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January 7, 2025

VIA ELECTRONIC DELIVERY
Clerk of Council
Council of the City of New Orleans
Room 1E09, City Hall
1300 Perdido Street
New Orleans, Louisiana 70112

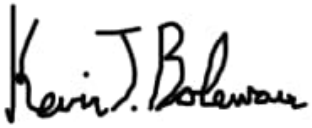
Re: 2024 TRIENNIAL INTEGRATED RESOURCE PLAN OF ENTERGY NEW ORLEANS, LLC Docket No. UD-23-01

Dear Clerk of Council:

Entergy New Orleans, LLC ("ENO" or the "Company") respectfully submits the Presentation for Public Meeting #2 being held January 21, 2025 in the above referenced Docket.

If you have any questions, please do not hesitate to call me. Thank you for your courtesy and assistance with this matter.

Sincerely,



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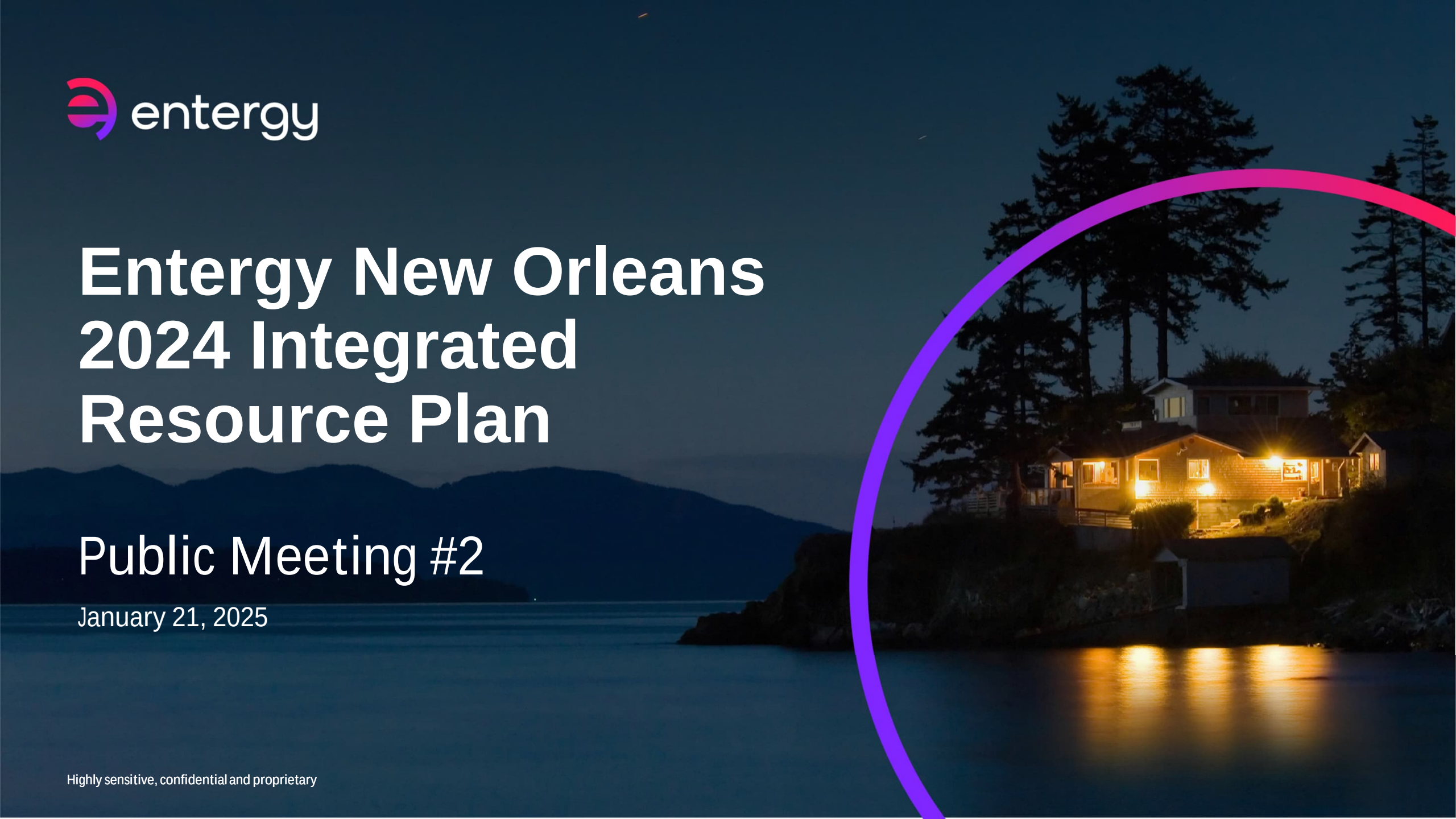
Enclosure
cc: Official Service List UD-23-01 (via electronic mail)



Entergy New Orleans 2024 Integrated Resource Plan

Public Meeting #2

January 21, 2025

Today's Meeting

- Following an extensive and collaborative process, ENO filed its 2024 Integrated Resource Plan (IRP) Report on December 13, 2024.
- Today’s meeting is to present findings from the Report and provide information to the public for submitting comments and questions to ENO.
- At Public Meeting #3 in February, attendees may make comments to the Council regarding the IRP Report.

What is the Integrated Resource Plan (IRP)?

- The Integrated Resource Plan is a study that looks at how ENO can reliably, affordably, and sustainably serve its customers' electricity needs over the next 20 years.
- Electric needs are served through different supply resources (e.g., generation) and demand side resources (e.g., energy efficiency).
- The study develops multiple portfolios of resources and the associated costs to serve customers.
- Portfolios are developed through modeling that considers different inputs and assumptions (e.g., projected customer demand, existing generation, projected costs of energy efficiency programs, fuel costs).
- ENO, stakeholders, and the Council Advisors agree on different market futures (called Planning Scenarios) and policy assumptions for New Orleans (called Planning Strategies) that incorporate inputs and assumptions at different levels.
- Modeling software produces a portfolio for each combination of a market future and a policy assumption; additional portfolios are developed manually to address specific objectives.
- Further analysis is conducted on several of the portfolios to produce 20-year projected costs to serve customers.

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Agenda

1. 2024 IRP Process Overview
2. Inputs and Assumptions
3. Planning Scenarios and Strategies
4. Portfolio Optimization and Total Relevant Supply Cost Analysis
5. Stochastic Risk Analysis
6. Action Plan
7. Question and Answer Period
8. Next Steps

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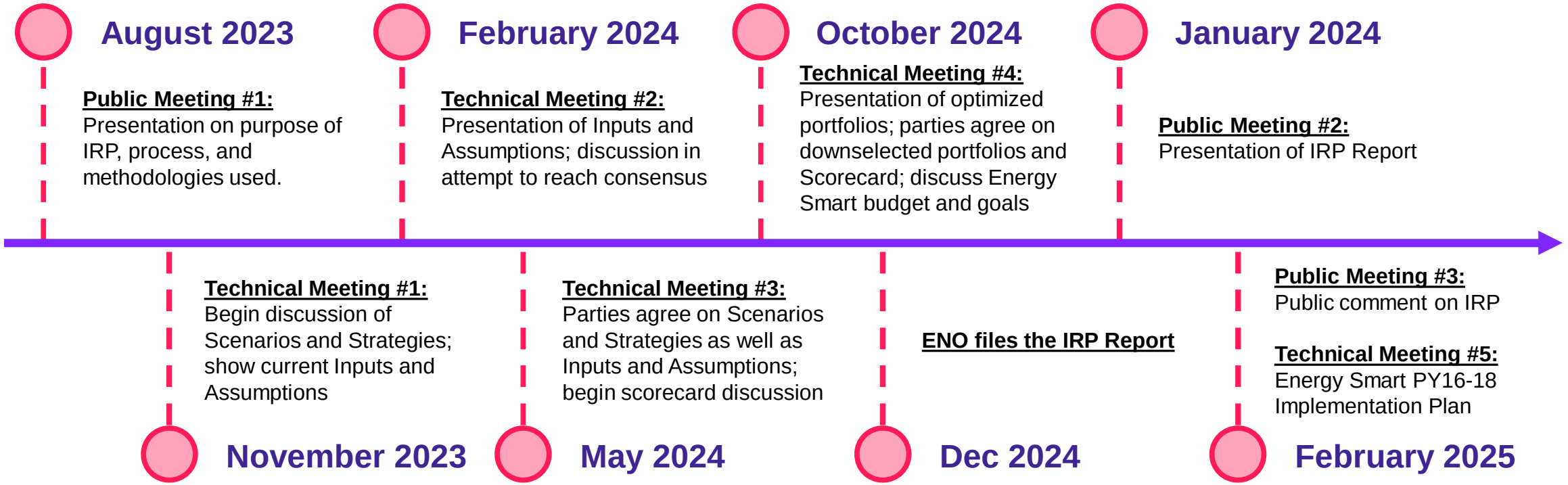
01

2024 IRP Process Overview

Stakeholder and Public Process Review

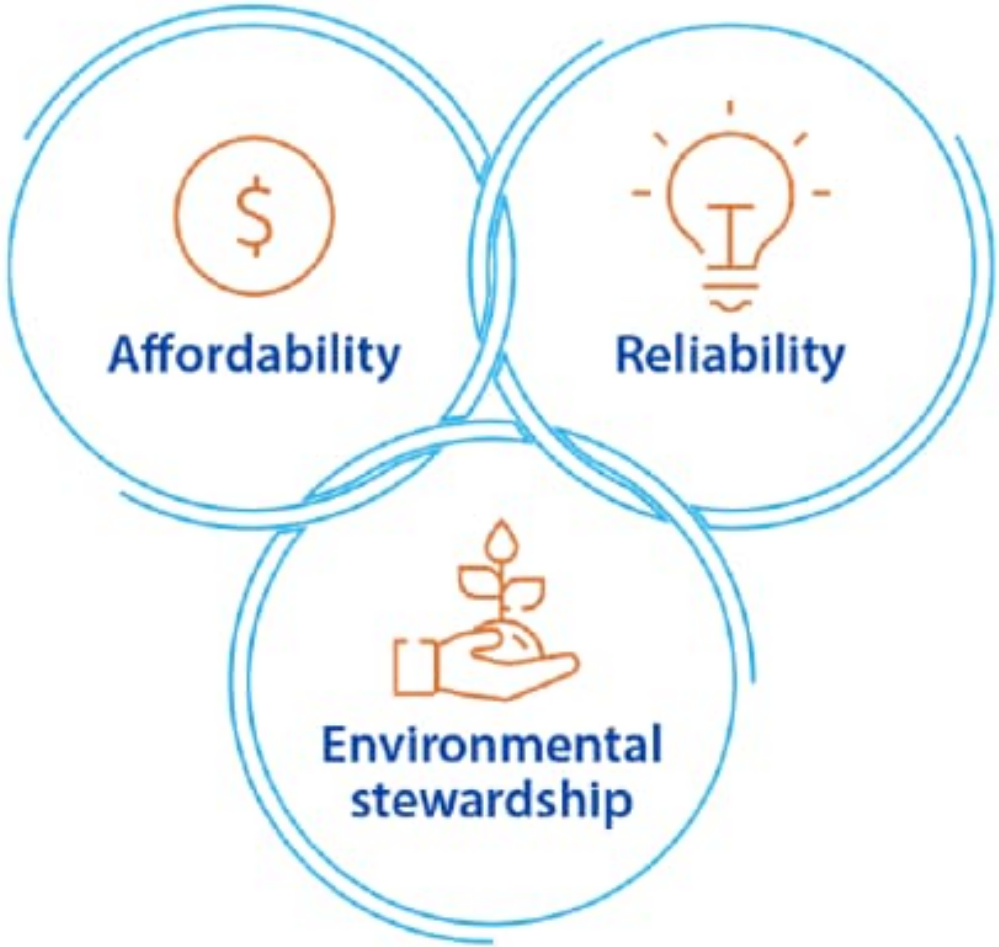


Key Resource Planning Objectives

- ENO’s resource planning process is based on a set of principles designed to reliably meet customer power needs at the lowest reasonable cost while reducing emissions, improving reliability and resilience performance, and minimizing customer risk exposure. While the landscape within the electric utility industry is changing, these principles remain the consistent factors underpinning our long-term planning strategy.

- The IRP plays an important role in the iterative process of planning ENO’s future resource portfolio by providing a comprehensive and transparent look at long-term themes and tendencies that may affect resource planning decisions.

- This strategy provides the flexibility for ENO to respond and adapt to a constantly shifting utility landscape and customer demand.



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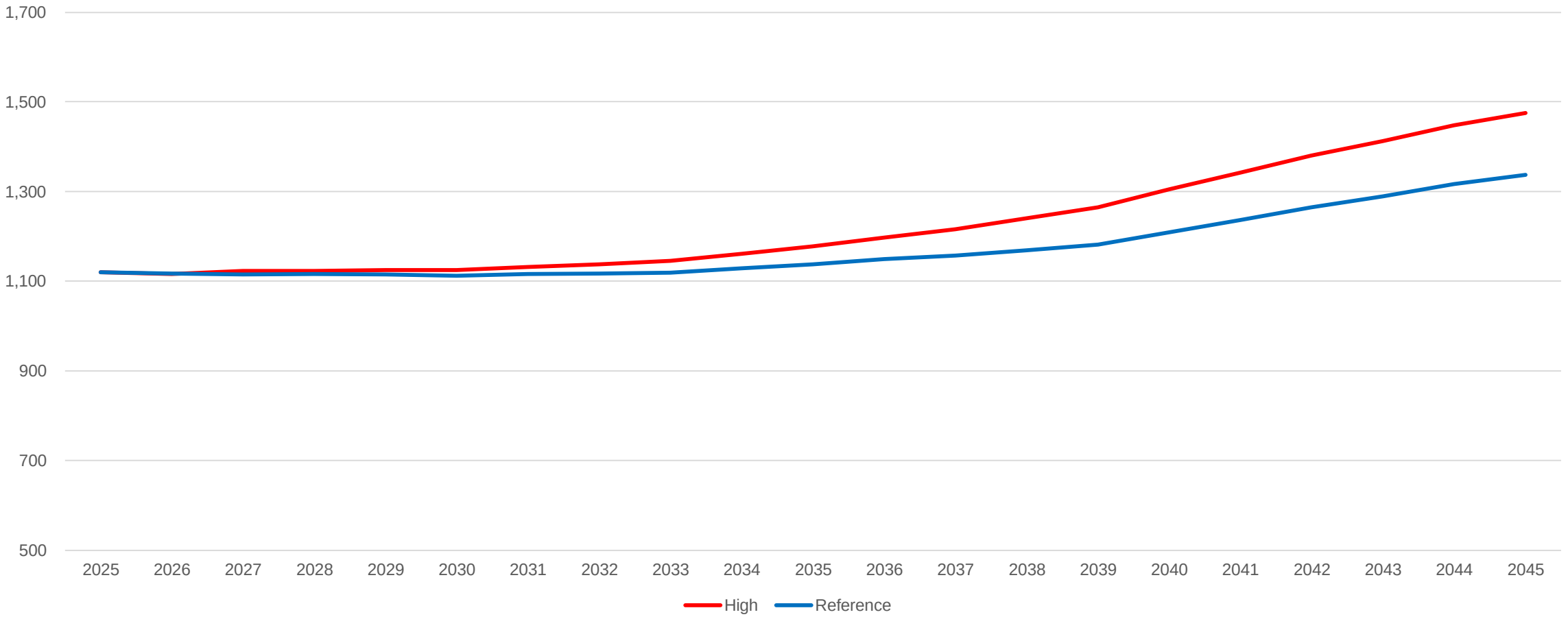
Inputs and Assumptions

Key Inputs and Assumptions

- Peak Load and Energy Forecast
- Long Term Capacity Need
- Existing Fleet Capability
- Supply Side Alternatives
- Demand Side Programs
- Fuel Forecast
- CO2 Forecast

Annual Non-Coincident Peak Load Cases



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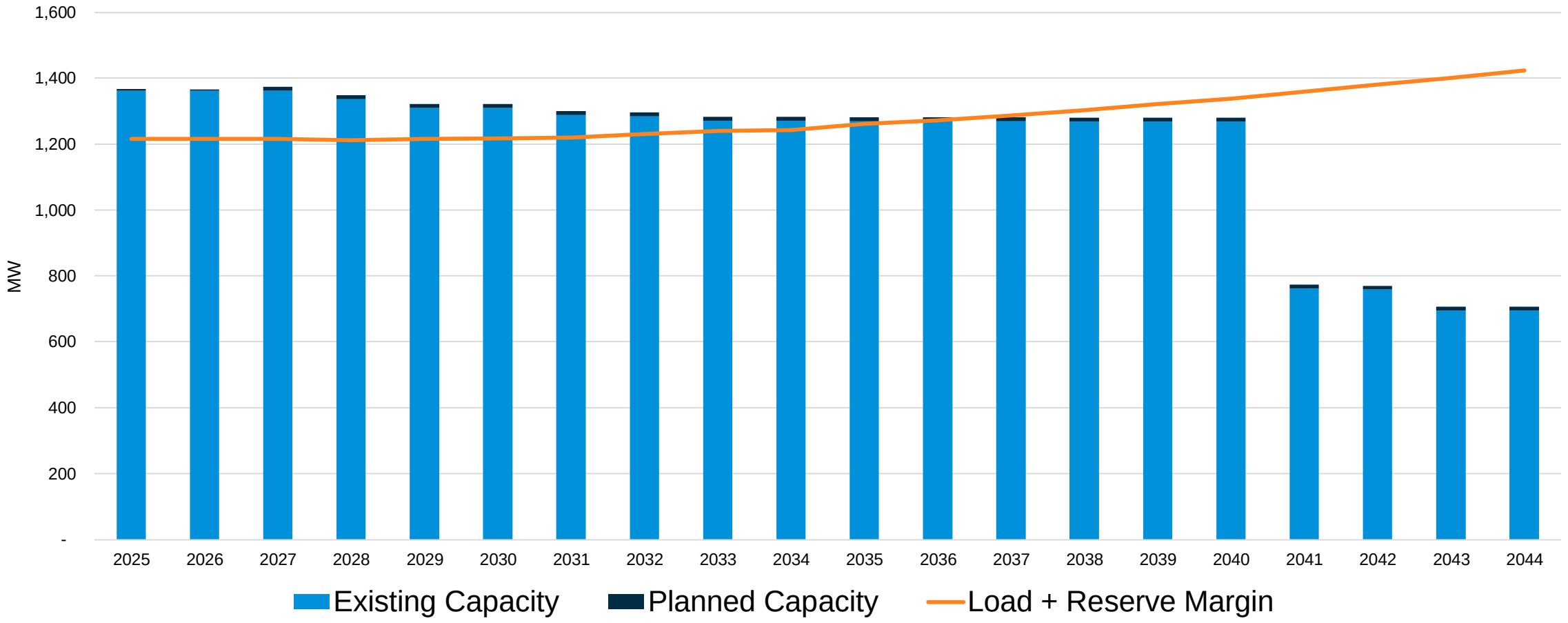
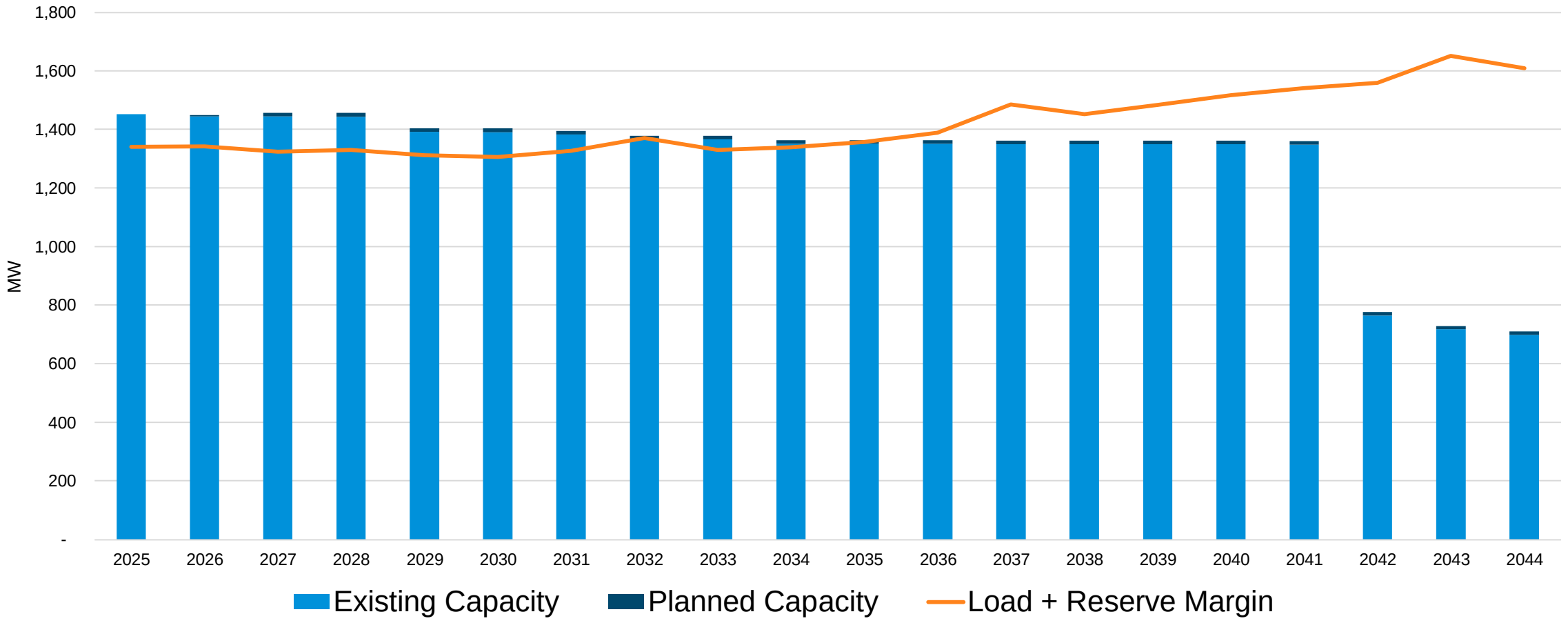
Long Term Capacity Need - Summer

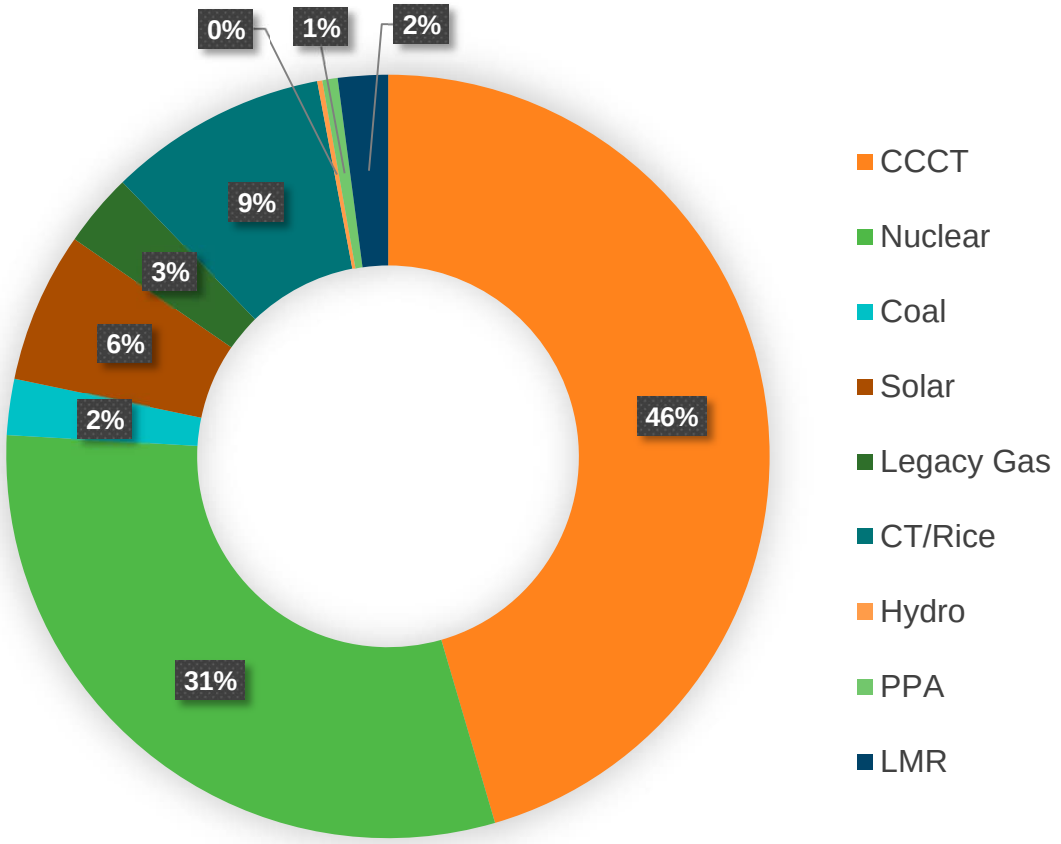


Long Term Capacity Need - Winter



Existing Fleet Capability

Fuel Type	Summer Rating MW
CCCT	632.9
Nuclear	423.1
Coal	32.9
Solar	88.9
Legacy Gas	43.0
CT/Rice	129.1
Hydro	3.3
PPA	8.8
LMR	29.4
Total	**1391.4**



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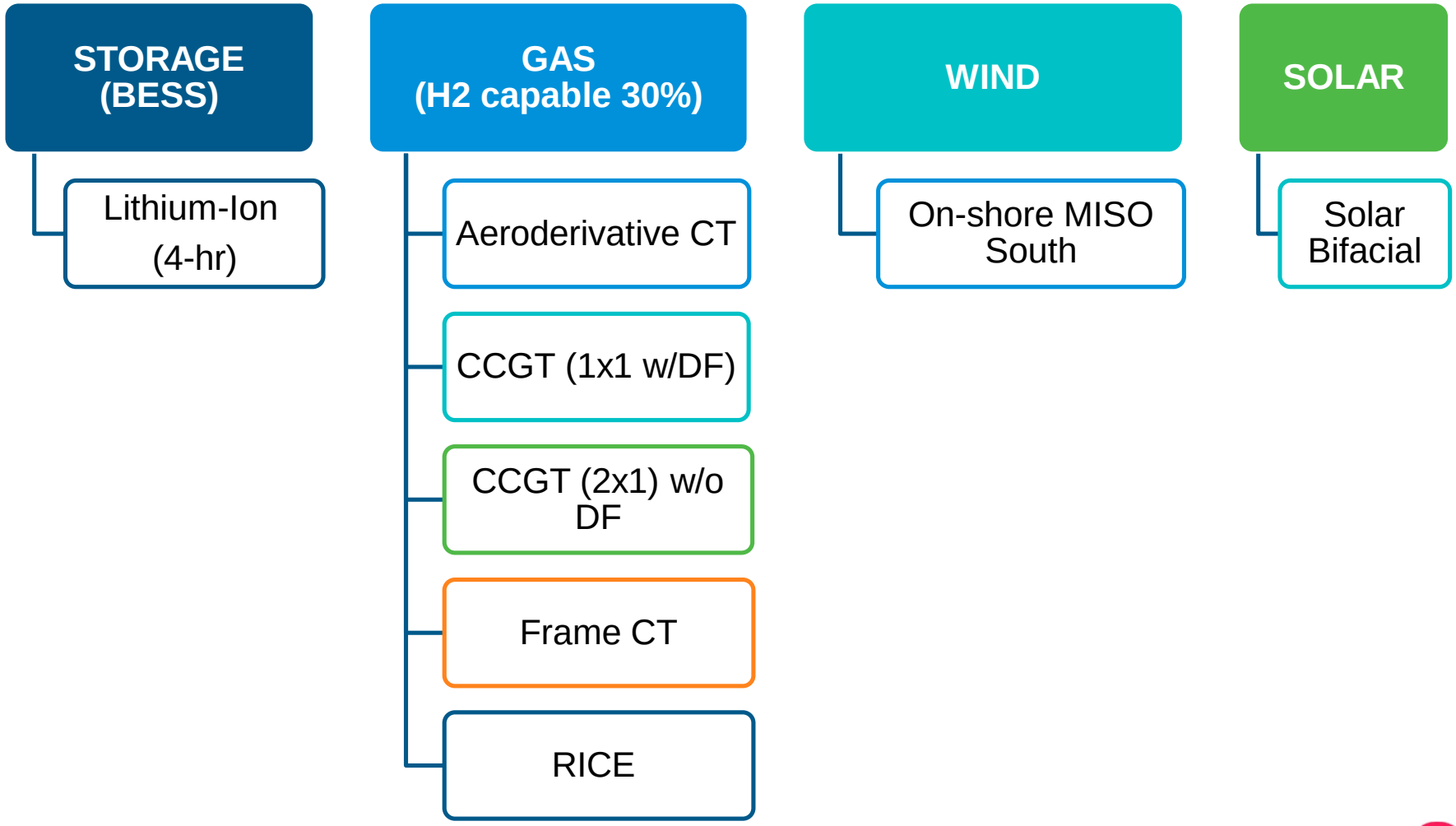
Supply Side Alternatives



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Demand Side Management (DSM) Study and Programs

- Long term DSM Potential Study looks at the potential over a 20-year period of:
  - Energy efficiency (EE) programs--which offer incentives for customers to reduce electricity usage in their homes and businesses; and
  - Demand response (DR) programs--which offer incentives to customers who agree to reduce their own electric usage at times of high load across the system.

- Guidehouse prepared the potential study for ENO starting from a set of source documents and data including the N.O. Technical Resource Manual, historical Energy Smart program results, and current Energy Smart implementation plans.

- The Study produced multiple sets of results (i.e., input cases) under two different discount rates. The parties agreed during the technical meetings which input cases to use in the IRP analysis.

- The Guidehouse Study will inform the proposed Energy Smart Implementation Plan for 2026-2028 (Program Years 16-18).

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Guidehouse DSM Study—Programs Evaluated

Energy Efficiency Programs
Commercial Behavioral
Home Performance w/ Energy Star
HVAC
Large Commercial and Industrial (C&I)
Low Income Multi-Family
Recycling
Residential Behavioral
Retail Products
School Kits
Small Commercial and Industrial

Demand Response Programs
BTMG – Battery Storage
C&I Curtailment – Advanced Lighting Control
C&I Curtailment – Auto-DR HVAC Control
C&I Curtailment – Industrial
C&I Curtailment – Other
C&I Curtailment – Refrigeration Control
C&I Curtailment – Standard Lighting Control
C&I Curtailment – Water Heating Control
Direct Load Control (DLC)-Switch – Water Heating
DLC-Thermostat – Res
Dynamic Pricing with enabling tech.
Dynamic Pricing w/o enabling tech.
EV Managed Charging
Peak Time Rebate

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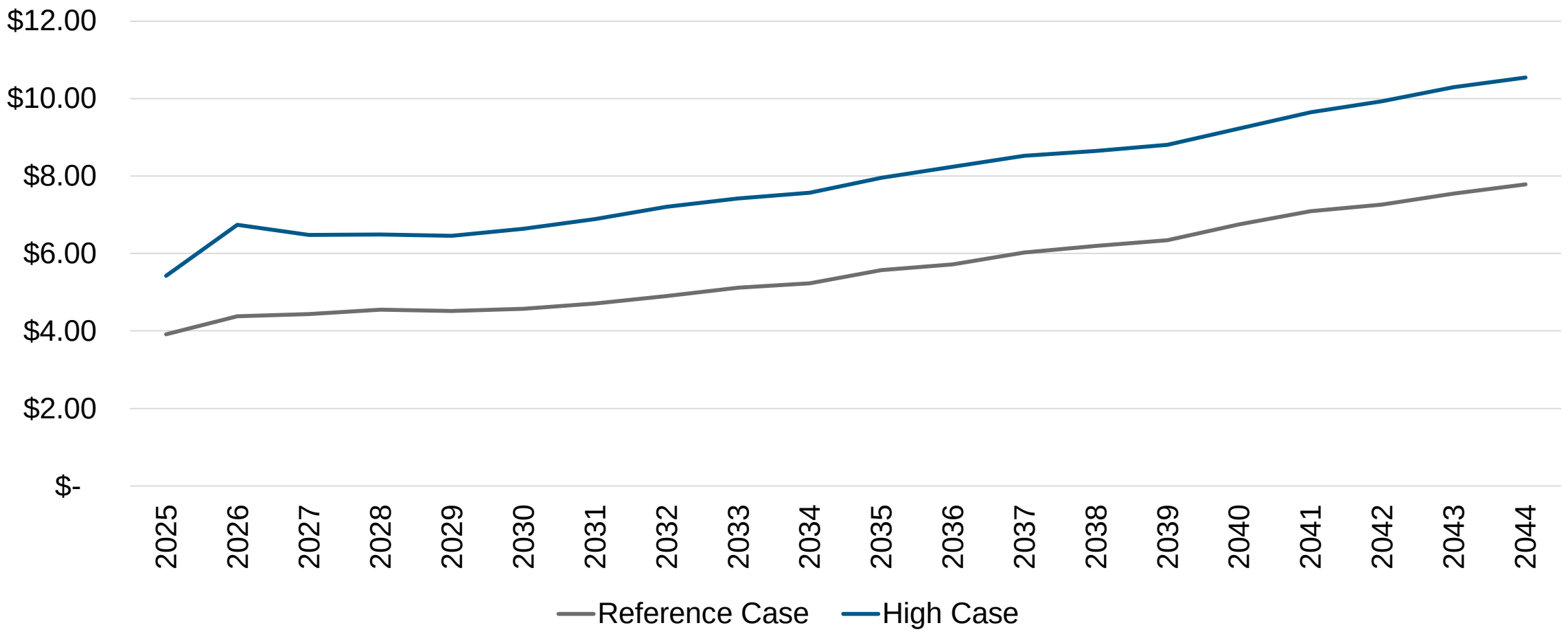
Natural Gas Price Forecast (nominal $/MMBtu)



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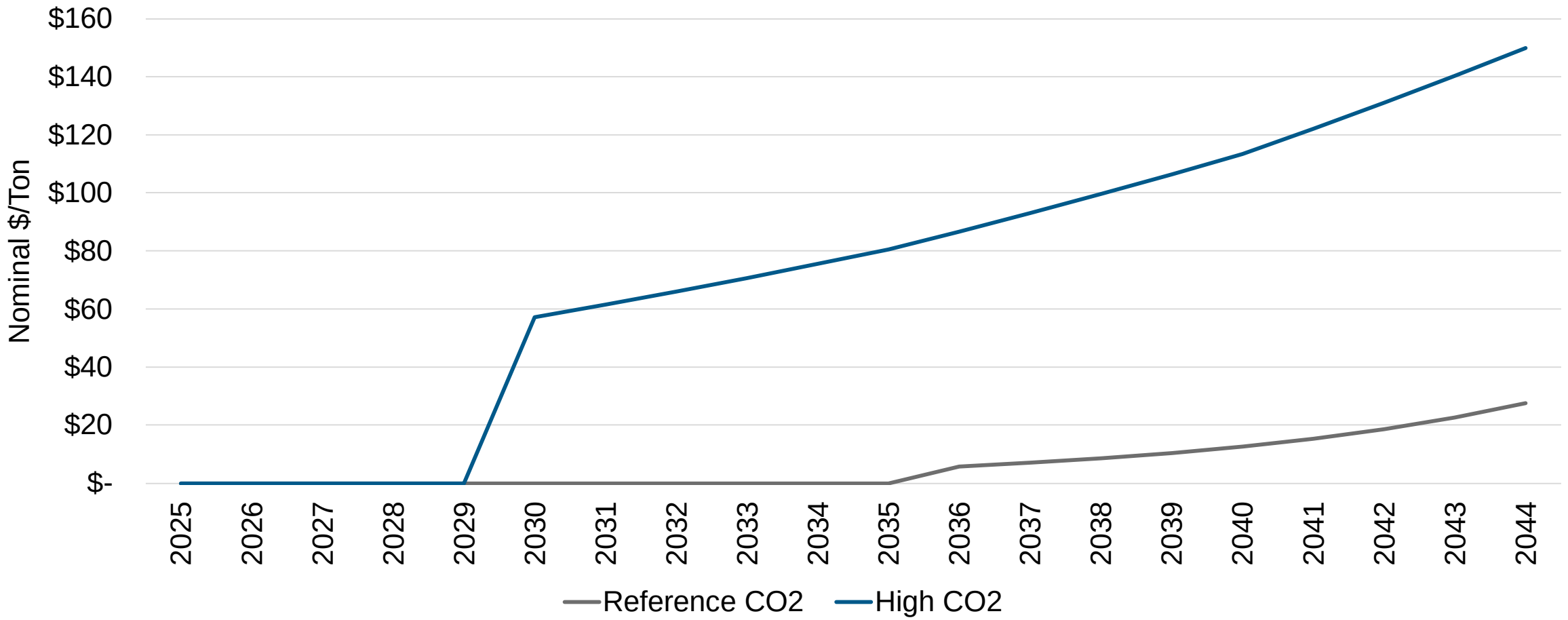
CO_2 Price Forecast (nominal $/ton)



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03

Planning Scenarios and Strategies

Planning Scenarios and Strategies

- **Planning Scenario** – Defined set of market outlooks consisting of key parameters not controlled by ENO or the Council (Macroeconomic)
- **Planning Strategy** – Defined set of resource constraints, regulatory policies, or business decision over which ENO, the Council, or Intervenors have control (Microeconomic or Policy Sensitivities; specific to New Orleans)
- Each Scenario combined with each Strategy results in one **Optimized Resource Portfolio**
- The 2024 IRP included three Planning Scenarios and four Planning Strategies which produced an initial set of **12 optimized portfolios**
- Two additional **Manual Portfolios** were developed to study specific drivers related to Union 1

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2024 IRP—Planning Scenarios

	Scenario 1 – Reference	Scenario 2 – Clean Air Act Section 111 Compliance	Scenario 3 – Stakeholder Scenario
Peak Load & Energy Growth	• Reference	• Reference	• High
Natural Gas Prices	• Reference	• Reference	• High
MISO Coal Deactivations[1]	• All ETR coal by 2030 • All MISO coal aligns with MTEP Future 2 (36 year life)	• All ETR coal by 2030 • All MISO coal by 2030	• All ETR and MISO coal by 2030
MISO Natural Gas CC Deactivations[1]	• 45 year life	• NGCC by 2035	• Deactivated by 2035
MISO Natural Gas Other Deactivations[1]	• 36 year life	• Steam gas EGUs by 2030	• Deactivated by 2035
Carbon Tax Scenario	• Reference Cost	• Reference Cost	• High Cost
Renewable Capital Cost	• Reference Cost	• Reference Cost	• Low Cost
Narrative	• Assumptions align with the 2024 Business Plan case. • Moderate amount of industrial growth forecasted which would drive the need for new development	• Entergy and utilities across MISO deactivate existing units early to be compliant with proposed changes to Clean Air Act Section 111(d) • New resources built would comply with proposed changes to 111(b)	• High energy growth from both industrial and residential sectors forecasted. • Renewable cost assumed to be low due to more efficient supply chain

1. See MISO Futures Report Series 1A for additional detail

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2024 IRP—Planning Strategies

	Strategy 1	Strategy 2	Strategy 3	Strategy 4
Description	Least Cost Planning	But For RCPS	RCPS Compliance	Stakeholder Strategy— Accelerated Grid Cleaning
Resource Portfolio Criteria and Constraints	Meet long-term Planning Reserve Margin (PRM) target using least-cost resource portfolio of supply and DSM resources	Include a portfolio of DSM programs that meet the Council's stated 2% goal and determine remaining needs	Include a portfolio of DSM programs that meet the Council's stated 2% goal and determine remaining needs in compliance with RCPS policy goals	800 MW of renewables by 2030, including 200 MW of BTM solar and 55 MW of IFOM Community Solar; high load growth driven by EVs and electrification
Objective	Assess demand- and supply-side alternatives to meet projected capacity needs with a focus on total relevant supply costs.	Design a portfolio that includes a set of potential DSM programs intended to meet the Council's stated 2% goal.	Design a portfolio that includes a set of potential DSM programs intended to meet the Council's stated 2% goal. Excludes new resources that would not be RCPS compliant.	Accelerate achievement of RCPS goals using local generation and PPAs to increase portfolio of solar, storage, and wind
DSM Input Case	WACC, Reference Case	WACC, 2% Program Case	WACC, 2% Program Case	Societal Discount Rate, High Case
Optimized Portfolio	Yes	Yes	Yes	No
Manual Portfolio	Early Deactivation of Union 1 in 2032 Early Deactivation of Union 1 in 2035	N/A	N/A	Yes

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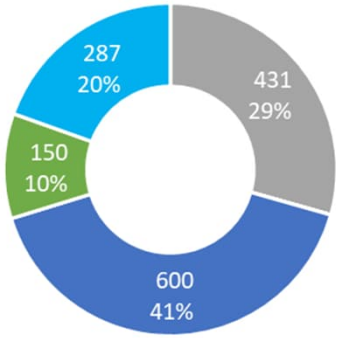
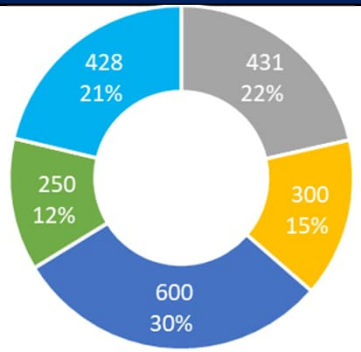
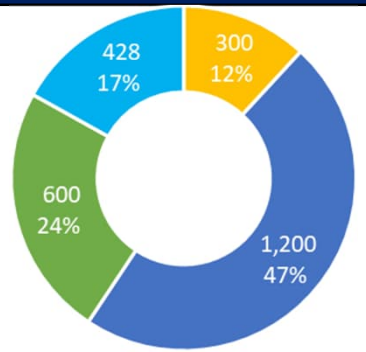
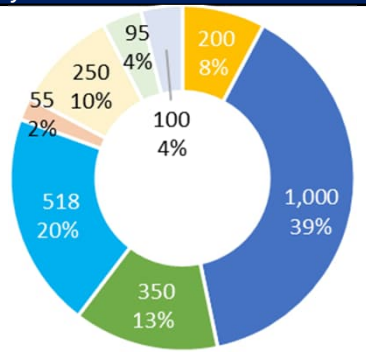
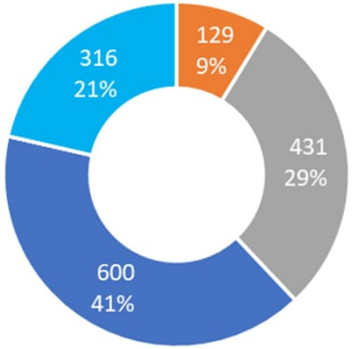
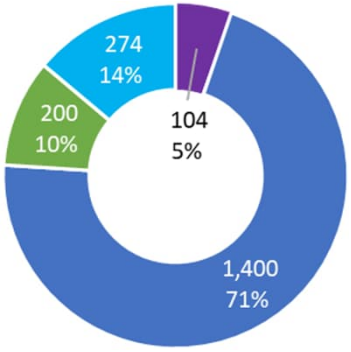
Portfolio Optimization and Total Relevant Supply Cost Analysis

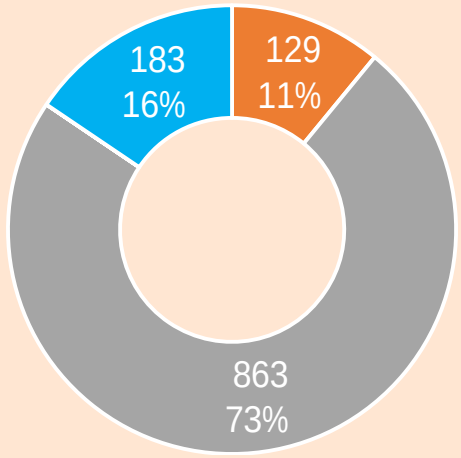
Scenario 1 Capacity Expansion Results *(Reference) ICAP MW / %*

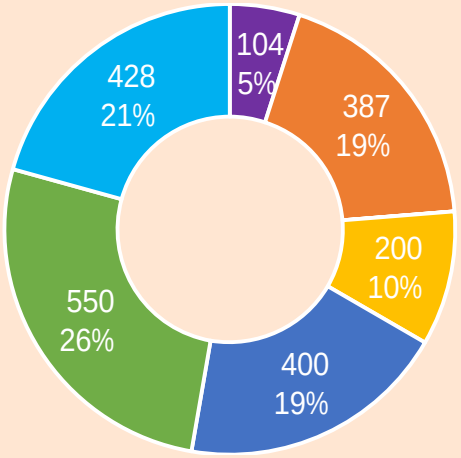
	Strategy 1 Least Cost Planning DSM Optimized All Resources Available	Strategy 2 But for RCPS 2% DSM Program Forced in All Resources Available	Strategy 3 RCPS Compliance 2% DSM Program Forced in Only Renewable Resources Available	Strategy 4 Stakeholder Strategy Societal High DSM Program Forced In 500 MW Renewables Block Forced In Only Renewable Resources Available
Optimized Portfolios				
Manual Portfolio 1a: 2032 Union 1 Deactivation				Manual Portfolio
Manual Portfolio 1b: 2035 Union 1 Deactivation				

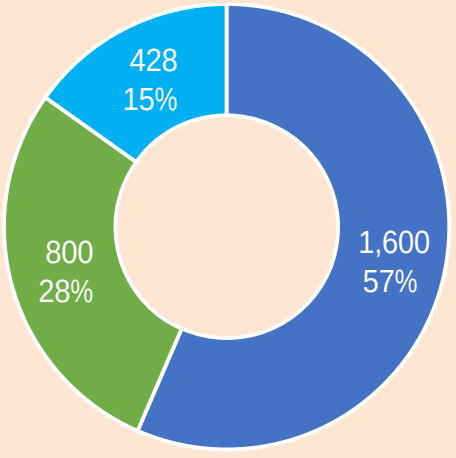
ENO Capacity Expansion Results

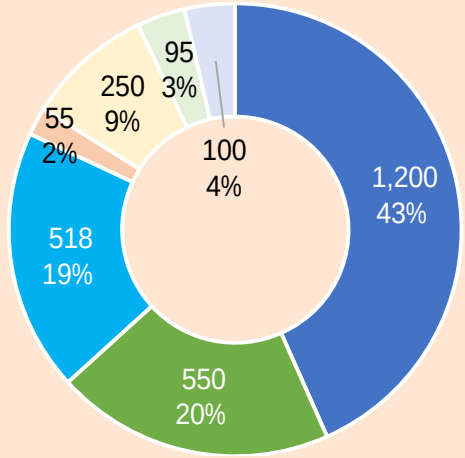
Scenario 2 (Clean Air Act Section 111 Compliance), ICAP MW / %

Scenario 2: CAA Compliance Reference Gas Reference Demand Reference CO2	Strategy 1 Least Cost Planning DSM Optimized All Resources Available	Strategy 2 But for RCPS 2% DSM Program Forced in All Resource Available	Strategy 3 RCPS Compliance 2% DSM Program Forced in Renewable Resource Available	Strategy 4 Stakeholder Accelerated Grid Cleaning Societal DSM Program Forced in Renewable Resource Available









Aeroderivative CT | RICE | Frame CT | Solar | Wind | Battery | DSM | Forced Community Solar | Forced Utility Solar | Forced Battery | Forced Wind

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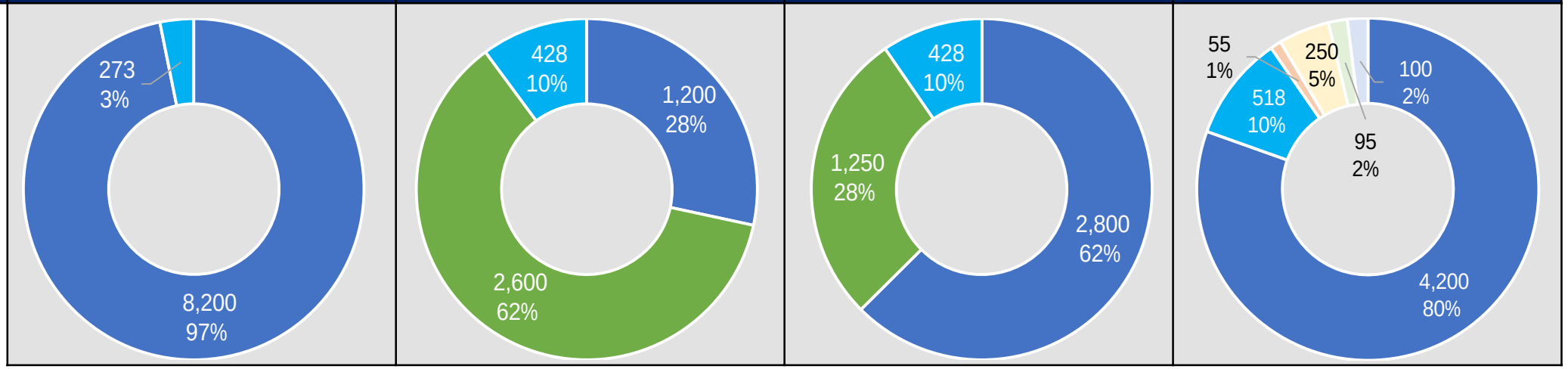
*All capacity stated in ICAP

ENO Capacity Expansion Results

Scenario 3 (Stakeholder Scenario), ICAP MW / %

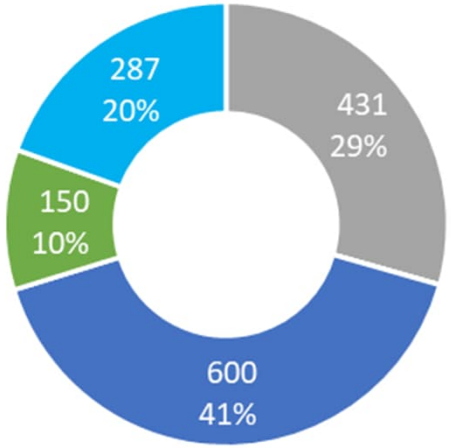
Scenario 3: Stakeholder High Gas High Demand High CO2	Strategy 1 Least Cost Planning DSM Optimized All Resources Available	Strategy 2 But for RCPS 2% DSM Program Forced in All Resource Available	Strategy 3 RCPS Compliance 2% DSM Program Forced in Renewable Resource Available	Strategy 4 Stakeholder Accelerated Grid Cleaning Societal DSM Program Forced in Renewable Resource Available



*All capacity stated in ICAP

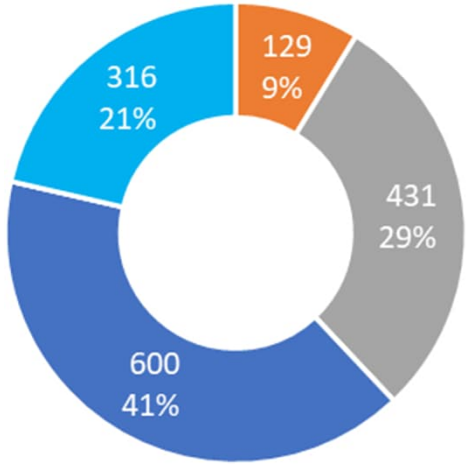
Downselected Portfolios

Strategy 1/Scenario 1 Least Cost Planning



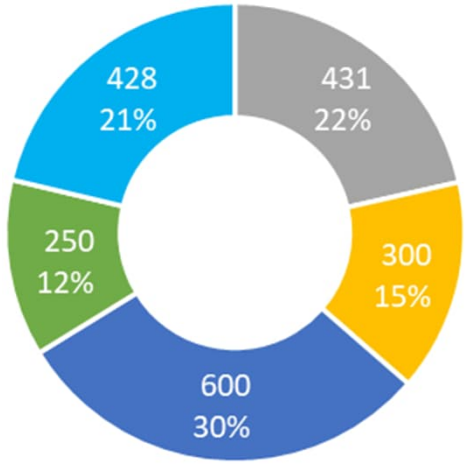
Resource	Year	Capacity MW
DSM	2025 – 2044	287
Wind	2025	200
Battery	2033	50
Wind	2035	400
Frame CT	2041	431
Battery	2042	50
Battery	2043	50

Strategy 1/Scenario 1 Manual Portfolio 1b



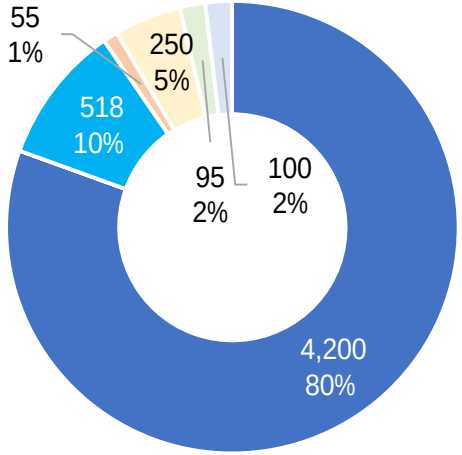
Resource	Year	Capacity MW
DSM	2025 – 2044	274
Battery	2033	50
Wind	2035	1,400
Battery	2035	100
Battery	2036	50
Aeroderivative CT	2041	104

Strategy 2/Scenario 1 But For RCPS



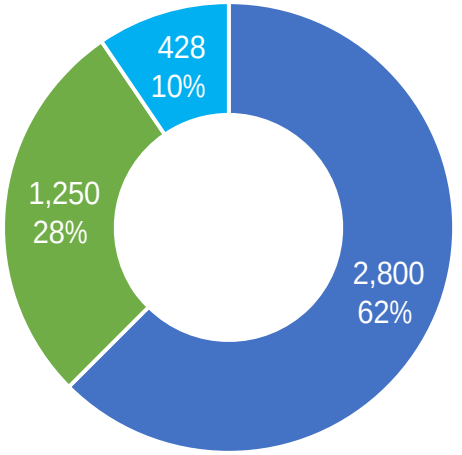
Resource	Year	Capacity MW
DSM	2025 – 2044	428
Battery	2029	200
Wind	2035	600
Frame CT	2041	431
Battery	2041	50
Solar	2042	100
Solar	2043	100
Solar	2044	100

Strategy 4/Scenario 2 Stakeholder Strategy



Resource	Year	Capacity MW
DSM	2025 – 2044	518
Forced Community Solar	2026	10
Forced Community Solar	2027	15
Forced Community Solar	2028	15
Forced Utility Solar	2028	125
Forced Community Solar	2029	15
Forced Utility Solar	2029	125
Forced Wind	2029	100
Forced Battery	2029	95
Wind	2035	800
Battery	2035	500
Wind	2037	200
Wind	2041	200
Battery	2043	50

Strategy 3/Scenario 3 RCPS Compliance



Resource	Year	Capacity MW
DSM	2025 – 2044	428
Battery	2028	50
Battery	2029	50
Battery	2030	50
Battery	2032	1,100
Wind	2032	400
Wind	2033	2,400

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Total Relevant Supply Costs

	Scenario 1	Scenario 2	Scenario 3
Strategy 1/Scenario 1 (Least Cost Planning)	$1,227	$1,552	$1,951
Strategy 1/Scenario 1 (Manual Portfolio 1b)	$1,207	$1,232	$1,645
Strategy 2/Scenario 1 (But For RCPS)	$1,347	$1,703	$2,034
Strategy 4/Scenario 2 (Stakeholder Strategy)	$1,793	$2,175	$2,362
Strategy 3/Scenario 3 (RCPS Compliance)	$988	$1,316	$808

Note: Shading indicates Scenario under which portfolio was originally optimized/developed.

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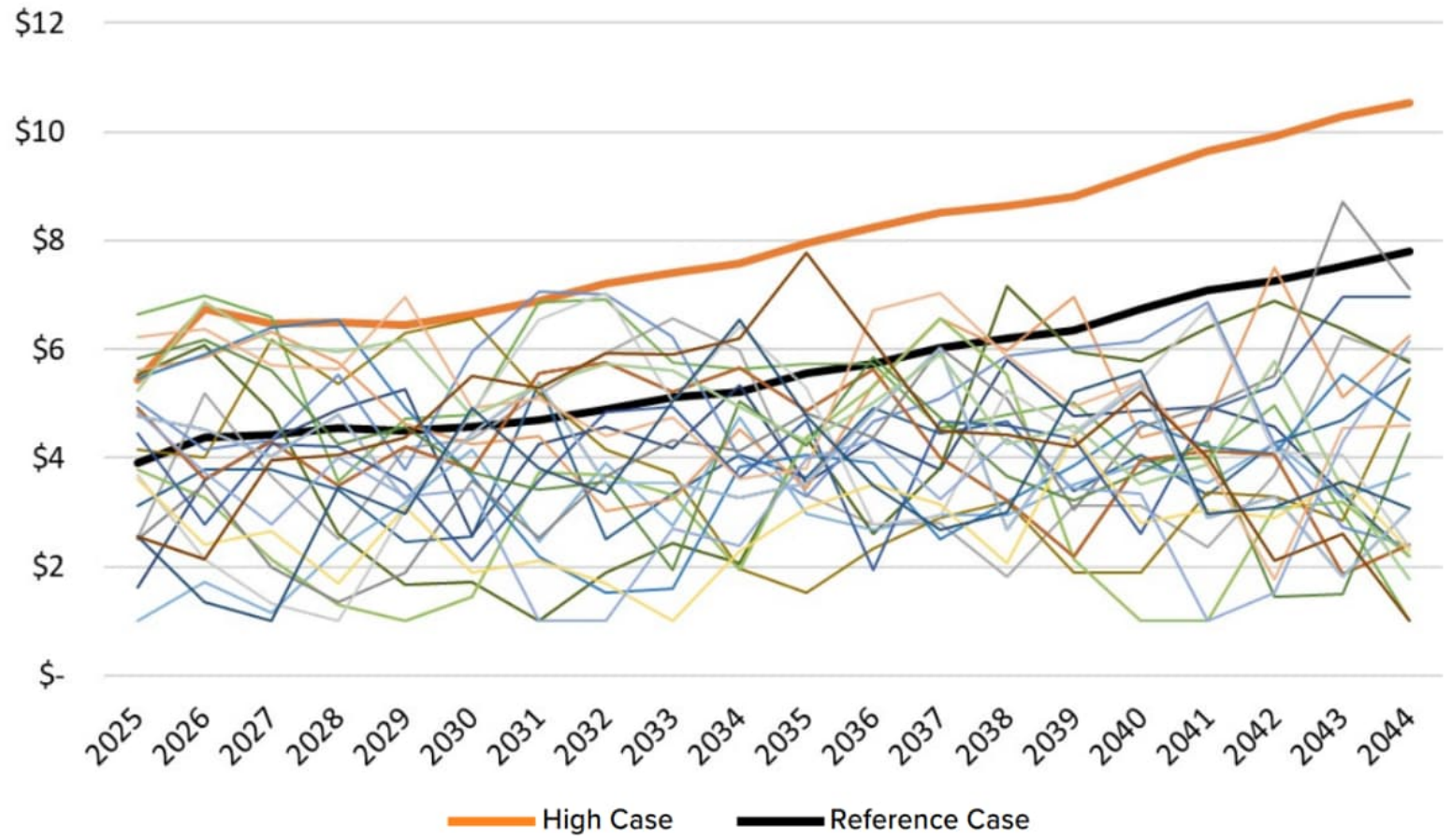
05 Stochastic Analysis

Stochastic Results – Annual Henry Hub Gas Price ($/MMBtu)



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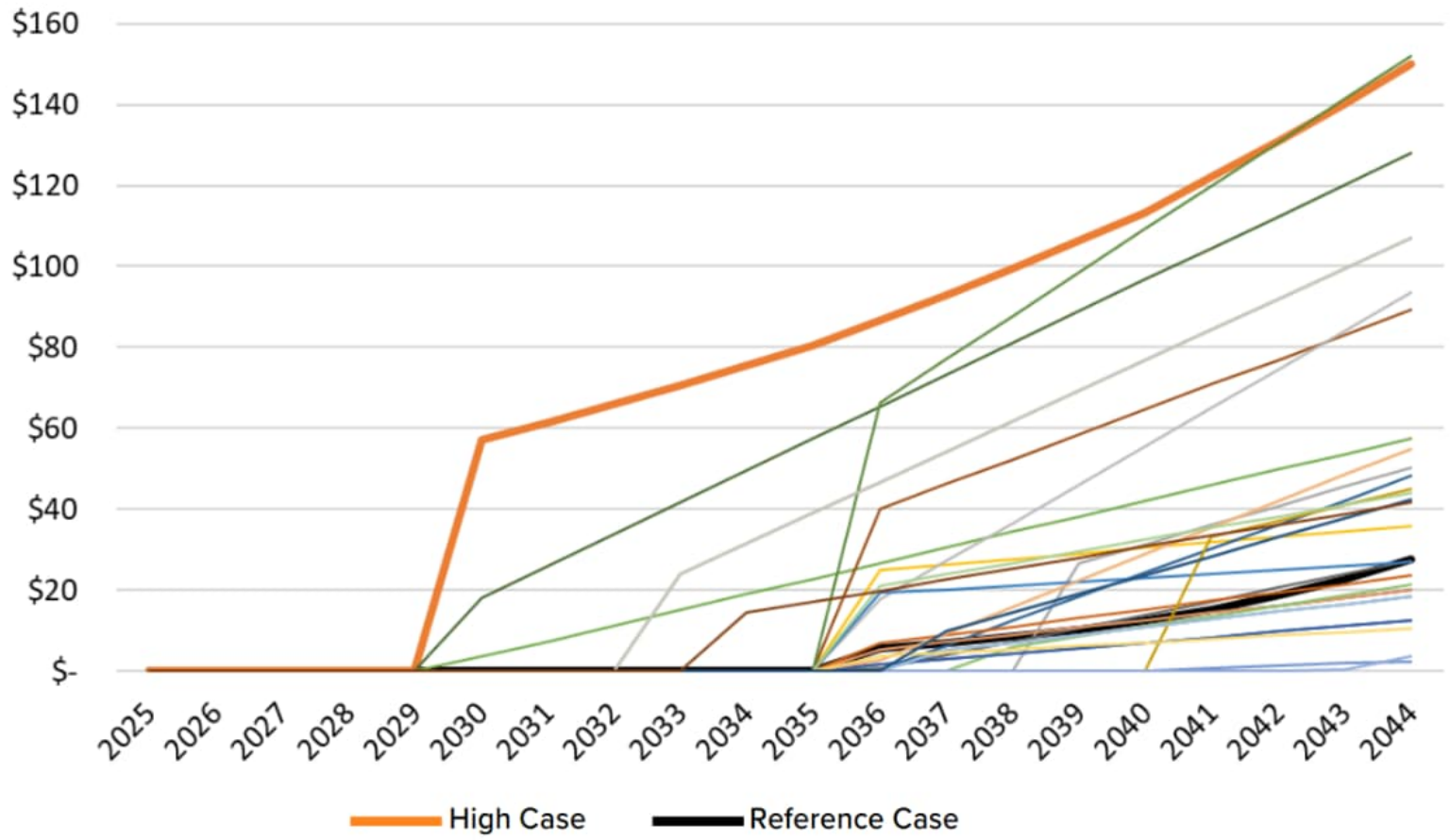
Stochastic Results – Annual CO2 Emission Price ($/ton)



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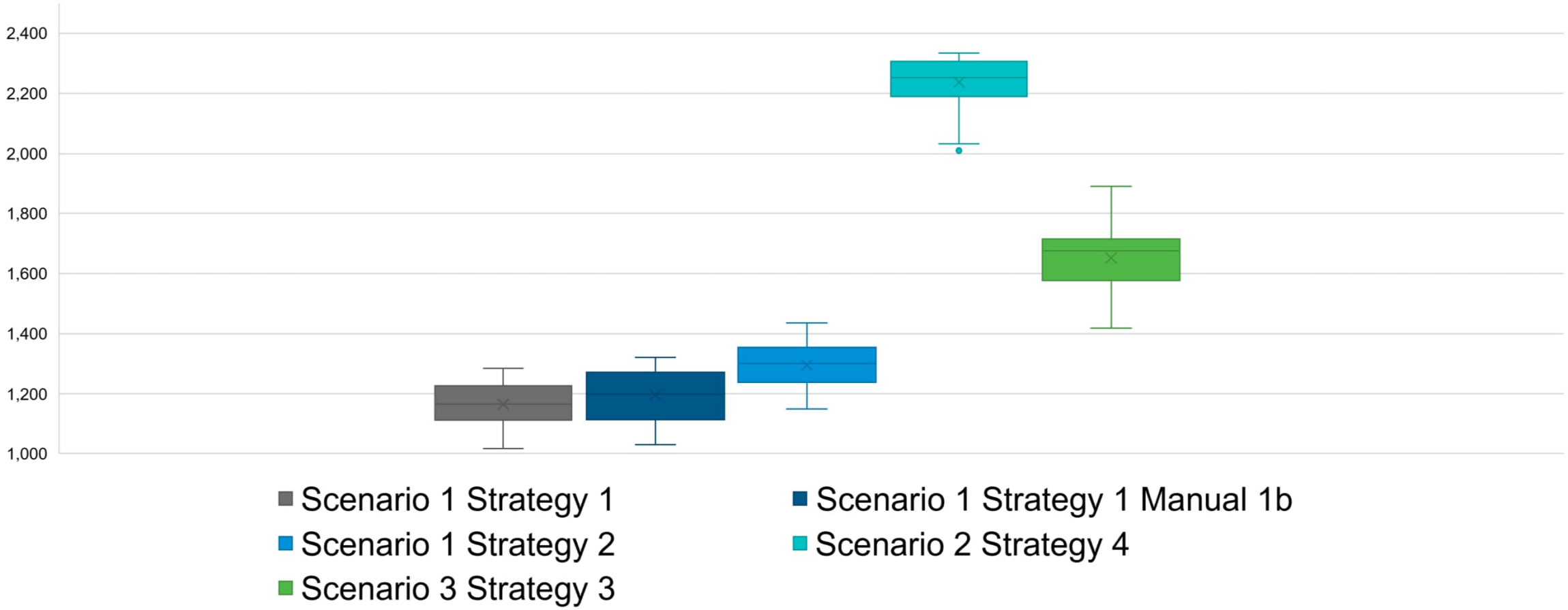
Stochastic Results – Variable Supply Cost



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Action Plan

2024 IRP Action Plan

Description	Action to be taken
RCPS Compliance Plan	ENO will develop and file its three-year RCPS compliance plan for 2026-2028
DSM/DR Program Implementation	File Implementation Plan for Energy Smart Program Years 16-18 as required by Resolution R-23-254 and work with the Advisors and Stakeholders towards Council review and approval.
Bring Your Own Battery (BYOB) Demand Response Pilot Expansion	ENO will pursue continuation of the BYOB DR pilot that was conducted in 2023 and 2024 and seek further expansion of the program through the DER Programs docket (UD-24-02).
System Resiliency and Storm Hardening Plan	Building on the resilience projects approved through Resolutions R-24-73 and R-24-625, ENO will develop plans detailing additional investments and projects to support further system resiliency and storm hardening
DER Programs docket (UD-24-02)	Actively participate in docket to help shape policy and program outcomes
Community Solar rulemaking (UD-18-03)	Continue active participation to help shape policy, rules, and processes for program administration.
Federal Funding	Identify and pursue additional opportunities for available federal grants and/or loans to support utility infrastructure projects and reduce project costs.

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Key Takeaways from the 2024 IRP Report

Deferred Capacity Need—The timing of capacity needs varied based on the Scenario and Strategy constraints imposed but generally didn't arise until the mid-2030s.

Future Resources—The amounts and types of resources best suited to fill identified capacity needs varied significantly in the IRP analysis based on the assumptions for the Planning Scenario and Strategy under which the portfolios were developed.

Continued Operation of Union 1—The analysis indicates future IRPs should continue to assess operation of Union 1 through its assumed 2041 deactivation date.

Source for Energy Smart plan—The programs identified in the 20-year DSM potential study will be valuable inputs to the Program Year 16-18 implementation plan that will be filed later in 2025.

Reference for Council's Renewable and Clean Portfolio Standard (RCPS)—ENO will file its 2026-2028 RCPS compliance plan as required by the Council's rules and use the designated IRP portfolio costs as its evaluation baseline.

General Resource Planning Tool—The comparative value of this IRP report comes from considering the different inputs, assumptions, and risk sensitivities of each Portfolio as a guide for the future, not from focusing on the costs of one Portfolio versus another. Actual costs in the future will be driven by resource certifications and DSM implementations that rely on then-current market costs.

Action Plan—Focus on initiatives that support Council policy goals and customer sustainability such as renewable and clean energy options, electric vehicles, and resilience.

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07 Question and Answer Period

Questions/Answers

Questions will be accepted through the Q/A Portal on the ENO 2024 IRP website through February 5, 2025. Answers will be provided on a rolling 10 day basis.

Link to the ENO 2024 IRP website: https://www.entergy-neworleans.com/irp/2024/.

08 Next Steps

Timeline

Event	Current Deadline	Status
Public Meeting #1	August 23, 2023	✓
Technical Meeting #1	November 9, 2023	✓
DSM Potential Studies Due	February 1, 2024	✓
Mardi Gras	February 13, 2024	✓
Stakeholders provide their Scenario and Strategy	Before Technical Meeting 2	✓
Technical Meeting #2—Discuss Final ENO and Stakeholder Scenarios and Strategies	February 29, 2024	✓
Deadline for Council policies to be included in optimization	April 15, 2024	✓
Technical Meeting #3—Finalize Scenarios and Strategies and DSM Input Case Assignments; DSM input files for modeling due; initial Scorecard discussion	May 7, 2024	✓
IRP Inputs Finalized	**May 17, 2024**	✓
Complete portfolio development and results; circulate portfolios and workpapers to Parties	September 6, 2024	✓
Technical Meeting #4—Downselection of portfolios for cross testing; finalize scorecard; initial discussion of Energy Smart budgets and goals	October 2, 2024	✓
2024 IRP Report filed	**December 13, 2024**	✓
Public Meeting #2 (ENO Presents)	January 21, 2025	
Public Meeting #3 (Council receives public comment)	February 26, 2025	
Technical Meeting #5—Energy Smart PY16-18 programs and implementation plan	February 18-28, 2025	
Mardi Gras	March 4, 2025	
Intervenor Comments on Final IRP	March 10, 2025	
ENO Reply Comments	April 28, 2025	
Advisor Report	June 2, 2025	
Energy Smart Implementation Plan Filing for PY 16-18	June 16, 2025	

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