

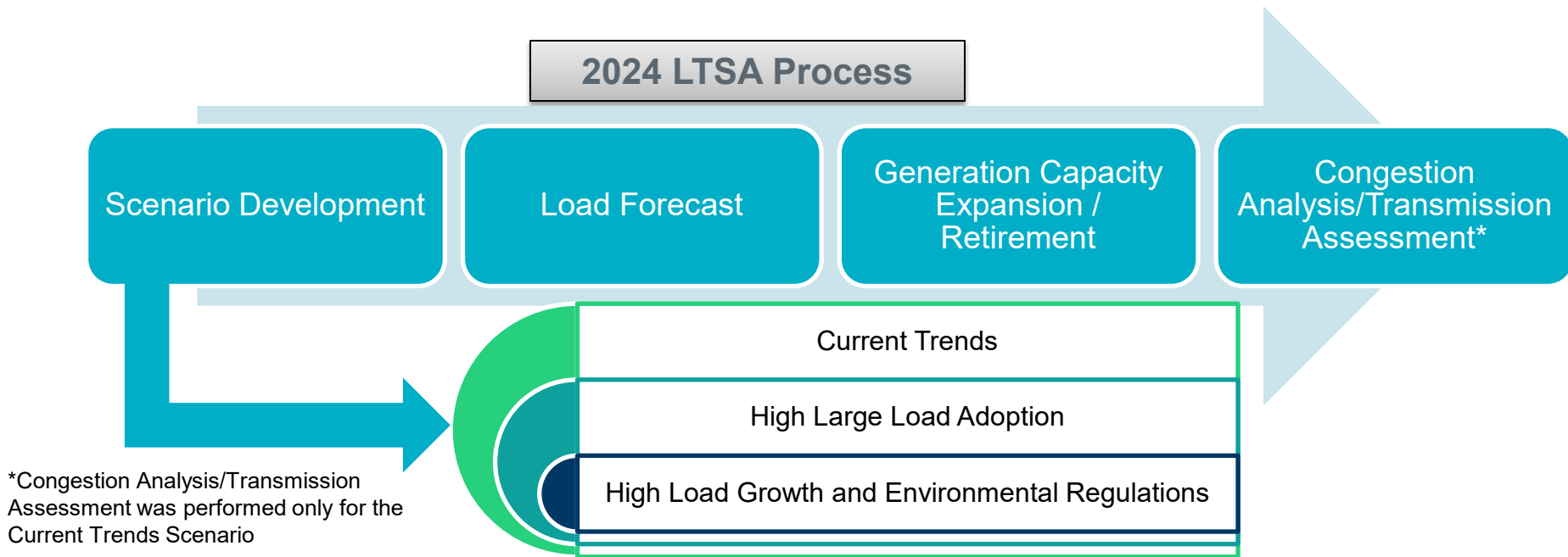


# 2024 LTSA Review

ERCOT Staff  
January 28, 2025

# 2024 Long-Term System Assessment (LTSA)

- ERCOT's 2024 LTSA analyzed potential system needs through **2039**.
  - ERCOT analyzes different future scenarios in its long-term planning process to account for the inherent uncertainty of planning the transmission system **beyond** six years.
- Detailed reports were posted at <https://www.ercot.com/gridinfo/planning>.

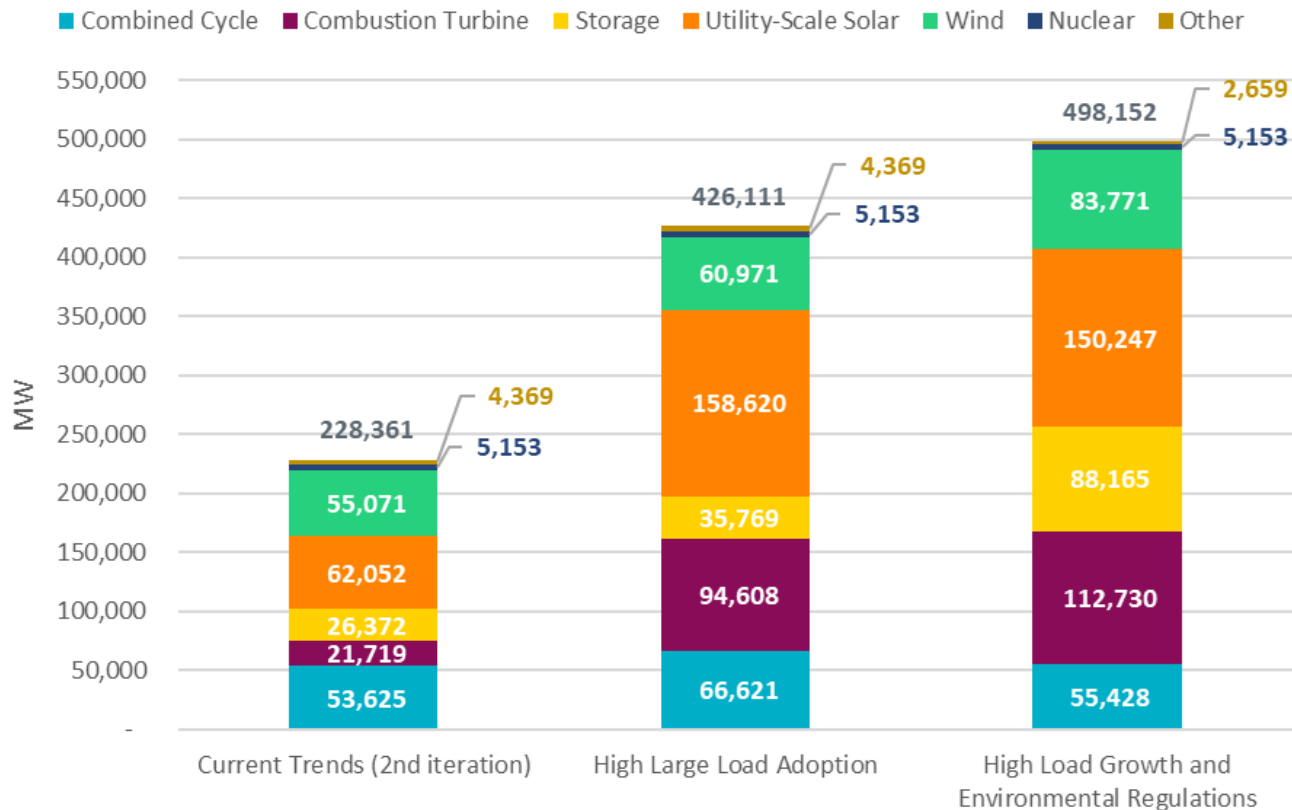


# Key Findings

1. Significant growth in wind, solar, natural gas, and battery energy storage resource types was found across all scenarios to replace retired coal and natural gas generation capacity and meet rising demand.
2. Renewable resources were found to constitute a large portion of available capacity across all scenarios, introducing elevated operational risks due to the increase in intermittency.
3. Battery energy storage and combustion turbines resources were found to be critical in managing increased net load ramping challenges.
4. The scale and geographic distribution of wind and solar generation additions depend on sufficient transmission capacity between resource-rich regions and demand centers.
5. Transmission challenges were identified for both the export from the renewable resource-rich region and the import into the demand centers.

# Capacity Expansion and Retirement Results

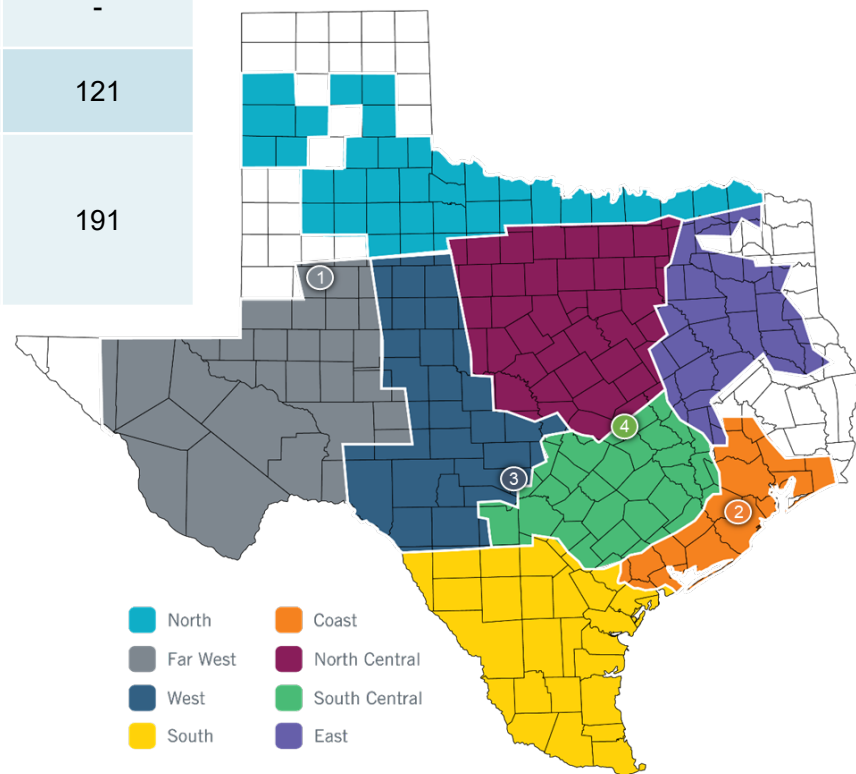
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\*These results only represent planning scenarios, and they do not reflect ERCOT's view of the future

# Transmission Improvement for Current Trends

Index	Project Name	Production cost savings (\$M)	Generator revenue reduction (\$M)	Consumer energy cost reduction (\$M)
1	Farmland – Long Draw and Fiddlewood Switch – Farmland 345-kV line upgrades	36	-	-
2	STP – Bailey and Bailey – PH Robinson 345-kV line additions	75	-	-
3	Hill Country – Kendall 345-kV line addition	31	36	121
4	Bell County East Switch – Sandow Switch double-circuit 345-kV line and Temple Switch – Tin Roof Pod 138-kV line upgrades	26	98	191



# Questions / Comments

- Please send questions and/or comments to  
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# References of Studies

- March 2023 RPG meeting  
[2024 LTSA Overview](#)
- May 2023 RPG meeting  
[2024 LTSA Stakeholder Survey Results and Current Trends Capacity Expansion Input Assumptions](#)
- September 2023 RPG meeting  
[Preliminary Generation Expansion and Retirement Results for 2024-LTSA Current Trends](#)
- June 2024 RPG meeting  
[2024 LTSA High Load Growth and Environmental Regulations Scenario Preliminary Capacity Expansion Results](#)
- August 2024 RPG meeting  
[2024 Long-Term System Assessment \(LTSA\) High Large Load Adoption Scenario](#)
- Oct. 2024 RPG meeting  
[2024 Long-Term System Assessment \(LTSA\): Transmission Expansion Analysis Update for Current Trends](#)