



Delaware Basin Load Integration Study - Update

ERCOT Transmission Planning

Regional Planning Group
May 14, 2019

Status of Delaware Basin Load Integration Study

- ❑ ERCOT presented the study scope in the Nov 2018 RPG http://www.ercot.com/content/wcm/key_documents_lists/138710/Delaware_Basin_Load_Integration_Study_Scope_-_Nov2019_RPG.pdf
- ❑ ERCOT worked with TSPs to obtain the higher-than-expected load and update system topology for the Delaware Basin area
- ❑ ERCOT is currently reviewing the data provided by TSPs

Introduction

- ❑ The Far West Weather Zone, especially in the Delaware Basin area, has had the highest peak demand growth rate in recent years
- ❑ As presented in the November 2018 RPG, ERCOT will assess the reliability needs for year 2024 focusing on the Delaware Basin Area in the Far West Weather Zone by incorporating higher-than-expected load growth (including the committed and potential load)
- ❑ ERCOR will identify potential challenges and solutions that address the reliability needs. The results of this analysis are intended to be indicative of likely future challenges to be faced in the ERCOT grid

Study Assumptions

□ Transmission Updates

- The following Tier 4 transmission projects are expected to be in-service by 2024 and will be added to the study base case

ERCOT Project Number	Project Title
6715	Noelke Substation Addition
7153	Fort Stockton Plant to Solstice: Raise Structures on 138 kV
43485	Cryo: Build 138 kV station
43487	Cryo to Saragosa: Build 138 kV line
44056	Coral to Cryo: Build 138 kV line
44058	Coral: Build 138 kV station
6945	Horseshoe Spring 138 kV Sw. Sta.

- Tier 1, 2, and 3 RPG projects in the study region that are not approved will be backed out
 - ✓ None

Study Assumptions

□ Generation Updates (April 2019 GIS Report)

- The following planned generators in the West and Far West Weather Zones that meet PG 6.9 conditions will be added to the study base case

GINR Reference Number	Project Name	County	Projected Date	Fuel	MW For Grid
16INR0019	BlueBell Solar	Coke	1/31/2019	SOL	30
17INR0067	Sweetwater 1 repower	Nolan	3/1/2019	WIN	0
17INR0068	Sweetwater 2 repower	Nolan	3/1/2019	WIN	7.3
17INR0069	Trent repower	Nolan	3/1/2019	WIN	6.4
18INR0033	Oveja Wind	Irion	6/30/2019	WIN	300
18INR0038	Barrow Ranch	Andrews	12/1/2019	WIN	160
18INR0068	Loraine Windpark Phase III	Mitchell	5/1/2020	WIN	100
19INR0029	Phoebe Solar	Winkler	9/1/2019	SOL	250
19INR0083	Oberon Solar	Ector	12/15/2019	SOL	180
19INR0099a	Kontiki 1 Wind (ERIK)	Glasscock	6/30/2020	WIN	255.3
19INR0099b	Kontiki 2 Wind (ERNEST)	Glasscock	6/30/2021	WIN	255.3
19INR0174	Elbow Creek repower	Howard	9/1/2019	WIN	0
19INR0184	Oxy Solar	Ector	7/15/2019	SOL	16.2
20INR0011	Ranchero Wind	Crockett	6/4/2019	WIN	300
14INR0009	WKN Amadeus Wind	Fisher	5/15/2020	WIN	245.9
18INR0055	Long Draw Solar	Borden	6/30/2020	SOL	225
19INR0038	High Lonesome W	Crockett	12/31/2019	WIN	449.5
19INR0080	Whitehorse Wind	Fisher	12/15/2019	WIN	418.9
19INR0102	Queen Solar	Upton	12/31/2019	SOL	400
19INR0163	Sage Draw Wind	Lynn	3/31/2020	WIN	338
19INR0185	Lapetus Solar 2	Andrews	12/31/2019	SOL	100
20INR0054	Taygete Solar	Pecos	12/1/2020	SOL	254.24

Study Assumptions

□ Generation Updates (cont.)

- Gibbons Creek Unit 1 (470 MW) will be turned off due to the mothball status
- Solar generation in the Delaware Basin area will be turned off to represent a stressed system condition as the load in the study area is mainly associated with oil and natural gas loads that are expected to operate as a constant load, 24*7
- Wind generation in the study area will be dispatched consistent with the 2019 RTP methodology

Study Assumptions

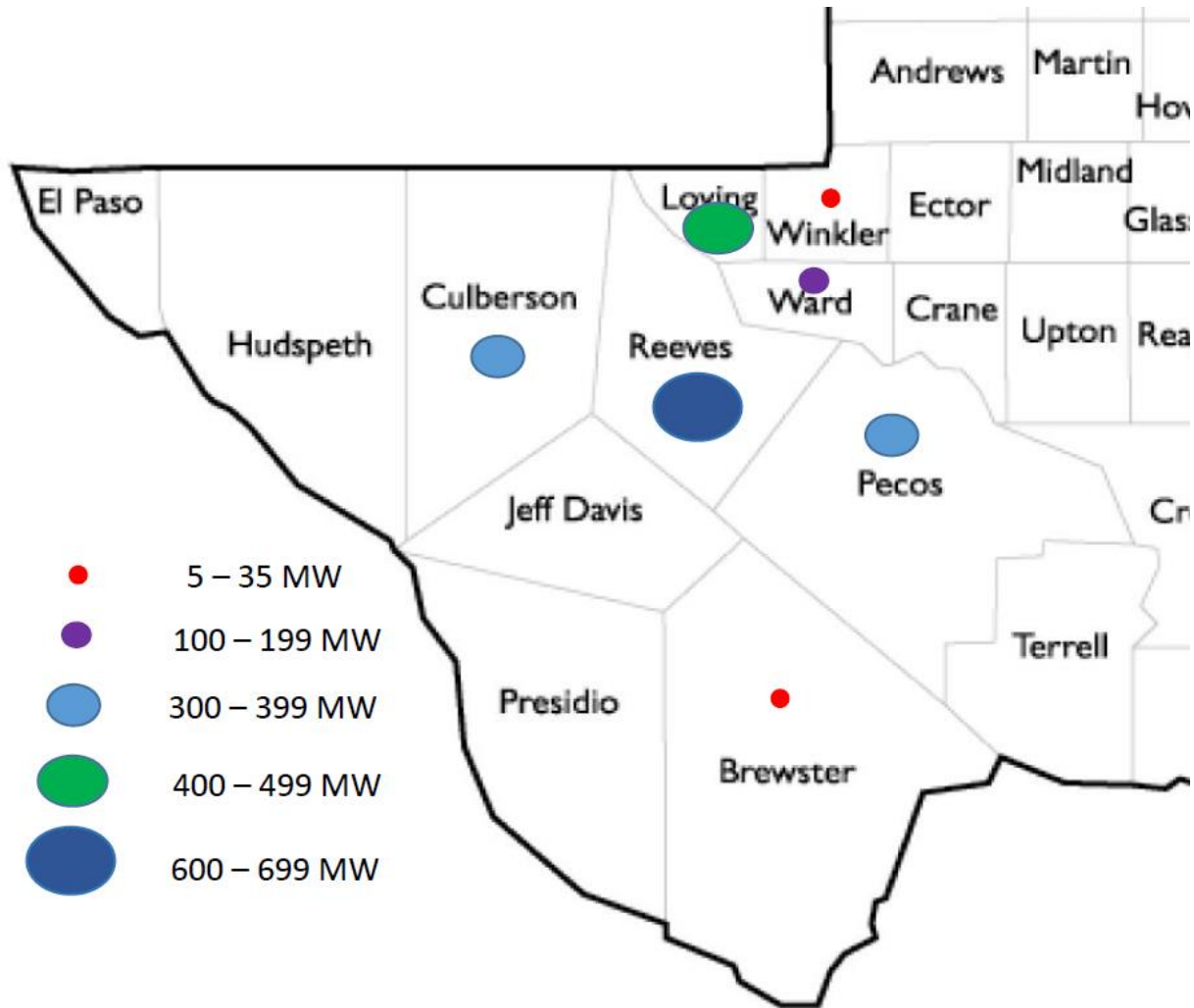
❑ Load Updates

- The preliminary review of the higher-than-expected load projection provided by TSPs showed approximately total 5,313 MW for year 2024 in the Delaware Basin Area

TSP	2018 RTP	2019 RTP	Feb 2019 SSWG	DBA Study
AEP	130	272	330	459
Golden Spread	8	6	7	9
LCRA	6	7	17	210
ONCOR	1,404	1,817	1,841	2,665
TNMP	507	527	1,254	1,969
Grand Total	2,055	2,630	3,450	5,313

Load Distribution Map

- Below map shows the distribution of added load in the Delaware Basin area



Deliverables and Timeline

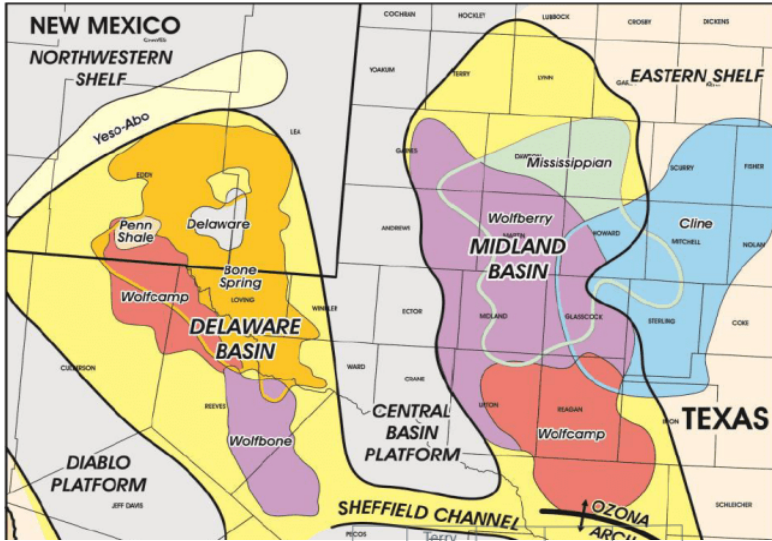
- ❑ The next step is to develop study base case based on the load projection and conduct reliability analysis
- ❑ Tentative Timeline

Deliverables	Tentative Schedule
Load Update by TSPs	April, 2019
Review the Data Provided by TSPs	May, 2019
Develop Study Base Case, Conduct Reliability Analysis	June, 2019
Study Potential Transmission Solutions	September, 2019
Study Report to Inform Stakeholders	November, 2019

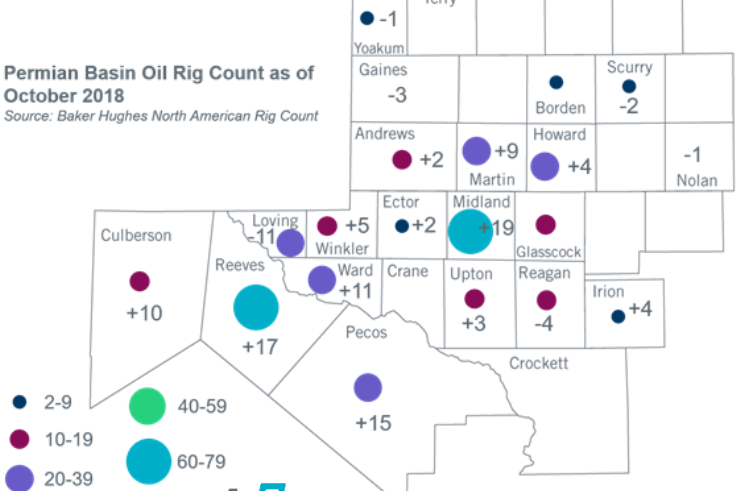


Stakeholder Comments Also Welcomed to Sun Wook Kang:
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Appendix



Permian Basin Oil Rig Count as of October 2018
Source: Baker Hughes North American Rig Count



SSWG Load (MW) of a TSP in the Study Area (2019 ~ 2024)

