Dominion Energy
Virginia and North Carolina
2024 Integrated Resource Plan (IRP)

Topic Specific Workshop 1 – Modeling

June 3, 2024

Goal of Today's Meeting

Dominion Energy will provide details and potential concepts for the 2024 IRP and then we want to hear from you:

- What's your reaction?
- What other considerations should we think about?
- What alternatives do you want to share?

The Legislation (Va. Code § 56–599 D)

As part of preparing any integrated resource plan pursuant to this section, each utility shall conduct outreach to engage the public in a stakeholder review process and **provide opportunities for the public to contribute information, input, and ideas on the utility's integrated resource plan, including the plan's development methodology, modeling inputs, and assumptions, as well as the ability for the public to make relevant inquiries, to the utility when formulating its integrated resource plan**. Each utility shall report its public outreach efforts to the Commission. The stakeholder review process shall include representatives from multiple interest groups, including residential and industrial classes of ratepayers. Each utility shall, at the time of the filing of its integrated resource plan, report on any stakeholder meetings that have occurred prior to the filing date.

IRP Modeling Process

1. RPS Program Workpaper

RPS Program % Requirement

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PJM Load Forecast (Net of Energy Efficiency)

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Adjustments (e.g., nuclear generation, losses, customer choice)

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VCEA RPS Adjusted Target

2. PLEXOS Inputs

- New unit data
- Existing unit updates
- Retirements (unit analysis)
- Commodity Forecasts
- PJM Load Forecast
- ELCC Values
- RPS Plan

3. Applicable Constraints

- Solar / Wind VCEA Build
- Storage VCEA Build
- VCEA Carbon Goals
- REC Purchase Limit

4. Example Considerations

Does Plan ensure 8,760hr reliable service?	Does Plan meet annual RPS Program?	Does Plan meet VCEA requirements?
Is build plan timing and quantity feasible?	Is plan cost–effective?	Others

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Post Model Analysis (i.e., Build Plans)

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Qualitative explanations

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IRP Document

IRP Updates and Considerations

Topic	Detail	IRP Input Notes
Onshore Wind Capacity Factor	• Capacity Factor for onshore wind is expected to be lower.	• Updated capacity factor assumptions for onshore wind will be utilized in the IRP. The capacity factor for offshore wind is not expected to change.
PJM Effective Load Carrying Capability (ELCC)	• Lower Solar and Storage o Solar Fixed Panel: 9% o Solar Tracking Panel: 14% o 4–hr Storage: 59% o 10–hr Storage: 78%	• Dominion Energy will utilize the PJM ELCC study (issued 4/24/24) for use in the IRP modeling for all applicable resources.
Third–Party Transmission Study	• Capacity & Energy Import Limits	• Third–Party Transmission Study information regarding import/export transmission limits is currently being finalized and will be included in the IRP. Study completed at DOM Zone transmission level and will be scaled down to DOM LSE level.
New EPA Environmental Regulations	• Good Neighbor Rule • EPA 111(b) and 111(d) • Updated MATS rule • ELG Rule	• Three were finalized in late April 2024, and will be incorporated into the IRP. • Good Neighbor Rule effective August 2023, with additional impacts.
Non–Normal Weather Analysis	• TBD	• Non–normal weather is expected to be included in the IRP.
Energy Efficiency Savings Targets		• Evaluating targets beyond 2025.

2024 Potential Plans – Illustrative

	1	2	3	4	5	
Description	**Least Cost* with EPA Environmental Regs**	**Least Cost without EPA Environmental Regs**	**VCEA-Compliant with EPA Environmental Regs**	**VCEA-Compliant without EPA Environmental Regs**	**Least Cost with EPA Environmental Regs**	**Other Plans?**
Meets RPS Program Requirement?	Yes	Yes	Yes	Yes	Yes	TBD
Forced VCEA Development Targets?	No	No	Yes	Yes	TBD	TBD
Retirements	Least Cost Optimized with Reliability Consideration	Least Cost Optimized with Reliability Consideration	Least Cost Optimized with Reliability Consideration	Least Cost Optimized with Reliability Consideration	Least Cost Optimized with Retirement Considerations	TBD
REC Purchases	30%	30%	30%	30%	30%	TBD
Load Forecast	PJM*	PJM*	PJM*	PJM*	PJM*	TBD
Capacity Purchases	PJM CETL	PJM CETL	PJM CETL	PJM CETL	PJM CETL	TBD
Energy Imports	Transmission Study	Transmission Study	Transmission Study	Transmission Study	Transmission Study	TBD
Renewable Utility/PPA	Model Optimized	Model Optimized	65/35*	65/35*	TBD	TBD

*Required by Statute/Order

Description of 2024 Potential Sensitivities

- Virginia in RGGI
- Company Load Forecast
- High Load Forecast
- Low Load Forecast
- High Fuel Case
- Low Fuel Case
- High Construction Costs
- Low Construction Costs
- Other?