



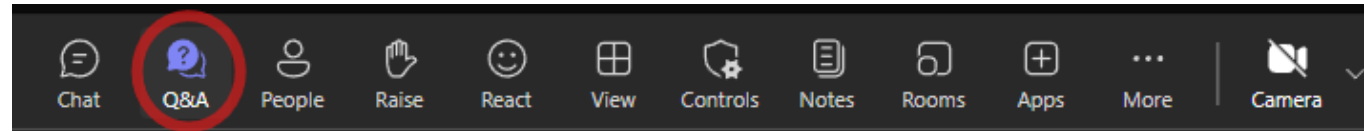
2026 Integrated Resource Plans

Tucson Electric Power & UNS Electric

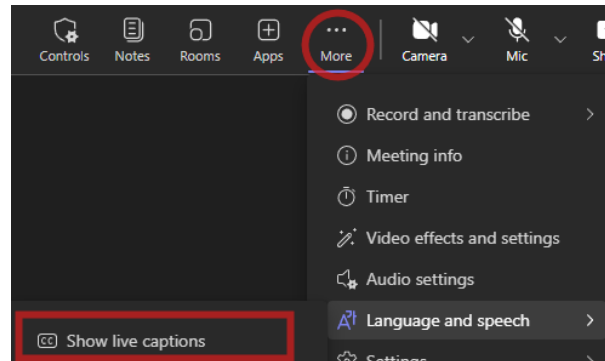
October 20, 2026

Meeting Logistics

- Cameras and chat will be disabled during the presentation to minimize distraction and allow attendees to focus on the presenter.
- To ask questions during the presentation, please use the **Q&A** feature located in the meeting toolbar.



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About Us

A History of Service

Founded in 1892 – 20 years before Arizona statehood – by local businesses to provide street lighting

Also provided natural gas service before selling the local gas distribution system to Southwest Gas in 1979

Acquired by in 2014 by Fortis, Inc., a company now led by former TEP CEO and Tucson resident David G. Hutchens.



Operated Tucson's first electric streetcar in the early 1900s before selling local transit operations to the predecessor of Sun Tran

After starting with a single mesquite-fired power plant, TEP turned to coal and natural gas to power postwar growth

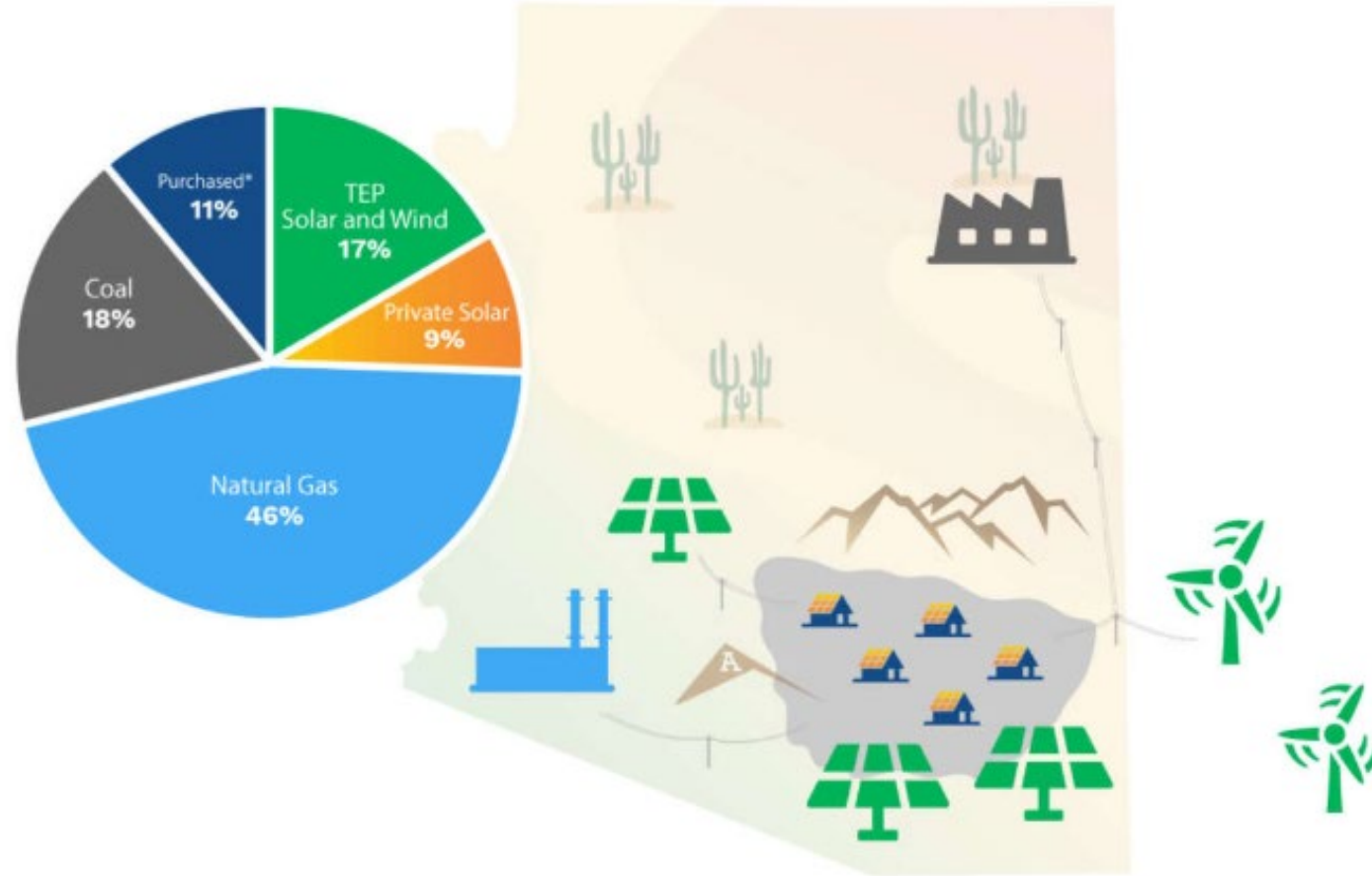
A clean energy leader, TEP developed the most productive solar array in the Western Hemisphere in the 2000's.

TEP's System



- Service area: 1,115 sq. miles
- Customers: 457,000
 - Residential: 414,000
 - Commercial: 40,000
 - Industrial: 560
 - Mining: 4
 - Other: 1,860
- 5,100 miles of overhead transmission and distribution lines
- 4,300 cable-miles of underground distribution lines
- Approximately 100,000 power poles and transmission structures
- Regulated by the Arizona Corporation Commission

2025 Gross Local Energy Mix



**Energy purchased from wholesale providers of variable resource types.*

Includes 9,118 GWh Generated and Purchased by TEP + 900 GWh Produced by Private Solar Arrays

Conventional Generating Resources

Facility	Fuel	Capacity
Springerville Generating Station Units 1, 2	Coal	793 MW
Four Corners Generating Station Units 4, 5	Coal	110 MW
Gila River Units 2, 3	Natural Gas	1,037 MW
Sundt Generating Station (Steam, turbine, RICE)	Natural Gas	498 MW
Luna Energy Facility	Natural Gas	185 MW
North Loop	Natural Gas	96 MW
DeMoss Petrie	Natural Gas	75MW
Total		2,794 MW



Renewable Energy Resources

TEP Solar	574 MW
Owned	58 MW
Purchased	516 MW
TEP Wind	429 MW
Owned	250 MW
Purchased	179 MW
TEP Total	1,003 MW
Distributed generation (2024)	566.3 MW
Community Total	1,569.3 MW

* All capacity presented as alternating current (AC) to align with grid capacity and conventional generation. Native direct current (DC) capacity ratings would be higher.

Underway: 2027 Winchester, 80 MW solar



Energy Storage Resources

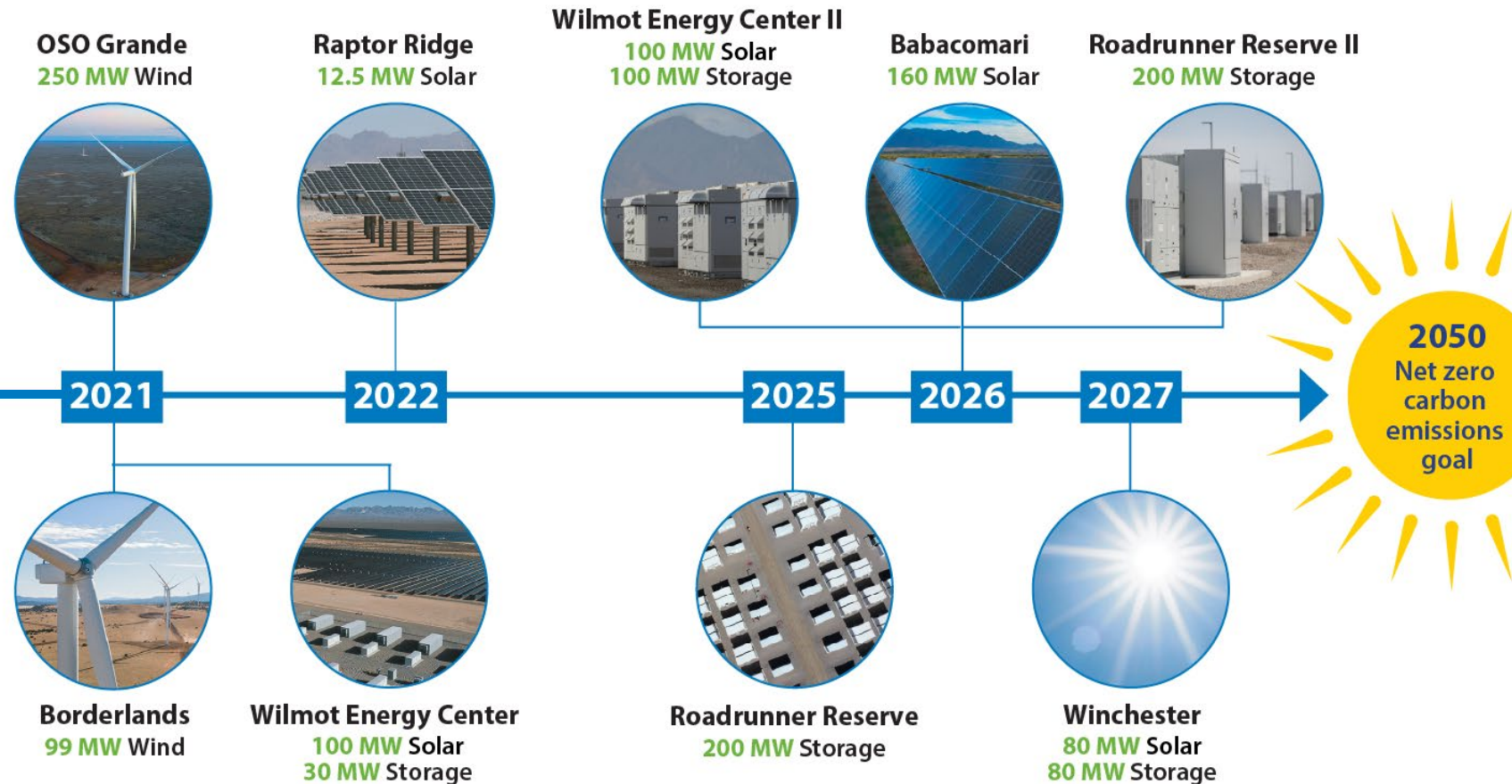
System	Capacity
Roadrunner Reserve	200 MW
Wilmot Energy Center	30 MW
Pima Energy Storage	10 MW
Iron Horse	10 MW
Wilmot Energy Center II	100 MW
Roadrunner Reserve II	200 MW
Total	550 MW

Underway: 2027 Winchester, 80 MW

Low Carbon Future

Over the last six years, TEP has quintupled its clean energy capacity - from 300 megawatts of combined wind, solar and storage to more than 1,500 MW.

We've already reduced our carbon emissions by 42 percent since 2019, jump starting our progress toward achieving our aspirational goal of net zero carbon emissions by 2050.



TEP Customer Energy Optimization Programs



Energy Efficiency

Programs to reduce energy use

- Rebates for HVAC upgrades or tune-ups for single family, multi-family and business customers.
- Rebates for products that help reduce energy use.
- Incentives for construction of new high energy efficient single family and manufactured homes.
- Discounted, desert-adaptive shade trees for homes and local businesses.
- Custom energy efficiency projects for schools and local businesses.
- Low-income energy efficiency programs.



Demand Response

Programs to reduce or manage peak demand

- Smart Rewards – Thermostat adjustments by 1 to 3 degrees to reduce energy use during peak periods.
- Storage Rewards – Residential battery discharge during identified grid opportunities.
- Commercial Demand Response – medium and large commercial customer load reduction through automated or manual actions. Program in re-design and relaunching end of 2025.



Transportation Electrification

Programs to manage load

- Residential managed charging for daily off-peak charging.
- Residential and commercial incentives for installation of EV charging stations.
- Fleet electrification advisory services
- Electric school bus vehicle-to-grid pilot.



Innovation, Education and Outreach

- Pilot programs to test new technologies or implementation pathways that help customers manage energy use.
- Community workshops to inform customers of energy efficiency actions and available programs.
- School educational workshops to educate students on energy safety and energy efficiency.

UNSE's System

- Service area: 8,056 sq. miles
- Customers: 104,965
- Population served: 261,000
- Regulated by the Arizona Corporation Commission



Conventional Generating Resources

Facility	Fuel	Capacity
Gila River Unit 3	Natural Gas	152 MW
Black Mountain Units 1,2	Natural Gas	90 MW
Valencia Units 1-4	Natural Gas	63 MW
Total		305 MW



Renewable Energy Resources

Source	Capacity
Solar (Community-Scale and Distributed Generation, year end 2025)	205.4 MW AC
Wind	10.3 MW AC
Total	215.7 MW AC

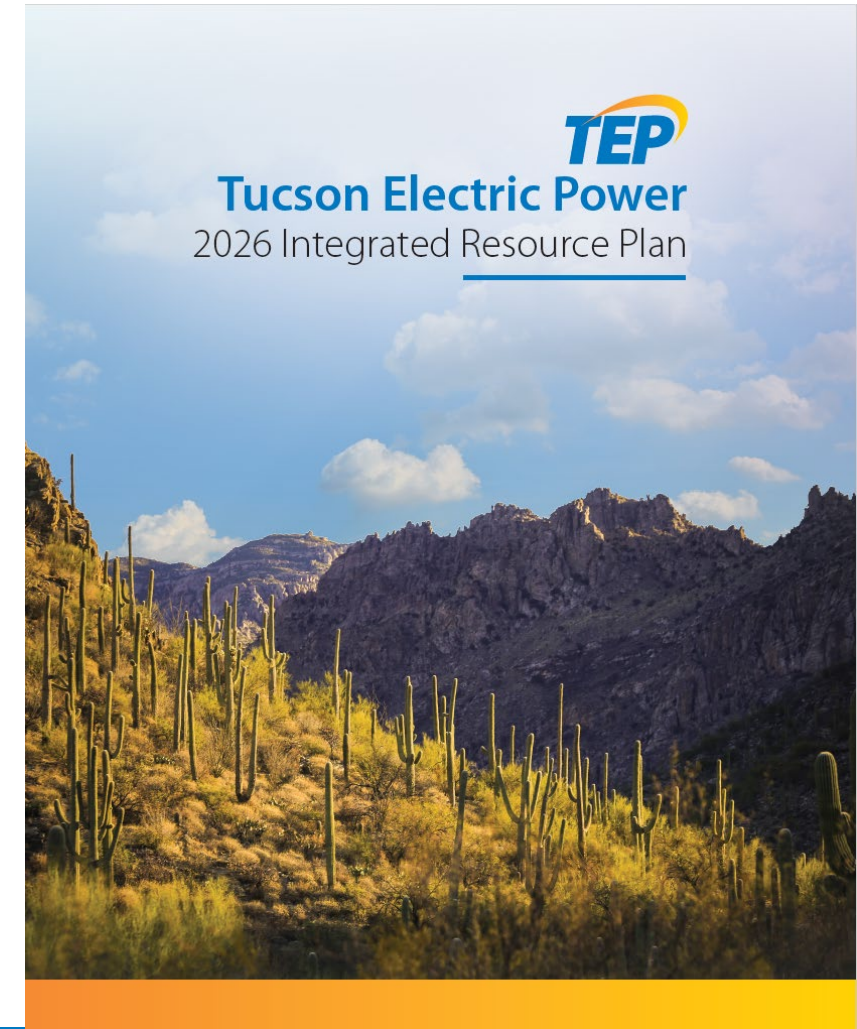


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Integrated Resource Plan Background

What is Integrated Resource Planning?

- An Integrated Resource Plan (IRP) is a comprehensive decision support tool and long-term roadmap for a utility to meet its projected energy needs using both supply and demand side resources while ensuring reliable service for customers in a cost-effective way.
- Resource portfolios present different options for future resources and can serve as a guide for the 5-year Capital Plan and the All-Source RFP.



Regulatory Compliance



The IRP is mandated by the Arizona Corporation Commission (ACC)

- The ACC is responsible for oversight of Arizona's public utilities and its representatives are elected officials.
- Requirements are outlined in the Arizona Administrative Code.
- The IRP is required every three years and covers a 15-year planning horizon.
- After filing, community stakeholders have an opportunity to submit questions through the official docket.
- Then, the ACC holds an Open Meeting to review IRPs and votes on whether to acknowledge each utility's plan.

Resource Planning Advisory Council (RPAC)

The RPAC is a council of community stakeholders that is essential in developing the IRP. Members provided valuable feedback and expertise that helped guide the planning process.

TEP and UNSE's RPACs met over the course of a full year.

Ensures that customer and community needs are heard, understood, and reflected in long-term planning outcomes.

RPAC Meeting Topics
Utility Basics and Company Overview
Integrated Resource Plan Basics, Key Assumptions, and Inputs
Load Forecasting and Model Inputs
Resource Adequacy and Portfolios
Base Case Results
Portfolio Results Review
Public Workshop

All meeting presentations and minutes are available at:

<https://www.tep.com/rpac/>

<https://www.uesaz.com/rpac/>



RPAC Member Organizations

TEP Members	
Public interest groups	Chamber of Southern Arizona
	Tucson Young Professionals
Consumer advocacy groups	AARP
	AZ Public Interest Resource Group
Limited-income customer advocacy groups	Interfaith Community Services
	Wildfire
Public at-large	University of Arizona
Residential customers	AZ Residential Utility Consumer Office
	Tucson Unified School District
Commercial customers	City of Tucson
	Pima County
	Davis-Monthan Air Force Base
	Hudbay Copper World
Environmental advocates	Western Resource Advocates
	The Nature Conservancy
	Sierra Club
Renewable power representatives	Arizona Solar Energy Industry Association
	Interwest Energy Alliance
Energy efficiency representative	Southwest Energy Efficiency Project
Regulator	Arizona Corporation Commission

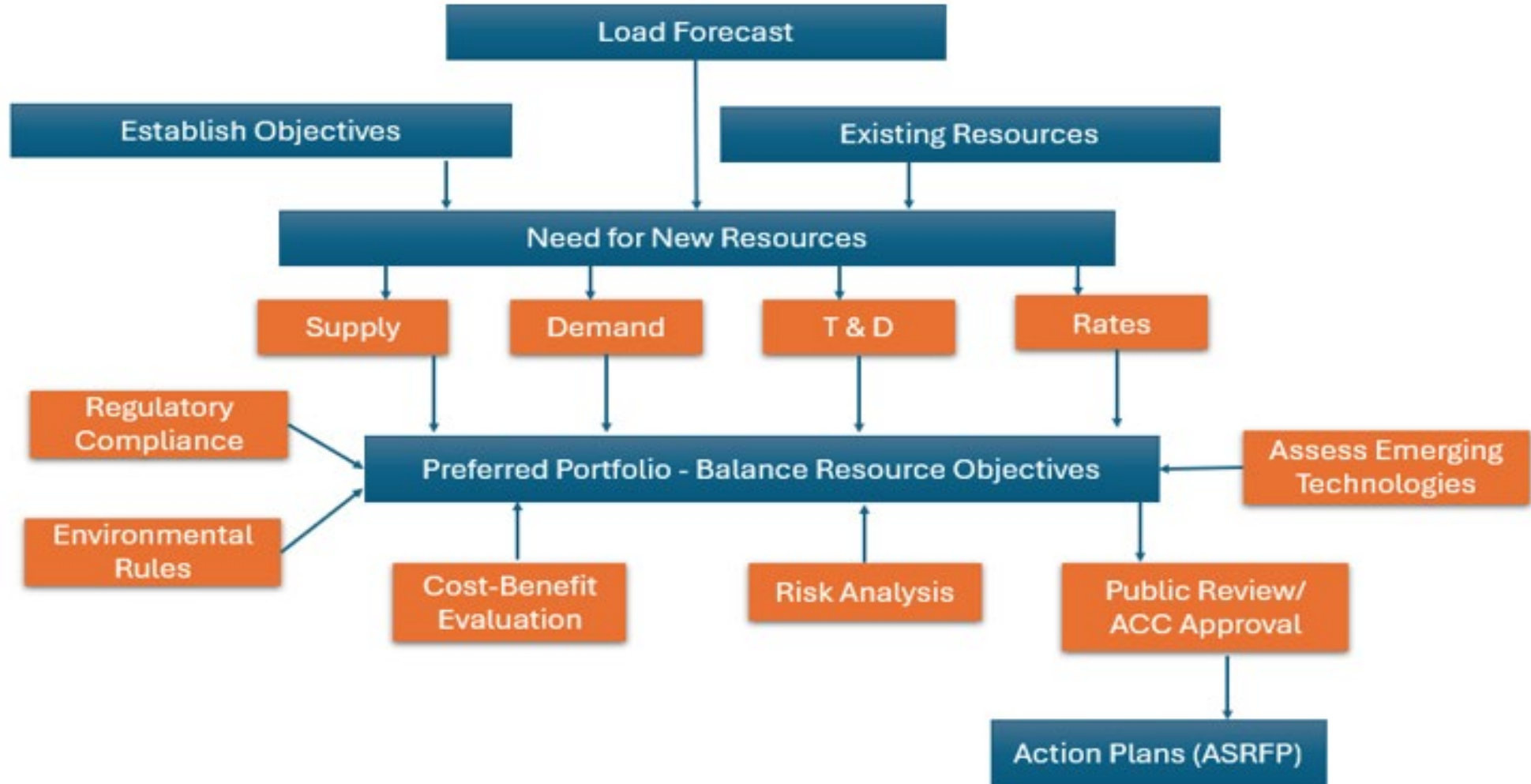
UNSE Members	
Public interest group	Lake Havasu Chamber of Commerce
Consumer advocacy groups	AARP
	AZ Public Interest Resource Group
	River Cities United Way
	Wildfire
Residential customers	AZ Residential Utility Consumer Office
Large commercial/industrial customers	Fresh Produce Association of the Americas
Mining	South32
Environmental advocate	Sierra Club
Renewable power representative	Arizona Solar Energy Industry Association
Energy efficiency representative	Southwest Energy Efficiency Project
Regulator	Arizona Corporation Commission

Environmental Regulation

- IRP analysis is conducted to maintain compliance with all relevant environmental regulations in place:
 - Regional Haze – Improving visibility in Class I Areas
 - GHG Emissions Reduction for Electric Generating Units (EGUs)
 - Good Neighbor – Interstate Ozone Transport
- Changes in federal and state policy, executive agency strategy, legislation, and legal challenges could impact the effectiveness, implementation, and timelines of environmental regulations.
- TEP and UNSE develop potential compliance pathways that are protective of the environment and our local communities and ensure the company's ability to continue to provide reliable, affordable power.



IRP Process



Modeling Overview

TEP and UNSE's Resource Planning team uses Aurora modeling software.

- **Long-Term Capacity Expansion (LTCE)**
 - A software module that will calculate the lowest-cost resource mix to meet given criteria and constraints
- **Production Cost Modeling (PCM)**
 - A software module that will dispatch the modeled resources to meet load and calculate system costs
- **Sensitivities**
 - Modeling results from running the PCM on a different set of parameters (change in market or fuel pricing, etc.)



Resource Adequacy

Resource adequacy is the ability of a utility to meet system demand and required reserves under varying system conditions.

- **Loss-of-Load Event (LOLE)**
 - Reliability as measured in loss of load; industry standard is one day in ten years (0.1 day/year)
- **Planning Reserve Margin (PRM)**
 - The amount of resource capacity needed above peak load to meet the 0.1 LOLE criteria
- **Effective Load Carrying Capability (ELCC)**
 - The amount of capacity each resource can be expected to provide to meet peak and prevent loss of load
 - Renewable resources are most impacted by Effective Load Carrying Capability, as high solar and wind penetration pushes energy-critical hours to times of low renewable production



All-Source Request for Proposals (ASRFP)

- Once the IRP is published, it is used as a guiding document in a subsequent ASRFP.
- ASRFPs are governed by the Arizona Administrative Code; TEP and UNSE work with an Independent Monitor
- Types of Agreements:
 - Power Purchase Agreements
 - Build-Own-Transfer Agreements
 - Load Management Agreements
- ASRFP solicit bids for capacity and energy:
 - Supply Side: fossil fuel plants, nuclear power plants, energy storage, solar, wind, hybrid solar and storage
 - Demand Side: demand response, energy efficiency

Projects From Recent All-Source RFPs

2022 ASRFP (TEP)

- Babacomari – 160MW solar
- Roadrunner Reserve I – 200MW/800MWh battery storage
- Wilmot II – 100 MW solar and 100MW/400MWh battery storage
- Winchester – 80 MW solar and 80MW 320MWh battery storage

2024 ASRFP (TEP)

- Roadrunner Reserve II – 200MW/800MWh battery storage

2025 ASRFP (UNSE)

- Black Mountain Expansion – 196 MW simple cycle combustion turbines

2026 ASRFP (UNSE)

- Dandelion Energy Park – 140 MW solar and 140MW/560MWh battery storage



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Key Inputs and Assumptions

Changes since the 2023 Integrated Resource Plan



- New load
 - Industrial load is the main driver
 - Project Blue Phase 1 and Copper World Mine are included in the base TEP forecast
- Rising inflation
 - Increases both capital and operations and maintenance (O&M) costs
- Reduction in tax credits
 - The One Big Beautiful Bill Act phased out credits for solar and wind, resulting in higher capital costs for those resources
- Environmental regulations
 - Uncertainty in future greenhouse gas rules requires additional modeling work

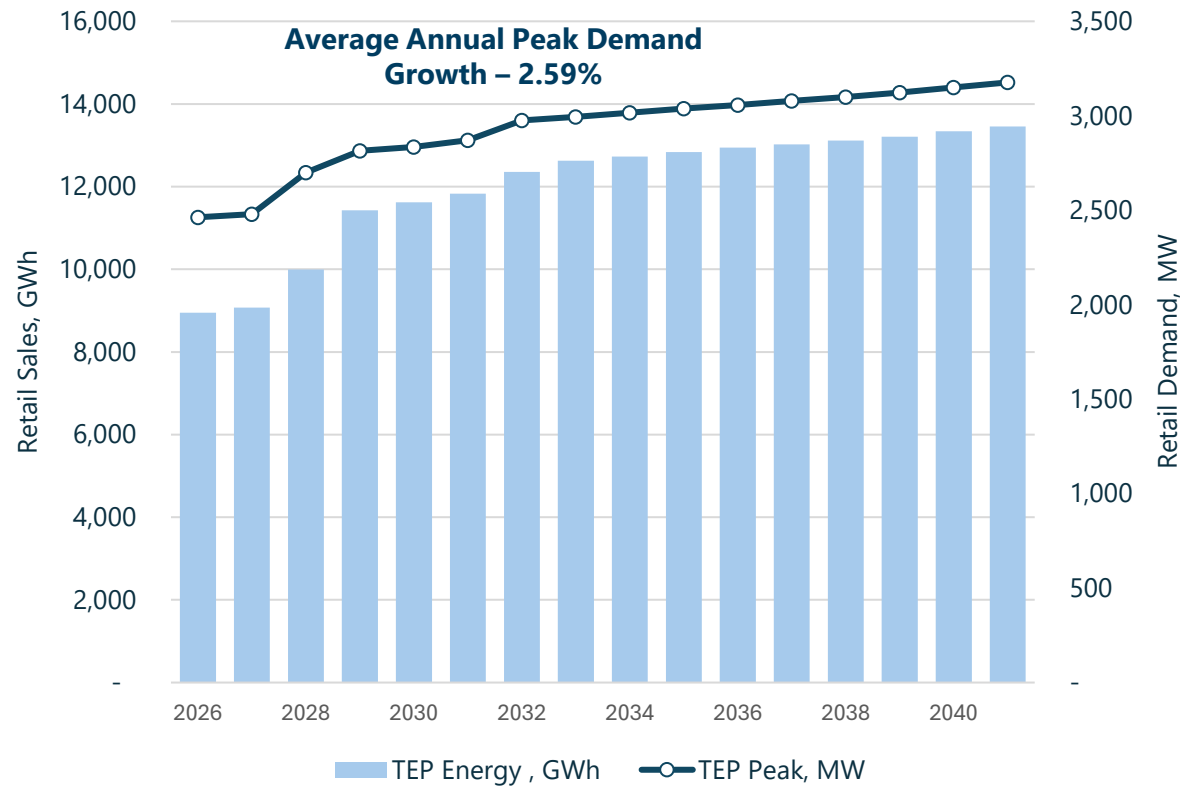


Modeling improvements since 2023

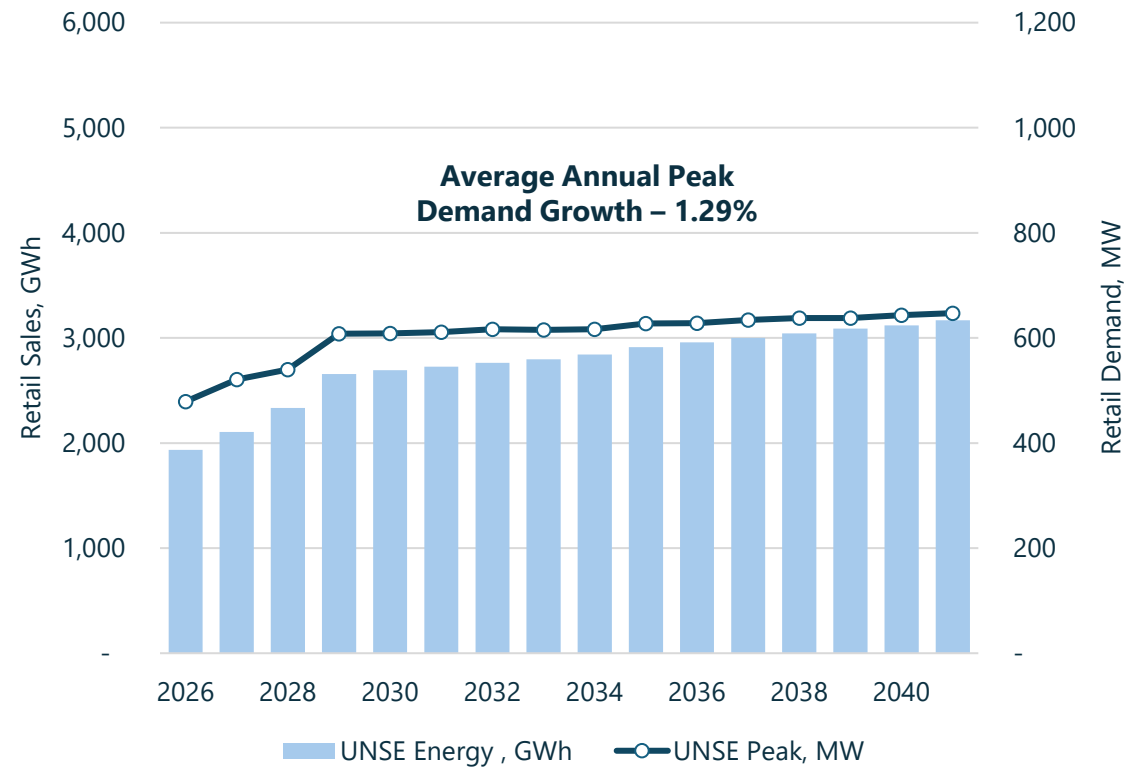
- Modeling optimization
 - TEP and UNSE engaged Siemens PTI to assist with the setup of LTCE in Aurora
- Resource adequacy parameters update
 - TEP and UNSE retained E3 to update and expand their 2022 RA study
 - The PRM was updated from 16.5% to 18%
 - E3 performed new ELCC analysis, accounting for updated load and resources forecasts and determining new capacity accreditation values
- Demand response as a dispatchable resource

Load Forecast

TEP Forecasted Annual Retail Sales and Peak Demand

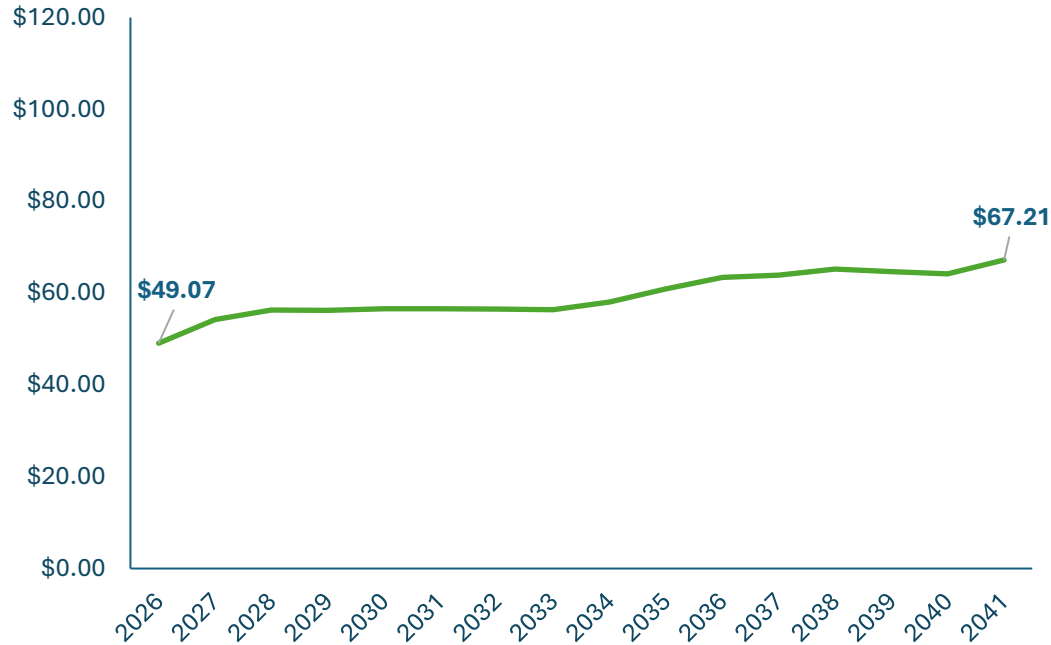


UNSE Forecasted Annual Retail Sales and Peak Demand

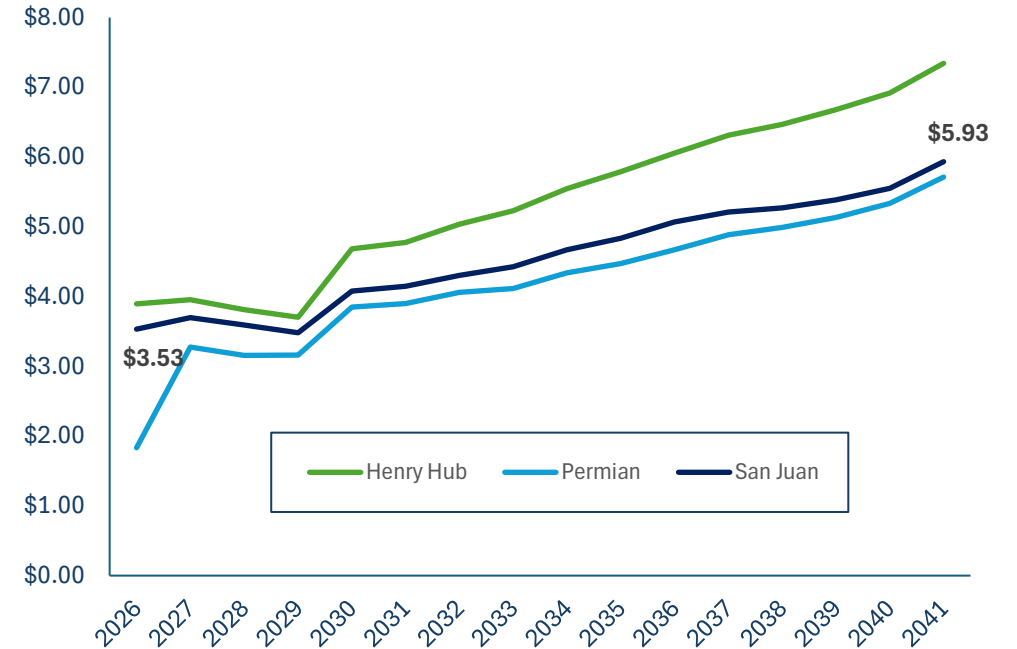


Forward Wholesale Power & Natural Gas Prices

Palo Verde Power Prices (7x24), Nominal\$/MWh



Natural Gas Prices, Nominal \$/MMBtu

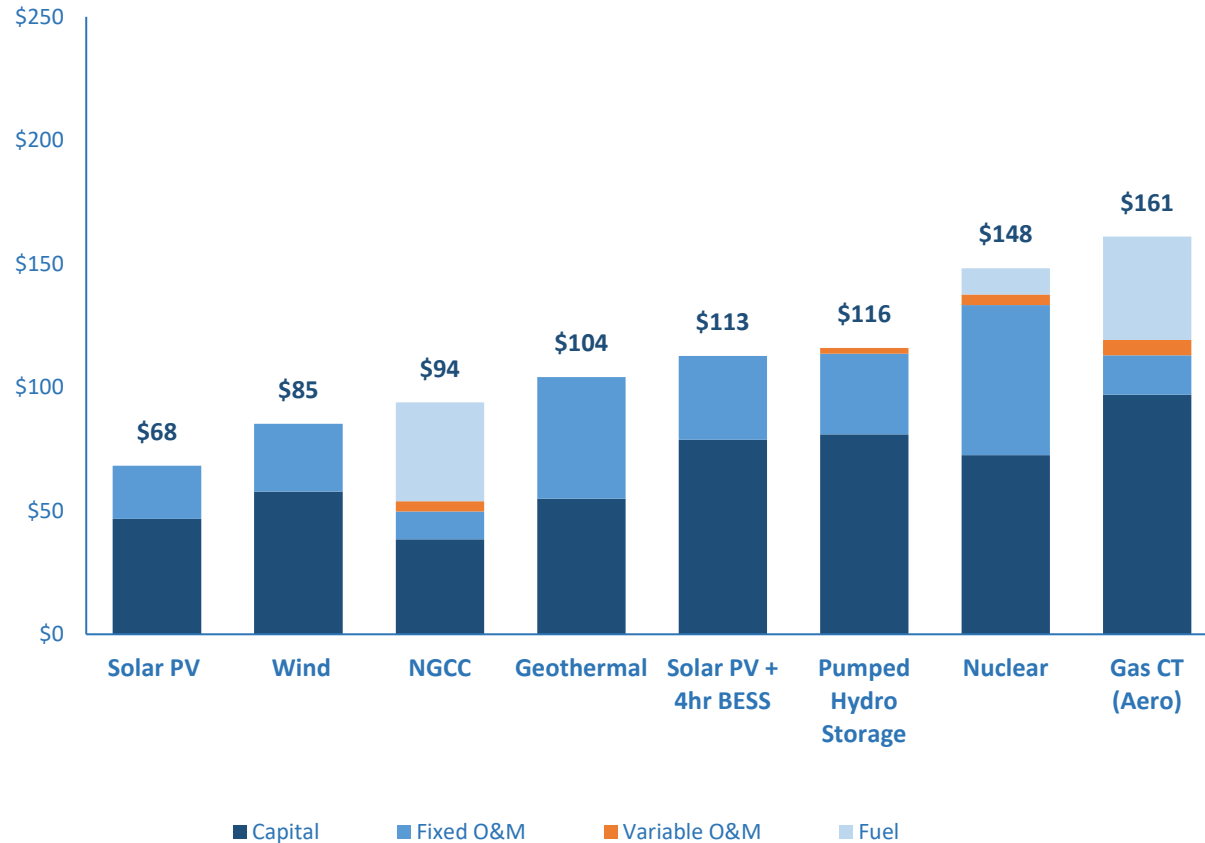


IRP Assumptions:

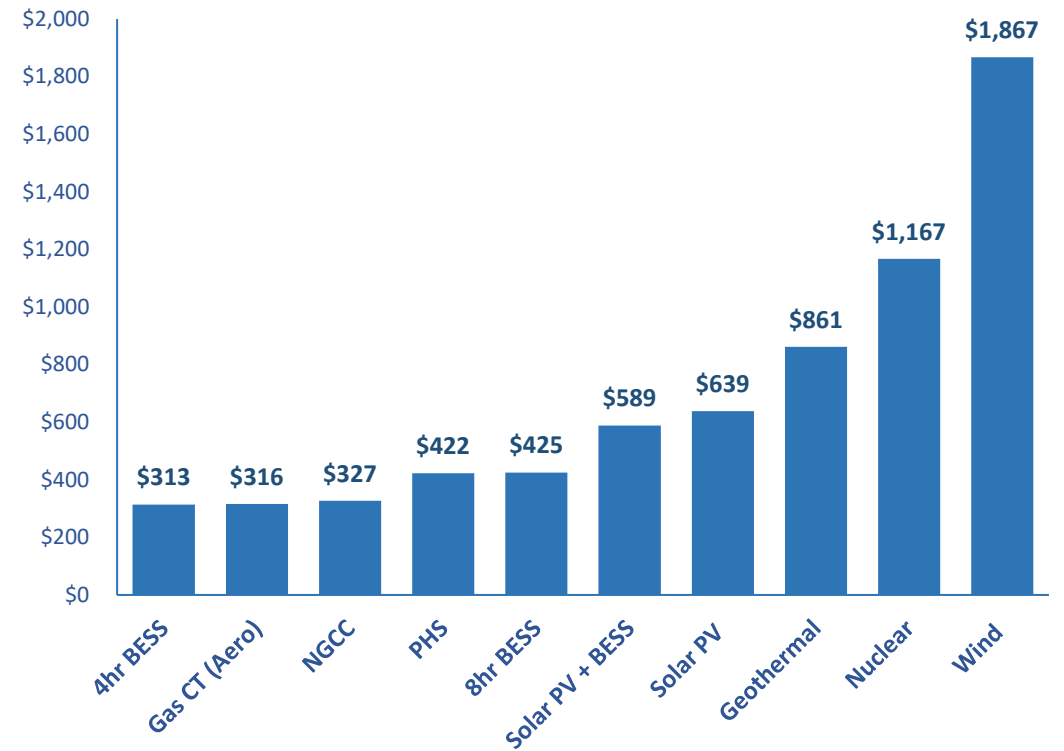
- Near-term prices are derived from monthly Platts Forward curves.
- Long-term prices reflect a blended forward and fundamental outlook based on Wood Mackenzie 2025 North America Power Market Outlook (moderated case).

Levelized Cost of New Resources

Levelized Cost of Energy, 2030\$/MWh



Levelized Cost of Capacity, 2030\$/kW-yr (ELCC Applied)



Tax credits – One Big Beautiful Bill Act (OBBBA)

Provision	Inflation Reduction Act (IRA)	OBBBA enacted by President Trump (4 July 2025)
Sections 48E and 45Y tax credit (TC) schedule	• 100% through 2033, 75% in 2034, 50% in 2035, 0% in 2036 and onwards.	• 100% by 2026, 0% by 2027 for solar and wind. • 100% by 2033, 75% by 2034, 50% by 2035 and 0% by 2036 for other technologies including storage.
Requirements to obtain full TC value	• Tax credit value depends on start-of-construction date. • Investment Tax Credit (ITC): a project has four years to be placed in service.	• Beginning-of-construction* (BOC) 2025: Placed-in-service (PIS) by 2029, no FEOC requirement. • BOC H1 2026: PIS by 2030, a 4-year safe harbor, subject to FEOC requirements. • BOC H2 2026: PIS by 2027, no safe harbor, subject to FEOC requirements.
Transferability	• In place throughout the ITC schedule.	• Maintained for sections 48E and 45Y credits. • Preserved for section 45X manufacturing credits.

* To establish beginning-of-construction, one of two tests must be satisfied: 1) Physical work test: the taxpayer must perform substantial physical work on equipment that is an integral part of the facility. Applies to all projects >1.5 MW_{ac}. 2) The 5% safe harbor test: the taxpayer must pay or incur at least 5% of the total cost of the facility and, for accrual-based taxpayers, take delivery of such components or expect to take delivery within 3.5 months of executing the binding written contract. This option is only applicable to smaller project <1.5 MW_{ac}.

Source: Wood Mackenzie, Power Market Outlook

TEP Resource Portfolios and Results

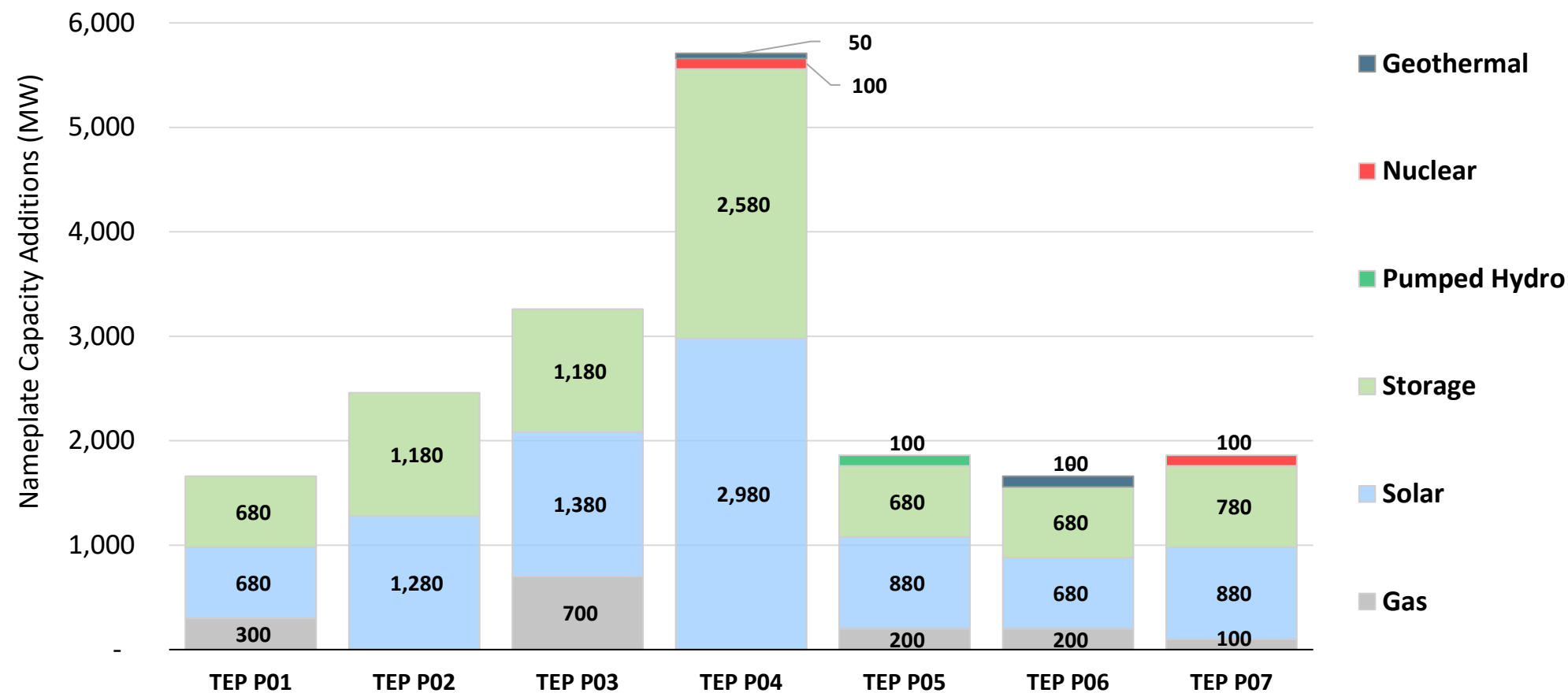
2026 TEP Portfolios

#	Name	Description ¹	Sensitivity tests
P01	Least-Cost, Technology Neutral Base Case	A least-cost, technology neutral portfolio required by the ACC. Allows the LTCE to select any resources available, including the SGS coal to gas conversion.	High/Low Market Prices Remove 40% Capacity Factor Limit on New Gas
P02	Clean Energy Buildout	A portfolio that only allows the LTCE to choose carbon-free resources (solar, wind, storage, pumped hydro, geothermal, nuclear). The model includes the SGS coal to gas conversion.	High/Low Market Prices
P03	High Load Factor Customer Growth (HLFCG)	A least-cost, technology neutral portfolio that adds 550 MW of high load factor customers to the base forecast beginning in 2030.	High/Low Market Prices Remove 40% Capacity Factor Limit on New Gas
P04	High Load Factor Customer Growth (HLFCG) / Clean Energy Buildout	A portfolio that adds 550 MW of high load factor customers to the base forecast beginning in 2030 and only allows the LTCE to select carbon-free resources.	High/Low Market Prices
P05	Pumped Hydro	A least-cost portfolio that adds 100 MW of pumped hydro storage in 2033.	High/Low Market Prices
P06	Geothermal	A least-cost portfolio that adds 100 MW geothermal resources in 2034.	High/Low Market Prices
P07	Nuclear	A least-cost portfolio that adds 100 MW of large nuclear resources in 2038.	High/Low Market Prices

¹ All Portfolios include 730MW Springerville conversion from coal to gas.

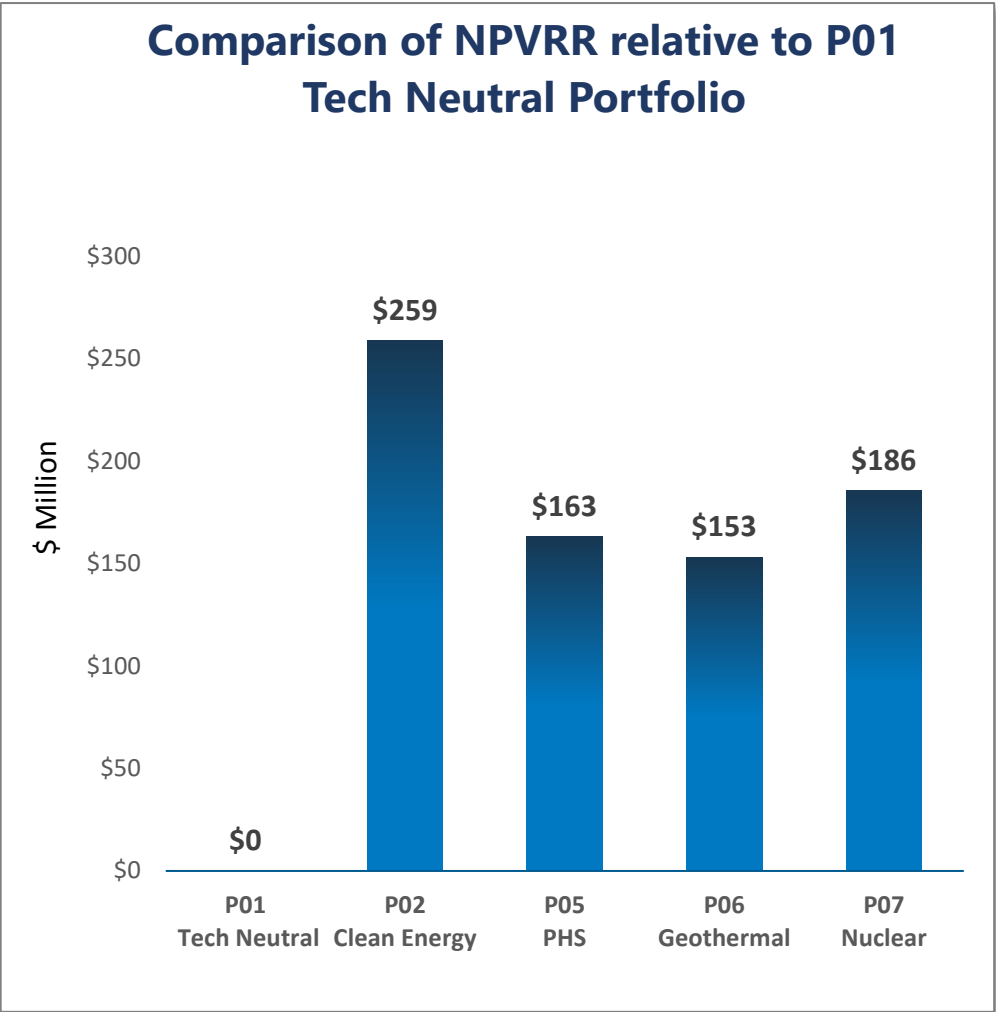
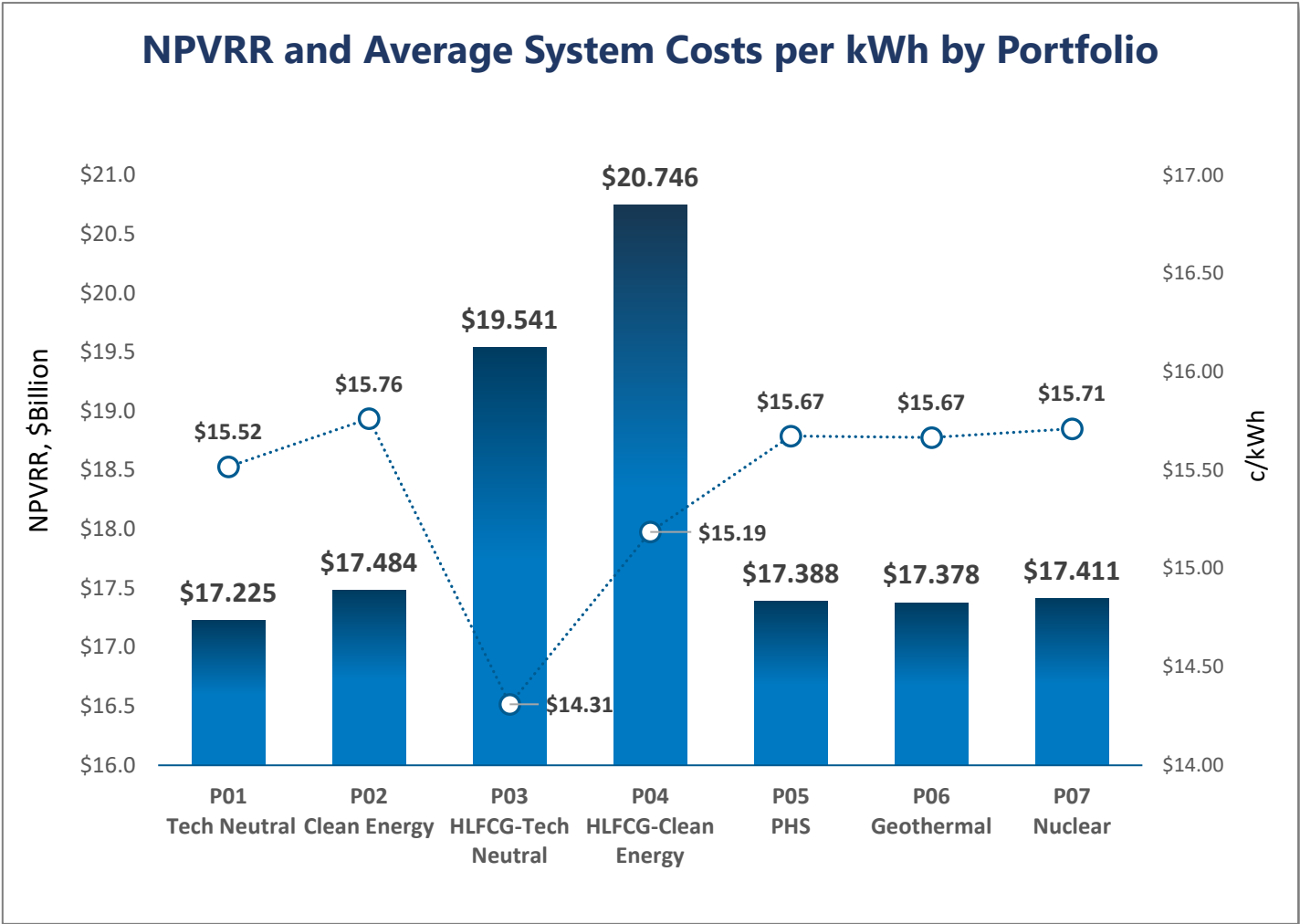
Resource Buildout Comparison

Total Resource Additions for Each Portfolio, MW



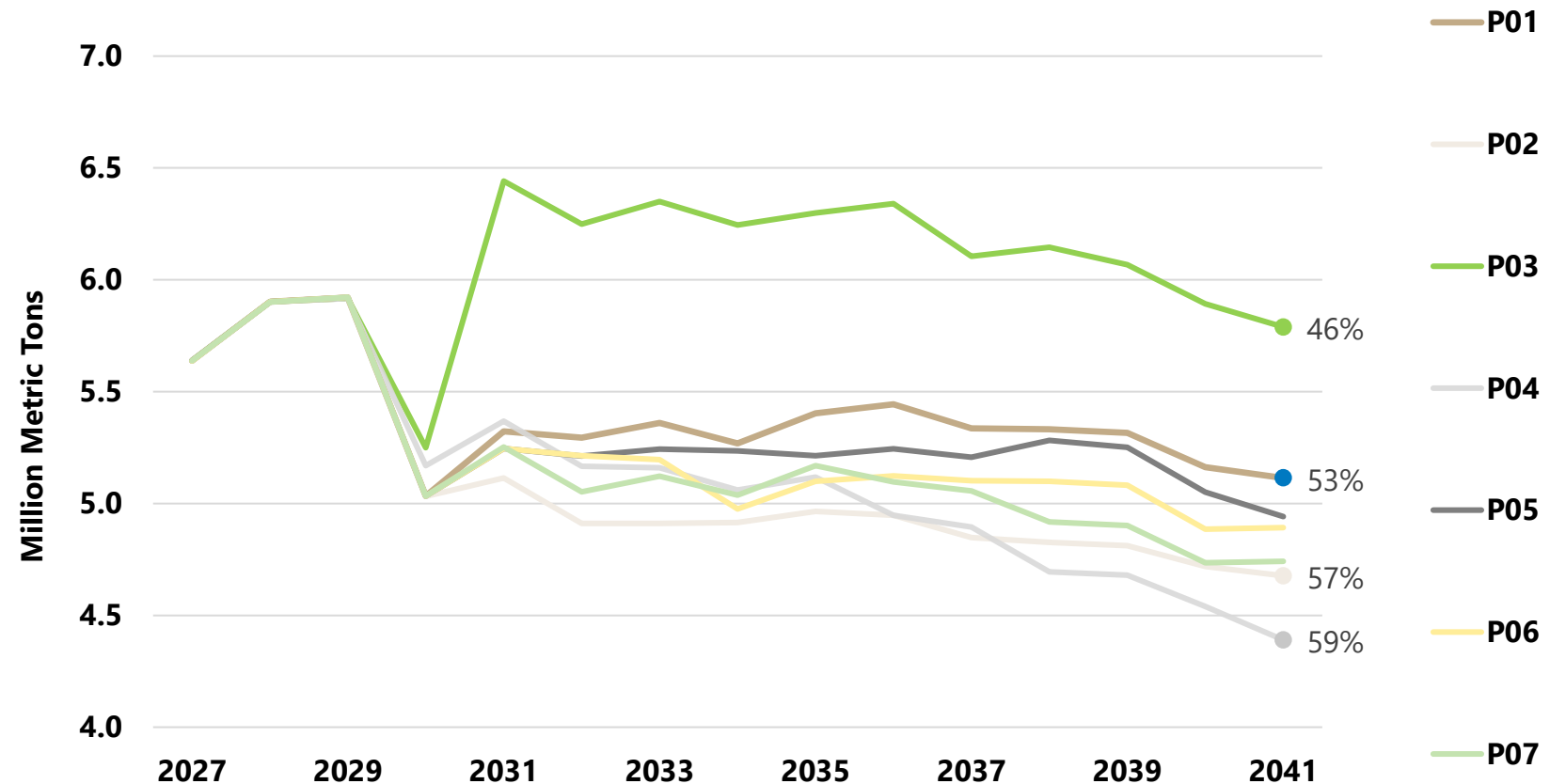
* Each portfolio includes the 730 MW Springerville Coal-to-Gas Conversion

Net Present Value Revenue Requirements (NPVRR)



Portfolio Emission Results

Total Annual Emissions, Million Metric Tons



*Percentage in 2041 represents emissions reductions since 2019.

TEP's Technology Neutral Base Case

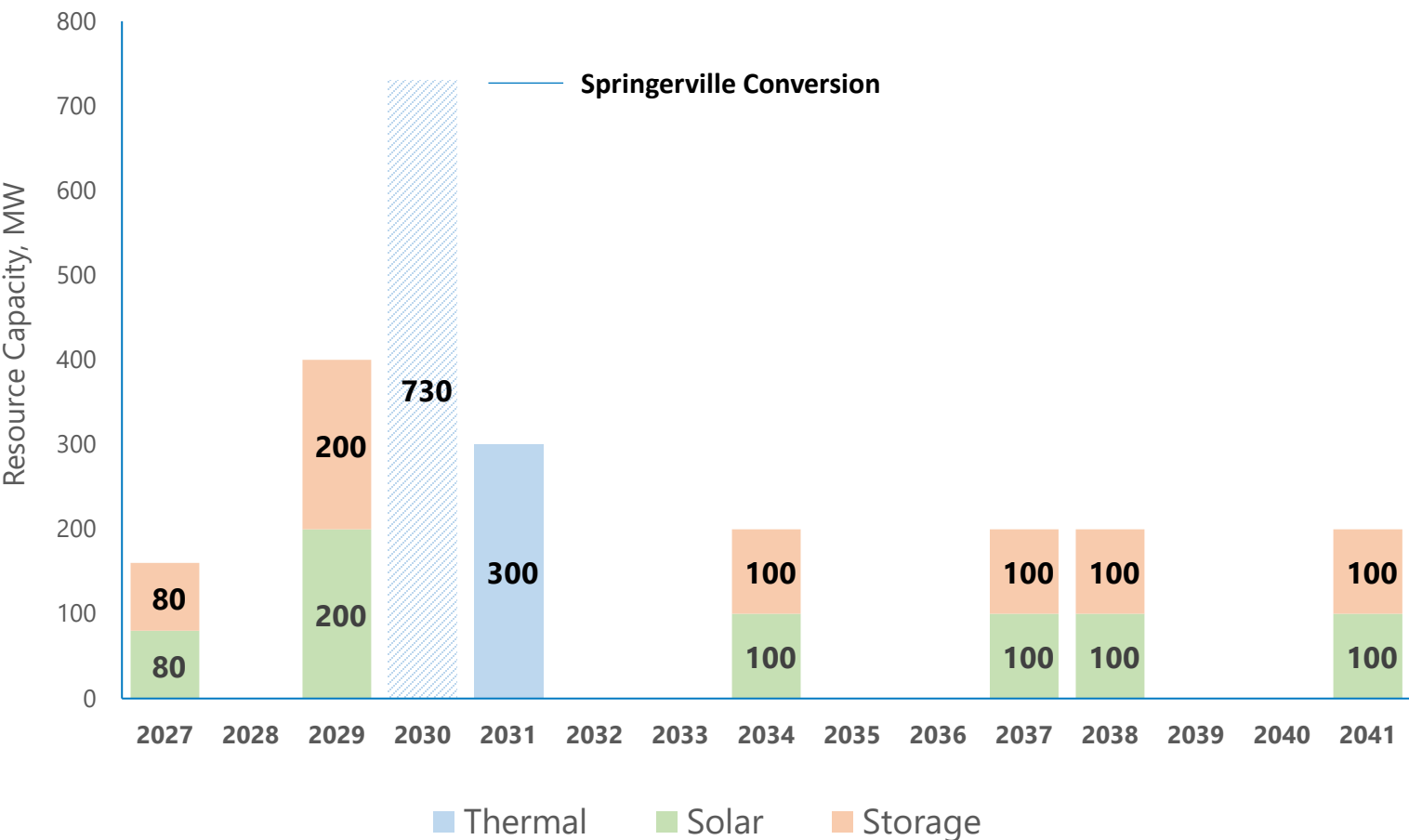
- Reliability
 - Resource mix meets resource adequacy requirements
 - New NGCC provides a base load and dispatchable resource
 - New storage uses excess solar for peak dispatch
- Affordability
 - Resource mix represents a least-cost approach
 - Exit from coal reduces long-term cost risk
 - New NGCC provides a least-cost option
 - Solar plus storage is projected to be cost-competitive over the long-term
- Sustainability
 - Exit coal generation by 2031
 - Solar and storage additions reduce emissions in the long-term



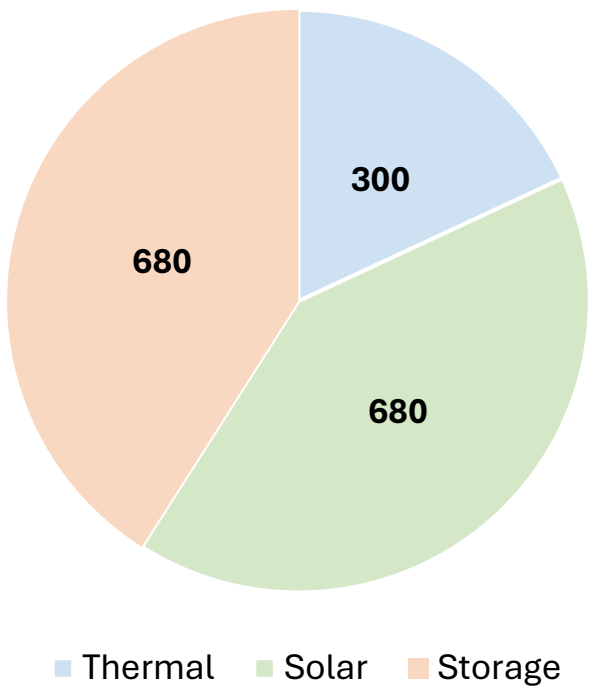
Resource Buildout by Year

TEP P01 – Technology Neutral Base Case Portfolio

840 MW Coal Retirement by 2031



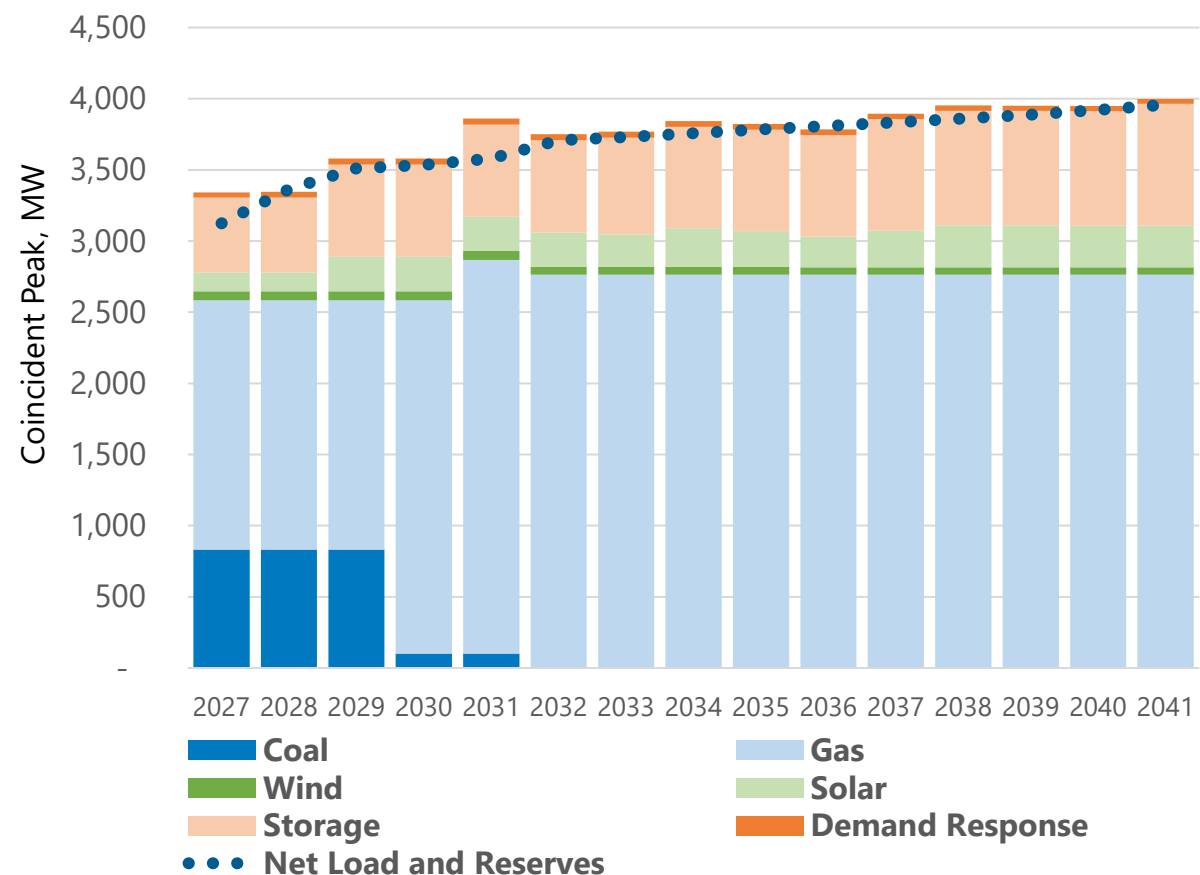
Capacity Additions by Resource, MW



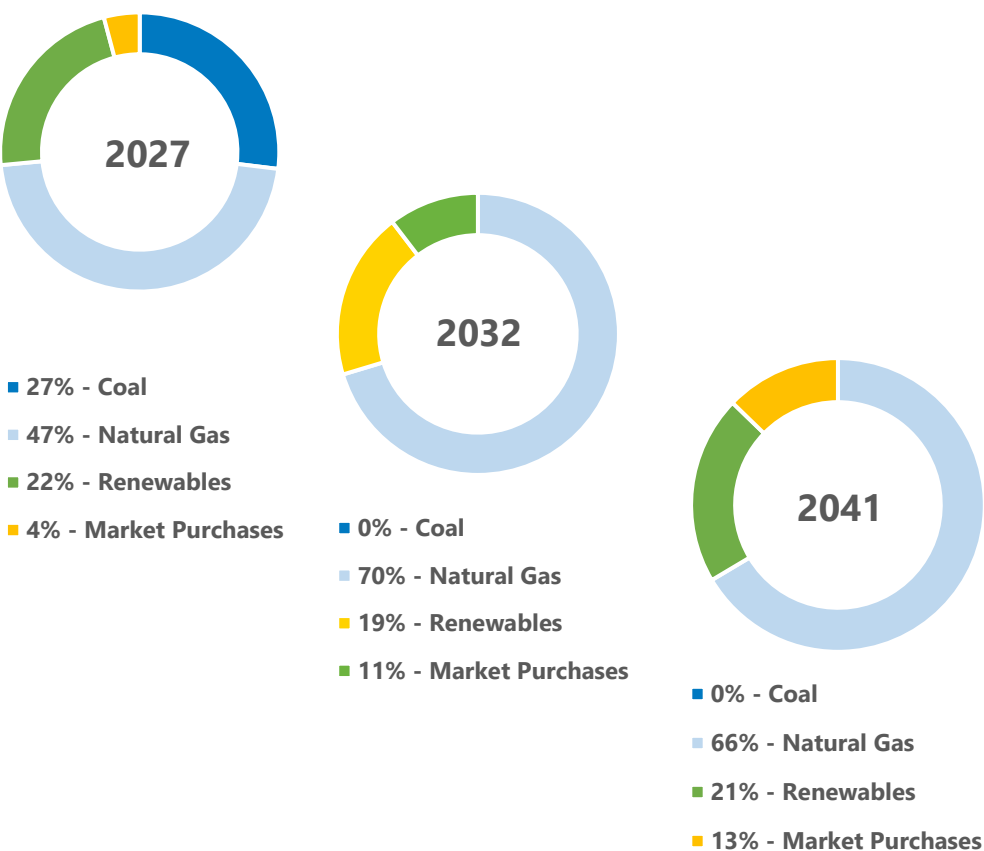
Future Resource Capacity and Energy Mix

TEP P01 – Technology Neutral Base Case Portfolio

TEP Loads & Resources Forecast



TEP Energy Portfolio through 2041



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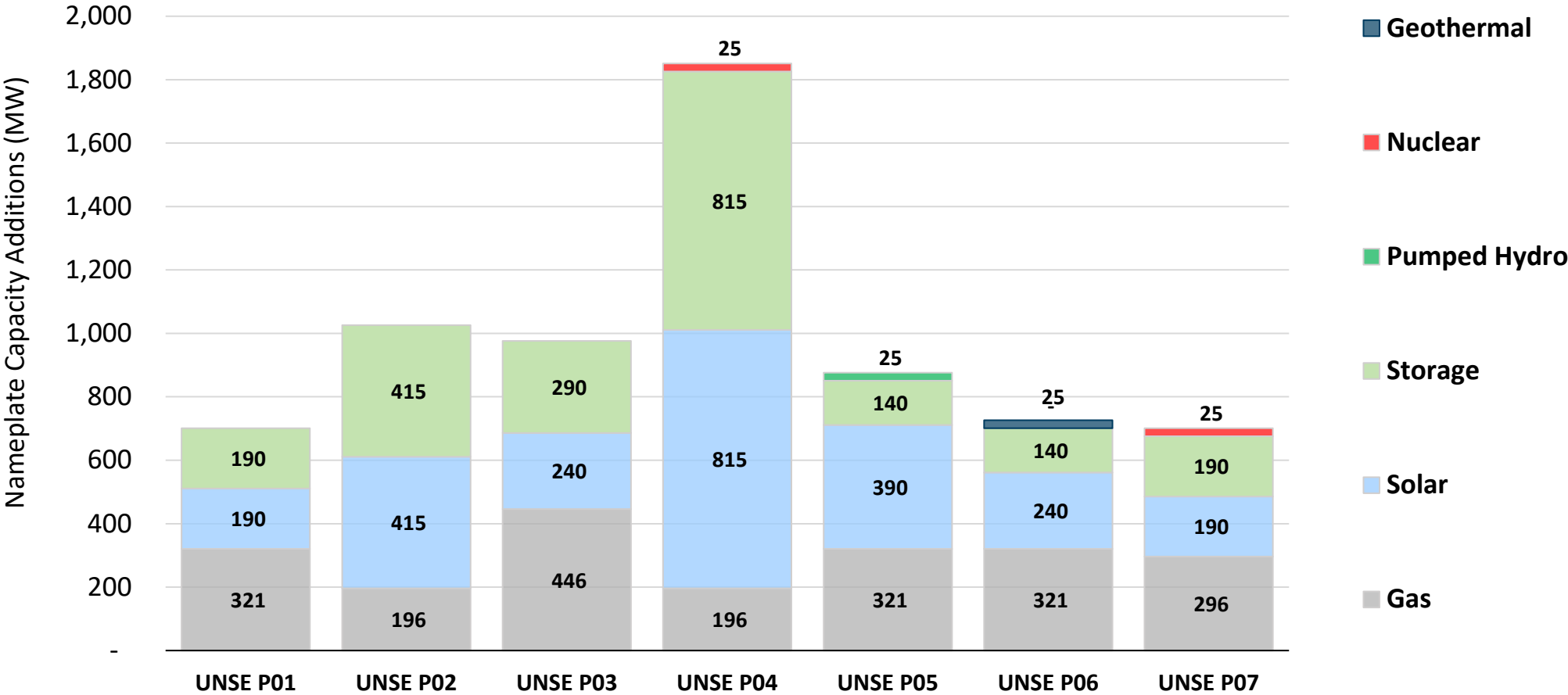
UNSE Resource Portfolios and Results

2026 UNS Electric Portfolios

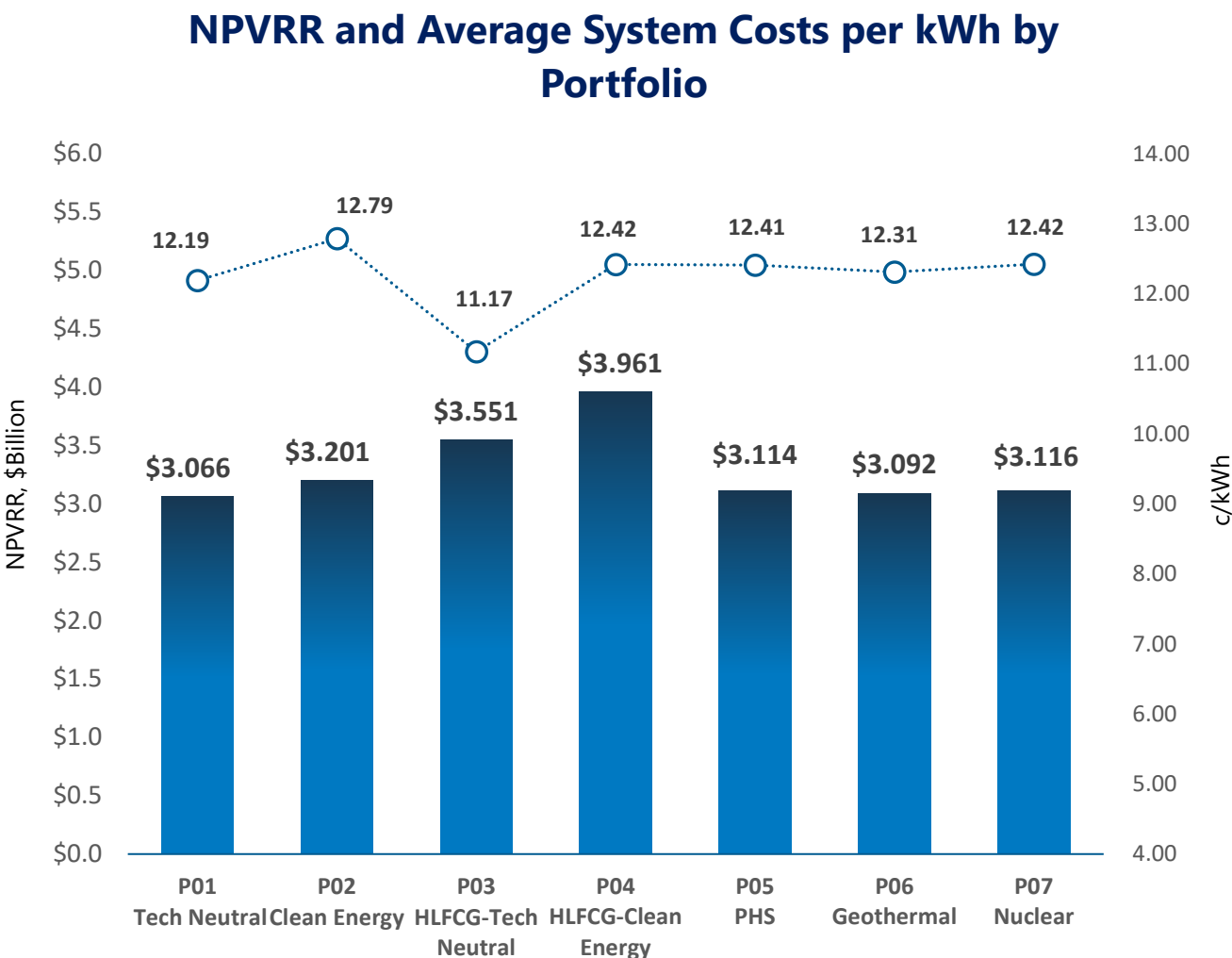
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Resource Buildout Comparison

Total Resource Additions for Each Portfolio, MW

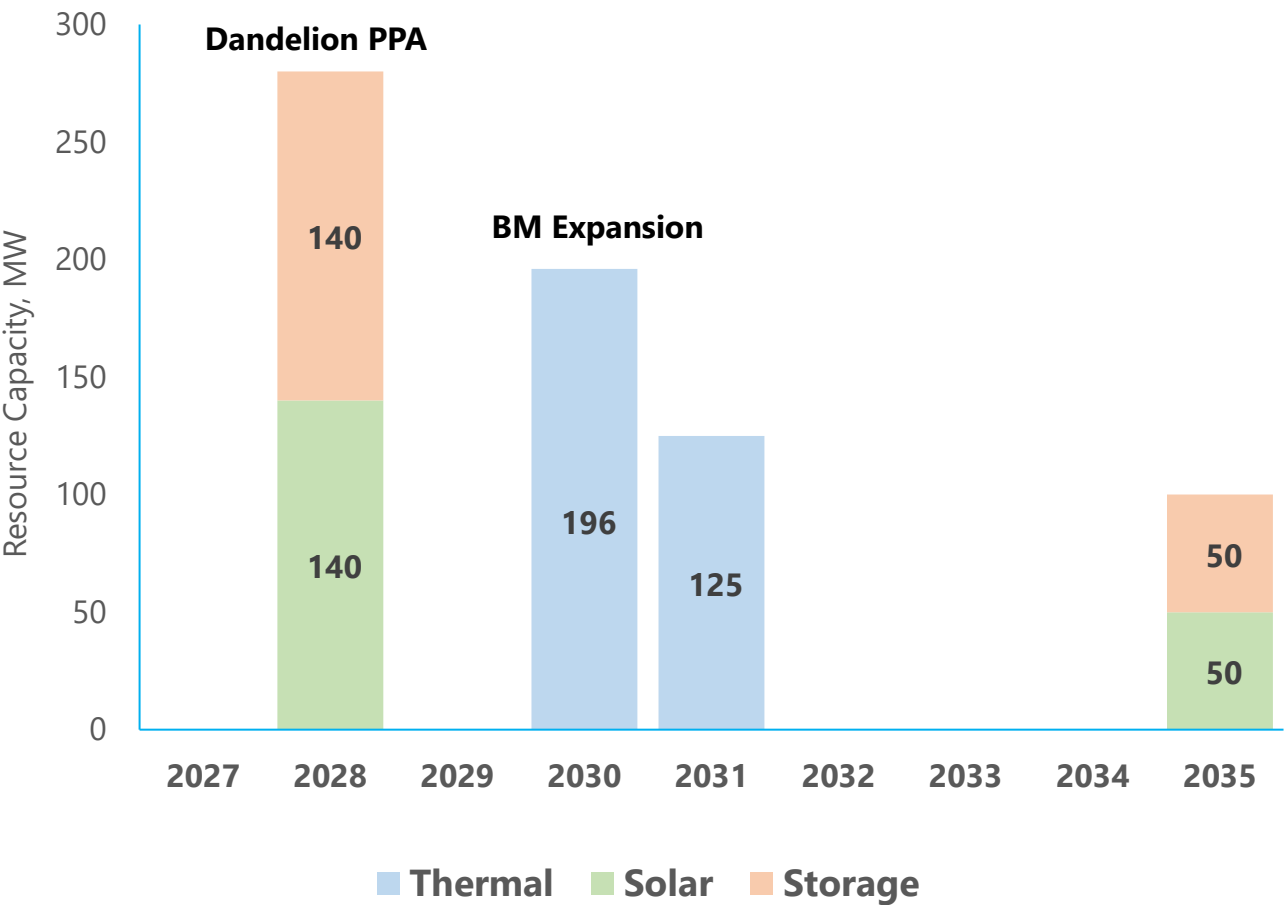


Net Present Value Revenue Requirement

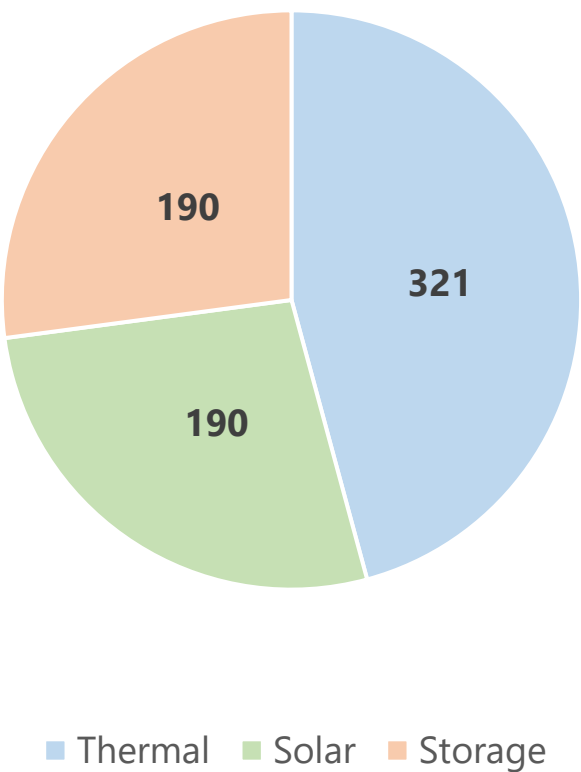


Resource Buildout by Year

UNSE P01 – Technology Neutral Base Case Portfolio



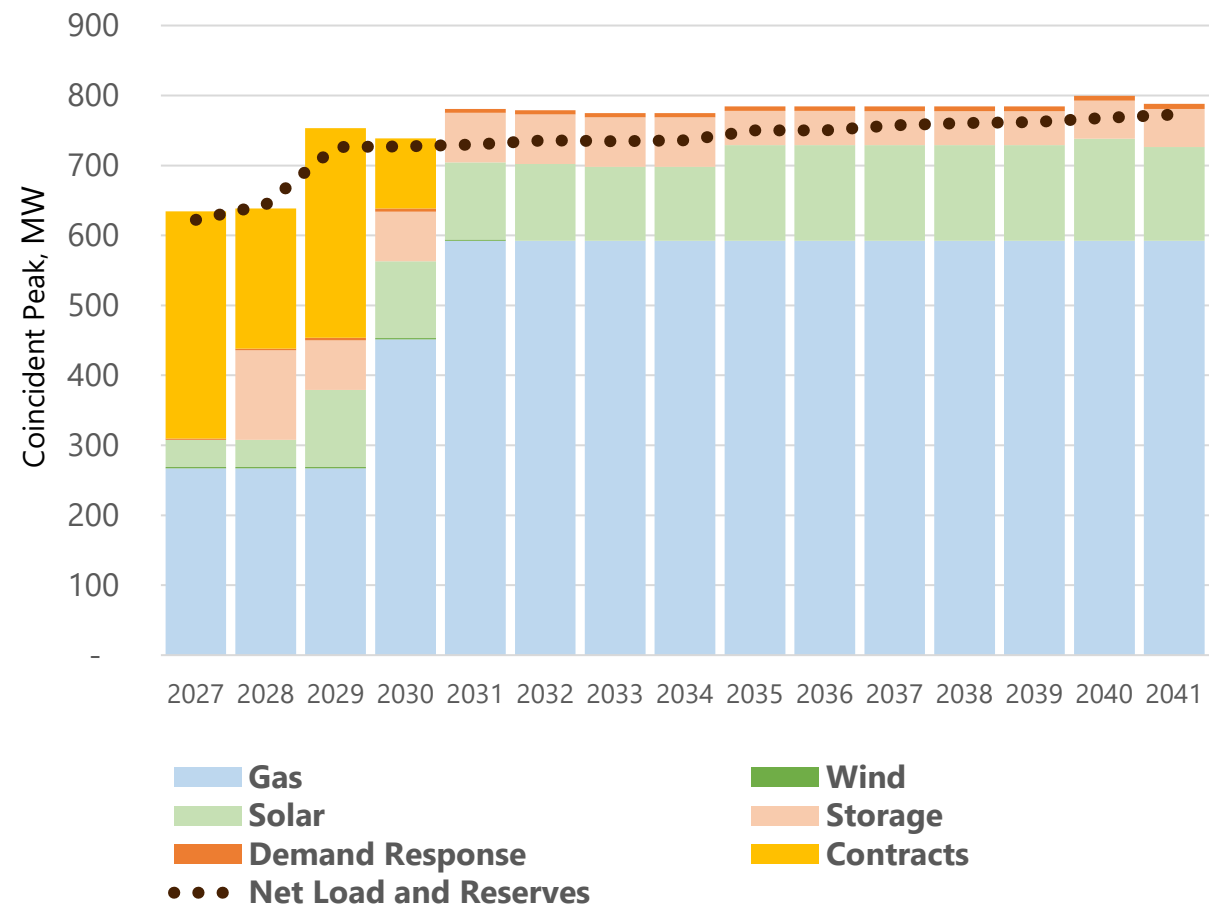
Capacity Additions by Resource, MW



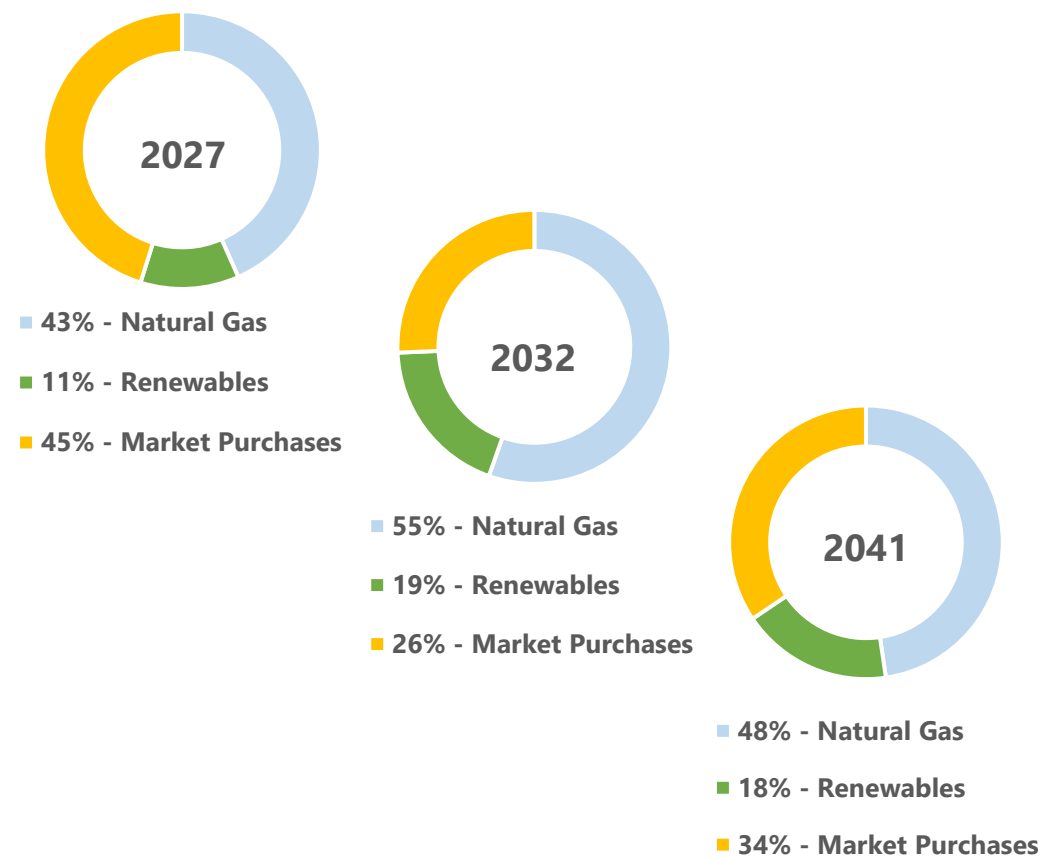
Future Resource Capacity and Energy Mix

UNSE P01 – Technology Neutral Base Case Portfolio

UNSE Loads & Resources Forecast



UNSE Energy Portfolio through 2041



UNS Electric's Least-Cost, Technology Neutral Portfolio

Reliability

- Resource mix meets resource adequacy requirements
- New NGCC provides a base load and dispatchable resource
- New storage uses excess solar for peak dispatch

Affordability

- Resource mix represents a least-cost approach
- New NGCC provides a least-cost option
- Solar plus storage is projected to be cost-competitive over the long-term

Sustainability

- Solar and storage additions displace gas in the long-term



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Looking Ahead

Next Steps

IRP Process Step	Dates
IRP submission	October 30, 2026
Stakeholder comments due	February 10, 2027
Response to stakeholder comments	June 10, 2027
Staff Assessment and proposed order	September 13, 2027

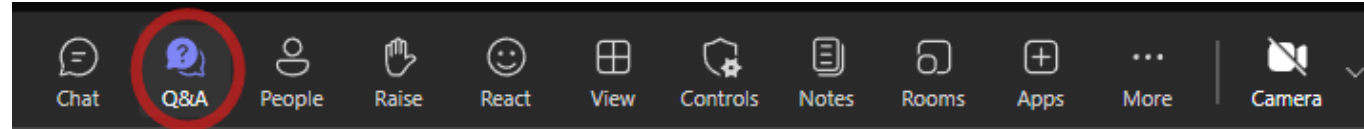
- See tep.com/rpac and uesaz.com/rpac for links to the ACC's IRP docket
- See azcc.gov > Meetings & Cases > Make a Public Comment in a Docket if you would like to file stakeholder comments



Q&A

Q&A Logistics

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- If we are unable to address all questions in the allotted time, we will follow up afterwards.