



Senate Business & Commerce Testimony

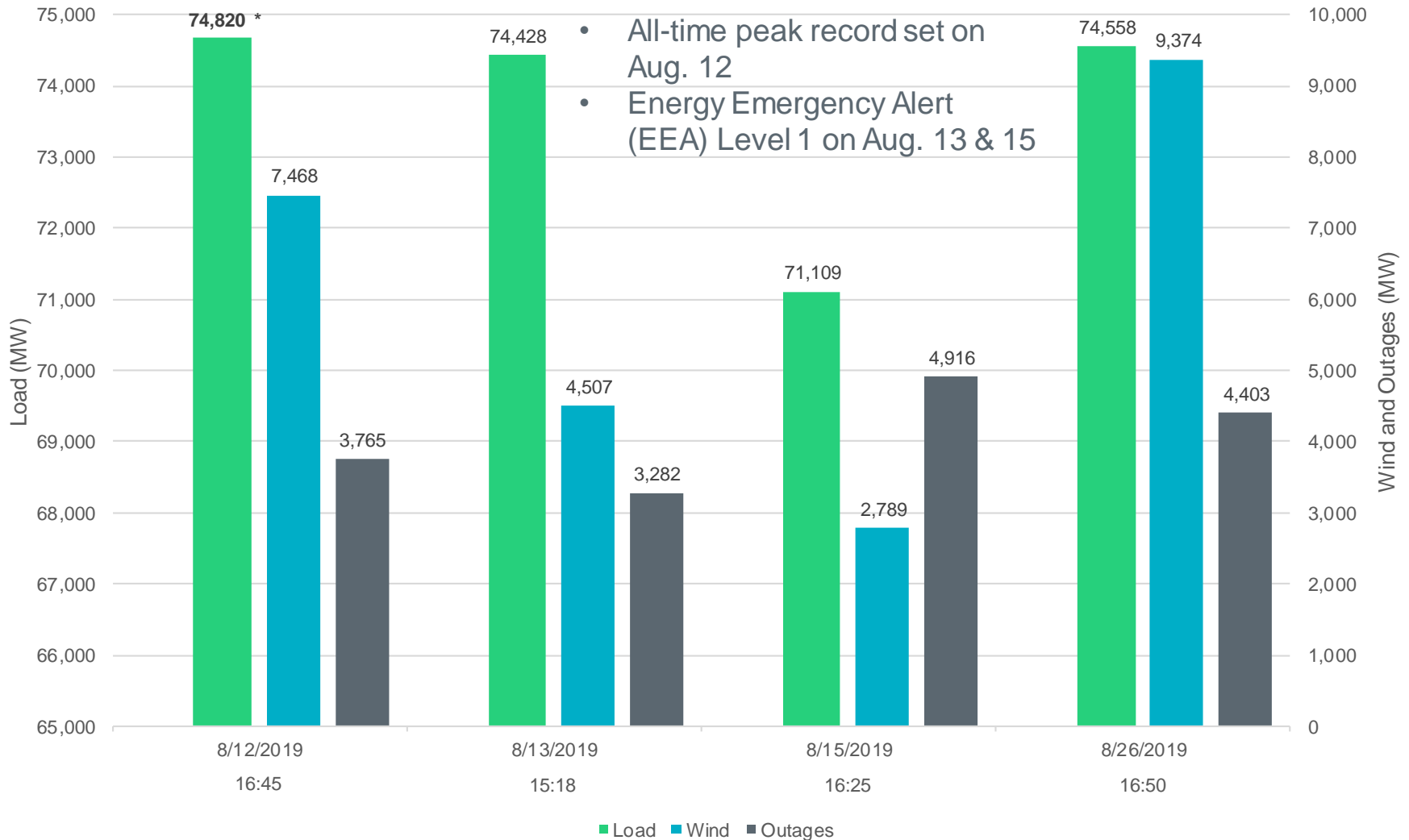
Bill Magness
President & CEO

February 6, 2020

Key Observations for Summer 2019: Market Outcomes Supported Electric Reliability

- ERCOT entered summer 2019 with a historically low reserve margin. June and July were mild, but August was very hot, and September was well above normal.
- New all-time record for peak electricity demand set on Aug. 12, 2019 (74,820 MW).
- Excellent performance by generators, and significant participation by consumers to reduce demand.
- Changes to scarcity pricing approved by the PUC were implemented and performed as expected.
- Tightest conditions frequently occurred earlier than time of peak demand (peak net load).

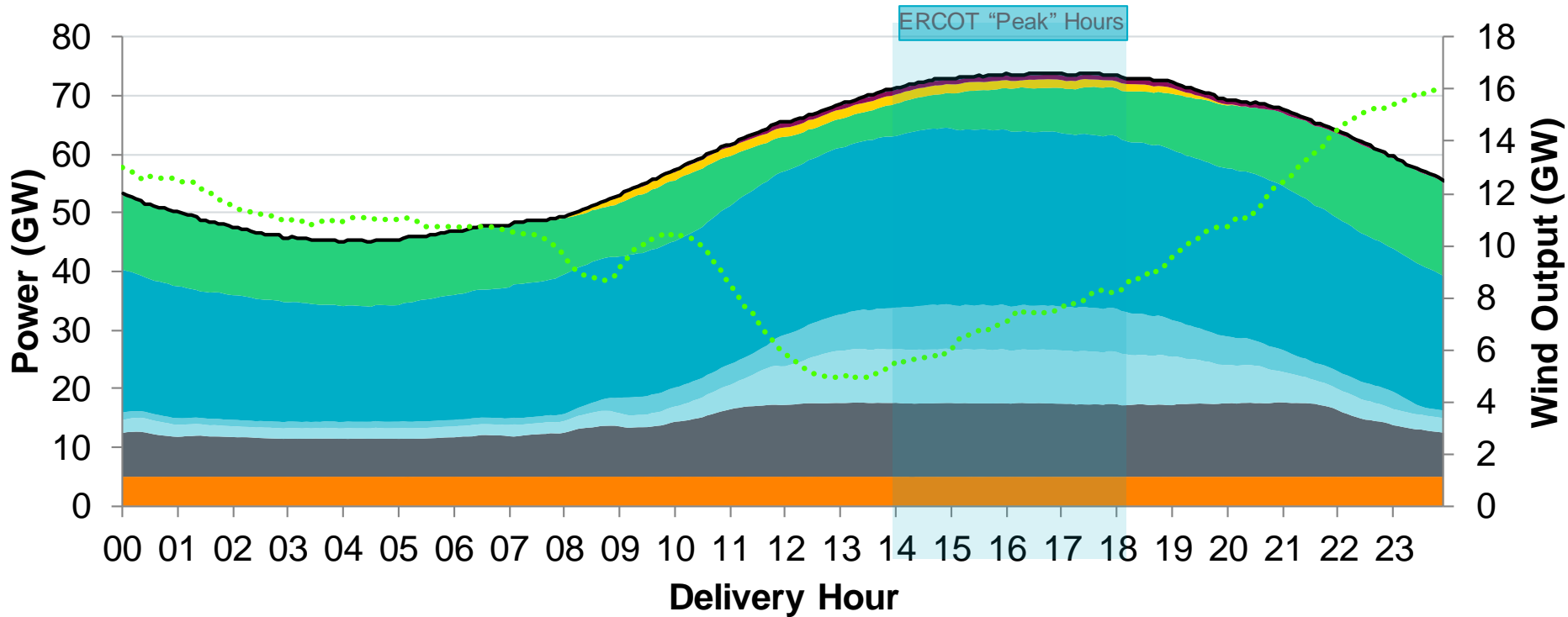
Highest Demand and EEA Days: Lowest Reserves and Higher Prices May Not Occur at Highest Demand Levels



* New all-time System Peak Record



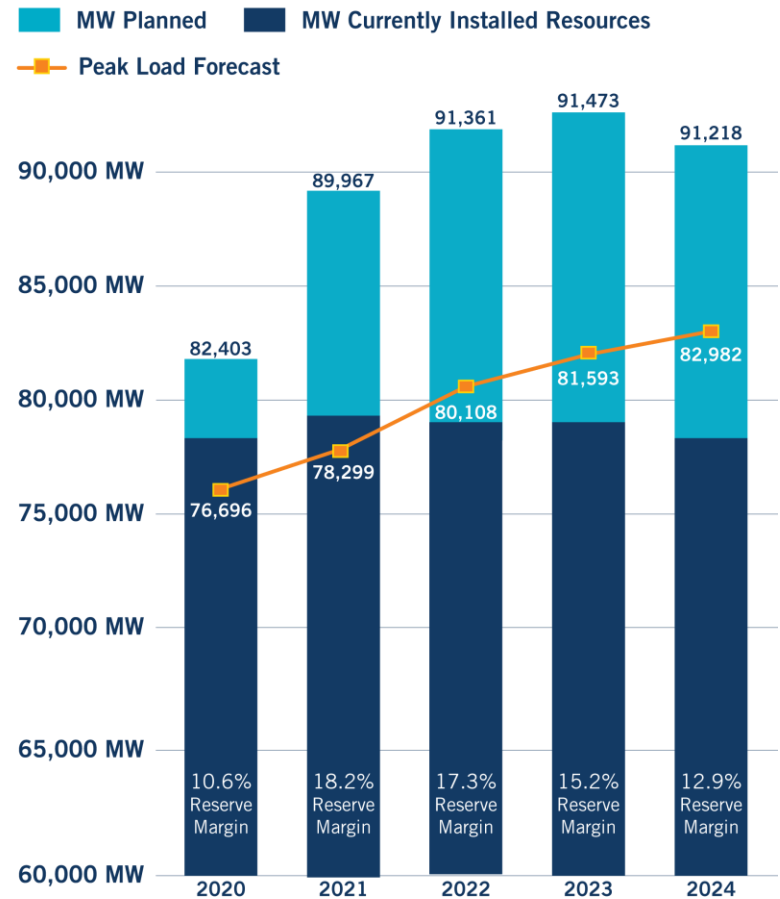
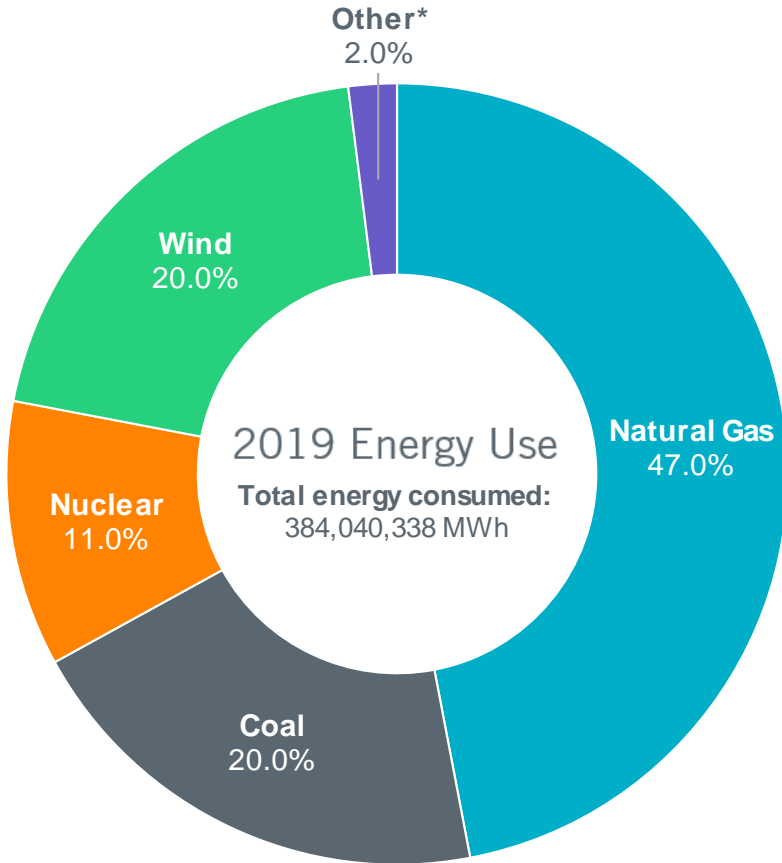
Close Look at Peak Demand Day of Aug. 12



- Nuclear
- Coal
- Gas Traditional
- Simple Cycle
- Combined Cycle
- Wind
- Solar
- Diesel
- Hydro
- Renewables
- Total Dispatch
- Wind Output

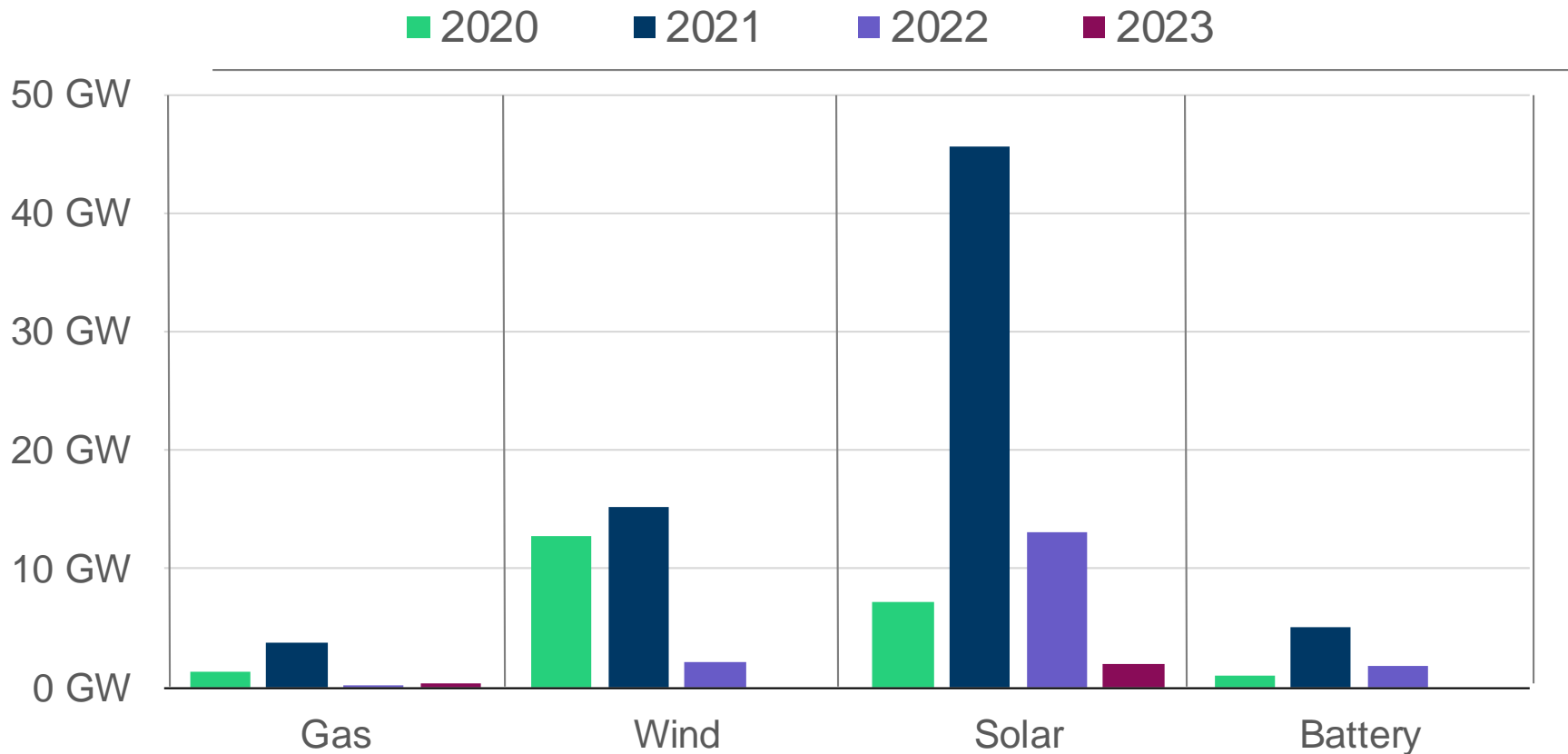


Supply & Demand in the ERCOT Market



The December 2019 Capacity, Demand, and Reserves (CDR) Report estimates a 10.6% reserve margin for summer 2020. This is 2% higher than the 8.6% reserve margin for summer 2019.

Interconnection Queue Capacity by Fuel Type and Projected Year

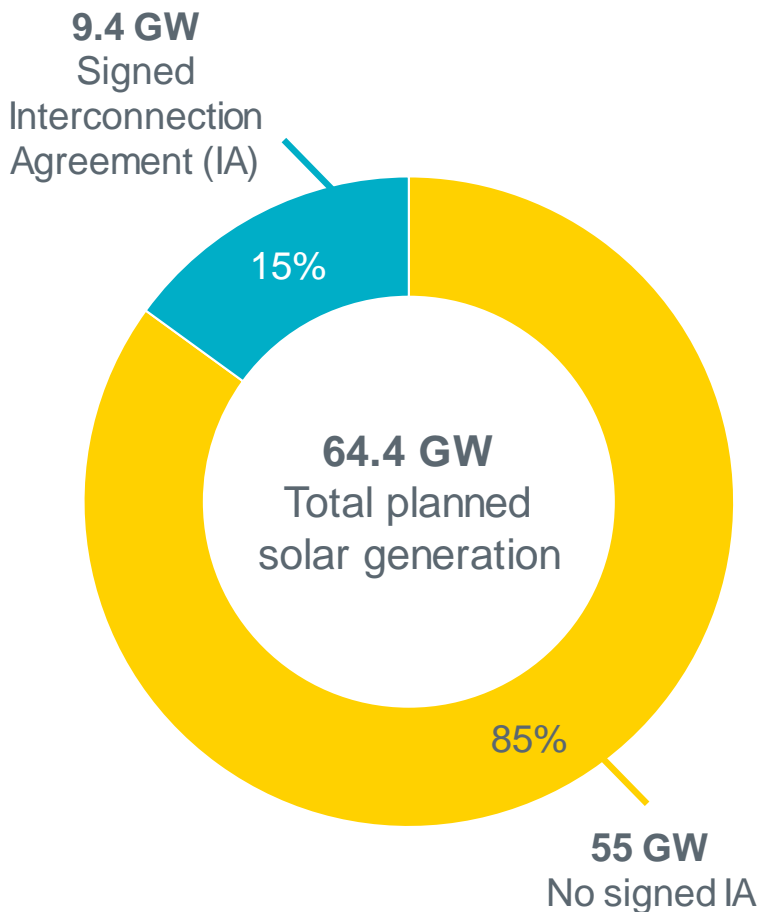


(1) Queue totals are based on interconnection data from Jan. 1, 2020.

For 2020-2023, totals are: solar 68 GW (61%), wind 30 GW (27%), battery 8 GW (7%) and gas 6 GW (5%).

(2) Chart excludes proposed projects using other miscellaneous fuel sources totaling 363 MW.

Closer Look at Prospective Utility-Scale Solar Projects



| | 2019* | 2020 | 2021 | 2022 |
|--------------------|---------------|-----------------|-----------------|---------------|
| January | | | | |
| February | | 341 MW | 206 MW | |
| March | | | | |
| April | | 380 MW | 790 MW | |
| May | | 216 MW | 1,106 MW | 201 MW |
| June | | 1,004 MW | 2,698 MW | |
| July | | | 400 MW | |
| August | | | | |
| September | | 105 MW | | |
| October | | 150 MW | | |
| November | | 255 MW | | |
| December | 200 MW | 1,067 MW | 304 MW | |
| Grand Total | 200 MW | 3,517 MW | 5,504 MW | 201 MW |

*Planned capacity in 2019 is due to one developer that failed to update their expired COD.



Most of the planned solar projects with signed Interconnection Agreements are expected to come online before summer 2021.

Preparing ERCOT to Manage a Changing Grid

- The PUC approved implementation of market improvements that will help manage a future with different resource types with optimal efficiency. Known as Real-Time Co-optimization, these changes are planned for full implementation in 2024.
- West Texas load continues to grow with the extensive development of oil and gas. Several transmission upgrades and improvements are ongoing in this area in order to provide reliable service to customers.
- ERCOT and market participants are working to ensure our market can handle future technologies such as Energy Storage Resources (ESRs) and Distribution Generation Resources (DGR).
 - Lower cost of ESR equipment makes it a quickly growing market segment. ERCOT has about 100 MW of ESR connected, with several hundred additional MWs expected. Majority of ESR activity to date is Battery Energy Storage (BES).
 - DGRs are resources that are connected to the ERCOT grid at distribution voltages (<60 kV), unlike traditional generation resources that connect at the transmission level.