



**AGENDA**  
**CITY OF LAKE WORTH BEACH**  
**ELECTRIC UTILITY ADVISORY BOARD MEETING**  
**BY TELECONFERENCE – [ZOOM LINK BELOW](#)**  
**TUESDAY, OCTOBER 04, 2022 - 6:00 PM**

**ROLL CALL:**

**PLEDGE OF ALLEGIANCE:**

**AGENDA - Additions/Deletions/Reordering:**

**PRESENTATIONS: (there is no public comment on Presentation items)**

**PUBLIC PARTICIPATION OF NON-AGENDAED ITEMS:**

**APPROVAL OF MINUTES:**

EUAB Minutes 08.04.22

EUAB Minutes 08.24.22

**UNFINISHED BUSINESS:**

A. Horizons Energy Integrated Resource Plan

**NEW BUSINESS:**

**BOARD COMMENTS:**

**BOARD LIAISON REPORTS AND COMMENTS:**

**ADJOURNMENT:**

If a person decides to appeal any decision made by the board, agency or commission with respect to any matter considered at such meeting or hearing, he or she will need a record of the proceedings, and that, for such purpose, he or she may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based. (F.S. 286.0105)

Please click the link below to join the webinar & for public participation :

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**MINUTES  
CITY OF LAKE WORTH BEACH  
ELECTRIC UTILITY ADVISORY  
VIA TELECONFERENCE - YOUTUBE  
THURSDAY, AUGUST 04, 2022 - 6:00 PM**

**ROLL CALL:**

Present members: Matthew Portilla, Ryan Oblander, Ramsay Stevens, David Simms, Eric Jeffers.  
Edward Liberty, the Board Liaison and Commissioner Christopher McVoy were also in attendance.

**PLEDGE OF ALLEGIANCE:** led by Board Member Matthew Portilla.

**AGENDA - Additions/Deletions/Reordering:**

No additions, deletions or reordering on the agenda.

**PRESENTATIONS:** (there is no public comment on Presentation items)

- A. New Board Member – Eric Jeffers was introduced to the board and the public.
- B. Horizons Energy Integrated Resource Plan – presented by Greg Turk, and Kathy Jones

Mr. Liberty opened the discussion explaining that the Integrated Resource Plan (IRP) is an assessment of the future generation and transmission needs for the City of Lake Worth Beach. The Integrated Resources Plan (IRP) not only takes a dive into the what the supply aspect of the resources should be but also the demand side, an example would be Conservation and Demand Response.

Kathy Jones is the Executive Consultant for Horizons Energy, she presented the latest market information using forecasting tools and the EnCompass Power Planning Model. Horizons Energy will assist the City in developing a plan to reach its goal of low-cost, reliable and low carbon service.

Lengthy discussion ensued.

**PUBLIC PARTICIPATION:**

There was no public participation.

**APPROVAL OF MINUTES:**

EUAB Minutes 12.15.21

Action: The motion was made by to David Simms approve minutes in the agenda second by Matthew Portilla.

Vote: Unanimous

**UNFINISHED BUSINESS:**

There was no unfinished business in the agenda.

**NEW BUSINESS:**

There was no new business in the agenda.

**BOARD COMMENTS:**

Eric Jeffers is the newest Advisory Board Member for the Electric Utility. Mr. Jeffers is currently a Software Engineer and a resident of the City.

**BOARD LIAISON REPORTS AND COMMENTS:**

No Board Liaison comments.

**ADJOURNMENT:**

The meeting was adjourned at 9:05 pm.

**MINUTES  
CITY OF LAKE WORTH BEACH  
ELECTRIC UTILITY ADVISORY  
VIA TELECONFERENCE - YOUTUBE  
WEDNESDAY, AUGUST 24, 2022 - 6:00 PM**

**ROLL CALL:**

Present members: Matthew Portilla, Ryan Oblander, David Simms, Eric Jeffers. Ramsay Stevens was absent for the roll call. Edward Liberty, the Board Liaison, Brian King, Assistant Director of Power Generation and Commissioner Christopher McVoy were also in attendance.

**PLEDGE OF ALLEGIANCE:** led by Board Member David Simms.

**AGENDA - Additions/Deletions/Reordering:**

No additions, deletions or reordering on the agenda.

**PRESENTATIONS:** (there is no public comment on Presentation items)

There was no presentation.

**PUBLIC PARTICIPATION:**

There was no public participation.

**APPROVAL OF MINUTES:**

No minutes to approve on the agenda.

**UNFINISHED BUSINESS:**

A. Discuss with Horizons Energy Integrated Resource Plan

Greg Turk gathered the City's historical information on the utilization of the Power Plant units, and the costs of resources. Mr. Turks provided preliminary results and discussed the table of contents for the Integrated Resource Plan (IRP) report. Mr. Turk stated that in the coming weeks Horizons Energy will provide preliminary cases for review that will show the level of demand and the resources that will natively supply this demand. The IRP models will also take into consideration the cost of achieving carbon compliance.

Commissioner McVoy stated the City should approach carbon reduction by hedging from the consumers point of view.

Lengthy discussion ensued.

**NEW BUSINESS:**

There was no new business in the agenda.

There was no new business in the agenda.

**BOARD COMMENTS:**

Questions submitted by Board Member Ramsay Stevens:

1. Is Horizons Energy able to model the value of a Virtual Power Plant for our community? Is this something we should pursue beyond or as part of our prospective demand response program? (1:31:23)
2. Does Horizons Energy see any value in determining the floor price at which we, worst case, would need to sell excess solar power in the open market? If we knew the floor price for surplus solar power, couldn't we then examine establishing a rate class that encourages as much community-based generation as possible without adversely impacting the utility's economics? (1:35:02)
3. How has the passage of the Inflation Reduction Act influenced Horizon Energy's modeling? (2:45:05)

**BOARD LIAISON REPORTS AND COMMENTS:**

No Board Liaison comments.

**ADJOURNMENT:**

The meeting was adjourned at 9:05 pm.



# LAKE WORTH BEACH IRP BASE CASE RESOURCE PLAN

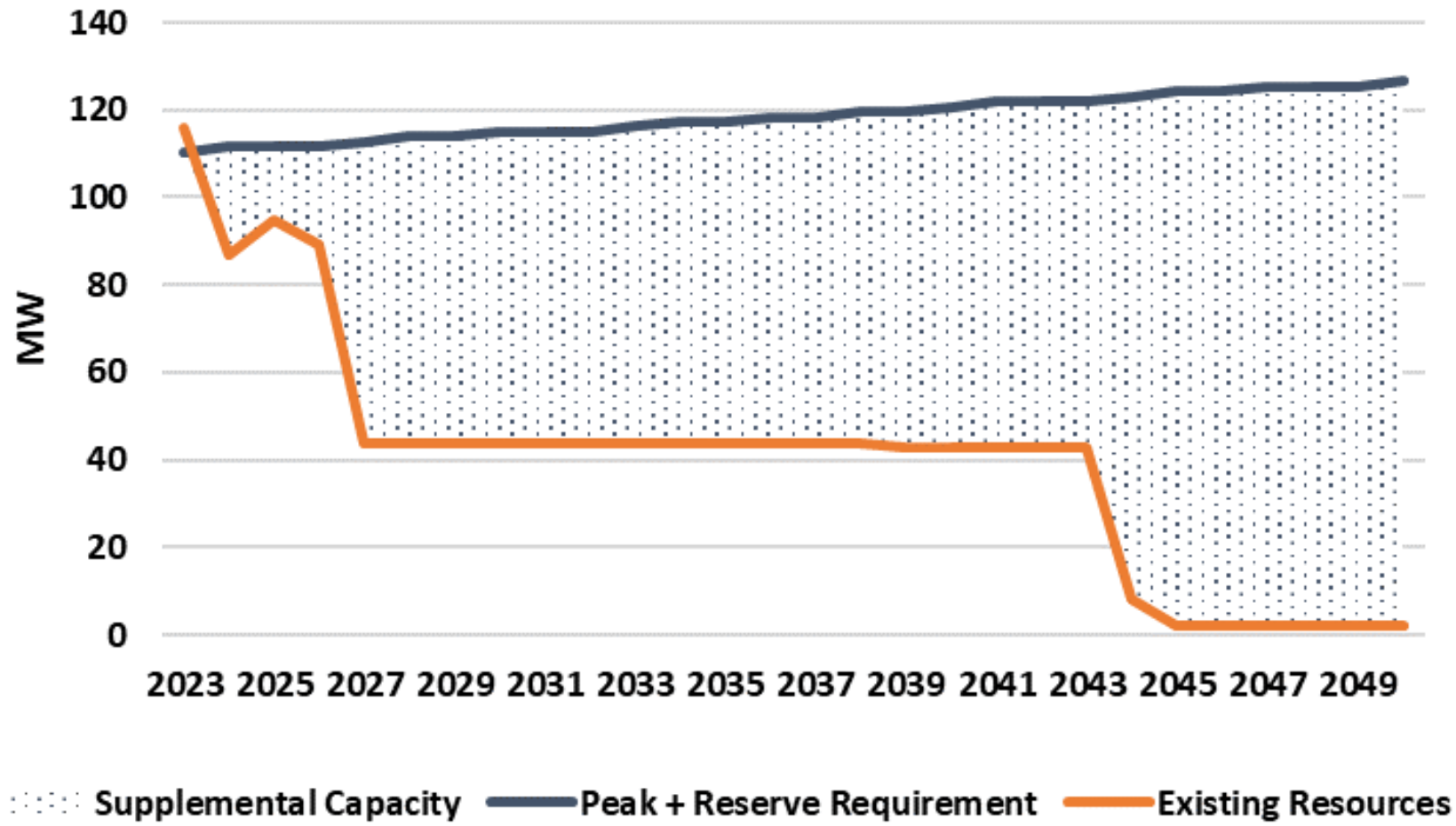
October 4<sup>th</sup>, 2022

# DISCUSSION

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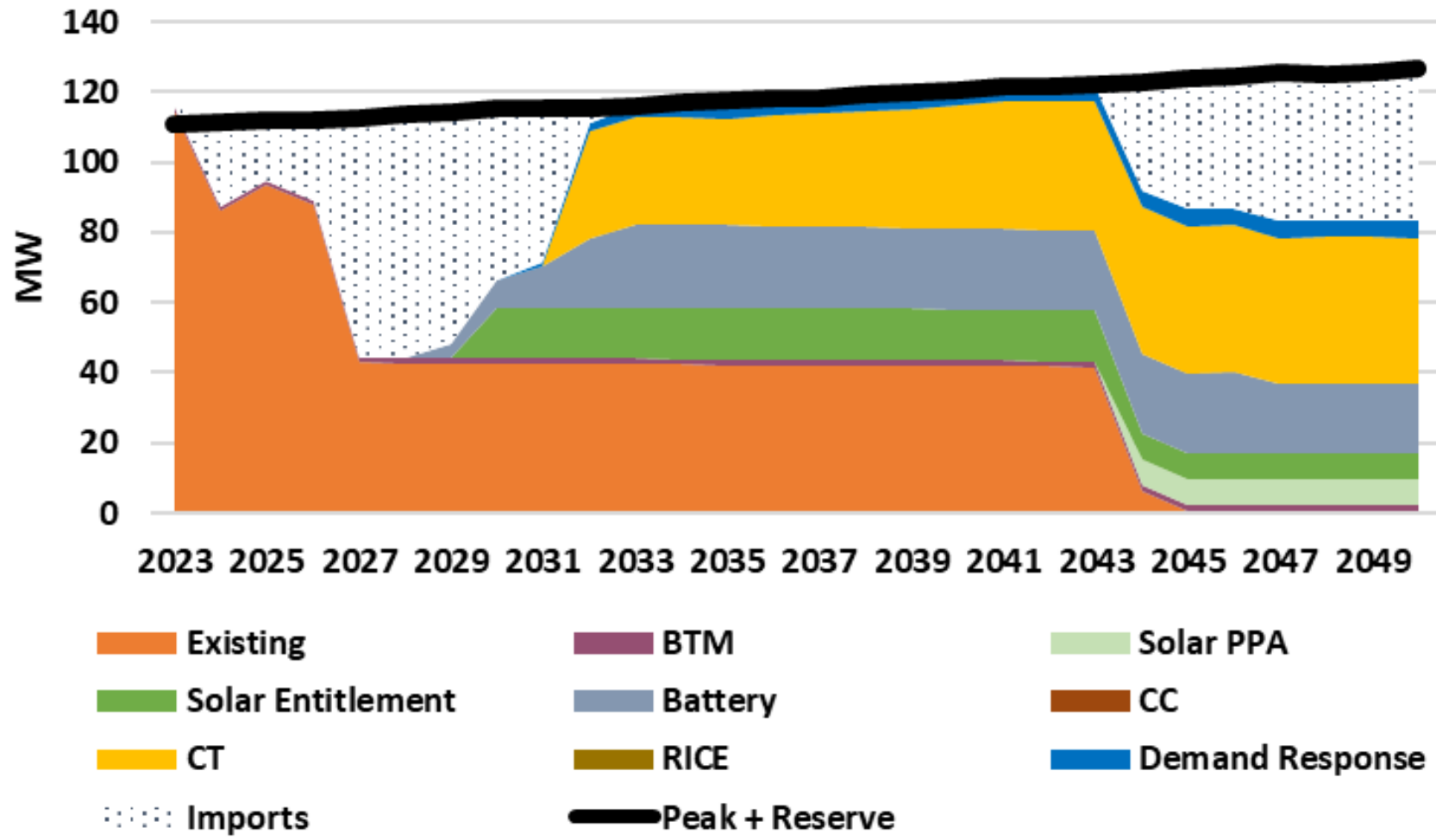
- Resource needs
- Base case resource plan
- Sensitivity resource plans
- Carbon footprint
- Observations

# RESOURCE NEEDS

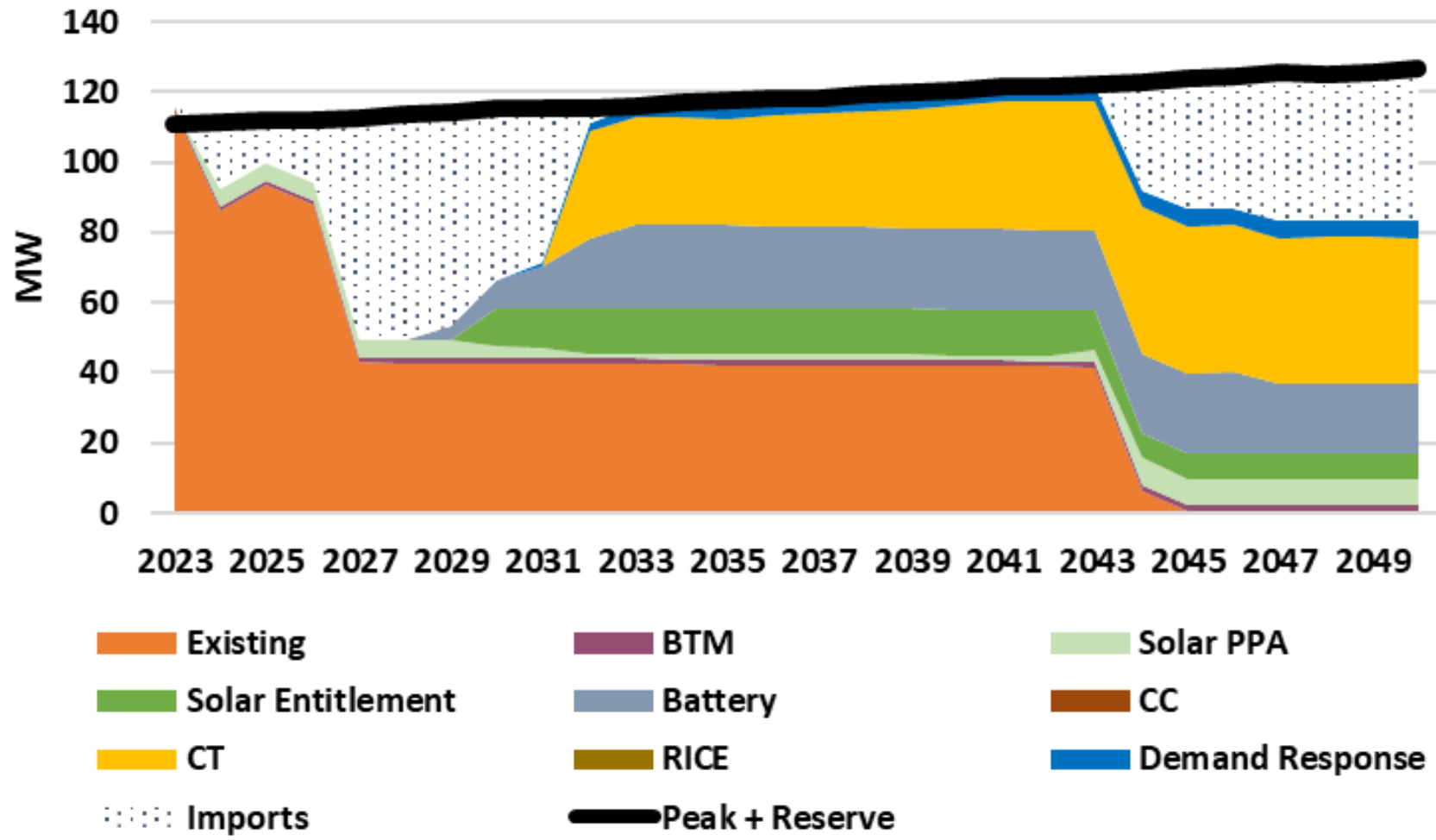




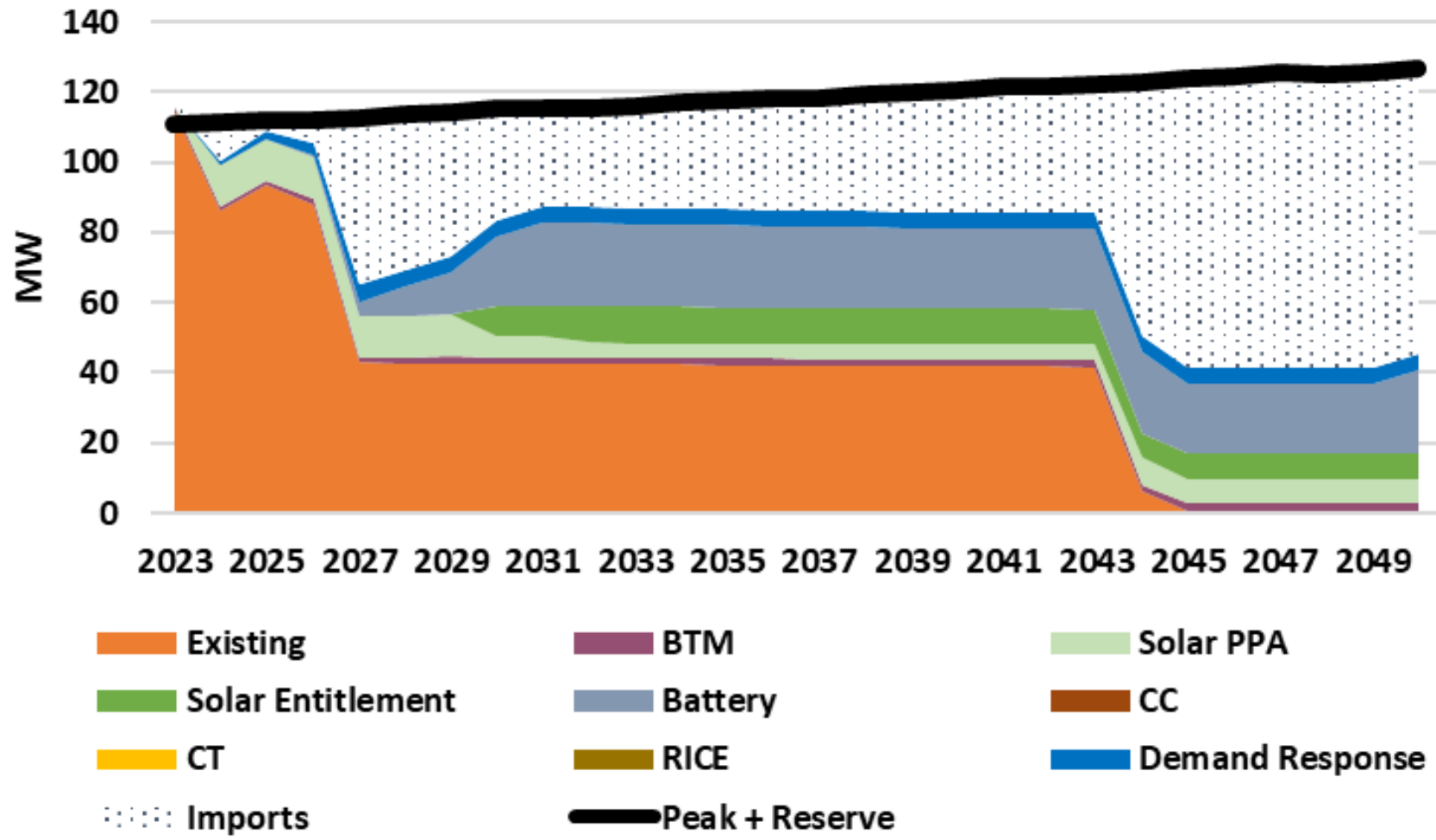
# BASE CASE RESOURCE PLAN



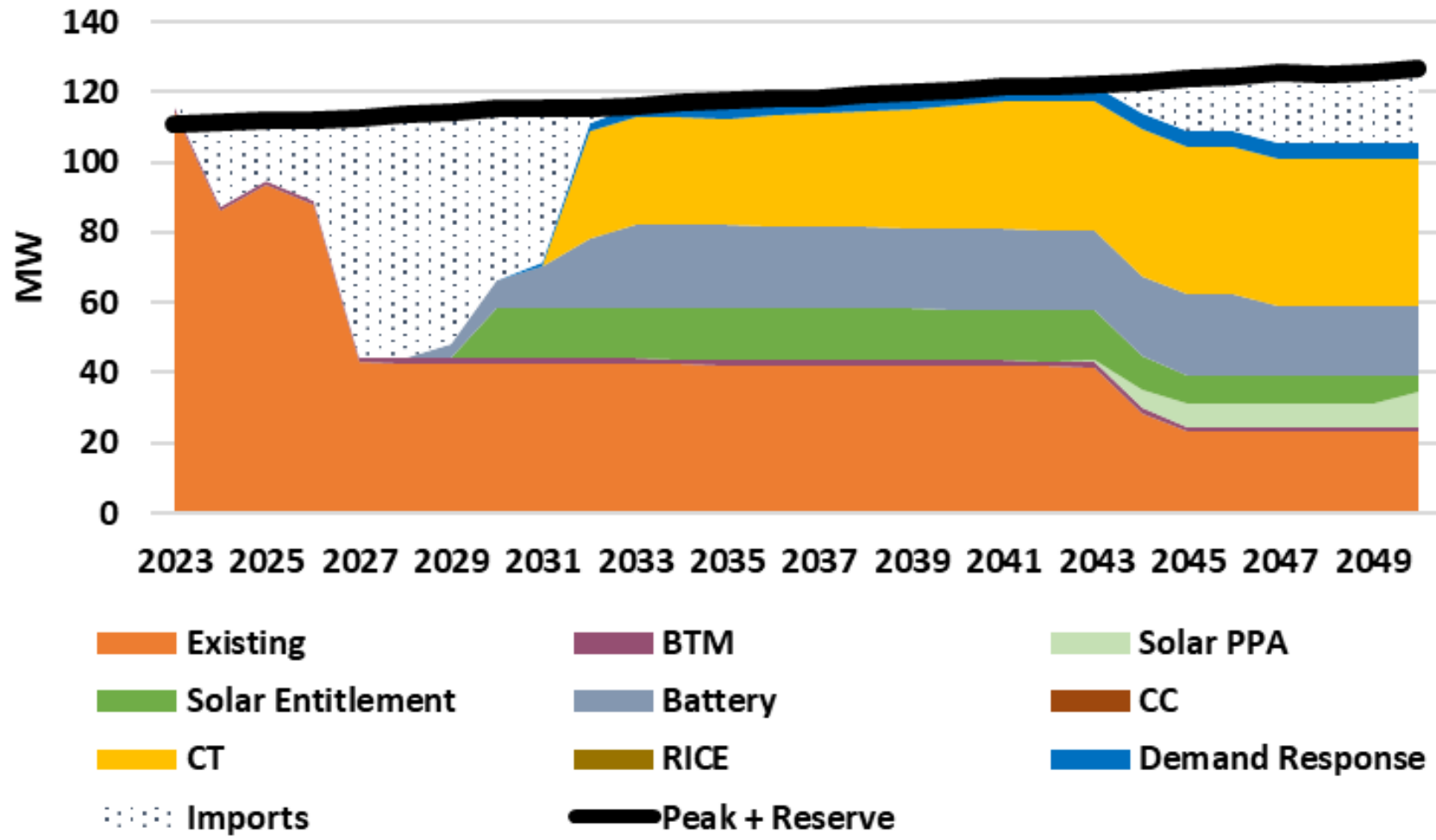
# BASE CASE RESOURCE PLAN-PPA SENSITIVITY



# HIGH NATURAL GAS - \$54/KW YEAR CAPACITY PRICE SENSITIVITY



# BASE CASE RESOURCE PLAN – ST. LUCIE EXTENSION SENSITIVITY

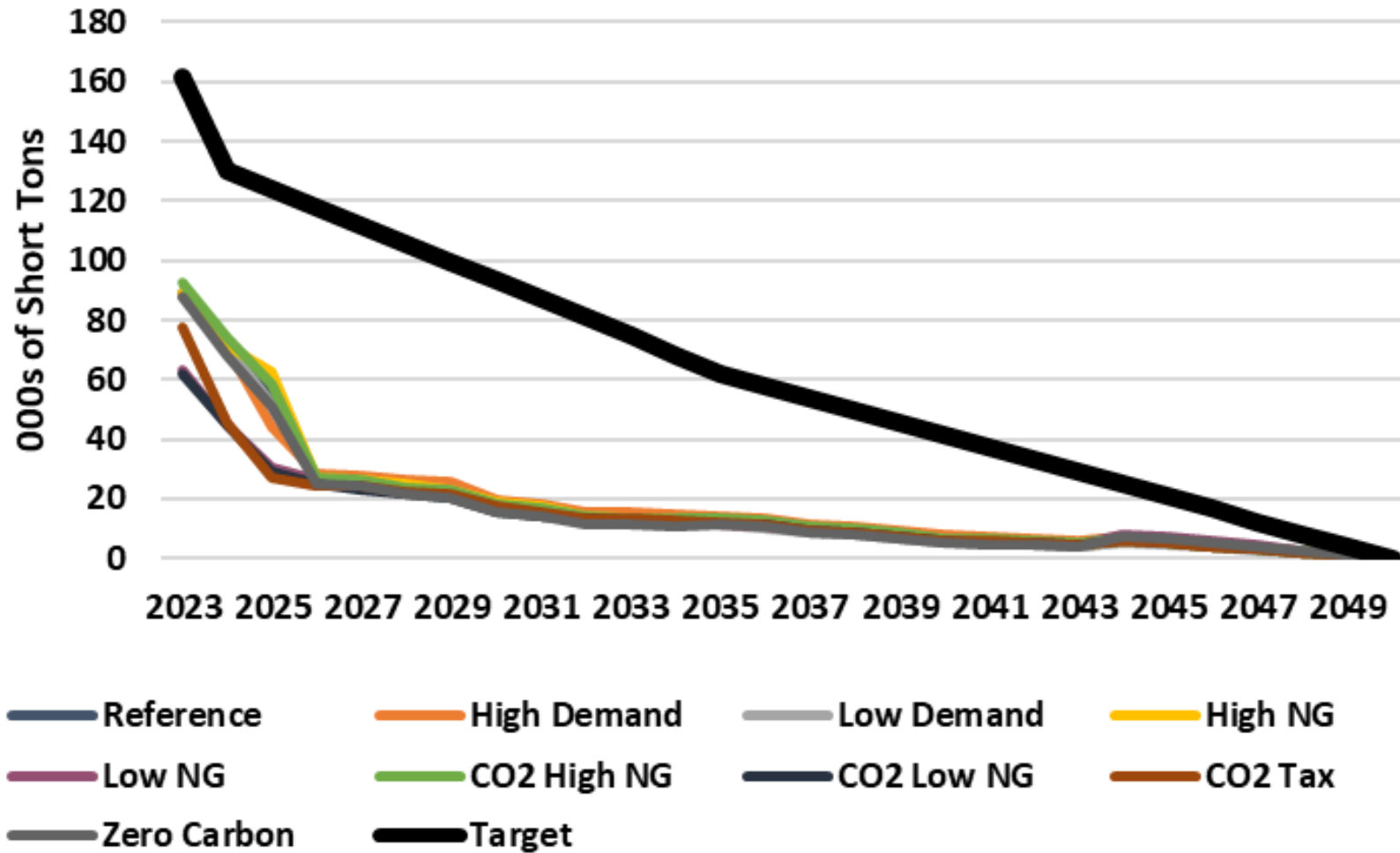


# RESOURCES BUILT



Scenario	Cumulative MW Added	2024	2025	2026	2027	2028	2029	2030	2050
Reference	Utility-Scale Solar Project	0.00	0.00	0.00	0.00	0.00	0.00	23.66	67.96
	Solar PPA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00
	Battery	0.00	0.00	0.00	0.00	0.00	4.00	8.00	40.00
	Solar Hybrid	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00
	Battery Hybrid	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00
	CT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	41.90
	Demand Response	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00
Reference-\$35 Solar PPA	Utility-Scale Solar Project	0.00	0.00	0.00	0.00	0.00	0.00	16.88	61.41
	Solar PPA	5.00	5.00	5.00	5.00	5.00	5.00	5.00	55.00
	Battery	0.00	0.00	0.00	0.00	0.00	4.00	8.00	40.00
	Solar Hybrid	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00
	Battery Hybrid	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00
	CT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	41.90
	Demand Response	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00
High NG-\$54/kWYr Capacity	Utility-Scale Solar Project	0.00	0.00	0.00	0.00	0.00	0.00	10.25	60.26
	Solar PPA	15.00	15.00	15.00	15.00	15.00	15.00	15.00	65.00
	Battery	0.00	0.00	0.99	4.00	8.00	12.00	16.00	40.00
	Solar Hybrid	0.00	0.00	0.00	0.00	0.00	0.00	10.00	20.00
	Battery Hybrid	0.00	0.00	0.00	0.00	0.00	0.00	4.00	8.00
	CT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Demand Response	1.00	2.00	3.00	4.00	4.00	4.00	4.00	8.00
Reference-St Lucie Extension	Utility-Scale Solar Project	0.00	0.00	0.00	0.00	0.00	0.00	24.46	38.23
	Solar PPA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00
	Battery	0.00	0.00	0.00	0.00	0.00	4.00	8.00	40.00
	Solar Hybrid	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00
	Battery Hybrid	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00
	CT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	41.90
	Demand Response	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00

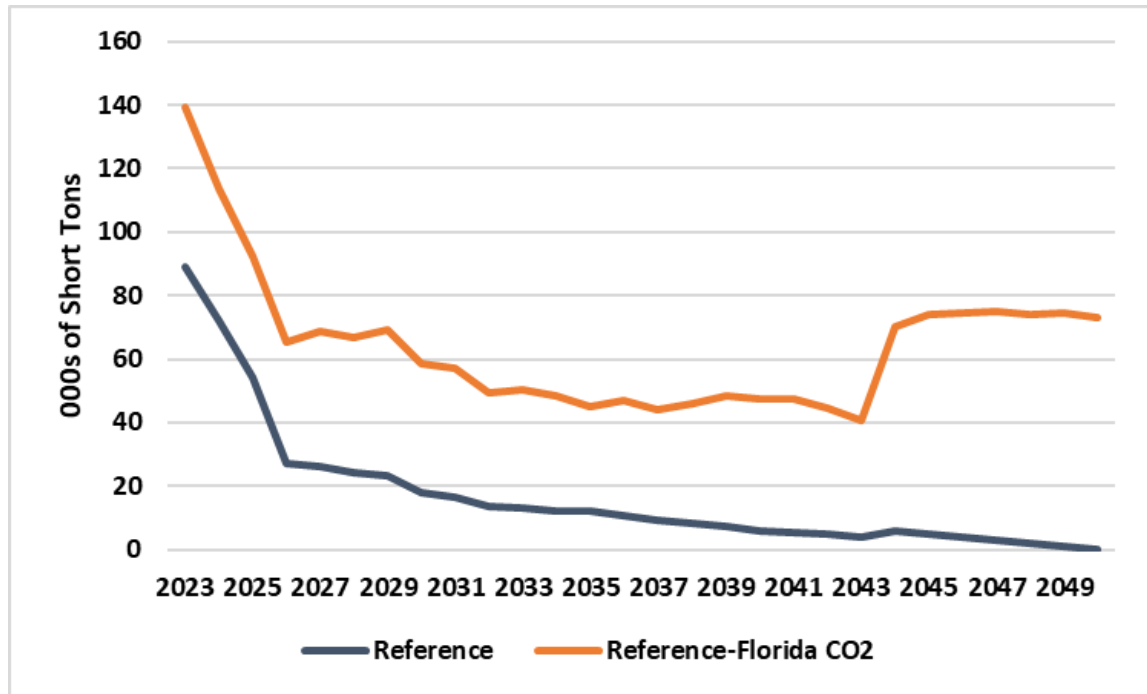
# CARBON EMISSIONS



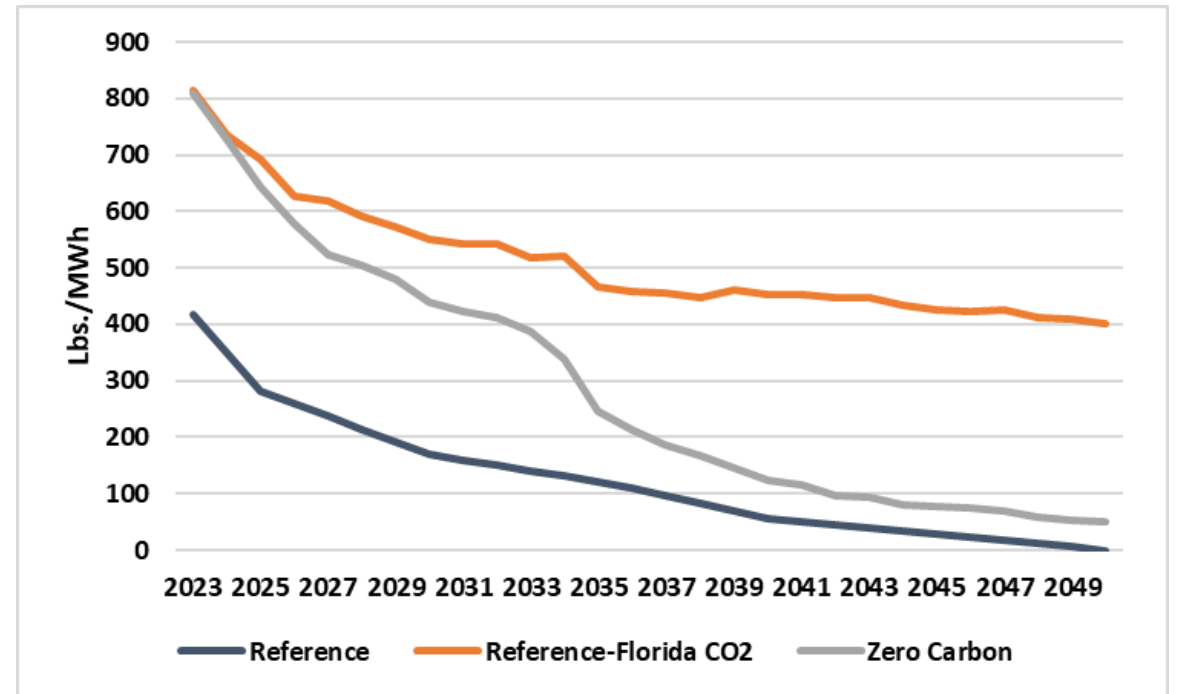
# CARBON SENSITIVITY



LWBEU Emission Forecast



Florida Import Emission Rate



# (SAVINGS)/COST

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<b>Reference Sensitivities</b>	<b>NPVRR \$ Millions (Savings)/Cost</b>	
Reference	470	
Reference-\$18/kWYr Capacity	431	-39
Reference-\$54/kWYr Capacity	470	0
Reference-\$35 Solar PPA	468	-1
Reference-St Lucie Extension	459	-11
Reference-In-City Solar	475	6
Reference-GT2 Extension	464	-5
Reference-No Additions	520	50
Reference-Florida CO2	470	1



# OBSERVATIONS

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- Solar PPA varies between 0 MW and 15+ MW, depending on scenario
  - Averages to around 6 MW
- Hitting zero carbon emissions target highly depends on import carbon rate
- GT 2 Extension in 2028 reduces costs by \$5 million NPV
- In-City Solar in 2024 increases costs by \$6 million NPV
- Acquiring contracts reduces costs over market price

# NATURAL GAS PRICE SCENARIOS

