

IRP Working Group Weighs In on Modeling, IRP Process at December Meeting

***Editor's Note:** TVA and stakeholders are working on TVA's next Integrated Resource Plan (IRP) to determine how TVA could meet customer demand for electricity between now and 2050 across a variety of possible futures that TVA could find itself operating in. A programmatic Environmental Impact Statement (EIS) will accompany the IRP to address its environmental effects.*

TVA and the IRP Working Group, a diverse group of stakeholders, met on Dec. 18-19, 2023, in Franklin, Tennessee, to discuss a wide variety of topics related to the IRP. The overarching objective of the IRP Working Group is to provide stakeholder input into the framing and evaluation of TVA's 2024 IRP.

Presentations at the meeting covered modeling updates, behind-the-meter forecasting, seasonal dispatch profiles, an Integrated Transmission Plan overview, a review of the strategies and the modeling approach, and strategy results by scenario.

During the IRP process, TVA – with significant input from stakeholders and the public – is considering future scenarios, various business strategies, and a diverse mix of resource options. After determining scenarios and strategies, TVA now is applying the five strategies to the five scenarios, which generates 25 potential resource portfolios to analyze.

TVA staff members offered modeling updates for two cases – Carbon Regulation with Baseline Utility Planning (Case 4A) and Carbon Regulation Plus Growth with Baseline Utility Planning (Case 5A). They also provided an overview of TVA's behind-the-meter forecasting. "Behind-the-meter" refers to energy generated by distributed sources such as a company's energy storage or energy generated from a homeowner's solar panels. The 2024 IRP includes assumptions for behind-the-meter solar, storage, and combined heat and power (CHP) adoption in each scenario and strategy portfolio. Key inputs are run through the model, and adoption uptake is driven by the number of years it would take a participant to see a payback on their investment.

TVA reviewed seasonal dispatch profiles for the year 2050. The profiles, which predict how much energy might be produced during peaks or specific times in the year, help TVA understand the model's selections. TVA also presented information on the transmission planning and projects process. Staff reviewed the opportunities and challenges of creating the grid of tomorrow, and explained current thoughts on how an Integrated Transmission Plan might be developed, following the completion of the IRP. The IRP Working Group members weighed in with thoughts and suggestions.

TVA reviewed its strategy development and modeling approach, and it provided modeling updates of the four alternative strategies in the reference case scenario – Reference Case x Carbon-Free Innovation Focus (1B), Reference Case x Carbon-Free Commercial Ready Focus (1C), Reference Case x Distributed and Demand Side Focus (1D) and Reference Case x Resiliency Focus (1E). These alternative strategy results were shown in context of case 1A, Reference Case with Baseline Utility Planning.

In the final segment of the meeting, TVA and the Working Group discussed IRP progress over the past six months. The Working Group members provided feedback on the IRP process to date and their suggestions for future meetings.