

Yorktown Units 1 and 2 Generator Deactivation Notification

Deactivation Study Results – updated June 26, 2017

General

On November 7, 2011 Dominion Generation submitted a deactivation notification to PJM for Yorktown generator Unit 1 (159 MW) with a deactivation date effective as of December 31, 2014.

On October 9, 2012 Dominion Generation submitted a deactivation notification to PJM for Yorktown generator Unit 2 (164 MW) with a deactivation date effective as of December 31, 2014.

Dominion Generation has twice delayed the deactivation of the Yorktown #1 and #2 generating units to support system reliability while the PJM required upgrades needed to alleviate system reliability issues are being installed. The current expected deactivation date for Yorktown units #1 and #2 is April 15, 2017.

June 26, 2017 update: The U.S. Secretary of Energy has issued an order, requested by PJM, temporarily allowing Yorktown Units 1 and 2 to operate on a limited basis to preserve the reliability of the bulk power transmission system in the North Hampton Roads area of Virginia.

Reliability Analysis

PJM's System Modeling and Support department performed a study of the 2017 summer Transmission System to understand the system conditions expected, given the delays in completing the required baseline upgrades, along with the impending deactivation of the Yorktown #1 and #2 generating units (**current deactivation date is now 9/14/2017**). The specific reliability impacts are:

N-1-1 Thermal and Voltage study:

- Overload of the Benns Church – Copeland Park 230 kV circuit.
- Overload of the Dow – Fort Eustis 115 kV circuit.
- Overload of the Fort Eustis – Grafton 115 kV.
- Overload of the Lanexa – Dow 115 kV.
- Overload of the Lanexa 230/115 kV Transformer.
- Overload of the Lightfoot – Waller 230 kV line.
- Overload of the Chuckatuck – Benns Church 230 kV circuit.
- Overload of the Pooleville – Winchester 230 kV circuit.
- Numerous voltage magnitude and drop violations were observed.

N-1 Common mode outage

- Overload of the Lanexa – Dow 115 kV circuit.

- Overload of the Dow – Fort Eustis 115 kV circuit.
- Overload of the Fort Eustis – Grafton 115 kV circuit.
- Overload of the Lightfoot – Waller 230 kV circuit.

Generation Deliverability study:

- Overload of the Lanexa – Dow 115 kV circuit.
- Overload of the Dow – Fort Eustis 115 kV circuit.
- Overload of the Fort Eustis – Grafton 115 kV circuit.
- Overload of the Lightfoot – Waller 230 kV circuit.

Study Results and Required Upgrades:

Yorktown generating units 1 and 2 are required for system reliability until transmission system upgrades are completed. The current expected deactivation date for Yorktown units #1 and #2 is **September 14, 2017**.

On January 5, 2017 Dominion submitted to FERC an informational filing for a Deactivation Avoidable Cost Rate for Yorktown units 1 and 2.

Required transmission upgrades and expected completion dates:

Upgrade Id	Description	Transmission Owner	Projected In Service Date	Actual In Service Date	Status
b1905.1	Surry to Skiffes Creek 500 kV Line (7 miles overhead)	Dominion	08/31/2019		UC
b1910	Rebuild line #262 from Yadkin - Chesapeake 230 kV for 1204 MVA load dump rating and re-conductor line #2110 from Suffolk - Thrasher 230	Dominion	12/15/2015	6/1/2015	IS

	kV for 1593 MVA load dump rating				
b1909	Uprate Brema – Midlothian 230 kV to its maximum operating temperature	Dominion	5/31/2017		UC
b1908	Rebuild Lexington – Doods 500 kV	Dominion	12/31/2016	12/20/2016	IS
b1906.4	Uprate Yadkin – Chesapeake 115 kV	Dominion	6/1/2015	6/1/2015	IS
b1905.4	New Skiffes Creek - Whealton 230 kV line	Dominion	12/30/2018		EP
b1905.3	Skiffes Creek 500-230 kV Tx and Switching Station	Dominion	12/30/2018		EP
b1905.2	Surry 500 kV Station Work	Dominion	1/31/2018	6/15/2016	IS
b1905.9	Kings Mill, Peninmen, Toano, Waller, Warwick	Dominion	12/30/2019		EP
b1905.8	Surry 230 kV work	Dominion	5/30/2014	6/1/2014	IS
b1905.7	Lanexa 115 kV work	Dominion	12/30/2019		EP
b1905.6	Yorktown 230	Dominion	1/31/2018		EP

	kV work				
b1912	Install four +/- 125 MVAR STATCOM at Landstown, Chesapeake, Fentress, and Lynnhaven	Dominion	1/31/2017	11/17/2016	IS
b1905.5	Whealton 230 kV breakers	Dominion	1/31/2018		EP
b1906.1	At Yadkin 500 kV, install six 500 kV breakers to loop in Septa - Fentress 500 kV	Dominion	11/29/2015	11/29/2015	IS
b1911	Add a second Valley 500/230 kV TX	Dominion	6/15/2016	6/15/2016	IS
b1907	Install a 3rd 500/230 kV TX at Clover	Dominion	6/17/2018	4/29/2016	IS
b1906.5	Install a third 500/230 kV TX at Yadkin	Dominion	10/30/2015	10/30/2015	IS
b1906.3	Install a 2nd 230/115 kV TX at Chesapeake	Dominion	6/1/2015	6/1/2015	IS
b1906.2	Install a 2nd 230/115 kV TX at Yadkin	Dominion	11/15/2015	12/16/2015	IS