2024 Integrated Resource Plan (IRP)

Public Scoping Webinar



About Today's Meeting

A recording of this presentation will be available on the TVA 2024 IRP website.

2024 IRP website: www.tva.gov/IRP.

There will be an opportunity for clarifying questions at the end of the presentation using either the Q&A functionality of the Teams webinar or by submitting clarifying questions to IRP@tva.gov with the subject line "Scoping Meeting Q&A".



Webinar Agenda

Welcome and Meeting Purpose

Stakeholder Engagement

Objective and Purpose of TVA's Integrated Resource Plan (IRP) Study

Overview of National Environmental Policy Act (NEPA) Process and Programmatic Environmental Impact Statement (EIS)

Clarifying Questions from Audience

Closing Remarks and How to Provide Comments



Welcome and Meeting Purpose

Brian Child Vice President, Enterprise Planning



TVA's Integrated Resource Plan

The IRP is a study of how TVA could meet customer demand for electricity between now and 2050 across a variety of future environments.

A programmatic Environmental Impact Statement (EIS) accompanies the IRP to address its environmental effects.

An updated IRP is needed in order 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 increasingly cleaner electricity to the 10 million residents of the Tennessee Valley.

2019 Integrated Resource Plan

VOLUME I - FINAL RESOURCE PLAN









2019 IRP - TVA Board Action and Direction*

Approved the planning direction in the 2019 IRP.

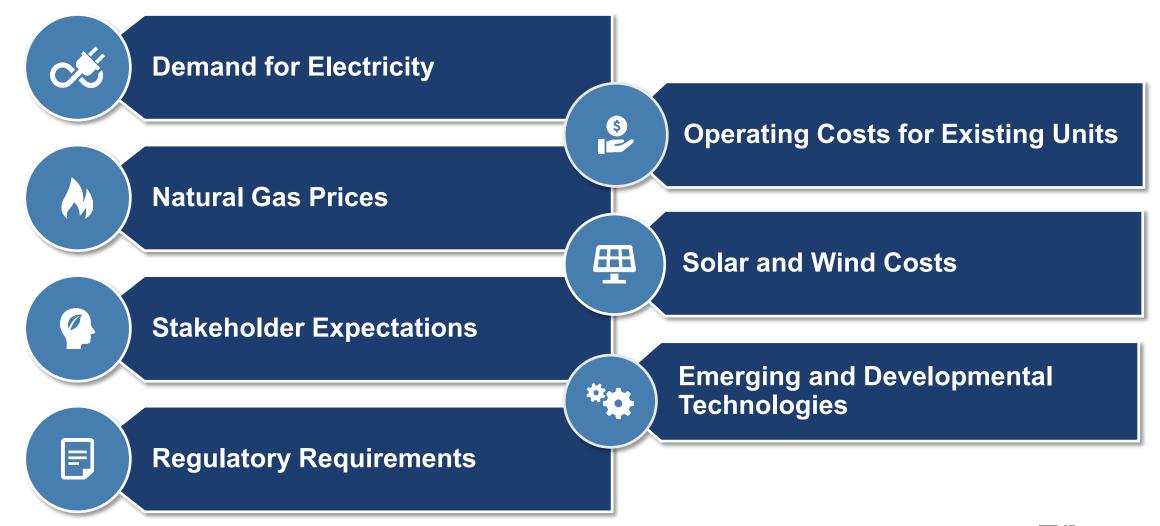
Directed TVA staff to monitor signposts to appropriately consider possible adjustments to the planning direction:

- Changing market conditions
- More stringent regulations
- Technology advancements

Directed TVA staff to initiate the next IRP no later than 2024.



2019 IRP Key Signposts





What is Public Scoping?

As TVA updates its power generation strategy, the first step is to understand the environment we're planning in, which is referred to as scoping.

We ask the general public, our customers, and our partners and regulators about their ideas regarding the generation needs of the future.

With this information, we develop key assumptions to study which are transformed into candidate resource plans to be evaluated for viability and environmental impact.

We also ask the public to comment on potential environmental issues and concerns that should be addressed in the EIS.



Stakeholder Engagement

Althea Jones Sr. Manager, Public and Community Engagement



TVA Customer & Stakeholder Engagement

- Seeking input from and listening to our customers and stakeholders is foundational to our mission – serving the people of the Tennessee Valley
- TVA seeks customer and stakeholder input and feedback on an ongoing basis through forums such as:
 - Federal Advisory Committees Regional Energy Resource Council (RERC) and Regional Resource Stewardship Council (RRSC)
 - Utility of the Future Information Exchange
 - Valley Pathways Study
 - Quarterly TVA Board Listening Sessions
 - Regional engagement teams
- A key element of TVA's IRP process is to ensure active public involvement and direct engagement with a diverse group of stakeholders.





Stakeholder Engagement and the IRP

IRP Working Group (IRPWG)

Regional Energy Resource Council (RERC)

Public Scoping meetings

Periodic informational webinars

Public meetings on the Draft IRP report





2024 IRP Objective and Purpose

Clifton Lowry
Director, Resource Planning & Strategy



TVA's Integrated Resource Planning

Collaboration with stakeholders to envision the generation needs of the future.

Based on a least-cost planning framework.

Provides foundation for developing long-range financial plans.

Considers a number of potential futures to help predict changes in the marketplace.



The IRP functions like a compass, not a GPS



Planning is Grounded in Least-Cost Principles

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





Resource Planning Is About Solving Puzzles



By asking a lot of questions, like ...

How much energy will our customers use in the future?

What alternatives do we have to meet our resource needs?

Are there strategic considerations that will limit the alternatives we can consider?

How do we properly evaluate these resource alternatives?

How do we find the best solution?

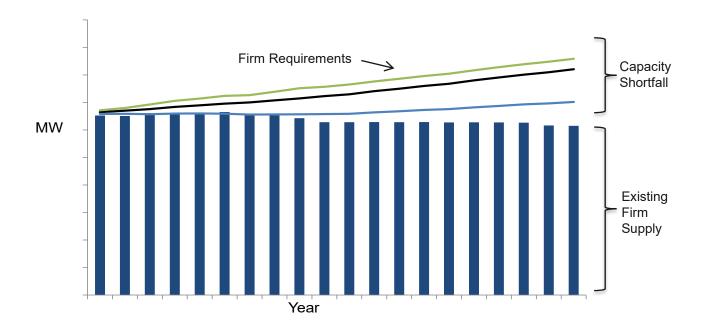
Which plan (portfolio) do we select?



Resource Planning Addresses Future Capacity Needs

Resource planning is about optimizing the mix of future capacity.

Projections of capacity needed are filled by the most cost-effective resources that meet system needs.





The TVA Resource Planning Process

Resource Planning is a common practice in the utility industry to identify the least cost solution to meet customer demand over a long horizon (typically 20-30 years)

Develop Load Forecast

Project customer demand for electricity in the future

Define Existing Resources

Define the resources currently available to meet customer demand and how that will change in the future

Establish Need for Resources

Compare future customer demand with existing resources

Identify Resource Options

Identify all resources (supply- and demand-side) that will be considered to meet future need

Analyze Portfolios

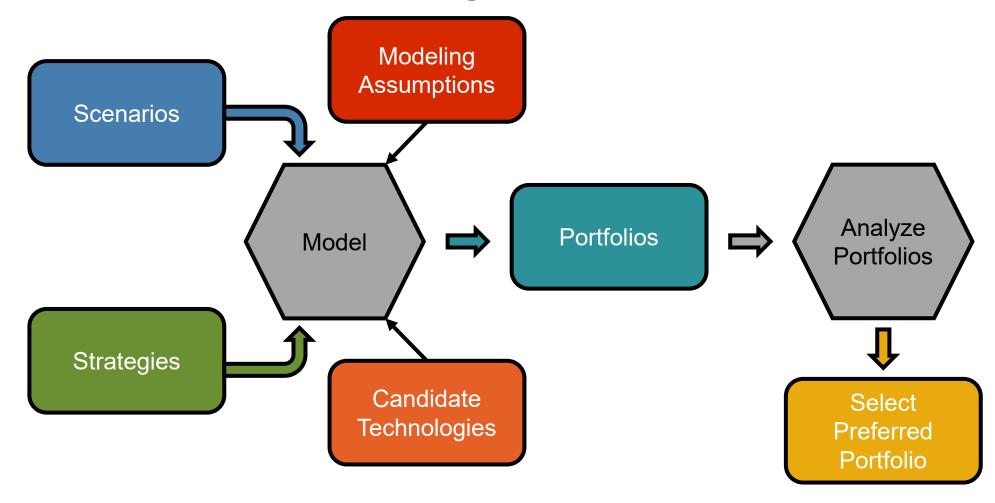
Test different resource combinations (portfolios) to evaluate performance

Select Preferred Portfolio

Select the preferred combination of resources



How the Resource Planning Process Works



Stakeholder feedback is a key component in the development of all model inputs



2019 IRP Results



All portfolios point to a TVA power system that will be LOW-COST, RELIABLE, and CLEAN



In addition to providing the strategic direction for TVA's future energy supply, the 2019 IRP recommended near-term actions that have been integrated into TVA's asset strategy.



2024 IRP Considerations

Reliability, affordability, and resiliency

Dispatchability

Electrification and load growth

Carbon reductions and net zero

Renewables and storage

Climate impacts

Environmental justice

Other Risks



IRP Supports TVA's Long-Range Financial Plan

The IRP will:

- Use least-cost planning criteria
- Incorporate resource capital, operating, fuel, and environmental compliance costs
- Include Valley economics as key criteria to evaluate strategies
- Evaluate socioeconomic and climate impacts of alternative strategies in the associated EIS

The IRP will not:

- Establish wholesale or retail electricity rates
- Identify specific sites for new resources
- Be a Distribution Integrated Resource Plan (DIRP)



Key IRP Dates

The 2024 IRP study approach is intended to enable stakeholder involvement and ensure transparency



Spring '23 – Publication of Notice of Intent (NOI) and public scoping initiation

Summer '23 – IRP Working Group commences

Fall '23 – Public scoping report published

Fall/Winter '23 – Modeling and environmental study

Spring '24 – Publish Draft IRP and EIS, public comment period begins

Spring/Summer '24 – Respond to Draft comments and develop Final documents

Summer '24 – Publication and TVA Board adoption of Final IRP and EIS



IRP Environmental Impact Statement (EIS)

Kelly Baxter NEPA Project Manager



IRP EIS Purpose and Approach

National Environmental Policy Act (NEPA)

Decision-makers informed of environmental impacts

Public involvement

System-wide study of environmental impacts

Programmatic EIS



EIS Process and Milestones



*Opportunity for public feedback



EIS Analyzes Key Environmental Factors

The EIS will assess broad region-wide impacts of the next IRP on environmental factors such as:

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

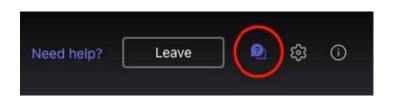


Clarifying Questions from Audience

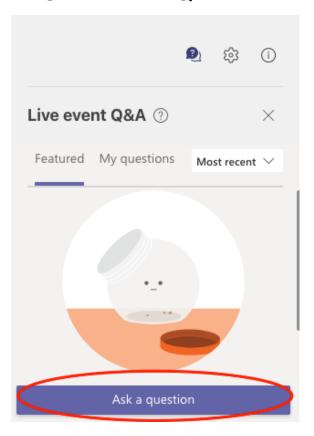


Q&A Operation

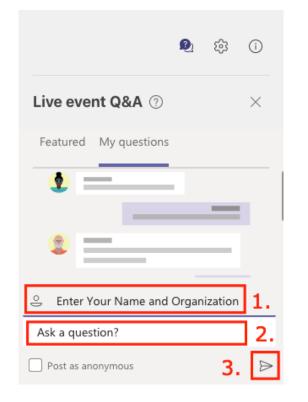
1. Click the Q&A button



2. Click "Ask a Question"



3. Please enter your name and organization in box 1, your question in box 2, then the arrow to submit





Recap: IRP Public Scoping

As TVA updates its power generation strategy, the first step is to understand the environment we're planning in, which is referred to as scoping.

We ask the general public, our customers, and our partners and regulators about their ideas regarding the generation needs of the future.

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Clarifying questions from the audience?

Use the Q&A box or email your question to IRP@tva.gov (subject: "Scoping Meeting Q&A")



Closing Remarks



Opportunities to Stay Involved

TVA Website www.tva.gov/IRP.

Submit comments during the scoping period (ends July 3rd, 2023).

Attend periodic informational webinars.

Add your name to the IRP mailing list at www.tva.gov/IRP to be notified when documents are released.

Submit comments on the Draft IRP/EIS Report, expected to be available in early 2024.



We Want Your Input!

Ways to provide comments:

- Use the online IRP comment form at <u>www.tva.gov/IRP</u>.
- Email your comment to <u>IRP@tva.gov</u>.
- Mail written comments to:

Kelly Baxter, NEPA Specialist 400 W Summit Hill Dr., WT 11B Knoxville, TN 37902-1499

Comments must be received before the scoping period ends on July 3rd, 2023



TENNESSEE VALLEY AUTHORITY