

JEA SolarSmart and Integration of Solar Resources

Board of Directors

February 16, 2016

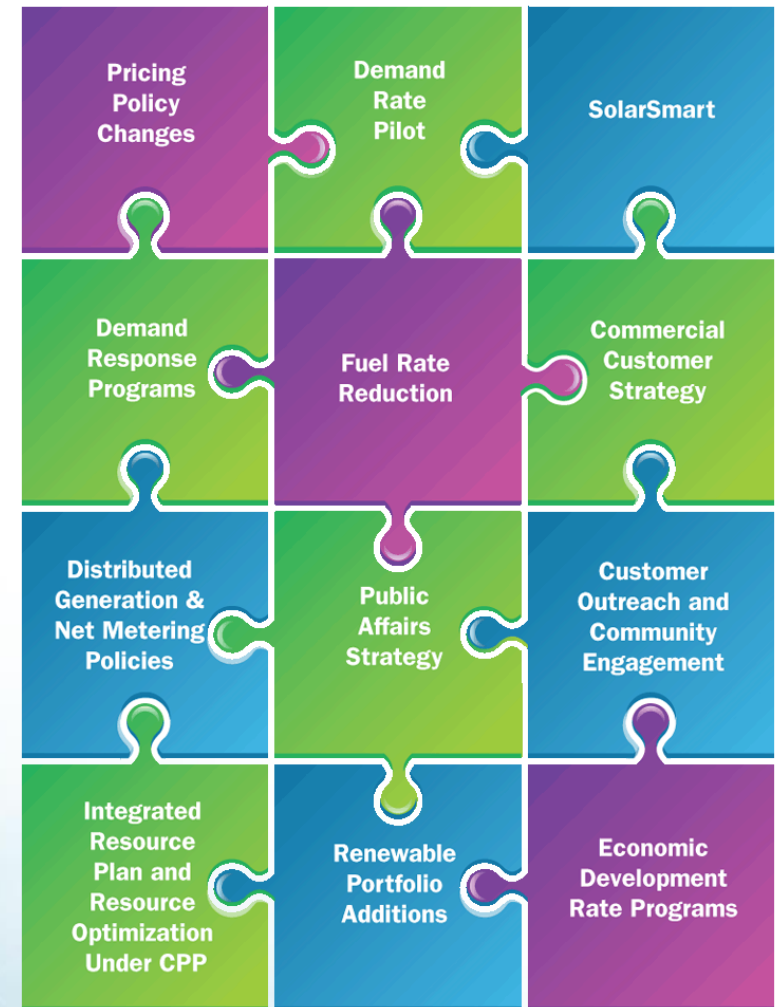
Past, Current and Future State



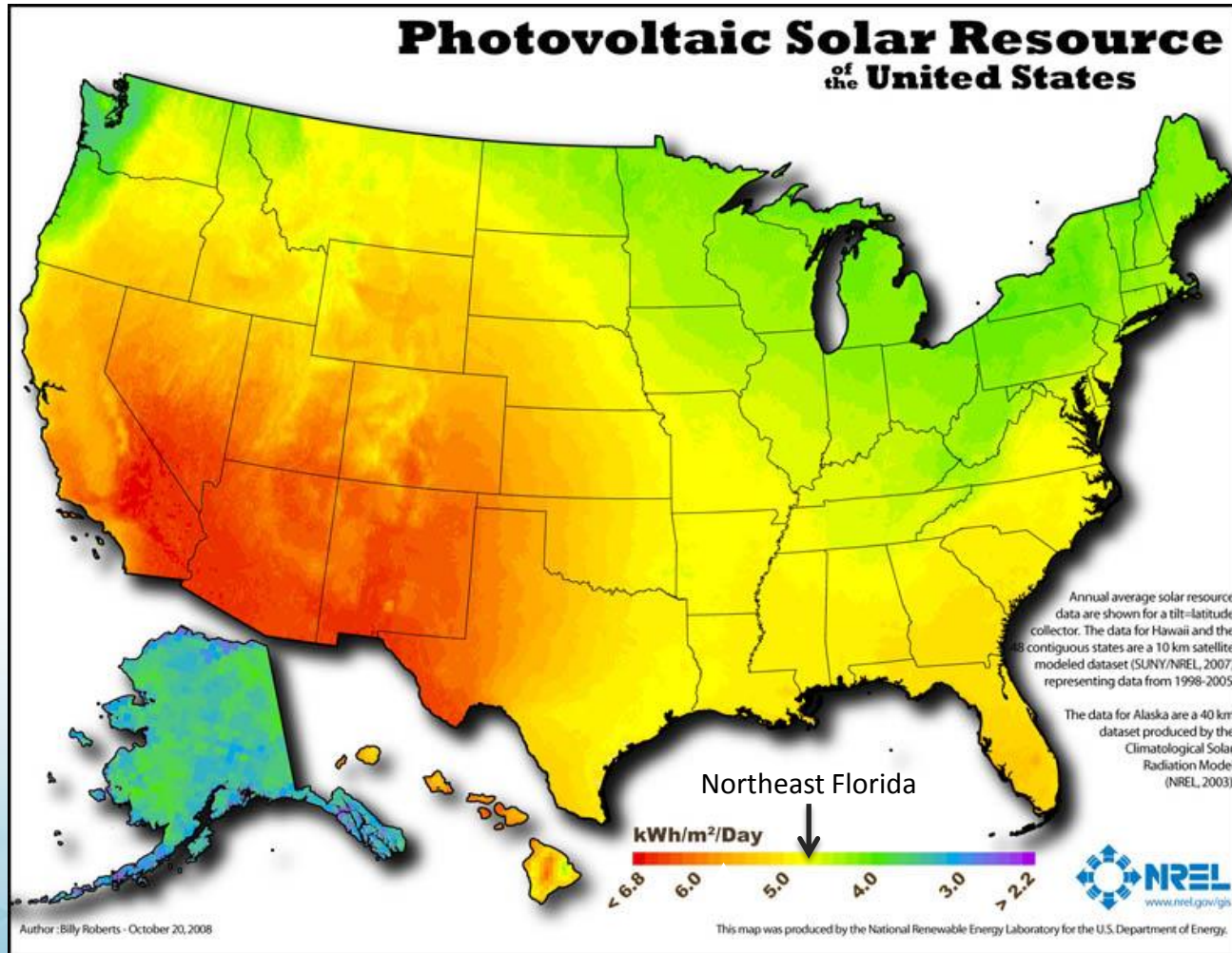
The Electric Industry is Facing Transformative Changes in the Coming Years

- Customers want choice
- Clean energy production is a cornerstone of our strategy as we face new industry regulations (Clean Power Plan)
- Level the playing field with respect to new technology in a changing industry
- Reduce customer costs by improving system utilization
- Recent declines in unit sales highlights the importance of revenue stability

GOAL
JEA will provide reliable, affordable, environmentally responsible utility service now and in the future



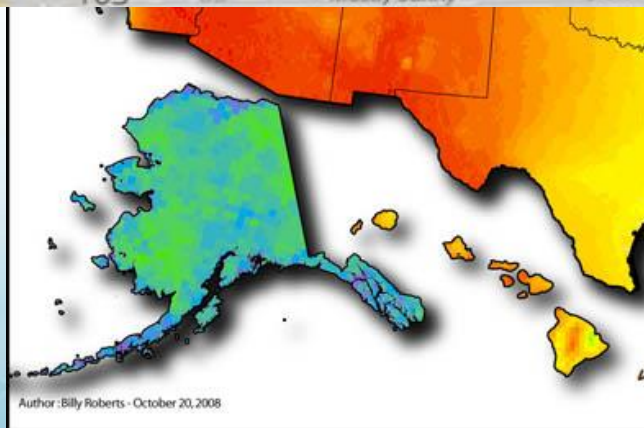
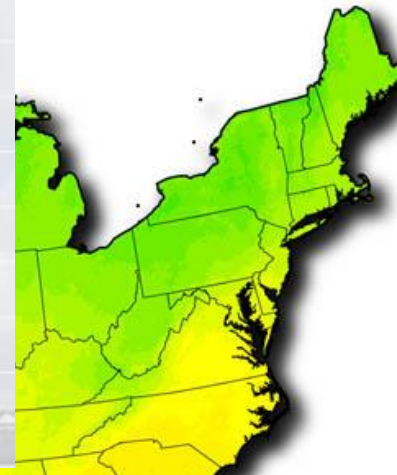
While Less Efficient Than Other Regions, Solar Energy is a Viable Renewable Technology in Florida



While Less Efficient Than Other Regions, Solar Energy is a Viable Renewable Technology

DAY	COND	HIGH	LOW	DESCRIPTION	PRECIP	WIND
TODAY Aug 17		110° ^F	86°	Partly Cloudy	∕ 0%	SW 14 mph
TUE Aug 18		108°	84°	Sunny	∕ 0%	SW 12 mph
WED Aug 19		108°	84°	Sunny	∕ 0%	SSW 10 mph
THU Aug 20		106°	84°	Sunny	∕ 0%	S 10 mph
FRI Aug 21		104°	81°	Mostly Sunny	∕ 10%	S 11 mph
SAT Aug 22		104°	82°	Sunny	∕ 0%	S 8 mph
SUN Aug 23		105°	84°	Sunny	∕ 0%	WNW 9 mph
MON Aug 24		106°	85°	Mostly Sunny	∕ 10%	SE 7 mph
TUE Aug 25		104°	83°	Mostly Sunny	∕ 20%	S 7 mph
WED Aug 26		103°	83°	Mostly Sunny	∕ 0%	SSE 7 mph

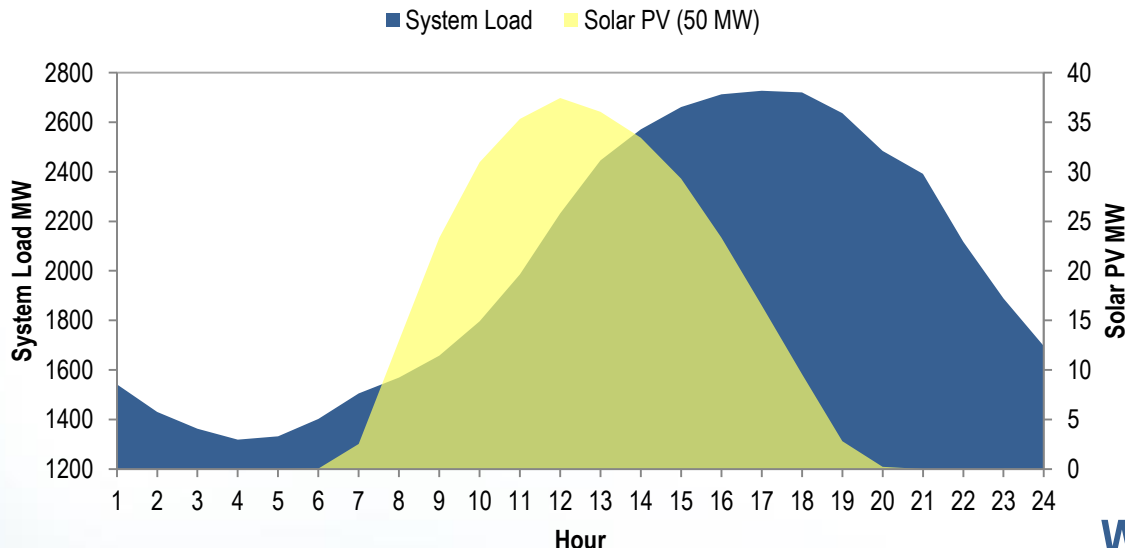
Solar Resource United States



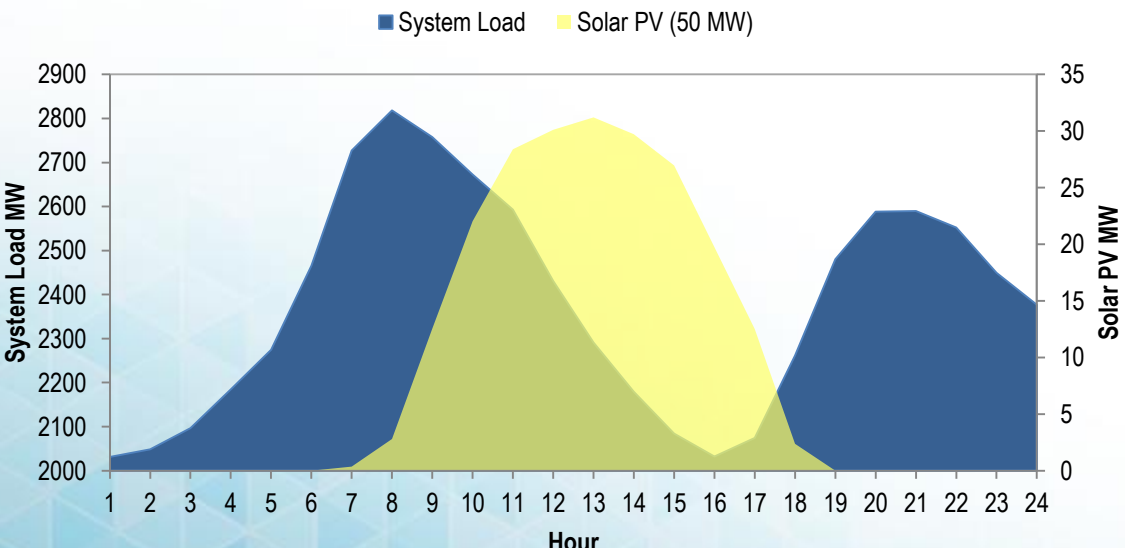
DAY	COND	HIGH	LOW	DESCRIPTION	PRECIP	WIND
TODAY Aug 17		87° ^F	76°	Scattered Thunderstorms	∕ 60%	ESE 9 mph
TUE Aug 18		92°	76°	PM Thunderstorms	∕ 80%	SSE 9 mph
WED Aug 19		94°	77°	PM Thunderstorms	∕ 60%	S 8 mph
THU Aug 20		94°	77°	PM Thunderstorms	∕ 60%	S 8 mph
FRI Aug 21		94°	77°	Scattered Thunderstorms	∕ 60%	N 7 mph
SAT Aug 22		94°	77°	PM Thunderstorms	∕ 60%	NNE 8 mph
SUN Aug 23		93°	76°	PM Thunderstorms	∕ 40%	NE 9 mph
MON Aug 24		93°	76°	Mostly Sunny	∕ 20%	NE 10 mph
TUE Aug 25		93°	75°	Mostly Sunny	∕ 20%	E 10 mph
WED Aug 26		92°	75°	Scattered Thunderstorms	∕ 60%	E 9 mph

Solar Integration – Electric System Impact of Solar PV

Summer Peak Day



Winter Peak Day



JEA Has Supported the Development of Solar Technologies Since 1999

- In 1999 JEA pioneered distributed solar energy in Florida by piloting photovoltaic (PV) panel deployments at:
 - 22 Duval County public schools
 - Jacksonville Zoo
 - Jax Chamber of Commerce
 - Jacksonville International Airport
 - Jacksonville University
 - FSCJ
 - COJ Fire Rescue Station
 - JEA downtown parking
- The 12MW Jacksonville Solar project will provide power to JEA through 2040

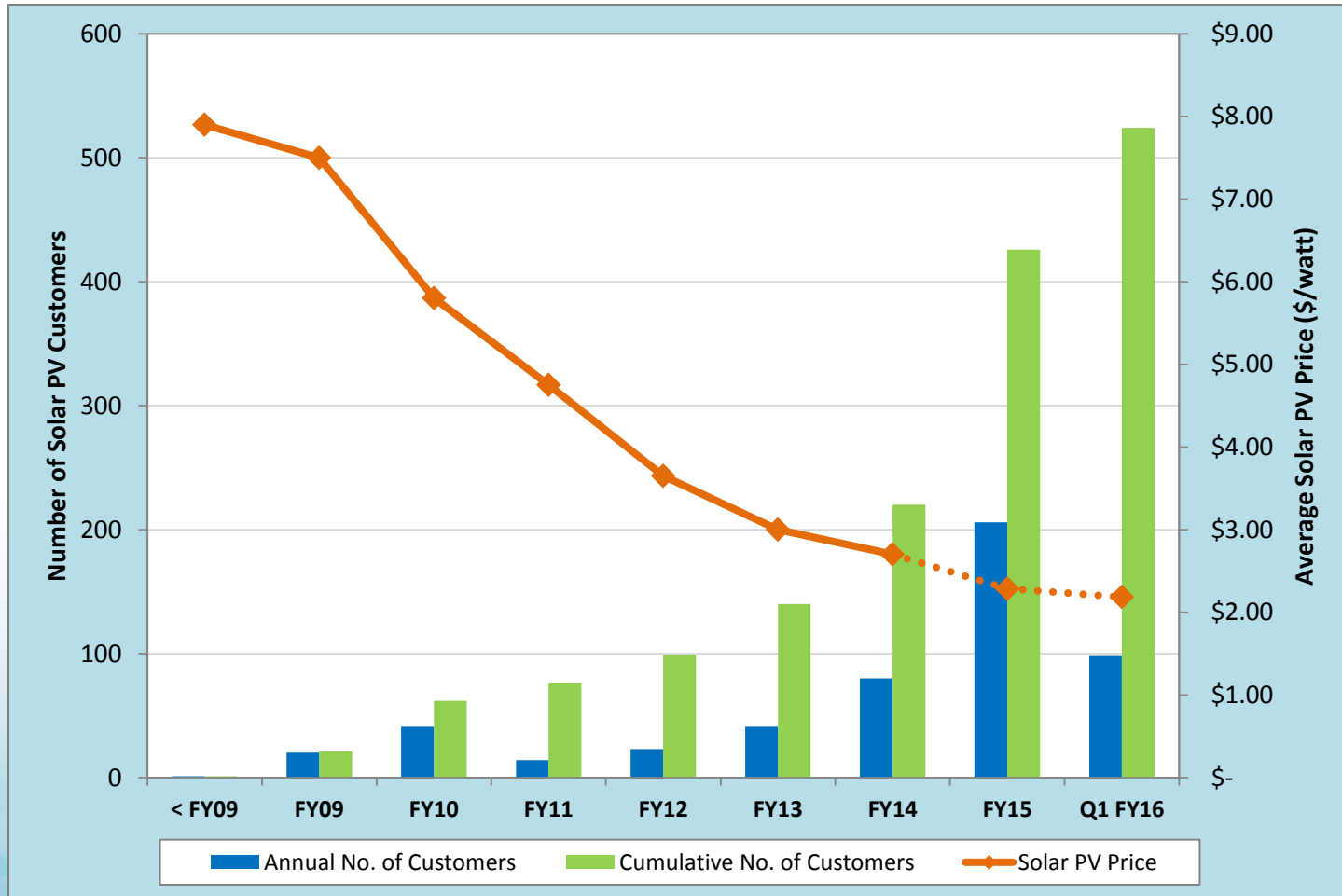


JEA Has Supported Customer-Owned Solar Generation Since 2009

- Customer-Owned solar arrays are installed at customer facilities, typically on rooftops.
- JEA Net Metering Policy established in 2009 to encourage customer-owned systems.
 - Matched programs provided by all other Florida utilities
 - Support for emerging renewable energy technologies to help market transformation
 - Guidelines for connection of customer-owned solar systems to the JEA grid
 - Billing and payment methodology for buying and selling electricity to/from the JEA grid
 - Credits for solar energy at the JEA Retail Rate as incentive for solar
 - Current level of inherent subsidy is small, but expected to grow



Cost of Solar Has Substantially Declined and Growth of JEA Customer-Owned Systems is Accelerating



JEA Engaged Stakeholders Throughout the Community in the Development of the Solar Strategy

Stakeholder Outreach

Environmental

- Sierra Club of North Florida
- Consumer Energy Alliance
- U.S. Green Building Council

Solar Industry

- Local PV Solar Contractors
- Solar Energy Power Association
- Florida Municipal Electric Association

Business

- JAX Chamber
- Green contractors, home energy designers

Nonprofit and Low Income

- United Way of Northeast Florida
- Habijax

JEA's New Solar Programs Offer More Choices to Customers

JEA is encouraging the addition of new solar resources by taking a holistic view of policies and products.

Solar Program Objectives:

1. Grow JEA's solar resources

- Increase the number and diversity of new utility scale solar installations in the JEA service territory

2. Expand customer offerings

- Identify and implement new value-added products made available as a result of JEA's new solar resources

3. Align customer-owned solar pricing policies to current market conditions

- Ensure that JEA treats all customers fairly



Objective 1 - Grow JEA's Solar Resources

Policy

- The JEA Solar Photovoltaic Policy establishes goals for increasing JEA's solar generation portfolio from the current capacity of 12 MW to a total of 50 MW by the end of 2016.

Actions

- JEA has already signed agreements for six solar installations to be installed in Jacksonville with a generation capacity of 25.5 MW.
- JEA is negotiating agreements for 11 MW additional solar generation.
- Cost of solar energy is higher than current energy costs.
 - Provides a hedge for CO2 regulations (Clean Power Plan)
 - Allows JEA to offer solar energy sales to customers who cannot install their own solar systems

Operations

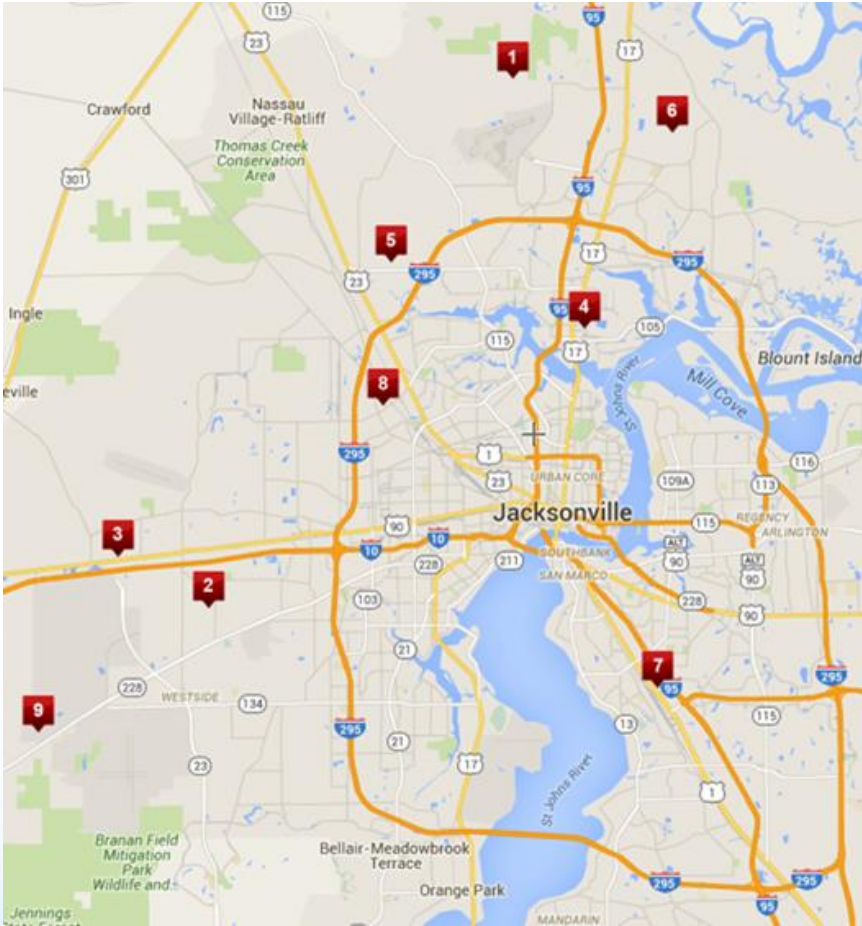
- The first new solar projects are expected to start producing energy by July 2016.

JEA will increase its solar generation capacity by over 300%



Objective 1 - Grow JEA's Solar Resources

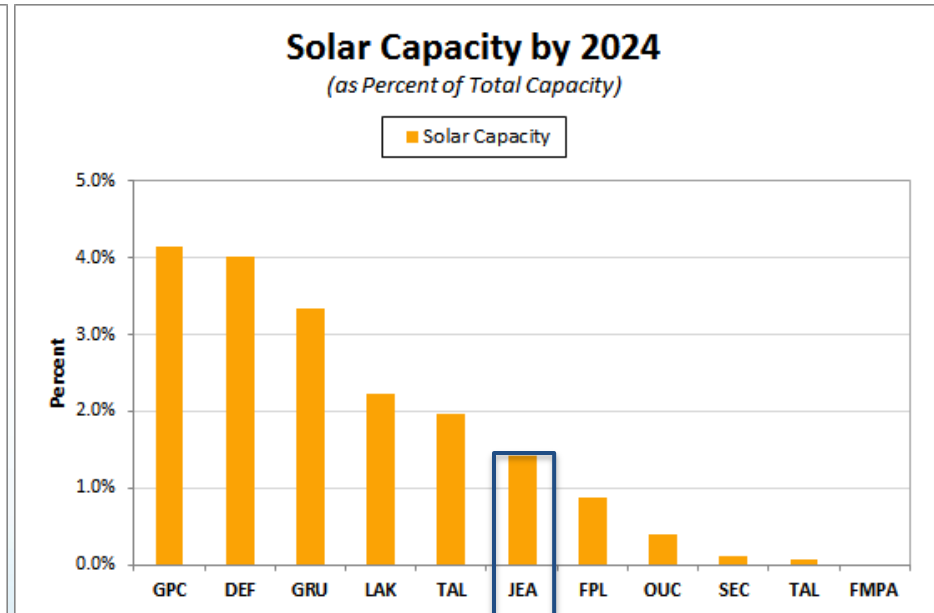
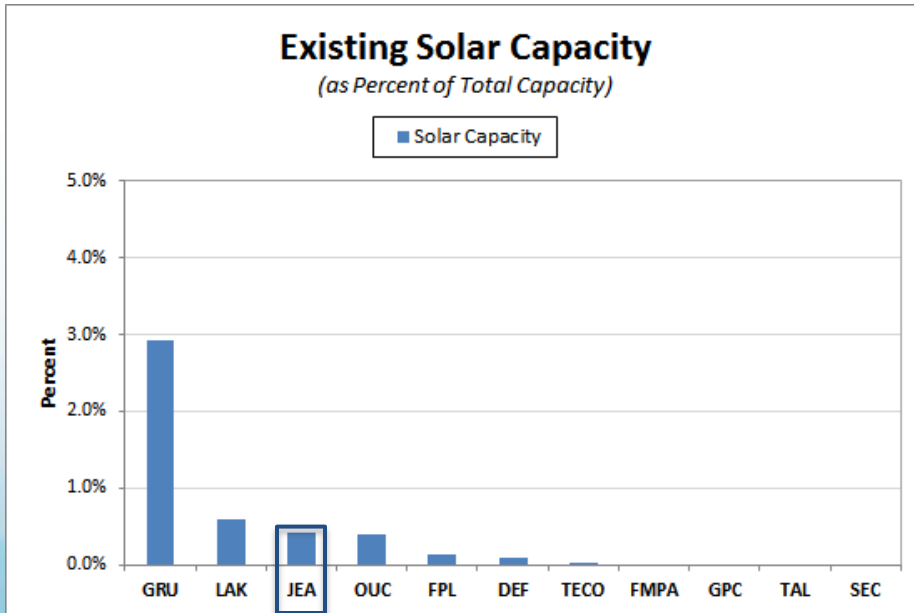
Project Name	Size (MW)
1- Montgomery Solar Farm	7.0
2- Blair Site Solar	4.0
3- Old Plank Road Solar Farm	3.0
4- Imeson Solar Farm	5.0
5- Simmons Road Solar	2.0
6- Starratt Solar	5.0
7- SunE Solar Farm	4.5
8- Soutel Solar	1.0
9- Yellow Water	5.0
Total MW	36.5



Solar resources will be geographically distributed to mitigate negative system impacts

JEA Utility Scale Solar vs Other Florida Utilities

- After the addition of the 38 MW of solar PV, JEA will have approximately 50 MW of utility scale solar generation - 1.4% of total generation capacity.



Based on the 2015-2024 Ten-Year Site Plan.
Site plan does not include any CPP assumptions or scenarios.

Objective 2 - Expand Customer Offerings

Policy

- JEA's Solar Policy allows for the energy produced from JEA's new solar arrays to be made available to JEA customers through new product options.

Actions

- JEA is proposing a new product to provide customers the rights to the energy produced by the new solar arrays:
 - The new product will be branded as **JEA SolarSmart**.
 - The pricing for **SolarSmart** will be higher due to the higher cost of solar energy
 - JEA will be selling the solar energy "at cost," as it does for the fuel used to generate electricity
 - Customers can enroll up to 100% of their energy to come from JEA's solar installations.



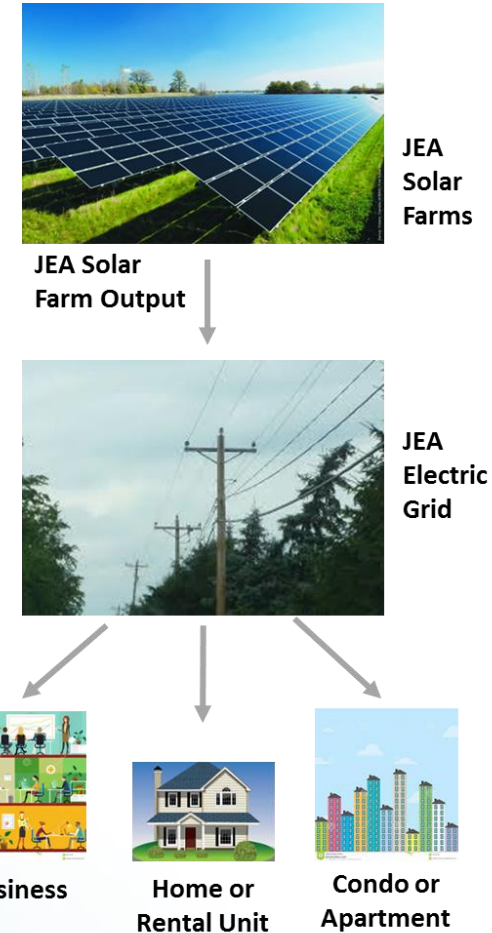
Objective 2 - Expand Customer Offerings

Operations

- The proposed new **SolarSmart** would be open for subscription **October 1, 2016** as we bring the first new solar projects online over the summer.

Customer Benefits

- **SolarSmart** will allow customers to participate and show commitment to improving the environment.
- It is an alternative for residential or business customers who can't afford the upfront and long-term cost of a solar system, or for whom rooftop solar is not viable or desired.
- It is suitable for customers living in condos, rental housing, or in properties with insufficient sunlight.



Business owners, renters and condo owners can “Go Green” with JEA SolarSmart

Objective 3 – Align customer-owned solar pricing policies to current market conditions

Under the current Net Metering policy, non-solar customers subsidize the cost to serve solar customers

Recommended Changes

- Treat all solar energy the same, regardless of source;
 - Modify the rate which JEA pays for excess electricity from full retail for Tier 1 & 2 customers and avoided cost for Tier 3 customers to JEA's cost to acquire solar energy, \$0.075/kWh for 2016 (to be updated annually)
 - These changes are applicable only to customers who purchase a solar PV system after April 30th 2016
 - Economics for solar producers are the same regardless of the type of solar installation
 - JEA's proposed SolarSmart will match JEA's cost to acquire solar, and ensures that all solar energy purchased is market-based
- JEA is evaluating retail rate structures, including demand rates and/or monthly customer charges. Solar customers will receive service under a demand rate if adopted in the future.

Net Metering Credits by Other Utilities in Florida

Avoided Cost

(2.2 to 2.4 cents per kWh)

- City of Bushnell
- City of Clewiston
- Fort Pierce Utilities Authority
- City of Green Cove Springs
- Town of Havana
- Keys Energy Services
- Kissimmee Utility Authority
- City of Leesburg
- City of Newberry
- Ocala Utility Services
- City of Starke

Retail Rate

(9.1 to 13.3 cents per kWh)

- City of Fort Meade
- Clay Electric Cooperative
- Gainesville Regional Utilities
- Beaches Energy Services
- Orlando Utilities Commission
- Florida Power and Light
- Gulf Power Company
- Progress Energy Florida
- Tampa Electric Company

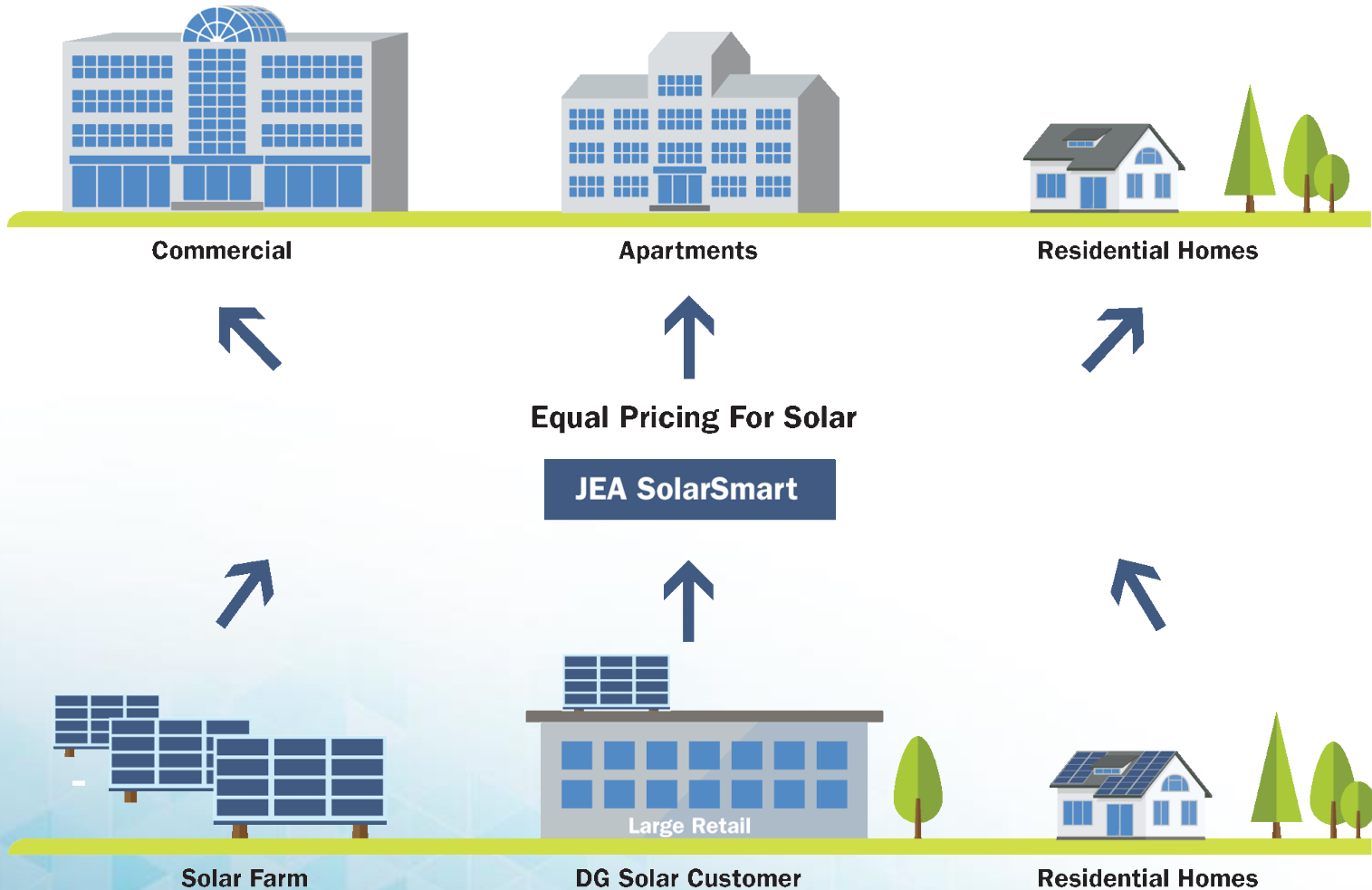
Objective 3 – Align customer-owned solar pricing policies to current market conditions

Recommended Changes, continued

- Increase net metering limit from 10 MW total (tiers 1-3) under current policy to 20 MW (10 MW for Tier 1 and 2; 10 MW for Tier 3) under proposed limit
- Clarify the determination of “excess energy” sold to JEA.
- Clarify the application process, including the timing of approvals.
- Clarify that change of property ownership requires a new interconnection agreement, which updates the policy to that active at the time of the ownership change.
- Change the policy to transfer Renewable Energy Credits to JEA for energy purchased by JEA.
- The Distributed Generation Policy was also modified to remain consistent with the changes in the Net Metering Policy.

Equal Pricing for Solar

Consuming Solar Energy (Buyer)



The Integration of Solar Expands our Community's Energy Options

Summary

JEA's Strategy

- Support the use of solar energy and the advancement of solar generation in financially responsible ways.
- Provide customers with options to buy solar energy under JEA SolarSmart.
- Ensure solar pricing is fair and transparent for all customers.

