



Levy County Solar Workshop

April 2021
Duke Energy Florida



Levy County Workshop

- Introduction
- Solar 101
- Schedule
- Questions

Thomas Lawery, Renewables Manager

Matthew Ruscio, Business Development

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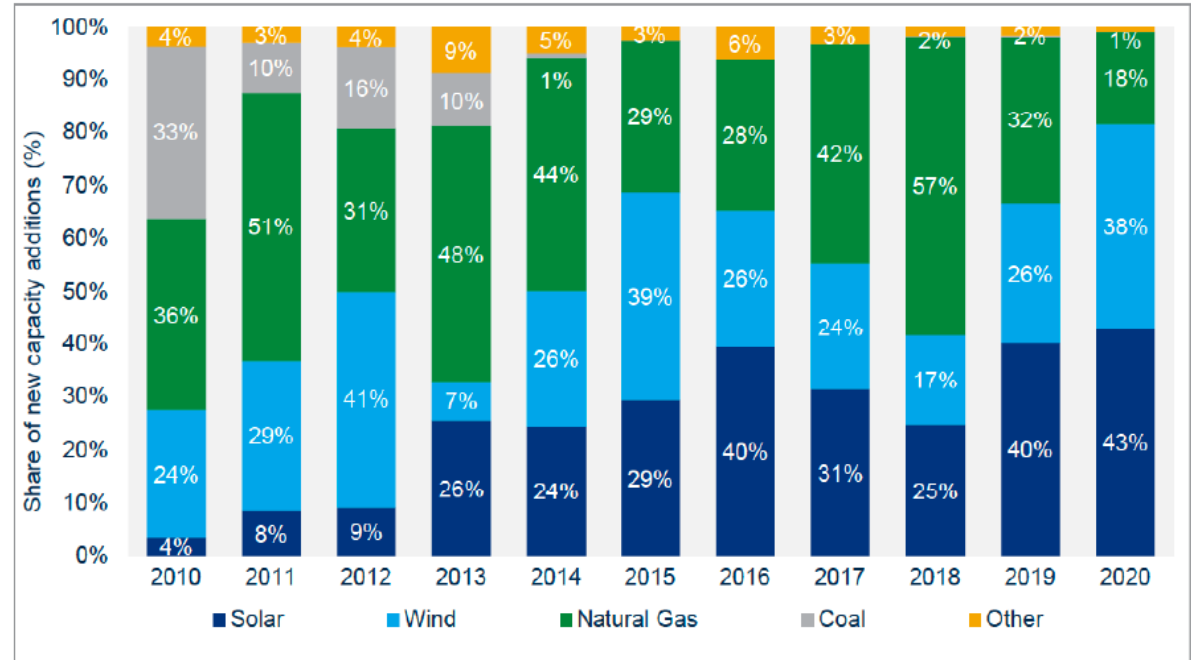
Lindsay Olivieri, Stakeholder Engagement



Solar in the United States

- The United States installed 9.0 GW of solar in first 3 quarters of 2020
- Largest first 9-month total ever

New U.S. electricity-generating capacity additions over the last decade



Source: Wood Mackenzie, Federal Energy Regulatory Commission (for all other technologies)

Duke Energy Florida: Renewable Energy and Batteries

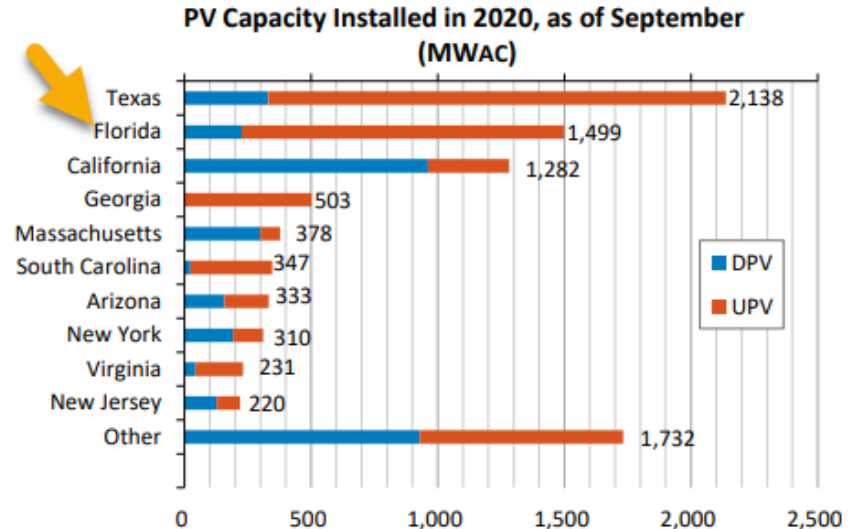
Florida will be ranked 2nd in new solar; 3rd in total solar by state

- Large scale utility is majority DE is building
 - 700 MW, 50% complete
- Roof top solar doing well mainly in residential

Future Technologies

- Floating solar, battery energy storage options, hydrogen

In the first 9 months of 2020, approximately 9.0 GWAC of PV capacity were installed, of which 5.7 GWAC were utility-scale PV and 3.3 GWAC were distributed PV.



Duke Energy Florida Solar Power Plants

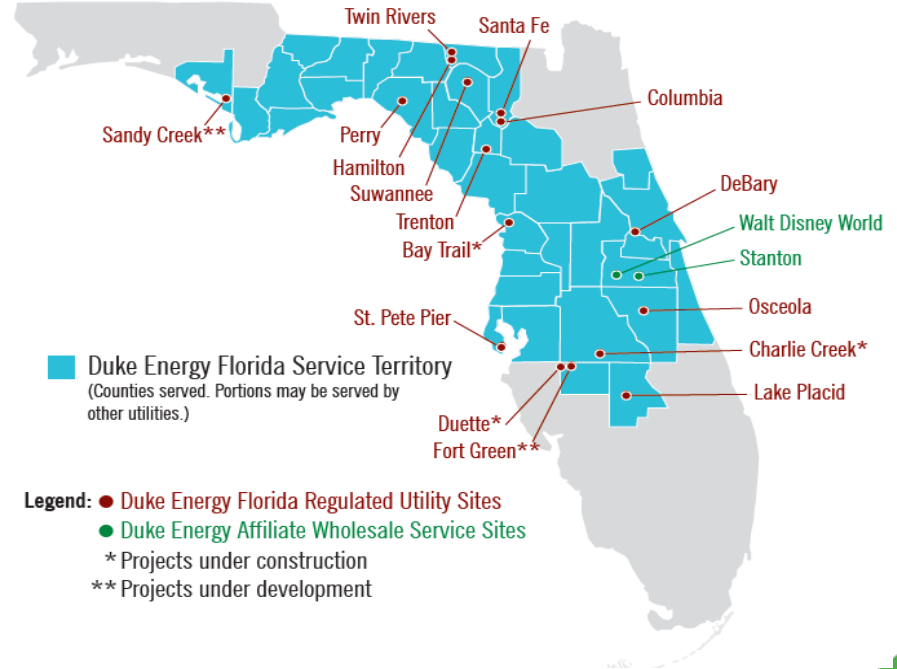


Twin Rivers (2021)

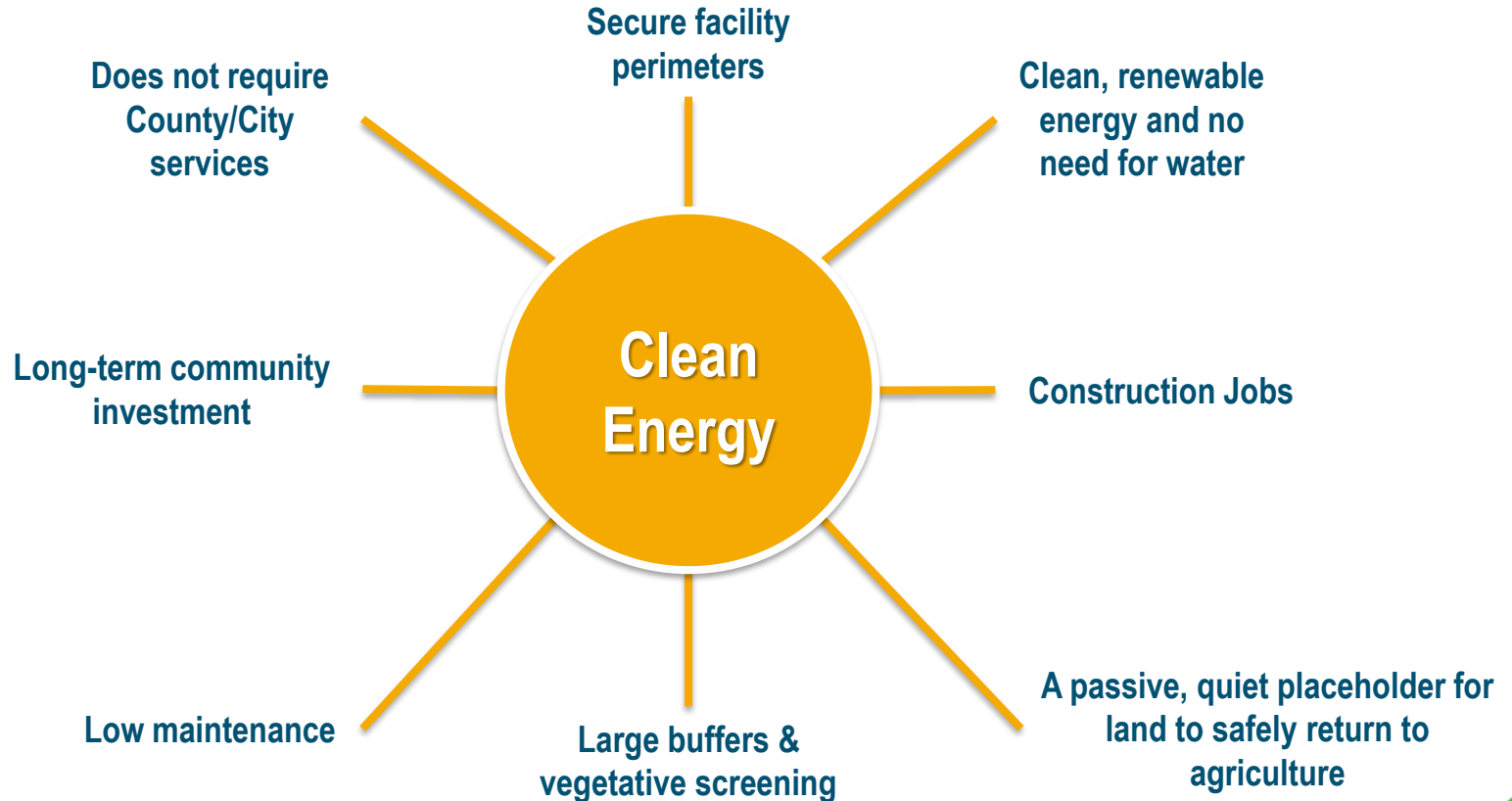


DeBary (2020)

Florida Solar Power Duke Energy Solar Sites



Solar Energy 101 – Benefits of Solar



HOW SOLAR ENERGY WORKS

Photovoltaic Panels convert sunlight into electricity



The inverter converts the DC electricity to the AC



Electricity is distributed on the electrical grid

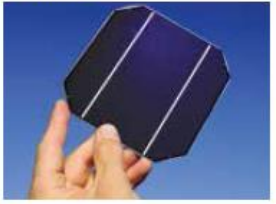


The grid provides clean energy to our homes and businesses



Solar Energy 101 – Module Terminology

PV CELL



Solar cells are the building blocks of a solar energy system

PV PANELS



Solar cells are wired into panels

PV ARRAYS



Solar arrays are a group of solar panels

Project Development Journey

Evaluate Development
Market

Prospecting

Early Development

Advanced Development

Construction

Operations (30+ years)



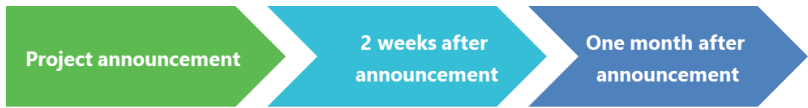
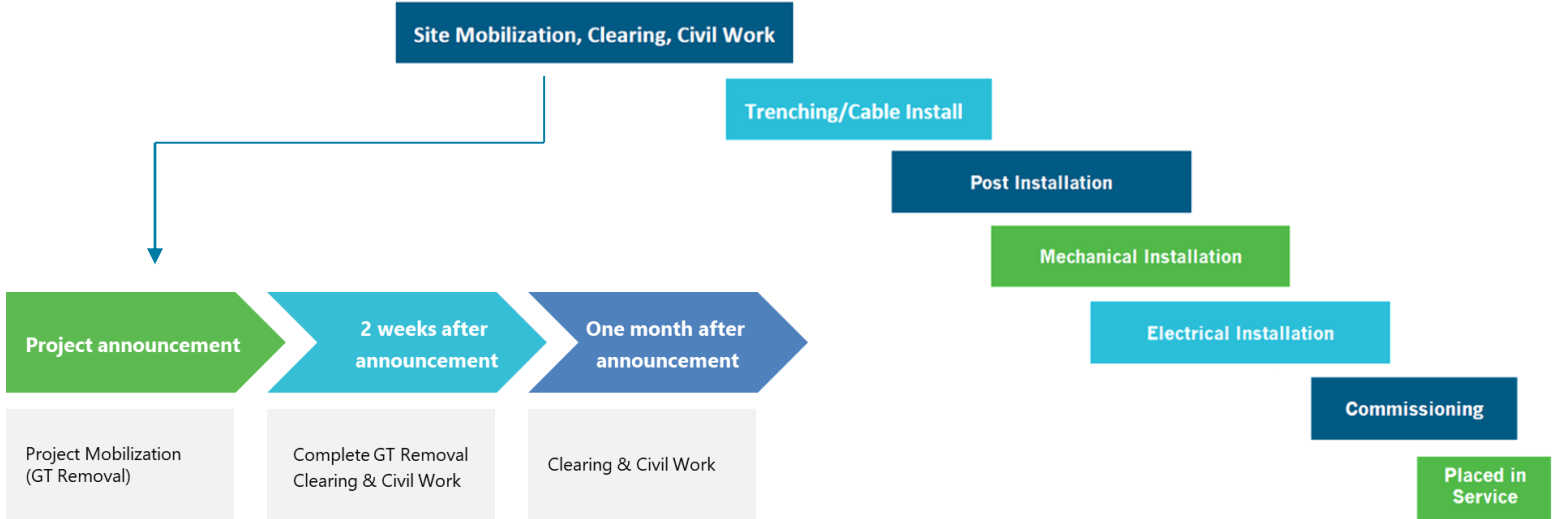
- Transmission study
- Landowner outreach
- Desktop environmental screening

- Land lease/purchase
- Interconnection request
- Environmental field work
- Permitting review/consultation
- Receive initial interconnection results
- Desktop environmental screening

- Generator Interconnection Agreement (GIA)
- State/Local permitting applications
- Detailed construction estimates

- Signed GIA
- All permits received
- Final site plan approvals obtained

Construction Schedule & Outreach



Project	Project Mobilization (GT Removal)	Complete GT Removal Clearing & Civil Work	Clearing & Civil Work
Int/Ext Key Stakeholders	Key leader & CREC notifications (morning)	CREC Employee Lunch/Learn (TBD)	Other identified needs (TBD)
External	Press Release (afternoon)	Neighbor Notifications Postcards	Public Outreach (as needed & continued throughout project construction)

Construction Process – Site Mobilization/Clearing



Construction Process – Trenching/Cable Installation



Construction Process – Post & Module Installation



Construction Process - Interconnection



Project Operation – Placed in Service



Post Operation – Project Decommissioning

Modules

- Shipped to an existing site or salvaged
- Over 90% of a solar panel is recyclable
- Remaining disposed off in accordance with local requirements

Inverters/ Cables/Racking

- Cables and electrical equipment (inverters) deemed no longer necessary are removed and recycled by approved recycling facilities
- Racking is comprised of steel, and are recycled by an approved metals recycler

Land Use

- Following removal of equipment, site is returned to its initial condition
- Site is tilled to restore sub-grade materials
- Biodiversity is maintained as part of vegetation management plans

**Decommissioning process ranges between 2-6 months*



Duke Energy Florida Solar Projects



Osceola (2016)



Perry (2016)



Suwannee (2017)



Disney (2016)*



Twin Rivers (2021)

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