

Annual Report to the Board of Trustees on Resource Planning

July 26, 2017



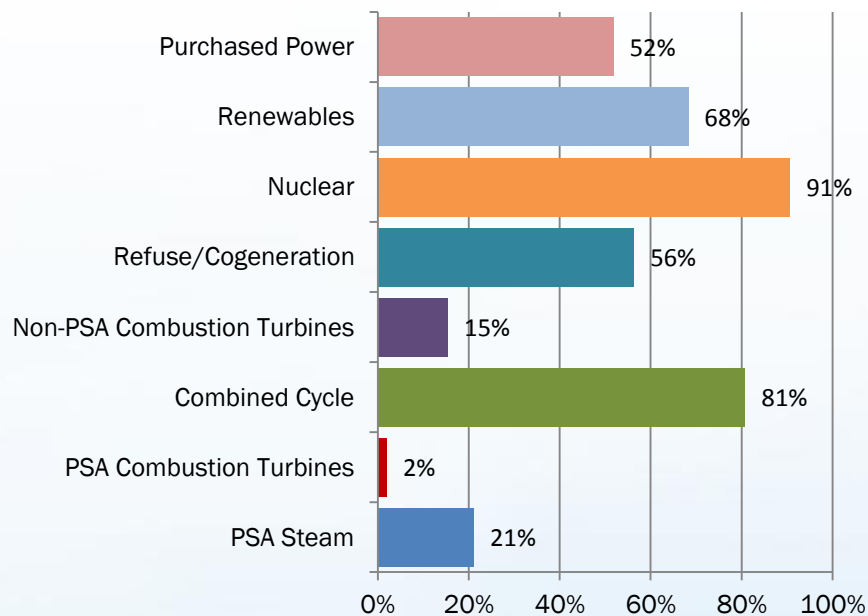
Agenda – Resource Planning

- ▲ Generation Portfolio
- ▲ Resource Adequacy
- ▲ Clean Energy Standard
- ▲ Market Policy Advocacy
- ▲ 2017 Peak (so far)

Generation Portfolio – 2016 Performance

- ▲ Capacity factor of units is within the range of normal operation for a system of Long Island’s generation mix and load characteristics
- ▲ All contracts met or exceeded contract standards
- ▲ Nine Mile Point Unit 2 2016 capacity factor exceeded the industry average
- ▲ The PSA steam units operate reliably with equivalent availability (summer) averaging well above 90%

Capacity Factor by Resource Type



Steam Plants - 2016

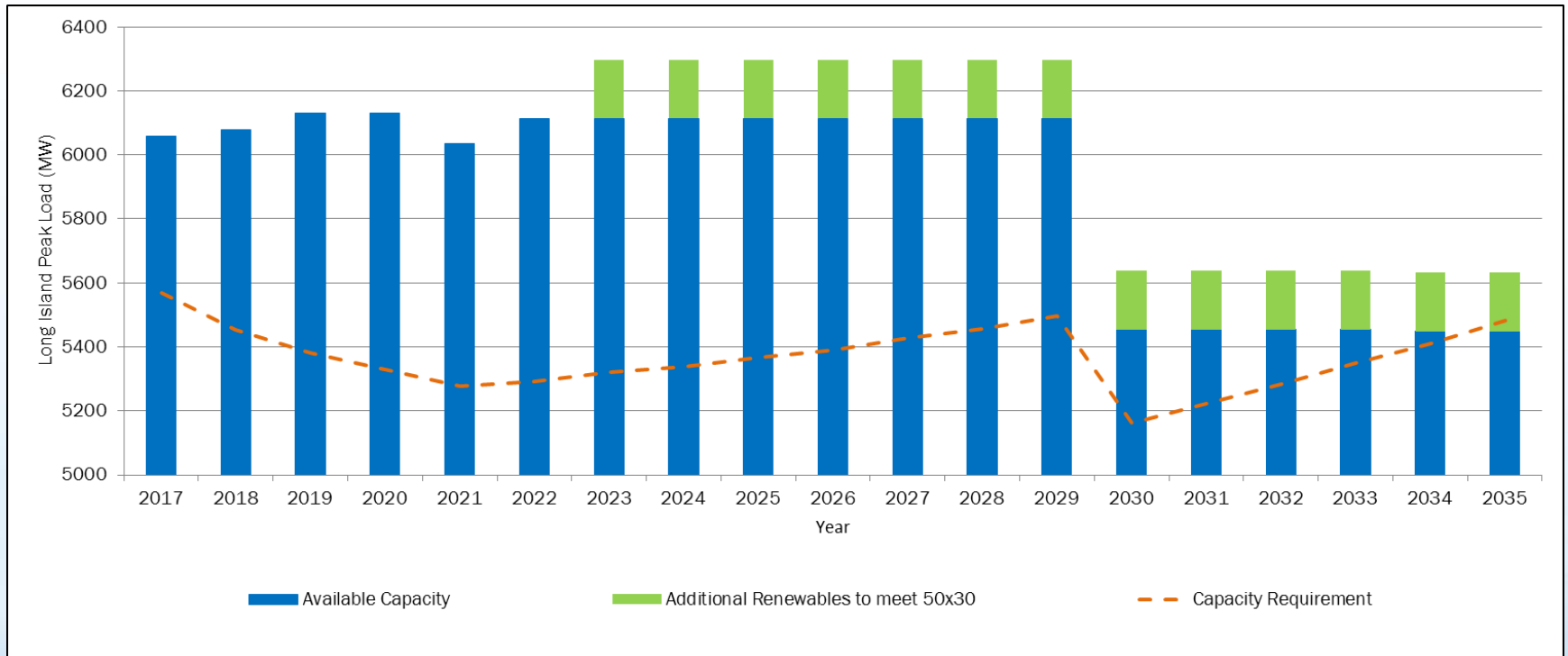
Plant	Equivalent Availability: Summer (%)
Barrett ST	92
Northport ST	94
Port Jefferson ST	98
Combined Cycle Contractual Guarantee (typical)	95 - 97

Generation Portfolio - Compliance

- ▲ Compliance with applicable regulatory and environmental standards
 - ✧ Air permits and continuous emissions monitoring
 - ✧ Water discharge permits - monthly sampling and reporting
 - ✧ Petroleum and chemical bulk storage
 - ✧ Waste management
- ▲ Power Supply Agreement with National Grid
 - ✧ Upgraded physical and cyber security to meet NERC Critical Infrastructure Protection standards
 - ✧ Plants operated to comply with System-wide NOx requirements
 - Investment in combustion and emission controls have reduced NOx emission rates by up to 60%
 - ✧ 316b of Federal Clean Water Act requires best technology available to reduce entrainment and impingement at circulating water intake systems.
 - Port Jefferson – Completed installation of technology and operating controls to meet updated DEC permit requirements
 - Northport – Installing technology and operating controls to meet updated DEC permit requirements. All units planned to be completed by 2021.
 - Barrett – In process with NYSDEC to determine required technology. Likely outcome to be similar to Port Jefferson and Northport.



Resource Adequacy Through 2035 (IRP Projection)





Clean Energy Standard Procurements

Procurement	Date of Issuance	Projected (MW)
FIT I*	July 2012	21-31
FIT II	October 2013	17-42
280 MW RFP	October 2013	49-76
FIT II (NS)	May 2014	1-9
South Fork	June 2015	90
2015 Renewable RFP	December 2015	59
FIT III	July 2016	20
FIT IV	July 2016	40
	Total	298-367

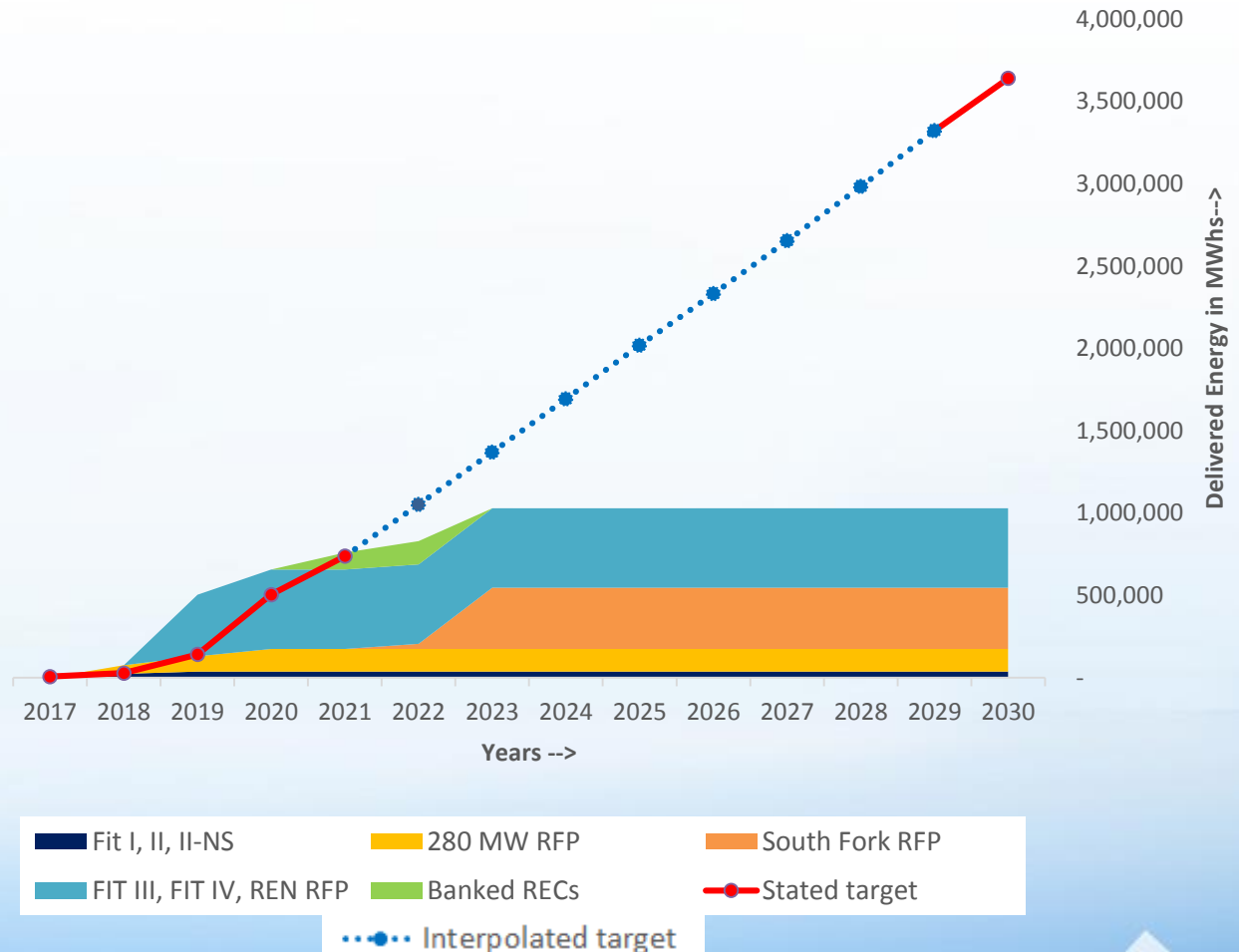
* Consists of FIT I projects that commenced operation after 1/1/15. Approximately 8 MW do not qualify for CES because they began operation prior to 2015.



Projected CES Targets and Anticipated Supply

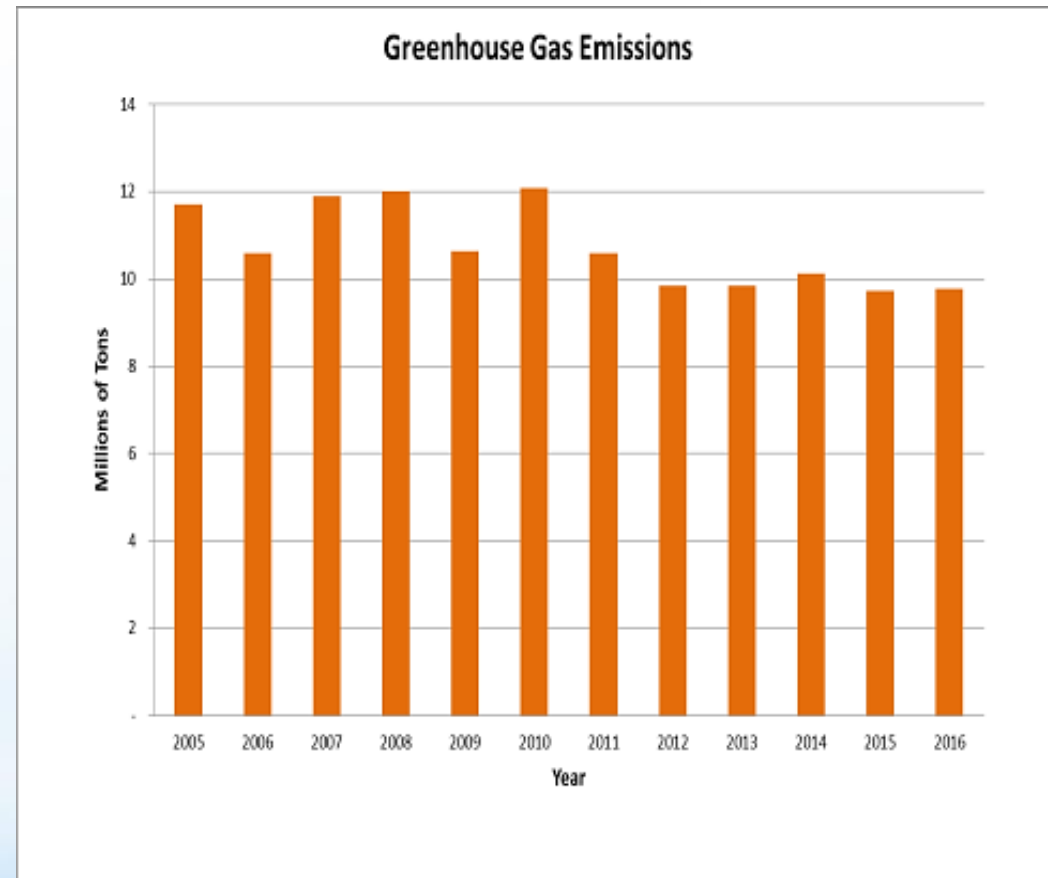
- ❑ Current procurements are expected to provide sufficient REC credits to carry LIPA through 2021
- ❑ Targets may be reduced by the effect of behind the meter renewable resources
- ❑ Future procurements may provide for some or all of additional needs after 2021

CES Targets VS Anticipated supply



Greenhouse Gas Progress

- ▲ 2016 greenhouse gas emissions – 9.8 million tons, a 16% reduction since 2005
- ▲ Key drivers of emissions drop to date
 - ✧ Change from oil/gas mix to primarily gas mix
 - ✧ Increased use of renewable energy from off-island and on-island sources
 - ✧ Decreased energy sales
 - ✧ More efficient use of gas in new combined cycle plants



- ▲ NY Independent System Operator (NYISO) rulemaking
 - ✧ Integrating the Clean Energy Standard in market design
 - ✧ Seeking to more accurately value ramping and storage capabilities
 - ✧ Fair allocation of costs and benefits to Long Island
- ▲ Public Policy Transmission
 - ✧ Identification of new public policy requirements for LI and NYS
 - ✧ Review of Western NY transmission proposals
 - ✧ Negotiation with NY Transco for AC Transmission project cost allocation
- ▲ Assessment of PJM proposed cost allocation methods for regional transmission projects



How LIPA Met the July 20, 2017 Peak Load

5,134 MW

(estimated 34 MW reduction from load management programs)

