2022 JEA
IRP Stakeholder Engagement Meeting Series
Welcome

Raynetta Curry Marshall
Chief Operating Officer
IRP Stakeholder Meeting Agenda

1) **Welcome Remarks**  
Raynetta Curry Marshall, Chief Operating Officer, JEA

2) **JEA’s Mission and the IRP**  
Jay Stowe, Chief Executive Officer and Managing Director, JEA

3) **Electric System Overview**  
Ricky Erixton, Vice President, Electric System, JEA

4) **Electric Utility Trends & Drivers**  
Brad Kushner, Black and Veatch Consulting

5) **Open Discussion & Next Steps**  
Laura Schepis, Chief External Affairs Officer, JEA
IRP Stakeholder Participants

Stephanie Burch
COJ, Mayor’s office

Reginald Caldwell
Bethel Baptist Institutional Church

Kimberly Cobb-Ray
NE Florida Community Action Agency (NFCAA)

Anne Coglianese
City of Jacksonville (COJ)

Gloria Crawford
COJ, Senior Services Division

Logan Cross
Sierra Club

Sam Dean
Baptist Medical Center

Greer Gillis
Jacksonville Transportation Authority

Jacob Gordon
Downtown Vision

Diana Greene
Duval County Public Schools

John Hale
University of North Florida

David Jones
Jacksonville Aviation Authority

Christina Kelcourse
North Florida Green Chamber of Commerce

Mari Kuraishi
Jesse Ball DuPont Fund

Linda Levin
Elder Source

Jeanne Miller
Jacksonville Civic Council

David Millinor
Mayport Naval Base

Lake Ray
First Coast Manufacturers Association

Lisa Rinaman
St Johns River Keeper

John Sapora
Local Initiative Support Corporation (LISC)

Lucinda Sonnenberg
Jacksonville University

Jessie Spradley
Northeast Florida Builders Association (NEFBA)

Jeff Winkler
United Way of Northeast Florida

Shamika Wright
JAX Chamber

Mark Zimmerman
CMC
JEA’s Mission and the IRP

Jay Stowe
Chief Executive Officer and Managing Director
Electric System Overview

Ricky Erixton
Vice President, Electric System
JE'A’s Service Territory

- 900 Square Miles
- 500,000 Customers
- 1 Million Residents
- 50,000 Businesses
How JEA’s Electric System Works

Generation
Electricity is generated when certain forces interact with energy resources—sunlight, wind, water, natural gas, coal, oil, nuclear. Various processes convert the potential energy from these resources to electric current, which is the movement of charged particles.

Transmission
Electric current then moves to an interconnected group of power lines and other equipment. These lines move electricity from its source, often transmitting high voltage electric current across great distances.

Distribution
Devices called transformers then reduce the voltage of the electricity and move it to another set of lines and equipment that connect directly to the homes and businesses in our community.
Electric Generation Assets

Generation Stations
1. Brandy Branch Generating Station
2. Greenland Energy Center
3. Northside Generating Station
4. Kennedy Generating Station

Solar Farms
1. PSEG Jacksonville Solar Facility
2. NW Jacksonville Solar Partners Facility
3. Old Plank Road Solar Facility
4. Starratt Road Solar Facility
5. Simmons Road Solar Facility
6. Blair Road Solar Facility
7. Old Kings Road Solar Facility
8. SunPort Solar Facility
Electric Transmission & Distribution Assets

Transmission Assets
- 744 circuit miles of transmission
- 80+ Substations
- 4 Voltage levels: 69 to 500 kV

Distribution Assets
- 7,000+ miles of distribution circuit with 60% underground
- 300+ feeders, 100,000+ transformers
- 3 Voltage levels 4.16 to 26.4 kV
Meeting our Customers’ Electric Needs

JEA is required to meet customers’ electricity peak demand and maintain a 15% reserve margin.

Peak demand is the time when consumer demand for electricity is at its highest.
JEA Seasonal Electric System Peaks

JEA’s all-time total Winter peak, also its all-time total system peak, happened in January 2010 at 3,224 MW with the lowest temperature at 20 °F.

JEA’s all-time total Summer peak happened in August 2007 at 2,897 MW with the highest temperature at 97 °F.
Growing Number of Customers

The number of JEA’s customers continue to grow based on population increases.
Carbon Emissions Decreasing

St. Johns River Power Park 1 and 2

Retirement in 2017 resulted in an average reduction of 4,800 kTons of CO\textsubscript{2} emissions per year.

Scherer 4

Retirement in 2021 will result in an additional reduction of 1,300 kTons of CO\textsubscript{2} emissions per year – approximately 17% of total CO\textsubscript{2} emissions attributed to JEA.
Looking Towards the Future

Together, we will create a framework to best serve our community’s energy needs long into the future.

Your participation in this IRP process will allow us to:

**Inform**
We will share information about trends, challenges and opportunities facing the electric utility industry.

**Listen**
We want to hear your suggestions and understand your perspectives as integral members of our community.

**Incorporate**
Your input will help us shape the right framework for decisions about our community’s power supply.
Electric Utility Trends and Drivers

Brad Kushner
Black and Veatch Consulting
Electric Utility Industry Trends & Drivers

- Renewables Integration & Energy Storage
- Affordable Power Supply
- Decarbonization
- Reliability
- Electrification / Electric Vehicles
- Environmental Regulations
- Aging Infrastructure
Electric Utility Industry Trends

Renewable Energy

Growth of Renewable Energy

- Increased utilization of renewables throughout U.S.
- Per the U.S. Energy Information Administration, approximately 20% of electricity was produced from renewables in 2020
- Record highs seen in first half of 2021

Utility Considerations

- Flexible resource fleet
- Ability to accommodate variable/intermittent nature of renewables
Electric Utility Industry Trends

Decarbonization

- Reduced carbon emissions from production of electricity
- Federal policies to encourage decarbonization
- Electrification/Electric Vehicles to reduce carbon emissions

Emerging Technologies

- Battery Energy Storage
- Hydrogen
Electric Utility Industry Trends

Electric Vehicles

Major Automakers
- Tesla
- GM
- Ford
- Toyota
- Nissan
- VW

Mass Transit/Fleet Vehicles
- Public Agencies-JTA
- Private Interests
- Commercial Providers

Impact on Electric Systems
- Charging Infrastructure
- Grid Impact
- Magnitude of Electric Load
The Integrated Resource Planning Process

Seven Step IRP Process

- **STEP 01**: Stakeholder Briefing
- **STEP 02**: Data Gathering/Estimating
- **STEP 03**: Data Analysis
- **STEP 04**: Expansion Planning & Production Cost Modeling
- **STEP 05**: Sensitivity and Scenario Analyses
- **STEP 06**: Analysis of Results of Modeling
- **STEP 07**: Conclusions

Stakeholder Feedback
### Existing Generating Resources
- Distributed Energy Resources
- New Generating Resources
- Demand-Side Management/Energy Efficiency
- Load Forecast
- Regulation of CO₂ Emissions; Air and Water
- Electric Vehicles
- Increased Renewables/Renewables Integration/Clean Energy
- Natural Gas and Solid Fuel Prices
Preliminary IRP Timeline

- **Stakeholder Meeting #2**
  - Present Scenarios
  - February 2022

- **Stakeholder Meeting #3**
  - Present Forecasts
  - March 2022

- **Stakeholder Meeting #4**
  - Present Supply Side Options and Demand-Side Management Potential
  - June 2022

- **Stakeholder Meeting #5**
  - Present Results of Initial Analysis
  - August 2022

- **Stakeholder Meeting #6**
  - Present Revised Modeling and Studies Results
  - October 2022

- **Stakeholder Meeting #7**
  - Present Preferred Plan
  - November 2022

- **Stakeholder Meeting #8**
  - Present 90% Draft IRP Report
  - December 2022
Open Discussion and Next Steps

Laura Schepis
Chief External Affairs Officer
# Stakeholder Engagement Update

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<thead>
<tr>
<th>Stakeholder Meeting</th>
<th>Date</th>
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<tbody>
<tr>
<td>#1 - Intro to JEA and IRP</td>
<td>1/13/22</td>
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<tr>
<td>#2 - Present Scenarios</td>
<td>2/9/22</td>
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<tr>
<td>#3 - Present Forecasts</td>
<td>3/10/22</td>
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<td>#4 - Present Supply Side Options and DSM</td>
<td>6/9/22</td>
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<td>#5 - Present PLEXOS and Initial Modeling Results</td>
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<tr>
<td>#6 - Present Revised Modeling and Studies Results</td>
<td>10/20/22</td>
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<td>#7 - Present Preferred Plan</td>
<td>11/17/22</td>
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<tr>
<td>#8 - Present 90% Draft IRP Report</td>
<td>12/15/22</td>
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**Stakeholder Meeting Dates Now Adjusted for Blackout Dates**
You and your organization represent the diverse community we serve.

We appreciate the value your time and effort will bring to the future of JEA and our region.