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September 18, 2024

Via Electronic Delivery
Clerk of Council
City Hall, Room 1E09
1300 Perdido Street
New Orleans, Louisiana 70112

Re: CNO Docket No. UD-23-01 (2024 Triennial IRP)

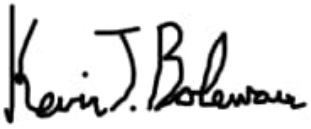
Dear Clerk:

Attached please find Entergy New Orleans, LLC's ("ENO") Slide Deck for Technical Meeting #4 that is scheduled for Wednesday, October 2, 2024, at 10:00 a.m.

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 direct. ENO requests that you file this submission in accordance with Council regulations as modified for the present circumstances.

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

Sincerely,



Kevin T. Boleware

Enclosures

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

October 2, 2024

ENO 2024 IRP
Technical Meeting #4

Docket UD-23-01

Goals and Agenda of Technical Meeting #4

Goals

The Initiating Resolution (R-23-254) contemplates several goals for this Technical Meeting:

- Review and discuss the Optimized Resource Portfolios selected through the Aurora capacity expansion modeling and reach consensus on the subset of portfolios to be carried through the total supply cost analysis and cross testing;
- Finalize the scorecard metrics presented at Technical Meeting #3; and
- Engage in an initial discussion regarding Energy Smart Program Years 16-18 (2026-2028).

Agenda

1. Optimized Resource Portfolio Discussion and Downselection
2. Risk Assessment Discussion
3. Scorecard Metrics Discussion
4. Energy Smart PY 16-18 Program Discussion
5. Timeline and Next Steps

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Technical Meeting #3 (5/7/24)—Follow Ups

- Parties had further discussions regarding the parameters of the Stakeholder Strategy
- On 5/13/24, ENO proposed updates to the composition of the 500 MW Renewables Block required by the Stakeholder Strategy
- On 5/16/24, Greg Nichols from the City's Office of Resilience and Sustainability submitted a letter confirming that the proposed updates were acceptable to the Intervenors
- As required by the Initiating Resolution, the Planning Scenarios, Planning Strategies, and IRP Inputs were all finalized on 5/17/24
- ENO circulated the results of the Aurora modeling and initial total supply costs on 9/6/24

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01 Optimized Resource Portfolio Discussion and Downselection

2024 IRP—Planning Scenarios (Finalized 5/17/24)

	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 (Finalized 5/17/24)

	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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Capacity Expansion– Process and Observations

- For each Scenario and Strategy combination, portfolios are created in Aurora capacity expansion using constraints and assumptions
- Three Scenarios and four Strategies produced twelve optimized portfolios, plus two manual portfolios created under Scenario 1 / Strategy 1
- Stakeholders work together to narrow down the fourteen portfolios created in capacity expansion to no more than five to be cross-tested across the three Scenarios
  - Limiting to five necessary to maintain the IRP schedule
- The objective of portfolio downselection for cross-testing is to identify a diverse, representative range of potential portfolios, which when tested across each of the Scenarios will provide more information regarding how portfolios' total supply costs change under the different assumptions of the three Scenarios
- Portfolios incorporate combinations of renewables, storage, and DSM, with fossil resources selected in some cases

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Portfolios proposed for downselection

- **Scenario 1 / Strategy 1** represents least cost planning with reference assumptions, including the current assumed deactivation of Union 1 in 2041.
- **Scenario 1 / Strategy 1, Manual Portfolio 1b** represents least cost planning with reference assumptions and an acceleration of the deactivation of Union 1 to 2035.
- **Scenario 1 / Strategy 2** provides an optimized portfolio with reference assumptions and a mix of different resource types.
- **Scenario 2 / Strategy 4** forces in solar, wind, and battery storage (500 MW total) by 2030 and DSM programs.
- **Scenario 3 / Strategy 3** provides a renewable-only resource selection with a mix of wind and battery capability. This portfolio selects the largest amount of capability given the high demand Scenario.

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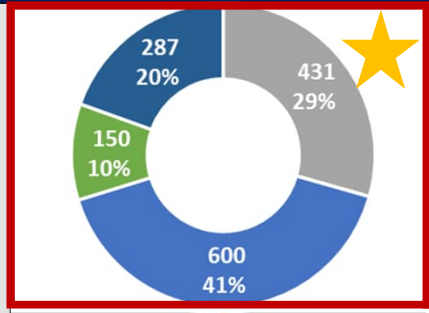
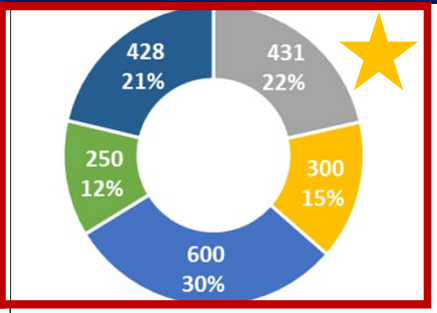
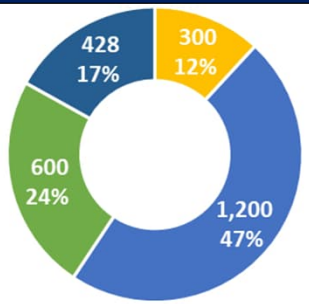
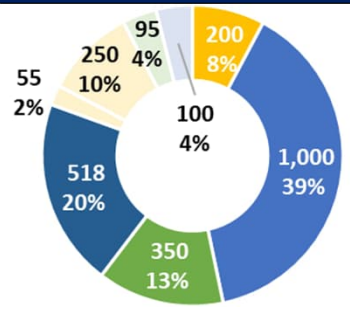
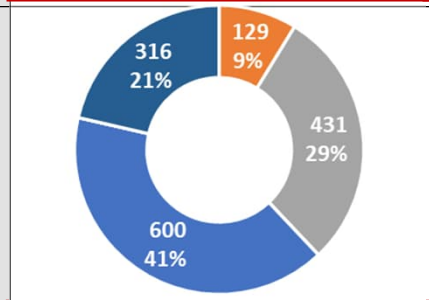
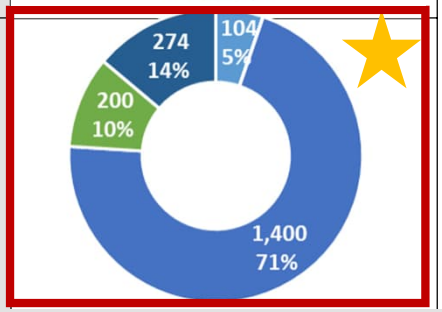
Scenario 1 (Reference) (ICAP MW)

	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				

Proposed portfolios for cross testing

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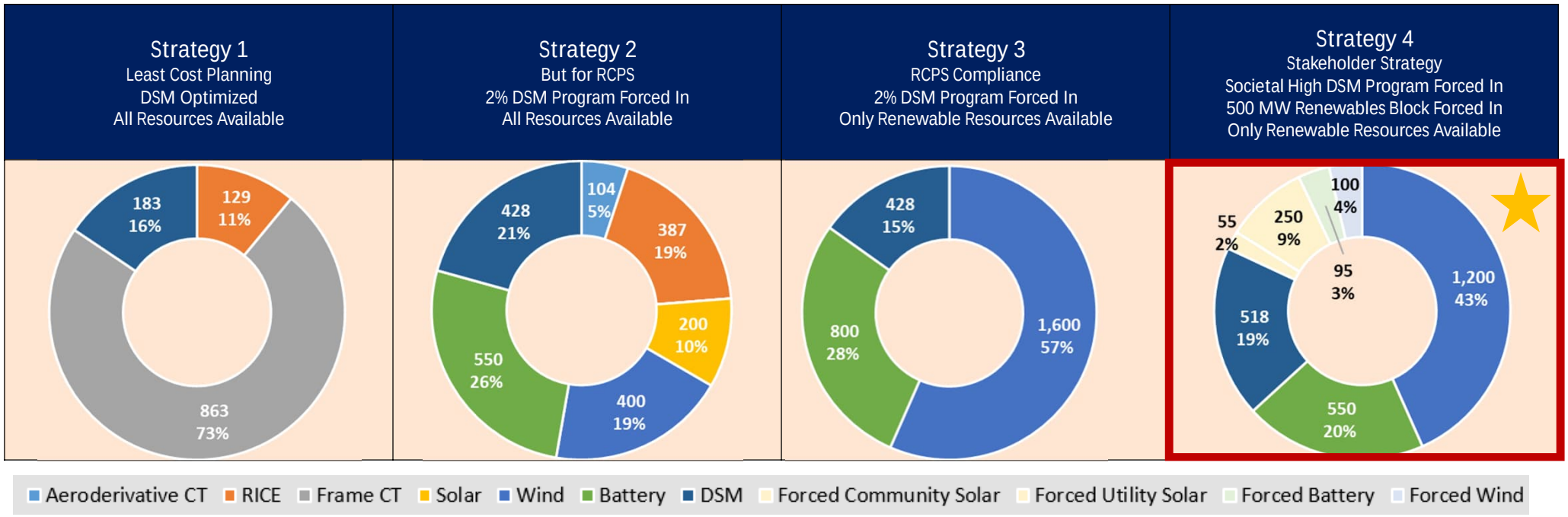
Aeroderivative CT | RICE | Frame CT | Solar | Wind | Battery | DSM | Forced Community Solar | Forced Utility Solar | Forced Battery | Forced Wind

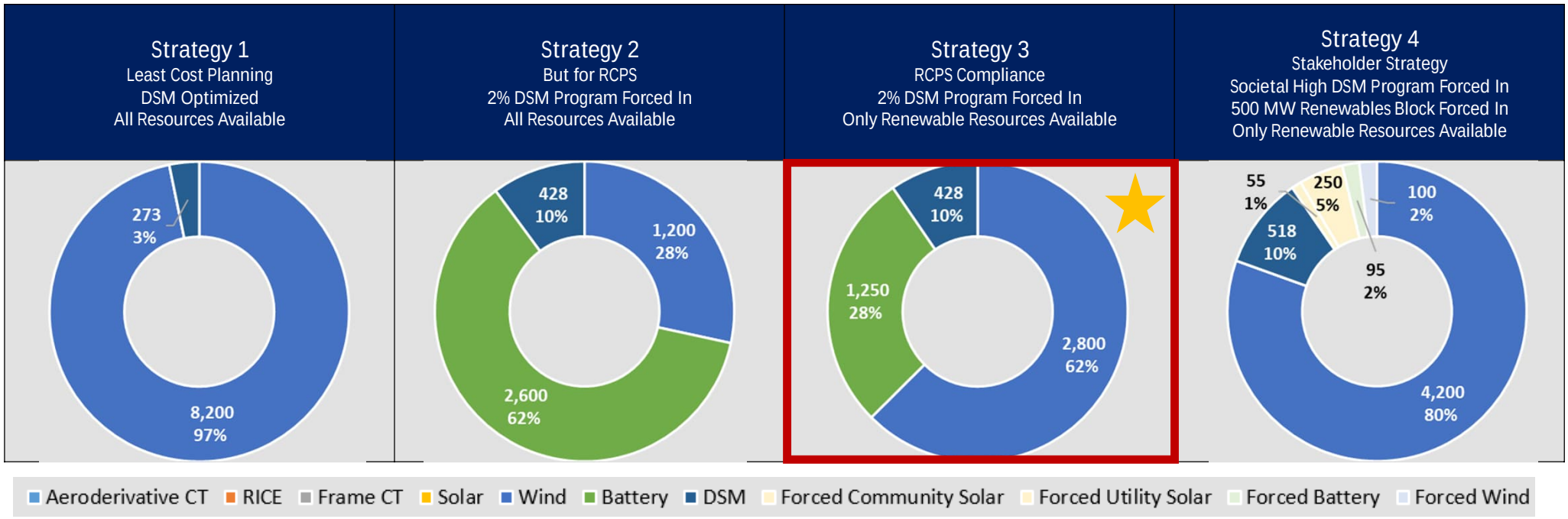
Scenario 2 (Clean Air Act Section 111 Compliance) (ICAP MW)



Proposed portfolios for cross testing

*All capacity stated in ICAP

Scenario 3 (Stakeholder Scenario) (ICAP MW)

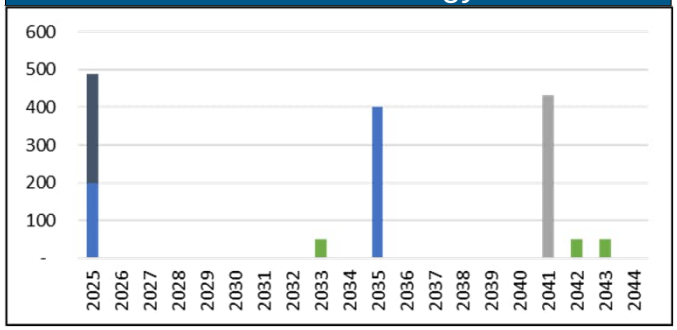


Proposed portfolios for cross testing

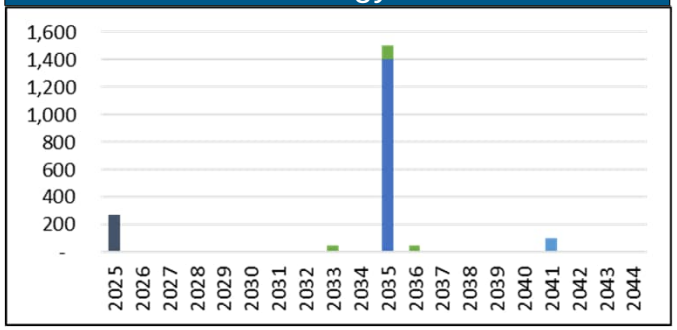
*All capacity stated in ICAP

Portfolios Proposed for Downselection - Build Timeline (ICAP MW)

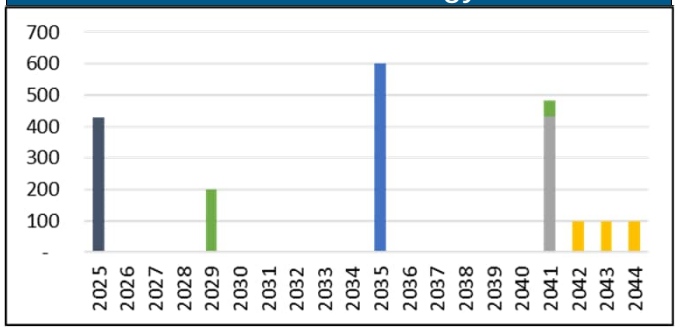
Scenario 1 Strategy 1



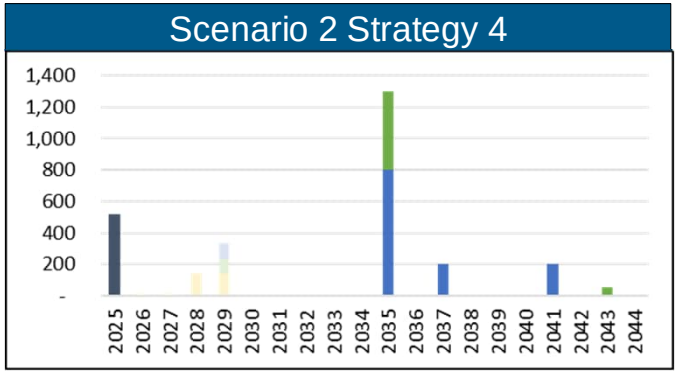
Scenario 1 Strategy 1 Manual 1b



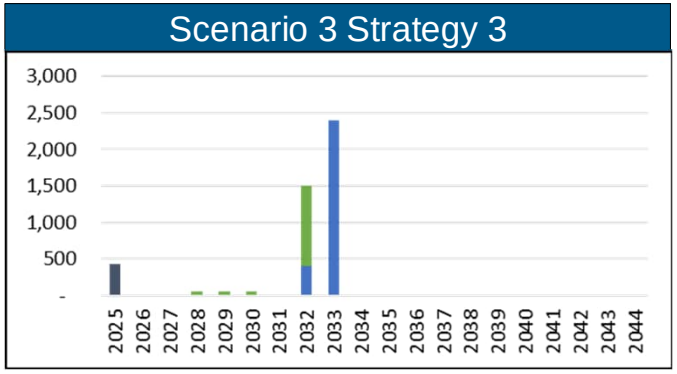
Scenario 1 Strategy 2



Scenario 2 Strategy 4



Scenario 3 Strategy 3



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

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02 Risk Assessment

Stochastic Analysis

The stochastic risk assessment gives an indication of the variability of a Portfolio's costs as underlying assumptions change.

The Company proposes performing the stochastic analysis on gas price & CO2 price assumptions for all of the proposed portfolios for downselection on Slide 7.

03

Proposed Scorecard Metrics

Scorecard Parameters and Descriptions

Utility Cost (Portfolio optimization in AURORA model)	
Expected Value	The average total relevant supply cost of Portfolios across Scenarios and relative to other optimized Portfolios (all Scenarios are weighted equally)
Utility Costs Impacted on ENO's Revenue Requirements	
Net present Value of Revenue Requirements	The Total Relevant Supply Cost of the Portfolio in the Scenario in which it was optimized
Nominal Portfolio Value (residential./other customer classes)	A sum of the initial 5 years of the planning period
Risk/Uncertainty	
Distribution of Potential Utility Costs	The standard deviation of total relevant supply cost across Scenarios divided by the expected value to get to a coefficient of variation
Range of potential utility costs	The sum of the total relevant supply cost upside and downside risk of Portfolios
Probability of high CO2 intensity	Probability of high CO2 intensity in the initial 5 years of the planning period
Probability of high groundwater usage	Probability of high groundwater usage in the initial 5 years of the planning period
Reliability	
Relative Loss of Load Expectation	The relative amount of "perfect capacity" added or subtracted to obtain the 0.1 Loss of Load Expectation target in the final year of the planning period
Flexible Resources	The total MW of ramp available in the final year of the planning period
Quick Start Resources	The total MW of quick start available in the final year of the planning period (Includes supply and demand side dispatchable resources)
Environmental Impact	
CO2 Intensity	The cumulative tons of CO2/GWh over the planning period
Groundwater usage	The cumulative percentage of energy generated by resources that use ground water
Land Usage	The cumulative acreage necessary for supply plan resources over the planning period
Consistency with City Policies/Goals	
Renewable and Clean Portfolio Standard (RCPS)	The average annual percent of a portfolio's clean energy targeted to align with Schedule 3.A. of the RCPS.
Macroeconomic Impact to ENO	
Macroeconomic Factor (Jobs, local economy impacts)	DSM spending represents only quantifiable macroeconomic impact at this time. Future ability to evaluate/model DERs could provide additional basis for comparison.

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Scorecard Metrics

Scoring Parameters	Measure	A	B	C	D
Utility Cost (Portfolio optimization in AURORA model)					
Expected Value	1-10 Grading Scale	>7.5	7.5 - 5.01	5 - 2.51	≤ 2.50
Utility Costs Impact on ENO's Revenue Requirements					
Net present Value of Revenue Requirements	1-10 Grading Scale	>7.5	7.5 - 5.01	5 - 2.51	≤ 2.50
Nominal Portfolio Value (residential/other customer classes)	1-10 Grading Scale	>7.5	7.5 - 5.01	5 - 2.51	≤ 2.50
Risk/Uncertainty					
Distribution of Potential Utility Costs	1-10 Grading Scale	>7.5	7.5 - 5.01	5 - 2.51	≤ 2.50
Range of potential utility costs	1-10 Grading Scale	>7.5	7.5 - 5.01	5 - 2.51	≤ 2.50
Probability of high CO2 intensity	1-100% Grading Scale	<33%	>33%	>66%	=100%
Probability of high groundwater usage	1-100% Grading Scale	<33%	>33%	>66%	=100%
Reliability					
Relative Loss of Load Expectation	1-10 Grading Scale	>7.5	7.5 - 5.01	5 - 2.51	≤ 2.50
Flexible Resources	1-10 Grading Scale	>7.5	7.5 - 5.01	5 - 2.51	≤ 2.50
Quick Start Resources	1-10 Grading Scale	>7.5	7.5 - 5.01	5 - 2.51	≤ 2.50
Environmental Impact					
CO2 Intensity	1-10 Grading Scale	>7.5	7.5 - 5.01	5 - 2.51	≤ 2.50
Groundwater usage	1-100% Grading Scale	<33%	>33%	>66%	=100%
Land Usage	1-10 Grading Scale	>7.5	7.5 - 5.01	5 - 2.51	≤ 2.50
Consistency with City Policies/Goals					
Renewable and Clean Portfolio Standard (RCPS)	1-(-15)% Grading Scale	100% Low Carbon	>66% Low Carbon	>33% Low Carbon	<33% Low Carbon
Macroeconomic Impact to City of NO					
Macroeconomic Factor (Jobs, local economy impacts)	N/A	N/A	N/A	N/A	N/A

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04

Energy Smart Program PY 16-18

Energy Smart PY 16-18—Implementation Plan Timeline

IRP Technical Meeting #4	October 2, 2024
Issue RFP for Third Party Administrator and Third Party Evaluator	October 2024
2024 IRP Report Filed	December 13, 2024
RFP Submission Deadline	December 2024
IRP Technical Meeting #5 (Energy Smart Design)	February 18-28, 2025
RFP selections and submission of Proposed TPA and TPE to Council	February 2025
Draft of Implementation Plan	May 16, 2025
Advisors' Report on 2024 IRP	June 2, 2025
Proposed Technical Conference	June 3, 2025
Implementation Plan Filing	June 16, 2025

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Energy Smart PY 13-15— EE Program Matrix

Current Programs (PY 13-14)	Proposed Programs (PY15)
Home Performance w Energy Star	Home Performance w Energy Star
A/C Solutions	A/C Solutions
Retail Lighting and Appliances	A/C Solutions Income Qualified
Residential Behavioral	Retail Appliances
Income Qualified Weatherization	Retail Appliances Income Qualified
Multifamily Solutions	Multifamily Solutions
School Kits	Multifamily Solutions Income Qualified
Small C&I Solutions	Income Qualified Weatherization
Large C&I Solutions	Neighborhood-Based Delivery Pilot
New Construction	
Publicly Funded Institutions	Residential HVAC Midstream
	School Kits
	Residential Behavioral
	Small C&I Solutions
	Large C&I Solutions
	New Construction Code Compliance
	Publicly Funded Institutions

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Energy Smart PY 13-15—DR Program Matrix

Proposed Programs (PY 15)	**Potential Programs (PY 16-18)**
Bring Your Own Thermostat	Bring Your Own Thermostat
Electric Vehicle Charging	Electric Vehicle Charging (Residential & Commercial)
Battery Storage (Residential & Small Commercial)	Battery Storage (Residential & Commercial)
Peak Time Rebate	Peak Time Rebate
Electric Vehicle Charging (Small Commercial Fleet)	Alternative Small C&I curtailment options offering two-way control
Critical Peak Pricing/ Dynamic Pricing	Electric Vehicle Charging (Commercial Fleet)
	Critical Peak Pricing/ Dynamic Pricing
	Direct Load Control – Water Heaters

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Energy Smart PY 16-18 Topics to be Considered

- Continued focus on income qualified programming
- Energy efficiency goal
  - “The Council will consider setting the kWh saving targets for PYs 16-18 (2026-2028) based upon the outcome of the DSM potential studies performed in the 2024 IRP proceeding.”*
- Demand Response goal and incentive mechanism
  - “The goal for PY16 and beyond shall also be evaluated as part of the Energy Smart Implementation plan for PYs 16-18 (2026-2028) based on registered DR Capacity for PY15 and based on actual kW savings for PY16 and beyond.”**

1. * Council for the City of New Orleans Resolution R-23-553, December 14, 2023 at page 11
2. **Council for the City of New Orleans Resolution R-23-553, December 14, 2023 at page 12

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05 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 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 & 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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