

September 7, 2021

The Honorable Jennifer Granholm Secretary of Energy United States Department of Energy 1000 Independence Ave, SW Washington DC 20585

RE: Request for Emergency Order Pursuant to Section 202(c) of the Federal Power Act

Dear Secretary Granholm:

Pursuant to Section 202(c) of the Federal Power Act (FPA),¹ and the Department of Energy (DOE) Administrative Procedures and Sanctions,² the California Independent System Operator Corporation (CAISO)³ requests the Secretary of Energy find an electric reliability emergency exists within the State of California that requires intervention, in the form of a Section 202(c) emergency order, to preserve the reliability of bulk electric power system in California. An emergency order will allow the CAISO to dispatch additional generation that may be necessary for the CAISO to meet demand in the face of extremely challenging conditions including extreme heat waves, multiple fires, high winds, and various grid issues.

The CAISO respectfully requests that the Secretary issue the requested emergency order by September 10, 2021, or a soon as possible thereafter, authorizing specific electric generating resources (Covered Resources) located within California to test and operate at their maximum generation output levels when directed to do so by the CAISO, notwithstanding air quality or other permit limitations. An order by September 10, 2021 will allow new units at the Greenleaf Unit 1 and the Roseville Energy Park sites to connect to the electricity system in mid-September. The CAISO requests that the Secretary make this order effective for an initial period of 60 days. The Covered Resources subject to this request include:

- Midway Sunset Cogeneration Facility Unit C in Fellows, California.
- > The Alamitos Energy Center in Long Beach, California
- > The Huntington Beach Energy Project in Huntington Beach, California

¹ 16 U.S.C. § 824a(c).

² 10 C.F.R. Part 205, Subpart W.

³ The CAISO is a non-profit public benefit corporation organized under the laws of the State of California. The CAISO is the balancing authority responsible for the reliable operation of the electric grid comprising the transmission systems of numerous utilities.

- > The Walnut Creek Energy Park in the City of Industry, California
- > New units at the Greenleaf Unit 1 site in Yuba City, California
- > New units at the Roseville Energy Park in Roseville, California

The CAISO has prepared this request in consultation with the California Energy Commission (CEC) and the California Air Resources Board (CARB). These state entities have informed the CAISO they are willing to support any reporting DOE may require under an emergency order.

The CAISO estimates that granting this request will provide more than 200 MW of additional generation supply from the Covered Resources when conditions merit. Exhibit A includes a list of the Covered Resources. This list includes: (1) the name of each Covered Resource and its location by city, zip code, and geographic information system (GIS) coordinates⁴; (2) the owner of the Covered Resource; (3) an estimated amount of additional megawatts this request may allow the CAISO to dispatch at each Covered Resource; and (4) permit exceedances that the CAISO understands may occur, if the CAISO dispatches the resources to the levels requested under the emergency order.⁵ Each of these generating units utilizes natural gas as a fuel supply. Two of the Covered Resources – at the Greenleaf Unit 1 and Roseville Energy Park sites – are working with the State of California to deploy new generating capacity at their facility sites with operation scheduled to begin as early as September 17, 2021. These Covered Resources will not have completed federal environmental permitting requirements by this date and will not operate unless they are subject to a DOE emergency order. Exhibit B is a map of California reflecting the geographic locations of the Covered Resources sources in relation to air quality management districts. *Exhibit C* identifies the nearest air quality monitoring stations to each Covered Resource. If the CAISO identifies additional generation units it deems necessary to operate in excess of federal environmental permitting limits to maintain electric reliability, the CAISO will request authorization to amend the list of Covered Resources.

In accordance with 10 CFR §205.391(a), the CAISO requests that DOE issue an emergency order by September 10, 2021 to remain effective – subject to the conditions described below – for a period of 60 days, without prejudice to the possible issuance of further orders as necessary to address the emergency should it continue or recur. This

⁴ The CAISO has obtained these coordinates from the CEC which maintains them in its publicly available power plant dataset: <u>https://cecgis-caenergy.opendata.arcgis.com/datasets/CAEnergy::california-power-plants/about</u>

⁵ The CEC has identified potential permit exceedances relate to nitrogen oxide emissions. Additional permit exceedances may relate to fuel throughput and maximum output levels.

initial period will ensure additional supply is available when California experiences extreme weather, threats from wildfire, and inadequate energy and reserve supplies.

I. Background

California and other parts of Western United States are experiencing extreme heat this summer. The threat of wildfire to the reliable operation of the bulk power system remains significant. Drought conditions are greatly affecting the availability of hydroelectric power. The CAISO has observed abnormally high temperatures this summer throughout the West and expects wildfire season, which began early this year, to continue into November. Given these circumstances, state officials have identified a need to secure additional generating capacity to meet expected electricity demand and reserve requirements. Despite efforts undertaken by load serving entities and the CAISO to secure additional generating capacity, the CAISO continues to forecast potential supply deficiencies. For September, the CAISO continues forecasts a significant supply deficiency to meet planning reserve requirements during evening hours. Granting this request for an emergency order and authorizing the operation of additional generating capacity identified in this request when conditions merit is critical to the CAISO maintaining reliability and meeting it load obligations.

A. The State of California is experiencing extreme heat, fire threats, and an energy supply shortfall

Since June of this year, the Governor of California has issued three proclamations of a state of emergency regarding electricity. On June 17, 2021, during an extreme heat event, Governor Newsom signed an emergency proclamation suspending certain permitting requirements to allow the use of back-up power generation and freeing up additional energy capacity to help alleviate electric demand on the electricity grid.⁶ On July 9, 2021, in the midst of an extreme heat wave and transmission de-rates resulting from the Bootleg Fire in southern Oregon, Governor Newsom again signed an emergency proclamation suspending certain permitting requirements to allow the use of back-up power generation.⁷ Fire remains a significant variable for electric grid reliability in California and other western states. On July 30, 2021, Governor Newsom issued a third emergency proclamation that recognizes

⁶ A copy of Governor Newsom's June 17, 2021 Proclamation is available here: <u>https://www.gov.ca.gov/wp-content/uploads/2021/06/6.17.21-Extreme-Heat-proclamation.pdf</u>

⁷ A copy of Governor Newsom's July 9, 2021 Proclamation is available here: <u>https://www.gov.ca.gov/wp-content/uploads/2021/07/Extreme-Heat-Proc-7-8-21.pdf</u>

extreme climate impacts across the West and their ongoing impacts on electric reliability.⁸ The proclamation identifies an energy supply shortage in California this summer and in the summer of 2022. Among other things, the proclamation authorizes the CEC to expedite amendments to existing power plant licenses and issue new licenses to emergency and temporary generators that can reduce the anticipated energy shortfall by October 31, 2021, while meeting specified criteria to mitigate the potential environmental impacts of those projects. Governor Newsom also directed the CARB to develop and implement a plan to mitigate the effects of additional emissions authorized by the proclamation. The mitigation plan must include plans to invest in programs to improve air quality in communities, with a particular focus on disadvantaged communities, and to reduce risk to sensitive populations.

B. The CAISO and state entities continue to take steps to address electric supply deficiencies this summer

Based on an assessment of available electric supply to meet expected electricity demand and input from California state energy officials, the CAISO has taken steps to respond to and mitigate the power shortage condition it faces. During the last eighteen months, the CAISO has denied the requests of all five existing generating facilities that notified the CAISO of their intent to mothball or retire. The CAISO instead designated those facilities as Reliability Must-Run units to run as cost-of-service units under the terms of the CAISO tariff. This has preserved more than 400 MWs of existing generation that was at risk of being lost to the California electricity supply.⁹

On July 1, 2021, the CAISO declared a capacity procurement mechanism significant event to trigger authority to procure additional electric generating capacity under its tariff approved by Federal Energy Regulatory Commission.¹⁰ Several significant factors informed this declaration, including significantly reduced hydroelectric production due to worsening drought conditions and extreme heat events that began unseasonably early this summer. The CAISO is also working with projects in its interconnection queue scheduled to reach commercial operation in the near term to assess whether it is possible to accelerate energization of those projects. Despite these efforts, the CAISO still forecasts a significant shortfall during some operating hours on days with high temperatures and increased electricity demand.

⁸ A copy of Governor Newsom's July 30, 2021 Proclamation is available here: <u>https://www.gov.ca.gov/wp-content/uploads/2021/07/Energy-Emergency-Proc-7-30-21.pdf</u>

⁹ Some of those generating units have since resumed operating as market units.

¹⁰ See CAISO Market Notice dated July 1, 2021: <u>http://www.caiso.com/Documents/CapacityProcurementMechanismSignificantEvent-Intent-Solicit-DesignateCapacity-070121.html</u>

In response to the California Governor's July 30, 2021 emergency proclamation, the California Department of Finance, working in consultation with the California Public Utilities Commission (CPUC), the CEC, the CAISO, and electric utilities, is implementing a utility load reduction program that provides some relief to the bulk power system during stressed grid conditions. In addition, the California Department of Water Resources (CDWR), subject to licenses issued by the CEC¹¹ in response to the July 30, 2021 emergency proclamation, has undertaken procurement efforts to deploy mobile, modular General Electric TM2500 aero-derivative gas turbine generators at existing generating facility sites. Each unit has a nameplate capacity of approximately 30 MW. CDWR is seeking to deploy two such units at the Greenleaf Unit 1 site outside of Yuba City, California and two units at the Roseville Energy Park in Roseville, California. The CAISO anticipates the units at the Greenleaf Unit 1 to be ready for operation by September 17, 2021, and the units at the Roseville Energy Park to be ready for operation between September 17 and September 21, 2021. *Exhibit D* and *Exhibit E* contain additional information prepared by CEC licensing staff regarding these projects.

Efforts are underway to address the longer-term needs in California in response to increasing heat waves and drought conditions, and thereby reduce the need to seek emergency relief on a continuing basis into the future. The CPUC has issued an order directing its jurisdictional load serving entities to procure 11,500 MW of new electricity resources to come online between the years 2023 and 2026.¹²

Finally, the CAISO continues to utilize its day-ahead market to ensure it has secured sufficient supply to meet its forecast of demand for the next operating day and its real-time market to increase incremental supply to meet changes in the day-ahead demand forecast. When there is insufficient supply in the day-ahead timeframe, the CAISO activates emergency procedures, which may include restricting transmission and generator maintenance activities, calling for voluntary conservation, requesting additional supply bids to meet expected energy and reserve requirements, seeking emergency assistance from neighboring balancing authorities, and deploying emergency demand response. The CAISO will also direct generators to produce more MW than their interconnection capacity for specific hours and day(s) during the emergency event if reliability studies find the transmission system can support their

¹² CPUC Decision No. 21-06-035 - Decision Requiring Procurement To Address Mid-Term Reliability (2023-2026) issued June 30, 2021: http://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=389603637

¹¹ More information about the CEC licensing process is available on the CEC website:

Greenleaf Unit 1: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=21-TPG-02

Roseville Energy Park: <u>https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=21-</u> <u>TPG-01</u>

increased output. However, it increasingly appears that these measures may not be sufficient to avoid load curtailments absent issuance of the emergency order the CAISO requests.

II. The relief requested is necessary to access additional generating capacity but should not create a disproportionate impact on any individual community

In consultation with the CEC and CARB, the CAISO understands that the owners of the Covered Resources will not make additional identified capacity available absent an order from the Secretary under FPA 202(c). The CAISO further understands that the electric generating units identified in this request have de-rated their facilities based on conditions set forth in their permits regarding nitrogen oxide emissions, heat output as well as fuel throughput. Accordingly, the CAISO anticipates that the emergency order it is requesting may result in exceedance of National Ambient Air Quality Standards (NAAQS) under the Clean Air Act. In addition, Unit C of the Midway Sunset Cogeneration facility may only operate under a permit condition requiring it to support an industrial host process, but it can no longer meet this permit condition. Although the generating unit owner has commenced a turbine conversion project that will allow the resource to meet air quality standards without an industrial host, the conversion may not be in place until July 2022. Further, the new units CDWR is deploying at the Greenleaf Unit 1 site and Roseville Energy Park are not equipped with best available control technology to control emissions and have not completed permitting processes to obtain their operating permit under Title V of the Clean Air Act. The CAISO anticipates that, collectively, these constraints will preclude CAISO dispatch of over 200 megawatts of available generating capacity. Authorizing these facilities to operate, notwithstanding permit and other limitations, would help mitigate shortages of expected energy and reserve requirements.

The CAISO seeks an order from DOE authorizing the Covered Resources to provide additional energy beyond their permitted levels. This authorization will help the CAISO meet the existing emergency and serve the public interest by preventing or mitigating power disruptions and the potential curtailment of electricity load within the CAISO balancing authority area. To minimize any adverse impact on the environment, the CAISO will only dispatch the generating units identified in this request above their permitted levels during specified hours and only if necessary to meet exceptional levels of electricity demand or to address a transmission emergency that would otherwise create the risk of curtailing electric demand. In addition, three of the Covered Resources will require limited operations for testing, which will entail a very limited period of operations.

The CAISO appreciates the importance of the environmental permit limits that are at issue. However, the CAISO is deeply concerned that losing power to homes and businesses in the areas affected by curtailments presents a greater risk to public health and safety than the temporary and limited exceedances of air emission permit limits that would occur under the requested emergency order. Authorizing the Covered Resources to operate notwithstanding permit requirements will reduce that risk. The affected power plants are located in different communities within the state of California. Accordingly, the CAISO does not anticipate a disproportionate impact on any single community. In addition, Covered Resources will need to report and verify their greenhouse gas emissions and secure any applicable offsets or allowances associated with their emissions. This request does not seek to exempt Covered Resources requirements under CARB's Mandatory Reporting of Greenhouse Gas Emissions Regulation (MRR) and the Cap-and-Trade Regulation. The Governor's July 30, 2021 emergency proclamation does not waive obligations under those programs, and the Covered Resources will be required to meet them to the extent applicable. In addition, any Section 202(c) order should not grant relief from MRR or Cap-and-Trade Program compliance obligations because that relief would not be necessary to carry out the order's purposes.

As part of the emergency proclamation issued on July 30, 2021, Governor Newsom directed CARB to develop and promptly implement, a State-funded plan to mitigate the effects of additional emissions authorized by his proclamation beyond ordinarily permitted levels. The mitigation plan must include plans to invest in programs to improve air quality in communities, with a particular focus on disadvantaged communities, and to reduce risk to sensitive populations. Details of mitigation options will be determined through a public process. To the extent feasible, CARB will gather local perspectives on how best to mitigate the effects of local increases of emissions to potential and historically affected parties. *Exhibit F* is a letter from CARB discussing its development of this mitigation plan. The CAISO also understands that the CEC and CARB are consulting on the specific data points needed to support the mitigation CARB will identify in its mitigation plan. The CEC will require submission of this data to determine the appropriate mitigation for projects subject to expedited licenses or amendments granted by the CEC in response to the July 30, 2021 emergency proclamation.

III. The CAISO requests capacity operate above permitted values at the Covered Resources pursuant to an emergency order under specified conditions and commits to report on the Covered Resources' operation

The CAISO performs short-term forecasting to assess electricity supply and demand in its balancing authority area and coordinates outages of transmission and generation facilities. The CAISO closely monitors the potential impacts of wildfire threats, which can cause sudden de-rates of transmission capability on its system. Additionally, the CAISO closely monitors forced de-rates of generating facilities that can occur from lack of fuel and extreme heat, or units forced out of service because of mechanical reasons. These conditions can give rise to sudden needs for electricity supply. For example, on July 9, 2021, the Bootleg Fire in southern Oregon caused a

derate of over 2000 MW of the California Oregon Intertie and Pacific DC Intertie, thereby significantly reducing the transfer capability of power from the Pacific Northwest into California.

As part of its day-ahead market, the CAISO undertakes a process to commit additional supply for reliability based on the CAISO's forecast of demand in its balancing authority area. This process follows the CAISO's economic market clearing process and usually is complete before 3:00 p.m. Pacific Time on the day before an operating day. If the CAISO observes a deficiency, it will issue a grid alert to solicit additional supply during the specified hours that it is short for the next day. The CAISO may also call for voluntary conservation during specified hours. To request voluntary conservation, the CAISO issues a Flex Alert and activates media to communicate there is a predicted shortage of energy supply that threatens reliable electricity system during certain hours.¹³ If the CAISO projects a deficiency during the operating day, it will issue a grid warning for specified hours and mobilize emergency demand response. The CAISO's issuance of a grid warning is synonymous with an Energy Emergency Alert, Level - 1 condition. Under these conditions, the CAISO may trigger the deployment of emergency demand response, *i.e.* reliability demand response resources. When the CAISO triggers the deployment of reliability demand response resources, the Reliability Coordinator for the CAISO balancing authority will issue an Energy Emergency Alert, Level - 2.

For purposes of dispatching the Covered Resources at levels that exceed their permitted values, the CAISO proposes to put them on call in the day-ahead timeframe if the CAISO issues a grid alert for specified hours. This will allow operators of these resources additional time to prepare for their operation and secure necessary fuel. The CAISO will direct these units to operate only after the CAISO has entered an Energy Emergency Alert – Level 2 condition, *i.e.* after the CAISO has initiated the dispatch of reliability demand response resources. In this case, these resources would operate outside of permitted levels only as needed to help mitigate the risks of a system emergency and avoid the need for the CAISO to curtail native load. In addition, the CAISO requests authority to dispatch the Covered Resources during transmission emergencies to reduce or eliminate the need to curtail native load to protect against the next contingency on the electric system.

Finally, the CAISO requests authority to conduct testing of Covered Resources as necessary to ensure they can operate reliably and, in the case of new units, synchronize to the electric grid. Testing and synchronization activities would involve the Midway Sunset Cogeneration Facility Unit C, as well as units at the Greenleaf Unit 1

¹³ More information about the CAISO's Flex Alert program is available on the following website: <u>https://www.flexalert.org/</u>

site and the Roseville Energy Park. The CAISO anticipates these activities will occur during off-peak hours and the Covered Resources will operate for a limited time during any such tests. Without such authorization, the CAISO cannot be certain the Covered Resources will be able to respond if the conditions to invoke the emergency order are satisfied.

The CAISO commits to report on the operation of the Covered Resources at the frequency determined by DOE. The CAISO proposes to report on the Covered Resource, and emissions that exceed permitted limits at each Covered Resource. The CAISO will coordinate any such reports with the CEC, CARB, local air districts, and the operators of the Covered Resources to determine the excess emissions that result from operations of the Covered Resources under a DOE emergency order. The CAISO understands that the pollutant concentrations measured at any given air monitor reflect emissions from a wide array of sources, including vehicles and other stationary sources, and are influenced by meteorological conditions. Data from the air monitors will need corroborating evidence from other methods to evaluate air quality impacts.

IV. Relief Requested

The emergency for which the CAISO seeks relief is ongoing and could have serious consequences regarding the CAISO's ability to serve load in California and meet its reserve obligations. Accordingly, the CAISO requests that DOE issue an order, effective for 60 days, that allows the generating units identified in Exhibit A that are subject to permit limits (or have yet to obtain permits) to operate at their maximum levels. The CAISO proposes that DOE grant this relief subject to the following and any additional conditions DOE may deem appropriate:

- Use of the generating capacity of Covered Resources that do not have a Title V permit, or at operating levels that may create permit exceedances during the following conditions:
 - the pendency of an Energy Emergency Alert Level 2 condition or greater between the hours of 2:00 p.m. and 10:00 p.m. after exhausting all reasonably and practically available resources;
 - (2) a transmission emergency that requires operation of the Covered Resource to mitigate the risk of load curtailment during any operating hour; or
 - (3) limited testing or synchronization of the Covered Resources.
- Covered Resources comply with the requirements of CARB's Mandatory Reporting Regulation and Cap-and-Trade regulation, to the extent

applicable, because such relief is not necessary to carry out the purpose of the emergency order requested.

- Report to DOE at requested intervals on emergency operations, permit exceedances, and other DOE-specified information.
- Support from the CAISO for any environmental impact review DOE may be required to undertake regarding the effects of the emergency order, including analysis of or modeling to assess the impact on NO₂ and ozone levels.

The CAISO greatly appreciates DOE's expedited consideration of this request. Please do not hesitate to contact the undersigned if you have any questions or require additional information in order to act on this request.

Respectfully submitted,

Mark Rothleder Senior Vice President and Chief Operating Officer <u>MRothleder@casio.com</u> Tel. (916) 608-5883

cc: Patricia Hoffman Acting Assistant Secretary, Office of Electricity Exhibit A - List of Covered Resources

Power plant and location	Owner/Operator	Estimated MW affected by limitation	Permit Exceedances
Midway Sunset Cogeneration Unit C Fellows, California 93224 Coordinates: Power Plant Latitude: 35.22727 Power Plant Longitude: 119.629706 Switchyard Latitude: 35.2273222 Switchyard Longitude: -119.6310111	Midway Sunset Cogeneration Company	80 MW Unit C is an 80 MW unit that previously supported oil field recovery operations. It is in the process of modifying its operating permit to operate in simple cycle mode.	Nitrogen oxide emissions
Alamitos Energy Center Long Beach, California 90803	AES Southland Development, LLC	5 MW Alamitos Energy Center is a 1,040 MW combined-cycle electric generating station	Nitrogen oxide emissions
Power Plant Latitude: 33.769295 Power Plant Longitude: -118.101155 Switchyard Latitude: 33.7713325 Switchyard Longitude: -118.1002474		comprised of natural gas-fired turbines (power block 1) and the steam turbine (power block 2). The two gas turbines in power block 1 can each generate an additional 2.5 MW of supply using peak firing software.	
Huntington Beach Energy Project Huntington Beach, California 92646	AES Huntington Beach Energy, LLC	6 MW Huntington Beach Energy Project. Huntington Beach Energy Project is a 640-	Nitrogen oxide emissions
Power Plant Latitude: 33.644395 Power Plant Longitude: -117.978672 Switchyard Latitude: 33.6459679 Switchyard Longitude: -117.9778218		facility, comprised of two natural gas-fired turbines and a steam turbine generator. The two combustion turbines can each produce 3.0 MW of additional supply using peak firing software	

Exhibit A - List of Covered Resources

Walnut Creek Energy Park City of Industry, California 91745 Coordinates: Power Plant Latitude: 37.48777 Power Plant Longitude: , -120.895557 Switchyard Latitude: 34.0082706 Switchyard Longitude: -117.9499278:	Clearway Energy	17 MW Walnut Creek Energy Park is s a 500-MW natural gas-fired, simple cycle facility that can produce additional MW as a result of a modification to its hourly fuel input and ammonia flow rates,	Nitrogen oxide emissions
Greenleaf Unit 1 Yuba City, California 95993 Coordinates: Package Unit Latitude: 39.0527451 Package Unit Longitude: -121.69296 Switchyard Latitude: 39.0519994 Switchyard Longitude: - 121.6962465	Greenleaf Energy Unit 1 LLC	60 MW Two GE TM2500 30 MW gas turbines	Lack of best available control technology and operating permit under Title V of Federal Clean Air Act
Roseville Energy Park, Roseville California 95747 Coordinates: Package Unit Latitude: 38.7926204 Package Unit Longitude: -121.3802826 Switchyard Latitude: 38.7922596 Switchyard Longitude: - 121.3833989	Roseville Electric Utility	60 MW Two GE TM2500 30 MW turbines	Lack of best available control technology and operating permit under Title V of Federal Clean Air Act

Exhibit B –

Map of Covered Resources and Local Air Districts

Feather River Greenleaf Unit 1 Placer Yuba City, CA 🖏 Plants Roseville Energy Park • Air districts Roseville CA ISO balancing area San Joaquin Valley Unified Midway Sunset Cogeneration Unit C Fellows, CA Alamitos Energy Center Walnut Creek Energy Park Long Beach, CA City of Industry, CA Huntington Beach Energy Project 🗨 South Coast Huntington Beach, CA Map is for illustrative purposes only.

Exhibit B – Map of Covered Resources and Air Quality Management Districts

Exhibit C –

Nearest Air Quality Monitoring Stations for each Covered Resource

Exhibit C - Nearest air quality monitoring stations for each Covered Resource

Power Plant	Nearest Air Quality Monitoring Station
Midway Sunset Cogeneration Unit C Fellows, California 93224	Shafter EPA AQS Site ID: 60296001
	NO2 and ozone: Shafter station at 548 WALKER ST., SHAFTER, CA., 93263, about 27 miles northeast of project
	PM10: Bakersfield-Golden / M St station at 2820 M St., Bakersfield, CA 93301, about 35.6 miles east-northeast of project
	PM2.5: Bakersfield-California station at 5558 California Ave., Bakersfield CA 93309, about 33.5 miles east-northeast of project
	SO2: Mesa2 station at 1300 GUADALUPE RD., NIPOMO, CA., 93444, about 55.2 miles west- southwest of project
	CO: Bakersfield-Muni station at 2000 South Union Ave. Bakersfield CA 93307, about 36.2 miles east-northeast of project
Alamitos Energy Center Long Beach, California 90803	Long Beach - Signal Hill EPA AQS Site ID: 60374009
	PM10, PM2.5: The South County Los Angeles County 2 (SCLA2) -South Long Beach station is located approximately 4.6 miles northwest of the project site
	PM2.5: The South County Los Angeles County 1 (SCLA1) -North Long Beach station (SCLA1) is located 6.4 miles northwest of the project site
	NO ₂ , PM10: The South Coastal Los Angeles 3 (SCLA3) -Hudson Long Beach station is located approximately 7.2 miles northwest of the project site
Huntington Beach Energy Project Huntington Beach, California 92646	Anaheim - Loara School EPA AQS Site ID: 60590007
:	O3, NO2, SO2, and CO: North Coastal Orange County monitoring station data, located about 3.5 miles northeast from the project site
	PM10 and PM2.5: North Long Beach station, approximately 17 miles to the northwest of the project site
Walnut Creek Energy Park	La Habra

City of Industry, California 91745	EPA AQS Site ID: 60595001
	Ozone, CO, NO2: La Habra Station, about 5.8 miles to the south;
	PM10, PM2.5, SO2: LA-North Main St, about 16.7 miles to the northwest.
Greenleaf Unit 1 Yuba City, California 95993	Yuba City EPA AQS Site ID: 61010003
	NO2, Ozone, PM10, PM2.5: Yuba City, 7.2 miles to the northeast
	CO, SO2: Sacramento-Del Paso Manor, 35 miles to the southeast
Roseville Energy Park, Roseville California 95747	North Highlands-Blackfoot Way EPA AQS Site ID: 60670002
	NO2 and PM10: North Highlands-Blackfoot station at 7823 BLACKFOOT WAY, NORTH HIGHLANDS, CA, about 5.6 miles south of project
	PM2.5: Roseville-N Sunrise Ave station at 151 NO SUNRISE BLVD, ROSEVILLE, CA, about 7 miles east-southeast
	CO and SO2: Sacramento-Del Paso Manor station at DEL PASO-2701 AVALON DR, SACRAMENTO, CA, about 12.7 miles south of project
	Ozone: Lincoln-2885 Moore Road station at 2885 MOORE ROAD, LINCOLN, CA 95648, about 5.6 miles north-northeast of project; the next closest monitoring station is North Highlands-Blackfoot station shown above

Exhibit D –

Summary of Project Information for Greenleaf Unit 1

EXHIBIT D – SUMMARY OF PROJECT INFORMATION FOR GREENLEAF UNIT 1

CEC staff has prepared the following project information about the Greenleaf Unit 1 facility. This information is based on the CEC's ongoing licensing process for the facility and is subject to change before final approval by the CEC.

License Information

The Feather River Air Quality Management District (FRAQMD) plans to issue Authority to Construct (ATC) permits allowing the operator to install the GE package units and associated equipment onsite. The FRAQMD also intends to issue Permits to Operate (PTOs) to allow the units to operate. However, the FRAQMD would be relying on waivers from DOE and USEPA permitting requirements in the instances that the units cannot initially comply with federal regulatory requirements.

The CEC anticipates receiving a license application (self-certification checklist) from Calpine (the project owner) for the package units at Greenleaf Unit 1 by August 27, 2021. CEC estimates issuing a license by September 3, 2021.

Projected Emissions

Emissions are valid within 9°F to 118°F and a GTG load down to 50% as defined in steady state conditions. Emission guarantees are as follows:

- NOx: 25 ppmvd at 15% O₂
- CO: 203 ppmvd at 15% O₂

Current BACT limits for these units under air district rules and regulations are as follows:

- NOx: 5 ppmvd at 15% O2
- CO: 6 ppmvd at 15% O₂

The units would comply with PM10 and SO₂ BACT emission requirements by using pipeline quality natural gas. Selective Catalytic Reduction (SCR), an advanced active emissions control technology system, is anticipated to be ready for installation in September 2022. Once these SCR post combustion controls are installed on the package units, a BACT determination will be made by the air districts during permitting of these units.

TM2500-G4 Steady State Estimated Emissions - Gas Fuel Operations									
Ambient Temp	F	100	100	100	100	100	100		
GTG Load	%	100	90	80	70	60	50		
NOx	lb/hr	26.7	26.7	26.7	26.7	26.7	26.7		
CO	lb/hr	33.2	34.9	33.1	30.8	26.5	30.4		
VOC	lb/hr	2.3	2.4	2.3	2.1	1.8	2.1		
PM10/PM2.5	lb/hr	4	4	4	4	4	4		
SOx	lb/hr	0.2	0.19	0.17	0.16	0.14	0.12		

TM2500-G4 Startup & Shutdown Estimated Emissions - Gas Fuel Operations							
Event	Duration (min)	Heat Input (MMBtu - HHV)	NOx (lb)	CO (lb)	VOC (lb)	PM10/PM2.5 (lb)	SOx (lb)
Startup	10.0	19.6	3.1	19.4	0.8	0.5	0.1
Shutdown	9.0	23.4	3.4	21.6	0.9	0.6	0.3

Stack Information

Exhaust parameters vary over ambient conditions. Since these units are only expected to operate during emergencies, which are expected to occur on hot days, the following stack information and parameters reflect those for a 100-degree day.

Stack Height: 26' 1-1/4" Exhaust Velocity: 190 ft/s Exhaust Temperature: 982.7 °F Exhaust Flow: 178.1 lb/s Energy: 67,755 BTU/s

Environmental Justice Communities

CEC reviewed and applied the environmental justice methodology used by DOE—the Federal Interagency Working Group on Environmental Justice and NEPA Committee's *Community Guide to Environmental Justice and NEPA Methods*—to determine whether the project is located in an environmental justice community. CEC also used the methodology in the United States Environmental Protection Agency's *Guidance on Considering Environmental Justice During the Development of Regulatory Actions*, which is consistent with the DOE methodology. Based on these methodologies, CEC used the most current data available, which is from the U.S Census, to determine whether the population in the census tract in which the project is located (06101051000) is considered an environmental justice community based on minority (race or ethnicity) or low-income status. CEC used 2019 5 Year American Community Survey data at the Census tract level, specifically, the DP05 ACS Demographic and Housing Estimates for minority data and S1701 Poverty Status in the Past 12 Months for low-income data. Based on this data, CEC determined that the population within the project's census tract is considered an environmental justice population based on low-income status.

CEC also reviewed EJSCREEN, a public online screening tool which can be used to better understand the demographic and environmental risk indicators in a geographic area. This tool is used in the screening process of project development to ensure that community concerns are not overlooked. It presents demographic and environmental information for a selected geography. CEC interprets percentiles at 90 or above, compared with statewide levels, to be worth noting when considering how a project would impact a community. None of the EJ Indexes applicable to Greenleaf Unit 1 had percentiles at 90 or above. The highest percentile, 76, was for the wastewater discharge indicator. As the project would not contribute to an increase in wastewater discharge, staff does not anticipate that the installation and operation of the temporary package units at the proposed site would overburden or disproportionately impact an EJ population. Furthermore, CARB is responsible for developing and implementing a State-funded plan to mitigate the effects of additional emissions authorized by the July 30, 2021 Proclamation of a State of Emergency declared by Governor Gavin Newsom beyond ordinarily permitted levels. The mitigation plan will include plans to invest in programs to improve air quality in communities, with a particular focus on disadvantaged communities, and to reduce risk to sensitive populations.

Environmental Impacts

<u>Air Quality</u>: The package units are expected to operate very infrequently and only under emergency operations. The units are expected to operate below significance thresholds established by local air districts and are not expected to cause significant impacts.

<u>Biological Resources</u>: Because the proposed package units would be placed on previously graveled or paved substrates, no direct impacts such as loss of federally- or state-protected plants, wildlife, or habitat are expected. Similarly, the proposed access road is located onsite in previously disturbed areas, with no biological constraints identified. Indirect impacts such as lighting, installation and operational noise, and storm water runoff are expected to be minimal and temporary. Wildlife likely have habituated to such activities at adjacent industrial facilities.

CEC undertook a generally qualitative approach to deposition of oxides of nitrogen (NOx), which may adversely affect sensitive habitat within the deposition zone of the proposed project. Based on CEC's best estimate, the generators would run infrequently and during emergencies only, on a temporary basis. Therefore, CEC does not expect that this low production would adversely affect state or federally sensitive species or habitat.

<u>Cultural Resources</u>. No constraints were identified. The Greenleaf 1 project site was surveyed for cultural resources in 1984, prior to its construction. No cultural resources were identified on the project site. Additionally, the proposed package unit would be placed on a paved or graveled portion of the Greenleaf 1 project site. Therefore, no impacts on cultural resources are expected.

Testing Requirements

GE has provided emission guarantees for NOx and CO based on the following EPA source test methods:

NOx: EPA METHOD 20 (25 ppmvd at 15% O₂) CO: EPA METHOD 10 (203 ppmvd at 15% O₂)

PM10/2.5 and SO₂ emissions would meet BACT emission requirements through the use of natural gas fuel.

Additional source testing verification is not proposed as these units are expected to operate infrequently and for emergencies only. To perform additional source testing would require the units to operate for unnecessary prolonged periods of time.

Mitigation Measures

<u>Air Quality.</u> CARB is developing a mitigation strategy to offset emissions associated with emergency operations of these units. The mitigation plan must include investments to improve air quality in communities, with a particular focus on disadvantaged communities, and to reduce risk to sensitive populations. Details of mitigation options will be determined through a public process. To the extent feasible, CARB will gather local perspectives on how best to mitigate the effects of local increases of emissions to potential and historically affected parties.

<u>Biological Resources.</u> As required by the CEC, Calpine will implement a Workers Environmental Awareness Program to educate and train on-site staff to recognize, avoid, and report biological resources. Deposition of nitrogen oxides is not expected to adversely affect state- or federally protected species or habitat; therefore no mitigation is required.

<u>Cultural Resources.</u> In the event that excavation of utility trenches or other ground disturbance is required to install the package units, Calpine will implement responsible best management practices required by the CEC to prevent or ameliorate the impact of inadvertent cultural resource discoveries. These practices are based on Calpine's existing Workers Environmental Awareness Program at the adjacent Sutter Power Plant under CEC jurisdiction. The best practices will consist of retaining an environmental coordinator to oversee compliance with mitigation requirements; including procedures for responding to inadvertent discoveries of cultural resources or human remains in the Workers Environmental Awareness Program; and implementing stop-work, assessment, and reporting procedures in the unlikely event of an inadvertent discovery.

<u>Noise.</u> The package units are expected to operate very infrequently and only under emergency operations. They are expected to operate primarily between 4 p.m. and 9 p.m. Prior to the start of their installation, Calpine will notify the nearest two residences, by mail or by other effective means, of the commencement of installation and subsequent operation. The notification will include a telephone number for use by the residents to report any undesirable noise conditions associated with the installation and operation of the unit(s). If needed, based on the result of the operational noise contour, Calpine will implement appropriate sound attenuation measures to sufficiently control project noise. Implementation of any necessary sound attenuation measures will be ensured by a condition in the CEC license. Exhibit E – Summary of Project Information for Roseville Energy Park

EXHIBIT E – SUMMARY OF PROJECT INFORMATION FOR ROSEVILLE ENERGY PARK

CEC staff has prepared the following project information about the Roseville Energy Park facility. This information is based on the CEC's ongoing licensing process for the facility and is subject to change before final approval by the CEC.

License Information

The Placer County Air Pollution Control District (PCAPCD) plans to issue Authority to Construct (ATC) permits allowing the operator to install the GE package units and associated equipment onsite. The PCAPCD also intends to issue Permits to Operate (PTOs) to allow the units to operate. However, the PCAPCD would be relying on the waiver from DOE and US EPA permitting requirements in the instances that the units cannot initially comply with certain regulatory requirements.

The CEC anticipates receiving a license application (self-certification checklist) from Roseville Electric for the package units at Roseville Energy Park by August 27, 2021. CEC estimates issuing a license by September 3, 2021.

Projected Emissions

Emissions are valid within 9°F to 118°F and a GTG load down to 50% as defined in steady state conditions. Emission guarantees are as follows:

- NOx: 25 ppmvd at 15% O₂,
- CO: 203 ppmvd at 15% O₂.

Current BACT limits for these units under air district rules and regulations are as follows:

- NOx: 5 ppmvd at 15% O2,
- CO: 6 ppmvd at 15% O₂.

The units would comply with PM10 and SO₂ BACT emission requirements by using pipeline quality natural gas. Selective Catalytic Reduction (SCR), an advanced active emissions control technology system, is anticipated to be ready for installation in September 2022. Once these SCR post combustion controls are installed on the package units a BACT determination will be made by the air districts during permitting of these units.

TM2500-G4 Steady State Estimated Emissions - Gas Fuel Operations								
Ambient Temp	100	100	100	100				
GTG Load	%	100	90	80	70	60	50	
NOx	lb/hr	26.7	26.7	26.7	26.7	26.7	26.7	
CO	lb/hr	33.2	34.9	33.1	30.8	26.5	30.4	
VOC	lb/hr	2.3	2.4	2.3	2.1	1.8	2.1	
PM10/PM2.5	lb/hr	4	4	4	4	4	4	
SOx	lb/hr	0.2	0.19	0.17	0.16	0.14	0.12	

TM2500-G4 Startup & Shutdown Estimated Emissions - Gas Fuel Operations								
Event	Duration (min)	Heat Input (MMBtu - HHV)	NOx (lb)	CO (lb)	VOC (lb)	PM10/PM2.5 (lb)	SOx (Ib)	
Startup	10.0	19.6	3.1	19.4	0.8	0.5	0.1	
Shutdown	9.0	23.4	3.4	21.6	0.9	0.6	0.3	

Stack information

Exhaust parameters vary over ambient conditions. Since these units are only expected to operate during emergencies, which are expected to occur on hot days, the following stack information and parameters reflect those for a 100-degree day.

Stack Height: 26' 1-1/4" Exhaust Velocity: 190 ft/s Exhaust Temperature: 982.7 °F Exhaust Flow: 178.1 lb/s Energy: 67,755 BTU/s

Environmental Justice Communities

CEC reviewed and applied the environmental justice methodology used by DOE—the Federal Interagency Working Group on Environmental Justice and NEPA Committee's *Community Guide to Environmental Justice and NEPA Methods*—to determine whether the project is located in an environmental justice community. CEC also used the methodology in the United States Environmental Protection Agency's *Guidance on Considering Environmental Justice During the Development of Regulatory Actions*, which is consistent with the DOE's methodology. Based on these methodologies, CEC used the most current data available, which is from the U.S Census, to determine whether the population in the census tract in which the project is located (06061021322) is considered an environmental justice community based on minority (race and ethnicity) or low-income status. CEC used 2019 5 Year American Community Survey data at the Census tract level, specifically, DP05 ACS Demographic and Housing Estimates for minority data and S1701 Poverty Status in the Past 12 Months for low-income data. Based on this data, CEC determined that the population within the project's census tract is not considered an environmental justice population based on minority or low-income status.

CEC also reviewed EJSCREEN, a public online screening tool which can be used to better understand the demographic and environmental risk indicators in a geographic area. This tool is used in the screening process of project development to ensure that community concerns are not overlooked. It presents demographic and environmental information for a selected geography. CEC interprets percentiles at 90 or above, compared with statewide levels, to be worth noting when considering how a project would impact a community. None of the EJ Indexes in which Roseville Energy Park is located had percentiles at 90 or above. The highest percentile, 15, was for the lead paint indicator. Therefore, CEC does not anticipate that the installation and operation of the temporary package units at the proposed site would overburden or disproportionately impact an EJ population. Furthermore, by November 15, 2021, CARB is responsible for developing and implementing a State-funded plan to mitigate the effects of additional emissions authorized by the July 30, 2021 Proclamation of a State of Emergency declared by Governor Gavin Newsom beyond ordinarily permitted levels. The mitigation plan will include plans to invest in programs to improve air quality in communities, with a particular focus on disadvantaged communities, and to reduce risk to sensitive populations.

Environmental Impacts

Air Quality. The package units are expected to operate very infrequently and only under emergency operations. The units are expected to operate below significance thresholds established by local air districts and are not expected to cause significant impacts. Biological Resources. The site of the proposed package units at Roseville Energy Park has been surveyed for the presence of biological resources as recently as August 2021. The site was previously disturbed and developed and allowed to regrow naturally, resulting in a mix of vegetation that is considered ruderal/annual grassland. As no permanent habitat loss is associated with the proposed project on disturbed land, no direct impacts such as loss of federally- or state-protected plants, wildlife, or habitat is expected. Additionally, no loss of denning or nesting wildlife would be associated with the project as there are no onsite trees or shrubs, and results of the 2021 survey revealed no presence or sign of sensitive species, such as burrowing owl, on or adjacent to the project site. Indirect impacts such as lighting, installation and operational noise, and storm water runoff are expected to be minimal and temporary. Wildlife likely have habituated to such activities at adjacent industrial facilities like the Roseville Energy Park.

CEC undertook a qualitative approach to deposition of oxides of nitrogen (NOx), which may adversely affect sensitive habitat within the deposition zone of the proposed project site. Based on CEC's best estimate, the generators would run infrequently for emergencies only, on a temporary basis, and therefore it is not expected that this low production would adversely influence surrounding sensitive habitat.

<u>Cultural Resources</u>. The site of the proposed package units at Roseville Energy Park has been surveyed for the presence of cultural resources six times between 2001 and 2003. The surveyors did not identify any cultural resources at the site of the proposed package units. The package unit project site is situated in an area that formerly supported concrete foundations and buildings, all of which was demolished around 2007 or 2008. The ground surface in this area is disturbed and discovery of cultural resources during installation of the package units is not expectable.

Testing Requirements

GE has provided emission guarantees for NOx and CO based on the following EPA source test methods:

NOx: EPA METHOD 20 (25 ppmvd at 15% O₂)

CO: EPA METHOD 10 (203 ppmvd at 15% O₂) PM10/2.5 and SO₂ emissions would meet BACT emission requirements through the use of natural gas fuel.

Additional source testing verification is not proposed as these units are expected to operate very infrequently and for emergencies only. To perform additional sources testing would require the units to operate for unnecessary prolonged periods of time.

Mitigation Measures

<u>Air Quality</u>. CARB is in the process of developing a mitigation strategy to offset emissions associated with emergency operations. The mitigation plan must include investments to improve air quality in communities, with a particular focus on disadvantaged communities, and to reduce risk to sensitive populations. Details of mitigation options will be determined through a public process. To the extent feasible, CARB will gather local perspectives on how best to mitigate the effects of local increases of emissions to potential and historically affected parties.

<u>Biological Resources</u>. As required by CEC, Roseville Electric will implement a Workers Environmental Awareness Program to educate and train on-site staff to recognize, avoid, and report biological resources. Other mitigation measures include placement of straw waddles to limit stormwater runoff and avoidance flagging of sensitive areas adjacent to the site. Deposition of nitrogen oxides is not expected to adversely affect state or federally protected species or habitat; therefore no mitigation is required.

<u>Cultural Resources</u>. In the event that excavation of utility trenches or other ground disturbance is required to install the package units, Roseville Electric will implement responsible best management practices as required by CEC to prevent or ameliorate the impact of inadvertent cultural resource discoveries. These practices are based on the Roseville Energy Park's existing Workers Environmental Awareness Program. For cultural resource concerns, the best practices will consist of retaining an environmental coordinator to oversee compliance with mitigation requirements; including procedures for responding to inadvertent discoveries of cultural resources or human remains in the Workers Environmental Awareness Program; and implementing stop-work, assessment, and reporting procedures in the unlikely event of an inadvertent discovery.

<u>Noise.</u> The package units are expected to operate very infrequently and only under emergency operations. They are expected to operate primarily between 4 p.m. and 9 p.m. Prior to the start of their installation, Roseville will notify the nearest residences, by mail or by other effective means, of the commencement of installation and subsequent operation. The notification will include a telephone number for use by the residents to report any undesirable noise conditions associated with the installation and operation of the unit(s). If needed, based on the operational noise contour map, Roseville Electric will implement appropriate sound attenuation measures to sufficiently control project noise. Implementation of any necessary sound attenuation measures will be ensured by a condition in the CEC license. Exhibit F –

August 25, 2021 Letter from Richard Corey, Executive Officer for the California Air Resources Board, to Jennifer Granholm, Secretary of Energy



August 25, 2021

The Honorable Jennifer Granholm Secretary of Energy United States Department of Energy 1000 Independence Ave, SW Washington, DC 20585

Dear Secretary Granholm:

On July 30, 2021, Governor Newsom signed a Proclamation of a State of Emergency (Proclamation) to expedite clean energy projects and relieve demand on the electrical grid during extreme weather events in California. The Proclamation suspends certain permitting requirements to allow greater energy production during critical times when extreme heat events or the interruption of transmission lines from wildfires or other causes threaten energy supply. It also requires mitigation to offset impacts from the additional emissions from greater energy production and commits state agencies to tracking additional emissions from any emergency measures under the Proclamation.

To allow for greater energy production during these extreme events, the California Independent System Operator Corporation (CAISO) is requesting the Secretary of Energy to find that an electric reliability emergency exists within the State of California that requires intervention by the Secretary, in the form of a Section 202(c) emergency order, to preserve the reliability of the bulk electric power system in California. CAISO has consulted with the California Air Resources Board (CARB) on this request. CARB respectfully submits this letter to summarize comments related to air pollution mitigation, continuity of requirements under CARB's Mandatory Reporting of Greenhouse Gas Emissions Regulation (MRR) and California's Cap-and-Trade Regulation during extreme weather events and data gathered from air quality monitors.

The Proclamation directs CARB to develop and then promptly implement, a State-funded plan to mitigate the effects of additional emissions authorized by the Proclamation beyond ordinarily permitted levels. This would include any emissions that occur from allowing resources to operate pursuant to CAISO's Section 202(c) emergency order request. The mitigation plan must include investments to improve air quality in communities, with a particular focus on disadvantaged communities, and to reduce risk to sensitive populations. Details of mitigation options will be determined through a public process. To the extent feasible, CARB will gather local perspectives on how best to mitigate the effects of local increases of emissions to potential and historically affected parties.

CARB also stresses that CAISO's Section 202(c), request does not seek a waiver of requirements under the MRR or Cap-and-Trade Regulation. The Governor's July 30, 2021 emergency proclamation also does not waive obligations under those programs and the

The Honorable Jennifer Granholm August 25, 2021 Page 2

covered resources will be required to meet them to the extent applicable. In addition, any Section 202(c) order that is issued should not grant relief from MRR or Cap-and-Trade Regulation obligations because such relief is not necessary to carry out the order's purposes.

Lastly, CARB intends to work with CAISO to assess the air quality impacts of this request based on review of all available data sources. This includes analysis of ambient air quality data from the air monitoring stations located nearest to each of the covered resources identified in the Section 202(c) request. It should be noted that the pollutant concentrations measured at any given air monitor reflect emissions from a wide array of sources, including vehicles and other stationary sources, and are also influenced by meteorological conditions. For purposes of mitigating emissions, one of the most important data sources will therefore be the source specific reporting outlined by CAISO's section 202(c) request.

If you have any questions, please contact Craig Segall, Deputy Executive Officer, Mobile Sources and Incentives, at *craig.segall@arb.ca.gov*.

Sincerely,

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Richard W. Corey, Executive Officer