
Integrated Resource Plan (IRP) Update

Public Briefing Webinar – 03/12/2026

Welcome

Amy Edge; Senior Director, Stakeholder Engagement

IRP Overview and Fundamentals

Candy Kelly, Senior Manager, Capacity Planning

TVA's Integrated Resource Plan (IRP)

The IRP is a long-term study of how TVA could meet customer demand for electricity over the next 20+ years, across a variety of futures.

An updated IRP is needed to:

- Proactively establish a strong planning foundation for the 2030s and beyond
- Inform TVA's next long-range financial plan

The IRP provides strategic direction on how TVA will continue to provide low-cost, reliable, and resilient electricity to the residents and businesses across the Valley region.



Latest Updates on IRP

Spring/Summer 2023: TVA initiated the **2024 IRP**, targeting Fall 2024 completion

Spring 2024: Initial **Draft 2024 IRP** issuance paused, pending forthcoming regulation announcements

Fall 2024: TVA published the rebranded **Draft 2025 IRP**, targeting Spring 2025 completion


Spring 2025: Initial **Final 2025 IRP** completed by TVA staff; TVA Board lost quorum, delaying publication

Spring/Summer 2025: Key changes in electric utility landscape shifted some 2025 IRP baseline assumptions

Winter 2025/2026: Board quorum restored; initial discussions held on IRP path forward options

Planning is Grounded in Least-Cost Principles

In integrated resource planning, TVA applies fundamental least-cost planning principles*:

<p>Low Cost</p> 	<p>Risk Informed</p> 	<p>Environmentally Responsible</p> 
<p>Reliable and Resilient</p> 	<p>Diverse</p> 	<p>Flexible</p> 

*In alignment with Section 113 of the Energy Policy Act of 1992

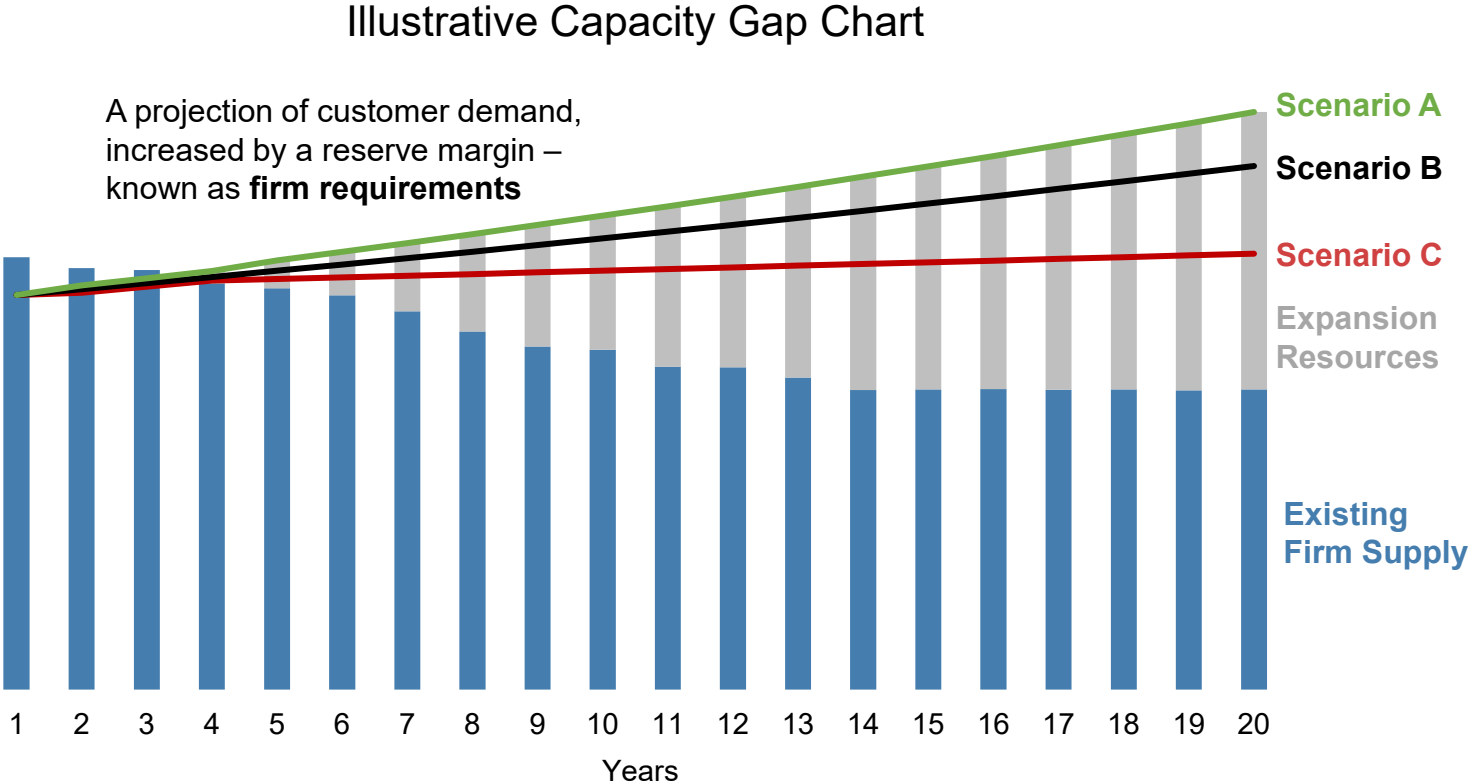
Resource Planning for Future Capacity Needs

Resource planning is about optimizing the mix of future capacity.

Projections of new capacity needed are filled by the most cost-effective resources.

Multiple scenarios will be explored, reflecting different levels of forecasted demand.

Multiple strategies will be explored, resulting in different resource mixes to evaluate in each scenario.



IRP Environmental Impact Statement (EIS)

A programmatic EIS accompanies the IRP and outlines anticipated environmental impacts, in compliance with the National Environmental Policy Act (NEPA)

The IRP does not represent a discrete action; therefore, the environmental review is a Programmatic EIS which future site-specific environmental reviews can be tiered from

Assesses broad region-wide impacts of the IRP on the following environmental factors:

- Air quality and climate impacts
- Water resources
- Fuel requirements
- Waste production
- Land requirements
- Socioeconomics

2026 IRP Stakeholder and Public Engagement

Building off the robust 2023-2025 stakeholder involvement activities, the 2026 IRP process will leverage several of the most effective mechanisms for stakeholder engagement.

2023-2025 Stakeholder Engagement Efforts

IRP Working Group

Board Public Listening Sessions

Regional Energy Resource Council

Regional Resource Stewardship Council

Customer Council

Valley Partner Meetings

Public Informational Briefings

2026 Integrated Resource Plan

Online: tva.com/IRP / Email: IRP@tva.gov / Channels: @TVA @TVANews

The Electric Utility Landscape Shifted in 2025

Some baseline assumptions underpinning previous 2025 IRP analysis have shifted.

Tax Credit Phase-out

Updated tax credit phase-outs under the OBBB Act require construction commencement by 2027 for renewables and by 2033 for nuclear and storage resources¹.

The majority of 2025 IRP cases assumed investment tax credits (ITC) would not be subject to phase-outs prior to 2050, therefore new requirements will increase effective resource costs, particularly for renewables.

EOs and Regulatory Relief

The Administration issued EOs encouraging investment in existing coal and new nuclear.

EPA announced intentions to provide regulatory relief across several rules, including GHG Rule and ELG².

The 2025 IRP included coal end-of-life by 2035 in all core cases, and status quo Nuclear Regulatory Commission (NRC) approval process for new nuclear.

Strong Demand Growth

The Tennessee Valley region continues to see rising electricity demand driven by population, employment, and industrial growth.

TVA's actual and forecasted electricity demand has rapidly increased relative to the 2025 IRP's Reference Scenario and is approaching the Higher Growth Scenario primarily due to data center growth (e.g., artificial intelligence, hyperscaler, etc.).

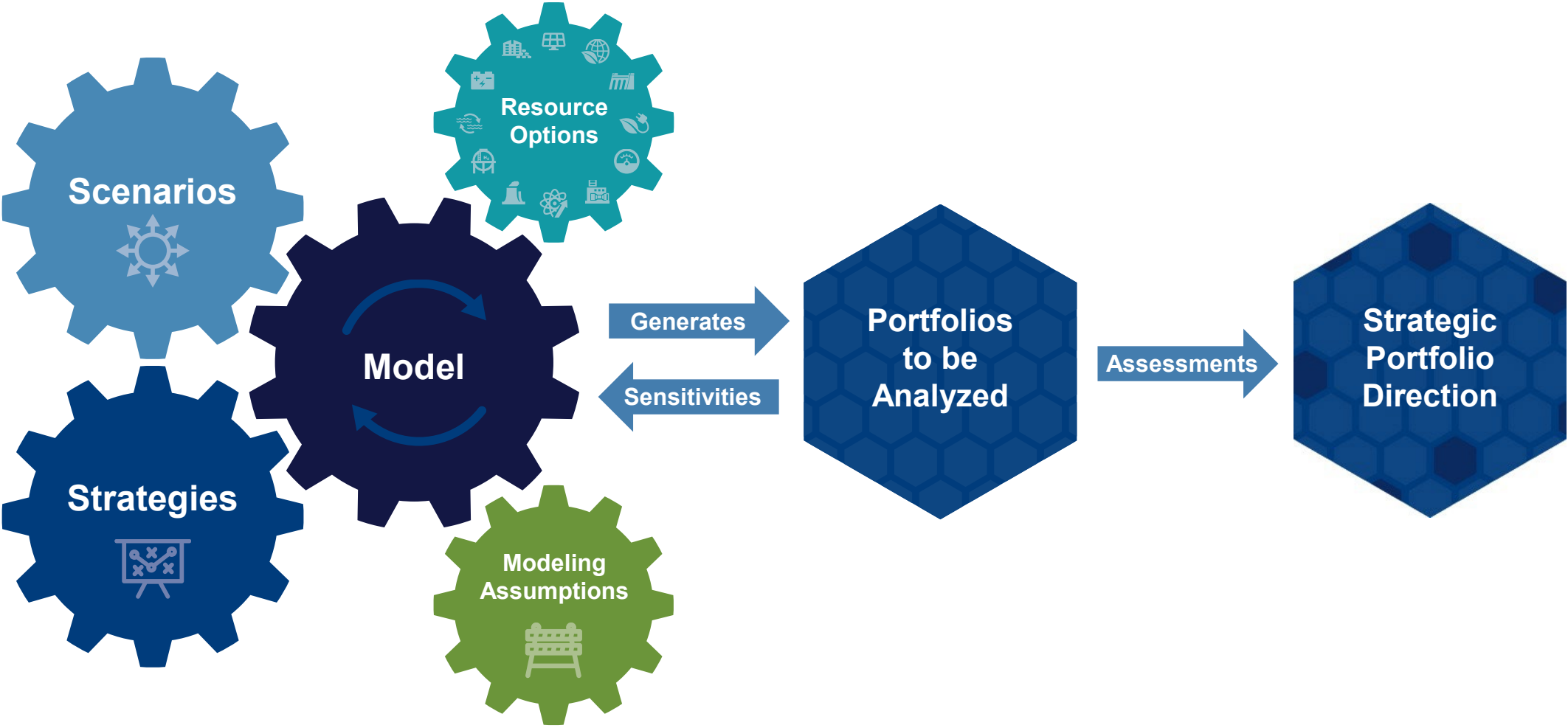
¹Solar/wind ITC drops to 0% following 2027 construction commencement; nuclear/storage ITC includes a 3-year phase out of 75%, 50%, 0% of full value following 2033 construction commencement.

²Greenhouse Gas (GHG) Rule of 2024 and Effluent Limitation Guidelines (ELG)

IRP Assumptions

Hunter Reed, IRP Project Manager

How the Integrated Resource Planning Process Works

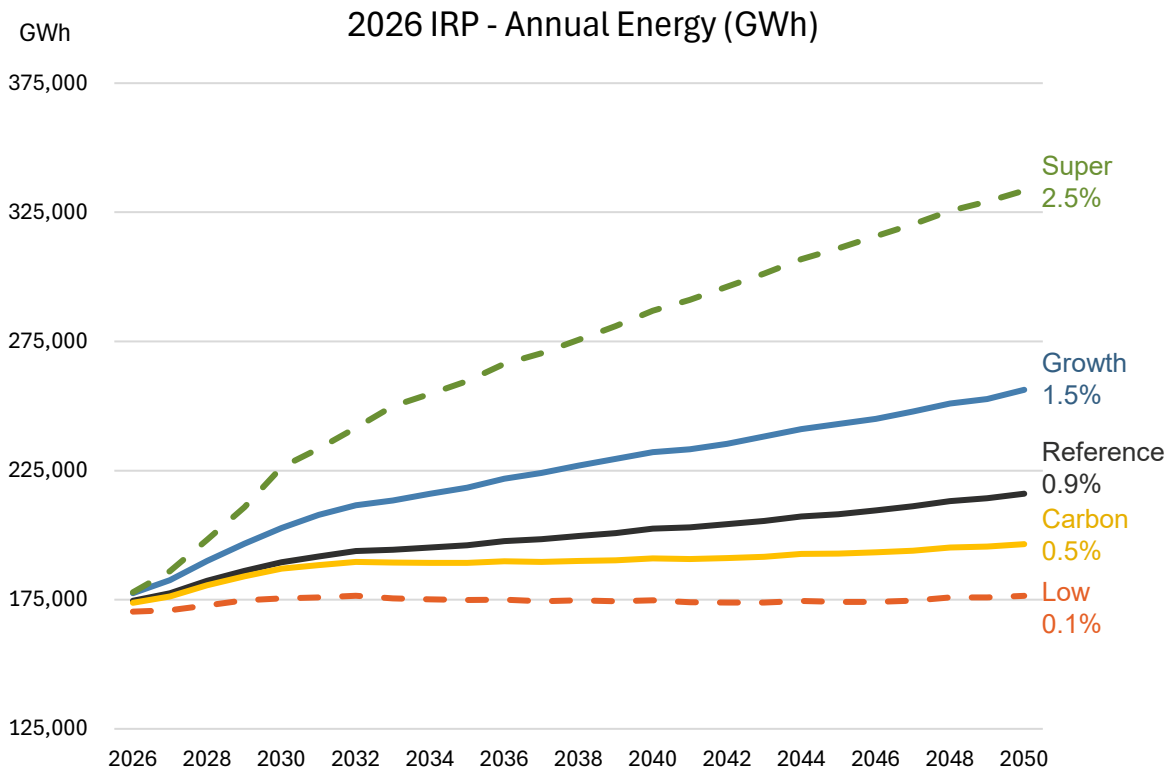
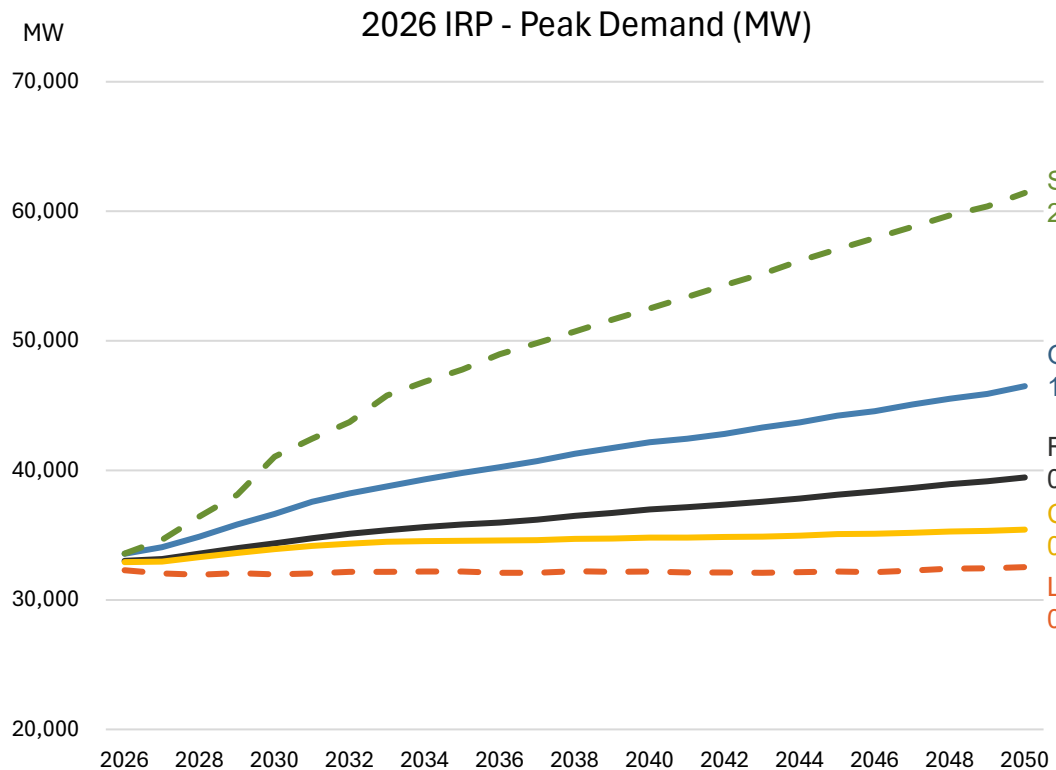


Simplified Scenarios and Strategies

Scenarios		Strategies	
Scenario	Scenario Description	Strategy	Strategy Description
1. Reference	TVA's current forecast	A. Baseline Utility Planning	Represents TVA's current outlook, no resource emphasis
2. High Growth	Reflects a technology-driven increase in U.S. productivity growth that stimulates the national and regional economies, resulting in substantially higher demand for electricity	B. Innovation	Emphasizes emerging, firm and dispatchable technologies such as advanced nuclear and long-duration storage through innovation, continued research and development, and strategic partnerships
3. Carbon Legislation	Reflects the impact of potential future carbon legislation designed to reduce power sector emissions.	C. Distributed	Emphasizes distributed technologies such as batteries, renewables, and demand-side programs to reduce reliance on central station generation and utilize virtual power plants

Sensitivity analysis will consider key “what if?” questions, be responsive to stakeholder input, and will be used to strengthen results.

2026 IRP Scenario Load Forecasts



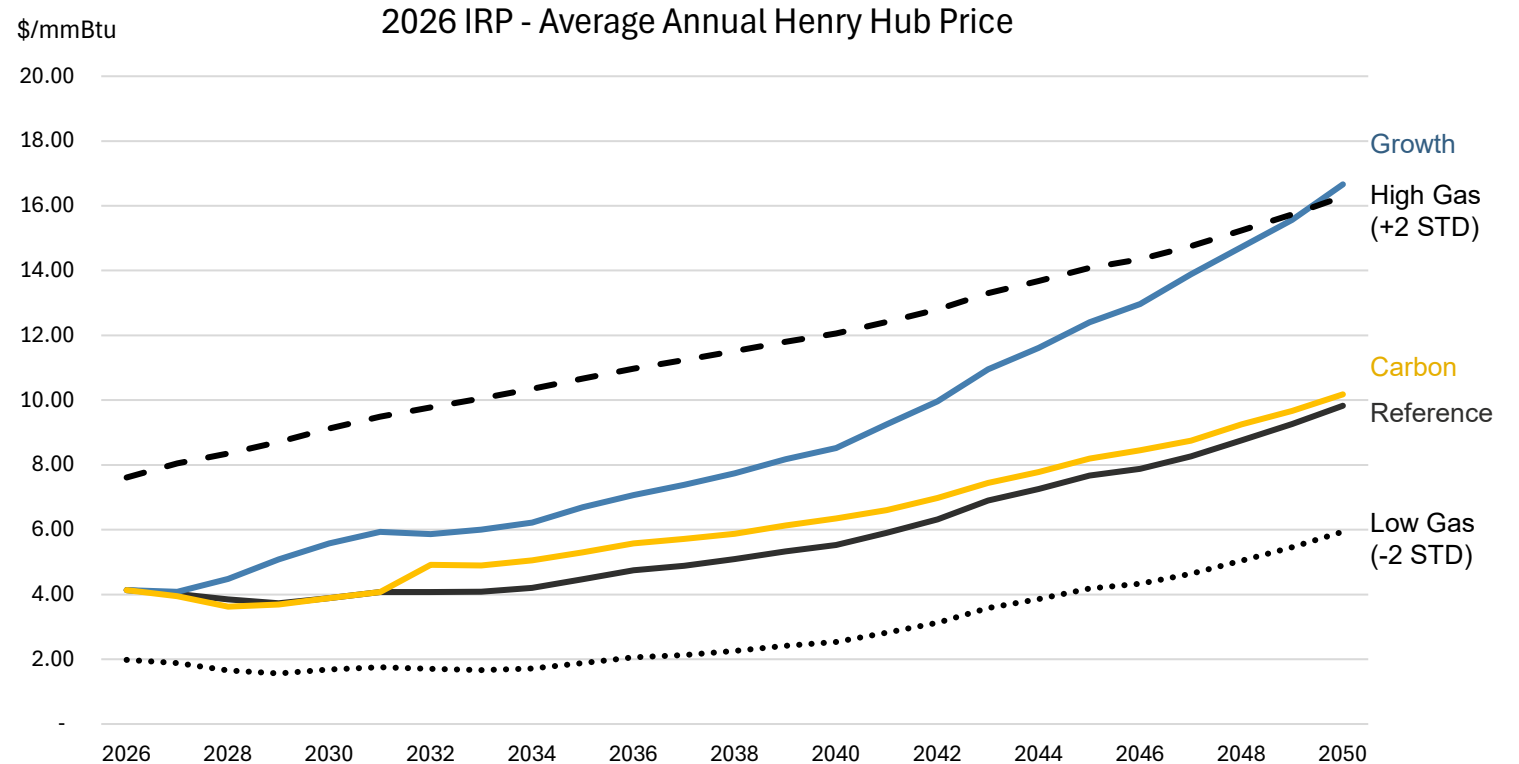
Note: Percentages represent compound annual growth rates (CAGR), 2026-2050

2026 IRP Scenario Natural Gas Price Forecasts

Natural gas demand and forecasted cost is higher across all three scenarios, compared to the 2025 IRP scenarios, due to tax credit phase-out for renewables and increased electricity demand.

High Growth scenario intensifies this trend with high natural gas expansion nationwide.

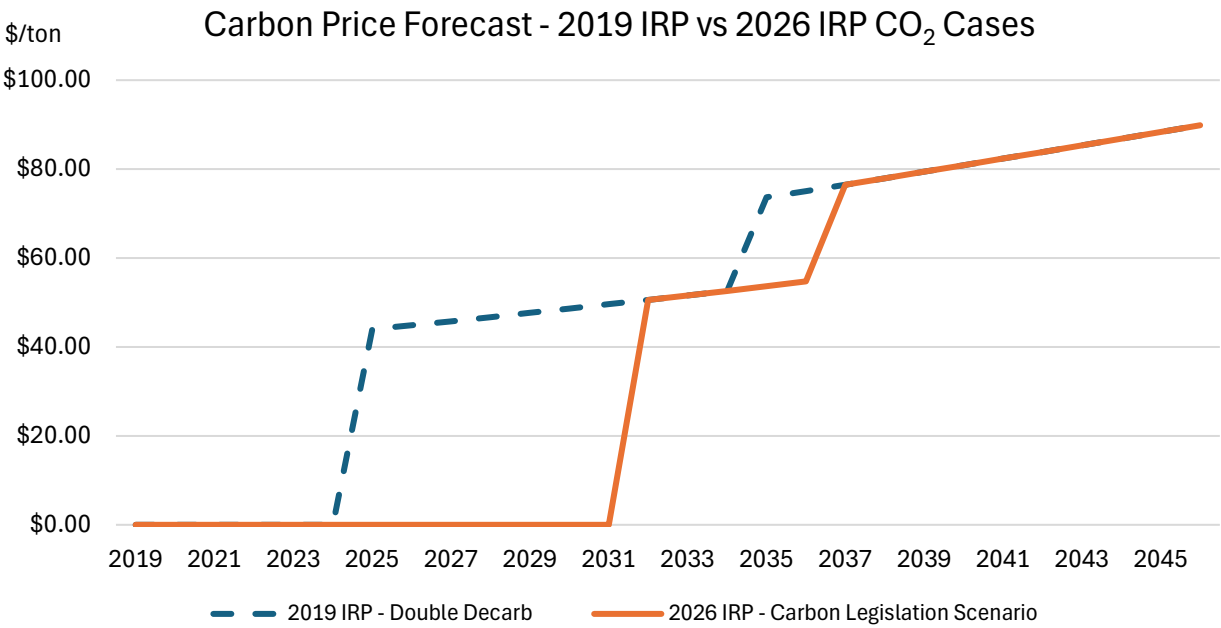
Carbon Legislation scenario sees a minor increase when the carbon tax takes effect and natural gas offsets coal generation.



Carbon Tax for Carbon Legislation Case

The 2019 IRP double decarbonization carbon tax is the general basis for the 2026 IRP Carbon Legislation scenario (start of tax will be pushed to 2032, with step-up after five years).

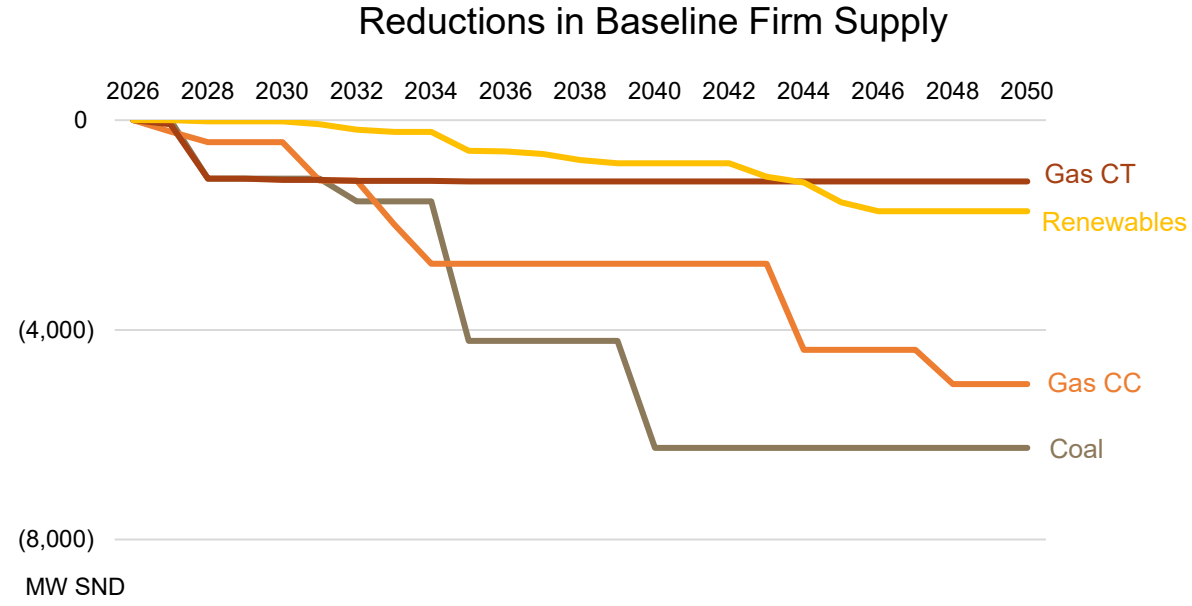
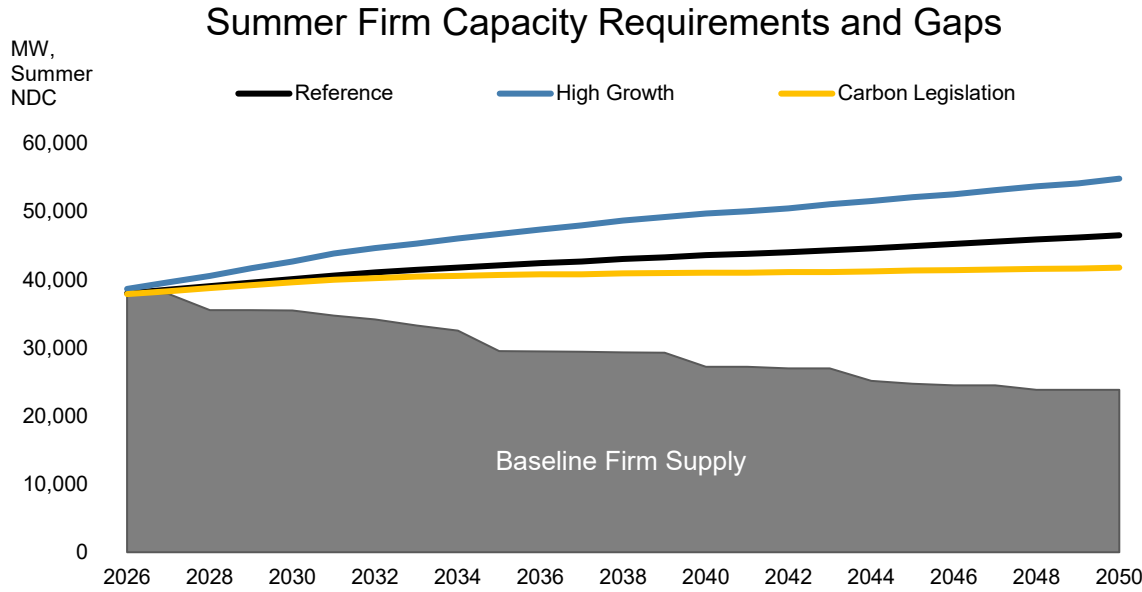
This carbon tax is not tied to any current or proposed legislation but is rather meant to be a proxy for potential future legislative or regulatory action.



Firm Capacity Requirements and Gaps

The three scenarios forecasted varying levels of electricity demand, which drove varying levels of capacity requirements and need for incremental resources in each scenario.

Baseline firm supply changes over time as generating units reach the end of their useful life and purchased power contracts expire



Note: Summer firm requirement assumes 18% planning reserve margin

Summary of Resource Options

All resource types are available for selection in all cases

Major Resource Types	Nuclear	Hydro	Coal	Gas	Renewables	Storage	EE and DR
Resource Technologies	<p>Advanced pressurized water reactor (APWR)</p> <p>Light water small modular reactor (LW SMR)</p> <p>Generation IV small modular reactor (Gen IV SMR)</p>	<p>Hydro uprates</p>	<p>Supercritical pulverized coal</p> <p>Supercritical pulverized coal with carbon capture</p>	<p>Combined cycle (CC)</p> <p>CC with carbon capture</p> <p>Combustion turbine (CT)</p> <p>Aeroderivative</p> <p>Reciprocating engine (RICE)</p>	<p>Utility-scale solar</p> <p>Distributed solar</p> <p>Midwest wind</p> <p>Southeast high-hub wind</p>	<p>Pumped storage</p> <p>Lithium-ion battery (4-hour)</p> <p>Advanced chemistry battery (8-hour)</p> <p>Distributed storage</p>	<p>Energy efficiency (EE)</p> <p>Demand response (DR)</p>

2026 IRP Strategy Design Matrix

Strategies have been consolidated with emphasis mechanisms simplified*.

Strategy ¹	Utility Scale Resources							Distributed and Demand Side Resources			
	Nuclear	Coal	Gas CC and Frame CT ²	Aero CT and RICE ²	Solar and Wind	Battery Storage	Long-duration Storage	Distributed Solar	Distributed Storage	Energy Efficiency	Demand Response
Baseline	Base	Base	Base	Base	Base	Base	Base	Base	Base	Base	Base
Innovation	Emphasize	Base	Base	Base	Base	Base	Emphasize	Base	Base	Base	Emphasize
Distributed	Base	Base	Base	Emphasize	Emphasize	Emphasize	Base	Emphasize	Emphasize	Emphasize	Emphasize

¹All resources are available for selection in all strategies

²Natural gas-fueled combined cycle (CC), combustion turbine (CT), and reciprocating internal combustion engine (RICE)

*Previous IRPs included promotion at base, moderate, and high levels; the 2026 IRP will only include base and emphasize levels.

Select 2026 IRP Resource Options and Costs

Resource	Capacity (MW)	First Year Available	Overnight Capital ⁴		Fixed O&M (2026\$/kW-yr)	Variable O&M (2026\$/MWh)	Tax Benefits
			2026\$/kW	\$MM, 2026\$			
Nuclear, APWR	1,110	2038	14,235	15,800	136.29	1.44	30% ITC through 2041 COD
Nuclear, light water small modular reactor (LW SMR) (first-of-a-kind / nth-of-a-kind)	285	2033 / 2041	17,263 / 8,743	4,900 / 2,500	157.42	1.18	30% ITC through 2041 COD
Nuclear, Gen IV SMR	345 / 500 ³	2041	9,751	4,900	290.52	4.49	30% ITC through 2041 COD
Coal, supercritical pulverized	650	2032	3,482	2,300	112.82	0.62	
Gas, combined cycle (CC) (3x1x1) ¹	2,145	2032	2,148	4,600	45.69	1.01	
Gas, combined cycle (CC) (2x1x1) ¹	1,430	2032	2,212	3,200	45.69	1.01	
Gas, CC (2x1x1) w/ carbon capture	1,430	2033	3,635	5,200	188.75	5.04	45Q credit through 2036 COD
Gas, frame combustion turbine (CT) (4x) ¹	884	2032	1,161	1,000	5.95	start-based	
Solar, utility-scale (single-axis track) ²	50	2031	1,698	100	21.71	N/A	30% ITC through 2031 COD
Wind, Midwest	200	2031	1,574	300	98.60 ⁵	N/A	30% ITC through 2031 COD
Wind, Southeast high hub	200	2031	2,205	400	33.00	N/A	30% ITC through 2031 COD
Storage, hydro pumped	1,212	2035	3,191	3,900	12.17	N/A	30% ITC through 2041 COD
Battery, lithium-ion (4-hour) ²	50	2031	2,158	100	44.87	N/A	30% ITC through 2035 COD
Battery, advanced chemistry (8-hour) ²	50	2031	3,886	200	80.33	N/A	30% ITC through 2035 COD

¹Alternative configurations offered for gas include CC (2x1x1, 1x1), Frame CT (3x, 2x), Aero CT (10x, 4x, 2x), and RICE (6x, 2x)

²Solar and battery storage options are modeled as PPAs using all-in energy (\$/MWh) or all-in demand (\$/kW-yr) charges, respectively; overnight capital cost shown here has been derived by back-calculating bottom-quartile responses from TVA's most recent request for proposal using a 7% discount rate, 20-year capital recovery period, and 2024 NREL ATB conservative assumptions for fixed O&M.

³Base reactor capacity of 345 MWe with 155 MW of integrated storage (~5.5 hours) for combined output of 500 MW

⁴Overnight capital, Fixed O&M, and Variable O&M costs presented as the first available year cost (prior to any applicable tax credits), de-escalated to 2026 dollars for comparison purposes; absolute dollar cost rounded to nearest \$100 million

⁵Includes cost of off-system wheeling and firm transmission

Updated 2026 IRP Metrics Scorecard

These metrics will be used to understand the tradeoffs among the IRP's nine core resource portfolios

Low Cost

- Present Value of Revenue Requirements (PVRR)
- System Average Cost
- Total Resource Cost (TRC)

Environmentally Responsible

- Land Use Intensity
- Water Consumption Intensity
- Waste Intensity
- CO₂ Direct Release
- CO₂ Intensity

Risk Informed

- Risk / Benefit Ratio
- Risk Exposure

Diverse, Reliable, and Flexible

- Operating Cost Stability
- P95 Average Unserved Energy Ratio
- Expected Average Energy Curtailment

Next Steps

Complete refreshed IRP modeling

Provide updates and solicit input from key stakeholders (e.g., Regional Energy Resource Council (RERC), IRP Working Group, public briefing, etc.)

- Next RERC meeting – April 23, 2026

Complete IRP document and associated environmental review, targeting May 2026 Board consideration

Pre-Submitted Q&A Response