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October 26, 2023

Via Electronic Delivery
Ms. Lora W. Johnson, CMC, LMMC
Clerk of Council
Council of the City of New Orleans
Room 1E09, City Hall
1300 Perdido Street
New Orleans, LA 70112

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

Dear Ms. Johnson:

Entergy New Orleans, LLC ("ENO" or the "Company") respectfully submits the Presentation for Technical Meeting #1 in the above referenced Docket. As a result of the remote operations of the Council's office related to COVID-19, ENO submits this filing electronically and will submit the requisite original and number of hard copies once the Council resumes normal operations, or as you or the Council otherwise directs. ENO requests that you file this submission in accordance with Council regulations as modified for the present circumstances.

Should you have any questions regarding the above, I may be reached at (504) 576-4102. Thank you for your assistance with this matter.

Sincerely,

Leslie M. LaCoste

LML/jlc
Enclosures
cc: Official Service List (Public Version *via email)*

November 9, 2023

ENO 2024 IRP Technical Meeting #1

Docket UD-23-01

Goals and Agenda of Technical Meeting #1

As described in the Initiating Resolution (R-23-254), the main purpose of this meeting is for ENO, the Advisors, and Intervenors to discuss inputs, assumptions, Planning Scenarios, and Planning Strategies with a view towards reaching consensus on the Scenarios and Strategies to be used in developing the 2024 IRP. Scenarios and Strategies are to be finalized no later than at Technical Meeting #3.

- The Initiating Resolution notes several additional topics that will inform the discussion of Scenarios and Strategies, including the use of manual portfolios, the treatment of early resource retirements, and the parameters of energy-based analysis as an alternative to capacity-based optimization.
- ENO will facilitate a discussion on these topics and present its proposals for reference and alternative Planning Scenarios and its proposed least-cost and RCPS/Council Policy Planning Strategies.
- ENO expects that the Intervenors will elect to provide a Stakeholder Scenario and Strategy for the 2024 IRP, as they did for the 2021 cycle. To the extent the Intervenors have discussed the requested parameters of the Stakeholder Scenario and Strategy among themselves, they can present their initial designs.

Given the substance and detail involved in these topics, and the importance of ensuring all parties have the opportunity to participate in the discussions, an additional, interim Technical Meeting may be necessary between this one and Technical Meeting #2. If so, it will be scheduled as soon as practical.

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01

2024 IRP Planning Objectives and Analytical Framework

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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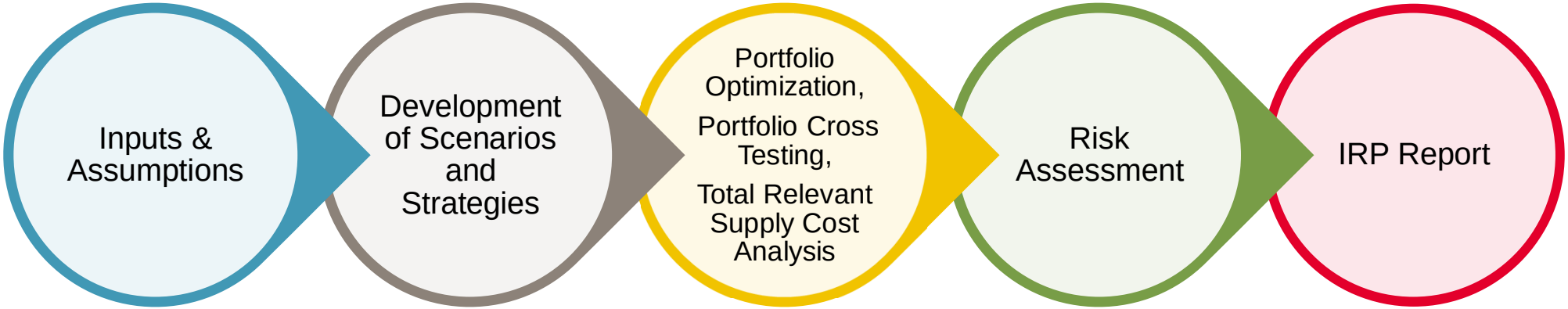
Path to the 2024 IRP Report



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Assessment of Portfolio Performance Across Scenarios

- Portfolios developed for each Scenario/Strategy combination will be tested across all other Scenarios to assess risk across key variables that differentiate the scenarios
- The total relevant supply cost of each of the Scenario/Portfolio combinations represents the present value of incremental fixed and net variable costs to customers
- IRP resolution requires additional risk assessment for identified least-cost portfolios to estimate P10/P50/P90 cost

Illustrative - actual scenarios and portfolio combinations TBD

Portfolios / Scenarios	Strategy 1 (Least Cost)	Strategy 2 (But For RCPS)	Strategy 3 (RCPS Compliance)
Scenario A	R_{A1}	R_{A2}	R_{A3}
Scenario B	R_{B1}	R_{B2}	R_{B3}
Scenario C	R_{C1}	R_{C2}	R_{C3}

Notes:
1. "R" refers to Long Term Capacity Expansion (LTCE) created portfolios for specific Scenario/Strategy combination
2. Colored entries illustratively represent proposed portfolios subject to cross-testing under all scenarios and additional risk assessment

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02

Inputs and Assumptions

Inputs and Assumptions

Reliability Need	Supply Side and Demand Side Resources	Economic & Financial
• Peak load and total energy load forecast w/ sensitivities • Long-term reserve margin requirements and MISO seasonal reserve margins • Capacity accreditation for thermal and non-thermal resources	• Existing fleet capability • Resource deactivation assumptions • Technology Assessment (capital and operating costs, performance) • Continued use of DSM	• Inflation rates • Discount rates • Fuel and emissions price forecasts (eg. gas, coal, nuclear, NOx, CO_2) • Federal tax credits • Capacity value

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2024 IRP Inputs and Assumptions

Input/Assumption	MISO Market Modeling	Portfolio Development	Total Relevant Supply Costs
Planning Scenarios	✓	✓	✓
Gas Price Forecast	✓	✓	✓
CO2 Price Forecast	✓	✓	✓
Load Forecast	✓	✓	✓
Planning Strategies		✓	✓
Capacity Value		✓	✓
Supply-Side Resource Alternative Costs		✓	✓
ENO's Long-Term Capacity Need		✓	✓
DSM Potential Study Results		✓	✓
Input Sensitivities			✓

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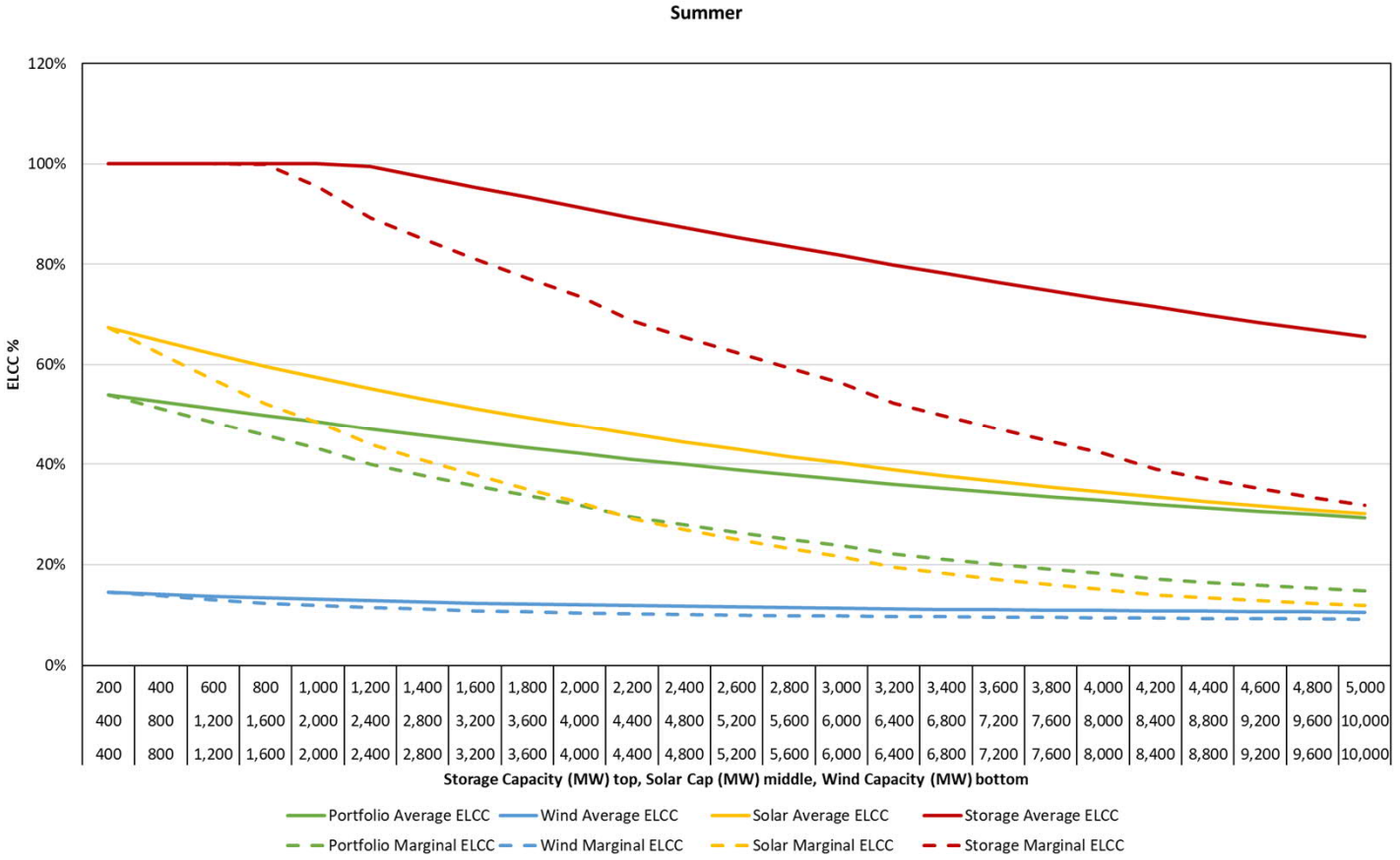
Effective Load Carrying Capability ("ELCC") Study

- Entergy engaged Astrapé consulting to perform a comprehensive ELCC study to inform IRP inputs
- Sample results for summer for a select portfolio of MISO South solar, wind, and four-hour storage are depicted below



Seasonal Accredited Capacity (SAC) for Thermal Resources

- Thermal resource accreditation is heavily based on historic unit availability during max gen events and other tight supply hours that occurred in the prior 3 years.
  - 80% of accreditation is based on availability during tight margin hours (Tier 2), 20% based on all other hours (Tier 1)
- Resource performance is measured by a resource's hourly real time offers, so planned outages (without a granted exemption) and forced outages will negatively impact a unit's accreditation.
- Generation resources with a lead time greater than 24 hours that are not online during tight supply hours will be considered unavailable during Tier 2 hours for accreditation purposes.
- The approved SAC methodology only applies to thermal resources. MISO is currently conducting a stakeholder process to develop a new non-thermal (wind, solar, battery, etc.) accreditation methodology.

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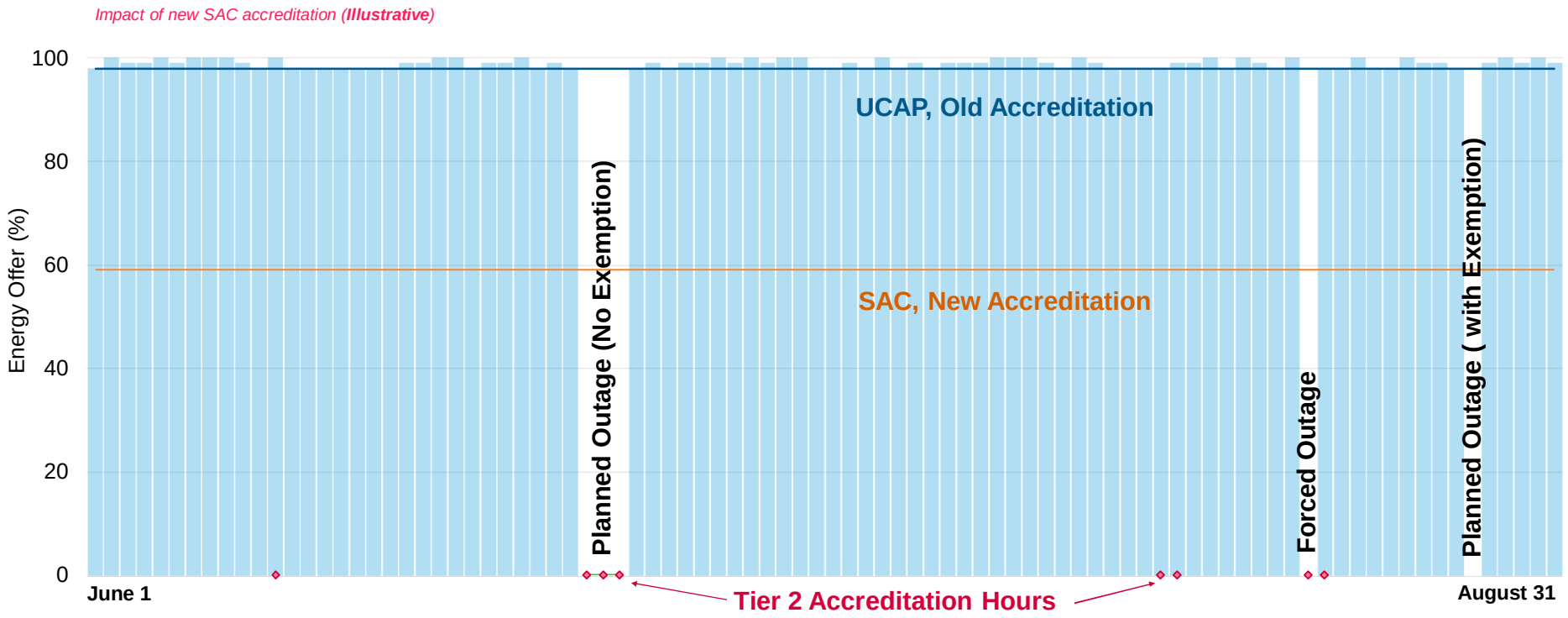
SAC vs UCAP - Example



UCAP is only impacted by forced outages
SAC is impacted by forced outages, derates, and non-exempt planned outages (80% weight on Tier 2 hours)

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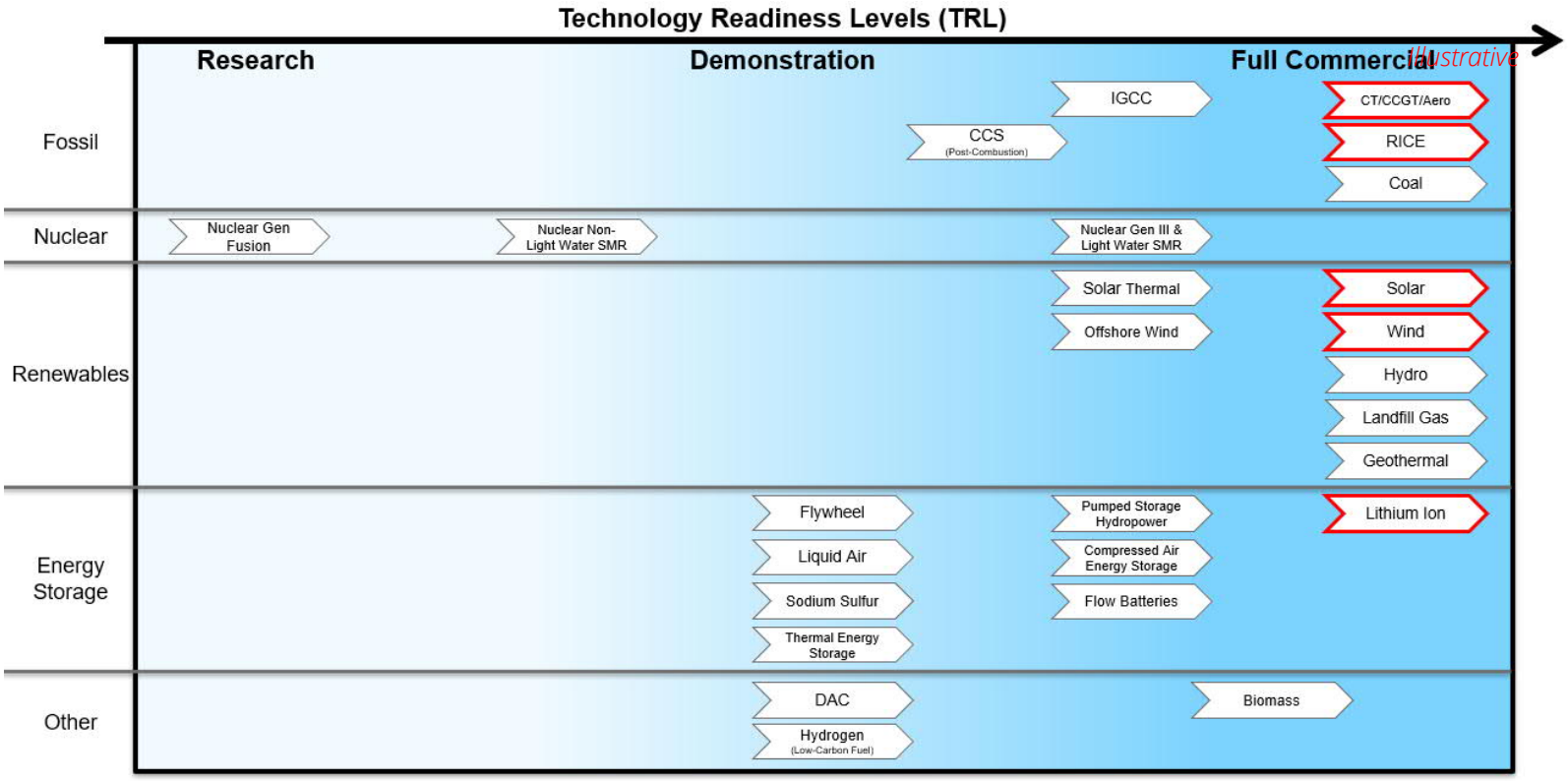
Resource Options

Illustrative Supply-Side Resource Alternatives

The technology evaluation includes:

- Survey supply side resource alternatives
- Retain subset of alternatives based on:
  - technology maturity
  - economics
  - reliability
  - environmental impact
  - geographic feasibility



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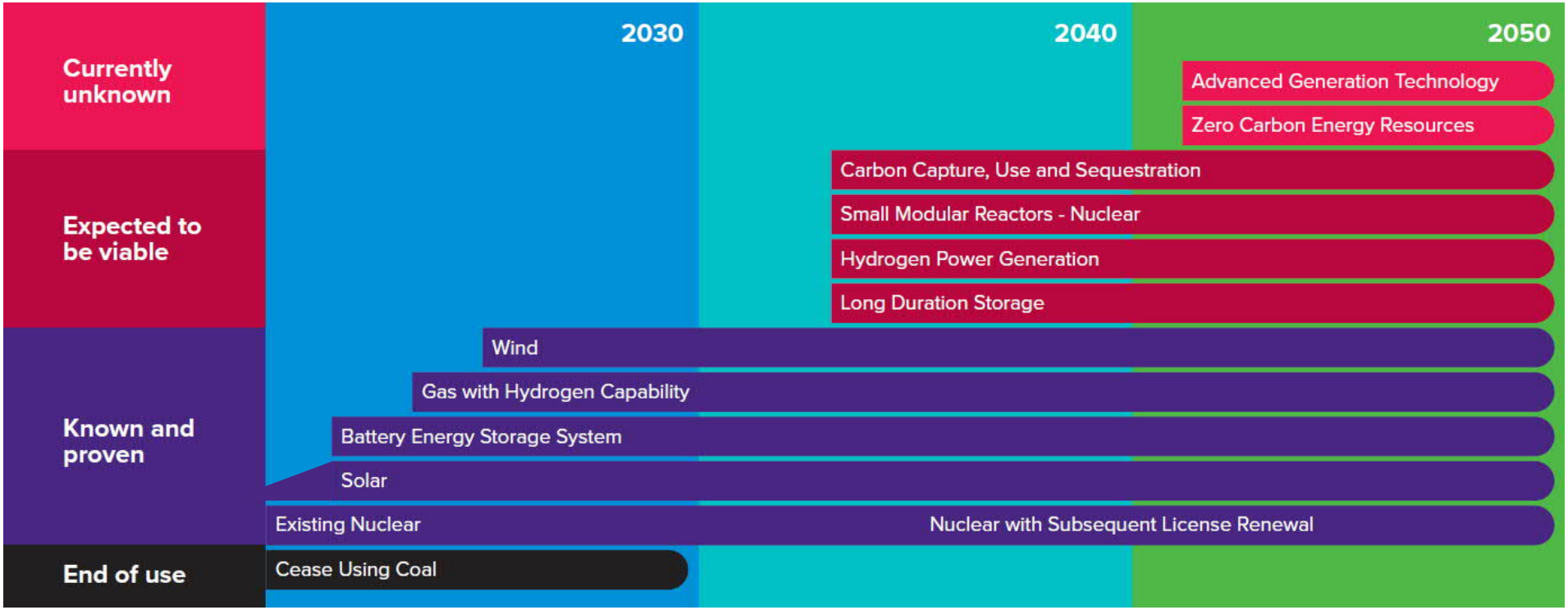
Illustrative pathway to zero carbon emissions

Technology evolution and integration assumptions



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Demand Side Management Potential Studies

- ENO has contracted with Guidehouse to develop its 2024 DSM Potential Study
  - Long term (2024-2043) EE and DR Potential in Orleans Parish
- Study results to be structured into input cases for use in Aurora
- ENO study to produce multiple input cases including one modeling potential to achieve the Council's 2% DSM savings goal
- Each input case will be run using two different discount rates to assess cost effectiveness:
  - ENO's after-tax WACC of 6.86%; and
  - A discount rate of 3.0% that aligns with the rate used by ADM Associates in its Societal Cost Test evaluation of the Energy Smart program
- To the extent feasible, DSM Studies will use BP2024 inputs
- Each Planning Strategy will require an assigned DSM Input Case
- DSM Studies due to be filed February 1, 2024

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04

ENO Proposed Planning Scenarios

Development of Planning Scenarios

In order to reasonably account for a broad range of uncertainty, the ENO IRP takes a scenario-based approach. In this approach, Planning Scenarios are developed that represent different combinations of outcomes of many variables and reasonably bookend the range of potential outcomes.

Major areas of uncertainty that are considered:

- Sales and load growth
- Customer usage trends
- Natural gas price trends
- Market unit life assumptions
- Federal tax credits
- Emissions price trends
- Generation capital cost forecasts
- MISO market reforms

For each scenario, the AURORA Capacity Expansion Model selects (i.e., outputs) a 20-year resource portfolio for each associated Planning Strategy that is economically optimal for ENO under that set of circumstances.

2024 IRP Proposed Planning Scenarios

	Scenario 1 – Reference	Scenario 2 – Clean Air Act Section 111 Compliance	Scenario 3 – For Stakeholder Consideration
Peak Load & Energy Growth	• Reference	• Reference	• High
Natural Gas Prices	• Reference	• Reference	• High
MISO Coal Deactivations	• 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 coal by 2030 • All MISO coal aligns with MTEP Future 3 (30 year life)
MISO Natural Gas CC Deactivations	• 45 year life	• NGCC by 2035	• 35 year life
MISO Natural Gas Other Deactivations	• 36 year life	• Steam gas EGUs by 2030	• 30 year life
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

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05

ENO Proposed Planning Strategies

2024 IRP Proposed Planning Strategies

	Strategy 1	Strategy 2	Strategy 3	Strategy 4
Description	Least Cost Planning	But For RCPS	RCPS Compliance	Stakeholder Strategy
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	TBD
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.	TBD
DSM Input Case	Reference Case	2% Program Case	2% Program Case	TBD
Manual Portfolio	TBD	TBD	TBD	TBD
Sensitivity	TBD	TBD	TBD	TBD

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Supplemental Analysis to Capacity Expansion Optimization

Manual Portfolios and Sensitivity Cases

- Early Unit Retirements
- Policy Goal Achievement (e.g., RCPS)

Energy-based Analysis

06 Timeline

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 20-March 1, 2024	
Deadline for Council policies to be included in optimization	April 15, 2024	
Technical Meeting #3—Finalize Strategies and DSM Input Case Assignments; DSM input files for modeling due; initial Scorecard discussion	May 1-May 14, 2024	
Technical Meeting #4—Downselection of Portfolios for Cross Testing; finalize Scorecard; initial discussion of Energy Smart budgets and goals	September 23-October 4, 2024	
2024 IRP Report filed	**December 13, 2024**	
Public Meeting #2 (ENO & SPO Present)	January 21-31, 2025	
Public Meeting #3 (Council receives public comment)	February 18-28, 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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