TENNESSEE VALLEY AUTHORITY

Regional Energy Resource Council

October 3, 2024

5th Meeting – Term 6

Welcome!

The Meeting will begin at 9:00 AM Eastern

Welcome

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RERC In-Person and Virtual Meeting

- **This is the fifth meeting of the 6th term of the RERC.**
- **We welcome members of the public attending virtually and are in listen only mode**. For those that pre-registered to make public comments, the meeting host will give you instructions for speaking to the Council at that time. Written comments are always welcomed (tva.com/rerc).
- For those in the public wishing to ask questions about the **2025 Draft IRP**, there will be two **public IRP webinars** and ten in-person **open house events** throughout the Valley from October 21 to November 22. You can find the dates, times, and locations on www.tva.com/irp
- **RERC Members who are attending virtually are able to mute and unmute their own line.** RERC Members who are attending virtually may **use the raise hand function** to be recognized for questions or comments.
- **RERC Members attending in person**, **please turn your light bulb on** and I will call on you. I will identify the person I call on so that those attending virtually will be able to identify the speaker. Please use your microphone so that those in the room and those attending virtually can hear your comments.

Safety First!

- **In case of fire or other building emergency,** exit the conference room doors you entered. Exit the building via back doors to Chestnut Street. Gather outside across the street near the Old Gillman Grill.

- **In case of severe weather**, exit the doors you entered in the back of the room. You will be guided to an interior room.

Introductions

Name

Position, Organization

Location

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RERC Term 6* Members

Introductions:
Name
Position, Organization
Location

Jan Berry
Citizens Climate Education

Marquita Bradshaw
Sowing Justice

Ron Bunch
Bowling Green Chamber of Commerce

Monte Cooper
Jackson Energy Authority

Erin Gill, RERC Chair
Knoxville Utilities Board

Rebecca Goodman
Commonwealth of Kentucky

Rodney Goodman
Habitat for Humanity

Chassen Haynes
Ford Motor Company

Chrissy Heard
State of Mississippi

Chelsea Jenkins
Commonwealth of Virginia

Candy Johnson
Urban League of Greater Chattanooga

Sen. Steve Livingston
State of Alabama

Pete Mattheis
Tennessee Valley Industrial Committee

Dan Miller
Oak Ridge National Laboratory

Doug Peters
Tennessee Valley Public Power Association

Boyd Pettit
State of Georgia

Erik Schmidt
City of Chattanooga

Patricia Sims
Drake State Community & Technical College

Alexa Voytek
State of Tennessee

Julie Woosley
State of North Carolina

*Aug 1, 2023 – July 28, 2025

RERC Meeting
October 3, 2024

Agenda

9:00 am EDT	**Welcome – Designated Federal Officer Melanie Farrell & RERC Chair Erin Gill**
9:05	**Introductions and Agenda Review**
9:20	**Helene Update**
9:35	**DFO Briefing**
9:45	**TVA's Integrated Resource Plan Updates** • IRP Overview • Draft 2025 IRP Key Inputs Review • Draft 2025 IRP Results • Next Steps and Discussion
12:00 pm	Lunch
1:00	**Public Listening Session**
2:00	Break
2:15	**Innovation Research Update**
3:15	**Wrap up Meeting**
3:30	**Adjourn RERC Meeting**

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TVA Helene Update

James Everett, River Management General Manager

Thursday, October 3, 2024

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Designated Federal Officer Briefing

Melanie Farrell, Designated Federal Officer

Thursday, October 3, 2024

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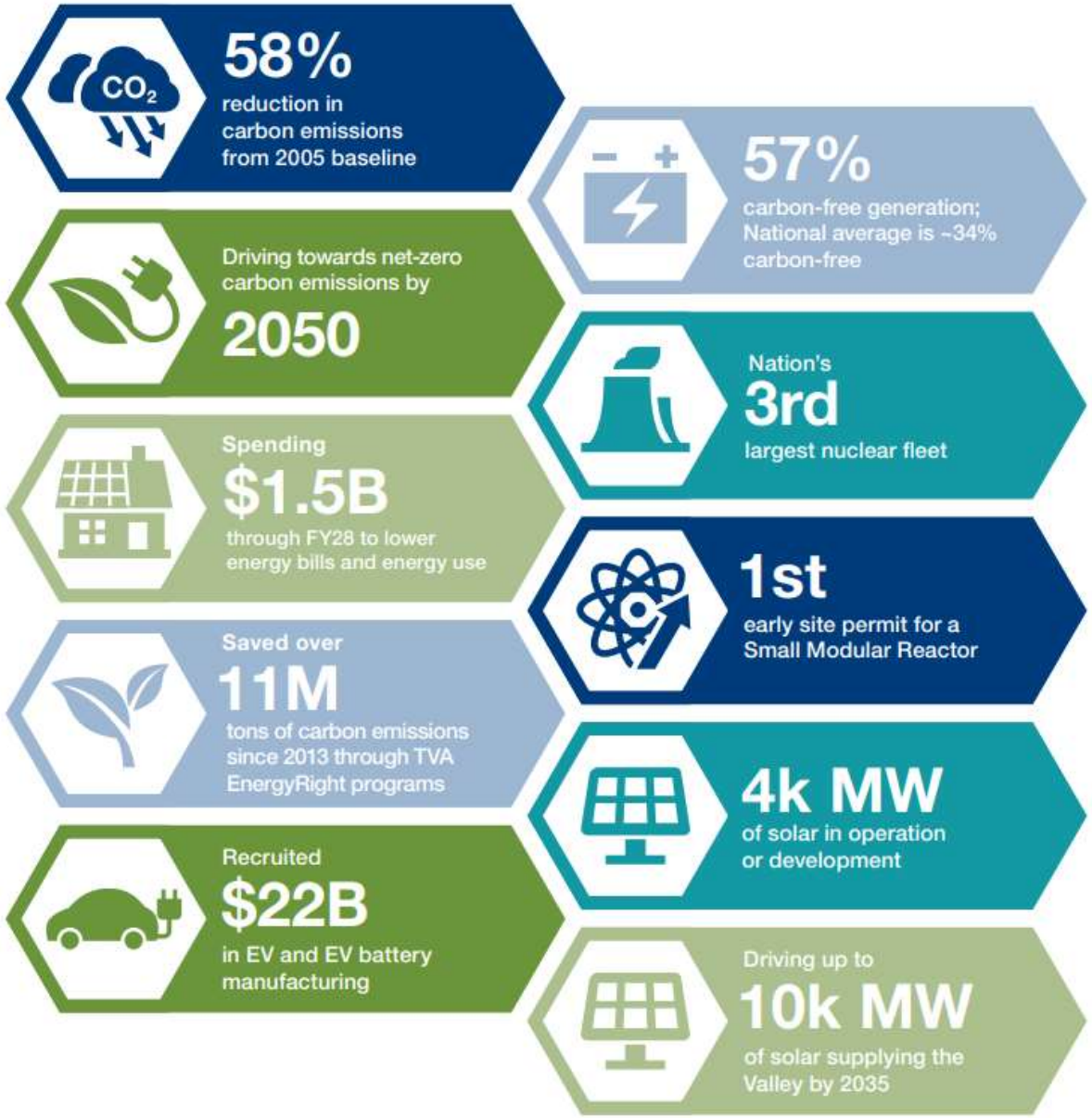
Tennessee Valley Authority's Clean Energy Leadership



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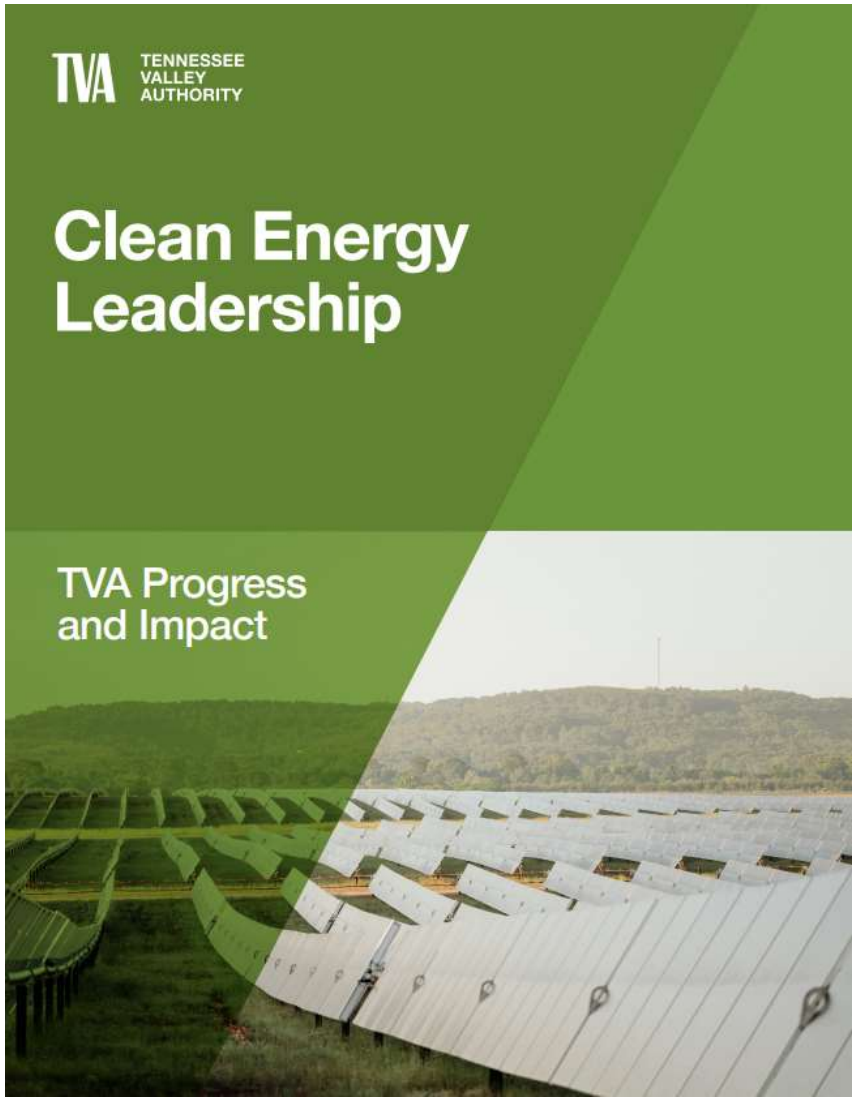
Clean Energy Report



For more information, visit:
https://www.tva.com/clean-energy

Integrated Resource Plan (IRP) Update

Regional Energy Resource Council (RERC)
October 3, 2024

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IRP Update Agenda

IRP Overview

Draft 2025 IRP Key Inputs Review

Draft 2025 IRP Results

Next Steps and Discussion

IRP Overview

Clifton Lowry, Director, Resource Planning & Strategy

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 futures.

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

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 increasingly cleaner electricity to the residents and businesses across the Valley region.

Planning is Grounded in Least-cost Principles

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

*In alignment with the Energy Policy Act of 1992

TVA Least-cost Planning Requirements

Section 113 of the Energy Policy Act of 1992 requires TVA to employ and implement a “least-cost planning program” for its electrical system to provide “adequate and reliable service at the lowest system cost.”

Under this program, TVA is directed to:

- Evaluate all demand and supply side resources, including energy conservation, efficiency, and renewable energy
- Take into account a variety of factors related to system operations, including diversity of resources to meet operating conditions, reliability, compliance costs, and other relevant risk factors

Key takeaways for resource planning:

- TVA is not permitted to direct a specific resource mix or adopt firm policy decisions regarding what resources are to be included in or excluded from that mix.
- TVA must strive for a balance of providing electrical service that it determines is “adequate” and “reliable,” consistent with the needs of the system, with the obligation to provide that service at the lowest system cost.

What TVA's IRP Does

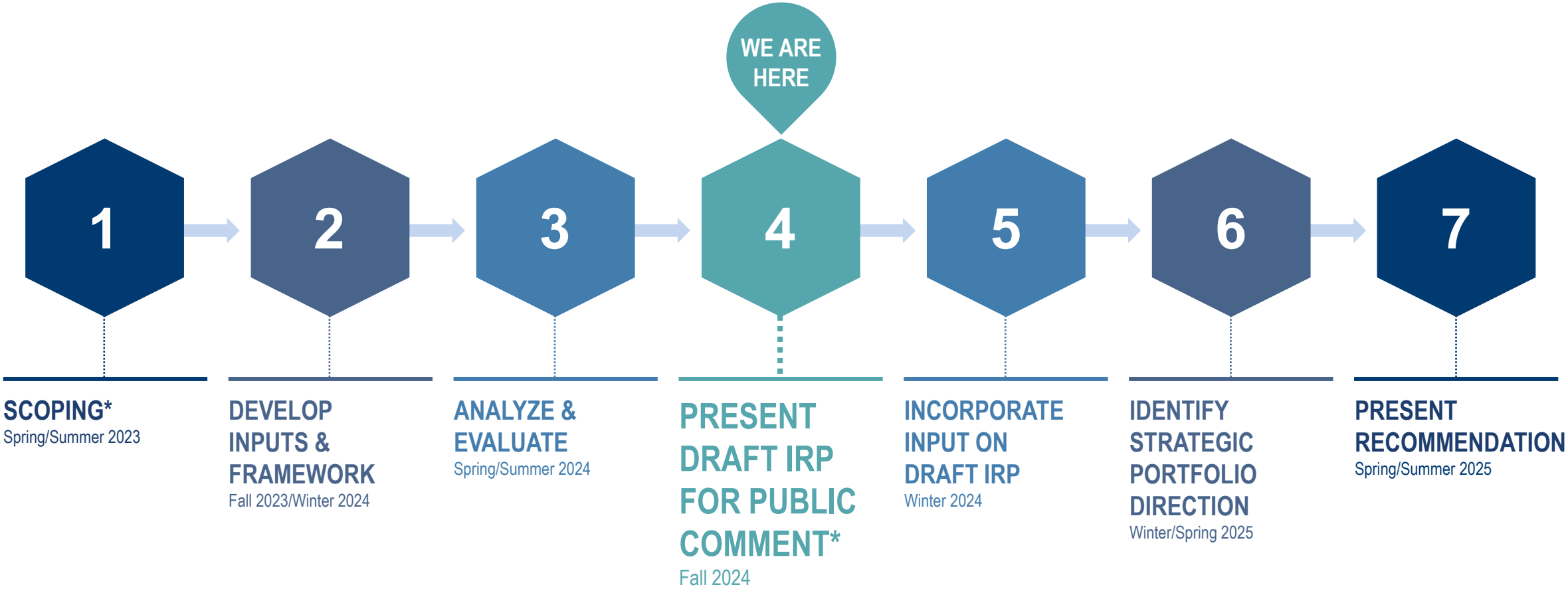
The IRP will:

- Use least-cost planning criteria
- Incorporate resource capital, operating, fuel, and environmental compliance costs
- Evaluate strategies using metrics based on least-cost planning principles
- Assess 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)

IRP Timeline



**Opportunity for public feedback during 45-day scoping and 60-day draft IRP and EIS public comment periods.*

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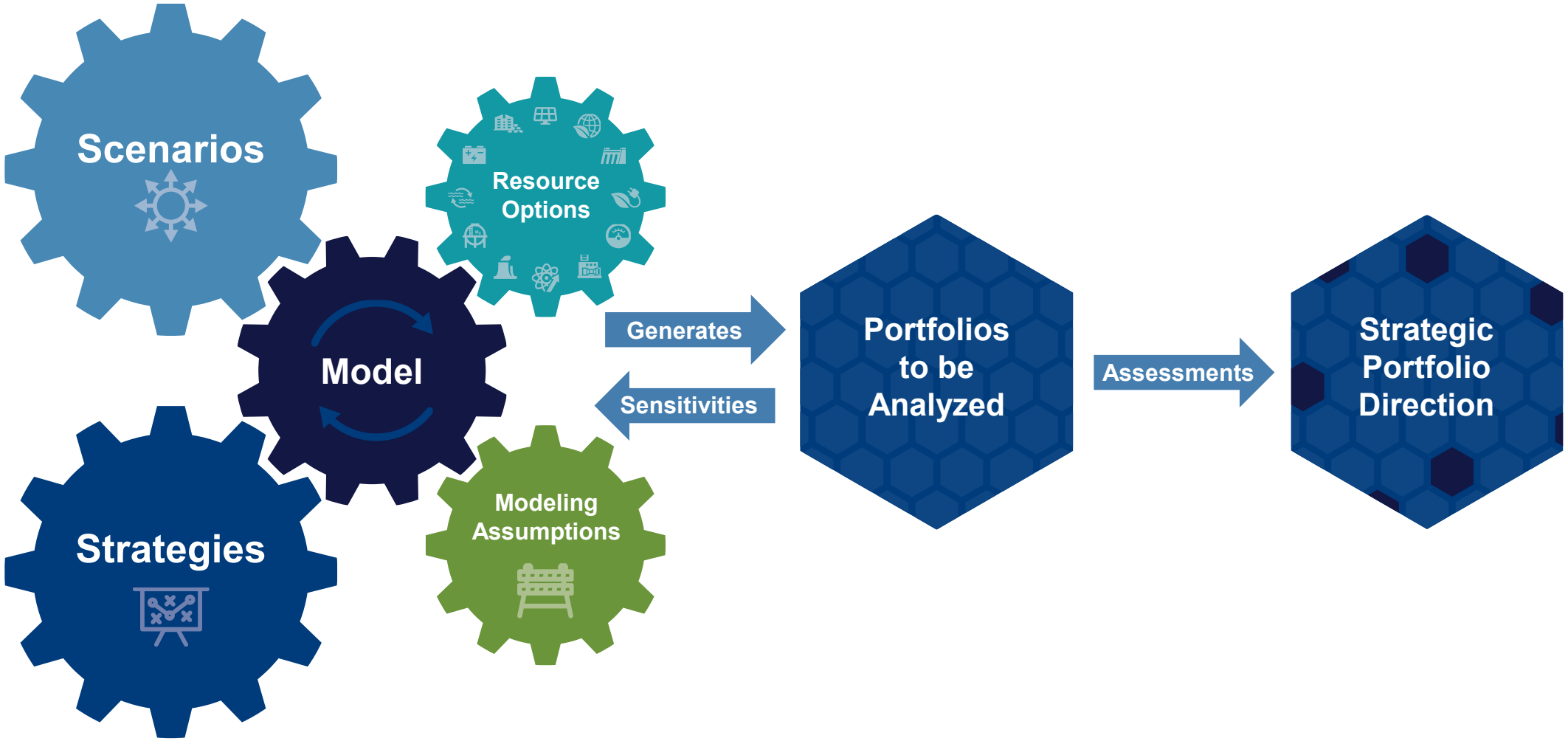
How the Integrated Resource Planning Process Works



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

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Resource Planning for Future Capacity Needs

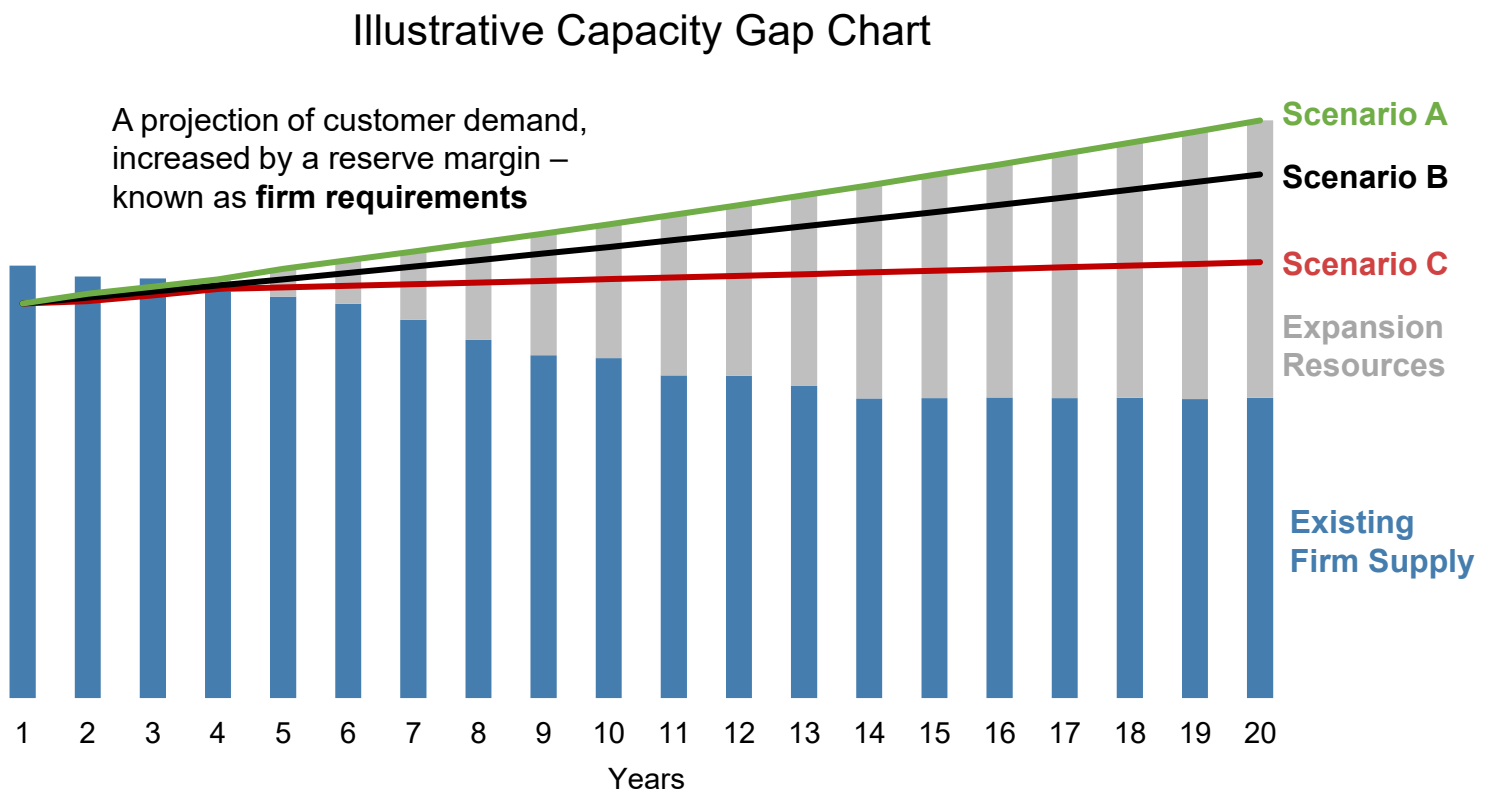
Recommended path provides low cost, reliability, diversity, and flexibility.

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.



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Draft 2025 IRP Key Inputs Review

Clifton Lowry, Director, Resource Planning & Strategy

IRP Scenarios (Future Conditions)

Reference (without Greenhouse Gas Rule)

Represents TVA's current forecast that reflects moderate population, employment, and industrial growth, weather-normal trends, growing electric vehicle use, and increasing efficiencies

Higher Growth Economy

Reflects a technology-driven increase in U.S. productivity growth that stimulates the national and regional economies, resulting in substantially higher demand for electricity

Stagnant Economy

Reflects rising debt and inflation that stifle consumer demand and business investment, resulting in weaker than expected economic growth and essentially flat electricity demand

Net-zero Regulation

Reflects the impact of the May 2023 draft Greenhouse Gas Rule that targets significant reductions in electric utility CO_2 emissions beginning in 2030 and potential future utility regulations striving for net-zero by 2050

Net-zero Regulation Plus Growth

Reflects the impact of the May 2023 draft Greenhouse Gas Rule and potential future utility regulations, along with substantial advancements in clean energy technologies, that spur economic growth and extensive electrification

Reference (with Greenhouse Gas Rule)

Reflects TVA's current forecast and incorporates the impact of the Greenhouse Gas Rule finalized in May 2024 that targets significant reductions in electric utility CO_2 emissions beginning in 2030

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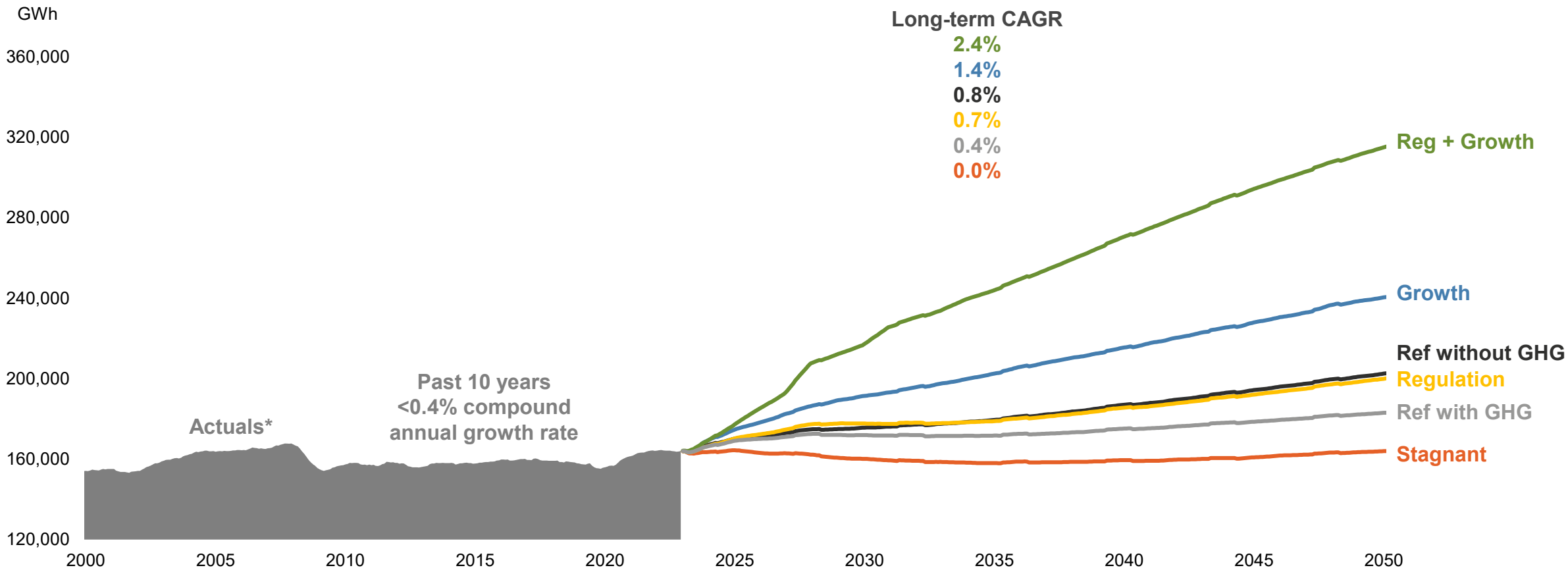
IRP Energy Demand Forecasts



* Weather normalized actuals. Excludes USEC

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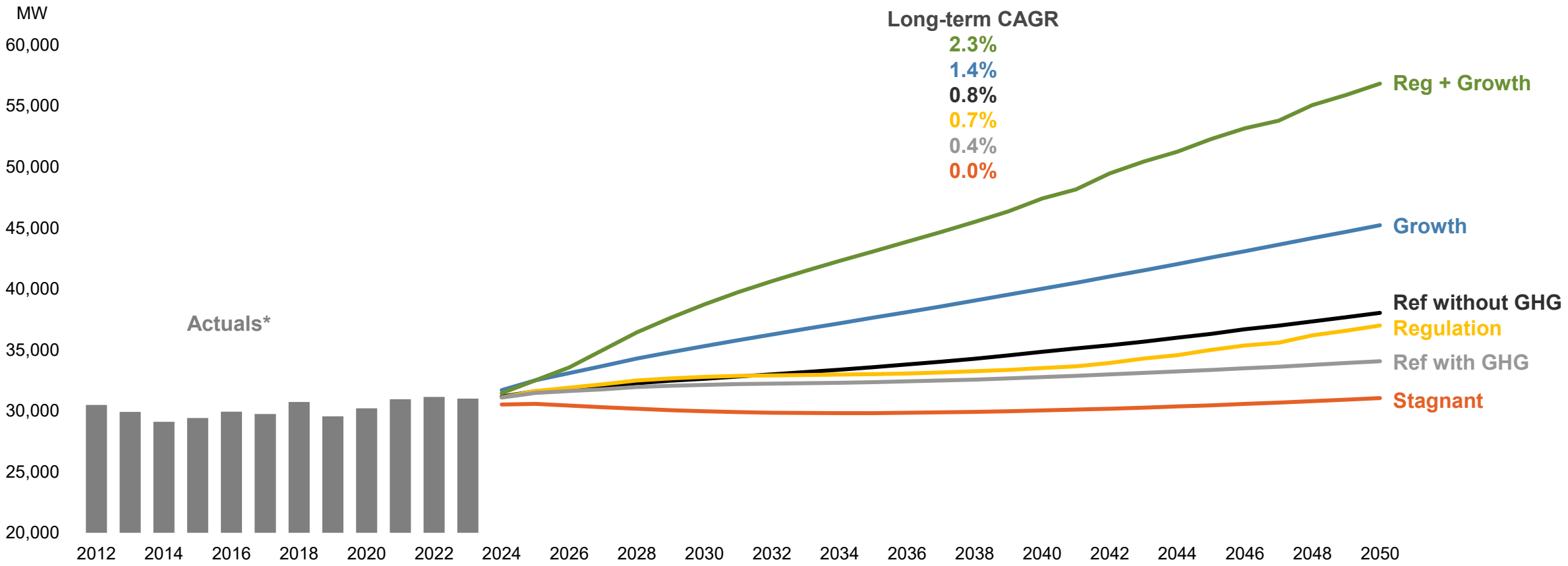
IRP Peak Demand Forecasts



* Weather normalized actuals. Excludes USEC

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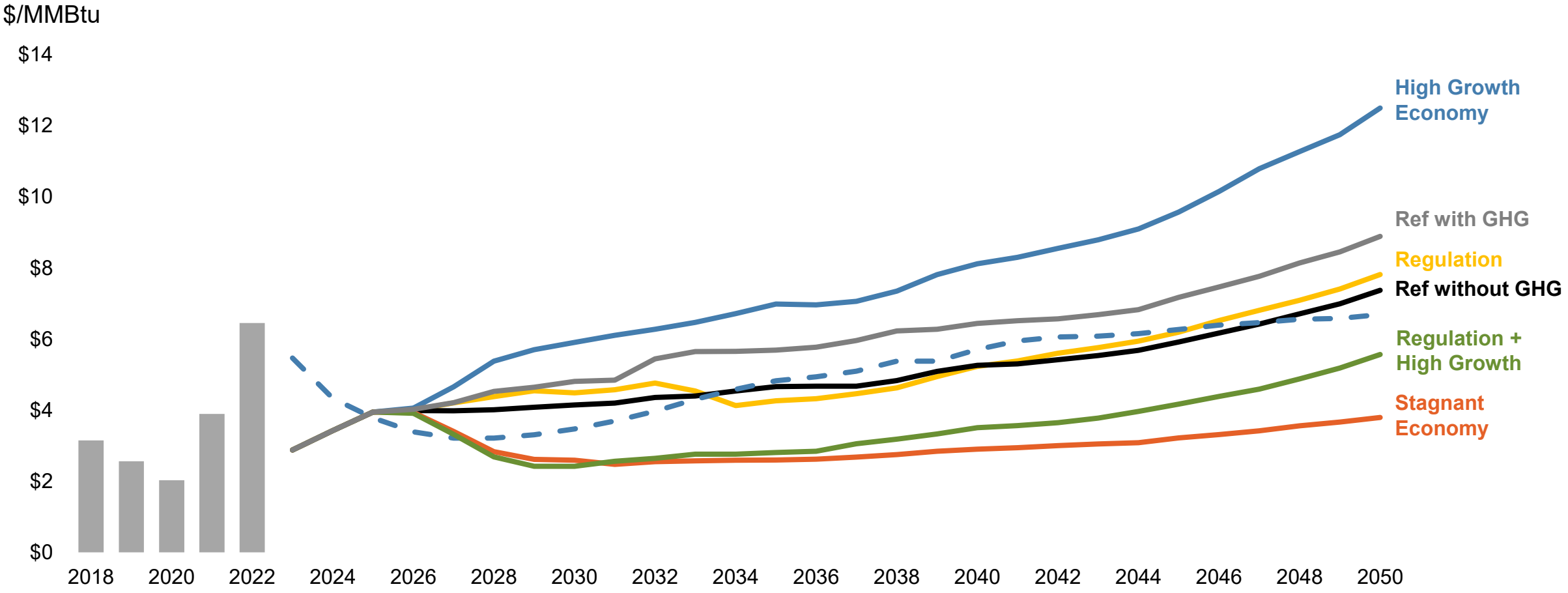
Gas Price All Scenarios

$5.14 (Ref.) | $3.00 (Stagnant) | $7.85 (High Growth) | $5.28 (Regulation) | $3.52 (Regulation + Growth) | $6.18 (Reference + GHG Rule)



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Selected Highlights: Draft vs Final EPA GHG Rules

While not exhaustive, selected highlights provide a high-level outline of impacts applicable to IRP modeling.

Draft GHG Rule (May 2023): Scenarios 4 and 5

Technology	Compliance Options
Existing coal	Retire by 2032, routine operations
	Retire by 2035, 20% annual CF* limit by 2030
	Retire by 2040, 40% gas co-fire by 2030
	Retire after 2040, 90% CCS^ by 2030
New and existing gas combined cycle	Highly efficient generation (<770 lb/MWh) until 2032/2035 – new combined cycle only
	30% hydrogen blend by 2032, 96% hydrogen blend by 2038
	90% CCS^ by 2035
New gas combustion turbine	20% annual CF* limit

*capacity factor
^carbon capture and sequestration

Final GHG Rule (May 2024): Scenario 6

Technology	Compliance Options
Existing coal	Retire by 2032, routine operations
	Retire by 2039, 40% gas co-fire by 2030
	Retire after 2039, 90% CCS^ by 2032
New gas combined cycle (>40% CF*)	Highly efficient generation (<800 lb/MWh) until 2032
	90% CCS by 2032 or <100 lb/MWh
New gas combined cycle or combustion turbine (20-40% CF*)	Highly efficient generation (<1,170 lb/MWh)
New gas combustion turbine	20% annual CF* limit

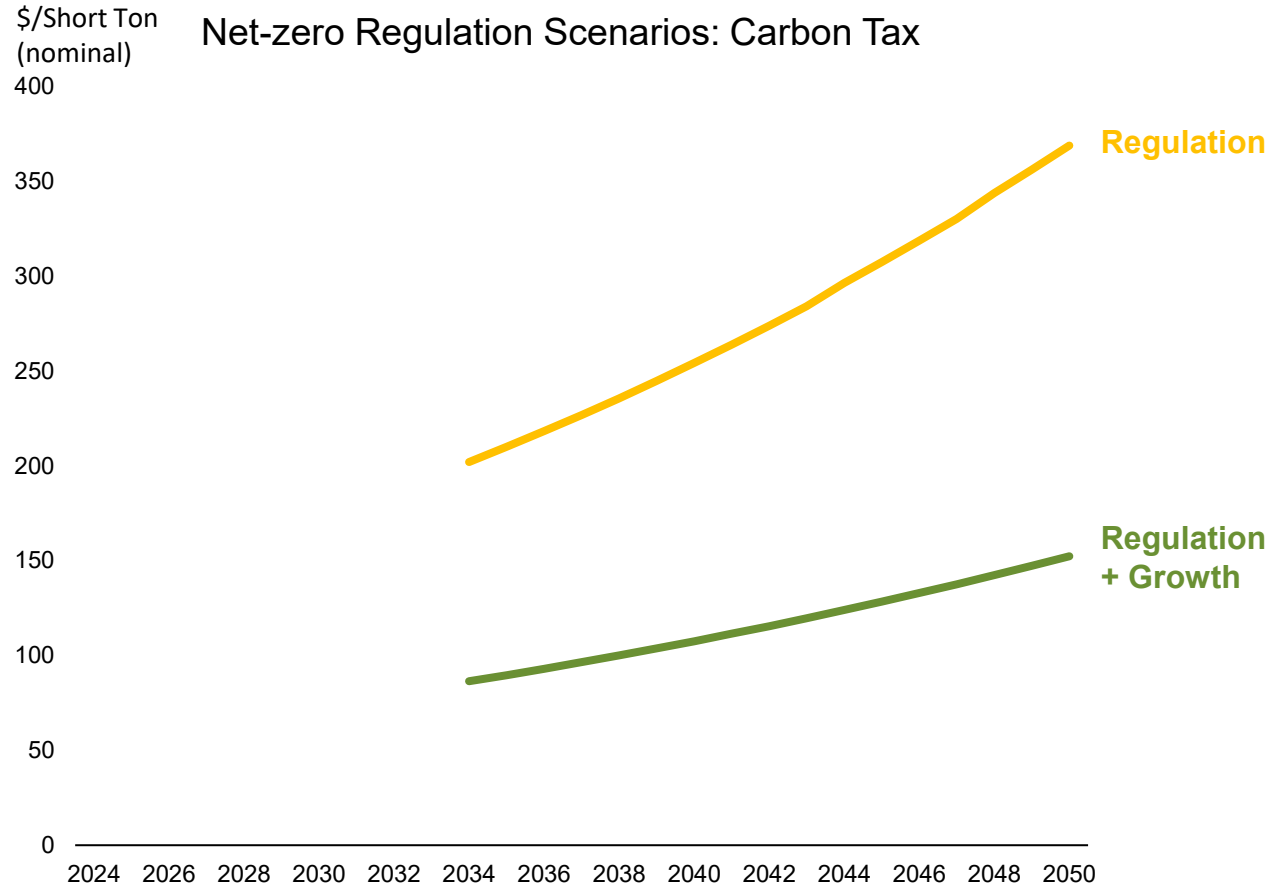
Net-zero Regulation Scenarios: Major Assumptions

Draft (May 2023) EPA Greenhouse Gas (GHG) Rules are implemented, requiring major changes to the operation of fossil fuel-based resources (phased impacts between 2030 and 2040).

Starting in 2034, a carbon tax is applied as a proxy for future carbon regulations beyond the GHG Rules.*

Changes specific to (5) Net-zero Regulation plus Growth:

- Resource cost forecasts are reduced to NREL advanced case
- IRA tax credits increase to maximum value



*Net-zero Regulation scenario uses the draft EPA social cost of carbon at a 2.5% discount rate as a proxy while the Net-zero Regulation plus Growth scenario uses the 2021 White House interim social cost of carbon at a 3.0% discount rate.

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IRP Strategies (Business Approaches)

Baseline Utility Planning

Represents TVA's current outlook based on least-cost planning, incorporating existing programs and a planning reserve margin target. This reserve margin target applies in all strategies

Carbon-free Innovation Focus

Emphasizes and promotes emerging, firm and dispatchable carbon-free technologies through innovation, continued research and development, and strategic partnerships

Carbon-free Commercial Ready Focus

Emphasizes proven carbon-free technologies like wind, solar, and storage, at both utility-scale and through customer partnerships, along with strategic transmission investment

Distributed and Demand-side Focus

Emphasizes existing and potentially expanded customer partnerships and programmatic solutions to reduce reliance on central station generation and promote virtual power plants

Resiliency Focus

Emphasizes smaller units and the promotion of storage, along with strategic transmission investment, to drive wider geographic resource distribution and additional resiliency across the system

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IRP Strategy Design Matrix

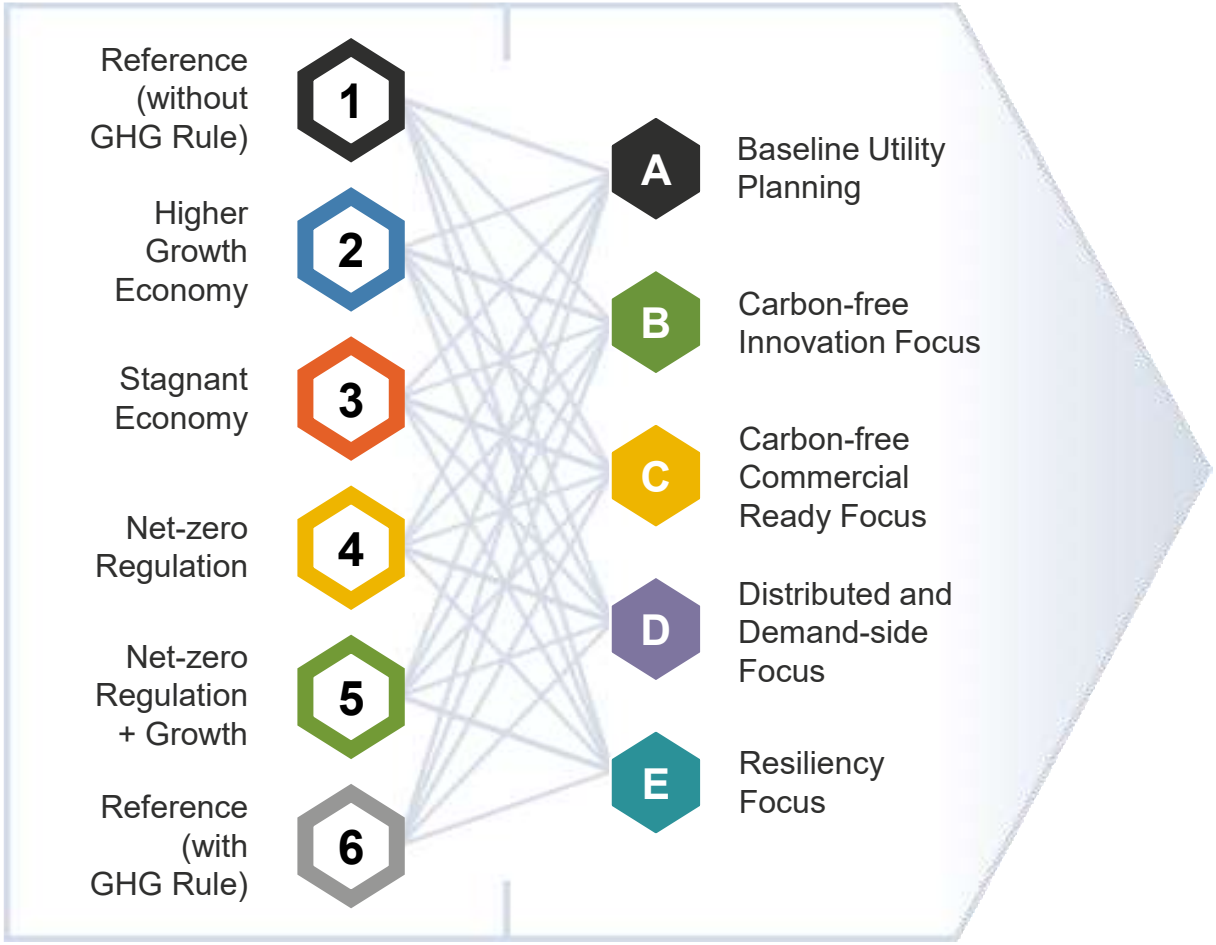
The Strategy Design Matrix provides the roadmap for how resource promotions are applied in the strategies

STRATEGY		UTILITY SCALE RESOURCES						DISTRIBUTED AND DEMAND-SIDE RESOURCES				
		Solar and Wind	Battery Storage	Long-duration Storage	Aero CTs and Recip Engines	Nuclear	Hydrogen and CCS*	Distributed Solar	Distributed Storage	Combined Heat and Power	Energy Efficiency	Demand Response
A	Baseline Utility Planning	Base	Base	Base	Base	Base	Base	Base	Base	Base	Base	Base
B	Carbon-free Innovation Focus	Moderate	Moderate	Moderate	Base	High	High	Moderate	Moderate	Base	Moderate	Moderate
C	Carbon-free Commercial Ready Focus	High	High	High	Base	Base	Base	Moderate	Moderate	Base	Base	Moderate
D	Distributed and Demand-side Focus	Base	High	Base	High	Base	Base	High	High	High	High	High
E	Resiliency Focus	Base	High	Moderate	High	Moderate	Base	Moderate	Moderate	Moderate	Base	High

*Carbon capture and sequestration

IRP Utilizes a Rigorous Analytical Process

6 SCENARIOS x 5 STRATEGIES



30 PORTFOLIOS

Stakeholder feedback and public comments informed the development of scenarios and strategies that combine to form 30 unique portfolios.

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IRP Resource Options

- Advanced pressurized water reactor
- Light water small modular reactor
- Gen IV small modular reactor

- Hydro uprates

- Supercritical pulverized coal
- Supercritical pulverized coal w/carbon capture

- Combined cycle
- Combined cycle w/carbon capture
- Combustion turbine
- Aeroderivative
- Reciprocating engine
- Hydrogen blending
- Combined heat and power

- Utility scale solar
- Distributed solar
- Midwest wind
- Southeast high-hub wind
- High Voltage Direct Current wind

- Pumped storage
- Lithium-ion battery
- Advanced chemistry battery
- Distributed storage

- Energy efficiency
- Demand response

Inflation Reduction Act (IRA) Tax Credits

All Draft 2025 IRP scenarios incorporate tax credits available through the IRA.

Section 45Q credits are available for sequestered CO_2 at CCS plants under construction before 2033.

Most scenarios assume a 40% investment tax credit (ITC) for all eligible resources.

Net-zero Regulation scenario (4) assumes power sector emission declines trigger the IRA phase-out in 2034.

Net-zero Regulation Plus Growth scenario (5) assumes the maximum amount of the ITC (50%) is achievable for all eligible resources, and the ITC credit availability is extended through the full study period.

IRP Metrics Development

Metrics are used to evaluate the key tradeoffs among the IRP portfolios.

TVA's least-cost planning program evaluates cost, operational, environmental, and risk factors to support providing reliable service at the lowest system cost.

Reflecting these planning principles and with input from the IRP Working Group, TVA developed a set of metrics to assess the performance of the different strategies across the scenarios.

Metrics Scorecard

Strategy	Low Cost	Risk Informed	Environmentally Responsible	Diverse, Reliable, and Flexible
A Baseline Utility Planning				
B Carbon-free Innovation Focus				
C Carbon-free Commercial Ready Focus				
D Distributed and Demand-side Focus				
E Resiliency Focus				

IRP Metrics and Definitions

These metrics will be used to evaluate performance of the IRP core portfolios and associated tradeoffs.

Metric Category	Metric	Definition
Low Cost	Present Value of Revenue Requirements (PVRR) ($B)	Total plan cost (capital and operating) expressed as expected present value of revenue requirements
	System Average Cost ($/MWh)	Average system cost expressed as levelized average annual revenue requirements divided by average annual sales
	Total Resource Cost ($B)	Total plan cost (capital and operating) expressed as PVRR plus participant costs net of bill savings and tax credits
Risk Informed	Risk / Benefit Ratio	PVRR above expected value divided by PVRR below expected value based on stochastic analysis
	Risk Exposure ($B)	PVRR above expected value based on stochastic analysis
Environmentally Responsible	CO_2 Direct Emissions (Million Tons)	Average annual tons of CO_2 emitted
	CO_2 Intensity (lbs/MWh)	Average annual CO_2 emissions divided by average annual energy generated and purchased
	Water Consumption Intensity (Million Gallons/MWh)	Average annual gallons of water consumed divided by average annual energy generated and purchased
	Waste Intensity (Million Tons/MWh)	Average annual quantity of coal ash and gypsum produced divided by average annual energy generated and purchased
	Land Use Intensity (Acres/MWh)	Acreage needed for expansion units divided by energy generated and purchased in 2050
Diverse, Reliable, and Flexible	Operating Cost Stability (%)	Stochastic volatility of operating cost ($/MWh) expressed as a percentage
	Flexible Resource Coverage Ratio	Flexible capacity available to meet maximum three-hour ramp divided by flexible capacity requirement in 2050
	Energy Curtailment Ratio (%)	Expected average annual curtailed energy divided by average annual energy generated and purchased

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Draft 2025 IRP Results

Hunter Reed, IRP Project Manager

Draft IRP Results Suggest by 2035…

Between now and 2035
9 to 26 GW
Incremental firm capacity needs

3 to 20 GW
Solar nameplate additions

4 to 19 GW
Natural gas, hydrogen, and CCS additions

1 to 4 GW
EE and DR additions

In all scenarios, TVA will continue to provide AFFORDABLE, RELIABLE, RESILIENT, and increasingly CLEANER energy for the region for decades to come.

Up to 6 GW
Storage nameplate additions

Up to 4 GW
Wind nameplate additions

Up to 1 GW
Nuclear additions

Projected
75 to 90%
Reductions in CO_2 intensity from 2005 baseline

Power supply mix ranges, summarized in gigawatts (GW), vary based on energy demand, market conditions, policy and regulations, and technology advancements.

Draft IRP Key Themes Are…

New capacity is needed in all scenarios to replace retiring and expiring capacity, support economic growth, and enable further electrification of the economy.

Firm, dispatchable technologies are needed to ensure system reliability throughout the year.

Solar expansion plays an increasingly substantial role, providing economic, carbon-free energy.

Gas expansion serves broad system needs, with the potential for emerging carbon capture and hydrogen options to enable deeper decarbonization.

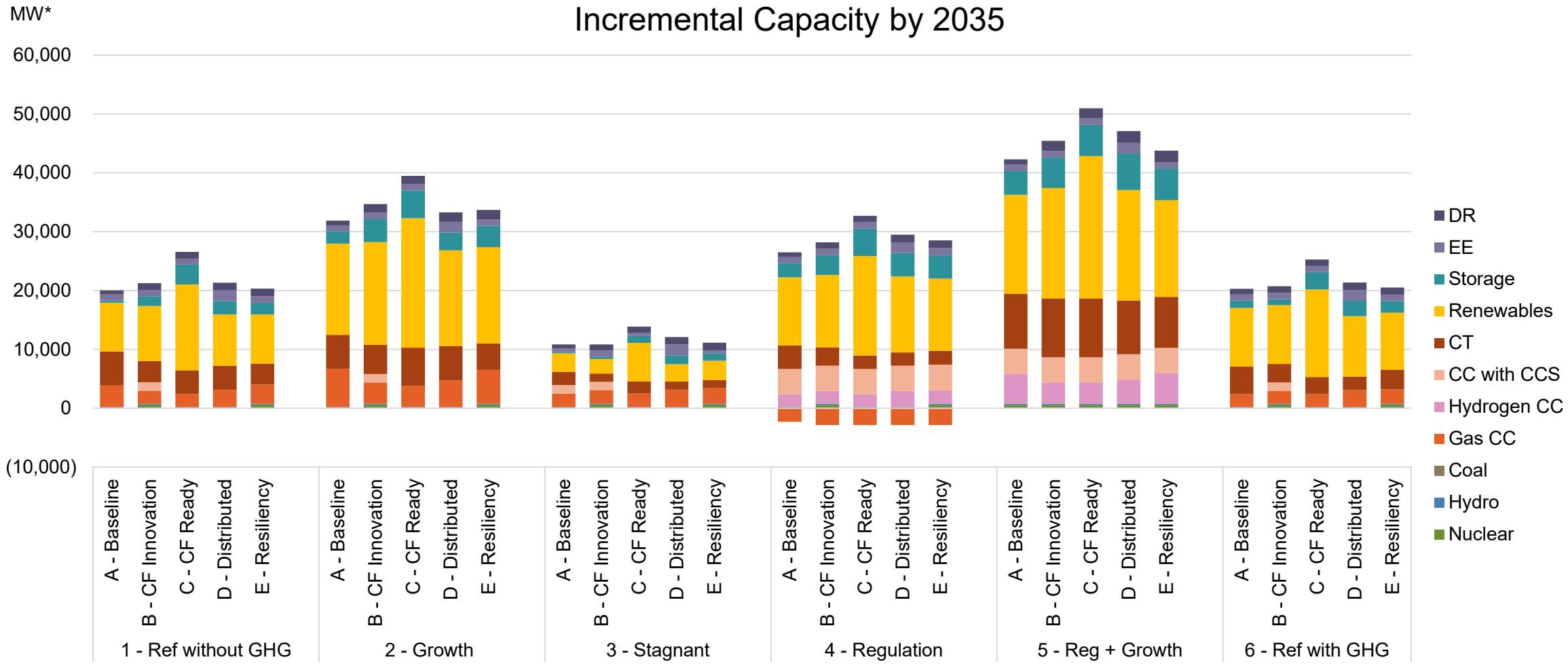
Energy efficiency deployment reduces energy needs, particularly between now and 2035, and demand response programs grow with the system and the use of smart technologies.

Storage expansion accelerates, driven by evolving battery technologies and the potential for additional pumped storage.

Wind additions have the potential to add more diversity and carbon-free energy to the resource mix.

New nuclear technologies, with continued advancements, can also support load growth and deeper decarbonization.

Incremental Capacity by 2035



* MW summer net dependable capacity, except for renewables and storage that are shown in nameplate.

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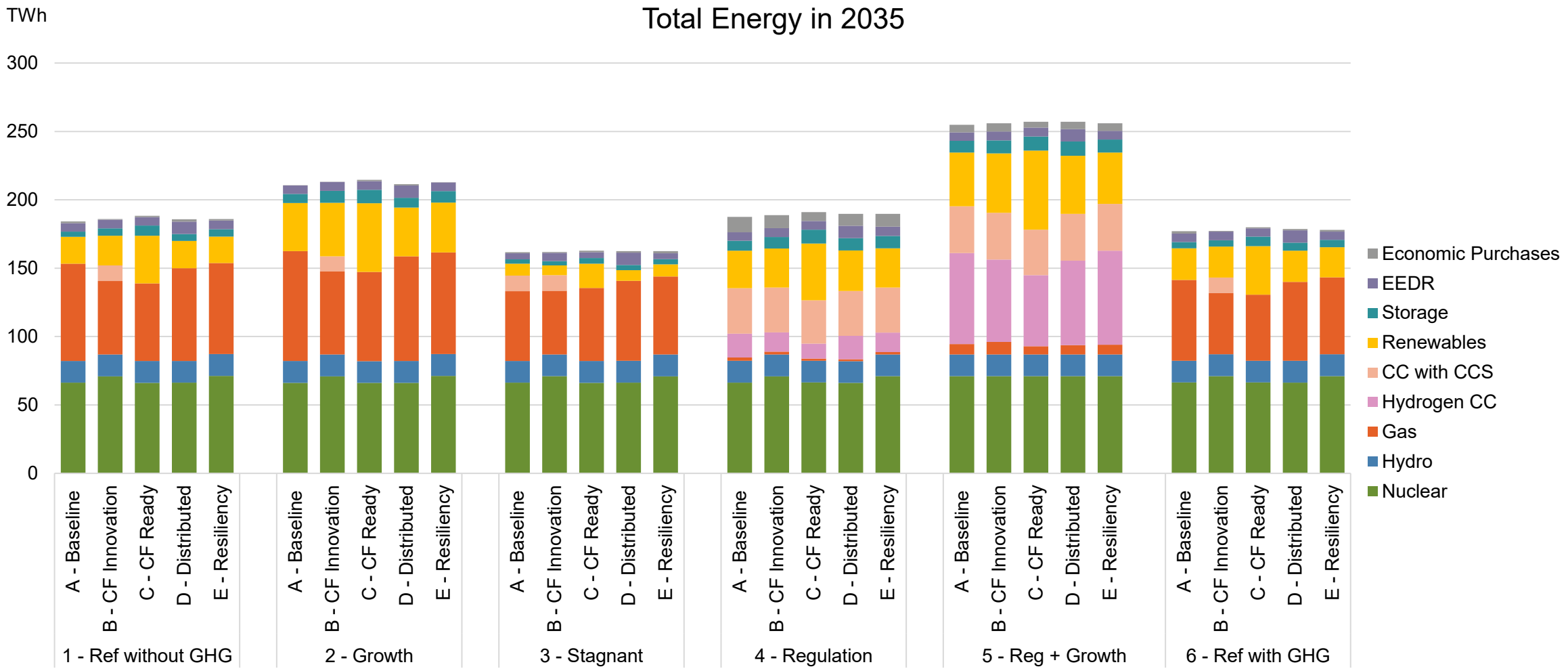
Total Energy in 2035



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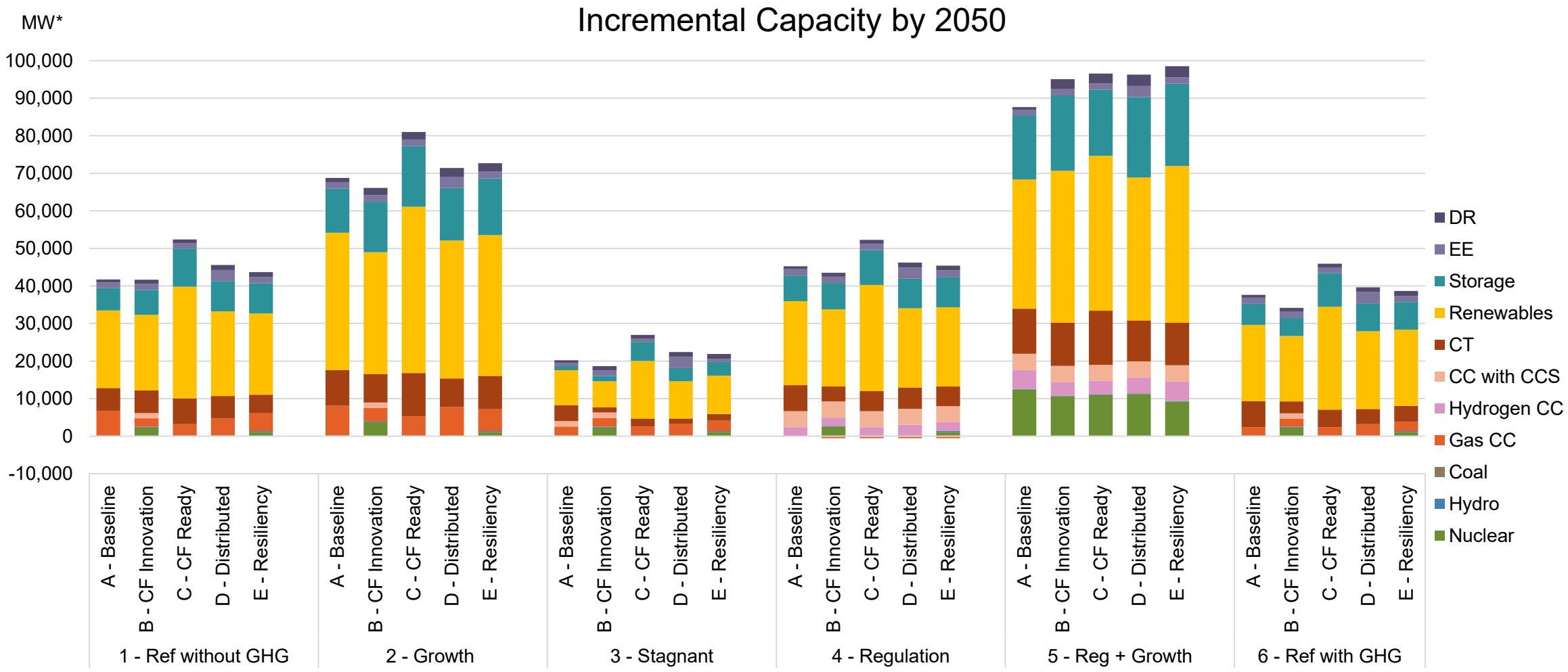
Incremental Capacity by 2050



* MW summer net dependable capacity, except for renewables and storage that are shown in nameplate.

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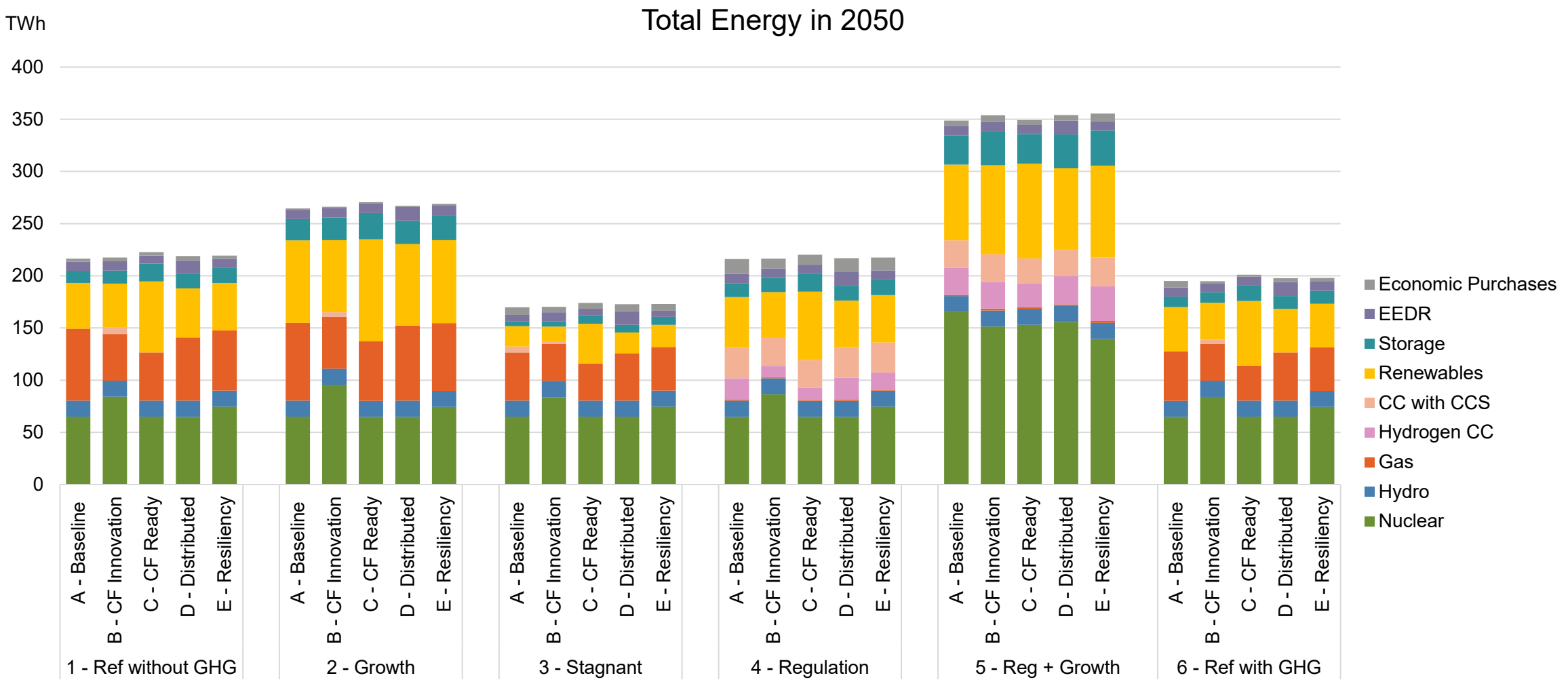
Total Energy in 2050



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Strategy Performance

Strategy	Low Cost	Risk Informed	Environmentally Responsible	Diverse, Reliable, and Flexible
A Baseline Utility Planning	$	!		
B Carbon-free Innovation Focus	$	!		
C Carbon-free Commercial Ready Focus	$	!		
D Distributed and Demand-side Focus	$	!		
E Resiliency Focus	$	!		

Good — Better — Even Better — Best

Draft Environmental Impact Statement

The draft EIS provides an overview of the IRP, discusses environmental conditions in the TVA region, and evaluates the potential environmental impacts of the IRP:

- Air quality
- Climate and greenhouse gases
- Water resources
- Land resources
- Solid and hazardous waste
- Fuel requirements
- Life cycle analysis
- Socioeconomics
- Environmental justice

Highlights of EIS Observations

Air Quality

Long-term reductions in air emissions of all types with expected coal retirements

Climate and Greenhouse Gases

Long-term reductions in CO_2 emissions and intensity

Water Resources

Reductions in water use from 2025 to 2050, except in Scenario 5 that has the most nuclear expansion

Land Resources

Increases in land use primarily driven by solar expansion

Solid and Hazardous Waste

Coal combustion residuals drop to zero by 2035

Overall Observations

Strategies B and C, which promote carbon-free resources, have the lowest emissions; Strategy C has the lowest water and highest land use

Next Steps and Discussion

Amy Edge, Director, Customer and Community Relations

2025 IRP Public Open Houses

Virtual Meetings

Oct 30 — After Business Hours
6:00 pm Central

Nov 22 — During Lunch Hour
11:00 am Central

Unable to make it to a virtual or in-person meeting?

- Visit TVA's IRP website at: www.tva.com/irp for registration information.
- Taped webinars will be available as well.

In-Person Meetings *at 6 PM Local Time*

Oct 21 — Murphy, NC
Tri-State Community College

Oct 22 — Bristol, VA
Virginia High School

Oct 28 — Antioch, TN
Southeast Community Center

Nov 4 — Oak Ridge, TN
East Tennessee Economic Council

Nov 7 — Hopkinsville, KY
The Bruce Center

Nov 12 — Huntsville, AL
Calhoun Community College

Nov 13 — Starkville, MS
The Gathering Starkville

Nov 14 — Memphis, TN
Museum of Science & History

Nov 20 — Rossville, GA
Rossville High School

Nov 21 — Chattanooga, TN
Kingdom Center

Public comment period runs from September 23 through November 26, 2024

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Upcoming IRP Activities and RERC Engagements

The Draft 2025 IRP and EIS public comment period will run through November 26, 2024.

TVA staff will review all submitted comments and incorporate feedback, as appropriate.

In consultation with the IRP Working Group, and informed by public comments, TVA will evaluate and model sensitivity cases for inclusion in the Final IRP throughout the Fall and Winter.

IRP staff expects to meet with the RERC again in early 2025 to provide updates on public comments received and planned sensitivities.

IRP staff expects to meet with the RERC a final time in the Spring or Summer of 2025 to present the Final IRP results and recommendation and seek an advice statement.

Public Listening Session

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Public Listening Session

This is a listening session; responses are typically not provided

This session is to address comments to the RERC.
To make comments through the formal IRP Public Comment process, please go to www.tva.com/IRP

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BREAK

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Innovation & Research

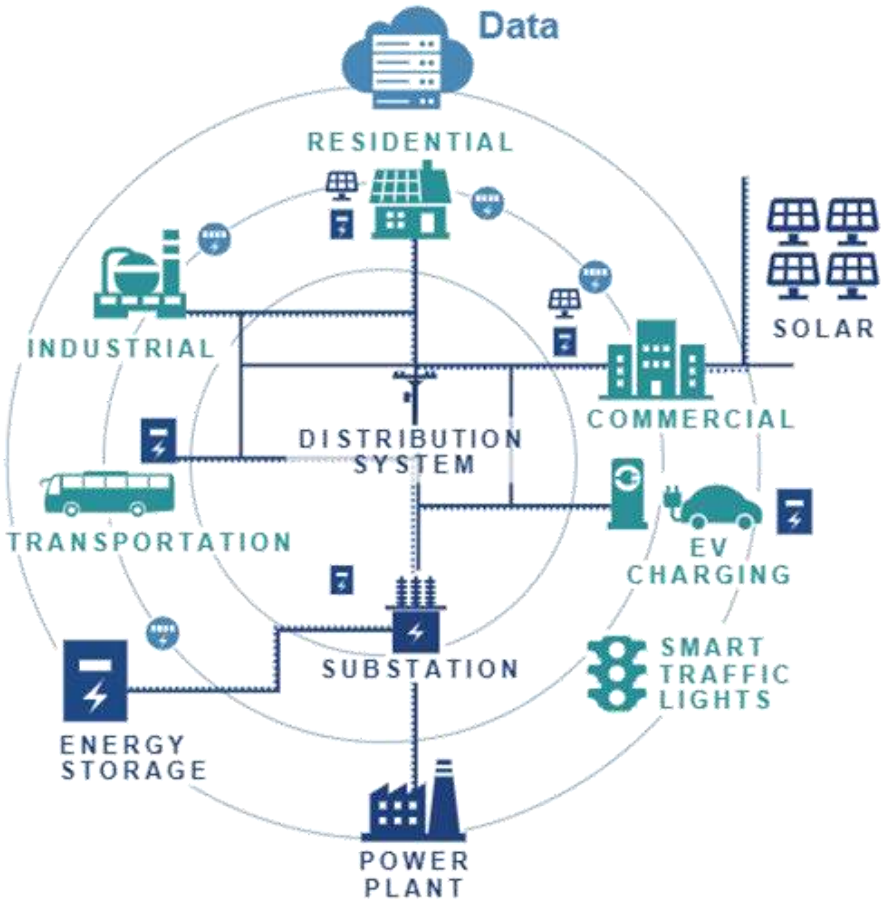
Regional Energy Resource Council

Amy Henry, Director, Transformative Innovation

October 2024

Future Power System

- Larger **load**, with dynamic, rapid, and uneven growth
- Increased **decarbonization** efforts at the energy system and regional levels
- The system will be more **complex** and **flexible** with diverse, distributed, and digital (less inertia, more controls) resources



- **Increased threats** from cyber and physical forces, extreme weather, geomagnetic disturbances, and electromagnetic pulse attack
- **Changing context** with greater uncertainty, more regulation, accelerating pace of technology change, and the energy marketplace evolution
- Focus on **energy burden, equity**, and **justice**

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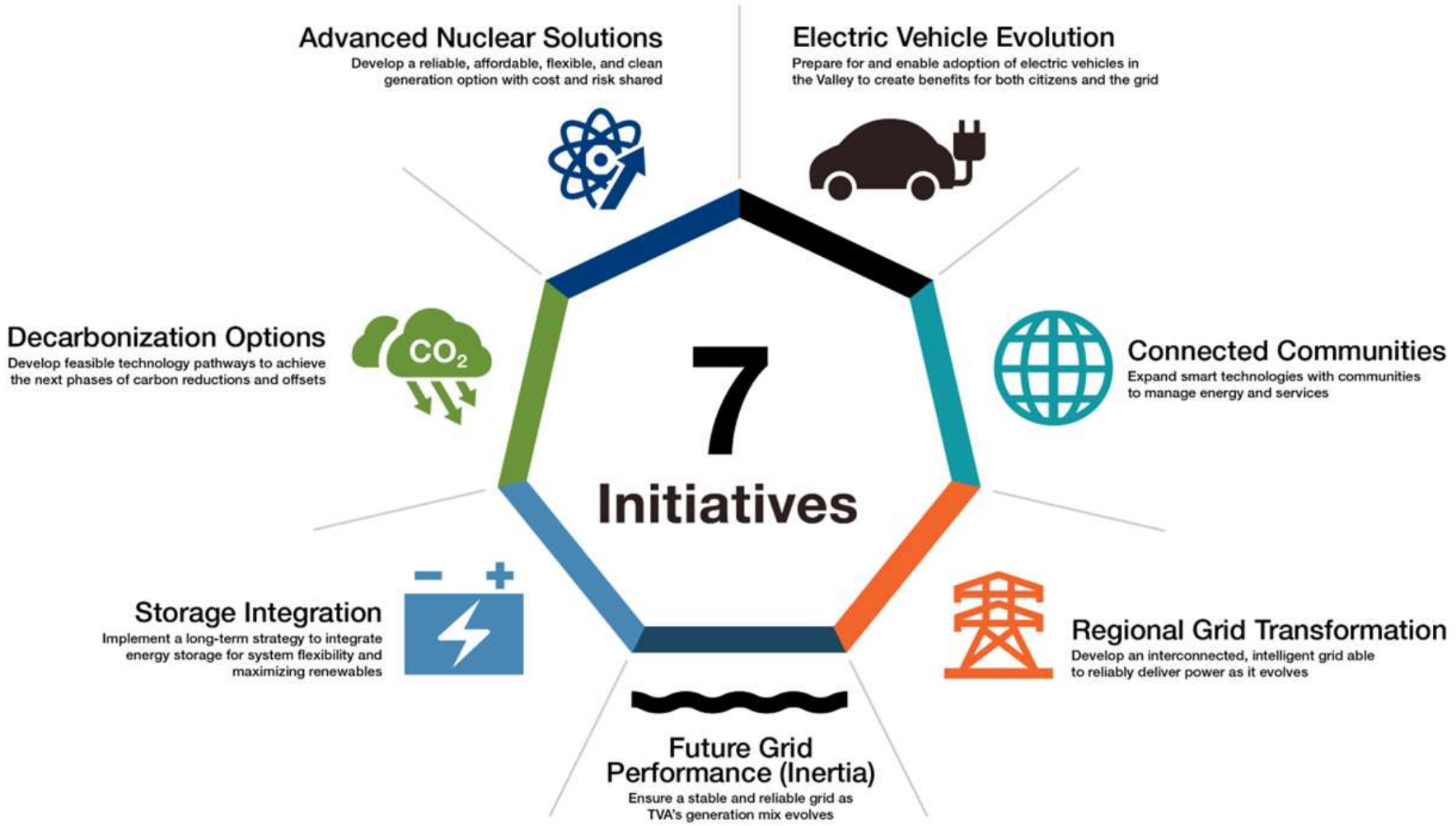
Key Focus Areas for Technology Transfer



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TVA Innovation for Transformation

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Innovation at Scale

Transformative Innovation Initiative		Target Scale and Timeline*
Regional Grid Transformation	Develop an interconnected, intelligent grid able to reliably deliver power as it evolves.	TVA and LPCs working together to shape the demand curve, providing 1,000+ MW of Virtual Power Plant, Demand Response, Demand-side Management to match intermittent, renewable resources of the future by 2040
Connected Communities	Use technology and data-related solutions to address community challenges and prepare for a modern energy system.	Every community engaged and participating in modern grid by 2050
Electric Vehicle Evolution	Prepare for and enable adoption of electric vehicles in the Valley to create benefits for both citizens and the grid.	Able to passively and actively manage 50% of EV charging peak load (5,000 MW) by 2050

Energy System of the Future

- Load growth up to 1,000 MW per year
- Grid with up to 60% Inverter-Based Resources
- Up to 10M Electric Vehicles (10 GW peak)

*denotes the aspirational outcome of innovation and research efforts based on anticipated pace of technology development with sustained R&D efforts. Intended to communicate the potential impact at scale.

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Regional Grid Transformation

Regional Energy Resource Council

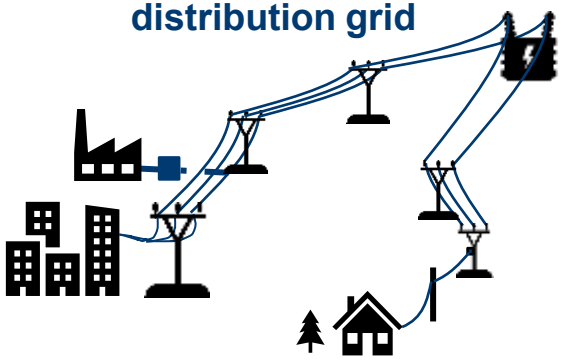
Amy Henry, Director, Transformative Innovation

October 2024

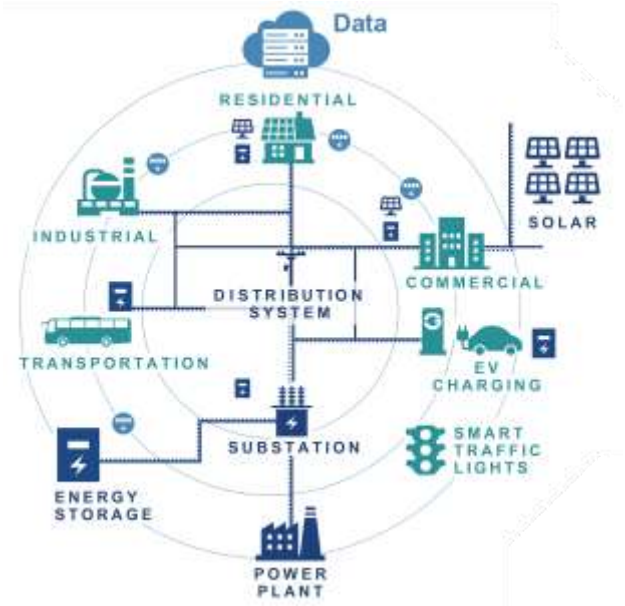
Regional Grid Transformation

Transform the power grid into a more **resilient**, **flexible,** and **integrated** system

Current state distribution grid



Resilient, flexible, and smart distribution grid



Valley Vision 2035

A **resilient, flexible, and smart distribution grid** is foundational to achieving Valley Vision 2035 outcomes

Key RGT activities include:

- Tactical Roadmaps
- Benchmarking
- Cost/Benefit Analyses
- Pilots
- Capability Assessments and Progression Models

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RGT Capability Progression Model

1 Enabling

CAPABILITIES

- Cybersecurity
- Grid Situational Awareness
- Telecommunications
- Advanced Customer Metering
- Workforce Enablement
- Data Management
- Data Analysis and Analytics

2 Planning and Assessing

CAPABILITIES

- System Modeling
- DER Interconnection
- Load and DER Forecasting (Planning)
- Load and DER Forecasting (Operations)

3 Value Generating

CAPABILITIES

- Grid Optimization
- Self-Healing Grid
- Impact Assessment
- Non-Traditional Alternatives Assessment
- Traditional Resource Co-Optimization
- Customer Experience Management
- DER Incorporation and Optimization

RGT STRATEGIC ROADMAP CAPABILITY AREAS

- Integrated Planning
- Regional Guidelines
- Enhanced T&D Operations
- Exceptional End-User Experience
- Grid Transformation Enabling

Capability Progression Model

Establishes Minimum Capability Levels

considered must-haves for all LPCs

Outlines an Investment Path

related to each capability area

Supports LPCs

in maturing capabilities and recognizing achievements

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Connected Communities

Regional Energy Resource Council

Bonnie Latta, Sr Manager, Transformative Innovation Initiatives

October 2024

Support to Accelerate Progress & Overcome Challenges

We're helping communities embrace technology and data solutions to overcome their challenges and prepare to be part of the energy system of the future. Our approach is stakeholder-driven and backed by research.

FOCUS AREAS

- **Broadband & Digital Literacy**
- **Economic Empowerment**
- **Energy & Environmental Justice**
- **Enhanced Community Resiliency**

RESOURCES

- **Community Information Hub**
- **Community Partnership Support**
- **Pilot Project Funding**
- **Network to Share Information and Success Models**

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Community Partnerships

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Support Varies Based on Community Priorities

The team provides flexible support tailored to communities' needs through a yearlong partnership. We identify and support priorities through the lens of the four initiative focus areas.

PARTNERSHIP IN ACTION

Assess Conditions and Needs

Gather and review data to understand current conditions and areas for potential improvement.

Engage Key Stakeholders and Set Goals

Identify and assemble key local stakeholders to set vision and prioritize goals for partnership.

Navigate Opportunities and Resources

Conduct research and share case studies and insights to guide and inspire.

Workshop Potential Solutions

Conduct 1-2 broader stakeholder workshops to share experience and explore solutions for priority topics.

Target Funding and Prepare to Pursue

Review funding opportunities aligned to priorities. Support initial framing for funding pursuit / create blueprint for action.

Establish Path Forward

Prepare report to document outcomes and action plan to guide ongoing progress.

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Connected Communities Pilot Portfolio

Connected Communities Pilot Projects

Round 1 Pilot Project

Round 2 Pilot Project

Ready Now Pilot Project

Learn more about Connected Communities' Pilot Projects at:
https://www.tva.com/energy/technology-innovation/connected-communities/connected-communities-pilots

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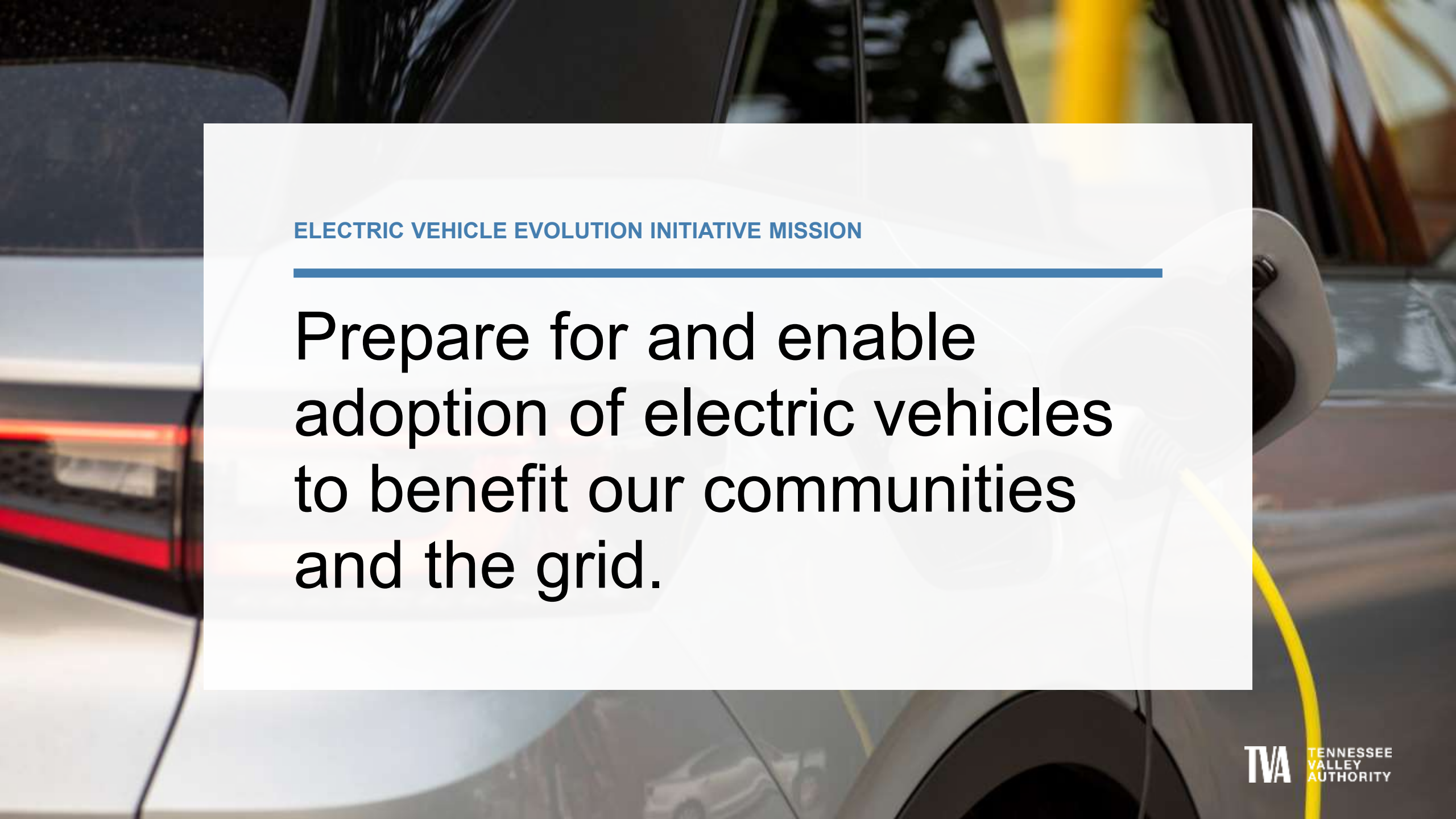
EV Evolution

Regional Energy Resource Council

Bonnie Latta, Sr Manager, Transformative Innovation Initiatives

October 2024



ELECTRIC VEHICLE EVOLUTION INITIATIVE MISSION

Prepare for and enable adoption of electric vehicles to benefit our communities and the grid.

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Electric Vehicle Evolution Focus Areas

Preparing for EV Impacts

Ensure our energy system is prepared for millions of EVs on Valley roadways in the future.

Understanding EVs as a Resource

Accelerating research, testing and demonstration of EV-grid technologies which improve the energy system.

Enabling EV Adoption

Collaborating with stakeholders to identify and address barriers to large-scale adoption of all EV types.

EVs in the Valley

CHARGING

35

Fast Charge Network stations

VEHICLES

61k

electric vehicles

as of June 2024, a 40% YoY increase

(~75% BEV)

SCHOOL BUS

115

electric school buses

operating in Valley school districts

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Questions?

Closing Remarks

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IRP Open Houses and Webinars

Please visit www.tva.com/irp for additional information

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Adjourn

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