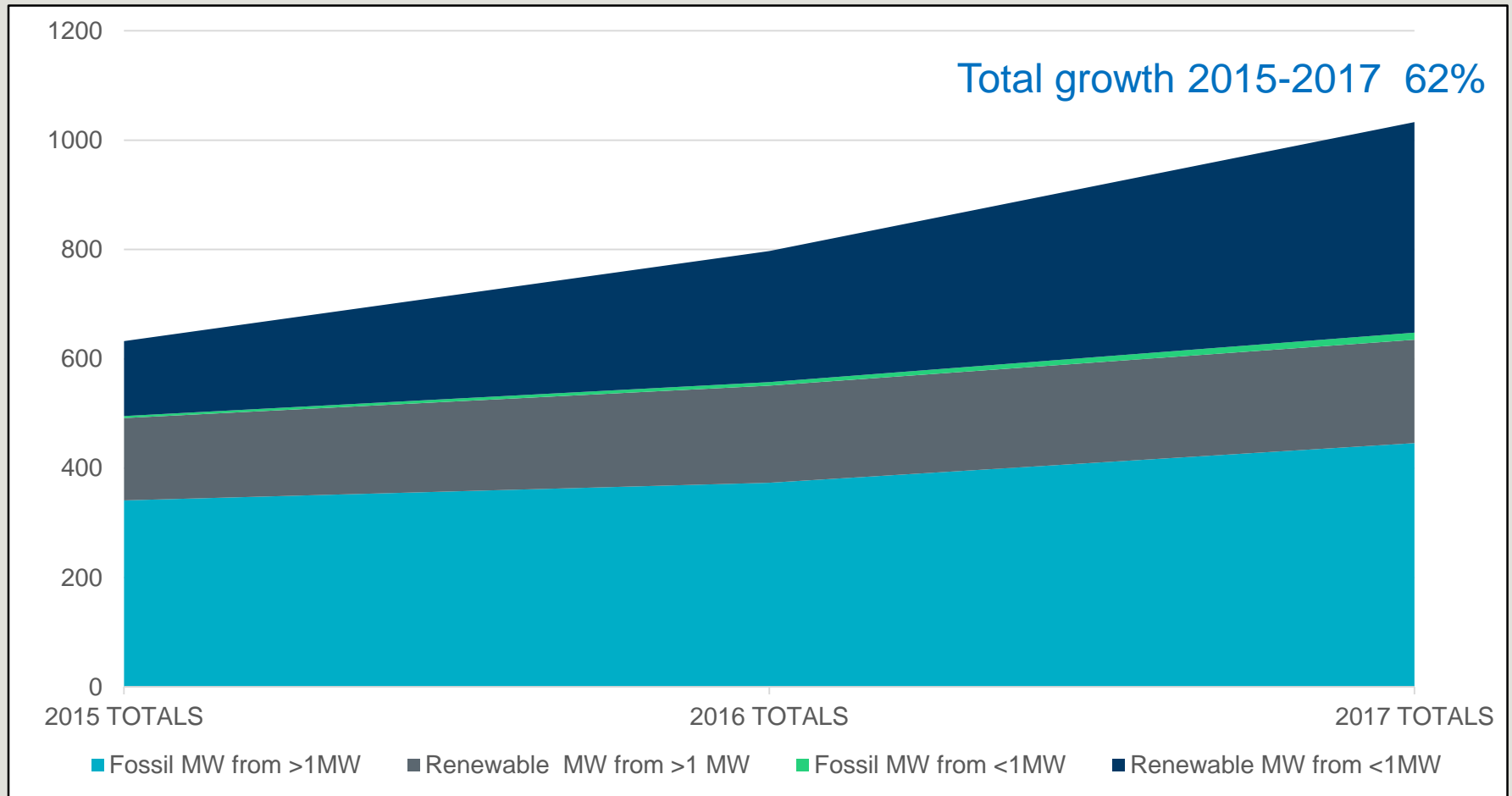


# Distributed Generation in TSP Planning Processes

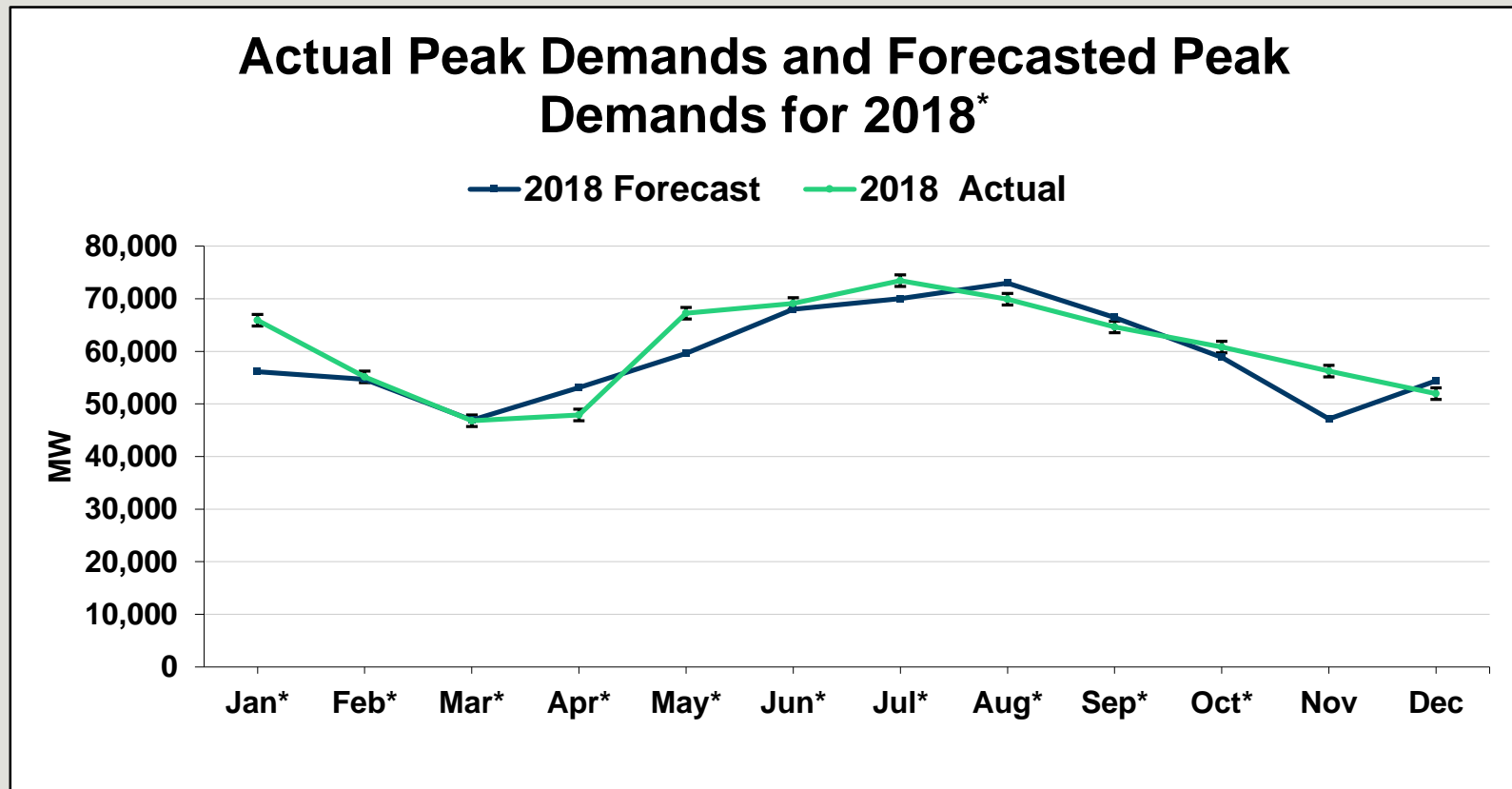
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ERCOT Planning Working Group  
February 20, 2019

# ERCOT Estimated DG Growth 2015-2017 (MW)\*



# DG Capacity vs ERCOT Demand



- Error bars on Actual Peak Demand values represent  $\pm$  Max DG Capacity

# DG in SSWG Planning Cases

## SSWG Procedure Manual Section 4.2 Load Data

- *“The bus number in the load data record must be a bus that exists in the SSWG Case. The load identifier is a two-character alphanumeric identifier used to differentiate between loads at a bus....**Distributed Generation must be identified by “DG” and modeled as negative load.**”*

## SSWG Procedure Manual Appendix D – Generation Unit ID Prefixes

Types of Generation Plants	Unit ID Prefix	Unit ID	Comment	Explanation
Distributed Generation	D	D1		All types of distributed generation
		D2		
		D3		

# Other DG Planning Activities

## NERC System Planning Impact from Distributed Energy Resources Working Group (SPIDER WG)

- Formed December 2018
- Consists of four subgroups: Modeling, Verification, Studies, Coordination
- The purpose of the System Planning Impacts from Distributed Energy Resources (SPIDERWG) is to address aspects of key points of interest related to system planning, modeling, and reliability impacts to the Bulk Power System (BPS).
- Scope:  
[https://www.nerc.com/comm/PC/System%20Planning%20Impacts%20from%20Distributed%20Energy%20Re/SPIDERWG\\_Scope\\_Document\\_-\\_2018-12-12.pdf](https://www.nerc.com/comm/PC/System%20Planning%20Impacts%20from%20Distributed%20Energy%20Re/SPIDERWG_Scope_Document_-_2018-12-12.pdf)

# Appendix

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# NPRRs related to DG

#	Title	Current Status
NPRR190	Clarification of Resource Definitions and Resource Registration of Self-Serve Generators for Reliability Purposes	Withdrawn
NPRR208	Registration and Settlement of Distributed Generation (DG) Less Than One MW	Approved
NPRR266	Installed Capacity of Unregistered Distributed Generation (DG)	Approved
NPRR386	Reduce the Frequency of Unregistered Distributed Generation Reports	Rejected
NPRR491	Updated Demand Response Information for ERCOT (formerly "Updated Distributed Generation and Demand Response Information for ERCOT")	Approved
NPRR719	Removal of Trigger and Requirement to Reduce the Distributed Generation (DG) Registration Threshold	Approved
NPRR751	Clarifications for Distributed Generation Resources	Rejected
NPRR753	Allow AMS Data Submittal Process for TDSP-Read Non-Modeled Generators	Approved
NPRR757	Distributed Generation Reporting Improvement	Withdrawn
NPRR777	ERCOT-directed Dispatch of Price-Responsive Distributed Generation	Withdrawn
NPRR794	Relocation of Unregistered DG Reporting Requirements	Approved
NPRR829	Incorporate Real-Time Non-Modeled Telemetered Net Generation by Load Zone into the Estimate of RTL	Approved
NPRR854	NOIE TDSP Submittal of Meters with Bidirectional Flow Caused by Generation Interconnected at Distribution Voltage	Approved
NPRR866	Mapping Registered Distributed Generation and Load Resources to Transmission Loads in the Network Operations Model	Approved
NPRR889	RTF-1 Replace Non-Modeled Generator with Settlement Only Generator	Approved
NPRR891	Removal of NOIE Capacity Reporting Threshold for the Unregistered Distributed Generation Report	Pending
NPRR917	Nodal Pricing for Settlement Only Distribution Generators (SODGs) and Settlement Only Transmission Generators (SOTGs)	Pending
NPRR921	RTF-2 Elimination of the Terms All-Inclusive Generation Resource and All-Inclusive Resource	Pending

# PGRRs related to DG

#	Title	Current Status
PGRR061	Related to NPRR866, Mapping Registered Distributed Generation and Load Resources to Transmission Loads in the Network Operations Model	Approved
PGRR069	Related to NPRR921, RTF-2 Elimination of the Terms All-Inclusive Generation Resource and All-Inclusive Resource	Pending