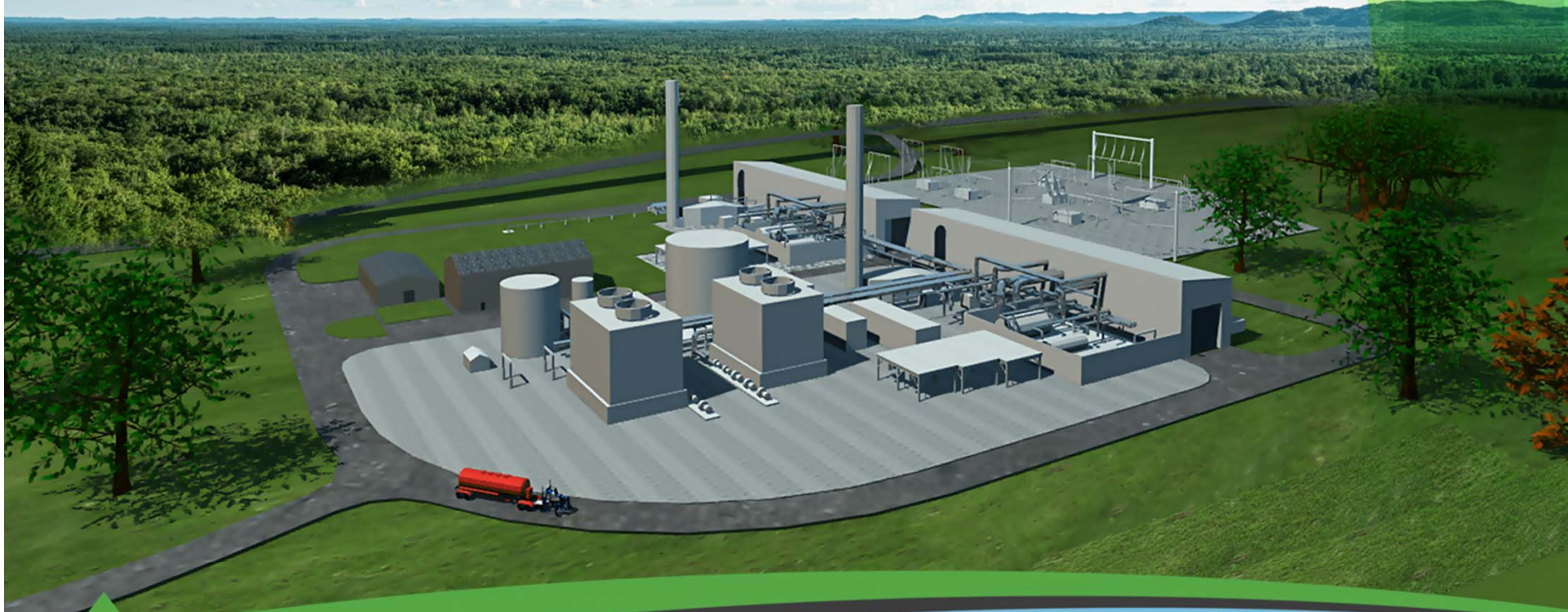


Apex Bethel Energy Center – Long Duration Energy Storage to Integrate Texas Wind

17th Annual Gas and Power Institute

September 20, 2018



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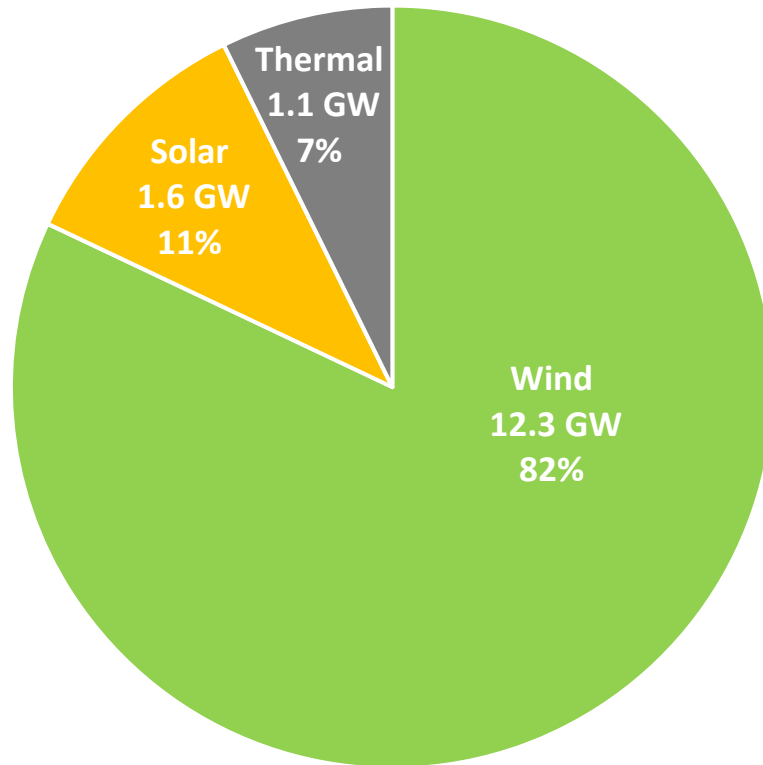
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WIND CAPACITY HAS DOMINATED NEW ERCOT SUPPLY FOR THE PAST 5 YEARS

2013 to 2018 ERCOT net capacity additions, GW

100% = 15.0 GW



Wind additions are driven by long-term hedges from...

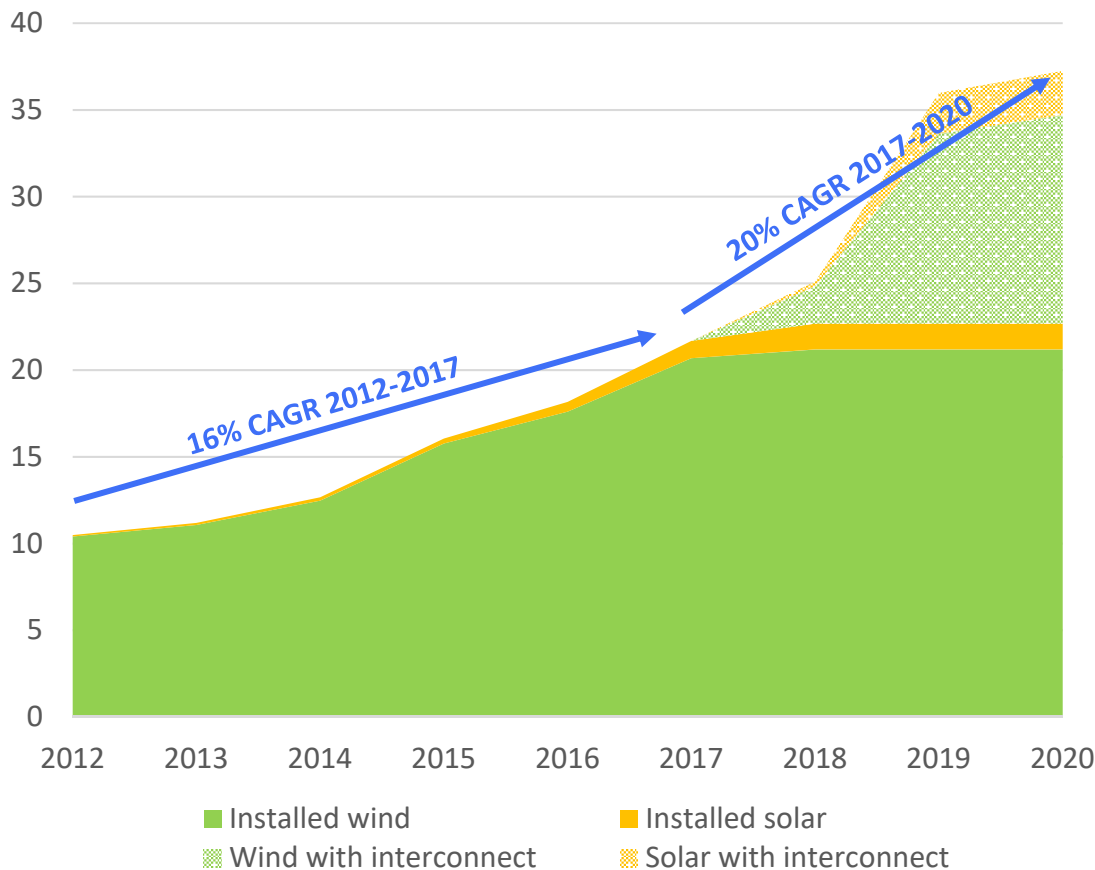
- Corporate ESG buyers (e.g., Microsoft, Google);
- Municipal/coop utility PPA buyers; and
- Bank and trading house hedges (e.g., Citibank, Shell)

* Net thermal capacity includes 4.2 GW of retirements

Source: ERCOT CDR May 2013, May 2018

STRONG GROWTH IN WIND CAPACITY PROJECTED TO CONTINUE

Historical and projected ERCOT renewable capacity, GW



Capacity additions:

- ERCOT is projecting an increased pace of renewable expansion over the next two years – new additions are dominated by wind

Renewable production:

- Renewables produced 20.7% of all supply in 2018 (YTD)
- At the pace of expansion seen over the last 2 years, ERCOT renewable could serve over 30% of ERCOT load in 5 years, and over 40% in 10 years*

* Based on 12-month additions of 2.5 GW of wind and 0.5 GW of solar from 8/17 to 7/18

Source: ERCOT Generation Interconnection Status report, July 31, 2018

Note: historical and projected ERCOT renewable capacity reflects year-end value

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