

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	



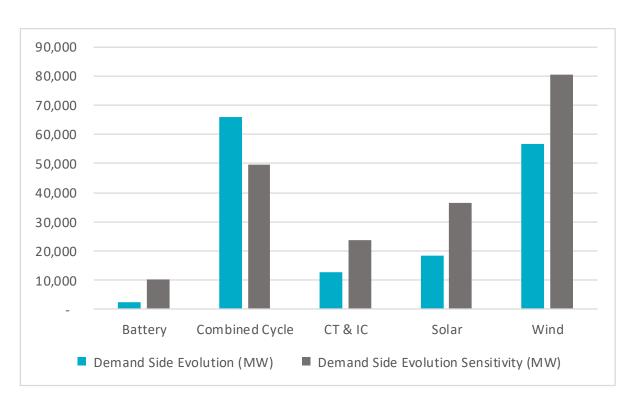
15-Year Total Resources (Plus Capacity Expansion) Comparison of Demand Side Evolution Scenarios

				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





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