



FPL's 2016 Ten-Year Site Plan: Resource Plan and Key Assumptions

**Presentation for the Florida Public Service Commission 2016 Annual Workshop
September 14, 2016**

Dr. Steven Sim

Senior Manager, Resource Assessment & Planning, Florida Power & Light

The resource plan presented in FPL's 2015 TYSP showed the conclusion of CC and CT modernization projects, new solar at three advantaged sites, and a 2019 resource need

Year	2015 TYSP Major Generation Changes *	Summer MW	Summer Reserve Margin
2016	Port Everglades Next Generation Clean Energy Center Removal of Existing GTs New CTs New PV ** Turkey Point Unit 1 converted to synchronous condenser	1,237 (1,707) 1,617 224 (396)	21.3%
2017	---	---	20.9%
2018	---	---	20.0%
2019	SJRPP suspension of energy Okeechobee Next Generation Clean Energy Center (<i>Placeholder for RFP</i>)	(382) 1,622	22.8%
2020	---	---	21.3%
2021	Eco-Gen PPA firm capacity (biomass)	180	22.0%
2022	---	---	20.9%
2023	Unsitd CC (<i>Placeholder</i>)	1,317	24.4%
2024	---	---	22.2%

After the April 2015 TYSP filing, FPL's planning work – which would be reflected in the 2016 TYSP – largely focused on projected resource needs beyond 2019 and the options which could address that need

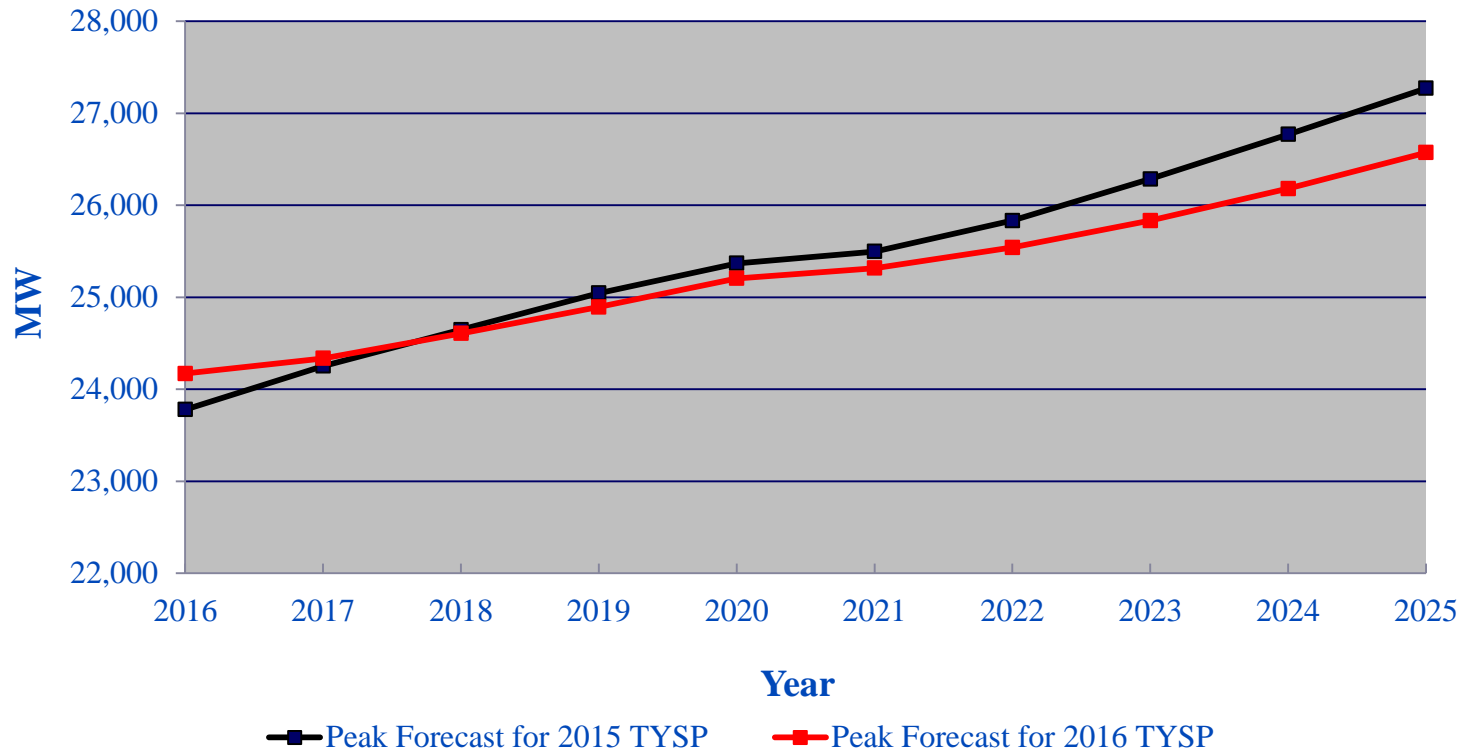
* FPL's DSM Goals for 2016 through 2024 were fully accounted for in FPL's resource planning work

** PV MW values in this presentation are nameplate values. Firm capacity values are lower.



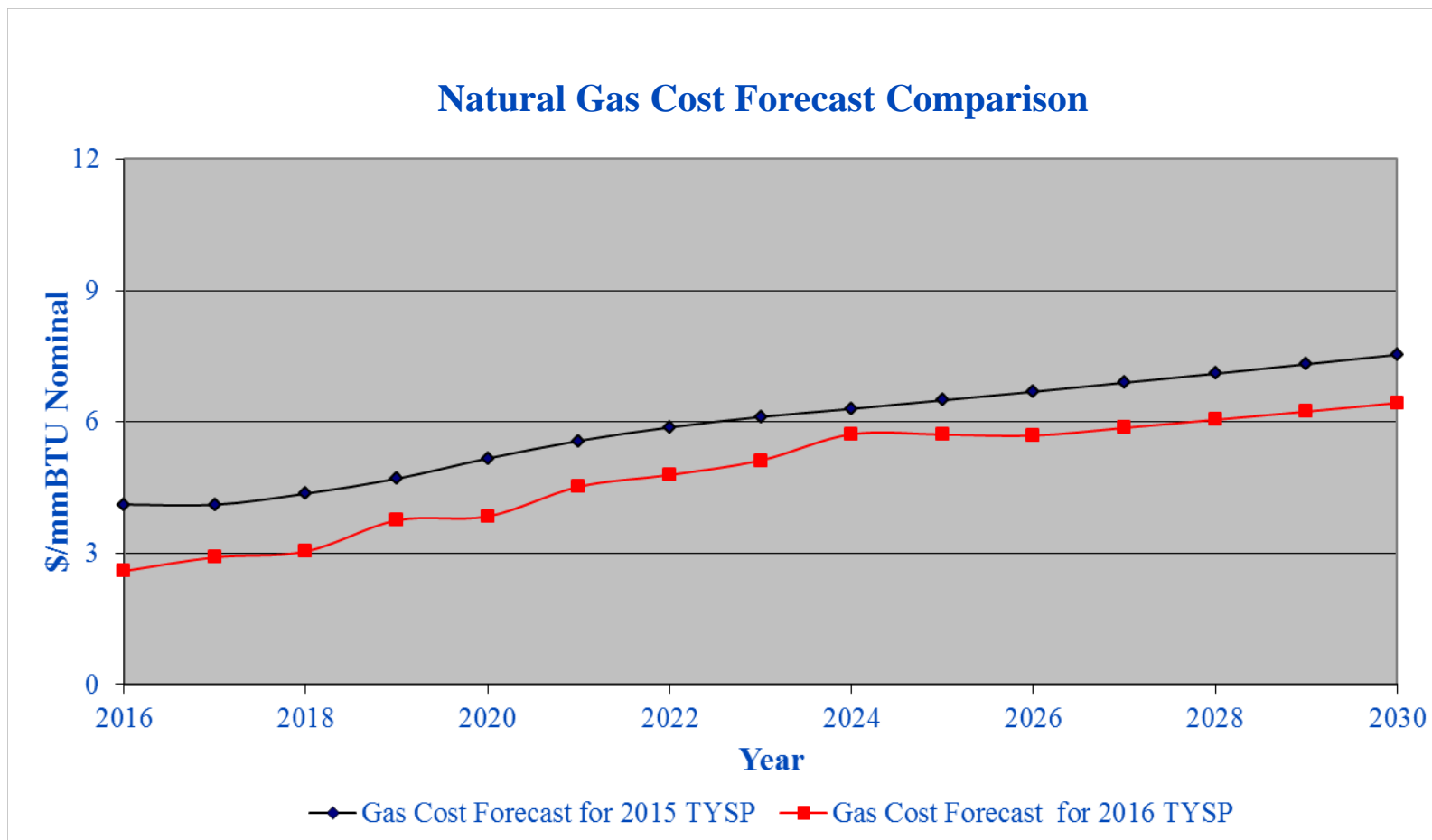
The peak load forecast for the 2016 TYSP is generally lower than the forecast for the 2015 TYSP

Summer Peak Load Forecast Comparison (MW)



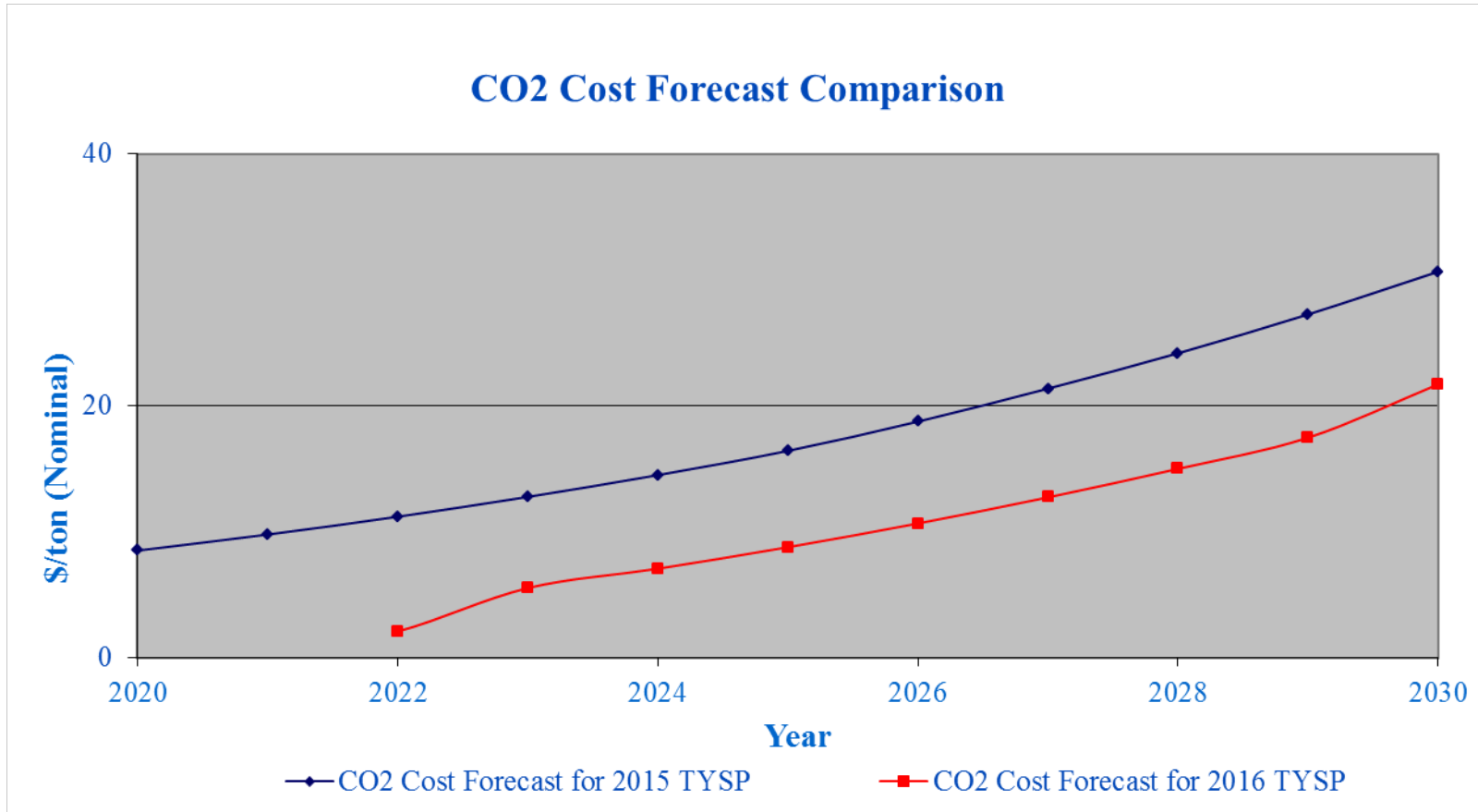
The lower peak forecast reduced FPL's projected resource needs through this period, particularly for the years 2022 - on

The natural gas cost forecast for the 2016 TYSP is lower than the corresponding forecast for the 2015 TYSP



The lower forecasted gas prices improve the economics of gas-fired resource options versus non-gas-fired options

The CO₂ cost forecast for the 2016 TYSP is slightly lower than the corresponding forecast for the 2015 TYSP



The lower CO₂ cost forecast reduces the cost-effectiveness of non-CO₂ emitting resource options

Analyses during 2015 that led to the 2016 TYSP resource plan primarily focused on CC, CT, and PV resource options *

- The FPSC approved FPL's petition that an Okeechobee CC was the best selection with which to meet FPL's 2019 resource need
- Due primarily to a lower load forecast, FPL's next significant resource need was not projected to be until the year 2024
- No decision regarding this resource need is needed for approximately 3 years (in 2019)
- This is because the total time, including permitting, regulatory, construction, etc., for a new CC unit typically takes approximately 5 years; less time is needed for other resource options
- More certainty generally exists regarding CC and CT costs and firm capacity contributions relative to those for PV, but PV is becoming increasingly competitive

Within this 10-year time frame, CC and PV are the more competitive options

* FPL's 2016-2024 DSM goals, plus a continuation of that level of DSM in 2025, were fully accounted for in FPL's resource planning work.

FPL presented an updated resource plan in the 2016 TYSP based on the updated assumptions and 2015 analyses

Year	2016 TYSP Major Generation Changes *	Summer MW	Summer Reserve Margin
2016	Port Everglades Next Generation Clean Energy Center Removal of Existing GTs New CTs New PV ** Turkey Point Unit 1 converted to synchronous condenser	1,237 (1,653) 1,617 224 (396)	22.0%
2017	---	---	20.0%
2018	---	---	20.0%
2019	Okeechobee Next Generation Clean Energy Center (Approved)	1,633	24.6%
2020	SJRPP suspension of energy Unsited Solar (PV) **	(382) 300	22.2%
2021	Eco-Gen PPA firm capacity	180	23.0%
2022	---	---	22.5%
2023	---	---	21.2%
2024	Unsited CC (Placeholder)	1,622	26.5%
2025	---	---	24.7%

The 2016 TYSP resource plan differs from the 2015 TYSP resource plan primarily by showing 300 MW of new solar additions and a 1-year delay in FPL's next resource need

* FPL's 2016-2024 DSM goals, plus a continuation of that level of DSM in 2025, were fully accounted for in FPL's resource planning work.

** PV MW values in this presentation are nameplate values. Firm capacity values are lower.

