



**ERCOT Extra-High Voltage (EHV)
Infrastructure Initiative
*Update***

ERCOT Regional Transmission Planning

September 25, 2024

Agenda

- 2024 RTP 345-kV Initial Violations Overview (*without EHV*)
- 2024 RTP 765-kV Infrastructure Plan – Phase I
- 2024 RTP 765-kV Infrastructure Plan – Phase II
- 765-kV Infrastructure Plan Summary and Benefits
- Next Steps

2024 RTP 345-kV Initial Violations Overview

- Initial violations without EHV:
 - The **2024 RTP** upgraded or added approximately **3,000** circuit miles of 345-kV lines during N-1 analysis.
 - The **2023 RTP** upgraded or added approximately **1,000** circuit miles of 345-kV lines during N-1 analysis.

2024 RTP 765-kV Infrastructure Plan Overview – Phase I

- Phase I

 - Permian Basin*

 - 765-kV paths proposed in Permian Basin study
 - 1,255 miles^[1]
 - 8 substations

- Phase I

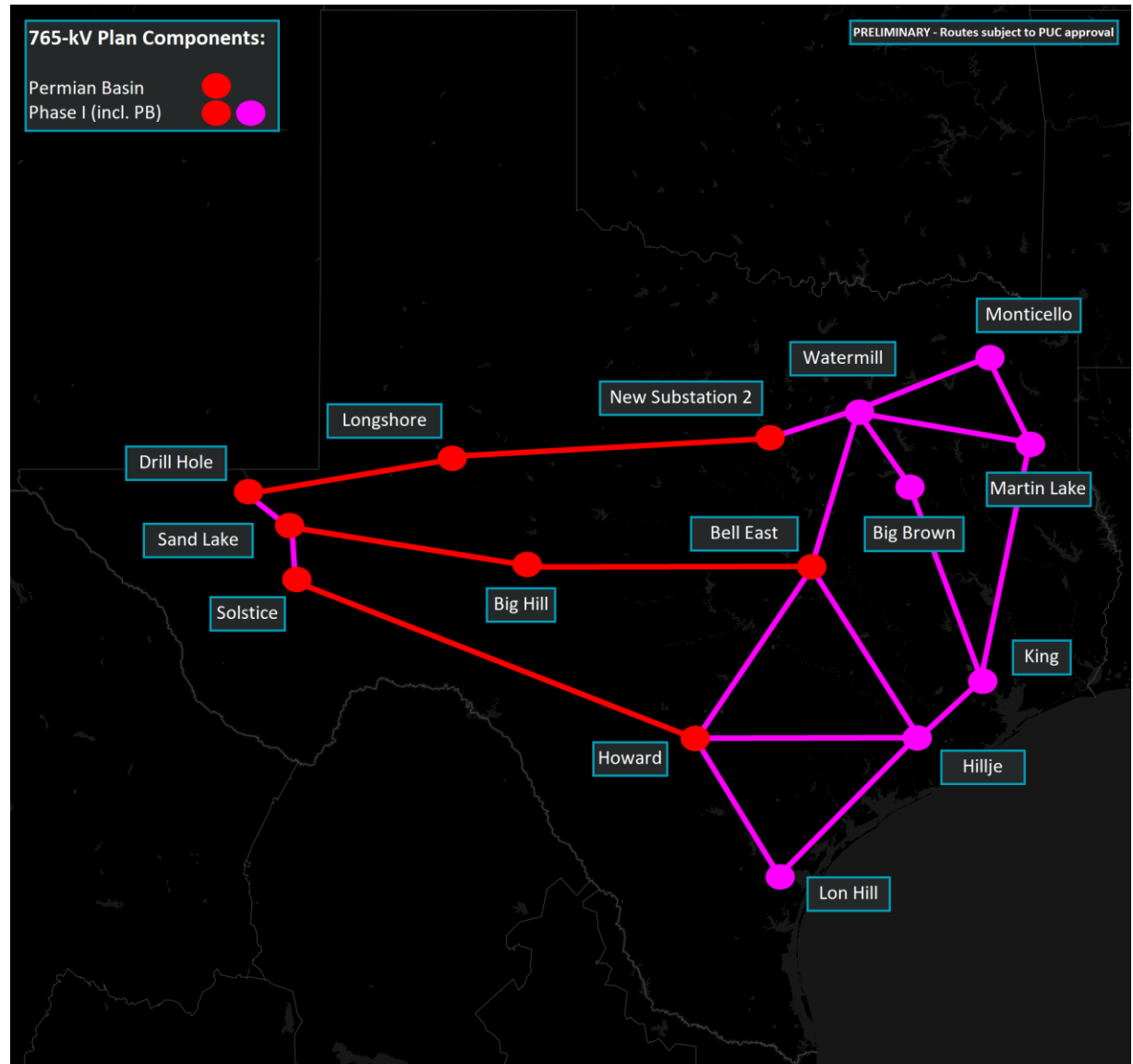
 - Eastern Connection*

 - Based on 2030 need
 - Includes Permian Basin import paths
 - Adds central and eastern connections
 - Closes western loop
 - 2,024 additional miles
 - 7 additional substations

- Phase I

 - Total*

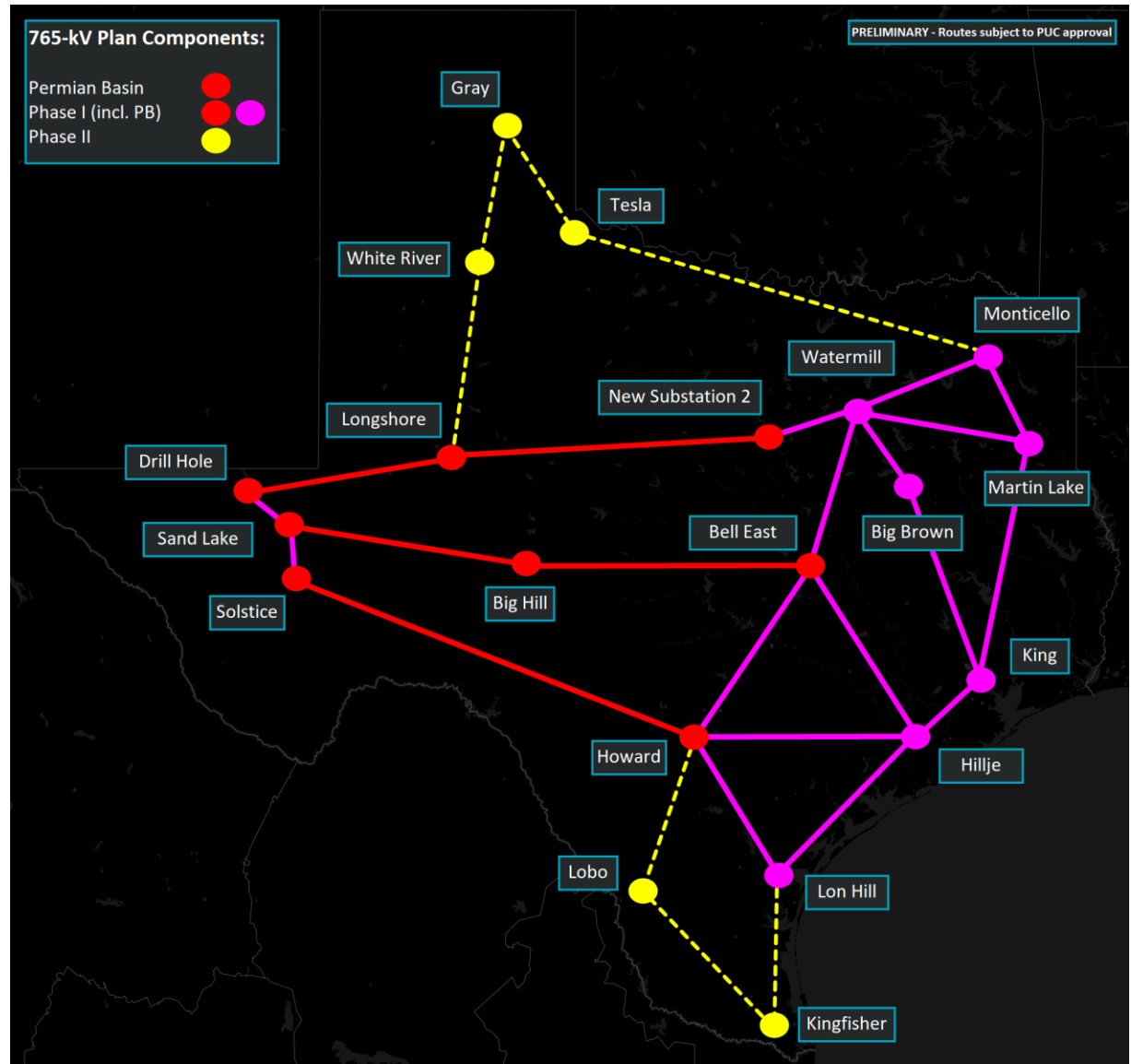
 - 3,279 total miles
 - 15 total substations



[1] All mileage numbers include 20% routing adder on top of point-to-point distance

2024 RTP 765-kV Infrastructure Plan Overview – Phase II

- Phase II
 - Potential future expansion plan
 - Adds Panhandle and Valley components
 - 1,202 additional miles
 - 5 additional substations
- Phases I & II
 - 4,481 total miles
 - 20 total substations



765-kV Infrastructure Plan Summary and Benefits

	Phase I <i>Permian Basin</i>	Phase I <i>Eastern Connection</i>	Phase I <i>Total</i>	Phase II	Phases I & II <i>Total</i>
Miles	1,255	2,024	3,279	1,202	4,481
Substations	8	7	15	5	20

- Benefits of 765-kV transmission plan:
 - Increased transfer capability between load centers
 - Flexibility on Generation Resource siting
 - Outage coordination capacity
 - Reduced impact to Texas consumers due to less Right of Way requirements
 - Lower line losses
 - Possible retirement of series compensation devices
 - Potential exit strategy for some current Generic Transmission Constraints

Next Steps

- EHV options will continue to be tested and evaluated as a part of the 2024 Regional Transmission Plan (RTP)
- Continue engagement with Transmission Service Providers (TSPs) on feasibility and optimization
- Additional specific next steps, and their timelines, will be determined in cooperation with state regulators
- Study will conclude by end of December 2024

Questions/Comments

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