

**STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH**

DOCKET NO. E-100, SUB 165

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of)	
2021 Integrated Resource Plan Update)	ORDER ACCEPTING FILING OF
Reports and Related REPS Compliance)	2021 UPDATE REPORTS AND
Plans)	ACCEPTING 2021 REPS
)	COMPLIANCE PLANS

BY THE COMMISSION: On September 1, 2021, Virginia Electric and Power Company (Dominion) filed its 2021 Integrated Resource Plan Update (2021 Update), as required by Commission Rule R8-60. In addition, Dominion filed its REPS compliance plan pursuant to Rule R8-67(b).

On January 7, 2022, Dominion filed a letter notifying the Commission of errors in its 2021 Update with regard to certain solar generation and storage projects that are currently under construction. Dominion stated that the errors impact the first year of undesignated capacity need identified in the 2021 Update, and it filed revisions to several of the 2021 Update pages to correct the errors.

The Dominion 2021 Update includes revised long-term planning assumptions (such as load forecasts, commodity prices, and projected costs of future resources) and including the incorporation of a social cost of carbon into the planning. Otherwise, the Alternative Plans presented in the 2021 Update are similar to those shown in the 2020 Plan recently accepted by this Commission.

The Update presents three Alternative Plans designed to meet customers' needs in the future under different scenarios, which were designed using constraint-based least-cost planning techniques:

Plan A presents a least-cost plan that estimates future generation expansion while meeting applicable carbon regulations and the mandatory Renewable Portfolio Standard (RPS) Program requirement of the Virginia Clean Economy Act (VCEA). Plan A is presented in compliance with Virginia State Corporation Commission and Commission orders and for cost comparison purposes only. For this Alternative Plan, the model was not forced to select any specific resource or exclude any reasonable resource and was allowed to optimize the accompanying resource plan. Notably, Alternative Plan A does not meet the development targets for solar, wind, and energy storage resources in Virginia established through the VCEA.

Plan B sets the Company on a trajectory toward dramatically reducing greenhouse gas emissions taking into consideration future challenges and uncertainties. Plan B includes the significant development of solar, wind, and energy storage resources envisioned by the VCEA. This plan preserves natural gas-fired generation to address future system reliability, stability, and energy independence issues. The natural gas resources preserved in Plan B differ from the 2020 Plan for two primary reasons: (1) Plan B no longer includes a 970-MW placeholder to address system reliability issues, and (2) the Rosemary generating plant is no longer classified as a natural gas unit.

Plan C uses similar assumptions as Plan B but retires all Company-owned carbon-emitting generation by the end of 2045, resulting in zero CO₂ emissions from the Company's fleet in 2046. This includes gas generation. If the Company retires all carbon-emitting units by the end of 2045, approximately 10 GW of new incremental battery storage would be needed to continue to reliably meet customer load. For context, the Company currently has approximately 100 MW of energy storage under development, in addition to its 16 MW of pilot projects. Over time as more renewable energy and storage resources are added to the system, the Company will learn whether it is capable of maintaining a reliable system under Plan C.

The 2021 Update includes an assessment of the Net Present Value (NPV) of Costs over the study period associated with each of the three Alternative Plans discussed above. The NPVs as reflected in the Update are \$46.0B, \$67.9B, and \$70.7B for Plans A, B, and C, respectively.

All Alternative Plans include Virginia's participation in the Regional Greenhouse Gas Initiative (RGGI), utilize the load forecast prepared by PJM, and assume a capacity factor for all existing and future solar resources of 21.2%, which is the 3-year average of solar tracking facilities in Virginia. The 2021 Update includes multiple sensitivities for assumptions such as load forecasts and projected capacity factors for future solar resources that better reflect their long-term output.

Dominion states in its Update that "Over the long term, achieving the clean energy goals of Virginia, North Carolina, and the Company will require supportive legislative and regulatory policies, technological advancements, grid modernization, and broader investments across the economy."

On June 29, 2021, the Commission issued its Order Waiving in Part Rule R8-60(h)(2) and Giving Notice of Additional Proceedings (June 29 Order), in which it relieved DEC and DEP of their obligation to file updated 2021 Integrated Resource Plans under Rule R8-60(h)(2), with exception of: (a) their Renewable Energy and Energy Efficiency Portfolio Standard (REPS) Compliance Plans as required by Rule R8-60(h)(4) and Rule R8-67(b); (b) their Competitive Procurement of Renewable Energy (CPRE) Program Plan update as required by Rule R8-71(g)(1); and (c) any material modifications to the short-term action plans identified in their 2020 biennial IRPs as would be required by Rule R8-60(h)(3).

On September 1, 2021, DEC and DEP (collectively, Duke), filed Updates responsive to the Commission's June 29 Order. The Public Staff reviewed Duke's IRP Update filings to ensure they comply with the June 29 Order and determined that they do comply. The Public Staff's determination should not be construed to indicate that it endorses any input or assumption utilized by any of the utilities in the development of their IRP Updates or any forecast or plan. According to the Public Staff, their report simply indicates that the utilities have complied with all of the requirements of the Commission's Order for purposes of the update year and that the information utilized by the utilities appears to be reasonable for planning purposes.

Short-term action plan updates are discussed by each of the DEC and DEP utilities in their respective filings. The plans present examples of enhancements and new studies that are planned to support development of the next comprehensive IRP. Enhancements include:

- Utilization of the Encompass modeling framework for system optimization and production cost modeling;
- Incorporation of the initial capabilities of Integrated Systems and Operations Planning (ISOP);
- Incorporation of additional portfolio, scenario and sensitivity analysis; and
- Integration of additional demand-side management and energy efficiency programs as identified through the EE collaborative work.

CONCLUSION

Based upon the record in this proceeding, including the report on the Public Staff's review of IRP Updates, the Commission hereby accepts the 2021 IRP Update filed by Dominion as complete and fulfilling the requirements set out in Commission Rule R8-60. The Commission further accepts the REPS compliance plans submitted by DEC, DEP and Dominion. Finally, the Commission accepts DEC's, and DEP's Competitive Procurement of Renewable Energy (CPRE) Program Plan updates as required by Rule R8-71(g)(1) and modifications to the short-term action plans identified in their 2020 biennial IRPs.

IT IS, THEREFORE, SO ORDERED.

ISSUED BY ORDER OF THE COMMISSION.

This the 23rd day of February, 2022.

NORTH CAROLINA UTILITIES COMMISSION



Erica N. Green, Deputy Clerk