

**2022 JEA**

# **IRP Stakeholder Engagement Meeting Series**



**IRP**   
INTEGRATED RESOURCE PLANNING

# 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*

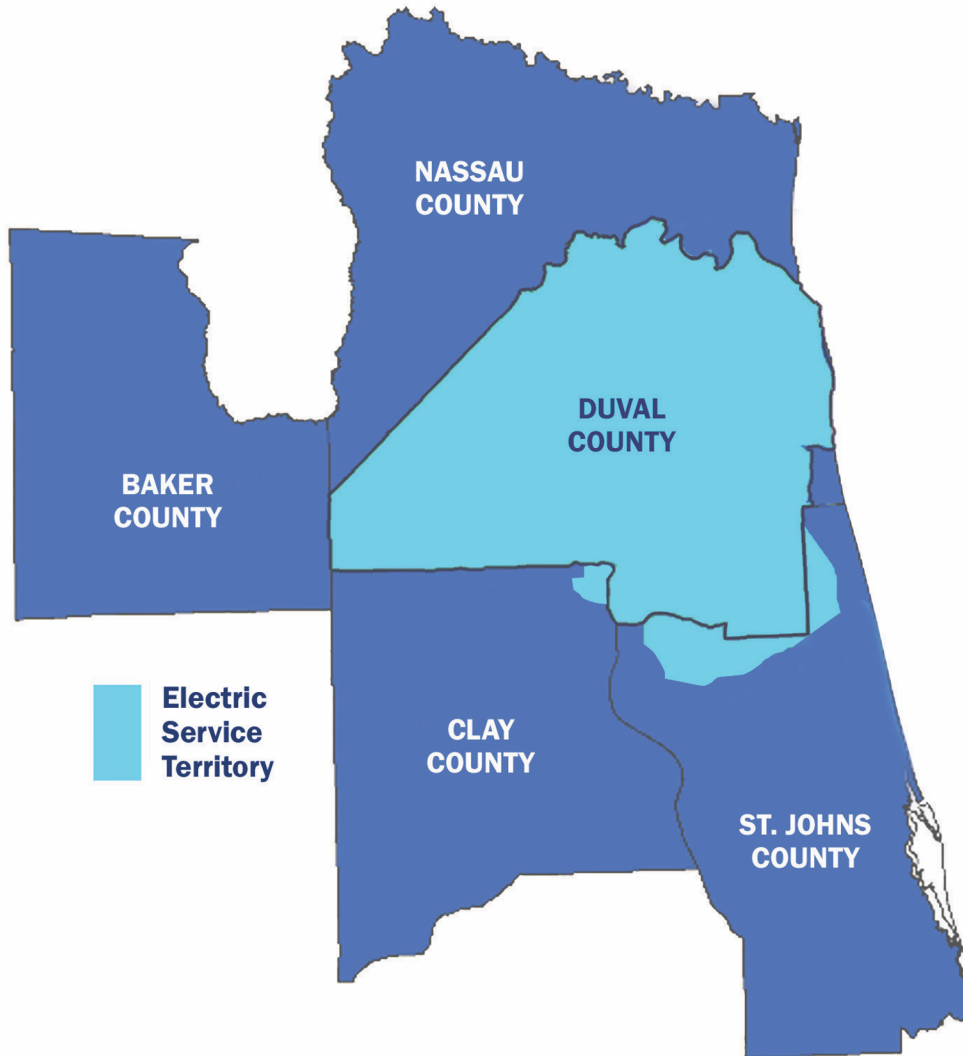


# Electric System Overview



**Ricky Erixton**  
*Vice President, Electric System*

# JEA's Service Territory



900 Square Miles

500,000 Customers

1 Million Residents

50,000 Businesses

# How JEA's Electric System Works

## Generation

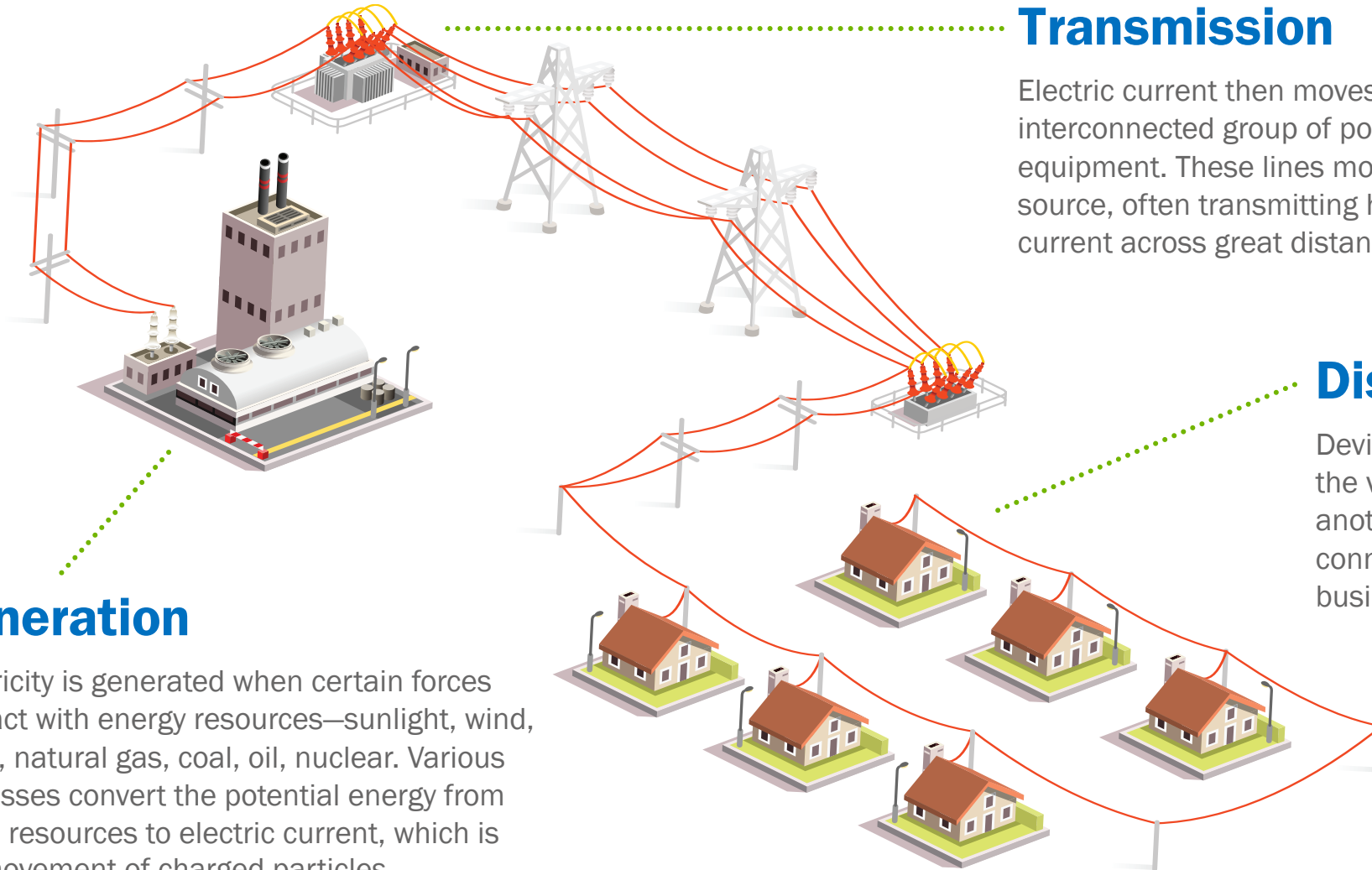
Electricity is generated when certain forces interact with energy resources—sunlight, wind, water, natural gas, coal, oil, nuclear. Various processes convert the potential energy from these resources to electric current, which is the movement of charged particles.

## 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.

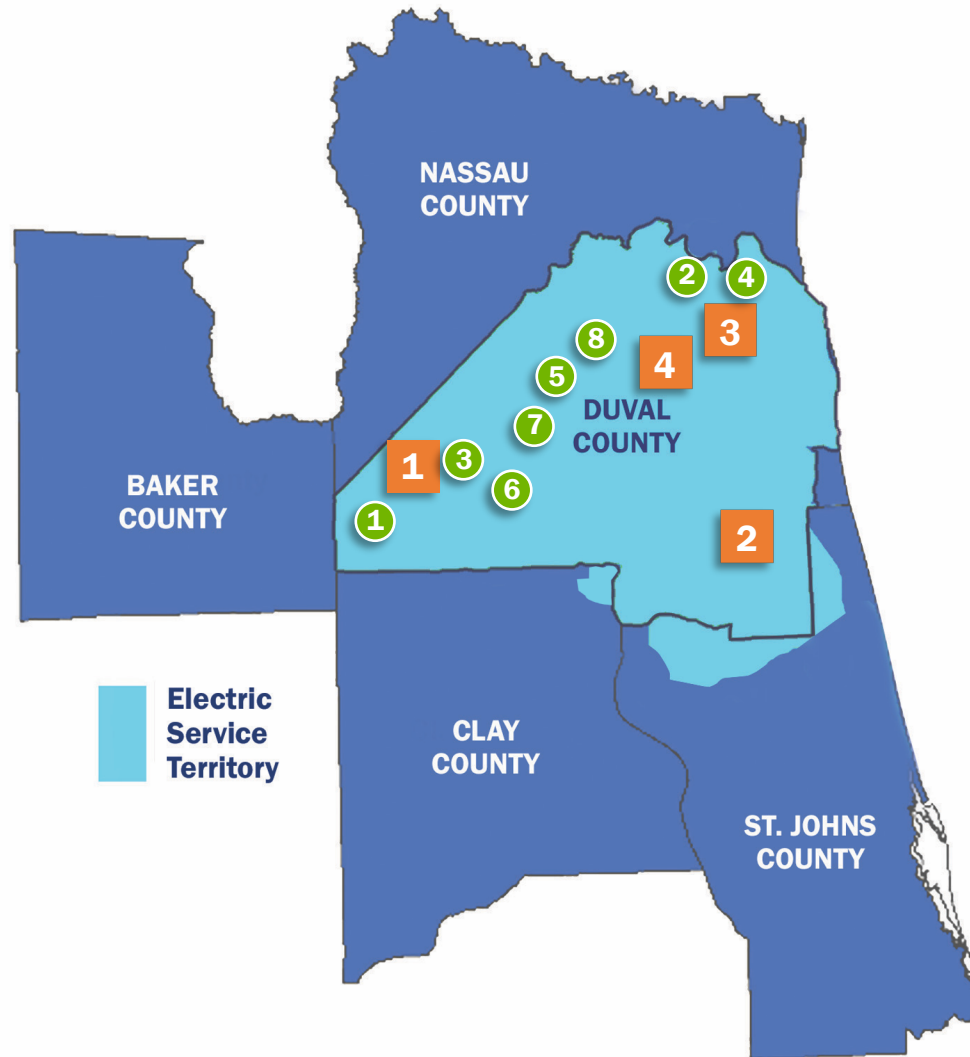
## Distribution

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

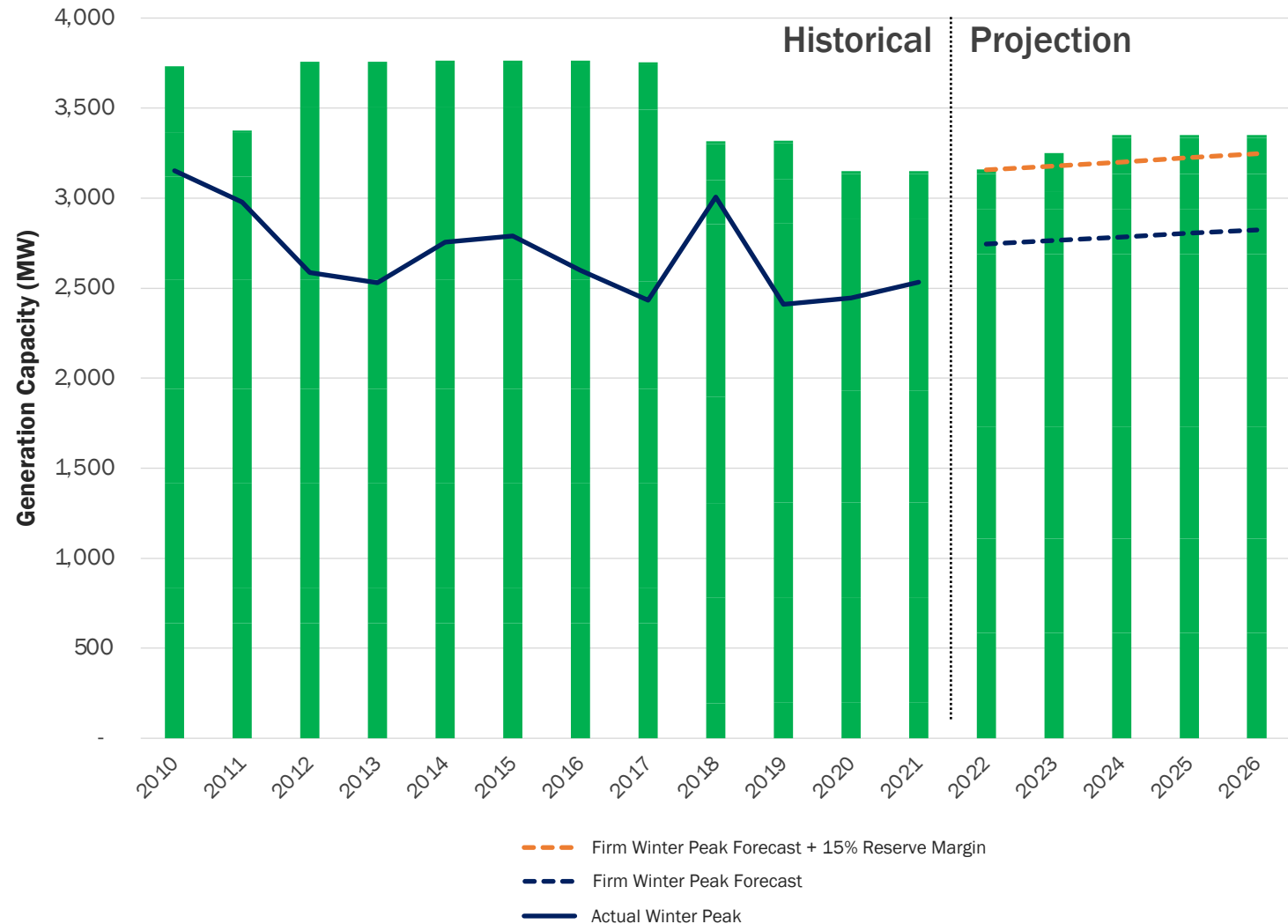
- 7,000+ miles of distribution circuit with 60% underground
- 300+ feeders, 100,000+ transformers
- 3 Voltage levels 4.16 to 26.4 kV

# 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.

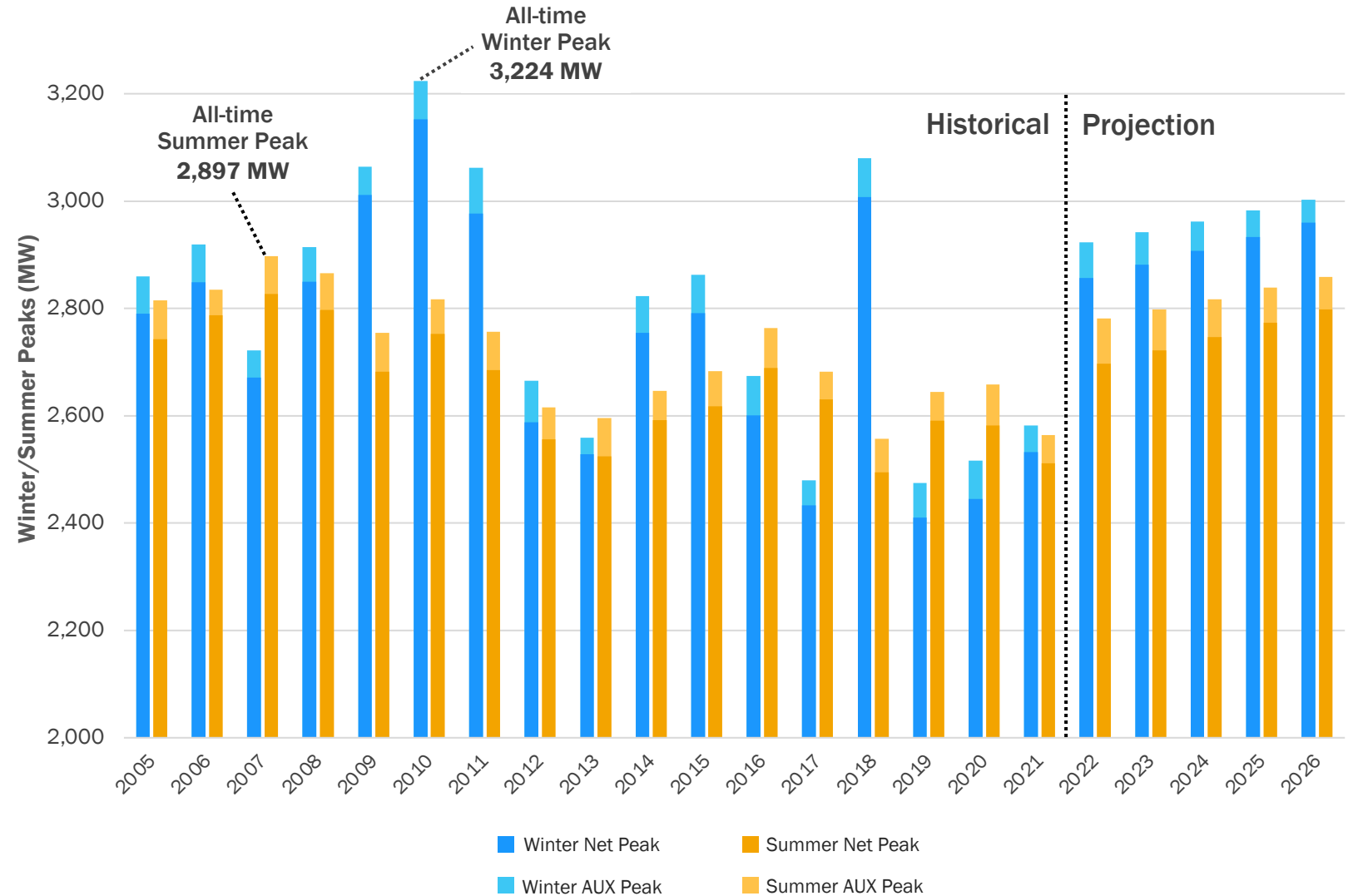


# JEA Seasonal Electric System Peaks



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.

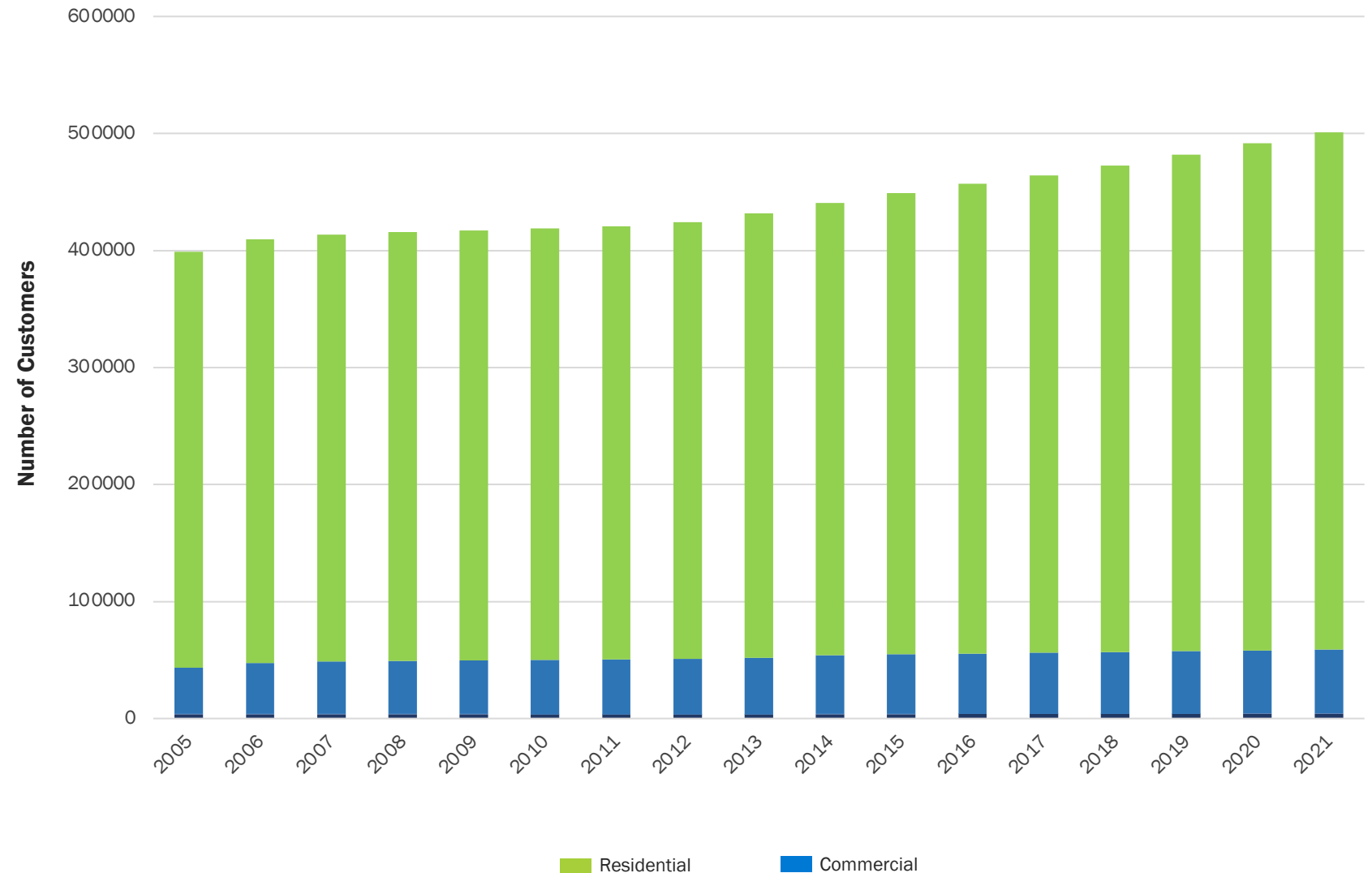
JEA's all-time total Summer peak happened in August 2007 at 2,897 MW with the highest temperature at 97° F.



# Growing Number of Customers



The number of JEA's customers continue to grow based on population increases



# Carbon Emissions Decreasing

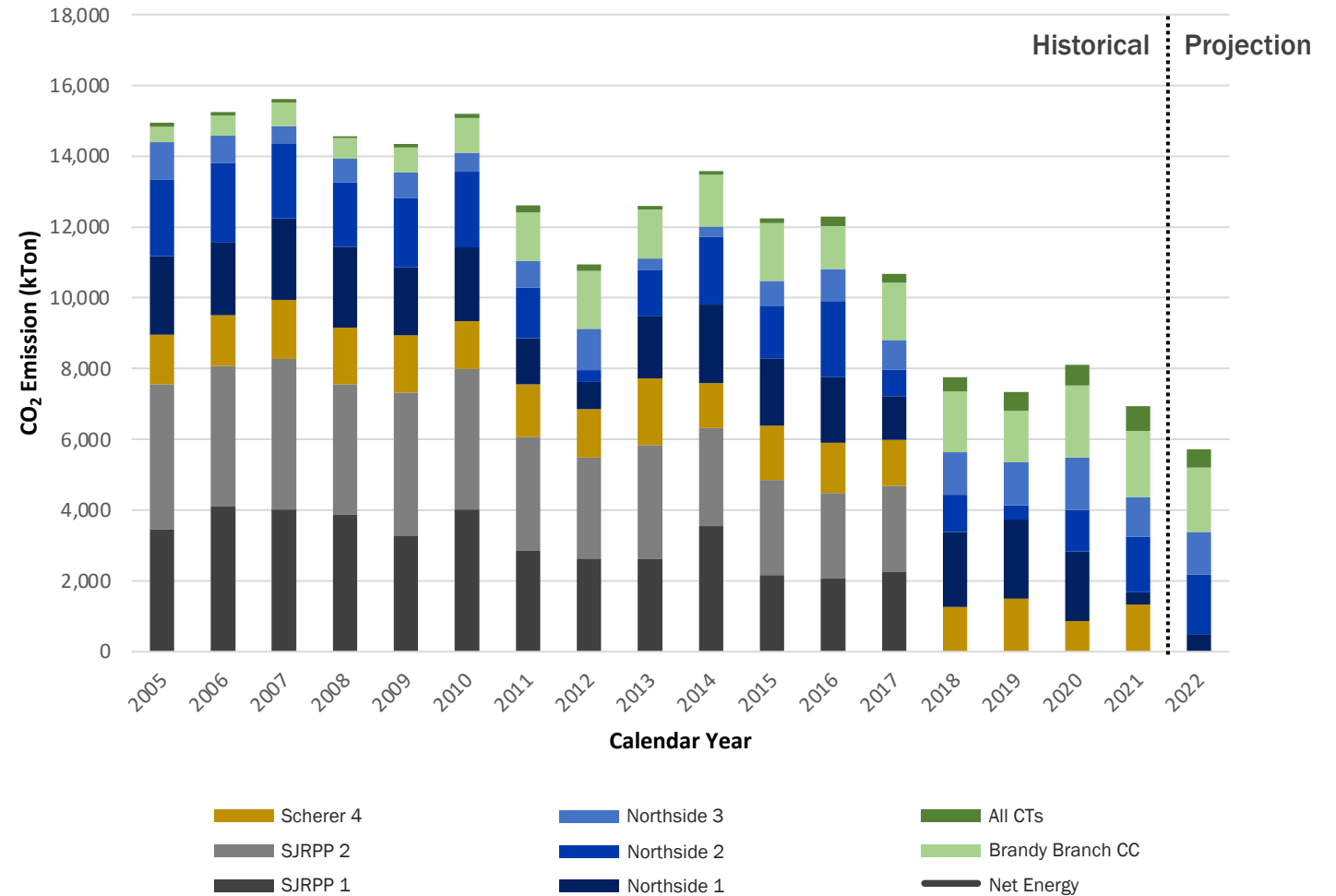


## St. Johns River Power Park 1 and 2

Retirement in 2017 resulted in an average reduction of 4,800 kTons of CO<sub>2</sub> emissions per year.

## Scherer 4

Retirement in 2021 will result in an additional reduction of 1,300 kTons of CO<sub>2</sub> emissions per year – approximately 17% of total CO<sub>2</sub> 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**

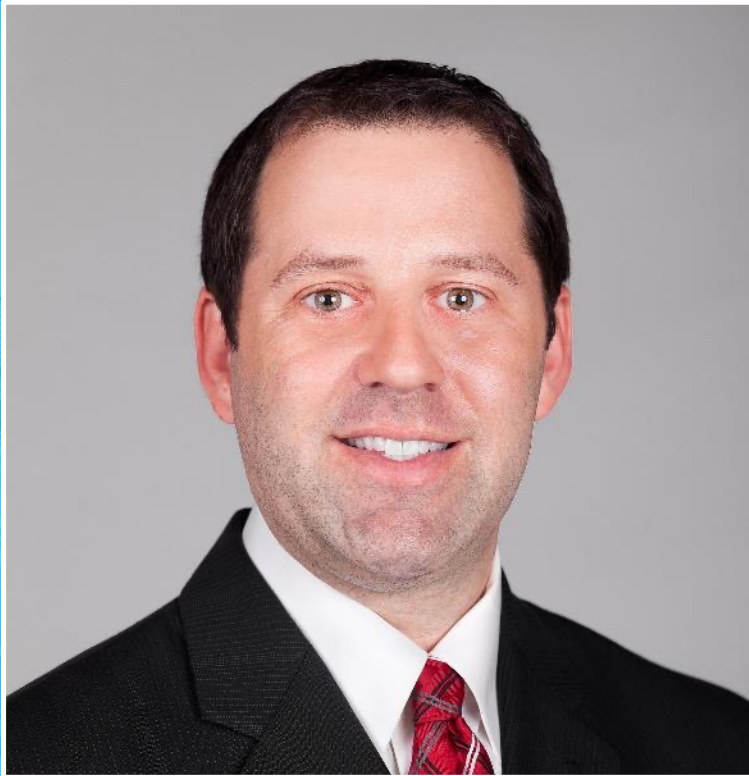
Your input will help us shape the right framework for decisions about our community's power supply.



# Electric Utility Trends and Drivers

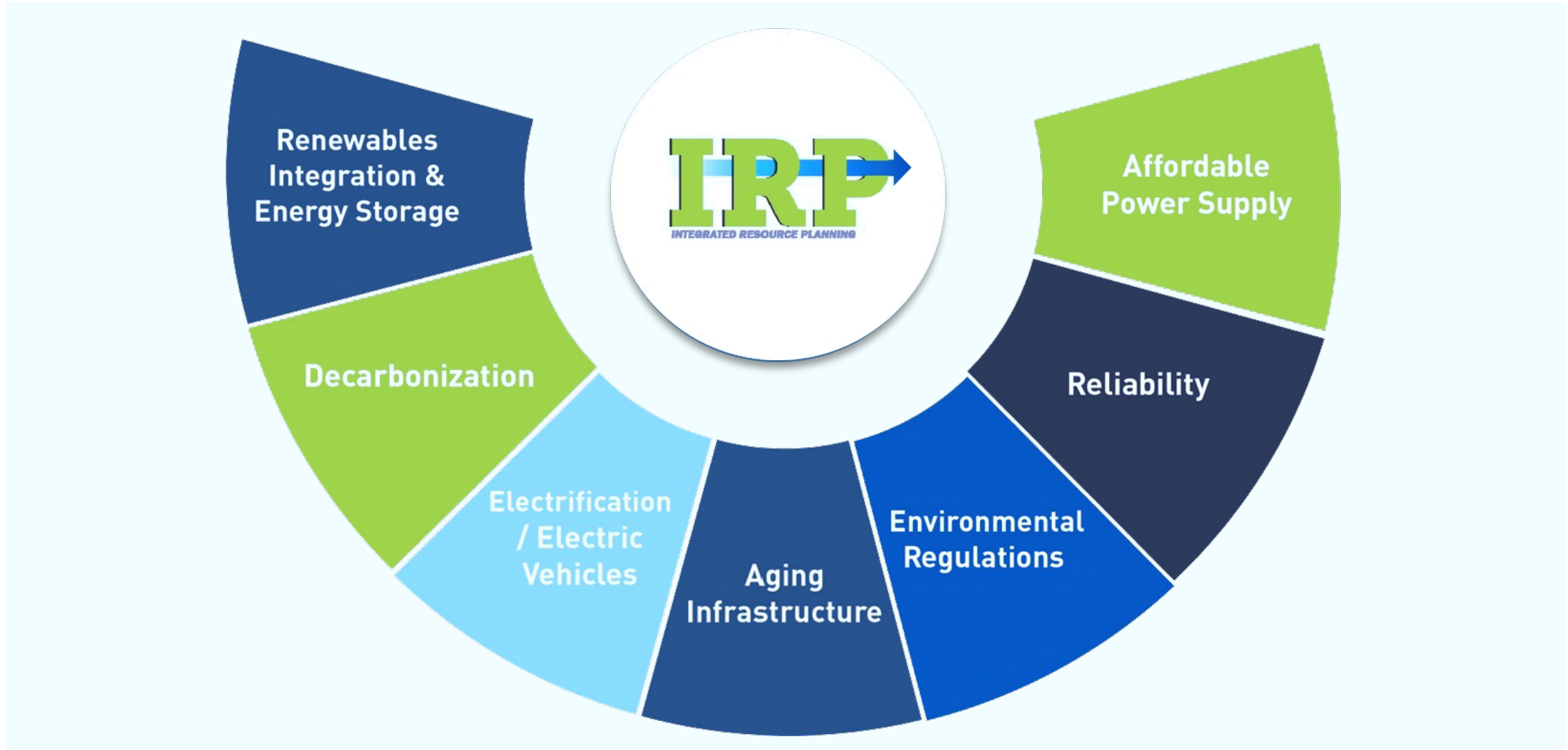
**Brad Kushner**

*Black and Veatch Consulting*





# Electric Utility Industry Trends & Drivers



# 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

### 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



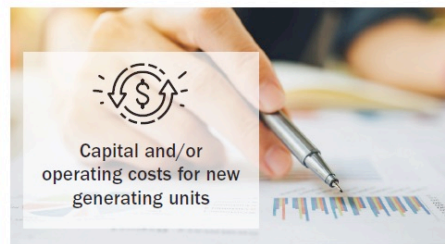
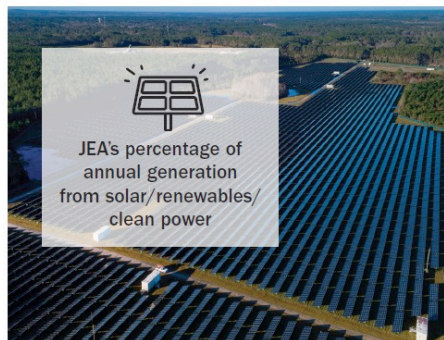
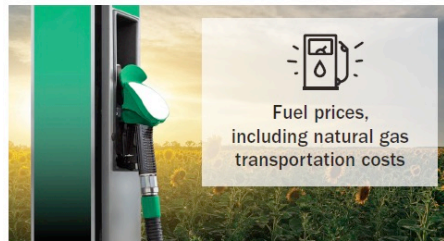
# The Integrated Resource Planning Process

IRP

## Seven Step IRP Process

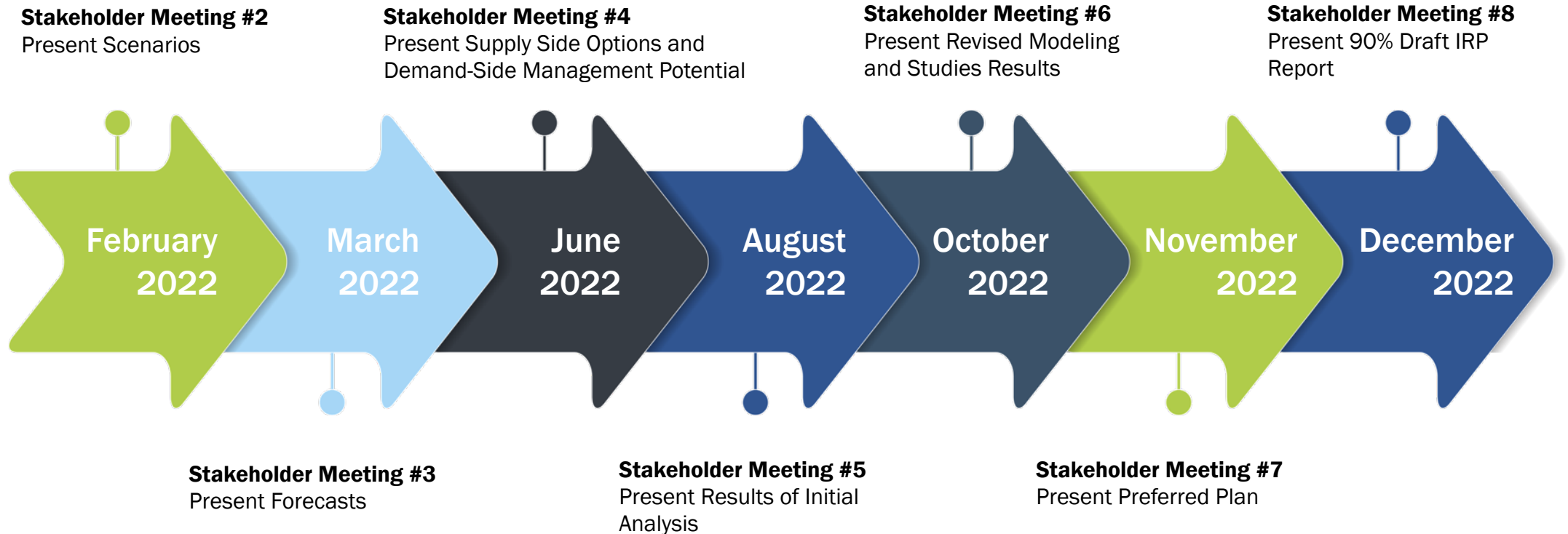


# IRP Development



- Existing Generating Resources
- Distributed Energy Resources
- New Generating Resources
- Demand-Side Management/Energy Efficiency
- Load Forecast
- Regulation of CO<sub>2</sub> Emissions; Air and Water
- Electric Vehicles
- Increased Renewables/Renewables Integration/Clean Energy
- Natural Gas and Solid Fuel Prices

# Preliminary IRP Timeline



# Open Discussion and Next Steps

**Laura Schepis**

*Chief External Affairs Officer*





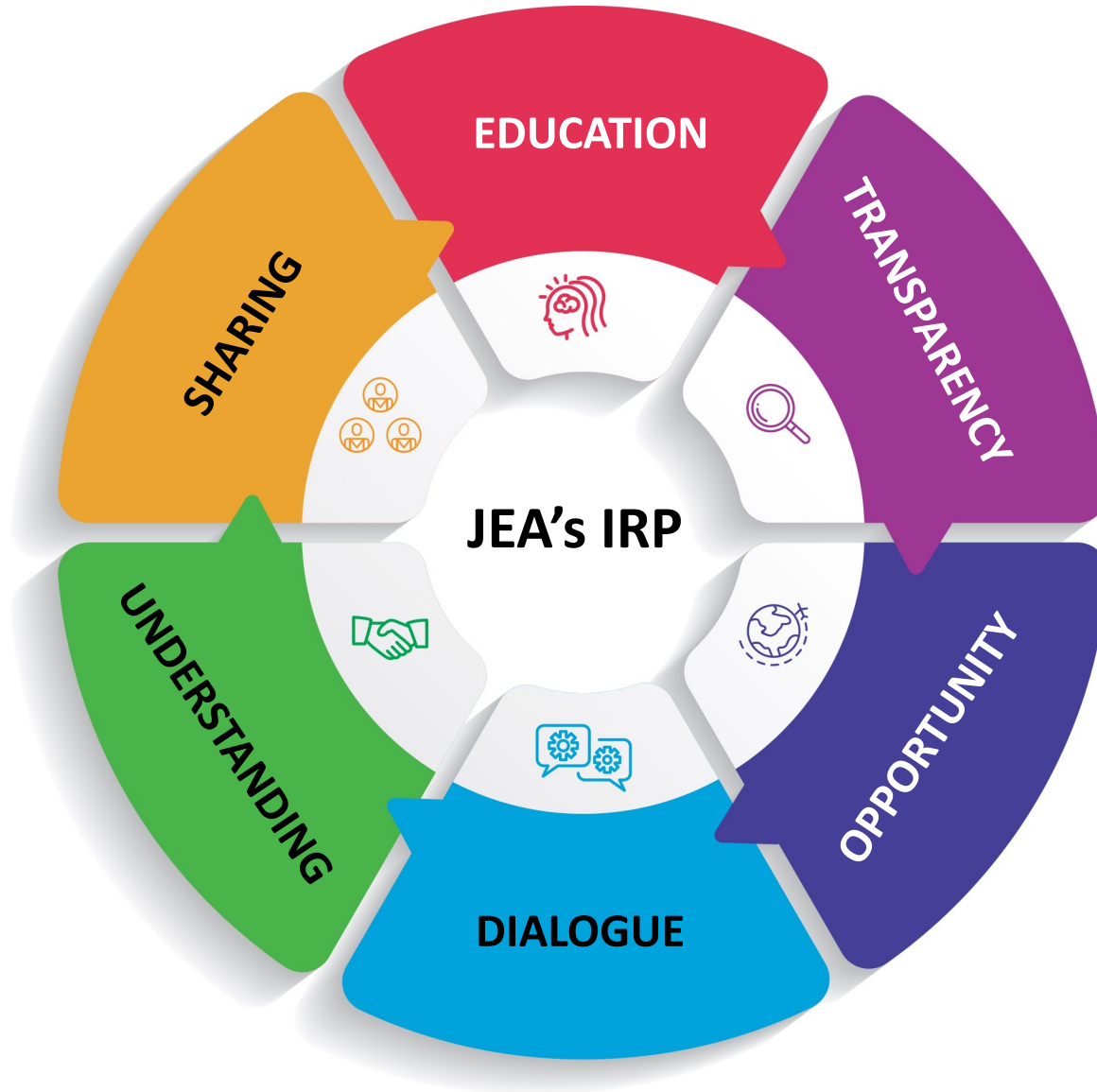
# Stakeholder Engagement Update



**Stakeholder Meeting  
Dates Now Adjusted  
for Blackout Dates**

<b>Stakeholder Meeting</b>	<b>Date</b>
#1 - Intro to JEA and IRP	1/13/22
#2 - Present Scenarios	2/9/22
#3 - Present Forecasts	3/10/22
#4 - Present Supply Side Options and DSM	6/9/22
#5 - Present PLEXOS and Initial Modeling Results	8/18/22
#6 - Present Revised Modeling and Studies Results	10/20/22
#7 - Present Preferred Plan	11/17/22
#8 - Present 90% Draft IRP Report	12/15/22

# Stakeholder Engagement



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.