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PROJECT NO. 55718

RELIABILITY PLAN FOR THE	§	PUBLIC UTILITY COMMISSION
PERMIAN BASIN REGION UNDER	§	OF TEXAS
PURA § 39.167	§	

ERCOT'S JUNE 2024 STATUS REPORT

Pursuant to the *Order Directing ERCOT to Develop a Reliability Plan for the Permian Basin Region* issued by the Commission in this Project on December 14, 2023, Electric Reliability Council of Texas, Inc. (ERCOT) hereby submits the attached monthly status report regarding its development of the reliability plan for the Permian Basin.

Respectfully submitted,

/s/ Anna Berlin

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ATTORNEYS FOR ELECTRIC
RELIABILITY COUNCIL OF TEXAS,
INC.

Permian Basin Reliability Plan Study - Monthly Update



Public Utility Commission of Texas
June 3, 2024

Status Update

- ERCOT has had multiple meetings with the TSPs to discuss the transmission projects needed to accommodate the forecasted Permian Basin load.
 - Including May 7, and May 20, 2024.
- ERCOT presented a status update to the Regional Planning Group (RPG) on May 14, 2024, which addressed:
 - The updated set of potential local transmission projects (i.e., those located in the Permian Basin region) needed to serve the Permian Basin region load growth.
 - The initial set of potential import paths to transfer power across the ERCOT System to serve the Permian Basin load in 2038.
- ERCOT received updated information from the TSPs (in early May) that resulted in removing 300 MW of unconfirmed non-oil & gas load in the Delaware Basin area.
- ERCOT continues working to evaluate the local transmission upgrades and import paths needed to serve the Permian Basin region load growth.

Study Assumptions – Updated Load Forecast

Permian Basin Region Load Comparison (MW)

	2019 Delaware Basin Study	2021 Permian Basin Study 2030 Case	2023 RTP Study 2029 Case	Permian Basin Reliability Plan 2030 Case	Permian Basin Reliability Plan 2038 Case
Permian Basin Total Load	9,771	10,527	16,577	23,659	26,400
Permian Basin Oil & Gas Load*	9,771	10,527	12,341	11,964	14,705
Additional Non-Oil & Gas Load**	0	0	4,236	11,695	11,695

Delaware Basin Area Load Comparison (MW)***

	2019 Delaware Basin Study	2021 Permian Basin Study 2030 Case	2023 RTP Study 2029 Case	Permian Basin Reliability Plan 2030 Case	Permian Basin Reliability Plan 2038 Case
Delaware Basin Total Load	5,260	4,960	7,933	10,930	13,183
Delaware Basin Oil & Gas Load*	5,260	4,960	4,884	6,439	8,692
Additional Non-Oil & Gas Load**	0	0	3,049	4,491	4,491

300 MW of unconfirmed non-oil & gas load in the Delaware Basin area was removed per TSP request in May 2024

*Including residential/commercial load

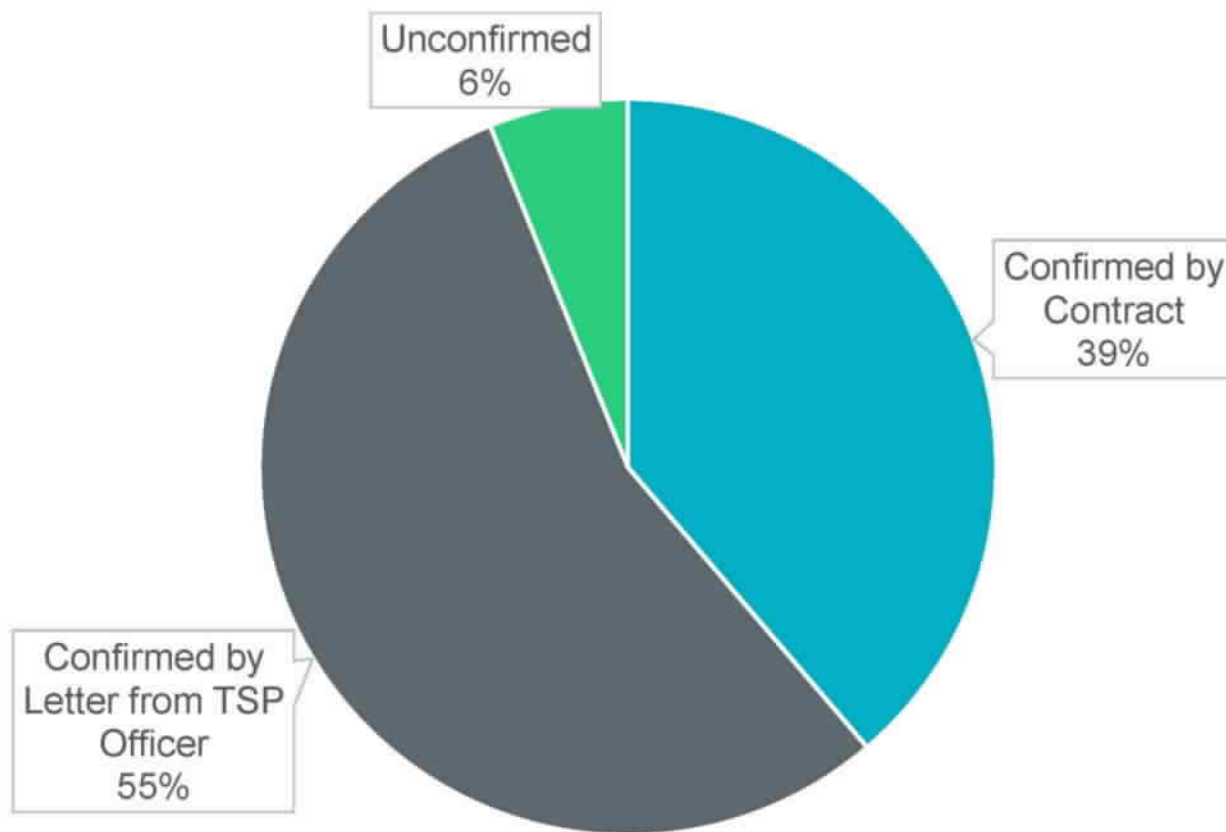
**Mainly datacenter/crypto load

***The Delaware Basin load is a subset of the Permian Basin load and is included as part of the Permian Basin Reliability Plan Study



Additional Non-Oil & Gas Load Breakdown – Updated

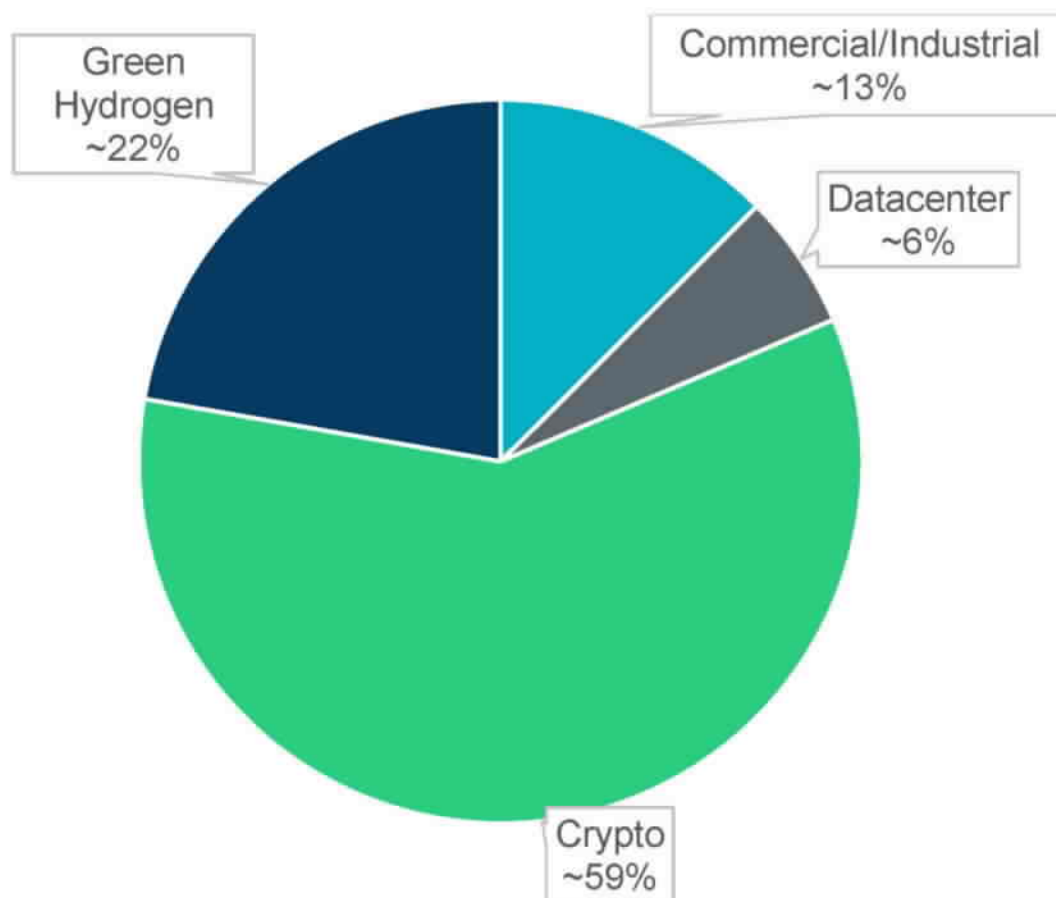
This chart shows the updated confirmed/unconfirmed percentage breakdown for the total 11,695 MW of additional non-oil & gas load.



300 MW of unconfirmed non-oil & gas load in the Delaware Basin area was removed per TSP request in May 2024

Additional Non-Oil & Gas Load Type Breakdown – Updated

This chart shows the updated approximate load type breakdown for the total 11,695 MW of additional non-oil & gas load.



300 MW of unconfirmed non-oil & gas load in the Delaware Basin area was removed per TSP request in May 2024

Updated Local Transmission Projects for 2038 Case

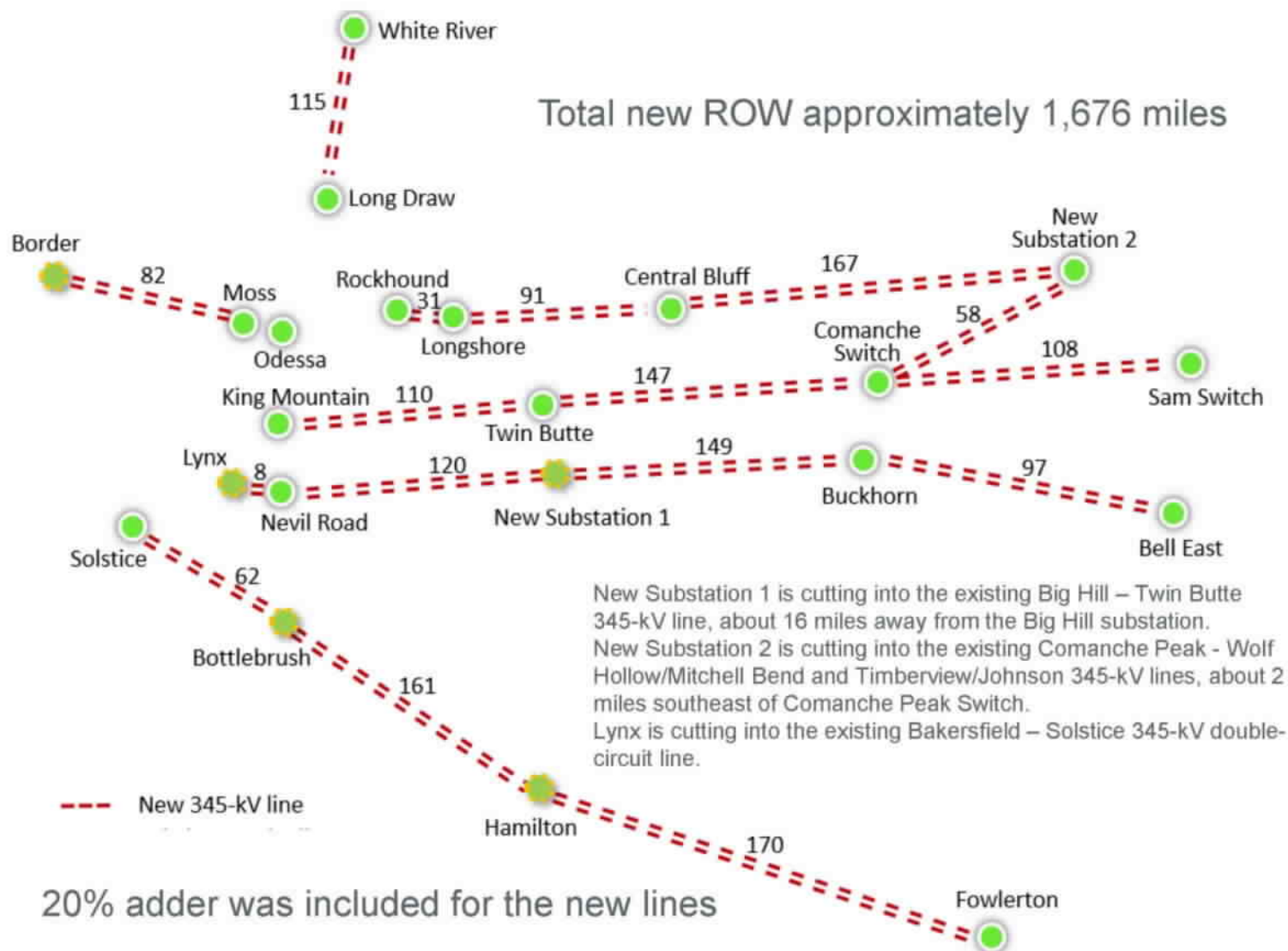
- ERCOT worked with the TSPs and updated the initial set of local transmission projects for the 2038 case.
- Substantial amounts of local transmission projects will be needed to serve all loads in the Permian Basin region for 2038:
 - Add approximately 245 miles of new 345-kV double-circuit transmission lines
 - Upgrade approximately 112 miles of existing 345-kV single-circuit transmission lines and add additional second circuits
 - Upgrade 98 miles of existing 345-kV double-circuit transmission lines
 - Add 10 new 345/138-kV substations with 22 345/138-kV transformers
 - Add approximately 162 miles of new 138-kV transmission lines
 - Upgrade approximately 318 miles of existing 138-kV transmission lines
- In addition, the 2019 ERCOT Delaware Basin Load Integration Study Stage 3, Stage 4 and Stage 5 upgrades⁽¹⁾ currently under RPG review will also be needed to serve all loads in the Permian Basin region for 2038.
- The local project statistics do not include the needed 69-kV transmission upgrades. TSPs are identifying these additional 69-kV upgrades to serve the Permian load.

(1) Stage 3, 4 and 5 upgrades were identified in the 2019 ERCOT Delaware Basin Load Integration Study (<https://www.ercot.com/gridinfo/planning>)

Import Paths to Permian Basin Region for 2038 Case

- Four new 345-kV double-circuit import paths, plus a short path from the Panhandle will be needed to serve all the loads in the Permian Basin region for 2038.
 - Three 345-kV import paths are from Central Texas and one 345-kV import path is from South Texas.
 - Approximately 1,676 miles of new 345-kV double-circuit transmission lines in total.
 - Additional new dynamic reactive devices required.

Import Paths to Permian Basin Region for 2038



Import Paths to Permian Basin for 2038

- Import Path 1
 - Construct a new 345-kV New Substation 2, about 2 miles southeast of the existing Comanche Peak Switch, cutting into the existing Comanche Peak – Wolf Hollow/Mitchell Bend 345-kV double-circuit line and Comanche Peak – Timberview/Johnson 345-kV double-circuit line
 - New New Substation 2 – Comanche Switch 345-kV double-circuit line
 - New New Substation 2 – Central Bluff – Longshore – Rockhound 345-kV double-circuit line
 - New Moss – Border 345-kV double-circuit line
- Import Path 2
 - New Sam Switch – Comanche Switch – Twin Butte – King Mountain 345-kV double-circuit line
- Import Path 3
 - New Bell East – Buckhorn – New Substation 1 – Nevil Road – Lynx 345-kV double-circuit line
 - New Substation 1 is cutting into the existing Big Hill – Twin Butte 345-kV line, about 16 miles away from the Big Hill substation
 - Lynx is cutting into the existing Bakersfield – Solstice 345-kV double-circuit line
- Import Path 4
 - New Fowlerton – Hamilton – Bottlebrush – Solstice 345-kV double-circuit line
 - No 345/138-kV transformers at Hamilton in this study
 - Add new dynamic reactive devices at Hamilton
- Additional Upgrades
 - New White River – Long Draw 345-kV double-circuit line
 - Bypass the series capacitors at Edison and add new dynamic reactive devices

Next Steps

- ERCOT will continue evaluating the local transmission projects and import paths to the Permian Basin region to address the reliability need for 2038.
- ERCOT will evaluate the local transmission projects and import paths needed for 2030. These projects will be a subset of the transmission projects needed for 2038.
- ERCOT will provide an update to the stakeholders at the June 11, 2024, RPG meeting.
- ERCOT will host a Permian Basin Reliability Plan Study workshop on June 28, 2024, for all stakeholders.