



**2022 LTSA:
Demand Side Evolution Update**

ERCOT Resource Adequacy

Demand Side Evolution Sensitivity

The assumption changes compare to the first run of Demand Side Evolution:

- There is a max limit of one CC build per year, CC build starts from 2025.
- There is a limit of 800MW CT build per year.
- This sensitivity has 16 GW of large flexible load (LFL) based on an informal survey that was conducted in early 2022.
- The 16 GW LFL curtailment is split into three categories based on stakeholder feedbacks and internal discussions.
 - 1- 60% of LFL (9600MW) at 100 \$/MWh , this is an energy only curtailment for the standard mining equipment.
 - 2- 30% of LFL (4800MW) at 200 \$/MWh, this is also an energy only targeted toward LFLs with more efficient/newer crypto mining equipment that can curtail at higher price.
 - 3- 10% of LFL (1600MW) at 1000 \$/MWh, this is for miners that are less price responsive to real time price swings.

Results of Demand Side Evolution Sensitivity

| Description | Units | 2023 | 2027 | 2032 | 2037 | Total |
|---------------------------------|-----------|---------|---------|---------|---------|--------|
| CC Adds | MW | - | 3,249 | 5,415 | 5,415 | 14,079 |
| CT Adds | MW | - | 3,156 | 3,945 | 3,945 | 11,046 |
| Coal Adds | MW | - | - | - | - | - |
| Nuclear Adds | MW | - | - | - | - | - |
| Storage Adds | MW | 2,400 | 1,800 | - | 3,976 | 8,176 |
| Solar Adds | MW | 4,000 | 10,500 | 2,900 | 1,500 | 18,900 |
| Wind Adds | MW | 3,000 | 12,000 | 15,000 | 13,500 | 43,500 |
| Annual Capacity Additions | MW | 9,400 | 30,705 | 27,260 | 28,336 | |
| Cumulative Capacity Additions | MW | 9,400 | 40,105 | 67,365 | 95,701 | |
| Retirements | MW | - | 6,310 | 6,366 | 6,994 | |
| Cumulative Retirements | MW | - | 6,310 | 12,676 | 19,670 | |
| Reserve Margin | % | 21 | 29 | 32 | 28 | |
| Coincident Peak | MW | 99,633 | 102,588 | 106,576 | 114,881 | |
| Peak Net Load (1) | MW | 84,124 | 85,663 | 89,697 | 99,666 | |
| Minimum Net load (1) | MW | 7,732 | 5,954 | 4,996 | 1,552 | |
| Annual Energy | GWhs | 612,664 | 647,526 | 703,485 | 772,811 | |
| Average LMP | \$/MWh | 31.43 | 31.55 | 36.50 | 42.08 | |
| Natural Gas Price | \$/MMbtu | 3.10 | 3.44 | 4.39 | 5.04 | |
| Average Market Heat Rate | MMbtu/MWh | 10.14 | 9.18 | 8.32 | 8.35 | |
| Natural Gas Generation | % | 48.18 | 42.97 | 39.37 | 38.53 | |
| Coal Generation | % | 10.98 | 6.31 | 4.40 | 3.39 | |
| Wind Generation | % | 24.17 | 30.84 | 36.96 | 39.92 | |
| Solar Generation | % | 8.19 | 12.05 | 12.12 | 11.49 | |
| Scarcity Hours | Hours | - | - | - | - | |
| Unserved Energy | GWhs | - | - | - | - | |
| Large Flexible Load Curtailment | Hours | 189 | 109 | 100 | 248 | |

15-Year Total Resources (Plus Capacity Expansion) Comparison of Demand Side Evolution Scenarios

| | | | | Demand Side Evolution (MW) | | | Demand Side Evolution Sensitivity (MW) | | |
|----------------|-----------------------|-------------------|-----------------------------|----------------------------|--------------------|-----------------|--|--------------------|-----------------|
| | Operational Resources | Planned Resources | Total Starting Capacity Mix | Retirements | Capacity Expansion | Total Resources | Retirements | Capacity Expansion | Total Resources |
| Battery | 235 | 1,807 | 2,042 | - | 370 | 2,411 | - | 8,176 | 10,217 |
| Combined Cycle | 37,478 | 86 | 37,564 | 1,918 | 30,324 | 65,969 | 1,918 | 14,079 | 49,724 |
| CT & IC | 12,616 | 860 | 13,476 | 711 | - | 12,765 | 711 | 11,046 | 23,811 |
| Gas Steam | 11,620 | 60 | 11,680 | 8,819 | - | 2,861 | 8,819 | - | 2,861 |
| Solar | 4,095 | 13,332 | 17,427 | - | 1,100 | 18,527 | - | 18,900 | 36,327 |
| Wind | 25,203 | 11,821 | 37,024 | - | 19,800 | 56,824 | - | 43,500 | 80,524 |
| Coal | 12,151 | - | 12,151 | 8,116 | - | 4,034 | 8,116 | - | 4,034 |
| Hydro | 536 | - | 536 | - | - | 536 | - | - | 536 |
| Nuclear | 5,153 | - | 5,153 | - | - | 5,153 | - | - | 5,153 |
| Other | 920 | - | 920 | - | - | 920 | 105 | - | 815 |
| Total | 110,006 | 27,965 | 137,972 | 19,565 | 51,594 | 170,001 | 19,670 | 95,701 | 214,002 |

15-Year Total Resources Comparison of Demand Side Evolution Scenarios

| | Demand Side Evolution (MW) | Demand Side Evolution Sensitivity (MW) |
|----------------|----------------------------|--|
| Battery | 2,411 | 10,217 |
| Combined Cycle | 65,969 | 49,724 |
| CT & IC | 12,765 | 23,811 |
| Gas Steam | 2,861 | 2,861 |
| Solar | 18,527 | 36,327 |
| Wind | 56,824 | 80,524 |
| Coal | 4,034 | 4,034 |
| Hydro | 536 | 536 |
| Nuclear | 5,153 | 5,153 |
| Other | 920 | 815 |
| Total | 170,001 | 214,002 |

