BEFORE THE UNITED STATES DEPARTMENT OF ENERGY

Federal Power Act Section 202(c) Emergency Order: Midcontinent Independent System Operator (MISO)	)))))	Order No. 202-25-9

Exhibit to
Motion to Intervene and Request for Rehearing and Stay of
Public Interest Organizations

Exhibit 101

Consumers June Responses to AG

From:	Bret A. Totoraitis
To:	Moody, Michael (AG)
Subject:	RE: AG"s first discovery request to Consumers Energy in U-21870
Date:	Friday, June 13, 2025 3:16:08 PM
Attachments:	Informal Response to AG Campbell Questions.pdf

Good afternoon, Mike. Thank you for your consideration of Consumers Energy interest in keeping these issues separate from its electric rate case. Attached are the Company's informal responses to the questions posed by the Attorney General related to the Campbell extension. I'm still working internally to figure out if there is additional information from the Company's annual capacity demonstration filing for this year that the Company can share. I hope to have an answer for you on that early next week.

Bret

From: Moody, Michael (AG) <moodym2@michigan.gov>
Sent: Thursday, June 12, 2025 4:01 PM
To: Bret A. Totoraitis <Bret.Totoraitis@cmsenergy.com>
Subject: AG's first discovery request to Consumers Energy in U-21870

Bret,

The AG agrees to not seek a response from Consumers Energy on the first discovery request in U-21870 in return for an informal narrative response to the discovery as well as the 6w capacity filing information (understanding that there may be some redactions) that we discussed on the call earlier today. The agreement is obviously conditioned on receiving the informal narratives and 6w materials and the agreement doesn't bar the AG from ever asking again in the future, if necessary. Thanks for being available and helping to work on this information with me. Let me know if you have any questions.

Michael

Michael Moody
Division Chief, Special Litigation Division
Michigan Department of Attorney General

Question:

1. Will any capital expenditures be required to operate the Campbell Plant1 for the period covered by the Secretary of Energy's Order2 to continue operating the Campbell Plant?3 If so, describe the required investments and provide the estimated costs.

Response:

The Company has not yet determined whether it will incur any costs which would be eligible for classification as capital expenditures. In accordance with the Company's capitalization guidelines, for an asset to be listed as a retirement unit and capitalized it must have a useful life of two years or more. As such, the Company does not anticipate recording any costs as capital expenditures and, in fact, has not recorded any capital expenditures at the Campbell plant in the two-year period prior to May 31, 2025.

The Company is complying with the Order from the Secretary of Energy and will coordinate appropriate cost recovery with MISO. The Order was issued for the benefit of all of MISO and, as such, it is the Company's position that any cost recovery should be received from all MISO market participants, similar to cost recovery afforded through a MISO-designated system support resource.

Date: June 10, 2025

Question:

2. To the extent not produced in response to Question No. 1 above, identify all amounts for the following categories of expenditures and costs Consumers anticipates it would make or incur as a result of operating the Campbell Plant for the period covered by the Secretary of Energy's Order, and produce any analyses, calculations, and assumptions for each such amount:

a. All capital expenditure amounts and working capital amounts, including all such amounts the Company anticipates it would include in a requested cost recovery;

b. Any other categories of expenditures or costs the Company anticipates it would include in a requested cost recovery.

c. All operation-and-maintenance costs;

d. All permitting costs;

e. All emissions-related costs.

f. All other categories of expenditures and costs Consumers anticipates it would include in a requested revenue requirement.

Response:

a. See the response to question 1. The Company has not performed any calculations to determine any amounts it could or would include in a request for cost recovery.
b. The Company has not yet determined the projected amounts.
c. The Company has not yet determined the projected amounts.
d. The Company has not yet determined the projected amounts.
e. The Company has not yet determined the projected amounts. Campbell Unit 2 and Campbell Unit 3 selective catalytic reduction catalysts are at end of life; both systems are expected to perform adequately for the next 90 days, however additional extensions beyond this will eventually require catalyst addition. Rough estimate for one layer catalyst at Campbell Unit 2 is $3M and at Campbell Unit 3 is $5M. Catalyst purchases typically require six-to-twelve-month lead time. See also the response to questions 11, 12, 13, 14, & 15.
f. The Company has not yet determined the projected amounts.

Date: June 10, 2025

Question:

3. To the extent not identified in response to Questions No. 1-2 above, explain how the Company intends to account for any expenditures and costs it anticipates it would make or incur as a result of operating the Campbell Plant for the period covered by the Secretary of Energy's Order, including the extent to which it anticipates accounting for all or part of such expenditures and costs as part of this proceeding and the extent to which it anticipates to account for all or part of such expenditures and costs as part of a filing with the Federal Energy Regulatory Commission.

Response:

The Company plans to record any expenditures and costs it incurs as a result of operating the Campbell Plant during the period covered by the Secretary of Energy's Order in a FERC regulatory asset.

Date: June 10, 2025

Question:

4. Will any planned outages be required to maintain the Campbell Plant as an operational plant for the period covered by the Secretary of Energy's Order to continue operating the Campbell Plant? If so, approximately when and for what duration?

Response:

The Company does not have any planned outages for Campbell Units 1 through 3 during the period covered by the Secretary of Energy's Order. Campbell Unit 2 is currently out of service due to needed boiler tube repairs and other balance of plant work. The estimated return to service is June 27, 2025.

Date: June 10, 2025

Question:

5. What is the lead time to bring the Campbell Plant units from an off condition to readiness for generation? What is the time required to turn the Campbell Plant units off after a period of generation?

Response:

Unit 1 – Plant startup from a cold condition takes approximately 24 hours and shutdown takes approximately 12 hours.

Unit 2 – Plant startup from a cold condition takes approximately 36 hours and shutdown takes approximately 12 hours.

Unit 3 – Plant startup from a cold condition takes approximately 72 hours and shutdown takes approximately 18 hours.

Date: June 10, 2025

Question:

7. What are the current heat rates of Campbell Plant Units 1, 2, and 3?

Response:

Heat rate analysis for May of 2025:

- Campbell 1 has a heat rate of 10,907.1 Btu/kWh
- Campbell 2 has a heat rate of 11,525.8 Btu/kWh
- Campbell 3 has a heat rate of 10,114.8 Btu/kWh

Date: June 10, 2025

Question:

8. What quantity of coal remained on hand at the Campbell Plant as of May 31, 2025, and what is the heat content of that coal?

Response:

At the time the Department of Energy (DOE) issued its order, the Company had nearly depleted the usable coal inventory at the Campbell site. Just prior to this, samples were collected to assess the usability of any remaining coal resins. Testing indicated that approximately 150,000 tons of resins remained, with an average heat content of about 5,294 Btu/lb.

Following the DOE's order on May 23, 2025, and before May 31, 2025, the Company began rebuilding a small amount of usable inventory. As of May 31, 2025, the Campbell Plant had approximately 9,000 tons of usable coal on hand, with an average heat content of 8,869 Btu/lb. – consistent with the historical specifications used by the Campbell units.

Date: June 19, 2025

Question:

9. How does the Company intend to acquire and manage coal for the Campbell Plant for the period covered by the Secretary of Energy's Order to continue operating the Campbell Plant?

a. Will the Company enter a supply contract or make "spot" purchases?

b. What coal sources are compatible with the Campbell Plant units? What is their expected heat content?

c. What does the Company expect coal for the Campbell Plant to cost per unit weight and per unit heat content?

d. What quantity of coal does the Company expect to need to comply with the Order to continue operating the Campbell Plant?

e. How will the Company transport coal to operate the Campbell Plant for the period covered by the Secretary of Energy's recent Order to continue operating the Campbell Plant? What is the expected cost of such coal transportation?

f. What does the Company project as the as-burned coal costs for the period covered by the Secretary of Energy's Order to continue operating the Campbell Plant?

Response:

a) The Company intends to continue its normal practice of procuring coal through this short period using spot purchases.
b) The Campbell Plant units are compatible with sub-bituminous coal, primarily sourced from the Powder River Basin (PRB). The expected heat content of compatible coal is approximately 8,400–8,800 Btu/lb. (PRB).
c) The expected cost of coal for the Campbell Plant is approximately $13.89/ton and $0.78/MMBtu.
d) The Company currently estimates that approximately 1.25M tons of coal will be required to meet operational demands for the period defined under the Department of Energy's Order.
e) Coal will be transported to the Campbell Plant via rail, using existing transportation agreements with rail carriers. The expected transportation cost is approximately $36.83/ton and $2.08/MMBtu.
f) The projected as-burned coal cost for the Campbell Plant during this period is projected to be approximately $55M.

Date: June 10, 2025

Question:

15. Will the Company continue to use Pulse Jet Fabric Filters at the Campbell Plant to reduce emissions, consistent with past practices, during the period covered by the Secretary of Energy's Order to continue operating the Campbell Plant?
a. If so, what is the stock of Pulse Jet Fabric Filters at the Plant as of May 31, 2025?
b. What is the expected quantity and cost of Pulse Jet Fabric Filters required to operate the air emissions controls at the plant during this period?

Response:

Yes. The Company will continue to use Pulse Jet Fabric Filters ("PJFF") at the Campbell Plant to reduce emissions. See also the response to question 11.

a. The stock of PJFF bags is shown on line 5 in the table below.
b. The expected quantity and cost of PJFF bags is shown on line 5 in the table below. PJFF bags are replaced individually on an as needed basis or for periodic testing at a rate of about 4-12 bags per year, which is a minor maintenance cost.
   PJFF bags are changed out in their entirety about every six to eight years as indicated by test results. All Campbell Unit 1 and Campbell Unit 2 PJFF bags were replaced in 2021. Campbell Unit 3 is overdue for PJFF bag changeout, but the project was cancelled due to expected site closure. The Campbell Unit 3 PJFF is expected to perform adequately with existing bags for 90-days, but further life extension may negatively impact PJFF performance. A rough estimate for Campbell Unit 3 PJFF full bag changeout (24 compartments with 28,272 bags total) is $7M-$10M. Campbell Unit 1 and Campbell Unit 2 PJFF are expected to perform as designed until at least mid-2028.

	Consumable	Purpose	On Hand 5/23/25 (ton)	On Hand 5/31/25 (ton)	Forecast 90-day usage (ton)	Estimated unit rate ($/ton)	Forecast 90-day cost ($M)
1	Urea	NOx	100	100	1250	638	0.800
2	Act Carbon	Hg	80	90	210	2590	0.550
3	Hydrated Lime	SOx	280	420	3790	379	1.440
4	Pebble Lime	SOx	170	90	5260	241	1.270
5	PJFF bags	PM	33+ bag[1]	33+ bag	0 bag	$113/bag	n/a
						TOTAL	4.060

Date: June 10, 2025

[1] 33 PJFF bags in stock plus one full compartment set (1178) available non-stock. JHC1 PJFF has 8 compartments, JHC2 has 10 compartments, JHC3 has 24 compartments.

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Exhibit 102

CAMPD Campbell Daily Emissions Data

State	Facility Name	Facility ID	Unit ID	Associated Stacks	Date	Operating Time Count	Sum of the Operating Time	Gross Load (MWh)	Steam Load (1000 lb)	SO2 Mass (short tons)	SO2 Rate (lbs/mmBtu)	CO2 Mass (short tons)	CO2 Rate (short tons/mmBtu)	NOx Mass (short tons)	NOx Rate (lbs/mmBtu)	Heat Input (mmBtu)	Primary Fuel Type	Secondary Fuel Type	Unit Type	SO2 Controls	NOx Controls	PM Controls	Hg Controls	Program Code
MI	J H Campbell	1710	1		6/1/2025	24	24	4034		5.342	0.2497	4486.7	0.105	2.637	0.1233	42777.6	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/2/2025	24	24	4035		5.483	0.2515	4570.9	0.105	2.763	0.1268	43579.9	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/3/2025	24	24	5116		6.607	0.2484	5573.4	0.105	3.621	0.1357	53140.9	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/4/2025	24	24	5499		7.116	0.2524	5911.5	0.105	3.984	0.1412	56364	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/5/2025	24	24	5633		7.158	0.2494	6019.4	0.105	4.211	0.1468	57392.3	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/6/2025	24	24	4565		6.034	0.2515	5032.4	0.105	3.451	0.143	47981.3	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/7/2025	24	24	3964		5.366	0.2511	4483.2	0.105	2.866	0.1341	42746.4	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/8/2025	24	24	3964		5.261	0.2477	4455	0.105	2.98	0.1403	42477.7	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/9/2025	24	24	4255		6.004	0.2702	4683.2	0.105	3.28	0.1468	44650.6	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/10/2025	24	24	5571		7.394	0.2619	5925.7	0.105	4.222	0.1494	56500.7	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/11/2025	24	24	5587		7.478	0.2633	5957.3	0.105	4.163	0.1466	56801.6	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/12/2025	24	24	5046		6.86	0.2588	5562.2	0.105	3.665	0.1369	53034.6	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/13/2025	24	24	5562		7.182	0.2512	5994.8	0.105	4.117	0.144	57157.6	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/14/2025	24	24	5561		7.369	0.2594	5958.5	0.105	4.094	0.1441	56812.4	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/15/2025	24	24	5562		7.186	0.252	5980.3	0.105	4.112	0.1442	57022	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/16/2025	24	24	5563		7.353	0.2571	6001.2	0.105	4.188	0.1464	57220.3	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/17/2025	24	24	5500		7.458	0.2649	5911.9	0.105	4.209	0.1493	56369.9	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/18/2025	24	24	5646		7.91	0.2708	6127.9	0.105	4.399	0.1506	58428.5	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/19/2025	24	24	5965		8.321	0.2722	6413.1	0.105	4.616	0.151	61145.4	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/20/2025	24	24	6138		9.075	0.2918	6524.5	0.105	4.693	0.1509	62210.3	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/21/2025	24	24	6137		12.777	0.4044	6623.1	0.105	5.018	0.1589	63148.5	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/22/2025	24	24	6105		10.32	0.3241	6674.8	0.105	4.795	0.1506	63645.2	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/23/2025	15	14.85	3645.2		5.101	0.2651	4026.2	0.105	2.788	0.1448	38388.825	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/24/2025	0	0										Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/25/2025	0	0										Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/26/2025	0	0										Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/27/2025	0	0										Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/28/2025	0	0										Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/29/2025	0	0										Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/30/2025	0	0										Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		6/1/2025	0	0										Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner | Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		6/2/2025	0	0										Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner | Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		6/3/2025	0	0										Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner | Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		6/4/2025	0	0										Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner | Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		6/5/2025	0	0										Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner | Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		6/6/2025	0	0										Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner | Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		6/7/2025	0	0										Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner | Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		6/8/2025	0	0										Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner | Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		6/9/2025	0	0										Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner | Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		6/10/2025	0	0										Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner | Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		6/11/2025	0	0										Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner | Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		6/12/2025	0	0										Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner | Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		6/13/2025	0	0										Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner | Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		6/14/2025	0	0										Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner | Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		6/15/2025	0	0										Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner | Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		6/16/2025	0	0										Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner | Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		6/17/2025	0	0										Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner | Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		6/18/2025	0	0										Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner | Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		6/19/2025	0	0										Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner | Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		6/20/2025	0	0										Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner | Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		6/21/2025	0	0										Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner | Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		6/22/2025	0	0										Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner | Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		6/23/2025	0	0										Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner | Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		6/24/2025	0	0										Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner | Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		6/25/2025	4	3.43	0		0	0	52.718	0.105	0	0.001	502.164	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner | Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		6/26/2025	18	16.57	0		0.093	0.0338	451.21	0.1051	0.2	0.0747	4301.58	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner | Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		6/27/2025	16	15.15	128		0.186	0.0552	559.31	0.1049	0.434	0.1348	5333.855	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner | Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		6/28/2025	24	24	4081		5.191	0.2444	4396.1	0.105	2.735	0.1389	41915.5	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner | Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		6/29/2025	24	24	4799		5.963	0.2498	5006.9	0.105	1.221	0.0512	47739.8	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner | Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		6/30/2025	24	24	4799		6.541	0.2742	5006.2	0.105	1.284	0.0538	47733.5	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner | Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/1/2025	24	24	14368		6.572	0.084	16473	0.105	3.141	0.04	157068.3	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/2/2025	24	24	14372		3.955	0.0498	16740	0.105	3.098	0.0388	159609.4	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/3/2025	24	24	16673		4.425	0.0498	18549	0.105	4.866	0.0542	176862.9	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/4/2025	24	24	17567		4.563	0.0495	19295	0.105	5.335	0.0579	183966.8	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/5/2025	24	24	17387		4.766	0.0515	19420	0.105	5.734	0.0619	185162.9	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/6/2025	24	24	18108		4.894	0.0515	19914	0.105	4.81	0.0507	189871.1	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/7/2025	24	24	18149		4.773	0.0508	19709	0.105	4.742	0.0505	187919.4	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/8/2025	24	24	18154		4.145	0.0447	19487	0.105	4.35	0.0468	185804.3	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/9/2025	24	24	18169		6.081	0.0651	19612	0.105	4.527	0.0484	186992.5	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/10/2025	24	24	18187		6.039	0.0639	19834	0.105	5.372	0.0568	189106.4	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/11/2025	24	24	18205		4.932	0.0514	20115	0.105	4.942	0.0515	191793.1	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/12/2025	24	24	17510		4.613	0.0499	19525	0.105	4.631	0.0495	186160.2	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/13/2025	24	24	17884		4.622	0.0495	19666	0.105	4.571	0.0487	187514.6	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/14/2025	24	24	18175		4.649	0.049	19857	0.105	4.528	0.0478	189332.2	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/15/2025	24	24	18183		4.471	0.047	19938	0.105	4.527	0.0476	190102.3	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/16/2025	24	24	18155		5.256	0.0548	20091	0.105	4.545	0.0475	191555.1	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/17/2025	24	24	17955		4.503	0.0477	19677	0.105	4.387	0.0469	187612.1	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/18/2025	24	24	17273		4.181	0.0453	19138	0.105	4.343	0.0473	182477.2	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/19/2025	24	24	18138		4.753	0.0495	20145	0.105	4.705	0.049	192077.2	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/20/2025	24	24	18195		5.122	0.0527	20403	0.105	4.689	0.0482	194532.4	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/21/2025	24	24	18210		5.972	0.0625	20124	0.105	4.517	0.0471	191876.2	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/22/2025	24	24	18213		5.238	0.0542	20275	0.105	4.531	0.0469	193315.2	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/23/2025	24	24	18088		4.714	0.05	19740	0.105	4.886	0.052	188215.2	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/24/2025	24	24	18225		4.594	0.0499	19308	0.105	6.307	0.0685	184096.5	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/25/2025	24	24	18227		4.722	0.0513	19322	0.105	5.734	0.0623	184226.9	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/26/2025	24	24	18195		5.971	0.0643	19446	0.105	7.319	0.079	185412.1	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/27/2025	24	24	18234		4.699	0.0505	19496	0.105	5.436	0.0585	185887	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/28/2025	24	24	18202		10.014	0.1095	19216	0.105	5.538	0.0605	183219.6	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/29/2025	24	24	18058		13.244	0.1469	18876	0.105	5.78	0.0643	179972.4	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/30/2025	24	24	17448		6.736	0.0769	18866	0.105	5.297	0.0591	179883.7	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS

BEFORE THE UNITED STATES DEPARTMENT OF ENERGY

Federal Power Act Section 202(c) Emergency Order: Midcontinent Independent System Operator (MISO)	)))))	Order No. 202-25-9

Exhibit to
Motion to Intervene and Request for Rehearing and Stay of
Public Interest Organizations

Exhibit 103

July 17 Email from Consumers to EGLE

From: Joseph J. Firlit <JOSEPH.FIRLIT@cmsenergy.com>
Sent: 7/17/2025 11:19:40 AM
To: "Lazzaro, April (EGLE)" <LazzaroA1@michigan.gov>
Subject: RE: Update to MATS Part 63 PM/HCl Test Notification - Consumers Energy, J.H. Campbell Generating Complex (ORIS Code 1710), Unit 2

CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov

Good Morning, April –

Unit 2 was offline on May 19, 2025 and there was no immediate plan as of May 27, 2025 to bring it back online. But after further evaluation and interpretation of the DOE order issued to MISO and Consumers Energy under section 202(c) of the Federal Power Act (FPA) , 16 U. S. C. 824a(c) and section 302(b) of the Department of Energy Organization Act, 42 U. S. C. 7151(b) it has been determined that it is necessary to attempt to repair and operate Unit 2 to address the energy shortage identified in this order. Unit 2 operated briefly between June 25-July 4, 2025 before coming back offline to address a water intake issue. The order states the facility is to remain available for dispatch through August 21, 2025.

Regards,

Joseph J. Firlit, PMP
Manager Engineering Support
Consumers Energy
J H Campbell Generating Station
17000 Croswell | West Olive, Michigan 49460
Office: 616-738-3260 | Cell: 616-836-9900 | Fax: 616-738-3215
joseph.firlit@cmsenergy.com | www.ConsumersEnergy.com

From: Lazzaro, April (EGLE) <LazzaroA1@michigan.gov>
Sent: Thursday, July 17, 2025 7:04 AM
To: Joseph J. Firlit <JOSEPH.FIRLIT@cmsenergy.com>
Subject: RE: Update to MATS Part 63 PM/HCl Test Notification - Consumers Energy, J.H. Campbell Generating Complex (ORIS Code 1710), Unit 2

##CAUTION##: This email originated from outside of CMS/CE. Remember your security awareness training: Stop, think, and use caution before clicking links/attachments.

Hi Joe,
Last we knew (May 27 email), EUBOILER2 went offline on May 19th and there were no plans to bring the unit back on-line. Has EUBOILER2 operated since it went down on May 19th?

Thanks,
April

April Lazzaro
Senior Environmental Quality Analyst
Air Quality Division
Grand Rapids District Office
Michigan Department of Environment, Great Lakes, and Energy
616-558-1092
Connect with us [cms.michigan.gov] | Michigan.gov/EGLE [michigan.gov]

MiEnviro Portal [michigan.gov]

From: Joseph J. Firlit <JOSEPH.FIRLIT@cmsenergy.com>
Sent: Wednesday, July 16, 2025 3:51 PM
To: compher.michael@epa.gov; Howe, Jeremy (EGLE) <HoweJ1@michigan.gov>; Hollenbach, Heidi (EGLE) <HOLLENBACHH@michigan.gov>; Lazzaro, April (EGLE) <LazzaroA1@michigan.gov>; R5AirEnforcement <r5airenforcement@epa.gov>
Cc: Michael E. Gruber II <Michael.GruberII@cmsenergy.com>; Jason M. Prentice <jason.prentice@cmsenergy.com>; Thomas R. Schmelter <Thomas.Schmelter@cmsenergy.com>; Roger D. Vargo <ROGER.VARGO@cmsenergy.com>; Joe Mason <Joe.MASON@cmsenergy.com>
Subject: Update to MATS Part 63 PM/HCl Test Notification - Consumers Energy, J.H. Campbell Generating Complex (ORIS Code 1710), Unit 2

CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov

All,

On June 19, 2025, Consumers Energy's J.H. Campbell Plant (JHC) SRN B2835 submitted a test protocol of a triennial HCl and PM test for Mercury Air Toxics Rule (MATS) 40 CFR Part 63 Subpart UUUUU. The MATS RATA test protocol was submitted to both MiEnviro (Submission #: HQD-F4PF-ZY9CT) and to r5airenforcement@epa.gov.

EUBOILER2 came offline unexpectedly due to a water intake issue. Therefore, the MATS testing at Unit 2 will not occur during the business week beginning July 21, 2025. A final return to service date for the unit has not yet been established. I will send another email with updates when a unit return to service date and proposed testing dates are known. Thank you!

Regards,

Joseph J. Firlit, PMP
Manager Engineering Support
Consumers Energy
J H Campbell Generating Station
17000 Croswell | West Olive, Michigan 49460
Office: 616-738-3260 | Cell: 616-836-9900 | Fax: 616-738-3215
joseph.firlit@cmsenergy.com | www.ConsumersEnergy.com

From: Joseph J. Firlit
Sent: Thursday, June 19, 2025 3:14 PM
To: r5airenforcement@epa.gov
Cc: Michael E. Gruber II <Michael.GruberII@cmsenergy.com>; Jason M. Prentice <JASON.PRENTICE@cmsenergy.com>; Thomas R. Schmelter <Thomas.Schmelter@cmsenergy.com>; David M. Kawasaki <David.Kawasaki@cmsenergy.com>; Roger D. Vargo <roger.vargo@cmsenergy.com>
Subject: Submittal of MATS PM/HCl Test Notice and Protocol for the Consumers Energy, J.H. Campbell Generating Complex (ORIS Code 1710), Unit 2

To Whom It May Concern:

Consumers Energy is respectfully submitting the attached test notice and protocol for a planned Mercury Air Toxics (MATS) Rule PM/HCl Test at our J.H. Campbell Unit 2 to commence on July 22, 2025. The same submittal has been provided to the Michigan Department of Environment, Great Lakes, and Energy (EGLE) Technical Programs Unit (TPU) and EGLE-AQD District Office today, via their MiEnviro Air Portal. Please let me know if there are any questions or concerns regarding this test notice.

Regards,

Joseph J. Firlit, PMP
Manager Engineering Support
Consumers Energy
J H Campbell Generating Station
17000 Croswell | West Olive, Michigan 49460
Office: 616-738-3260 | Cell: 616-836-9900 | Fax: 616-738-3215
joseph.firlit@cmsenergy.com | www.ConsumersEnergy.com

Consumers Energy

Count on Us

BEFORE THE UNITED STATES DEPARTMENT OF ENERGY

Federal Power Act Section 202(c)	)	
Emergency Order: Midcontinent	)	Order No. 202-25-9
Independent System Operator	)	
(MISO)	)	
	)	

Exhibit to
Motion to Intervene and Request for Rehearing and Stay of
Public Interest Organizations

Exhibit 104

CAMPD Campbell Hourly Emissions Data

State	Facility Name	Facility ID	Unit ID	Associated Stacks	Date	Hour	Operating Time	Gross Load (MW)	Steam Load (1000 lb/hr)	SO2 Mass (lbs)	SO2 Mass Measure Indicator	SO2 Rate (lbs/mmBtu)	SO2 Rate Measure Indicator	CO2 Mass (short tons)	CO2 Mass Measure Indicator	CO2 Rate (short tons/mmBtu)	CO2 Rate Measure Indicator	NOx Mass (lbs)	NOx Mass Measure Indicator	NOx Rate (lbs/mmBtu)	NOx Rate Measure Indicator	Heat Input (mmBtu)	Heat Input Measure Indicator	Primary Fuel Type	Secondary Fuel Type	Unit Type	SO2 Controls	NOx Controls	PM Controls	Hg Controls	Program Code
MI	J H Campbell	1710	1		6/1/2025	0	1	168		485.4	Measured	0.275	Calculated	185.2	Measured	0.105	Calculated	215.4	Measured	0.122	Measured	1765.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/1/2025	1	1	168		450.9	Measured	0.254	Calculated	186.2	Measured	0.105	Calculated	216.6	Measured	0.122	Measured	1775.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/1/2025	2	1	168		426.1	Measured	0.238	Calculated	187.6	Measured	0.105	Calculated	220	Measured	0.123	Measured	1788.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/1/2025	3	1	168		449.2	Measured	0.25	Calculated	188.3	Measured	0.105	Calculated	219.1	Measured	0.122	Measured	1795.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/1/2025	4	1	168		448	Measured	0.26	Calculated	180.6	Measured	0.105	Calculated	206.6	Measured	0.12	Measured	1721.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/1/2025	5	1	168		473.6	Measured	0.263	Calculated	188.6	Measured	0.105	Calculated	215.8	Measured	0.12	Measured	1798.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/1/2025	6	1	168		457	Measured	0.253	Calculated	189.6	Measured	0.105	Calculated	220.5	Measured	0.122	Measured	1807.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/1/2025	7	1	168		459.2	Measured	0.257	Calculated	187.5	Measured	0.105	Calculated	218.1	Measured	0.122	Measured	1787.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/1/2025	8	1	168		482	Measured	0.272	Calculated	185.8	Measured	0.105	Calculated	219.6	Measured	0.124	Measured	1771.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/1/2025	9	1	168		488.7	Measured	0.275	Calculated	186.1	Measured	0.105	Calculated	212.9	Measured	0.12	Measured	1774.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/1/2025	10	1	168		451.7	Measured	0.254	Calculated	186.6	Measured	0.105	Calculated	215.2	Measured	0.121	Measured	1778.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/1/2025	11	1	168		402.1	Measured	0.225	Calculated	187.2	Measured	0.105	Calculated	216	Measured	0.121	Measured	1784.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/1/2025	12	1	168		396.1	Measured	0.222	Calculated	187.2	Measured	0.105	Calculated	219.5	Measured	0.123	Measured	1784.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/1/2025	13	1	169		425.1	Measured	0.238	Calculated	187.1	Measured	0.105	Calculated	217.6	Measured	0.122	Measured	1783.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/1/2025	14	1	168		433.3	Measured	0.244	Calculated	186.2	Measured	0.105	Calculated	218.3	Measured	0.123	Measured	1775.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/1/2025	15	1	169		434.7	Measured	0.245	Calculated	186.4	Measured	0.105	Calculated	220.4	Measured	0.124	Measured	1777.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/1/2025	16	1	168		428.1	Measured	0.241	Calculated	186.1	Measured	0.105	Calculated	221.8	Measured	0.125	Measured	1774	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/1/2025	17	1	168		431.7	Measured	0.244	Calculated	185.5	Measured	0.105	Calculated	219.3	Measured	0.124	Measured	1768.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/1/2025	18	1	168		440.9	Measured	0.248	Calculated	186.5	Measured	0.105	Calculated	217	Measured	0.122	Measured	1778.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/1/2025	19	1	168		436.9	Measured	0.245	Calculated	187.1	Measured	0.105	Calculated	217.6	Measured	0.122	Measured	1783.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/1/2025	20	1	168		428.7	Measured	0.24	Calculated	187.1	Measured	0.105	Calculated	226.6	Measured	0.127	Measured	1784.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/1/2025	21	1	168		436.7	Measured	0.243	Calculated	188.3	Measured	0.105	Calculated	231.6	Measured	0.129	Measured	1795	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/1/2025	22	1	168		453.7	Measured	0.25	Calculated	190.5	Measured	0.105	Calculated	232.5	Measured	0.128	Measured	1816.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/1/2025	23	1	168		464.6	Measured	0.257	Calculated	189.4	Measured	0.105	Calculated	236.5	Measured	0.131	Measured	1805.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/2/2025	0	1	168		460.9	Measured	0.254	Calculated	190.6	Measured	0.105	Calculated	230.8	Measured	0.127	Measured	1817.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/2/2025	1	1	168		464.2	Measured	0.255	Calculated	191.1	Measured	0.105	Calculated	227.8	Measured	0.125	Measured	1822.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/2/2025	2	1	168		449.1	Measured	0.248	Calculated	189.6	Measured	0.105	Calculated	225.9	Measured	0.125	Measured	1807.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/2/2025	3	1	168		461.4	Measured	0.253	Calculated	191	Measured	0.105	Calculated	218.5	Measured	0.12	Measured	1821.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/2/2025	4	1	168		446.8	Measured	0.249	Calculated	188.2	Measured	0.105	Calculated	222.5	Measured	0.124	Measured	1794.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/2/2025	5	1	168		443	Measured	0.243	Calculated	191.2	Measured	0.105	Calculated	237	Measured	0.13	Measured	1823	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/2/2025	6	1	168		457.2	Measured	0.251	Calculated	190.7	Measured	0.105	Calculated	238.2	Measured	0.131	Measured	1818.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/2/2025	7	1	168		452.1	Measured	0.252	Calculated	188.2	Measured	0.105	Calculated	233.3	Measured	0.13	Measured	1794.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/2/2025	8	1	168		453.7	Measured	0.252	Calculated	188.6	Measured	0.105	Calculated	233.8	Measured	0.13	Measured	1798.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/2/2025	9	1	168		437.6	Measured	0.241	Calculated	190.6	Measured	0.105	Calculated	232.6	Measured	0.128	Measured	1817	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/2/2025	10	1	168		398.3	Measured	0.222	Calculated	188.2	Measured	0.105	Calculated	218.9	Measured	0.122	Measured	1794	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/2/2025	11	1	168		409.5	Measured	0.225	Calculated	190.8	Measured	0.105	Calculated	220.1	Measured	0.121	Measured	1819.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/2/2025	12	1	168		434.9	Measured	0.241	Calculated	189.6	Measured	0.105	Calculated	222.4	Measured	0.123	Measured	1807.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/2/2025	13	1	168		451.1	Measured	0.249	Calculated	190.1	Measured	0.105	Calculated	228.3	Measured	0.126	Measured	1812.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/2/2025	14	1	168		457.3	Measured	0.251	Calculated	190.8	Measured	0.105	Calculated	234.7	Measured	0.129	Measured	1819.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/2/2025	15	1	168		455.7	Measured	0.248	Calculated	192.4	Measured	0.105	Calculated	236.6	Measured	0.129	Measured	1834.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/2/2025	16	1	169		457.3	Measured	0.25	Calculated	191.6	Measured	0.105	Calculated	235.7	Measured	0.129	Measured	1826.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/2/2025	17	1	168		444	Measured	0.244	Calculated	190.6	Measured	0.105	Calculated	225.3	Measured	0.124	Measured	1817.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/2/2025	18	1	168		450.3	Measured	0.246	Calculated	191.6	Measured	0.105	Calculated	226.5	Measured	0.124	Measured	1826.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/2/2025	19	1	169		452.5	Measured	0.247	Calculated	192.1	Measured	0.105	Calculated	225.3	Measured	0.123	Measured	1831.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/2/2025	20	1	168		460.4	Measured	0.253	Calculated	190.7	Measured	0.105	Calculated	234.5	Measured	0.129	Measured	1817.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/2/2025	21	1	168		457.4	Measured	0.251	Calculated	191.3	Measured	0.105	Calculated	238.9	Measured	0.131	Measured	1823.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/2/2025	22	1	169		495.1	Measured	0.272	Calculated	191	Measured	0.105	Calculated	240.4	Measured	0.132	Measured	1820.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/2/2025	23	1	168		616.9	Measured	0.34	Calculated	190.3	Measured	0.105	Calculated	237.7	Measured	0.131	Measured	1814.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/3/2025	0	1	168		488.3	Measured	0.27	Calculated	189.9	Measured	0.105	Calculated	228.1	Measured	0.126	Measured	1810.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/3/2025	1	1	168		434.8	Measured	0.239	Calculated	190.9	Measured	0.105	Calculated	227.5	Measured	0.125	Measured	1819.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/3/2025	2	1	168		415.2	Measured	0.227	Calculated	191.6	Measured	0.105	Calculated	224.8	Measured	0.123	Measured	1827.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/3/2025	3	1	168		438.6	Measured	0.241	Calculated	190.6	Measured	0.105	Calculated	227.2	Measured	0.125	Measured	1817.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/3/2025	4	1	168		437	Measured	0.242	Calculated	189.5	Measured	0.105	Calculated	233.1	Measured	0.129	Measured	1806.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/3/2025	5	1	168		446.1	Measured	0.245	Calculated	190.6	Measured	0.105	Calculated	239.9	Measured	0.132	Measured	1817.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/3/2025	6	1	168		456	Measured	0.249	Calculated	192.3	Measured	0.105	Calculated	243.9	Measured	0.133	Measured	1833.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/3/2025	7	1	183		509	Measured	0.261	Calculated	204.4	Measured	0.105	Calculated	265	Measured	0.136	Measured	1948.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/3/2025	8	1	234		609.5	Measured	0.254	Calculated	251.3	Measured	0.105	Calculated	357	Measured	0.149	Measured	2396.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/3/2025	9	1	234		578.2	Measured	0.243	Calculated	249.2	Measured	0.105	Calculated	342.2	Measured	0.144	Measured	2376.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/3/2025	10	1	234		590.7	Measured	0.247	Calculated	250.6	Measured	0.105	Calculated	332.2	Measured	0.139	Measured	2389.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/3/2025	11	1	235		579.1	Measured	0.241	Calculated	251.8	Measured	0.105	Calculated	338.5	Measured	0.141	Measured	2400.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/3/2025	12	1	234		581.3	Measured	0.242	Calculated	252.2	Measured	0.105	Calculated	336.6	Measured	0.14	Measured	2404.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/3/2025	13	1	235		593.2	Measured	0.247	Calculated	252.2	Measured	0.105	Calculated	339.1	Measured	0.141	Measured	2404.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/3/2025	14	1	234		614.8	Measured	0.256	Calculated	251.9	Measured	0.105	Calculated	336.2	Measured	0.14	Measured	2401.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/3/2025	15	1	235		614.7	Measured	0.255	Calculated	253	Measured	0.105	Calculated	330.4	Measured	0.137	Measured	2411.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/3/2025	16	1	234		624	Measured	0.261	Calculated	250.8	Measured	0.105	Calculated	327.6	Measured	0.137	Measured	2391.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/3/2025	17	1	235		630.8	Measured	0.263	Calculated	251.8	Measured	0.105	Calculated	328.9	Measured	0.137	Measured	2401	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/3/2025	18	1	235		598	Measured	0.248	Calculated	252.4	Measured	0.105	Calculated	327.3	Measured	0.136	Measured	2406.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/3/2025	19	1	235		581.2	Measured	0.243	Calculated	250.8	Measured	0.105	Calculated	330	Measured	0.138	Measured	2391.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/3/2025	20	1	234		594.8	Measured	0.247	Calculated	252.6	Measured	0.105	Calculated	327.6	Measured	0.136	Measured	2408.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/3/2025	21	1	235		605.9	Measured	0.252	Calculated	251.8	Measured	0.105	Calculated	328.9	Measured	0.137	Measured	2400.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/3/2025	22	1	235		589.4	Measured	0.244	Calculated	253.2	Measured	0.105	Calculated	328.4	Measured	0.136	Measured	2414.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/3/2025	23	1	239		602.9	Measured	0.245	Calculated	258	Measured	0.105	Calculated	341.9	Measured	0.139	Measured	2459.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/4/2025	0	1	250		642.9	Measured	0.252	Calculated	267.8	Measured	0.105	Calculated	372.8	Measured	0.146	Measured	2553.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/4/2025	1	1	252		627.4	Measured	0.245	Calculated	268.2	Measured	0.105	Calculated	378.4	Measured	0.148	Measured	2557	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/4/2025	2	1	245		609.4	Measured	0.244	Calculated	261.8	Measured	0.105	Calculated	357	Measured	0.143	Measured	2496.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/4/2025	3	1	237		601	Measured	0.247	Calculated	255.3	Measured	0.105	Calculated	340.8	Measured	0.14	Measured	2434.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/4/2025	4	1	235		632.7	Measured	0.265	Calculated	250.3	Measured	0.105	Calculated	334.1	Measured	0.14	Measured	2386.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/4/2025	5	1	236		631.4	Measured	0.261	Calculated	253.3	Measured	0.105	Calculated	340.6	Measured	0.141	Measured	2415.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/4/2025	6	1	236		614.7	Measured	0.252	Calculated	255.4	Measured	0.105	Calculated	340.9	Measured	0.14	Measured	2435.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/4/2025	7	1	236		583.3	Measured	0.241	Calculated	254.3	Measured	0.105	Calculated	327.4	Measured	0.135	Measured	2424.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/4/2025	8	1	235		583.9	Measured	0.243	Calculated	252.5	Measured	0.105	Calculated	329.8	Measured	0.137	Measured	2407.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/4/2025	9	1	235		592.9	Measured	0.247	Calculated	251.9	Measured	0.105	Calculated	331.4	Measured	0.138	Measured	2401.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/4/2025	10	1	235		652.7	Measured	0.273	Calculated	250.9	Measured	0.105	Calculated	339.7	Measured	0.142	Measured	2392.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/4/2025	11	1	235		669.4	Measured	0.279	Calculated	251.4	Measured	0.105	Calculated	342.8	Measured	0.143	Measured	2397	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/4/2025	12	1	235		633.2	Measured	0.265	Calculated	250.7	Measured	0.105	Calculated	339.5	Measured	0.142	Measured	2390.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/4/2025	13	1	235		608.2	Measured	0.254	Calculated	251	Measured	0.105	Calculated	335.1	Measured	0.14	Measured	2393.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/4/2025	14	1	235		614.1	Measured	0.256	Calculated	251.2	Measured	0.105	Calculated	335.3	Measured	0.14	Measured	2394.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/4/2025	15	1	236		601.5	Measured	0.251	Calculated	251.1	Measured	0.105	Calculated	332.8	Measured	0.139	Measured	2393.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/4/2025	16	1	235		583.1	Measured	0.245	Calculated	249.8	Measured	0.105	Calculated	333.4	Measured	0.14	Measured	2381.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/4/2025	17	1	195		476.1	Measured	0.234	Calculated	213.6	Measured	0.105	Calculated	289.3	Measured	0.142	Measured	2037.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/4/2025	18	1	173		459.7	Measured	0.249	Calculated	193.5	Measured	0.105	Calculated	241.7	Measured	0.131	Measured	1845	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/4/2025	19	1	173		461.5	Measured	0.248	Calculated	195.3	Measured	0.105	Calculated	260.7	Measured	0.14	Measured	1862.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/4/2025	20	1	213		597.7	Measured	0.27	Calculated	232.1	Measured	0.105	Calculated	301	Measured	0.136	Measured	2212.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/4/2025	21	1	234		599.7	Measured	0.252	Calculated	250	Measured	0.105	Calculated	367.2	Measured	0.154	Measured	2384.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/4/2025	22	1	234		572.7	Measured	0.241	Calculated	249	Measured	0.105	Calculated	351.3	Measured	0.148	Measured	2373.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/4/2025	23	1	234		583.1	Measured	0.244	Calculated	251.1	Measured	0.105	Calculated	344.7	Measured	0.144	Measured	2393.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/5/2025	0	1	235		587.7	Measured	0.245	Calculated	251.5	Measured	0.105	Calculated	347.7	Measured	0.145	Measured	2397.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/5/2025	1	1	235		606	Measured	0.253	Calculated	251.1	Measured	0.105	Calculated	349.6	Measured	0.146	Measured	2394.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/5/2025	2	1	234		605.2	Measured	0.253	Calculated	251.1	Measured	0.105	Calculated	354.3	Measured	0.148	Measured	2393.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/5/2025	3	1	235		604	Measured	0.252	Calculated	251.3	Measured	0.105	Calculated	354.7	Measured	0.148	Measured	2396.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/5/2025	4	1	235		591.3	Measured	0.251	Calculated	247.2	Measured	0.105	Calculated	351.2	Measured	0.149	Measured	2356.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/5/2025	5	1	234		587.9	Measured	0.247	Calculated	249.7	Measured	0.105	Calculated	357.1	Measured	0.15	Measured	2380.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/5/2025	6	1	235		599.1	Measured	0.251	Calculated	250	Measured	0.105	Calculated	355.2	Measured	0.149	Measured	2383.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/5/2025	7	1	234		617.8	Measured	0.259	Calculated	250.6	Measured	0.105	Calculated	348.8	Measured	0.146	Measured	2389.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/5/2025	8	1	234		581.7	Measured	0.244	Calculated	249.9	Measured	0.105	Calculated	343.2	Measured	0.144	Measured	2383.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/5/2025	9	1	235		585.4	Measured	0.245	Calculated	251	Measured	0.105	Calculated	344.6	Measured	0.144	Measured	2393.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS

State	Facility Name	Facility ID	Unit ID	Associated Stacks	Date	Hour	Operating Time	Gross Load (MW)	Steam Load (1000 lb/hr)	SO2 Mass (lbs)	SO2 Mass Measure Indicator	SO2 Rate (lbs/mmBtu)	SO2 Rate Measure Indicator	CO2 Mass (short tons)	CO2 Mass Measure Indicator	CO2 Rate (short tons/mmBtu)	CO2 Rate Measure Indicator	NOx Mass (lbs)	NOx Mass Measure Indicator	NOx Rate (lbs/mmBtu)	NOx Rate Measure Indicator	Heat Input (mmBtu)	Heat Input Measure Indicator	Primary Fuel Type	Secondary Fuel Type	Unit Type	SO2 Controls	NOx Controls	PM Controls	Hg Controls	Program Code
MI	J H Campbell	1710	1		6/5/2025	10	1	235		607.2	Measured	0.253	Calculated	251.9	Measured	0.105	Calculated	343.4	Measured	0.143	Measured	2401.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/5/2025	11	1	235		611.8	Measured	0.255	Calculated	251.4	Measured	0.105	Calculated	357.1	Measured	0.149	Measured	2396.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/5/2025	12	1	235		608.4	Measured	0.253	Calculated	252.5	Measured	0.105	Calculated	334.6	Measured	0.139	Measured	2407.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/5/2025	13	1	235		593.5	Measured	0.247	Calculated	251.8	Measured	0.105	Calculated	345.8	Measured	0.144	Measured	2401.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/5/2025	14	1	235		586.5	Measured	0.245	Calculated	251.5	Measured	0.105	Calculated	347.6	Measured	0.145	Measured	2397.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/5/2025	15	1	235		597.7	Measured	0.249	Calculated	251.8	Measured	0.105	Calculated	348.1	Measured	0.145	Measured	2400.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/5/2025	16	1	234		572.4	Measured	0.24	Calculated	250.2	Measured	0.105	Calculated	345.9	Measured	0.145	Measured	2385.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/5/2025	17	1	235		588.8	Measured	0.247	Calculated	250.4	Measured	0.105	Calculated	346.1	Measured	0.145	Measured	2387.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/5/2025	18	1	234		605.1	Measured	0.255	Calculated	248.7	Measured	0.105	Calculated	348.5	Measured	0.147	Measured	2371	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/5/2025	19	1	235		564.8	Measured	0.237	Calculated	249.5	Measured	0.105	Calculated	349.7	Measured	0.147	Measured	2379	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/5/2025	20	1	235		556.4	Measured	0.233	Calculated	250.4	Measured	0.105	Calculated	358.1	Measured	0.15	Measured	2387.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/5/2025	21	1	235		576.9	Measured	0.241	Calculated	250.8	Measured	0.105	Calculated	363.5	Measured	0.152	Measured	2391.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/5/2025	22	1	235		637.1	Measured	0.263	Calculated	253.6	Measured	0.105	Calculated	365.1	Measured	0.151	Measured	2418.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/5/2025	23	1	234		643.3	Measured	0.268	Calculated	251.5	Measured	0.105	Calculated	362.1	Measured	0.151	Measured	2398.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/6/2025	0	1	235		624.4	Measured	0.261	Calculated	251.4	Measured	0.105	Calculated	357.1	Measured	0.149	Measured	2396.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/6/2025	1	1	234		599	Measured	0.25	Calculated	251.3	Measured	0.105	Calculated	354.6	Measured	0.148	Measured	2396	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/6/2025	2	1	235		605.5	Measured	0.253	Calculated	251.5	Measured	0.105	Calculated	359.6	Measured	0.15	Measured	2397.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/6/2025	3	1	235		600.4	Measured	0.251	Calculated	251.1	Measured	0.105	Calculated	361.6	Measured	0.151	Measured	2394.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/6/2025	4	1	234		601.4	Measured	0.256	Calculated	246.6	Measured	0.105	Calculated	357.3	Measured	0.152	Measured	2350.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/6/2025	5	1	235		605.9	Measured	0.254	Calculated	249.7	Measured	0.105	Calculated	361.9	Measured	0.152	Measured	2381.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/6/2025	6	1	235		591.8	Measured	0.248	Calculated	250.3	Measured	0.105	Calculated	358	Measured	0.15	Measured	2386.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/6/2025	7	1	235		594.3	Measured	0.251	Calculated	248.8	Measured	0.105	Calculated	355.8	Measured	0.15	Measured	2371.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/6/2025	8	1	223		563.6	Measured	0.249	Calculated	237.3	Measured	0.105	Calculated	353	Measured	0.156	Measured	2262.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/6/2025	9	1	161		416.4	Measured	0.239	Calculated	182.8	Measured	0.105	Calculated	256.2	Measured	0.147	Measured	1743	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/6/2025	10	1	163		424.3	Measured	0.24	Calculated	185.4	Measured	0.105	Calculated	242.2	Measured	0.137	Measured	1767.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/6/2025	11	1	163		414	Measured	0.235	Calculated	185.2	Measured	0.105	Calculated	254.2	Measured	0.144	Measured	1765.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/6/2025	12	1	162		431.5	Measured	0.244	Calculated	185.8	Measured	0.105	Calculated	256.9	Measured	0.145	Measured	1771.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/6/2025	13	1	163		458.4	Measured	0.258	Calculated	186.4	Measured	0.105	Calculated	261.3	Measured	0.147	Measured	1777.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/6/2025	14	1	166		487.4	Measured	0.272	Calculated	188.2	Measured	0.105	Calculated	245.8	Measured	0.137	Measured	1794.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/6/2025	15	1	165		469.5	Measured	0.263	Calculated	186.9	Measured	0.105	Calculated	242.4	Measured	0.136	Measured	1782	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/6/2025	16	1	165		444.8	Measured	0.25	Calculated	186.6	Measured	0.105	Calculated	238.4	Measured	0.134	Measured	1778.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/6/2025	17	1	165		448.2	Measured	0.251	Calculated	187.5	Measured	0.105	Calculated	243.2	Measured	0.136	Measured	1788.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/6/2025	18	1	166		451	Measured	0.254	Calculated	186.5	Measured	0.105	Calculated	236.5	Measured	0.133	Measured	1778.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/6/2025	19	1	165		450.8	Measured	0.254	Calculated	186.4	Measured	0.105	Calculated	241.7	Measured	0.136	Measured	1777.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/6/2025	20	1	165		444	Measured	0.25	Calculated	186.2	Measured	0.105	Calculated	243.2	Measured	0.137	Measured	1775.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/6/2025	21	1	165		442.5	Measured	0.248	Calculated	187	Measured	0.105	Calculated	244.3	Measured	0.137	Measured	1783.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/6/2025	22	1	165		448.5	Measured	0.252	Calculated	186.9	Measured	0.105	Calculated	238.8	Measured	0.134	Measured	1782.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/6/2025	23	1	165		450.5	Measured	0.253	Calculated	186.6	Measured	0.105	Calculated	238.3	Measured	0.134	Measured	1778.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/7/2025	0	1	165		443.1	Measured	0.25	Calculated	185.6	Measured	0.105	Calculated	237.2	Measured	0.134	Measured	1770	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/7/2025	1	1	166		438.1	Measured	0.247	Calculated	185.8	Measured	0.105	Calculated	232.1	Measured	0.131	Measured	1771.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/7/2025	2	1	165		422.1	Measured	0.238	Calculated	185.9	Measured	0.105	Calculated	233.9	Measured	0.132	Measured	1772.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/7/2025	3	1	165		439.9	Measured	0.248	Calculated	185.9	Measured	0.105	Calculated	237.5	Measured	0.134	Measured	1772.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/7/2025	4	1	165		435.1	Measured	0.251	Calculated	182	Measured	0.105	Calculated	234.3	Measured	0.135	Measured	1735.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/7/2025	5	1	165		443.7	Measured	0.253	Calculated	183.7	Measured	0.105	Calculated	236.4	Measured	0.135	Measured	1751.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/7/2025	6	1	165		442.9	Measured	0.252	Calculated	184.6	Measured	0.105	Calculated	235.8	Measured	0.134	Measured	1759.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/7/2025	7	1	165		470.3	Measured	0.267	Calculated	184.6	Measured	0.105	Calculated	235.8	Measured	0.134	Measured	1759.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/7/2025	8	1	165		460.8	Measured	0.261	Calculated	185.4	Measured	0.105	Calculated	236.8	Measured	0.134	Measured	1767.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/7/2025	9	1	165		442.3	Measured	0.249	Calculated	186.3	Measured	0.105	Calculated	236.3	Measured	0.133	Measured	1776.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/7/2025	10	1	166		426.6	Measured	0.239	Calculated	187.1	Measured	0.105	Calculated	240.8	Measured	0.135	Measured	1783.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/7/2025	11	1	165		417.1	Measured	0.234	Calculated	187.2	Measured	0.105	Calculated	233.8	Measured	0.131	Measured	1784.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/7/2025	12	1	165		428.5	Measured	0.238	Calculated	188.7	Measured	0.105	Calculated	235.7	Measured	0.131	Measured	1799.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/7/2025	13	1	165		440.9	Measured	0.244	Calculated	189.2	Measured	0.105	Calculated	238.2	Measured	0.132	Measured	1804.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/7/2025	14	1	164		475.8	Measured	0.267	Calculated	187	Measured	0.105	Calculated	246	Measured	0.138	Measured	1782.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/7/2025	15	1	165		472.9	Measured	0.262	Calculated	189.1	Measured	0.105	Calculated	236.2	Measured	0.131	Measured	1802.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/7/2025	16	1	165		445.6	Measured	0.247	Calculated	189.4	Measured	0.105	Calculated	240.1	Measured	0.133	Measured	1805.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/7/2025	17	1	166		435.8	Measured	0.241	Calculated	189.8	Measured	0.105	Calculated	242.5	Measured	0.134	Measured	1809.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/7/2025	18	1	166		459.1	Measured	0.255	Calculated	189	Measured	0.105	Calculated	237.9	Measured	0.132	Measured	1802.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/7/2025	19	1	165		442.9	Measured	0.249	Calculated	186.7	Measured	0.105	Calculated	242.1	Measured	0.136	Measured	1780.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/7/2025	20	1	165		439.8	Measured	0.246	Calculated	187.7	Measured	0.105	Calculated	247	Measured	0.138	Measured	1789.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/7/2025	21	1	166		452.1	Measured	0.253	Calculated	187.7	Measured	0.105	Calculated	245.2	Measured	0.137	Measured	1790.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/7/2025	22	1	165		483.4	Measured	0.269	Calculated	188.7	Measured	0.105	Calculated	246.5	Measured	0.137	Measured	1799.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/7/2025	23	1	165		473.1	Measured	0.267	Calculated	186.1	Measured	0.105	Calculated	243.1	Measured	0.137	Measured	1774.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/8/2025	0	1	165		451.9	Measured	0.254	Calculated	186.8	Measured	0.105	Calculated	240.4	Measured	0.135	Measured	1781.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/8/2025	1	1	165		395.4	Measured	0.222	Calculated	187	Measured	0.105	Calculated	242.5	Measured	0.136	Measured	1782.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/8/2025	2	1	165		404.8	Measured	0.229	Calculated	185.8	Measured	0.105	Calculated	244.5	Measured	0.138	Measured	1771.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/8/2025	3	1	165		429.6	Measured	0.242	Calculated	186.5	Measured	0.105	Calculated	249	Measured	0.14	Measured	1778.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/8/2025	4	1	165		436.9	Measured	0.25	Calculated	183.3	Measured	0.105	Calculated	246.5	Measured	0.141	Measured	1747.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/8/2025	5	1	165		429.4	Measured	0.243	Calculated	185.1	Measured	0.105	Calculated	247.1	Measured	0.14	Measured	1765.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/8/2025	6	1	166		442.5	Measured	0.25	Calculated	185.3	Measured	0.105	Calculated	245.6	Measured	0.139	Measured	1767.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/8/2025	7	1	165		446.1	Measured	0.251	Calculated	186.4	Measured	0.105	Calculated	247.1	Measured	0.139	Measured	1777.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/8/2025	8	1	165		446.1	Measured	0.252	Calculated	185.4	Measured	0.105	Calculated	254.5	Measured	0.144	Measured	1767.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/8/2025	9	1	165		443.9	Measured	0.25	Calculated	186.5	Measured	0.105	Calculated	249	Measured	0.14	Measured	1778.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/8/2025	10	1	166		453.9	Measured	0.253	Calculated	187.9	Measured	0.105	Calculated	247.2	Measured	0.138	Measured	1791.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/8/2025	11	1	165		464.7	Measured	0.262	Calculated	186	Measured	0.105	Calculated	244.8	Measured	0.138	Measured	1773.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/8/2025	12	1	165		459.7	Measured	0.26	Calculated	185.6	Measured	0.105	Calculated	244.2	Measured	0.138	Measured	1769.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/8/2025	13	1	165		445.4	Measured	0.251	Calculated	186	Measured	0.105	Calculated	246.4	Measured	0.139	Measured	1773	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/8/2025	14	1	165		428.7	Measured	0.242	Calculated	185.5	Measured	0.105	Calculated	244	Measured	0.138	Measured	1768.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/8/2025	15	1	165		433.9	Measured	0.245	Calculated	185.8	Measured	0.105	Calculated	246.3	Measured	0.139	Measured	1771.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/8/2025	16	1	165		448.9	Measured	0.252	Calculated	186.6	Measured	0.105	Calculated	249.1	Measured	0.14	Measured	1779.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/8/2025	17	1	165		451	Measured	0.254	Calculated	186.5	Measured	0.105	Calculated	254.2	Measured	0.143	Measured	1777.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/8/2025	18	1	166		439.6	Measured	0.247	Calculated	186.4	Measured	0.105	Calculated	257.7	Measured	0.145	Measured	1776.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/8/2025	19	1	165		431	Measured	0.246	Calculated	183.9	Measured	0.105	Calculated	257.8	Measured	0.147	Measured	1753.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/8/2025	20	1	165		424	Measured	0.24	Calculated	184.9	Measured	0.105	Calculated	252.1	Measured	0.143	Measured	1763.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/8/2025	21	1	166		434.2	Measured	0.247	Calculated	184.7	Measured	0.105	Calculated	250	Measured	0.142	Measured	1760.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/8/2025	22	1	165		436.9	Measured	0.248	Calculated	184.4	Measured	0.105	Calculated	251.5	Measured	0.143	Measured	1758.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/8/2025	23	1	165		444.1	Measured	0.255	Calculated	182.7	Measured	0.105	Calculated	249.1	Measured	0.143	Measured	1742.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/9/2025	0	1	165		446	Measured	0.255	Calculated	183.3	Measured	0.105	Calculated	248.2	Measured	0.142	Measured	1747.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/9/2025	1	1	166		445.1	Measured	0.253	Calculated	184.4	Measured	0.105	Calculated	246.2	Measured	0.14	Measured	1758.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/9/2025	2	1	165		468.6	Measured	0.267	Calculated	183.8	Measured	0.105	Calculated	252.3	Measured	0.144	Measured	1752.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/9/2025	3	1	166		435.9	Measured	0.247	Calculated	184.8	Measured	0.105	Calculated	260.8	Measured	0.148	Measured	1761.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/9/2025	4	1	165		422.7	Measured	0.246	Calculated	180.4	Measured	0.105	Calculated	254.6	Measured	0.148	Measured	1720.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/9/2025	5	1	165		439.7	Measured	0.251	Calculated	183.4	Measured	0.105	Calculated	257	Measured	0.147	Measured	1748.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/9/2025	6	1	165		435.9	Measured	0.248	Calculated	184	Measured	0.105	Calculated	249.1	Measured	0.142	Measured	1754.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/9/2025	7	1	165		448	Measured	0.255	Calculated	183.9	Measured	0.105	Calculated	249	Measured	0.142	Measured	1753.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/9/2025	8	1	164		432	Measured	0.247	Calculated	183.2	Measured	0.105	Calculated	246.2	Measured	0.141	Measured	1746.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/9/2025	9	1	160		433.4	Measured	0.254	Calculated	179.3	Measured	0.105	Calculated	244.4	Measured	0.143	Measured	1709.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/9/2025	10	1	160		759.4	Measured	0.446	Calculated	178.8	Measured	0.105	Calculated	260.8	Measured	0.153	Measured	1704.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/9/2025	11	1	160		811.7	Measured	0.474	Calculated	179.7	Measured	0.105	Calculated	269	Measured	0.157	Measured	1713.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/9/2025	12	1	160		519.3	Measured	0.304	Calculated	179.3	Measured	0.105	Calculated	258.2	Measured	0.151	Measured	1709.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/9/2025	13	1	161		430.8	Measured	0.251	Calculated	179.9	Measured	0.105	Calculated	252.2	Measured	0.147	Measured	1715.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/9/2025	14	1	160		417.9	Measured	0.244	Calculated	179.6	Measured	0.105	Calculated	251.7	Measured	0.147	Measured	1712.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/9/2025	15	1	160		384.5	Measured	0.227	Calculated	177.3	Measured	0.105	Calculated	250.3	Measured	0.148	Measured	1690.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/9/2025	16	1	160		379	Measured	0.221	Calculated	180.1	Measured	0.105	Calculated	269.5	Measured	0.157	Measured	1716.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/9/2025	17	1	173		449.5	Measured	0.246	Calculated	191.5	Measured	0.105	Calculated	248.3	Measured	0.136	Measured	1825.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/9/2025	18	1	223		612.9	Measured	0.27	Calculated	238.5	Measured	0.105	Calculated	316	Measured	0.139	Measured	2273.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/9/2025	19	1	231		591.9	Measured	0.254	Calculated	244.2	Measured	0.105	Calculated	353.8	Measured	0.152	Measured	2327.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS

State	Facility Name	Facility ID	Unit ID	Associated Stacks	Date	Hour	Operating Time	Gross Load (MW)	Steam Load (1000 lb/hr)	SO2 Mass (lbs)	SO2 Mass Measure Indicator	SO2 Rate (lbs/mmBtu)	SO2 Rate Measure Indicator	CO2 Mass (short tons)	CO2 Mass Measure Indicator	CO2 Rate (short tons/mmBtu)	CO2 Rate Measure Indicator	NOx Mass (lbs)	NOx Mass Measure Indicator	NOx Rate (lbs/mmBtu)	NOx Rate Measure Indicator	Heat Input (mmBtu)	Heat Input Measure Indicator	Primary Fuel Type	Secondary Fuel Type	Unit Type	SO2 Controls	NOx Controls	PM Controls	Hg Controls	Program Code
MI	J H Campbell	1710	1		6/9/2025	20	1	233		568.4	Measured	0.242	Calculated	246.1	Measured	0.105	Calculated	349.6	Measured	0.149	Measured	2346.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/9/2025	21	1	234		591.8	Measured	0.251	Calculated	247.7	Measured	0.105	Calculated	354.3	Measured	0.15	Measured	2361.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/9/2025	22	1	222		574.8	Measured	0.255	Calculated	236.8	Measured	0.105	Calculated	352.2	Measured	0.156	Measured	2257.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		6/9/2025	23	1	172		509	Measured	0.276	Calculated	193.2	Measured	0.105	Calculated	267.2	Measured	0.145	Measured	1842.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	0	1	221		639.2	Measured	0.282	Calculated	237.5	Measured	0.105	Calculated	317	Measured	0.14	Measured	2264.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	1	1	232		620.2	Measured	0.263	Calculated	247.3	Measured	0.105	Calculated	363.2	Measured	0.154	Measured	2358.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	2	1	232		607.1	Measured	0.258	Calculated	247.2	Measured	0.105	Calculated	363	Measured	0.154	Measured	2357.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	3	1	233		609.2	Measured	0.257	Calculated	248.4	Measured	0.105	Calculated	360	Measured	0.152	Measured	2368.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	4	1	232		560.1	Measured	0.24	Calculated	244.8	Measured	0.105	Calculated	359.5	Measured	0.154	Measured	2334.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	5	1	233		578.9	Measured	0.244	Calculated	248.7	Measured	0.105	Calculated	365.2	Measured	0.154	Measured	2371.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	6	1	233		609.7	Measured	0.258	Calculated	247.9	Measured	0.105	Calculated	361.6	Measured	0.153	Measured	2363.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	7	1	233		603.1	Measured	0.255	Calculated	248.2	Measured	0.105	Calculated	355	Measured	0.15	Measured	2366.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	8	1	232		598	Measured	0.254	Calculated	247.3	Measured	0.105	Calculated	353.7	Measured	0.15	Measured	2358.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	9	1	233		597.8	Measured	0.253	Calculated	248	Measured	0.105	Calculated	352.3	Measured	0.149	Measured	2364.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	10	1	233		612.4	Measured	0.26	Calculated	247	Measured	0.105	Calculated	353.3	Measured	0.15	Measured	2355.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	11	1	233		619	Measured	0.262	Calculated	247.7	Measured	0.105	Calculated	349.6	Measured	0.148	Measured	2362	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	12	1	232		632.2	Measured	0.268	Calculated	247.7	Measured	0.105	Calculated	352	Measured	0.149	Measured	2362.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	13	1	233		628.6	Measured	0.265	Calculated	248.4	Measured	0.105	Calculated	360	Measured	0.152	Measured	2368.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	14	1	233		632.4	Measured	0.268	Calculated	247.5	Measured	0.105	Calculated	354	Measured	0.15	Measured	2360.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	15	1	232		635.8	Measured	0.271	Calculated	246.5	Measured	0.105	Calculated	347.8	Measured	0.148	Measured	2350.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	16	1	233		618.7	Measured	0.264	Calculated	246.2	Measured	0.105	Calculated	347.4	Measured	0.148	Measured	2347.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	17	1	232		616.6	Measured	0.263	Calculated	245.6	Measured	0.105	Calculated	344.2	Measured	0.147	Measured	2341.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	18	1	233		618.9	Measured	0.264	Calculated	246.3	Measured	0.105	Calculated	342.8	Measured	0.146	Measured	2347.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	19	1	233		620.1	Measured	0.265	Calculated	245.8	Measured	0.105	Calculated	344.5	Measured	0.147	Measured	2343.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	20	1	232		611.8	Measured	0.26	Calculated	246.8	Measured	0.105	Calculated	345.9	Measured	0.147	Measured	2352.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	21	1	233		615.7	Measured	0.26	Calculated	248.6	Measured	0.105	Calculated	350.8	Measured	0.148	Measured	2370.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	22	1	232		643.1	Measured	0.272	Calculated	248.1	Measured	0.105	Calculated	350.2	Measured	0.148	Measured	2366	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	23	1	233		659.7	Measured	0.279	Calculated	248.2	Measured	0.105	Calculated	350.3	Measured	0.148	Measured	2366.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	0	1	233		652.8	Measured	0.276	Calculated	247.7	Measured	0.105	Calculated	349.5	Measured	0.148	Measured	2361.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	1	1	233		637.6	Measured	0.271	Calculated	246.9	Measured	0.105	Calculated	348.5	Measured	0.148	Measured	2354.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	2	1	232		638.5	Measured	0.272	Calculated	245.9	Measured	0.105	Calculated	340	Measured	0.145	Measured	2344.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	3	1	233		626.4	Measured	0.264	Calculated	248.7	Measured	0.105	Calculated	343.8	Measured	0.145	Measured	2370.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	4	1	233		590.7	Measured	0.255	Calculated	243.4	Measured	0.105	Calculated	338.8	Measured	0.146	Measured	2320.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	5	1	233		582	Measured	0.248	Calculated	245.6	Measured	0.105	Calculated	339.6	Measured	0.145	Measured	2342.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	6	1	233		609.2	Measured	0.258	Calculated	247.5	Measured	0.105	Calculated	344.5	Measured	0.146	Measured	2359.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	7	1	232		631.8	Measured	0.269	Calculated	246.6	Measured	0.105	Calculated	350.3	Measured	0.149	Measured	2351.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	8	1	233		609.7	Measured	0.258	Calculated	247.6	Measured	0.105	Calculated	344.6	Measured	0.146	Measured	2360.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	9	1	233		619.1	Measured	0.261	Calculated	249	Measured	0.105	Calculated	339.5	Measured	0.143	Measured	2373.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	10	1	233		619.3	Measured	0.261	Calculated	248.8	Measured	0.105	Calculated	344	Measured	0.145	Measured	2372.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	11	1	232		641	Measured	0.27	Calculated	249.2	Measured	0.105	Calculated	346.9	Measured	0.146	Measured	2376	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	12	1	233		642.4	Measured	0.272	Calculated	247.9	Measured	0.105	Calculated	349.8	Measured	0.148	Measured	2363.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	13	1	233		592.7	Measured	0.248	Calculated	250.2	Measured	0.105	Calculated	350.7	Measured	0.147	Measured	2385.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	14	1	233		563.7	Measured	0.237	Calculated	249.8	Measured	0.105	Calculated	347.8	Measured	0.146	Measured	2382.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	15	1	233		603.5	Measured	0.254	Calculated	248.8	Measured	0.105	Calculated	344	Measured	0.145	Measured	2372.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	16	1	233		627.2	Measured	0.264	Calculated	248.9	Measured	0.105	Calculated	351.2	Measured	0.148	Measured	2373.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	17	1	233		641.4	Measured	0.27	Calculated	249.1	Measured	0.105	Calculated	346.8	Measured	0.146	Measured	2375.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	18	1	233		631.7	Measured	0.264	Calculated	251.1	Measured	0.105	Calculated	347.2	Measured	0.145	Measured	2394.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	19	1	233		618.7	Measured	0.261	Calculated	248.4	Measured	0.105	Calculated	345.8	Measured	0.146	Measured	2368.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	20	1	232		639.4	Measured	0.271	Calculated	247.2	Measured	0.105	Calculated	348.9	Measured	0.148	Measured	2357.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	21	1	232		626	Measured	0.262	Calculated	250.3	Measured	0.105	Calculated	358	Measured	0.15	Measured	2386.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	22	1	233		651.7	Measured	0.273	Calculated	250.5	Measured	0.105	Calculated	353.5	Measured	0.148	Measured	2388.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	23	1	233		659.1	Measured	0.279	Calculated	248.2	Measured	0.105	Calculated	352.6	Measured	0.149	Measured	2366.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	0	1	232		646	Measured	0.272	Calculated	249	Measured	0.105	Calculated	346.7	Measured	0.146	Measured	2374.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	1	1	233		707.9	Measured	0.299	Calculated	248.3	Measured	0.105	Calculated	348	Measured	0.147	Measured	2367.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	2	1	232		749	Measured	0.314	Calculated	250.3	Measured	0.105	Calculated	350.8	Measured	0.147	Measured	2386.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	3	1	233		673.1	Measured	0.282	Calculated	250.7	Measured	0.105	Calculated	349	Measured	0.146	Measured	2390.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	4	1	176		515.8	Measured	0.272	Calculated	198.8	Measured	0.105	Calculated	246.4	Measured	0.13	Measured	1895.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	5	1	171		510.9	Measured	0.273	Calculated	196.1	Measured	0.105	Calculated	239.3	Measured	0.128	Measured	1869.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	6	1	173		499.2	Measured	0.264	Calculated	198.1	Measured	0.105	Calculated	228.6	Measured	0.121	Measured	1889.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	7	1	172		507.2	Measured	0.272	Calculated	195.6	Measured	0.105	Calculated	225.7	Measured	0.121	Measured	1865	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	8	1	177		494	Measured	0.257	Calculated	201.4	Measured	0.105	Calculated	226.6	Measured	0.118	Measured	1920.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	9	1	177		492.6	Measured	0.255	Calculated	202.3	Measured	0.105	Calculated	227.6	Measured	0.118	Measured	1928.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	10	1	177		484.7	Measured	0.252	Calculated	201.9	Measured	0.105	Calculated	223.4	Measured	0.116	Measured	1925.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	11	1	177		467.4	Measured	0.243	Calculated	201.9	Measured	0.105	Calculated	223.3	Measured	0.116	Measured	1925.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	12	1	179		465.5	Measured	0.238	Calculated	205.5	Measured	0.105	Calculated	235.1	Measured	0.12	Measured	1959.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	13	1	222		601.2	Measured	0.258	Calculated	244.8	Measured	0.105	Calculated	322.1	Measured	0.138	Measured	2333.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	14	1	231		586.4	Measured	0.244	Calculated	251.7	Measured	0.105	Calculated	352.8	Measured	0.147	Measured	2400	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	15	1	231		586.8	Measured	0.246	Calculated	250.3	Measured	0.105	Calculated	353.2	Measured	0.148	Measured	2386.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	16	1	231		592	Measured	0.246	Calculated	252.5	Measured	0.105	Calculated	351.5	Measured	0.146	Measured	2407.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	17	1	232		584.1	Measured	0.243	Calculated	252	Measured	0.105	Calculated	353.2	Measured	0.147	Measured	2402.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	18	1	232		592.3	Measured	0.247	Calculated	251.3	Measured	0.105	Calculated	352.3	Measured	0.147	Measured	2396.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	19	1	232		596.2	Measured	0.25	Calculated	250.4	Measured	0.105	Calculated	346.2	Measured	0.145	Measured	2387.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	20	1	231		594.9	Measured	0.248	Calculated	251.2	Measured	0.105	Calculated	352.1	Measured	0.147	Measured	2395.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	21	1	232		586.8	Measured	0.243	Calculated	253.2	Measured	0.105	Calculated	362.1	Measured	0.15	Measured	2414	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	22	1	232		593	Measured	0.246	Calculated	253.2	Measured	0.105	Calculated	359.7	Measured	0.149	Measured	2414.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	23	1	231		593.7	Measured	0.247	Calculated	251.7	Measured	0.105	Calculated	355.1	Measured	0.148	Measured	2399.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	0	1	232		611.2	Measured	0.255	Calculated	251.8	Measured	0.105	Calculated	360.2	Measured	0.15	Measured	2401.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	1	1	232		599.5	Measured	0.249	Calculated	252.1	Measured	0.105	Calculated	353.3	Measured	0.147	Measured	2403.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	2	1	231		598.9	Measured	0.25	Calculated	250.8	Measured	0.105	Calculated	351.5	Measured	0.147	Measured	2391.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	3	1	232		597.6	Measured	0.25	Calculated	250.8	Measured	0.105	Calculated	349.1	Measured	0.146	Measured	2390.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	4	1	232		598.6	Measured	0.254	Calculated	247.5	Measured	0.105	Calculated	346.9	Measured	0.147	Measured	2359.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	5	1	231		603.2	Measured	0.252	Calculated	250.6	Measured	0.105	Calculated	351.2	Measured	0.147	Measured	2389	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	6	1	232		595.9	Measured	0.25	Calculated	250.3	Measured	0.105	Calculated	346.1	Measured	0.145	Measured	2386.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	7	1	232		585.1	Measured	0.244	Calculated	251.1	Measured	0.105	Calculated	347.2	Measured	0.145	Measured	2394.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	8	1	232		597.2	Measured	0.251	Calculated	249.1	Measured	0.105	Calculated	334.9	Measured	0.141	Measured	2374.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	9	1	231		600.7	Measured	0.252	Calculated	250.1	Measured	0.105	Calculated	333.8	Measured	0.14	Measured	2384.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	10	1	232		599.3	Measured	0.25	Calculated	251.3	Measured	0.105	Calculated	337.8	Measured	0.141	Measured	2395.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	11	1	232		598.6	Measured	0.251	Calculated	249.6	Measured	0.105	Calculated	340.4	Measured	0.143	Measured	2380.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	12	1	231		654.6	Measured	0.276	Calculated	248.8	Measured	0.105	Calculated	339.3	Measured	0.143	Measured	2372.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	13	1	232		714	Measured	0.299	Calculated	250.4	Measured	0.105	Calculated	341.4	Measured	0.143	Measured	2387.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	14	1	232		533.1	Measured	0.225	Calculated	248.8	Measured	0.105	Calculated	329.7	Measured	0.139	Measured	2372	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	15	1	231		584.7	Measured	0.246	Calculated	249.1	Measured	0.105	Calculated	334.9	Measured	0.141	Measured	2375.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	16	1	232		549	Measured	0.231	Calculated	248.9	Measured	0.105	Calculated	339.3	Measured	0.143	Measured	2372.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	17	1	232		581.5	Measured	0.245	Calculated	248.8	Measured	0.105	Calculated	336.9	Measured	0.142	Measured	2372.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	18	1	232		591.8	Measured	0.25	Calculated	248.6	Measured	0.105	Calculated	341.3	Measured	0.144	Measured	2370.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	19	1	232		589	Measured	0.248	Calculated	248.7	Measured	0.105	Calculated	343.8	Measured	0.145	Measured	2371.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	20	1	231		588	Measured	0.247	Calculated	249.5	Measured	0.105	Calculated	347.4	Measured	0.146	Measured	2379.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	21	1	232		592.1	Measured	0.248	Calculated	250	Measured	0.105	Calculated	343.2	Measured	0.144	Measured	2383.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	22	1	232		599.7	Measured	0.252	Calculated	249.6	Measured	0.105	Calculated	340.3	Measured	0.143	Measured	2380	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	23	1	232		601.5	Measured	0.254	Calculated	248.5	Measured	0.105	Calculated	343.5	Measured	0.145	Measured	2369.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	0	1	232		607.9	Measured	0.256	Calculated	249.2	Measured	0.105	Calculated	339.8	Measured	0.143	Measured	2376.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	1	1	232		603.1	Measured	0.255	Calculated	248.3	Measured	0.105	Calculated	336.1	Measured	0.142	Measured	2367.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	2	1	231		569.7	Measured	0.241	Calculated	247.6	Measured	0.105	Calculated	335.2	Measured	0.142	Measured	2360.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	3	1	232		582.7	Measured	0.246	Calculated	248.8	Measured	0.105	Calculated	332.2	Measured	0.14	Measured	2372.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	4	1	232		581.1	Measured	0.248	Calculated	246	Measured	0.105	Calculated	330.8	Measured	0.141	Measured	2345.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	5	1	232		595.7	Measured	0.252	Calculated	248.2	Measured	0.105	Calculated	336	Measured	0.142	Measured	2366.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS

State	Facility Name	Facility ID	Unit ID	Associated Stacks	Date	Hour	Operating Time	Gross Load (MW)	Steam Load (1000 lb/hr)	SO2 Mass (lbs)	SO2 Mass Measure Indicator	SO2 Rate (lbs/mmBtu)	SO2 Rate Measure Indicator	CO2 Mass (short tons)	CO2 Mass Measure Indicator	CO2 Rate (short tons/mmBtu)	CO2 Rate Measure Indicator	NOx Mass (lbs)	NOx Mass Measure Indicator	NOx Rate (lbs/mmBtu)	NOx Rate Measure Indicator	Heat Input (mmBtu)	Heat Input Measure Indicator	Primary Fuel Type	Secondary Fuel Type	Unit Type	SO2 Controls	NOx Controls	PM Controls	Hg Controls	Program Code
MI	J H Campbell	1710	1		#######	6	1	232		600.8	Measured	0.254	Calculated	248.1	Measured	0.105	Calculated	335.9	Measured	0.142	Measured	2365.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	7	1	232		584	Measured	0.246	Calculated	248.6	Measured	0.105	Calculated	339	Measured	0.143	Measured	2370.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	8	1	231		589.3	Measured	0.248	Calculated	248.8	Measured	0.105	Calculated	339.2	Measured	0.143	Measured	2372.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	9	1	232		593.7	Measured	0.249	Calculated	249.6	Measured	0.105	Calculated	340.4	Measured	0.143	Measured	2380.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	10	1	232		619.2	Measured	0.261	Calculated	249.1	Measured	0.105	Calculated	337.3	Measured	0.142	Measured	2375.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	11	1	231		603.2	Measured	0.255	Calculated	248	Measured	0.105	Calculated	335.8	Measured	0.142	Measured	2365	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	12	1	232		601.8	Measured	0.254	Calculated	248.2	Measured	0.105	Calculated	338.5	Measured	0.143	Measured	2366.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	13	1	232		602.6	Measured	0.251	Calculated	251.3	Measured	0.105	Calculated	340.3	Measured	0.142	Measured	2396.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	14	1	232		590.3	Measured	0.249	Calculated	248.7	Measured	0.105	Calculated	343.8	Measured	0.145	Measured	2371.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	15	1	232		595.6	Measured	0.253	Calculated	247.3	Measured	0.105	Calculated	339.6	Measured	0.144	Measured	2358.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	16	1	232		607.8	Measured	0.258	Calculated	246.9	Measured	0.105	Calculated	341.3	Measured	0.145	Measured	2353.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	17	1	231		601.1	Measured	0.256	Calculated	246.4	Measured	0.105	Calculated	345.3	Measured	0.147	Measured	2349	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	18	1	232		588.9	Measured	0.251	Calculated	246.3	Measured	0.105	Calculated	345.2	Measured	0.147	Measured	2348.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	19	1	232		611.1	Measured	0.259	Calculated	247.5	Measured	0.105	Calculated	349.2	Measured	0.148	Measured	2359.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	20	1	231		602.3	Measured	0.255	Calculated	248.1	Measured	0.105	Calculated	350.1	Measured	0.148	Measured	2365.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	21	1	231		597.6	Measured	0.252	Calculated	248.5	Measured	0.105	Calculated	348.3	Measured	0.147	Measured	2369.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	22	1	232		651.1	Measured	0.273	Calculated	250.3	Measured	0.105	Calculated	350.8	Measured	0.147	Measured	2386.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	23	1	231		957.9	Measured	0.404	Calculated	248.7	Measured	0.105	Calculated	358	Measured	0.151	Measured	2370.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	0	1	232		689.4	Measured	0.291	Calculated	248.2	Measured	0.105	Calculated	347.9	Measured	0.147	Measured	2366.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	1	1	232		637.5	Measured	0.268	Calculated	249.4	Measured	0.105	Calculated	344.9	Measured	0.145	Measured	2378.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	2	1	232		641.5	Measured	0.272	Calculated	247.5	Measured	0.105	Calculated	344.6	Measured	0.146	Measured	2360	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	3	1	231		613.6	Measured	0.258	Calculated	249.6	Measured	0.105	Calculated	345	Measured	0.145	Measured	2379.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	4	1	232		571.7	Measured	0.243	Calculated	246.7	Measured	0.105	Calculated	336.4	Measured	0.143	Measured	2352.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	5	1	232		573.7	Measured	0.241	Calculated	249.4	Measured	0.105	Calculated	337.6	Measured	0.142	Measured	2377.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	6	1	232		573.6	Measured	0.241	Calculated	249.3	Measured	0.105	Calculated	337.5	Measured	0.142	Measured	2377.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	7	1	232		602	Measured	0.255	Calculated	248	Measured	0.105	Calculated	338.1	Measured	0.143	Measured	2364.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	8	1	231		588.2	Measured	0.248	Calculated	248.5	Measured	0.105	Calculated	336.5	Measured	0.142	Measured	2369.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	9	1	232		594.9	Measured	0.251	Calculated	248.8	Measured	0.105	Calculated	339.2	Measured	0.143	Measured	2372.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	10	1	231		583.9	Measured	0.246	Calculated	249.3	Measured	0.105	Calculated	344.7	Measured	0.145	Measured	2377.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	11	1	232		602.4	Measured	0.252	Calculated	250.4	Measured	0.105	Calculated	346.2	Measured	0.145	Measured	2387.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	12	1	231		596.1	Measured	0.25	Calculated	249.8	Measured	0.105	Calculated	347.7	Measured	0.146	Measured	2381.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	13	1	232		608.7	Measured	0.254	Calculated	251.6	Measured	0.105	Calculated	347.8	Measured	0.145	Measured	2398.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	14	1	232		585.6	Measured	0.244	Calculated	251.3	Measured	0.105	Calculated	345.1	Measured	0.144	Measured	2396.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	15	1	232		585.6	Measured	0.244	Calculated	251.3	Measured	0.105	Calculated	345.1	Measured	0.144	Measured	2396.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	16	1	232		581.9	Measured	0.245	Calculated	248.7	Measured	0.105	Calculated	341.5	Measured	0.144	Measured	2371.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	17	1	232		578.8	Measured	0.245	Calculated	247.9	Measured	0.105	Calculated	333.3	Measured	0.141	Measured	2363.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	18	1	231		608.4	Measured	0.257	Calculated	247.9	Measured	0.105	Calculated	335.6	Measured	0.142	Measured	2363.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	19	1	232		599.5	Measured	0.253	Calculated	248.4	Measured	0.105	Calculated	338.7	Measured	0.143	Measured	2368.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	20	1	231		593.5	Measured	0.249	Calculated	249.5	Measured	0.105	Calculated	342.6	Measured	0.144	Measured	2379.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	21	1	232		585.7	Measured	0.247	Calculated	248.8	Measured	0.105	Calculated	348.7	Measured	0.147	Measured	2372.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	22	1	232		591.5	Measured	0.248	Calculated	249.9	Measured	0.105	Calculated	350.3	Measured	0.147	Measured	2383.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	23	1	232		584.5	Measured	0.245	Calculated	250.1	Measured	0.105	Calculated	348.1	Measured	0.146	Measured	2384.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	0	1	232		603.4	Measured	0.255	Calculated	247.7	Measured	0.105	Calculated	349.6	Measured	0.148	Measured	2361.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	1	1	232		584.6	Measured	0.247	Calculated	248.3	Measured	0.105	Calculated	343.3	Measured	0.145	Measured	2367.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	2	1	232		585.6	Measured	0.247	Calculated	249	Measured	0.105	Calculated	341.9	Measured	0.144	Measured	2374.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	3	1	231		577.5	Measured	0.243	Calculated	249.4	Measured	0.105	Calculated	340.1	Measured	0.143	Measured	2378.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	4	1	231		530.2	Measured	0.225	Calculated	246.9	Measured	0.105	Calculated	339	Measured	0.144	Measured	2354.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	5	1	232		554.2	Measured	0.233	Calculated	249.1	Measured	0.105	Calculated	346.8	Measured	0.146	Measured	2375.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	6	1	232		581.6	Measured	0.244	Calculated	250.4	Measured	0.105	Calculated	355.8	Measured	0.149	Measured	2387.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	7	1	232		608.6	Measured	0.255	Calculated	250.2	Measured	0.105	Calculated	350.7	Measured	0.147	Measured	2385.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	8	1	232		601.8	Measured	0.253	Calculated	249.9	Measured	0.105	Calculated	347.9	Measured	0.146	Measured	2382.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	9	1	231		629.5	Measured	0.263	Calculated	251	Measured	0.105	Calculated	349.4	Measured	0.146	Measured	2392.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	10	1	232		632	Measured	0.262	Calculated	252.8	Measured	0.105	Calculated	344.7	Measured	0.143	Measured	2410.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	11	1	232		626.6	Measured	0.261	Calculated	251.8	Measured	0.105	Calculated	345.7	Measured	0.144	Measured	2400.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	12	1	232		611.2	Measured	0.255	Calculated	251.8	Measured	0.105	Calculated	352.9	Measured	0.147	Measured	2400.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	13	1	232		539.6	Measured	0.225	Calculated	251.4	Measured	0.105	Calculated	354.7	Measured	0.148	Measured	2396.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	14	1	232		539.6	Measured	0.225	Calculated	252	Measured	0.105	Calculated	358	Measured	0.149	Measured	2402.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	15	1	232		592.4	Measured	0.247	Calculated	251.6	Measured	0.105	Calculated	355.1	Measured	0.148	Measured	2399.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	16	1	231		640	Measured	0.267	Calculated	251	Measured	0.105	Calculated	356.6	Measured	0.149	Measured	2393.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	17	1	232		624.3	Measured	0.261	Calculated	251.1	Measured	0.105	Calculated	349.5	Measured	0.146	Measured	2393.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	18	1	232		602.9	Measured	0.254	Calculated	249.3	Measured	0.105	Calculated	347.1	Measured	0.146	Measured	2377.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	19	1	232		586.2	Measured	0.247	Calculated	249	Measured	0.105	Calculated	346.6	Measured	0.146	Measured	2374.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	20	1	231		589.2	Measured	0.248	Calculated	249.5	Measured	0.105	Calculated	347.3	Measured	0.146	Measured	2379	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	21	1	232		581.1	Measured	0.245	Calculated	248.9	Measured	0.105	Calculated	344.1	Measured	0.145	Measured	2373.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	22	1	232		717.3	Measured	0.302	Calculated	249.2	Measured	0.105	Calculated	349.3	Measured	0.147	Measured	2376.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	23	1	232		966.1	Measured	0.406	Calculated	249.9	Measured	0.105	Calculated	359.7	Measured	0.151	Measured	2382.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	0	1	185		565.5	Measured	0.293	Calculated	202.2	Measured	0.105	Calculated	273.8	Measured	0.142	Measured	1928.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	1	1	216		592.9	Measured	0.265	Calculated	234.8	Measured	0.105	Calculated	297.8	Measured	0.133	Measured	2239	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	2	1	232		576.4	Measured	0.244	Calculated	247.7	Measured	0.105	Calculated	347.1	Measured	0.147	Measured	2361.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	3	1	231		588.1	Measured	0.248	Calculated	248.5	Measured	0.105	Calculated	343.6	Measured	0.145	Measured	2369.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	4	1	231		641.3	Measured	0.275	Calculated	244.9	Measured	0.105	Calculated	347.9	Measured	0.149	Measured	2335	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	5	1	231		644.9	Measured	0.274	Calculated	246.7	Measured	0.105	Calculated	355.2	Measured	0.151	Measured	2352.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	6	1	232		593.7	Measured	0.251	Calculated	248	Measured	0.105	Calculated	354.7	Measured	0.15	Measured	2364.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	7	1	232		567.5	Measured	0.239	Calculated	249.1	Measured	0.105	Calculated	353.9	Measured	0.149	Measured	2375.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	8	1	231		599.9	Measured	0.254	Calculated	247.4	Measured	0.105	Calculated	356.2	Measured	0.151	Measured	2359.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	9	1	232		612	Measured	0.258	Calculated	249.2	Measured	0.105	Calculated	358.8	Measured	0.151	Measured	2376.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	10	1	232		621.3	Measured	0.262	Calculated	248.2	Measured	0.105	Calculated	355.1	Measured	0.15	Measured	2367	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	11	1	232		633.7	Measured	0.267	Calculated	249.3	Measured	0.105	Calculated	354.1	Measured	0.149	Measured	2376.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	12	1	232		635.2	Measured	0.267	Calculated	249.6	Measured	0.105	Calculated	359.4	Measured	0.151	Measured	2380.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	13	1	232		634.4	Measured	0.264	Calculated	252	Measured	0.105	Calculated	362.8	Measured	0.151	Measured	2402.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	14	1	232		602.2	Measured	0.251	Calculated	252.1	Measured	0.105	Calculated	358.1	Measured	0.149	Measured	2403.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	15	1	232		643.9	Measured	0.268	Calculated	251.8	Measured	0.105	Calculated	355.4	Measured	0.148	Measured	2401.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	16	1	231		682.2	Measured	0.286	Calculated	250.1	Measured	0.105	Calculated	357.6	Measured	0.15	Measured	2384.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	17	1	231		668.2	Measured	0.278	Calculated	252.5	Measured	0.105	Calculated	363.6	Measured	0.151	Measured	2407.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	18	1	233		648.6	Measured	0.269	Calculated	253.2	Measured	0.105	Calculated	366.9	Measured	0.152	Measured	2414.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	19	1	232		652.5	Measured	0.273	Calculated	251.1	Measured	0.105	Calculated	361.5	Measured	0.151	Measured	2394.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	20	1	232		637	Measured	0.266	Calculated	250.8	Measured	0.105	Calculated	358.8	Measured	0.15	Measured	2391.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	21	1	232		632	Measured	0.269	Calculated	246.8	Measured	0.105	Calculated	360	Measured	0.153	Measured	2353.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	22	1	232		625.2	Measured	0.27	Calculated	243.2	Measured	0.105	Calculated	359.5	Measured	0.155	Measured	2319.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	23	1	232		618.2	Measured	0.267	Calculated	242.7	Measured	0.105	Calculated	356.3	Measured	0.154	Measured	2313.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	0	1	232		639	Measured	0.275	Calculated	243.3	Measured	0.105	Calculated	361.9	Measured	0.156	Measured	2320.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	1	1	232		629.8	Measured	0.27	Calculated	244.3	Measured	0.105	Calculated	363.4	Measured	0.156	Measured	2329.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	2	1	232		610.9	Measured	0.263	Calculated	243.2	Measured	0.105	Calculated	359.4	Measured	0.155	Measured	2318.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	3	1	232		620.1	Measured	0.267	Calculated	243.2	Measured	0.105	Calculated	359.4	Measured	0.155	Measured	2318.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	4	1	232		635.4	Measured	0.268	Calculated	248.7	Measured a	0.105	Calculated	343.9	Measured a	0.145	Substitute	2371.6	Measured a	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	5	1	251		663.4	Measured	0.259	Calculated	268.3	Measured a	0.105	Calculated	386.3	Measured a	0.151	Substitute	2558	Measured a	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	6	1	237		605.9	Measured	0.251	Calculated	252.8	Measured a	0.105	Calculated	349.5	Measured a	0.145	Substitute	2410.5	Measured a	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	7	1	235		621.6	Measured	0.252	Calculated	258.3	Measured	0.105	Calculated	359.5	Measured	0.146	Measured	2462.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	8	1	235		646	Measured	0.26	Calculated	260.7	Measured	0.105	Calculated	365.4	Measured	0.147	Measured	2485.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	9	1	235		659.9	Measured	0.273	Calculated	253.9	Measured	0.105	Calculated	363.2	Measured	0.15	Measured	2421	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	10	1	236		670.6	Measured	0.278	Calculated	253	Measured	0.105	Calculated	361.8	Measured	0.15	Measured	2412.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	11	1	235		661.7	Measured	0.272	Calculated	255.5	Measured	0.105	Calculated	358.2	Measured	0.147	Measured	2436.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	12	1	235		655.2	Measured	0.267	Calculated	257.8	Measured	0.105	Calculated	363.8	Measured	0.148	Measured	2458.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	13	1	235		647.5	Measured	0.262	Calculated	258.9	Measured	0.105	Calculated	367.9	Measured	0.149	Measured	2468.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	14	1	235		645.7	Measured	0.26	Calculated	260.5	Measured	0.105	Calculated	372.5	Measured	0.15	Measured	2483.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	15	1	235		661.3	Measured	0.266	Calculated	260.8	Measured	0.105	Calculated	370.6	Measured	0.149	Measured	2487.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS

State	Facility Name	Facility ID	Unit ID	Associated Stacks	Date	Hour	Operating Time	Gross Load (MW)	Steam Load (1000 lb/hr)	SO2 Mass (lbs)	SO2 Mass Measure Indicator	SO2 Rate (lbs/mmBtu)	SO2 Rate Measure Indicator	CO2 Mass (short tons)	CO2 Mass Measure Indicator	CO2 Rate (short tons/mmBtu)	CO2 Rate Measure Indicator	NOx Mass (lbs)	NOx Mass Measure Indicator	NOx Rate (lbs/mmBtu)	NOx Rate Measure Indicator	Heat Input (mmBtu)	Heat Input Measure Indicator	Primary Fuel Type	Secondary Fuel Type	Unit Type	SO2 Controls	NOx Controls	PM Controls	Hg Controls	Program Code
MI	J H Campbell	1710	1		#######	16	1	235		666.3	Measured	0.271	Calculated	258.3	Measured	0.105	Calculated	369.4	Measured	0.15	Measured	2462.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	17	1	235		680.8	Measured	0.276	Calculated	259	Measured	0.105	Calculated	363.1	Measured	0.147	Measured	2469.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	18	1	236		673.4	Measured	0.273	Calculated	258.8	Measured	0.105	Calculated	365.2	Measured	0.148	Measured	2467.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	19	1	235		660.6	Measured	0.269	Calculated	257.3	Measured	0.105	Calculated	372.9	Measured	0.152	Measured	2453.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	20	1	235		652.5	Measured	0.265	Calculated	258.3	Measured	0.105	Calculated	379.2	Measured	0.154	Measured	2462.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	21	1	236		651.6	Measured	0.265	Calculated	258.1	Measured	0.105	Calculated	376.5	Measured	0.153	Measured	2460.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	22	1	235		684.6	Measured	0.278	Calculated	258.6	Measured	0.105	Calculated	379.7	Measured	0.154	Measured	2465.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	23	1	235		875.9	Measured	0.358	Calculated	256.3	Measured	0.105	Calculated	386.2	Measured	0.158	Measured	2444.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	0	1	235		709.4	Measured	0.291	Calculated	255.9	Measured	0.105	Calculated	375.8	Measured	0.154	Measured	2440.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	1	1	235		665.6	Measured	0.274	Calculated	254.7	Measured	0.105	Calculated	369.1	Measured	0.152	Measured	2428	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	2	1	235		659.4	Measured	0.27	Calculated	256.5	Measured	0.105	Calculated	359.5	Measured	0.147	Measured	2445.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	3	1	235		667.8	Measured	0.272	Calculated	257.4	Measured	0.105	Calculated	365.7	Measured	0.149	Measured	2454.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	4	1	235		635.8	Measured	0.263	Calculated	253.5	Measured	0.105	Calculated	360.1	Measured	0.149	Measured	2416.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	5	1	235		650	Measured	0.267	Calculated	255.3	Measured	0.105	Calculated	367.6	Measured	0.151	Measured	2434.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	6	1	236		673	Measured	0.276	Calculated	255.6	Measured	0.105	Calculated	370.4	Measured	0.152	Measured	2436.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	7	1	235		668.5	Measured	0.276	Calculated	253.9	Measured	0.105	Calculated	365.5	Measured	0.151	Measured	2420.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	8	1	243		724.7	Measured	0.292	Calculated	260.7	Measured	0.105	Calculated	377.8	Measured	0.152	Measured	2485.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	9	1	257		692.6	Measured	0.262	Calculated	276.9	Measured	0.105	Calculated	390.8	Measured	0.148	Measured	2640.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	10	1	256		688.5	Measured	0.264	Calculated	273	Measured	0.105	Calculated	393.1	Measured	0.151	Measured	2603.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	11	1	256		701.2	Measured	0.267	Calculated	275.1	Measured	0.105	Calculated	396.1	Measured	0.151	Measured	2623.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	12	1	257		701.7	Measured	0.266	Calculated	276.9	Measured	0.105	Calculated	401.3	Measured	0.152	Measured	2640	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	13	1	257		713.7	Measured	0.271	Calculated	276.6	Measured	0.105	Calculated	403.5	Measured	0.153	Measured	2637.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	14	1	257		718.9	Measured	0.271	Calculated	277.9	Measured	0.105	Calculated	408	Measured	0.154	Measured	2649.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	15	1	257		715.9	Measured	0.272	Calculated	275.7	Measured	0.105	Calculated	399.5	Measured	0.152	Measured	2628.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	16	1	257		733.5	Measured	0.278	Calculated	276.3	Measured	0.105	Calculated	400.4	Measured	0.152	Measured	2634	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	17	1	256		721	Measured	0.275	Calculated	275.1	Measured	0.105	Calculated	393.4	Measured	0.15	Measured	2622.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	18	1	257		704.8	Measured	0.268	Calculated	276.3	Measured	0.105	Calculated	403.1	Measured	0.153	Measured	2634.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	19	1	258		697.5	Measured	0.265	Calculated	275.8	Measured	0.105	Calculated	397.1	Measured	0.151	Measured	2630	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	20	1	250		677.7	Measured	0.268	Calculated	265	Measured	0.105	Calculated	381.5	Measured	0.151	Measured	2526.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	21	1	256		720.6	Measured	0.28	Calculated	269.9	Measured	0.105	Calculated	388.5	Measured	0.151	Measured	2573	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	22	1	255		706.4	Measured	0.274	Calculated	270.5	Measured	0.105	Calculated	384.3	Measured	0.149	Measured	2579.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	23	1	255		693.3	Measured	0.271	Calculated	268.6	Measured	0.105	Calculated	379	Measured	0.148	Measured	2560.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	0	1	256		702.9	Measured	0.274	Calculated	268.7	Measured	0.105	Calculated	386.8	Measured	0.151	Measured	2561.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	1	1	256		712.3	Measured	0.275	Calculated	271.5	Measured	0.105	Calculated	390.9	Measured	0.151	Measured	2588.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	2	1	256		699.2	Measured	0.27	Calculated	271.8	Measured	0.105	Calculated	386.2	Measured	0.149	Measured	2591.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	3	1	256		699.2	Measured	0.269	Calculated	272.3	Measured	0.105	Calculated	379.1	Measured	0.146	Measured	2596.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	4	1	256		703.3	Measured	0.272	Calculated	270.9	Measured	0.105	Calculated	382.2	Measured	0.148	Measured	2582.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	5	1	256		733.8	Measured	0.283	Calculated	272.3	Measured	0.105	Calculated	389.5	Measured	0.15	Measured	2596.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	6	1	255		709.8	Measured	0.273	Calculated	272.8	Measured	0.105	Calculated	390.2	Measured	0.15	Measured	2601.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	7	1	257		660	Measured	0.252	Calculated	274.4	Measured	0.105	Calculated	389.9	Measured	0.149	Measured	2616.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	8	1	256		646.1	Measured	0.25	Calculated	270.8	Measured	0.105	Calculated	384.7	Measured	0.149	Measured	2581.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	9	1	256		688.5	Measured	0.267	Calculated	270.5	Measured	0.105	Calculated	381.7	Measured	0.148	Measured	2579.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	10	1	255		691.2	Measured	0.268	Calculated	270.8	Measured	0.105	Calculated	382.1	Measured	0.148	Measured	2581.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	11	1	256		705.2	Measured	0.27	Calculated	273.9	Measured	0.105	Calculated	383.8	Measured	0.147	Measured	2611.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	12	1	255		695.7	Measured	0.27	Calculated	270.7	Measured	0.105	Calculated	379.5	Measured	0.147	Measured	2581.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	13	1	255		695.6	Measured	0.268	Calculated	272.2	Measured	0.105	Calculated	394.6	Measured	0.152	Measured	2595.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	14	1	256		692.3	Measured	0.267	Calculated	272.3	Measured	0.105	Calculated	394.6	Measured	0.152	Measured	2596.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	15	1	255		712	Measured	0.275	Calculated	271.1	Measured	0.105	Calculated	395.6	Measured	0.153	Measured	2585.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	16	1	255		779.3	Measured	0.302	Calculated	270.8	Measured	0.105	Calculated	392.5	Measured	0.152	Measured	2582.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	17	1	256		813.1	Measured	0.314	Calculated	271.8	Measured	0.105	Calculated	393.9	Measured	0.152	Measured	2591.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	18	1	256		767.6	Measured	0.294	Calculated	273.7	Measured	0.105	Calculated	391.4	Measured	0.15	Measured	2609.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	19	1	256		749.7	Measured	0.289	Calculated	271.7	Measured	0.105	Calculated	398.9	Measured	0.154	Measured	2590.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	20	1	256		717.6	Measured	0.275	Calculated	273.5	Measured	0.105	Calculated	406.8	Measured	0.156	Measured	2607.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	21	1	256		748.6	Measured	0.288	Calculated	272.8	Measured	0.105	Calculated	400.5	Measured	0.154	Measured	2600.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	22	1	256		921.8	Measured	0.355	Calculated	272	Measured	0.105	Calculated	396.8	Measured	0.153	Measured	2593.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	23	1	255		1506	Measured	0.582	Calculated	271.2	Measured	0.105	Calculated	413.7	Measured	0.16	Measured	2585.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	0	1	256		1090	Measured	0.42	Calculated	271.9	Measured	0.105	Calculated	414.8	Measured	0.16	Measured	2592.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	1	1	256		994.2	Measured	0.382	Calculated	273.3	Measured	0.105	Calculated	406.5	Measured	0.156	Measured	2605.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	2	1	255		872.6	Measured	0.339	Calculated	269.7	Measured	0.105	Calculated	398.5	Measured	0.155	Measured	2571.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	3	1	256		842.5	Measured	0.327	Calculated	270.1	Measured	0.105	Calculated	396.6	Measured	0.154	Measured	2575.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	4	1	255		943.5	Measured	0.37	Calculated	267.1	Measured	0.105	Calculated	402.4	Measured	0.158	Measured	2546.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	5	1	256		1069	Measured	0.408	Calculated	275	Measured	0.105	Calculated	419.5	Measured	0.16	Measured	2622.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	6	1	256		1088	Measured	0.415	Calculated	275.3	Measured	0.105	Calculated	420	Measured	0.16	Measured	2625.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	7	1	256		1032	Measured	0.394	Calculated	274.9	Measured	0.105	Calculated	414.1	Measured	0.158	Measured	2621.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	8	1	255		1046	Measured	0.401	Calculated	273.3	Measured	0.105	Calculated	419.6	Measured	0.161	Measured	2606.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	9	1	255		1088	Measured	0.415	Calculated	275.2	Measured	0.105	Calculated	419.8	Measured	0.16	Measured	2623.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	10	1	256		1160	Measured	0.442	Calculated	275.3	Measured	0.105	Calculated	422.5	Measured	0.161	Measured	2624.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	11	1	256		1304	Measured	0.494	Calculated	276.9	Measured	0.105	Calculated	433	Measured	0.164	Measured	2640.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	12	1	256		1357	Measured	0.511	Calculated	278.5	Measured	0.105	Calculated	435.5	Measured	0.164	Measured	2655.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	13	1	256		1409	Measured	0.532	Calculated	277.7	Measured	0.105	Calculated	436.9	Measured	0.165	Measured	2647.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	14	1	255		1361	Measured	0.513	Calculated	278.2	Measured	0.105	Calculated	442.9	Measured	0.167	Measured	2652.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	15	1	256		1311	Measured	0.489	Calculated	281	Measured	0.105	Calculated	434.1	Measured	0.162	Measured	2679.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	16	1	256		1133	Measured	0.424	Calculated	280.1	Measured	0.105	Calculated	432.6	Measured	0.162	Measured	2670.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	17	1	256		1018	Measured	0.381	Calculated	280	Measured	0.105	Calculated	421.8	Measured	0.158	Measured	2669.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	18	1	256		991.7	Measured	0.372	Calculated	279.8	Measured	0.105	Calculated	418.9	Measured	0.157	Measured	2668.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	19	1	256		995.6	Measured	0.376	Calculated	278.1	Measured	0.105	Calculated	405.6	Measured	0.153	Measured	2651.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	20	1	255		884.7	Measured	0.334	Calculated	277.9	Measured	0.105	Calculated	416	Measured	0.157	Measured	2649.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	21	1	255		803.3	Measured	0.304	Calculated	276.8	Measured	0.105	Calculated	409	Measured	0.155	Measured	2639	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	22	1	256		812	Measured	0.305	Calculated	279.3	Measured	0.105	Calculated	407.4	Measured	0.153	Measured	2662.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	23	1	256		947.4	Measured	0.358	Calculated	277.7	Measured	0.105	Calculated	407.8	Measured	0.154	Measured	2647.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	0	1	256		1040	Measured	0.393	Calculated	277.5	Measured	0.105	Calculated	407.4	Measured	0.154	Measured	2645.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	1	1	256		1057	Measured	0.397	Calculated	279.2	Measured	0.105	Calculated	410	Measured	0.154	Measured	2662.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	2	1	255		918.9	Measured	0.347	Calculated	277.9	Measured	0.105	Calculated	413.4	Measured	0.156	Measured	2649.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	3	1	256		848.9	Measured	0.321	Calculated	277	Measured	0.105	Calculated	401.5	Measured	0.152	Measured	2641.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	4	1	256		871.4	Measured	0.331	Calculated	275.8	Measured	0.105	Calculated	397.1	Measured	0.151	Measured	2630.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	5	1	255		866.1	Measured	0.329	Calculated	275.8	Measured	0.105	Calculated	405	Measured	0.154	Measured	2630	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	6	1	255		856.7	Measured	0.325	Calculated	276.7	Measured	0.105	Calculated	406.3	Measured	0.154	Measured	2638.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	7	1	255		851.7	Measured	0.322	Calculated	277.1	Measured	0.105	Calculated	401.6	Measured	0.152	Measured	2641.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	8	1	256		870.7	Measured	0.328	Calculated	278.2	Measured	0.105	Calculated	400.5	Measured	0.151	Measured	2652.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	9	1	256		875.1	Measured	0.329	Calculated	278.7	Measured	0.105	Calculated	393.2	Measured	0.148	Measured	2656.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	10	1	255		842.9	Measured	0.318	Calculated	278.3	Measured	0.105	Calculated	392.7	Measured	0.148	Measured	2653.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	11	1	255		793.5	Measured	0.3	Calculated	277.8	Measured	0.105	Calculated	397.4	Measured	0.15	Measured	2649	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	12	1	255		762.9	Measured	0.286	Calculated	279.4	Measured	0.105	Calculated	391.7	Measured	0.147	Measured	2664.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	13	1	256		778.9	Measured	0.291	Calculated	281	Measured	0.105	Calculated	396.6	Measured	0.148	Measured	2679.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	14	1	255		779.6	Measured	0.293	Calculated	279.2	Measured	0.105	Calculated	404.6	Measured	0.152	Measured	2661.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	15	1	255		801.8	Measured	0.3	Calculated	280.7	Measured	0.105	Calculated	404.2	Measured	0.151	Measured	2676.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	16	1	255		795.6	Measured	0.297	Calculated	281	Measured	0.105	Calculated	407.2	Measured	0.152	Measured	2679	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	17	1	255		795	Measured	0.296	Calculated	281.7	Measured	0.105	Calculated	403	Measured	0.15	Measured	2686.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	18	1	256		776.5	Measured	0.288	Calculated	282.4	Measured	0.105	Calculated	395.8	Measured	0.147	Measured	2692.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	19	1	255		1152	Measured	0.431	Calculated	280.2	Measured	0.105	Calculated	411.5	Measured	0.154	Measured	2672	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	20	1	255		1042	Measured	0.39	Calculated	280.5	Measured	0.105	Calculated	417.3	Measured	0.156	Measured	2674.8	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	21	1	255		861.6	Measured	0.32	Calculated	282.4	Measured	0.105	Calculated	409.3	Measured	0.152	Measured	2692.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	22	1	252		787.1	Measured	0.297	Calculated	278.3	Measured	0.105	Calculated	390.1	Measured	0.147	Measured	2653.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	23	1	235		614.2	Measured	0.25	Calculated	258	Measured	0.105	Calculated	332.1	Measured	0.135	Measured	2459.9	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	0	1	235		631.4	Measured	0.259	Calculated	256	Measured	0.105	Calculated	329.5	Measured	0.135	Measured	2440.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	1	1	234		650.6	Measured	0.267	Calculated	255.8	Measured	0.105	Calculated	324.4	Measured	0.133	Measured	2439.1	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS

State	Facility Name	Facility ID	Unit ID	Associated Stacks	Date	Hour	Operating Time	Gross Load (MW)	Steam Load (1000 lb/hr)	SO2 Mass (lbs)	SO2 Mass Measure Indicator	SO2 Rate (lbs/mmBtu)	SO2 Rate Measure Indicator	CO2 Mass (short tons)	CO2 Mass Measure Indicator	CO2 Rate (short tons/mmBtu)	CO2 Rate Measure Indicator	NOx Mass (lbs)	NOx Mass Measure Indicator	NOx Rate (lbs/mmBtu)	NOx Rate Measure Indicator	Heat Input (mmBtu)	Heat Input Measure Indicator	Primary Fuel Type	Secondary Fuel Type	Unit Type	SO2 Controls	NOx Controls	PM Controls	Hg Controls	Program Code
MI	J H Campbell	1710	1		#######	2	1	234		657	Measured	0.268	Calculated	257.1	Measured	0.105	Calculated	330.9	Measured	0.135	Measured	2451.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	3	1	233		584.5	Measured	0.241	Calculated	254.6	Measured	0.105	Calculated	330.2	Measured	0.136	Measured	2427.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	4	1	236		572.6	Measured	0.235	Calculated	255.1	Measured	0.105	Calculated	323.5	Measured	0.133	Measured	2432.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	5	1	236		623.5	Measured	0.254	Calculated	257.9	Measured	0.105	Calculated	332	Measured	0.135	Measured	2459.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	6	1	236		649.6	Measured	0.262	Calculated	259.6	Measured	0.105	Calculated	336.7	Measured	0.136	Measured	2475.5	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	7	1	242		704.8	Measured	0.277	Calculated	266.4	Measured	0.105	Calculated	355.7	Measured	0.14	Measured	2540.4	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	8	1	257		779.7	Measured	0.286	Calculated	286.4	Measured	0.105	Calculated	423.2	Measured	0.155	Measured	2730.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	9	1	257		755.5	Measured	0.278	Calculated	285.1	Measured	0.105	Calculated	421.3	Measured	0.155	Measured	2718.3	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	10	1	258		771.6	Measured	0.284	Calculated	285.1	Measured	0.105	Calculated	424.1	Measured	0.156	Measured	2718.7	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	11	1	258		783.4	Measured	0.287	Calculated	285.9	Measured	0.105	Calculated	419.8	Measured	0.154	Measured	2726	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	12	1	257		753.1	Measured	0.275	Calculated	286.8	Measured	0.105	Calculated	429.3	Measured	0.157	Measured	2734.6	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	13	1	258		702.9	Measured	0.255	Calculated	288.8	Measured	0.105	Calculated	432.3	Measured	0.157	Measured	2753.2	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	1		#######	14	0.85	252		581.7	Measured	0.248	Calculated	245.565	Measured	0.105	Calculated	362.9	Measured	0.155	Measured	2341.325	Measured	Coal		Tangentially-fired	Dry Sorbent Injection	Low NOx Burner Technology w/ Closed-coupled/Separated OFA	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	20	0.43	0		0	Measured	0	Calculated	1.118	Measured	0.105	Calculated	0	Measured	0.001	Measured	10.664	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	21	1	0		0	Measured	0	Calculated	17	Measured a	0.105	Calculated	0.2	Measured a	0.001	Substitute	162.3	Measured a	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	22	1	0		0	Measured	0	Calculated	17.2	Measured a	0.105	Calculated	0.2	Measured a	0.001	Substitute	163.8	Measured a	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	23	1	0		0	Measured	0	Calculated	17.4	Measured a	0.105	Calculated	0.2	Measured a	0.001	Substitute	165.4	Measured a	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	0	1	0		0	Measured	0	Calculated	17.1	Measured a	0.105	Calculated	0.2	Measured a	0.001	Substitute	163.3	Measured a	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	1	1	0		0	Measured	0	Calculated	17	Measured a	0.105	Calculated	0.2	Measured a	0.001	Substitute	162	Measured a	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	2	1	0		0	Measured	0	Calculated	16.9	Measured a	0.105	Calculated	0.2	Measured a	0.001	Substitute	160.9	Measured a	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	3	1	0		6.5	Measured	0.023	Calculated	30.2	Measured	0.105	Calculated	0.3	Measured a	0.001	Substitute	287.7	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	4	1	0		7.7	Measured	0.023	Calculated	34.4	Measured	0.105	Calculated	0.3	Measured a	0.001	Substitute	328.4	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	5	1	0		42.1	Measured	0.118	Calculated	37.3	Measured	0.105	Calculated	56.9	Measured	0.16	Measured	355.7	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	6	1	0		19.8	Measured	0.051	Calculated	40.4	Measured	0.105	Calculated	61.3	Measured	0.159	Measured	385.3	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	7	1	0		33.8	Measured	0.093	Calculated	38.1	Measured	0.105	Calculated	54.5	Measured	0.15	Measured	363.5	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	8	1	0		12.4	Measured	0.041	Calculated	31.4	Measured	0.105	Calculated	37.1	Measured	0.124	Measured	299.5	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	9	1	0		8.8	Measured	0.031	Calculated	30.1	Measured	0.105	Calculated	33	Measured	0.115	Measured	287.1	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	10	1	0		21.3	Measured	0.064	Calculated	35	Measured	0.105	Calculated	44	Measured	0.132	Measured	333.4	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	11	0.35	0		9.555	Measured	0.075	Calculated	13.335	Measured	0.105	Calculated	18.83	Measured	0.148	Measured	127.19	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	18	0.22	0		0	Measured	0	Calculated	0.572	Measured	0.106	Calculated	0.022	Measured	0.003	Measured	5.39	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	19	1	0		0	Measured	0	Calculated	10.4	Measured	0.105	Calculated	1	Measured	0.01	Measured	99	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	20	1	0		0	Measured	0	Calculated	11.9	Measured	0.105	Calculated	1.6	Measured	0.014	Measured	113.4	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	21	1	0		0.9	Measured	0.003	Calculated	27.4	Measured	0.105	Calculated	23.8	Measured	0.091	Measured	261	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	22	1	0		5.6	Measured	0.019	Calculated	31.2	Measured	0.105	Calculated	34.7	Measured	0.117	Measured	297	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	23	1	0		18.4	Measured	0.068	Calculated	28.5	Measured	0.105	Calculated	31.5	Measured	0.116	Measured	271.8	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	0	1	0		15	Measured	0.053	Calculated	29.7	Measured	0.105	Calculated	32.8	Measured	0.116	Measured	283.1	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	1	1	0		32.8	Measured	0.096	Calculated	35.9	Measured	0.105	Calculated	51.1	Measured	0.149	Measured	342.7	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	2	1	0		18.2	Measured	0.051	Calculated	37.5	Measured	0.105	Calculated	55.4	Measured	0.155	Measured	357.5	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	3	0.4	0		13.2	Measured	0.086	Calculated	16.16	Measured	0.105	Calculated	26.8	Measured	0.174	Measured	154.08	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	12	0.75	0		0	Measured	0	Calculated	2.85	Measured	0.104	Calculated	0.15	Measured	0.005	Measured	27.375	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	13	1	0		0	Measured	0	Calculated	11.5	Measured	0.105	Calculated	1.4	Measured	0.013	Measured	109.8	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	14	1	0		0.4	Measured	0.002	Calculated	26	Measured	0.105	Calculated	21.8	Measured	0.088	Measured	248.2	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	15	1	0		3	Measured	0.011	Calculated	29.8	Measured	0.105	Calculated	33.8	Measured	0.119	Measured	284.2	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	16	1	0		4.5	Measured	0.015	Calculated	31.2	Measured	0.105	Calculated	35.7	Measured	0.12	Measured	297.4	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	17	1	0		12.9	Measured	0.045	Calculated	30	Measured	0.105	Calculated	34.9	Measured	0.122	Measured	286.2	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	18	1	0		12.3	Measured	0.041	Calculated	31.4	Measured	0.105	Calculated	38.9	Measured	0.13	Measured	299.3	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	19	1	0		33.3	Measured	0.101	Calculated	34.5	Measured	0.105	Calculated	47	Measured	0.143	Measured	329	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	20	1	6		38.7	Measured	0.096	Calculated	42.2	Measured	0.105	Calculated	69.2	Measured	0.172	Measured	402.5	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	21	1	26		40.7	Measured	0.076	Calculated	56.5	Measured	0.105	Calculated	106.1	Measured	0.197	Measured	538.8	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	22	1	39		53.7	Measured	0.087	Calculated	64.7	Measured	0.105	Calculated	132.6	Measured	0.215	Measured	616.6	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	23	1	57		93	Measured	0.123	Calculated	79.4	Measured	0.105	Calculated	180.9	Measured	0.239	Measured	757.1	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	0	1	62		118.2	Measured	0.132	Calculated	93.9	Measured	0.105	Calculated	189.7	Measured	0.212	Measured	895	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	1	1	96		204.8	Measured	0.184	Calculated	116.9	Measured	0.105	Calculated	215.2	Measured	0.193	Measured	1114.8	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	2	1	136		361.8	Measured	0.265	Calculated	143.4	Measured	0.105	Calculated	269.4	Measured	0.197	Measured	1367.5	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	3	1	151		389.5	Measured	0.249	Calculated	164.4	Measured	0.105	Calculated	322.8	Measured	0.206	Measured	1567.1	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	4	1	155		390	Measured	0.239	Calculated	170.9	Measured	0.105	Calculated	332.3	Measured	0.204	Measured	1629	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	5	1	176		470.3	Measured	0.259	Calculated	190.5	Measured	0.105	Calculated	368.7	Measured	0.203	Measured	1816.4	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	6	1	147		382.8	Measured	0.245	Calculated	163.6	Measured	0.105	Calculated	302.6	Measured	0.194	Measured	1559.8	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	7	1	145		389	Measured	0.252	Calculated	162.2	Measured	0.105	Calculated	295.4	Measured	0.191	Measured	1546.7	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	8	1	145		395.9	Measured	0.254	Calculated	163.5	Measured	0.105	Calculated	300.8	Measured	0.193	Measured	1558.5	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	9	1	145		391.2	Measured	0.253	Calculated	161.9	Measured	0.105	Calculated	296.4	Measured	0.192	Measured	1544	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	10	1	151		412.8	Measured	0.259	Calculated	167.2	Measured	0.105	Calculated	310.9	Measured	0.195	Measured	1594.3	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	11	1	185		513.6	Measured	0.272	Calculated	198	Measured	0.105	Calculated	394.5	Measured	0.209	Measured	1887.6	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	12	1	193		491.7	Measured	0.249	Calculated	206.9	Measured	0.105	Calculated	394.5	Measured	0.2	Measured	1972.3	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	13	1	196		476.8	Measured	0.242	Calculated	206.3	Measured	0.105	Calculated	373.7	Measured	0.19	Measured	1967.1	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	14	1	200		500	Measured	0.25	Calculated	210.1	Measured	0.105	Calculated	220.4	Measured	0.11	Measured	2003.4	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	15	1	200		544	Measured	0.274	Calculated	208.3	Measured	0.105	Calculated	99.3	Measured	0.05	Measured	1986.1	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	16	1	199		470.8	Measured	0.237	Calculated	208.7	Measured	0.105	Calculated	97.5	Measured	0.049	Measured	1989.6	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	17	1	200		484.9	Measured	0.243	Calculated	209.5	Measured	0.105	Calculated	97.9	Measured	0.049	Measured	1997.3	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	18	1	200		511.8	Measured	0.257	Calculated	209	Measured	0.105	Calculated	97.7	Measured	0.049	Measured	1993.2	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	19	1	200		476.9	Measured	0.241	Calculated	207.1	Measured	0.105	Calculated	98.7	Measured	0.05	Measured	1974.9	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	20	1	200		475.8	Measured	0.239	Calculated	208.6	Measured	0.105	Calculated	99.5	Measured	0.05	Measured	1989.2	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	21	1	199		526.9	Measured	0.266	Calculated	207.8	Measured	0.105	Calculated	99.1	Measured	0.05	Measured	1981.5	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	22	1	200		495	Measured	0.25	Calculated	207.8	Measured	0.105	Calculated	95.1	Measured	0.048	Measured	1981.5	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	23	1	200		506.8	Measured	0.254	Calculated	209.6	Measured	0.105	Calculated	97.9	Measured	0.049	Measured	1998.7	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	0	1	200		489.6	Measured	0.246	Calculated	208.5	Measured	0.105	Calculated	93.4	Measured	0.047	Measured	1988.2	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	1	1	200		476.4	Measured	0.239	Calculated	208.8	Measured	0.105	Calculated	95.6	Measured	0.048	Measured	1991.1	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	2	1	200		492.7	Measured	0.248	Calculated	208.2	Measured	0.105	Calculated	103.2	Measured	0.052	Measured	1984.8	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	3	1	201		509	Measured	0.255	Calculated	209.1	Measured	0.105	Calculated	99.7	Measured	0.05	Measured	1993.7	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	4	1	199		502.7	Measured	0.254	Calculated	207.8	Measured	0.105	Calculated	95.1	Measured	0.048	Measured	1981.7	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	5	1	200		497.7	Measured	0.249	Calculated	210	Measured	0.105	Calculated	98.1	Measured	0.049	Measured	2002.5	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	6	1	201		499.1	Measured	0.25	Calculated	209.2	Measured	0.105	Calculated	101.7	Measured	0.051	Measured	1994.7	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	7	1	200		501.5	Measured	0.251	Calculated	209.2	Measured	0.105	Calculated	101.7	Measured	0.051	Measured	1994.6	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	8	1	198		485.8	Measured	0.246	Calculated	207.4	Measured	0.105	Calculated	96.9	Measured	0.049	Measured	1977.8	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	9	1	200		488.8	Measured	0.247	Calculated	207.4	Measured	0.105	Calculated	96.9	Measured	0.049	Measured	1977	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	10	1	200		491.2	Measured	0.249	Calculated	207.3	Measured	0.105	Calculated	100.8	Measured	0.051	Measured	1976.3	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	11	1	201		526.6	Measured	0.265	Calculated	208.5	Measured	0.105	Calculated	105.3	Measured	0.053	Measured	1987.7	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	12	1	200		535.6	Measured	0.27	Calculated	208.2	Measured	0.105	Calculated	107.2	Measured	0.054	Measured	1985.3	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	13	1	199		493.9	Measured	0.25	Calculated	207.3	Measured	0.105	Calculated	104.8	Measured	0.053	Measured	1976.9	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	14	1	200		489.5	Measured	0.246	Calculated	208.7	Measured	0.105	Calculated	105.5	Measured	0.053	Measured	1990.2	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	15	1	200		491.4	Measured	0.246	Calculated	209.3	Measured	0.105	Calculated	107.7	Measured	0.054	Measured	1995.3	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	16	1	200		497.7	Measured	0.249	Calculated	209.3	Measured	0.105	Calculated	107.7	Measured	0.054	Measured	1995.2	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	17	1	200		512.5	Measured	0.258	Calculated	208.2	Measured	0.105	Calculated	109.2	Measured	0.055	Measured	1985.2	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	18	1	200		502.4	Measured	0.252	Calculated	208.8	Measured	0.105	Calculated	107.5	Measured	0.054	Measured	1991.3	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	19	1	200		470.1	Measured	0.237	Calculated	208.3	Measured	0.105	Calculated	99.3	Measured	0.05	Measured	1985.7	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	20	1	200		459.7	Measured	0.231	Calculated	209.1	Measured	0.105	Calculated	105.7	Measured	0.053	Measured	1994.1	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	21	1	200		494.1	Measured	0.246	Calculated	210.4	Measured	0.105	Calculated	104.3	Measured	0.052	Measured	2006.1	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	22	1	200		505.6	Measured	0.254	Calculated	208.8	Measured	0.105	Calculated	103.5	Measured	0.052	Measured	1990.6	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	23	1	200		511.9	Measured	0.257	Calculated	209.1	Measured	0.105	Calculated	91.7	Measured	0.046	Measured	1993.8	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	0	1	200		476.3	Measured	0.239	Calculated	209.4	Measured	0.105	Calculated	121.8	Measured	0.061	Measured	1996.1	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	1	1	200		494.6	Measured	0.248	Calculated	209	Measured	0.105	Calculated	101.7	Measured	0.051	Measured	1993.2	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	2	1	199		579.3	Measured	0.291	Calculated	208.9	Measured	0.105	Calculated	109.6	Measured	0.055	Measured	1992.1	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	3	1	200		625	Measured	0.316	Calculated	207.2	Measured	0.105	Calculated	102.7	Measured	0.052	Measured	1975.6	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	4	1	200		650.3	Measured	0.329	Calculated	207.3	Measured	0.105	Calculated	100.8	Measured	0.051	Measured	1976.6	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	5	1	200		629.5	Measured	0.322	Calculated	205.3	Measured	0.105	Calculated	92	Measured	0.047	Measured	1957.8	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	6	1	201		651	Measured	0.328	Calculated	208.3	Measured	0.105	Calculated	101.3	Measured	0.051	Measured	1986.4	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS

State	Facility Name	Facility ID	Unit ID	Associated Stacks	Date	Hour	Operating Time	Gross Load (MW)	Steam Load (1000 lb/hr)	SO2 Mass (lbs)	SO2 Mass Measure Indicator	SO2 Rate (lbs/mmBtu)	SO2 Rate Measure Indicator	CO2 Mass (short tons)	CO2 Mass Measure Indicator	CO2 Rate (short tons/mmBtu)	CO2 Rate Measure Indicator	NOx Mass (lbs)	NOx Mass Measure Indicator	NOx Rate (lbs/mmBtu)	NOx Rate Measure Indicator	Heat Input (mmBtu)	Heat Input Measure Indicator	Primary Fuel Type	Secondary Fuel Type	Unit Type	SO2 Controls	NOx Controls	PM Controls	Hg Controls	Program Code
MI	J H Campbell	1710	2		#######	7	1	200		617	Measured	0.311	Calculated	208.2	Measured	0.105	Calculated	101.2	Measured	0.051	Measured	1984.9	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	8	1	200		563.8	Measured	0.282	Calculated	210	Measured	0.105	Calculated	100.1	Measured	0.05	Measured	2001.9	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	9	1	199		503.3	Measured	0.253	Calculated	208.5	Measured	0.105	Calculated	99.4	Measured	0.05	Measured	1988.4	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	10	1	200		485.1	Measured	0.243	Calculated	209.6	Measured	0.105	Calculated	105.9	Measured	0.053	Measured	1998.5	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	11	1	200		525.3	Measured	0.266	Calculated	206.8	Measured	0.105	Calculated	110.4	Measured	0.056	Measured	1972.2	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	12	1	200		554.8	Measured	0.278	Calculated	209.7	Measured	0.105	Calculated	108	Measured	0.054	Measured	1999.2	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	13	1	200		583.8	Measured	0.291	Calculated	210.1	Measured	0.105	Calculated	110.2	Measured	0.055	Measured	2003.1	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	14	1	200		547.5	Measured	0.273	Calculated	210.1	Measured	0.105	Calculated	110.2	Measured	0.055	Measured	2003.4	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	15	1	199		423.1	Measured	0.212	Calculated	209.8	Measured	0.105	Calculated	106	Measured	0.053	Measured	2000.1	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	16	1	200		461.6	Measured	0.232	Calculated	208.7	Measured	0.105	Calculated	107.4	Measured	0.054	Measured	1989.5	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	17	1	201		607.1	Measured	0.307	Calculated	207.6	Measured	0.105	Calculated	112.8	Measured	0.057	Measured	1979.4	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	18	1	200		613.5	Measured	0.31	Calculated	207.6	Measured	0.105	Calculated	114.8	Measured	0.058	Measured	1979.2	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	19	1	201		557.7	Measured	0.281	Calculated	208.1	Measured	0.105	Calculated	113.1	Measured	0.057	Measured	1984.3	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	20	1	199		495.5	Measured	0.25	Calculated	208.2	Measured	0.105	Calculated	107.2	Measured	0.054	Measured	1985.5	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	21	1	200		468.6	Measured	0.235	Calculated	209.1	Measured	0.105	Calculated	107.7	Measured	0.054	Measured	1993.6	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	22	1	200		468.7	Measured	0.234	Calculated	209.7	Measured	0.105	Calculated	112	Measured	0.056	Measured	1999.9	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	2		#######	23	1	200		499.1	Measured	0.25	Calculated	209	Measured	0.105	Calculated	111.6	Measured	0.056	Measured	1992.6	Measured	Coal		Cell burner boiler	Dry Sorbent Injection	Low NOx Cell Burner|Selective Catalytic Reduction	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/1/2025	0	1	599		413.7	Measured	0.064	Calculated	676.5	Measured	0.105	Calculated	290.3	Measured	0.045	Measured	6450.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/1/2025	1	1	599		484.7	Measured	0.075	Calculated	675.6	Measured	0.105	Calculated	270.6	Measured	0.042	Measured	6441.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/1/2025	2	1	599		410.5	Measured	0.064	Calculated	671.2	Measured	0.105	Calculated	262.4	Measured	0.041	Measured	6400.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/1/2025	3	1	598		433.1	Measured	0.067	Calculated	673.2	Measured	0.105	Calculated	269.6	Measured	0.042	Measured	6418.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/1/2025	4	1	598		543.7	Measured	0.085	Calculated	673.3	Measured	0.105	Calculated	256.8	Measured	0.04	Measured	6420.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/1/2025	5	1	598		1190	Measured	0.185	Calculated	673.1	Measured	0.105	Calculated	256.7	Measured	0.04	Measured	6418	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/1/2025	6	1	598		1327	Measured	0.207	Calculated	670.7	Measured	0.105	Calculated	236.6	Measured	0.037	Measured	6395.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/1/2025	7	1	599		1292	Measured	0.201	Calculated	672.8	Measured	0.105	Calculated	256.6	Measured	0.04	Measured	6414.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/1/2025	8	1	598		970.2	Measured	0.149	Calculated	682.1	Measured	0.105	Calculated	240.6	Measured	0.037	Measured	6503.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/1/2025	9	1	599		389.8	Measured	0.06	Calculated	684.6	Measured	0.105	Calculated	241.5	Measured	0.037	Measured	6527.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/1/2025	10	1	599		324.2	Measured	0.05	Calculated	686.5	Measured	0.105	Calculated	320.7	Measured	0.049	Measured	6545.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/1/2025	11	1	598		319.5	Measured	0.049	Calculated	688.1	Measured	0.105	Calculated	242.8	Measured	0.037	Measured	6560.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/1/2025	12	1	598		271.8	Measured	0.041	Calculated	690.6	Measured	0.105	Calculated	263.4	Measured	0.04	Measured	6585.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/1/2025	13	1	600		250.8	Measured	0.038	Calculated	692.7	Measured	0.105	Calculated	264.2	Measured	0.04	Measured	6604.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/1/2025	14	1	600		335.7	Measured	0.051	Calculated	695.4	Measured	0.105	Calculated	258.6	Measured	0.039	Measured	6630.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/1/2025	15	1	597		369.9	Measured	0.056	Calculated	698	Measured	0.105	Calculated	246.3	Measured	0.037	Measured	6655.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/1/2025	16	1	598		517.2	Measured	0.077	Calculated	701.5	Measured	0.105	Calculated	267.5	Measured	0.04	Measured	6688.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/1/2025	17	1	598		468.8	Measured	0.07	Calculated	700.7	Measured	0.105	Calculated	253.9	Measured	0.038	Measured	6681.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/1/2025	18	1	599		521.6	Measured	0.078	Calculated	702.5	Measured	0.105	Calculated	267.9	Measured	0.04	Measured	6697.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/1/2025	19	1	600		452.8	Measured	0.068	Calculated	695.8	Measured	0.105	Calculated	258.7	Measured	0.039	Measured	6634.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/1/2025	20	1	598		476.8	Measured	0.072	Calculated	693.6	Measured	0.105	Calculated	257.9	Measured	0.039	Measured	6613.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/1/2025	21	1	599		467.7	Measured	0.071	Calculated	693.7	Measured	0.105	Calculated	257.9	Measured	0.039	Measured	6614	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/1/2025	22	1	600		461.3	Measured	0.07	Calculated	692.2	Measured	0.105	Calculated	270.6	Measured	0.041	Measured	6599.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/1/2025	23	1	599		450	Measured	0.069	Calculated	688.8	Measured	0.105	Calculated	269.3	Measured	0.041	Measured	6567.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/2/2025	0	1	598		491.8	Measured	0.075	Calculated	686.6	Measured	0.105	Calculated	248.8	Measured	0.038	Measured	6546.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/2/2025	1	1	600		514.5	Measured	0.078	Calculated	688	Measured	0.105	Calculated	255.9	Measured	0.039	Measured	6560.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/2/2025	2	1	599		529.3	Measured	0.081	Calculated	683.8	Measured	0.105	Calculated	260.8	Measured	0.04	Measured	6520.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/2/2025	3	1	599		465.2	Measured	0.072	Calculated	681.9	Measured	0.105	Calculated	266.6	Measured	0.041	Measured	6502.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/2/2025	4	1	599		380.3	Measured	0.059	Calculated	680.8	Measured	0.105	Calculated	259.6	Measured	0.04	Measured	6490.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/2/2025	5	1	598		475.5	Measured	0.073	Calculated	683.9	Measured	0.105	Calculated	247.8	Measured	0.038	Measured	6520.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/2/2025	6	1	599		500.8	Measured	0.076	Calculated	691.6	Measured	0.105	Calculated	244	Measured	0.037	Measured	6594.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/2/2025	7	1	601		369.8	Measured	0.056	Calculated	697.8	Measured	0.105	Calculated	259.5	Measured	0.039	Measured	6653.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/2/2025	8	1	601		301.4	Measured	0.045	Calculated	700.6	Measured	0.105	Calculated	240.5	Measured	0.036	Measured	6679.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/2/2025	9	1	597		207.4	Measured	0.031	Calculated	699.7	Measured	0.105	Calculated	246.8	Measured	0.037	Measured	6671.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/2/2025	10	1	601		235.9	Measured	0.035	Calculated	715.2	Measured	0.105	Calculated	211.4	Measured	0.031	Measured	6818.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/2/2025	11	1	597		261.4	Measured	0.038	Calculated	713	Measured	0.105	Calculated	271.9	Measured	0.04	Measured	6798.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/2/2025	12	1	600		227.7	Measured	0.034	Calculated	712.1	Measured	0.105	Calculated	251.2	Measured	0.037	Measured	6789.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/2/2025	13	1	600		256.3	Measured	0.038	Calculated	709	Measured	0.105	Calculated	256.9	Measured	0.038	Measured	6760	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/2/2025	14	1	598		290.4	Measured	0.043	Calculated	706.9	Measured	0.105	Calculated	242.6	Measured	0.036	Measured	6739.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/2/2025	15	1	598		286.7	Measured	0.043	Calculated	706.7	Measured	0.105	Calculated	242.6	Measured	0.036	Measured	6738.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/2/2025	16	1	598		243.1	Measured	0.036	Calculated	701.8	Measured	0.105	Calculated	254.3	Measured	0.038	Measured	6691.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/2/2025	17	1	598		237.8	Measured	0.035	Calculated	702.7	Measured	0.105	Calculated	268	Measured	0.04	Measured	6700.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/2/2025	18	1	599		248.4	Measured	0.037	Calculated	695	Measured	0.105	Calculated	258.4	Measured	0.039	Measured	6626.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/2/2025	19	1	599		236	Measured	0.036	Calculated	696.4	Measured	0.105	Calculated	265.6	Measured	0.04	Measured	6640.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/2/2025	20	1	598		242	Measured	0.036	Calculated	697.7	Measured	0.105	Calculated	279.4	Measured	0.042	Measured	6652.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/2/2025	21	1	599		297.9	Measured	0.045	Calculated	698.9	Measured	0.105	Calculated	273.2	Measured	0.041	Measured	6663.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/2/2025	22	1	599		294.4	Measured	0.044	Calculated	699.3	Measured	0.105	Calculated	293.4	Measured	0.044	Measured	6667.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/2/2025	23	1	597		315.4	Measured	0.048	Calculated	690.4	Measured	0.105	Calculated	296.2	Measured	0.045	Measured	6582.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/3/2025	0	1	599		335.7	Measured	0.051	Calculated	690.4	Measured	0.105	Calculated	256.7	Measured	0.039	Measured	6582.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/3/2025	1	1	599		320.6	Measured	0.048	Calculated	693.5	Measured	0.105	Calculated	271.1	Measured	0.041	Measured	6612.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/3/2025	2	1	599		275.3	Measured	0.041	Calculated	697.9	Measured	0.105	Calculated	272.8	Measured	0.041	Measured	6653.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/3/2025	3	1	599		265.5	Measured	0.04	Calculated	696.4	Measured	0.105	Calculated	265.6	Measured	0.04	Measured	6639.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/3/2025	4	1	598		297.8	Measured	0.045	Calculated	698.6	Measured	0.105	Calculated	273.1	Measured	0.041	Measured	6661.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/3/2025	5	1	598		308.8	Measured	0.047	Calculated	692	Measured	0.105	Calculated	263.9	Measured	0.04	Measured	6598.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/3/2025	6	1	600		295.8	Measured	0.045	Calculated	692.1	Measured	0.105	Calculated	296.9	Measured	0.045	Measured	6598.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/3/2025	7	1	602		270.3	Measured	0.041	Calculated	699.3	Measured	0.105	Calculated	273.4	Measured	0.041	Measured	6667.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/3/2025	8	1	605		308.5	Measured	0.047	Calculated	695.6	Measured	0.105	Calculated	265.3	Measured	0.04	Measured	6632	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/3/2025	9	1	726		556.9	Measured	0.072	Calculated	814.4	Measured	0.105	Calculated	504.7	Measured	0.065	Measured	7765.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/3/2025	10	1	753		466.9	Measured	0.059	Calculated	826.6	Measured	0.105	Calculated	535.9	Measured	0.068	Measured	7881.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/3/2025	11	1	754		447.1	Measured	0.057	Calculated	824.4	Measured	0.105	Calculated	518.8	Measured	0.066	Measured	7860.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/3/2025	12	1	754		376.9	Measured	0.048	Calculated	824.8	Measured	0.105	Calculated	534.8	Measured	0.068	Measured	7864.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/3/2025	13	1	753		424	Measured	0.054	Calculated	823.8	Measured	0.105	Calculated	510.6	Measured	0.065	Measured	7854.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/3/2025	14	1	754		507	Measured	0.065	Calculated	820.9	Measured	0.105	Calculated	501	Measured	0.064	Measured	7827.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/3/2025	15	1	753		390.3	Measured	0.05	Calculated	822.5	Measured	0.105	Calculated	517.6	Measured	0.066	Measured	7842.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/3/2025	16	1	753		403.2	Measured	0.051	Calculated	823.7	Measured	0.105	Calculated	518.3	Measured	0.066	Measured	7853.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/3/2025	17	1	754		374.4	Measured	0.048	Calculated	812.4	Measured	0.105	Calculated	449.3	Measured	0.058	Measured	7745.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/3/2025	18	1	753		396.9	Measured	0.051	Calculated	816.2	Measured	0.105	Calculated	435.8	Measured	0.056	Measured	7782.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/3/2025	19	1	754		386.3	Measured	0.05	Calculated	815.6	Measured	0.105	Calculated	443.3	Measured	0.057	Measured	7776.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/3/2025	20	1	753		365.3	Measured	0.047	Calculated	814.9	Measured	0.105	Calculated	481.8	Measured	0.062	Measured	7770.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/3/2025	21	1	754		353.8	Measured	0.045	Calculated	816.9	Measured	0.105	Calculated	459.6	Measured	0.059	Measured	7789.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/3/2025	22	1	753		364.2	Measured	0.047	Calculated	817.2	Measured	0.105	Calculated	436.3	Measured	0.056	Measured	7791.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/3/2025	23	1	753		358.9	Measured	0.046	Calculated	819.2	Measured	0.105	Calculated	445.2	Measured	0.057	Measured	7810.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/4/2025	0	1	754		350.9	Measured	0.045	Calculated	815	Measured	0.105	Calculated	442.9	Measured	0.057	Measured	7770.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/4/2025	1	1	754		366.6	Measured	0.047	Calculated	813.2	Measured	0.105	Calculated	449.7	Measured	0.058	Measured	7753.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/4/2025	2	1	753		375.2	Measured	0.048	Calculated	814.1	Measured	0.105	Calculated	489	Measured	0.063	Measured	7761.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/4/2025	3	1	753		403.7	Measured	0.052	Calculated	813.4	Measured	0.105	Calculated	434.3	Measured	0.056	Measured	7755.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/4/2025	4	1	754		439.7	Measured	0.057	Calculated	815.2	Measured	0.105	Calculated	443	Measured	0.057	Measured	7772.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/4/2025	5	1	754		401.5	Measured	0.052	Calculated	813	Measured	0.105	Calculated	472.8	Measured	0.061	Measured	7751.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/4/2025	6	1	754		401.5	Measured	0.052	Calculated	809	Measured	0.105	Calculated	478.2	Measured	0.062	Measured	7713.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/4/2025	7	1	753		478.5	Measured	0.062	Calculated	814.4	Measured	0.105	Calculated	473.7	Measured	0.061	Measured	7765.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/4/2025	8	1	753		412.6	Measured	0.053	Calculated	817.6	Measured	0.105	Calculated	491.1	Measured	0.063	Measured	7795.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/4/2025	9	1	754		557.3	Measured	0.072	Calculated	816.2	Measured	0.105	Calculated	490.3	Measured	0.063	Measured	7782	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/4/2025	10	1	754		340	Measured	0.044	Calculated	813.7	Measured	0.105	Calculated	581.9	Measured	0.075	Measured	7758.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/4/2025	11	1	754		469.4	Measured	0.06	Calculated	816.6	Measured	0.105	Calculated	646.2	Measured	0.083	Measured	7786	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/4/2025	12	1	754		530.5	Measured	0.068	Calculated	822.2	Measured	0.105	Calculated	533.1	Measured	0.068	Measured	7839.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/4/2025	13	1	751		350.7	Measured	0.044	Calculated	826.6	Measured	0.105	Calculated	512.3	Measured	0.065	Measured	7881.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/4/2025	14	1	701		402.7	Measured	0.054	Calculated	787.3	Measured	0.105	Calculated	390.3	Measured	0.052	Measured	7506.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/4/2025	15	1	704		466.2	Measured	0.062	Calculated	786.7	Measured	0.105	Calculated	390.1	Measured	0.052	Measured	7501.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/4/2025	16	1	701		238.3	Measured	0.032	Calculated	784	Measured	0.105	Calculated	366.3	Measured	0.049	Measured	7475.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS

State	Facility Name	Facility ID	Unit ID	Associated Stacks	Date	Hour	Operating Time	Gross Load (MW)	Steam Load (1000 lb/hr)	SO2 Mass (lbs)	SO2 Mass Measure Indicator	SO2 Rate (lbs/mmBtu)	SO2 Rate Measure Indicator	CO2 Mass (short tons)	CO2 Mass Measure Indicator	CO2 Rate (short tons/mmBtu)	CO2 Rate Measure Indicator	NOx Mass (lbs)	NOx Mass Measure Indicator	NOx Rate (lbs/mmBtu)	NOx Rate Measure Indicator	Heat Input (mmBtu)	Heat Input Measure Indicator	Primary Fuel Type	Secondary Fuel Type	Unit Type	SO2 Controls	NOx Controls	PM Controls	Hg Controls	Program Code
MI	J H Campbell	1710	3		6/4/2025	17	1	701		188.1	Measured	0.025	Calculated	783.5	Measured	0.105	Calculated	373.5	Measured	0.05	Measured	7470.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/4/2025	18	1	703		240.7	Measured	0.032	Calculated	792	Measured	0.105	Calculated	370	Measured	0.049	Measured	7551.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/4/2025	19	1	702		270.6	Measured	0.036	Calculated	791.5	Measured	0.105	Calculated	377.4	Measured	0.05	Measured	7547	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/4/2025	20	1	702		540	Measured	0.072	Calculated	784	Measured	0.105	Calculated	366.3	Measured	0.049	Measured	7474.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/4/2025	21	1	701		285.3	Measured	0.038	Calculated	782.2	Measured	0.105	Calculated	350.5	Measured	0.047	Measured	7458.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/4/2025	22	1	701		266.4	Measured	0.035	Calculated	791.1	Measured	0.105	Calculated	347	Measured	0.046	Measured	7542.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/4/2025	23	1	702		349	Measured	0.046	Calculated	792.1	Measured	0.105	Calculated	400.3	Measured	0.053	Measured	7552	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/5/2025	0	1	703		380.8	Measured	0.05	Calculated	791.3	Measured	0.105	Calculated	392.4	Measured	0.052	Measured	7545.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/5/2025	1	1	702		367.8	Measured	0.049	Calculated	789.2	Measured	0.105	Calculated	376.3	Measured	0.05	Measured	7525.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/5/2025	2	1	702		351.1	Measured	0.046	Calculated	792.2	Measured	0.105	Calculated	377.7	Measured	0.05	Measured	7553.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/5/2025	3	1	702		331.1	Measured	0.044	Calculated	792.5	Measured	0.105	Calculated	385.4	Measured	0.051	Measured	7556	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/5/2025	4	1	702		447	Measured	0.059	Calculated	791.5	Measured	0.105	Calculated	422.6	Measured	0.056	Measured	7546.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/5/2025	5	1	703		321.3	Measured	0.042	Calculated	793	Measured	0.105	Calculated	438.5	Measured	0.058	Measured	7561.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/5/2025	6	1	702		381.3	Measured	0.05	Calculated	799.3	Measured	0.105	Calculated	434.4	Measured	0.057	Measured	7620.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/5/2025	7	1	702		309.5	Measured	0.041	Calculated	793.6	Measured	0.105	Calculated	423.8	Measured	0.056	Measured	7567.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/5/2025	8	1	702		326.6	Measured	0.043	Calculated	798.1	Measured	0.105	Calculated	464.2	Measured	0.061	Measured	7609.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/5/2025	9	1	703		393.3	Measured	0.052	Calculated	799.2	Measured	0.105	Calculated	495.3	Measured	0.065	Measured	7620.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/5/2025	10	1	702		544.7	Measured	0.072	Calculated	790.8	Measured	0.105	Calculated	505.2	Measured	0.067	Measured	7540.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/5/2025	11	1	704		454.2	Measured	0.06	Calculated	796.9	Measured	0.105	Calculated	577.5	Measured	0.076	Measured	7598.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/5/2025	12	1	737		320.7	Measured	0.041	Calculated	826	Measured	0.105	Calculated	763.9	Measured	0.097	Measured	7875.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/5/2025	13	1	732		392.9	Measured	0.051	Calculated	815.2	Measured	0.105	Calculated	761.7	Measured	0.098	Measured	7772.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/5/2025	14	1	731		488.6	Measured	0.063	Calculated	811	Measured	0.105	Calculated	788.7	Measured	0.102	Measured	7732.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/5/2025	15	1	731		588.1	Measured	0.076	Calculated	811.9	Measured	0.105	Calculated	472.2	Measured	0.061	Measured	7741.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/5/2025	16	1	749		494	Measured	0.063	Calculated	826.9	Measured	0.105	Calculated	417.9	Measured	0.053	Measured	7884.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/5/2025	17	1	739		341.9	Measured	0.044	Calculated	822.6	Measured	0.105	Calculated	415.7	Measured	0.053	Measured	7843.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/5/2025	18	1	756		293	Measured	0.037	Calculated	834.8	Measured	0.105	Calculated	453.7	Measured	0.057	Measured	7959.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/5/2025	19	1	757		348.4	Measured	0.044	Calculated	833.2	Measured	0.105	Calculated	413.1	Measured	0.052	Measured	7944.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/5/2025	20	1	756		499.5	Measured	0.063	Calculated	825.5	Measured	0.105	Calculated	425	Measured	0.054	Measured	7870.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/5/2025	21	1	757		440.4	Measured	0.056	Calculated	827.5	Measured	0.105	Calculated	434	Measured	0.055	Measured	7890.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/5/2025	22	1	756		347.5	Measured	0.044	Calculated	828.9	Measured	0.105	Calculated	403	Measured	0.051	Measured	7902.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/5/2025	23	1	757		368.3	Measured	0.047	Calculated	828.8	Measured	0.105	Calculated	426.7	Measured	0.054	Measured	7902.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/6/2025	0	1	757		382.4	Measured	0.048	Calculated	827.7	Measured	0.105	Calculated	386.7	Measured	0.049	Measured	7892.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/6/2025	1	1	757		384.4	Measured	0.049	Calculated	827.6	Measured	0.105	Calculated	347.2	Measured	0.044	Measured	7890.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/6/2025	2	1	756		409.3	Measured	0.052	Calculated	827.6	Measured	0.105	Calculated	363	Measured	0.046	Measured	7891.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/6/2025	3	1	756		373.4	Measured	0.047	Calculated	826.2	Measured	0.105	Calculated	362.4	Measured	0.046	Measured	7878	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/6/2025	4	1	756		341.9	Measured	0.043	Calculated	825.2	Measured	0.105	Calculated	354.1	Measured	0.045	Measured	7868.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/6/2025	5	1	757		328.5	Measured	0.041	Calculated	835.2	Measured	0.105	Calculated	358.4	Measured	0.045	Measured	7963.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/6/2025	6	1	757		363.4	Measured	0.046	Calculated	834.4	Measured	0.105	Calculated	381.9	Measured	0.048	Measured	7955.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/6/2025	7	1	756		697	Measured	0.088	Calculated	830.9	Measured	0.105	Calculated	404	Measured	0.051	Measured	7922.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/6/2025	8	1	717		419.4	Measured	0.055	Calculated	796.3	Measured	0.105	Calculated	303.7	Measured	0.04	Measured	7592.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/6/2025	9	1	755		425.5	Measured	0.054	Calculated	826.7	Measured	0.105	Calculated	402	Measured	0.051	Measured	7882.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/6/2025	10	1	757		353.6	Measured	0.045	Calculated	828.5	Measured	0.105	Calculated	379.2	Measured	0.048	Measured	7899.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/6/2025	11	1	756		340.7	Measured	0.043	Calculated	827.5	Measured	0.105	Calculated	347.1	Measured	0.044	Measured	7889.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/6/2025	12	1	755		325.6	Measured	0.041	Calculated	835	Measured	0.105	Calculated	286.6	Measured	0.036	Measured	7961.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/6/2025	13	1	757		358.7	Measured	0.045	Calculated	835.3	Measured	0.105	Calculated	278.8	Measured	0.035	Measured	7964.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/6/2025	14	1	756		324.8	Measured	0.041	Calculated	840.1	Measured	0.105	Calculated	304.4	Measured	0.038	Measured	8010.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/6/2025	15	1	757		423	Measured	0.053	Calculated	839.1	Measured	0.105	Calculated	368	Measured	0.046	Measured	8000.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/6/2025	16	1	755		568.9	Measured	0.071	Calculated	839.2	Measured	0.105	Calculated	376.1	Measured	0.047	Measured	8001.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/6/2025	17	1	756		464.8	Measured	0.059	Calculated	829.7	Measured	0.105	Calculated	371.8	Measured	0.047	Measured	7910.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/6/2025	18	1	757		368.2	Measured	0.046	Calculated	833.4	Measured	0.105	Calculated	397.3	Measured	0.05	Measured	7946.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/6/2025	19	1	755		423.5	Measured	0.054	Calculated	826	Measured	0.105	Calculated	464.6	Measured	0.059	Measured	7875.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/6/2025	20	1	755		443	Measured	0.056	Calculated	827.8	Measured	0.105	Calculated	694.6	Measured	0.088	Measured	7893	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/6/2025	21	1	756		429.1	Measured	0.054	Calculated	828.8	Measured	0.105	Calculated	774.5	Measured	0.098	Measured	7902.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/6/2025	22	1	756		390.8	Measured	0.049	Calculated	833.4	Measured	0.105	Calculated	492.7	Measured	0.062	Measured	7946.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/6/2025	23	1	756		447.6	Measured	0.056	Calculated	831.9	Measured	0.105	Calculated	420.4	Measured	0.053	Measured	7932.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/7/2025	0	1	756		417.1	Measured	0.053	Calculated	829.5	Measured	0.105	Calculated	458.7	Measured	0.058	Measured	7908.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/7/2025	1	1	757		316.1	Measured	0.04	Calculated	830.1	Measured	0.105	Calculated	443.2	Measured	0.056	Measured	7914.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/7/2025	2	1	756		324.3	Measured	0.041	Calculated	829.9	Measured	0.105	Calculated	451	Measured	0.057	Measured	7912.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/7/2025	3	1	754		306.9	Measured	0.039	Calculated	827.6	Measured	0.105	Calculated	434	Measured	0.055	Measured	7891.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/7/2025	4	1	755		316.9	Measured	0.04	Calculated	826.7	Measured	0.105	Calculated	378.4	Measured	0.048	Measured	7882.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/7/2025	5	1	756		357.2	Measured	0.045	Calculated	829.4	Measured	0.105	Calculated	387.5	Measured	0.049	Measured	7908.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/7/2025	6	1	755		405.8	Measured	0.052	Calculated	823.5	Measured	0.105	Calculated	400.4	Measured	0.051	Measured	7851.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/7/2025	7	1	756		350.1	Measured	0.044	Calculated	827.5	Measured	0.105	Calculated	410.3	Measured	0.052	Measured	7889.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/7/2025	8	1	756		346.6	Measured	0.044	Calculated	823.9	Measured	0.105	Calculated	369.2	Measured	0.047	Measured	7855.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/7/2025	9	1	756		222.5	Measured	0.028	Calculated	827.7	Measured	0.105	Calculated	386.7	Measured	0.049	Measured	7892.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/7/2025	10	1	757		538.7	Measured	0.068	Calculated	826	Measured	0.105	Calculated	401.6	Measured	0.051	Measured	7875.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/7/2025	11	1	756		432.3	Measured	0.055	Calculated	819.2	Measured	0.105	Calculated	406.2	Measured	0.052	Measured	7810.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/7/2025	12	1	756		381.6	Measured	0.049	Calculated	819.7	Measured	0.105	Calculated	422.1	Measured	0.054	Measured	7815.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/7/2025	13	1	756		408.1	Measured	0.052	Calculated	819.7	Measured	0.105	Calculated	390.8	Measured	0.05	Measured	7815.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/7/2025	14	1	756		462.1	Measured	0.059	Calculated	821.5	Measured	0.105	Calculated	344.6	Measured	0.044	Measured	7832.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/7/2025	15	1	757		647.7	Measured	0.083	Calculated	818.2	Measured	0.105	Calculated	374.5	Measured	0.048	Measured	7801.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/7/2025	16	1	758		439.7	Measured	0.057	Calculated	810.8	Measured	0.105	Calculated	378.8	Measured	0.049	Measured	7731	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/7/2025	17	1	755		380.3	Measured	0.049	Calculated	814.3	Measured	0.105	Calculated	380.4	Measured	0.049	Measured	7764.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/7/2025	18	1	757		359.6	Measured	0.046	Calculated	813.9	Measured	0.105	Calculated	403.5	Measured	0.052	Measured	7759.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/7/2025	19	1	756		381	Measured	0.049	Calculated	815.9	Measured	0.105	Calculated	381.2	Measured	0.049	Measured	7778.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/7/2025	20	1	758		422.4	Measured	0.054	Calculated	816.8	Measured	0.105	Calculated	389.4	Measured	0.05	Measured	7788.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/7/2025	21	1	757		437.7	Measured	0.056	Calculated	814.8	Measured	0.105	Calculated	388.4	Measured	0.05	Measured	7768.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/7/2025	22	1	756		460.8	Measured	0.06	Calculated	812.1	Measured	0.105	Calculated	363.9	Measured	0.047	Measured	7742.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/7/2025	23	1	757		431.3	Measured	0.056	Calculated	810.4	Measured	0.105	Calculated	340	Measured	0.044	Measured	7727.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/8/2025	0	1	757		382.2	Measured	0.049	Calculated	814.1	Measured	0.105	Calculated	364.8	Measured	0.047	Measured	7761.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/8/2025	1	1	757		320.4	Measured	0.041	Calculated	812.8	Measured	0.105	Calculated	356.5	Measured	0.046	Measured	7749.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/8/2025	2	1	757		267.4	Measured	0.034	Calculated	813.1	Measured	0.105	Calculated	325.6	Measured	0.042	Measured	7753	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/8/2025	3	1	756		289.4	Measured	0.037	Calculated	811.9	Measured	0.105	Calculated	325.1	Measured	0.042	Measured	7740.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/8/2025	4	1	756		306.1	Measured	0.039	Calculated	812.9	Measured	0.105	Calculated	341	Measured	0.044	Measured	7750.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/8/2025	5	1	755		314.2	Measured	0.041	Calculated	812.7	Measured	0.105	Calculated	348.7	Measured	0.045	Measured	7748.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/8/2025	6	1	755		472.9	Measured	0.062	Calculated	805	Measured	0.105	Calculated	360.8	Measured	0.047	Measured	7675.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/8/2025	7	1	755		260.9	Measured	0.034	Calculated	812	Measured	0.105	Calculated	363.9	Measured	0.047	Measured	7742	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/8/2025	8	1	756		237	Measured	0.031	Calculated	813.9	Measured	0.105	Calculated	341.4	Measured	0.044	Measured	7760	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/8/2025	9	1	757		274.4	Measured	0.035	Calculated	822.5	Measured	0.105	Calculated	368.6	Measured	0.047	Measured	7842.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/8/2025	10	1	757		294.8	Measured	0.038	Calculated	822.4	Measured	0.105	Calculated	352.9	Measured	0.045	Measured	7841.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/8/2025	11	1	755		343.3	Measured	0.044	Calculated	813.8	Measured	0.105	Calculated	341.4	Measured	0.044	Measured	7759.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/8/2025	12	1	757		353.7	Measured	0.046	Calculated	814.5	Measured	0.105	Calculated	341.7	Measured	0.044	Measured	7765.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/8/2025	13	1	758		339.2	Measured	0.043	Calculated	818.9	Measured	0.105	Calculated	351.3	Measured	0.045	Measured	7807.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/8/2025	14	1	758		534.5	Measured	0.069	Calculated	808.6	Measured	0.105	Calculated	377.8	Measured	0.049	Measured	7710.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/8/2025	15	1	756		333.8	Measured	0.043	Calculated	808.7	Measured	0.105	Calculated	401	Measured	0.052	Measured	7711	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/8/2025	16	1	756		468.3	Measured	0.061	Calculated	804	Measured	0.105	Calculated	398.6	Measured	0.052	Measured	7665.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/8/2025	17	1	756		345.5	Measured	0.045	Calculated	807.4	Measured	0.105	Calculated	369.5	Measured	0.048	Measured	7698.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/8/2025	18	1	757		348.2	Measured	0.045	Calculated	808.7	Measured	0.105	Calculated	377.8	Measured	0.049	Measured	7711	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/8/2025	19	1	757		336.6	Measured	0.044	Calculated	810.5	Measured	0.105	Calculated	378.7	Measured	0.049	Measured	7727.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/8/2025	20	1	757		338.4	Measured	0.044	Calculated	809.9	Measured	0.105	Calculated	386.1	Measured	0.05	Measured	7721.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/8/2025	21	1	756		376.8	Measured	0.049	Calculated	808.7	Measured	0.105	Calculated	370.1	Measured	0.048	Measured	7711	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/8/2025	22	1	756		385.8	Measured	0.05	Calculated	810.3	Measured	0.105	Calculated	370.8	Measured	0.048	Measured	7726	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/8/2025	23	1	757		367.1	Measured	0.048	Calculated	809.8	Measured	0.105	Calculated	386.1	Measured	0.05	Measured	7721.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/9/2025	0	1	758		374.6	Measured	0.048	Calculated	812.7	Measured	0.105	Calculated	403	Measured	0.052	Measured	7749.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/9/2025	1	1	757		464.4	Measured	0.06	Calculated	807.8	Measured	0.105	Calculated	400.5	Measured	0.052	Measured	7702.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/9/2025	2	1	756		513.9	Measured	0.067	Calculated	808.5	Measured	0.105	Calculated	370	Measured	0.048	Measured	7708.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS

State	Facility Name	Facility ID	Unit ID	Associated Stacks	Date	Hour	Operating Time	Gross Load (MW)	Steam Load (1000 lb/hr)	SO2 Mass (lbs)	SO2 Mass Measure Indicator	SO2 Rate (lbs/mmBtu)	SO2 Rate Measure Indicator	CO2 Mass (short tons)	CO2 Mass Measure Indicator	CO2 Rate (short tons/mmBtu)	CO2 Rate Measure Indicator	NOx Mass (lbs)	NOx Mass Measure Indicator	NOx Rate (lbs/mmBtu)	NOx Rate Measure Indicator	Heat Input (mmBtu)	Heat Input Measure Indicator	Primary Fuel Type	Secondary Fuel Type	Unit Type	SO2 Controls	NOx Controls	PM Controls	Hg Controls	Program Code
MI	J H Campbell	1710	3		6/9/2025	3	1	756		428.7	Measured	0.056	Calculated	810.1	Measured	0.105	Calculated	370.7	Measured	0.048	Measured	7723.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/9/2025	4	1	756		403.6	Measured	0.052	Calculated	809	Measured	0.105	Calculated	378	Measured	0.049	Measured	7714	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/9/2025	5	1	757		417.7	Measured	0.054	Calculated	815.6	Measured	0.105	Calculated	373.3	Measured	0.048	Measured	7776.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/9/2025	6	1	756		391.2	Measured	0.05	Calculated	815.9	Measured	0.105	Calculated	389	Measured	0.05	Measured	7779.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/9/2025	7	1	757		307.5	Measured	0.04	Calculated	816.4	Measured	0.105	Calculated	365.9	Measured	0.047	Measured	7784.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/9/2025	8	1	757		451.8	Measured	0.058	Calculated	818	Measured	0.105	Calculated	366.6	Measured	0.047	Measured	7799	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/9/2025	9	1	757		1165	Measured	0.15	Calculated	816.7	Measured	0.105	Calculated	358.2	Measured	0.046	Measured	7786.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/9/2025	10	1	757		1264	Measured	0.163	Calculated	815.3	Measured	0.105	Calculated	373.2	Measured	0.048	Measured	7774	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/9/2025	11	1	756		832	Measured a	0.106	Calculated	821.3	Measured a	0.105	Calculated	430.7	Measured a	0.055	Substitute	7830.5	Measured a	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/9/2025	12	1	757		833.4	Measured a	0.106	Calculated	822.6	Measured a	0.105	Calculated	431.4	Measured a	0.055	Substitute	7843.6	Measured a	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/9/2025	13	1	758		389.2	Measured	0.05	Calculated	818.7	Measured	0.105	Calculated	359.1	Measured	0.046	Measured	7806.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/9/2025	14	1	758		531.6	Measured	0.068	Calculated	818.3	Measured	0.105	Calculated	351.1	Measured	0.045	Measured	7802.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/9/2025	15	1	757		487.7	Measured	0.063	Calculated	809.4	Measured	0.105	Calculated	339.6	Measured	0.044	Measured	7717.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/9/2025	16	1	757		314.6	Measured	0.04	Calculated	820.7	Measured	0.105	Calculated	320.8	Measured	0.041	Measured	7825.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/9/2025	17	1	757		349.8	Measured	0.045	Calculated	821.9	Measured	0.105	Calculated	384	Measured	0.049	Measured	7836.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/9/2025	18	1	758		382.1	Measured	0.049	Calculated	820.8	Measured	0.105	Calculated	399.1	Measured	0.051	Measured	7826.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/9/2025	19	1	758		355.2	Measured	0.045	Calculated	820.2	Measured	0.105	Calculated	422.3	Measured	0.054	Measured	7819.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/9/2025	20	1	757		322.5	Measured	0.041	Calculated	820.1	Measured	0.105	Calculated	391	Measured	0.05	Measured	7819.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/9/2025	21	1	757		342.4	Measured	0.044	Calculated	823.6	Measured	0.105	Calculated	353.4	Measured	0.045	Measured	7853.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/9/2025	22	1	758		377.5	Measured	0.048	Calculated	824.3	Measured	0.105	Calculated	353.7	Measured	0.045	Measured	7859.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		6/9/2025	23	1	757		461.4	Measured	0.059	Calculated	823.8	Measured	0.105	Calculated	369.2	Measured	0.047	Measured	7854.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	0	1	758		444.8	Measured	0.057	Calculated	823.4	Measured	0.105	Calculated	392.6	Measured	0.05	Measured	7851.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	1	1	759		436.6	Measured	0.056	Calculated	816.4	Measured	0.105	Calculated	381.4	Measured	0.049	Measured	7783.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	2	1	758		448.9	Measured	0.058	Calculated	816.4	Measured	0.105	Calculated	381.4	Measured	0.049	Measured	7784.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	3	1	758		349.6	Measured	0.045	Calculated	814.2	Measured	0.105	Calculated	434.8	Measured	0.056	Measured	7763.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	4	1	757		629.4	Measured	0.081	Calculated	818.3	Measured	0.105	Calculated	444.7	Measured	0.057	Measured	7802.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	5	1	756		483.6	Measured	0.062	Calculated	816.3	Measured	0.105	Calculated	389.2	Measured	0.05	Measured	7783.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	6	1	758		658.9	Measured	0.084	Calculated	821.5	Measured	0.105	Calculated	391.6	Measured	0.05	Measured	7832.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	7	1	757		392.8	Measured	0.05	Calculated	824.7	Measured	0.105	Calculated	385.3	Measured	0.049	Measured	7863.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	8	1	758		502.4	Measured	0.063	Calculated	830.8	Measured	0.105	Calculated	411.9	Measured	0.052	Measured	7921.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	9	1	758		567.5	Measured	0.072	Calculated	826.1	Measured	0.105	Calculated	417.5	Measured	0.053	Measured	7876.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	10	1	758		561.1	Measured	0.071	Calculated	829.7	Measured	0.105	Calculated	371.8	Measured	0.047	Measured	7910.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	11	1	757		519.9	Measured	0.065	Calculated	832.6	Measured	0.105	Calculated	381.1	Measured	0.048	Measured	7938.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	12	1	758		523.4	Measured	0.066	Calculated	834.9	Measured	0.105	Calculated	406	Measured	0.051	Measured	7960.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	13	1	759		515.5	Measured	0.065	Calculated	832.2	Measured	0.105	Calculated	420.5	Measured	0.053	Measured	7934.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	14	1	757		559	Measured	0.071	Calculated	822.6	Measured	0.105	Calculated	415.7	Measured	0.053	Measured	7843	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	15	1	758		768.8	Measured	0.098	Calculated	823.7	Measured	0.105	Calculated	384.8	Measured	0.049	Measured	7853.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	16	1	757		520.7	Measured	0.066	Calculated	826.8	Measured	0.105	Calculated	386.3	Measured	0.049	Measured	7883.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	17	1	758		379	Measured	0.048	Calculated	827.5	Measured	0.105	Calculated	418.2	Measured	0.053	Measured	7890.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	18	1	758		464.3	Measured	0.059	Calculated	825.4	Measured	0.105	Calculated	495.8	Measured	0.063	Measured	7869.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	19	1	759		401.9	Measured	0.051	Calculated	828.1	Measured	0.105	Calculated	679	Measured	0.086	Measured	7895.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	20	1	757		629.2	Measured	0.08	Calculated	823.4	Measured	0.105	Calculated	722.2	Measured	0.092	Measured	7850.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	21	1	758		490.8	Measured	0.062	Calculated	835.6	Measured	0.105	Calculated	756.8	Measured	0.095	Measured	7966.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	22	1	758		444.6	Measured	0.055	Calculated	841.7	Measured	0.105	Calculated	449.4	Measured	0.056	Measured	8025.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	23	1	758		386.2	Measured	0.048	Calculated	841.3	Measured	0.105	Calculated	425.1	Measured	0.053	Measured	8021.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	0	1	759		396	Measured	0.049	Calculated	840.1	Measured	0.105	Calculated	400.5	Measured	0.05	Measured	8010	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	1	1	759		598.1	Measured	0.075	Calculated	838.5	Measured	0.105	Calculated	423.7	Measured	0.053	Measured	7995	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	2	1	760		525.4	Measured	0.066	Calculated	838.2	Measured	0.105	Calculated	431.6	Measured	0.054	Measured	7991.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	3	1	759		379.2	Measured	0.048	Calculated	832.5	Measured	0.105	Calculated	404.8	Measured	0.051	Measured	7937.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	4	1	758		353	Measured	0.044	Calculated	834.1	Measured	0.105	Calculated	389.7	Measured	0.049	Measured	7953.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	5	1	758		324.8	Measured	0.041	Calculated	836.4	Measured	0.105	Calculated	374.8	Measured	0.047	Measured	7974.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	6	1	759		340	Measured	0.043	Calculated	838.1	Measured	0.105	Calculated	383.6	Measured	0.048	Measured	7991	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	7	1	759		580.2	Measured	0.072	Calculated	846.7	Measured	0.105	Calculated	379.4	Measured	0.047	Measured	8072.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	8	1	760		441.4	Measured	0.055	Calculated	842.8	Measured	0.105	Calculated	361.6	Measured	0.045	Measured	8035.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	9	1	758		441.9	Measured	0.055	Calculated	839.8	Measured	0.105	Calculated	360.3	Measured	0.045	Measured	8007.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	10	1	759		393.8	Measured	0.049	Calculated	842.4	Measured	0.105	Calculated	369.5	Measured	0.046	Measured	8031.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	11	1	758		291.2	Measured	0.036	Calculated	843.8	Measured	0.105	Calculated	370.1	Measured	0.046	Measured	8045.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	12	1	759		291.5	Measured	0.036	Calculated	837.6	Measured	0.105	Calculated	375.4	Measured	0.047	Measured	7986.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	13	1	759		429.3	Measured	0.054	Calculated	836.2	Measured	0.105	Calculated	366.8	Measured	0.046	Measured	7973.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	14	1	757		546.6	Measured	0.069	Calculated	835.8	Measured	0.105	Calculated	366.6	Measured	0.046	Measured	7968.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	15	1	757		552.9	Measured	0.069	Calculated	839.8	Measured	0.105	Calculated	376.3	Measured	0.047	Measured	8007.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	16	1	758		376.3	Measured	0.047	Calculated	837.7	Measured	0.105	Calculated	391.4	Measured	0.049	Measured	7987.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	17	1	758		378.3	Measured	0.047	Calculated	837.7	Measured	0.105	Calculated	391.4	Measured	0.049	Measured	7987	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	18	1	758		463.6	Measured	0.058	Calculated	842.4	Measured	0.105	Calculated	409.6	Measured	0.051	Measured	8032	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	19	1	760		449.2	Measured	0.056	Calculated	842.7	Measured	0.105	Calculated	506.2	Measured	0.063	Measured	8034.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	20	1	758		342.5	Measured	0.043	Calculated	833.9	Measured	0.105	Calculated	707.6	Measured	0.089	Measured	7950.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	21	1	758		313.3	Measured	0.039	Calculated	833.6	Measured	0.105	Calculated	588.2	Measured	0.074	Measured	7948.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	22	1	759		321.4	Measured	0.04	Calculated	832.9	Measured	0.105	Calculated	373.3	Measured	0.047	Measured	7941.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	23	1	758		333.3	Measured	0.042	Calculated	831.6	Measured	0.105	Calculated	380.6	Measured	0.048	Measured	7929	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	0	1	759		361.5	Measured	0.045	Calculated	834.7	Measured	0.105	Calculated	390	Measured	0.049	Measured	7958.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	1	1	758		356.9	Measured	0.045	Calculated	835.9	Measured	0.105	Calculated	382.6	Measured	0.048	Measured	7970.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	2	1	758		363.4	Measured	0.046	Calculated	836.6	Measured	0.105	Calculated	398.9	Measured	0.05	Measured	7977.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	3	1	738		372.2	Measured	0.048	Calculated	810	Measured	0.105	Calculated	355.3	Measured	0.046	Measured	7723.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	4	1	649		244.8	Measured	0.034	Calculated	748.8	Measured	0.105	Calculated	228.5	Measured	0.032	Measured	7139.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	5	1	635		312.4	Measured	0.044	Calculated	741.1	Measured	0.105	Calculated	240.3	Measured	0.034	Measured	7066.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	6	1	633		863.2	Measured	0.123	Calculated	734.5	Measured	0.105	Calculated	280.1	Measured	0.04	Measured	7003.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	7	1	639		347.9	Measured	0.049	Calculated	744.2	Measured	0.105	Calculated	255.4	Measured	0.036	Measured	7095.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	8	1	740		411.9	Measured	0.052	Calculated	834.6	Measured	0.105	Calculated	397.9	Measured	0.05	Measured	7957.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	9	1	758		286.3	Measured	0.036	Calculated	840.6	Measured	0.105	Calculated	376.7	Measured	0.047	Measured	8014.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	10	1	758		317.1	Measured	0.04	Calculated	839.9	Measured	0.105	Calculated	368.4	Measured	0.046	Measured	8008	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	11	1	757		333.9	Measured	0.042	Calculated	840.3	Measured	0.105	Calculated	392.6	Measured	0.049	Measured	8012.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	12	1	757		355.6	Measured	0.045	Calculated	837.7	Measured	0.105	Calculated	391.4	Measured	0.049	Measured	7986.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	13	1	757		336.9	Measured	0.042	Calculated	842.6	Measured	0.105	Calculated	425.8	Measured	0.053	Measured	8034.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	14	1	758		449.2	Measured	0.056	Calculated	838.7	Measured	0.105	Calculated	447.8	Measured	0.056	Measured	7996.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	15	1	756		602.2	Measured	0.075	Calculated	839.8	Measured	0.105	Calculated	464.4	Measured	0.058	Measured	8007.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	16	1	758		486.3	Measured	0.061	Calculated	831.4	Measured	0.105	Calculated	491.5	Measured	0.062	Measured	7927.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	17	1	758		376.9	Measured	0.048	Calculated	829.9	Measured	0.105	Calculated	466.8	Measured	0.059	Measured	7912.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	18	1	731		361.7	Measured	0.047	Calculated	807.3	Measured	0.105	Calculated	508	Measured	0.066	Measured	7697.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	19	1	661		318.2	Measured	0.045	Calculated	745.8	Measured	0.105	Calculated	320	Measured	0.045	Measured	7110.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	20	1	717		425.7	Measured	0.055	Calculated	806.7	Measured	0.105	Calculated	423	Measured	0.055	Measured	7691.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	21	1	759		271.6	Measured	0.034	Calculated	840	Measured	0.105	Calculated	456.5	Measured	0.057	Measured	8009.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	22	1	758		306.2	Measured	0.039	Calculated	831.1	Measured	0.105	Calculated	396.2	Measured	0.05	Measured	7923.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	23	1	758		364.7	Measured	0.046	Calculated	832.5	Measured	0.105	Calculated	404.8	Measured	0.051	Measured	7937.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	0	1	759		388.4	Measured	0.049	Calculated	834.4	Measured	0.105	Calculated	413.7	Measured	0.052	Measured	7955.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	1	1	759		350.4	Measured	0.044	Calculated	833	Measured	0.105	Calculated	397.1	Measured	0.05	Measured	7942.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	2	1	758		370.5	Measured	0.047	Calculated	824.5	Measured	0.105	Calculated	400.9	Measured	0.051	Measured	7861.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	3	1	710		554.8	Measured	0.074	Calculated	782.4	Measured	0.105	Calculated	313.3	Measured	0.042	Measured	7460.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	4	1	633		365.4	Measured	0.053	Calculated	723.4	Measured	0.105	Calculated	282.8	Measured	0.041	Measured	6897.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	5	1	643		497.5	Measured	0.071	Calculated	734.9	Measured	0.105	Calculated	294.3	Measured	0.042	Measured	7007.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	6	1	745		450.9	Measured	0.058	Calculated	815.9	Measured	0.105	Calculated	357.9	Measured	0.046	Measured	7779.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	7	1	757		371.5	Measured	0.047	Calculated	834	Measured	0.105	Calculated	357.8	Measured	0.045	Measured	7951.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	8	1	757		363.3	Measured	0.046	Calculated	834	Measured	0.105	Calculated	357.8	Measured	0.045	Measured	7951.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	9	1	758		366.3	Measured	0.046	Calculated	831.6	Measured	0.105	Calculated	372.7	Measured	0.047	Measured	7928.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	10	1	758		282	Measured	0.035	Calculated	835	Measured	0.105	Calculated	366.2	Measured	0.046	Measured	7961.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	11	1	757		330.2	Measured	0.042	Calculated	825.8	Measured	0.105	Calculated	354.3	Measured	0.045	Measured	7873.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	12	1	758		318.5	Measured	0.04	Calculated	827.2	Measured	0.105	Calculated	378.6	Measured	0.048	Measured	7887	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air | Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS

State	Facility Name	Facility ID	Unit ID	Associated Stacks	Date	Hour	Operating Time	Gross Load (MW)	Steam Load (1000 lb/hr)	SO2 Mass (lbs)	SO2 Mass Measure Indicator	SO2 Rate (lbs/mmBtu)	SO2 Rate Measure Indicator	CO2 Mass (short tons)	CO2 Mass Measure Indicator	CO2 Rate (short tons/mmBtu)	CO2 Rate Measure Indicator	NOx Mass (lbs)	NOx Mass Measure Indicator	NOx Rate (lbs/mmBtu)	NOx Rate Measure Indicator	Heat Input (mmBtu)	Heat Input Measure Indicator	Primary Fuel Type	Secondary Fuel Type	Unit Type	SO2 Controls	NOx Controls	PM Controls	Hg Controls	Program Code
MI	J H Campbell	1710	3		#######	13	1	758		336.7	Measured	0.043	Calculated	826.8	Measured	0.105	Calculated	386.3	Measured	0.049	Measured	7883.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	14	1	757		388.2	Measured	0.049	Calculated	830.5	Measured	0.105	Calculated	388	Measured	0.049	Measured	7918.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	15	1	757		379.1	Measured	0.048	Calculated	832.7	Measured	0.105	Calculated	404.9	Measured	0.051	Measured	7939.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	16	1	757		464.2	Measured	0.059	Calculated	832	Measured	0.105	Calculated	404.6	Measured	0.051	Measured	7932.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	17	1	758		452.9	Measured	0.057	Calculated	829.8	Measured	0.105	Calculated	403.5	Measured	0.051	Measured	7911.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	18	1	757		376.9	Measured	0.048	Calculated	827.9	Measured	0.105	Calculated	426.3	Measured	0.054	Measured	7893.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	19	1	757		428.3	Measured	0.054	Calculated	829.5	Measured	0.105	Calculated	427.1	Measured	0.054	Measured	7908.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	20	1	757		469.9	Measured	0.06	Calculated	824	Measured	0.105	Calculated	400.7	Measured	0.051	Measured	7856.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	21	1	758		311.5	Measured	0.039	Calculated	831.9	Measured	0.105	Calculated	412.5	Measured	0.052	Measured	7932.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	22	1	758		334.5	Measured	0.042	Calculated	833.3	Measured	0.105	Calculated	421.1	Measured	0.053	Measured	7945.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	23	1	758		291.1	Measured	0.037	Calculated	831.9	Measured	0.105	Calculated	420.4	Measured	0.053	Measured	7931.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	0	1	756		492.6	Measured	0.062	Calculated	828.5	Measured	0.105	Calculated	395	Measured	0.05	Measured	7899.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	1	1	756		413.5	Measured	0.052	Calculated	827.2	Measured	0.105	Calculated	370.7	Measured	0.047	Measured	7886.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	2	1	758		609.7	Measured	0.077	Calculated	829.1	Measured	0.105	Calculated	363.6	Measured	0.046	Measured	7905.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	3	1	756		567.2	Measured	0.072	Calculated	831.7	Measured	0.105	Calculated	372.7	Measured	0.047	Measured	7930	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	4	1	756		396.3	Measured	0.05	Calculated	828.8	Measured	0.105	Calculated	371.4	Measured	0.047	Measured	7902.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	5	1	756		380.5	Measured	0.048	Calculated	829.5	Measured	0.105	Calculated	363.8	Measured	0.046	Measured	7909.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	6	1	758		393.8	Measured	0.05	Calculated	832.1	Measured	0.105	Calculated	365	Measured	0.046	Measured	7934	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	7	1	757		356.7	Measured	0.045	Calculated	830.4	Measured	0.105	Calculated	364.2	Measured	0.046	Measured	7917.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	8	1	758		420.8	Measured	0.053	Calculated	833.5	Measured	0.105	Calculated	365.6	Measured	0.046	Measured	7947.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	9	1	758		270.5	Measured	0.034	Calculated	825	Measured	0.105	Calculated	361.8	Measured	0.046	Measured	7865.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	10	1	758		285.3	Measured	0.036	Calculated	826.8	Measured	0.105	Calculated	378.4	Measured	0.048	Measured	7883.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	11	1	757		411	Measured	0.052	Calculated	827.2	Measured	0.105	Calculated	370.7	Measured	0.047	Measured	7887.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	12	1	758		369.8	Measured	0.047	Calculated	830.2	Measured	0.105	Calculated	387.9	Measured	0.049	Measured	7916	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	13	1	757		474.4	Measured	0.06	Calculated	828.3	Measured	0.105	Calculated	394.9	Measured	0.05	Measured	7897.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	14	1	758		305.7	Measured	0.039	Calculated	820.4	Measured	0.105	Calculated	398.9	Measured	0.051	Measured	7822.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	15	1	757		290.9	Measured	0.037	Calculated	824.4	Measured	0.105	Calculated	393	Measured	0.05	Measured	7860.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	16	1	757		513.7	Measured	0.065	Calculated	826.5	Measured	0.105	Calculated	378.2	Measured	0.048	Measured	7880.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	17	1	757		229.5	Measured	0.029	Calculated	822.9	Measured	0.105	Calculated	368.8	Measured	0.047	Measured	7845.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	18	1	758		224.6	Measured	0.028	Calculated	827.4	Measured	0.105	Calculated	362.9	Measured	0.046	Measured	7888.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	19	1	758		632.1	Measured	0.08	Calculated	825.2	Measured	0.105	Calculated	369.8	Measured	0.047	Measured	7867.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	20	1	757		309.1	Measured	0.039	Calculated	823.9	Measured	0.105	Calculated	369.2	Measured	0.047	Measured	7855.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	21	1	758		322.8	Measured	0.041	Calculated	827.7	Measured	0.105	Calculated	386.7	Measured	0.049	Measured	7892.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	22	1	758		303.6	Measured	0.039	Calculated	825.5	Measured	0.105	Calculated	409.3	Measured	0.052	Measured	7870.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	23	1	758		323.8	Measured	0.041	Calculated	825.1	Measured	0.105	Calculated	393.3	Measured	0.05	Measured	7866.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	0	1	758		308	Measured	0.039	Calculated	826.3	Measured	0.105	Calculated	393.9	Measured	0.05	Measured	7878.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	1	1	757		333.2	Measured	0.042	Calculated	828.2	Measured	0.105	Calculated	402.7	Measured	0.051	Measured	7896.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	2	1	758		367.5	Measured	0.047	Calculated	827.3	Measured	0.105	Calculated	402.3	Measured	0.051	Measured	7888.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	3	1	757		360.5	Measured	0.046	Calculated	829.8	Measured	0.105	Calculated	403.5	Measured	0.051	Measured	7912.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	4	1	757		404.6	Measured	0.051	Calculated	827.9	Measured	0.105	Calculated	394.7	Measured	0.05	Measured	7893.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	5	1	757		393.6	Measured	0.05	Calculated	826.3	Measured	0.105	Calculated	386.1	Measured	0.049	Measured	7879	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	6	1	758		373.9	Measured	0.047	Calculated	835	Measured	0.105	Calculated	366.2	Measured	0.046	Measured	7961.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	7	1	758		328.7	Measured	0.041	Calculated	834.3	Measured	0.105	Calculated	389.8	Measured	0.049	Measured	7955	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	8	1	758		333.1	Measured	0.042	Calculated	834.9	Measured	0.105	Calculated	374.1	Measured	0.047	Measured	7960.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	9	1	758		340.3	Measured	0.043	Calculated	837.7	Measured	0.105	Calculated	367.4	Measured	0.046	Measured	7986.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	10	1	759		342	Measured	0.043	Calculated	836.7	Measured	0.105	Calculated	390.9	Measured	0.049	Measured	7977.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	11	1	757		395.1	Measured	0.05	Calculated	829.4	Measured	0.105	Calculated	387.5	Measured	0.049	Measured	7908.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	12	1	758		481	Measured	0.06	Calculated	836.3	Measured	0.105	Calculated	398.7	Measured	0.05	Measured	7973.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	13	1	758		395	Measured	0.05	Calculated	829.3	Measured	0.105	Calculated	411.2	Measured	0.052	Measured	7906.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	14	1	757		491.5	Measured	0.062	Calculated	830	Measured	0.105	Calculated	324.4	Measured	0.041	Measured	7913.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	15	1	757		553.6	Measured	0.07	Calculated	828.6	Measured	0.105	Calculated	355.5	Measured	0.045	Measured	7900.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	16	1	757		350	Measured	0.044	Calculated	831.4	Measured	0.105	Calculated	356.7	Measured	0.045	Measured	7927.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	17	1	757		399.2	Measured	0.05	Calculated	832.2	Measured	0.105	Calculated	349.1	Measured	0.044	Measured	7934.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	18	1	758		314.5	Measured	0.04	Calculated	827.5	Measured	0.105	Calculated	370.8	Measured	0.047	Measured	7889.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	19	1	758		270.1	Measured	0.034	Calculated	829	Measured	0.105	Calculated	355.7	Measured	0.045	Measured	7904.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	20	1	758		311.7	Measured	0.039	Calculated	830.8	Measured	0.105	Calculated	356.4	Measured	0.045	Measured	7921	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	21	1	758		365.3	Measured	0.046	Calculated	831.6	Measured	0.105	Calculated	372.7	Measured	0.047	Measured	7928.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	22	1	758		354	Measured	0.045	Calculated	829	Measured	0.105	Calculated	371.5	Measured	0.047	Measured	7904.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	23	1	757		376.2	Measured	0.048	Calculated	828.5	Measured	0.105	Calculated	371.3	Measured	0.047	Measured	7899.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	0	1	758		391.9	Measured	0.049	Calculated	831.3	Measured	0.105	Calculated	372.5	Measured	0.047	Measured	7925.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	1	1	758		357.5	Measured	0.045	Calculated	832.6	Measured	0.105	Calculated	381	Measured	0.048	Measured	7938.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	2	1	758		302.9	Measured	0.038	Calculated	836.4	Measured	0.105	Calculated	382.8	Measured	0.048	Measured	7974.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	3	1	757		389.1	Measured	0.049	Calculated	836.9	Measured	0.105	Calculated	375	Measured	0.047	Measured	7979.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	4	1	756		346	Measured	0.043	Calculated	836.6	Measured	0.105	Calculated	374.9	Measured	0.047	Measured	7976.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	5	1	757		351.6	Measured	0.044	Calculated	835.3	Measured	0.105	Calculated	366.4	Measured	0.046	Measured	7964.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	6	1	757		496.9	Measured	0.062	Calculated	835.6	Measured	0.105	Calculated	374.5	Measured	0.047	Measured	7967.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	7	1	758		716.5	Measured	0.09	Calculated	836.4	Measured	0.105	Calculated	366.8	Measured	0.046	Measured	7974.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	8	1	757		267.6	Measured	0.033	Calculated	841.6	Measured	0.105	Calculated	369.1	Measured	0.046	Measured	8024.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	9	1	757		308.1	Measured	0.038	Calculated	840.7	Measured	0.105	Calculated	360.7	Measured	0.045	Measured	8016.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	10	1	758		361.6	Measured	0.045	Calculated	841.9	Measured	0.105	Calculated	361.2	Measured	0.045	Measured	8027	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	11	1	757		325.1	Measured	0.04	Calculated	842.6	Measured	0.105	Calculated	369.6	Measured	0.046	Measured	8034.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	12	1	758		343.2	Measured	0.043	Calculated	841.7	Measured	0.105	Calculated	361.1	Measured	0.045	Measured	8025.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	13	1	758		380.4	Measured	0.047	Calculated	842.7	Measured	0.105	Calculated	385.7	Measured	0.048	Measured	8034.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	14	1	758		497	Measured	0.062	Calculated	842.8	Measured	0.105	Calculated	385.7	Measured	0.048	Measured	8035.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	15	1	757		447	Measured	0.056	Calculated	837.2	Measured	0.105	Calculated	375.2	Measured	0.047	Measured	7982.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	16	1	756		375.7	Measured	0.047	Calculated	841.4	Measured	0.105	Calculated	393.1	Measured	0.049	Measured	8022.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	17	1	757		401.4	Measured	0.05	Calculated	839.5	Measured	0.105	Calculated	392.2	Measured	0.049	Measured	8004.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	18	1	754		389.9	Measured	0.049	Calculated	834.2	Measured	0.105	Calculated	389.7	Measured	0.049	Measured	7953.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	19	1	754		367.5	Measured	0.046	Calculated	834.2	Measured	0.105	Calculated	397.7	Measured	0.05	Measured	7953.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	20	1	753		629.7	Measured	0.079	Calculated	831.7	Measured	0.105	Calculated	388.6	Measured	0.049	Measured	7929.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	21	1	754		506.3	Measured	0.063	Calculated	837.9	Measured	0.105	Calculated	383.5	Measured	0.048	Measured	7989	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	22	1	754		989	Measured	0.126	Calculated	823.5	Measured	0.105	Calculated	376.9	Measured	0.048	Measured	7851.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	23	1	754		570.1	Measured	0.072	Calculated	835.9	Measured	0.105	Calculated	406.5	Measured	0.051	Measured	7970.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	0	1	754		467.6	Measured	0.059	Calculated	830.7	Measured	0.105	Calculated	380.2	Measured	0.048	Measured	7920.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	1	1	754		425.9	Measured	0.054	Calculated	825.6	Measured	0.105	Calculated	377.9	Measured	0.048	Measured	7872	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	2	1	754		469.3	Measured	0.06	Calculated	823.2	Measured	0.105	Calculated	368.9	Measured	0.047	Measured	7848.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	3	1	753		473	Measured	0.06	Calculated	822.6	Measured	0.105	Calculated	360.8	Measured	0.046	Measured	7843	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	4	1	752		476.6	Measured	0.06	Calculated	828.8	Measured	0.105	Calculated	355.6	Measured	0.045	Measured	7902.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	5	1	753		476.2	Measured	0.061	Calculated	821.1	Measured	0.105	Calculated	360.1	Measured	0.046	Measured	7828.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	6	1	754		379.2	Measured	0.048	Calculated	824.1	Measured	0.105	Calculated	322.2	Measured	0.041	Measured	7857.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	7	1	755		325.6	Measured	0.042	Calculated	819.3	Measured	0.105	Calculated	359.3	Measured	0.046	Measured	7811.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	8	1	754		414.9	Measured	0.053	Calculated	820	Measured	0.105	Calculated	351.8	Measured	0.045	Measured	7818.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	9	1	754		400.9	Measured	0.051	Calculated	820.4	Measured	0.105	Calculated	359.8	Measured	0.046	Measured	7822.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	10	1	754		370.8	Measured	0.047	Calculated	821	Measured	0.105	Calculated	352.3	Measured	0.045	Measured	7828.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	11	1	753		388.5	Measured	0.049	Calculated	826.8	Measured	0.105	Calculated	346.9	Measured	0.044	Measured	7883.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	12	1	754		409.3	Measured	0.052	Calculated	827.9	Measured	0.105	Calculated	347.3	Measured	0.044	Measured	7893.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	13	1	754		375	Measured	0.047	Calculated	828.2	Measured	0.105	Calculated	355.4	Measured	0.045	Measured	7896.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	14	1	754		494.6	Measured	0.063	Calculated	828.3	Measured	0.105	Calculated	363.3	Measured	0.046	Measured	7897.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	15	1	754		342.4	Measured	0.043	Calculated	827.8	Measured	0.105	Calculated	355.2	Measured	0.045	Measured	7892.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	16	1	754		342.9	Measured	0.043	Calculated	829.1	Measured	0.105	Calculated	355.7	Measured	0.045	Measured	7905.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	17	1	754		368.9	Measured	0.047	Calculated	828.3	Measured	0.105	Calculated	355.4	Measured	0.045	Measured	7897.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	18	1	755		368.2	Measured	0.047	Calculated	826.7	Measured	0.105	Calculated	378.4	Measured	0.048	Measured	7882.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	19	1	754		257.2	Measured	0.033	Calculated	820.7	Measured	0.105	Calculated	359.9	Measured	0.046	Measured	7824.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	20	1	754		271.2	Measured	0.034	Calculated	826.9	Measured	0.105	Calculated	370.6	Measured	0.047	Measured	7884.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	21	1	754		333.3	Measured	0.042	Calculated	830.3	Measured	0.105	Calculated	372.1	Measured	0.047	Measured	7916.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	22	1	753		298.8	Measured	0.038	Calculated	823.7	Measured	0.105	Calculated	400.5	Measured	0.051	Measured	7853.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS

State	Facility Name	Facility ID	Unit ID	Associated Stacks	Date	Hour	Operating Time	Gross Load (MW)	Steam Load (1000 lb/hr)	SO2 Mass (lbs)	SO2 Mass Measure Indicator	SO2 Rate (lbs/mmBtu)	SO2 Rate Measure Indicator	CO2 Mass (short tons)	CO2 Mass Measure Indicator	CO2 Rate (short tons/mmBtu)	CO2 Rate Measure Indicator	NOx Mass (lbs)	NOx Mass Measure Indicator	NOx Rate (lbs/mmBtu)	NOx Rate Measure Indicator	Heat Input (mmBtu)	Heat Input Measure Indicator	Primary Fuel Type	Secondary Fuel Type	Unit Type	SO2 Controls	NOx Controls	PM Controls	Hg Controls	Program Code
MI	J H Campbell	1710	3		#######	23	1	617		74.8	Measured	0.011	Calculated	695.2	Measured	0.105	Calculated	464	Measured	0.07	Measured	6628.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	0	1	600		158.1	Measured	0.024	Calculated	692.7	Measured	0.105	Calculated	264.2	Measured	0.04	Measured	6604.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	1	1	599		179.8	Measured	0.027	Calculated	692.4	Measured	0.105	Calculated	231.1	Measured	0.035	Measured	6601.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	2	1	600		208.1	Measured	0.031	Calculated	695.7	Measured	0.105	Calculated	238.8	Measured	0.036	Measured	6633.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	3	1	599		212	Measured	0.032	Calculated	696.5	Measured	0.105	Calculated	252.3	Measured	0.038	Measured	6640.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	4	1	620		222.9	Measured	0.032	Calculated	720.4	Measured	0.105	Calculated	267.9	Measured	0.039	Measured	6868.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	5	1	675		277.4	Measured	0.038	Calculated	771.4	Measured	0.105	Calculated	331	Measured	0.045	Measured	7355.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	6	1	754		519	Measured	0.064	Calculated	848.6	Measured	0.105	Calculated	356	Measured	0.044	Measured	8091.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	7	1	756		336.7	Measured	0.042	Calculated	840.8	Measured	0.105	Calculated	360.7	Measured	0.045	Measured	8016.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	8	1	754		238.7	Measured	0.03	Calculated	833.5	Measured	0.105	Calculated	365.6	Measured	0.046	Measured	7947.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	9	1	755		520.8	Measured	0.066	Calculated	824.9	Measured	0.105	Calculated	361.8	Measured	0.046	Measured	7865.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	10	1	754		321.5	Measured	0.041	Calculated	824.4	Measured	0.105	Calculated	377.3	Measured	0.048	Measured	7860.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	11	1	754		412.9	Measured	0.053	Calculated	824.2	Measured	0.105	Calculated	392.9	Measured	0.05	Measured	7858.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	12	1	755		388.7	Measured	0.049	Calculated	824.6	Measured	0.105	Calculated	377.4	Measured	0.048	Measured	7862.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	13	1	754		455.1	Measured	0.058	Calculated	826.4	Measured	0.105	Calculated	362.5	Measured	0.046	Measured	7879.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	14	1	754		509.4	Measured	0.065	Calculated	819	Measured	0.105	Calculated	382.7	Measured	0.049	Measured	7809.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	15	1	754		373.6	Measured	0.048	Calculated	822.8	Measured	0.105	Calculated	392.2	Measured	0.05	Measured	7844.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	16	1	754		282	Measured	0.036	Calculated	828	Measured	0.105	Calculated	386.9	Measured	0.049	Measured	7895.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	17	1	754		366.1	Measured	0.047	Calculated	821.6	Measured	0.105	Calculated	376	Measured	0.048	Measured	7833.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	18	1	755		375.6	Measured	0.048	Calculated	820.2	Measured	0.105	Calculated	461.4	Measured	0.059	Measured	7820.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	19	1	754		427.5	Measured	0.055	Calculated	818.6	Measured	0.105	Calculated	437.1	Measured	0.056	Measured	7805.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	20	1	755		390.1	Measured	0.05	Calculated	822.1	Measured	0.105	Calculated	415.4	Measured	0.053	Measured	7838.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	21	1	755		406.5	Measured	0.051	Calculated	829	Measured	0.105	Calculated	450.6	Measured	0.057	Measured	7904.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	22	1	755		419.7	Measured	0.054	Calculated	819.5	Measured	0.105	Calculated	422	Measured	0.054	Measured	7814.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	23	1	754		360.6	Measured	0.046	Calculated	820.8	Measured	0.105	Calculated	422.6	Measured	0.054	Measured	7826.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	0	1	755		371.6	Measured	0.047	Calculated	822.2	Measured	0.105	Calculated	399.8	Measured	0.051	Measured	7839.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	1	1	755		412.2	Measured	0.053	Calculated	820.9	Measured	0.105	Calculated	422.7	Measured	0.054	Measured	7827.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	2	1	754		409.7	Measured	0.052	Calculated	819.9	Measured	0.105	Calculated	390.9	Measured	0.05	Measured	7818	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	3	1	753		374.6	Measured	0.048	Calculated	819.9	Measured	0.105	Calculated	390.9	Measured	0.05	Measured	7817.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	4	1	754		375.5	Measured	0.048	Calculated	828.8	Measured	0.105	Calculated	395.1	Measured	0.05	Measured	7902.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	5	1	754		377.6	Measured	0.048	Calculated	829	Measured	0.105	Calculated	395.2	Measured	0.05	Measured	7904.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	6	1	754		387.5	Measured	0.049	Calculated	835.1	Measured	0.105	Calculated	390.2	Measured	0.049	Measured	7962.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	7	1	755		362.2	Measured	0.045	Calculated	840.8	Measured	0.105	Calculated	384.8	Measured	0.048	Measured	8017.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	8	1	753		405.2	Measured	0.05	Calculated	847.6	Measured	0.105	Calculated	387.9	Measured	0.048	Measured	8081.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	9	1	754		336.7	Measured	0.042	Calculated	839	Measured	0.105	Calculated	400	Measured	0.05	Measured	7999.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	10	1	756		335.5	Measured	0.042	Calculated	841.1	Measured	0.105	Calculated	368.9	Measured	0.046	Measured	8019.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	11	1	757		362.3	Measured	0.045	Calculated	841.1	Measured	0.105	Calculated	393	Measured	0.049	Measured	8019.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	12	1	757		374.9	Measured	0.047	Calculated	841.7	Measured	0.105	Calculated	385.2	Measured	0.048	Measured	8025.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	13	1	757		672.7	Measured	0.083	Calculated	845.1	Measured	0.105	Calculated	386.8	Measured	0.048	Measured	8058.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	14	1	757		596.1	Measured	0.075	Calculated	838.3	Measured	0.105	Calculated	383.7	Measured	0.048	Measured	7992.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	15	1	757		279.9	Measured	0.035	Calculated	848.1	Measured	0.105	Calculated	404.3	Measured	0.05	Measured	8086.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	16	1	757		356.5	Measured	0.044	Calculated	849.2	Measured	0.105	Calculated	388.6	Measured	0.048	Measured	8096.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	17	1	757		377	Measured	0.047	Calculated	841.8	Measured	0.105	Calculated	369.2	Measured	0.046	Measured	8026	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	18	1	757		373.4	Measured	0.046	Calculated	843.1	Measured	0.105	Calculated	377.8	Measured	0.047	Measured	8038.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	19	1	757		384.2	Measured	0.048	Calculated	844.1	Measured	0.105	Calculated	394.4	Measured	0.049	Measured	8048.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	20	1	757		409.6	Measured	0.05	Calculated	852.5	Measured	0.105	Calculated	382	Measured	0.047	Measured	8128.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	21	1	757		413.4	Measured	0.051	Calculated	851.7	Measured	0.105	Calculated	406.1	Measured	0.05	Measured	8121.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	22	1	757		392.9	Measured	0.048	Calculated	852.1	Measured	0.105	Calculated	381.8	Measured	0.047	Measured	8124.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	23	1	757		363.9	Measured	0.045	Calculated	851.9	Measured	0.105	Calculated	430.5	Measured	0.053	Measured	8122.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	0	1	758		365.2	Measured	0.045	Calculated	850.1	Measured	0.105	Calculated	397.2	Measured	0.049	Measured	8105.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	1	1	758		396.4	Measured	0.049	Calculated	843.6	Measured	0.105	Calculated	410.2	Measured	0.051	Measured	8043.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	2	1	758		419.4	Measured	0.052	Calculated	844.3	Measured	0.105	Calculated	402.5	Measured	0.05	Measured	8049.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	3	1	758		387.6	Measured	0.048	Calculated	842.3	Measured	0.105	Calculated	393.5	Measured	0.049	Measured	8031.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	4	1	758		805.7	Measured	0.1	Calculated	842.6	Measured	0.105	Calculated	401.7	Measured	0.05	Measured	8033.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	5	1	758		622.9	Measured	0.078	Calculated	840	Measured	0.105	Calculated	384.5	Measured	0.048	Measured	8009.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	6	1	758		555.1	Measured	0.068	Calculated	851.1	Measured	0.105	Calculated	340.8	Measured	0.042	Measured	8114.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	7	1	758		302.3	Measured	0.037	Calculated	861.5	Measured	0.105	Calculated	394.3	Measured	0.048	Measured	8214.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	8	1	758		255.1	Measured	0.031	Calculated	862	Measured	0.105	Calculated	369.8	Measured	0.045	Measured	8218.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	9	1	758		294.5	Measured	0.036	Calculated	862.8	Measured	0.105	Calculated	394.9	Measured	0.048	Measured	8226.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	10	1	758		305.3	Measured	0.037	Calculated	857.1	Measured	0.105	Calculated	392.3	Measured	0.048	Measured	8172	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	11	1	757		277.9	Measured	0.034	Calculated	855.3	Measured	0.105	Calculated	375.1	Measured	0.046	Measured	8155.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	12	1	758		309.9	Measured	0.038	Calculated	851.2	Measured	0.105	Calculated	405.8	Measured	0.05	Measured	8116	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	13	1	759		299.3	Measured	0.037	Calculated	850.6	Measured	0.105	Calculated	381.2	Measured	0.047	Measured	8110.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	14	1	759		340.5	Measured	0.042	Calculated	850.3	Measured	0.105	Calculated	413.5	Measured	0.051	Measured	8106.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	15	1	757		476.2	Measured	0.059	Calculated	842.3	Measured	0.105	Calculated	369.4	Measured	0.046	Measured	8031.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	16	1	758		475	Measured	0.059	Calculated	847.6	Measured	0.105	Calculated	404.1	Measured	0.05	Measured	8081.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	17	1	759		407.9	Measured	0.05	Calculated	853.1	Measured	0.105	Calculated	382.3	Measured	0.047	Measured	8134	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	18	1	759		300.5	Measured	0.037	Calculated	854	Measured	0.105	Calculated	407.2	Measured	0.05	Measured	8143	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	19	1	759		447.4	Measured	0.056	Calculated	842.5	Measured	0.105	Calculated	401.6	Measured	0.05	Measured	8032.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	20	1	757		794.8	Measured	0.099	Calculated	843.5	Measured	0.105	Calculated	394.1	Measured	0.049	Measured	8042.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	21	1	759		704.4	Measured	0.087	Calculated	851.2	Measured	0.105	Calculated	397.7	Measured	0.049	Measured	8115.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	22	1	758		422.7	Measured	0.052	Calculated	853.9	Measured	0.105	Calculated	382.6	Measured	0.047	Measured	8141.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	23	1	758		278.6	Measured	0.034	Calculated	849.6	Measured	0.105	Calculated	380.8	Measured	0.047	Measured	8101.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	0	1	759		330.4	Measured	0.041	Calculated	849	Measured	0.105	Calculated	380.5	Measured	0.047	Measured	8095.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	1	1	759		363.8	Measured	0.045	Calculated	849.4	Measured	0.105	Calculated	364.4	Measured	0.045	Measured	8098.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	2	1	760		400.8	Measured	0.05	Calculated	848.5	Measured	0.105	Calculated	396.4	Measured	0.049	Measured	8090.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	3	1	759		415.3	Measured	0.051	Calculated	848.4	Measured	0.105	Calculated	388.3	Measured	0.048	Measured	8089.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	4	1	758		460.5	Measured	0.057	Calculated	840.5	Measured	0.105	Calculated	376.7	Measured	0.047	Measured	8013.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	5	1	758		399.7	Measured	0.05	Calculated	839.1	Measured	0.105	Calculated	376	Measured	0.047	Measured	8000.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	6	1	759		384.5	Measured	0.048	Calculated	837.5	Measured	0.105	Calculated	383.3	Measured	0.048	Measured	7985.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	7	1	758		385.4	Measured	0.048	Calculated	842.1	Measured	0.105	Calculated	377.4	Measured	0.047	Measured	8029.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	8	1	759		346.2	Measured	0.043	Calculated	847.1	Measured	0.105	Calculated	379.6	Measured	0.047	Measured	8076.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	9	1	759		459.1	Measured	0.057	Calculated	845	Measured	0.105	Calculated	370.6	Measured	0.046	Measured	8057	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	10	1	759		495.7	Measured	0.061	Calculated	847.5	Measured	0.105	Calculated	387.9	Measured	0.048	Measured	8081.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	11	1	757		527.9	Measured	0.065	Calculated	849.3	Measured	0.105	Calculated	380.6	Measured	0.047	Measured	8097.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	12	1	759		422.9	Measured	0.053	Calculated	840	Measured	0.105	Calculated	376.4	Measured	0.047	Measured	8009.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	13	1	759		371.7	Measured	0.047	Calculated	836.8	Measured	0.105	Calculated	375	Measured	0.047	Measured	7978.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	14	1	759		377.3	Measured	0.048	Calculated	830.8	Measured	0.105	Calculated	356.5	Measured	0.045	Measured	7921.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	15	1	759		824.8	Measured	0.104	Calculated	830.1	Measured	0.105	Calculated	364.1	Measured	0.046	Measured	7915.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	16	1	758		1043	Measured	0.133	Calculated	823.2	Measured	0.105	Calculated	376.7	Measured	0.048	Measured	7848.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	17	1	758		526.8	Measured	0.068	Calculated	818.5	Measured	0.105	Calculated	374.6	Measured	0.048	Measured	7803.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	18	1	759		572	Measured	0.073	Calculated	823	Measured	0.105	Calculated	361	Measured	0.046	Measured	7847.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	19	1	760		480.8	Measured	0.061	Calculated	829	Measured	0.105	Calculated	371.5	Measured	0.047	Measured	7904.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	20	1	758		477.9	Measured	0.06	Calculated	838.1	Measured	0.105	Calculated	367.6	Measured	0.046	Measured	7991.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	21	1	760		511	Measured	0.064	Calculated	841.9	Measured	0.105	Calculated	377.3	Measured	0.047	Measured	8027.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	22	1	759		585.9	Measured	0.073	Calculated	840	Measured	0.105	Calculated	392.5	Measured	0.049	Measured	8009.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	23	1	758		781.7	Measured	0.099	Calculated	829.1	Measured	0.105	Calculated	379.4	Measured	0.048	Measured	7905.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	0	1	759		462.2	Measured	0.058	Calculated	836	Measured	0.105	Calculated	374.6	Measured	0.047	Measured	7970.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	1	1	760		409.1	Measured	0.051	Calculated	837.2	Measured	0.105	Calculated	383.2	Measured	0.048	Measured	7982.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	2	1	759		288.9	Measured	0.036	Calculated	843.1	Measured	0.105	Calculated	377.8	Measured	0.047	Measured	8038.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	3	1	759		516.6	Measured	0.064	Calculated	841.1	Measured	0.105	Calculated	376.9	Measured	0.047	Measured	8019.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	4	1	758		548.6	Measured	0.069	Calculated	839.6	Measured	0.105	Calculated	368.3	Measured	0.046	Measured	8005.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	5	1	758		354.1	Measured	0.044	Calculated	841.1	Measured	0.105	Calculated	376.9	Measured	0.047	Measured	8020	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	6	1	759		313.7	Measured	0.039	Calculated	850.5	Measured	0.105	Calculated	364.9	Measured	0.045	Measured	8108.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	7	1	760		348.2	Measured	0.043	Calculated	848.9	Measured	0.105	Calculated	380.4	Measured	0.047	Measured	8094.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	8	1	758		421.6	Measured	0.052	Calculated	847.5	Measured	0.105	Calculated	363.6	Measured	0.045	Measured	8080.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS

State	Facility Name	Facility ID	Unit ID	Associated Stacks	Date	Hour	Operating Time	Gross Load (MW)	Steam Load (1000 lb/hr)	SO2 Mass (lbs)	SO2 Mass Measure Indicator	SO2 Rate (lbs/mmBtu)	SO2 Rate Measure Indicator	CO2 Mass (short tons)	CO2 Mass Measure Indicator	CO2 Rate (short tons/mmBtu)	CO2 Rate Measure Indicator	NOx Mass (lbs)	NOx Mass Measure Indicator	NOx Rate (lbs/mmBtu)	NOx Rate Measure Indicator	Heat Input (mmBtu)	Heat Input Measure Indicator	Primary Fuel Type	Secondary Fuel Type	Unit Type	SO2 Controls	NOx Controls	PM Controls	Hg Controls	Program Code
MI	J H Campbell	1710	3		#######	9	1	759		527.6	Measured	0.065	Calculated	845.9	Measured	0.105	Calculated	363	Measured	0.045	Measured	8065.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	10	1	759		363.9	Measured	0.045	Calculated	851.9	Measured	0.105	Calculated	373.6	Measured	0.046	Measured	8122.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	11	1	758		404.7	Measured	0.05	Calculated	850.8	Measured	0.105	Calculated	381.3	Measured	0.047	Measured	8112.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	12	1	760		457.2	Measured	0.057	Calculated	845.4	Measured	0.105	Calculated	370.8	Measured	0.046	Measured	8060.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	13	1	760		401.7	Measured	0.05	Calculated	846	Measured	0.105	Calculated	387.2	Measured	0.048	Measured	8066.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	14	1	760		740.5	Measured	0.092	Calculated	845.2	Measured	0.105	Calculated	386.8	Measured	0.048	Measured	8058.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	15	1	759		521.6	Measured	0.065	Calculated	842.9	Measured	0.105	Calculated	385.8	Measured	0.048	Measured	8036.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	16	1	759		406.3	Measured	0.05	Calculated	845.5	Measured	0.105	Calculated	387	Measured	0.048	Measured	8061.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	17	1	758		396.4	Measured	0.049	Calculated	841.9	Measured	0.105	Calculated	385.3	Measured	0.048	Measured	8027	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	18	1	759		398.7	Measured	0.05	Calculated	842.4	Measured	0.105	Calculated	377.5	Measured	0.047	Measured	8032.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	19	1	759		356.7	Measured	0.044	Calculated	844.7	Measured	0.105	Calculated	378.5	Measured	0.047	Measured	8054.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	20	1	758		377.6	Measured	0.047	Calculated	845.5	Measured	0.105	Calculated	395	Measured	0.049	Measured	8061.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	21	1	758		415	Measured	0.051	Calculated	846.5	Measured	0.105	Calculated	379.3	Measured	0.047	Measured	8070.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	22	1	759		562.6	Measured	0.07	Calculated	846.1	Measured	0.105	Calculated	371.1	Measured	0.046	Measured	8067.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	23	1	758		482.3	Measured	0.06	Calculated	849.2	Measured	0.105	Calculated	372.5	Measured	0.046	Measured	8097.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	0	1	760		453.7	Measured	0.056	Calculated	853.6	Measured	0.105	Calculated	398.8	Measured	0.049	Measured	8139.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	1	1	759		403.5	Measured	0.049	Calculated	857	Measured	0.105	Calculated	400.4	Measured	0.049	Measured	8171.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	2	1	760		499.6	Measured	0.062	Calculated	850.7	Measured	0.105	Calculated	381.2	Measured	0.047	Measured	8111.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	3	1	758		490.1	Measured	0.06	Calculated	855.5	Measured	0.105	Calculated	367.1	Measured	0.045	Measured	8157.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	4	1	712		320.2	Measured	0.041	Calculated	812.8	Measured	0.105	Calculated	271.2	Measured	0.035	Measured	7749.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	5	1	662		352.5	Measured	0.048	Calculated	776.2	Measured	0.105	Calculated	325.6	Measured	0.044	Measured	7401.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	6	1	754		651.5	Measured	0.08	Calculated	858.3	Measured	0.105	Calculated	368.3	Measured	0.045	Measured	8183.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	7	1	760		559.9	Measured	0.068	Calculated	858.4	Measured	0.105	Calculated	376.5	Measured	0.046	Measured	8184.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	8	1	759		390.2	Measured	0.05	Calculated	826.7	Measured	0.105	Calculated	378.4	Measured	0.048	Measured	7882.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	9	1	760		345.7	Measured	0.044	Calculated	822.3	Measured	0.105	Calculated	384.2	Measured	0.049	Measured	7840.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	10	1	760		295.7	Measured	0.038	Calculated	815.1	Measured	0.105	Calculated	388.6	Measured	0.05	Measured	7771.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	11	1	759		210.3	Measured	0.027	Calculated	815.2	Measured	0.105	Calculated	373.1	Measured	0.048	Measured	7772.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	12	1	760		266.5	Measured	0.034	Calculated	822.1	Measured	0.105	Calculated	368.4	Measured	0.047	Measured	7838.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	13	1	761		309.6	Measured	0.04	Calculated	820.5	Measured	0.105	Calculated	391.2	Measured	0.05	Measured	7823.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	14	1	760		375.7	Measured	0.049	Calculated	812.4	Measured	0.105	Calculated	395.1	Measured	0.051	Measured	7746.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	15	1	761		549.3	Measured	0.071	Calculated	812.3	Measured	0.105	Calculated	402.8	Measured	0.052	Measured	7745.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	16	1	760		344.2	Measured	0.044	Calculated	811.7	Measured	0.105	Calculated	479.8	Measured	0.062	Measured	7739.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	17	1	760		289.6	Measured	0.038	Calculated	809.6	Measured	0.105	Calculated	478.6	Measured	0.062	Measured	7719.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	18	1	761		326.8	Measured	0.043	Calculated	802.5	Measured	0.105	Calculated	489.7	Measured	0.064	Measured	7652.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	19	1	761		465.8	Measured	0.061	Calculated	803.3	Measured	0.105	Calculated	490.2	Measured	0.064	Measured	7659.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	20	1	760		397.8	Measured	0.052	Calculated	803.9	Measured	0.105	Calculated	490.6	Measured	0.064	Measured	7665	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	21	1	760		367.9	Measured	0.047	Calculated	813.5	Measured	0.105	Calculated	473.2	Measured	0.061	Measured	7756.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	22	1	761		388.9	Measured	0.05	Calculated	814	Measured	0.105	Calculated	457.9	Measured	0.059	Measured	7761.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	23	1	760		373.4	Measured	0.048	Calculated	812	Measured	0.105	Calculated	441.3	Measured	0.057	Measured	7742.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	0	1	760		398.5	Measured	0.052	Calculated	805.4	Measured	0.105	Calculated	453.1	Measured	0.059	Measured	7679.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	1	1	760		418.2	Measured	0.054	Calculated	810.5	Measured	0.105	Calculated	432.7	Measured	0.056	Measured	7727.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	2	1	760		464.4	Measured	0.06	Calculated	811.5	Measured	0.105	Calculated	479.7	Measured	0.062	Measured	7737.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	3	1	760		485	Measured	0.063	Calculated	811.3	Measured	0.105	Calculated	487.3	Measured	0.063	Measured	7735.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	4	1	759		390.1	Measured	0.051	Calculated	805.2	Measured	0.105	Calculated	514.4	Measured	0.067	Measured	7677	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	5	1	760		406	Measured	0.053	Calculated	810.8	Measured	0.105	Calculated	502.5	Measured	0.065	Measured	7730.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	6	1	760		390.3	Measured	0.05	Calculated	819.8	Measured	0.105	Calculated	492.5	Measured	0.063	Measured	7816.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	7	1	760		346.6	Measured	0.044	Calculated	819.6	Measured	0.105	Calculated	507.9	Measured	0.065	Measured	7814.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	8	1	759		400.9	Measured	0.052	Calculated	816	Measured	0.105	Calculated	591.3	Measured	0.076	Measured	7780.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	9	1	759		275.7	Measured	0.035	Calculated	818.5	Measured	0.105	Calculated	741.4	Measured	0.095	Measured	7803.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	10	1	759		228.4	Measured	0.029	Calculated	812.7	Measured	0.105	Calculated	767.2	Measured	0.099	Measured	7749.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	11	1	759		278.5	Measured	0.036	Calculated	813.5	Measured	0.105	Calculated	527.4	Measured	0.068	Measured	7756.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	12	1	759		347.5	Measured	0.045	Calculated	814.4	Measured	0.105	Calculated	512.5	Measured	0.066	Measured	7765.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	13	1	759		368	Measured	0.047	Calculated	821	Measured	0.105	Calculated	477.5	Measured	0.061	Measured	7827.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	14	1	760		395.1	Measured	0.051	Calculated	814	Measured	0.105	Calculated	558.8	Measured	0.072	Measured	7761.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	15	1	758		515.9	Measured	0.067	Calculated	803.9	Measured	0.105	Calculated	536.6	Measured	0.07	Measured	7665.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	16	1	759		375.2	Measured	0.049	Calculated	797.1	Measured	0.105	Calculated	501.6	Measured	0.066	Measured	7600.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	17	1	759		372.1	Measured	0.049	Calculated	792.3	Measured	0.105	Calculated	521.3	Measured	0.069	Measured	7554.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	18	1	759		394.8	Measured	0.053	Calculated	784.8	Measured	0.105	Calculated	531.3	Measured	0.071	Measured	7483.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	19	1	759		433.1	Measured	0.058	Calculated	782.8	Measured	0.105	Calculated	485.1	Measured	0.065	Measured	7463.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	20	1	759		406.6	Measured	0.054	Calculated	783.6	Measured	0.105	Calculated	485.6	Measured	0.065	Measured	7471.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	21	1	760		367.5	Measured	0.049	Calculated	784.2	Measured	0.105	Calculated	486	Measured	0.065	Measured	7477.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	22	1	760		361.3	Measured	0.048	Calculated	784.3	Measured	0.105	Calculated	516	Measured	0.069	Measured	7478.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	23	1	759		367.3	Measured	0.049	Calculated	790.9	Measured	0.105	Calculated	505.2	Measured	0.067	Measured	7540.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	0	1	759		389.3	Measured	0.052	Calculated	782.2	Measured	0.105	Calculated	477.3	Measured	0.064	Measured	7457.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	1	1	760		398.2	Measured	0.053	Calculated	790.4	Measured	0.105	Calculated	489.9	Measured	0.065	Measured	7536.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	2	1	760		405.5	Measured	0.054	Calculated	792.7	Measured	0.105	Calculated	513.9	Measured	0.068	Measured	7558	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	3	1	759		378.8	Measured	0.05	Calculated	789	Measured	0.105	Calculated	519.1	Measured	0.069	Measured	7523.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	4	1	759		371.8	Measured	0.05	Calculated	787.4	Measured	0.105	Calculated	480.5	Measured	0.064	Measured	7507.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	5	1	758		394.8	Measured	0.053	Calculated	787.8	Measured	0.105	Calculated	465.7	Measured	0.062	Measured	7511.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	6	1	760		395.8	Measured	0.052	Calculated	797	Measured	0.105	Calculated	501.5	Measured	0.066	Measured	7598.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	7	1	760		488.5	Measured	0.064	Calculated	796.1	Measured	0.105	Calculated	485.8	Measured	0.064	Measured	7590.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	8	1	760		361	Measured	0.047	Calculated	797.9	Measured	0.105	Calculated	509.7	Measured	0.067	Measured	7608.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	9	1	759		396.5	Measured	0.052	Calculated	798.3	Measured	0.105	Calculated	487.1	Measured	0.064	Measured	7611.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	10	1	759		399.9	Measured	0.053	Calculated	796.9	Measured	0.105	Calculated	463.5	Measured	0.061	Measured	7598.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	11	1	758		486.3	Measured	0.064	Calculated	799.2	Measured	0.105	Calculated	487.7	Measured	0.064	Measured	7619.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	12	1	760		458	Measured	0.06	Calculated	804.1	Measured	0.105	Calculated	475.4	Measured	0.062	Measured	7667.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	13	1	760		332.4	Measured	0.042	Calculated	827.5	Measured	0.105	Calculated	457.6	Measured	0.058	Measured	7890.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	14	1	759		402.5	Measured	0.051	Calculated	826.5	Measured	0.105	Calculated	449.2	Measured	0.057	Measured	7880.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	15	1	760		455.4	Measured	0.058	Calculated	828.3	Measured	0.105	Calculated	450.1	Measured	0.057	Measured	7897.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	16	1	759		355.5	Measured	0.045	Calculated	820.9	Measured	0.105	Calculated	477.5	Measured	0.061	Measured	7827.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	17	1	759		329.7	Measured	0.042	Calculated	816.8	Measured	0.105	Calculated	498.4	Measured	0.064	Measured	7788.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	18	1	759		347.3	Measured	0.045	Calculated	814	Measured	0.105	Calculated	481.2	Measured	0.062	Measured	7761	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	19	1	761		354.8	Measured	0.046	Calculated	816.9	Measured	0.105	Calculated	444	Measured	0.057	Measured	7788.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	20	1	759		423.8	Measured	0.054	Calculated	817.3	Measured	0.105	Calculated	452	Measured	0.058	Measured	7792.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	21	1	760		405.1	Measured	0.052	Calculated	817.3	Measured	0.105	Calculated	459.8	Measured	0.059	Measured	7793.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	22	1	760		365	Measured	0.047	Calculated	809.2	Measured	0.105	Calculated	486.1	Measured	0.063	Measured	7715.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	23	1	760		347.8	Measured	0.045	Calculated	808.1	Measured	0.105	Calculated	454.6	Measured	0.059	Measured	7705.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	0	1	760		371.2	Measured	0.048	Calculated	809.2	Measured	0.105	Calculated	486.1	Measured	0.063	Measured	7715.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	1	1	760		377.9	Measured	0.049	Calculated	810.1	Measured	0.105	Calculated	486.6	Measured	0.063	Measured	7724.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	2	1	759		377.5	Measured	0.049	Calculated	802.2	Measured	0.105	Calculated	520.1	Measured	0.068	Measured	7648.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	3	1	759		394.6	Measured	0.051	Calculated	805.9	Measured	0.105	Calculated	522.5	Measured	0.068	Measured	7683.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	4	1	758		379.1	Measured	0.05	Calculated	801.2	Measured	0.105	Calculated	450.7	Measured	0.059	Measured	7638.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	5	1	758		365.1	Measured	0.047	Calculated	809.5	Measured	0.105	Calculated	424.5	Measured	0.055	Measured	7718.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	6	1	756		921.4	Measured a	0.118	Calculated	815.8	Measured	0.105	Calculated	404.5	Measured	0.052	Measured	7778.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	7	1	756		902.6	Measured a	0.117	Calculated	806.1	Measured	0.105	Calculated	538	Measured	0.07	Measured	7686.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	8	1	756		1436	Measured	0.187	Calculated	804.7	Measured	0.105	Calculated	437.3	Measured	0.057	Measured	7672.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	9	1	756		1014	Measured	0.133	Calculated	801.4	Measured	0.105	Calculated	366.8	Measured	0.048	Measured	7640.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	10	1	756		444.8	Measured	0.057	Calculated	813.2	Measured	0.105	Calculated	1427	Measured	0.184	Measured	7753.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	11	1	756		454.2	Measured	0.059	Calculated	808.1	Measured	0.105	Calculated	1772	Measured	0.23	Measured	7704.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	12	1	758		410.3	Measured	0.053	Calculated	814.3	Measured	0.105	Calculated	551.2	Measured	0.071	Measured	7763.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	13	1	759		390.8	Measured	0.05	Calculated	816.4	Measured	0.105	Calculated	381.4	Measured	0.049	Measured	7784.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	14	1	760		398.2	Measured	0.051	Calculated	814.6	Measured	0.105	Calculated	388.4	Measured	0.05	Measured	7767.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	15	1	759		393.3	Measured	0.05	Calculated	817.4	Measured	0.105	Calculated	436.5	Measured	0.056	Measured	7794	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	16	1	760		365.6	Measured	0.047	Calculated	815.7	Measured	0.105	Calculated	505.5	Measured	0.065	Measured	7777	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	17	1	757		359.6	Measured	0.046	Calculated	811.4	Measured	0.105	Calculated	518.3	Measured	0.067	Measured	7736.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	18	1	756		316.2	Measured	0.041	Calculated	803.8	Measured	0.105	Calculated	659.1	Measured	0.086	Measured	7664	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS

State	Facility Name	Facility ID	Unit ID	Associated Stacks	Date	Hour	Operating Time	Gross Load (MW)	Steam Load (1000 lb/hr)	SO2 Mass (lbs)	SO2 Mass Measure Indicator	SO2 Rate (lbs/mmBtu)	SO2 Rate Measure Indicator	CO2 Mass (short tons)	CO2 Mass Measure Indicator	CO2 Rate (short tons/mmBtu)	CO2 Rate Measure Indicator	NOx Mass (lbs)	NOx Mass Measure Indicator	NOx Rate (lbs/mmBtu)	NOx Rate Measure Indicator	Heat Input (mmBtu)	Heat Input Measure Indicator	Primary Fuel Type	Secondary Fuel Type	Unit Type	SO2 Controls	NOx Controls	PM Controls	Hg Controls	Program Code
MI	J H Campbell	1710	3		#######	19	1	757		332.8	Measured	0.043	Calculated	811.1	Measured	0.105	Calculated	788.9	Measured	0.102	Measured	7734.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	20	1	760		378.7	Measured	0.049	Calculated	810.1	Measured	0.105	Calculated	818.8	Measured	0.106	Measured	7724.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	21	1	760		396.1	Measured	0.051	Calculated	811.8	Measured	0.105	Calculated	797.2	Measured	0.103	Measured	7740.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	22	1	760		384.4	Measured	0.05	Calculated	813.4	Measured	0.105	Calculated	527.4	Measured	0.068	Measured	7755.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	23	1	759		377.2	Measured	0.048	Calculated	818.5	Measured	0.105	Calculated	429.2	Measured	0.055	Measured	7803.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	0	1	760		409.2	Measured	0.053	Calculated	813	Measured	0.105	Calculated	426.4	Measured	0.055	Measured	7752.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	1	1	760		405.2	Measured	0.053	Calculated	806.3	Measured	0.105	Calculated	453.6	Measured	0.059	Measured	7688.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	2	1	760		367.5	Measured	0.048	Calculated	805.6	Measured	0.105	Calculated	430.2	Measured	0.056	Measured	7681.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	3	1	759		358.7	Measured	0.047	Calculated	804.6	Measured	0.105	Calculated	421.9	Measured	0.055	Measured	7671.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	4	1	759		359.8	Measured	0.047	Calculated	806.9	Measured	0.105	Calculated	430.8	Measured	0.056	Measured	7693.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	5	1	759		366.6	Measured	0.047	Calculated	815.3	Measured	0.105	Calculated	855.1	Measured	0.11	Measured	7773.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	6	1	760		413.3	Measured	0.053	Calculated	813	Measured	0.105	Calculated	472.9	Measured	0.061	Measured	7752.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	7	1	760		752.4	Measured	0.097	Calculated	811.8	Measured	0.105	Calculated	410.2	Measured	0.053	Measured	7740.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	8	1	759		392	Measured	0.05	Calculated	814.8	Measured	0.105	Calculated	404	Measured	0.052	Measured	7768.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	9	1	760		376.6	Measured	0.048	Calculated	817.1	Measured	0.105	Calculated	405.1	Measured	0.052	Measured	7790.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	10	1	760		394.1	Measured	0.05	Calculated	819.1	Measured	0.105	Calculated	421.8	Measured	0.054	Measured	7810.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	11	1	760		380.2	Measured	0.048	Calculated	823.1	Measured	0.105	Calculated	423.8	Measured	0.054	Measured	7848.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	12	1	760		472.4	Measured	0.06	Calculated	825.3	Measured	0.105	Calculated	385.6	Measured	0.049	Measured	7869	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	13	1	760		360.2	Measured	0.046	Calculated	817.4	Measured	0.105	Calculated	413.1	Measured	0.053	Measured	7793.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	14	1	760		382.2	Measured	0.049	Calculated	815.7	Measured	0.105	Calculated	404.4	Measured	0.052	Measured	7777.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	15	1	760		380.4	Measured	0.049	Calculated	816.3	Measured	0.105	Calculated	412.5	Measured	0.053	Measured	7783.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	16	1	759		353.2	Measured	0.046	Calculated	808.4	Measured	0.105	Calculated	439.4	Measured	0.057	Measured	7708.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	17	1	759		375.3	Measured	0.049	Calculated	807.2	Measured	0.105	Calculated	469.5	Measured	0.061	Measured	7696.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	18	1	760		388.8	Measured	0.05	Calculated	809.6	Measured	0.105	Calculated	470.9	Measured	0.061	Measured	7718.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	19	1	761		346.1	Measured	0.045	Calculated	811.3	Measured	0.105	Calculated	433.2	Measured	0.056	Measured	7735.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	20	1	760		358.5	Measured	0.046	Calculated	811.1	Measured	0.105	Calculated	456.3	Measured	0.059	Measured	7733.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	21	1	760		336.9	Measured	0.044	Calculated	809.1	Measured	0.105	Calculated	455.1	Measured	0.059	Measured	7714.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	22	1	760		340.4	Measured	0.044	Calculated	807.6	Measured	0.105	Calculated	500.5	Measured	0.065	Measured	7700.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	23	1	759		327.4	Measured	0.043	Calculated	806.1	Measured	0.105	Calculated	476.5	Measured	0.062	Measured	7685.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	0	1	760		364.7	Measured	0.047	Calculated	806.6	Measured	0.105	Calculated	476.9	Measured	0.062	Measured	7691.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	1	1	760		353.3	Measured	0.046	Calculated	804.2	Measured	0.105	Calculated	444.7	Measured	0.058	Measured	7667.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	2	1	760		406.6	Measured	0.053	Calculated	803.8	Measured	0.105	Calculated	429.2	Measured	0.056	Measured	7664.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	3	1	759		394.4	Measured	0.051	Calculated	804.2	Measured	0.105	Calculated	414	Measured	0.054	Measured	7667.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	4	1	759		349.7	Measured	0.046	Calculated	805.2	Measured	0.105	Calculated	437.6	Measured	0.057	Measured	7677.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	5	1	758		361.5	Measured	0.047	Calculated	804.1	Measured	0.105	Calculated	429.3	Measured	0.056	Measured	7666.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	6	1	758		363.7	Measured	0.047	Calculated	804.3	Measured	0.105	Calculated	444.8	Measured	0.058	Measured	7669	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	7	1	759		485.1	Measured	0.062	Calculated	815.3	Measured	0.105	Calculated	443.1	Measured	0.057	Measured	7773.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	8	1	759		921	Measured	0.119	Calculated	809.7	Measured	0.105	Calculated	440.1	Measured	0.057	Measured	7720.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	9	1	759		925.4	Measured	0.12	Calculated	811.7	Measured	0.105	Calculated	456.6	Measured	0.059	Measured	7739.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	10	1	758		1181	Measured	0.155	Calculated	800	Measured	0.105	Calculated	472.9	Measured	0.062	Measured	7628.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	11	1	757		1194	Measured	0.158	Calculated	791.6	Measured	0.105	Calculated	445.3	Measured	0.059	Measured	7547.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	12	1	758		1219	Measured	0.161	Calculated	794.6	Measured	0.105	Calculated	439.4	Measured	0.058	Measured	7576.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	13	1	759		1207	Measured	0.159	Calculated	795.6	Measured	0.105	Calculated	485.5	Measured	0.064	Measured	7586.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	14	1	758		1313	Measured	0.174	Calculated	792.7	Measured	0.105	Calculated	438.4	Measured	0.058	Measured	7557.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	15	1	757		1159	Measured	0.154	Calculated	791.6	Measured	0.105	Calculated	422.7	Measured	0.056	Measured	7547.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	16	1	758		1035	Measured	0.137	Calculated	794	Measured	0.105	Calculated	439.1	Measured	0.058	Measured	7570.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	17	1	758		1014	Measured	0.134	Calculated	791.6	Measured	0.105	Calculated	445.3	Measured	0.059	Measured	7547.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	18	1	759		950.1	Measured	0.126	Calculated	793.2	Measured	0.105	Calculated	499.1	Measured	0.066	Measured	7562.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	19	1	758		928.9	Measured	0.121	Calculated	804.3	Measured	0.105	Calculated	552.2	Measured	0.072	Measured	7668.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	20	1	757		961.1	Measured	0.126	Calculated	797.6	Measured	0.105	Calculated	532.3	Measured	0.07	Measured	7604.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	21	1	758		944.1	Measured	0.124	Calculated	800.1	Measured	0.105	Calculated	564.5	Measured	0.074	Measured	7628.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	22	1	758		969.4	Measured	0.127	Calculated	801.1	Measured	0.105	Calculated	481.2	Measured	0.063	Measured	7637.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	23	1	758		1027	Measured	0.135	Calculated	799	Measured	0.105	Calculated	441.8	Measured	0.058	Measured	7618	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	0	1	758		1043	Measured	0.137	Calculated	798.8	Measured	0.105	Calculated	411.3	Measured	0.054	Measured	7616.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	1	1	759		1025	Measured	0.135	Calculated	797.2	Measured	0.105	Calculated	425.6	Measured	0.056	Measured	7600.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	2	1	758		1047	Measured	0.139	Calculated	791.8	Measured	0.105	Calculated	460.5	Measured	0.061	Measured	7549.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	3	1	759		1110	Measured	0.147	Calculated	792.8	Measured	0.105	Calculated	446	Measured	0.059	Measured	7558.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	4	1	759		995.7	Measured	0.131	Calculated	794.3	Measured	0.105	Calculated	590.7	Measured	0.078	Measured	7573.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	5	1	758		1013	Measured	0.135	Calculated	787.1	Measured	0.105	Calculated	667.9	Measured	0.089	Measured	7504.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	6	1	759		1085	Measured	0.144	Calculated	790.2	Measured	0.105	Calculated	625.4	Measured	0.083	Measured	7534.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	7	1	758		1041	Measured	0.135	Calculated	805.6	Measured	0.105	Calculated	645.2	Measured	0.084	Measured	7680.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	8	1	758		1041	Measured	0.135	Calculated	807.4	Measured	0.105	Calculated	654.4	Measured	0.085	Measured	7698.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	9	1	760		1137	Measured	0.148	Calculated	806.7	Measured	0.105	Calculated	584.6	Measured	0.076	Measured	7691.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	10	1	748		1168	Measured	0.155	Calculated	790.9	Measured	0.105	Calculated	482.6	Measured	0.064	Measured	7540.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	11	1	748		1155	Measured	0.153	Calculated	791.5	Measured	0.105	Calculated	309.4	Measured	0.041	Measured	7547	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	12	1	760		1199	Measured	0.157	Calculated	798.7	Measured	0.105	Calculated	373.1	Measured	0.049	Measured	7615.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	13	1	760		1212	Measured	0.16	Calculated	795.4	Measured	0.105	Calculated	371.6	Measured	0.049	Measured	7583.5	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	14	1	760		1220	Measured	0.161	Calculated	793.9	Measured	0.105	Calculated	401.2	Measured	0.053	Measured	7569.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	15	1	759		1218	Measured	0.161	Calculated	792.6	Measured	0.105	Calculated	377.9	Measured	0.05	Measured	7557	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	16	1	758		1173	Measured	0.157	Calculated	784.8	Measured	0.105	Calculated	434	Measured	0.058	Measured	7483	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	17	1	760		1164	Measured	0.157	Calculated	779	Measured	0.105	Calculated	497.6	Measured	0.067	Measured	7427.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	18	1	761		1174	Measured	0.159	Calculated	776.3	Measured	0.105	Calculated	510.7	Measured	0.069	Measured	7401.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	19	1	760		1175	Measured	0.157	Calculated	782.7	Measured	0.105	Calculated	470.1	Measured	0.063	Measured	7462.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	20	1	760		1180	Measured	0.157	Calculated	785.8	Measured	0.105	Calculated	427.1	Measured	0.057	Measured	7492.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	21	1	760		1151	Measured	0.153	Calculated	789	Measured	0.105	Calculated	458.9	Measured	0.061	Measured	7523.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	22	1	761		1077	Measured	0.143	Calculated	787.4	Measured	0.105	Calculated	465.5	Measured	0.062	Measured	7507.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	23	1	617		686.7	Measured	0.11	Calculated	655.7	Measured	0.105	Calculated	468.9	Measured	0.075	Measured	6251.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	0	1	602		688.9	Measured	0.109	Calculated	662.1	Measured	0.105	Calculated	656.5	Measured	0.104	Measured	6312.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	1	1	603		725.1	Measured	0.114	Calculated	666.3	Measured	0.105	Calculated	311.3	Measured	0.049	Measured	6353.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	2	1	603		730.9	Measured	0.114	Calculated	670	Measured	0.105	Calculated	351.4	Measured	0.055	Measured	6388.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	3	1	602		773.1	Measured	0.121	Calculated	669.8	Measured	0.105	Calculated	364	Measured	0.057	Measured	6386	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	4	1	623		932.8	Measured	0.143	Calculated	685.4	Measured	0.105	Calculated	346.4	Measured	0.053	Measured	6535.6	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	5	1	743		1217	Measured	0.161	Calculated	790.6	Measured	0.105	Calculated	459.8	Measured	0.061	Measured	7537.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	6	1	759		1097	Measured	0.143	Calculated	807.3	Measured	0.105	Calculated	392.6	Measured	0.051	Measured	7697.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	7	1	760		1034	Measured	0.134	Calculated	811.2	Measured	0.105	Calculated	402.2	Measured	0.052	Measured	7734.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	8	1	759		1165	Measured	0.151	Calculated	808.3	Measured	0.105	Calculated	447	Measured	0.058	Measured	7707.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	9	1	760		1239	Measured	0.16	Calculated	809.5	Measured	0.105	Calculated	447.7	Measured	0.058	Measured	7718.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	10	1	759		1219	Measured	0.158	Calculated	808.1	Measured	0.105	Calculated	416.1	Measured	0.054	Measured	7705.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	11	1	758		295.6	Measured	0.038	Calculated	813.3	Measured	0.105	Calculated	426.5	Measured	0.055	Measured	7754.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	12	1	760		180.5	Measured	0.023	Calculated	817	Measured	0.105	Calculated	444	Measured	0.057	Measured	7789.8	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	13	1	760		189.3	Measured	0.024	Calculated	819.5	Measured	0.105	Calculated	461	Measured	0.059	Measured	7813.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	14	1	760		331.6	Measured	0.042	Calculated	820.5	Measured	0.105	Calculated	492.8	Measured	0.063	Measured	7822.9	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	15	1	759		312.5	Measured	0.04	Calculated	820.6	Measured	0.105	Calculated	446	Measured	0.057	Measured	7824.2	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	16	1	759		124	Measured	0.016	Calculated	823	Measured	0.105	Calculated	455.1	Measured	0.058	Measured	7847.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	17	1	759		149.6	Measured	0.019	Calculated	827.8	Measured	0.105	Calculated	481.5	Measured	0.061	Measured	7892.7	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	18	1	760		228.7	Measured	0.029	Calculated	821	Measured	0.105	Calculated	493.2	Measured	0.063	Measured	7828.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	19	1	760		191.4	Measured	0.024	Calculated	828.7	Measured	0.105	Calculated	442.5	Measured	0.056	Measured	7901.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	20	1	760		139.3	Measured	0.018	Calculated	821.1	Measured	0.105	Calculated	446.3	Measured	0.057	Measured	7829.3	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	21	1	760		162.5	Measured	0.021	Calculated	822.7	Measured	0.105	Calculated	455	Measured	0.058	Measured	7844.4	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	22	1	761		175	Measured	0.022	Calculated	822.9	Measured	0.105	Calculated	478.6	Measured	0.061	Measured	7846	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS
MI	J H Campbell	1710	3		#######	23	1	759		170.1	Measured	0.022	Calculated	819.3	Measured	0.105	Calculated	476.5	Measured	0.061	Measured	7812.1	Measured	Coal		Dry bottom wall-fire	Dry Lime FGD	Low NOx Burner Technology w/ Overfire Air|Selective Catalytic Redu	Baghouse	Halogenated PAC Sorbent Injection	ARP, CSNOX, CSOSG2E, CSSO2G1, MATS

BEFORE THE UNITED STATES DEPARTMENT OF ENERGY

Federal Power Act Section 202(c) Emergency Order: Midcontinent Independent System Operator (MISO)	)))))	Order No. 202-25-9

Exhibit to
Motion to Intervene and Request for Rehearing and Stay of
Public Interest Organizations

Exhibit 105

DOE Order No. 202-08-1

The Secretary of Energy
Washington, DC 20585

Order No. 202-08-1

Pursuant to the authority vested in me by section 202(c) of the Federal Power Act (FPA), 16 U.S.C. 824a(c), and section 301(b) of the Department of Energy Organization Act, 42 U.S.C. 7151(b), and for the reasons set forth below, I hereby determine that an emergency exists in Texas due to a shortage of electric energy, a shortage of facilities for the generation of electric energy, a shortage of facilities for the transmission of electric energy and other causes, and that issuance of this order will serve to alleviate the emergency and serve the public interest.

As a result of the massive devastation caused by Hurricane Ike, large portions of the areas affected by the hurricane are without electricity, posing a threat to human life and health. It is my judgment that in these circumstances, the order I am issuing today will meet the emergency and serve the public interest because it will alleviate electricity shortages and protect the life and health of the people in the affected areas.

Based on my determination set forth above, I hereby order:

Effective immediately, CenterPoint Energy is authorized and directed to temporarily connect at distribution and transmission level voltages such as 12.5kV, 13.2kV, 25kV, 69kV, 138kV, and 230kV to restore power to Entergy Gulf States, Inc. as well as electric cooperatives and municipal customers within the State of Texas. Pursuant to section 202(d) of the FPA, 16 U.S.C. 824a(d), during the continuance of this order, any person engaged in the transmission and sale of electric energy and not otherwise subject to the jurisdiction of the Federal Energy Regulatory Commission (FERC) may, pursuant to this order, make such temporary connections with any public utility subject to the jurisdiction of FERC and shall not become subject to FERC jurisdiction as a result of that temporary connection.

This order shall be effective upon its issuance and shall expire at 12:01 a.m., November 1, 2008.

Issued in Washington, D.C. at 1600 this 14th day of September, 2008.

Samuel W. Bodman
Secretary of Energy

BEFORE THE UNITED STATES DEPARTMENT OF ENERGY

Federal Power Act Section 202(c) Emergency Order: Midcontinent Independent System Operator (MISO)	)))))	Order No. 202-25-9

Exhibit to
Motion to Intervene and Request for Rehearing and Stay of
Public Interest Organizations

Exhibit 106

DOE Order No. 202-22-2 Amendment No. 1

Department of Energy
Washington, DC 20585

Amendment Number 1 to Order No. 202-22-2

On September 4, 2022, because of a shortage of currently operational electric generating facilities, high demand for electricity, and other adverse conditions resulting from the extreme heat event in California, I issued Order No. 202-22-2. Order No. 202-22-2 authorized the Balancing Authority of Northern California (BANC) to direct the identified electric generating resource (Covered Resources) to operate in BANC's Balancing Authority Area (BAA), under specified conditions, to prevent or mitigate potential power disruptions and provide relief to the bulk power system during stressed grid conditions caused by extreme heat until September 8, 2022. Order No. 202-22-2 expires at the end of the day on September 8, 2022, by its own terms.

On September 7, 2022, BANC submitted a *Request for Extension and Limited Amendment of Emergency Order Pursuant to Section 202(c) of the Federal Power Act* (Renewal Application) to the Department. In its Renewal Application, BANC requests an extension of Order 202-22-1 through September 11, 2022 and certain modifications to the run time hour limitations contained in Order No. 202-22-2. On September 8, 2022, BANC filed a Revised Request for *Request for Extension and Limited Amendment of Emergency Order Pursuant to Section 202(c) of the Federal Power Act* in response to questions from DOE.

Emergency Situation

In its Renewal Application, BANC states that "the actual heat event has been more severe and records loads have been experienced." The emergency conditions brought about by the ongoing extreme heat event in California have continued and worsened and the supply of electricity is at increased risk for meeting system demand. As stated in its Renewal Application, BANC established a new record peak of approximately 4943 MW on September 6. BANC entered into an EEA-2 as of 1330 hours that same day. During this period BANC had forced outages of significant generation but was able to return units to service in approximately 90 minutes. It is believed that BANC members Roseville and Modesto exceeded their all-time peaks. Consequently, BANC requests the expiration date of Order No. 202-22-2 be extended through September 11, 2022.

In addition to the extension of Order No. 202-22-2, BANC has requested that the Order be modified to remove the 2 PM to 10 PM run time limitation so as to allow additional operational flexibility. BANC specifically requests that the Covered Resource be allowed to run during anytime that they have received notice of an Energy Emergency Alert Level 2 (EEA2) condition or greater. The practical impact of this will be to allow the Covered Resource more notice to follow their protocols for ramping up their diesel-fired generator units. In addition, BANC has requested the ramp down of the Covered Resource could extend beyond the period in which the EEA 2 condition exists. Specifically, the ramp down would commence at the time the EEA 2 condition is declared ended and should be completed as soon as possible consistent with good utility and operational

Consultation

In considering renewal or reissuance of an order under FPA section 202(c) that may conflict with an environmental law or regulation, DOE is required to "consult with the primary Federal agency with expertise in the environmental interest protected by such law or regulation" and to include "conditions as such Federal agency determines necessary . . . to the extent practicable." 16 U.S.C. § 824a(c)(4). The Environmental Protection Agency (EPA) is the primary federal agency in this case with expertise in the protected environmental interest, specifically Title V of the Clean Air Act and the Department consulted with EPA after receiving the Renewal Application and EPA did not request any additional conditions be included in this Order. Email from Acting Assistant Administrator Larry Starfield, EPA Office of Enforcement and Compliance Assurance to Kathleen Hogan, Acting Under Secretary for Infrastructure for DOE, September 7, 2022.

Based on the information submitted to the Department, I have determined that an emergency continues to exist in California due to a shortage of electric energy. I find that the issuance of this Order will help to meet the emergency conditions and serve the public interest as required by FPA section 202(c).

ORDER

For the reasons set forth above, pursuant to Section 202(c) of the FPA, I hereby grant BANC's Renewal Application and issue this Order, with modifications as explained below, to extend the expiration date of Order No. 202-22-2 through September 11, 2022.

1. Ordering Paragraph A appearing on page 4 of Order No. 202-22-2 is hereby deleted and replaced in its entirety by the following:

    A. From September 8, 2022, to September 11, 2022, in the event that BANC determines that generation from the Covered Resource is necessary to preserve the reliability of the bulk electric power system in California, I direct BANC to dispatch such unit or units and to order their operation solely under the following conditions: the notification of an Energy Emergency Alert Level 2[1] condition or greater after exhausting all reasonably and practically available resources, together with such reasonable and limited time as is necessary for a Covered Resource to ramp down following an Energy Emergency Alert Level 2 or greater, consistent with good utility practice as directed by the BANC with the goal of limited operation outside of an Energy Emergency Alert Level 2 or greater to the greatest extent possible.

[1] For the purposes of this Order, "Energy Emergency Alert Level 2" has the meaning set forth in Section 3.6.3 of the California ISO System Emergency Operating Procedure, Procedure No. 4420, Version 14.0, Effective Date May 1, 2022 (CAISO Emergency Operating Procedure).

2. The date September 8, 2022 where it appears in Ordering Paragraphs D and H of Order No. 202-22-2 is hereby replaced by the date September 11, 2022.

3. All other terms of Order No. 202-22-2 remain the same and in effect, including Ordering Paragraphs A-H, except as modified herein.

4. This Amendment Number 1 to Order No. 202-22-2 shall be effective upon its issuance, and shall expire at 23:59 Pacific Time on September 11, 2022.

Issued in Washington, D.C. at 16:38 Eastern Time on this 8th day of September, 2022.

Kathleen Hogan
Acting Under Secretary for
Infrastructure

BEFORE THE UNITED STATES DEPARTMENT OF ENERGY

Federal Power Act Section 202(c)	)	
Emergency Order: Midcontinent	)	Order No. 202-25-9
Independent System Operator	)	
(MISO)	)	
	)	

Exhibit to
Motion to Intervene and Request for Rehearing and Stay of
Public Interest Organizations

Exhibit 107

DOE Order No. 202-22-1 Amendment No. 2

Department of Energy
Washington, DC 20585

Amendment Number 2 to Order No. 202-22-1

On September 2, 2022, because of a shortage of currently operational electric generating facilities, high demand for electricity, and other adverse conditions resulting from the extreme heat event in California, I issued Order No. 202-22-1. Order No. 202-22-1 authorizes the California Independent System Operator Corporation (CAISO), to direct the operation of the Covered Resources identified in Order No. 202-22-1 and on the terms set forth therein. On September 7, 2022, because of the continuing shortage of electric energy and the need for continued operation of the two units at Calpine's Greenleaf Unit 1 site in Yuba City, California (Greenleaf Units), I issued Amendment No. 1 to Order No. 202-22-1. Amendment No. 1 to Order No. 202-22-1 added the Greenleaf Units as Covered Resources subject to the terms of Order No. 202-22-1, except that the Greenleaf Units may be operated through September 9, 2022. By its terms, Order No. 202-22-1 as amended by Amendment No. 1 expires at the end of the day on September 8, 2022 with respect to the Covered Resources other than the Greenleaf Units, and at the end of the day on September 9, 2022 with respect to the Greenleaf Units. Order No. 202-22-1 as amended by Amendment No. 1 is sometimes referred to herein as Amended Order No. 202-22-1.

On September 7, 2022, CAISO submitted a *Request for Extension of Emergency Order Pursuant to Section 202(c) of the Federal Power Act* (Renewal Application) to the Department. In its Renewal Application, CAISO requests an extension of the expiration date of Order No. 202-22-1 through September 12, 2022.

Emergency Situation

In its Renewal Application, CAISO states that California is experiencing extreme heat, which the CAISO forecasts to continue through at least September 9, 2022. Further, CAISO explains that unpredictable conditions could exacerbate grid reliability issues at any time. The threat of wildfire to the reliable operation of the bulk power system remains significant, and drought conditions are affecting the availability of hydroelectric power. Ambient conditions facing generating facilities are causing de-rates at some units and forcing other units offline. Wildfire threats arising from the extreme heat event are unpredictable and could force transmission and resources out of service. Consequently, the CAISO believes it prudent to ask that the expiration date of Order No. 202-22-1 be extended through September 12, 2022.

Consultation

In considering renewal or reissuance of an order under FPA section 202(c) that may conflict with an environmental law or regulation, DOE is required to "consult with the primary Federal agency with expertise in the environmental interest protected by such law or regulation" and to include "conditions as such Federal agency determines necessary . . . to the extent practicable." 16 U.S.C. § 824a(c)(4). The Environmental

Protection Agency (EPA) is the primary federal agency in this case with expertise in the protected environmental interest, specifically Title V of the Clean Air Act and the Department consulted with EPA after receiving the Renewal Application and EPA did not request any additional conditions be included in this Order. Email from Acting Assistant Administrator Larry Starfield, EPA Office of Enforcement and Compliance Assurance to Kathleen Hogan, Acting Under Secretary for Infrastructure for DOE, September 7, 2022.

Based on the information submitted to the Department, I have determined that an emergency continues to exist in California due to a shortage of electric energy. I find that the issuance of this Order will help to meet the emergency conditions and serve the public interest as required by FPA section 202(c).

ORDER

For the reasons set forth above, pursuant to Section 202(c) of the FPA, I hereby grant CAISO's Renewal Application and issue this Order to extend the expiration date of Amended Order No. 202-22-1 through September 12, 2022.

1. In accordance with the foregoing, (a) the date September 8, 2022 where it appears in Ordering Paragraphs A, D, and H of Order No. 202-22-1 is hereby replaced by the date September 12, 2022, and (b) the date September 9, 2022 where it appears in the Ordering Paragraph of Amendment No. 1 to Order No. 202-22-1 is hereby replaced by the date September 12, 2022.

2. All other terms of Amended Order No. 202-22-1 remain the same and in effect, including Ordering Paragraphs A-H, except as modified herein.

3. This Amendment Number 2 to Order No. 202-22-1 shall be effective upon its issuance and shall expire at 23:59 Pacific Time on September 12, 2022.

Issued in Washington, D.C. at 15:52 Eastern Time on this 8th day of September, 2022.

Kathleen Hogan
Acting Under Secretary for
Infrastructure

BEFORE THE UNITED STATES DEPARTMENT OF ENERGY

Federal Power Act Section 202(c) Emergency Order: Midcontinent Independent System Operator (MISO)	)))))	Order No. 202-25-9

Exhibit to
Motion to Intervene and Request for Rehearing and Stay of
Public Interest Organizations

Exhibit 108

Starfield Email to Hoffman

From: Starfield, Lawrence <Starfield.Lawrence@epa.gov>
Date: Monday, Sep 11, 2017, 11:27 AM
To: Hoffman, Patricia <Pat.Hoffman@hq.doe.gov>
Cc: Lucas, John T. <John.T.Lucas@hq.doe.gov>, Minoli, Kevin <Minoli.Kevin@epa.gov>, Kelley, Rosemarie <Kelley.Rosemarie@epa.gov>, Chapman, Apple <Chapman.Apple@epa.gov>
Subject: DOE section 202(c) order

To: Pat Hoffman, DOE Acting Under Secretary for Science and Energy

On August 24, 2017, PJM submitted a renewal application requesting a 90-day renewal of the Order issued on June 16, 2017, by the Secretary of Energy. This email confirms that the Department of Energy (DOE) consulted with the Environmental Protection Agency (EPA), the primary Federal agency with expertise in the Mercury and Air Toxics Standard and section 316(b) of the Clean Water Act, with respect to a renewal order under Section 202(c) of the Federal Power Act related to Virginia Electric and Power Company's Units 1 and 2 at its Yorktown Power Station, near Yorktown, Virginia. See 16 U.S.C. § 824a(c)(4)(B) (Federal Power Act, Section 202(c)(4)(B)). DOE's proposed operational conditions for the order are generally consistent with EPA's Administrative Compliance Order, AED-CAA-113(a)-2016-002, as amended.

Thank you for your coordination on this matter.

Larry Starfield
Acting Assistant Administrator
Office of Enforcement and Compliance Assurance
U.S. EPA
Washington, DC

(202) 564-2440 (office)
(202) 564-8179 (direct)

BEFORE THE UNITED STATES DEPARTMENT OF ENERGY

Federal Power Act Section 202(c) Emergency Order: Midcontinent Independent System Operator (MISO)	)))))	Order No. 202-25-9

Exhibit to
Motion to Intervene and Request for Rehearing and Stay of
Public Interest Organizations

Exhibit 109

MISO ERAS News Release

Expedited Resource Addition Study attracts large, diverse applicant pool

Projects tailored to address rapidly growing demand in specific areas

For Immediate Release

August 26, 2025

Media Contact

Brandon D. Morris

CARMEL, Ind. — Today, MISO shared the list of applications submitted to date for the Expedited Resource Addition Study (ERAS) which includes 47 projects across 12 states, representing more than 26,500 megawatts of proposed new capacity. ERAS is a temporary process aimed at fast-tracking urgently needed generation projects across the region. The proposed projects include: 74% natural gas, 15% battery storage, 4% wind, 4% solar and 3% nuclear.

"This broad mix underscores MISO's evolving energy landscape and the urgent need to bring new resources online to address growing reliability challenges," said Aubrey Johnson, MISO's vice president of system planning. "These projects are designed to meet localized and accelerating demand growth."

The ERAS process will study up to 10 projects per quarter, with a maximum of 68 projects before the program sunsets on Aug. 31, 2027. ERAS was developed in close collaboration with stakeholders to address specific load growth and/or resource adequacy concern – through the Generator Interconnection process.

"ERAS is another tool in our toolbox to help maintain reliability while we continue to improve the interconnection process for the long term," Johnson continues. "These projects must meet strict requirements to ensure that only viable, needed projects are considered."

MISO continues to evaluate the applications to ensure all requirements are met and will publish the approved ERAS projects after September 2, 2025. Eligible projects must demonstrate a clear resource adequacy or reliability need, be commercially operable within three to six years and have support from Relevant Electric Retail Regulatory Authority. More information, including the application guide and schedule, is available on the MISO website.

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Media Contact:
Brandon D. Morris

About MISO

Midcontinent Independent System Operator (MISO) is an independent, not-for-profit organization that delivers safe, cost-effective electric power across 15 U.S. states and the Canadian province of Manitoba. 42 million people depend on MISO to generate and transmit the right amount of electricity every minute of every day. MISO is committed to reliable, nondiscriminatory operation of the bulk power transmission system and collaborating with all stakeholders to create cost-effective and innovative solutions for our changing industry. MISO operates one of the world's largest energy markets with more than $22 billion in annual gross market energy transactions.

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BEFORE THE UNITED STATES DEPARTMENT OF ENERGY

Federal Power Act Section 202(c) Emergency Order: Midcontinent Independent System Operator (MISO)	)))))	Order No. 202-25-9

Exhibit to
Motion to Intervene and Request for Rehearing and Stay of
Public Interest Organizations

Exhibit 110

DOE Order No. 202-24-1

Department of Energy
Washington, DC 20585

Order No. 202-24-1

Pursuant to the authority vested in the Secretary of Energy by section 202(c) of the Federal Power Act (FPA), 16 U.S.C. § 824a(c), and section 301(b) of the Department of Energy Organization Act, 42 U.S.C. § 7151(b), and for the reasons set forth below, I hereby determine that an emergency exists in Florida due to a shortage of electric energy, a shortage of facilities for the generation of electric energy, and other causes, and that issuance of this Order will meet the emergency and serve the public interest.

Emergency Situation

On October 9, 2024, Duke Energy Florida, LLC (Duke), an investor-owned utility, whose service territory includes electric customers in Florida, filed a *Request for Emergency Order Under Section 202(c) of the Federal Power Act* (Application) with the United States Department of Energy (Department) "to preserve the reliability of the bulk electric power system." As of 4 PM EDT on October 9, 2024, Hurricane Milton is a Category 3 storm forecast to remain a major hurricane and expand in size as it approaches the west coast of Florida. The center is likely to make landfall along the west-central coast of Florida during the night on Wednesday, October 9, 2024, or in the early morning on Thursday, October 10, 2024, and move east-northeastward across central Florida through October 10, 2024. Hurricane Milton follows the landfall of Hurricane Helene in Florida on September 26, 2024, which resulted in over 230 deaths in the southeast United States and for which recovery and restoration efforts remain ongoing. As of 5:00 PM EDT on October 9, 2024, Florida was experiencing 118,000 outages related to the approaching Hurricane Milton, with the number increasing rapidly.

On October 7, 2024, President Biden declared that an emergency exists in the State of Florida and ordered Federal assistance to supplement State, tribal, and local response efforts due to the emergency conditions resulting from Hurricane Milton beginning on October 5, 2024, and continuing.

Duke has indicated that its service territory is being impacted by Hurricane Milton. Duke expects that Hurricane Milton will cause hurricane-force-gusts across the St. Petersburg/Tampa metropolitan region at the height of the storm overnight into early Thursday, October 10, 2024. Elsewhere, strong tropical-storm to near hurricane-force-gusts are projected to impact highly populated zones along the I-4 corridor served by Duke. The combination of damaging winds, torrential rain and subsequent flooding, storm surge at the coast, and possible tornadoes, will result in major power outages, damaging distribution and transmission infrastructure, and threaten several generation stations along the path. Application at 1.

While many generating units in the Duke service territory continue to function adequately under these stressed conditions, several of Duke's generating units are expected to be forced to shut down due to facility limits on wind speeds and storm surge, as well as staffing issues caused by mandatory evacuations. Additionally, Crystal River Units 4 and 5 remain in forced outage from storm surge impacts from Hurricane Helene. Specifically, approximately 4,000 MW of generating units are currently offline and will remain offline during Hurricane Milton. Application at 2.

Additionally, several units at Citrus Combined Cycle, the subject of this Order, may be forced offline by conditions in its Title V operating permit. With projected outages and low demand, in order to keep the Citrus Combined Cycle units online, they would potentially need to operate at low load for an extended period of time, which could result in noncompliance with its Title V permit. If these units are brought offline due to these compliance requirements, they may not be able ramp up quickly enough to meet demand as load increases following power restoration, particularly in light of the amount of generation predicted to be offline due to hurricane impacts. For example, ramp-up times from a cold start could be eight or nine hours, and could be further delayed by pre-generation start-up checks. Additionally, shutting down also increases the risk or equipment failure, as well as the risk of water intrusion due to thermal and pressure gradient changes. If equipment fails or is damaged by Hurricane Milton, units may not be able to start without additional maintenance. In that case, Duke may have to declare an Energy Emergency Alert (EEA) Level 3 and institute rotating load shed. Such impacts would hinder post-hurricane restoration and recovery activities and overall grid reliability. Although Duke would attempt to mitigate such impacts through alternative generation as well as power purchases, it is unknown what will be available following Hurricane Milton and whether the necessary transmission infrastructure will remain for this purpose. Application at 2.

The Florida Reliability Coordinating Council, Inc. (FRCC), the Reliability Coordinator for Duke's service territory and others, filed a formal endorsement on October 9, 2024, of Duke's Application, specifically the need to continue operation of the Specified Resources in Application Exhibit A at low load operation to help reduce the likelihood of any firm load shedding during the hurricane event. FRCC Letter at 1. The endorsement explains:

> It is the FRCC's firm opinion that granting this relief request will provide an immeasurable benefit to this mission and in turn, the public served by the FRCC and its member entities. Allowing this relief will not only serve the reliability of [Duke's] service territory, but also the many local electric cooperatives served by [Duke] and other interconnected electric utilities and service providers.

FRCC Letter at 2.

Description of Mitigation Measures

Duke has indicated that it will attempt to keep the Citrus Combined Cycle units operating at a load level compliant with its Title V permit whenever possible, including attempting to sell power to keep load higher. Duke anticipates needing to continue these efforts through October 13, 2024. Subject to the exceptions included in this Order, Duke has committed to continuing to take such actions, including attempting to sell power, before operating any units in a manner that will result in a conflict with a requirement of any federal, state, or local environmental statute or regulation, including requirements in permits issued pursuant to such laws or regulations.

Request for Order

Duke requests that the Secretary issue an order immediately, effective October 9, 2024, through 00:00 EDT on October 13, 2024, authorizing "continued operation of the Specified Resources" in the Duke service territory. Application at 3. The generating units (Specified Resources) that this Order pertains to are listed on the Order 202-24-1 Resources List, as described below.

ORDER

Given the emergency nature of the expected load stress, the responsibility of Duke to ensure maximum reliability on its system, and the ability of Duke to identify and dispatch generation necessary to meet load requirements, I have determined that, under the conditions specified below, additional dispatch of the Specified Resources is necessary to best meet the emergency and serve the public interest for purposes of FPA section 202(c). This determination is based on, among other things:

- The emergency nature of the expected load stress caused by the current extreme weather event and its aftermath threatens to cause loss of power to homes and local businesses in the areas that may be affected by curtailments, presenting a risk to public health and safety.
- The expected shortage of electric energy, shortage of facilities for the generation of electric energy, and other causes in the State of Florida and within the region demonstrate the need for the Specified Resources to contribute to system reliability.
- Duke's responsibility to ensure maximum reliability on its system, and, with the authority granted in this Order, its ability to identify and dispatch generation, including the Specified Resources, necessary to meet the load resulting from the extreme weather event and its aftermath.

In line with the anticipated circumstances precipitated by Hurricane Milton, this Order is limited to the period beginning with the issuance of this Order on October 9, 2024, through 00:00 EDT on October 13, 2024. Because the additional generation may result in a conflict with environmental standards and requirements, I am authorizing only the necessary additional generation on the conditions contained in this Order, with reporting requirements as described below.

FPA section 202(c)(2) requires the Secretary of Energy to ensure that any 202(c) order that may result in a conflict with a requirement of any environmental law be limited to the "hours necessary to meet the emergency and serve the public interest, and, to the maximum extent practicable," be consistent with any applicable environmental law and minimize any adverse environmental impacts. Duke anticipates that this Order may result in exceedance of emissions of Volatile Organic Compounds (VOC), specifically formaldehyde. To minimize adverse environmental impacts, this Order limits operation of dispatched units to the times and within the parameters determined by Duke for reliability purposes.

Based on my determination of an emergency set forth above, I hereby order:

A. From the time this Order is issued on October 9, 2024, to 00:00 EDT on October 13, 2024, in the event that Duke determines that generation from the Specified Resources is necessary to meet the electricity demand that Duke anticipates in Florida during and immediately following this event, I direct Duke to dispatch such unit or units and to order their operation only as needed to maintain the necessary expected generation in the Duke service territory. Specified Resources are those generating units set forth on the Order 202-24-1 Resource List, which the Department shall post on www.energy.gov. Duke is directed to provide updates, if any, to Exhibit A to its Application with the anticipated category of environmental impact(s) (i.e., formaldehyde, sulfur dioxide, nitrogen oxide, mercury, carbon monoxide emissions, wastewater release, other air pollutants) by 21:00 EDT on October 10, 2024.

B. To minimize adverse environmental impacts, this Order limits operation of dispatched units to the times and within the parameters determined by Duke for maintaining grid reliability to avoid adverse health and safety impacts to customers from shedding firm customer load. Duke shall exhaust all possible measures to run the Specified Units at a load level in compliance with permit requirements, including attempting to sell power. Duke shall provide a daily notification to the Department (via AskCR@hq.doe.gov) reporting each generating unit that has been designated to use the allowance and operated in reliance on the allowances contained in this Order.

C. All operation of the Specified Resource must comply with applicable environmental requirements, including but not limited to monitoring, reporting, and recordkeeping requirements, to the maximum extent feasible while operating consistent with the emergency conditions. This Order does not provide relief from any obligation to pay fees or purchase offsets or allowances for emissions that occur during the emergency condition or to use other geographic or temporal flexibilities available to generators.

D. Duke shall provide such additional information regarding the environmental impacts of this Order and its compliance with the conditions of this Order, in each case as requested by the Department of Energy from time to time. By October 20, 2024, Duke shall report all dates between October 9, 2024, and October 13, 2024, inclusive, on which the Specified Resources were operated, the hours of operation, and exceedance of permitting limits, including formaldehyde, sulfur dioxide, nitrogen oxide, mercury, carbon monoxide, and other air pollutants, as well as exceedances of wastewater release limits. Duke shall submit a final report by November 20, 2024, with any revisions to the information reported on October 20, 2024. The environmental information submitted in the final report shall also include the following information:

(i) Emissions data in pounds per hour for each Specified Resource unit, for each hour of the operational scenario, for CO, NOx, PM10, formaldehyde, VOC, and SO2;
(ii) Emissions data must include emissions (lbs/hr) calculated consistent with reporting obligations pursuant to operating permits, permitted operating/emission limits, and the actual incremental emissions above the permit limits;
(iii) The number and actual hours each day that each Specified Resource unit operated in excess of permit limits or conditions, e.g. “Generator #1; October 10, 2024; 4 hours; 04:00-08:00 EDT”;
(iv) Amount, type and formulation of any fuel used by each Specified Resource;
(v) All reporting provided under the Specified Resource’s operating permit requirements over the last three years to the United States Environmental Protection Agency or local Air Quality Management District for the location of a Specified Resource that operates pursuant to this Order;
(vi) Additional information requested by DOE as it performs any environmental review relating to the issuance of this Order; and
(vii) Information provided by the Specified Resource describing how the requirements in paragraph C above were met by the Specified Resource while operating under the provisions of this Order.

In addition, Duke shall provide information to the Department quantifying the net revenue associated with generation in excess of environmental limits accruing to the Specified Resources in connection with any order issued by the Department pursuant to Section 202(c) of the Federal Power Act.

E. Duke shall take reasonable measures to inform affected communities where all Specified Resources operate that Duke has been issued this Order, in a manner that ensures that as many members of the community as possible are aware of the Order, and explains clearly what the Order allows Duke to do. At a minimum, Duke shall post a description of this Order on its website (with a link to this Order) and identify the name, municipality or other political subdivision, and zip code of any Specified Resource covered by this Order. In addition, in the event that a Specified Resource operates pursuant to this Order, a general description of the action authorized by this Order will be included in any press release issued by Duke with respect to the extreme weather event and will include a reference to the website posting required by the preceding sentence for further information. Duke shall describe the actions taken to comply with this paragraph in the reports delivered to the Department pursuant to paragraph D above.

F. This Order shall not preclude the need for the Specified Resource to comply with applicable state, local, or Federal law or regulations following the expiration of this Order.

G. Duke shall be responsible for the reasonable third-party costs of performing analysis of the environmental and environmental justice impacts of this Order, including any analysis conducted pursuant to the National Environmental Policy Act.

H. This Order shall be effective upon its issuance, and shall expire at 00:00 EDT on Sunday, October 13, 2024, with the exception of the reporting requirements in paragraph D. Renewal of this Order, should it be needed, must be requested before this Order expires.

Issued in Washington, D.C. at 8:00 PM Eastern Daylight Time on this 9th day of October 2024.

____

Jennifer Granholm
Secretary of Energy

BEFORE THE UNITED STATES DEPARTMENT OF ENERGY

Federal Power Act Section 202(c) Emergency Order: Midcontinent Independent System Operator (MISO)	)))))	Order No. 202-25-9

Exhibit to
Motion to Intervene and Request for Rehearing and Stay of
Public Interest Organizations

Exhibit 111

MISO June Operations Report

MISO Monthly Operations Report

June 2025

Reliability, markets and operational functions performed as expected in June

AVERAGE & PEAK LOAD (GW)

SYSTEM-WIDE LOAD PEAK

120 GW

June 23, Hour Ending (HE) 16

SOLAR PEAK

13.1 GW

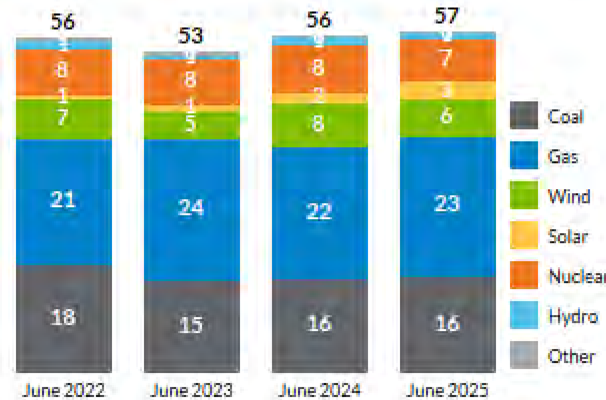
Jun 22, 2025, HE 11

WIND PEAK

21.5 GW

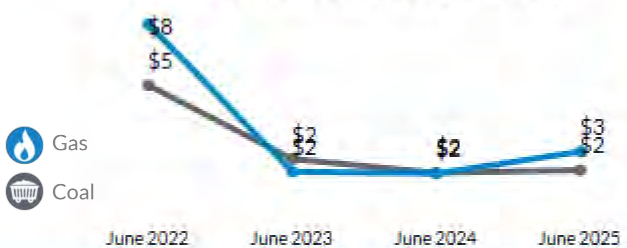
Jun 20, 2025, HE 23

ENERGY FUEL MIX (TWh)

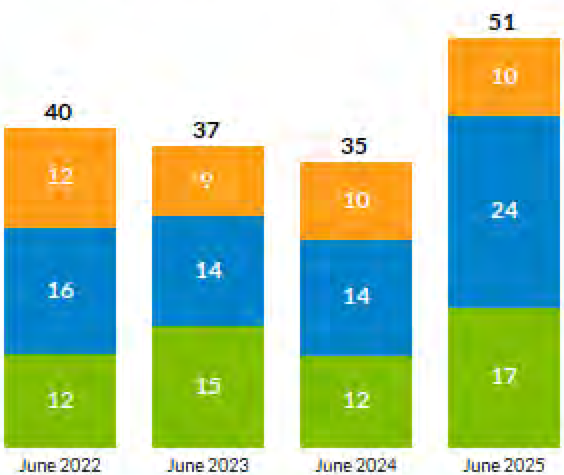


REAL-TIME LMP ($/MWh)

AVERAGE FUEL PRICE ($MMBtu)



AVERAGE DAILY GENERATION OUTAGE (GW)



KEY OPERATING DECLARATIONS

JUNE 2025

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

***06/06-06/08 South:** Conservative Operations*
***06/12 South:** Severe Weather Alert*
***06/18 Central:** Severe Weather Alert*
***06/20-06/21 North:** Severe Weather Alert*
***06/21-06/24 N/C:** Hot Weather Alert*
***06/23 N/C:** Max Gen Event – Step 1b*
***06/24 N/C:** Max Gen Warning*
***06/21–06/27 System:** Conservative Operations*

Awareness and Weather
Alerts and Warnings
Reliability Actions and Events

- *All-Time Solar Peak: 13.5 GW on May 31, 2025, HE 13*
- *All-Time Wind Peak: 25.7 GW on Jan 12, 2024, HE 19*
- *All-Time Load Peak: 127.1 GW on Jul 20, 2011, HE17*

MISO

Dashboard

Metric	Chart	June 2025	May '25	Apr '25	Mar '25	Metric	Chart	June 2025	May '25	Apr '25	Mar '25
Market Efficiency Metric	D	▼	●	●	●	**Unit Commitment Efficiency**	H	●	●	●	●
Percentage Price Deviation	A	■	■	■	●	Day Ahead Wind Generation Forecast Error	K	●	●	●	●
Monthly Average Gross Virtual Profitability	B	●	●	●	●	Day-Ahead Solar Generation Forecast Error	T	●	●	●	●
FTR Funding	C	●	●	●	●	Tie Line Error	L	●	●	●	●
RSG per MWh to Energy Price	E	●	●	●	●	Control Performance – BAAL	M	●	●	●	●
Day Ahead Mid-Term Load Forecast	F	●	■	▼	▼	Control Performance – CPS1 and CPS1 12-month rolling	N	●	●	●	●
Short-Term Load Forecast	G	●	●	■	●	ARS Deployment	P	●	●	●	●
Real-Time Obligation fulfilled by Day-Ahead Supply at the Peak Hour	I	●	●	●	●						
System Impact Study Performance	Q	▼	●	▼	▼	Settlement Disputes	S	●	●	●	●

● *Expected* ■ *Concern/Monitor* ▼ *Review*

Note: Dashboard metric criteria are reviewed and revised each year and is included in the Appendix.

Three metrics fell outside of the expected range for this month

Metric	Expected Criteria	Actual	Status	Comments
Percentage Price Deviation	Absolute DA-RT price difference divided by DA LMP <=28.6%	32.8%	Monitor	Periods of congestion, especially on June 23 and June 24, and Real-Time ancillary service product scarcity pricing throughout the month resulted in some price divergence between the Day-Ahead and Real-Time markets.
Market Efficiency Metric	>= 95%	90.5%	Review	Excess Congestion Fund (ECF) performance for the month of June was largely impacted by the effects of the notable heat days (6/21-6/24) as well as outlier constraints. The high impact ECF constraints were driven by large Joint Operating Agreement payments to SPP, outages, Real-Time congestion management actions, and congestion forecast.
System Impact Study Performance	Studies completed in less than 60 days >=85%	Completed studies were done in more than 60 days	Review	Resource constraints impacted study completion timing.

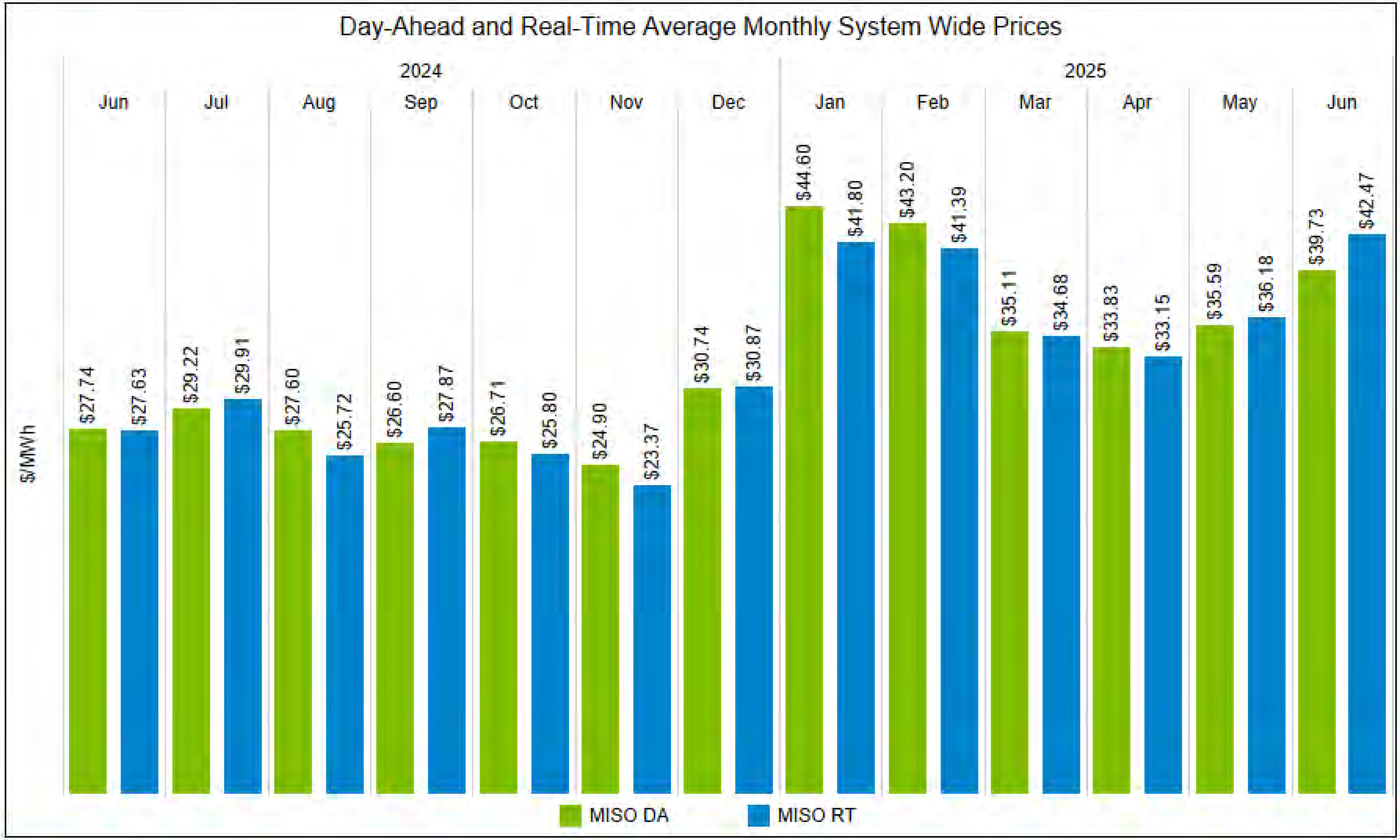
Appendix

MISO has worked collaboratively with stakeholders to review and implement the following changes on the Monthly Operations Report

Removed	Modified	Added
• Price Duration Curve – Peak Hours • Price Duration Curve – Off-Peak Hours • MISO Hubs RT Price Duration – Peak Hours • MISO Hubs RT Price Duration – Off-Peak Hours • Load Duration Curve • Solar Energy and Daily Peak	• Add hours to Manual Redispatch/Cap summary on the Reliability slide • Provided regional breakdown for Real-Time Congestion Dollars • Consolidated load and temperature information	• Add an Operator Actions for congestion management slide with details on Manual Redispatches/Caps • Added a monthly solar slide that resembles the monthly wind slide • Added a daily solar slide that resembles the daily wind slide

Contents

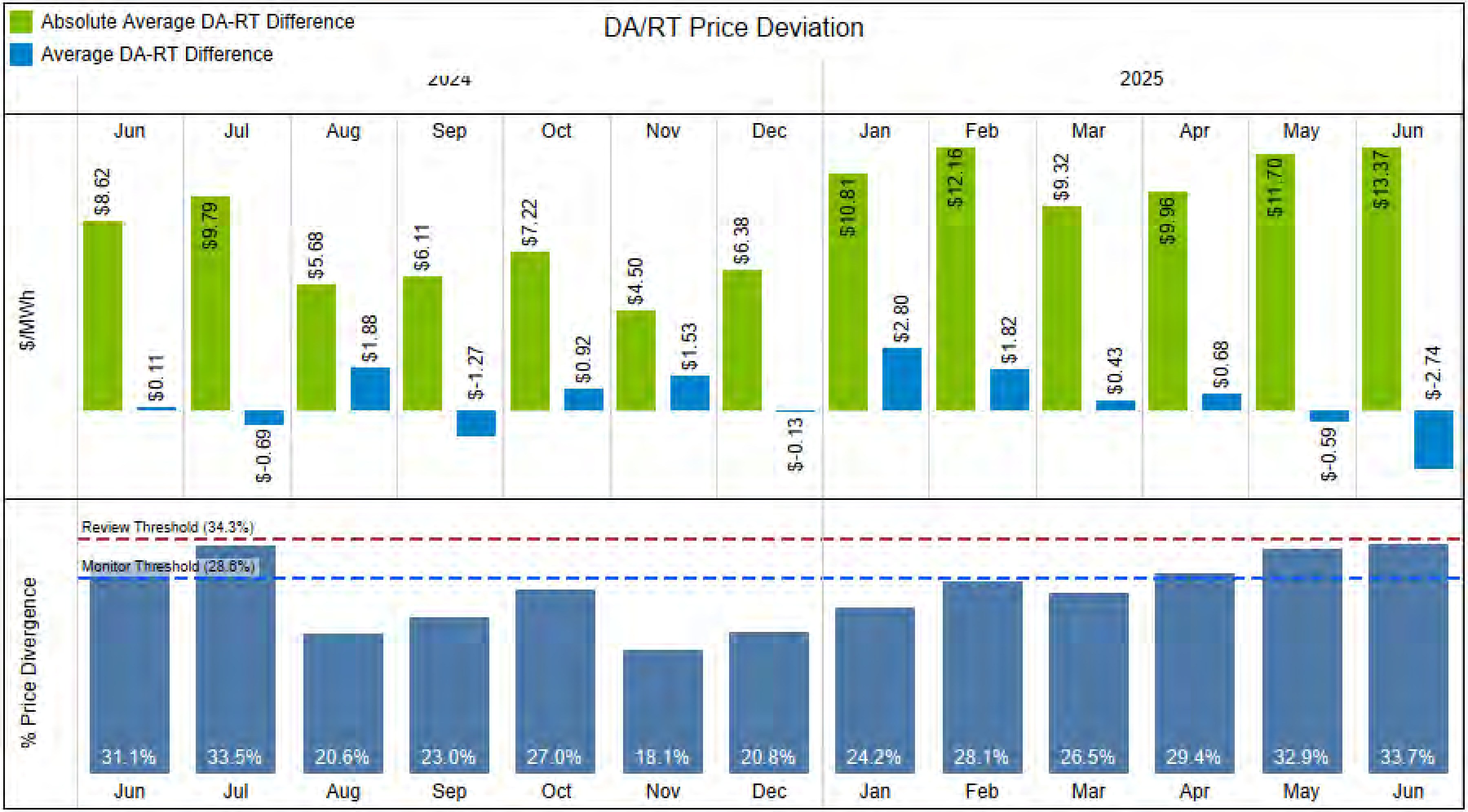
MISO System-wide Day-Ahead and Real-Time Locational Marginal Pricing



Note: MISO System-Wide price is based on the monthly hourly average of the active hubs
Source: MISO Market and Operations Analytics Department

Price Convergence: Day-Ahead and Real-Time Locational Marginal Pricing

A

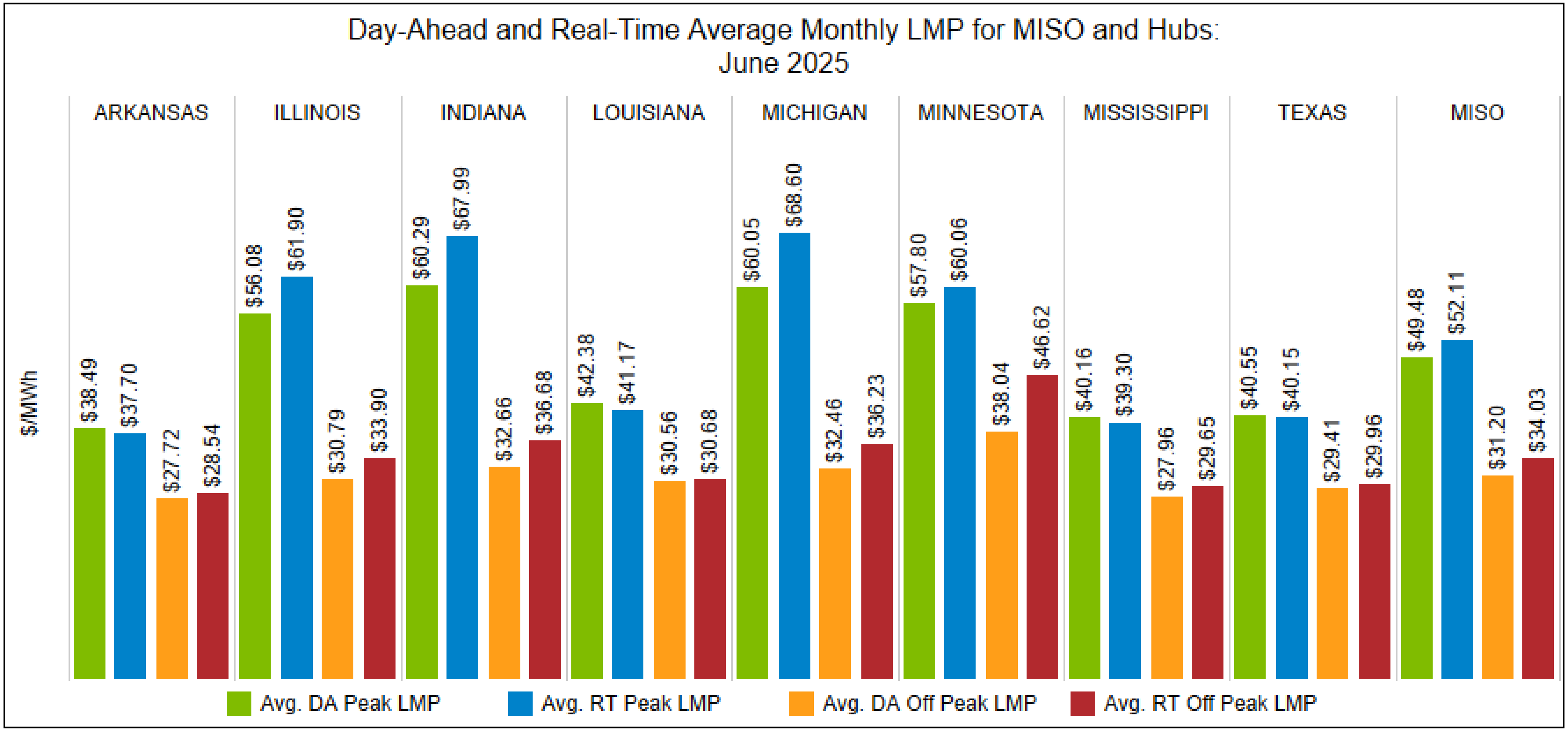


**Monthly deviation, expressed as a percent of average DA LMP, is calculated as the average of hourly absolute (DA-RT) price difference divided by the average of hourly DA LMPs for the month*

Note: MISO System-Wide price is based on the monthly hourly average of the active trading hubs
Source: MISO Market and Operations Analytics Department

MISO

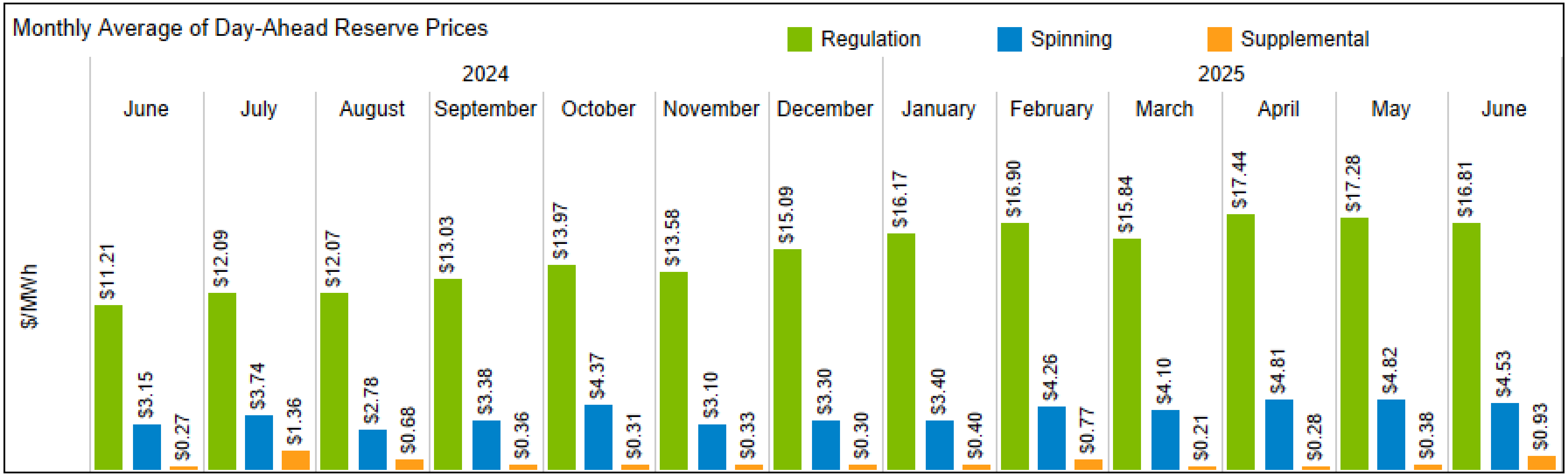
MISO Day-Ahead and Real-Time Hub Locational Marginal Pricing

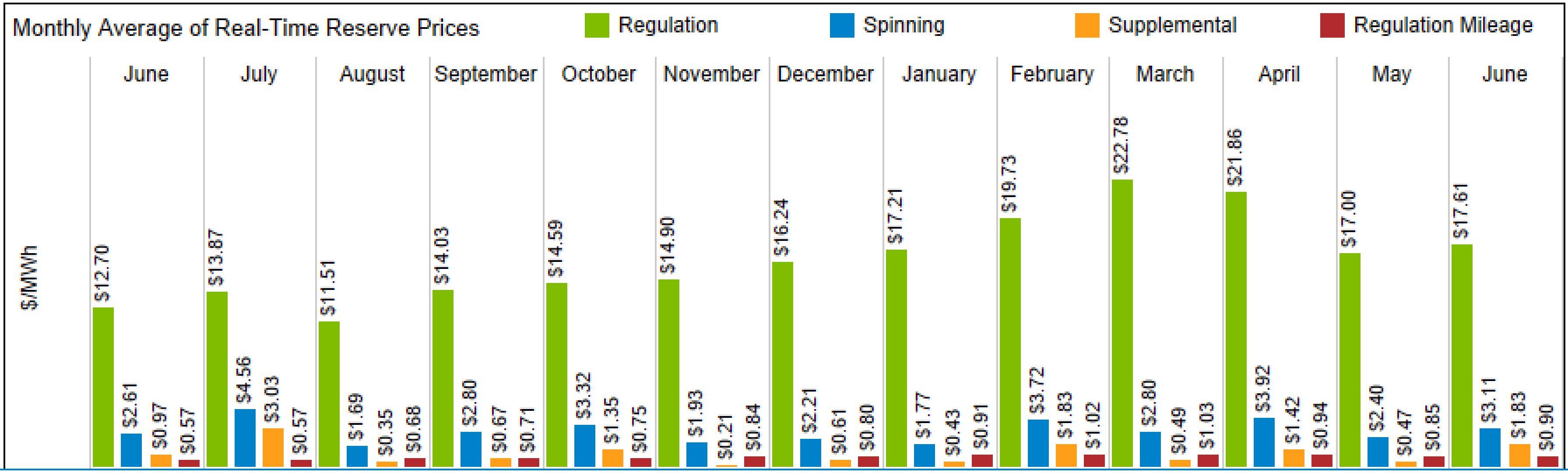


		ARKANSAS	ILLINOIS	INDIANA	LOUISIANA	MICHIGAN	MINNESOTA	MISSISSIPPI	TEXAS	MISO
Marginal Congestion Component of LMP ($/MWh)	DA Peak	-16.62	-0.48	1.78	-14.90	1.82	-0.63	-16.19	-15.79	-7.63
	RT Peak	-23.91	-1.42	2.06	-22.70	2.91	-2.36	-23.51	-23.17	-11.51
	DA Off Peak	-3.55	-0.81	-0.24	-2.16	-0.23	5.13	-3.96	-2.61	-1.06
	RT Off Peak	-5.71	-0.78	0.54	-5.11	0.35	10.78	-5.28	-5.53	-1.34

Source: MISO Market and Operations Analytics Department

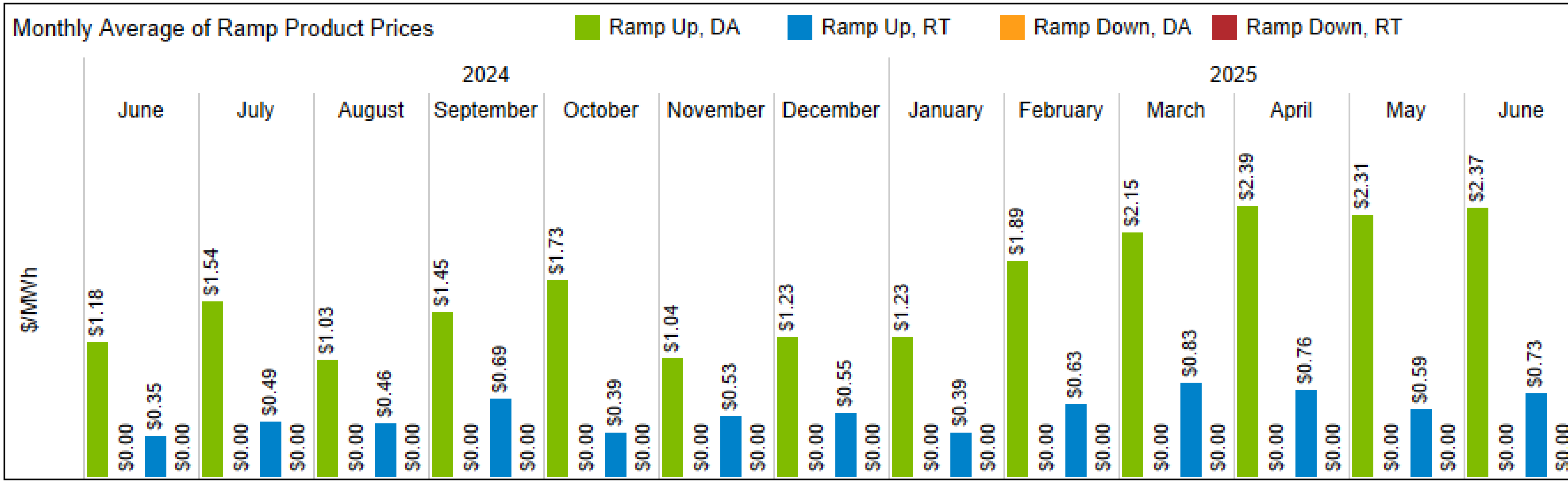
Ancillary Services - Day-Ahead and Real-Time Market Clearing Prices

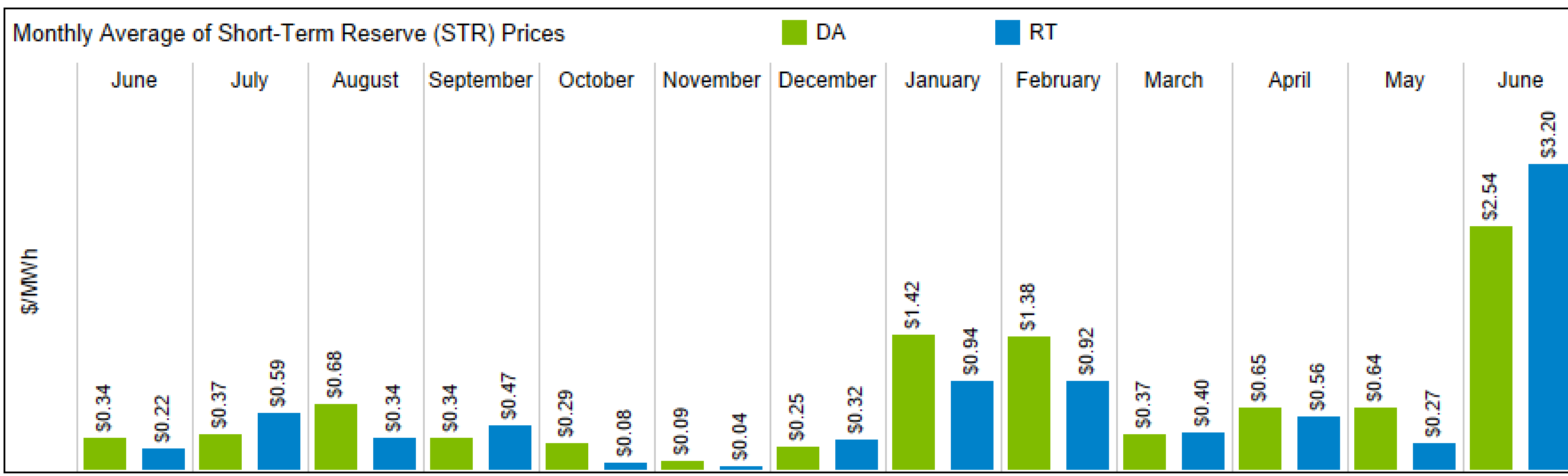




Source: MISO Market and Operations Analytics Department

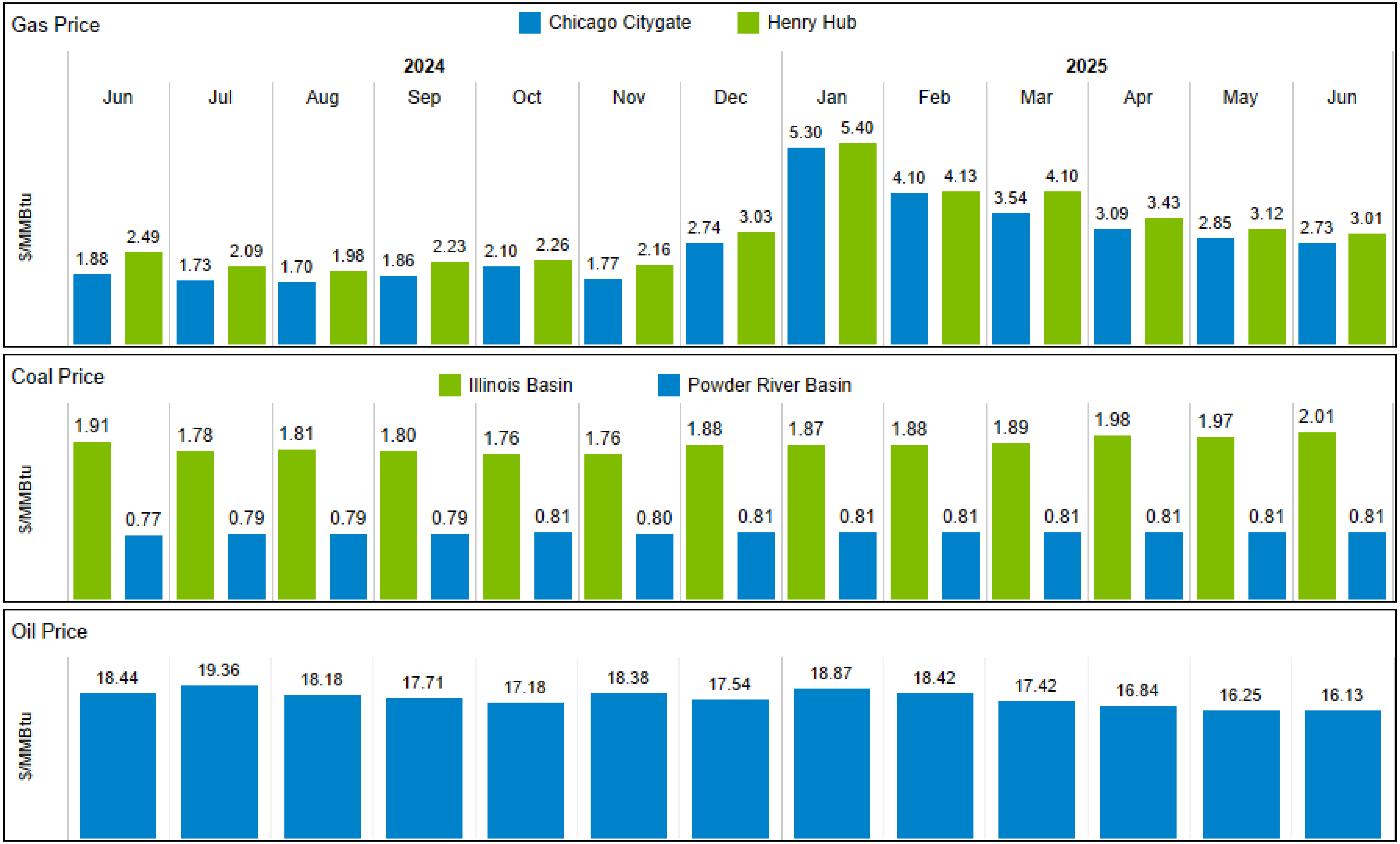
Ancillary Services - Day-Ahead and Real-Time Market Clearing Prices





Source: MISO Market and Operations Analytics Department

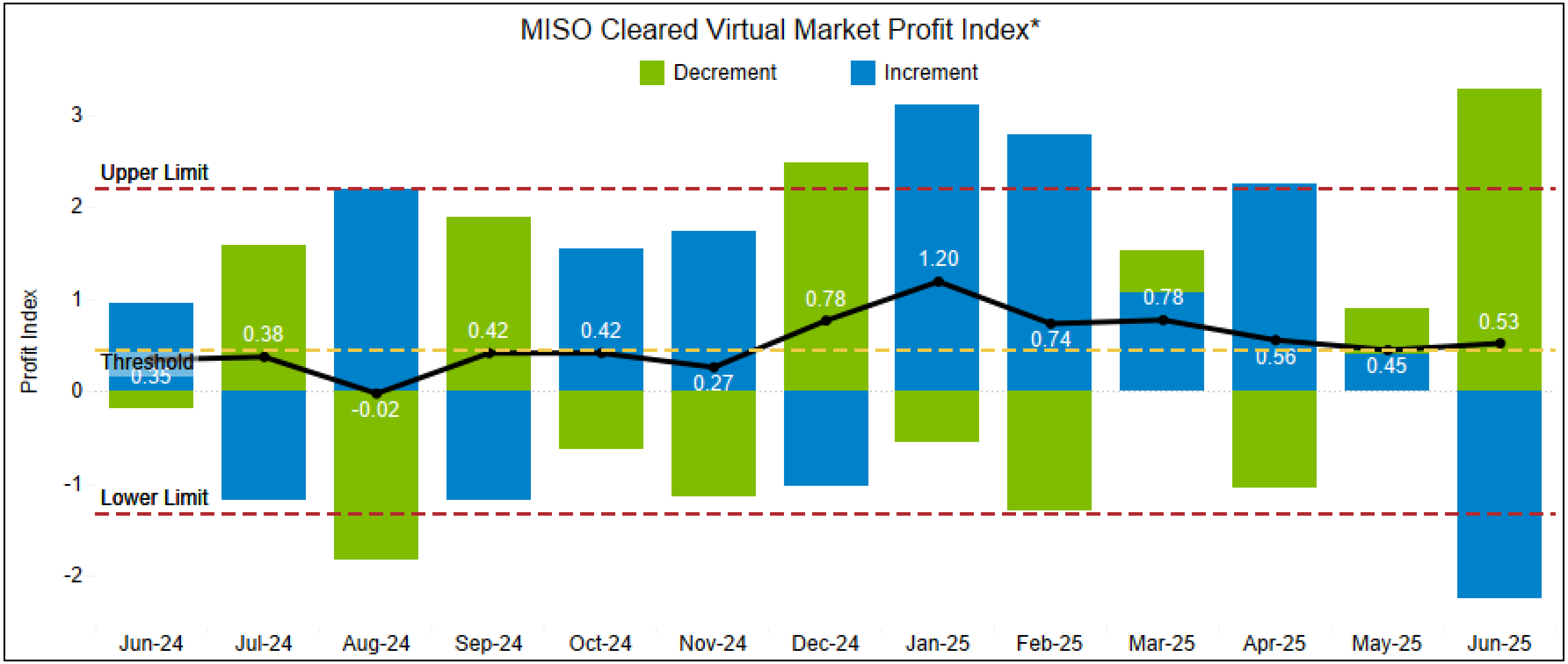
Nominal Fuel Prices



Monthly oil prices are estimates and subject to change upon finalization
Source: EIA

Monthly Average Gross Virtual Profitability

B



Monthly Standard Deviation

Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25
1.09	2.96	0.86	1.32	1.21	1.74	1.50	2.60	2.21	1.16	1.15	2.04	1.61

** The virtual profitability market index is defined as the sum of profits/losses for all cleared virtual transactions divided by the volume (MWh) of total cleared transactions.*

** Virtual profits/losses are calculated by multiplying the cleared virtual MW and the imbalance between RT LMP and DA LMP for a cpnode, then summed across all cpnodes, all hours.*

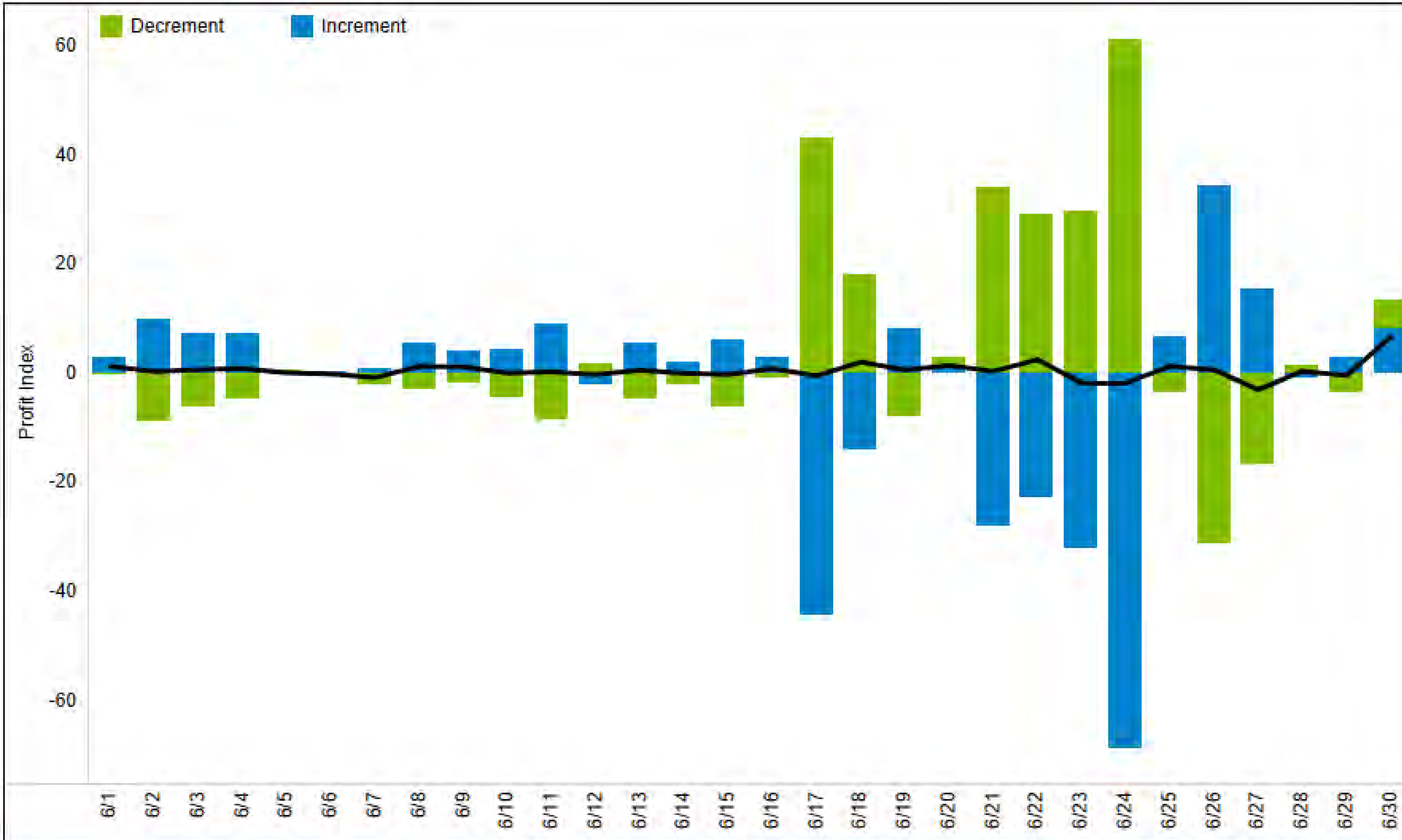
** Upper Limit is Threshold (average of monthly indices from the previous year) plus Daily Average Standard Deviation for the previous 13 months (current reporting month inclusive)*

** Lower Limit is Threshold (average of monthly indices from the previous year) minus Daily Average Standard Deviation for the previous 13 months (current reporting month inclusi..*

Source: MISO Market and Operations Analytics Department

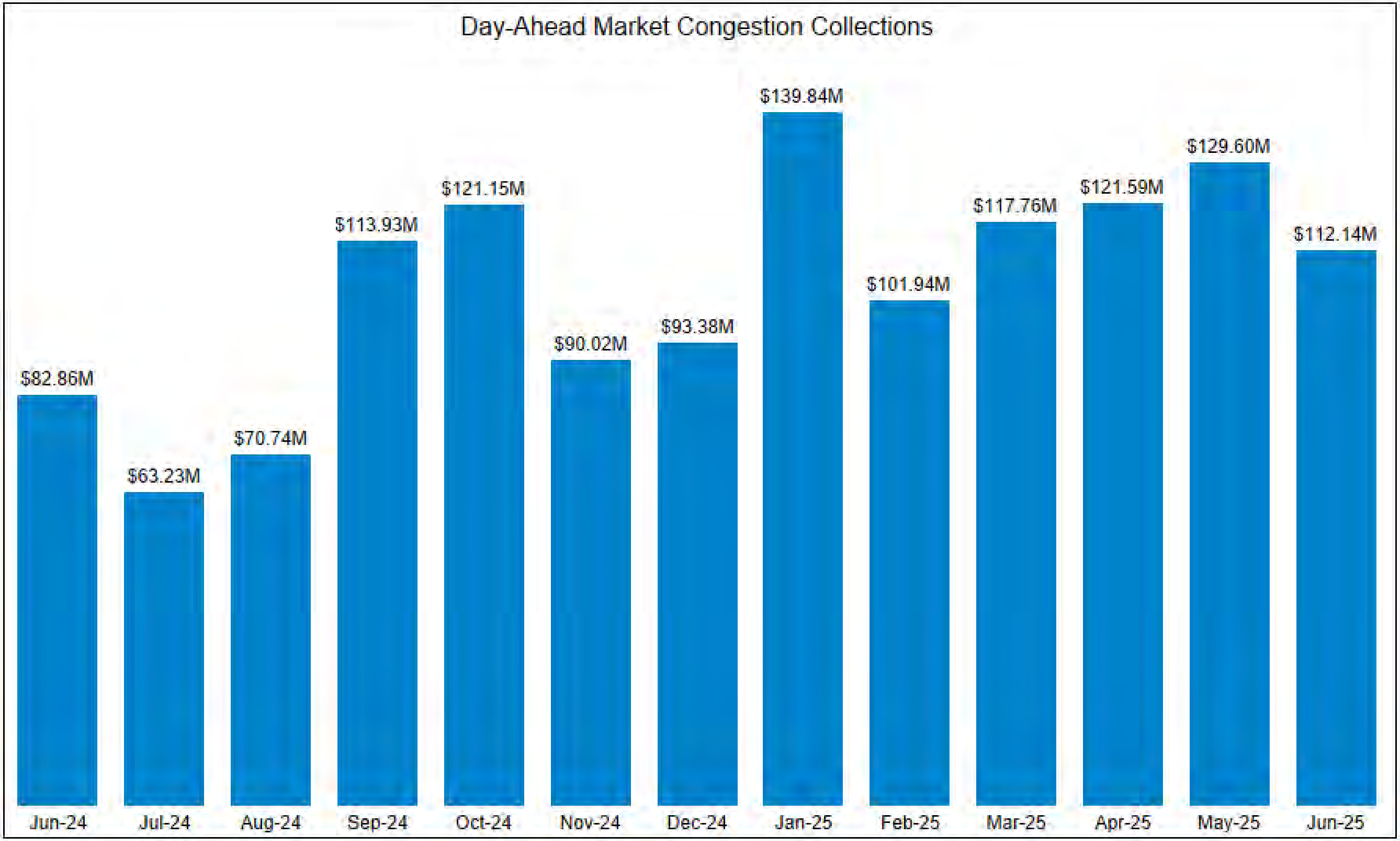
MISO

Daily Gross Cleared Virtual Profitability



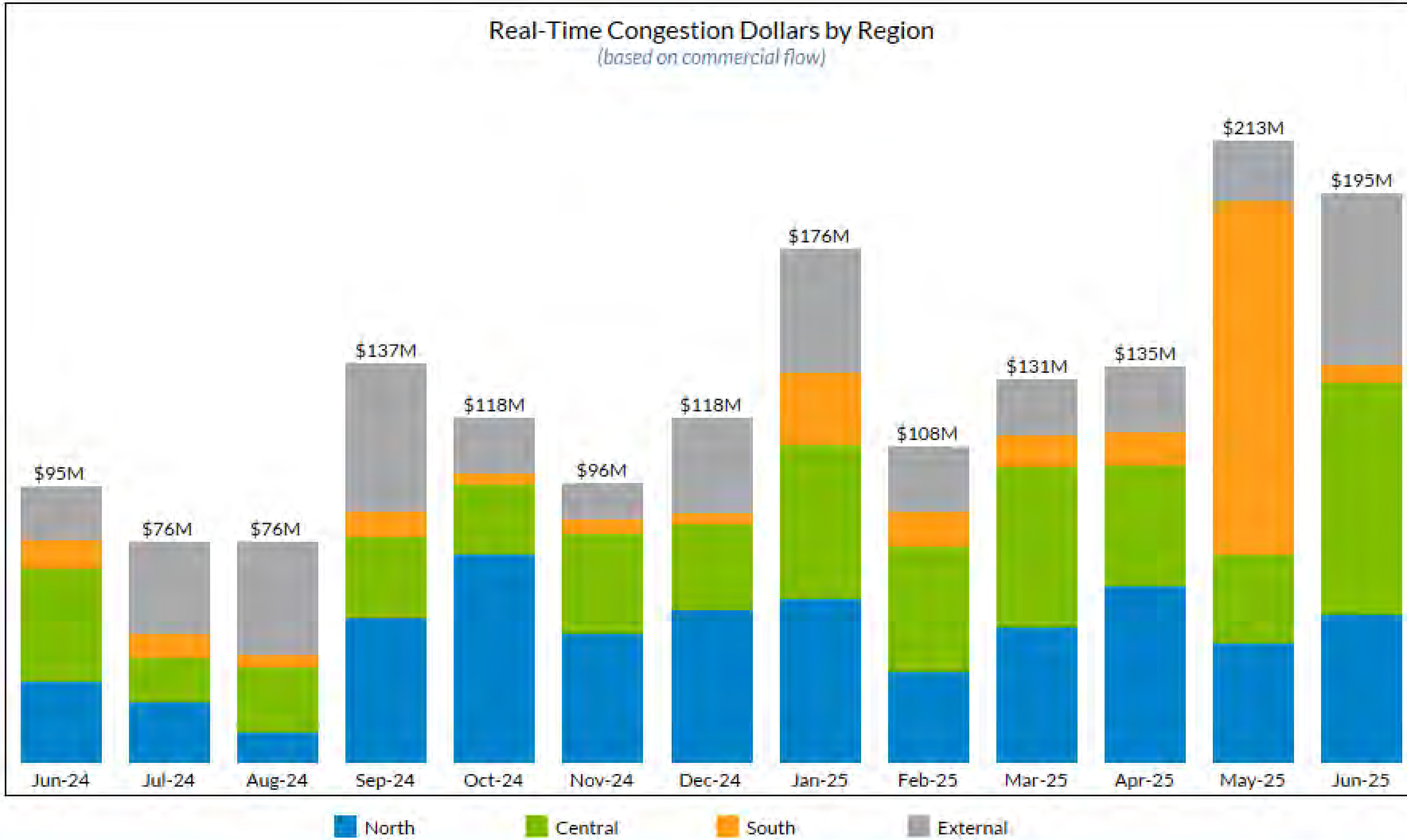
The virtual profitability market index is defined as the sum of profits/losses for all cleared virtual transactions divided by the volume (MWh) of total cleared transactions
Source: MISO Market and Operations Analytics Department

Day-Ahead Congestion Collections



Source: MISO Market and Operations Analytics Department

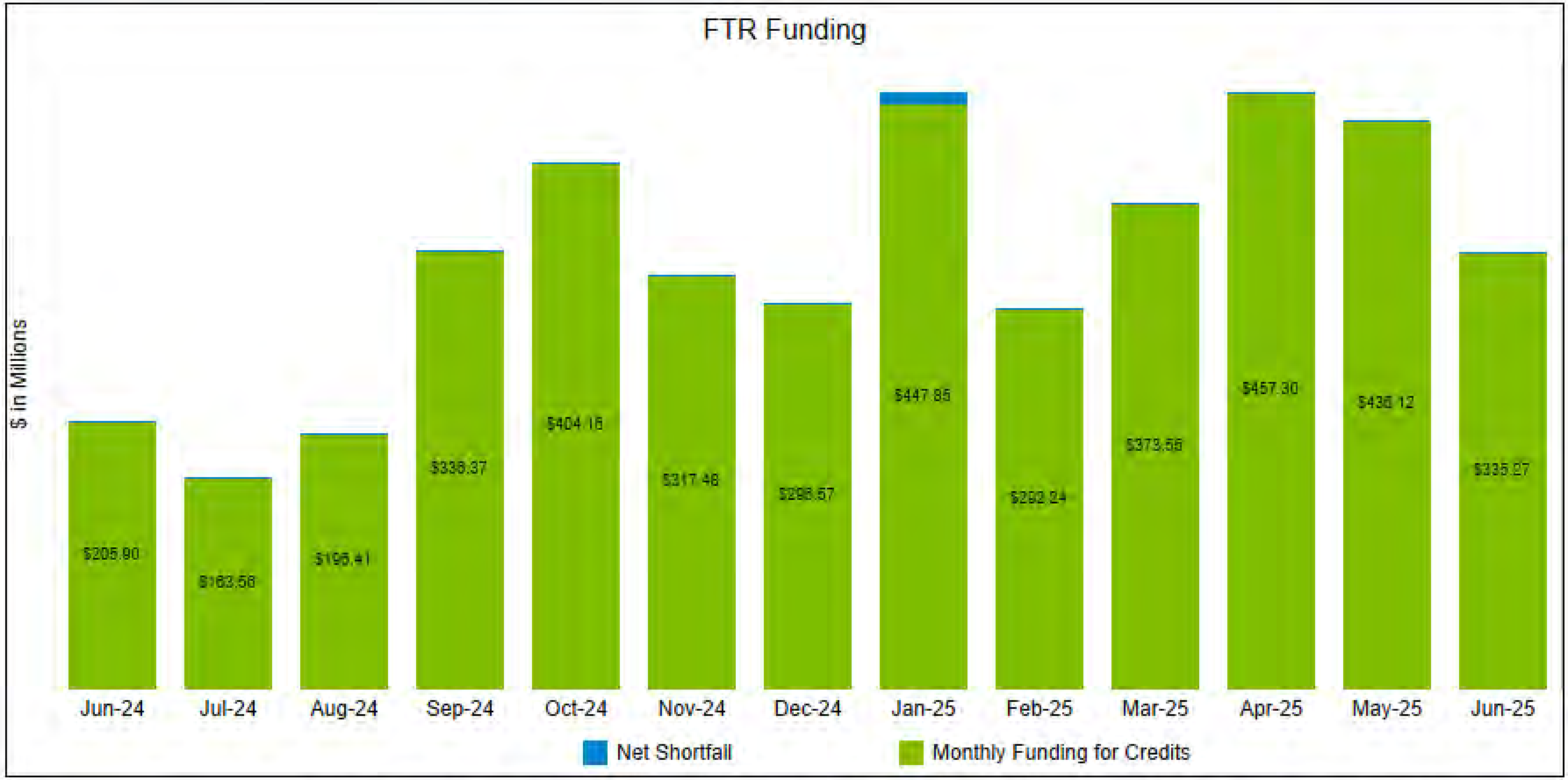
Real-Time Congestion Dollars by Region



Includes External Constraints
Commercial Flow excludes phase angle regulators and loop flows
Source: MISO Market and Operations Analytics Department

Financial Transmission Rights, Monthly and Rolling Year-to-Date Allocation Funding

C

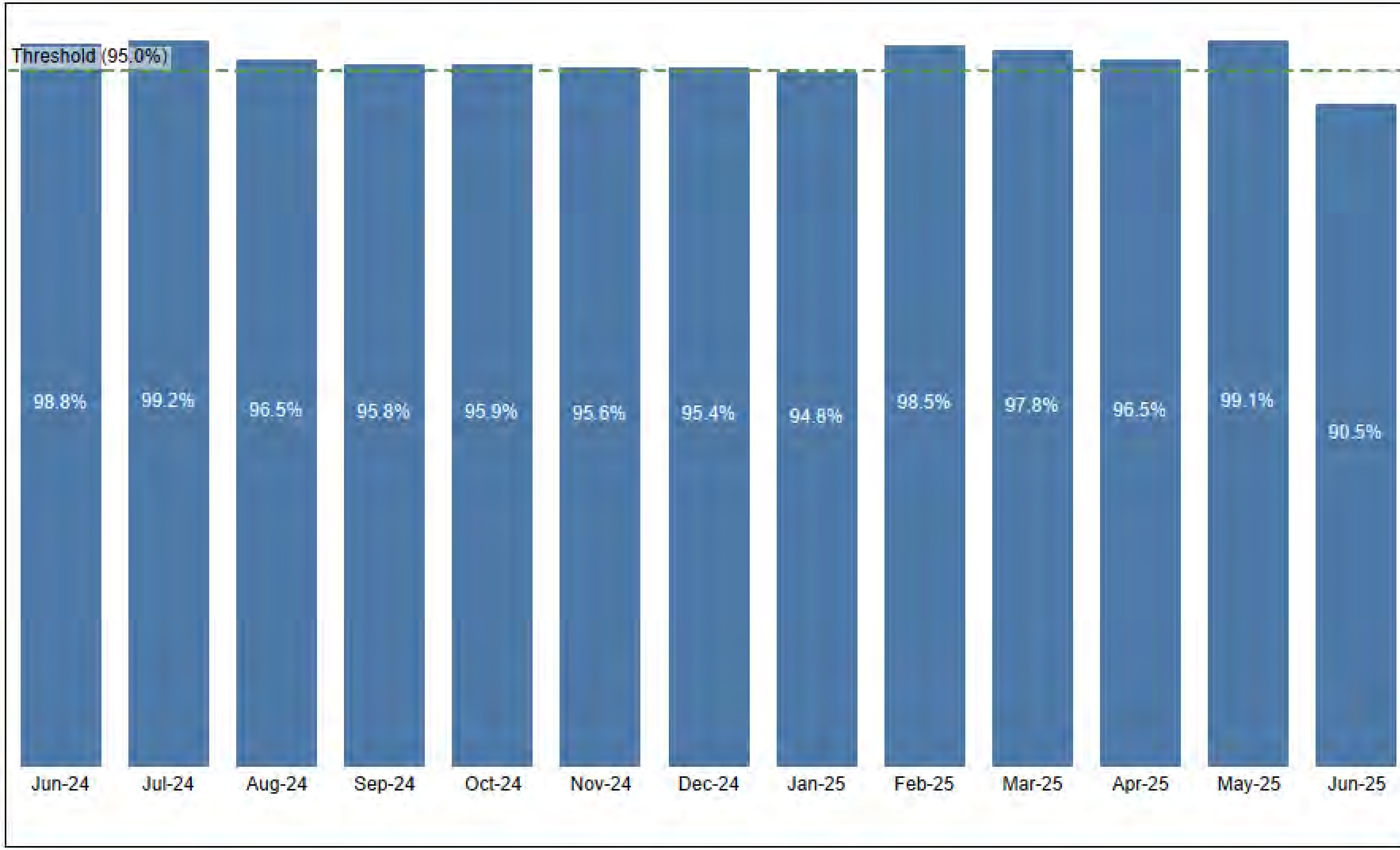


	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25
Monthly FTR Allocation (%)	100.0%	100.0%	100.0%	99.9%	100.0%	100.0%	100.0%	97.8%	100.0%	100.0%	100.0%	100.0%	100.0%
YTD FTR Allocation (%)	95.6%	96.3%	96.7%	97.1%	97.5%	97.8%	98.0%	NA	NA	NA	100.0%	100.0%	100.0%

YTD metric is applied beginning April
Values may change due to resettlement
Source: MISO Market ECF Report

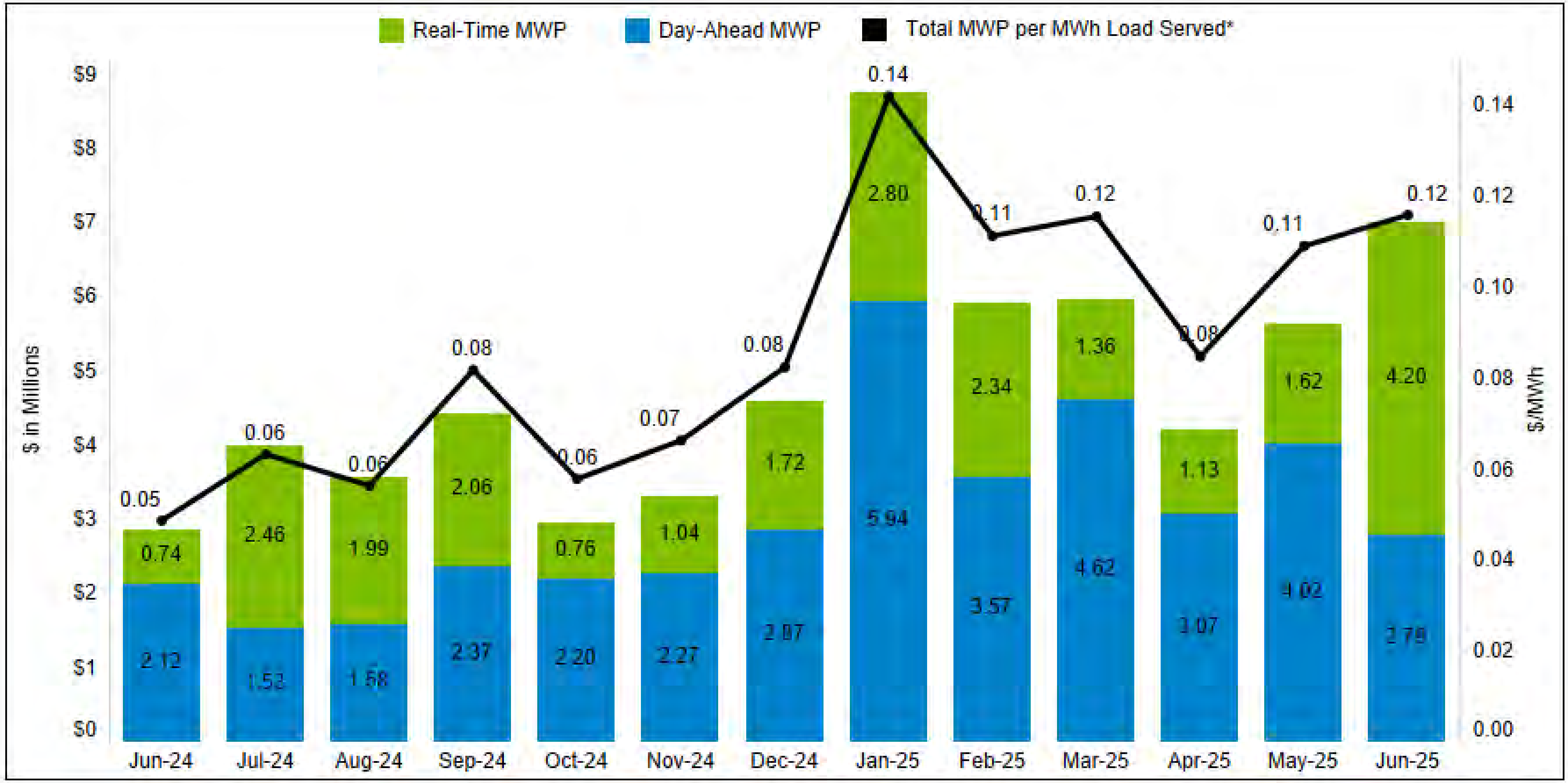
Market Funding Efficiency

D



Values may change due to resettlement
Source: MISO Market ECF Report

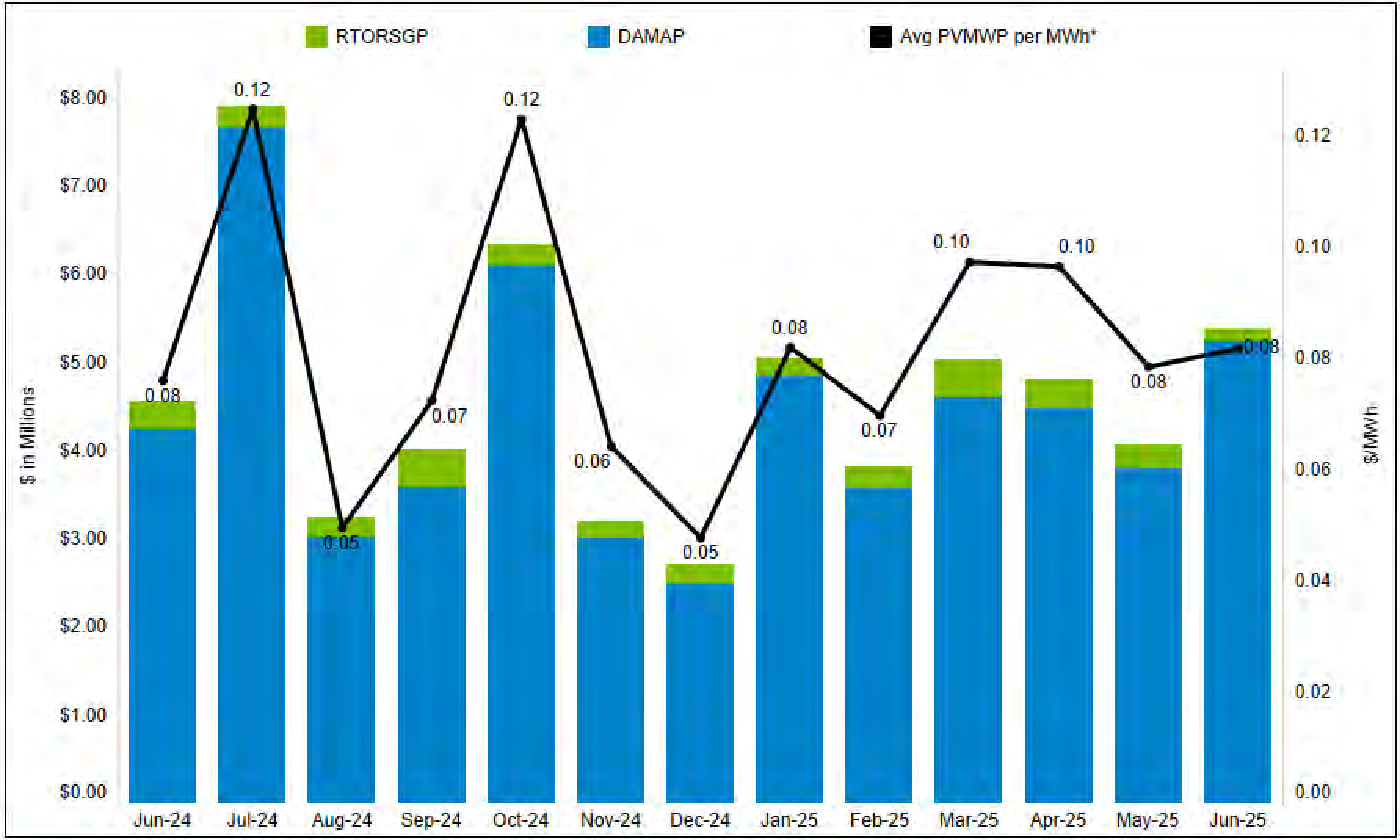
Day-Ahead and Real-Time Revenue Sufficiency Guarantee



	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25
Chicago Gas Prices ($/MMBtu)	1.88	1.73	1.70	1.86	2.10	1.77	2.74	5.30	4.10	3.54	3.09	2.85	2.73
Henry Gas Prices ($/MMBtu)	2.49	2.09	1.98	2.23	2.26	2.16	3.03	5.40	4.13	4.10	3.43	3.12	3.01
^^RSG Per MWh to Energy Price (%)	0.18	0.22	0.20	0.31	0.22	0.27	0.27	0.32	0.26	0.33	0.25	0.31	0.29

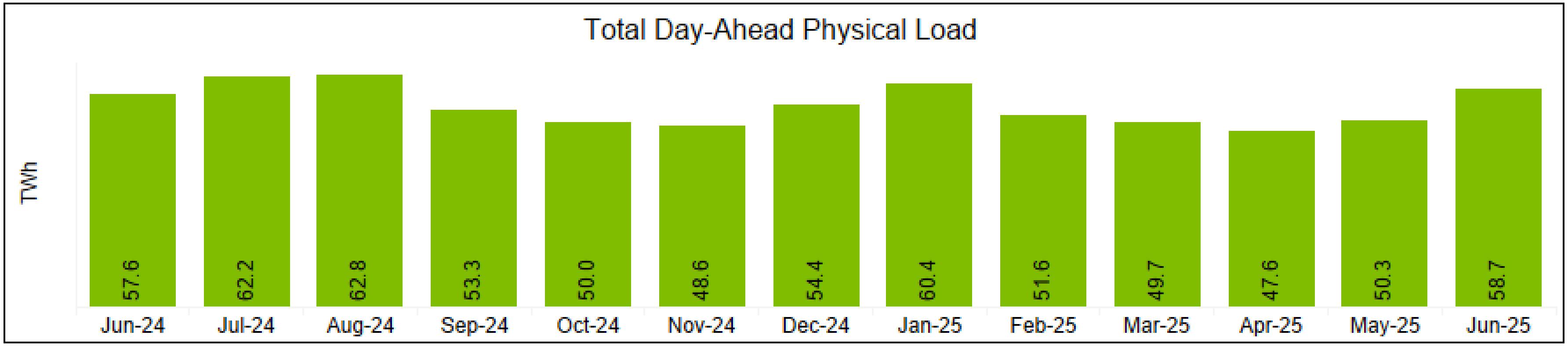
**Based on hourly ICCP Data; ^^metric value*
Values may change due to resettlement
Source: The Web-based Revenue Sufficiency Gurantee Report

Price Volatility Make Whole Payment



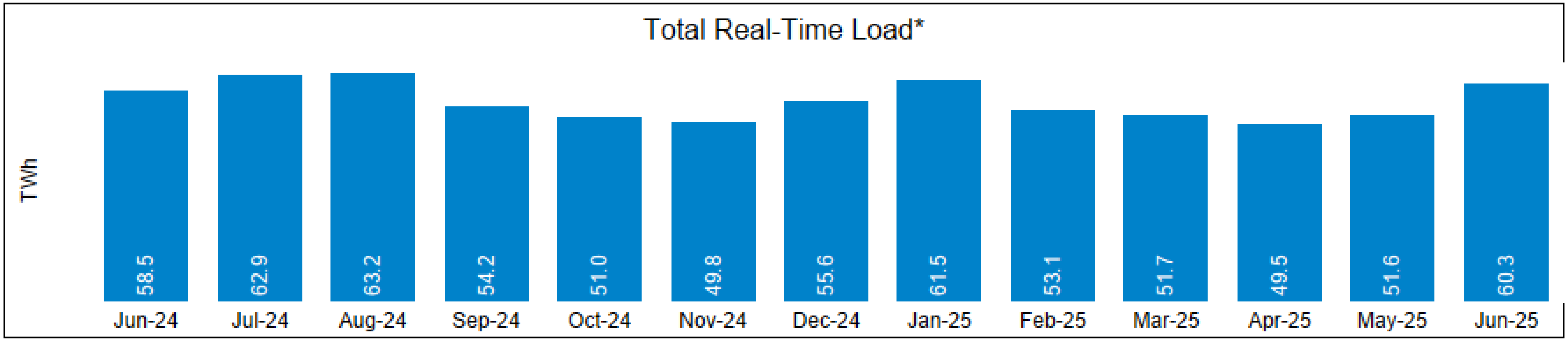
*Hourly ICCP data
Source: Web-based Revenue Neutrality Uplift Report

Day-Ahead and Real-Time Cleared Physical Energy



Day-Ahead Cleared Load Value (including Virtuals)

Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25
$1.92B	$2.37B	$2.20B	$1.74B	$1.57B	$1.44B	$2.06B	$3.20B	$2.68B	$1.93B	$1.87B	$2.14B	$2.97B

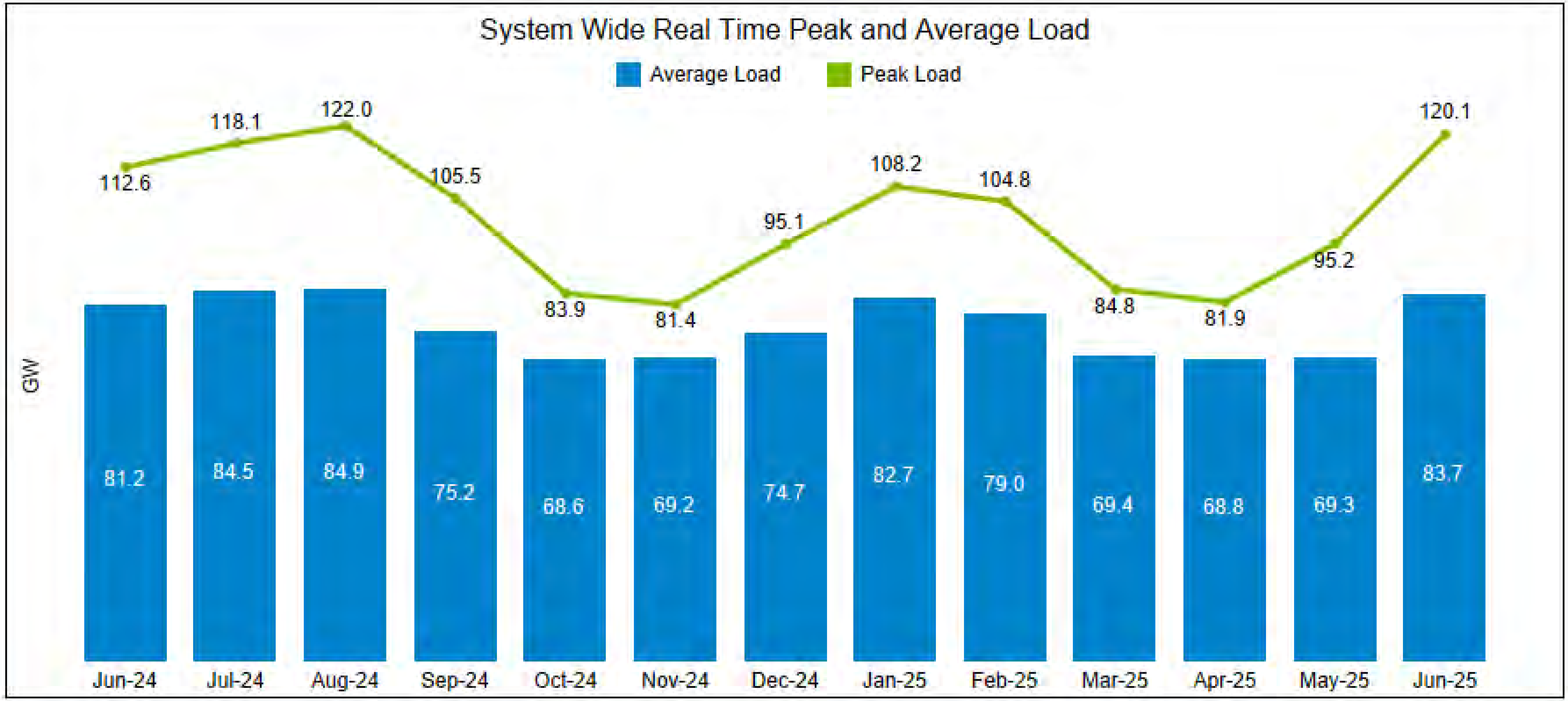


Real-Time Cleared Load Value ($ in Billions)

Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25
$1.66B	$2.14B	$1.81B	$1.63B	$1.29B	$1.18B	$1.83B	$2.64B	$2.21B	$1.65B	$1.55B	$1.95B	$3.00B

*Sum of Hourly ICCP Load Data
Source: MISO Market and Operations Analytics Department

Monthly System Load and Temperature



System Wide Load Weighted Temperature

	Jun-24	May-25	Jun-25
Average	77°F	63°F	76°F
Maximum	93°F	83°F	100°F
Minimum	55°F	47°F	52°F

Load Weighted Heating & Cooling Degree Days

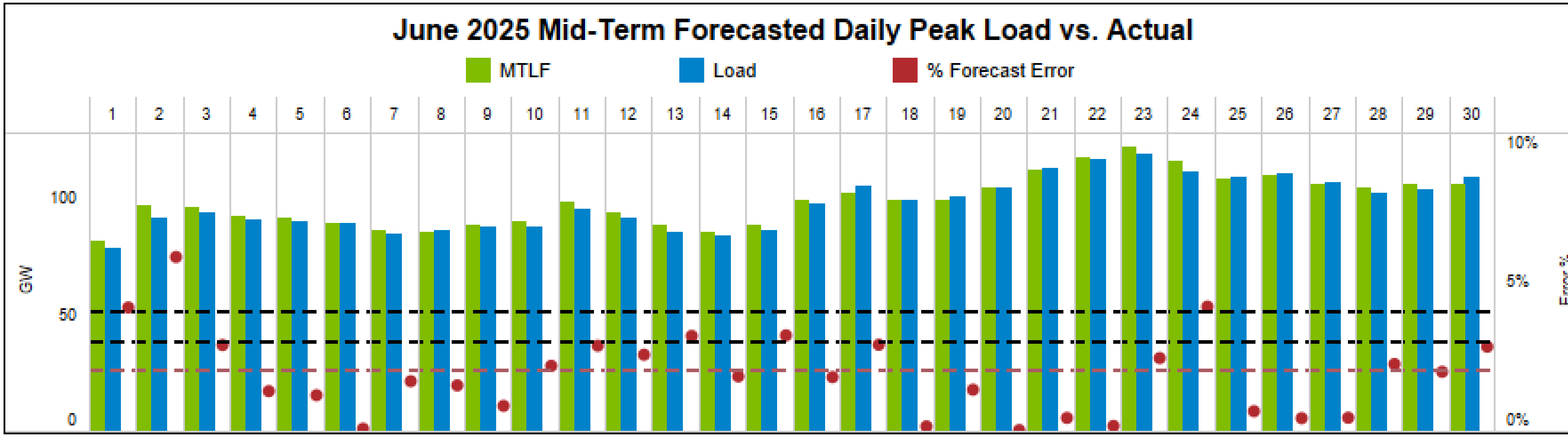
	Average HDD	Std Dev HDD	Average CDD	Std Dev CDD
Jun-25	0.14	0.94	14.60	8.60
May-25	2.30	3.41	3.73	4.90
Jun-24	0.07	0.56	14.60	7.77

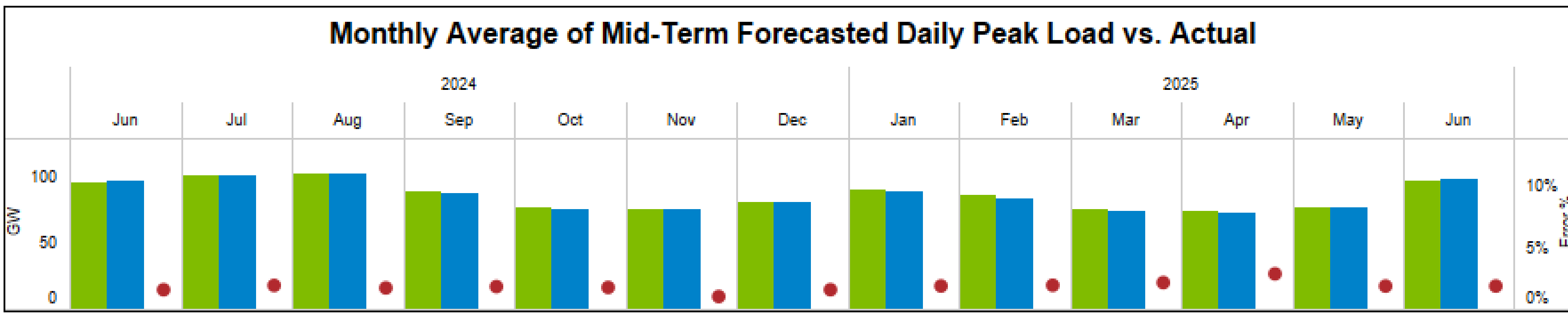
Hours with Load Greater than:

	100 GW	80 GW	60 GW
Jun-25	110	415	709
May-25	0	62	653
Jun-24	67	364	695

**Monthly data based on hourly ICCP Load Data; Hourly Integrated Peak Load Hour could differ from the Instantaneous Peak Load Hour.*
Source: MISO Market and Operations Analytics Department

Day-Ahead Mid-Term Load Forecast*





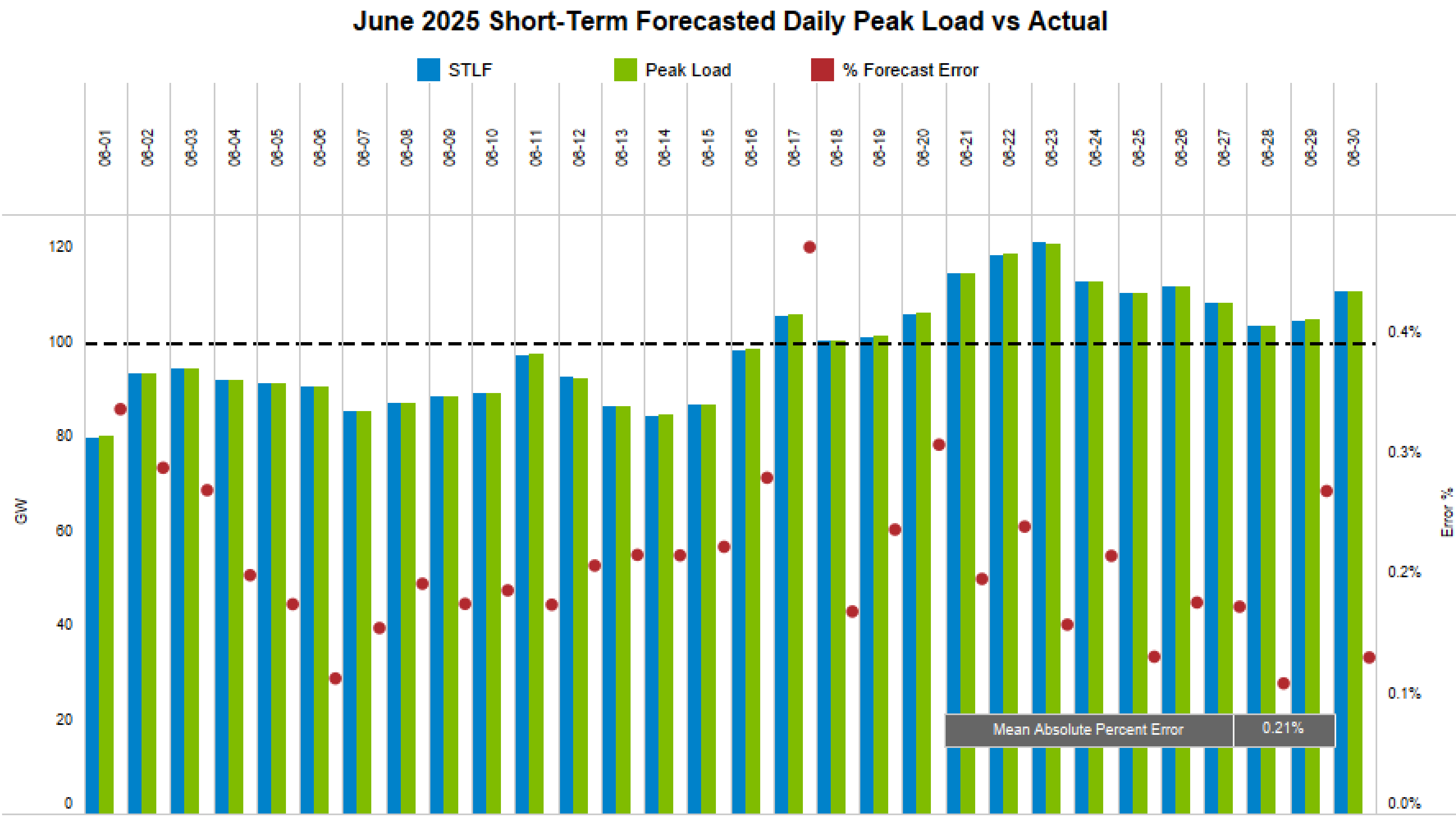
	2024							2025					
	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
% Std of Error (CV)	90.18	76.54	67.80	71.09	68.94	101.98	81.76	77.55	60.87	54.00	40.07	78.67	71.95
Mean of Error (MW)	1,594	1,980	1,845	1,700	1,418	814	1,334	1,742	1,674	1,671	2,191	1,474	1,852
Std of Error (MW)	1,437	1,515	1,251	1,209	978	830	1,090	1,351	1,019	902	878	1,159	1,332

* Monthly data based on the average of the daily integrated peak hours in the month
* Daily data based on the integrated peak hour of the day
* Peak Day and Hour End based on Hourly Integrated Peak Load Hour

Source: MISO Operations Risk Management

Short-Term Load Forecast*

G

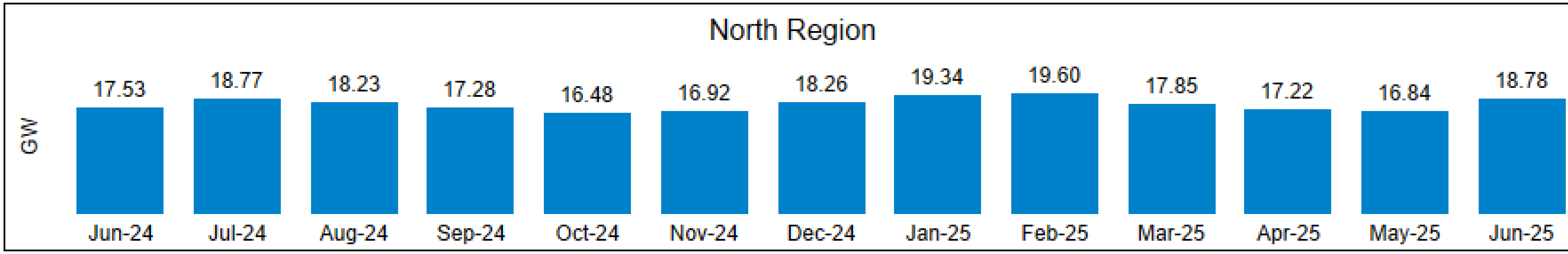


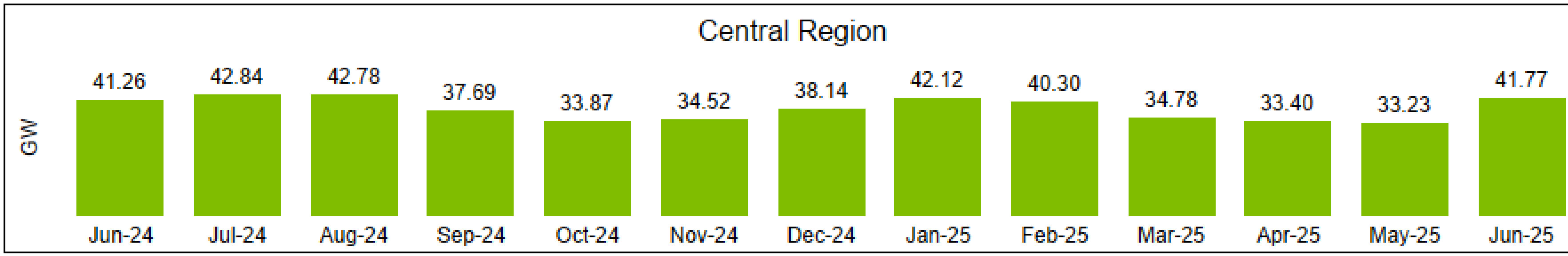
Daily data based on the average of five-minute interval data at the peak hour of the day
Error Threshold calculated as 95% quantile of Forecast Error from Jan-Dec of the previous year

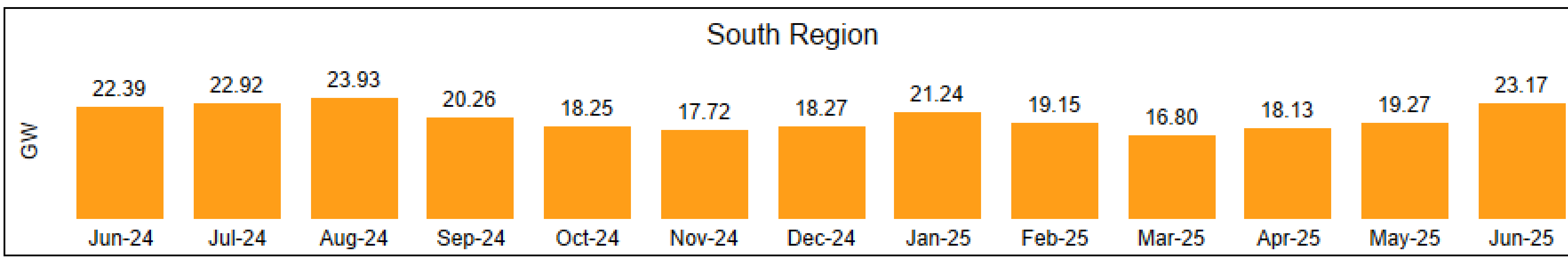
Peak Day and Hour End based on Hourly Integrated Peak Load Hour

Source: MISO Operations Risk Management

Average Load by Region





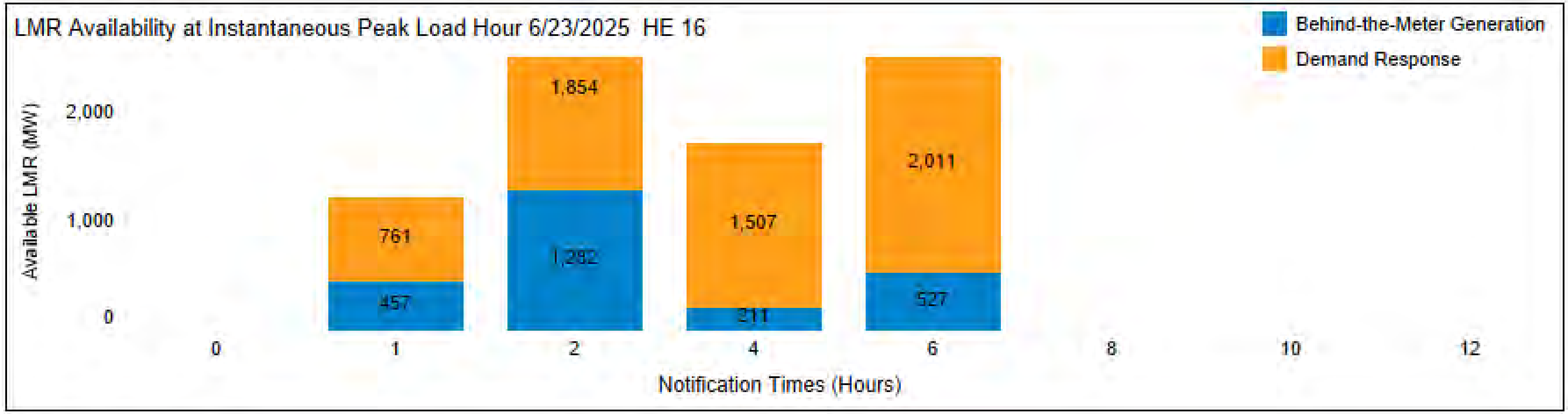


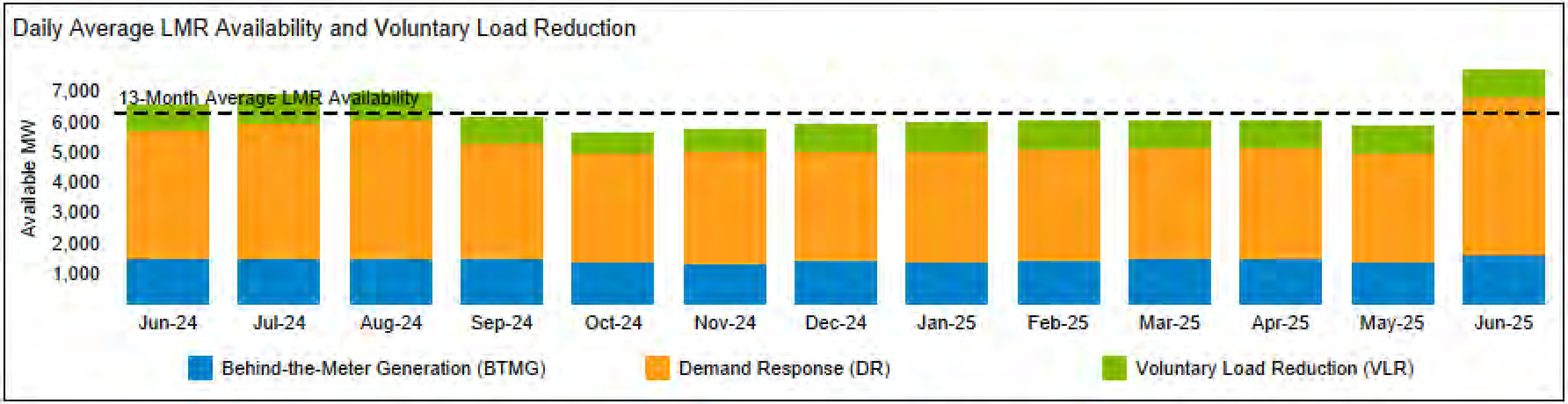
Hourly Integrated System Load Peak Hour Ending: 06/23/2025 16 EST

North	25.86 GW
Central	65.78 GW
South	30.29 GW
MISO	119.31 GW

*Monthly data based on hourly ICCP Load Data; Hourly Integrated Peak Load Hour could differ from the Instantaneous Peak Load Hour.
Source: MISO Market and Operations Analytics Department

Market Participant entered Load Modifying Resource (LMR) Availabililty

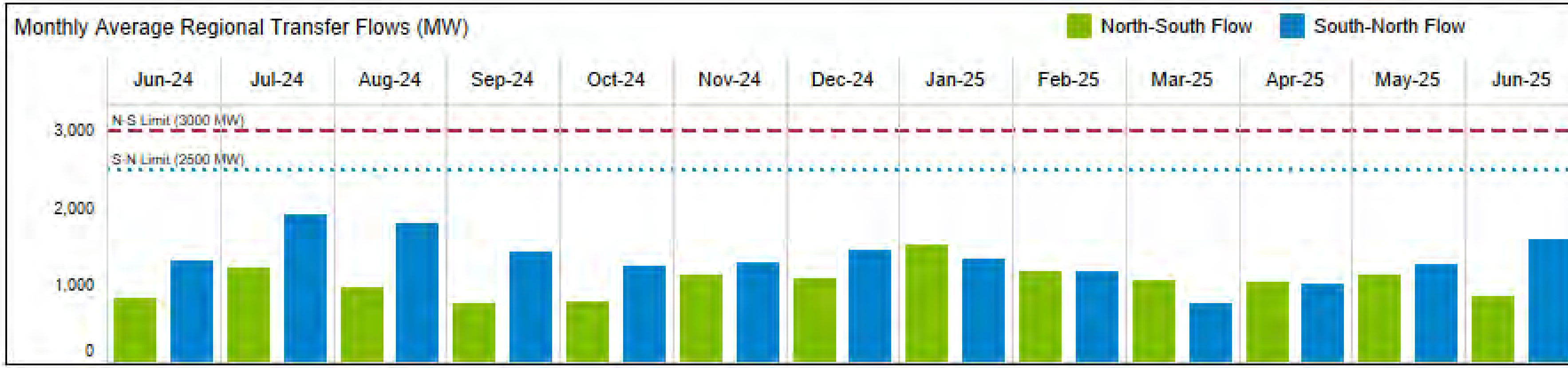




PRA Auction	BTMG (MW)	DR (MW)	Total BTMG and DR (MW)
Summer 2024	4,144	8,109	12,253
Summer 2025	4,283	9,004	13,287

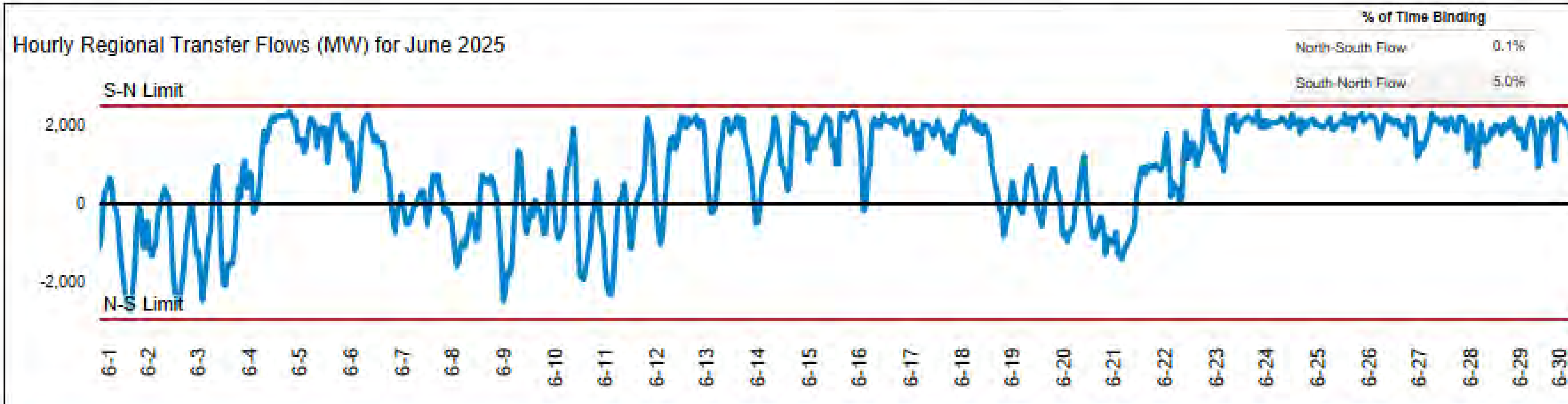
Source: MISO Markets and Operations Analytics Department

Regional Directional Transfer**



Percentage of Time Regional Directional Flow

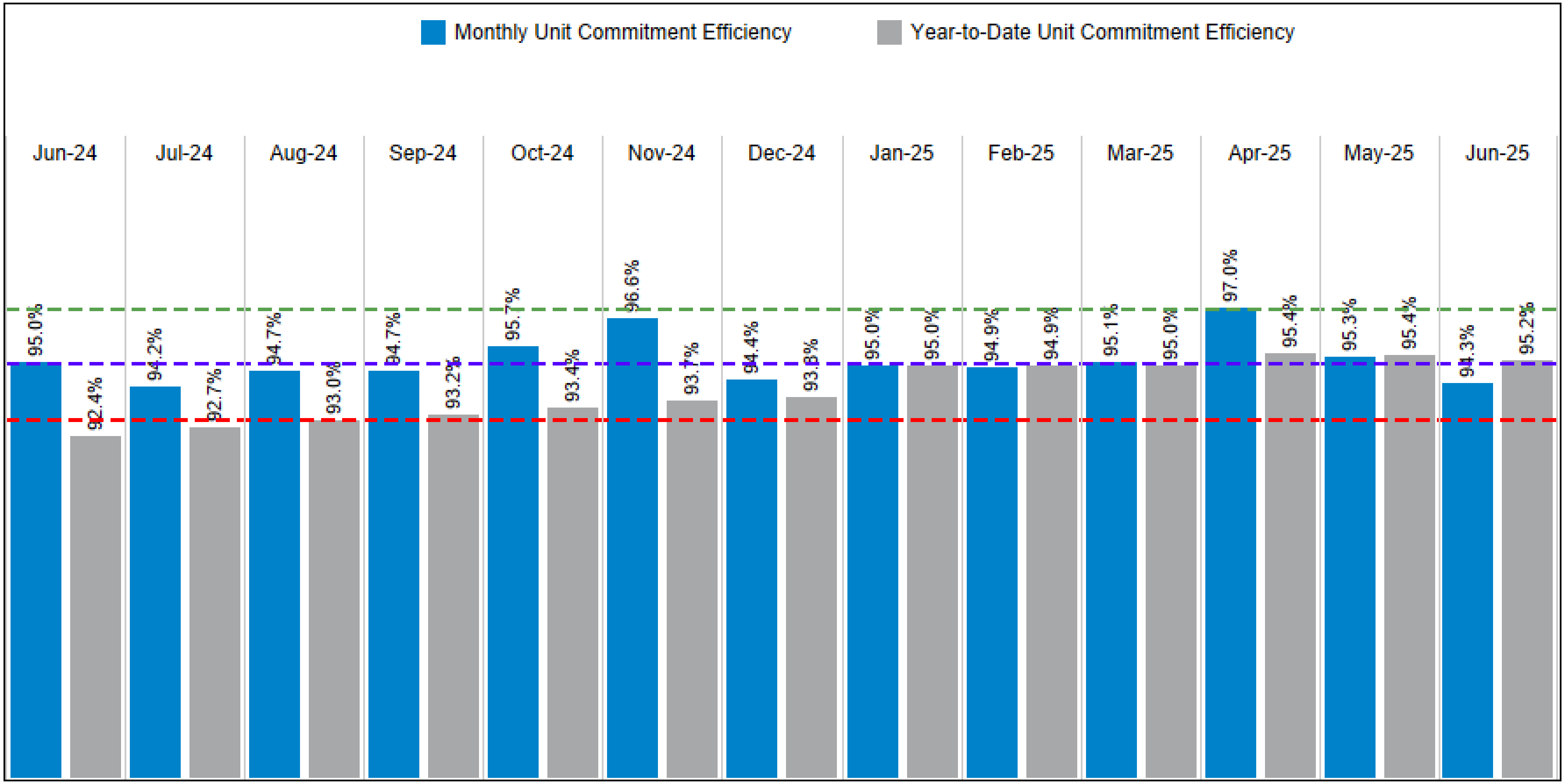
	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25
North-South Flow	34%	8%	10%	21%	17%	23%	22%	29%	40%	61%	44%	49%	26%
South-North Flow	66%	92%	90%	79%	83%	78%	78%	71%	60%	39%	56%	51%	74%



***Regional Directional Transfer between MISO South and Central/North Regions*
Source: MISO Markets and Operations Analytics Department

Unit Commitment Efficiency

Effectively commit generation to meet demand obligations and mitigate constraints

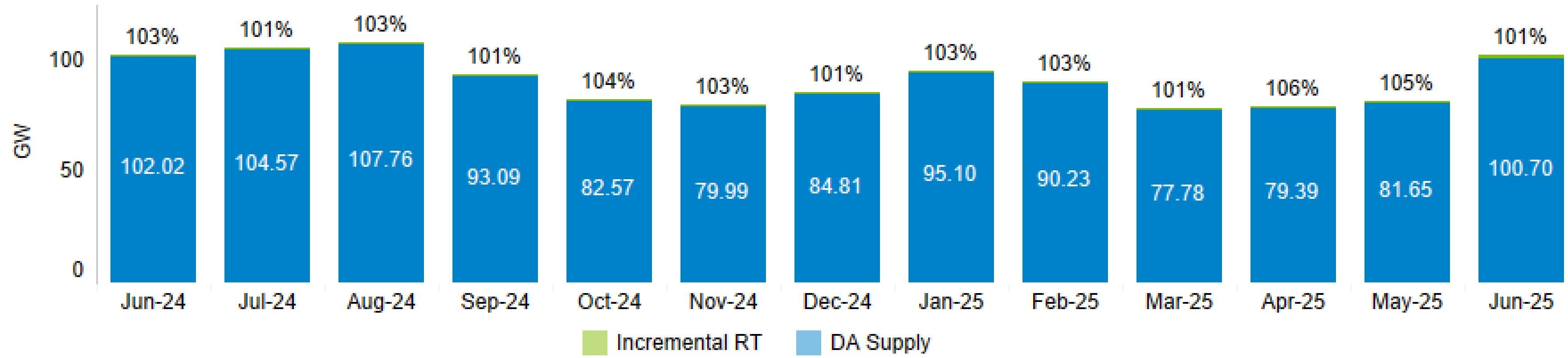


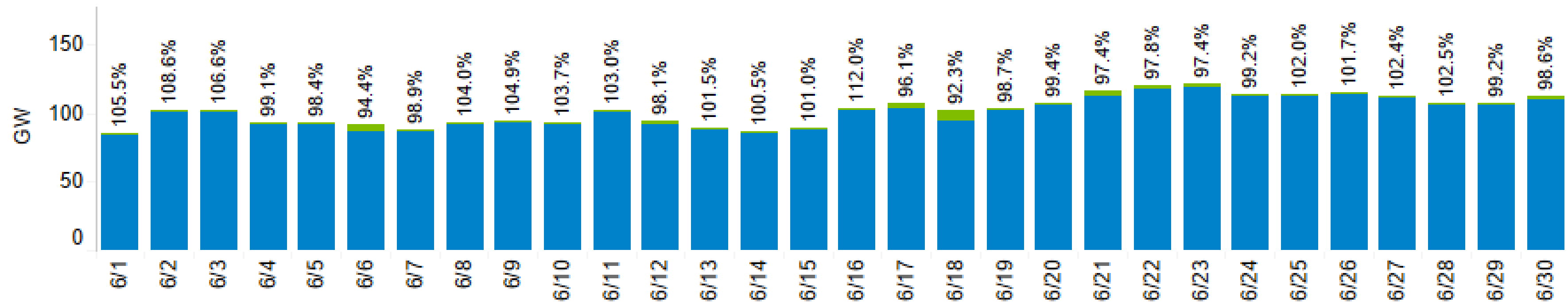
	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25
Actual Cost	$871M	$1,013M	$974M	$809M	$705M	$682M	$988M	$1,311M	$1,069M	$819M	$756M	$829M	$1,095M
Optimal Cost	$865M	$1,005M	$967M	$803M	$701M	$679M	$978M	$1,300M	$1,061M	$812M	$752M	$822M	$1,085M
Sunk Cost	$742M	$878M	$842M	$685M	$595M	$576M	$807M	$1,095M	$897M	$673M	$628M	$678M	$913M

Source: MISO Optimal Dispatch Calculator (ODC)

Unit Commitment Efficiency = 1-((Actual cost – Optimal cost)/(Actual cost – Sunk cost))

Day-Ahead Supply and Real-Time Load Obligation at the Peak Load Hour





Incremental GW Commited in Real-Time

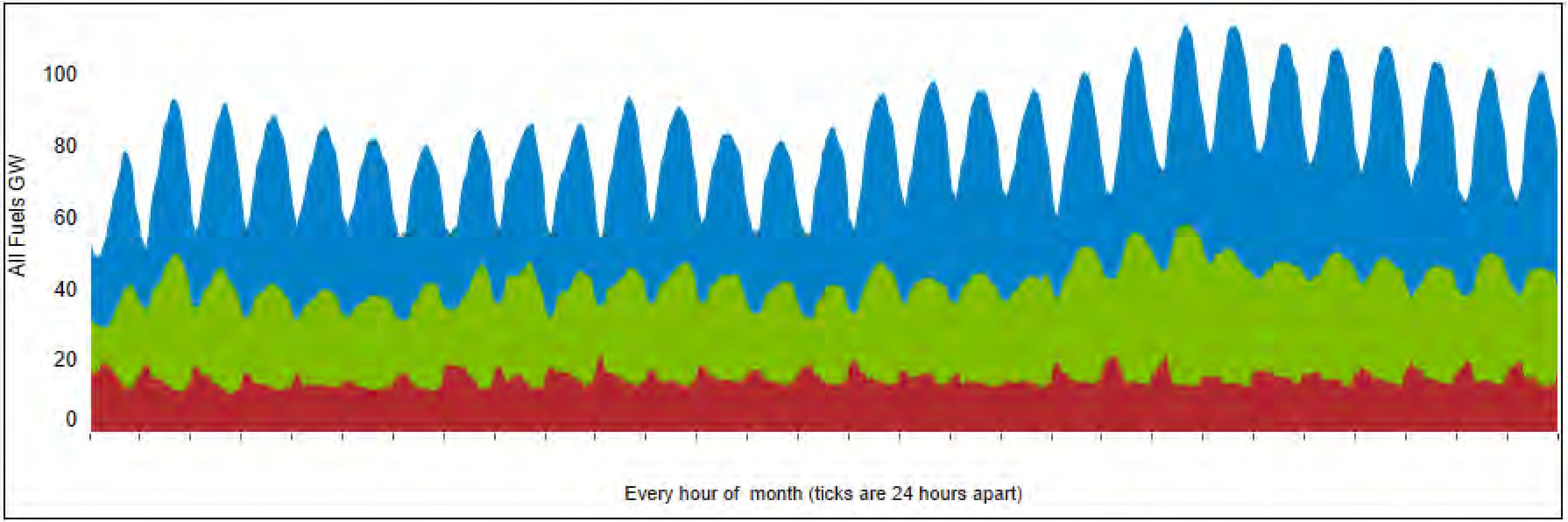
6/1	6/2	6/3	6/4	6/5	6/6	6/7	6/8	6/9	6/10	6/11	6/12	6/13	6/14	6/15
-4.44	-8.08	-6.38	0.83	1.50	5.11	1.00	-3.60	-4.41	-3.30	-2.92	1.78	-1.33	-0.39	-0.91

6/16	6/17	6/18	6/19	6/20	6/21	6/22	6/23	6/24	6/25	6/26	6/27	6/28	6/29	6/30
-11.03	4.21	7.84	1.32	0.68	3.02	2.70	3.15	0.97	-2.21	-1.87	-2.58	-2.65	0.84	1.52

Day-Ahead Supply is the Day-Ahead Economic Maximum received in Real-Time plus Behind-the-Meter plus Day-Ahead NSI at the Peak Hour
Real-Time Obligation is the Real-Time ICCP Load plus Real-Time Regulation Requirement plus Real-Time Spinning Requirement at the Peak Hour
Real-Time Increment is the Real-Time Obligation less Day-Ahead Supply at the Peak Hour
Percents calculated as Day-Ahead Supply divided by Real-Time Obligation

Source: MISO Market and Operations Analytics Department

Self Committed and Economically Dispatched Energy - June 2025



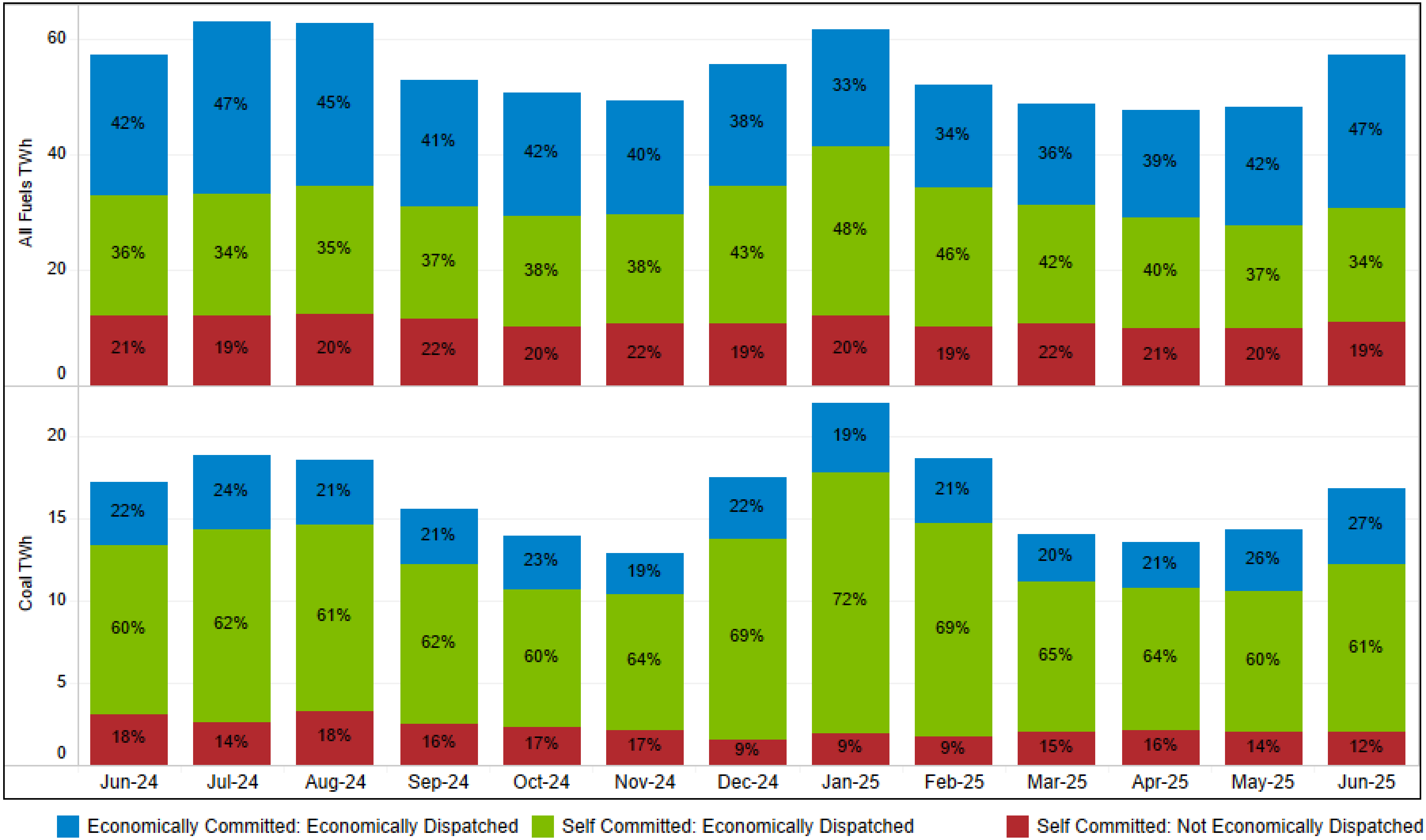
	All Fuels		Coal		Gas	
	TWh	%	TWh	%	TWh	%
Economically Committed: Economically Dispatched	26.8	47%	4.6	27%	17.8	75%
Self Committed: Economically Dispatched	19.8	34%	10.2	61%	4.9	21%
Self Committed: Not Economically Dispatched	10.9	19%	2.0	12%	1.0	4%
Grand Total	**57.5**	**100%**	**16.8**	**100%**	**23.7**	**100%**

Economically Committed: Economically Dispatched	Generation committed by MISO and dispatched on economic offers.
Self Committed: Economically Dispatched	Generation that is self-committed, but Resource Owners allow MISO to dispatch economically after the self-schedule portion of their resource offer is satisfied. Self-commitments can be used to manage local reliability, operational constraints, and fuel contract constraints.
Self Committed: Not Economically Dispatched	Energy from self-committed generation produced at its minimum level or is block-loaded and cannot be dispatched. Block Loaded energy is not necessarily uneconomic, but MISO has no ability to dispatch it based on economics.

Source: MISO Market and Operations Analytics Department

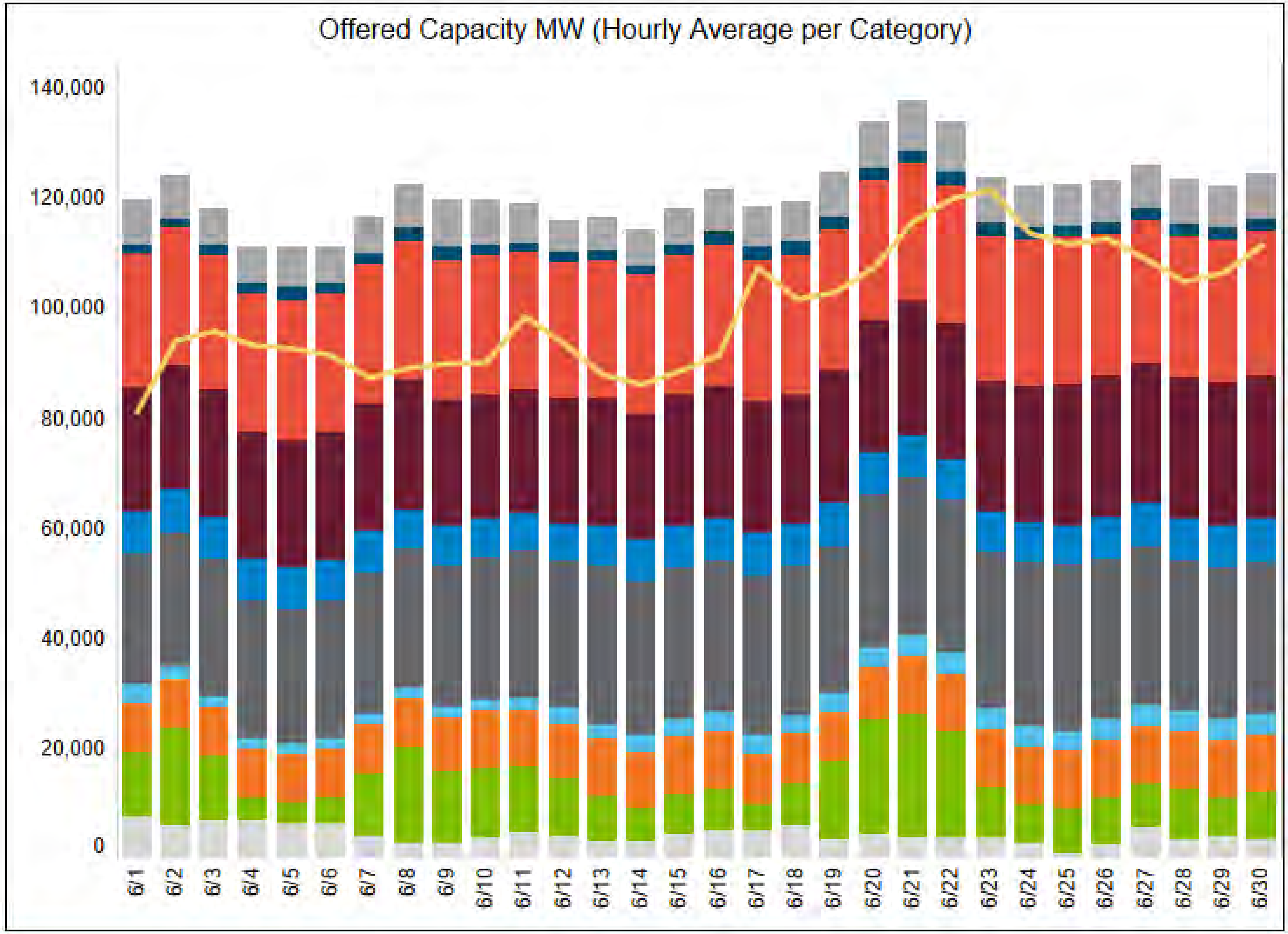
MISO

Monthly Trend - Self Committed and Economically Dispatched Energy



Source: MISO Market and Operations Analytics Department

Offered Capacity and Real-Time Peak Load Obligation



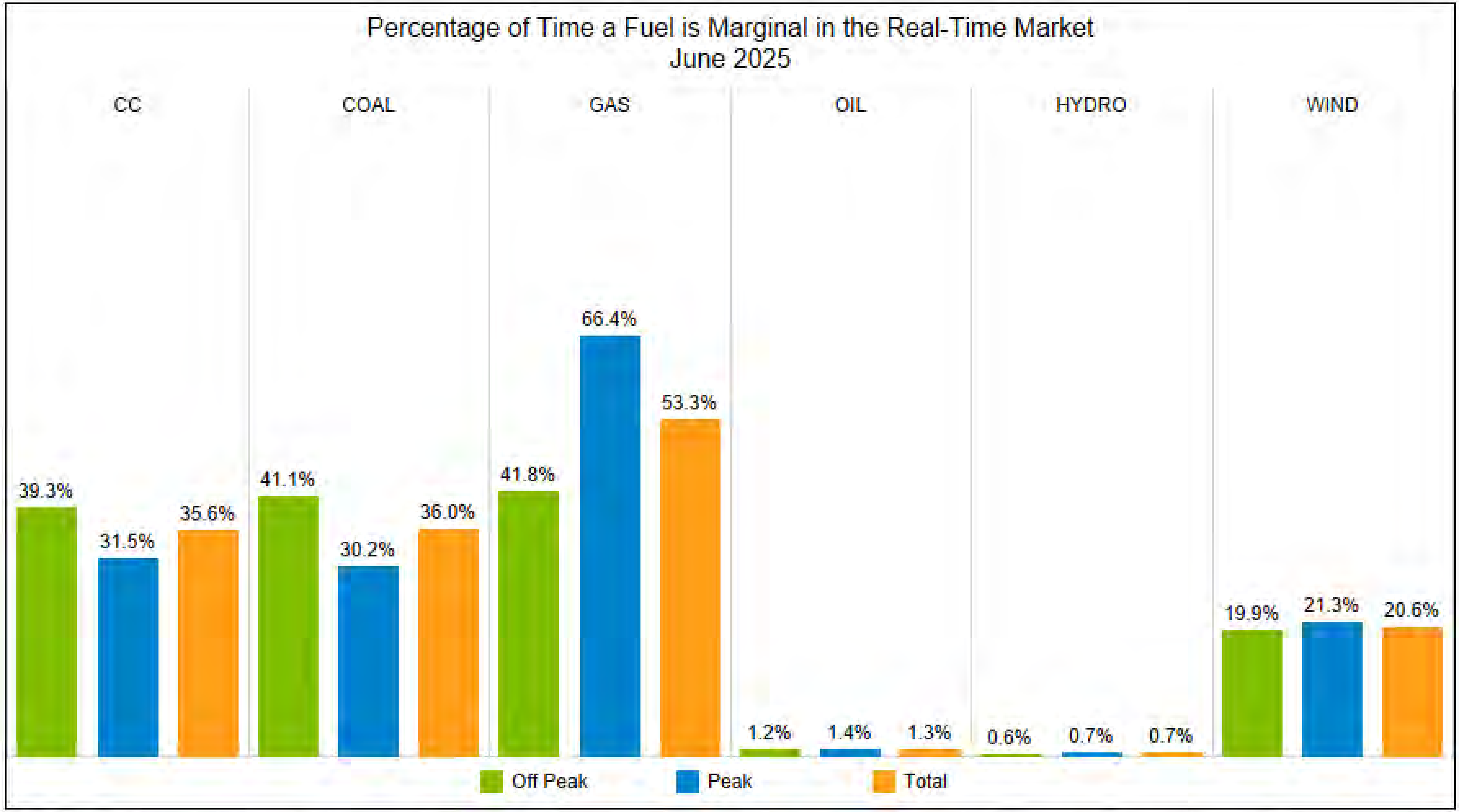
* Real-Time ICCP Load plus Real-Time Regulation Requirement plus Real-Time Spinning Requirement at the daily Peak hour.

** Other includes DRR, SER, pet coke, and waste units.

*** Gas excludes CC and CT.

Source: *MISO Market and Operations Analytics Department*

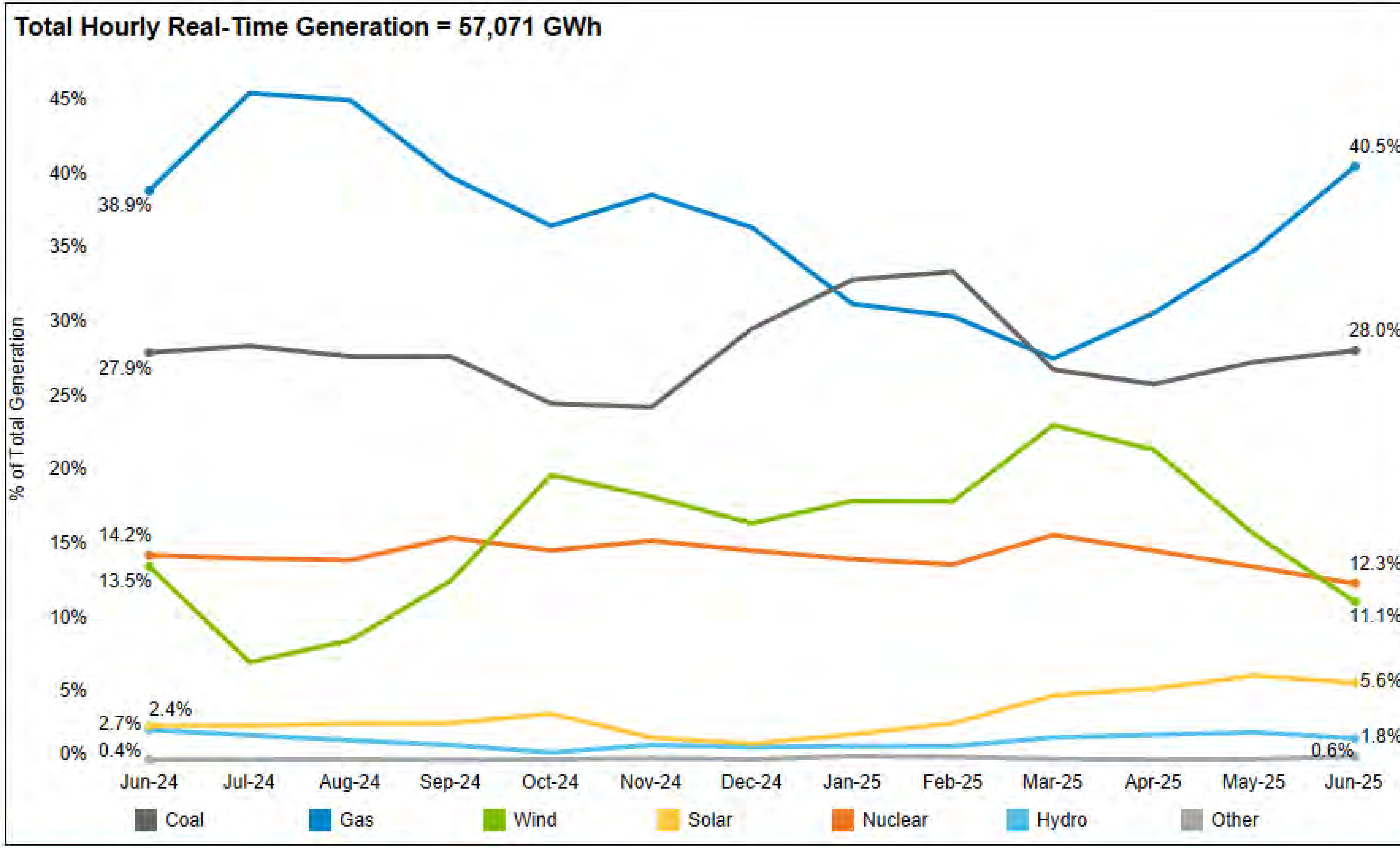
Marginal Fuel



Note: Binding transmission constraints can produce instances where more than one unit is marginal in the system. Consequently, more than one fuel may be on the margin; and since each marginal unit is included in the analysis, the percentage may sum to more than 100%.

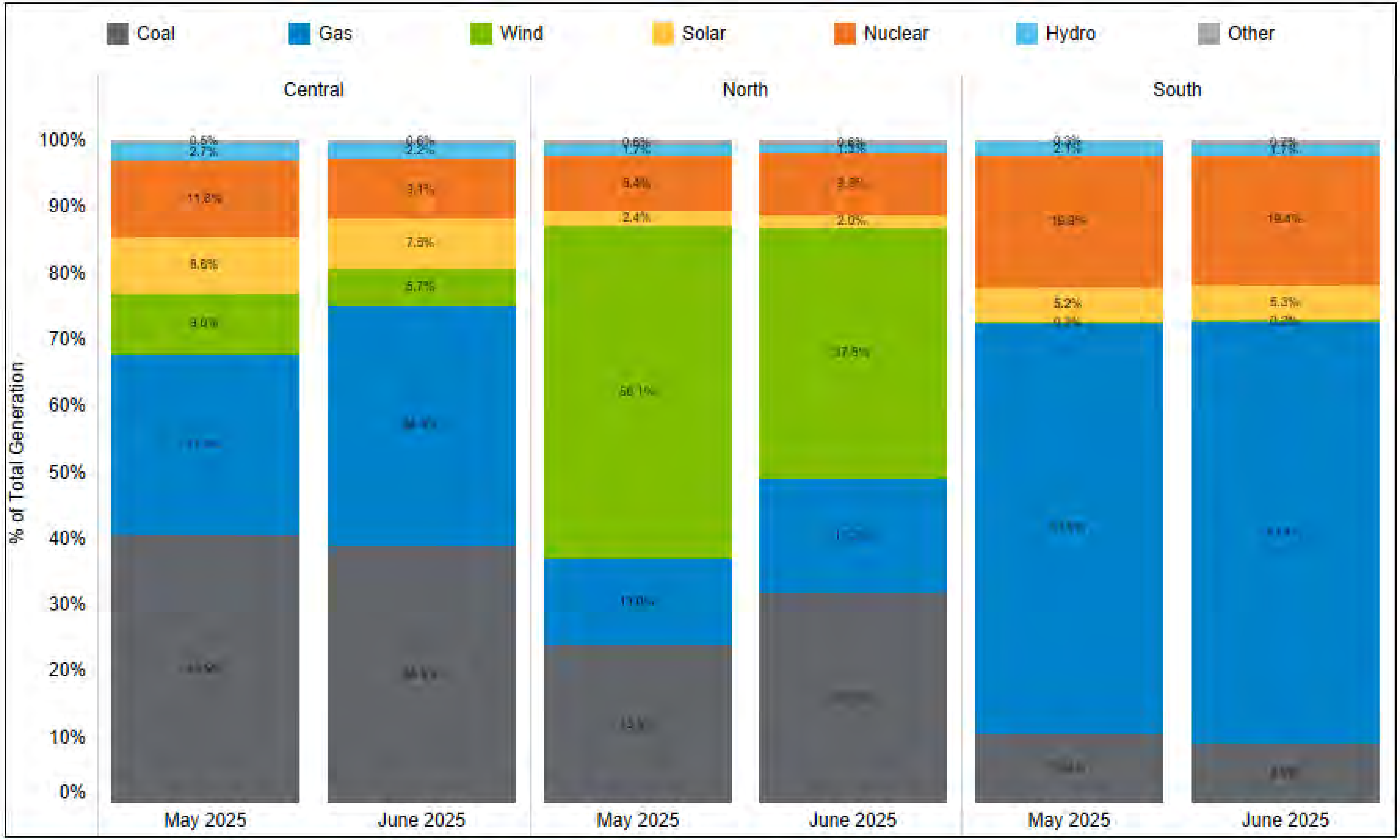
Source: MISO Market and Operations Analytics Department

Real-Time Generation Fuel Mix



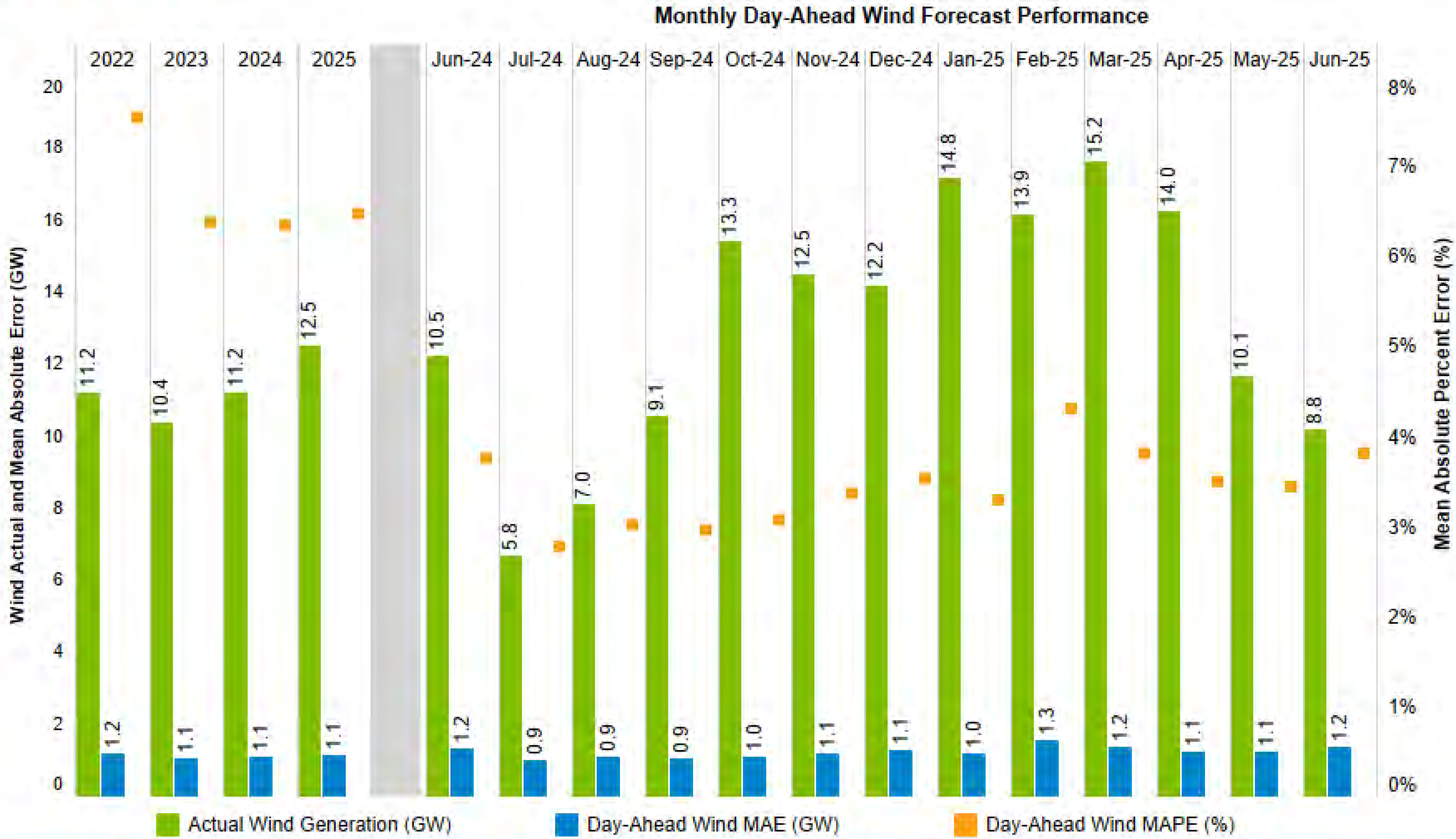
Based on hourly unit level state estimator data
Other includes: Battery, Oil, Pet Coke, Waste and Other fuels
Source: MISO Market and Operations Analytics Department

Real-Time Generation Fuel Mix by Region



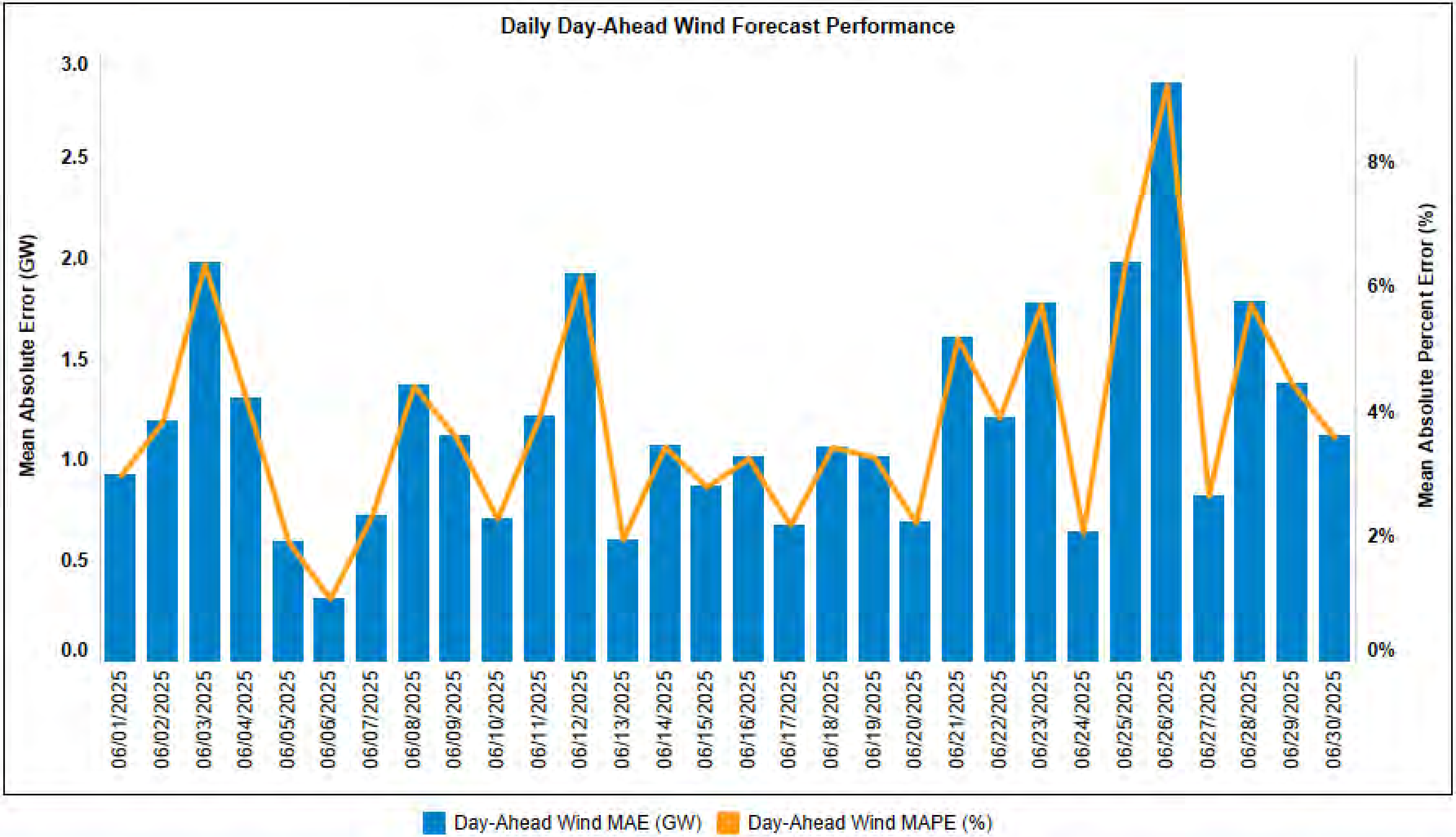
Based on hourly unit level state estimator data
Other includes: Battery, Oil, Pet Coke, Waste and Other fuels
Source: MISO Market and Operations Analytics Department

Monthly Day-Ahead Wind Forecast Performance: Mean Absolute Error (MAE) and Mean Absolute Percent Error (MAPE)



Source: MISO Operations Risk Management

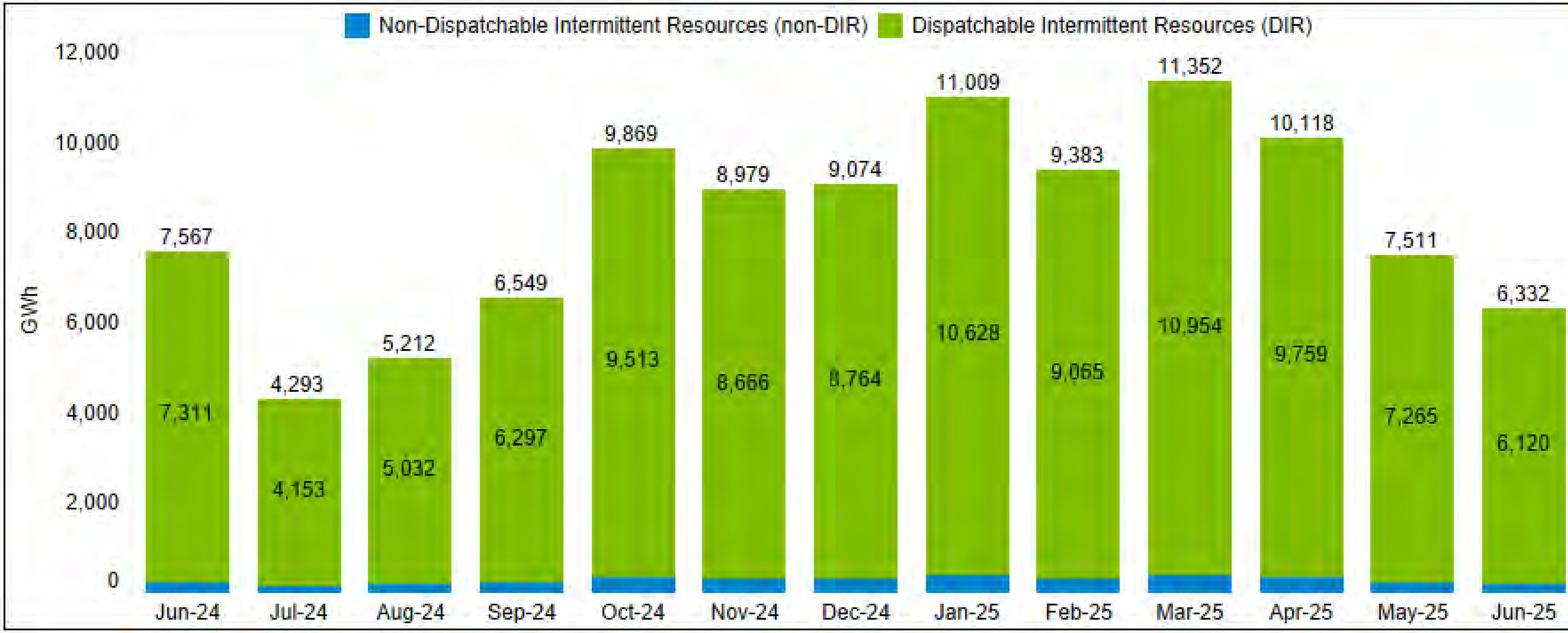
Daily Day-Ahead Wind Forecast Performance: Mean Absolute Error (MAE) and Mean Absolute Percent Error (MAPE)



Source: MISO Operations Risk Management

Monthly Wind Energy Generation

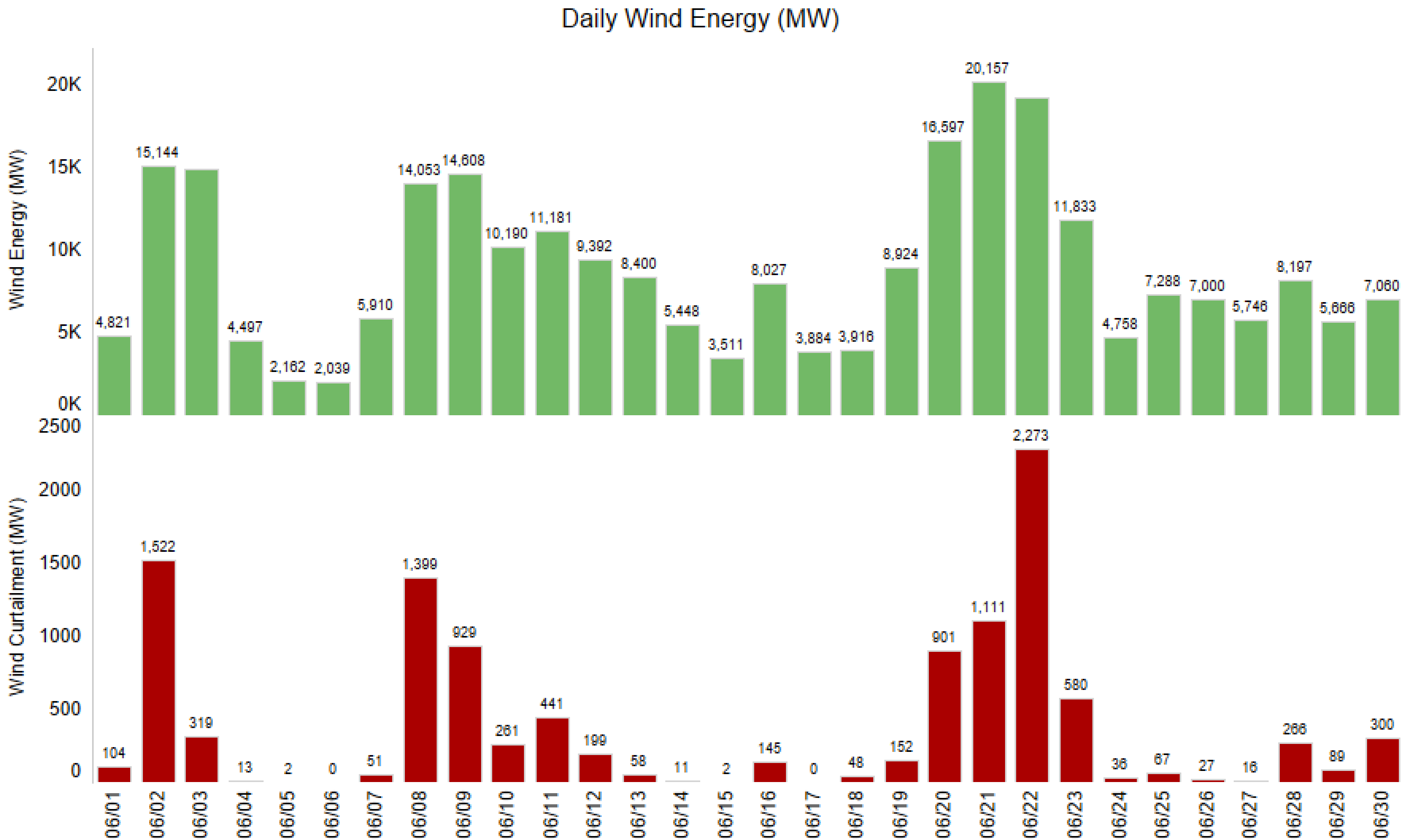
As of 06/04/2025
Registered Wind Capacity = 31,650 MW; Inservice Wind Capacity = 31,315 MW
Registered DIR Capacity = 30,122 MW; Inservice DIR Capacity = 29,787 MW



	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25
Peak Wind Date and Hour Ending	6/6 17	7/1 23	8/6 4	9/12 24	10/30 2	11/20 18	12/4 11	1/28 21	2/28 22	3/23 15	4/28 19	5/16 21	6/21 15
Peak hourly wind output (MW)	21,341	18,465	15,418	16,944	22,683	21,272	24,044	25,218	24,646	24,172	23,582	22,803	21,086
Peak wind output as % of MISO load in that hour	24.1%	24.0%	21.2%	24.2%	36.1%	29.0%	28.7%	31.2%	34.1%	34.6%	28.6%	28.6%	19.3%
Wind Energy as a percent of MISO Energy	13.7%	7.3%	8.8%	12.8%	19.9%	18.4%	16.3%	18.2%	18.1%	23.2%	21.5%	15.6%	11.3%
DIR dispatch below Max as % of avail. DIR	3.0%	2.1%	2.7%	4.9%	4.0%	3.4%	2.3%	3.3%	2.0%	3.1%	4.3%	3.3%	3.3%

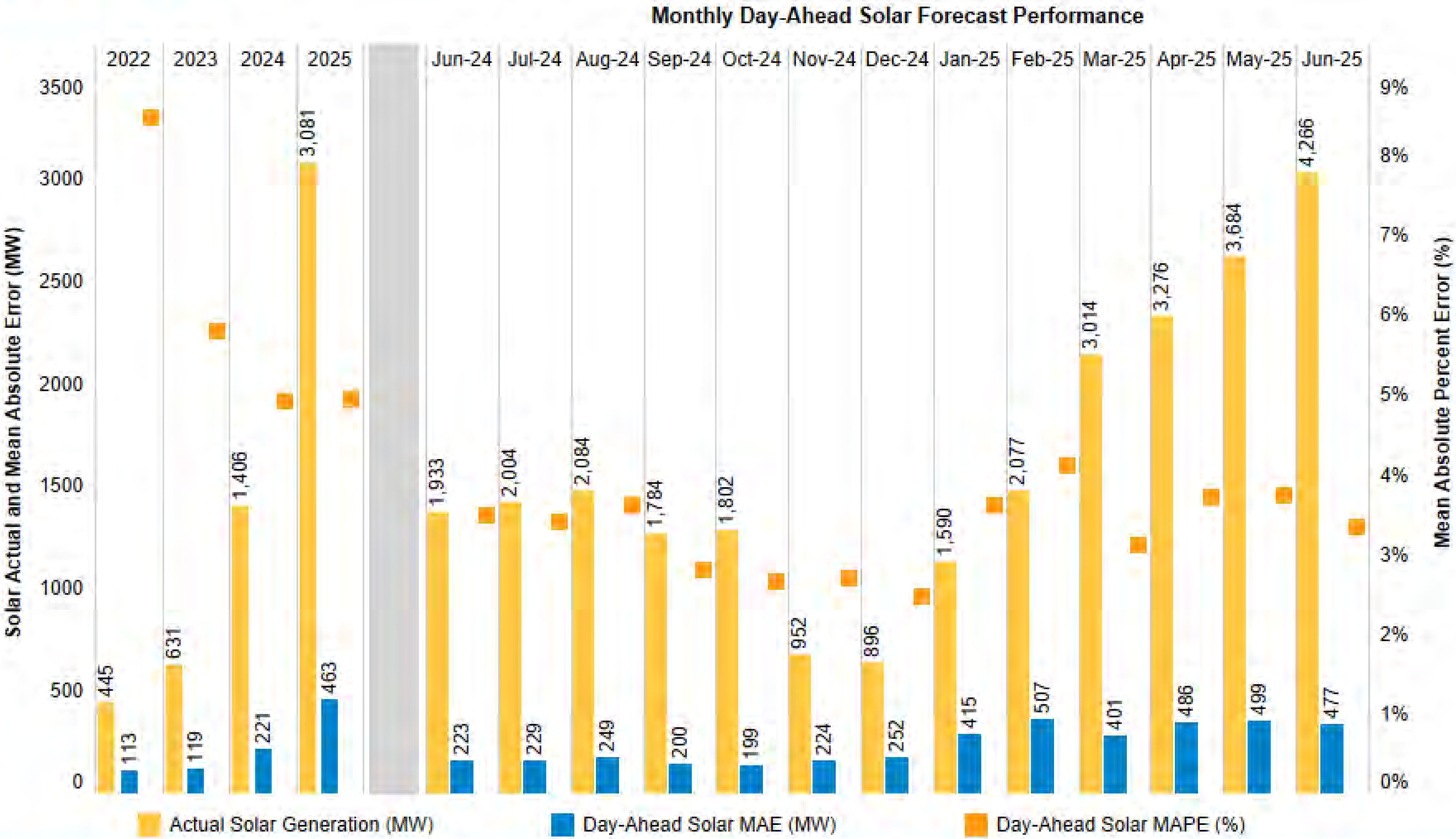
**Hourly State Estimator data*
Source: MISO Market and Operations Analytics Department

Daily Average Wind Energy and Curtailment



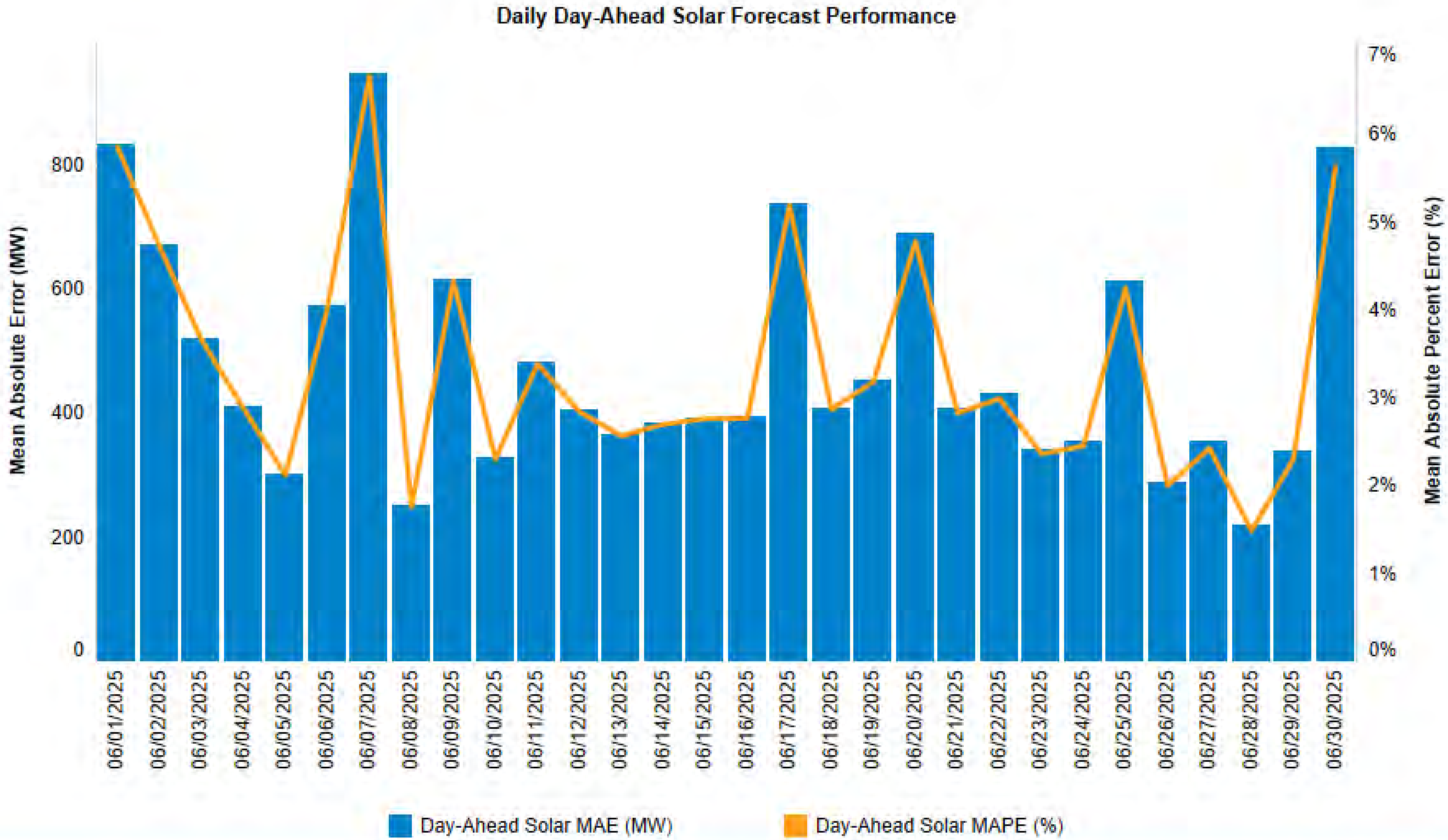
Source: MISO Market and Operations Analytics Department

Monthly Day-Ahead Solar Forecast Performance: Mean Absolute Error (MAE) and Mean Absolute Percent Error (MAPE)



Source: MISO Operations Risk Management

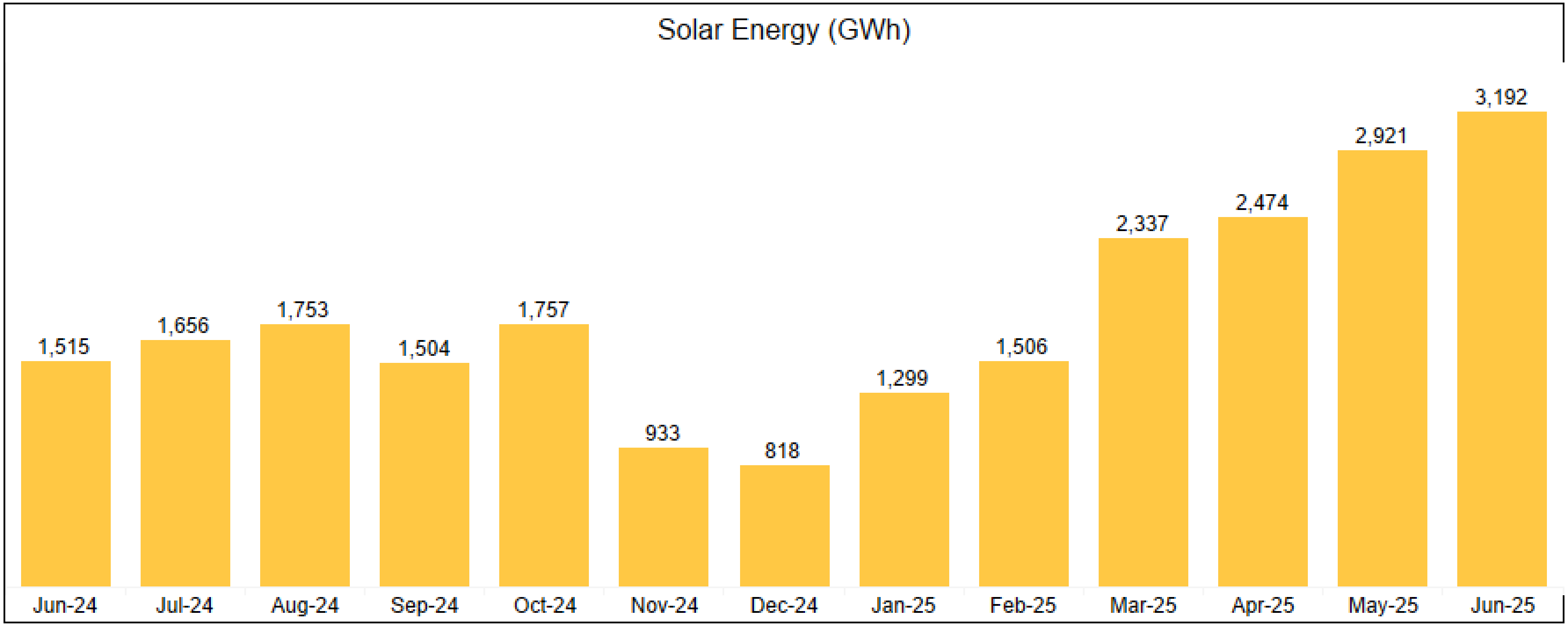
Daily Day-Ahead Solar Forecast Performance: Mean Absolute Error (MAE) and Mean Absolute Percent Error (MAPE)



Source: MISO Operations Risk Management

Monthly Solar Energy

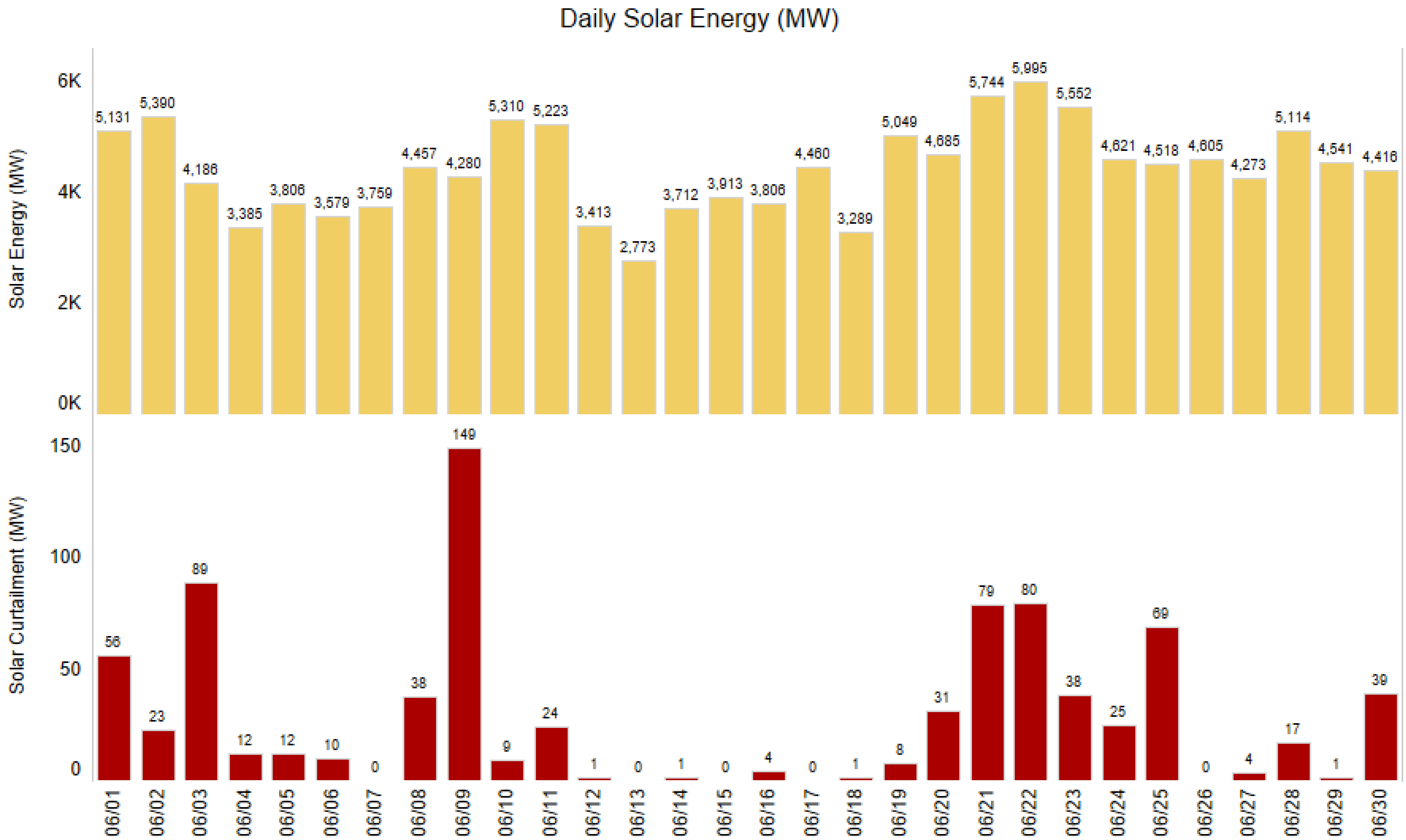
As of 06/04/2025
Registered Solar Capacity = 19,131 MW; Inservice Solar Capacity = 14,112 MW
Registered DIR Capacity = 18,959 MW; Inservice DIR Capacity = 13,940 MW



Peak Solar Date and Hour Ending	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25
	6/14 11	7/13 12	8/22 12	9/26 12	10/16 16	11/12 16	12/21 12	1/20 12	2/21 12	3/22 15	4/16 14	5/31 13	6/22 11
Peak Hour Solar Output (MW)	6,016	6,168	6,835	7,054	7,919	6,813	6,898	8,308	11,360	12,061	12,342	13,366	12,872
Peak Solar Output as a % of MISO Load in that hour	6.9%	6.5%	8.3%	9.1%	11.5%	9.6%	8.7%	8.4%	12.4%	18.8%	18.0%	19.2%	12.9%
Solar Energy as a % of MISO Energy	3.4%	3.2%	3.8%	3.5%	4.7%	2.6%	2.0%	2.6%	3.5%	6.0%	5.4%	6.0%	6.0%
DIR Dispatch below MAX as a % of avail. DIR	-0.1%	-0.5%	-0.5%	0.4%	-0.3%	-0.6%	-3.1%	-1.9%	0.1%	1.1%	0.5%	-0.1%	-0.1%

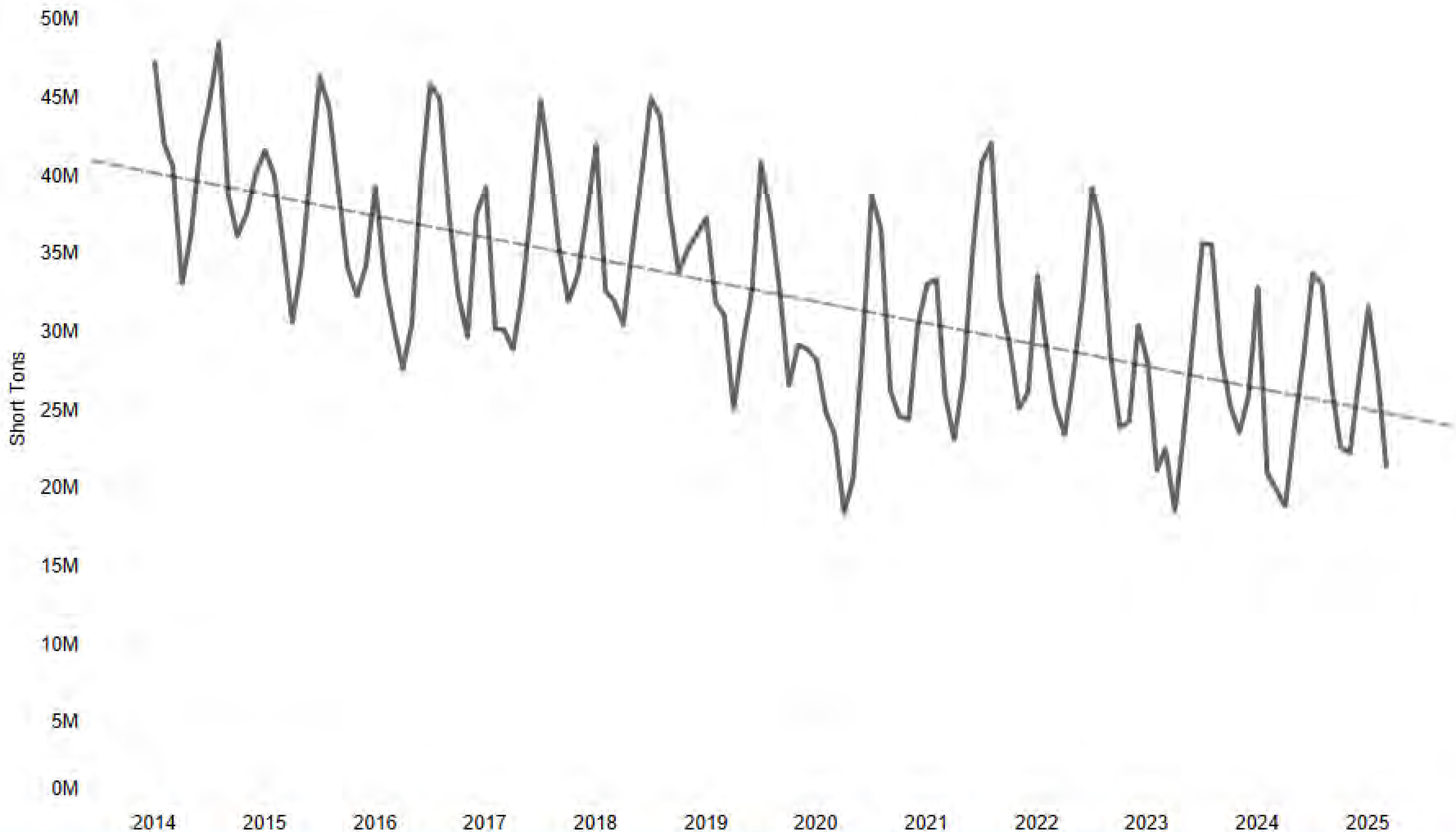
**Hourly State Estimator data*
Source: MISO Forecast Department

Daily Average Solar Energy and Curtailment



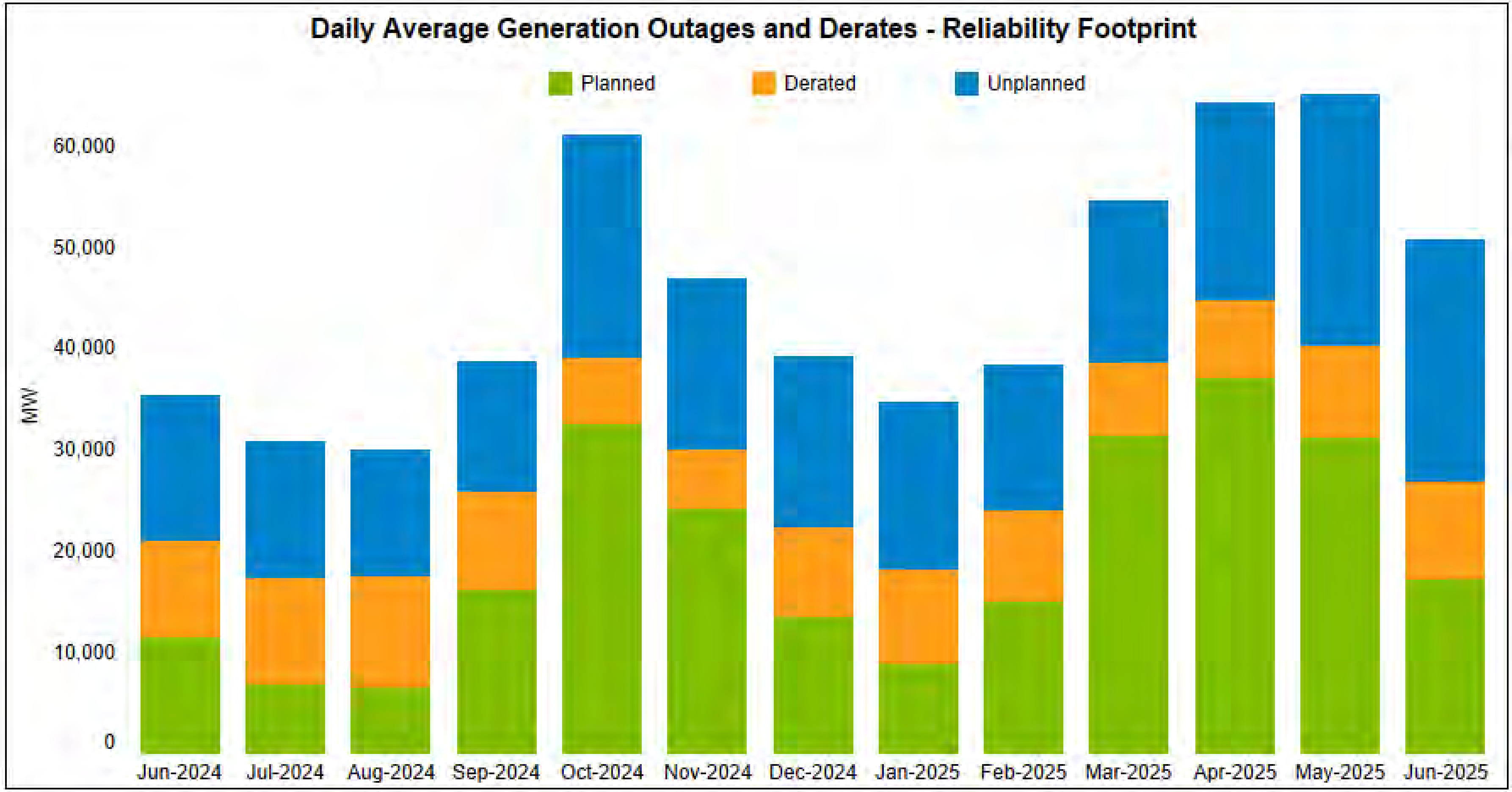
Source: MISO Market and Operations Analytics Department

Carbon Emissions



Data Source: EPA emissions through March 2025 and EPA EIA-860 2023
Emissions generated from MISO generators and does not account for volume of imports or exports
One Short Ton = 2000 lbs

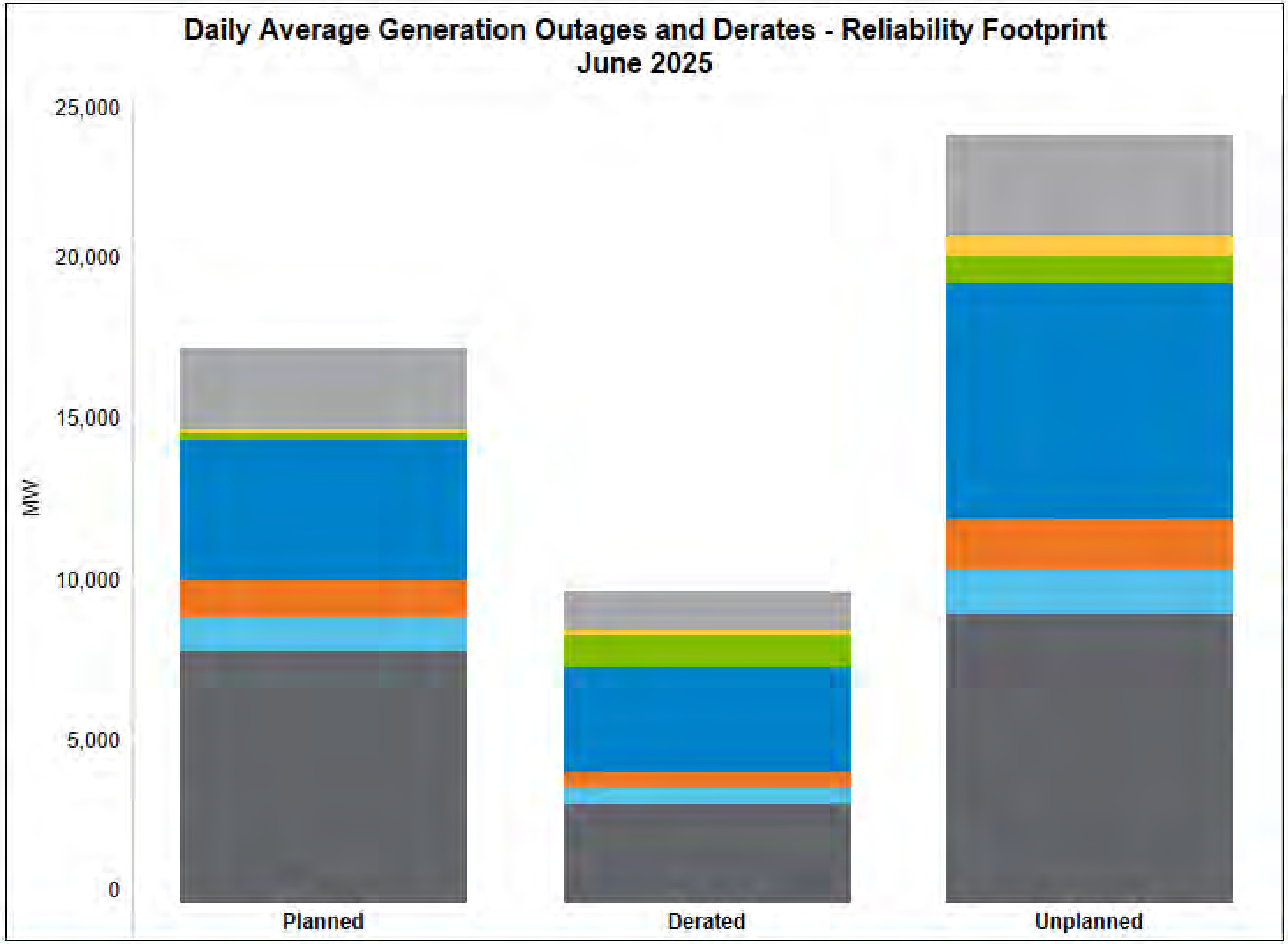
Generation Outages and Derates



Notes:
- *Unplanned Outages include Emergency, Forced, and Urgent*
- *Planned Outages include Planned*
- *De-rates are based on limits observed in Real-Time and may not reflect normal seasonal de-rates or de-rates for maintenance or other operating conditions*

Outage data is "point in time" and can change; the chart reflects the data as it resided in the system on the date of extraction
Source: MISO CROW Outage Scheduler

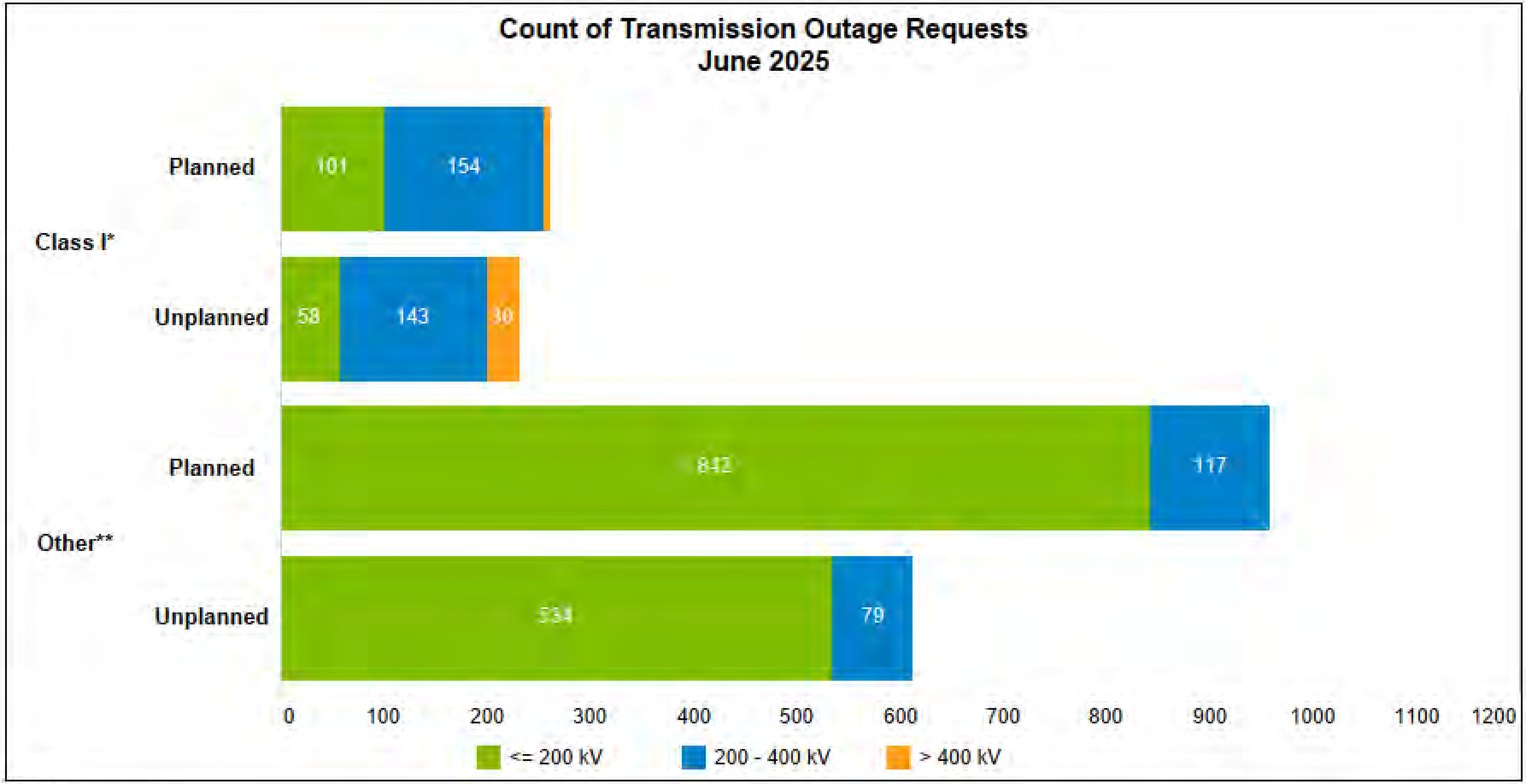
Generation Outages by Fuel



Notes:
•Other includes Oil ,Hydro, Pet coke, Waste, BTMG, and units not in market footprint
•Unplanned Outages include Emergency, Forced, and Urgent
•Planned Outages include Planned
•De-rates are based on limits observed in Real-Time and may not reflect normal seasonal de-rates or de-rates for maintenance or other operating conditions

Outage data is "point in time" and can change; the chart reflects the data as it resided in the system on the date of extraction
Source: MISO CROW Outage Scheduler

Transmission Outages



Notes:
- *Class 1 is any facility which has a reliability or market impact on transmission system operations*
- *Other is any facility which does NOT have a reliability or market impact on transmission system operations*
- *Unplanned Outages include Emergency, Forced, Discretionary and Urgent*
- *Planned Outages include Planned, Opportunity*

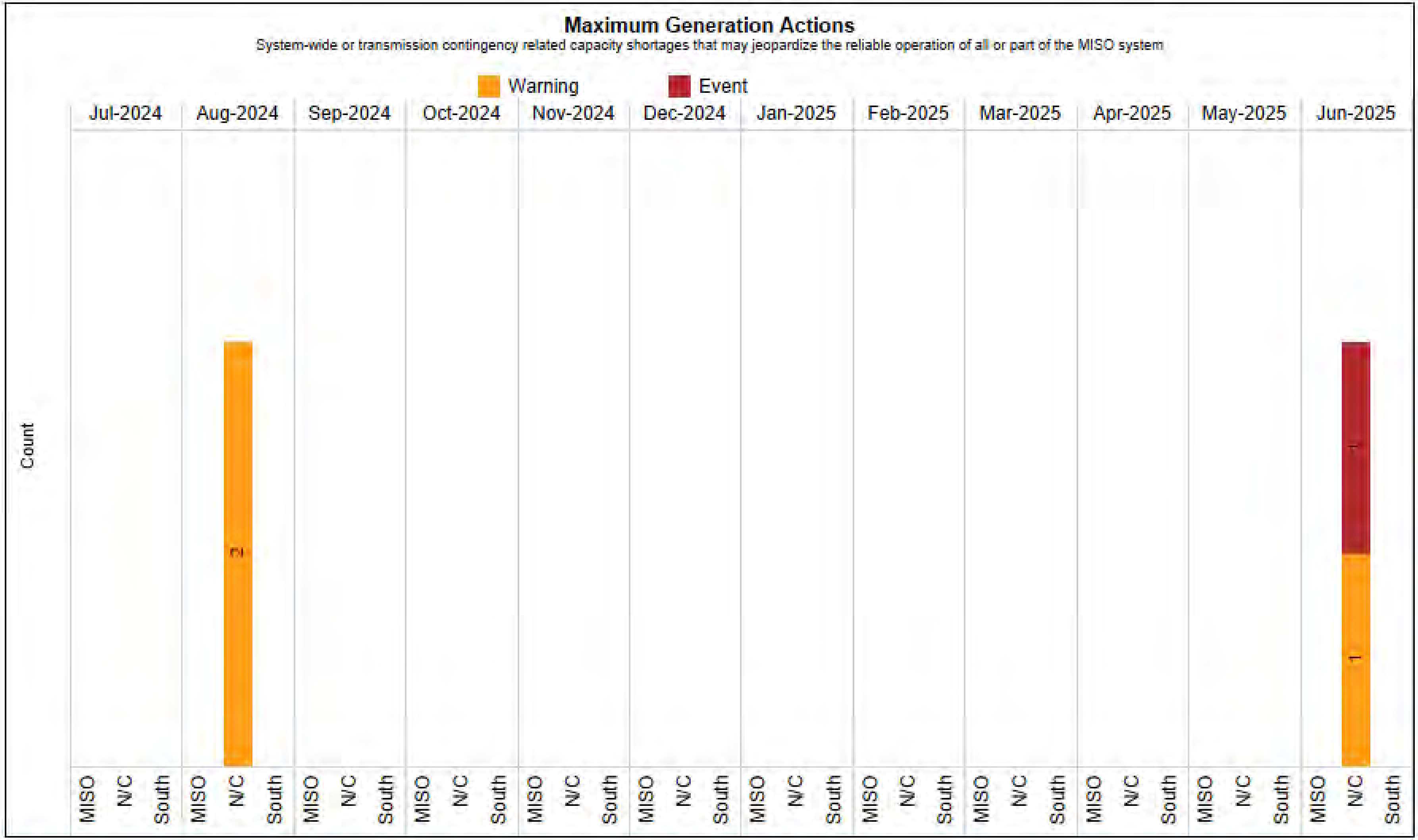
Outage data is "point in time" and can change; the chart reflects the data as it resided in the system on the date of extraction
Source: MISO CROW Outage Scheduler

MISO Inadvertent Balance

Month/Year	Net	On-Peak	Off-Peak
6/1/2024	-21,123	-10,382	-10,741
7/1/2024	-33,949	-12,863	-21,086
8/1/2024	-39,602	-15,448	-24,154
9/1/2024	-79,156	-36,769	-42,387
10/1/2024	-37,833	-17,446	-20,387
11/1/2024	-5,440	-2,237	-3,203
12/1/2024	-1,006	624	-1,630
1/1/2025	11,913	7,358	4,555
2/1/2025			
3/1/2025			
4/1/2025			
5/1/2025			
6/1/2025			
Running Total from 2009	-95,937	-88,521	-7,416

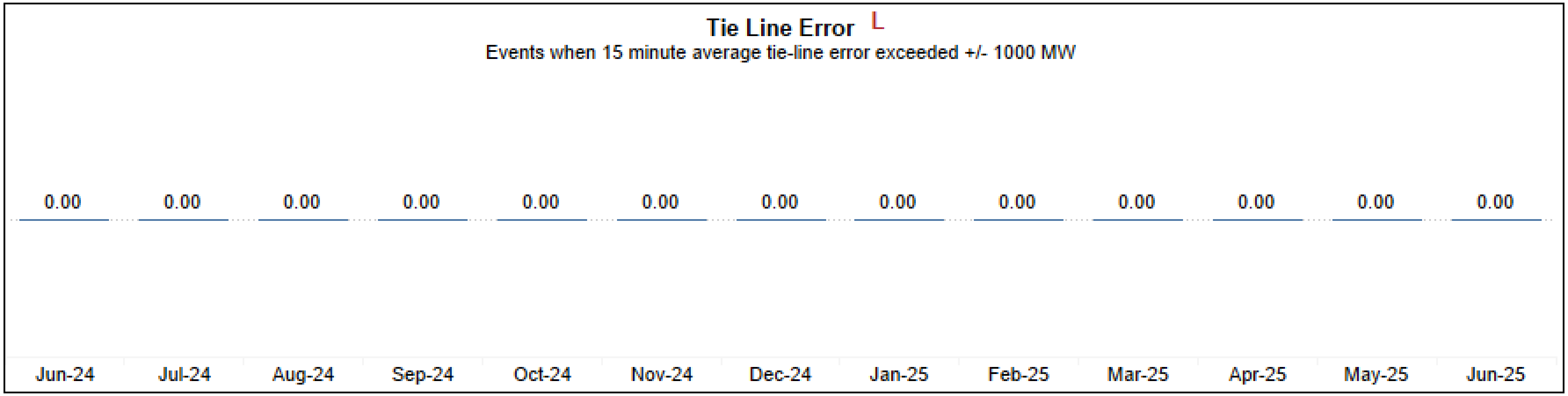
Source: NERC Tool (As of May 10, 2025)

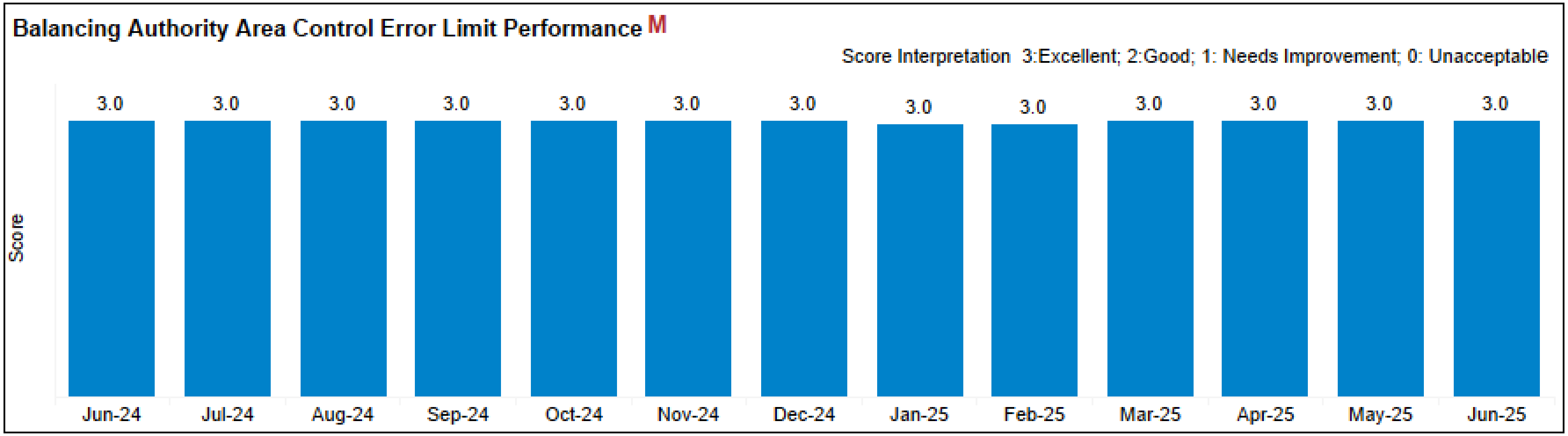
Generation Notifications



* Alerts – forecasting specific emergency situations in a future time-frame
* Warnings – experiencing initial stages of an emergency situation and taking action
* Events – experiencing an emergency situation and taking action

Tie Line and BAAL Performance



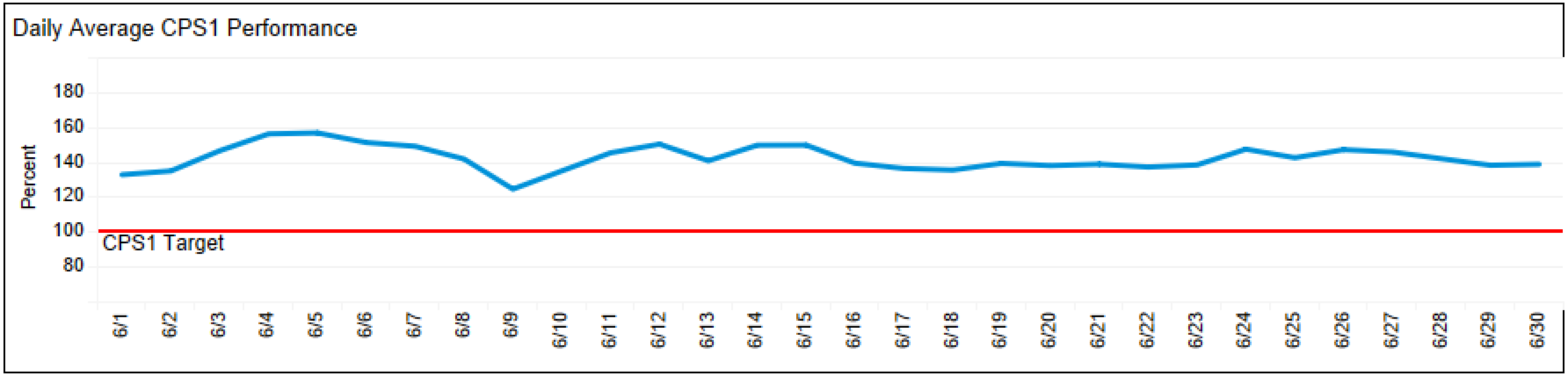


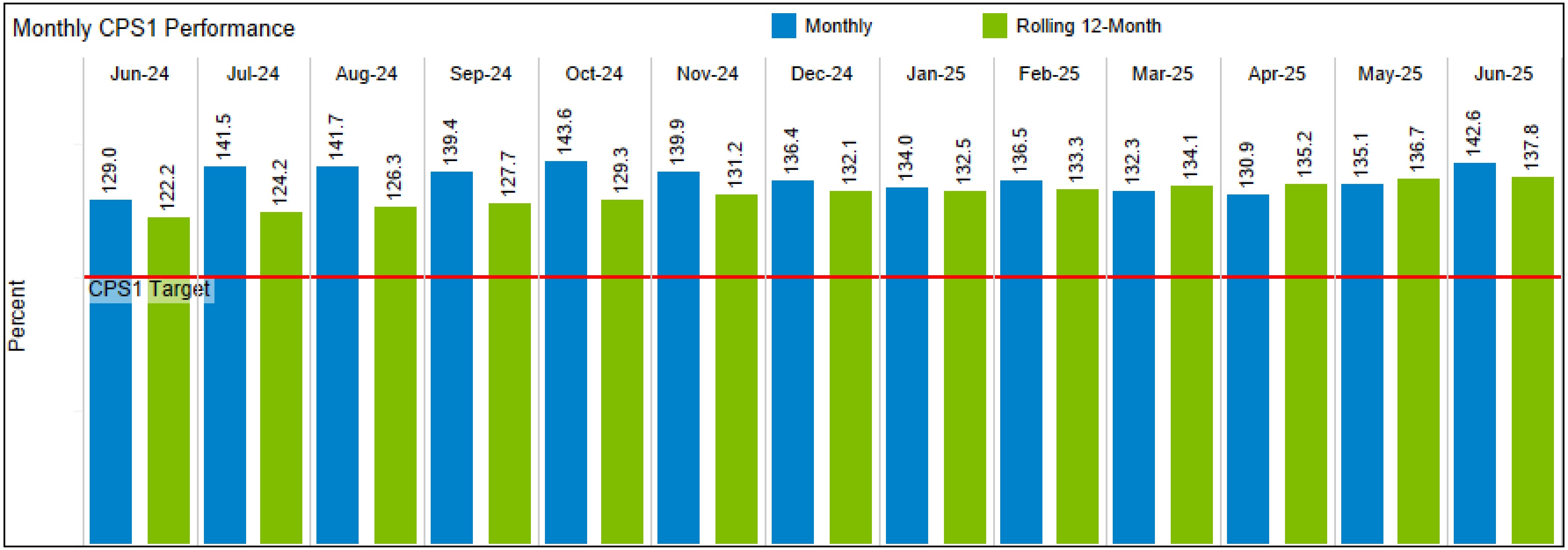
The Balancing Authority Area Control Error Limit (BAAL) measures control performance over the short-term. Exceeding BAAL for a continuous time period greater than 30 minutes constitutes a non-compliant event. The daily MISO BAAL performance rating is the lowest scored incident of the day.

Source: MISO Real-Time Operations Department

CPS1 Performance

N

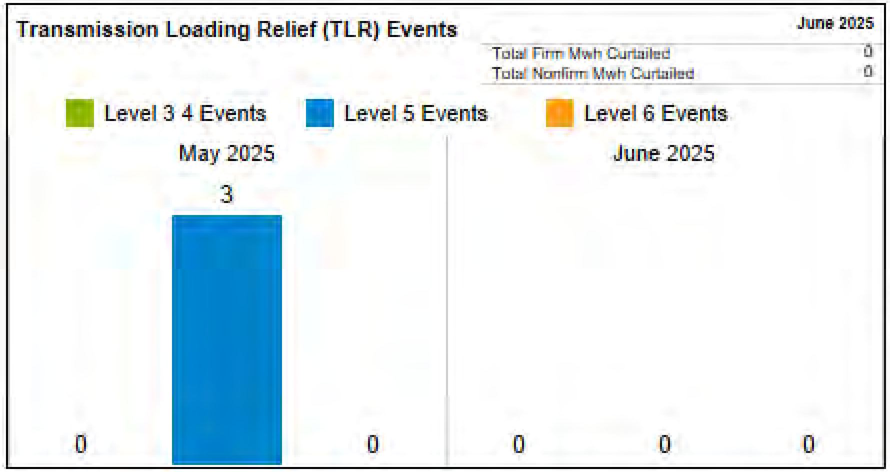


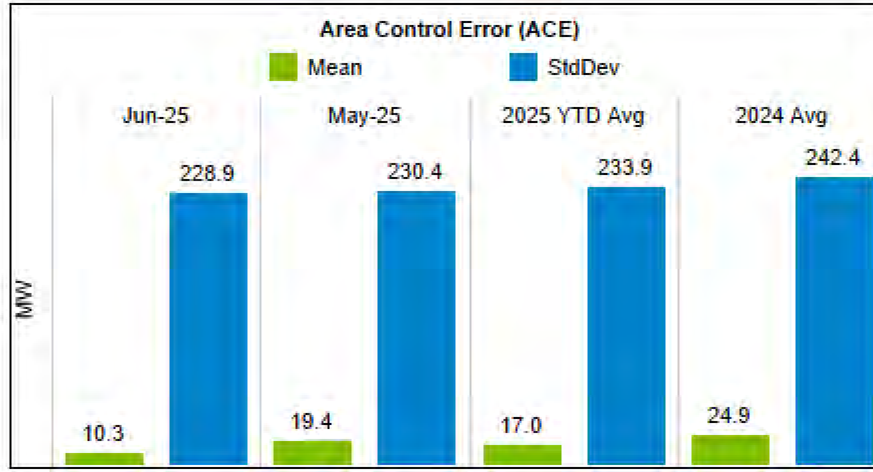


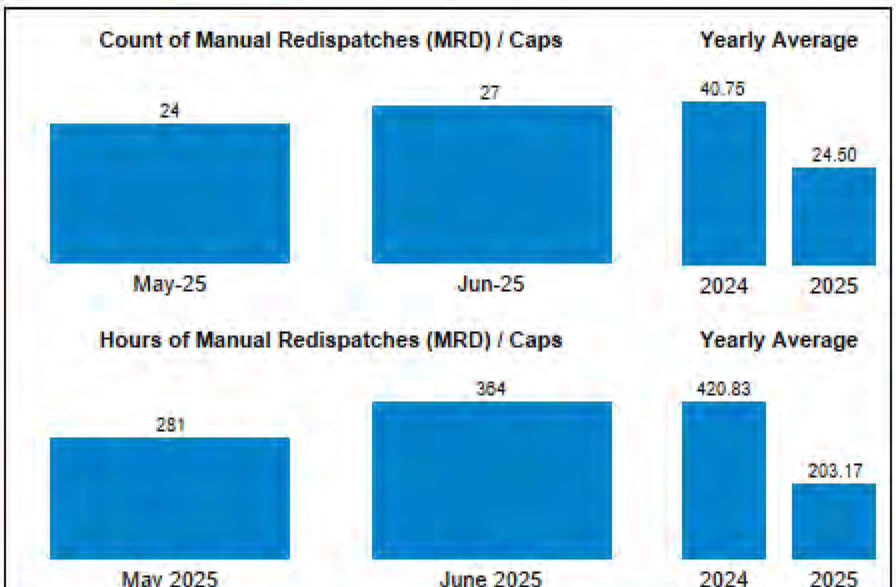
Per NERC Standard BAL-001-0 and MISO OP-044, the MISO will monitor CPS 1 performance and implement actions to ensure the MISO's rolling 12-month CPS 1 performance exceeds 100%
Source: MISO Real-Time Operations Department

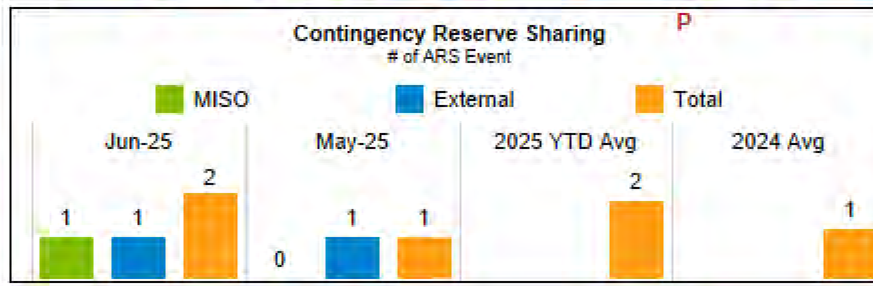
MISO

Reliability — Other Metrics









MISO deployed Contingency Reserves **

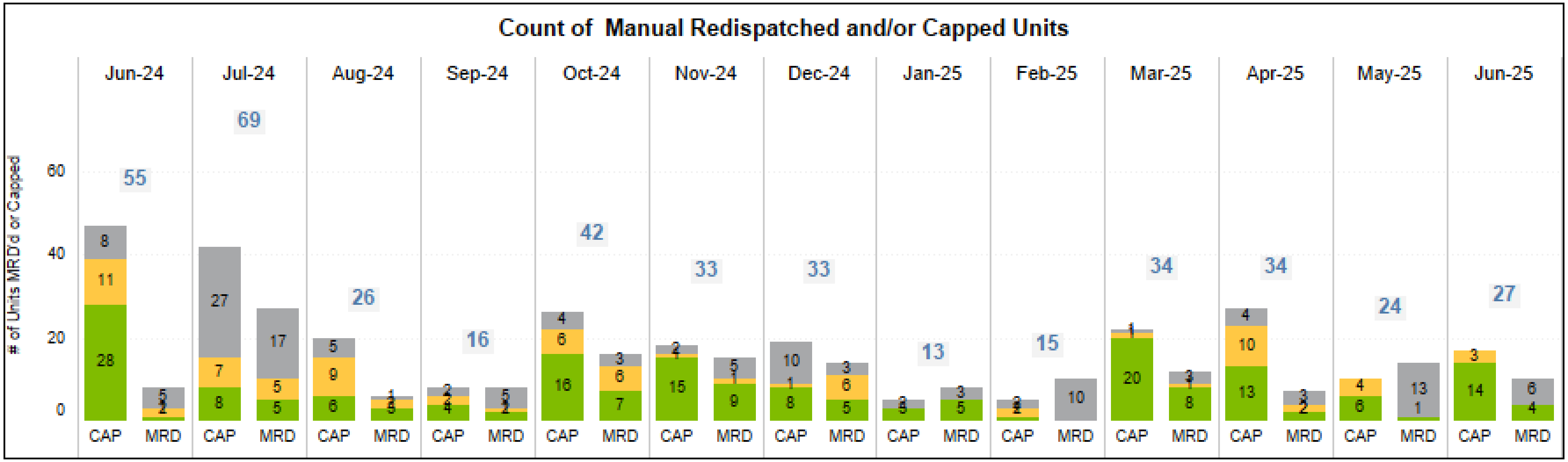
Date	HE	Deployment Type	MW
6/1/2025	19	OFFLINE	79
		ONLINE	1,227
6/17/2025	5	OFFLINE	338
		ONLINE	961
5/20/2025	9	ONLINE	512

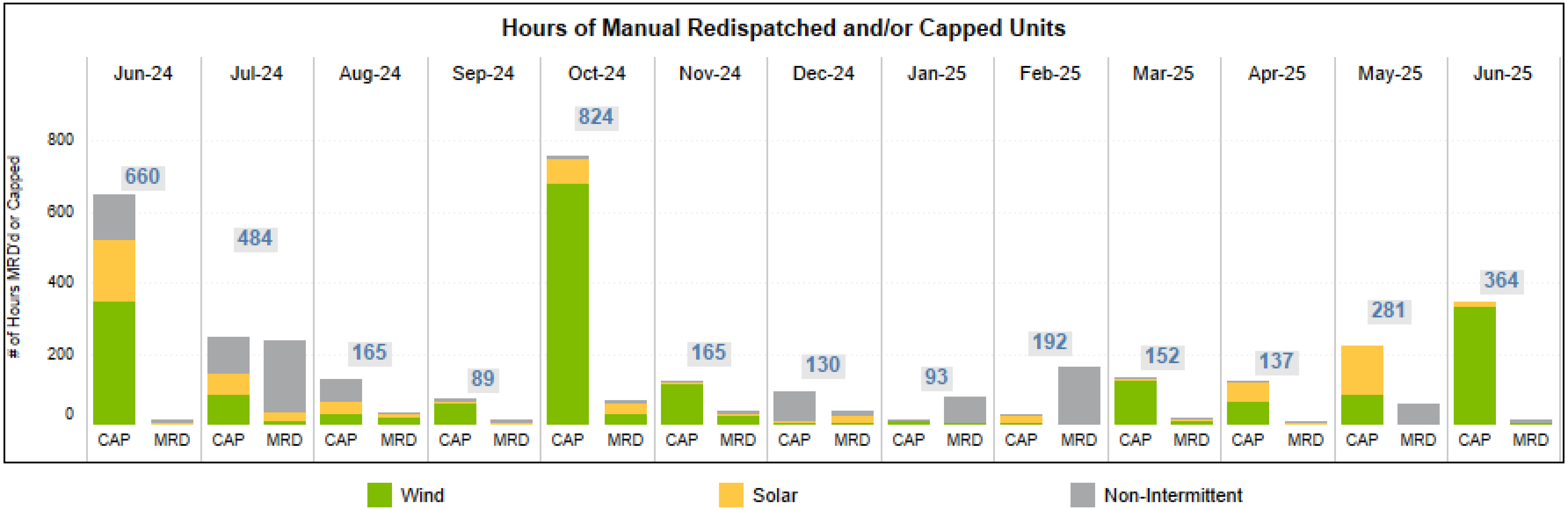
Source: MISO Real-Time Operations Department

**Historical Contingency Deployment data located in *Related Documents* at

https://cdn.misoenergy.org/202001-202103%20Additional%20Information%20-%20Historical%20Contingency%20Deployment%20Data548321.pdf/

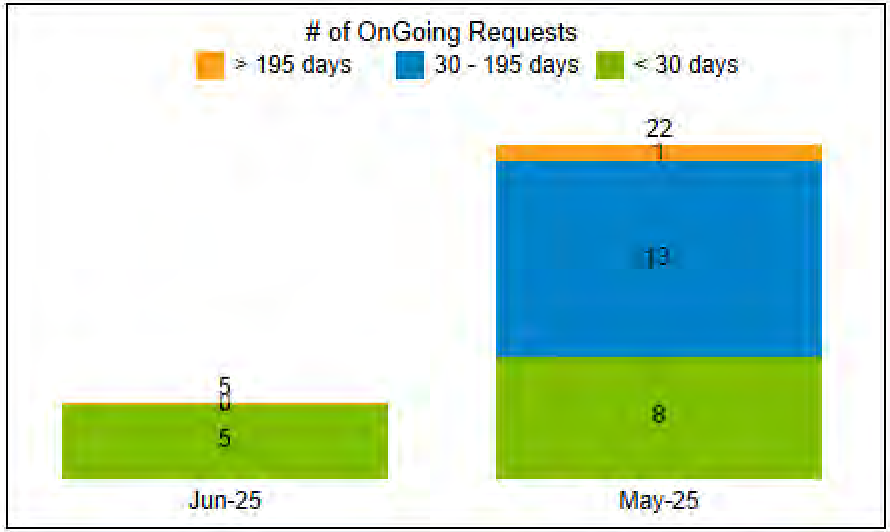
Operator Actions - Manual Redispatch and Caps

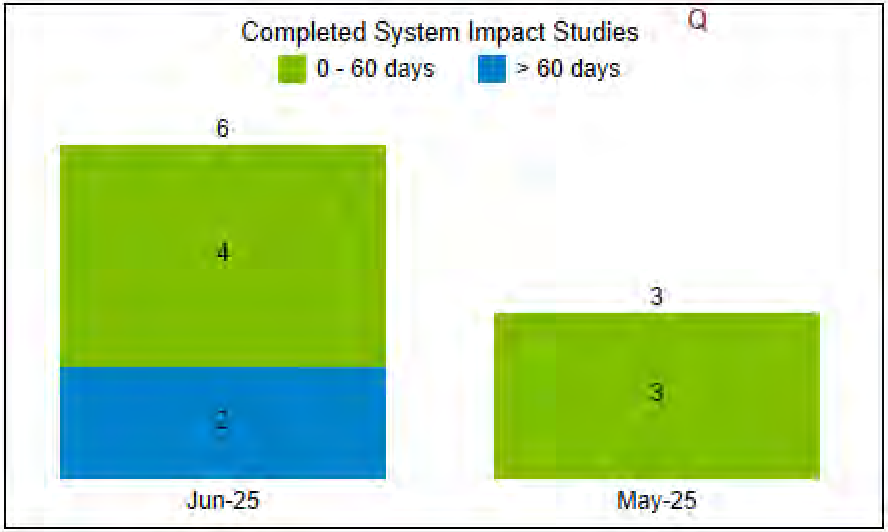


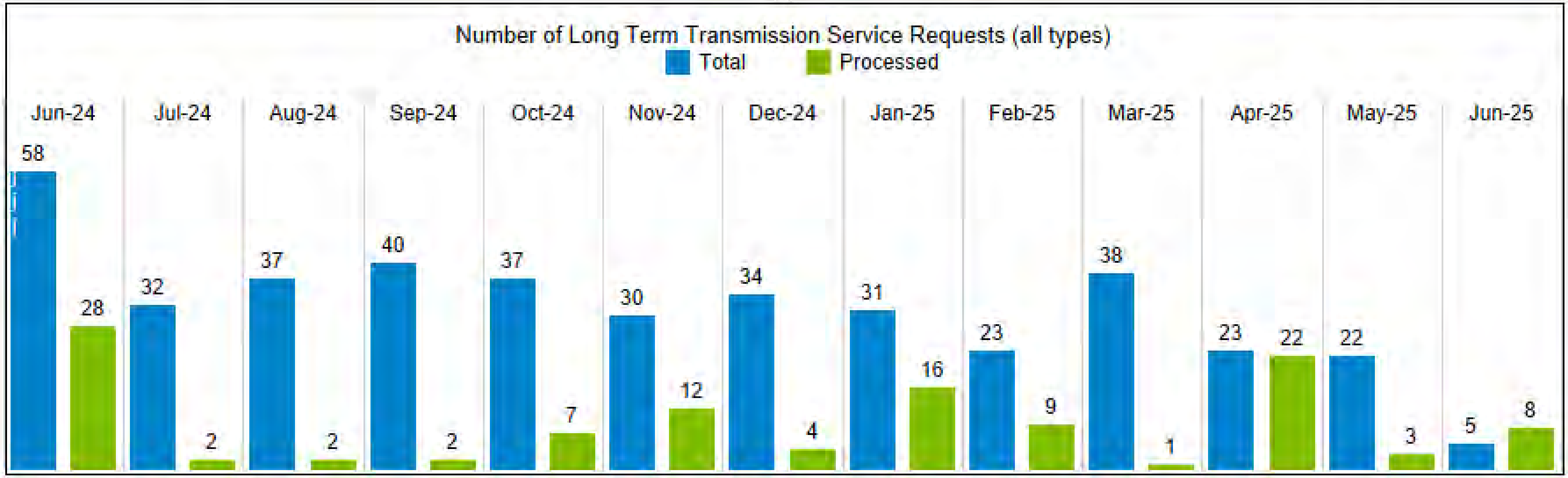


Source: MISO Market and Operations Analytics Department

Transmission Service Request

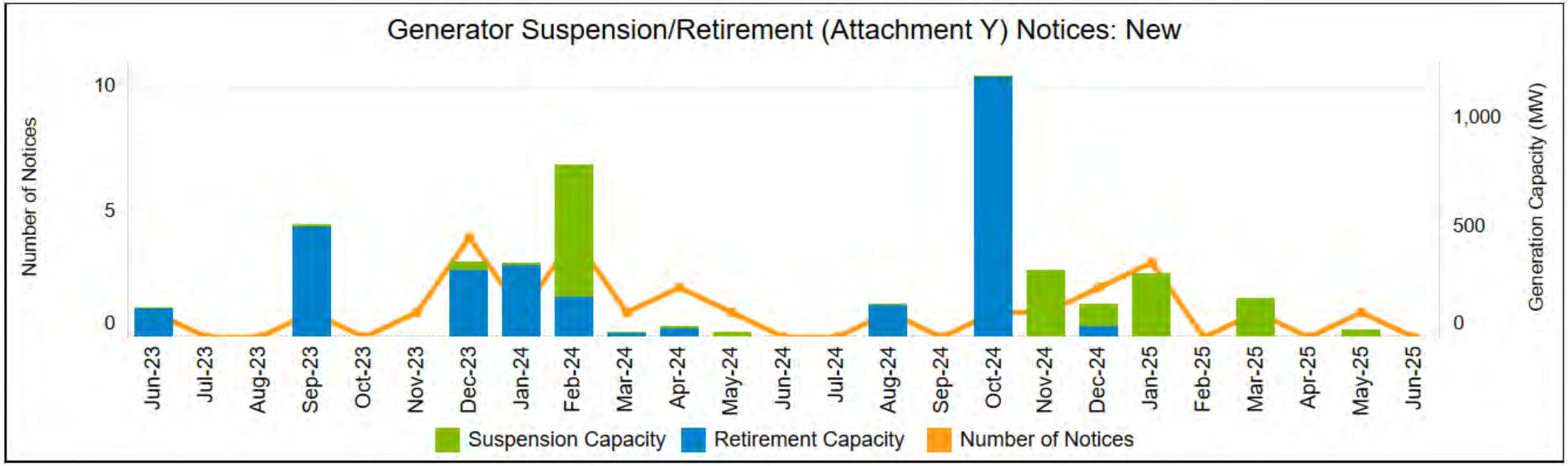


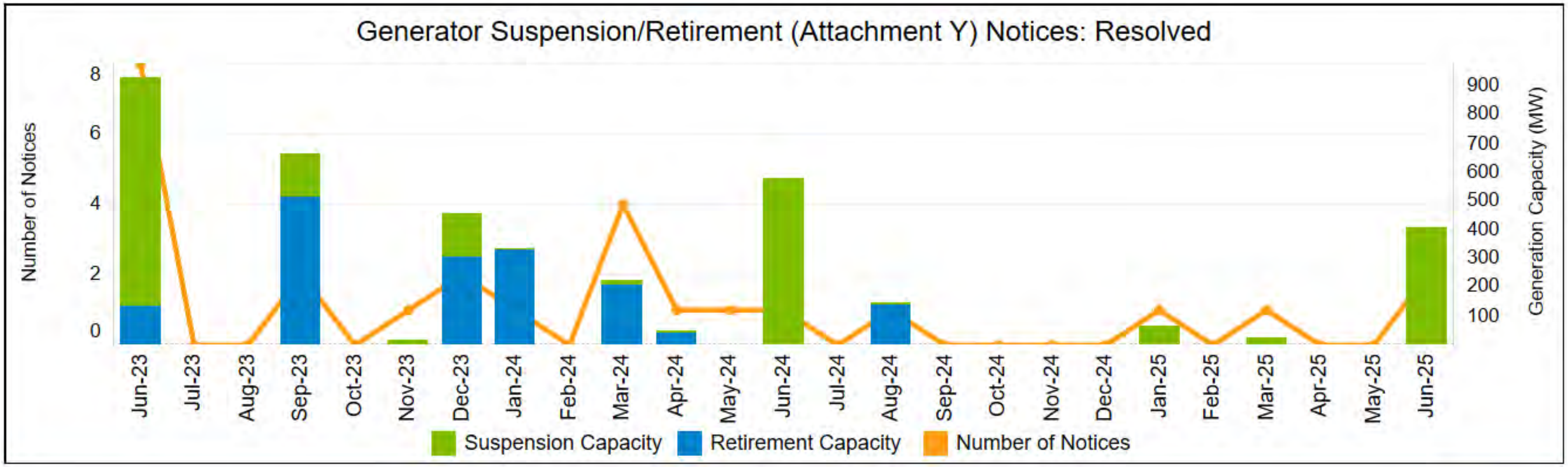




Source: MISO Resource Utilization

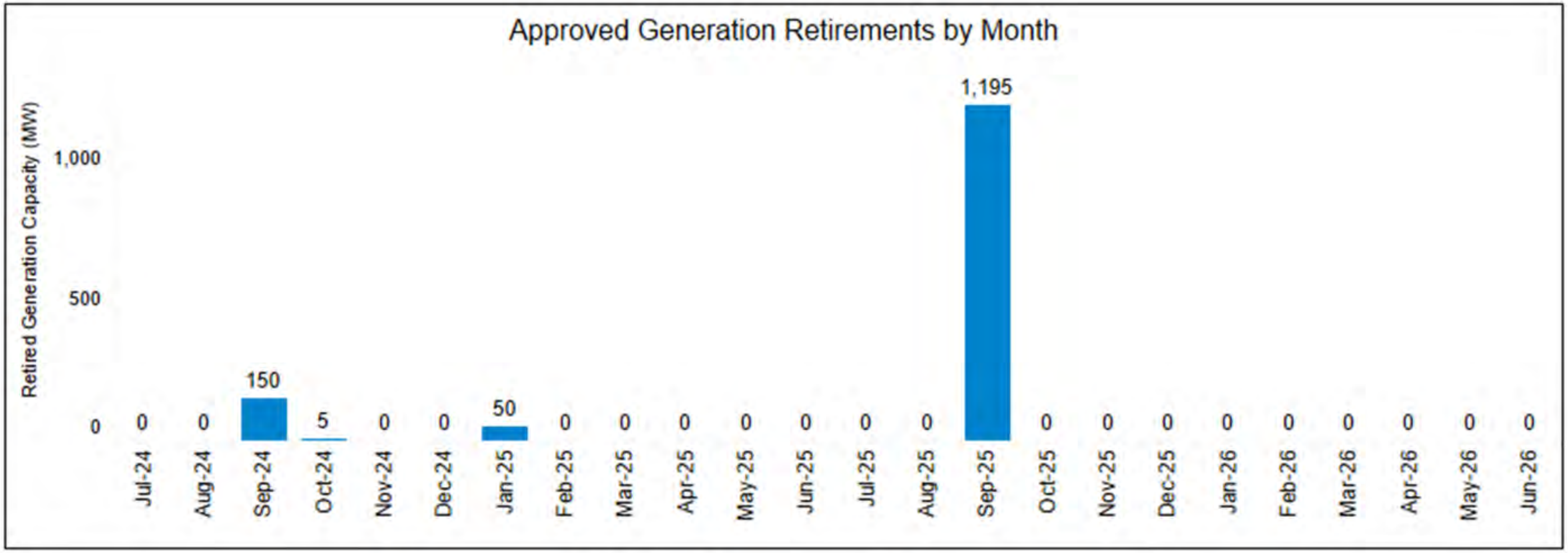
Generator Suspension/Retirement - New and Resolved

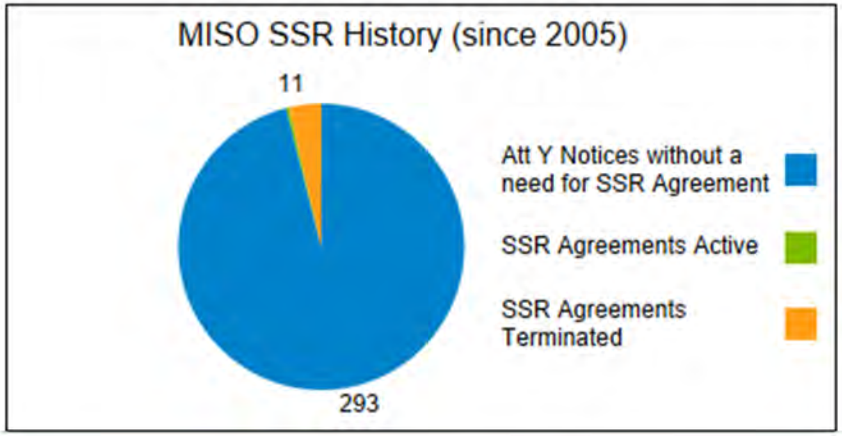




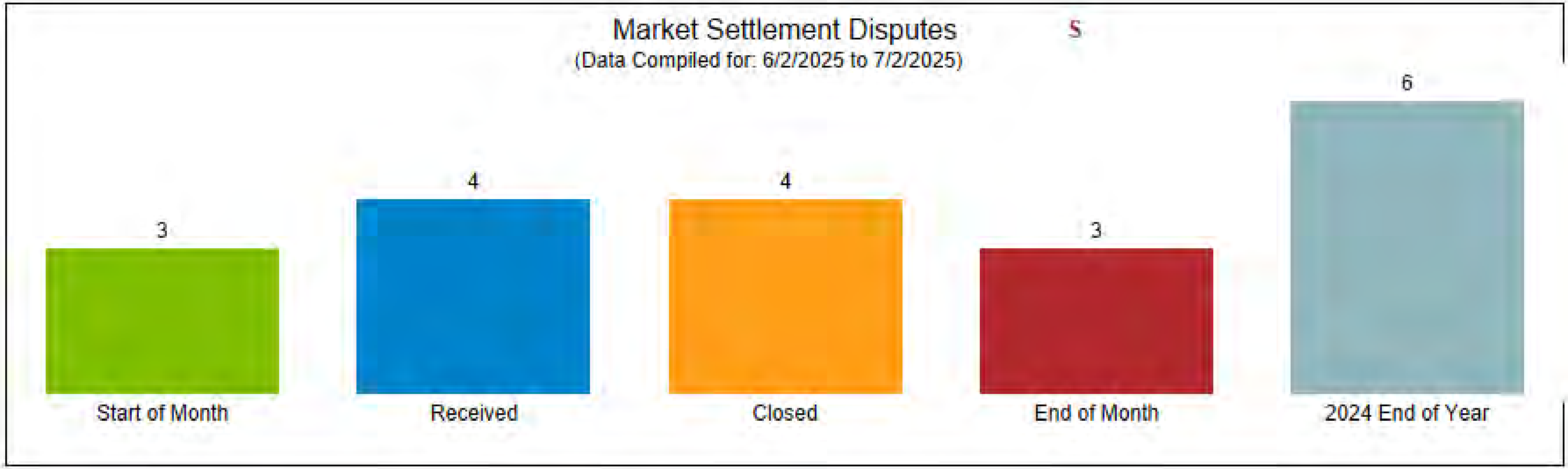
Source: MISO Transmission Planning Department

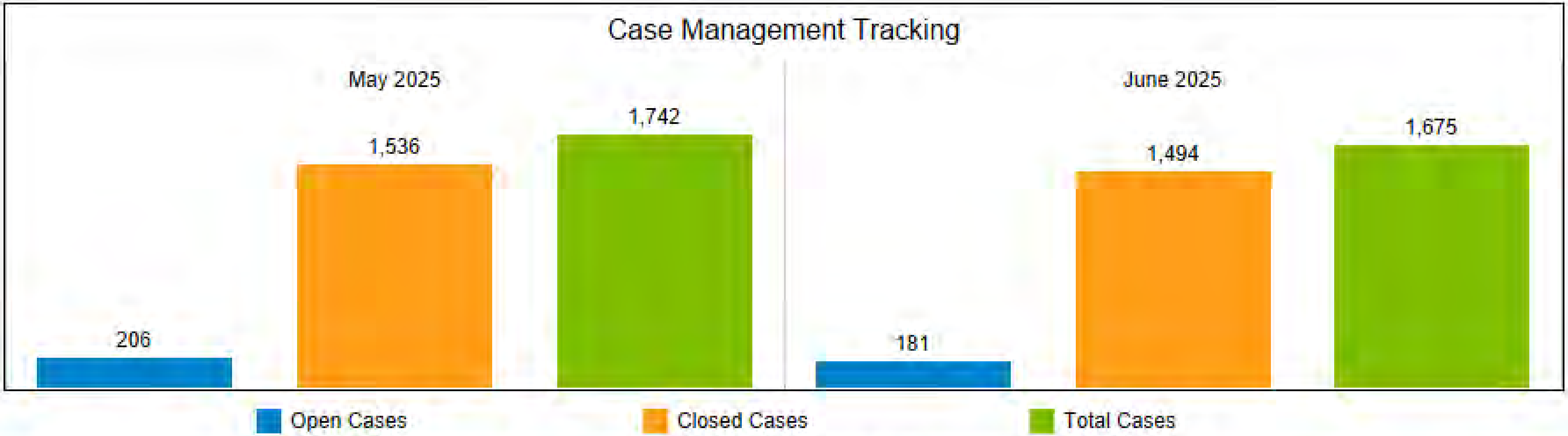
Generator Suspension/Retirement - Overall





Settlements/Client Services and Readiness





Source: MISO Settlements and Client Services and Readiness Departments
Settlement values may change due to resettlement
Resource Adequacy, Tariff Pricing, Market Settlements, and Credit cases are included in Case Management Tracking data

MISO has set an even higher standard for its System Availability metrics in 2025, and while January and February had no downtime, a critical incident occurred in March that impacted STI

January - April 2025

Short-Term Incentive Metrics	JAN 25	FEB 25	MAR 25	APR 25	Trend *	YTD	Threshold | Target | Excellent
Critical Systems Availability (Downtime in Hours)	0.0	0.0	1.5	0.0	↘	**1.5**	4 Hours | 3 Hours | 2 Hours
Number of Critical System Incidents Exceeding 30 Minutes	0	0	1	0.0	↘	**1**	2 | 1 | 0

Other Availability Metrics	JAN 25	FEB 25	MAR 25	APR 25	Trend *	Monthly Target
ICCP** (Availability %)	100	100	100	100	↔	99.5
Customer Facing Applications – Portals (Availability Index)	10	10	10	10	↔	10 of 10
Markets (Availability Index)	4	4	4	4	↔	4 of 4
Reliability Targets (Availability Index)	3	3	3	3	↔	3 of 3

**Trend lines represent quarter-over-quarter performance*

***ICCP = Inter-Control Center Communications Protocol*

2025 Dashboard Metric Criteria (1 of 2)

**New or revised 2025 Metric;*

Metric	Chart	Expected	Monitor	Review	Metric	Chart	Expected	Monitor	Review
Operational Excellence									
Percentage Price Deviation*	A	Absolute DA-RT price difference divided by DA LMP <=28.6%	Absolute DA-RT price difference divided by DA LMP is >28.6% but <=34.3%	Absolute DA-RT price difference divided by DA LMP >34.3%	Unit Commitment Efficiency*	H	>=93%		<93%
Monthly Average Gross Virtual Profitability*	B	Within the standard deviation bands (threshold $0.44/MWh)	Outside the standard deviation bands		Real-Time Obligation fulfilled by Day-Ahead Supply at the Peak Hour	I	>=95%	>=93% but <95%	<93%
FTR Funding	C	Monthly FTR Allocation % is >=92% and YTD FTR Allocation % is >=96%	Not in good status AND Monthly FTR Allocation % is >=87% AND Rolling 12-month FTR Allocation % is >=93%	Not in Good AND not in Monitor status	Day Ahead Wind Generation Forecast Error	K	# of days that the hourly average forecast error exceeds 10% <= 6	# of days that the forecast error exceeds 10% >6 or Forecast error exceeds 15% in = 3 days	# of days that the forecast error exceeds 10% >8 or Forecast error exceeds 15% in > 3 days or Forecast error resulted in declaring 1 Real Time Event
Market Efficiency Metric	D	>= 95%		<95%	Day Ahead Solar Generation Forecast Error	T	# of days that the hourly average forecast error exceeds 10% <= 6	# of days that the forecast error exceeds 10% >6 or Forecast error exceeds 15% in = 3 days	# of days that the forecast error exceeds 10% >8 or Forecast error exceeds 15% in > 3 days or Forecast error resulted in declaring 1 Real Time Event
RSG per MWh to Energy Price*	E	<=0.38%	>0.38% and <=0.46%	>0.46%	Tie Line Error	L	<=1	>1 but <=3	>3
Day Ahead Mid-Term Load Forecast**	F	# of days that forecast error exceeds 3% <=6 AND # days that forecast error exceeds 4% <=4	# of days that forecast error exceeds 3% > 6 OR # days that forecast error exceeds 4%> 4 OR forecast error exceeds 6% on >= 1 day	# of days that forecast error exceeds 3% > 10 OR # days that forecast error exceeds 4%> 8 OR forecast error exceeds 7% on >= 1 day OR Forecast error resulted in declaring 1 Real Time Event	Control Performance – BAAL	M	Monthly performance score >=2	Monthly performance score<2 but >=1	Monthly performance score <1

FTR YTD metric is applied beginning April

*** Forecast errors observed in March, April, October and November will be measured by 1% lower thresholds*

MISO

2025 Dashboard Metric Criteria (2 of 2)

**New or revised 2025 Metric;*

Operational Excellence									
Metric	**Chart**	**● Expected**	**■ Monitor**	**▼ Review**	**Metric**	**Chart**	**● Expected**	**■ Monitor**	**▼ Review**
Short-Term Load Forecast*	G	Forecast error exceeding the 95% percentile of forecast error for the past year <= 2 days	3 days <= Forecast error exceeding the 95% percentile of forecast error for the past year <= 5 days	Forecast error exceeding the 95% percentile of forecast error for the past year > 5 days	Control Performance – CPS1 and CPS1 12-month rolling	N	>=100%		<100%
					ARS Deployment	P	DCS monthly average % recovery (APR) = 100%	Analysis of event not yet complete	DCS monthly average % recovery (APR) confirmed <100%
Customer Service									
System Impact Study Performance	Q	Studies completed in less than 60 days >=85%	Studies completed in less than 60 days <85% but >=75%	Studies completed in less than 60 days <75%	Settlement Disputes	S	Increase of up to 20 disputes	Increase of between 20 and 50 disputes	Increase of more than 50 disputes

FTR YTD metric is applied beginning April

*** Forecast errors observed in March, April, October and November will be measured by 1% lower thresholds*

BEFORE THE UNITED STATES DEPARTMENT OF ENERGY

Federal Power Act Section 202(c) Emergency Order: Midcontinent Independent System Operator (MISO)	)))))	Order No. 202-25-9

Exhibit to
Motion to Intervene and Request for Rehearing and Stay of
Public Interest Organizations

Exhibit 112

Witmeier 2024 Queue Cap Testimony

TAB A

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Midcontinent Independent System Operator, Inc.	**)** **)**	**Docket No. ER25-___-000**

PREPARED DIRECT TESTIMONY OF ANDREW WITMEIER

ON BEHALF OF THE MIDCONTINENT INDEPENDENT SYSTEM OPERATOR, INC.

November 21, 2024

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Midcontinent Independent System Operator, Inc.	))	**Docket No. ER25-___-000**

PREPARED DIRECT TESTIMONY OF
ANDREW WITMEIER

I. PROFESSIONAL BACKGROUND AND QUALIFICATIONS

Q. PLEASE STATE YOUR NAME, CURRENT POSITION AND YOUR BUSINESS ADDRESS.

A. My name is Andrew Witmeier. I am the Director of Resource Utilization for the Midcontinent Independent System Operator, Inc. ("MISO"). My business address is: 720 City Center Drive, Carmel, IN 46032-7574.

Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE.

A. I joined MISO in 2003 after graduating from Purdue University with a bachelor's degree in electrical engineering. I spent the first 17 years of my career in various positions in MISO Operations. During that time, I worked as a North American Electric Reliability Corporation ("NERC") certified system operator in scheduling, engineering, and as a reliability coordinator. I also led several groups within MISO Operations as a manager in engineering, reliability coordination, and seams administration. In January 2020, I was appointed to my current position.

Q. PLEASE DESCRIBE YOUR JOB RESPONSIBILITIES WITH MISO AS THEY RELATE TO THIS FILING.

A. As the Director of Resource Utilization, I am responsible for the administration of MISO's Generator Interconnection Procedures ("GIP"), which are set forth in Attachment X of MISO's Open Access Transmission, Energy and Operating Reserve Markets Tariff ("Tariff" or "MISO Tariff").[1] I oversee MISO's generation interconnection queue, including the negotiation and execution of Generator Interconnection Agreements ("GIAs"), which are based on MISO's *pro forma* GIA set forth in Appendix 6 of the GIP. I also oversee the group that manages and processes generation retirement, generator replacement, and Surplus Interconnection Service requests for generators connected to MISO's Transmission System. I have been directly involved in the preparation and development of the current proposals.

Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY IN REGULATORY PROCEEDINGS?

A. Yes. I submitted testimony at the Federal Energy Regulatory Commission ("FERC" or "Commission") in Docket No. ER22-661-000 on issues related to MISO's generator queue reform and resource utilization and Docket Nos. ER24-340-000 and ER24-341-000 on additional issues related to MISO's generator queue reform and management.

II. <u>OVERVIEW AND PURPOSE OF TESTIMONY</u>

Q. ARE YOU SUBMITTING YOUR TESTIMONY ON BEHALF OF MISO?

A. Yes.

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[1] Unless otherwise indicated in my Testimony, all capitalized terms used herein have the meaning as set forth in the Tariff or the proposed Tariff revisions, as applicable.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. My testimony supports the updated Tariff revisions that MISO is submitting in this docket to refile certain urgent quantity improvements to the GIP. As further discussed below, MISO's filing in this docket contains two severable proposals. While these proposals are separate from each other, both should be implemented as soon as possible to ensure that MISO's generator interconnection queue can continue to operate in a just and reasonable manner in the face of severe challenges precipitated by an ongoing and unprecedented increase in the number and volume of Interconnection Requests in MISO. The proposed changes will make MISO's administration of the queue more efficient and will improve MISO's compliance with the GIP timing requirements.

Q. HOW WAS THIS NEW PROPOSAL DEVELOPED?

A. MISO developed this updated proposal through a broad and inclusive stakeholder process. This filing incorporates the extensive stakeholder input we received in the past several months and reflects the lessons we learned from our previous queue reform efforts, including the Commission's guidance in Docket No. ER24-341-000. As discussed in more detail below, we have addressed the specific suggestions and concerns identified in the guidance order and have provided extensive opportunities for all interested parties to comment during the stakeholder review process. The final proposal that MISO is submitting today incorporates many of the comments and recommendations we have received in the process.

Q. HOW IS THIS FILING DIFFERENT FROM THE NOVEMBER 2023 CAP PROPOSAL?

A. MISO adjusted the formula for determining the cap, how exemptions will fit within the cap structure, and the types of exemptions presented in the current filing. With respect to the cap formula, the current proposal responds to the Commission's directives and opts for a more balanced, much simpler approach that relies on the MTEP power flow model to run the interconnection studies as the basis for the cap formula. The proposed cap formula will be 50% of the non-coincident summer peak values for each study region from the power flow model that will be used to perform the queue studies.[2] This percentage was chosen based on analysis performed by MISO that showed when queue volumes continue to rise above 50%, more Network Upgrades are required to mitigate congestion caused by new Interconnection Requests, offsetting substantially more existing generation. The purpose of a cap is to establish a more realistic dispatch that includes existing generation with new Interconnection Requests. This improved dispatch should result in less Network Upgrades, which reduces costs and reduces the need for additional facility studies and should therefore lead to faster processing and less dropouts. In light of the Commission's Order in Docket Nos. ER24-340-000 and ER24-341-000, MISO significantly modified the exemptions from its prior proposal. First, MISO removed the RERRA exemption. After special consideration of the comments and concerns brought forth by stakeholders and the Commission and the unique needs of RERRAs, MISO has committed to address RERRAs

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[2] *Queue Improvements Cap Proposal* (October 16, 2024), https://cdn.misoenergy.org/20241016%20PAC%20Item%2006b%20Cap%20Proposal%20(PAC-2023-1)653144.pdf.

in a separate, newly proposed Expedited Resource Adequacy Study ("ERAS") process.[3] This new process will expedite the approval process of new generation needed to address state resource adequacy goals.[4] Second, addressing the Commission's earlier concerns regarding uncapped exemptions, MISO updated its queue cap formula to note that approved exemptions will be included in the number of Interconnection Requests needed to reach the 50% cap number. Put another way, approved exemptions will count towards the total MW queue cap of a given region. Third, any exemption must be elected at the time the interconnection application is submitted. This ensures the efficient implementation of the processing of the exemptions, less volatility in establishing the queue cap, and increases the levels of communication between MISO and stakeholders regarding when the queue cap is met. Finally, MISO is modifying the Provisional Generator Interconnection Agreement ("PGIA") exemption to stipulate that the PGIA exemption must be requested at the time of application. MISO determined that mandating an executed PGIA made it extremely difficult for Interconnection Customers to utilize this exemption for the reasons outlined above. Additionally, Interconnection Customers with a requested PGIA have assumed additional risks when their request for PGIA is made. While they are similarly situated to Replacement Generating Facilities or ERIS to NRIS conversions, MISO addressed PGIA specific concerns, such as when an Interconnection Customer can revert to non-provisional status.

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[3] *See Expeditated Resource Adequacy Study (ERAS) Introduction* (November 13, 2024), https://cdn.misoenergy.org/20241113%20PAC%20Item%2009%20Expedited%20Resource%20Adequacy%20Study%20(ERAS)%20Introduction660245.pdf;.

[4] *See Expedited Resource Adequacy Study (ERAS) Workshop* (November 18, 2024), https://cdn.misoenergy.org/20241118%20Expedited%20Resource%20Adequacy%20Study%20(ERAS)%20Workshop661622.pdf.

Q. PLEASE DESCRIBE WHY THE EXEMPTIONS, SITE CONTROL AND PAYMENTS ARE NOW REQUESTED WITH THE APPLICATION SUBMITTAL.

A. Following the Commission's Order on its first proposal, MISO reanalyzed its internal processes on how it would validate Interconnection Requests. MISO determined it was administratively inefficient to allow Interconnection Customers to retroactively request priority project status. Retroactive requests undermine the assertion that a project is truly a priority project. Retroactive requests can also unfairly game the limitation on a queue cycle. For example, under MISO's previous proposal, if a project learns that it will not be under the queue cap, then it could retroactively propose to enter into a PGIA in order to gain access to the next queue cycle. Under the previous proposal, that same project could later revert to non-provisional status with no penalty. Stakeholders expressed similar concerns. By adjusting the requirements for when an exemption must be declared and the requirements to maintain that exemption, MISO levels the playing field for all projects. These changes will necessitate that Interconnection Customers who want to make use of the PGIA exemption evaluate its project's feasibility and viability earlier in the process to determine whether they are willing to be bound by the PGIA commitments that make these projects more certain and justify their priority inclusion. This approach will allow MISO to efficiently process and prepare for a given Definitive Planning Phase ("DPP") Cycle. Additionally, MISO modified its proposal to notify its Interconnection Customers of the queue cap earlier in the process.

Q. PLEASE SUMMARIZE THE ADDITIONAL STAKHOLDER MEETINGS FOLLOWING THE ISSUES OF THE COMMISION'S REJECTION.

A. MISO re-engaged with the stakeholders and revised its initial cap proposal. The revised proposal was posted for stakeholder review and discussed in the Interconnection Process Working Group ("IPWG") and Planning Advisory Committee ("PAC") on multiple occasions. During these discussions, an alternative proposal ("Savion VPE proposal") was presented and subsequently voted on by stakeholders at the IPWG. Ultimately, the alternative proposal didn't receive enough votes to pass.

Q. PLEASE DESCRIBE THE BREAKDOWN OF THIS FILING.

A. MISO views the Queue Cap Proposal and the Exemptions to the Queue Cap Proposal as being two separate, but related, proposals included together in one filing for administrative convenience and Tariff version control. The Queue Cap Proposal is necessary and appropriate to address the unsupportable number of Interconnection Requests that MISO must process. It is a complete proposal in and of itself and does not depend on the approval of any of the exemptions to be complete or reasonable rate. While the Exemptions to the Queue Cap Proposal will necessarily depend on the acceptance of the Queue Cap Proposal, it is severable and a complete proposal. The Exemptions to the Queue Cap Proposal is intended as a standalone set of enhancements to the Queue Cap Proposal. While it is not necessary to make the cap function, the exemptions add independent value. Specifically, they allow the historically limited number of projects that have used PGIAs, sought ERIS to NRIS conversions, or sought to add additional interconnection service to a replacement facility to proceed directly into the next queue cycle in acknowledgement of the facts that these types of projects have proven highly certain given the level of commitment undertaken or the existing facilities. Even if the Commission determines the Exemptions to the Queue Cap Proposal does not adequately address the open access concerns identified in its previous order, the state of the queue still necessitates a backstop queue cap to properly function, and the cap can function without the exemptions. I note that neither I nor my staff made any promises regarding whether the exemptions should be included in the cap filing or made any compromises to secure stakeholder support for the Queue Cap Proposal based on these exemptions. MISO commits to making a subsequent filing with the Commission to update the Tariff sheets to reflect the most up-to-date versions of the then-current Tariff provisions and within sixty (60) days of an order on each proposal is

Q. DID MISO ENGAGE THIRD PARTIES TO SUPPORT THE DEVELOPMENT OF THE PROPOSED REFORMS?

A. Yes. MISO hired Charles River Associates ("CRA") in early 2023 to perform an analysis of the MISO generator interconnection queue and to recommend changes to the process that would improve the quality of projects entering the queue, as well as MISO's ability to provide timely and consistent study results. CRA provided its findings in the stakeholder process and their final report is included as Exhibit 1 to my testimony ("CRA Report").

Q. DID MISO ADOPT ALL OF CRA'S RECOMMENDATIONS IN THIS PROPOSAL?

A. MISO adopted a significant number of CRA recommendations, with some adjustments. MISO adjusted the Proposals based on guidance of the Commission's Order in Docket No. ER24-341-000. These final proposals reflect the collaborative input from MISO, its stakeholders, and the additional CRA analysis on the need for a cap. An example of the CRA recommendation that was not included was to consider an individual developer cap on proposed projects, in addition to the overall MW value cap. The intent of this CRA recommendation was to provide a protection mechanism such that smaller developers are not crowded out of the process by larger developers. This concept potentially could be necessary at some point in the future, but at this time MISO believes there is insufficient evidence to support a per-developer cap in the Queue Cap Proposal as needed.

Q. HOW DO THESE FILINGS RELATE TO MISO'S COMPLIANCE OBLIGATIONS UNDER ORDER NO. 2023/2023-A?

A. At the time of this submission, MISO submitted its Order No. 2023-2023-A compliance filings pursuant to the independent entity variation requirements set forth in Order No. 2003.[5] If the Commission accepts the proposed revisions, they will become part of the MISO Tariff. The proposal is submitted as a necessary independent entity variation to MISO's compliance with Order No. 2023-2023-A.

III. THE CURRENT STATE OF THE MISO QUEUE AND THE CONTINUED NEED FOR A CAP

Q. PLEASE DESCRIBE MISO'S INTERCONNECTION QUEUE PROCESS.

A. MISO's generator interconnection queue process generally follows the Commission's *pro forma* Large Generator Interconnection Procedures ("LGIP"), with changes and improvements adopted over the years pursuant to the Commission's independent entity variation. The current framework was put in effect in January 2017 as a result of extensive stakeholder driven reforms, which implemented a novel three-phase DPP structure to study Interconnection Requests, which since has been successfully adopted in some other regional transmission organizations ("RTOs"). MISO uses clusters to study

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[5] *See Standardization of Generator Interconnection Agreements and Procedures,* Order No. 2003, FERC Stats. & Regs. ¶ 31,146 (2003), *order on reh'g*, Order No. 2003-A, FERC Stats. & Regs. ¶ 31,160, *order on reh'g*, Order No. 2003-B, FERC Stats. & Regs. ¶ 31,171 (2004), *order on reh'g*, Order No. 2003-C, FERC Stats. & Regs. ¶ 31,190 (2005), *aff'd sub nom. Nat'l Ass'n of Regulatory Util. Comm'rs v. FERC*, 475 F.3d 1277 (D.C. Cir. 2007), *cert. denied*, 552 U.S. 1230 (2008).

Interconnection Requests, with each calendar year producing one or two study clusters, known as "cycles." The clusters are studied on a subregional basis and, as I previously noted, MISO currently has five interconnection queue study regions.

Q. PLEASE EXPLAIN HOW THE THREE-PHASE DPP PROCESS WORKS.

A. The DPP structure provides for a sequential process to study Interconnection Requests in the queue. MISO conducts one System Impact Study ("SIS") in each of the three DPP Phases (*i.e.*, Preliminary SIS in DPP Phase I, Revised SIS in DPP Phase II, and Final SIS in DPP Phase III) to account for project withdrawals and to refine and update the analysis. Facilities Studies are conducted in DPP Phases II and III. The DPP process also includes three milestone payments—M2, M3, and M4, and provides for two designated off-ramps—Interconnection Customer Decision Points I and II ("Decision Points"). The first milestone payment, M2, is fixed at $8,000 per MW of Interconnection Service requested and is payable at entry into the queue. The second milestone, M3, is equal to the greater of twenty (20) percent of the amount of Network Upgrades identified in the Preliminary SIS less the amount previously posted as M2 or $1,000/MW. M3 is due at the end of Decision Point I. The third milestone, M4, is equal to 30 percent of the amount of Network Upgrades identified in the Revised SIS less than the amount previously posted as M2 and M3 payments. M4 is due at the end of Decision Point II. These milestones may be partially refundable upon withdrawal depending on the time of withdrawal and on whether they increase the Network Upgrade cost to other Interconnection Customers in the same cycle pursuant to a calculation of financial harm to other Interconnection Customers, as set forth in Section 7.8 of the GIP (*i.e.*, the "harm test"). The GIP also provides for penalty-free withdrawals in specified circumstances, as set forth in Section 7.6.2.4 of the GIP, less any

Automatic Withdrawal Penalty that was established in reforms approved by FERC in January 2024.[6] The two off-ramps, Decision Points I and II, each last fifteen (15) Business Days and allow Interconnection Customers to review the study results from the most recent phase, pay the applicable milestone, and decide whether to proceed to the next DPP phase or withdraw from the queue.

Q. PLEASE DESCRIBE THE CURRENT STATUS OF MISO'S GENERATOR INTERCONNECTION QUEUE.

A. As of October 30, 2024, MISO's generator interconnection queue contained 1,706 active Interconnection Requests comprising of nearly 312 GW of proposed new generator interconnection capacity, which is a considerable backlog. This backlog is spread over all five queue study regions and includes queue cycles going back to 2019. It should be noted that when MISO previously made this cap filing in November of 2023, MISO's generator interconnection queue contained 1,371 active Interconnection Requests comprising nearly 236 GW of proposed new generator interconnection capacity. In contrast, MISO's peak load is only 127.1 GW and, as of December 2023, 191 GW of functioning total installed generation capacity already exists in the MISO Region.

Q. HOW DOES THE CURRENT QUEUE SIZE COMPARE TO PRIOR YEARS?

A. The current queue size is extraordinary and unprecedented. The most recent queue cycle, DPP-2023, alone is 124 GW. The two immediately preceding cycles, DPP-2022 and DPP-2021, were 170.8 GW and 76.8 GW, respectively. In contrast, the two cycles that started in 2017 following the implementation of the three-phase DPP process, DPP-2017-FEB and

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6 *Midcontinent Indep. Sys. Operator*, 186 FERC ¶ 61,054 (January 19, 2024).
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DPP-2017-AUG, were only 30.7 GW, which generally is in line with the average queue cycle size in 2014-2016. It is important to note that the queue reforms approved by FERC in January 2024 did result in lower number of submitted projects. DPP-2023 had 30% less Interconnection Requests submitted than the amount of DPP-2022. However, the 124 GW in DPP-2023 is still as large as MISO's typical summer peak load. This shows that the previous reforms were not enough to facilitate a more efficient queue, and a MW cap is still necessary.

Q. WHAT IS THE CURRENT FUEL PROFILE OF THIS PROPOSED GENERATION?

A. Virtually all the proposed generating capacity in the latest queue cycles involves intermittent and weather-dependent resources, with solar facilities accounting for the lion's share of those.

Q. WHAT IS THE PERCENTAGE OF PROPOSED GENERATION IN THE MISO QUEUE THAT USUALLY GETS BUILT?

A. The CRA Report analyzed queue withdrawals in the latest queue cycles. *See* Exhibit 1 at 7-10. In the most recent completed cycles at the time of the report, DPP-2017-FEB, DPP-2017-AUG, and DPP-2018-APR, nearly 70% of the total generation capacity that entered these cycles was eventually withdrawn. *Id*. at 8-9. The remaining approximately 30% got their GIAs, but the actual MWs of generating capacity that will be constructed and energized will be less than 30% due to financial and construction stage challenges. Some of these GIAs have already been terminated, and various delays impacting some of the remaining GIAs will reduce the number of projects that achieve commercial operation still further.

Q. DO YOU EXPECT THE CURRENT QUEUE TRENDS TO CONTINUE?

A. Yes. I expect the queue to continue to grow in the next several years, with the bulk of the new proposed generating resources continuing to be intermittent and weather dependent.

Q. WHAT IS THE BASIS FOR YOUR EXPECTATION?

A. I attribute this trend to growing customer demand for renewable generation, the considerable financial incentives for renewable generation implemented in the *Infrastructure Investment and Jobs Act of 2021* and the *Inflation Reduction Act of 2022*,[7] and the backbone transmission MISO has approved, and plans to approve, through our Long Range Transmission Planning ("LRTP") effort. In July 2022, the MISO Board of Directors approved the first tranche of LRTP projects worth an estimated $10.3 billion of regional transmission facilities, which will provide access to the MISO grid for many new renewable resources. MISO anticipates a second tranche of projects to be approved in December 2024, currently estimated at $21.8 billion and known as LRTP Tranche 2.1. These contributing factors make a growth in Interconnection Requests very likely, and it is critical to implement the proposed reforms to ensure that MISO can manage the continuing growth.

Q. IF THE MAJORITY OF INTERCONNECTION REQUESTS IN THE QUEUE WITHDRAW, WHY IS THE CURRENT QUEUE GROWTH PROBLEMATIC?

A. The increasing number and volume of speculative Interconnection Requests in the queue strains MISO's resources and ability to process Interconnection Requests in accordance with the Commission's timing requirements and causes delays in the completion of required Interconnection Studies. This leads to increasing withdrawals, less certain DPP

Phase I and II study results, and ultimately, uncertainty and delays for all Interconnection Customers in the queue. Currently, queue delays are one of the largest contributing factors that negatively impact Interconnection Customers' ability to timely execute a GIA and, potentially, receive timely capacity accreditation under MISO's Resource Adequacy construct. Although cluster studies allow for multiple Interconnection Requests to be studied together, many administrative tasks required to process the queue are performed on an individual Interconnection Request basis. Such tasks include application processing to review modeling data, Site Control, and financial security and certain other tasks. Also, each Interconnection Request usually has one POI that requires its own individual studies, and each GIA is negotiated and executed individually.

Furthermore, independent from these timing challenges, the growth of the interconnection queue jeopardizes the ability of Interconnection Customers to receive study results that reflect actual system impacts, and the costs needed to mitigate them, especially in earlier phases of the DPP. To capture the actual impact of an Interconnection Request on the Transmission System, MISO must study that Interconnection Request at its full output, according to fuel-based dispatch assumptions, to establish the Network Upgrades needed to accommodate that request. Because a project is allowed to operate up to the service levels specified in its GIA, failure to capture the impacts of operating at such a level would artificially understate the impact of that project. This, in turn, can lead to overloads and other reliability cost problems if not mitigated, and cause cost shifts if the mitigations are identified in later studies for other projects. Thus, it is important to capture the full impact of a proposed project in an Interconnection Study. However, this becomes increasingly challenging when the amount of generation proposed in a queue cycle begins to exceed projected peak load. Proposed generating facilities do not exist in a vacuum on MISO's system. In addition to what is proposed in a given queue cycle, there is existing generation already in commercial operation on the Transmission System and higher queued projects whose output must be accounted for in studies for new Interconnection Requests. When the total of this generation far exceeds load, MISO must use assumptions in order to develop a valid mathematical solution that will allow for a model that studies new generation at its authorized output while still sinking that power in the MISO region. MISO has some limited flexibility in model building to address these problems. However, the larger the queue size, the more aggressively MISO must adjust its assumptions to allow the model to solve (*i.e.*, to balance generation and load). Past a certain point, these assumptions begin to diverge sufficiently from reality and the model is no longer modelling how MISO's Transmission System and generation resources are expected to behave. The results of a study built on such models have diminished value because some existing generation will continue to dispatch well above the artificially lowered assumptions resulting in reliability issues on the Transmission System that were not studied. This, in turn, will require new studies in the interconnection process or in annual transmission planning studies resulting in potential cost shifts to future Interconnection Requests or to load, which creates risks and cost uncertainty for both existing and future projects, can lead to reliability issues on the Transmission System, and ultimately delays in deploying new generation. In short, assumptions diverging from expected conditions is a necessary result of study clusters that are too large to study under realistic system conditions, particularly when populated with increasing numbers of speculative Interconnection Requests. And, while Interconnection Customers will receive some "results" from these studies, those results have a diminished value and, will ultimately cause more risk to the Transmission System and Interconnection Customers than study results based on cluster sizes that allow for realistic assumptions to be used.

Q. HAS MISO ATTEMPTED TO ADDRESS THESE CHALLENEGES WITHOUT LIMITING ITS QUEUE SIZE ?

A. MISO is continuously striving to improve its GIP. Following the introduction of the three-phase DPP in 2017, MISO made several targeted efforts to improve various aspects of the DPP process, such as milestone and penalty provisions, Site Control requirements, expedited processing options and other improvements, as summarized in the transmittal letters accompanying the MISO filings in the dockets. Nonetheless, no material changes have been made to the milestone amounts and penalty-free withdrawal provisions since 2017. Accordingly, the new challenges that have recently arisen require an urgent response and change to those GIP requirements. Additionally, MISO submitted and received approval for a set of queue reforms in early 2024 regarding increased financial payments and penalties along with increased site control requirements.

D. <u>TRANSITION PROVISIONS</u>

Q. IS MISO PROPOSING ANY TRANSITION PROVISIONS FOR THE REFORMS INCLUDED IN THE GIP IMPROVEMENTS FILING?

A. Yes, the transition provisions are included in proposed section 5.11 of the GIP. Generally, the proposed reforms will apply only to Interconnection Requests submitted in study cycles with application deadlines after the effective date of the reforms, starting with the DPP 2025 cycle. All preceding cycles will be exempt from the proposed changes.

IV. THE NEW CAP FILING

Q. PLEASE DESCRIBE THE UPDATED PERCENTAGE-BASED CAP MECHANISM.

A. The percentage-based load nature of the cap ensures that the studies are appropriately scaled to consider existing generation, new Interconnection Requests, and the load MISO serves while still enabling competition. The new queue cap formula is noted below:

*MISO study region cap = 50% * study region non-coincident summer peak*

The proposed cap formula will be 50% of the non-coincident summer peak values for each study region from the power flow model that will be used to perform the queue studies. MISO will use the most recent available MTEP model series. Open access is maintained as Interconnection Requests that are included in the cap are based on the timing of their request. This formula will ensure more reasonable study volumes and subsequently result in more certain study outcomes. The new proposed cap formula differs in three ways from the rejected cap formula. First, the new proposed cap formula uses non-coincident summer peak values while the original cap formula used non-coincident shoulder peak values. Second, the old cap formula utilized the Pmin value as floor to which existing generation can be turned down to accommodate to generation. The new cap formula does not. Finally, the old cap formula adjusted for estimated withdrawals and exemptions. MISO will review the need for a queue cap after three (3) years.

Q. WHY IS IT REASONABLE TO REQUIRE A 50% QUEUE CAP?

A. The 50% queue cap is reasonable because it allows MISO to balance the appropriate level of the interconnection queue size to ensure that Interconnection Requests are processed efficiently, increasing certainty for active projects and reduces the risk of future cost shifts, while also addressing the base load needs of each study region. After numerous rounds of internal analysis, MISO determined that 50% of the non-coincident peak best strikes that balance. The analysis entailed performing iterative model builds at a reduced non-coincident peak value until the model could be built and solved without the need for Backbone Network Upgrades or needing exports to neighboring systems. This threshold was met at 50%. Backbone Network Upgrades are an indication that the model, before taking any contingencies, is in such a state that the power flow can't be solved without the addition of Network Upgrade(s). Typically, this is an indication of voltage collapse. Similar, exports to neighbors are indication of further Affected System costs. The internal analysis recommended that the appropriate level of the queue cap as well would be 50%**.** This would balance out the backbone upgrades to a reasonable level where it is appropriate to obtain a usable model and run the DPP studies from. MISO provides the results below based on that internal analysis:

Power flow model	Total GW of Queue Projects	% of Non-Coincident Peak Load	Backbone Network Upgrades	Export to Neighbors (GW)
2022 Cycle test cases	67.6	50%	0	0
2022 Cycle test cases	80.9	60%	0	0
2022 Cycle test cases	84.3	63%	0	10.2
2022 Cycle test cases	90.9	68%	1 Transmission line	12.2
2022 Cycle test cases	95.9	72%	1 Transmission line	15.0

2022 Cycle Kickoff	142.0	106%	21.5 GVAR of voltage support	6.4
2022 Cycle Prescreen	177.0	132%	3 Transmission lines 42.5 GVAR of voltage support	10.3

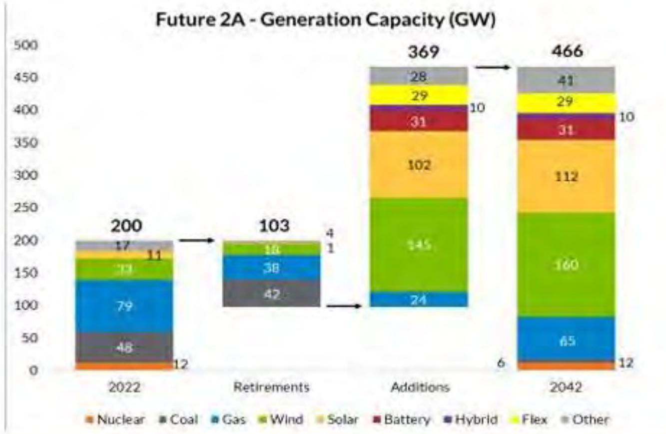
As noted in the chart, while the 60% test case did eliminate the need to make Backbone Network Upgrades under the previous formula, MISO also accounted for shoulder peak load and Pmin evaluation, which are no longer accounted for in the newly proposed queue cap formula. Based upon this evidence, MISO elected to move forward with the 50% cap value. This new formula represents a balance between MISO's need to efficiently manage the queue while also addressing regional load needs and open access concerns.

Q. WHY ARE THE PROPOSED CAP CHANGES STILL NECESSARY AND URGENT GIVEN THE EARLIER APPROVED QUEUE REFORMS?

A. While MISO noted that the increased GIP financial commitments and penalties along with updated site control evidence requirements that were approved in early 2024 resulted in a 30% reduction of "uncertain" interconnection applications from the previous cycle, it still represents a large number of projects for the team to study. Adding in the 2023 study cycle, MISO's current interconnection queue is sitting at roughly 312 GW. To put this into more context, MISO's all-time system peak load is 127 GW. Even with notable reductions of interconnection applications, the current interconnection service proposed in the queue is more than twice the all-time system peak load. This only further demonstrates purely qualitative improvements do not sufficiently increase in the queue size and ability to efficiently manage that queue. A MW limitation on individual interconnection queue cycles will ensure that MISO can continue to produce more realistic resource dispatch, models, reduce queue timelines and produce lower Interconnection costs and therefore improving the success rate of the Queue, thereby increasing overall certainty in the interconnection queue. Additionally, MISO notes that the application portal is currently open and available for projects to be submitted into the next available study cycle; the cap is needed urgently to ensure that the appropriate balance of interconnection requests is processed in that study cycle.

Q. PLEASE DESCRIBE HOW THIS NEW PROPOSED CAP ADDRESSES THE COMMISSIONS EARLIER CONCERNS REGARDING FUTURE RESOURCE ADEQUACY NEEDS?

A. MISO re-engaged with its stakeholder to develop a proposal that would adequately address future adequacy needs. Per FERC's guidance, MISO reviewed the Future Planning Scenarios developed in conjunction with the Transmission Planning process("Futures"). MISO calls these scenarios "Futures," and they help MISO envision a set of possible resource adequacy outcomes up to twenty (20) years in the future. The scenarios establish a bookended range of economic, policy, and technological possibilities—such as load growth, electrification, decarbonization, renewable energy levels, generator retirements, fuel prices, and generation capital costs. The Futures hedge uncertainty by utilizing stakeholder information, policy direction, industry trends, and capacity expansion modeling to create the forecasts. Futures are updated with new or changing information. In reviewing the Futures 2A Planning Scenario, it was noted that 248 GW of Net Additions would be needed in the years 2025-2042 (17 years):



Taking this into account, MISO compared how the cap would impact this forecasted need.

Active Interconnection Requests in the Queue[8]	321 GW
Assumed completion rate of 21%	67.4 GW
Proposed Queue Cap	68 GW
Per Year additions (21% completion rate)	14.3 GW

Per the CRA report, using a historical completion rate of 21%, MISO estimates per year additions of 14.3 GW. From 2025 to 2042 and adding to the existing active Interconnection Requests already in the queue, this equates to 310 GW. Based on this analysis MISO believes there will be adequate throughput even with the cap to meet our future Resource Adequacy needs even with a queue cap of 50% of the non-coincidental peak load.

Q. PLEASE DESCRIBE HOW THIS NEW PROPOSED CAP FORMULA ADDRESSES THE COMMISSIONS EARLIER CONCERNS REGARDING EXEMPTIONS?

A. While limited in use given their inherent nature that minimize their submittals, MISO has found that projects related to increases in replacements, ERIS to NRIS conversions and PGIAs tend to reflect a greater commitment of the Interconnection Customer to the project and a lower withdrawal rate, leading to a greater level of certainty, given they are comprised of instances where an Interconnection Customer seeks to add incremental new service to an existing generating facility or have committed to a higher level of financial commitment. Given this criterion of existing generation facilities, MISO anticipates the continued limited use of these exemptions based on the inherent practical nature of these products that have historically limited their submittals. Additionally, in rejecting MISO's initial cap filing, citing the RERRA exemption, FERC noted an "uncapped exemption" potential that might undermine the benefits of having a cap in place. MISO ultimately found that the RERRA exemption engendered strong criticism from the stakeholders and the Commission, and the filing was ultimately rejected. Under the current proposal, MISO is amending Section 4.1.2 of Attachment X to remove the RERRA exemption. MISO has recognized that this as a more distinct queue issue that should be addressed in a separate filing. MISO has committed to working on addressing the needs of RERRA entities through a newly proposed ERAS process that will expedite the approval process of new generation needed to address resource adequacy. Furthermore, MISO has updated the cap formula to note that approved exemptions will be included with all projects that are used to meet the cap limit.

Q. **DID CRA RECOMMEND A QUEUE CAP?**

A. Yes. In fact, the CRA Report recommends two separate caps: (1) a queue cap per cycle; and (2) a per developer cap. *See* Exhibit 1 at 17-18. The CRA Report views a queue cap as a critical remedy to address the challenges outlined in my testimony. CRA recommended that MISO determine the level of the queue cap as well as its application across study regions, queue cycles and potentially individual entities. *Id*. at 17. The CRA Report further suggested that the following criteria could be considered in designing an appropriate queue cap: (1) peak load and forecasted peak load, (2) installed capacity, guaranteed additions, and expected retirements, and (3) reliability and resource adequacy. *Id*. at 18.

Q. **WHAT ARE THE BENEFITS OF A STUDY CYCLE CAP?**

A. The proposed cap will ensure that Interconnection Study results are based on a more realistic dispatch, thereby removing the need for prohibitively expensive and unrealistic Network Upgrades. Currently, Interconnection Customers receive realistic and informative study results only after enough projects exit the queue to achieve a realistic dispatch. The proposed cap will ensure more realistic and informative study results at an earlier point in the study process, without the delays and uncertainty caused by withdrawals after studies are performed with unrealistic Network Upgrade assumptions. The cap benefits Interconnection Customers by providing better cost estimates and a timelier study process. As discussed above, the cap also will provide benefits to the engineers performing these studies by improving their ability to solve these complex models and will reduce the amount of unnecessary engineering analyses, which are performed on a study model using unrealistic assumptions.

Q. WHERE WILL THIS CAP FORMULA BE STATED?

A. MISO will put the queue cap formula in the Tariff. In addition, MISO will post a report to its website prior to each study cycle describing the cap calculation and results.

Q. WILL MISO USE THE SAME FORMULA FOR POST-2025 QUEUE CYCLES?

A. MISO will continue to work with stakeholders to determine if the calculation should be modified for future cycles. MISO purposely used a simple calculation that more than adequately meets regional load needs. MISO also has committed to revisiting its cap-related Tariff provisions in three (3) years. MISO is willing to either provide an informational report discussing the effectiveness of these provisions after the third cluster study cycle or propose changes in a subsequent FERC filing based on the accumulated experience.

Q. HOW WILL MISO PROCESS APPLICATIONS ONCE THE CAP IS ESTABLISHED?

A. Once the cap amount has been calculated and posted, MISO will process the applications using a serial "first-come, first-served" approach based on when the applications were queued during the open application window. MISO will subsequently review the interconnection applications until the cap amount is reached. This process will provide an incentive to submit an Interconnection Request earlier in the open application window as opposed to right up until the application deadline as is often the case today. In addition, this process will have the added effect of "flattening the curve" for application submittals, *i.e.*, the projects would enter the queue when they are ready rather than wait until the last moment, thereby allowing MISO to manage the study cycle more efficiently. Meaning we expect projects to enter the queue when they are ready and will meet all necessary requirements to secure their spot. MISO recognizes that this flattening of the curve will not hold true for the 2023 cycle, as it is expected that most applications will be submitted on the first day that MISO opens the web-based application tool to accept new applications.

Q. CAN YOU PLEASE EXPAND ON WHAT HAPPENS TO THOSE INTECONNECTION REQUESTS THAT FOUND TO BE "OVER THE CAP"?

A. Interconnection Requests that are processed after the cap has been met will continue to be evaluated by MISO to ensure they are valid requests, including necessary items such as milestones, Site Control, and modeling data. Once approved as valid, these Interconnection Requests will remain in the queue and will be studied in the next available queue cycle. Therefore, all Interconnection Customers, even those that are "above the cap", have comparable access to the interconnection process. A subset of the Interconnection Requests, i.e., those submitted closest to the time when the cap was met, can potentially replace projects that withdraw up to 30 days before the start of the DPP process. If a project that was under the cap withdraws, then MISO will pull the first project in the next cycle forward. This will be done up until the model needs to be built for the pre-screening analysis, which is 30 days before the start of the DPP process. This will allow 15 days to develop the model and post the pre-screening results, and then another 15 days for Interconnection Customers to review the analysis and determine if they should withdraw or remain in the queue and be included in the DPP process. Any dropouts that occur between the window when the pre-screening model is being developed and the start of the DPP process will not be replaced.

Q. CAN INTERCONNECTION REQUESTS IN THE QUEUE THAT ARE WAITING FOR THE NEXT CYCLE BE MODIFIED?

A. Yes, these Interconnection Requests will be able to make all the modifications allowable per section 4.4 of the GIP, which could include, but are not limited to: POI changes, MW reduction, removal of one fuel source for hybrids. Once these Interconnection Requests are included in a DPP study cycle, any changes will be evaluated as a potential material modification per Section 4.4.

Q. WILL DEVELOPERS KNOW THE MAXIMUM AMOUNT OF MEGAWATTS THAT CAN BE SUBMITTED IN A GIVEN QUEUE CYCLE?

A. Yes, the MW value for each DPP study cycle will be posted on the MISO public website at least ten (10) Business Days prior to the application deadline of that Definitive Planning study cycle. Additionally, MISO will post an associated whitepaper to the MISO public website to inform stakeholders how the cap was developed and set. It should be noted that as part of this process, MISO will be re-evaluating the formula prior to each study cycle, including the cap amount and the associated margins. There will be no cap on the number of individual requests any Interconnection Customer can submit. All applications will be evaluated against the cap on a "first come, first served" basis. This could result in an Interconnection Customer having a higher percentage of projects within any given queue cycle than another. If MISO determines this could create an unfair advantage over other Interconnection Customers, then MISO will develop an individual cap per Interconnection Customer and will file that tariff change with FERC for future queue cycles.

Q. IS MISO PROPOSING ANY EXEMPTIONS FROM THE QUEUE CAP?

A. Yes. MISO recognized in the early stages of development of its queue reform proposals the importance for a narrow set of Interconnection Requests to be included in a cycle if they already have an existing Generating Facility or Interconnection Service in place or otherwise exhibit a high level of certainty. These proposed exemptions are set forth in Section 4.1.2 of the GIP and include: 1) Interconnection Requests involving an increase in the capacity of an approved Replacement Generating Facility; (2) Interconnection Requests involving a conversion of ERIS into NRIS; (3) Interconnection Requests involving a Generating Facility with a requirement to request a PGIA. MISO initially proposed that these projects be exempt from the queue size limitations and other aspects of the initial proposal. In consideration of the concerns highlighted by the Commission, these projects will no longer be exempt from the queue cap limitations. However, as described herein, these projects will be exempt from certain requirements that will allow these exemptions to receive first access to the cycle for which it applies. Exemption requests must be submitted with their application submittal.

Q. PLEASE EXPLAIN THE REPLACEMENT FACILITY EXEMPTION.

A. Under the Tariff, Replacement Generating Facility requests generally are processed outside the interconnection queue. One exception to this process is when a Replacement Generating Facility requires Interconnection Service (in MW) in excess of that of the Existing Generating Facility that is being replaced. In such instances, the Replacement Generating Facility is allowed to generate up to the existing Interconnection Service of the Existing Generating Facility. However, an Interconnection Request associated with the excess MW value must proceed through the regular DPP cycle procedures. The proposed exemption is for such excess capacity requests. Such requests are highly valuable to the MISO Transmission System because they are certain: the Replacement Generating Facility was already approved through the replacement process and exists under an executed replacement GIA.

Q. PLEASE EXPLAIN THE ERIS TO NRIS CONVERSION EXEMPTION.

A. The Tariff allows Interconnection Customers to convert their ERIS to NRIS, which is a higher level of Interconnection Service. The conversion requires submission of an Interconnection Request and proceeding through the queue. MISO proposes to exempt such "NRIS conversion" Interconnection Requests from the cap. The rationale is similar to that for the Replacement Generating Facility exemption discussed above. The Interconnection Request seeking conversion already has an executed GIA and as such, are highly valuable to the MISO Transmission System.

Q. PLEASE EXPLAIN THE PGIA EXEMPTION.

A. MISO's Tariff currently includes a process that allows its Interconnection Customers to enter into a PGIA before the end of the DPP cycle. The PGIA allows limited operation, based upon the results of available studies. This option allows an Interconnection Customer with a ready project to connect to the MISO Transmission System and inject power into the grid before the completion of all studies. The potential downside of the PGIA is that Interconnection Customers assume the risk of interconnecting prior to the completion of Network Upgrades being identified through the DPP process. Because Interconnection Customers with a requested PGIA have assumed additional risks and commit to proceeding through the DPP cycle regardless of the potential costs of Network Upgrades, MISO views these types of Interconnection Requests are as certain as existing generation—so long as the ability to revert is limited. Unlike MISO's current PGIA process, which allows reversion from provisional to non-provisional status, Interconnection Customers that claim this exemption will forfeit its ability to revert with no consequences. Any Interconnection Customer that elects to proceed under the PGIA exemption and reverts back to non-provisional status will lose all monies and will forfeit its queue position. This exemption is available to any Interconnection Customer willing to assume PGIA risks, thus allowing an exception for Interconnection Customers who are willing to make commitments that a reasonable developer would not undertake for an uncertain project.

Q. PLEASE EXPLAIN WHY THE RERRA EXEMPTION WAS REMOVED FROM THIS UPDATED CAP FILING.

A. In early 2024, MISO and its stakeholders embarked on a joint effort to address the challenges introduced with the RERRA exemption. MISO engaged in discussions with stakeholders to identify the challenges associated with the implementation of the RERRA exemption for the cap. MISO identified several concerns with the original RERRA exemption process. First, MISO was concerned with how to limit the size of RERRA exemptions. The RERRA exemptions, unlike the included exemptions, posed a particular risk to diminishing the value of the cap. Second, multiple stakeholders brought forth comments regarding the standardization of format and processing of the RERRA exemptions. Third. MISO further recognized this as a more distinct queue issue that should be addressed in a separate process. There is a fundamental necessity for a short-term generator interconnector product to handle direct urgent resource adequacy needs for the states within the MISO system. Due to these challenges, MISO removed the RERRA exemption from the current filing. However, the importance of RERRAs to the MISO Transmission System is not lost on MISO. To better respond to the unique needs of RERRAs, MISO will work with stakeholders on a separate, concentrated effort to address the unique resource adequacy needs of a RERRA. MISO has committed to working on addressing the needs of RERRA entities through a new ERAS process that is being developed with stakeholders now and will more comprehensively address the approval process of new generation needed to address resource adequacy.

VI. STAKEHOLDER PROCESS

Q. PLEASE DESCRIBE THE STAKEHOLDER PROCESS USED TO DEVELOP THIS PROPOSAL.

A. MISO engaged in an extensive stakeholder process throughout the development of its updated queue cap proposal. MISO obtained feedback through the PAC and the IPWG, conducted dozens of calls with stakeholders across the MISO sectors, and receiving multiple rounds of formal and informal written feedback. During the stakeholder process, MISO considered the advantages and disadvantages of multiple approaches for addressing the identified challenges and risks, collaborating with stakeholders on identifying areas where flexibility could be increased. MISO revised its initial proposal considerably, incorporating the input received.

The key milestones of the stakeholder process were as follows:

- January 30, 2024: MISO provided an update to the IPWG regarding FERC's response on MISO's GIP Improvements and Cap filings, along with next steps.
- July 23, 2024: MISO presented several updates to the cap proposal to address FERC concerns with the original filing at the IPWG

- September 3, 2024: MISO provided refined proposal and responded to feedback at the IPWG.
- September 30, 2024: MISO held a special IPWG workshop to review the current proposal and answer stakeholder questions
- October 16, 2024: MISO presented a final package of reforms at the PAC. MISO also introduced its Expedited Resource Adequacy Study proposal.[9]

Q. WHAT WAS MISO'S RESPONSE TO CONCERNS AND RECOMMENDATIONS FROM STAKEHOLDERS?

A. Stakeholders asked MISO to justify a rationale for the 50% limitation, with some expressing concern that this cap would "arbitrarily" reduce the number of projects that can compete. MISO understands these concerns but notes that the rationale for selecting 50% is to ensure a balance of supply to demand while also addressing the queue administration difficulties MISO faces due to the volume of Interconnection Requests. Without limiting the amount of Interconnection Requests, the interconnection queue will continue to grow at an unsustainable rate, slowing study processes and making results less accurate. MISO supports many of the objectives of the alternative Savion VPE Proposal and is committed to working with stakeholders to incorporate elements of that proposal to meet those objectives.

Q. IS MISO STILL CONINUING TO IMPROVE QUEUE COORDINATION WITH INTERCONNECTION CUSTOMERS AND TRANSMISSION OWNERS?

A. Yes. In addition to the proposed Tariff changes, MISO has multiple efforts underway to enhance the queue experience. These transparent initiatives will facilitate enhanced

9 ERAS Workshop Citation

Interconnection Customer workflow throughout Interconnection Request lifecycle. MISO is coordinating the development of these enhancements through the stakeholder process.

VII. CONCLUSION

Q. IN YOUR OPINION, ARE MISO'S FILINGS JUST AND REASONABLE?

A. Yes. This updated cap Filing address certain specific needs that MISO, the Commission and the stakeholder process identified. To ensure that MISO is on the right track to resolving its interconnection backlog, MISO requests that the Commission approve this updated proposal. The proposed new Tariff revisions address the Commissions earlier concerns and will significantly enhance the GIP by reducing queue delays and by improving the precision and timeliness of Interconnection Studies and will enable MISO to take the necessary steps to manage the size of individual cluster studies performed during the interconnection queue process.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

Affidavit of Andrew Witmeier

COUNTY OF HAMILTON)
)
STATE OF INDIANA)

Andrew Witmeier, being duly sworn, deposes and states that he prepared the Prepared Direct Testimony of Andrew Witmeier, and the statements contained therein are true and correct to the best of his knowledge and belief.

Andrew Witmeier

SUBSCRIBED AND SWORN BEFORE ME, this 7th day of November, 2024.

Jennifer L. Miller

Jennifer L. Miller
Notary Public, State of Indiana
Boone County
Commission Number 697079
My Commission Expires
February 22, 2025
NOTARY PUBLIC SEAL INDIANA

EXHIBIT 1
TO
PREPARED DIRECT TESTIMONY OF
ANDREW WITMEIER

Prepared for:
Midcontinent Independent System Operator
720 City Center Drive
Carmel, IN 46032

MISO Generator Interconnection Queue: M2, M3, and M4 Security Deposits and Return Procedures

Evaluation and Suggested Adjustments

Prepared by:
Charles River Associates
200 Clarendon Street
Boston, MA 02116

Date: September 27, 2023

CONFIDENTIAL MATERIAL

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TABLE OF CONTENTS

1. BACKGROUND

The Midcontinent Independent System Operator (MISO) generator interconnection queue has experienced significant growth, leading to a substantial backlog of projects that is negatively impacting MISO stakeholders and interconnection customers. Recognizing this challenge, MISO has undertaken efforts to improve the efficiency of the interconnection queue process and reduce the backlog.

In pursuit of these objectives, MISO has enlisted the expertise of Charles River Associates (CRA) to provide an independent review of current rules for entry to and exit from the interconnection queue. Within the review, we evaluate the security deposits required within the MISO Definitive Planning study process, with a specific focus on the M2, M3, and M4 deposit amounts. The analysis conducted by CRA has relied upon data from the 2017-2022 study cycles, which forms the basis for the charts and recommendations presented in this report.

CRA's historical analysis has concentrated on the volume of interconnection requests, the magnitude of network upgrade costs assessed at different stages of the queue process, and withdrawal rates. These analyses have provided insights into how deposit amounts, policies, and the overall study process can be restructured to enhance the efficiency of the interconnection queue.

2. STATE OF THE QUEUE

A prevailing trend observed with respect to the interconnection queue studies published in recent years[1] is the consistent rise in queue sizes, accompanied by prolonged wait times and elevated withdrawal rates.

2.1. QUEUE SIZE

Figure 1 illustrates a concerning trend in the MISO queue. For years, the queue remained relatively stable but has inflated significantly in recent years to increasingly unmanageable levels. Comparing the 2022 queue size to the 2017 cycle, the queue has grown by 4.5 times. Moreover, the 2022 queue size, which stands at 170.8 GW, surpasses the all-time MISO summer peak demand of 127.1 GW and approaches the total MISO installed capacity of 192 GW.

The analysis of the 2022 interconnection queue, as presented in Figure 1, examines the costs associated with bringing all submitted capacity online as installed capacity. Results will likely show that significant costs are required, in the form of network upgrade and affected system costs, to bring all submitted capacity online. This data has been examined to give context to the proposed reforms outlined in this report and to help quantify the suggested magnitudes of deposits required and deposits at risk of forfeiture.

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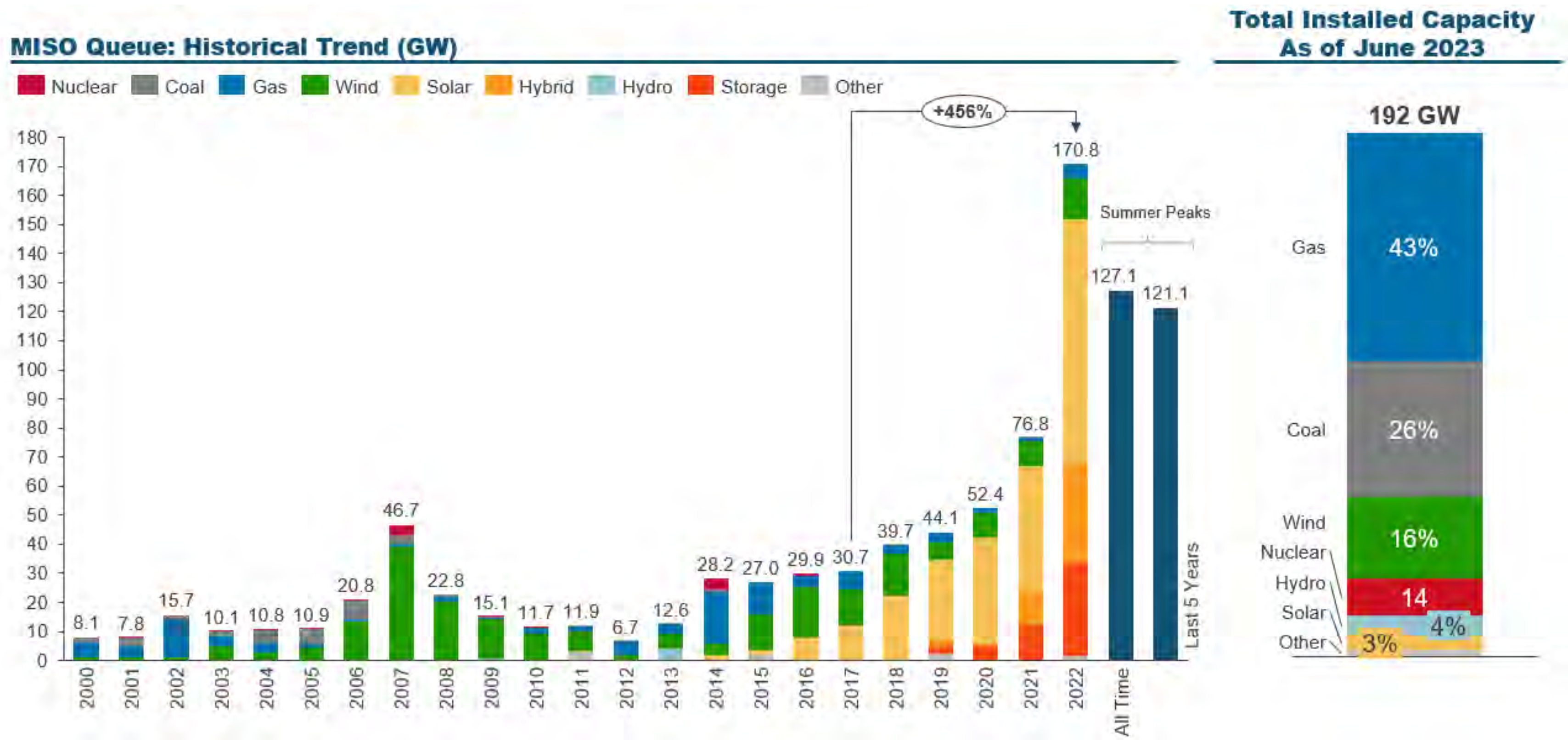
[1] For example, "Queued Up: Characteristics of Power Plants Seeking Transmission Interconnection" published by Berkeley Lab https://emp.lbl.gov/queues

As a practical matter, a significant portion of the queued generation will not ultimately be placed in service and much of the study effort will, arguably, be wasted.

Figure 1. MISO Queue: Historical Trend (GW)



Source: MISO

2.2. QUEUE PHASES, MILESTONES, AND TIMING [2]

The MISO interconnection queue study process is structured into distinct phases and incorporates milestone payments. In the pre-queue phase, interconnection customers (ICs) submit interconnection requests and MISO carries out essential preliminary tasks before commencing a formal study. These tasks include a set of initial screenings and a scoping meeting. A completed application includes an M2 milestone payment of $4,000 per MW studied.

The MISO Definitive Planning Phase (DPP) follows the pre-queue phase. During this phase, detailed studies and planning activities are conducted to assess the feasibility and impact of the proposed project on the MISO transmission system. The DPP consists of three phases: DPP Phase 1 (DPP 1), DPP Phase 2 (DPP 2), and DPP Phase 3 (DPP 3).

In the initial phase of the Definitive Planning Phase (DPP 1), the interconnection customer receives a comprehensive preliminary analysis of their request's impact on the reliability of the transmission system. During this phase, MISO conducts the initial Model Building and Review, followed by the preliminary System Impact Study (SIS). After completing the analysis, interconnection customers reach Decision Point I, where they have two options: (1) withdraw their request and potentially be subject to harm calculations (i.e., calculations to determine whether withdrawal shifted cost from the withdrawn project to other projects), with a potential to lose up to 50% of the M2 deposit, or (2) choose to proceed further in the queue process by paying an additional security deposit (M3). The M3 security deposit equals 10 percent of the network upgrade cost, as assessed in DPP 1, minus the M2 deposit.

DPP 2 is designed to provide the interconnection customer with a revised and more detailed analysis of the interconnection project’s impact on the reliability of the transmission system after incorporating updated generation assumptions resulting from the withdrawal of interconnection requests during DPP 1. Once the revised SIS and affected system analysis are completed, inclusive of estimated upgrade costs, the interconnection customer enters Decision Point 2. Here, if the interconnection customer decides to withdraw, 100% of the M2 deposit becomes at risk (subject to harm calculations), and 100% of M3 is returned. If the project meets penalty-free withdrawal criteria,[3] 100% of the M2 deposit is returned. If the interconnection customer decides to continue in the queue, they are required to submit an M4 deposit. The M4 deposit equals 20% of the network upgrade cost calculated in DPP 2, minus the M3 and M2 deposits.

DPP Phase 3 is designed to provide ICs with a final, detailed analysis of their interconnection project’s impact on the reliability of the transmission system after incorporating updated generation assumptions due to the withdrawals of interconnection requests during Decision Point 2. All milestone deposits (M2, M3, and M4) become at risk and subject to harm calculations upon entry into Phase 3. However, all three deposits may be returned in full upon withdrawal in DPP 3 if the project meets penalty-free withdrawal criteria.

[2] Information in this section is based on MISO’s Generation Interconnection Business Practices Manual PM-015-r25

[3] Section 7.6.2.4 Withdrawal and refund due to increase in network upgrade costs of Generator Interconnection Procedures

The Generation Interconnection Agreement (GIA) Execution Phase follows DPP 3. For more detail, see MISO's Generator Interconnection Procedures, and Generation Interconnection Business Practices Manual.

We find that in our sample, the average length of the pre-kick off phase is 305 days and the average length of the DPP1 is 298 days, see Figure 2 below.

Figure 2. Days spent in each queue cycle (2017-2022)

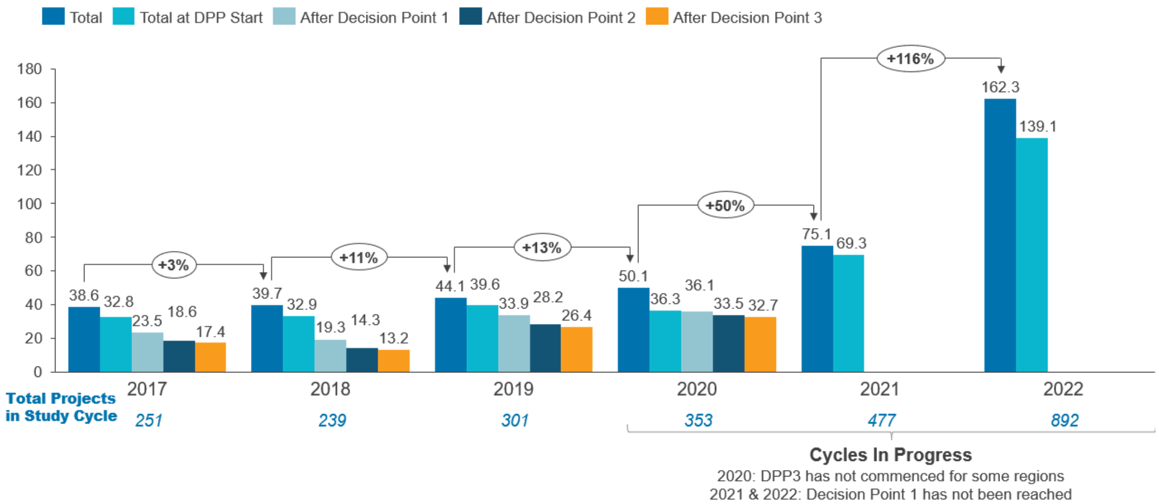
Queue Phase	Average # days in phase
Pre-Kick-Off	305
DPP 1	298
DPP 2	200
DPP 3	187
GIA Execution	142

Source: MISO

2.3. WITHDRAWALS

Figure 3 further illustrates the year-over-year percentage increase in the size of the interconnection queue along with the dynamics of withdrawals. The queue size has experienced significant growth, with the steepest increase occurring between the 2021 and 2022 cycles, where the queue expanded by 116%. The withdrawals are significant and occur at every stage.

Figure 3. MISO Queue Withdrawals by Cycle (GW)



Source: MISO. Note: This figure does not include withdrawals without a specified date.

Table 1. MISO Queue Withdrawals by Cycle, percentages based on MW withdrawn

Status	Withdrawal Phase	DPP-2017-AUG	DPP-2017-FEB	DPP-2018-APR	DPP-2019-Cycle	DPP-2020-Cycle	DPP-2021-Cycle	DPP-2022-Cycle
Active		2%	0%	0%	13%	53%	88%	86%
Done		35%	26%	32%	44%	6%	0%	0%
Withdrawn								
	Pre Kick-off	19%	1%	17%	10%	28%	8%	14%
	Decision Point 1 (DPP 1)	22%	34%	34%	13%	0%	2%	0%
	Decision Point 2 (DPP 2)	11%	17%	13%	13%	5%	0%	0%
	During DPP Phase 3	1%	11%	3%	4%	2%	0%	0%
	During GIA Execution Phase	8%	0%	0%	0%	1%	0%	0%
	Post GIA	2%	11%	1%	0%	0%	0%	0%
	Withdrawn (Other)	0%	0%	0%	2%	6%	2%	0%
Withdrawn Total		63%	74%	68%	43%	41%	12%	14%

Source: MISO.

Table 1 provides an overview of the percentage of total MW in the queue that has been withdrawn at various stages, including Active and Done[4] . Note that as of now, the 2019-2022 queue cycles remain active. Looking at the fully completed cycles in our sample (2017-2018

[4] Done means the project has completed the interconnection queue process.

cycles), nearly 70% of the total generation capacity that entered these cycles was eventually withdrawn. We observe that a considerable percentage of capacity is withdrawn during the Pre-Kick-off phase. The 2022 Cycle for example, which has not yet reached the DPP Phase, has already had 14% of the initially entered capacity withdrawn. This raises concerns about whether some projects are being entered into the queue speculatively without undergoing proper due diligence. Most of the withdrawn projects exit either before the DPP Start or at Decision Point 1, which highlights the need to incentivize more careful project assessment before entry into the queue.

Next, we examine the withdrawal dynamics based on the relative portion of the queue that each participant holds. The company size is determined by considering the total MW of projects within our sample. Table 2 illustrates the overall share of projects and the withdrawal pattern for the top developers in MISO territory.

According to the data in Table 2, the top 3 companies (as defined by requests to enter into the queue) collectively accounted for 30% of the capacity entered into the 2017 - 2022 interconnection queues. Of all applications submitted by these top 3 companies, 72% were eventually withdrawn. As we expand our analysis to include more companies, the overall percentage of withdrawn applications decreases. In comparison, when considering all companies in the sample, the withdrawal rate was 53%. This observation may imply a greater likelihood of speculative entry among the most active companies.

Table 2. MISO Queue Withdrawals by Top Interconnection Customers

	Withdrawn MW 2017 – 2020 Cycles		Point of Withdrawal			
	MW submitted into queue as % of all projects	Out of submitted, % withdrawn	% Withdrawn before DPP Start	% Withdrawn at DPP1	% Withdrawn at DPP2	% Withdrawn Phase 3 and after
Top 3 Companies	30%	72%	32.5%	37.8%	22.6%	5.5%
Top 5 Companies	34%	69%	36.3%	34.8%	21.6%	5.9%
Top 10 Companies	40%	68%	38.4%	32.1%	20.9%	7.4%
Top 15 Companies	43%	67%	37.0%	33.4%	20.2%	6.9%
Top 20 Companies	46%	66%	38.0%	33.2%	19.3%	7.1%
Top 25 Companies	49%	67%	36.4%	32.8%	19.3%	8.6%
All Companies	**100%**	**53%**	**33.6%**	**31.4%**	**19.7%**	**11.0%**

Source: MISO. Note: figures by row may not sum to 100% due to missing withdrawal dates for some projects.

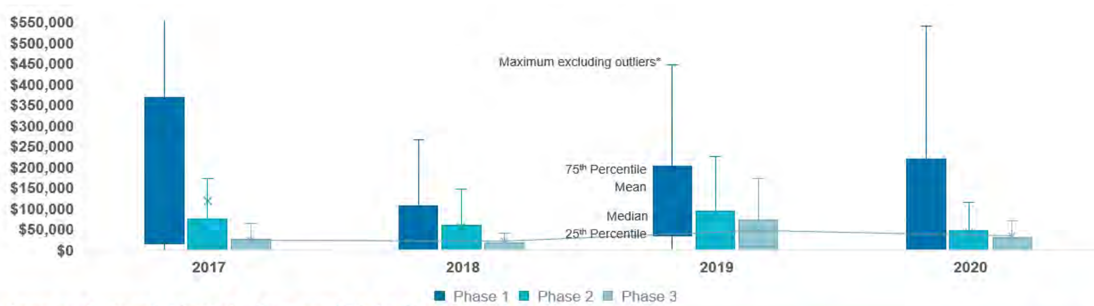
When we consider the timing of withdrawals, the top companies' withdrawal patterns differ from the broader pool of companies in the sample. The top developers are more likely to withdraw in the initial stages of the process and less likely to withdraw in Phase 3 or beyond. This finding suggests that top companies might have greater resources enabling follow-through and commitment, which explains the lower withdrawal rates at later phases as compared to other companies in the sample.

2.4. Network Upgrade Costs

In this section, we analyze the network upgrade costs per MW. As previously discussed in Section 2.2, the network upgrade costs are initially calculated in DPP 1, followed by DPP 2, and ultimately finalized in DPP 3. For a comprehensive overview, Figure 4 illustrates the network upgrade costs for the cycles spanning from 2017 to 2020, allowing for a comparison of average costs across the three DPP phases.

The average network upgrade costs in DPP 1 are notably higher compared to those in DPP 2 and DPP 3. This outcome is not surprising, considering the larger size of the initial queue. As projects progress through the phases, many drop out, leading to a more manageable number of projects being analyzed and, consequently, more realistic network upgrade costs. Additionally, the projects with the highest network upgrade costs are expected to drop out first.

Figure 4. Network Upgrade Cost per MW, by DPP Phase[5]



Average Network Upgrade Cost per MW, by Phase

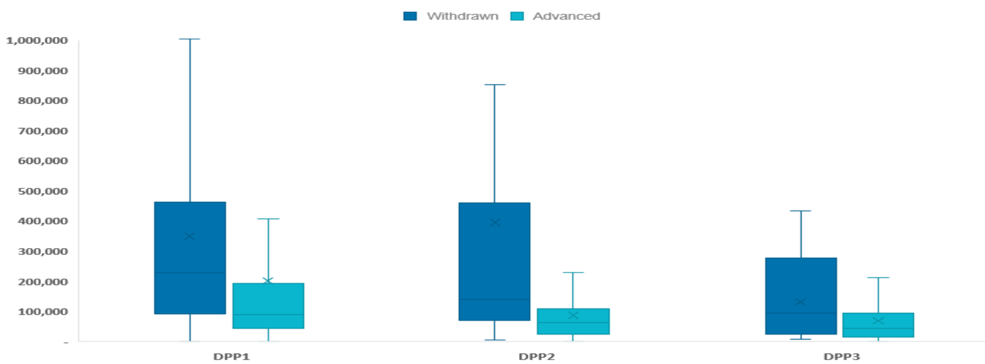
	2017	2018	2019	2020	Average
Phase 1	$341,916	$101,703	$170,781	$297,694	$232,051
Phase 2	$216,525	$100,492	$122,008	$112,098	$138,353
Phase 3	$53,518	$56,483	$82,037	$94,279	$72,514

Source: MISO.

5 A box plot consists of a rectangular "box" that represents the interquartile range (IQR) of the data, (25th to 75Th percentile), and the "whiskers" show the range of the data. Any data points beyond the whiskers are considered outliers and are not shown on this chart.

We observe that the sample mean (marked as 'x') consistently exceeds the median (denoted by a line). This suggests that most of the projects within each plotted distribution have network upgrade costs lower than the average.

Figure 5. Network Upgrade Cost per MW, by Phase and Status



Average Network Upgrade Cost per MW, by Phase and Status

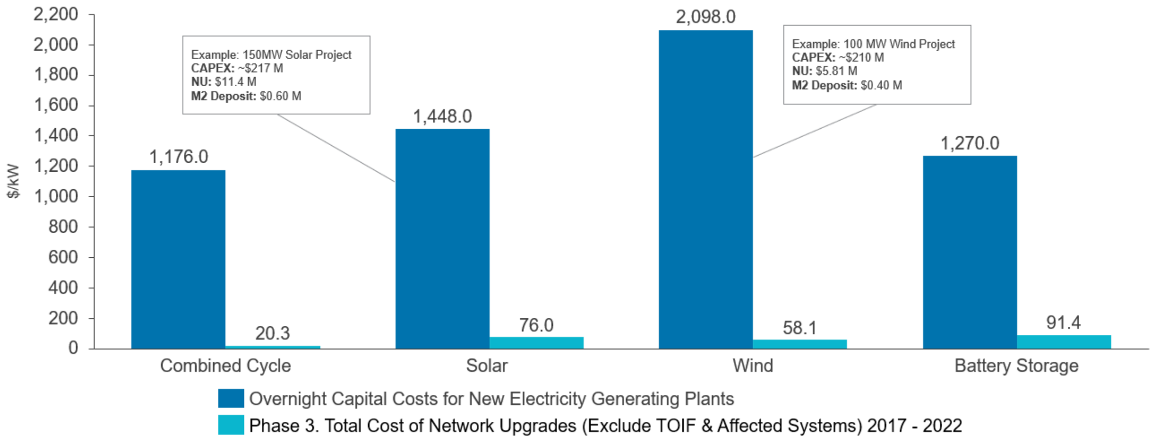
	DPP1	DPP2	DPP3
Withdrawn	$349,601	$395,560	$132,849
Advanced	$201,878	$87,747	$70,059

Source: MISO.

Figure 5 presents the aggregate data for the 2017 – 2020 cycles. It illustrates the distinct cost distributions of network upgrades for projects that either proceeded to the subsequent DPP stage or were withdrawn at each respective DPP stage. At Decision Point 1, the average network upgrade cost per MW for a withdrawn project was $349,601, and projects that advanced to the next stage had an average network upgrade cost of $201,878. As anticipated, the projects that were advanced tend to, on average, have lower costs compared to those that were withdrawn.

The average network upgrade cost for projects that advanced beyond DPP 1 is notably higher than those advanced beyond DPP 2. This suggests that developers have an understanding that the network upgrade costs are likely to decrease in subsequent phases.

Figure 6. Network Upgrade Cost per MW vs. CapEx



Source: MISO (2017-2022 Cycles), EIA AEO (March 2023) Overnight Capital Costs for New Electricity Generating Plants

Figure 6 illustrates the comparison between the capital costs needed to construct a new generation facility and the average network upgrade costs that the same facility is anticipated to incur for securing interconnection in MISO. The network upgrade costs constitute only a fraction of the overall budget that developers are required to allocate.

This consideration plays a role when discussing incentives to deter speculative entry into the interconnection queue. The accepted economic deterrents for unwanted behavior are penalties. To be effective, penalties should be assessed within the context of overall costs and budgets.

3. RECOMMENDATIONS

This section presents our recommendations for MISO queue policies, aiming to achieve the dual goals of reducing the size of the interconnection queue and decreasing the withdrawal rate. Once these challenges are successfully addressed, study times will decrease, leading to enhanced efficiency within the MISO interconnection queue. This improvement will enable MISO to process more projects more quickly than the current situation allows and should result in customers receiving more dependable information with which to make business decisions regarding their projects.

3.1. Definition of Harm

The interconnection queue within MISO has reached a point where it has become unmanageable at entry, and modeling upgrade costs in the early phases has become unrealistic. Additionally, the frequent dropouts within the interconnection queue create significant uncertainty, making the results of studies unreliable and subject to significant change over the course of the study process. This constant fluctuation requires continual reevaluation, adding complexity to the process. We observed that interconnection requests are withdrawn at every stage, leading to changes in results and even more withdrawals.

Two behavioral aspects behind the problems identified above are (1) speculative entry and (2) frequent withdrawals. The two aspects are intertwined as projects that enter the queue without due diligence regarding readiness and feasibility are more likely to be withdrawn.

Effective preventive measures should be implemented to discourage these harmful behaviors. Creating and enforcing these measures establishes a more responsible environment, minimizing harm. To achieve this, harmful behavior must be clearly defined. Once appropriately defined, it becomes the basis for levying penalties where harmful behavior is proven to exist.

Withdrawals are unlikely to be penalized under the present definition of harm, which is narrowly focused on cost increases to remaining projects due to required Network Upgrades following a project's withdrawal. This definition accounts for situations where shares of required transmission upgrades are allocated to remaining projects after a re-study analysis. However, it may also result in less expensive required transmission upgrades and lower allocated shares, reflecting the stepped nature of upgrade costs as incremental generation capacity is accommodated. Such outcomes do not mean that the remaining projects are unharmed by the withdrawal. On the contrary, they suffer from the additional time required for necessary re-studies and the uncertainty engendered by the constantly changing queue.

Interdependencies among projects and shared information mean that withdrawals inevitably impact other projects through delays and increased uncertainty; these two impacts should be recognized as harmful:

> Delays: The study process is delayed when projects withdraw, and previously identified upgrades may no longer be applicable. This leads to more time required for analysis.
>
> Uncertainty: Projects in the queue rely on network upgrade estimates for crucial business decisions, and these decisions are undermined when projects are withdrawn.

Regardless of why a project is withdrawn from the interconnection queue, such withdrawal invariably inflicts some harm on remaining projects. This harm might be quantifiable in monetary terms but is often intangible and can only be described qualitatively.

Besides the measurable harm of increased upgrade costs, the delays and uncertainty inherent in the process argue for a harm penalty. This penalty, even when the harm isn't directly measurable, should escalate with each stage of the process to encourage early decision-making regarding non-viable projects. The presence of such a penalty recognizes that harm extends beyond mere dollars and cents, encompassing broader impacts on the queue's efficiency and reliability.

3.2. Penalty Free withdrawal adjustment

Penalty-free withdrawal should be eligible only for projects facing a significant increase in total costs. Current MISO rules that allow for penalty-free withdrawal are outlined in Section 7.6.2 Refunds of Definitive Planning Phase Milestones (M2, M3, M4) of the Generator Interconnection Procedures (GIP). Figure 7 below summarizes our analysis of the penalty-free withdrawal rules.

Figure 7. Penalty-free withdrawal rules application

Under current rules:
Out of projects that reached DPP2, **42%** are eligible for penalty free withdrawal
Out of projects that reached DPP3, **37%** are eligible for penalty free withdrawal

	Status and Withdrawal Phase	DPP-2017-AUG	DPP-2017-FEB	DPP-2018-APR	DPP-2019-Cycle	DPP-2020-Cycle	DPP-2021-Cycle	DPP-2022-Cycle
	Active	2		2	30	179	413	762
	Done	64	17	80	131	17		
Withdrawn	Pre Kick off	29	1	39	33	98	46	128
	Decision Point 1 (DPP 1)	51	23	81	52	3	12	2
	Decision Point 2 (DPP 2)	24	13	20	40	22		
	During DPP Phase 3	2	1	7	9	10		
	During GIA Execution Phase	11		1	2	5		
	Post GIA	7	6	1	1			
	Withdrawn - Pending Cure				1			
	Withdrawn - No Date				2	19	6	
	Withdrawn Total	124	44	157	140	157	64	130
	Total Project	190	61	239	301	363	477	892

127 projects withdrew at DPP 2; data available to evaluate **83** for penalty-free withdrawal eligibility.

	> 25% NU Cost Increase	> 10,000 per MW Cost increase	>10,000 Affected System upgrade costs increase	Eligible for Penalty-free withdrawal
Number of projects that qualify	36	30	19*	**61**
% of total that qualify	43%	36%	23%	**73%**

29 projects withdrew at DPP 3; data available to evaluate **23** for penalty-free withdrawal eligibility.

P2 to P3				P1 to P3		
> 35% NU Cost Increase	> 15,000 per MW Cost increase	> 40% Affected System upgrade costs increase	>$15,000 Affected System upgrade costs increase	> 50% NU Cost Increase	> 20,000 per MW Cost increase	Eligible for Penalty-free withdrawal
9	8	3	7	9	6	**17**
39%	35%	13%	30%	39%	26%	**74%**

*Only 2 projects had non-zero Affected System Upgrade costs in P1.

Source: MISO

The penalty-free withdrawal procedure is based on a comparison between the previously estimated network upgrade cost within the same cycle and the new estimates. As such, this procedure is only applicable at Decision Point 2 and when the DPP3 cost estimates become available.

Current rules allow for a broad set of circumstances to qualify. For example, projects that experience a significant decrease in network upgrade costs may still qualify if affected systems costs increase. This is one of the key reasons why penalty-free withdrawals apply to a large number of projects in the queue. For example, 42% of all projects that reached DPP2 are eligible for penalty-free withdrawal, and 37% of all projects that received network upgrade costs in phase 3 are eligible for penalty-free withdrawal in that phase.

Simple and efficient rules ensure that only projects facing significant increases in overall costs qualify for penalty-free withdrawal. We suggest streamlining the rules and applying only a percentage increase in combined network upgrade and affected systems costs from DPP1 to DPP2 or DPP2 to DPP3. That is, streamline rules to allow penalty-free withdrawal if:

Combined NU + AS cost increased by 50% from P1 and P2 (1)

Combined NU + AS cost increased by 35% from P2 and P3 (2)

The suggested thresholds of 50% and 35% are selected using data in Table 3 below. First column in Table 3 is the threshold, second shows the % of projects that reached DPP2 that would be eligible for penalty free withdrawal under (1) above, and the third column shows the % of projects that reached DPP3 eligible for withdrawal penalty-free withdrawal under (2) above.

At the suggested threshold of 50% cost increase from P1 to P2, 30% of all projects that reached DPP2 would be eligible for penalty-free withdrawal. At the suggested threshold of 35% cost increase from P2 to P3, 20% of all projects that reached DPP3 would be eligible for penalty-free withdrawal.

Table 3. Sensitivity of Withdrawal Eligibility to NU + AS Threshold

Combined NU + AS % Increase Threshold	P2 to P1: % of Projects that Reached DPP2 Eligible for Withdrawal	P3 to P2: % of Projects that Reached DPP3 Eligible for Withdrawal
10%	43%	27%
20%	37%	22%
25%	36%	21%
30%	34%	20%
35%	33%	20%
40%	31%	18%
45%	31%	16%
50%	30%	15%
55%	29%	14%
60%	29%	13%
65%	27%	13%

Source: MISO

3.3. M2, M3 AND M4 ADJUSTMENTS

We recommend that MISO adjusts M2, M3, and M4 deposits to better reflect potential harm caused by a withdrawal at each study phase.

In The M2 deposit should be more representative of the final NU payment and significant enough to discourage speculative behavior. To aid our analysis of the appropriate deposit we consider average per MW costs in each phase of DPP cycle. We consider a range of 15% to 25% of the average NU cost in Phase 3 to determine a reasonable value range for the M2 deposit amount.

Table 4. Network Upgrade Costs[6]

Study Cycle	Average of NU Cost per MW, Phase 1	Average of NU Cost per MW, Phase 2	Average of NU Cost per MW, Phase 3	15% of NU Cost in Phase 3	20% of the NU Cost in Phase 3	25% of NU Cost in Phase 3
DPP-2017-AUG	$177,999	$118,107	$53,583	$8,038	$10,717	$13,396
DPP-2017-FEB	$840,358	$521,006	$53,247	$7,987	$10,649	$13,312
DPP-2018-APR	$101,703	$100,492	$56,483	$8,472	$11,297	$14,121
DPP-2019-Cycle	$170,781	$122,008	$82,037	$12,306	$16,407	$20,509
DPP-2020-Cycle	$297,694	$112,098	$94,279	$14,142	$18,856	$23,570
Total In-Sample Average	**$232,051**	**$138,353**	**$72,514**	**$10,877**	**$14,503**	**$18,129**
Total in-Sample Median	**$80,624**	**$70,690**	**$48,420**	**$7,263**	**$9,684**	**$12,105**

Source: MISO

We recommend an increase of the M2 amount from $4,000 / MW to a value in the range of $10,000 to $14,000 / MW.

Deposits should increase at each stage, reflecting harm that occurs with withdrawal at later stages in the study process. Additionally, we suggest that M3 and M4 deposits should never be negative. Negative or zero deposits are not representative of harm that occurs should a project withdraw. We suggest adjusting M3 and M4 formulas to:

$$M3 = \text{Max of } \$1{,}000 \text{ and } ((10\% * NU) - M2)$$

$$M4 = \text{Max of } \$1{,}000 \text{ and } ((20\% * NU) - M3 - M2)$$

We believe that this deposit structure more accurately aligns with the network upgrade costs that developers are likely to incur.

3.4. Fixed Penalty Schedule

To mitigate the issues of an unwieldy queue size and frequent withdrawals, it is essential to implement penalties for detrimental practices. As previously discussed, both entering the queue without adequate due diligence and exiting the queue by interconnection customers contribute to an unmanageable queue size and create significant uncertainty.

Penalties are a proven economic lever for curbing undesirable behavior. For such penalties to be effective, they must be both substantial and consistently applied when unwanted actions occur.

Requiring a deposit alone is not a sufficient deterrent unless it is integrated with a comprehensive penalty structure. We propose implementing a fixed penalty schedule in conjunction with the current penalties to address this. Specifically, the current total amounts at risk from the DPP1 and beyond will remain unchanged. However, a predetermined percentage of the M2 deposit will be forfeited at withdrawal, regardless of the specific harm calculations. This percentage should

[6] Similar table based on median values is included in the Appendix

escalate with each successive phase of the DPP. We recommend that this penalty be applied to every withdrawal, extending even to those that occur before the commencement of the DPP.

Table 5 illustrates the suggested penalty schedule with an example.

Table 5. Current and Potential Penalties by DPP Cycle

Withdrawal Time/ Stage of the Cycle	Current Penalties: at risk subject to harm calculations	Suggested Penalty Schedule: Example		
		Fixed Penalty Schedule	*Harm Calculation*	*Penalty-Free withdrawal*
Before DPP Start	No penalty	10% of M2 Deposit	Doesn't apply	Doesn't apply
Decision Point 1	50% of M2 at risk	25% of M2 Deposit	Applies	Doesn't apply
Decision Point 2	100% of M2 at risk	50% of M2 Deposit	Applies	Applies
During Phase 3	M2, M3, and M4 at risk	75% of M2 Deposit	Applies	Applies
GIA Execution Phase and beyond	M2, M3, and M4 at risk	100% of M2 Deposit	Applies	Doesn't apply

Source: MISO

We suggest distributing the collected penalties pro-rata to completed projects of the same cycle. This provides additional support for projects that go through the process and additional incentive for interconnection customers to complete projects.

3.5. QUEUE CAP PER CYCLE

Robust demand for generation interconnection has caused the MISO queue to grow to an unmanageable size, with interconnection requests exceeding what MISO can process in a single cycle, contributing to a substantial backlog.

To mitigate the negative impact of excessive requests on participants and the overall study process, establishing a queue cap might be a solution. The implementation of a queue cap not only limits these detrimental effects but also strengthens the case for withdrawal penalties at every stage, including pre-kick-off.

The excessive interconnection requests compromise other study cycle participants and the overall integrity of the study process. As previously shown, these excessive requests can artificially inflate the magnitude of network upgrade costs in the early stages of the study cycle, leading to escalating financial and manpower burdens on MISO and other stakeholders as the queue size surpasses reasonable limits. Moreover, dissatisfaction with the process could fuel more speculative requests, and projects forced to drop out may swell the number of requests seen in subsequent study cycles.

MISO should determine the level of the queue cap along with its application across study regions, cycles, and possibly entities. The cap should be designed considering certain criteria for MISO overall and by region. For example, the following could be considered:

- Peak load and forecasted peak load.
- Installed capacity, guaranteed additions, and expected retirements.
- Reliability and resource adequacy.

All applications in excess of the cycle queue cap should be entered into the next cycle.

To give a tangible example, the queue cap per cycle could be set as a percentage of the forecasted peak load and/or installed capacity.

3.6. Per developer cap

Implementing a per-developer cap can be an approach to ensuring fairness within the interconnection queue, though it may present challenges in execution. To prevent a single developer from having disproportionate control or excessively entering multiple projects, it is advisable to consider specific safeguards when putting an overall queue cap in place.

These safeguards should be designed to maintain a balanced playing field among developers. It's important to recognize that no specific threshold is universally accepted to spark antitrust concerns; rather, this depends on a variety of factors, including market concentration, the potential for market manipulation, barriers to entry, and the possibility of harm to competition.

If an overall queue cap is put in place, we recommend considering a per-developer cap as well, set at a level between 5% and 15% of the overall queue cap per cycle. The implementation of a per-developer cap would necessitate a robust administrative process, with certain key elements to be included. These could encompass:

- **Authentication**: Define the entity or organization that is subject to the cap. Clear procedures should be established to ensure that all branches or subsidiaries of the same organization are included under the same cap.
- **Monitoring and Reporting**: Establish a system to track the project entries of each developer.
- **Verification**: Develop processes to validate the reported information provided by developers.
- **Transfers**: Ensure that transfers do not result in cap violations.
- **Penalties**: Define penalties for developers who exceed the prescribed limits.
- **Appeals and Dispute Resolution**: Establish a process for developers to appeal decisions related to cap enforcement.
- **Regular Review and Adjustment**: Conduct regular reviews of the cap's effectiveness and consider adjustments if necessary.

4. SUMMARY

CRA's analysis supports the argument that reform to generator interconnection queue rules for queue entry and exit could alleviate interconnection constraints. A key step to reform is an adjustment to the definition of harm. The new definition should acknowledge that withdrawn projects harm those remaining in the queue beyond cost shifting via queue delay and uncertainty. One suggestion to reducing queue sizes is that MISO establish queue cap rules. These caps, either in the form of regional caps or developer caps per cycle, could limit excessive requests detrimental to other participants and the overall study process. Updating the monetary value placed on entering, remaining in, and withdrawing from the queue will prevent speculative projects from entering the interconnection process. CRA recommends increasing the M2 deposit to a value in the range of $10,000-$14,000/MW and adjusting the M3 and M4 deposit formulas to a minimum of $1,000 to reflect final costs better. CRA also recommends that MISO implement an escalating fixed penalty schedule, including a minimum pre-kick-off stage withdrawal penalty to support the queue cap implementation. The penalty-free withdrawal rules should be updated to consider the overall percentage increase in combined network upgrades and affected system costs. Penalty-free rules should not apply after phase 3.

5. APPENDIX

The table presented below is a revised version of Table 4 from the report, adjusted to reflect median values. We've incorporated this table in response to feedback from stakeholders.

The values in this table support our recommendation for the M2 deposit, particularly when greater emphasis is placed on values from the latest cycles. Giving more weight to values from recent studies offers a more accurate representation of the queue's current status.

Table 6. Network Upgrade Costs, Median Values

Study Cycle	Median of NU Cost per MW, Phase 1	Median of NU Cost per MW, Phase 2	Median of NU Cost per MW, Phase 3	15% of Median NU Cost in Phase 3	20% of Median NU Cost in Phase 3	25% of Median NU Cost in Phase 3
DPP-2017-AUG	$ 89,051	$ 52,000	$ 42,948	$ 6,442	$ 8,590	$ 10,737
DPP-2017-FEB	$ 655,871	$ 111,467	$ 35,815	$ 5,372	$ 7,163	$ 8,954
DPP-2018-APR	$ 67,918	$ 55,860	$ 36,524	$ 5,479	$ 7,305	$ 9,131
DPP-2019-Cycle	**$ 100,511**	**$ 75,228**	**$ 56,814**	**$ 8,522**	**$ 11,363**	**$ 14,203**
DPP-2020-Cycle	**$ 135,621**	**$ 80,175**	**$ 65,872**	**$ 9,881**	**$ 13,174**	**$ 16,468**
Total in-Sample Median	$ 80,624	$ 70,690	$ 48,420	$ 7,263	$ 9,684	$ 12,105

Source: MISO

BEFORE THE UNITED STATES DEPARTMENT OF ENERGY

Federal Power Act Section 202(c)	)	
Emergency Order: Midcontinent	)	Order No. 202-25-9
Independent System Operator	)	
(MISO)	)	
	)	

Exhibit to
Motion to Intervene and Request for Rehearing and Stay of
Public Interest Organizations

Exhibit 113

Inst. Pol'y Integrity Report

Enough Energy

A Review of DOE's Resource Adequacy Methodology

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Table of Contents

Executive Summary

On April 8, 2025, President Trump issued an Executive Order on Strengthening the Reliability and Security of the United States Electric Grid (the EO) requiring the Department of Energy (DOE) to (1) "identify current and anticipated regions with reserve margins below acceptable thresholds" and (2) "establish . . . a protocol to identify which generation resources within a region are critical to system reliability."[1] DOE responded on July 7, 2025 with its *Resource Adequacy Report: Evaluating the Reliability and Security of the United States Electric Grid* (DOE Study).[2]

This report reviews best practices for analyzing whether a region is resource adequate and for identifying whether a particular resource is critical for resource adequacy. It next analyzes the DOE Study as compared to those best practices. Finally, it examines next steps for U.S. resource adequacy policy following the DOE Study, in light of different entities' respective authorities over the issue.

In Part 1, this report outlines a four-step process for evaluating whether a region is resource adequate and then identifying which resources are critical. Each step involves choices between traditional methods and best practices adapted to the evolving risks posed by the energy transition and the new conditions brought about by climate change.

- *Step 1*: *Set a Resource Adequacy Target*: Planners should define resource adequacy targets using a multi-metric approach that captures not just outage frequency but also magnitude and duration, possibly supplemented by metrics focused on tail risks instead of expected values. Targets should be region-specific and reflect a local cost-benefit analysis that weighs the incremental benefits and costs of achieving reduced outages.
- *Step 2: Conduct Resource Adequacy Modeling:* Rather than focusing narrowly on annual peak load, planners should assess whether a region achieves the target from Step 1 by modeling all 8,760 hours of the year in chronological order using probabilistic techniques that account for uncertainty like the Monte Carlo method. Best practices include incorporating weather-linked dependencies; climate-adjusted inputs; and realistic assumptions about retirements and additions, interregional imports, and storage and demand response dynamics. This modeling more accurately reflects the risks posed by variable generation and energy-limited resources.
- *Step 3: Establish Accreditation Values:* Resource accreditations—the specific contribution of a resource or resource type to resource adequacy—should be derived from Step 2's probabilistic modeling of a resource's ability to contribute during hours of highest risk.

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1 Exec. Order No. 14,262, Strengthening the Reliability and Security of the United States Electric Grid, 90 Fed. Reg. 15521, 15521–22 (Apr. 14, 2025).

2 U.S. Dep't of Energy, Resource Adequacy Report: Evaluating the Reliability and Security of the United States Electric Grid (2025), https://perma.cc/A587-S88S.

Effective Load Carrying Capability or related probabilistic methods should be applied to all resource types, including thermal plants, to accurately describe their contributions under a wide range of possible futures and hard-to-predict risk periods. Accreditation methods should be applied equally to thermal and variable resources to allow for technology-neutral comparisons.

- *Step 4: Calculate the Reference Margin Level and the Reserve Margin:* Using the resource adequacy modeling and accreditation values from Steps 2 and 3, planners should calculate a reference margin level—the amount of accredited capacity that corresponds to achieving the resource adequacy target. Comparing a region's actual resource fleet to this benchmark allows planners to determine whether the exit or entry of specific resources would affect achievement of the reference margin level and thus the resource adequacy target, given the resources' accreditations.

Part 2 compares the best practices from Part 1 to DOE's methodology in the DOE Study—in which DOE concluded that all transmission planning regions except ERCOT are currently resource adequate but that all regions except ISO-NE and NYISO will be resource inadequate in 2030. Across multiple dimensions, DOE's approach departs from best practices in ways that call these results into question.

- *Resource Adequacy Targets:* DOE's use of a multi-metric standard—2.4 hours of lost load per year and 0.002% normalized unserved energy—is consistent with best practices, but the choice of values is not. Neither value is appropriately justified based on a cost-benefit framework, and the use of a one-size-fits-all target for the entire country ignores regional differences. Additionally, DOE inappropriately attempts to label PJM as currently resource inadequate even though the region achieves DOE's own target according to DOE's modeling.

- *Resource Adequacy Modeling:* DOE models all 8,760 hours of the year chronologically but relies on a deterministic rather than probabilistic framework, limiting its ability to assess uncertainty or tail risks. This less accurate approach evaluates adequacy only under a fixed set of historical weather and load years. Further, DOE's truncated description of how its model decides whether an outage has been triggered makes this assumption impossible to fully evaluate, but DOE's limited explanation does suggest that it may have adopted an overly conservative approach that exaggerates resource adequacy risk. Finally, DOE's 2030 results are significantly shaped by unrealistic assumptions about additions, retirements, load, and possibly interregional imports.

- *Accreditation and Reference Margin Levels:* The DOE Study does not attempt to identify resources that are critical for any region's resource adequacy, and thus does not calculate accreditation values or reference margin levels. But DOE does estimate the amount of perfect capacity required to bring certain regions to the 0.002% NUSE target. DOE could build upon this approach in the future to calculate reference margin levels, but any future efforts should attend to all prongs of its multi-metric resource adequacy target. Additionally, DOE's perfect capacity additions inexplicably bring regions far beyond 0.002% NUSE, meaning that DOE overstates how difficult it would be to cure the purported resource adequacy shortfalls.

Part 3 answers what should happen next for U.S. resource adequacy policy now that DOE has published its study.

- Given how DOE's statutory authority under Section 202(c) of the Federal Power Act is limited to emergencies, DOE's own conclusion that most regions are not currently experiencing resource adequacy shortfalls suggests that DOE has limited legal authority to address potential problems in 2030. Moreover, the limitations of the DOE Study call into question the accuracy of DOE's forecasts.
- Instead of DOE, the Federal Energy Regulatory Commission and the North American Electric Reliability Corporation could more appropriately—and less intrusively from the perspective of states, grid operators, and markets—support resource adequacy by issuing reliability standards that require best practices for regions' resource adequacy efforts. Rather than establishing a national resource adequacy target, these standards would govern how regions select resource adequacy targets, evaluate if they are achieving them, and measure the contributions of specific resources. This step would be in line with the Federal Energy Regulatory Commission's Order No. 747, which approved analytical guardrails for resource adequacy analysis for a portion of the U.S.

Introduction

How does a regional electric grid operator know when its region has enough electricity to meet demand and whether any specific generation resource, like a particular coal plant, is essential for doing so? President Trump's Executive Order on Strengthening the Reliability and Security of the United States Electric Grid (the EO) implicates these questions: The EO directs the Department of Energy (DOE) to assess if each region of the United States has sufficient energy resources to meet current and future demand, and to identify and retain critical resources.[3] On July 7, 2025, DOE responded to the EO by publishing its *Resource Adequacy Report: Evaluating the Reliability and Security of the United States Electric Grid* (DOE Study).[4]

This report addresses the EO and the DOE Study's fundamental concern: resource adequacy. Resource adequacy is one key aspect of a power system's reliability. It refers to a system's "ability . . . to generate and transmit adequate quantities of electricity to meet demand, taking into account scheduled and reasonably expected unscheduled system outages."[5] Resource adequacy thus concerns whether a system's supply of energy exceeds demand. Determining whether an area is resource adequate is, however, ultimately a policy question, rather than an engineering one, because it would be prohibitively expensive to build a system that serves 100% of demand under all conditions.[6] Deciding whether a region is resource adequate always explicitly or implicitly balances society's desire for reliable electricity with the cost of providing that reliability.

Starting from first principles, Part 1 examines how to determine whether a region meets its selected resource adequacy target and how a planner can know whether any one particular resource is critical for resource adequacy. Part 2 discusses whether the DOE Study reflects, rejects, or obscure these first principles. Part 3 explores next steps for U.S. resource adequacy policy following the publication of the DOE Study, considering the respective roles of the Federal Energy Regulatory Commission (FERC), the North American Electric Reliability Corporation (NERC), DOE, grid operators, and states.

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3 Exec. Order No. 14,262, Strengthening the Reliability and Security of the United States Electric Grid, 90 Fed. Reg. 15521, 15521 (Apr. 14, 2025).

4 U.S. Dep't of Energy, Resource Adequacy Report, *supra* note 2.

5 Burçin Ünel & Avi Zevin, Inst. for Pol'y Integrity, Toward Resilience: Defining, Measuring, and Monetizing Resilience in the Electricity System 11 (2018), https://perma.cc/UDB5-DEEM (citing a NERC "Frequently Asked Questions" page that is no longer available).

6 Energy Sys. Integration Grp., New Resource Adequacy Criteria for the Energy Transition: Modernizing Reliability Requirements 38 (2024), https://perma.cc/NXU4-N4UG.

Part 1: Best Practices for Resource Adequacy

The EO requires DOE to evaluate the sufficiency of regions' "reserve margins" and establish a resulting protocol to identify "critical" resources that should be retained.[7] To figure out what kind of buffer will ensure that a region achieves a given level of resource adequacy, and to label specific generators as essential for that resource adequacy, a planner would need to undertake a four-step process. At each step, the planner must pick between antiquated approaches and newer best practices.

First, the planner must make the policy choice of selecting a resource adequacy target for the region that, if achieved, would indicate resource adequacy. Second, it should use resource adequacy modeling to determine whether a region has achieved and will continue to achieve the selected target under foreseeable future conditions. Third, the planner should use its resource adequacy modeling with accurate data curation to derive how each generation and storage resource contributes to meeting the target (their "accreditation" values). Fourth, it should use the resource adequacy modeling plus resources' accreditation values to derive an acceptable reserve margin for the region (the "reference margin level"). At this fourth step, the planner can use the accreditation values to check whether the exit of a particular resource would cause a region to dip below the reference margin level.

These best practices have largely emerged to address the resource adequacy challenges caused by the energy transition and extreme weather events caused by climate change. Whereas traditional methods have focused on whether demand would exceed supply during peak load hours, system risk has shifted to *net* peak hours, i.e., when load minus variable generation is highest.[8] Measuring whether supply will meet demand has itself become more complicated. Increasingly, it has become important to perform modeling resource adequacy chronologically—each hour reflecting the conditions that came before it—to account for the dynamics of battery storage resources and demand response.[9] And policymakers now are also confronting the outdated idea that thermal resources are "perfect" capacity, given their weather-related vulnerabilities.[10]

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7 Exec. Order No. 14,262, Strengthening the Reliability and Security of the United States Electric Grid, 90 Fed. Reg. 15521, 15521–22 (Apr. 14, 2025).

8 Juan Pablo Carvallo et al., Lawrence Berkeley Nat'l Lab'y, A Guide for Improved Resource Adequacy Assessments in Evolving Power Systems: Institutional and Technical Dimensions 13 (2023), https://perma.cc/5VLY-B7HF.

9 N. Am. Elec. Reliability Corp. & Nat'l Acad. of Eng'g, Evolving Planning Criteria for a Sustainable Power Grid: A Workshop Report 9 (2024), https://perma.cc/KE8D-W6VX.

10 Nat'l Ass'n of Regul. Util. Comm'rs, Resource Adequacy for State Utility Regulators: Current Practices and Emerging Reforms 32–34 (Nov. 2023), https://perma.cc/K88X-2JCR.

Step 1: Pick a Resource Adequacy Target

Before any analysis can determine if a system is resource adequate, policymakers must set a clear resource adequacy *target*.[11] This first step involves two distinct choices: (1) selecting one or more metrics to represent the variables by which resource adequacy will be judged, and (2) setting the numerical values for those chosen metrics to achieve the resource adequacy target.

Consider what it would take to set a target, not for resource adequacy, but for human health. First, you would pick the metrics that you think would best define whether a person is healthy, e.g., blood pressure, resting heart rate, or cholesterol levels. Using only one metric would not give you enough information. And paying attention to only each metric's average levels without also examining whether the metric ever reaches dangerous levels could obscure risk of a catastrophic health event. Second, you would pick a value for each metric, like a blood pressure of less than less than 120/80 mmHg. To pick that value, you would consider the best available evidence on what level is optimal.

Similarly, when it comes to resource adequacy, the best practice is to move beyond the standard approach of attending primarily to the *frequency* of outages and to also consider their *magnitude* and *duration*. Additionally, regions should consider metrics focused on the extremes of the probability distribution, rather than expected value metrics that could label a system as resource adequate when a low probability (but plausible) event would be catastrophic.

When selecting numerical values for the chosen resource adequacy metrics, the best practice is to consider the best available evidence on the tradeoff between the benefits and costs of additional resource adequacy. The optimal level of resource adequacy may be different in each region, depending on the local costs of the investments that would be needed to reduce shortfall events and the local consequences of a shortfall.[12] A resource adequacy target should ideally represent the level of resource adequacy that the system planner has identified as socially optimal because it balances costs and benefits.

Metrics

Historically, U.S. policymakers have framed their resource adequacy targets in terms of loss of load expectation (LOLE),[13] and this metric remains widespread.[14] LOLE typically refers to the number of days per year in which an outage occurs and is largely a measure of frequency.[15]

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11 *See* Energy Sys. Integration Grp., New Resource Adequacy Criteria, *supra* note 6, at 2 tbl.1.

12 *Id.* at 39, 41.

13 Elec. Power Rsch. Inst., Metrics and Criteria: Insights from Case Studies and Recommendations and Considerations for Future Practice 31 (2024), https://perma.cc/W4VF-VQPD.

14 Energy Sys. Integration Grp., New Resource Adequacy Criteria, *supra* note 6, at 8 tbl.2.

15 Elec. Power Rsch. Inst., Resource Adequacy for a Decarbonized Future 3, 8 (Apr. 2022), https://perma.cc/7G9V-CNWB. Technically, the number of days per year in which an outage occurs is "loss of load days" (LOLD), which is a special case of the broader concept of LOLE, which can be used with different event-periods. *Id.* at 7–8. In North America, however, LOLE typically means LOLD. *Id.* at 7; *accord* Gord Stephen et al., *Clarifying the Interpretation and Use of the LOLE Resource Adequacy Metric* at 2, https://perma.cc/A9DJ-C3B5.

Frequency is an important characteristic to track because consumers prefer fewer outages.[16] LOLE coarsely accounts for duration, too, in that an outage that stretches multiple days will count as an additional event for each additional day.

LOLE does, however, obscure important aspects of resource adequacy. It will not differentiate between (1) a 10-hour event with 1 GWh of load shed that is followed by a second identical event within the same day and (2) a 30-minute event with 5 MWh of load shed. Customers are not indifferent, however, between these two situations.[17] Because damages depend on outages' frequency, magnitude, and duration, LOLE neglects key dimensions of resource adequacy affecting customers' wellbeing.[18] Attending to these characteristics when setting resource adequacy targets is more important than ever, because changes in the resource mix and extreme weather due to climate change mean that loss-of-load events have become less uniform and thus less interchangeable.[19]

The Multi-Metric Approach

The best practice is to supplement the traditional LOLE metric (or a different frequency-focused metric like "loss of load events," which separately counts all events within a year and thus differentiates between events that occur during the same day[20]) with additional metrics that capture other dimensions of resource adequacy.[21] Both the Electric Reliability Council of Texas (ERCOT) and the Northwest Power and Conservation Council (NWPCC) have done exactly this, augmenting their LOLE-based targets to include magnitude and duration metrics.[22] Under a multi-metric approach, a system could be declared resource adequate if it achieves selected value targets for each and every metric,[23] or if it achieves some minimum number or combination of the metrics (e.g., any two of a system's three metrics).[24]

A leading magnitude metric that could be incorporated into a multi-metric approach is expected unserved energy (EUE): the amount of demand that the system will fail to serve during a period, typically a year.[25] A region's EUE can be contextualized by dividing it by the region's total annual load—this is called normalized unserved energy (NEUE).[26] Australia uses an annual unserved

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16 Energy Sys. Integration Grp., New Resource Adequacy Criteria, *supra* note 6, at 17.

17 *Id.* at 3.

18 *Id.* at 10.

19 *Id.* at 11, 15, 22.

20 Elec. Power Rsch. Inst., Resource Adequacy for a Decarbonized Future, *supra* note 15, at 8.

21 Energy Sys. Integration Grp., New Resource Adequacy Criteria, *supra* note 6, at 33–37; Elec. Power Rsch. Inst., Resource Adequacy Philosophy: A Guide to Resource Adequacy Concepts and Approaches 23 (2022), https://perma.cc/ZH4Y-ZD7J; Juan Pablo Carvallo et al., *supra* note 8, at 28–29; N. Am. Elec. Reliability Corp. & Nat'l Acad. of Eng'g, *supra* note 9, at vii.

22 Reliability Standard for the ERCOT Region, No. 54584, 2024 WL 4263493, at *24 (Tex. Pub. Utils. Comm'n Sept. 9, 2024); *Resource Adequacy*, Nw. Power & Conservation Council, https://perma.cc/39P6-VBNN.

23 Energy Sys. Integration Grp., New Resource Adequacy Criteria, *supra* note 6, at 35.

24 Elec. Power Rsch. Inst., Metrics and Criteria, *supra* note 13, at 31–32.

25 Energy Sys. Integration Grp., New Resource Adequacy Criteria, *supra* note 6, at 17.

26 *Id.* at 18.

energy metric,[27] as does NWPCC.[28] Planning around these magnitude metrics can help a region avoid catastrophic events associated with significant unserved energy.[29]

But, like LOLE, magnitude-focused metrics like EUE and NEUE are incomplete alone; they do not account for how the unserved energy is distributed throughout the year.[30] An alternative or complementary magnitude metric is "peak shortfall," defined as the largest expected outage of the period.[31] Peak shortfall is potentially useful because damages from a single outage increase nonlinearly with its scale.[32] Both ERCOT and NWPCC have versions of a peak shortfall metric (NWPCC's complements its EUE metric).[33]

For duration, a popular metric that could supplement frequency and magnitude metrics is loss of load hours (LOLH), which measures the number of hours per year in which an outage occurs.[34] LOLH fundamentally resembles LOLE, but is more granular because it analyzes each hour, rather than each day. As such, LOLH does a better job at expressing the aggregate duration of all shortfalls in a region.[35]

Many countries use LOLH as their sole resource adequacy metric,[36] but, in aggregating hours, it neglects the duration of individual events—even though damages increase nonlinearly with an outage's duration.[37] Supplemental metrics such as average shortfall duration[38] and the maximum shortfall length (used in Texas and NWPCC)[39] can capture this aspect of duration.

Accounting for Tail Risks

Beyond questions of frequency, magnitude, and duration, a separate question when using any chosen metric is whether to look at the mean of the distribution, extremes, or both. Traditionally, regions have framed their LOLE, EUE, and LOLH goals in terms of their *mean* values.[40] But the energy transition and climate change have increased the risk of extremely damaging tail risks,[41]

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27 *Id.* at 9.

28 Nw. Power & Conservation Council, *supra* note 22.

29 Energy Sys. Integration Grp., New Resource Adequacy Criteria, *supra* note 6, at 19 tbl.4.

30 *Id.*

31 Elec. Power Rsch. Inst., Resource Adequacy Assessment Tool Guide 18 (2024), https://perma.cc/CB7Q-MXZM (using the equivalent phrase "MW Short").

32 Energy Sys. Integration Grp., New Resource Adequacy Criteria, *supra* note 6, at 3.

33 Reliability Standard for the ERCOT Region, No. 54584, 2024 WL 4263493, at *24 (Tex. Pub. Utils. Comm'n Sept. 9, 2024); *Resource Adequacy*, Nw. Power & Conservation Council, https://perma.cc/39P6-VBNN.

34 Elec. Power Rsch. Inst., Resource Adequacy for a Decarbonized Future, *supra* note 15, at 8.

35 *Id.* at 8.

36 Energy Sys. Integration Grp., New Resource Adequacy Criteria, *supra* note 6, at 8.

37 *Id.* at 3.

38 Elec. Power Rsch. Inst., Resource Adequacy for a Decarbonized Future, *supra* note 15, at 10.

39 Reliability Standard for the ERCOT Region, No. 54584, 2024 WL 4263493, at *24 (Tex. Pub. Utils. Comm'n Sept. 9, 2024); *Resource Adequacy*, Nw. Power & Conservation Council, https://perma.cc/39P6-VBNN.

40 Elec. Power Rsch. Inst., Resource Adequacy Gap Assessment 4 (2023), https://perma.cc/M3A5-2WAL; Juan Pablo Carvallo et al., *supra* note 8, at 12.

41 Energy Sys. Integration Grp., New Resource Adequacy Criteria, *supra* note 6, at 22.

making it increasingly appropriate to factor these risks into regions' metrics.[42] When it comes to resource adequacy, customers care not just about how the how severe and common outages will be on average, but also about how bad the worst outages they will experience could be.

One option for assessing these potentially severe consequences is the "value at risk" method. This method defines the selected metric (whether it is focused on frequency, magnitude, or duration), not in terms of its expected value, but in terms of how bad some relatively unlikely but still plausible scenario would be.[43] For example, one of NWPCC's metrics is the maximum shortfall length, framed in terms of what the maximum shortfall length will be at the 97.5th percentile of the distribution, i.e., how long the shortfall would be if there were only a 2.5% chance that the shortfall could be longer.[44] Planners can also frame a metric both in terms of expected value *and* value at risk for the same system: Belgium previously had an LOLE metric that simultaneously required an expected value of less than 3 LOLH and required the 95th percentile of the distribution to be less than 20 LOLH.[45]

An alternative to the value at risk method is the "conditional value at risk" method, in which the metric is framed not in terms of the value at some percentile of the distribution, but in terms of the average value of the distribution beyond the percentile.[46] Policymakers' preference between these two options will depend on their risk tolerance, as the value at risk method will equally weight all tail events while the conditional value at risk method effectively places more weight on extreme events even within the tail.[47]

Values

After picking resource adequacy metrics—whether singular or multi-valued, and based on expected values, tail risks, or a combination of the two—the second step for setting a resource adequacy target is picking the numerical value for the metric(s). In the U.S., the most common value for the LOLE metric is 0.1, i.e., outages should occur no more than 0.1 days per year.[48] Selecting a value inherently involves balancing customers' desire for resource adequacy with the cost of achieving it.[49]

Notwithstanding that tradeoff, U.S. resource adequacy planners have largely set these values without any economic analysis. The origin of the widespread 0.1 LOLE target is somewhat enigmatic, especially relative to its contemporary significance, but it appears to describe the

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42 *See* Juan Pablo Carvallo et al., *supra* note 8, at 29; Elec. Power Rsch. Inst., Resource Adequacy Gap Assessment, *supra* note 40, at 8; Elec. Power Rsch. Inst., Resource Adequacy for a Decarbonized Future, *supra* note 15, at 10; Energy Sys. Integration Grp., New Resource Adequacy Criteria, *supra* note 6, at 26–27.

43 Energy Sys. Integration Grp., New Resource Adequacy Criteria, *supra* note 6, at 26–27.

44 Nw. Power & Conservation Council, Pacific Northwest Power Supply Adequacy Assessment for 2029 12 (2024), https://perma.cc/GZY2-PKY7.

45 Elec. Power Rsch. Inst., Metrics and Criteria, *supra* note 13, at 17.

46 Energy Sys. Integration Grp., New Resource Adequacy Criteria, *supra* note 6, at 26–27; Elec. Power Rsch. Inst., Resource Adequacy for a Decarbonized Future, *supra* note 15, at 10.

47 Energy Sys. Integration Grp., New Resource Adequacy Criteria, *supra* note 6, at 27 fig.8.

48 *Id.* at 8.

49 *Id.* at 38.

level of resource adequacy that happened to exist in the 1940s.[50]

The values used in NERC's reports on regions' long-term resource adequacy similarly seem arbitrary. NERC uses a LOLH metric, labeling regions with greater than 2.4 LOLH as high risk, 0.1-2.4 as elevated risk, and less than 0.1 as normal risk. NERC does not explain the basis for these categories, but they appear to stem this from a common (but widely criticized) hourly conversion of the 0.1 LOLE standard.[51] And NERC's values for the NEUE metric—above 0.002% is high risk, less than 0.002% but above zero is elevated risk, negligible or zero is normal risk—is adapted from Australia's 0.002% NEUE target without considering the different national contexts.[52] Context matters because the U.S. and Australia may vary in terms of how damaging outages would be (e.g., how bad it would be to lose electric heating and cooling in light of the region's temperatures) and how expensive it would be to avert them (e.g., the country-specific cost of building a natural gas peaker plant).

A better practice would be to use economic principles to select a socially efficient resource adequacy target, i.e., to select the value at which the incremental costs of additional resource adequacy equal the incremental benefits of achieving it.[53] Where policymakers do estimate the *costs* of improving resource adequacy, they often turn to the concept of "cost of new entry" (CONE).[54] CONE, expressed in $/MWh, represents the marginal investment and fixed costs of adding additional capacity to the system to achieve a more stringent resource adequacy standard.[55] Historically, planners assumed the marginal resource was a combustion turbine, but today it is more accurate to assume a portfolio of diverse resources.[56] Considering CONE by itself, however, does not accurately capture the social marginal cost of achieving higher levels of resource adequacy, because adding capacity can have follow-on effects like reducing the cost of energy.[57] Accordingly, it is better to estimate total net CONE, which nets out potential system benefits such as reduced energy costs for loads and lower operating costs.[58]

To estimate the *benefits* of additional resource adequacy, planners typically rely on the value of lost load (VOLL).[59] The VOLL represents the societal cost of failing to serve a unit of energy

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50 Kevin Carden et al., Nat'l Regul. Rsch. Inst., The Economics of Resource Adequacy: Why Reserve Margins Are Not Just About Keeping the Lights On 2 (2011), https://perma.cc/LS2F-2EZR; Energy Sys. Integration Grp., New Resource Adequacy Criteria, *supra* note 6, at 6.

51 *See* N. Am. Elec. Reliability Corp., 2024 Long-Term Reliability Assessment 11–12 (2024), https://perma.cc/GJB2-VCZQ; Juan Pablo Carvallo et al., *supra* note 8, at 11 ("The LOLE is typically used as a target setting metric and has historically taken a value of 1 event-day in 10 years, commonly (and incorrectly) interpreted as 2.4 hours per year.").

52 N. Am. Elec. Reliability Corp., 2024 Long-Term Reliability Assessment, *supra* note 51, at 141.

53 Kevin Carden et al., *supra* note 50, at 1; Energy Sys. Integration Grp., New Resource Adequacy Criteria, *supra* note 6, at 38–42; Elec. Power Rsch. Inst., Metrics and Criteria, *supra* note 13, at 35.

54 Energy Sys. Integration Grp., New Resource Adequacy Criteria, *supra* note 6, at 13, 41–42.

55 *Id.* at 42.

56 *Id.*

57 Christoph Graf et al., *Cost-Effective Capacity Markets* 29, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4864513 (posted June 21, 2024); Kevin Carden et al., *supra* note 50, at 8–9.

58 Energy Sys. Integration Grp., New Resource Adequacy Criteria, *supra* note 6, at 42.

59 Elec. Power Rsch. Inst., Metrics and Criteria, *supra* note 13, at 35.

demanded by consumers and is denominated in \$/MWh.[60] Estimates vary significantly across customer classes,[61] but modelers can capture this through averaging.[62] More challenging is capturing how the VOLL varies with an outage's particular characteristics. For relatively short outages, the first hour tends to the most expensive,[63] indicating that many frequent outages could be more socially disruptive than a consolidated one of equal length. Long-duration outages result in damages that increase nonlinearly (food spoilage, jeopardized medical care, and loss of access to safe drinking water).[64] Similarly, the VOLL can increase nonlinearly with magnitude: When the grid operator can no longer manage the situation through rotating outages, the resulting uncontrolled outage is much more damaging.[65] Accordingly, undertaking a cost-benefit analysis that allows VOLL to vary with duration and magnitude would produce a more accurate, cost-benefit-justified resource adequacy target.

Many jurisdictions use some version a cost-benefit analysis when setting their resource adequacy targets. In the European Union, countries solve for their specific LOLH targets by dividing a local CONE value by the local VOLL, which, in 2023, resulted in a range from 1 LOLH (Sweden) to 15 LOLH (Czechia).[66] The United Kingdom uses this same approach.[67] Australia periodically reviews its 0.002% NEUE target to ensure that the implied "value of customer reliability," which is akin the VOLL, is close to its estimated value.[68] Somewhat analogous to these examples, the administratively set, downward-sloping demand curves for capacity markets in U.S. regions like PJM embody the tradeoff between the benefits and costs of additional resource adequacy, because the curves dictate how much regions are willing to pay for each increment of additional capacity given the capacity's incremental benefits.[69] Technically, though, this cost-benefit thinking happens not when *setting* the resource adequacy target, but in deciding whether to under-, over-, or exactly *achieve* an already-determined target.

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60 Jennifer Danis et al., Inst. for Pol'y Integrity, Transmission Planning for the Energy Transition: Rethinking Modeling Approaches 6 (2023), https://perma.cc/5A6L-DJHL.

61 Michael J. Sullivan et al., Ernest Orlando Lawrence Berkeley Nat'l Lab'y, Updated Value of Service Reliability Estimates for Electric Utility Customers in the United States xii, tbl.ES-1 (2015), https://perma.cc/CT53-8WEA.

62 *See* Elec. Power Rsch. Inst., Metrics and Criteria, *supra* note 13, at 35.

63 Michael J. Sullivan et al., *supra* note 61, at xii, tbl.ES-1.

64 Energy Sys. Integration Grp., New Resource Adequacy Criteria, *supra* note 6, at 23 fig.5.

65 *See, e.g.*, Joshua W. Busby et al., *Cascading Risks: Understanding the 2021 Winter Blackout in Texas*, 77 Energy Rsch. & Soc. Sci. (2021); Sergio Castellanos et al., *A Synthesis and Review of Exacerbated Inequities from the February 2021 Winter Storm (Uri) in Texas and the Risks Moving Forward*, 5 Progress in Energy (2023); Hassan Haes Alhelou et al., *A Survey on Power System Blackout and Cascading Events: Research Motivations and Challenges*, 12 Energies 1, 16–17 (2019).

66 Energy Sys. Integration Grp., New Resource Adequacy Criteria, *supra* note 6, at 39 fig.12, 40.

67 *Id.* at 40.

68 Reliability Panel AEMC, Final Report: Reliability Standard and Settings Review 2018 i, 14 (2018), https://perma.cc/TAN8-TPXZ.

69 *PJM Interconnection, L.L.C.*, 117 FERC ¶ 61,331, at P 76 (2006) ("In addition, we agree with PJM that a downward-sloping demand curve provides a better indication of the incremental value of capacity at different capacity levels than the current vertical demand curve. Under a vertical demand curve, capacity above the Installed Reserve Margin is deemed to have no value. Incremental capacity above the Installed Reserve Margin is likely to provide additional reliability benefits, albeit at a declining level. This value is reflected in the positive (but declining) prices in the sloped demand curve to the right of the Installed Reserve Margin, but is not reflected in the current capacity market.").

Step 2: Conduct Resource Adequacy Modeling

Once the policymaker sets a resource adequacy target, a resource adequacy model can predict whether a region is achieving it (and will continue to do so). Traditionally, modeling was limited to examining whether demand would exceed supply during one or a few peak load hours. But the energy transition, combined with extreme weather from climate change, requires planners to rethink prevailing resource adequacy modeling techniques. For most systems, it is now important to model all 8,760 hours of the year, in chronological order, to accurately capture the risk of load shed.

Along with improving models' temporal resolution, it has become important to make more sophisticated assumptions about modeling inputs. In particular, it has become critical to capture how supply and demand have become more dependent on the weather, which, in turn, has become more extreme. In general, a best practice is to use the Monte Carlo method, and run many (on the order of hundreds or thousands) simulations of grid operations, allowing the model to randomly pull from a distribution of possible values for every input.[70] Additionally, best practices exist for curating the data for each input and their interdependencies, such as representing the relationship between the weather and thermal outages.[71]

Temporal Scope

Historically, resource adequacy modeling focused on the likelihood that supply would exceed demand during one (or a few) top demand hours, ignoring the risk of inadequate supply during the rest of the year.[72] This simplification was more plausible when the grid was dominated by dispatchable resources with relatively predicable outputs.[73]

Now, with the increased penetration of wind and solar, periods of resource adequacy risk have shifted from peak demand to "net peak" demand, defined as load minus energy from non-dispatchable resources.[74] In this new reality, the system is most likely to lack sufficient supply when there is high demand unserved by wind or solar. And, just as weather dictates the performance of these variable resources, it also affects outages at thermal generators (e.g., interruptions of natural gas supply) and load (not just by influencing customers' demand, but also by altering

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70 See Inputs, below, for a more detailed description of the Monte Carlo method.

71 For example, cold winter snaps have historically yielded correlated outages of thermal generators. Nick Wintermantel & Nick Simmons, Astrapé Consulting 8 (2022), https://perma.cc/6D7Y-QCZ2. Similarly, extreme hot weather can require both thermal and nuclear units to cease operations, if the unit can no longer use intake water bodies for cooling. *E.g., High French River Temperatures to Hit Nuclear Production Next Week*, Reuters (June 20, 2025), https://www.reuters.com/business/energy/high-french-river-temperatures-hit-nuclear-production-next-week-2025-06-20.

72 Juan Pablo Carvallo et al., *supra* note 8, at 9; N. Am. Elec. Reliability Corp. & Nat'l Acad. of Eng'g, *supra* note 9, at 2.

73 N. Am. Elec. Reliability Corp. & Nat'l Acad. of Eng'g, *supra* note 9, at 2; Juan Pablo Carvallo et al., *supra* note 8, at 1, 27.

74 Jill Moraski et al., Clean Air Task Force, Beyond LCOE: A Systems-Oriented Perspective for Evaluating Electricity Decarbonization Pathways 21 (2025), https://perma.cc/3A39-FQLW.

behind-the-meter generation that typically provides "negative" load).[75] Given this confluence of variables, the best practice is now to examine all 8,760 hours of the year when evaluating the likelihood and expected characteristics of shortfalls.[76]

The increased prevalence of energy-limited resources like battery storage and demand response have similarly complicated more traditional resource adequacy modeling assumptions. Battery storage's ability to avoid a resource adequacy shortfall will depend on its state of charge.[77] For example, a battery could have sufficient energy to prevent a shortfall in the morning and then, if it has no opportunity to recharge, be empty for a second event that same afternoon. Similarly, demand response participants have only a limited willingness to curtail or shift their demand; activating the program degrades its later effectiveness.[78] Accordingly, the best practice for resource adequacy modeling is to not just to consider all 8,760 hours, but to do so sequentially, capturing how storage and demand response used in one hour can affect their subsequent availability.[79]

Inputs

To keep pace with the many uncertainties of contemporary resource adequacy analysis, planners have shifted to probabilistic modeling approaches like the Monte Carlo method.[80] Under this best practice, rather than assessing resource adequacy using specific expected values for each input, the user provides the model with a probability distribution for different inputs, and the model randomly samples from those distributions across hundreds or thousands of simulated scenarios.[81] The model will draw the load for each hour, along with potentially correlated variable generation, thermal resource availability, and transmission outages.[82]

While the Monte Carlo method can yield more accurate resource adequacy estimates than simpler methods, its accuracy depends on the user-provided probability distributions, as well as accurate specification of key interdependencies.[83] For weather data, the current best practice is to use as many years as are available, with hourly resolution and geographic granularity.[84] And, especially when forecasting longer-term resource adequacy, it has become important to account

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75 Juan Pablo Carvallo et al., *supra* note 8, at 27; Standard Authorization Request (SAR) Form, N. Am. Elec. Reliability Corp. at 2, https://perma.cc/Q8AU-9YWW.

76 Juan Pablo Carvallo et al., *supra* note 8, at 27; Standard Authorization Request (SAR) Form, N. Am. Elec. Reliability Corp. at 2, https://perma.cc/Q8AU-9YWW.

77 Energy Sys. Integration Grp., Ensuring Efficient Reliability: New Design Principles for Capacity Accreditation 11 (2023), https://perma.cc/4ETD-JQK2.

78 Elec. Power Rsch. Inst., Resource Adequacy Assessment Tool Guide, *supra* note 31, at 55–56.

79 N. Am. Elec. Reliability Corp. & Nat'l Acad. of Eng'g, *supra* note 9, at 9; Juan Pablo Carvallo et al., *supra* note 8, at 9; Nat'l Ass'n of Regul. Util. Comm'rs, *supra* note 12, at 44.

80 Elec. Power Rsch. Inst., Resource Adequacy Assessment Tool Guide, *supra* note 31, at 9.

81 *Id.* at 10.

82 Juan Pablo Carvallo et al., *supra* note 8, at 13.

83 Elec. Power Rsch. Inst., Resource Adequacy Assessment Tool Guide, *supra* note 31, at 12.

84 Juan Pablo Carvallo et al., *supra* note 8, at 30.

for climate change projections,[85] including the increasing severity of extreme events.[86]

For load, the best practice is to capture its relationship to the weather, and to add a probabilistically determined amount of distributed generation as negative load.[87] Similarly, for generation, the best practice is to derive the relationship between weather and its output, while also accounting for how technological improvements will improve production profiles,[88] along with the possibility of other types of common mode failures.[89]

Other important considerations include realistic assumptions about electricity imports from neighboring regions (e.g., probabilistically modeling neighbors' operations during tight periods),[90] intraregional transmission constraints,[91] the impact of probabilistic intraregional transmission failures,[92] and for when the model decides that an outage has been triggered.[93]

Additionally, for forecasting longer-term resource adequacy, modelers need to make assumptions about which resources retire and come online. These assumptions will have a large bearing on model outputs. For retirements, modelers should include announced retirements while also forecasting unannounced retirements by accounting for likely retirements due to federal and state policy, age-based retirements, and retirements driven by economics.[94] For near-term new generation and storage, modelers should consider projects that have cleared or will soon clear the interconnection queue, along with expected build times.[95] To anticipate later-term resource additions, modelers should consider resource costs and trajectories, regulatory incentives and barriers, and other relevant drivers. As with other inputs, modelers can implement retirements and additions through a distribution of probabilities, rather than strict assumptions about what will occur.[96]

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85 *Id.*

86 Elec. Power Rsch. Inst., Resource Adequacy Gap Assessment, *supra* note 40, at 22.

87 Juan Pablo Carvallo et al., *supra* note 8, at 31.

88 *Id.* at 32.

89 Elec. Power Rsch. Inst., Modeling New and Existing Technologies and System Components in Resource Adequacy 17–18 (2023), https://perma.cc/3CWR-G5LM; Energy Sys. Integration Grp., Ensuring Efficient Reliability, *supra* note 77, at 37–38; *How MISO Utilizes PLEXOS for Enhanced Resource Adequacy*, Energy Exemplar (Oct. 9, 2024), https://perma.cc/VQY8-WAVX.

90 Elec. Power Rsch. Inst., Resource Adequacy Gap Assessment, *supra* note 40, at 31; Adria E. Brooks et al., Grid Strategies LLC, Resource Adequacy Value of Interregional Transmission 31 (2025), https://perma.cc/77FQ-L94V; Sam Hostetter & Derek Stenclik, Analysis of Resource Adequacy Across the Eastern Interconnection 7, 16 (2025), https://perma.cc/LCU4-LBZF.

91 Elec. Power Rsch. Inst., Resource Adequacy Scenario Selection Guide 6, (2024), https://perma.cc/FZ5A-5G2M.

92 Juan Pablo Carvallo et al., *supra* note 8, at 13–14; Elec. Power Rsch. Inst., Resource Adequacy Gap Assessment, *supra* note 40, at 12.

93 Kevin Carden et al., *supra* note 50, at 7.

94 Inst. for Pol'y Integrity, Comments on Policy-Driven Retirements in the Context of Order No. 1920 at 4–6 (Oct. 18, 2024), https://perma.cc/GB4R-X55D.

95 *E.g.*, N. Am. Elec. Reliability Corp., 2024 Long-Term Reliability Assessment, *supra* note 51, at 137.

96 *See* Inst. for Pol'y Integrity, Comments, *supra* note 94, at 7–8.

Step 3: Accreditation

After resource adequacy modeling, the next step is to derive how much credit each resource deserves for its contribution towards the system's resource adequacy—a process called "accreditation." A resource's accreditation, typically expressed as a fraction of its nameplate capacity, captures the resource's estimated availability during the periods when resource adequacy is most strained.[97]

If a planner is interested in determining only whether a system is achieving its resource adequacy target, this step is unnecessary because Step 2 will accomplish that.[98] Nor is this step strictly necessary to determine how the retirement of any particular resource would affect reaching the resource adequacy target; a planner can accomplish that by re-running Step 2 without the resource included.

But, as explained further in Step 4, accreditation is important to calculate a region's *reference reserve margin*, i.e., the resource adequacy cushion that, when obtained, suggests that the system will achieve its resource adequacy target. Accreditation is also valuable because, once a planner calculates the reference margin level, having these accreditation values can allow a policymaker to quickly estimate how the retirement or addition of particular resources would affect maintaining that margin, without needing to re-run the resource adequacy modeling. This kind of analysis could satisfy the EO's call for a protocol to "identify which generation resources within a region are critical to system reliability."[99]

Historically, planners accredited thermal resources at their full nameplate capacity—reflecting an assumption that they could always generate at maximum capacity during the moments of greatest resource adequacy risk—or accredited them based on their nameplate capacity discounted by their average forced outage rate.[100] Variable resources have often been accredited based on their historical performance during peak load hours.[101]

With the energy transition and climate change, however, the best practice is to derive a resource's accreditation from the resource adequacy modeling described in Step 2 using a probabilistic

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97 An Pham et al., Nat'l Renewable Energy Lab'y, Average and Marginal Capacity Credit Values of Renewable Energy and Battery Storage in the United States Power System 5 (2024) (using the equivalent phrase "capacity credit"). These times have become increasingly decoupled with peak load events. Energy Sys. Integration Grp., Ensuring Efficient Reliability, *supra* note 77, at 4.

98 Juan Pablo Carvallo et al., *supra* note 8, at 36 ("Capacity accreditation is not inherent to resource adequacy assessments . . . ."); Energy Sys. Integration Grp., Ensuring Efficient Reliability, *supra* note 77, at vii ("While resource adequacy analysis assesses whether there are enough resources to serve load across the system, capacity accreditation measures the contribution of individual resources toward meeting that goal, both in terms of capacity and energy.").

99 Exec. Order No. 14,262, Strengthening the Reliability and Security of the United States Electric Grid, 90 Fed. Reg. 15521, 15522 (Apr. 14, 2025).

100 Energy Sys. Integration Grp., Ensuring Efficient Reliability, *supra* note 77, at 9, 37; Nat'l Ass'n of Regul. Util. Comm'rs, *supra* note 12, at 5.

101 Juan Pablo Carvallo et al., *supra* note 8, at 36.

method.[102] Probabilistic methods like Effective Load Carrying Capability (ELCC) analyze how slight changes in the modeled resource inputs would affect resource adequacy outcomes.[103] They typically work by adding more of the studied resource to the model, beyond what exists in the base case, and then adding load until the model's base case resource adequacy outcome is restored.[104]

The benefit of probabilistic approaches like ELCC is that, when the modeling inputs from Step 2 are well-curated, the resulting accreditations will more accurately reflect a resource's contribution to resource adequacy during the true risk periods.[105] Additionally, these methods consider a wide range of possible futures, including the possibility of tail events, rather than assuming the future will resemble the past.[106]

The best practice is to apply these ELCC-style methodologies to both variable and thermal resources, storage, and transmission.[107] It is important to treat all resource types equally because capacity accreditation provides a technology-agnostic way of comparing resources' resource adequacy contributions.[108] That purpose is compromised when the resource adequacy value of variable resources is reduced to account for myriad factors affecting their output, without parallel reductions capturing thermal resources' weather dependency and common mode outages.[109] With increased saturation of natural gas resources—which are susceptible to fuel disruptions and extreme weather—it is more important than ever to accurately account for thermal generations' winter risks, especially the risk that a significant amount of thermal capacity will become unavailable at once.[110] Probabilistic methods are ideal for understanding the effect of these risks, including tail risks, in light of the complicated interdependencies of all the factors that dictate the timing of resource adequacy shortfalls.[111]

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102 *Id.* at 36–37; N. Am. Elec. Reliability Corp., Methods to Model and Calculate Capacity Contributions of Variable Generation for Resource Adequacy Planning 24–27 (2011), https://perma.cc/294F-25KU.

103 Elec. Power Rsch. Inst., Resource Adequacy for a Decarbonized Future, *supra* note 15, at 13.

104 *Id.*

105 Energy Sys. Integration Grp., Ensuring Efficient Reliability, *supra* note 77, at 12–14; Elec. Power Rsch. Inst., Resource Adequacy for a Decarbonized Future, *supra* note 15, at 15; Christoph Graf et al., *supra* note 57, at 30. As explained in Step 2 above, these risk periods are becoming harder to predict due to weather's increased influence on supply and demand, and because of increased energy-limited resources in the generation mix.

106 Energy Sys. Integration Grp., Ensuring Efficient Reliability, *supra* note 77, at 14.

107 Juan Pablo Carvallo et al., *supra* note 8, at 37; N. Am. Elec. Reliability Corp., Methods to Model and Calculate Capacity Contributions, *supra* note 102, at 28; Adria E. Brooks et al., *supra* note 90, at 31.

108 Energy Sys. Integration Grp., Ensuring Efficient Reliability, *supra* note 77, at 32, 37.

109 *Id.* at 37–38.

110 Elec. Power Rsch. Inst., Resource Adequacy Gap Assessment, *supra* note 40, at 24; Nat'l Ass'n of Regul. Util. Comm'rs, *supra* note 12, at 40–41; Elec. Power Rsch. Inst., Resource Adequacy Assessment Tool Guide, *supra* note 31, at 30; Elec. Power Rsch. Inst., Resource Adequacy Philosophy, *supra* note 21, at 27.

111 *See* Energy Sys. Integration Grp., Ensuring Efficient Reliability, *supra* note 77, at 11 ("Increasingly, periods of risk are driven by correlation among many components that are often weather-related, including high load, low renewable resource availability, drought, and correlated outages and fuel supply disruptions from the fossil fuel generators."); N. Am. Elec. Reliability Corp., 2024 Long-Term Reliability Assessment, *supra* note 51, at 91 ("If resource performance were to occur at the levels expected during average winter days, the system should be able to serve these high loads. However, resource performance from thermal resources on very cold days, especially natural gas resources, is more likely to be poor. This, coupled with poor performance from solar

Step 4: Calculating the Reference Margin Level and the Reserve Margin

Using Step 2's resource adequacy modeling and Step 3's accreditations, a planner can assess whether a region's fleet would achieve its appropriate reference margin level.[112] The reference margin level typically expresses the amount of accredited capacity that a region would need to achieve its resource adequacy target. The planner will conduct resource adequacy modeling, adding or subtracting additional capacity or load until the system reaches the resource adequacy target. The reference margin level is the sum of the accredited capacity needed to achieve the target.

Once the planner derives the reference margin level (how much total accredited capacity the system requires), it is also possible to answer whether any particular resource is critical to achieving the margin. To check this, the planner would subtract the accredited capacity of the resource in question from the total accredited capacity of the region, and check whether the difference exceeds the reference margin level.

Reference Margin Levels

Historically, reference margin levels were—and, in some places, continue to be—resource adequacy targets in themselves (e.g., a target of accredited capacity that is 15% above peak load).[113] But setting a target framed entirely around the summed accredited capacity, even when informed by years of operating experience at different margin levels, yields a target that does not explicitly aim to achieve any particular outcome.[114] As explained in Step 1, targets are more typically expressed in terms of outcomes: the frequency, duration, and/or magnitude of shortfalls.

Yet the idea of a reference margin level has persisted, as planners often convert their outcome-focused targets into the equivalent reference margin levels.[115] For example, a region might have a 0.1 LOLE target and then determine that the 0.1 LOLE target is achieved when the region's installed capacity has an accreditation of at least 15% above peak load.[116] The same type of translation is possible for targets set using other metrics, like EUE or LOLH.[117]

resources, results in very low total electricity supply and causes loss-of-load events in the ProbA analysis. The winter load-loss events tend to occur during morning and evening demand peaks and coincide with poor thermal performance and poor solar performance.").

112 This is also commonly referred to as a planning reserve margin, connoting that it includes resources that are in reserve and only be dispatched in highly constrained scenarios.

113 Elec. Power Rsch. Inst., Resource Adequacy Philosophy, *supra* note 21, at 24; Energy Sys. Integration Grp., New Resource Adequacy Criteria, *supra* note 6, at 8–9.

114 Elec. Power Rsch. Inst., Resource Adequacy for a Decarbonized Future, *supra* note 15, at 5–6; N. Am. Elec. Reliability Corp., Methods to Model and Calculate Capacity Contributions, *supra* note 102, at 29–30.

115 Energy Sys. Integration Grp., New Resource Adequacy Criteria, *supra* note 6, at 7; Juan Pablo Carvallo et al., *supra* note 8, at 37; N. Am. Elec. Reliability Corp. & Nat'l Acad. of Eng'g, *supra* note 9, at 1.

116 Juan Pablo Carvallo et al., *supra* note 8, at 28.

117 N. Am. Elec. Reliability Corp. & Nat'l Acad. of Eng'g, *supra* note 9, at 15; Juan Pablo Carvallo et al., *supra* note 8, at 29.

Given how resource adequacy risk has evolved, however, the best practice is to derive the reference margin level using the probabilistic resource adequacy modeling from Step 2 (itself conducted in accordance with best practices).[118] Doing this helps to ensure that the margin is calculated to comprehensively reflect year-round risks. Indeed, when resource adequacy risk shifts beyond peak load hours, the amount of accredited capacity necessary to achieve the resource adequacy target can become *lower* than peak load—because resources' accreditations will be based on their outputs during moments of greatest risk, which may be lower than their outputs at peak load.[119] Accordingly, calculating a reference margin level that matches accredited capacity to peak load would overestimate the necessary margin.

While there are multiple plausible ways to use probabilistic resource adequacy modeling to convert the resource adequacy target to a reference margin level, the general approach depends on whether the modeling reveals that the system is exactly achieving the target, underachieving it, or overachieving it. For the rare case in which the system happens to be exactly achieving the resource adequacy target, then the sum of the total accredited capacity installed on the system equals the reference margin level. It can be expressed as MW of accredited capacity, or in reference to some other amount, like a percentage of peak load.[120]

It is more likely, however, that the system is either above or below the resource adequacy target. In these instances, it is common to add or subtract accredited capacity in the model until the system achieves the target.[121] Then, the reference margin level will be the amount of accredited capacity on the modeled system when the target is achieved, again expressed as a quantity of MWs or as a percentage of peak load.

Effect of Particular Resources

Once the reference margin level and accreditation values have been calculated, it becomes possible to test how the exit (or entry) of a particular resource would affect the region's resource adequacy.

An example is useful in understanding how. Imagine that the reference margin level for a region is 25 GW, and its resource mix has 26 GW of accredited capacity. As is, the region would be exceeding its reference margin level by 1 GW. If any resource with an accreditation greater than 1 GW were to exit the grid, that would cause the actual reserve margin to dip below the reference margin level. Because the reference margin level was calculated following Steps 1–3,

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118 Elec. Power Rsch. Inst., Resource Adequacy for a Decarbonized Future, *supra* note 15, at 6, 11; Nat'l Ass'n of Regul. Util. Comm'rs, *supra* note 12, at 95. *See also* N. Am. Elec. Reliability Corp., 2024 Long-Term Reliability Assessment, *supra* note 51, at 11.

119 Energy Sys. Integration Grp., Ensuring Efficient Reliability, *supra* note 77, at 18.

120 *Id.*; N. Am. Elec. Reliability Corp., Methods to Model and Calculate Capacity Contributions, *supra* note 102, at 6.

121 Nat'l Ass'n of Regul. Util. Comm'rs, *supra* note 12, at 95. *See also, e.g.*, MISO, Planning Year 2025–2026 Loss of Load Expectation Study Report 34–35, https://perma.cc/4VV5-4FHU; Western Power Pool, Western Resource Adequacy Program, 102 Forward Showing Reliability Metrics 14 (2024), https://perma.cc/7A6Q-A96E; NYISO, 2024 Reliability Needs Assessment 44 (2024), https://perma.cc/LD5E-RMV9; IESO, Annual Planning Outlook: Resource Adequacy and Energy Assessments Methodology 19 (2024), https://perma.cc/26N7-QC5J.

this dip would indicate that the region can no longer be expected to achieve the resource adequacy target (e.g., 0.1 LOLE) underlying the 25 GW reference margin level. In contrast, any resource with an accredited capacity of 1 GW or less could retire without causing the system to violate its resource adequacy target.

Importantly, this technique for evaluating individual resources' impact works only for relatively small changes to the system, such as the exit or entry of one or a few plants. When larger changes happen in the region's resource composition, the new mix will itself affect resources' accreditation values, because these values inherently depend on the entire fleet composition.[122] To calculate the resource adequacy effect of major changes to the fleet (e.g., the retirement of half of the coal capacity in a region), it would be necessary to re-run the modeling from Step 2 with different inputs.

Having reviewed resource adequacy terms, methodologies, and best practices, Part 2 next uses this understanding to discuss DOE's recent resource adequacy modeling endeavor.

[122] Energy Sys. Integration Grp., Ensuring Efficient Reliability, *supra* note 77, at 30.

Part 2: DOE's *Resource Adequacy Report*

On July 7, 2025, DOE published its *Resource Adequacy Report: Evaluating the Reliability and Security of the United States Electric Grid* (DOE Study), responding to the EO's request for a "uniform methodology to identify at-risk region(s) and guide reliability interventions."[123] The report does not fulfill the EO's separate request for a "a protocol to identify which generation resources within a region are critical to system reliability."[124]

The DOE Study generally examines the resource adequacy of two time periods: today and 2030. According to the study, today, only ERCOT currently fails to achieve DOE's selected resource adequacy targets.[125] Under DOE's assumptions about load growth (including load growth from data centers), resource additions, and retirements, its modeling shows that all transmission planning regions will be resource inadequate in 2030 except ISO-NE and NYISO.[126] When reporting that a region is or would be resource inadequate, DOE sometimes calculates the amount of perfect capacity that could restore the region to resource adequacy.[127]

The DOE Study borrows heavily from NERC's recent Interregional Transfer Capability Study, which analyzed interregional transmission capacity and evaluated how additional interregional capacity could improve resource adequacy.[128] In contrast to NERC's Interregional Transfer Capability Study, the DOE Study does not consider how shortfalls could be mitigated through additional interregional transmission, which can be an alternative to new generation.[129]

Building on Part 1's discussion of how a resource adequacy model's metrics, values, and input assumptions drive its results, this Part evaluates DOE's resource adequacy methodology, including its input choices for load growth, resource additions, and retirements. At each step, it discusses the assumptions embedded in DOE's modeling choices, and reviews why those assumptions provide a weak basis for commanding specific, aging resources to continue serving load at consumers' expense and outside of existing market structures.

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123 U.S. Dep't of Energy, Resource Adequacy Report, *supra* note 2, at vi.

124 Exec. Order No. 14,262, Strengthening the Reliability and Security of the United States Electric Grid, 90 Fed. Reg. 15521, 15521 (Apr. 14, 2025).

125 U.S. Dep't of Energy, Resource Adequacy Report, *supra* note 2, at 7.

126 *Id.* at 8.

127 *Id.* at 5. The exact meaning of these perfect capacity quantities is unclear due to contradictions within the DOE Study. At times, DOE explains that these are the perfect capacity quantities that restore the system to 0.002% while assuming projected retirements. *Id.* At other points, though, DOE states that these quantities assume no retirements. *Id.* at 9.

128 *Id.* at 2; N. Am. Elec. Reliability Corp., Interregional Transfer Capability Study vi, ix (2024), https://perma.cc/U7M3-L56J.

129 *See generally* Adria E. Brooks et al., *supra* note 90.

Resource Adequacy Targets

The DOE Study uses a multi-metric resource adequacy target of 2.4 LOLH and 0.002% normalized unserved energy (NUSE), which is the deterministic equivalent to NEUE.[130] DOE's decision to use a multi-metric target aligns with best practices, and its decision to use LOLH and NEUE together is reasonable. But DOE's value selections for these metrics are problematic.

For LOLH, DOE indicated that it picked 2.4 because that value "translates into one day of lost load in ten years," i.e., the traditional 0.1 LOLE standard.[131] This decision does not align with best practices for two reasons. First, it seeks to unquestioningly replicate the already arbitrary 0.1 LOLE standard (which merely captures the level of resource adequacy that happened to exist in the 1940s).[132] DOE's choice thus does not reflect any meaningful cost-benefit analysis.

Second, DOE's conversion of 0.1 LOLE to 2.4 LOLH is inaccurate.[133] A region with 0.1 LOLE will experience only one day with an outage—of any length—across ten years, which will be 24 hours in only the most extreme case. A region with 2.4 LOLH will have 24 hours of outages across the decade, across any combination of hours. DOE's selection of 2.4 LOLH metric would therefore, in the vast majority of cases, permit a greater duration and frequency of outages.[134] Although this 2.4 LOLH target might indicate that, all else being equal, DOE's methodology is too permissive, DOE's inputs and assumptions likely dominate its analysis and lead DOE to overestimate potential shortfalls.

Turning to NUSE, DOE reports that it selected 0.002% because NERC uses that same value in its long-term resource adequacy assessments.[135] But, as discussed in Part 2, NERC adopted that value from Australia without any consideration of how the costs and benefits of resource adequacy differ in the U.S. context.[136] In contrast, DOE previously used 0.001% in the National Transmission Planning Study.[137]

Moreover, contrary to best practices, for both LOLH and NUSE, DOE imposes the same resource adequacy target across the entire continental United States, without considering regional differences. As noted in Part 1, when it comes to averting outages, regions face different costs and benefits with regard to resource adequacy and thus different socially optimal levels of resource adequacy.

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130 U.S. Dep't of Energy, Resource Adequacy Report, *supra* note 2, at 4, 14 ("This study does not employ common probabilistic industry metrics such as EUE or LOLE due to their reliance on probabilistic modeling. Instead, deterministic equivalents are used.").

131 *Id.* at 4.

132 Kevin Carden et al., *supra* note 50, at 2; Energy Sys. Integration Grp., New Resource Adequacy Criteria, *supra* note 6, at 6.

133 Juan Pablo Carvallo et al., *supra* note 8, at 11 ("The LOLE is typically used as a target setting metric and has historically taken a value of 1 event-day in 10 years, commonly (and incorrectly) interpreted as 2.4 hours per year.").

134 Gord Stephen et al., *supra* note 15, at 3, https://perma.cc/A9DJ-C3B5.

135 U.S. Dep't of Energy, Resource Adequacy Report, *supra* note 2, at 4 n.10.

136 N. Am. Elec. Reliability Corp., 2024 Long-Term Reliability Assessment, *supra* note 51, at 141.

137 U.S. Dep't of Energy, National Transmission Planning Study: Chapter 2: Long-Term U.S. Transmission Planning Scenarios 4, 82 (2024), https://perma.cc/R8RA-23E2.

Finally, at times, the DOE Study appears to struggle with the very meaning of a resource adequacy standard: It questions both PJM's and SPP's resource adequacy, even though each satisfies the metrics DOE's itself picked for its analysis. For PJM in particular, DOE notes that the region currently satisfies both prongs of the resource adequacy metric, but not for the particular weather year that includes Winter Storm Elliot.[138] Seemingly for this reason, DOE concludes that PJM needs 2.4 GW of additional perfect capacity to be resource adequate now.[139] But DOE's resource adequacy targets are, in DOE's own words, "average indicators" to be achieved across all modeled scenarios, not a requirement that must be achieved in each and every scenario.[140] PJM is resource adequate today according to DOE's targets.

Of course, as discussed in Part 1, it may be reasonable for a system planner to set a resource adequacy target that depends, in part, on each region's performance during tail risks. But DOE has not done so here.

Resource Adequacy Modeling

DOE's resource adequacy modeling is inconsistent with best practices. DOE's high-level decisions about the study's overall modeling approach and data input decisions both diverge from the best practices described in Part 1.

Deterministic Model

While the DOE Study appropriately examines all 8,760 hours of the year in chronological order,[141] DOE departs from best practices by using deterministic modeling rather than a probabilistic approach (like the Monte Carlo method), perhaps because of the EO's relatively short timeline.[142] Rather than randomly sampling probability distributions for each input to construct hundreds or thousands of plausible scenarios, DOE "evaluates whether a power system has sufficient resources . . . under a pre-defined set of conditions which correspond to the past few years of real-world events."[143] DOE uses twelve years of data (2007–2013 and 2019–2023) for weather, load, and generation.[144]

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138 U.S. Dep't of Energy, Resource Adequacy Report, *supra* note 2, at 7, 9, 27.

139 *Id.* at 9.

140 *Id.* at 7.

141 *See* U.S. Dep't of Energy, Resource Adequacy Report, *supra* note 2, at 10, 12–13.

142 *Id.* at 2. The EO provided an extremely accelerated deadline of 90-days for DOE to produce results. *See* Exec. Order No. 14,262, Strengthening the Reliability and Security of the United States Electric Grid, 90 Fed. Reg. 15521, 15521 (Apr. 14, 2025). The DOE Study itself provides additional evidence for this conclusion, with its acknowledgement that "[p]robabilistic approaches incorporate data and advanced modeling techniques to represent uncertainty" but "require more computing power." U.S. Dep't of Energy, Resource Adequacy Report, *supra* note 2, at 2 n.2.

143 U.S. Dep't of Energy, Resource Adequacy Report, *supra* note 2, at 10.

144 *Id.* at 11. While DOE uses historical data for the years 2019–2023, it uses "synthetic" data for 2007–2013. *Id.* "The synthetic approach used historical weather data to estimate load and resource availability if those same weather conditions were to occur again in the future. The historic approach used historical measured data for load, as well as wind and solar resource output, from recent years and scaled it appropriately to represent future conditions." N. Am. Elec. Reliability Corp., Interregional Transfer Capability Study, *supra* note 128, at 74.

By examining whether regions would be resource adequate only under conditions that resemble the recent past, DOE's study does not sufficiently account for uncertainty. Indeed, in the Interregional Transfer Capability Study, from which DOE borrowed, NERC itself explains the limitations of this same deterministic approach and same data: Some regions may look resource adequate because they happened to do well during the twelve years of data, while others look resource inadequate but be unlikely to perform as poorly in the future.[145] Addressing the deterministic vs. probabilistic distinction, NERC cautions that, because a "[p]robabilistic resource adequacy analysis was not conducted[,] . . . . the [Interregional Transfer Capability Study] should not be considered a North American resource adequacy assessment."[146]

DOE grounds its use of a deterministic model in "transparency" and an interest in "model[ing] detailed historic system conditions."[147] Neither is a reason to step away from best practices: DOE could document a probabilistic approach in a transparent way, and relying on a small sample of historic years is less accurate than a probabilistic approach. Given the high stakes associated with resource adequacy planning, any future DOE resource adequacy assessment should prioritize accuracy over expediency.

Outage Threshold

Another modeling choice is the threshold for determining when a shortfall event has occurred. DOE projects a shortfall if "the remaining capacity after transmission and demand response falls below the 6 percent or 3 percent needed for error forecasting and ancillary services, depending on the scenario."[148] This choice means that DOE identifies shortfall events in the hours when, after exhausting imports and demand response, a region's excess energy falls below 6% or 3% of hourly load—but it is not clear when DOE uses 6% versus 3%. DOE states that more details are available in a section of the study's appendix entitled "Outputs," but, as of publication of this report, no such section appears to be available.[149]

NERC uses a 3% threshold in its Interregional Transfer Capability Study, using 6% only in a sensitivity analysis.[150] According to NERC, the 3% value "was established based on an evaluation of average reserve requirements where load shed may occur" and reflects how "a Balancing Authority will continue to hold reserves even if involuntary load shed is underway to safeguard the system from cascading or widespread outages."[151] It is impossible to tell from the DOE Study when DOE used 6% versus 3%, but the fact that DOE listed 6% first may suggest that 6% was not limited to a sensitivity analysis.

If DOE's model instead identifies shortage events even when a region still has 6% of load available as spare capacity, then DOE's results depart from NERC's practice and may overstate

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145 *Id.* at 138.
146 *Id.* at 4.
147 U.S. Dep't of Energy, Resource Adequacy Report, *supra* note 2, at 2 n.2.
148 *Id.* at 12.
149 *Id.*
150 N. Am. Elec. Reliability Corp., Interregional Transfer Capability Study, *supra* note 128, at 84.
151 *Id.* at 91 n.90, 85.

the extent of expected outages. In NERC's Interregional Transfer Capability Study, this change alone *significantly* altered the existence and extent of predicted outages in many regions, such as producing a 690% increase in the size of the maximum outage event in SERC-Florida.[152] Under the 6% sensitivity, NERC also recommended 58 GW of transmission additions to address resource adequacy instead of 35 GW, illustrating the sizable influence of shifting this assumption from 3% to 6%.[153]

Inputs

DOE's prediction that most regions will experience resource inadequacy by 2030 depends heavily on its assumptions about resource additions, retirements, load growth, and interregional imports. In each instance, DOE makes choices that raise significant questions about the validity of its modeling results.

Additions

DOE assumes that the only resource additions by 2030 will be those NERC currently categorizes as "Tier 1."[154] To be a Tier 1 resource, the resource must have achieved at least one milestone from a NERC list that signifies the unit is "very mature in the development pipeline."[155] This assumption is very conservative: The study itself admits that "[t]his results in minimal capacity additions beyond 2026."[156] In other words, DOE's finding of widespread resource inadequacy in 2030 rests on the assumption that very little will be built from 2027–2030. For example, NERC identifies 17,047 MW of Tier 1 resources slated to come online in PJM throughout 2025 and 2026, but only 1,108 MW from 2027–2030.[157]

The drop-off in Tier 1 resources after 2026 is not due to a shortage of projects in development, but rather because NERC currently classifies much of the capacity that will come online between 2027 and 2030 as "Tier 2."[158] Tier 2 resources occupy a wide range of positions in the interconnection queue, from the earliest stages (e.g., those having completed a feasibility study) to the very end

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152 *Id.* at 105 tbl.8.4

153 *Id.*

154 U.S. Dep't of Energy, Resource Adequacy Report, *supra* note 2, at 4.

155 *Id.* at A-5. More specifically, the resource must have finished construction, be under construction, have a signed/approved interconnection service agreement, have a signed/approved power purchase agreement, have a signed/approved construction service agreement, have a signed/approved wholesale market participant agreement, or (if it is in the footprint of a vertically integrated utility) be included in an integrated resource plan or under a regulatory environment that mandates a resource adequacy requirement. N. Am. Elec. Reliability Corp., 2024 Long-Term Reliability Assessment, *supra* note 51, at 137.

156 U.S. Dep't of Energy, Resource Adequacy Report, *supra* note 2, at A-5. *See also* Ric O'Connell, *GridLab Analysis: Department of Energy Resource Adequacy Report*, GridLab (July 11, 2025), https://perma.cc/B3GC-T7GA ("The report assumes just 22 GW of new 'firm' capacity (narrowly defined as gas) is added which is based on NERC LTRA 'Tier 1' – projects with a very high likelihood of success. The report assumes no projects are built post 2026, which is not realistic for a report forecasting to 2030. A more reasonable assumption for capacity additions is the EIA 860 released in June, which has 35 GW of gas additions, and another 53 GW of batteries – **88 GW of firm additions by 2030.**") (bolded text in original).

157 N. Am. Elec. Reliability Corp., 2024 Long-Term Reliability Assessment, *supra* note 51, at 89.

158 *See id.* at 137.

of the process (e.g., those that have requested an interconnection service agreement).[159]

In recent years, the median project has taken approximately 55 months (4.58 years) to go from entering the queue to commercial operation.[160] Extrapolating from this historical trend reveals that a large number of Tier 2 resources will likely be operating by 2030. DOE should have anticipated some of them in the 2030 resource mix, and it departed from best practices by excluding all Tier 2 resources.[161] To do this forecasting accurately, DOE should have examined historical statistics of interconnection queue time by region, resource type, and resource size, along with differentiated queue withdrawal rates, estimating Tier 2 resource additions for each region.[162]

And applying historical statistics for time spent in a region's interconnection queue would itself be a conservative methodology for DOE to use, as FERC Order 2023 and related regional interconnection queue updates are set to speed up waiting times.[163] For example, the DOE Study found a 10.5 GW resource adequacy deficit for PJM in 2030 but failed to consider the almost 12 GW of nameplate capacity—mostly gas—that PJM is fast-tracking through its Reliability Resource Initiative.[164] PJM expects that 90% of this capacity will be online by 2030.[165] PJM is simultaneously pursuing other resource adequacy interventions, including a FERC-approved change to surplus interconnection service (to allow new generators to come online faster by taking advantage of underutilized transmission capacity),[166] and a FERC-pending proposal to expedite the process to transfer capacity interconnection rights from retiring generators to new resources.[167]

Finally, recently "retired" resources represent another potential source of fast additions.[168]

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159 *Id.*

160 Joseph Rand et al., Lawrence Berkeley Nat'l Lab'y, Queued Up: 2024 Edition: Characteristics of Power Plants Seeking Transmission Interconnection As of the End of 2023 41 (2024), https://perma.cc/5DE4-XNK6.

161 *See* N. Am. Elec. Reliability Corp., 2024 Long-Term Reliability Assessment, *supra* note 51, at 23 fig.2.

162 *See generally* Joseph Rand et al., Lawrence Berkeley Nat'l Lab'y, Queued Up: 2024 Edition: Characteristics of Power Plants Seeking Transmission Interconnection As of the End of 2023 (2024), https://perma.cc/5DE4-XNK6.

163 *Improvements to Generator Interconnection Procedures and Agreements*, 184 FERC ¶ 61,054 (2023).

164 Donnie Bielak, PJM, Reliability Resource Initiative: Additional Summaries 2 (2025), https://perma.cc/Y2AB-3CEM; Donnie Bielak, PJM, Reliability Resource Initiative: Results Summary 6 (2025), https://perma.cc/MYQ8-Y53G. *See also* Ric O'Connell, *supra* note 156 ("The study ignores both utility plans for meeting increased load growth and how markets will respond. In fact, markets and utilities have already responded with plans to add new capacity and fast track new resources. These include PJM's Reliability Resource Initiative, which plans on adding 11 GW of new firm resources by 2030. SPP and MISO both have proposals at FERC (called ERAS) that will likely add another 30 GW of firm resources. Those three regional efforts alone would add roughly twice what the DOE assumed for the entire nation.").

165 *PJM Chooses 51 Generation Resource Projects To Address Near-Term Electricity Demand Growth*, PJM Inside Lines (May 2, 2025), https://perma.cc/8EW2-G2XZ.

166 *PJM Interconnection, L.L.C.*, 190 FERC ¶ 61,083 (2025).

167 Proposed Revisions to PJM's Open Access Transmission Tariff, PJM, Docket No. ER25-____-000 (Jan. 31, 2025), https://perma.cc/J9T3-MCGL.

168 *E.g.*, Francisco "A.J." Camacho & Daviel Schulman, *Mothballed Nuclear Plant on Brink of Revival*, EnergyWire (July 15, 2025), https://subscriber.politicopro.com/article/eenews/2025/07/15/mothablled-nuclear-plant-on-brink-of-revival-00445239.

Retirements

DOE's assumption that 104 GW of nameplate capacity will retire by 2030 likely overestimates retirements.[169] This number includes both "confirmed" retirements—resources that have notified their system operators of their impending retirements and begun the retirement process—and "announced" retirements—which are publicly stated but not officially noticed.[170] These data come from NERC's Long-Term Reliability Assessment 2024 model.[171] In turn, NERC receives reports of confirmed retirements directly from each region, while announced retirements come from multiple sources, including Energy Information Agency Form 860 data, trade press, and utility integrated resource plans.[172]

These data likely overestimate retirements.[173] First, the economics of energy production have changed since 2024. The combined effect of new demand from data centers and the elimination of federal tax credits for new wind and solar resources improves the financial outlook for thermal resources.[174] Second, federal environmental regulations that would have required thermal resources to make investments reducing their pollution or else retire were projected to result in significant retirements before 2030.[175] But the Trump Administration has begun to rescind or reexamine these rules, which could cause resources to delay their retirements.[176]

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169 *See* U.S. Dep't of Energy, Resource Adequacy Report, *supra* note 2, at 5.

170 *Id.* at 12.

171 *Id.*

172 N. Am. Elec. Reliability Corp., 2024 Long-Term Reliability Assessment, *supra* note 51, at 28 n.19.

173 Ric O'Connell, *supra* note 156 ("The report assumed 104 GW of retirements by 2030, with 3/4 of this coal and 1/4 gas. But the most recent data from the U.S. Energy Information Administration released in June (the EIA 860) has just **half** of this capacity retiring. In the report, the DOE assumed these 50 GW of likely retirements, but included another 50 GW of *announced* retirements, inconsistent with their assumption around capacity additions. Most likely many plants will choose not to retire due to the changing regulatory and economic landscape, driven by the administration's policies.") (bolded text in original).

174 Aurora Energy Research, Impact of Reform to Clean Energy Tax Credits on Investment, Jobs and Consumer Bills 10 (2025), https://perma.cc/VHR5-UEGP; ("Most demand is made up through more production from existing plants (35%), meaning these plants are running for longer hours and/or at higher output levels. Some projects that retired in the base case scenario see longer lifetimes in Tax Credit Removal scenario because of more favorable economics due to clean energy decline (making up 17% of lost generation), and the rest is made up for by new build thermal plants (29%)."); Energy Innovation Pol'y & Tech. LLC, Federal Clean Energy Tax Credits Make Energy More Affordable—A Meta-Analysis (2025) https://perma.cc/QH2E-7PLL ("The research is clear—repealing technology-neutral energy tax credits would raise annual energy bills up to $140–$220 per year nationally, and over $500 per year in some states."). *See also* Ethan Howland, *PJM Capacity Prices Hit Record Highs, Sending Build Signal to Generators*, Utility Dive (July 31, 2024), https://perma.cc/UC6U-QHYT ("Prices in the PJM Interconnection's latest capacity auction hit record highs, which should provide incentives for power plant companies to build new generating resources and keep existing ones operating, according to the grid operator."); Ethan Howland, *MISO Summer Capacity Prices Jump to $666.50/MW-day as Power Supplies Shrink*, Utility Dive (Apr. 29, 2025), https://perma.cc/A6S5-4A4U ("Capacity prices for the upcoming summer season jumped to $666.50/MW-day from $30/MW-day last year across the Midcontinent Independent System Operator's footprint—driven in part by declining surplus capacity, according to the results of its latest planning resource auction released Monday.").

175 PJM, Energy Transition in PJM: Resource Retirements, Replacements & Risks 8 (2023), https://perma.cc/7J3A-FL8U.

176 *EPA Launches Biggest Deregulatory Action in U.S. History*, EPA (Mar. 12, 2025), https://perma.cc/55MN-2SUB.

Load

The DOE Study assumes 50 GW of growth in data center load and 51 GW of additional non-data center load.[177] DOE does not account for the possibility that this data center load could be flexible, even as one study suggests that 76 GW of additional data center load could be accommodated today if it could be curtailed only 0.25% of the time, and relevant corporations have confirmed flexibility potential.[178]

In June 2025, Texas enacted a law that allows ERCOT to curtail certain new loads over 75 MW during emergencies.[179] DOE assumes an additional 8 GW of data center load in ERCOT by 2030 and finds a reliability shortfall of 10.5 GW (which is likely an overestimate for the reasons discussed elsewhere in this Part, including how this 10.5 GW brings ERCOT to 0.0008% NUSE instead of 0.002% NUSE).[180] Accordingly, Texas's new law could go a long way towards avoiding the DOE-identified resource adequacy problem. Other regions like PJM are considering strategies to soften the resource adequacy impact of data centers, including ways to better encourage their participation in demand response programs.[181] DOE should have considered the possibility that some of the projected data center load would be flexible, especially in ERCOT.

Additionally, how DOE chose to distribute the projected 50 GW of data center load across regions is questionable. The DOE Study explains it used state-level growth ratios to perform this allocation.[182] But it is unlikely that all the computing demand needs to be processed close to load centers (i.e., proportional to a region's current electric load). In fact, some computing demand

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177 U.S. Dep't of Energy, Resource Adequacy Report, *supra* note 2, at 2–3.

178 Tyler H. Norris et al., Nicholas Inst. for Energy, Env't & Sustainability, Rethinking Load Growth: Assessing the Potential for Integration of Large Flexible Loads in US Power Systems 2 (2025), https://perma.cc/6693-3HZU; *EPRI Launches Initiative to Enhance Data Center Flexibility and Grid Reliability,* Elec. Power Rsch. Inst. (Oct. 29, 2024), https://perma.cc/75LY-PSP5 ("Led by EPRI, DCFlex will coordinate real-world demonstrations of flexibility in a variety of existing and planned data centers and electricity markets, creating reference architectures and providing shared learnings to enable broader adoption of flexible operations that benefit all electricity consumers. Specifically, DCFlex will establish five to ten flexibility hubs, demonstrating innovative data center and power supplier strategies that enable operational and deployment flexibility, streamline grid integration, and transition backup power solutions to grid assets. Demonstration deployment will begin in the first half of 2025, and testing could run through 2027."); Anuja Ratnayake, *Unlocking AI Potential with Data Center Flexibility*, EnergyCentral (June 12, 2025), https://www.energycentral.com/intelligent-utility/post/unlocking-ai-potential-with-data-center-flexibility-PtPoXIAuRMzs5Ff ("In a preliminary test of the depth of computational flexibility possible in an AI data center, the Arizona demonstration site experienced some early success. It showcased the potential for an AI data center to provide grid relief during a peak system event—such as a hot summer day with high power demand—by temporarily and precisely ramping down its electricity consumption without compromising data center performance."). *See also* Ric O'Connell, *supra* note 156 ("It does not address flexibility of this load, however, which was recently demonstrated in a report from Duke University to allow for 100 GW of large load additions today with minimal grid impact.").

179 S.B. No. 6 § 4, 89th Legislature (Tex. 2025) (to be enacted at Tex. Util. Code § 39.170), https://perma.cc/4Z7H-9XKQ; Brian Martucci, *Texas Law Gives Grid Operator Power to Disconnect Data Centers During Crisis*, Utility Dive (June 25, 2025), https://perma.cc/SYK3-V4XX; Waleed Aslam & Robin Hytowitz, Elec. Power Rsch. Inst., Texas SB6 Explained: Addressing Large Load Impacts (2025), https://perma.cc/QD8S-3M5C.

180 U.S. Dep't of Energy, Resource Adequacy Report, *supra* note 2, at 40.

181 Tim Horger, PJM, Large Load Additions Workshop 28 (2025), https://perma.cc/4HSN-CW4W.

182 U.S. Dep't of Energy, Resource Adequacy Report, *supra* note 2, at 17.

may be served from other regions if it will be cheaper to integrate the data center elsewhere. Given the scale of DOE's projected data center load compared to the relatively small resource adequacy shortfalls that the study identifies, these assumptions may have made the difference between whether a region achieves DOE's resource adequacy targets.[183]

Interregional Imports

The DOE Study states that it has adopted the interregional transfer capacities from NERC's Interregional Transfer Capability Study but also notes that transfers are "available up to the *minimum* total transfer capacity."[184] NERC's values describe the available transmission capacity between regions, including sub-regions of larger transmission-constrained regions like PJM, SPP, and MISO.[185] NERC provides a summer value and a winter value for each interregional interface and for each direction of flow.[186]

It is unclear what DOE means when it says that transfers are allowed up to their "minimum." If DOE picked the lesser of the summer and winter transfer capacities and applied that annually, doing so would inaccurately underestimate the amount of interregional transfer capacity.

Accreditation & Reference Margin Levels

While DOE issued its study in response to the EO's request for a "methodology to identify current and anticipated regions with reserve margins below acceptable thresholds,"[187] it does so through resource adequacy modeling, rather than by calculating accreditation values and using them to derive reference margin levels. As explained in Part 2, properly performed resource adequacy modeling is sufficient to determine whether a region is resource adequate.

In contrast, accreditations and reference margin levels are useful in combination to quickly evaluate how the loss or addition of a particular resource would affect whether a region achieves its resource adequacy target without re-running regional resource adequacy modeling. They are thus more applicable to EO Section 3(c)'s separate command to establish a "protocol to identify which generation resources within a region are critical to system reliability.[188] Thus far, DOE has not released a study implementing this provision. DOE may eventually supplement the DOE Study with additional accreditation and reference margin level analyses.

Nonetheless, while the DOE Study does not calculate accreditation values or reference margin levels, it does undertake the related exercise of evaluating how much additional perfect capacity would bring certain regions to resource adequacy.[189] (DOE calculated these perfect capacity

183 *See id.* at 9, 17.
184 *Id.* at 18, 12, A-1 (emphasis added).
185 N. Am. Elec. Reliability Corp., Interregional Transfer Capability Study, *supra* note 128, at 7, 9–10.
186 *Id.* at 17–24.
187 Exec. Order No. 14,262, Strengthening the Reliability and Security of the United States Electric Grid, 90 Fed. Reg. 15521, 15521 (Apr. 14, 2025).
188 *Id.* at 15522.
189 U.S. Dep't of Energy, Resource Adequacy Report, *supra* note 2, at 5.

additions for only four of the seven regions that failed to achieve 0.002% NUSE in 2030: PJM, SPP, SERC, and ERCOT—not MISO, CAISO, or West Non-CAISO.[190]) More specifically, DOE asked how much perfect capacity it would take for regions to achieve the 0.002% NUSE resource adequacy standard in 2030.[191]

If, in the future, DOE were to also calculate the accredited capacity of a region's fleet and then add the solved-for perfect capacity, it could calculate the region's reference margin level. Similarly, although DOE did not perform any perfect capacity analysis for regions that achieve 0.002% NUSE, DOE could subtract perfect capacity from the accredited capacity of the regional fleets to solve for reference margin levels. Once DOE calculates a region's reference margin, it could look at the accredited capacity of any resource to evaluate how its exit or entry would affect achievement of the reference margin level.

In calculating any reference margin levels, DOE should attend to all prongs of its multi-metric resource adequacy target. Here, DOE Study's perfect capacity exercise focuses exclusively on 0.002% NUSE. But if a region achieves 0.002% NUSE and not 2.4 LOLH, it would be resource inadequate according to the terms of this DOE Study. Separate reference margin levels may apply to each prong, and a region would be resource adequate only when the highest reference margin level is achieved.

Additionally, going forward, DOE should better prioritize accuracy in any new studies with respect to calculating a region's need for perfect capacity additions/subtractions. Critically, while DOE asserted that it added the amount of perfect capacity needed to bring each region to 0.002% NUSE, the 10.5 GW that it added to PJM actually brought it to 0.0003% NUSE; the 500 MW added to SERC brought it to 0.0002% NUSE; the 1.5 GW added to SPP brought it to 0.0002% NUSE; and the 10.5 GW added to ERCOT brought it to 0.0008% NUSE.[192] All of these values indicate significantly greater resource adequacy that 0.002% NUSE, sometimes by an order of magnitude.

While DOE explains that its perfect capacity additions were done "by hand with a limited number of iterations (15)" such that the capacity additions "should not be considered the minimum possible capacity to accomplish these targets," that approach does not appear to explain why DOE brought these regions far beyond the 0.002% NUSE target.[193] Rather, this explanation suggests that, for each of the regions, DOE could have achieved these high levels of resource adequacy using less perfect capacity than it added. Accordingly, to achieve 0.002% NUSE, DOE likely could have added much less perfect capacity than it did. Identifying resources that meet these overestimated capacity levels could result in overpaying to achieve a different resource adequacy target than selected.

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190 *Id.* at 20–42.
191 Id. at 5.
192 *Id.* at 27, 30, 32, 40.
193 *Id.* at 19.

Part 3: Next Steps

Having reviewed best practices for resource adequacy modeling and the DOE Study, this final section discusses next steps for U.S. resource adequacy policy considering the diverse actors in this space and their respective authorities.

The Federal Power Act (FPA) gives FERC, and FERC's designated "Electric Reliability Organization" (ERO), NERC, jurisdiction over and responsibility for ensuring "[e]lectric reliability" for the "bulk power system," i.e., the high-voltage transmission network and the energy that flows through it.[194] More specifically, the FPA requires NERC to "establish and enforce reliability standards," which take effect after FERC approves them.[195] Importantly, FERC can also order NERC to submit reliability standards on particular topics and can independently enforce reliability standards.[196] NERC's six regional entities (comprising the continental U.S. plus Canada) also have authority to propose reliability standards to NERC.[197]

Achieving reliability arguably requires that bulk power system be resource adequate because, as FERC explains, "[i]f resources cannot meet load, or are insufficient to provide a reserve margin above expected load, then instability, uncontrolled separation or cascading failures can result from the unanticipated loss of a system element."[198] But, although reliable grid operations depend in part on resource adequacy, the FPA does not put FERC and NERC in the driver's seat for this aspect of reliability. FERC lacks authority to *directly achieve* resource adequacy because it cannot order construction of electric generation facilities.[199] Rather, states retain their traditional authority "over facilities used for the generation of electric energy,"[200] which some exercise by requiring utilities to submit integrated resource plans describing their plans to meet future demand.[201] Other states fully or partially delegate this authority to the Regional Transmission Organizations (RTOs) that operate their regional grids, e.g., by relying on the RTOs to achieve resource adequacy through capacity markets.[202]

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194 16 U.S.C. § 824o(a).

195 16 U.S.C. § 824o(a)(2), (d). FERC does not have authority to create reliability standards directly. *See id.* at § 824o(d).

196 16 U.S.C. § 824o(d)(5), (e)(3).

197 16 U.S.C. § 824o(e)(4); *ERO Enterprise; Regional Entities,* N. Am. Elec. Reliability Corp., https://perma.cc/EQ9E-BXJW.

198 *Planning Resource Adequacy Assessment Reliability Standard*, 134 FERC ¶ 61,212, at P 25 (2011). Reliable operation also encompasses a second aspect of reliability not implicated by the EO—operational reliability—which refers to "ability of the electric system to withstand sudden disturbances while avoiding cascading blackouts." Burçin Ünel & Avi Zevin, *supra* note 5, at 11.

199 16 U.S.C. § 824o(a)(3). The FPA also prohibits FERC from directing utilities to build transmission, and states retain primary siting authority for transmission. *See id.*; *Building for the Future Through Electric Regional Transmission Planning and Cost Allocation*, 187 FERC ¶ 61,068 at P258 (2024).

200 16 U.S.C. § 824(b)(1).

201 Coley Girouard, *Understanding IRPs: How Utilities Plan for the Future*, Advanced Energy United (Aug. 11, 2015), https://perma.cc/5MDN-26QY.

202 Dena Adler & Jennifer Danis, Inst. for Pol'y Integrity, Reducing Pollution Without Sacrificing Reliability 14–16

But FERC and NERC can still play an important role for resource adequacy: FERC and NERC, through reliability standards, can ensure grid operators are proactively conducting appropriate resource adequacy assessments and analyses. In Order No. 747, FERC approved a regional reliability standard for conducting resource adequacy assessments.[203] This enforceable reliability standard requires, at a minimum, that entities within the applicable footprint conduct an annual analysis of what reserve margin would be necessary to ensure no more than 0.1 LOLE, using specific inputs like the median load forecast and accounting for important factors like fuel availability.[204] This reliability standard does not require regions to actually achieve 0.1 LOLE, only to conduct the mandated analysis.[205] A future reliability standard could require regions to instead adopt best practices comparable to those described in Part 1.

Turning to DOE, the DOE Reorganization Act put emergency grid reliability powers in DOE's hands for addressing certain emergency situations. Section 202(c) of the FPA empowers DOE, upon the finding of an emergency, to require, among any things, "such generation . . . as in its judgment will best meet the emergency and serve the public interest."[206] Section 202(c) and its implementing regulations, along with the common understanding of the word "emergency," indicate that this authority is limited to unexpected events.[207] Additionally, DOE's implementing regulations indicate that a shortage caused by a resource's poor economics would not qualify as an emergency, unless the shortage is "imminent."[208] When promulgating these regulations, DOE noted that:

> DOE does not intend these regulations to replace prudent utility planning and system expansion. This intent has been reinforced in the final rule by expanding the "Definition of Emergency" to indicate that, while a utility may rely upon these regulations for assistance during a period of unexpected inadequate supply of electricity, it must solve long-term problems itself.[209]

(2024), https://perma.cc/G6J3-9ZL4. These capacity markets are FERC-jurisdictional, and operate according to rules contained in tariffs filed with FERC, specifying particulars like demand curve type, resource accreditation, and formulas for calculating reserve margins. *See, e.g.*, *PJM Interconnection, L.L.C.*, 191 FERC ¶ 61,066, at P 8 (2025).

203 *Planning Resource Adequacy Assessment Reliability Standard*, 134 FERC ¶ 61,212, at P 1 (2011).

204 Standard BAL-502-RF-03, N. Am. Elec. Reliability Corp., https://perma.cc/9MB5-5H67.

205 *Planning Resource Adequacy Assessment Reliability Standard*, 134 FERC ¶ 61,212, at P 33 (2011) ("The only obligations under BAL-502-RFC-02 are analysis and documentation requirements. This regional Reliability Standard does not specify how the results of the analysis required in this standard are to be used. For example, BAL-502-RFC-02 does not require state commissions to use the resource assessment analysis resulting from BAL-502-RFC-02 for economic decisions regarding resource adequacy requirements.").

206 16 U.S.C. § 824a(c)(1).

207 16 U.S.C. § 824a(c)(1); 10 C.F.R. § 205.371; Burçin Ünel & Avi Zevin, *supra* note 5, at 37–38.

208 10 C.F.R. § 205.371 ("Situations where a shortage of electric energy is projected due solely to the failure of parties to agree to terms, conditions or other economic factors relating to service, generally will not be considered as emergencies unless the inability to supply electric service is imminent.").

209 Emergency Interconnection of Electric Facilities and the Transfer of Electricity to Alleviate an Emergency Shortage of Electric Power, 46 Fed. Reg. 39984, 39985 (Aug. 6, 1981) (codified at 10 C.F.R. pt. 205).

In a departure from prior practice,[210] DOE has now used this authority to prevent thermal plants from retiring.[211] These orders have already drawn challenges from multiple parties, including from a politically diverse coalition of utility regulators.[212] Parties argue, among other points, that the plants' retirements were not unexpected; that the regions would be resource adequate even without the plants; and that DOE's newly asserted authority over resource adequacy triggers the major questions doctrine.[213]

Having nationally set best practices and principles for determining resource adequacy in the face of rapidly escalating demand and the clean energy transition could be useful if they are well vetted and use appropriate legal constructs. The FPA in conjunction with the DOE Reorganization Act suggest that the appropriate course of action for the federal government to support resource adequacy would be for NERC and FERC to set national resource adequacy *planning* standards (not a national resource adequacy target) to help regions guard against potential resource adequacy risks that might materialize in the future, instead of allowing DOE to stretch its 202(c) emergency authorities.

The DOE study itself cautions, "the resource adequacy analysis that was performed in support of this study could benefit greatly from the in-depth engineering assessments which occur at the regional and utility level."[214] Despite DOE's press statement asserting that the study's methodology can help guide "guide Federal reliability interventions,"[215] presumably to address the EO's mandate that DOE find a way to routinize further 202(c) emergency orders,[216] the study reports a fundamental limitation for doing so: It does not find any near-term reliability risk from current levels of resource adequacy.

The study itself states that, "one of the key takeaways from this study process is the underscored 'call to action' for strengthened regional engagement, collaboration, and robust data exchange which are critical to addressing the urgency of reliability and security concerns that underpin our

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210 Cong. Rsch. Serv., Federal Power Act: The Department of Energy's Emergency Authority 4 (updated 2025), https://perma.cc/AU8L-VR55.

211 *DOE's Use of Federal Power Act Emergency Authority*, U.S. Dep't of Energy, https://perma.cc/DPB9-6B74.

212 Ethan Howland, *Groups Appeal DOE "Emergency" Order Keeping Michigan Plan Online*, Utility Dive (updated June 20, 2025), https://perma.cc/P9YZ-FNLK; Ethan Howland, *Eight Utility Regulators Challenge DOE Order Keeping Michigan Coal Plant* Open, Utility Dive (June 26, 2025), https://perma.cc/55FE-2RYR; Motion to Intervene and Request for Rehearing of the Joint Consumer Advocates, Dep't of Energy Order No. 202-25-4 (June 27, 2025), https://perma.cc/PD74-6CNC.

213 Request for Rehearing by Michigan Attorney General Dana Nessel, Dep't of Energy Order No. 202-25-3, at 27–31, 35–36 (June 18, 2025); Motion to Intervene and Request for Rehearing and Stay of Sierra Club et al., Dep't of Energy Order No. 202-25-3, at 29–36 (June 18, 2025), https://perma.cc/4MYN-MHZC; Petition to Intervene and Request for Rehearing of the Organization of MISO States, Inc., Dep't of Energy Order No. 202-25-3, at 2–6 (June 23, 2025), https://perma.cc/D3PG-56H2. *See also* Brief of the Institute for Policy Integrity at 4–13, V.O.S. Selections, Inc. v. Trump, No. 25-00066-GSK-TMR-JAR (Ct. Int'l Trade May 8, 2025), https://perma.cc/5Z4T-8CHG (describing the major questions doctrine).

214 U.S. Dep't of Energy, Resource Adequacy Report, *supra* note 2, at i.

215 *Department of Energy Releases Report on Evaluating U.S. Grid Reliability and Security*, U.S. Dep't of Energy (July 7, 2025), https://perma.cc/942V-L7VB.

216 *See* Exec. Order No. 14,262, Strengthening the Reliability and Security of the United States Electric Grid, 90 Fed. Reg. 15521, 15521–22 (Apr. 14, 2025).

collective economic and national security." And it presents a pathway to fulfill DOE's discussion of what will happen next: "The report will inform joint planning processes and help integrate modern metrics into national reliability assessment methodology."[217] FERC directing NERC to develop national resource adequacy planning metrics, protocols, and input parameters would fit neatly within this call to action.

[217] *Reliability*, U.S. Dep't of Energy, https://perma.cc/RSW3-FNN2.

Conclusion

Given ever-increasing demand for electricity—proliferation of data centers for artificial intelligence; electrification of heating, cooling, and transportation; and pushes to onshore manufacturing—maintaining resource adequacy is essential. But there is no single answer to the question of when a system is resource adequate, or even what constitutes resource adequacy. Still, as this report explains, there are better and worse ways to pick resource adequacy targets, to evaluate whether the system has achieved and will maintain them, and to understand the resource adequacy impacts of a particular resource entering or exiting the system. The DOE Study uses some of these best practices but not other important ones, undermining the accuracy of its predictions. The DOE Study will hopefully focus additional attention on resource adequacy and speed up federal and state endeavors already underway to bolster resource adequacy. It does not, however, provide a rational basis for DOE to take action now to thwart ongoing plans for uneconomic, aging resources to retire. DOE's next best step would be to request that FERC open a proceeding eliciting proposals for nationwide, enforceable reliability standards mandating not a national resource adequacy target, but best practices for grid planners to conduct resource adequacy assessments. Additionally, states and grid operators should continue working together to expedite resource permitting, better forecast what hyperscaler demand will materialize, engage in holistic transmission planning, and speed interconnection queues—all of which will support future resource adequacy.

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BEFORE THE UNITED STATES DEPARTMENT OF ENERGY

Federal Power Act Section 202(c) Emergency Order: Midcontinent Independent System Operator (MISO)	)))))	Order No. 202-25-9

Exhibit to
Motion to Intervene and Request for Rehearing and Stay of
Public Interest Organizations

Exhibit 114

2025 EPA MI Haze SIP Approval

PRA. This proposed action does not establish any new information collection requirements.

D. Regulatory Flexibility Act (RFA)

This rule is not subject to notice and comment requirements because the Agency has invoked the APA ''good cause'' exemption under 5 U.S.C. 553(b)(B).

E. Unfunded Mandates Reform Act (UMRA)

This action does not contain an unfunded mandate as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. The action imposes no enforceable duty on any state, local or Tribal governments or the private sector.

F. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

G. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This action does not have Tribal implications as specified in Executive Order 13175. This action withdraws two rules impacting the State of Texas. No Tribe is subject to the requirement to submit an implementation plan under the findings of inadequacy relevant to this action. Thus, Executive Order 13175 does not apply to this action.

H. Executive Order: 13045 Protection of Children From Environmental Health & Safety Risks

The EPA interprets Executive Order 13045 as applying only to those regulatory actions that concern health or safety risks that the EPA has reason to believe may disproportionately affect children, per the definition of ''covered regulatory action'' in section 2–202 of the Executive Order. This action is not subject to Executive Order 13045 because it withdraws two rules that are no longer applicable to the State of Texas and does not directly or disproportionately affect children

I. Executive Order 13211: Actions That Significantly Affect Energy Supply, Distribution or Use

This action is not subject to Executive Order 13211, because it is not a significant regulatory action under Executive Order 12866.

J. National Technology Transfer and Advancement Act

This proposed action does not involve technical standards.

This action is subject to the Congressional Review Act (CRA), and the EPA will submit a rule report to each House of the Congress and to the Comptroller General of the United States. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2).

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by November 4, 2025. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements (see section 307(b)(2)).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Reporting and recordkeeping requirements, Sulfur oxides.

Dated: August 26, 2025.

Walter Mason,

Regional Administrator, Region 6.

For the reasons stated in the preamble, the Environmental Protection Agency amends 40 CFR part 52 as follows:

PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

■ 1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

Subpart SS—Texas

§ 52.2277 [Amended]

■ 2. Amend § 52.2277 by removing and reserving paragraph (c).

[FR Doc. 2025–17029 Filed 9–4–25; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R05–OAR–2021–0577; FRL–12588–02–R5]

Air Plan Approval; Michigan; Second Period Regional Haze Plan

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA) is approving the Regional Haze State Implementation Plan (SIP) revision submitted by the Michigan Department of Environment, Great Lakes, and Energy (EGLE) on August 23, 2021, and supplemented on July 24, 2025, as satisfying applicable requirements under the Clean Air Act (CAA) and EPA's Regional Haze Rule (RHR) for the program's second implementation period. EGLE's SIP submission addresses the requirement that States must periodically revise their long-term strategies for making reasonable progress towards the national goal of preventing any future, and remedying any existing, anthropogenic impairment of visibility, including regional haze, in mandatory Class I Federal areas. The SIP submission also addresses other applicable requirements for the second implementation period of the regional haze program. EPA is taking this action pursuant to sections 110 and 169A of the CAA.

DATES: This final rule is effective on October 6, 2025.

ADDRESSES: EPA has established a docket for this action under Docket ID No. EPA–R05–OAR–2021–0577. All documents in the docket are listed on the *https://www.regulations.gov* website. Although listed in the index, some information is not publicly available, *i.e.,* Confidential Business Information (CBI), Proprietary Business Information (PBI), or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the internet and will be publicly available only in hard copy form. Publicly available docket materials are available either through *https://www.regulations.gov* or at the Environmental Protection Agency, Region 5, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604. This facility is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding Federal holidays. We recommend that you telephone Matt

Rau, at (312) 886–6524 before visiting the Region 5 office.

FOR FURTHER INFORMATION CONTACT: Matt Rau, Air and Radiation Division (AR–18J), Environmental Protection Agency, Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604, (312) 886–6524, *rau.matthew@epa.gov.*

SUPPLEMENTARY INFORMATION:

Throughout this document whenever "we," "us," or "our" is used, we mean EPA.

This supplementary information section is arranged as follows:

I. Background
II. Public Comment Process
III. Summary of Public Comments and EPA's Responses
IV. What action is EPA taking?
V. Statutory and Executive Order Reviews

I. Background

On August 23, 2021, EGLE submitted a revision to its SIP to address regional haze requirements for the second implementation period. On July 24, 2025, EGLE submitted a supplement (Supplement) to its original submission providing expanded source-specific analyses and emissions updates. EGLE made this SIP submission to satisfy the requirements of the CAA's regional haze program pursuant to CAA sections 169A and 169B and 40 CFR 51.308.

EPA proposed to approve EGLE's submission into the SIP on June 18, 2025. A full background, the specifics of the Michigan regional haze plan, and EPA's evaluation of the plan are given in the proposed rule and will not be restated in this rule. See 90 FR 25975 (June 18, 2025). EGLE submitted the Supplement in draft for parallel processing on April 3, 2025. Detail on parallel processing is provided in the proposed rule.

In this final action, EPA is affirming that it is now the Agency's policy that, where visibility conditions for a Class I Federal area impacted by a State are below the uniform rate of progress (URP) and the State has considered the four statutory factors, the State will have presumptively demonstrated reasonable progress for the second planning period for that area. EPA acknowledges that this final action reflects a change in policy as to how the URP should be used in the evaluation of regional haze second planning period SIPs but believes that this policy better aligns with the purpose of the statute and RHR: achieving "reasonable" progress towards natural visibility.

As described in the approval of West Virginia's regional haze plan (90 FR 29737, July 7, 2025), EPA has discretion and authority to change its policy. In *FCC* v. *Fox Television Stations, Inc.,* the U.S. Supreme Court plainly stated that an agency is free to change a prior policy and "need not demonstrate . . . that the reasons for the new policy are better than the reasons for the old one; it suffices that the new policy is permissible under the statute, that there are good reasons for it, and that the agency believes it to be better." 566 U.S. 502, 515 (2009) (referencing Motor *Vehicle Mfrs. Ass'n of United States, Inc.* v. *State Farm Mut. Auto. Ins. Co.,* 463 U.S. 29 (1983)). *See also Perez* v. *Mortgage Bankers Assn.,* 135 S. Ct. 1199 (2015).

The Class I areas impacted by emissions from Michigan sources are all below the 2028 URP, and EGLE's SIP submission demonstrated that the State took into consideration the four reasonable progress factors listed in CAA 169A(g)(1) [1] with respect to an adequate number of emissions sources. Thus, EPA determines that EGLE's SIP revision is fully approvable.

In developing the regulations required by CAA section 169A(b), EPA established the concept of the URP for each Class I area. The URP is determined by drawing a straight line from the measured 2000 to 2004 baseline conditions (in deciviews) for the 20 percent most impaired days at each Class I area to the estimated natural conditions (in deciviews) for the 20 percent most impaired days in 2064. From this calculation, a URP value can be calculated for each year between 2004 and 2064. EPA developed the URP to address the diverse concerns of Eastern and Western States and account for the varying levels of visibility impairment in Class I areas around the country while ensuring an equitable approach nationwide. For each Class I area, States must calculate the URP for the end of each planning period (*e.g.,* in 2028 for the second planning period).[2] 40 CFR 51.308(f)(1)(vi)(A). States may also adjust the URP to account for impacts from anthropogenic sources outside the United States and/or impacts from certain wildland prescribed fires. 40 CFR 51.308(f)(1)(vi)(B). Then, for each Class I area, States must compare the reasonable progress goal (RPG) for the 20 percent most impaired days to the URP for the end of the planning period. If the RPG is above the URP, then an additional "robust demonstration" requirement is triggered for each State that contributes to that Class I area. 40 CFR 51.308(f)(3)(ii)(B).

In the 2017 RHR Revisions, EPA addressed the role of the URP as it relates to a State's development of its second planning period SIP. 82 FR 3078 (January 10, 2017). Specifically, in response to comments suggesting that the URP should be considered a "safe harbor" that relieve States of any obligation to consider the four statutory factors, EPA explained that the URP was not intended to be such a safe harbor. *Id.* at 3099. "Some commenters stated a desire for corresponding rule text dealing with situations where RPGs are equal to ("on") or better than ("below") the URP or glidepath. Several commenters stated that the URP or glidepath should be a 'safe harbor,' opining that States should be permitted to analyze whether projected visibility conditions for the end of the implementation period will be on or below the glidepath based on on-the-books or on-the-way control measures, and that in such cases a four-factor analysis should not be required." *Id.*

Other comments indicated a similar approach, such as "a somewhat narrower entrance to a 'safe harbor,' by suggesting that if current visibility conditions are already below the end-of-planning-period point on the URP line, a four-factor analysis should not be required." *Id.* EPA stated in its response that we did not agree with either of these recommendations. "The CAA requires that each SIP revision contain long-term strategies for making reasonable progress, and that in determining reasonable progress States must consider the four statutory factors. Treating the URP as a safe harbor would be inconsistent with the statutory requirement that States assess the potential to make further reasonable progress towards natural visibility goal in every implementation period." *Id.*

Importantly, EPA's recently adopted policy does not make the URP a safe harbor. The policy merely creates a presumption that the State's second planning period SIP is making reasonable progress for a Class I Federal Area if the State has taken into consideration the four statutory factors

[1] The four statutory factors required to be taken into consideration in determining reasonable progress are: the costs of compliance, the time necessary for compliance, and the energy and non-air quality environmental impacts of compliance, and the remaining useful life of any existing source subject to such requirements. CAA section 169(g)(1).

[2] We note that RPGs are a regulatory construct that we developed to address the statutory mandate in CAA section 169B(e)(1), which required our regulations to include "criteria for measuring 'reasonable progress' toward the national goal." Under 40 CFR 51.308(f)(3)(ii), RPGs measure the progress that is projected to be achieved by the control measures a State has determined are necessary to make reasonable progress. Consistent with the 1999 RHR, the RPGs are unenforceable, though they create a benchmark that allows for analytical comparisons to the URP and mid-implementation-period course corrections if necessary. 82 FR 3091–92 (January 10, 2017).

of 169A(g)(1) and that area is below the URP. This is consistent with the CAA and RHR.

II. Public Comment Process

The public comment period on EPA's proposed approval ended on July 18, 2025. During this period, EPA received three sets of comments. The Power Generators Air Coalition (PGen) and the Mid-Atlantic/Northeast Visibility Union (MANEVU) each submitted a set of comments. Four conservation groups, including the National Parks Conservation Association, the Sierra Club, the Environmental Law and Policy Center, and the Coalition to Protect America's National Parks, submitted a third set of comments and are collectively referred to as ''the Conservation Groups'' throughout this document.

III. Summary of Public Comments and EPA's Responses

EPA has included all comments in the rulemaking docket for this action. The August 25, 2025, Response to Comments (RTC) document is included in the docket for this rulemaking under Docket ID No. EPA–R05–OAR–2021–0577 and provides full and detailed responses to all significant comments that further explain the basis for our final action.

EPA received comments on the proposed rule that covered several topics including, but not limited to, EPA's URP policy,[3] an ''Ask'' from a regional planning organization, source selection, analysis of effectively controlled sources, incorporation of measures into the SIP, four-factor analyses,[4] and the impact on local communities.

PGen's comments, summarized as Comment 1 in the RTC document, are supportive of the proposed approval and EPA's URP policy. EPA concurs with the supportive comments and acknowledges the comment on the URP policy.

MANEVU commented on EPA's URP policy and its ''Asks'' about the DTE- St. Clair Power Plant. MANEVU's comments and EPA's responses can be found in the RTC document at Comment 2a and 2b and Response 2a and 2b. EPA disagrees with MANEVU's comment as the URP policy is consistent with the statute for the reasons as detailed in Response 2a in the RTC document. EPA also disagrees with MANEVU's comment regarding DTE-St. Clair Power Plant since EGLE fully responded to MANEVU's ''Asks'' [5] in the Supplement, section 2.2. See Response 2b in the RTC document for more detail on how EGLE addressed the MANEVU ''Asks.''

The Conservation Groups commented on the economic, public health, and environmental benefits of reducing air pollution through Michigan's regional haze SIP. EPA notes, as explained in Response 3 of the RTC, that EGLE has made progress in reducing visibility-impairing pollution during the second implementation period as demonstrated in the monitoring data collected at the impacted Class I areas. EPA also notes that regional haze program is designed to address visibility concerns and that the National Ambient Air Quality Standards, required by the CAA, protect human health.

The Conservation Groups argue that EGLE's source selection process is arbitrary and capricious since EGLE did not select sources that the Conservation Groups previously recommended for selection. As explained in Response 4 of the RTC, EPA disagrees with the comment. EGLE addressed the requirements of 40 CFR 51.308(f)(2)(i) in its source selection process. EGLE provided information on its source selection process and the results in section 3.2.2 of its Supplement.

The Conservation Groups commented that EPA's proposal to approve EGLE's determination that no additional measures were necessary to make reasonable progress in the second implementation period is arbitrary and capricious. The Conservation Groups claim that EPA has no system to determine how current control technologies or past and potential ongoing emission reductions should be considered when evaluating whether additional measures are necessary. The Conservation Groups also assert that EPA failed to provide adequate public notice because the proposed approval did not provide a metric or an analysis to determine that no additional measures are necessary. See Comment and Response 5 in the RTC document for further details. EPA disagrees with the comment. EPA fully evaluated the information EGLE provided for the sources with current effective control technologies, as well as emission reductions achieved in the second implementation period. In the proposed rule, EPA articulated its rationale in determining how to weigh current effective control measures and emission reductions to approve EGLE's determination that no additional measures are necessary for reasonable progress, citing references to effective control demonstrations in section 3(f) of the 2019 Regional Haze Guidance. See 90 FR 25975 (June 18, 2025). The record in the docket for this rulemaking contains evidence of enforceable emission reductions, as well as EPA's evaluation of emissions reductions in the Technical Support Document (TSD) accompanying the proposed rule. Therefore, EPA disagrees with the Conservation Groups that consideration of these emission reductions was improper in EGLE's determination that no additional measures are necessary to make reasonable progress in the second implementation period. EPA's proposed approval was not arbitrary or capricious because of a lack of a metric and analysis and, as such, does not constitute a failure of public notice.

The Conservation Groups claim that EGLE inappropriately failed to perform four-factor analyses for seven facilities that were improperly determined to be effectively controlled. The Conservation Groups state that the plain language of the CAA and the RHR does not allow EGLE or EPA to eliminate sources from analysis based on assertions that the sources are effectively controlled, but rather requires that States consider the four statutory factors. The Conservation Groups comment that the seven facilities are not effectively controlled and that there are likely cost-effective controls available for each of the sources that would further reduce emissions. The Conservation Groups also commented on two sources that EGLE did not select for analysis, saying EPA did not address or analyze EGLE's decision. As explained in Response 6 of the RTC document, EPA disagrees with this comment. Neither CAA section 169A(b)(2), CAA section 169A(g)(1), nor the RHR prohibit States from forgoing a four-factor analysis based on a source being effectively controlled. As outlined in the 2017 RHR, ''the EPA has consistently interpreted the CAA to provide States with the flexibility to conduct four-factor analyses for specific sources, groups of sources or even entire source categories, depending on State policy preferences and the specific circumstances of each State.'' 82 FR 3088, January 10, 2017. EPA acknowledges that a State may reasonably decide not to select sources

[3] A change in Agency policy was introduced in the approval of West Virginia's regional haze plan. See the April 18, 2025, (90 FR 16478) proposed rule) and the July 7, 2025, (90 FR 29737) final rule.

[4] Under CAA 169A(g)(1), the four statutory factors are the costs of compliance, the time necessary for compliance, the energy and non-air quality environmental impacts of compliance, and the remaining useful life of any potentially affected sources. See also 40 CFR 51.308(f)(2)(i). An evaluation of potential control options for sources of visibility impairing pollutants based on applying the four statutory factors in CAA section 169A(g)(1) is referred to as a ''four-factor'' analysis.

[5] The August 25, 2017, and July 27, 2018, MANEVU ''Asks''.

that have recently installed effective controls. EPA notes that if a source's emissions are already well-controlled, it is unlikely that further cost-effective reductions are available. In this case, EGLE evaluated the seven units, including permit limitations, control efficiencies, regulations, actual emissions, past emission trends, and projected 2028 emissions to demonstrate that the existing level of control makes it reasonable to conclude that the controls are effective and that a full four-factor analysis would likely result in the conclusion that no further controls are necessary. EPA also disagrees with the comment regarding two sources EGLE did not select for evaluation of potential additional control measures. EGLE properly addressed the requirements of 40 CFR 51.308(f)(2)(i) in the source selection process it used.

The Conservation Groups commented that EGLE's analyses of existing effective controls are flawed and that EPA's TSD for the proposed rule does not support EPA's proposed approval of EGLE's Regional Haze SIP revision. The Conservation Groups also commented that EGLE did not perform four-factor analyses for specific sources. Detail on the general existing effective controls is given in Comment and Response 6 in the RTC document. Comment and Response 6a in the RTC document provide details on the TSD comment. More detail on the comments regarding the specific sources EGLE did not perform a four-factor analysis on and the responses are found in the RTC document under Comment and Response 6b: J. H. Campbell, Units 1, 2, and 3; Comment and Response 6c: Consumers Energy—Dan E. Karn Units 3 and 4; Comment and Response 6d: Tilden Mining Company Kiln 1; Comment and Response 6e: Belle River Power Plant Units 1 and 2; Comment and Response 6f: St. Mary's Cement—Charlevoix Plant; Comment and Response 6g: Holcim US Lafarge Alpena Plant; and Comment and Response 6h: Neenah Paper Michigan-Munising. EPA disagrees with the assertion that CAA sections 169A(b)(2), (g)(1), or the RHR require every source exceeding the source selection threshold to require a four-factor analysis. EPA disagrees with the commentors on what those portions of the CAA and the RHR require of selected sources. Specifically, States have the flexibility to determine that a source is effectively controlled. As detailed in Response 6 in the RTC document, CAA section 169A(b)(2) does not discuss which sources, types of sources, or groups of sources must be considered to determine reasonable progress. Reasonable progress is addressed in CAA section 169A(g)(1) in that States must ''take into consideration'' the four statutory factors. Similarly, the RHR does not give minimum source selection criteria. EPA disagrees that the TSD does not provide support for the proposed approval. As explained in the TSD and RTC, EPA's approval of the Michigan regional haze plan is based on the consideration of all evidence provided in EGLE's submission and additional information provided in the docket. EPA also disagrees with the notion that a four-factor analysis is required for each of the specific units that were identified by the Conservations Groups. In summary, EPA finds that EGLE reasonably concluded that the units are effectively controlled and that conducting a four-factor analysis would not likely result in additional measures being needed for reasonable progress.

The Conservation Groups also commented with concerns that two specific sources, Midland Cogeneration Venture and EES Coke Battery, were not selected for evaluation of possible additional control measures. Further information regarding these two sources is found in the RTC at Response 6i: Midland Cogeneration Venture and Response 6j: EES Coke Battery. EPA disagrees that Midland Cogeneration Venture and EES Coke Battery should have been selected for analysis and EPA finds that EGLE's source selection process was appropriate and well supported. EGLE sufficiently captured the State's sources with the greatest impact on visibility impairment.

The Conservation Groups expressed concerns about EPA's review of EGLE's four-factor analyses, arguing that EPA did not provide an evaluation of EGLE's analyses or a conclusion as to whether the State's determinations complied with the CAA and RHR. The Conservation Groups also made specific comments on the four-factor analyses for three facilities. A summary of this comment and EPA's full response can be found as Comment and Response 7 in the RTC document. The comments and responses on specific four-factor analyses for Tilden Mining Company LLC Kiln 2, Billerud—Escanaba LLC Power Boiler 11, and Graymont Western Lime Kiln 1 are detailed in the RTC document as Comments and Responses 7a, 7b, and 7c, respectively. EPA disagrees with this comment. As explained in the proposed rule, EPA carefully evaluated EGLE's entire SIP submission, including the Supplement, the comments from the FLM consultation and the State's responses to comments received during the State comment period. EGLE worked directly with the sources in evaluating potential measures and concluded that additional control measures are not necessary for reasonable progress during the second implementation period based on the four factors. EPA disagrees with the comments on these specific facilities. EGLE considered the four statutory factors, current effective control technologies, emission reductions that have already occurred during the second implementation period, and the projected 2028 visibility conditions for Class I areas influenced by emissions from Michigan sources. EPA therefore finds that EGLE reasonably concluded that no additional measures are necessary to make reasonable progress in the second implementation period for any of the three identified sources.

The Conservation Groups commented that EPA did not analyze the impact of haze-forming pollution from Michigan sources on the communities that surround these facilities. See Comment and Response 8 in the RTC document. The RHR does not require an analysis of health impacts. Instead, the National Ambient Air Quality Standards are established to separately protect human health.

The Conservation Groups argue that EPA's URP Policy violates the CAA's visibility provisions. The Conservation Groups comment on specific portions of the CAA and cite several cases. Those comments and EPA's responses are detailed in Comments and Responses 9, 9a, 9b, 9c, and 9d in the RTC document. EPA disagrees with the comments. EPA's URP policy is consistent with the CAA. Pursuant to CAA 169A(a)(4), Congress explicitly delegated the authority to EPA to promulgate regulations regarding reasonable progress towards meeting the national goal. In determining the measures necessary to make reasonable progress, Congress mandated ''tak[ing] into consideration the cost of compliance, the time necessary for compliance, and the energy and non-air quality environmental impacts of compliance, and the remaining useful life of any existing source subject to such requirement.'' CAA 169A(g)(1). However, nothing in the statute defines what it means ''to take into consideration'' the four factors under CAA 169A(g)(1). Under this statutory framework, Congress has empowered EPA to give meaning to this statutory phrase. *Loper Bright Enters.* v. *Raimondo,* 603 U.S. 369, 395 (2024). The phrase ''to take into consideration'' implies a broader process not limited to the four statutory factors, allowing

States to weigh other factors, like visibility, to support their determination of whether additional measures are necessary to make reasonable progress at Class I areas. This follows from the fact that reasonable progress requires the improvement of visibility. CAA 169A(b)(2). As such, visibility improvement must be a fundamental part of determining the extent of progress that is considered reasonable. Being below the URP does not relieve a State of its obligations under the CAA and the RHR to make reasonable progress.

The Conservation Groups state that the URP policy is inconsistent with the RHR. The Conservation Groups comment that, ''EPA cannot square its new policy with the RHR.'' See Comment 10 and Response 10 in the RTC document for further detail. EPA disagrees with this comment. EPA's URP policy is consistent with the RHR. To meet the reasonable progress goal requirements under 40 CFR 51.308(f)(3), the reasonable progress goals established by a State must reflect the measures it deemed to be necessary to make reasonable progress within the applicable implementation period and must be projected to be achieved by the end of the applicable implementation period. Therefore, it is sufficient under 40 CFR 51.308(f)(3) that this SIP establishes reasonable progress goals that reflect visibility conditions that are projected to be achieved by the end of the second planning period.

The Conservation Groups commented that the URP policy violates the procedural requirements of the CAA. The Conservation Groups comment that the URP policy unlawfully departs from national policy, that the URP policy is inconsistent with actions across EPA Regions, that the URP policy effectively revises the RHR, and that EPA must determine if its URP policy has a nationwide scope. The comments and responses on each point are presented in detail as Comments and Responses 11a, 11b, 11c, and 11d in the RTC document. EPA disagrees with each comment. As for the comment noting that the URP policy was announced in a regional action and that this change violates the CAA requirements that SIP actions be consistent with national policy, EPA disagrees that our Regional Consistency regulations at 40 CFR part 56, and 40 CFR 56.5(b) in particular, are relevant to this action. The Conservation Groups mention other regional haze actions in commenting that the URP policy is inconsistent with actions across EPA Regions. EPA disagrees that its change in policy means that all of its actions on second planning period regional haze SIPs that pre-date its proposed approval of the West Virginia second planning period submittal are inconsistent with the URP policy. See 90 FR 29737 (July 7, 2025). The policy is consistent with EPA's long-standing position that the URP is not a ''safe harbor.'' EPA's policy establishes a presumption that the reasonable progress requirements of the CAA and the RHR are met if the State has taken into consideration the four statutory factors and the visibility impairment for each Class I Area is projected to be below the URP (*i.e.,* the ''glidepath'') at the end of the applicable planning period. Unlike treating the URP as a ''safe harbor,'' the policy does not exempt or allow a State to evade the requirements of the CAA or the RHR. Treating the URP as a ''safe harbor'' would exempt States from considering the four statutory factors and would allow States to exclude measures necessary for reasonable progress from the SIP. EPA disagrees with the comment that it must determine if the URP policy has a nationwide scope. EPA notes that this action applies to a SIP submission from one State—Michigan. EPA also states that the comment that EPA ''must'' publish a finding that this action is ''based on a determination of nationwide scope [or] effect'' is also unsupported and incorrect. Under CAA section 307(b)(1), 42 U.S.C. 7607(b)(1), a petition for review of an action that is ''locally or regionally applicable may be filed only in the United States Court of Appeals for the appropriate circuit,'' with one exception: if (i) the action ''is based on a determination of nationwide scope or effect'' and (ii) ''if in taking such action the Administrator finds and publishes that such action is based on such a determination,'' then any petition for review must be filed in the D.C. Circuit. The Administrator has not made and published a finding that this action is based on a determination of nationwide scope or effect. Accordingly, any petition for review of this action must be filed in the United States Court of Appeals for the appropriate regional circuit.

The Conservation Groups commented that EGLE's SIP Revision and Supplement do not meet EPA's URP policy for presumptive approval. The Conservation Groups commented on EGLE relying on the IMPROVE Network to satisfy the monitoring requirement of the RHR and EGLE's URP adjustments, as well as on EGLE not addressing additional Class I areas. As explained in Responses 12a, 12b, and 12c of the RTC document, EPA disagrees with these comments. The IMPROVE network was in operation up to the time EGLE submitted its SIP revision. EGLE continues to support and participate in the IMPROVE network. Concerns regarding the future funding of the IMPROVE network are speculative, out of the control of EGLE, and beyond the scope of the basis for our action on EGLE's second planning period SIP. As for the URP adjustments, the RHR at 40 CFR 51.308(f)(1) also provides the option for States to propose adjustments to the URP line for a Class I area to account for visibility impacts from anthropogenic sources outside the United States and the impacts from wildland prescribed fires that were conducted for certain, specified objectives. EGLE provided this analysis for its Class I areas. Under 40 CFR 51.308(f)(2)(ii)(B), States must consider and address the emissions reduction measures identified by other States for their sources as being necessary to make reasonable progress in the mandatory out-of-state Class I area. EGLE analyzed the Class I areas impacted by Michigan emissions using Lake Michigan Air Directors Consortium (LADCO) modeling, as the comment noted. EGLE identified 13 out-of-state Class I areas in addition to its own two Class I areas where Michigan sources contribute to total visibility impairment above 1 percent. EGLE also identified two additional Class I areas within the LADCO States, Voyageurs National Park and Boundary Waters Canoe Area Wilderness in Minnesota, even though Michigan sources contribute below 1 percent to total visibility impairment in each of those areas. The comment included several additional Class I areas. EGLE found no additional measures to be necessary to make reasonable progress in the out-of-state Class I areas. The contribution from Michigan sources would be even smaller at more distant Class I areas so there is no reason to expect that EGLE would find additional measures necessary to make reasonable progress for those distant Class I areas. EPA concludes that EGLE properly considered Michigan sources that are reasonably anticipated to contribute to visibility impairment Class I areas.

IV. What action is EPA taking?

EPA is approving the Regional Haze SIP revision submitted by EGLE on August 23, 2021, and supplemented on July 24, 2025, as satisfying applicable requirements under the CAA and RHR for the program's second implementation period.

V. Statutory and Executive Order Reviews

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the CAA and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve State choices, provided that they meet the criteria of the CAA. Accordingly, this action merely approves State law as meeting Federal requirements and does not impose additional requirements beyond those imposed by State law. For that reason, this action:

- Is not a significant regulatory action subject to review by the Office of Management and Budget under Executive Order 12866 (58 FR 51735, October 4, 1993);
- Is not subject to Executive Order 14192 (90 FR 9065, February 6, 2025) because SIP actions are exempt from review under Executive Order 12866;
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4);
- Does not have federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not subject to Executive Order 13045 (62 FR 19885, April 23, 1997) because it approves a State program;
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001); and
- Is not subject to requirements of section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA.

In addition, the SIP is not approved to apply on any Indian reservation land or in any other area where EPA or an Indian Tribe has demonstrated that a Tribe has jurisdiction. In those areas of Indian country, the rule does not have Tribal implications and will not impose substantial direct costs on Tribal governments or preempt Tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

This action is subject to the Congressional Review Act, and EPA will submit a rule report to each House of the Congress and to the Comptroller General of the United States. This action is not a "major rule" as defined by 5 U.S.C. 804(2).

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by November 4, 2025. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements. (See section 307(b)(2).)

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen oxides, Reporting and recordkeeping requirements, Sulfur oxides.

Dated: August 26, 2025.

Anne Vogel,

Regional Administrator, Region 5.

For the reasons stated in the preamble, title 40 CFR part 52 is amended as follows:

PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

■ 1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

■ 2. In § 52.1170, the table in paragraph (e) is amended by adding an entry for "Regional Haze Plan for the Second Implementation Plan" after the entry for "Regional Haze Progress Report" to read as follows:

§ 52.1170 Identification of plan.

* * * * *

(e) * * *

EPA—APPROVED MICHIGAN NONREGULATORY AND QUASI-REGULATORY PROVISIONS

Name of nonregulatory SIP provision	Applicable geographic or nonattainment area	State submittal date	EPA approval date	Comments
* *	*	*	* *	*
Regional Haze Plan for the Second Implementation Plan.	Statewide	8/23/2021, 7/24/2025.	9/5/2025, 90 FR [Insert **Federal Register** page where the document begins].	Full Approval.
* *	*	*	* *	*

* * * * *

[FR Doc. 2025–17096 Filed 9–4–25; 8:45 am]

BILLING CODE 6560–50–P

BEFORE THE UNITED STATES DEPARTMENT OF ENERGY

Federal Power Act Section 202(c)	)	
Emergency Order: Midcontinent	)	Order No. 202-25-9
Independent System Operator	)	
(MISO)	)	
	)	

Exhibit to
Motion to Intervene and Request for Rehearing and Stay of
Public Interest Organizations

Exhibit 115

Mar. 2025 MI SIP Supplement

STATE OF MICHIGAN
DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY
EXECUTIVE OFFICE

GRETCHEN WHITMER
GOVERNOR

EGLE

PHILLIP D. ROOS
DIRECTOR

April 3, 2025

VIA ELECTRONIC SUBMISSION

Cheryl Newton, Acting Regional Administrator
United States Environmental Protection Agency, Region 5
77 West Jackson Boulevard, R-19J
Chicago, Illinois 60604-3507

Dear Acting Regional Administrator Newton:

SUBJECT: Formal Request for Parallel Processing of Michigan's Supplement to the August 2021 Regional Haze State Implementation Plan

Request for Parallel Processing

The Michigan Department of Environment, Great Lakes, and Energy (EGLE) submits to the United States Environmental Protection Agency (USEPA) this formal request to initiate parallel processing, as authorized under Appendix V to Part 51 of Title 40 of the Code of Federal Regulations, for Michigan's Public Notice Draft Supplement to the August 2021 Regional Haze State Implementation Plan ("Supplement").

Schedule for Final Submission to the USEPA

The 30-day public comment period for the Supplement began on March 10, 2025, and was initially scheduled to end on April 8, 2025; however, upon receiving a request for extension from the National Parks Conservation Association, Coalition to Protect America's National Parks, and Sierra Club, EGLE decided to extend the public comment period by 14 days. Due to the approved extension, the new deadline for the public comment period regarding the Supplement is set to end on April 22, 2025. Upon completion of the public comment period, Air Quality Division (AQD) staff will address all public comments received, initiate further review by AQD management, and provide it for my consideration for submittal to the USEPA. EGLE anticipates that it has the ability to submit the Supplement to the USEPA in May, which would provide the USEPA with three or four months to issue a proposed approval, disapproval, or partial approval/disapproval for Michigan's Supplement, initiate a federal public comment period on the proposal, and issue a final rulemaking.

Please find Michigan's Public Notice Draft Regional Haze Supplement enclosed with this letter (Attachment A), along with all associated appendices (Attachments B-D).

If you have any questions, please contact John Olson, SIP Development Unit, AQD, at 517-648-3551 or OlsonJ12@Michigan.gov; or you may contact me.

Sincerely,

Phillip D. Roos

Phillip D. Roos
Director
517-284-6700

Enclosures
cc/enc: John Mooney, USEPA, Region 5
Michael Langman, USEPA, Region 5
Aaron B. Keatley, Chief Deputy Director, EGLE
Annette Switzer, EGLE
Dr. Eduardo Olaguer, EGLE
Tom Shanley, EGLE
Robert Irvine, EGLE
John Olson, EGLE

SUPPLEMENT TO MICHIGAN'S AUGUST 23, 2021, REGIONAL HAZE STATE IMPLEMENTATION PLAN REVISION FOR THE SECOND PLANNING PERIOD

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

Michigan Department of Environment, Great Lakes, and Energy
Air Quality Division
P.O. Box 30260
Lansing, Michigan 48909-7760
https://www.michigan.gov/air

[Public Notice Draft for 30-day Public Comment Period]

March 2025

Facility Name	Sector	Facility Unit ID	Retirement Date	2016 Emissions (tpy)			
				NH3	NO_X	$PM_{2.5}$	SO_2
		Unit 3	6/1/2021		1859.4	3.6	2805.7
LBWL, Erickson Station	EGU	Unit 1	11/28/2022	0.1	1058.5	1.4	2588.5
LBWL, Eckert Station	EGU	Unit 1	12/31/2020	0.1	785.5	12.4	1858
		Unit 3	12/31/2020				
		Unit 4	5/31/2021				
		Unit 5	12/31/2020				
		Unit 6	12/31/2020				
Consumers Energy – J.C. Weadock Facility	EGU	Weadock 7	4/15/2016	0	510.5	30.9	1635.5
		Weadock 8	4/15/2016				
Consumers Energy – D.E. Karn Facility		Karn 1	6/1/2023	0	213.8	12	283.9
		Karn 2	6/1/2023				
MARQUETTE BOARD OF LIGHT & POWER - Shiras	EGU	Boiler 3	4/29/2019	0	196.7	44.5	419
Michigan Hub Plant	EGU	Unit 1	9/30/2017		132.9	0.8	139.5
DTE – Pontiac North LLC		EUBHB9	1/10/2017	0	0	0	0
Graphic Packing International, Inc. - Kalamazoo		Unit BLR08	10/07/2024		82.1	4.5	0.4
J B Sims		Unit 3	6/1/2020	0	459.4	9.5	364.9
J R Whiting		Unit 1	4/15/2016	0	217.4	18.8	484.7
		Unit 2	4/15/2016	0	178.3	6.1	440.6
		Unit 3	4/15/2016	14.4	589	7.3	527.5
James De Young		Unit 5	6/1/2017		0.1	0	0
Consumers Energy - Thetford		Unit 2	6/1/2019		0		0.6
		Unit 3	4/1/2018		0		0.8
		Unit 4	6/1/2019		0		1.5
Wyandotte		Unit 8	6/30/2016		0	0	0.0

In addition to the retirements that have already occurred, the following units will be retired in the future, although not all were selected for a possible four-factor analysis under Section 3.2.2.

- **Consumers Energy – J.H. Campbell Plant: Units 1, 2, and 3**

  Units 1, 2, and 3 are discussed in detail in Michigan's 2021 Regional Haze SIP submittal on pages 14, 20, and 21 (*See* Appendix 1). This SIP supplement provides further elaboration.

  Consumers Energy – J.H. Campbell Power Plant is subject to a settlement agreement approved by the Michigan Public Service Commission on April 20, 2020, which requires closure/retirement of coal-fired Units 1, 2, and 3 on or before May 31, 2025. *See* April 20, 2022, Settlement Agreement – Michigan Public Service Commission, Case No. U-21090 – In the Matter of the Application of Consumers Energy Company for Approval of and Integrated Resource Plan under MCL 460.6t, certain accounting approvals, and for other relief. https://mi-psc.my.site.com/sfc/servlet.shepherd/version/download/0688y000002gLkGAAU (*See* Appendix 10).

  The settlement agreement was executed by Consumers Energy Company, the Michigan Public Service Commission staff, Michigan Environmental Council, the Natural Resources Defense Council, the Sierra Club, Attorney General Dana Nessel, Environmental Law and Policy Center, Vote Solar, Ecology Center, Union of Concerned

Scientists, Urban Core Collective, Citizens Utility Board of Michigan, Hemlock Semiconductor Operations LLC, Michigan Energy Innovation Business Council, Institute for Energy Innovation, Clean Grid Alliance, Michigan Electric Transmission Company LLC, and Great Lakes Renewable Energy Association.

The settlement agreement was affirmed in the State of Michigan Court of Appeals. *See* No. 362294 Public Service Commission, LC No. 00-021090, March 23, 2023. https://mi-psc.my.site.com/sfc/servlet.shepherd/version/download/0688y000007I2GEAA0 (*See* Appendix 11).

When retired sometime before May 31, 2025, the permanent shutdown of coal-fired Units 1, 2 and 3 at Consumers Energy – J.H. Campbell Power Plant will represent a reduction in emissions of 2,346 tpy NO_X and 12,850 tpy SO_2 based on the 2016 inventory.

- **Consumers Energy – Dan E. Karn, Units 3 and 4**

  Units 3 and 4 are discussed in detail in Michigan's 2021 Regional Haze SIP submittal on pages 14,15, 21, and 22 (*See* Appendix 1). This SIP supplement provides further elaboration.

  Consumers Energy – Dan E. Karn Power Plant is subject to the same settlement agreement mentioned above for the J.H. Campbell Plant that was approved by the Michigan Public Service Commission on April 20, 2022. The settlement agreement requires closure/retirement of coal-fired Units 3 and 4 at Consumers Energy – Dan E. Karn on or before May 31, 2031. *See* April 20, 2022, Settlement Agreement - Michigan Public Service Commission, Case No. U-21090 (*See* Appendix 10). In 2023, Consumers Energy voluntarily converted Units 3 and 4 from coal to natural gas and fuel oil – approximately 8 years ahead of its 2031 retirement deadline. https://www.consumersenergy.com/news-releases/news-release-details/2023/06/14/15/30/consumers-energy-takes-next-step-to-clean-energy-future-by-closing-karn-coal-plants.

  Although 2031 is beyond the end of the second implementation period in 2028, the 2019 Regional Haze Guidance states, "if a source is certain to close by December 31, 2028 (or soon thereafter), under an enforceable requirement, a state can reasonably consider that to be sufficient reason to remove the source from further analysis and reasonable progress consideration" (2019 Regional Haze Guidance, pg. 42).

  Although Units 3 and 4 did not appear on LADCO's list in Table 8 because the Q/d for both units was below 1.0, the emission reductions are still noteworthy. When retired sometime before May 31, 2031, the permanent shutdown of coal-fired Units 3 and 4 at Consumers Energy – Dan E. Karn will represent a reduction in emissions of 40 tpy NO_X and 58 tpy SO_2 based on the 2016 inventory.

BEFORE THE UNITED STATES DEPARTMENT OF ENERGY

Federal Power Act Section 202(c) Emergency Order: Midcontinent Independent System Operator (MISO)	)))))	Order No. 202-25-9

Exhibit to
Motion to Intervene and Request for Rehearing and Stay of
Public Interest Organizations

Exhibit 116

July 2025 MI SIP Supplement

SUPPLEMENT TO
MICHIGAN'S AUGUST 23, 2021,
REGIONAL HAZE STATE IMPLEMENTATION PLAN REVISION
FOR THE SECOND PLANNING PERIOD

Michigan Department of Environment, Great Lakes, and Energy
Air Quality Division
P.O. Box 30260
Lansing, Michigan 48909-7760
https://www.michigan.gov/air

July 2025

SRN: State Registration Number

Sources: See Table 8 Appendix 33 and 34

Michigan EGLE Air Permits System
https://www.egle.state.mi.us/aps/downloads/rop/pub_ntce/pub_ntce.shtml

List of Michigan EGLE Air Quality Division – Voided Renewable Operating Permits (ROPs)
https://www.egle.state.mi.us/aps/downloads/rop/ROPlist/APS_ROP_Sources_Void.pdf

Sources Subject to Michigan's Renewable Operating Permit Program
https://www.egle.state.mi.us/aps/downloads/rop/ROPlist/APS_ROP_Sources_by_Name.pdf

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In addition to the retirements that have already occurred, the following units will be retired in the future, although not all were selected for a possible four-factor analysis under Section 3.2.2.

- **Consumers Energy – J.H. Campbell Plant: Units 1, 2, and 3**

  Units 1, 2, and 3 are discussed in detail in Michigan's 2021 Regional Haze SIP submittal on pages 14, 20, and 21 (see Appendix 1). This SIP supplement provides further elaboration.

  Consumers Energy – J.H. Campbell Power Plant is subject to a settlement agreement approved by the Michigan Public Service Commission on April 20, 2020, which requires closure/retirement of coal-fired Units 1, 2, and 3 on or before May 31, 2025. *See* April 20, 2022, Settlement Agreement – Michigan Public Service Commission, Case No. U-21090 – In the Matter of the Application of Consumers Energy Company for Approval of and Integrated Resource Plan under MCL 460.6t, certain accounting approvals, and for other relief. https://mi-psc.my.site.com/sfc/servlet.shepherd/version/download/0688y000002gLkGAAU (see Appendix 10).

  The settlement agreement was executed by Consumers Energy Company, the Michigan Public Service Commission staff, Michigan Environmental Council, the Natural Resources Defense Council, the Sierra Club, Attorney General Dana Nessel, Environmental Law and Policy Center, Vote Solar, Ecology Center, Union of Concerned Scientists, Urban Core Collective, Citizens Utility Board of Michigan, Hemlock Semiconductor Operations LLC, Michigan Energy Innovation Business Council, Institute for Energy Innovation, Clean Grid Alliance, Michigan Electric Transmission Company LLC, and Great Lakes Renewable Energy Association.

  The settlement agreement was affirmed in the State of Michigan Court of Appeals. *See* No. 362294 Public Service Commission, LC No. 00-021090, March 23, 2023. https://mi-psc.my.site.com/sfc/servlet.shepherd/version/download/0688y000007I2GEAA0 (see Appendix 11).

  The permanent shutdown of coal-fired Units 1, 2 and 3 at Consumers Energy – J.H. Campbell Power Plant, which is now scheduled to occur in August 2025, will represent a reduction in emissions of 2,346 tpy NO_X and 12,850 tpy SO_2 based on the 2016 inventory. On May 23, 2025, the DOE issued an emergency order[3], pursuant to section 202(c) of the Federal Power Act, to Midcontinent Independent System Operator (MISO). The emergency order directs MISO, in coordination with Consumers Energy, to ensure that the J.H. Campbell Power Plant in West Olive, Michigan remains available for operation, minimizing any potential generation shortfall that could lead to unnecessary power outages. This Order has been written to expire on August 21, 2025, which EGLE anticipates will prompt the retirement of the three coal-fired units at the plant on, or shortly thereafter, that date.

- **Consumers Energy – Dan E. Karn, Units 3 and 4**

  Units 3 and 4 are discussed in detail in Michigan's 2021 Regional Haze SIP submittal on pages 14,15, 21, and 22 (see Appendix 1). This SIP supplement provides further elaboration.

  Consumers Energy – Dan E. Karn Power Plant is subject to the same settlement agreement mentioned above for the J.H. Campbell Plant that was approved by the Michigan Public Service Commission on April 20, 2022. The settlement agreement requires closure/retirement of coal-fired Units 3 and 4 at Consumers Energy – Dan E. Karn on or before May 31, 2031. *See* April 20, 2022, Settlement Agreement – Michigan Public Service Commission, Case No. U-21090 (See Appendix 10). In 2023, Consumers Energy voluntarily converted Units 3 and 4 from coal to natural gas and fuel oil – approximately 8 years ahead of its 2031 retirement deadline. https://www.consumersenergy.com/news-releases/news-release-details/2023/06/14/15/30/consumers-energy-takes-next-step-to-clean-energy-future-by-closing-karn-coal-plants.

  Although 2031 is beyond the end of the second implementation period in 2028, the 2019 Regional Haze Guidance states, "if a source is certain to close by December 31, 2028 (or soon thereafter), under an enforceable requirement, a state can reasonably consider that to be sufficient reason to remove the source from further analysis and reasonable progress consideration" (2019 Regional Haze Guidance, pg. 42).

  Although Units 3 and 4 did not appear on LADCO's list in Table 8 because the Q/d for both units was below 1.0, the emission reductions are still noteworthy. When retired sometime before May 31, 2031, the permanent shutdown of coal-fired Units 3 and 4 at Consumers Energy – Dan E. Karn will represent a reduction in emissions of 40 tpy NO_X and 58 tpy SO_2 based on the 2016 inventory.

3.3.2 Indefinitely Idled Source

- **Cleveland-Cliffs, Inc. – Empire Iron Mining Partnership**

  Empire Iron Mining Partnership was among the sources screened in using EGLE's revised Q/d analysis based on emissions from a 2016 base year; however, since 2016, the facility has been idled indefinitely. A recent January 17, 2024, on-site inspection report by EGLE's AQD documented the following conditions:

[3] https://www.energy.gov/sites/default/files/2025-05/Midcontinent%20Independent%20System%20Operator%20%28MISO%29%20202%28c%29%20Order_1.pdf

BEFORE THE UNITED STATES DEPARTMENT OF ENERGY

Federal Power Act Section 202(c)	)	
Emergency Order: Midcontinent	)	Order No. 202-25-9
Independent System Operator	)	
(MISO)	)	
	)	

Exhibit to
Motion to Intervene and Request for Rehearing and Stay of
Public Interest Organizations

Exhibit 117

RTO Insider Article on August Order

Consumers Energy's J.H. Campbell coal plant | *Newkirk Electric Associates*

Aug 21, 2025 | John Cropley and Amanda Durish Cook

The U.S. Department of Energy has ordered the J.H. Campbell Generating Plant to remain available another 90 days, saying its capacity is needed to maintain *MISO* grid reliability.

Consumers Energy had planned to retire the 1,420-MW coal-fired facility in southwest Michigan on May 31, but DOE on May 23 issued an emergency order (*202-25-3*) under Section 202(c) of the Federal Power Act ordering it to remain ready to operate because of a shortage of electricity and capacity to generate electricity. (See *DOE Orders Michigan Coal Plant to Reverse Retirement*.)

That order expired at midnight Eastern time Aug. 21.

Energy Secretary Chris Wright issued the follow-up order (*202-25-7*) at 8:50 p.m. Eastern time Aug. 20; it expires Nov. 19.

Why This Matters

Why This Matters

The order is another move by the Trump administration to use aging fossil generation to shore up the grid.

The order is another move by the Trump administration to use aging fossil generation to shore up the grid.

In his Aug. 20 order, Wright indicated the generation shortfall in MISO is likely to continue.

President Donald Trump *declared an energy emergency* on his first day in office, and his Cabinet agencies have been scrambling to rejigger energy policy toward the fossil fuels he favors.

One of their stated priorities has been halting retirement of aging fossil-burning plants.

In a news release, Wright cited seasonal outlooks by *NERC* and NOAA warning of high temperatures in the Midwest as well as resource adequacy projections by MISO itself.

"The United States continues to face an energy emergency, with some regions experiencing more capacity constraints than others. With electricity demand increasing, we must put an end to the dangerous energy subtraction policies embraced by politicians for too long," he said.

"This order will help ensure millions of Americans can continue to access affordable, reliable and secure baseload power regardless of whether the wind is blowing or the sun is shining."

Section 202(c) has been a lightly used provision historically. Just 11 orders were issued during the Biden administration, all of them weather-related. This compares with *nine by Wright since mid-May*, only one of which was weather-related.

The cost of halting the J.H. Campbell retirement has been a point of contention. (See *DOE Extension of Michigan Coal Plant Cost $29M in 1st Month* and *FERC Rules Costs of Mich. Coal Plant Extension Can be Split Among 11 States*.)

It also has been unpopular with environmental advocates.

Sierra Club Beyond Coal Campaign Director Laurie Williams *said Aug. 21*: "By illegally extending this sham emergency order, Donald Trump and Chis Wright are costing hardworking Americans more money every single day for a coal plant that is unnecessary, deadly and extremely expensive."

Earthjustice Senior Attorney Michael Lenoff said: "Chris Wright is not a Soviet-era central planner, but his new order suggests he would fit right in. The order purports to override the considered judgment and careful work of many federal, state and regional bodies who actually have authority to keep the lights on. In their place, Secretary Wright blunders in."

In a statement, MISO said it will "continue coordinating with Consumers Energy to comply with the order."

But MISO again stressed that J.H. Campbell did not clear the planning resource auction and is unnecessary for resource adequacy in the 2025/26 planning year.

"MISO's 2025-2026 Planning Resource Auction indicated adequate resources to meet anticipated demand. State regulators along with utilities have the responsibility of ensuring resource adequacy. MISO remains focused on reliably operating the grid using the resources our members provide, while working closely with stakeholders and regulatory partners, providing visibility into system needs and sending market signals to inform long-term resource planning," MISO spokesperson Brandon Morris said in a statement to *RTO Insider*.

MISO leadership previously has said it might have to navigate similar future orders from the federal government to prop up retiring coal plants.

MISO Director Todd Raba said MISO might have to navigate similar edicts in the future, with about 30 coal plants in the footprint. At MISO's June board meeting, he said it's a "critical topic that will have huge implications in MISO."

Lawmakers, health professionals and other officials *gathered* near the plant in West Olive, Mich., on Aug. 12 to protest its extension. On Aug. 18, a small crowd of community members marched to U.S. Rep. Bill Huizenga's office in nearby Holland, Mich., to again protest continued operations.

Consumers Energy said it was evaluating the order extension and expects to "continue operating the plant as required by DOE."

"We have worked closely with MISO and have been operating in compliance with the order and MISO's dispatch requirements. All power generated by the Campbell plant and other Consumers generating plants is supplied to the MISO grid. Specific details on recent generation are not publicly available at this time," spokesperson Brian Wheeler told *RTO Insider*.

Wheeler also said the utility was "pleased" with *FERC*'s approval of an allocation that's set to disburse cost recovery of the plant among the 11 states or portions of states in MISO Midwest.

Consumers Energy declined to comment on the coal plant's usefulness so far over the summer or how the plant will fit into the MISO market over the fall.

Data from power analytics company Yes Energy shows the 1.42-GW plant has been used consistently since the beginning of August, averaging an 84-88% hourly capacity factor.

COAL RELIABILITY RESOURCE ADEQUACY

KEYWORDS CHRIS WRIGHT CONSUMERS ENERGY FEDERAL POWER ACT SECTION 202 (C) J.H. CAMPBELL PLANT MIDCONTINENT INDEPENDENT SYSTEM OPERATOR (MISO) U.S. DEPARTMENT OF ENERGY (DOE)

BEFORE THE UNITED STATES DEPARTMENT OF ENERGY

Federal Power Act Section 202(c)	)	
Emergency Order: Midcontinent	)	Order No. 202-25-9
Independent System Operator	)	
(MISO)	)	
	)	

Exhibit to
Motion to Intervene and Request for Rehearing and Stay of
Public Interest Organizations

Exhibit 118

RMI Analysis of Coal Plants' Threats to Reliability

Reality Check: We Have What's Needed to Reliably Power the Data Center Boom, and It's Not Coal Plants

A range of clean, resilient solutions can help us meet the electrical needs of our growing digital economy while saving Americans money.

August 12, 2025

By Gabriella Tosado, Ashtin Massie, Joe Daniel

After decades of relatively flat electricity demand, the US power sector is expecting demand to grow due, in large part, to new data centers. These energy-intensive facilities are reshaping the grid, with some utilities now projecting over 20 percent load growth by 2035. In places like Virginia, which constitutes 13 percent of all reported data center capacity globally and 25 percent of the data center capacity in the United States, data centers already account for over a quarter of some utilities' total electric demand, and their footprint is only growing.

The myth

Utilities are struggling to maintain accurate forecasts and identify resources that can meet this growth. There is a high-profile effort to keep coal plants that are set to retire online and run them at unprecedented levels, ostensibly for reasons of reliability. But the truth is, coal-fired power plants, far from being a reliable backbone for this new era of electricity demand, are a brittle, outmoded technology that threatens to undermine the very grid resilience they're being proposed to protect.

> Coal-fired power plants, far from being a reliable backbone for this new era of electricity demand, are a brittle, outmoded technology that threatens to undermine the very grid resilience they're being proposed to protect.
>
> Tweet

Reality #1: Aging coal plants are failing to consistently deliver under stress

Coal plants face a fundamental constraint: they are aging and increasingly unreliable. Most of the coal fleet was built in the 1970s and 1980s, and years of wear and tear have led to a rise in unplanned outages. In many cases the sheer cost to maintain and modernize these plants did not make sense with the availability of more reliable and affordable alternatives – and that's still the case.

According to the Energy Systems Integration Group (ESIG) *Ensuring Efficient Reliability* report, a coal plant's capacity accreditation, or the amount of time it can contribute to peak demand, is only 83 percent when adjusted for real-world performance. PJM also has capacity accreditation of coal plants at 83 percent and some plants fare even worse. Gridlab's reliability study found Colstrip, a large regional coal plant in Montana, operating with a capacity accreditation of only 54 percent – meaning it's effectively unavailable nearly half the time it's needed.

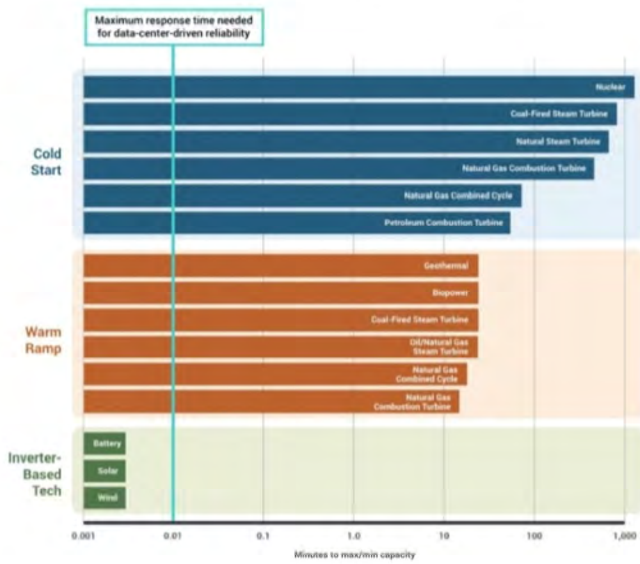
Extreme weather exacerbates these vulnerabilities. Cold snaps, heat waves, and storms have all exposed coal's fragility during grid stress events. Reliability is not just about being dispatchable, it's about delivering performance under stress. Coal plants struggle to do that consistently. For coal plants to truly meet the constant demands of data centers, they would need to run at high-capacity factors and avoid major outages, all of which fly in the face of current performance trends. If a large coal plant trips offline while supporting a cluster of data centers, the sudden loss of supply could lead to cascading failures across the grid. This is because generation must equal load at all times, datacenter or no datacenter. As a result, relying on coal plants to support these high-density digital loads doesn't enhance reliability, it endangers it. And it's not a matter of *if* the coal plant will fail, but *when*.

Reality #2: The inflexibility of coal plants risks grid stability

Coal boosters often point to the "always-on" nature of coal plants as evidence of their reliability. But that characteristic is a liability, not a strength, when it comes to supporting large, fast-changing loads like data centers. Coal units are inherently inflexible: they ramp slowly, respond poorly to sudden load shifts, and are difficult to turn on or off quickly. This rigidity is a poor match for the dynamic and often unpredictable nature of data center demand. Further, inflexible coal plants can worsen grid congestion; by occupying limited transmission capacity with inflexible generation, they prevent cheaper or cleaner resources from being delivered. This issue has already been flagged by independent market monitors in regions like MISO – which covers 15 US states and a Canadian province – where congestion-related market distortions have cost over $1 billion a year. Coal plants displace faster-responding resources that are better suited to follow load. And the stakes are high.

As noted by the North American Electric Reliability Corporation (NERC), large, voltage-sensitive loads like data centers require flexible, responsive grid solutions, not slow-ramping generators that can take 12 or more hours to come online. NERC's recent *Incident Review and Guidance on Voltage-Sensitive Large Load Integration* describes an event in 2024 where a transmission fault triggered a sudden disconnection of 1,500 megawatts of voltage-sensitive data center load, leading to sharp frequency and voltage spikes that required operator intervention. The incident exposes the system's vulnerability to instability when inflexible generation cannot respond to large load fluctuations.

Minutes needed for a power plant to reach max/min capacity



If a data center either loses access to load or goes offline rapidly, a grid's generation needs to respond at sub-second speeds. The average coal plant ramp rate is 4 percent per minute which translates to spending over 20 minutes to respond to a large load event. From a cold start, the average coal plant would take over 12 hours to reach max capacity. Coal plants simply can't respond fast enough to support the reliability needs of modern data centers. Whether it's the hours-long startup time from a cold state or sluggish ramp rates to turn off, these plants are too slow to provide the real-time flexibility required during sudden load changes or outages.

Reality #3: Clean resources are available now that can better respond to and support data centers for less

The good news is that we don't need to rely on brittle coal plants to meet the needs of a digital economy. A range of cleaner, more resilient solutions is already available – and scalable. For example, we recently found that more than 95 percent of future demand can be met with fast, scalable, and clean solutions:

Alternative near-term solutions to meet load growth

Technology	Opportunity
Energy Efficiency	Over 50 GW of energy efficiency can be deployed – by both creating programs for new loads and expanding existing programs aligned with system needs. Energy efficiency can unlock benefits beyond system cost savings, improving comfort and resilience in homes.

Virtual Power Plants	60 GW of virtual power plants can be deployed by 2030, with programs stood up and enrolled in under 6 months. Policymakers in Virginia recently passed a bill that requires 450 MW of VPPs deployed rapidly to meet growing demand.
Advanced Transmission Technologies	Grid enhancing technologies and reconductoring can unlock over 80 GW of incremental peak capacity by reducing transmission and interconnection constraints. Lawmakers in New Mexico passed a bill requiring utilities to assess the use these technologies in plans to get more out of the existing grid.
Clean Repowering	There is 14 GW of fossil-fuel generation expected to retire, that could serve as sites for quick addition of new renewable energy and storage while reducing system costs. Market operators like PJM are enabling clean repowering by updating rules to allow for surplus interconnection.
Power Couples	New load can be co-located with renewable energy at the site of existing, underutilized generators with approved interconnections—a strategy which we call "Power Couples." There is over 30 GW of opportunity to deploy Power Couples under $100/MWh, and over 50 GW of opportunity under $200/MWh.

Coal plants are a legacy technology, not a solution for the future. Coal plants' operational characteristics make them less suited to meet the scale and speed of these new challenges. The path forward is not about discarding the past, but about building on it with cleaner, more adaptable resources that can reliably serve evolving grid needs.

Technologies like battery storage, demand flexibility, and clean energy portfolios offer practical, cost-effective options that align with modern load dynamics. As we noted in a recent **article**, by running coal plants only when it is economical to do so and using the extra transmission headroom that creates to reinvest with clean energy upgrades, our grid can support the next wave of economic growth with the flexibility it demands. There are reasons to manage the shift to new, clean resources **thoughtfully and intentionally**, but propping up coal plants that are not suited for the job is a step in the wrong direction.

RECOMMENDED READING

Gas Turbine Supply Constraints Threaten Grid Reliability; More Affordable Near-Term Solutions Can Help

June 18, 2025

Read More

Reinvesting at Coal Plant Sites with Clean Energy Upgrades Supports both Reliability and Affordability

July 16, 2025

Read More

Solutions Can Help

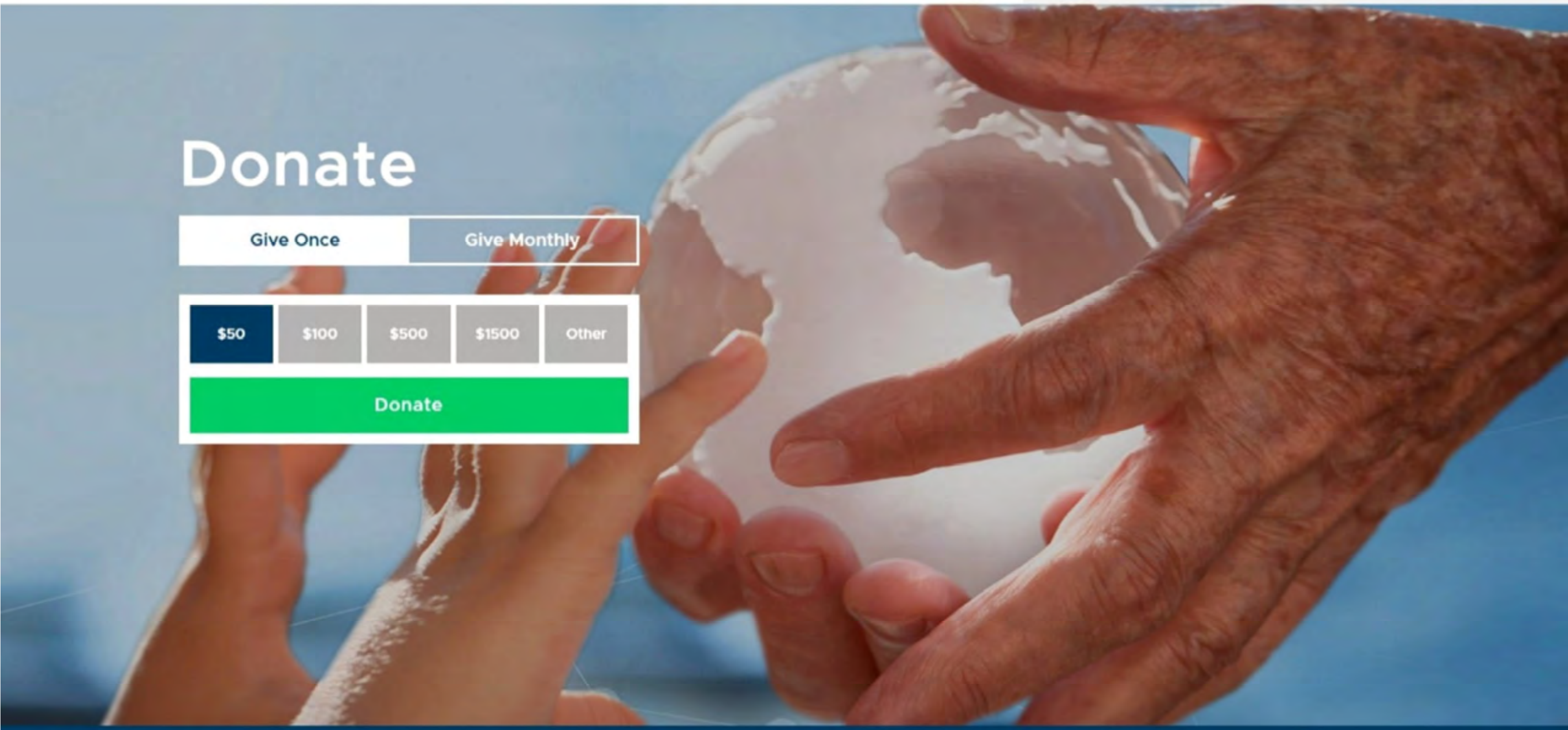
June 18, 2025

Read More

Affordability

July 16, 2025

Read More



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BEFORE THE UNITED STATES DEPARTMENT OF ENERGY

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Exhibit to
Motion to Intervene and Request for Rehearing and Stay of
Public Interest Organizations

Exhibit 119

ZRC Replacement

ZRC Replacement and instructions in the MECT

RASC

05/24/2023

Presentation updated as 7/11/2023
Updates are at the end of the deck Slides 12-17

Presentation updated as of 9/29/2023
Updates are on slides 14 & 17

Purpose and Key Takeaways

Purpose:

Provide Stakeholders with information and training on ZRC replacement in the MECT

Key Takeaways:

- ZRC replacement uses, and process explained and clarified
- ZRC replacement does not impact settlements from the PRA
- ZRC replacement is used for suspension, retirement, Catastrophic Generator Outage or full or partial Generator Planned Outages that may exceed thirty-one (31) Days in the Season
- MECT User Guide has additional detail

Reasons to use ZRC Replacement

- Generators that have cleared a season(s) in the PRA that go on suspension, retirement or Catastrophic Generator Outage
- Cleared ZRCs for resources with planned generator outages and/or derates in excess of 31 days in a season
- ZRC replacement must overlap the suspension, retirement, catastrophic outage or outages/derates of the cleared generation being replaced
- Resources ZRCs cannot be replaced other than for the reasons listed above

[31-day rule Capacity Replacement Clarification]

ZRC Replacement FAQ

- ZRC replacement substitutes the Resource Adequacy Requirement (RAR) and Must Offer Obligation for the cleared resource

- Fully replaced resources (>95% cleared ZRC) will be granted Tier 1 & 2 exemptions during the replacement hours from Schedule 53 SAC calculation
  - Exemptions are for SAC calculations only, still subject to the capacity replacement rules and penalties
  - Exemptions for derates is still under discussion

- ZRC replacement does not impact settlements from the PRA, however resources that failed to meet the replacement requirement will incur non-compliance charges

Process for ZRC Replacement

- Use the “Replacement Calculator” on the MECT
- Obtain the ZRCs used in the replacement
- Submit the replacement on the “Resource Substitution” screen in the MECT
  - ZRC replacement should be entered into the MECT at least 7 calendar days prior to the effective date of replacement
- Contact MISO with any issues through the MISO help center

Use Replacement Calculator

- The Replacement Calculator is to verify that the prospective replacement ZRCs do not violate LCR, CIL or CEL for each zone when using ZRCs from another LRZ or ERZ

Zonal Data	PRMR (Obligation)	Offers Cleared + FRAP	LCR	Import Level (CIL)	Export Level (CEL)	Auction Import	Auction Export	Replacement Import	Replacement Export	Import Available	Export Available
1	18374.9	18661.2	16588.7	3754.0	3373.2	0.0	286.3	0.0	0.0	4040.3	3086.9
2	13449.9	13536.9	13017.5	1714.0	978.7	0.0	87.0	48.1	22.0	1774.9	917.8
3	9882.0	10391.1	7960.2	2896.0	4589.7	0.0	509.1	0.0	0.4	3405.5	4080.2

CALCULATE RESET

Calculator	Total MW needing replacement	Replacement ZRCs from the same zone	ZRCs from same zone after replacement	LCR test	Total Import Amount Needed	Amount Exported	Import Test	Export Test
1	200	100	18561.2	PASS	100	0	PASS	
2	0	0	13470.8	PASS		40		PASS
3	0	0	10331.5	PASS		60		PASS
4	0	0				0		

More information can be found in the MECT User Guide in section 31 & 32

Obtain the ZRCs

- Market Participants will need the un-cleared ZRCs to use in the ZRC replacement
  - This can be from their own un-cleared ZRCs
  - This can be from a ZRC Transaction
    - Non-MISO Bulletin can be utilized to find ZRCs from other Market Participants

More information can be found in the MECT User Guide in section 18

ZRC Replacement in the MECT

- Navigate to the “Resource Substitution” screen in the MECT, fill in the form and submit

More information can be found in the [MECT User Guide] in section 30

Next Steps

- MECT release at the end of May will include an "end date" for ZRC replacement". When the replacement is completed the ZRCs will be repopulated to the resource

- Additional details and screenshots will be added to this presentation and the MECT user guide and both will be reposted

Bullet point 3 updated on 7/12/2023

References

- MISO Resource Adequacy BPM-011-r27
  - Section 6.4, "Replacement Resources"
- MISO Tariff Module E-1
  - Section 69A.3.1.h, "Retirement, Suspension and Replacement of Planning Resources"
- MECT User Guide
  - Sections 18, 30, 31 and 32

https://help.misoenergy.org/support/

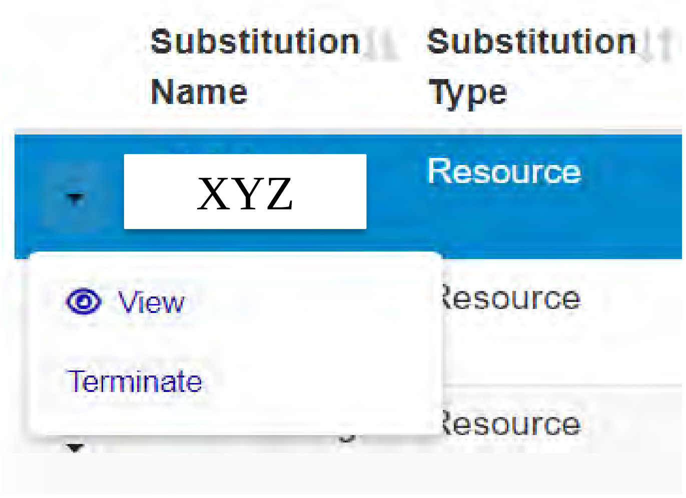
Additional Content added as of 7/11/2023

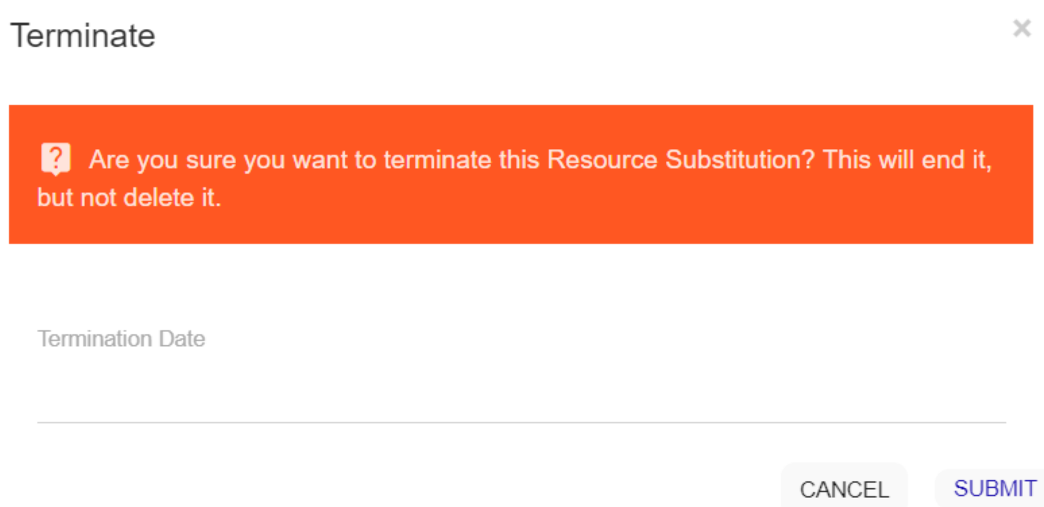
BPM-011-r28 updated and posted to MISO website

- BPM-011-r28 has been posted to MISO website with clarification to sections 6.4.3 – 6.4.7
- Updates are limited to ZRC Replacement and implementation and assessment of the 31-day rule

Updates to the MECT allowing ZRC Replacement Termination

- Resource Substitution defaults to the end of the season
  - Before the effective date, a new dropdown will allow MPs to delete the substitution
  - After the effective date, a new dropdown will allow MPs to terminate the ZRC replacement between the effective date and current date





Scheduling 31+ day Generator Outages and participation in the PRA

- For resources that have anticipated planned outages that last longer than 31 days in the next Planning Year, the following options are available
  - Straddle seasons, if the resource has a planned 50-day outage, having 25 at the end of one season, continuing for the other 25 days into the subsequent season
  - If the outage is long enough, the resource could plan the outage during one season and not offer into the PRA for that season (requires working with the IMM). During the time the resource is available in the season, they could provide ZRC replacement for other resources
  - Work with the IMM to factor in the 31-day penalty price into the offer for the PRA, which can exceed the FSRL limit ~$25-30/MW-day

31-day Outage Rule (1 of 2)

- MISO's Control Room Operations Window (CROW) includes the following 4 categories of out of service (OOS) and derates: Planned, Urgent, Emergency and Forced. For purposes of calculating CRNCCs, MISO will use CROW outages prioritized as Planned. In addition, all outages not prioritized as Planned in CROW, but that were: (1) known or reasonably known at the time of the PRA, or (2) were determined by the IMM to be incorrectly prioritized in CROW shall be included in calculation of the CRNCC. See BPM-008 and the CROW users guide for outage prioritization codes and definitions. must replace ZRCs or incur a CRNCC penalty cost.
- Capacity non-compliance charge as stated in section 6.4.7 of BPM-011-r28 is equal to the # of days greater than 31 that did not properly replace * # of ZRCs * (seasonal ACP + daily Zonal CONE)
  - For example. A 100 MW resource in LRZ5 for Summer 2023 ($10 ACP) that was on a planned outage for 35 days and did not replace any ZRCs would incur the following charges
    - 4 days * 100MW * (10 + 300.2) = $124,080
- The ZRC replacement and penalties are assessed and applied to the Market Participant who converts SAC to ZRCs

31-day Outage Rule (2 of 2)

- The 31-day rule will be implemented on an hourly basis as laid out in section 6.4.7 of BPM-011-r28 (31 days * 24 hours = 744hours)
- CROW has 4 outage types

Outage type	
Forced – already out at time of submission	Not counted
Emergency – 0 to 2 days in the future	Not counted
Urgent – 2 to 14 days in the future	Not counted*
Planned – 14 days + in the future	Counted

- The hours of planned outages across the season per resource will be summed up from most ZRCs to least ZRCs, the 31 days will apply to the most severe planned outage days and the remaining hours will be counted towards the penalty
- The penalty is assessed on a daily basis so the hours will be converted back to days and rounded down to the nearest day

*IMM and MISO will continue to review Urgent, Emergency and Forced outages to determine if they were known or reasonably known at the time of the PRA and if they should be counted towards the 31-day outage rule

BEFORE THE UNITED STATES DEPARTMENT OF ENERGY

Federal Power Act Section 202(c) Emergency Order: Midcontinent Independent System Operator (MISO)	)))))	Order No. 202-25-9

Exhibit to
Motion to Intervene and Request for Rehearing and Stay of
Public Interest Organizations

Exhibit 120

2024 OMS-MISO Survey

2024 OMS-MISO Survey Results

Furthering our joint commitment to regional resource adequacy, OMS and MISO are pleased to announce the results of the 2024 OMS-MISO Survey

CORRECTIONS
Reposted 6/20/2024
Slide 11 PRM% Updated

June 20, 2024

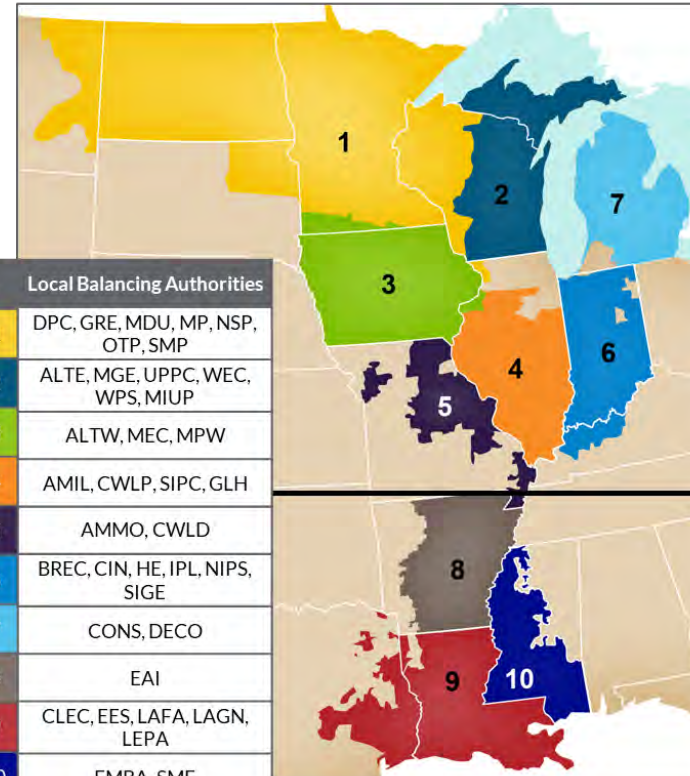
The 2024 OMS-MISO Survey reinforces near-term risks and highlights key uncertainties impacting resource adequacy in the MISO region

- Results indicate a potential surplus of 1.1 GW to a deficit of 2.7 GW for the summer of PY2025/26, depending on critical, yet uncertain, drivers such as the pace and quantity of new resource additions and projected resource retirements.
- Resource Adequacy risks could grow over time across all seasons, absent increased new capacity additions and actions to delay capacity retirements.
- Significant economic development activities are spurring new, large spot-load additions (e.g., data centers, onshoring of manufacturing, new industrials) and increasing pressures on resource adequacy and requiring improved abilities for the timely addition of new resources.
- Recent reforms to MISO's resource adequacy construct will enhance MISO's ability to accurately assess the changing resource adequacy risks driven by extreme weather, the rapid growth of weather-dependent resources, and the retirement of dispatchable resources.
- Results highlight resource adequacy challenges in the MISO region and the need for continued collaboration between OMS, MISO, and its Members to maintain a reliable electricity system.

All presentation references to capacity indicate Seasonal Accredited Capacity (SAC)

The OMS-MISO Survey provides a resource adequacy view over a five-year horizon based on currently available information

- The survey results indicate the degree to which expected capacity resources satisfy planning reserve margin requirements with either a surplus or a deficit.
- The survey considers that Load Serving Entities (LSEs) within each zone must have sufficient resources to meet load and required reserves.
- Surplus resources may be shared among LSEs with resource deficits to meet reserve requirements.



	Zone	Local Balancing Authorities
North/Central	1	DPC, GRE, MDU, MP, NSP, OTP, SMP
	2	ALTE, MGE, UPPC, WEC, WPS, MIUP
	3	ALTW, MEC, MPW
	4	AMIL, CWLP, SIPC, GLH
	5	AMMO, CWLD
	6	BREC, CIN, HE, IPL, NIPS, SIGE
	7	CONS, DECO
South	8	EAI
	9	CLEC, EES, LAFA, LAGN, LEPA
	10	EMBA, SME

This year's survey includes an updated baseline methodology to reflect the changing pace of new resource additions. Various scenarios for projected capacity and anticipated large spot-load additions across the MISO region are also included to highlight the increasing uncertainty and evolving risk.

90% of existing generation capacity participated in OMS-MISO Survey in 2024.

Additional factors can impact projected deficits or surpluses that are observed in the survey

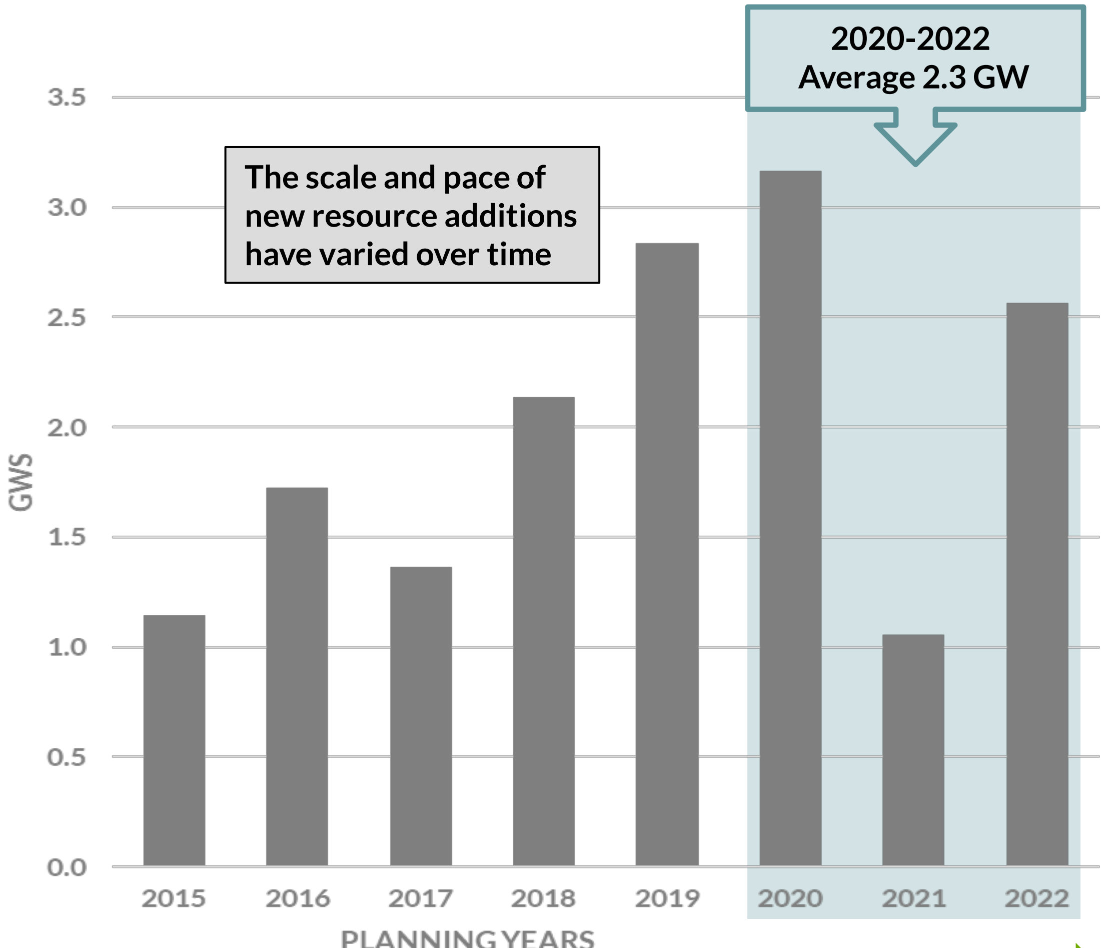
Downside Risks

- Continuing rapid pace of resource retirements
- EPA regulations further accelerating resource retirements
- Ongoing delays to capacity additions due to supply chain bottlenecks, permitting delays, and commercial challenges
- Continued queue challenges due to exceptionally large accumulated backlog and expectations for high quantities of future applications
- Higher load growth due to economic development and new, large spot-load additions (e.g., data centers and onshoring of manufacturing/new industrials), absent an improved ability to concurrently add new resources

Upside Possibilities

- Substantial new capacity enabled by the easing of supply chain bottlenecks, permitting constraints, and labor shortages
- Continued queue improvements to reduce speculative quantities and associated delays
- Market responses to local capacity deficits
- Improved price signals through market reforms, such as the Reliability Based Demand Curve, incentivizing additional capacity
- Improved ability to add new resources and support economic development and related new, large spot-load additions

Trends and market pressures related to new capacity additions suggest refinements are needed to better reflect uncertainty



Queue applications have grown to >300 GW & >50 GW signed GIAs

In the past, it was reasonable to use probability-adjusted estimates applied to quantities of projects in various phases of queue development.

That's no longer applicable due to the larger queue and constraints faced by projects with signed generation interconnection agreements (GIAs). The 2024 survey uses a range of estimates for new resource additions:

1. **Three-Year Historical Average:** based on the historical rate of additions per planning year*
2. **Alternative Projection:** based on MISO's updated timing estimates from interconnection customers with GIAs*

Note: 2023 data unavailable during time of analysis. Including 2023 projects would change the 3-year average to 2.2 GW.
**Based on Historical averages defined on slide 6*

Understanding Resource Categories

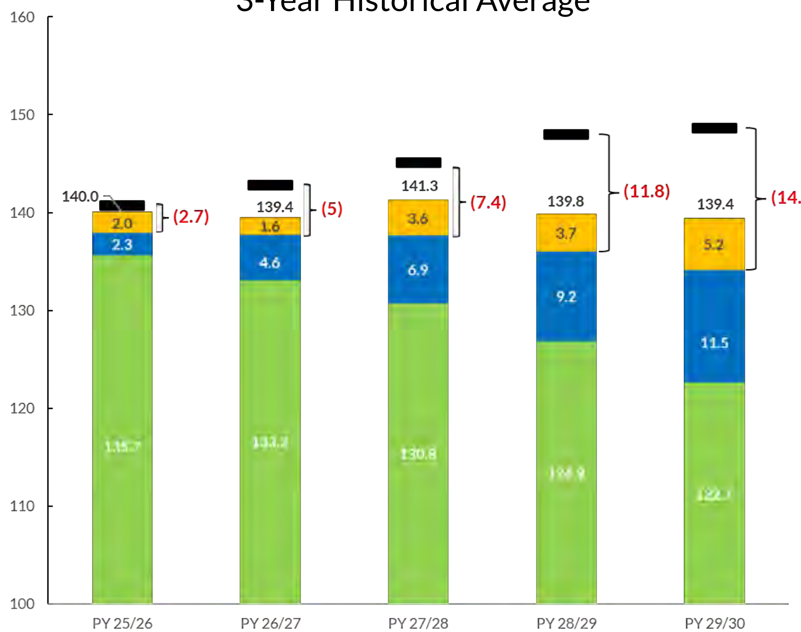
Resource Category	Past Practice	2024 Survey
Committed Capacity *Resources committed to serving MISO's load*	• Existing generation resources • Signed Generation Interconnection Agreement Projects • External resources with firm contracts to MISO load • Assumes resources will be used to meet PRMR	• **Same, except does not include signed Generation Interconnection Agreement (GIA) projects (Signed GIA projects moved to 'Potential New')**
Potential New Capacity	• Projects in the MISO Generator Interconnection Queue adjusted for queue phase and related probabilities for projects reaching commercial operations • Assumes resources will **NOT** be used to meet PRMR	• **Using 3-Year Historical Average: Capacity addition based (2.3 GW/year) based on the average new capacity built in Planning Years 2020-2022** • **Using Alternative Projection: Informed by timing estimates from interconnection customers with signed GIA projects* (6.1 GW/year)** • **Assumes resources <u>WILL</u> be used to meet PRMR**
Potentially Unavailable Resources *May be available to serve MISO's load but may not have firm commitments*	• Indicated as Low Certainty in survey results by Market Participants • Includes potential retirements or suspensions • Assumes resources will **NOT** be used to meet PRMR	• **No Changes**

****MISO Alternative Projection**: Responses indicate 6.8GW can be built for PY 2025/26. MISO data shows 90% of GIAs get built.*
PRMR: Planning Reserve Margin Requirement

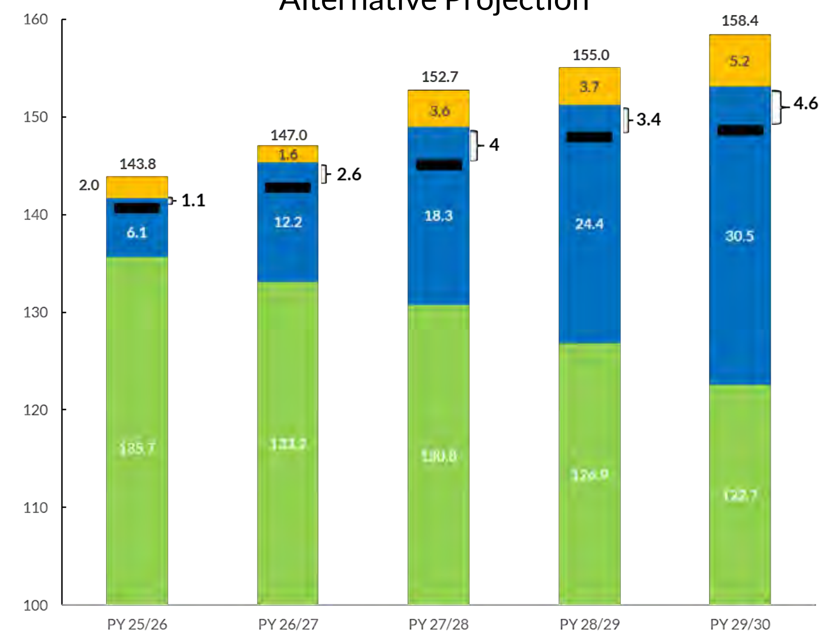
The 2024 OMS-MISO Survey illustrates a strong sensitivity to the pace of new capacity additions, with PY 2025/26 showing a range from a 2.7 GW deficit to a 1.1 GW surplus and widening thereafter

MISO Resource Adequacy Projection – Summer (GW)

Assuming 2.3 GW/yr of Potential New Capacity added
3-Year Historical Average*



Assuming 6.1 GW/yr of Potential New Capacity added
Alternative Projection*



2.3 GW/yr					PRM% - Planning Reserve Margin	6.1 GW/yr				
9.2%	9.4%	9.6%	9.5%	9.4%		9.2%	9.4%	9.6%	9.5%	9.4%

- Projected PRMR with LSE forecast
- Potentially Unavailable Resources
- Potential New Capacity
- Committed Capacity

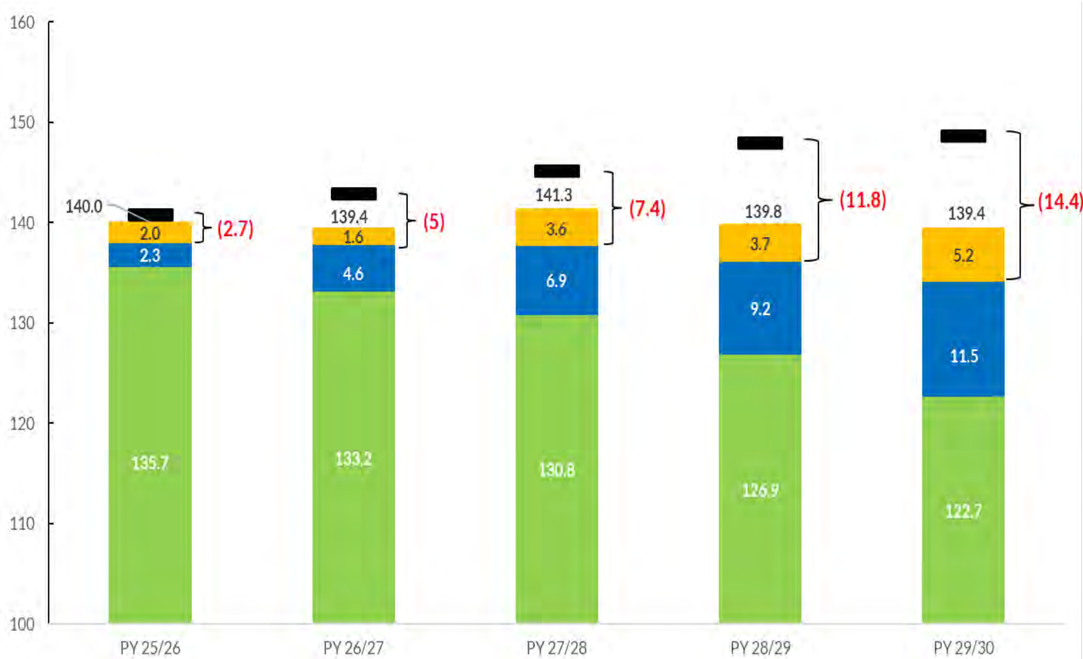
- Bracketed values indicate difference between Committed + Projected New Capacity and Projected PRMR with LSE forecast
- Capacity accreditation values and PRM projections based on current practices
- Regional Directional Transfer (RDT) limit of 1900 MW is reflected in this chart

Note: Y-axis truncated in all capacity projection charts to accentuate capacity sufficiency/deficiency.
PRMR: Planning Reserve Margin Requirement
**Using methods for potential New Capacity described on Slide 6*

Continued pace of retirements and pressures on generation development could potentially result in deficits as early as PY 2025/26

MISO Resource Adequacy Projection – Summer (GW)

*Assuming **2.3 GW/yr** of Potential New Capacity added*
3-Year Historical Average*



	PY 25/26	PY 26/27	PY 27/28	PY 28/29	PY 29/30
PRM% - Planning Reserve Margin	**9.2%**	**9.4%**	**9.6%**	**9.5%**	**9.4%**

Projection of 2.3 GW of new capacity per year derived from:

- Actual buildout over PYs 2020-2022
- Projected capacity buildout in line with historical rate
- Reflects impacts from COVID slowdown, such as continuing supply-chain bottlenecks, commercial uncertainty and permitting/labor delays

Projected PRMR with LSE forecast
Potentially Unavailable Resources
Potential New Capacity
Committed Capacity

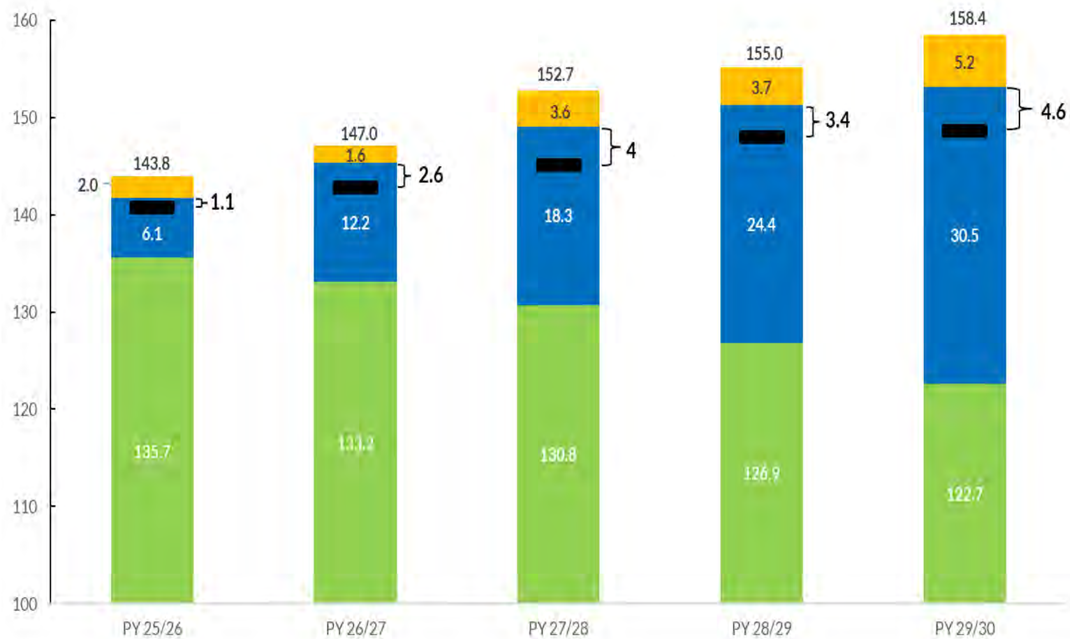
- Bracketed values indicate difference between Committed+ Projected New Capacity and Projected PRMR with LSE forecast
- Capacity accreditation values and PRM projections based on current practices
- Regional Directional Transfer (RDT) limit of 1,900 MW is reflected in this chart

Note: Y-axis truncated in all capacity projection charts to accentuate capacity sufficiency/deficiency.
All references to capacity indicate Seasonal Accredited Capacity (SAC)
**Using Potential New Capacity as described on slide 6*

Favorable changes in development drivers could accelerate capacity additions necessary to cover projected growth

MISO Resource Adequacy Projection – Summer (GW)

Assuming ***6.1 GW/yr*** *of Potential New Capacity added*
Alternative Projection*



PRM% - Planning Reserve Margin	9.2%	9.4%	9.6%	9.5%	9.4%

Projected PRMR with LSE forecast
Potentially Unavailable Resources
Potential New Capacity
Committed Capacity

- Bracketed values indicate difference between Committed+ Projected New Capacity and Projected PRMR with LSE forecast
- Capacity accreditation values and PRM projections based on current practices
- Regional Directional Transfer (RDT) limit of 1,900 MW is reflected in this chart

Projection of 6.1 GW of new capacity per year dependent upon:

- Easing of supply chain bottlenecks
- Reduced permitting-related delays
- Adequate supply of skilled labor
- Supportive commercial viability
- Continued queue improvements to reduce speculative quantities and associated delays

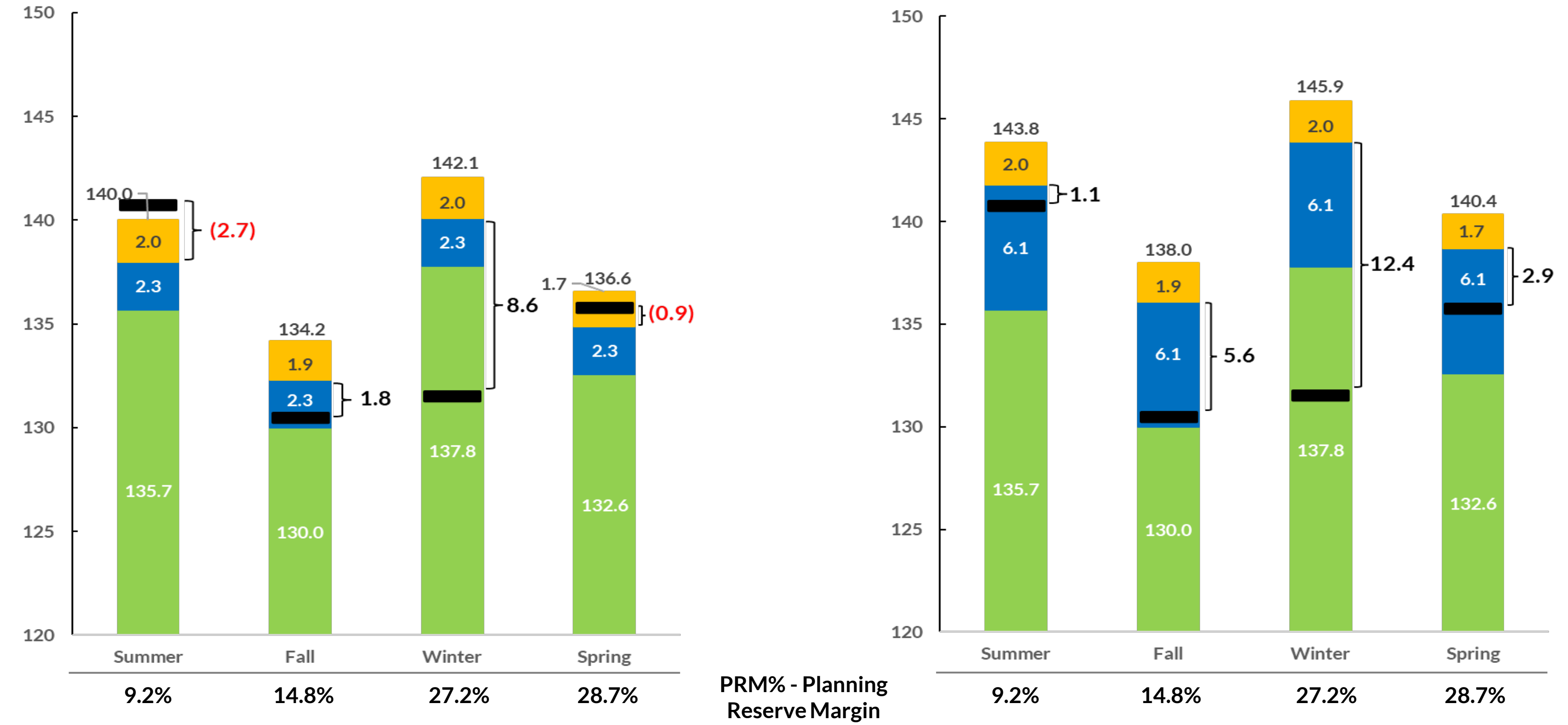
Note: Y-axis truncated in all capacity projection charts to accentuate capacity sufficiency/deficiency.
All references to capacity indicate Seasonal Accredited Capacity (SAC)
**Using Potential New Capacity as described on slide 6*

Seasonal comparison for PY 2025-26 shows the greatest risk in summer and spring

MISO Resource Adequacy Projection 2025/26 (GW)

Assuming 2.3 GW/yr of Potential New Capacity added
3-year Historical Average*

Assuming 6.1 GW/yr of Potential New Capacity added
Alternative Projection*



- Projected PRMR with LSE forecast
- Potentially Unavailable Resources
- Potential New Capacity
- Committed Capacity

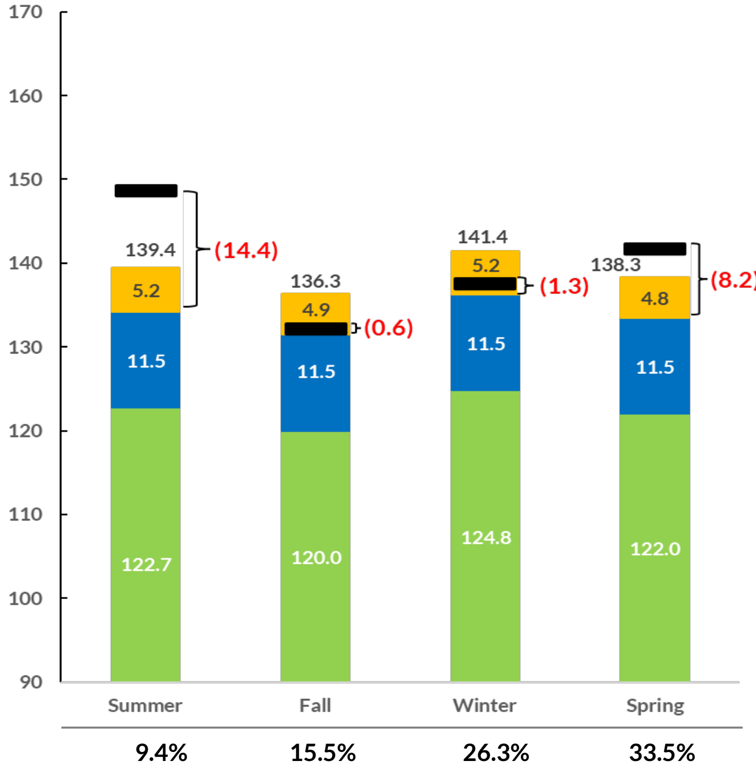
- Bracketed values indicate difference between Committed+ Projected New Capacity and Projected PRMR with LSE forecast
- Capacity accreditation values and PRM projections based on current practices
- Regional Directional Transfer (RDT) limit of 1,900 MW is reflected in this chart

Note: Y-axis truncated in all capacity projection charts to accentuate capacity sufficiency/deficiency.
PRMR: Planning Reserve Margin Requirement
**Using Potential New Capacity as described on slide 6*

Projections for PY 2029/30 show increased reliance on new resources to meet PRMR

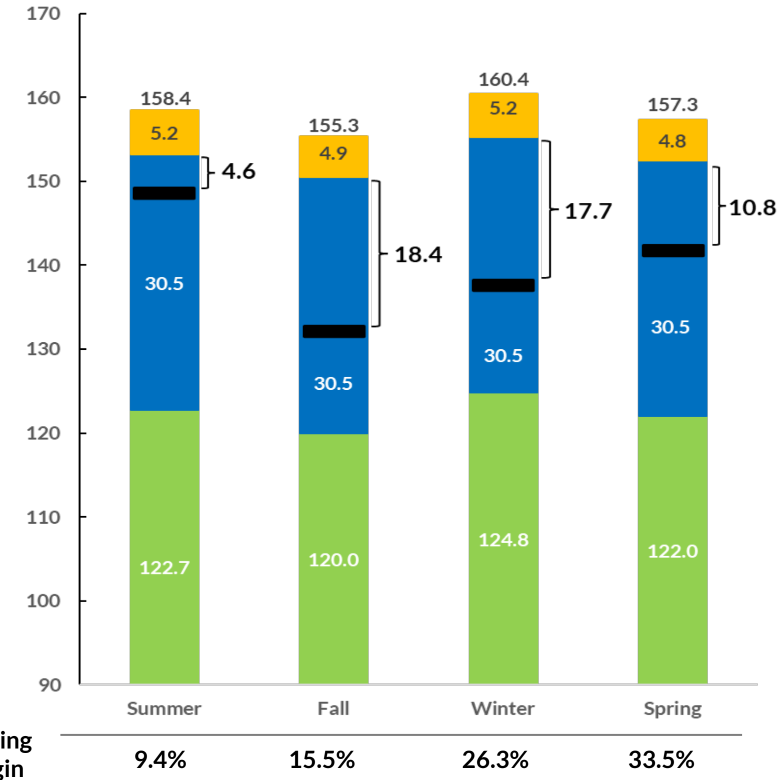
MISO Resource Adequacy Projection 2029/30 (GW)

Assuming 2.3 GW/yr of Potential New Capacity added
3-Year Historical Average*



PRM% - Planning Reserve Margin

Assuming 6.1 GW/yr of Potential New Capacity added
Alternative Projection*



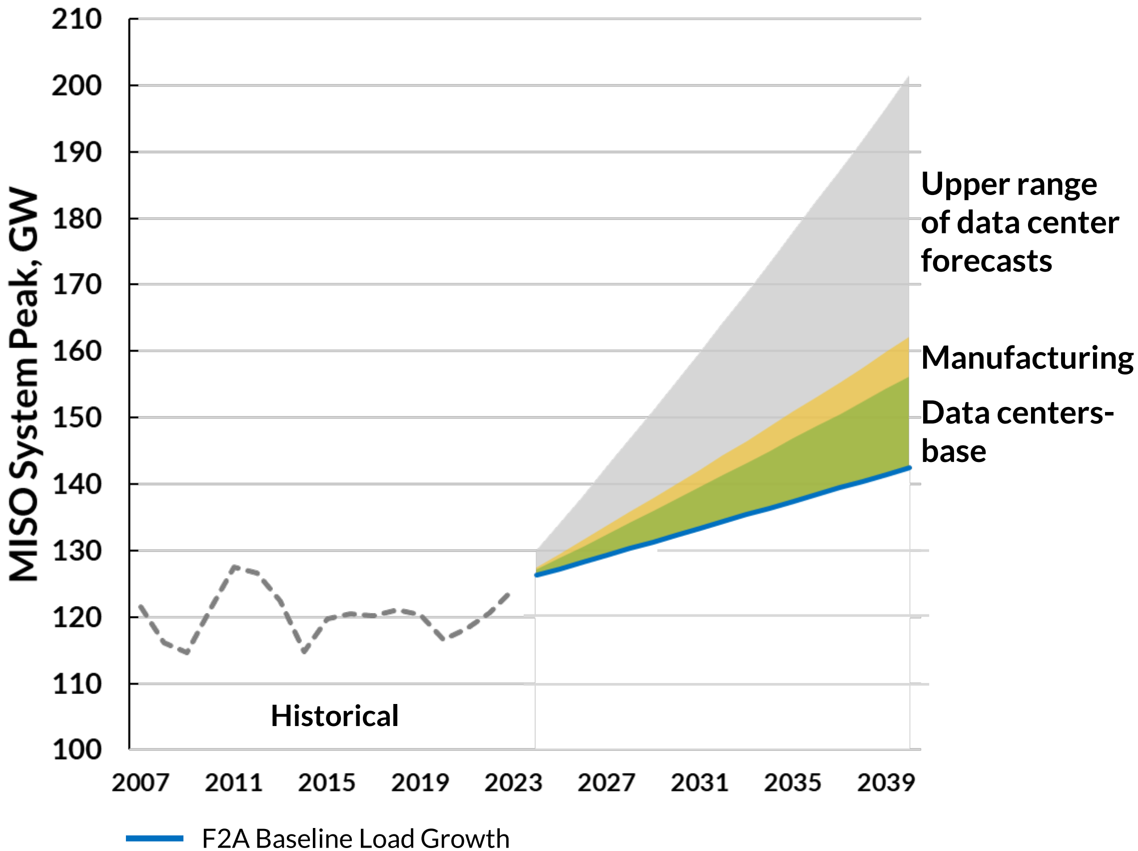
Projected PRMR with LSE forecast
Potentially Unavailable Resources
Potential New Capacity
Committed Capacity

- Bracketed values indicate difference between Committed+ Projected New Capacity and Projected PRMR with LSE forecast
- Capacity accreditation values and PRM projections based on current practices
- Regional Directional Transfer (RDT) limit of 1,900 MW is reflected in this chart

Note: Y-axis truncated in all capacity projection charts to accentuate capacity sufficiency/deficiency.
PRMR: Planning Reserve Margin Requirement
**Using Potential New Capacity as described on slide 6*

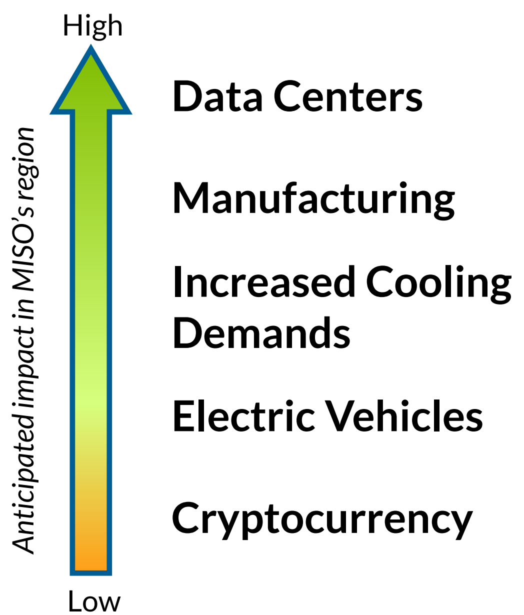
MISO's future long-term load forecasts will account for emerging digital demands, industrial expansion and climate changes

EPRI and Grid Strategies[1] anticipate manufacturing growth to favor MISO's service area



Note: *All figures shown are PRELIMINARY*

- Grid planners nearly *doubled* their 5-year peak load growth forecasts since last year
- MISO anticipates strong *long-term* load growth driven primarily by:



See appendix slide 31 with load forecast updates of other grid operators, potential new data centers in MISO and other commentary

1: https://www.epri.com/research/products/000000003002027930; https://gridstrategiesllc.com/wp-content/uploads/2023/12/National-Load-Growth-Report-2023.pdf

NEW: The 2024 OMS-MISO Survey includes sensitivities considering a range of new, large spot-load additions

Illustrative Example: PY 2026/27 Using Three-Year Historical Average

PRMR based on a higher range of large spot-load additions

- Uses MISO Future 2A as starting point[1]
- Models higher load-growth scenario using data from third-party consultants based on aggressive buildout of large load spot additions[2]

PRMR considering large spot-load additions

- Uses MISO Future 2A as starting point[1]
- Models increased demand based on public announcements for proposed data centers and manufacturing facilities within the MISO region[2]

PRMR based on LSE submitted load forecast

- LSE-submitted Non-Coincident Peak Forecast (NCPF) converted to Coincident Peak Forecast (CPF) using MISO posted Coincidence Factors
- Transmission losses added
- PRMR calculated using out year PRM% from PY 2024/25 LOLE Study

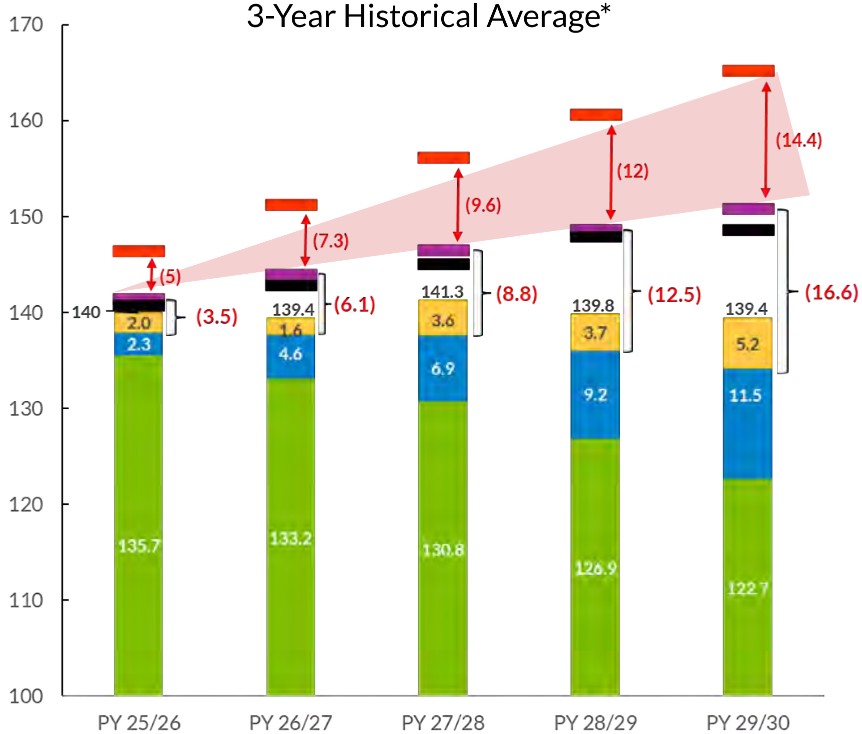
[1] https://cdn.misoenergy.org/Series1A_Futures_Report630735.pdf, [2] *See slides 12 & 31 for more information*

PRMR: Planning Reserve Margin Requirement LSE: Load Serving Entity LOLE: Loss of Load Expectation

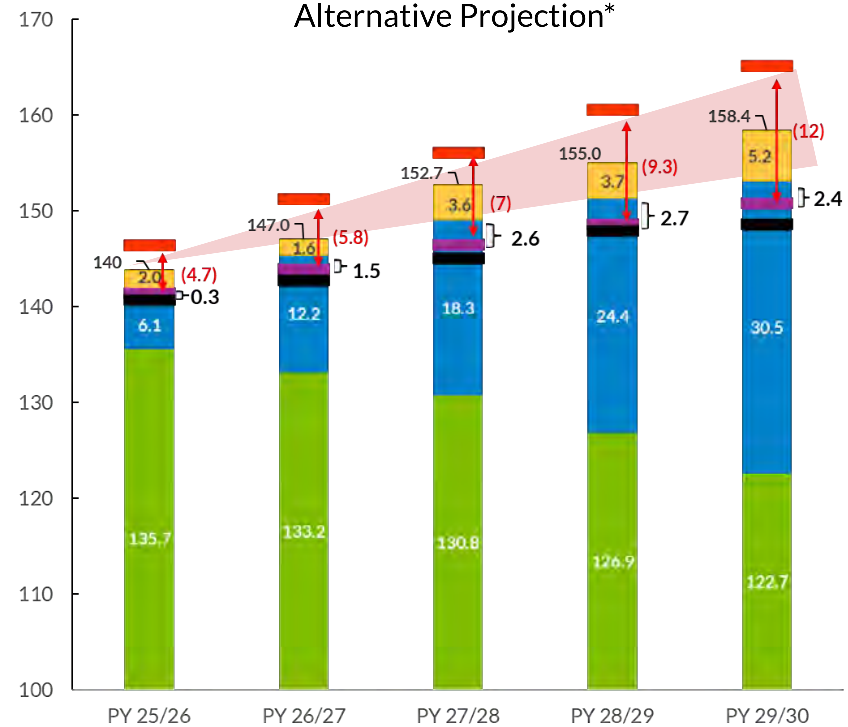
Capacity deficits continue to grow in the near and long term under a large spot-load additions scenario

MISO Resource Adequacy Projection – Summer (GW)

Assuming 2.3 GW/yr of Potential New Capacity added
3-Year Historical Average*



Assuming 6.1 GW/yr of Potential New Capacity added
Alternative Projection*



	PY 25/26	PY 26/27	PY 27/28	PY 28/29	PY 29/30
PRM% - Planning Reserve Margin (2.3 GW/yr)	9.2%	9.4%	9.6%	9.5%	9.4%
PRM% - Planning Reserve Margin (6.1 GW/yr)	9.2%	9.4%	9.6%	9.5%	9.4%

- Projected PRMR for high range of Large Spot-Load Additions
- Projected PRMR with Large Load Spot Additions
- Projected PRMR with LSE forecast
- Potentially Unavailable Resources
- Potential New Capacity
- Committed Capacity

- Bracketed values indicate difference between Committed + Projected New Capacity and Projected PRMR with large spot-load additions
- Red arrow values indicate the additional potential deficit with high-range large load growth case
- Capacity accreditation values and PRM projections based on current practices
- Regional Directional Transfer (RDT) limit of 1900 MW is reflected in this chart

Note: Y-axis truncated in all capacity projection charts to accentuate capacity sufficiency/deficiency.
PRMR: Planning Reserve Margin Requirement
**Using Potential New Capacity as described on slide 6*

MISO's existing accreditation methods can overstate a resource's capacity value during the highest risk periods, especially as the region's risk profile changes, leading to understated risk

- Increased reliance on wind, solar and storage, projected large-load additions and electrification, and frequent large-scale weather events are decoupling periods of risk from periods of high demand.
- These drivers are upending traditional methods for establishing reliability requirements and resource accreditation.
- MISO's proposed resource accreditation methodology* (Direct Loss of Load) will value a resource's marginal contribution to reliability during the highest risk periods.

MISO's proposed accreditation reforms, on file at FERC and targeted for implementation in PY 2028/29, will better measure a resource's contribution to reliability.

*See Resource Accreditation White Paper, published March 2024: https://cdn.misoenergy.org/Resource%20Accreditation%20White%20Paper%20Version%202.1630728.pdf

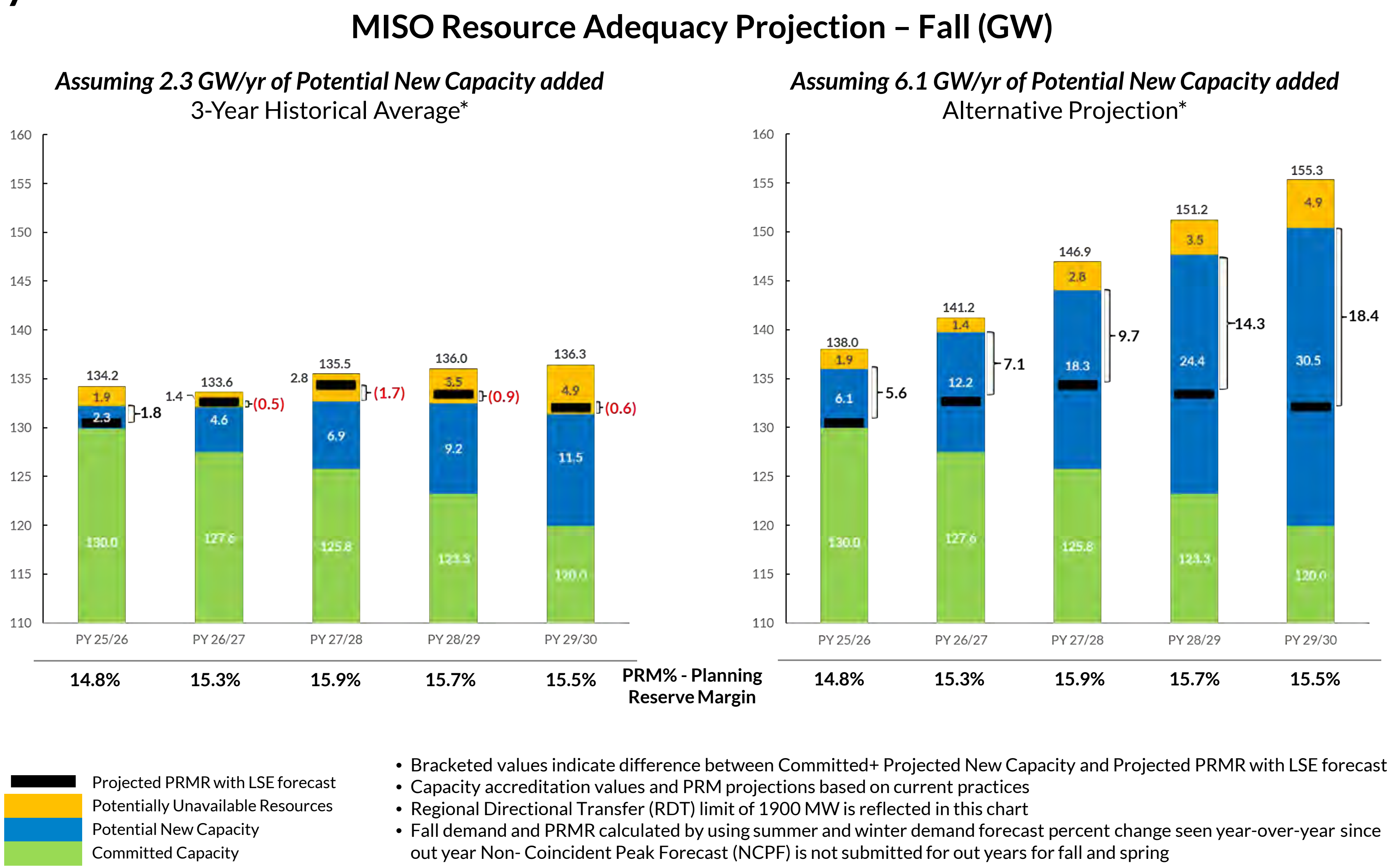
The 2024 Survey shows that the near-term resource decisions made by utilities, regulators, MISO and its Members will determine whether the region's resources remain adequate

- Continued collaboration between OMS and MISO is necessary to maintain a reliable electricity system.
- The survey shows a range of potential resource adequacy outcomes, reinforcing near-term risks and illustrating key uncertainties impacting resource adequacy in the MISO region.
- Immediate actions are needed to expedite the addition of new capacity, coordinate resources for new load additions, and potentially moderate the pace of resource retirements.
- MISO's reforms under the Reliability Imperative are timely and responsive to the drivers contributing to resource adequacy challenges.
  - Implemented: Seasonal construct and thermal accreditation
  - Filed at FERC: 1) Reliability-Based Demand Curve, 2) resource accreditation
  - Ongoing reforms: 1) Load Modifying Resource accreditation, 2) Resource adequacy risk modeling improvements, 3) Attributes Roadmap, 4) LRTP, 5) JTIQ, 6) Queue Reforms

Appendix

Appendix Table of Contents

Fall capacity ranges from 1.8 GWs to 5.6 GWs surplus in the prompt year



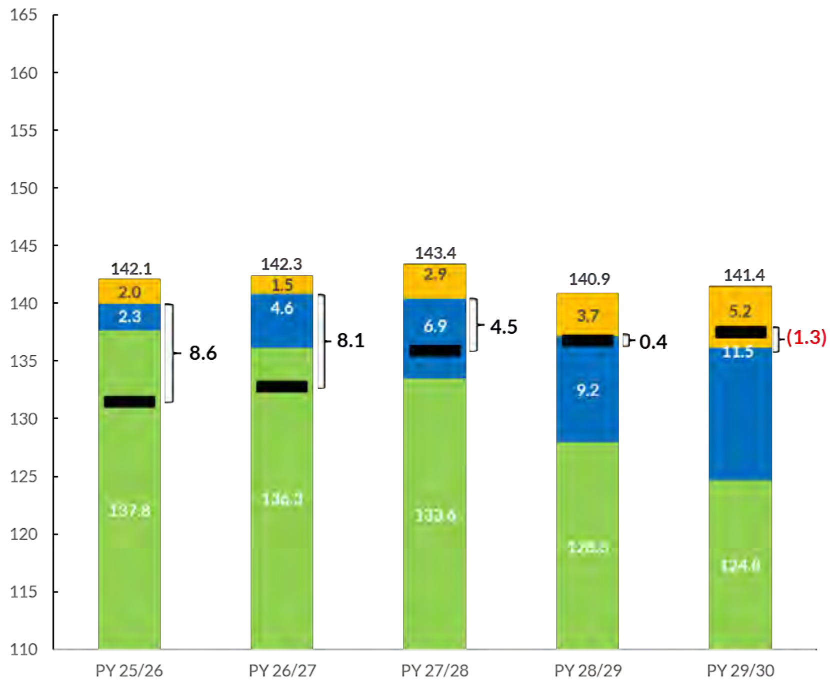
- Bracketed values indicate difference between Committed+ Projected New Capacity and Projected PRMR with LSE forecast
- Capacity accreditation values and PRM projections based on current practices
- Regional Directional Transfer (RDT) limit of 1900 MW is reflected in this chart
- Fall demand and PRMR calculated by using summer and winter demand forecast percent change seen year-over-year since out year Non- Coincident Peak Forecast (NCPF) is not submitted for out years for fall and spring

Note: Y-axis truncated in all capacity projection charts to accentuate capacity sufficiency/deficiency.
PRMR: Planning Reserve Margin Requirement
**Using Potential New Capacity as described on slide 6*

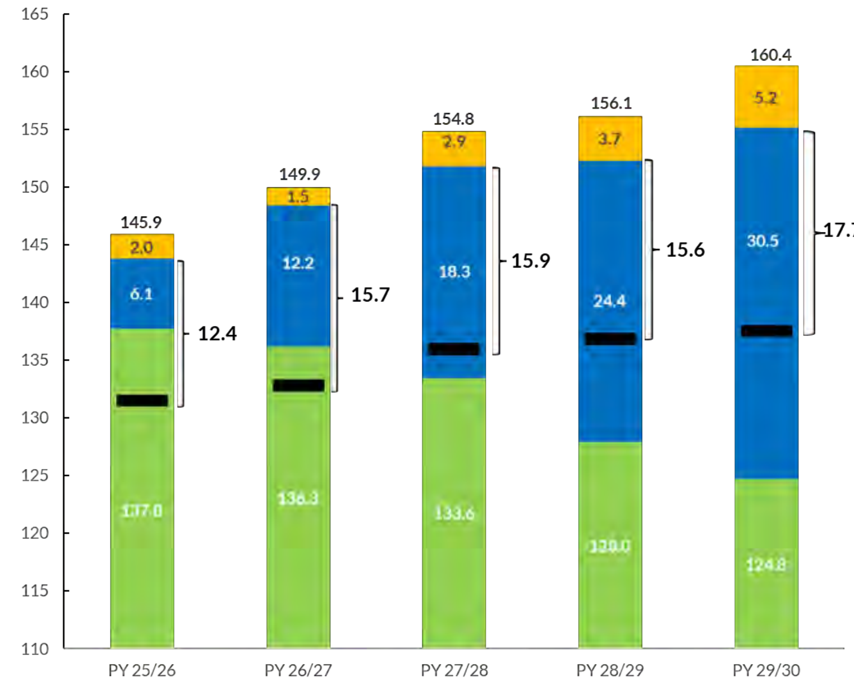
Winter capacity ranges from 8.6 GWs to 12.4 GWs surplus in the prompt year

MISO Resource Adequacy Projection – Winter (GW)

Assuming 2.3 GW/yr of Potential New Capacity added
3-Year Historical Average *



Assuming 6.1 GW/yr of Potential New Capacity added
Alternative Projection*



27.2%	**27%**	**26.8%**	**26.5%**	**26.3%**	**PRM% - Planning Reserve Margin**	**27.2%**	**27%**	**26.8%**	**26.5%**	**26.3%**

- Projected PRMR with LSE forecast
- Potentially Unavailable Resources
- Potential New Capacity
- Committed Capacity

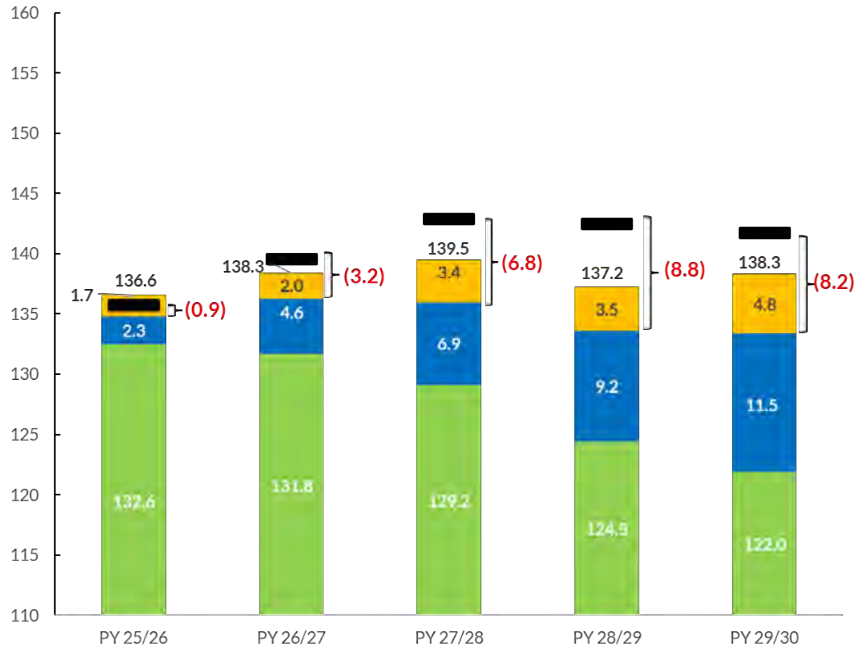
- Bracketed values indicate difference between Committed+ Projected New Capacity and Projected PRMR with LSE forecast
- Capacity accreditation values and PRM projections based on current practices
- Regional Directional Transfer (RDT) limit of 1900 MW is reflected in this chart

Note: Y-axis truncated in all capacity projection charts to accentuate capacity sufficiency/deficiency.
PRMR: Planning Reserve Margin Requirement
**Using Potential New Capacity as described on slide 6*

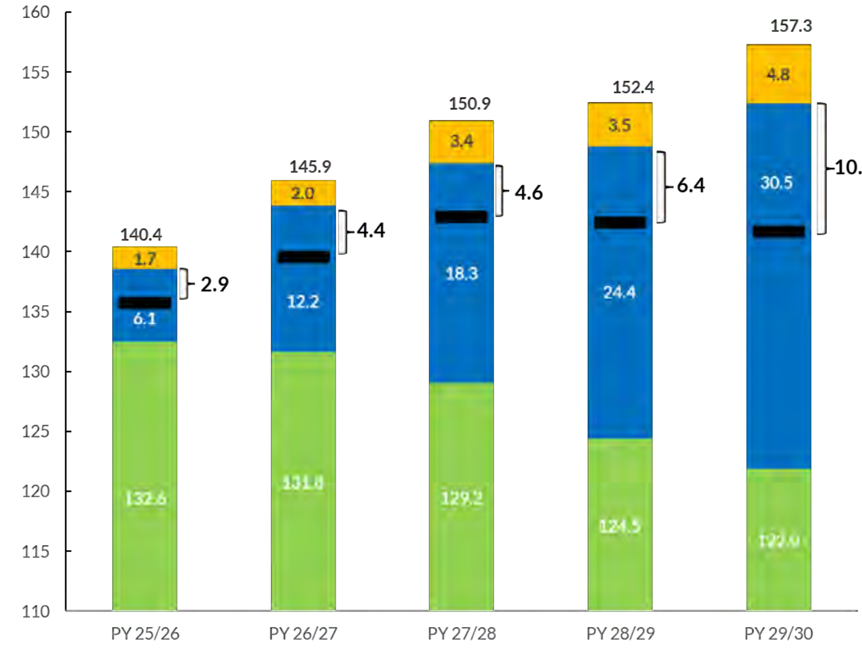
Spring capacity ranges from 0.9 GWs deficit to 2.9 GWS surplus in the prompt year

MISO Resource Adequacy Projection – Spring (GW)

Assuming 2.3 GW/yr of Potential New Capacity added
3-Year Historical Average *



Assuming 6.1 GW/yr of Potential New Capacity added
Alternative Projection*



	PY 25/26	PY 26/27	PY 27/28	PY 28/29	PY 29/30
2.3 GW/yr	28.7%	30.7%	32.8%	33.1%	33.5%
PRM% - Planning Reserve Margin (6.1 GW/yr)	28.7%	30.7%	32.8%	33.1%	33.5%

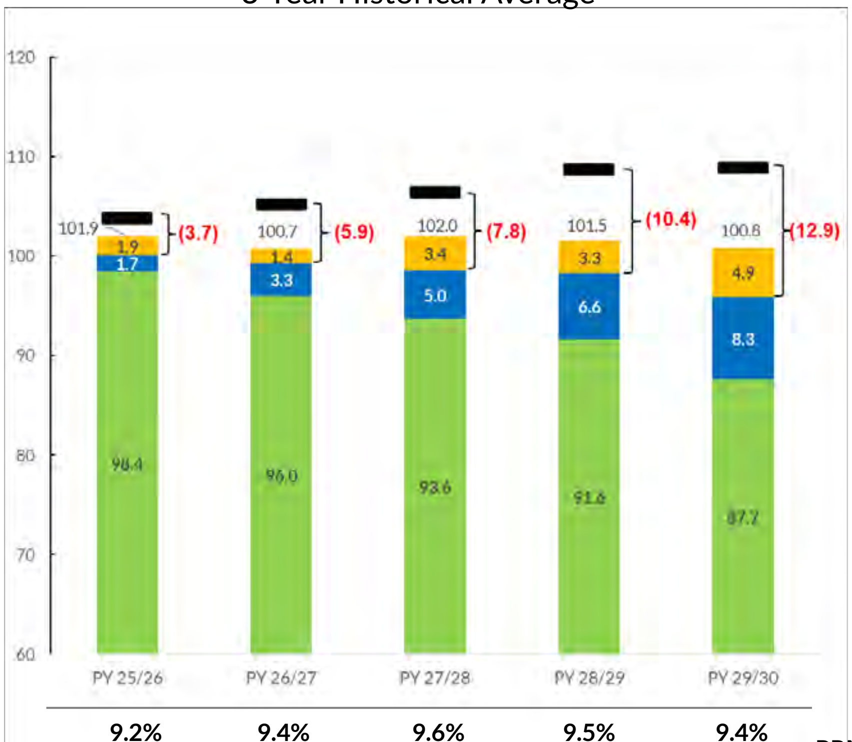
Projected PRMR with LSE forecast
Potentially Unavailable Resources
Potential New Capacity
Committed Capacity

- Bracketed values indicate difference between Committed+ Projected New Capacity and Projected PRMR with LSE forecast
- Capacity accreditation values and PRM projections based on current practices
- Regional Directional Transfer (RDT) limit of 1900 MW is reflected in this chart
- Spring demand and therefore PRMR is calculated by using Summer and Winter demand forecast percent change seen year over year since out year NCPF is not submitted for out years for Fall and Spring

Note: Y-axis truncated in all capacity projection charts to accentuate capacity sufficiency/deficiency.
PRMR: Planning Reserve Margin Requirement
**Using Potential New Capacity as described on slide 6*

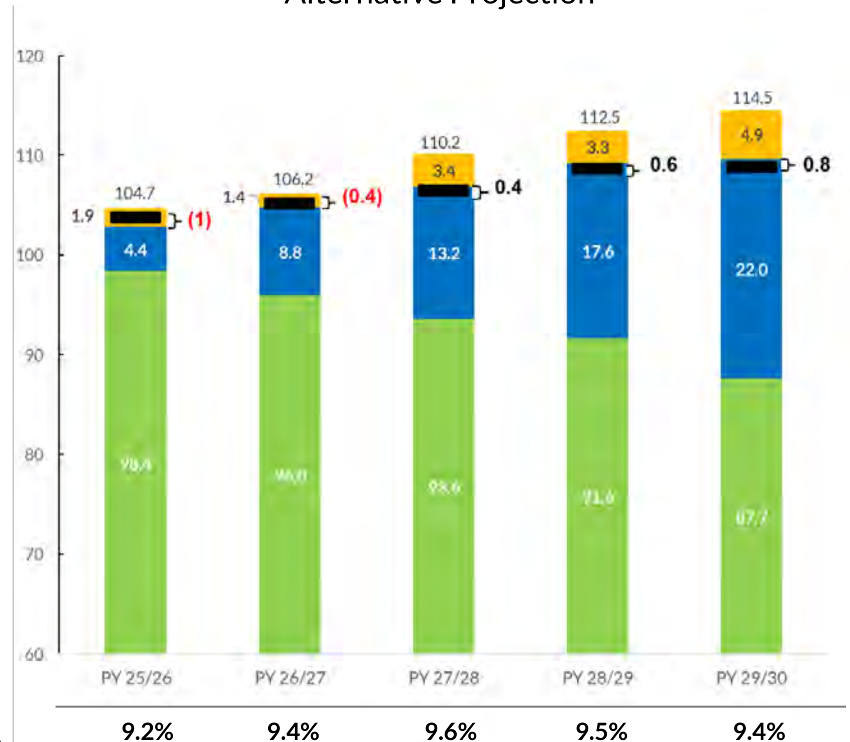
The North/Central subregion capacity for Summer ranges from 3.7 GWs to 1 GW deficit in the prompt year

Assuming 2.3 GW/yr of Potential New Capacity added
3-Year Historical Average *



PRM% - Planning Reserve Margin

Assuming 6.1 GW/yr of Potential New Capacity added
Alternative Projection*

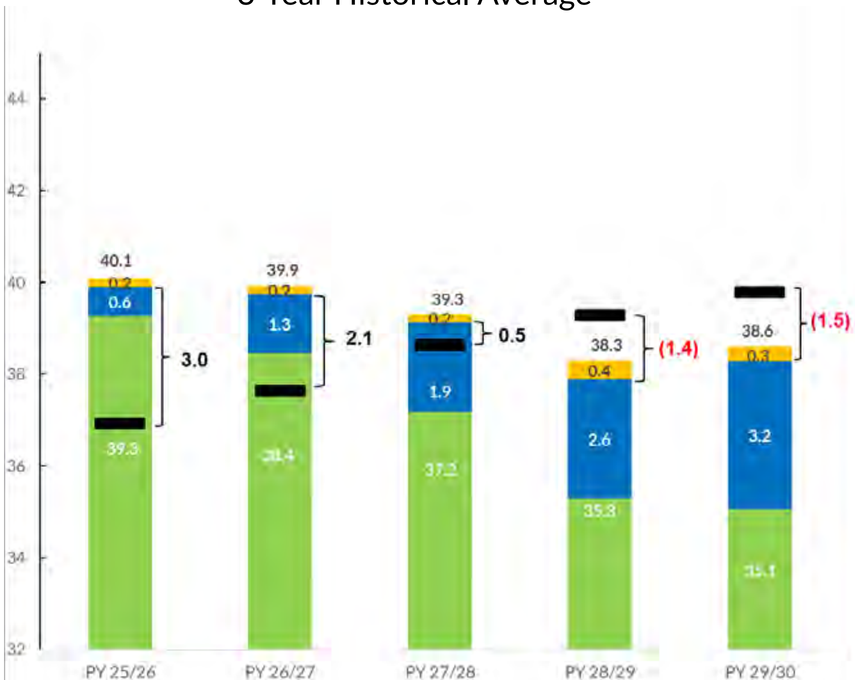


- Projected PRMR with LSE forecast
- Potentially Unavailable Resources
- Potential New Capacity
- Committed Capacity

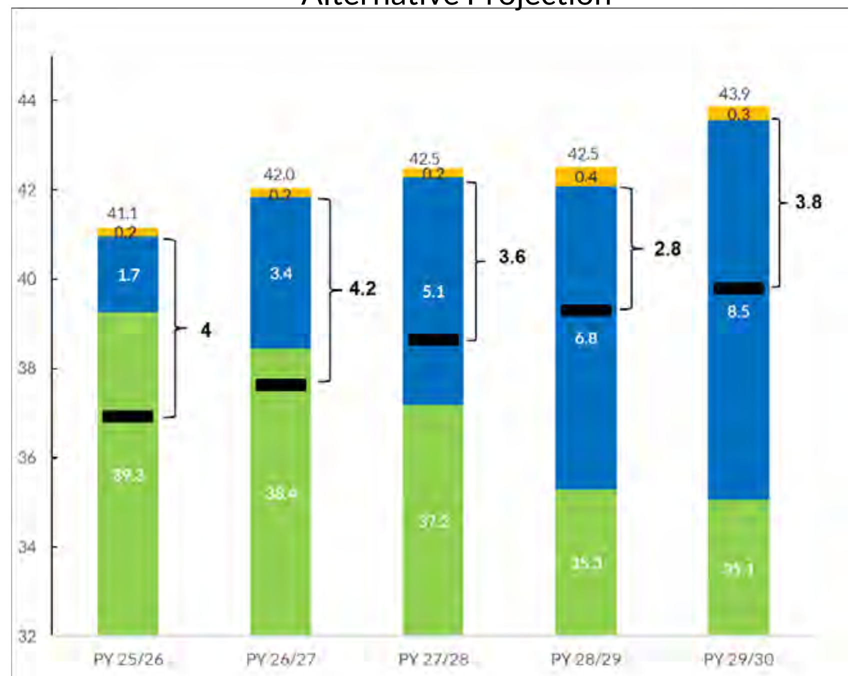
**Using Potential New Capacity as described on slide 6*
Note: Y-axis truncated in all capacity projection charts to accentuate capacity sufficiency/deficiency. While RDT is not reflected in these charts the limit is currently modeled at 1900 MW in Resource Adequacy. PRMR: Planning Reserve Margin Requirement.

The South subregion capacity for Summer ranges from 3 GWs to 4 GWs of surplus in the prompt year

Assuming 2.3 GW/yr of Potential New Capacity added
3-Year Historical Average *



Assuming 6.1 GW/yr of Potential New Capacity added
Alternative Projection*



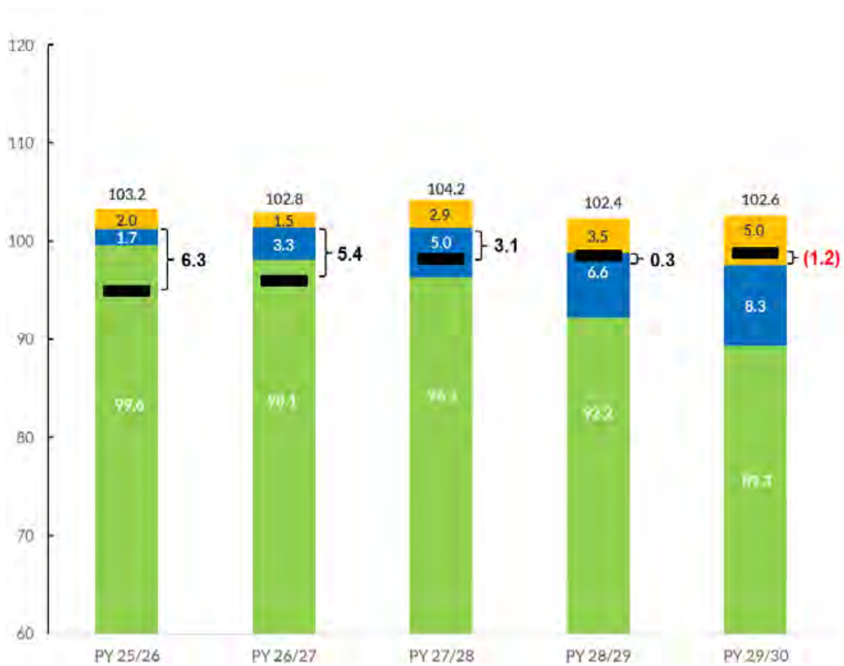
9.2%	9.4%	9.6%	9.5%	9.4%	PRM% - Planning Reserve Margin	9.2%	9.4%	9.6%	9.5%	9.4%

- Projected PRMR with LSE forecast
- Potentially Unavailable Resources
- Potential New Capacity
- Committed Capacity

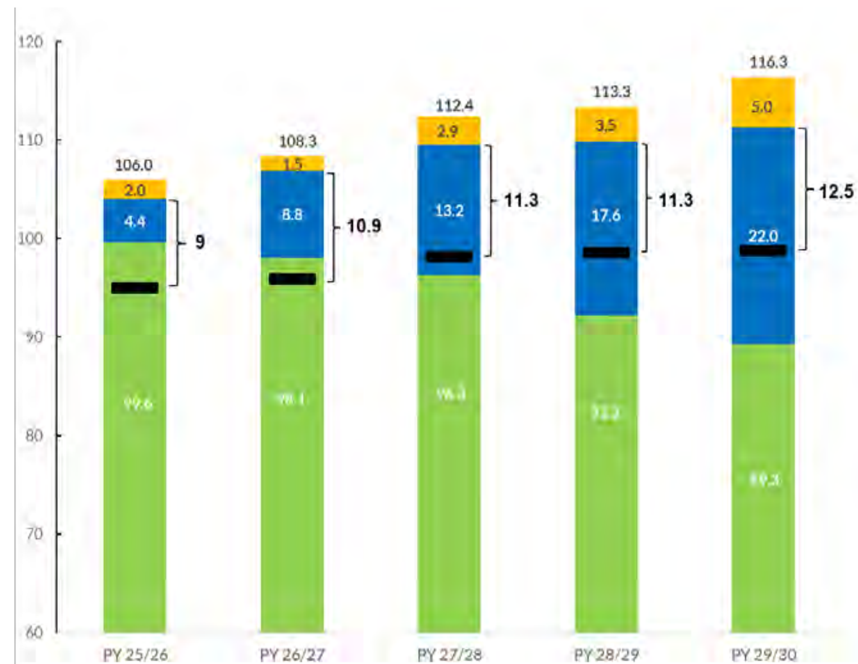
**Using Potential New Capacity as described on slide 6*
Note: Y-axis truncated in all capacity projection charts to accentuate capacity sufficiency/deficiency. While RDT is not reflected in these charts the limit is currently modeled at 1900 MW in Resource Adequacy. PRMR: Planning Reserve Margin Requirement.

The North/Central subregion capacity for Winter ranges from 6.3 GWs to 9 GWs of surplus in the prompt year

Assuming 2.3 GW/yr of Potential New Capacity added
3-Year Historical Average *



Assuming 6.1 GW/yr of Potential New Capacity added
Alternative Projection*



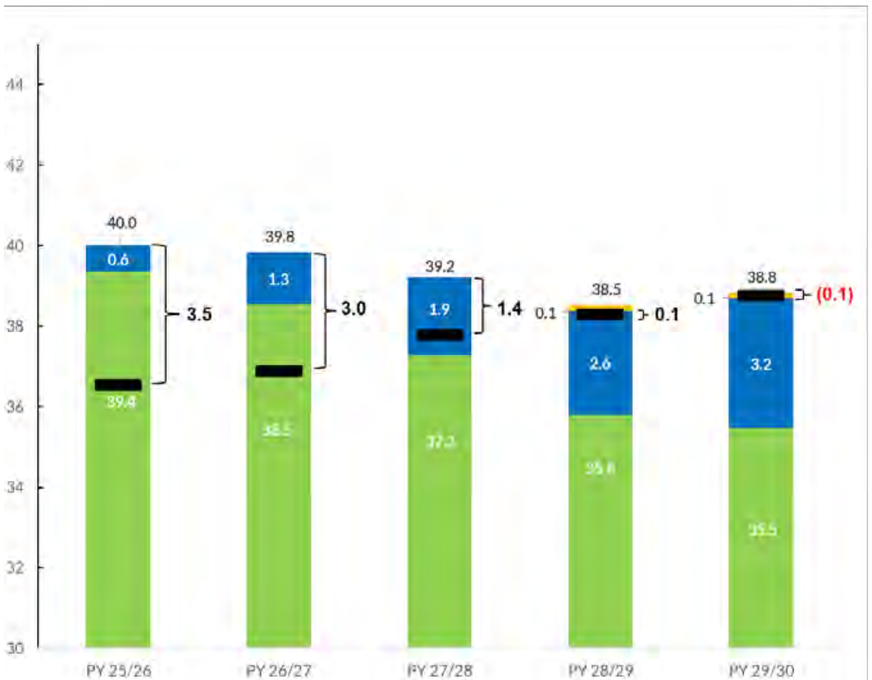
27.2%	27%	26.8%	26.5%	26.3%	PRM% - Planning Reserve Margin	27.2%	27%	26.8%	26.5%	26.3%

- Projected PRMR with LSE forecast
- Potentially Unavailable Resources
- Potential New Capacity
- Committed Capacity

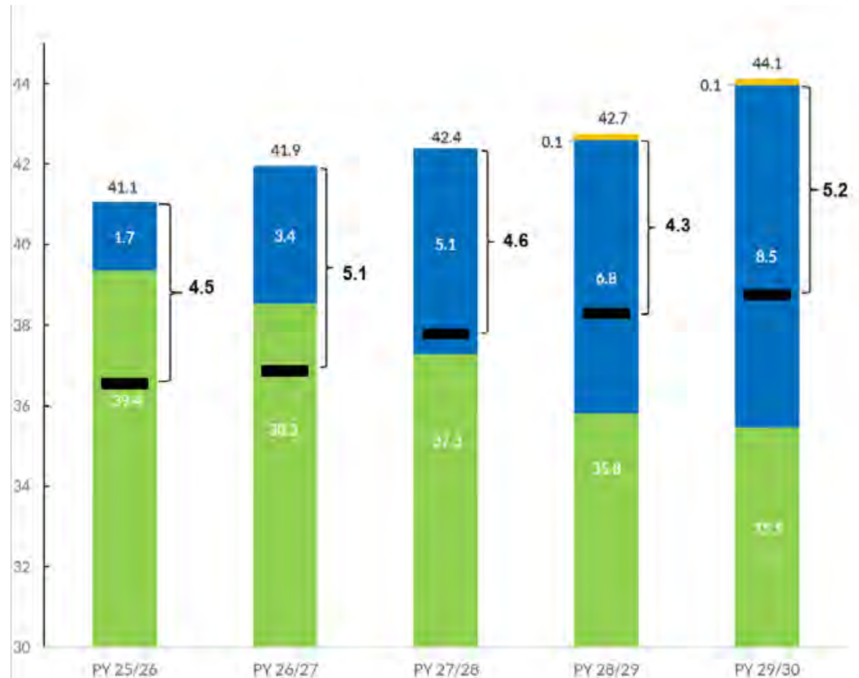
**Using Potential New Capacity as described on slide 6*
Note: Y-axis truncated in all capacity projection charts to accentuate capacity sufficiency/deficiency. While RDT is not reflected in these charts the limit is currently modeled at 1900 MW in Resource Adequacy. PRMR: Planning Reserve Margin Requirement.

The South subregion capacity for Winter ranges from 3.5 GWs to 4.5 GWs of surplus in the prompt year

Assuming 2.3 GW/yr of Potential New Capacity added
3-Year Historical Average *



Assuming 6.1 GW/yr of Potential New Capacity added
Alternative Projection*



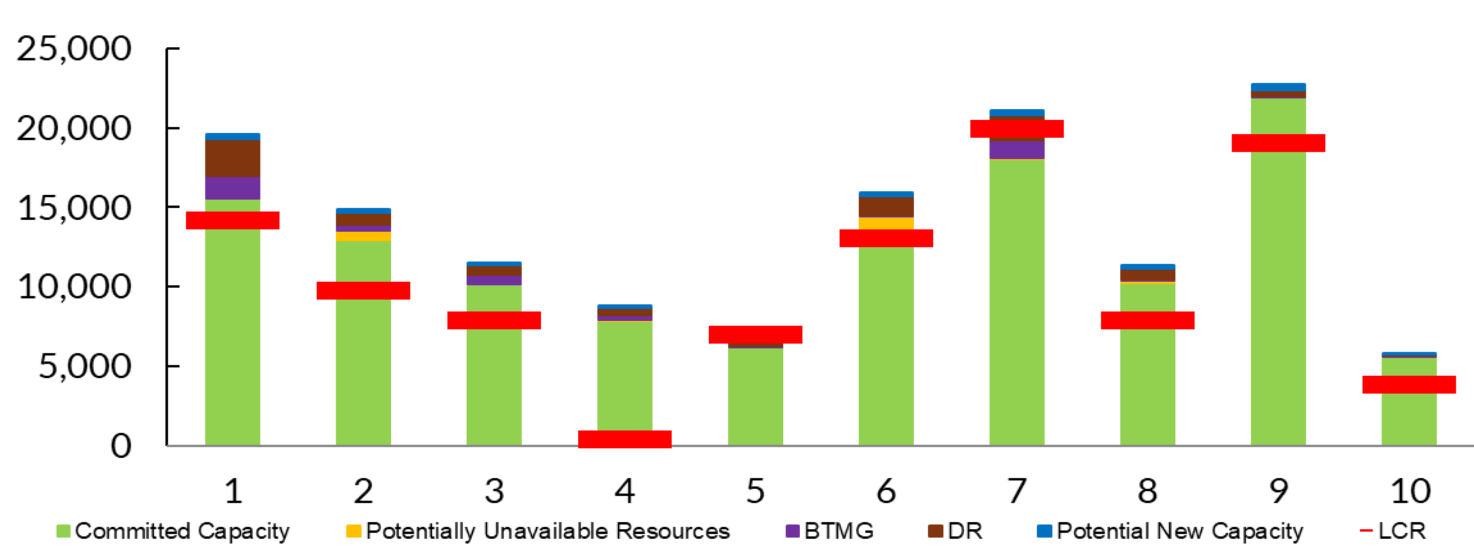
27.2%	**27%**	**26.8%**	**26.5%**	**26.3%**	**PRM% - Planning Reserve Margin**	**27.2%**	**27%**	**26.8%**	**26.5%**	**26.3%**

Projected PRMR with LSE forecast
Potentially Unavailable Resources
Potential New Capacity
Committed Capacity

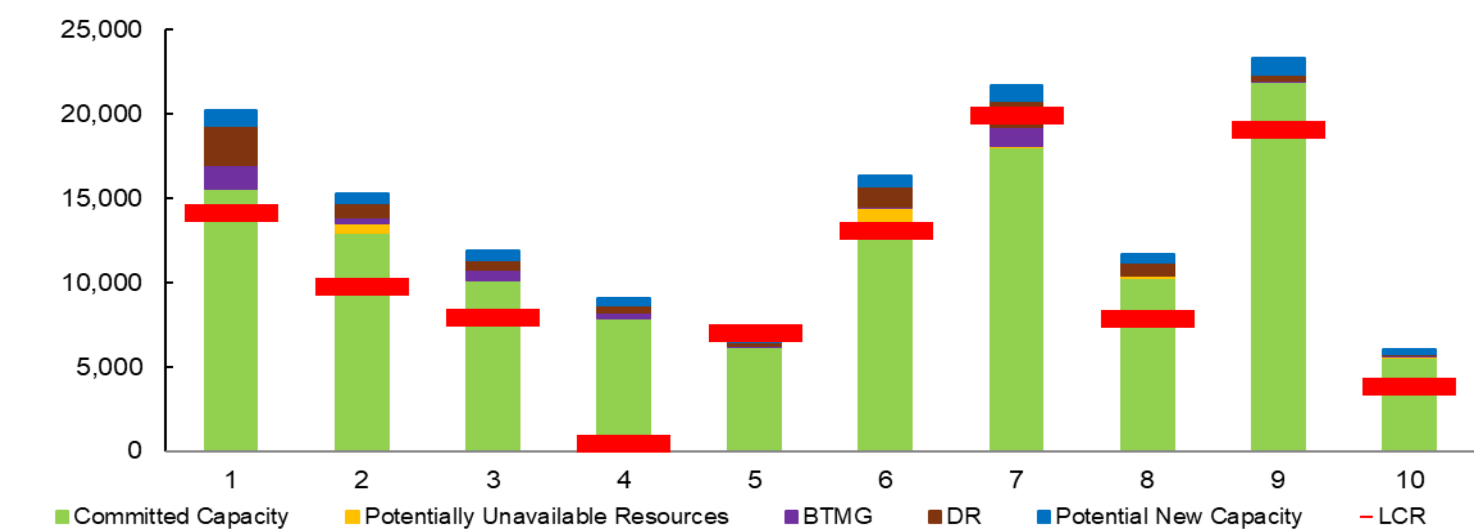
**Using Potential New Capacity as described on slide 6*
Note: Y-axis truncated in all capacity projection charts to accentuate capacity sufficiency/deficiency. While RDT is not reflected in these charts the limit is currently modeled at 1900 MW in Resource Adequacy. PRMR: Planning Reserve Margin Requirement.

Summer PY 2025/26 Load Clearing Requirement (LCR) by zone

PY 2025/26 Summer by Zone vs. LCR (MW) Using 3-Year Historical average for new capacity*



PY 2025/26 Summer by Zone vs. LCR (MW) Using Alternative Projection for new capacity*

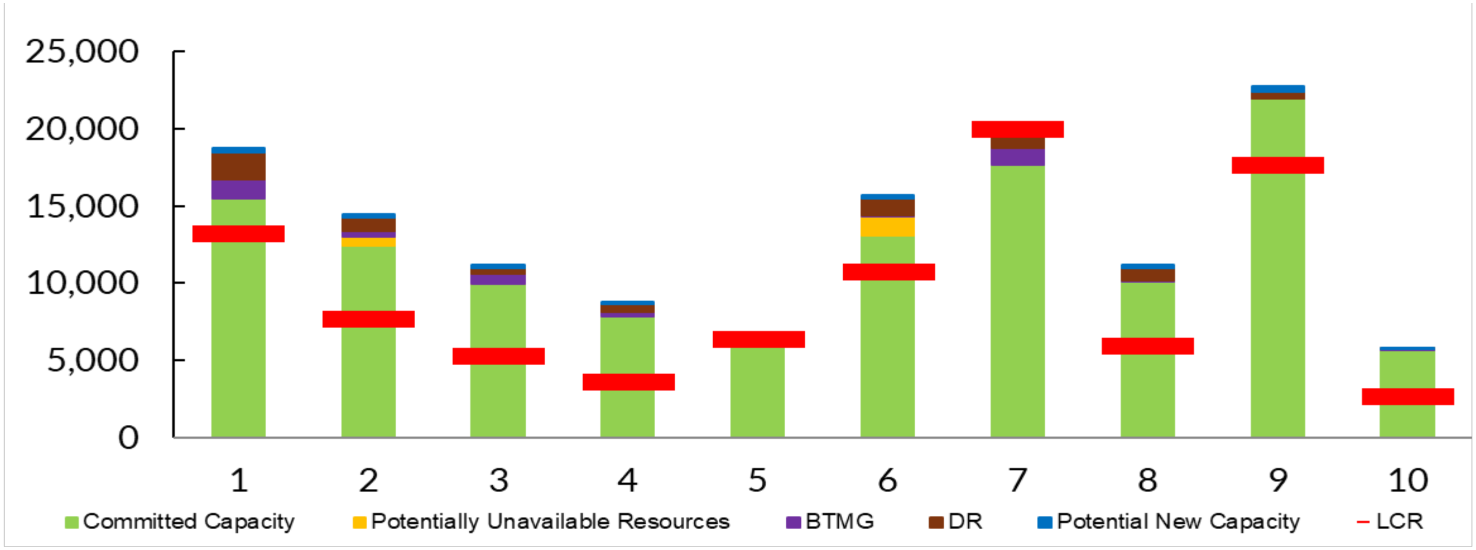


Using Potential New Capacity as described on slide 6

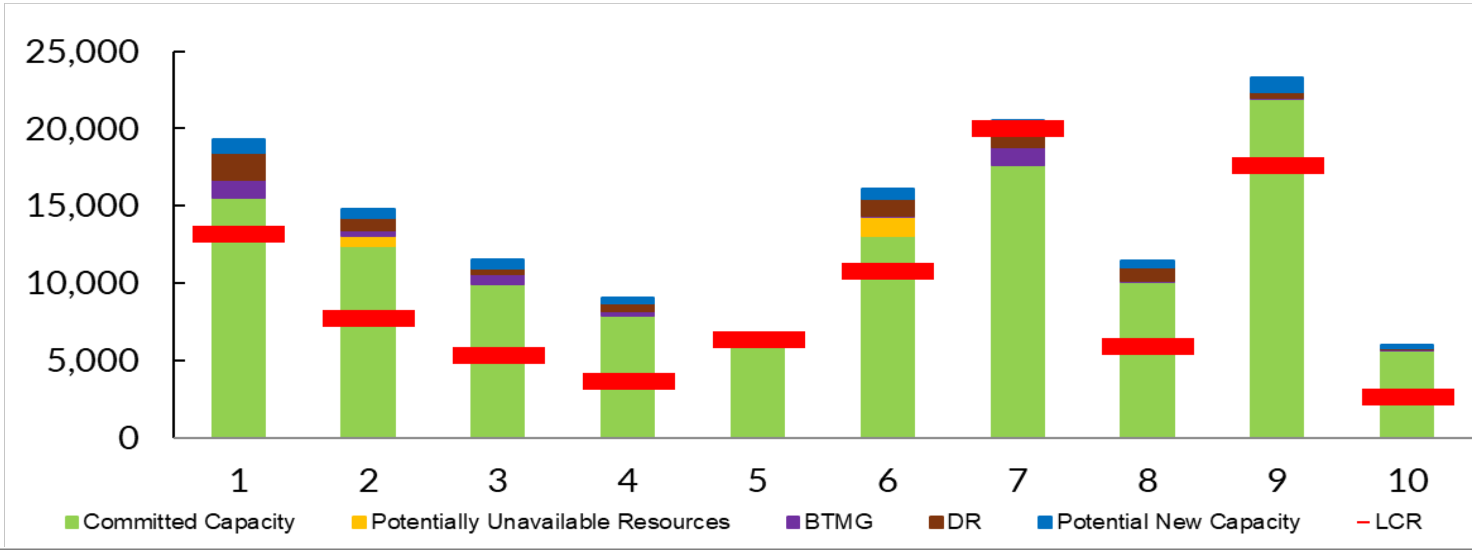
Includes only projected capacity resources within the zone (not imports and interzonal transfers). Potential Capacity for each zone is the average actual installed New Capacity used in the MISO overview slide proportional to that zones existing generation.

Fall PY 25/26 Load Clearing Requirement (LCR) by Zone

PY 2025/26 Summer by Zone vs. LCR (MW) Using 3-Year Historical average for new capacity*



PY 2025/26 Summer by Zone vs. LCR (MW) Using Alternative Projection for new capacity*



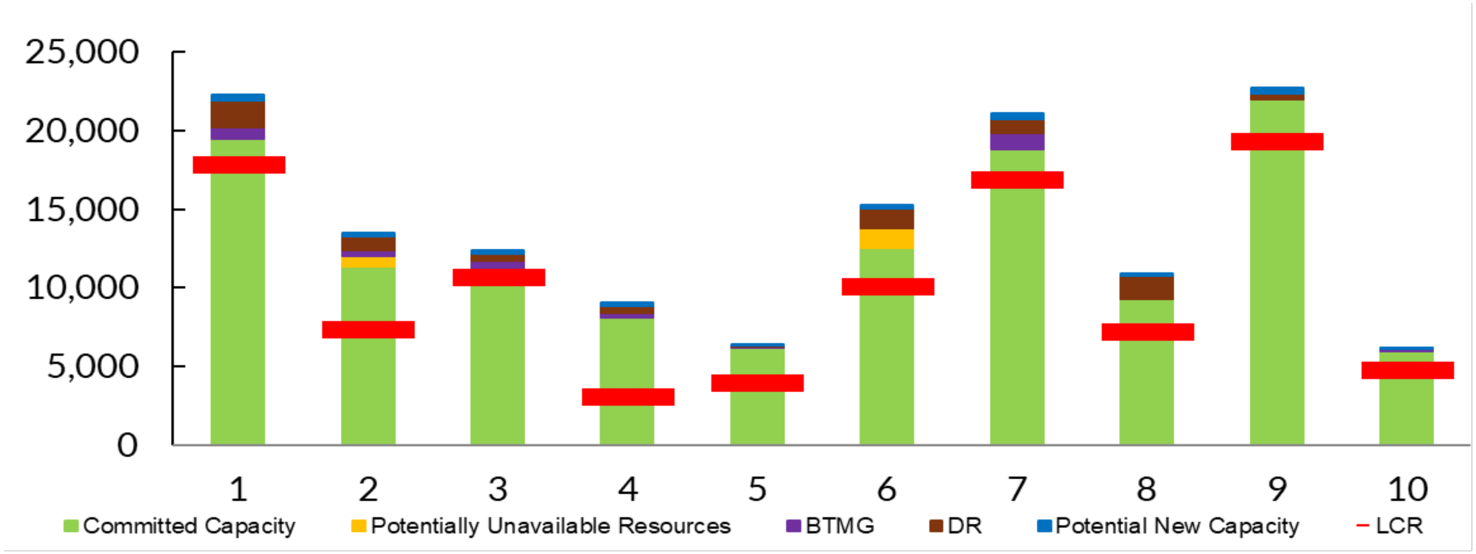
Using Potential New Capacity as described on slide 6

Includes only projected capacity resources within the zone (not imports and interzonal transfers). Potential Capacity for each zone is the average actual installed New Capacity used in the MISO overview slide proportional to that zones existing generation.

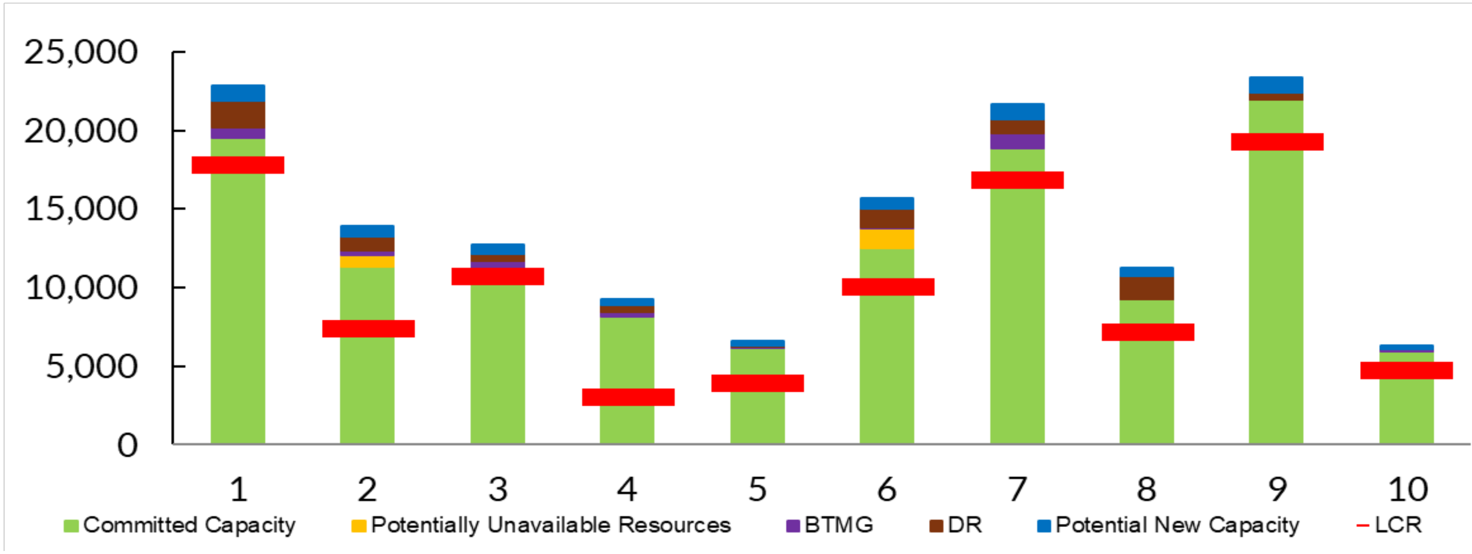
OMS MISO

Winter PY 25/26 Load Clearing Requirement (LCR) by Zone

PY 2025/26 Summer by Zone vs. LCR (MW) Using 3-Year Historical average for new capacity*



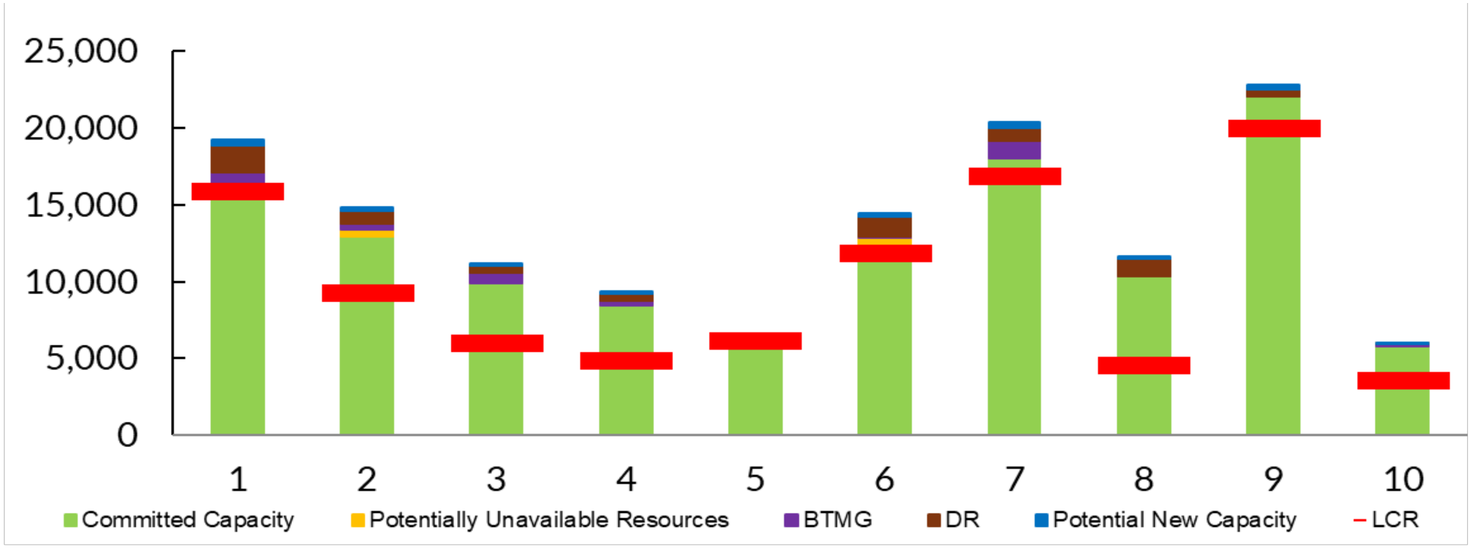
PY 2025/26 Summer by Zone vs. LCR (MW) Using Alternative Projection for new capacity*



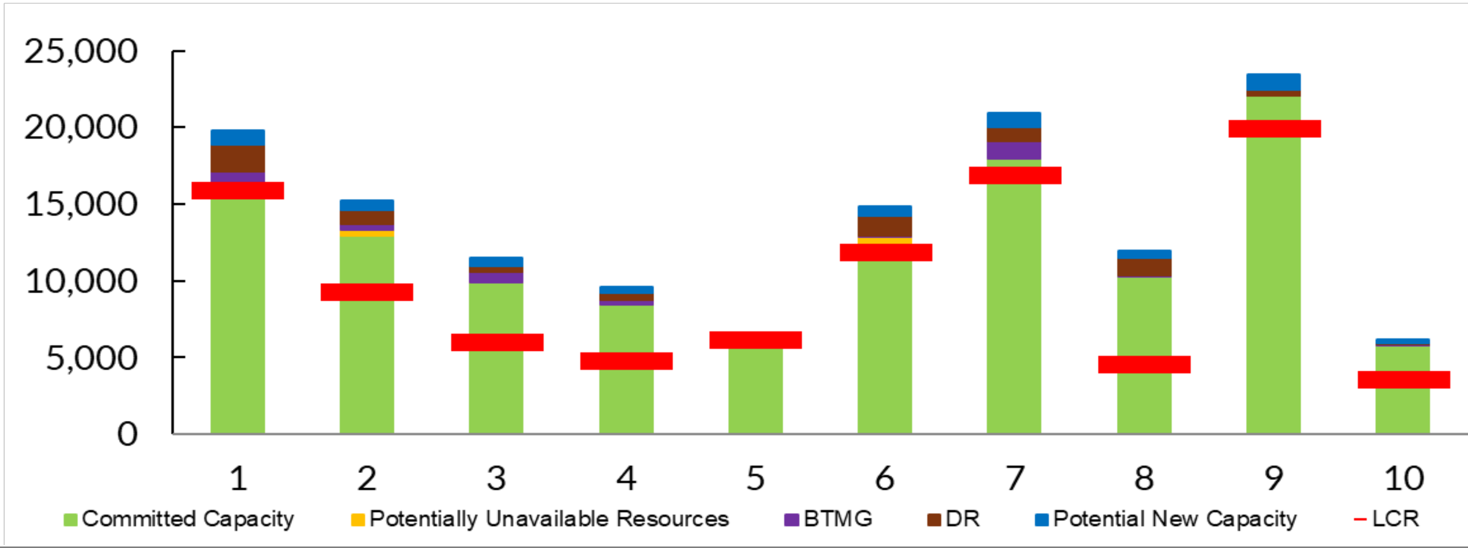
*Using Potential New Capacity as described on slide 6
Includes only projected capacity resources within the zone (not imports and interzonal transfers). Potential Capacity for each zone is the average actual installed New Capacity used in the MISO overview slide proportional to that zones existing generation.

Spring PY 25/26 Load Clearing Requirement (LCR) by Zone

PY 2025/26 Summer by Zone vs. LCR (MW) Using 3-Year Historical average for new capacity*

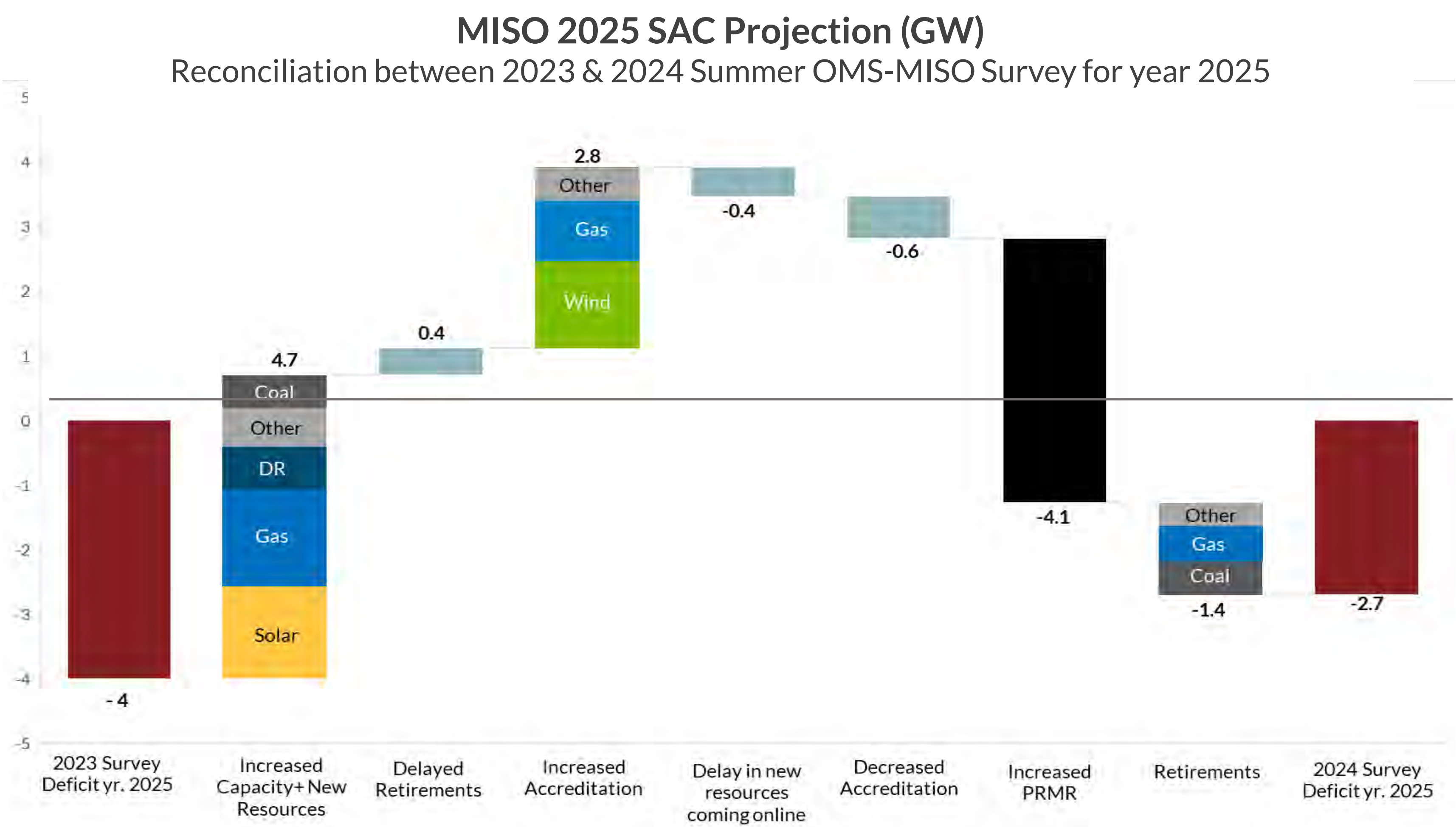


PY 2025/26 Summer by Zone vs. LCR (MW) Using Alternative Projection for new capacity*



*Using Potential New Capacity as described on slide 6
Includes only projected capacity resources within the zone (not imports and interzonal transfers). Potential Capacity for each zone is the average actual installed New Capacity used in the MISO overview slide proportional to that zones existing generation.

Year-over-year, the OMS-MISO Survey results show a decreased deficit due to increased response/new resources and increased accreditation, but a deficit remains largely driven by an increased Planning Reserve Margin Requirement



Higher load forecast included in 'Increased PRMR (Planning Reserve Margin Requirement)'
Other in 'Increased Response +New Resources': Wind, Battery, Hydro, and Oil
Other in 'Increased Accreditation' and Retirements: Other-Gas(CU ft), Water, Wood, Waste Heat