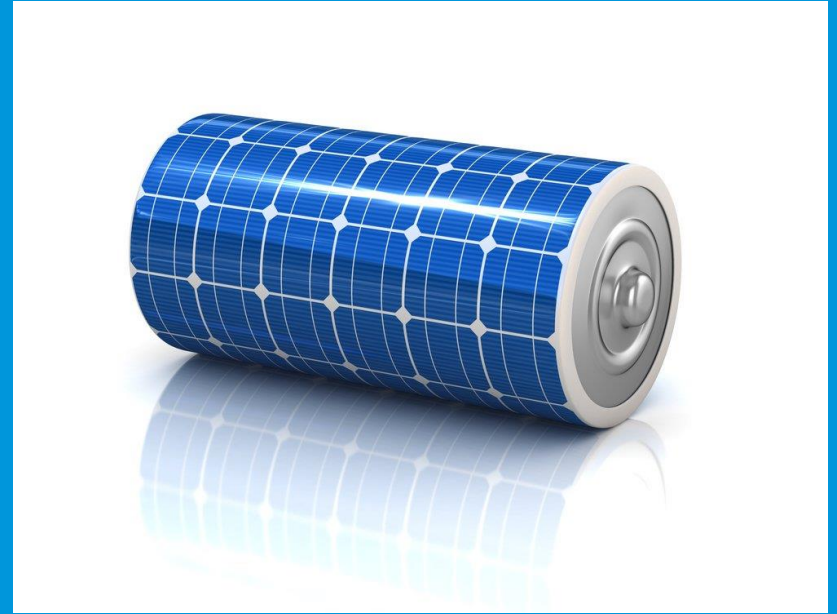




FPL®

Energy Storage



Cory Ramsel – Sr. Director

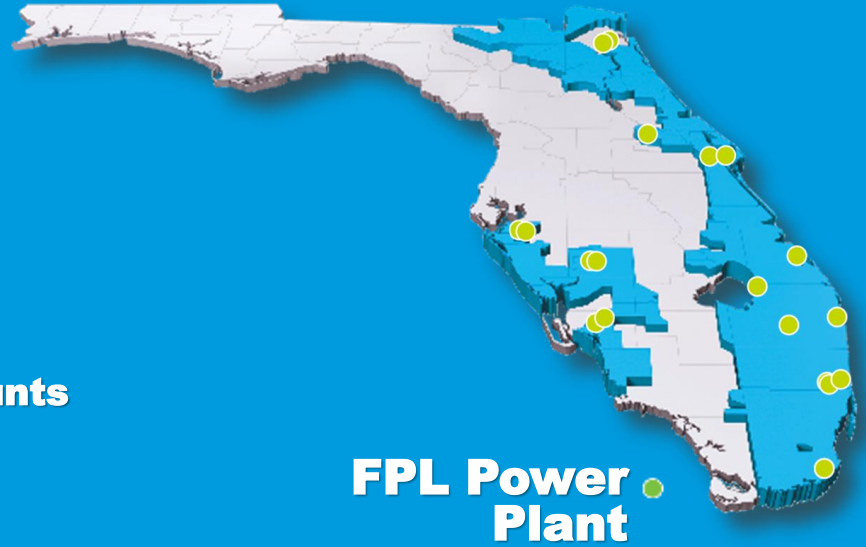
October 19

Florida Power & Light

**Largest of Florida's
55 electric utilities**

Powering about half the state
4.9 million customer accounts
nearly **10 million** people

Largest utility in the U.S. by
electricity sold, **3rd** in customers



Our Record

Enabling reliable service, reducing emissions
and keeping customer bills low
for the long term

**30%
lower
bills**

typical 1000-kWh
rates vs. U.S.
average



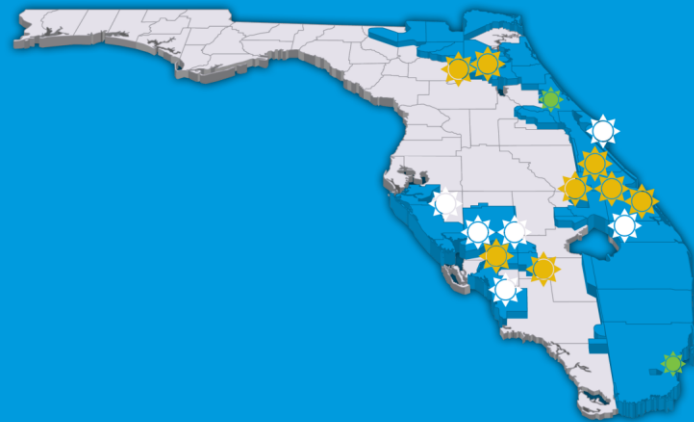
99.98+%
reliable
service

**30%
cleaner**
CO₂ emission rate
vs. U.S. average

Solar is a growing part of the mix

☀️ **FPL is adding 10 million+ solar panels** across Florida by 2023

- We built three new solar power plants in 2016
- **Eight more solar plants are under construction**
- **Numerous future sites are being developed**
 - That's about 20 more solar power plants



☀️ Universal Solar 🌿 Commercial Solar 🌞 Under Construction

Why should we deploy energy storage

- ▶ **Can it lower customer bills?**
- ▶ **Can it improve customer reliability?**
- ▶ **Can it lower our emissions profile?**

How can we use storage

Curtailment Reduction

Voltage Support

Congestion Relief

Frequency Regulation

Power Quality

Renewable Ramp Control

Demand Response

Peak Shaving

Generation Capacity

Load Following

Generation Reserves

Solar Storage

UPS

T&D Deferral

Renewable Smoothing

Demand Charge Management

Energy Arbitrage

Which technology

Solid State
"Battery"

Flow

Flywheels

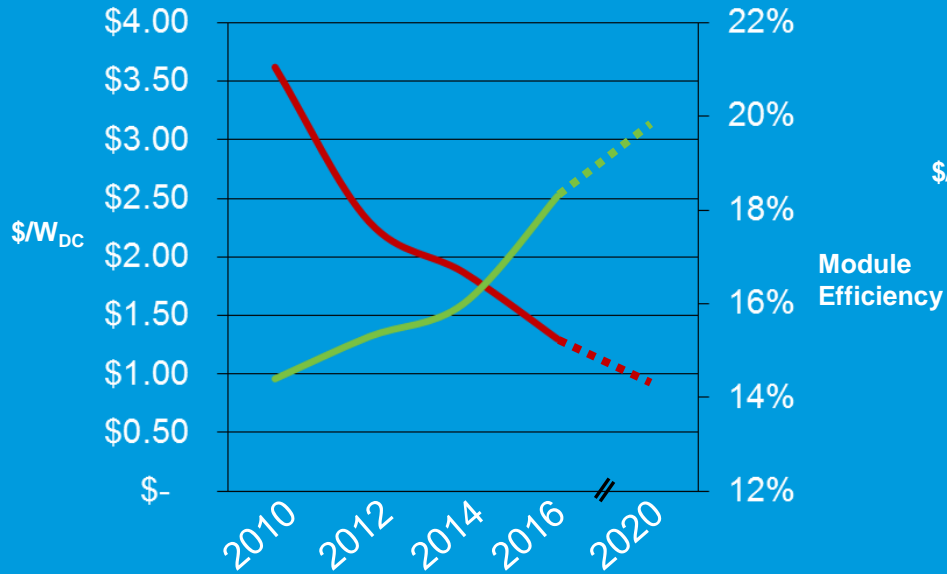
Compressed
Air

Thermal

Pumped
Hydro

Batteries (like solar) are becoming cheaper

Solar Installed Cost¹



Lithium-Ion Battery Pack Cost²



1) Bloomberg New Energy Finance and GTM Research
2) Bloomberg New Energy Finance

Energy storage evolution @ FPL



2016
6 projects
3 MW



2017-2020
10-20 projects
50 MW



2020+

2016 demonstration projects

Community

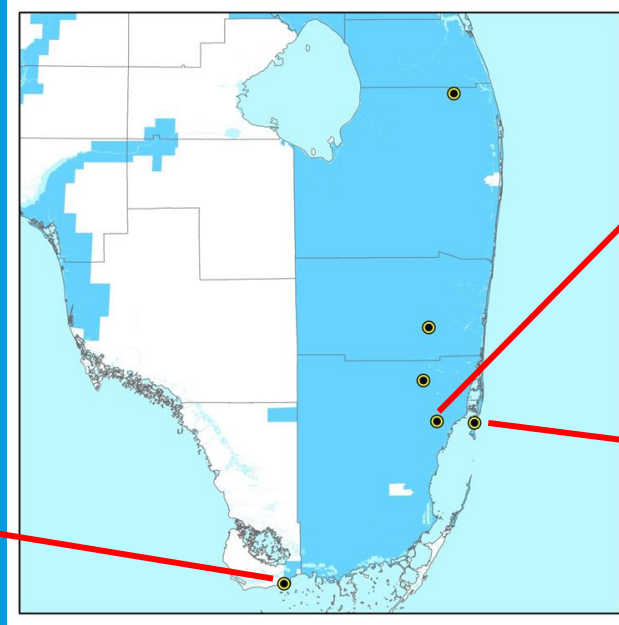


3 Residential Sites

Florida Bay



1.5 MW / 1.5 MWh



SW Substation



1.5 MW / 4 MWh using 2nd life EV Batteries

Relocatable



Stadium Lighting Backup & Customer UPS

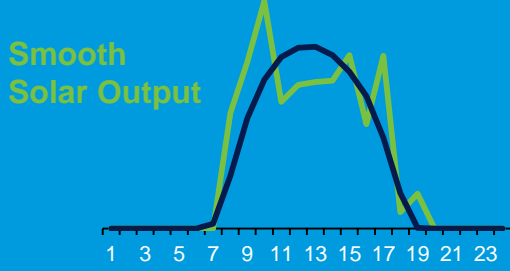
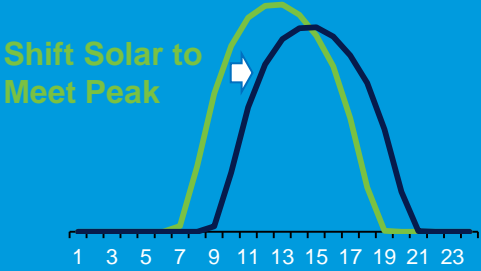
Current 50 MW Pilot

Urban Environment



Source: ComEd Underground 345kV Project

Solar + Storage



Current 50 MW Pilot (cont'd)

Mobile



Customer Sites



EV Charging



Other





FPL®