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Kimberly R. Silas Senior Counsel Legal Department -- Regulatory

September 30, 2020

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

Re: 2021 TRIENNIAL INTEGRATED RESOURCE PLAN

OF ENTERGY NEW ORLEANS, LLC

Council Docket No. UD-20-02

Dear Ms. Johnson:

On behalf of Entergy New Orleans, LLC ("ENO"), please find for electronic filing the *October 14*, 2020 1<sup>st</sup> Public Meeting Materials that ENO will present 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 direct. ENO requests that you file this submission in accordance with Council regulations as modified for the present circumstances.

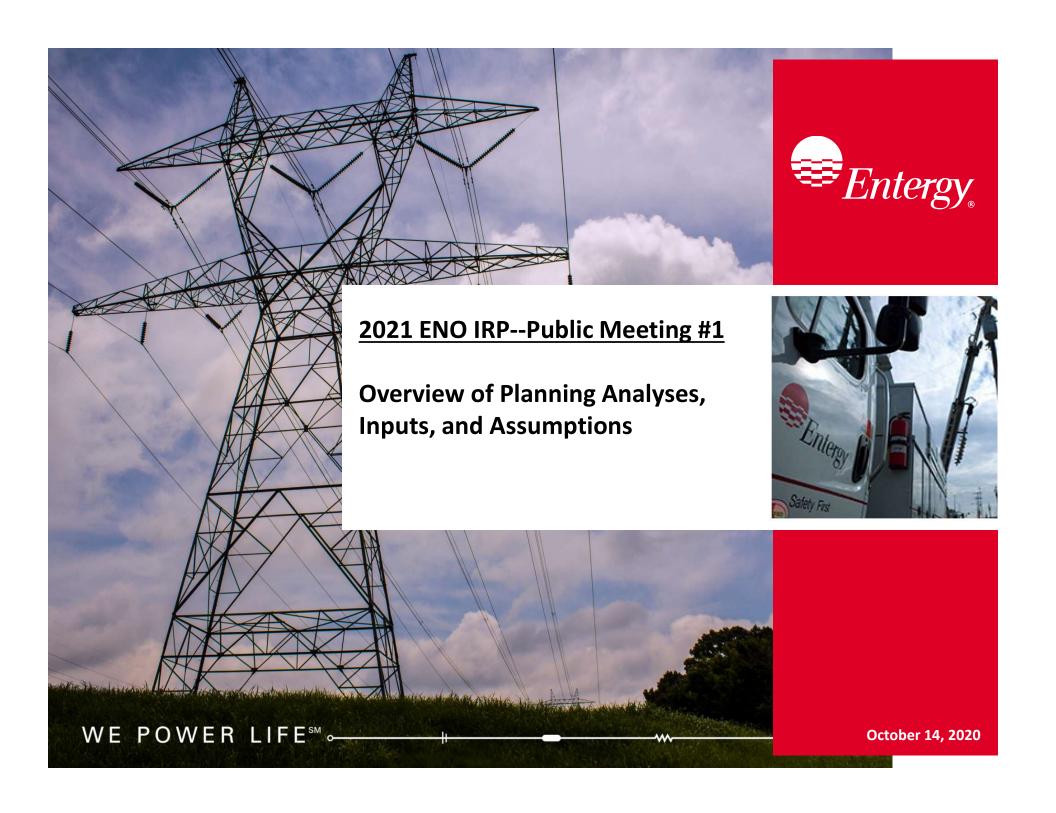
Should you have any questions regarding the above/attached, please do not hesitate to contact me.

Sincerely,

Kimberly R. Silas

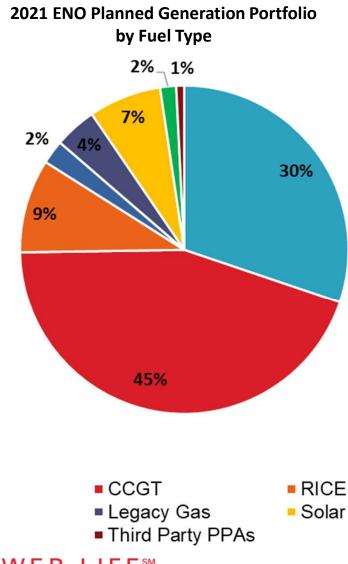
KRS/amb Enclosures

cc: Official Service List via email



### **ENO Overview: Electric Service**

- In 2019, ENO served over 204,000 electric customers in the City of New Orleans
  - Customers used over 5.8 million MWh of electricity
- ENO has one of the cleanest generation portfolios in the U.S., with CO2 emissions about 50% below the national average
- As part of its commitment to sustainability, Entergy Corp recently announced its goal to achieve net zero emissions by 2050



∘WE POWER LIFE™

Nuclear

Coal

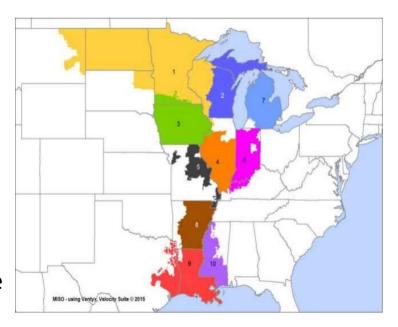
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### **ENO Overview: MISO Membership**

- What is MISO?
  - A Regional Transmission Organization (RTO)
- When did ENO join?
  - In December 2013, following Council approval
- Why is ENO a member of MISO?
  - Participating in MISO energy and capacity markets delivers cost savings to customers
  - Market provides opportunity for load modifying resources and demand response resources to meet capacity needs
  - MISO oversees reliability of the transmission system in its footprint and facilitates a transmission planning process to enhance efficiency of the electric grid







### 2021 IRP—Requirements of Revised Rules (R-17-429)

### What's the goal?

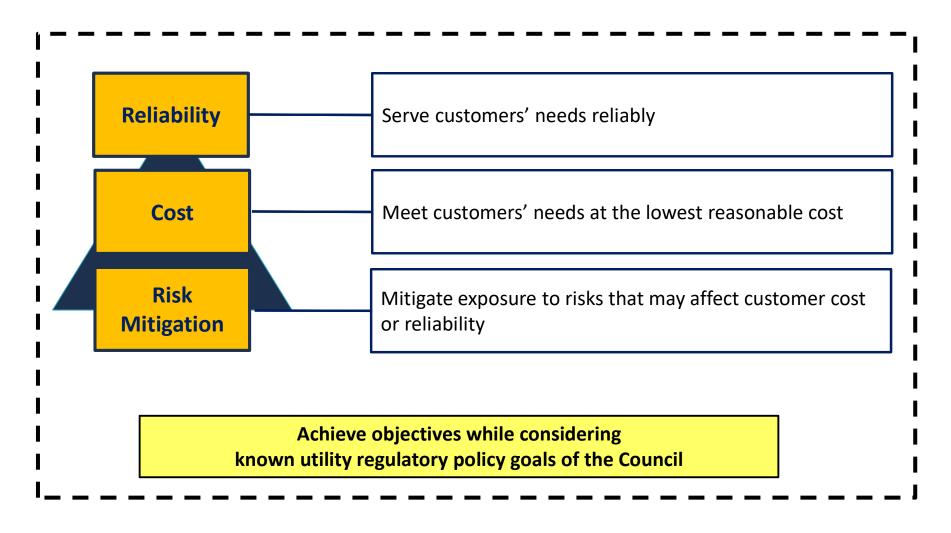
 An IRP Report filed in early 2022 that "serves as a general resource planning tool to the Utility and the Council"

### How will the Report be developed?

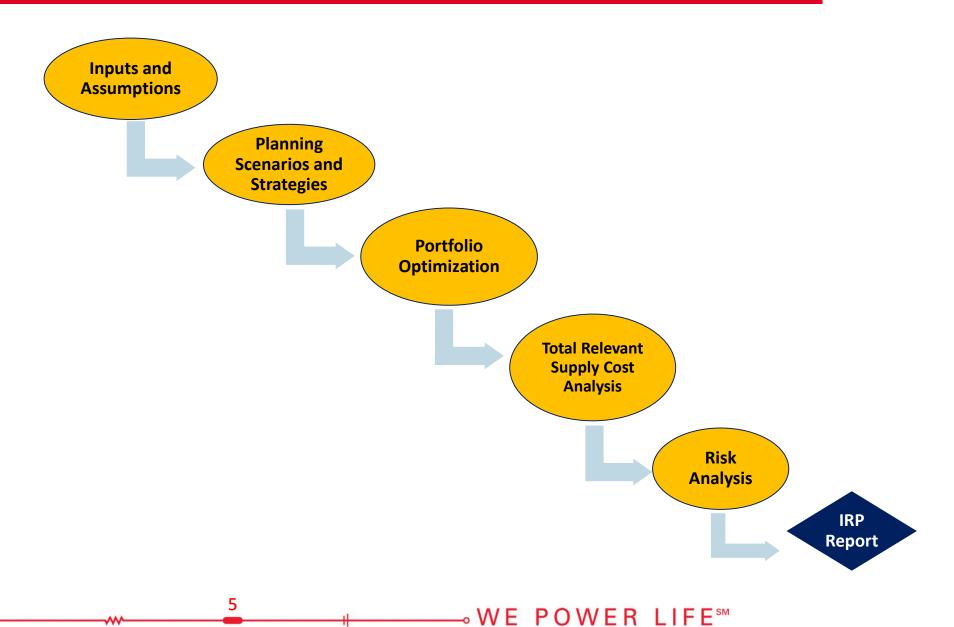
- ENO, Stakeholders, and the Advisors will analyze and discuss a range of inputs and assumptions across different, reasonable future scenarios and strategies
- This analysis will result in a number of optimized resource portfolios that will inform resource decisions during the 20year planning horizon from 2022-2041.

### **ENO Planning Objectives**

The IRP planning process seeks to balance three main objectives: reliability, cost, and risk



# Path to the 2021 IRP Report

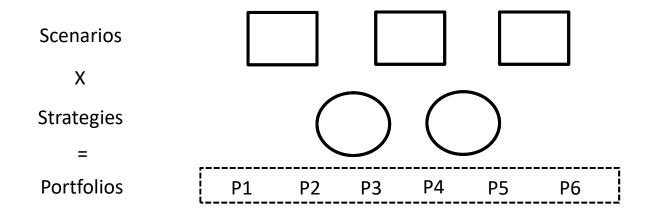


# **Inputs and Assumptions**

	Customer Need	Supply Side and Demand Side Resources		Economic and Financial		Policy
•	Peak Load Forecast w/ Sensitivities	<ul> <li>Existing Fleet capability</li> </ul>	•	Forecasted Capacity and Energy Value	•	Known Council Policy Goals
•	Reserve Requirements	<ul> <li>Planned Resource Additions</li> </ul>	•	Inflation	<ul> <li>Entergy         Sustainability         Goals     </li> </ul>	Sustainability
		• Resource	•	Discount Rate		
		deactivations	•	Fuel Forecasts		
		<ul> <li>Technology         Assessment (capital and operating costs)     </li> </ul>	•	Environmental pricing (e.g., CO <sub>2</sub> )		
		<ul> <li>DSM Potential Studies and impact of existing programs</li> </ul>				

# **Planning Scenarios and Strategies**

- <u>Planning Scenario</u>—Definition of market outside New Orleans outlook consisting of key parameters not controlled by ENO or the Council (Macroeconomic)
- <u>Planning Strategy</u>—Defined set of resource constraints, regulatory policies, or business
  decisions over which ENO, the Council, or Intervenors have control (Microeconomic or Policy
  Sensitivities). Based on consensus among the parties, each Strategy will be assigned a DSM
  Input case from one of the two Potential Studies for use in modeling
- Each Scenario combined with each Strategy results in one optimized Resource Portfolio
- Example: if there are three Scenarios and two Strategies, then the analysis would result in six Resource Portfolios to be evaluated



# **Planning Scenarios and Strategies**

#### ENO Scenarios—Three or Four total

- One Reference Scenario: Most likely future circumstances and policies
- Two Alternative Scenarios: Account for alternative circumstances and policies
- One Consensus Scenario: Developed with input of Advisors and majority of intervenors

### Intervenor Scenario—Possibly One

 If no consensus, then future circumstances and policies agreed to by majority of intervenors

### ENO Strategies—Two to Four total

- One Lowest Cost Option Strategy
- Zero to two Alternative Strategies: Reflect known policy goals of the Council
- One Consensus Strategy: Developed with input of Advisors and majority of intervenors

### Intervenor Strategy—Possibly One

If no consensus, then input agreed to by majority of intervenors

# **Portfolio Optimization**

- ENO uses AURORA capacity expansion modeling software to develop resource portfolios given defined constraints (e.g. magnitude of capacity needed, minimization of total supply costs)
- Based on defined assumptions and constraints, AURORA selects the optimal portfolio of supply- and demand-side resources to most economically serve customer needs over the 20-year planning horizon (2022-2041)

# **Total Relevant Supply Cost Analysis**

- Optimized portfolios are assessed based on the economic impact to customers under each of the defined Scenarios
- In the 2018 IRP cycle, the parties agreed on a representative subset of 5 of the 15 total optimized portfolios to carry through the full valuation analysis in order to meet procedural deadlines
- Once the parties agree on a subset of portfolios for the 2021 IRP, each one will be tested in each Scenario using AURORA production cost modeling software
- For each resource portfolio, a present value forward revenue requirement (i.e., a Total Relevant Supply Cost, that includes both relevant fixed and variable costs) will be calculated for the 20year planning period



# **Risk Analysis**

- ENO will assess the performance of the various portfolios across possible scenarios to help determine portfolio risk
- Additionally, ENO will conduct sensitivity analysis of quantifiable costs and risks that might affect portfolio robustness (e.g. fuel cost and CO2 price sensitivities)
- Analysis will examine impacts on ENO's cost of providing service to customers from social and environmental effects that are:
  - Quantifiable, and
  - Were included in the modeling of the optimized portfolios
- To the extent possible with current modeling software, the risk analysis will evaluate the expected outcome of potential costs as well as the range and probabilities of those costs

### **IRP Report**

- IRP report is currently due to be filed in January 2022
- Will include several sections, as well as supporting analysis and a description of the process and inputs used:
  - Optimized Portfolios: A range of different resource portfolios optimized to address different possible future scenarios and strategies
  - <u>Cost/Risk Analysis</u>: Assessment of quantifiable costs and risks of identified portfolios
  - Policy Scorecard: A matrix of qualitative and quantitative metrics as described in the IRP Rules and Initiating Resolution to assist the Council in assessing the IRP report
  - <u>Distributed Energy Resource (DER) Integration Report</u>: An assessment of the progress made to install systems and conduct training necessary for ENO to be able to evaluate integration of DERs into the distribution grid
  - Action Plan: Timeline and plan of steps proposed as a result of the IRP

# CERTIFICATE OF SERVICE DOCKET NO. UD-20-02

I hereby certify that I have served the required number of copies of the foregoing report upon all other known parties of this proceeding, by the following: electronic mail, facsimile, overnight mail, hand delivery, and/or United States Postal Service, postage prepaid.

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New Orleans, Louisiana, this  $30^{\rm th}$  day of September 2020.

Kimberly R. Silas

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