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April 23, 2024

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 #3 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,

A handwritten signature in blue ink that reads 'Leslie LaCoste'.

Leslie M. LaCoste

LML/jlc

Enclosures

cc: Official Service List (Public Version *via email*)



May 7, 2024

ENO 2024 IRP Technical Meeting #3

Docket UD-23-01



Goals and Agenda of Technical Meeting #3

Goals

As described in the Initiating Resolution (R-23-254), the main purpose of this meeting is for ENO, the Advisors, and Intervenor to finalize the Planning Scenarios and Planning Strategies to be used in developing the 2024 IRP. All IRP inputs are to be locked down by May 17, 2024. There will also be a discussion of the Guidehouse DSM Potential Study and the draft Scorecard.

Agenda

1. Discussion of Proposed Stakeholder Scenario and Strategy
2. Technical Meeting #2 Follow-Ups
3. Review of Guidehouse DSM Study results
4. Initial Discussion of Scorecard Metrics – Initial discussion, starting from 2021 Scorecard

01

**Proposed Planning
Scenarios and Strategies**

2024 IRP Proposed 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	• 45 year life	• NGCC by 2035	• Deactivated by 2035
MISO Natural Gas Other Deactivations	• 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	<ul style="list-style-type: none"> • Assumptions align with the 2024 Business Plan case. • Moderate amount of industrial growth forecasted which would drive the need for new development 	<ul style="list-style-type: none"> • 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) 	<ul style="list-style-type: none"> • 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

2024 IRP Proposed 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

Questions

- Follow-up from Technical Meeting #2
- Additional Questions

02

DSM Potential Study

Potential Calculation Methodology

- **Technical Potential** – total energy savings assuming all installed measures can immediately be replaced with the efficient measure
- **Economic Potential (EE Only)** – assumes same immediate replacement, but only using measures that pass cost-effectiveness testing
 - Total Resource Cost (TRC) test used at different levels in the 2024 study
- **Achievable Potential** – economic potential modified to account for measure adoption rates and the diffusion of technology through the market

Overview of 2024 DSM Potential Study

For EE, Guidehouse developed four input cases of achievable potential:

- **Reference**—Assumes current incentive levels and expected behavior participation; aligns with historical program achievement; uses historical program admin costs on a \$/kWh basis; 0.9 TRC threshold
- **2% Savings**—Aligns to 2% savings goal by 2025 instead of historical savings achievement; assumes increased incentives (10X Reference case, up to 100% of incremental cost) and aggressive behavioral participation; 0.75 TRC threshold
- **Low**—Same inputs as Reference; incentives are set to 50% of Reference case levels.
- **High**—Same inputs as Reference assumes increased incentives (100X Reference case, up to 100% of incremental cost); no TRC threshold so all measures are passed through

For Demand Response, Guidehouse developed three input cases:

- **Reference**—Reflects participation based on incentives that match current programs and industry best practice
- **Low**—Assumes incentives 50% lower than the Reference case
- **High**—Assumes incentives 50% higher than Reference case

All DSM and DR cases were run using two different discount rates—ENO's WACC and a 3% societal discount rate.

Key EE Findings—2024 DSM Potential Study

Findings

1. Over 20 year time period, lower potential savings in the Reference and Low Cases, but higher potential savings in the 2% and High cases in the 2024 study as compared to the 2021 study
2. Costs are \$71M lower in the Reference Case in the 2024 study as compared to the 2021 study. Costs are significantly higher in the 2% and High cases
3. Top Measures: Residential A/C Tune-Up and Duct sealing; Commercial Occupancy Sensor and A/C and Heat Pump Tune-Up

Drivers

- **Calibration targets**
 - The 2021 study used planned targets for savings from the PY10-12 implementation plan, including a 2% savings goal for 2025.
 - The 2024 study used the actual savings and budget from PY10-12 and performance to date for PY13. Underperformance was seen in the C&I sector, consistent with results in other jurisdictions.
- **Assumptions on home energy reports**
 - Planned savings associated with the behavioral program were reduced
 - Savings percentage of consumption reduced
- **Updated data from the 2022 Residential Appliance Saturation Study**
- **Updated commercial saturation values**
- **EISA standards incorporated**
- **Updated TRM version**
- **Behavioral programs that did not show promise for kWh savings in the ENO area were removed**

Incremental Potential GWh Savings and MW Reduction by Year

Year	Electric Energy (GWh)			
	Reference Case	2% Savings Case	High Case	Low Case
2024	70	98	119	49
2028	89	117	141	66
2033	73	89	102	58
2038	40	44	51	34
2043	29	31	37	22

Year	Total Investment				Incentives				Administrative Costs			
	Ref.	2%	High	Low	Ref.	2%	High	Low	Ref.	2%	High	Low
2024	\$11	\$32	\$81	\$6	\$6	\$25	\$71	\$2	\$5	\$8	\$10	\$4
2028	\$18	\$42	\$115	\$9	\$10	\$32	\$101	\$3	\$8	\$11	\$13	\$6
2033	\$17	\$35	\$95	\$10	\$10	\$27	\$85	\$4	\$7	\$9	\$11	\$6
2038	\$8	\$15	\$54	\$6	\$4	\$11	\$49	\$3	\$4	\$4	\$5	\$4
2043	\$4	\$8	\$39	\$4	\$2	\$6	\$36	\$2	\$2	\$2	\$3	\$2
20-Year Total	\$250	\$558	\$1613	\$152	\$139	\$415	\$1,439	\$56	\$111	\$143	\$174	\$96

Note: Values in \$ millions

Incremental Potential GWh Savings by Year as a Percentage of Total Annual Sales

Year	Reference Case	2% Savings Case	High Case	Low Case
2024	1.25%	1.74%	2.11%	0.87%
2028	1.54%	2.04%	2.44%	1.15%
2033	1.24%	1.51%	1.72%	0.99%
2038	0.58%	0.62%	0.70%	0.50%
2043	0.38%	0.39%	0.47%	0.29%

Incremental Potential GWh Savings by Year in the 2024 and 2021 DSM Potential Studies

2024 DSM Potential Study				
	Reference Case	2% Case	Low Case	High Case
2024	70	98	49	119
2028	89	117	67	141
2033	73	89	58	102
2038	40	44	34	51
2043	29	31	22	37
Total (MW)	1242	1551	960	1830

2021 DSM Potential Study				
	Reference Case	2% Case	Low Case	High Case
2021	79	89	77	93
2025	103	119	101	126
2030	96	115	96	123
2035	65	86	66	94
2040	50	73	51	81
Total (MW)	1302	1344	1299	1359

Incremental Potential Peak Demand Reduction (MW) by Year in the 2024 and 2021 DSM Potential Studies

	2024 DSM Potential Study Peak Demand Reduction					2021 DSM Potential Study Peak Demand Reduction			
	Reference Case	2% Case	Low Case	High Case		Reference Case	2% Case	Low Case	High Case
2024	19	25	14	30	2021	21	22	20	23
2028	30	39	24	45	2025	25	26	25	26
2033	29	34	26	39	2030	24	25	25	26
2038	14	14	13	18	2035	17	18	17	18
2043	9	9	7	12	2040	12	13	12	13
Total (MW)	433	515	362	608	Total (MW)	408	429	409	432

Key DR Findings—2024 DSM Potential Study

Findings

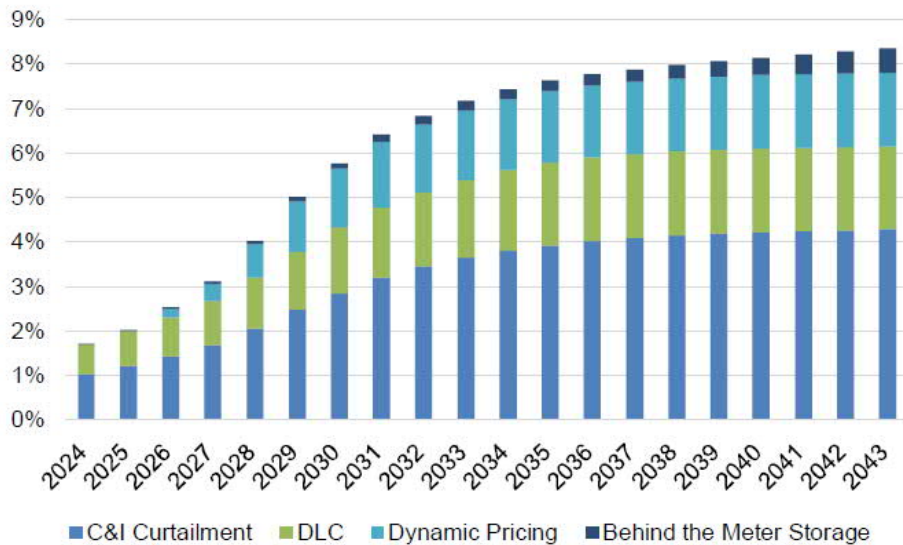
1. Peak demand reduction potential through DR programs ramps up slower in the 2024 study, but reaches higher levels in the outer years
2. Top DR Options: C&I Curtailment (51%); Residential Thermostat DLC (22%); Dynamic Pricing (20%); BTM Storage (7%)

Drivers

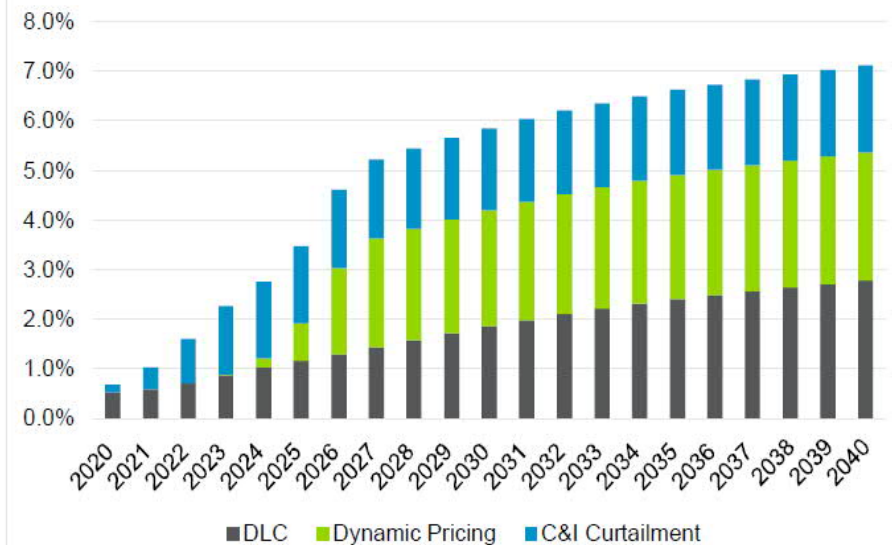
- MISO slightly changed the definition of peak
- Added new DR options
 - EV Managed Charging and Peak Time Rebate
- Used data from ENO's current DR programs
- Updated Behind-the-Meter battery storage projections
 - Assumed batteries are paired with solar
 - Updated data on penetration of smart thermostats and other control technologies

Peak Achievable Potential (% of peak demand) by DR Option in the 2024 and 2021 Potential Studies

2024 DSM Potential Study



2021 DSM Potential Study



Questions

- Follow-up from Technical Meeting #2
- Additional Questions

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 it was optimized in
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 portfolios 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.

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 Impacted 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 ENO					
Macroeconomic Factor (Jobs, local economy impacts)	N/A	N/A	N/A	N/A	N/A

04

Timeline

Timeline

<u>Event</u>	<u>Current Deadline</u>	<u>Status</u>
<i>Public Meeting #1</i>	August 23, 2023	✓
<i>Technical Meeting #1</i>	November 9, 2023	✓
<i>DSM Potential Studies Due</i>	February 1, 2024	✓
<i>Mardi Gras</i>	February 13, 2024	✓
<i>Stakeholders provide their Scenario and Strategy</i>	Before Technical Meeting 2	✓
<i>Technical Meeting #2—Discuss Final ENO and Stakeholder Scenarios and Strategies</i>	February 29, 2024	✓
<i>Deadline for Council policies to be included in optimization</i>	April 15, 2024	✓
<i>Technical Meeting #3—Finalize Scenarios and Strategies and DSM Input Case Assignments; DSM input files for modeling due; initial Scorecard discussion</i>	May 7, 2024	
IRP Inputs Finalized	May 17, 2024	
<i>Complete portfolio development and results; circulate portfolios and workpapers to Parties</i>	September 6, 2024	
<i>Technical Meeting #4—Downselection of Portfolios for Cross Testing; finalize Scorecard; initial discussion of Energy Smart budgets and goals</i>	September 23-October 4, 2024	
2024 IRP Report filed	December 13, 2024	
<i>Public Meeting #2 (ENO & SPO Present)</i>	January 21-31, 2025	
<i>Public Meeting #3 (Council receives public comment)</i>	February 18-28, 2025	
<i>Technical Meeting #5—Energy Smart PY16-18 programs and implementation plan</i>	February 18-28, 2025	
<i>Mardi Gras</i>	March 4, 2025	
<i>Intervenor Comments on Final IRP</i>	March 10, 2025	
<i>ENO Reply Comments</i>	April 28, 2025	
<i>Advisor Report</i>	June 2, 2025	
<i>Energy Smart Implementation Plan Filing for PY 16-18</i>	June 16, 2025	

CERTIFICATE OF SERVICE
UD-23-01

I hereby certify that I have served the required number of copies of the foregoing pleading upon all other known parties of this proceeding individually and/or through their attorney of record or other duly designated individual.

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New Orleans, Louisiana, this 15th day of February 2024



Leslie M. LaCoste