



**Report on the Capacity, Demand and Reserves  
(CDR) in the ERCOT Region, 2017-2026**

**May 3, 2016**

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## **Disclaimer**

### **CDR WORKING PAPER FOR PLANNING PURPOSES ONLY**

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## Definitions

### **Mothballed Unit**

A generation resource for which a generation entity has submitted a Notification of Suspension of Operations, for which ERCOT has declined to execute an RMR agreement, and for which the generation entity has not announced retirement of the generation resource. A seasonal mothballed unit is one in which the generation entity requests a seasonal operation period that must include the summer Peak Load Season, June 1 through September 30.

### **Mothballed Capacity**

Capacity that is designated as mothballed by a generating unit's owner as described above, and which is not available for operations during the summer Peak Load Season (June, July, August and September) or winter Peak Load Season (December, January and February).

### **Available Mothballed Capacity based on Owner's Return Probability**

Mothballed capacity with a return-to-service probability of 50% or greater for a given season of the year, as provided by its owner, constitutes available mothballed generation. Return probabilities for individual units are considered protected information under the ERCOT Protocols and therefore are not included in this report.

### **Forecast Zone**

Forecast Zones generally have the same boundaries as the 2003 Congestion Management Zones with the following exceptions: A) Panhandle Zone for resources in the Texas Panhandle counties and outside the 2003 Congestion Management Zones, and B) Coastal Zone for resources in 11 counties along the Texas Gulf Coast and formerly in the South Zone of the 2003 Congestion Management Zones.

### **LRs (Load Resources)**

Load capable of reducing or increasing the need for electrical energy or providing Ancillary Services to the ERCOT System, as described in the ERCOT Protocols, Section 6, Ancillary Services. These Resources may provide the following Ancillary Services: Responsive Reserve Service, Non-Spinning Reserve Service, Replacement Reserve Service, and Regulation Service. The Resources must be registered and qualified by ERCOT and will be scheduled by a Qualified Scheduling Entity (QSE).

### **Peak Load Seasons**

Summer months are June, July, August, and September; winter months are December, January, and February.

### **Non-Synchronous Tie**

Any non-synchronous transmission interconnection between ERCOT and non-ERCOT electric power systems.

### **Private Use Networks**

An electric network connected to the ERCOT transmission grid that contains load that is not directly metered by ERCOT (i.e., load that is typically netted with internal generation).

### **Reliability Must-Run (RMR) Unit**

A generation resource unit operated under the terms of an agreement with ERCOT that would not otherwise be operated except that they are necessary to provide voltage support, stability or management of localized transmission constraints under first contingency criteria.

### **Signed SGIA (Standard Generation Interconnection Agreement)**

An agreement that sets forth requirements for physical connection between an eligible transmission service customer and a transmission or distribution service provider.

### **Switchable Unit**

A generation resource that can be connected to either the ERCOT transmission grid or a grid outside the ERCOT Region.

### **Wind Seasonal Peak Average Capacity Percentage**

The average wind capacity available for the summer and winter Peak Load Seasons for a region (non-coastal / coastal) divided by the installed capacity for the region, expressed as a percentage. Details for the derivation of the percentages are outlined in ERCOT Protocol Section 3.2.6.2.2 (see [http://www.ercot.com/content/wcm/current\\_guides/53528/03\\_030115\\_Nodal.doc](http://www.ercot.com/content/wcm/current_guides/53528/03_030115_Nodal.doc)).

### **Wind Peak Average Capacity Contribution**

The seasonal net capacity rating of wind resources multiplied by the Seasonal Peak Average Capacity Percentage for non-coastal and coastal regions.

### **Wind Regions**

The coastal wind region comprises the following 11 Texas counties along the southern Gulf Coast: Cameron, Willacy, Kenedy, Kleberg, Nueces, San Patricio, Refugio, Aransas, Calhoun, Matagorda, and Brazoria. The non-coastal region consists of all other counties in the ERCOT Region.

## Notes on Changes Relative to the Last CDR, Published December 2015

- 1 Martin Lake U1 (MLSES\_UNIT1) moved from Seasonal Mothball status to Operational status as of 1/1/2016.
- 2 W A PARISH - PETRA NOVA CTG (PNPI\_GT2) moves from Operational status to Mothball for 3-6 months as of 5/19/2016.
- 3 GREENS BAYOU STG U5 (GBY\_GBY\_5) moves from Operational status to Mothball as of 6/27/2016.
- 4 LUFKIN BIOMASS (LFBIO\_UNIT1) moves from Operational status to Mothball as of 7/6/2016.

Winter Peak Average Capacity Contribution Percentages (WINDPEAKPCT) were updated based on winter 2015/2016 data. The Non-coastal region increased from 18% to 20% due to an increased share of Panhandle wind projects that have a higher capacity factor. The Coastal region decreased from 37% to 35% because all the 20 peak hours for winter 2015/2016 were morning hours, whereas coastal wind normally peaks in the afternoon.

- 5 Due to installed, registered solar capacity exceeding the 200 MW threshold, the Peak Average Capacity Contribution Percentages (SOLAR\_PEAK\_PCT) are now calculated using historical unit availability during peak load hours. The summer percentage is 80%; the winter percentage is 5%.
- 6 Annual PUN forecast capacity adjustments are applied based on ERCOT Board-approved changes to Protocol Sections 3.2.6.2.2 and 10.3.2.4.
- 7 The following Planned Resources have been moved to Operational Status since the release of the December 2015 CDR report:

Project Name	Unit Code	County	Fuel	Zone	Installed Capacity MW	Summer Capacity MW
JAVELINA WIND 18	BORDAS_JAVEL18	WEBB	WIND	SOUTH	19.7	2.4
JAVELINA WIND 20	BORDAS_JAVEL20	WEBB	WIND	SOUTH	230.0	27.6
LOS VIENTOS III WIND	LV3_UNIT_1	STARR	WIND	SOUTH	200.0	24.0
SENDERO WIND ENERGY	EXGNSND_WIND_1	JIM HOGG	WIND	SOUTH	76.0	9.1
SHANNON WIND	SHANNONW_UNIT_1	CLAY	WIND	WEST	204.1	24.5
CAMERON COUNTY WIND [CAMWIND_UNIT1]	CAMWIND_UNIT1	CAMERON	WIND-C	COASTAL	165.0	90.8
OCI ALAMO 5 (DOWNIE RANCH)	HELIOS_UNIT1	UVALDE	SOLAR	SOUTH	95.0	76.0
<b>TOTAL</b>					989.8	254.3

- 9 The following Planned Resources have finalized the necessary agreements and permits to be added to the CDR report:

Project Name	GENERATION INTERCONNECTION PROJECT CODE	County	Fuel	Zone	Year of Projected Commercial Operations <sup>1/</sup>	Capacity MW	Summer Capacity MW
COLORADO BEND II	17INR0007	WHARTON	GAS	SOUTH	2017	1,148.0	1,088.0
HALYARD WHARTON ENERGY CENTER	16INR0044	WHARTON	GAS	SOUTH	2017	419.0	419.0
ALBERCAS WIND	15INR0049	ZAPATA	WIND	SOUTH	2016	250.0	30.0
MARIAH DEL SUR	13INR0010c	PARMER	WIND	PANHANDLE	2017	230.4	27.6
LOCKETT WIND FARM	16INR0062b	WILBARGER	WIND	WEST	2017	184.0	22.1
PUMPKIN FARM WIND	16INR0037c	FLOYD	WIND	PANHANDLE	2017	200.0	24.0
SANTA RITA WIND	16INR0091	REAGAN	WIND	WEST	2016	300.0	36.0
SILVER CANYON WIND A	12INR0002a	BRISCOE	WIND	PANHANDLE	2017	200.0	24.0
LOGAN'S GAP WIND II	15INR0082	COMANCHE	WIND	NORTH	2017	200.0	24.0
CASTLE GAP SOLAR 2	16INR0065a	UPTON	SOLAR	WEST	2017	63.0	50.4
UPTON SOLAR	16INR0114	UPTON	SOLAR	WEST	2017	102.0	81.6
<b>TOTAL</b>						3,296.4	1,826.7

<sup>1/</sup> This date is based on the projected Commercial Operations Date (COD) reported by the project developer. In contrast, a unit's first summer CDR forecast year (reported in the SummerCapacities sheet) is defined as the first year in which the capacity is available for the entire summer Peak Load Season. (The summer Peak Load Season constitutes the months of June, July, August and September.) For example, if a unit has a projected COD of July 1, 2015, the first summer CDR forecast year would be 2016.

- 10** FRONTERA GENERATION CTG 1 (FRONTERA\_FRONTREG1), FRONTERA GENERATION CTG 2 (FRONTERA\_FRONTREG2) and FRONTERA GENERATION STG (FRONTERA\_FRONTREG3) are not available to ERCOT after 10/1/2016.
- 11** Planned wind project, MIAMI WIND 1B (project code 14INR0012b, 111 MW nameplate rating, Gray County), cancelled in April 2016.
- 12** Planned natural gas combined-cycle project, PONDERA KING (project code 10INR0022, 882 MW summer rating, Harris County), cancelled in February 2016.

## CDR Report - Executive Summary

The methodology for developing this report is defined in Section 3.2.6 of the ERCOT Protocols (see: [http://www.ercot.com/content/wcm/current\\_guides/53528/03\\_030116\\_Nodal.doc](http://www.ercot.com/content/wcm/current_guides/53528/03_030116_Nodal.doc)). ERCOT has developed this report using data provided by resource developers/owners and by transmission service providers. Although ERCOT works to ensure that the data provided are as accurate and current as possible, ERCOT cannot independently verify all of the information provided. Information available to ERCOT as of April 29 is included in this report.

Summer planning reserve margins for 2017 and 2018 declined since the release of the December 2015 CDR report. The 2.5 percentage point drop for 2017 primarily reflects a two-year delay in the projected commercial operations date of a planned 700 MW natural gas combined-cycle plant (spring 2017 to winter 2019). Additionally, there is a 416 MW increase in mothballed capacity beginning in 2016, which includes the 371 MW Greens Bayou 5 unit. (Note that ERCOT has initially determined that this unit may be needed for Reliability Must-Run Service. ERCOT's final determination will be made by May 28, 2016). After 2018, the summer planning reserve margin increases by about 0.5 percentage points on an average annual basis.

Since the release of the December 2015 CDR report, about 990 MW of wind and solar nameplate capacity was approved for commercial operations by ERCOT, equivalent to a summer peak capacity contribution of about 254 MW. Resources that became eligible for inclusion in this CDR report total 3,296 MW of installed capacity, consisting of 1,567 MW of gas, 1,564 MW of wind, and 165 MW of solar.

This CDR report reflects a change in the methodology for calculating the summer peak solar unit capacity. The summer peak solar capacity contribution percentage is now 80% based on three years of historical summer solar production data, whereas the previous capacity contribution percentage was 100%.

ERCOT did not factor into this CDR report the proposed 2019 integration of Lubbock Power & Light's loads and resources into the ERCOT system due to uncertainty regarding the regulatory outcome of the proposal. This proposal is undergoing study by ERCOT at the request of the Public Utility Commission of Texas (PUCT), and issues associated with the proposed integration are being assessed by the PUCT under Project Number 45633.

ERCOT continues to analyze the anticipated impacts of environmental regulations on resource adequacy, and acknowledges the possibility that several units included in the CDR report may be retired within the next several years. As ERCOT receives additional information about operational changes and unit retirements, it will incorporate this information in future CDR reports.

## Report on the Capacity, Demand and Reserves in the ERCOT Region

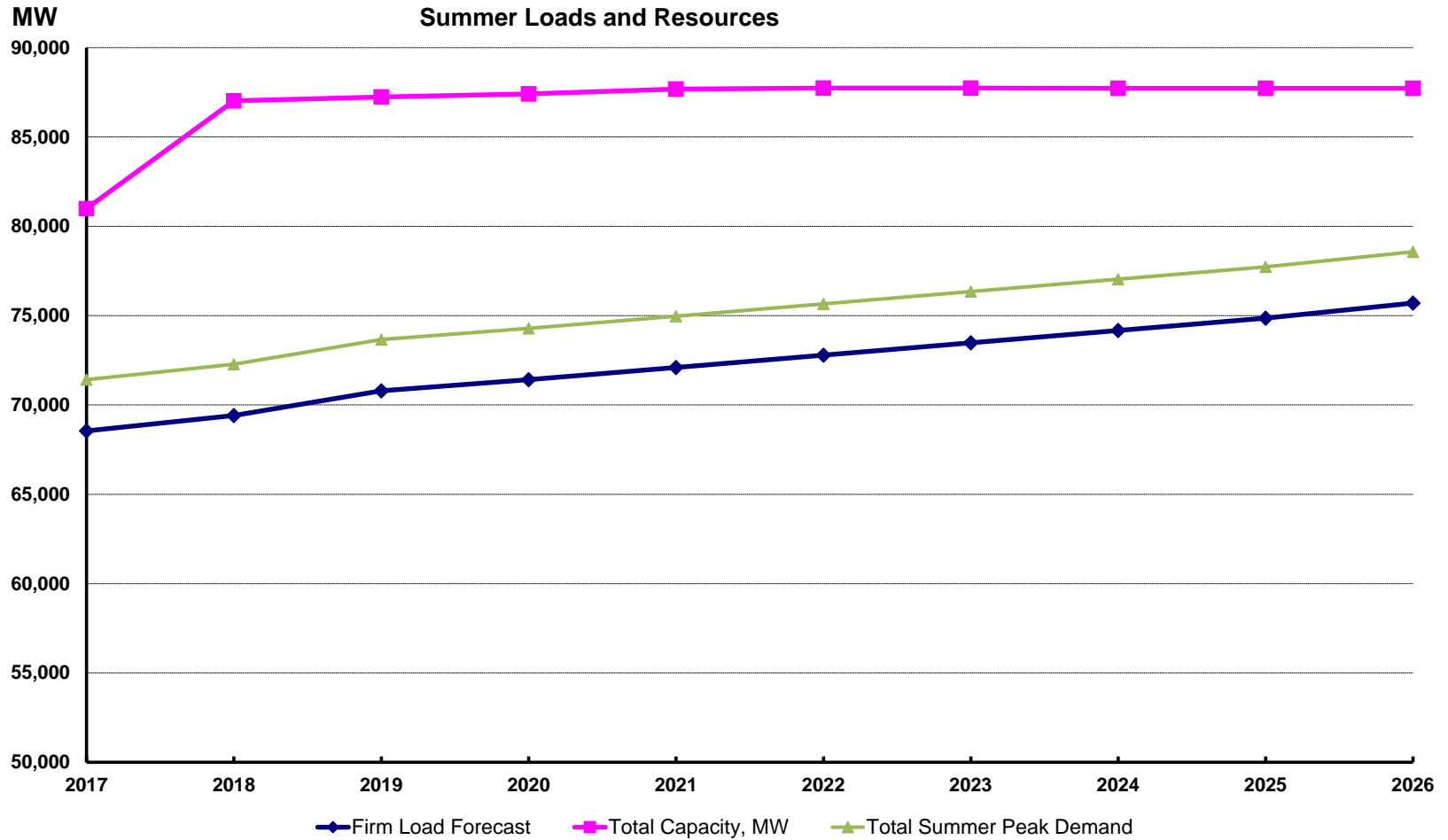
### Summer Summary: 2017-2026

Load Forecast, MW:	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Total Summer Peak Demand (based on normal weather)	71,416	72,277	73,663	74,288	74,966	75,660	76,350	77,036	77,732	78,572
less: Load Resource providing Responsive Reserve	-1,153	-1,153	-1,153	-1,153	-1,153	-1,153	-1,153	-1,153	-1,153	-1,153
less: Load Resource providing Non-Spinning Reserve	0	0	0	0	0	0	0	0	0	0
less: Emergency Response Service (10- and 30-min ramp products)	-1,507	-1,507	-1,507	-1,507	-1,507	-1,507	-1,507	-1,507	-1,507	-1,507
less: TDSP Standard Offer Load Management Programs	-208	-208	-208	-208	-208	-208	-208	-208	-208	-208
<b>Firm Peak Load, MW</b>	<b>68,548</b>	<b>69,409</b>	<b>70,795</b>	<b>71,420</b>	<b>72,098</b>	<b>72,792</b>	<b>73,482</b>	<b>74,168</b>	<b>74,864</b>	<b>75,703</b>
<b>Resources, MW:</b>										
Installed Capacity, Thermal/Hydro	65,990	66,165	65,325	65,325	65,325	65,325	65,325	65,325	65,325	65,325
Switchable Capacity, MW	2,972	2,972	2,972	2,972	2,972	2,972	2,972	2,972	2,972	2,972
less: Switchable Capacity Unavailable to ERCOT, MW	-300	-300	-300	-300	0	0	0	0	0	0
Available Mothballed Capacity, MW	805	805	805	805	805	805	805	805	805	805
Capacity from Private Use Networks	4,292	4,540	4,536	4,465	4,436	4,496	4,496	4,486	4,486	4,486
Non-Coastal Wind, Peak Average Capacity Contribution (12%)	1,693	1,693	1,693	1,693	1,693	1,693	1,693	1,693	1,693	1,693
Coastal Wind, Peak Average Capacity Contribution (55%)	1,015	1,015	1,015	1,015	1,015	1,015	1,015	1,015	1,015	1,015
Solar Utility-Scale, Peak Average Capacity Contribution (80%)	230	230	230	230	230	230	230	230	230	230
RMR Capacity to be under Contract	0	0	0	0	0	0	0	0	0	0
<b>Operational Generation Capacity, MW</b>	<b>76,697</b>	<b>77,120</b>	<b>76,276</b>	<b>76,205</b>	<b>76,476</b>	<b>76,536</b>	<b>76,536</b>	<b>76,526</b>	<b>76,526</b>	<b>76,526</b>
Capacity Contribution - Non-Synchronous Ties, MW	577	577	577	577	577	577	577	577	577	577
Planned Thermal Resources with Signed IA, Air Permits and Water Rights, MW	1,400	6,207	7,185	7,425	7,425	7,425	7,425	7,425	7,425	7,425
Planned Non-Coastal Wind with Signed IA, Peak Average Capacity Contribution (12%)	838	1,083	1,167	1,167	1,167	1,167	1,167	1,167	1,167	1,167
Planned Coastal Wind with Signed IA, Peak Average Capacity Contribution (55%)	305	619	619	619	619	619	619	619	619	619
Planned Solar Utility-Scale, Peak Average Capacity Contribution (80%)	1,177	1,412	1,412	1,412	1,412	1,412	1,412	1,412	1,412	1,412
<b>Total Capacity, MW</b>	<b>80,995</b>	<b>87,019</b>	<b>87,238</b>	<b>87,407</b>	<b>87,678</b>	<b>87,738</b>	<b>87,738</b>	<b>87,728</b>	<b>87,728</b>	<b>87,728</b>
<b>Reserve Margin</b>	<b>18.2%</b>	<b>25.4%</b>	<b>23.2%</b>	<b>22.4%</b>	<b>21.6%</b>	<b>20.5%</b>	<b>19.4%</b>	<b>18.3%</b>	<b>17.2%</b>	<b>15.9%</b>
(Total Resources - Firm Load Forecast) / Firm Load Forecast										



# Report on the Capacity, Demand and Reserves in the ERCOT Region

## Summer Summary: 2017-2026























## Summer Fuel Types - ERCOT

Fuel type is based on the primary fuel. Capacity contribution of the wind resources is included at 12% for Non-Coastal and 55% for Coastal counties, while the solar capacity contribution is 80%. Private Use Network, Hydro and Non-Synchronous Tie resources are included based on the three-year average historical capability for each Summer Season's 20 peak load hours. Non-Synchronous Tie resources are categorized as Other. Mothballed resource capacity is excluded except for Available Mothball Capacity based on a Seasonal Availability Schedule or Owner's reported Return Probability. Private Use Network is categorized as gas.

Fuel_Type	Capacity_Pct	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
<b>Biomass</b>	<b>100%</b>	199	199	199	199	199	199	199	199	199	199
<b>Coal</b>	<b>100%</b>	19,209	19,209	18,369	18,609	18,609	18,609	18,609	18,609	18,609	18,609
<b>Gas</b>	<b>100%</b>	50,509	55,564	56,214	56,143	56,414	56,474	56,474	56,464	56,464	56,464
<b>Nuclear</b>	<b>100%</b>	4,981	4,981	4,981	4,981	4,981	4,981	4,981	4,981	4,981	4,981
<b>Other</b>	<b>100%</b>	577	577	577	577	577	577	577	577	577	577
<b>Hydro</b>	<b>79%</b>	437	437	437	437	437	437	437	437	437	437
<b>Wind</b>	<b>12%</b>	2,531	2,776	2,860	2,860	2,860	2,860	2,860	2,860	2,860	2,860
<b>Wind-C</b>	<b>55%</b>	1,320	1,634	1,634	1,634	1,634	1,634	1,634	1,634	1,634	1,634
<b>Solar</b>	<b>80%</b>	1,407	1,642	1,642	1,642	1,642	1,642	1,642	1,642	1,642	1,642
<b>Storage</b>	<b>100%</b>	-	-	324	324	324	324	324	324	324	324
<b>Total</b>		<b>81,170</b>	<b>87,019</b>	<b>87,238</b>	<b>87,407</b>	<b>87,678</b>	<b>87,738</b>	<b>87,738</b>	<b>87,728</b>	<b>87,728</b>	<b>87,728</b>

Fuel_Type	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
<b>Biomass</b>	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
<b>Coal</b>	23.7%	22.1%	21.1%	21.3%	21.2%	21.2%	21.2%	21.2%	21.2%	21.2%
<b>Natural Gas</b>	62.2%	63.9%	64.4%	64.2%	64.3%	64.4%	64.4%	64.4%	64.4%	64.4%
<b>Nuclear</b>	6.1%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%
<b>Other</b>	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%
<b>Hydro</b>	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
<b>Wind</b>	3.1%	3.2%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%
<b>Wind-C</b>	1.6%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%
<b>Solar</b>	1.7%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%
<b>Storage</b>	0.0%	0.0%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

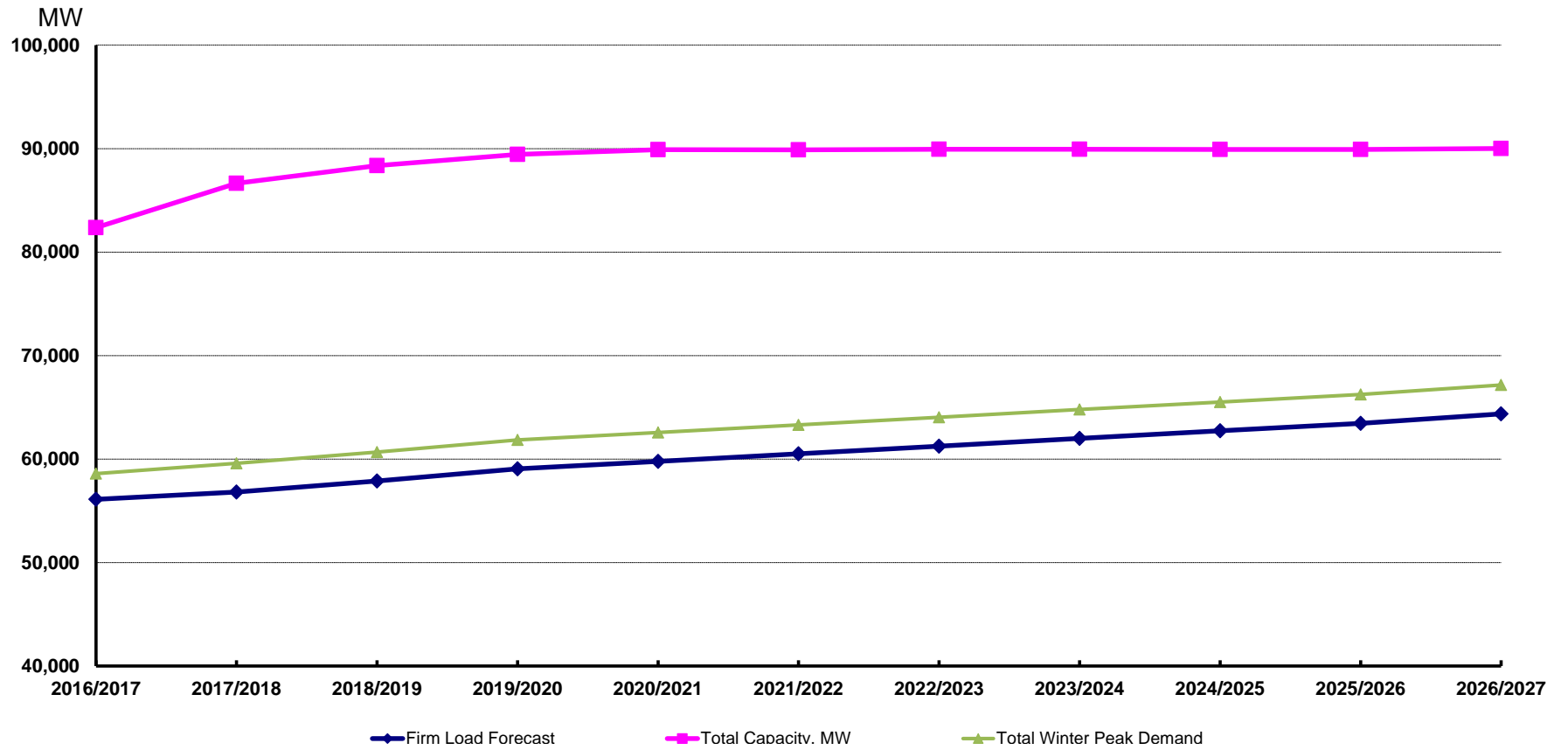
## Report on the Capacity, Demand and Reserves in the ERCOT Region

### Winter Summary: 2016/2017 through 2025/2026

	<u>2016/2017</u>	<u>2017/2018</u>	<u>2018/2019</u>	<u>2019/2020</u>	<u>2020/2021</u>	<u>2021/2022</u>	<u>2022/2023</u>	<u>2023/2024</u>	<u>2024/2025</u>	<u>2025/2026</u>	<u>2026/2027</u>
<b>Load Forecast, MW:</b>											
Total Winter Peak Demand (based on normal weather)	58,591	59,597	60,679	61,845	62,562	63,299	64,038	64,790	65,516	66,236	67,157
less: Load Resource providing Responsive Reserve	-1,365	-1,365	-1,365	-1,365	-1,365	-1,365	-1,365	-1,365	-1,365	-1,365	-1,365
less: Load Resource providing Non-Spinning Reserve	0	0	0	0	0	0	0	0	0	0	0
less: Emergency Response Service (10- and 30-min ramp products)	-1,119	-1,426	-1,426	-1,426	-1,426	-1,426	-1,426	-1,426	-1,426	-1,426	-1,426
less: TDSP Standard Offer Load Management Programs	0	0	0	0	0	0	0	0	0	0	0
<b>Firm Peak Load, MW</b>	<b>56,107</b>	<b>56,806</b>	<b>57,888</b>	<b>59,054</b>	<b>59,771</b>	<b>60,508</b>	<b>61,247</b>	<b>61,999</b>	<b>62,725</b>	<b>63,445</b>	<b>64,366</b>
<b>Resources, MW:</b>											
Installed Capacity, Thermal/Hydro	68,541	68,541	67,896	67,896	67,896	67,896	67,896	67,896	67,896	67,896	67,984
Switchable Capacity	3,178	3,178	3,178	3,178	3,178	3,178	3,178	3,178	3,178	3,178	3,178
less: Switchable Capacity Unavailable to ERCOT	-300	-300	-300	-300	0	0	0	0	0	0	0
Available Mothballed Capacity	0	0	0	0	0	0	0	0	0	0	0
Capacity from Private Use Networks	4,436	4,462	4,710	4,706	4,635	4,606	4,666	4,666	4,656	4,656	4,656
Non-Coastal Wind, Peak Average Capacity Contribution (20%)	2,821	2,821	2,821	2,821	2,821	2,821	2,821	2,821	2,821	2,821	2,821
Coastal Wind, Peak Average Capacity Contribution (35%)	646	646	646	646	646	646	646	646	646	646	646
Solar Utility-Scale, Peak Average Capacity Contribution (5%)	14	14	14	14	14	14	14	14	14	14	14
RMR Capacity to be under Contract	0	0	0	0	0	0	0	0	0	0	0
<b>Operational Generation Capacity, MW</b>	<b>79,337</b>	<b>79,363</b>	<b>78,966</b>	<b>78,962</b>	<b>79,191</b>	<b>79,162</b>	<b>79,222</b>	<b>79,222</b>	<b>79,212</b>	<b>79,212</b>	<b>79,300</b>
Capacity Contribution - Non-Synchronous Ties	246	246	246	246	246	246	246	246	246	246	246
Planned Resources (not wind or solar) with Signed IA, Air Permits and Water Rights	1,859	4,837	6,798	7,776	8,016	8,016	8,016	8,016	8,016	8,016	8,016
Planned Non-Coastal Wind with Signed IA, Peak Average Capacity Contribution (20%)	798	1,727	1,868	1,968	1,968	1,968	1,968	1,968	1,968	1,968	1,968
Planned Coastal Wind with Signed IA, Peak Average Capacity Contribution (35%)	71	394	394	394	394	394	394	394	394	394	394
Planned Solar Utility-Scale, Peak Average Capacity Contribution (5%)	55	87	88	88	88	88	88	88	88	88	88
<b>Total Capacity, MW</b>	<b>82,366</b>	<b>86,655</b>	<b>88,360</b>	<b>89,434</b>	<b>89,903</b>	<b>89,874</b>	<b>89,934</b>	<b>89,934</b>	<b>89,924</b>	<b>89,924</b>	<b>90,012</b>
<b>Reserve Margin</b>	<b>46.8%</b>	<b>52.5%</b>	<b>52.6%</b>	<b>51.4%</b>	<b>50.4%</b>	<b>48.5%</b>	<b>46.8%</b>	<b>45.1%</b>	<b>43.4%</b>	<b>41.7%</b>	<b>39.8%</b>
(Total Resources - Firm Load Forecast) / Firm Load Forecast											

# Report on the Capacity, Demand and Reserves in the ERCOT Region

## Winter Summary: 2016/2017 through 2025/2026























## Winter Fuel Types - ERCOT

Fuel type is based on the primary fuel. Capacity contribution of the wind resources is included at 20% for Non-Coastal and 35% for Coastal counties, while the solar capacity contribution is 5%. Private Use Network, Hydro and Non-Synchronous Tie resources are included based on the three-year average historical capability for each Summer Season's 20 peak load hours. Non-Synchronous Tie resources are categorized as Other. Mothballed resource capacity is excluded except for Available Mothball Capacity based on a Seasonal Availability Schedule or Owner's reported Return Probability. Private Use Network is categorized as gas.

Fuel_Type	Capacity_Pct	In MW										
		2016/2017	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025	2025/2026	2026/2027
Biomass	100%	199	199	199	199	199	199	199	199	199	199	199
Coal	100%	18,545	18,545	17,705	17,705	17,945	17,945	17,945	17,945	17,945	17,945	17,945
Gas	100%	53,648	56,652	58,861	59,511	59,740	59,711	59,771	59,771	59,761	59,761	59,761
Nuclear	100%	5,164	5,164	5,164	5,164	5,164	5,164	5,164	5,164	5,164	5,164	5,164
Other	100%	246	246	246	246	246	246	246	246	246	246	246
Hydro	80%	442	442	442	442	442	442	442	442	442	442	442
Wind	20%	3,619	4,548	4,689	4,789	4,789	4,789	4,789	4,789	4,789	4,789	4,789
Wind-C	35%	717	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040
Solar	5%	70	102	103	103	103	103	103	103	103	103	103
Storage	100%	-	-	-	324	324	324	324	324	324	324	324
<b>Total</b>		<b>82,649</b>	<b>86,938</b>	<b>88,448</b>	<b>89,522</b>	<b>89,991</b>	<b>89,962</b>	<b>90,022</b>	<b>90,022</b>	<b>90,012</b>	<b>90,012</b>	<b>90,012</b>

Fuel_Type	In Percentages										
	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025	2025/2026	2026/2027
Biomass	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
Coal	22.4%	21.3%	20.0%	19.8%	19.9%	19.9%	19.9%	19.9%	19.9%	19.9%	19.9%
Gas	64.9%	65.2%	66.5%	66.5%	66.4%	66.4%	66.4%	66.4%	66.4%	66.4%	66.4%
Nuclear	6.2%	5.9%	5.8%	5.8%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%
Other	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
Hydro	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Wind	4.4%	5.2%	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%
Wind-C	0.9%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%
Solar	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Storage	0.0%	0.0%	0.0%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>