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Apr 20 2022

April 20, 2022

Via Electronic Filing

Ms. A. Shonta Dunston, Chief Clerk
North Carolina Utilities Commission
Dobbs Building
430 North Salisbury Street
Raleigh, North Carolina 27603

*Re: Dominion Energy North Carolina's Technical Conference Presentation
Docket Nos. E-100, Sub 173 and M-100, Sub 163*

Dear Ms. Dunston:

Enclosed for filing in the above-referenced proceedings on behalf of Virginia Electric and Power Company, d/b/a Dominion Energy North Carolina ("DENC") is its PowerPoint presentation as presented at the April 19, 2022 Technical Conference held in connection with the above-referenced docket.

Please do not hesitate to contact me should you have any questions. Thank you for your assistance with this matter.

Very truly yours,

/s/Mary Lynne Grigg

MLG:kjg

Enclosure

NCUC Technical Conference
Dominion Energy North Carolina
April 19, 2022

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Apr 20 2022



**Dominion
Energy[®]**

Cold Weather Preparedness (Questions 1-2)

- Prior to February 2021, Dominion Energy has invested significantly in hardening its procedures and material condition of freeze prevention infrastructure.
- Areas of interest include but are not limited to:
 - Employee safety
 - Heat tracing and insulation integrity
 - Wind breaks
 - Heaters (permanent and temporary) and fuel
 - Operator walkdown routes and associated criteria
 - Consumable supplies
 - Snow/ice removal equipment
- Dual fuel unit testing
- Market Operations
 - PJM capacity market changes

Cold Weather Operations

- Dominion Energy is continuing to evaluate its current processes to ensure alignment and compliance with EOP-011.
 - All procedures from the 2021-2022 Winter season have been collected and are being reviewed.
- Solar generation is not appreciably impacted by cold temperatures.
- Wind generation is designed for -4 degrees Fahrenheit.
- Reserves
 - VACAR
 - PJM

Load Forecasting (Questions 3-6)

- Four load forecasts: 2 external, PJM, internal
- Temperature, cloud cover, relative humidity, precipitation, wind speed, wind direction
- Hot and Cold Weather Alert forecast

											Average of the 7AM WSI/DTN forecasts					
		Dominion Zone Peak Load			Dominion Zone Temperature			Actual temps			1 day before			3 days before		
Year	Day	Peak Load	1 day ahead forecast	3 day ahead forecast	Temperature at Peak Load Hour	1 day ahead forecast	3 day ahead forecast	DCA	ORF	RIC	DCA	ORF	RIC	DCA	ORF	RIC
2014	7-Jan	19,730	* 20,905	N/A	10	11	12	7	14	10	8	16	11	8	17	11
2014	30-Jan	19,784	19,255	18,950	10	15	16	16	9	4	15	18	12	17	20	12
2015	20-Feb	21,651	21,200	21,500	7	5	5	6	9	5	4	9	2	6	9	1
2018	7-Jan	21,232	20,085	20,100	7	11	9	9	15	-2	10	14	9	9	13	6
			* Estimated from the DA LSE bid, 3 day ahead data is unavailable													

Power Plant Performance (Questions 7-8)

- During the three previous winter peaks only one event was potentially related to freezing weather.
 - Suspected frozen component on Jan. 21, 2019, from 1632 to 2010 hours.
- January 7, 2014, @ 1900 hours
 - 11% Dominion Energy forced outage rate
 - 22% in PJM RTO
- February 20, 2015 @ 0800 hours
 - 4% Dominion Energy forced outage rate
 - 12% in PJM RTO
- Natural gas – 9,465 MW in our fleet
- Dual fuel capability – 4,823 MW capable

Locations with No.2 Fuel Oil	Days at Full Load
Bear Garden	5.2
Chesterfield	15.0
Gordonsville	8.9
Possum Point	3.2
Rosemary	7.2
Chesapeake CT	3.5
Darbytown	6.9
Elizabeth River	6.9
Gravel Neck 3-6	6.7
Gravel Neck 1-2	1.2
Ladysmith	2.4
Low Moor	9.1
Mt. Storm	2.8
Northern Neck	8.6
Remington	3.0

Load Shed / Curtailment (Questions 10-12)

- Critical Customers Identified by Special Condition Codes on Individual Accounts
- Natural Gas Compressor Stations noted as Critical on our system are served from the Transmission System

Customer Category	Critical Infrastructure		High Profile		Public Interest	
Large Industrial & Commercial	50	Transmission / Primary Delivery	60	Assigned Large Industrial and Commercial Accounts	70	Fuel Distribution Terminals
Large Medical	51	Hospitals	61	Large Rehab Centers, Nursing Homes, Other Critical Centers	71	Assisted Living, Dialysis Centers
Homeland Security, Federal & Military	52	Large Military Bases and Posts, CIA, Pentagon	62	Assigned Large Government Accounts	72	
State and Local Government	53	SCC, Capitol Building	63	Prisons	73	Municipal Complexes
Public Safety (Fire, Police, 911, etc.)	54	Emergency Oper Centers, 911, Fire, Police & Rescue Squads	64	Emergency Shelters	74	
Water Treatment / Pump Stations	55	Critical Water Treatment/Supply, Major Sewage Treatment	65		75	Water, Sewage or City Well Pumps
Telecommunications	56	Major TV Stations, Central Telecommunications Facilities	66	Major Radio Stations, Transmitter Sites	76	Cell Towers, Neighborhood Switching Stations
Transportation	57	Major Airports, Tunnels, WMATA	67	Critical Traffic Signals	77	Railroad Crossings and Drawbridges
Educational	58		68	Large Universities and Colleges	78	Primary and Secondary Schools

Load Shed / Curtailment

- Load Shed Program is implemented on Distribution voltage level circuits, Reviewed prior to Summer and Winter Load Periods
- Special Condition Codes from Individual Accounts are Associated with Distribution Circuits
- All Distribution Circuits Classified for Priority:
 - Group W - serving predominantly residential customers
 - Group X - serving predominantly commercial, industrial, and governmental customers
 - Group Y - circuits serving commercial, industrial, and governmental customers that will experience long lasting detrimental operating effects from an interruption
 - Group Z - circuits serving critical customers that will experience long lasting detrimental effects to public safety, welfare, and health
- Water Pumping and Water Treatment are classified as Y and are included in load shed, but are the last to be shed

LSR Circuit Priority Code	# of Circuits	Total Peak Load	Total Customers
W	254	2,077	361,517
X	218	2,607	371,382
Y	429	5,615	627,062
Z	1,337	11,909	1,365,675

- 34 of 122 Circuits in NC included in Load Shed Plan (circuits with net positive Distributed Generation are also excluded)

Training and Communications (Question 13)

➤ Transmission Operators

Annual Internal Training on Load Curtailment Plan (All Operators)

- Review all components of Plan – Voluntary Reductions, Voltage Reduction, Load Shed
- Hands-On Simulation to execute needed actions within the program
- Internal Communications Tested

Bi-Annual Coordinated Drills with PJM (Operators On-Shift that day)

➤ Communication Follows a documented Coordinated Emergency Plan established with PJM

- Internet News Services
- Social Media
- Voice & E-mail Notifications
- Public Media Outlets

Energy Transfers/Reserve Sharing (Questions 14-18) Prepared by PJM

- Capacity Benefit Margin (CBM) Verification Study annually
- Transfer capability with North Carolina's transmission system
 - 2500 MW exports and 3200 MW imports historically
 - Emergency transfer capability could be higher
- PJM fully covers their reserve requirement
- No frequency drops below the allowable range for last three winter peaks.

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing PowerPoint presentation, as filed in Docket Nos. E-100, Sub 173 and M-100, Sub 163, was served via electronic delivery or mailed, first-class, postage prepaid, upon all parties of record.

This, the 20th day of April, 2022.

/s/Mary Lynne Grigg

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