



## **Item 10.2: Wind and Solar Forecast Methodologies**

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Board of Directors Meeting

ERCOT Public

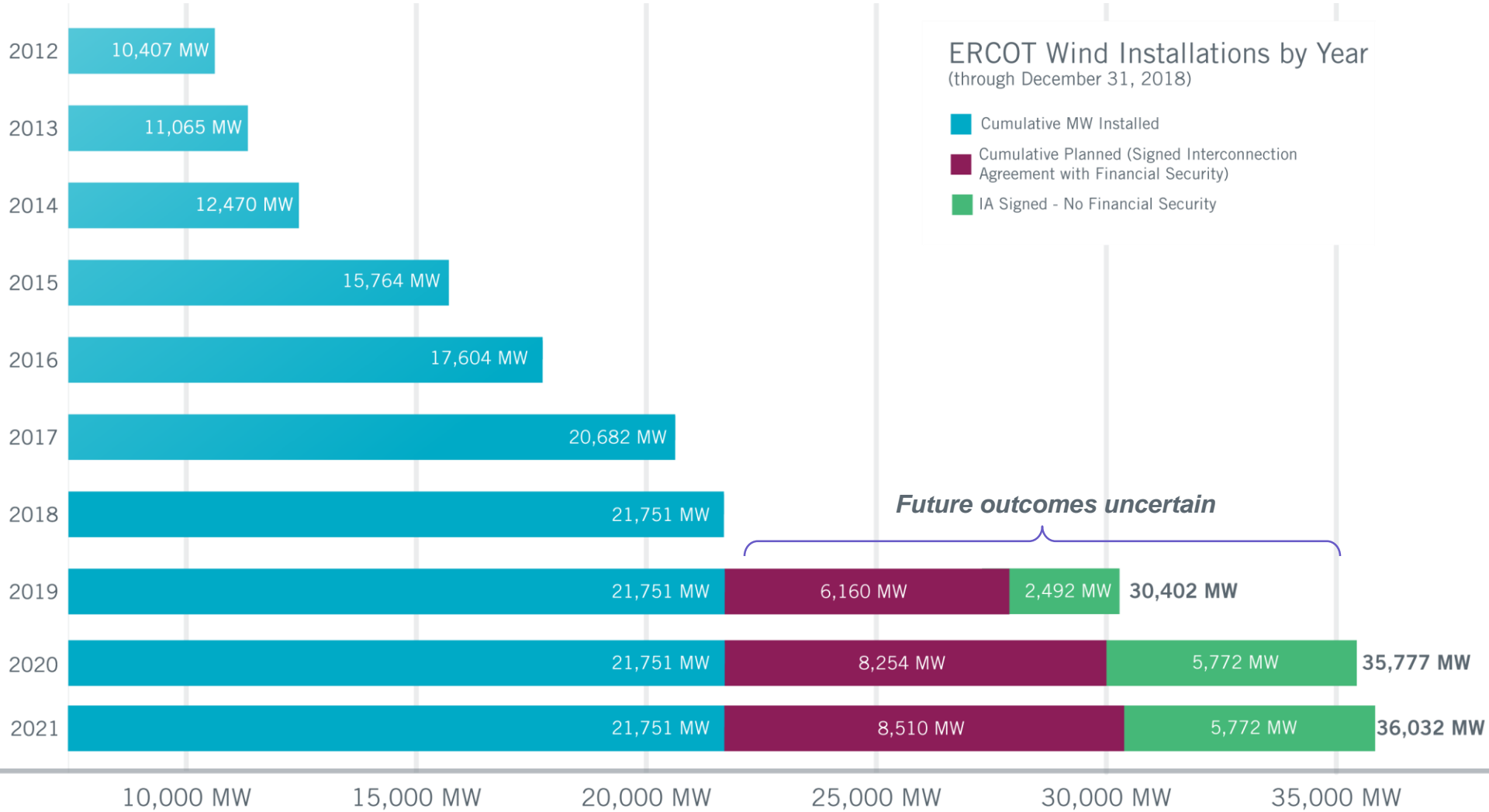
February 12, 2019

## Discussion Outline

- Wind Generation and Utility Scale Solar Generation Installation Capacity
- Recent Improvements to Intermittent Renewable Resource (IRR) Forecast
- IRR Forecast Performance
- Future Endeavors

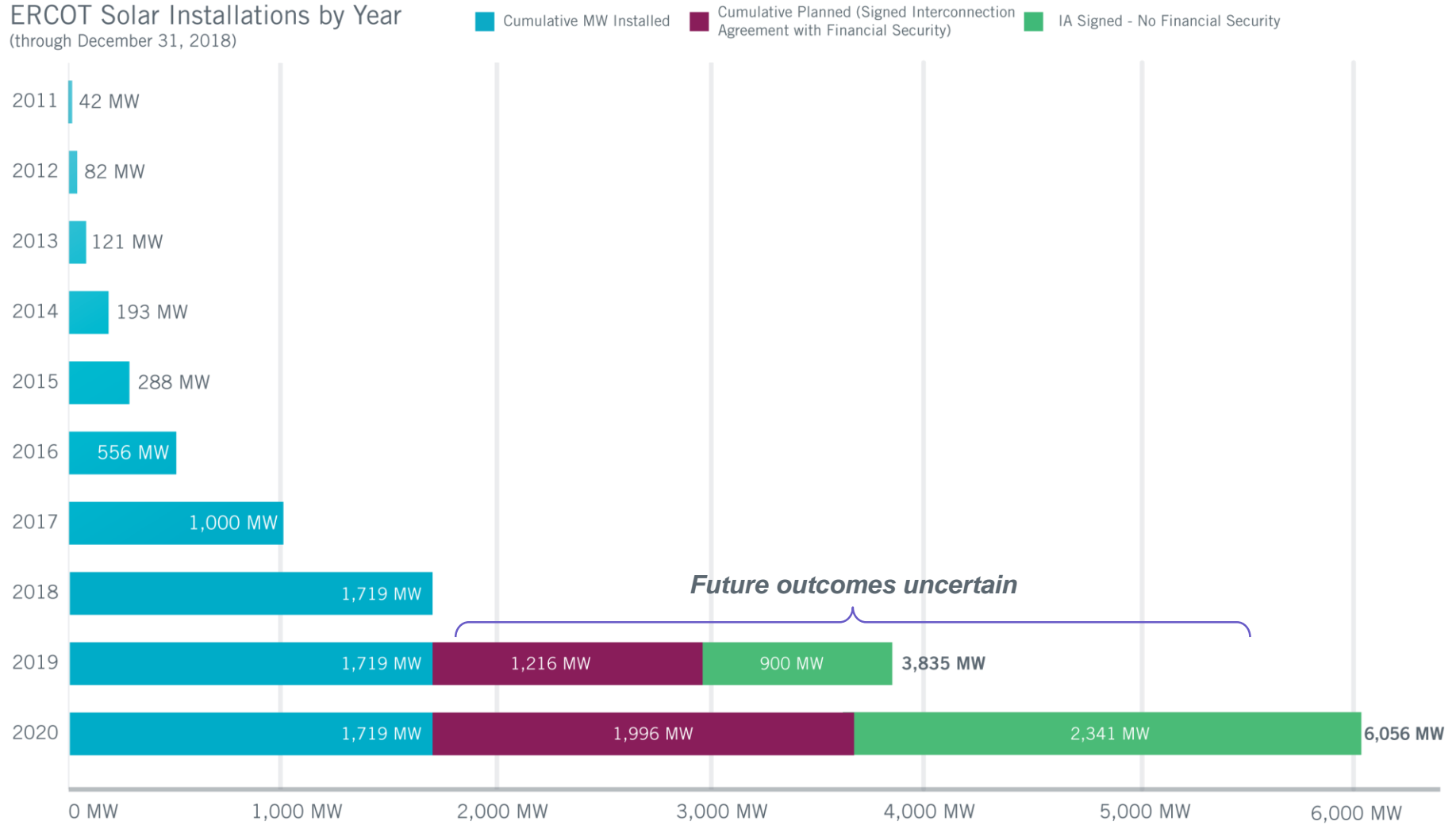


# Wind Generation Capacity – December 2018

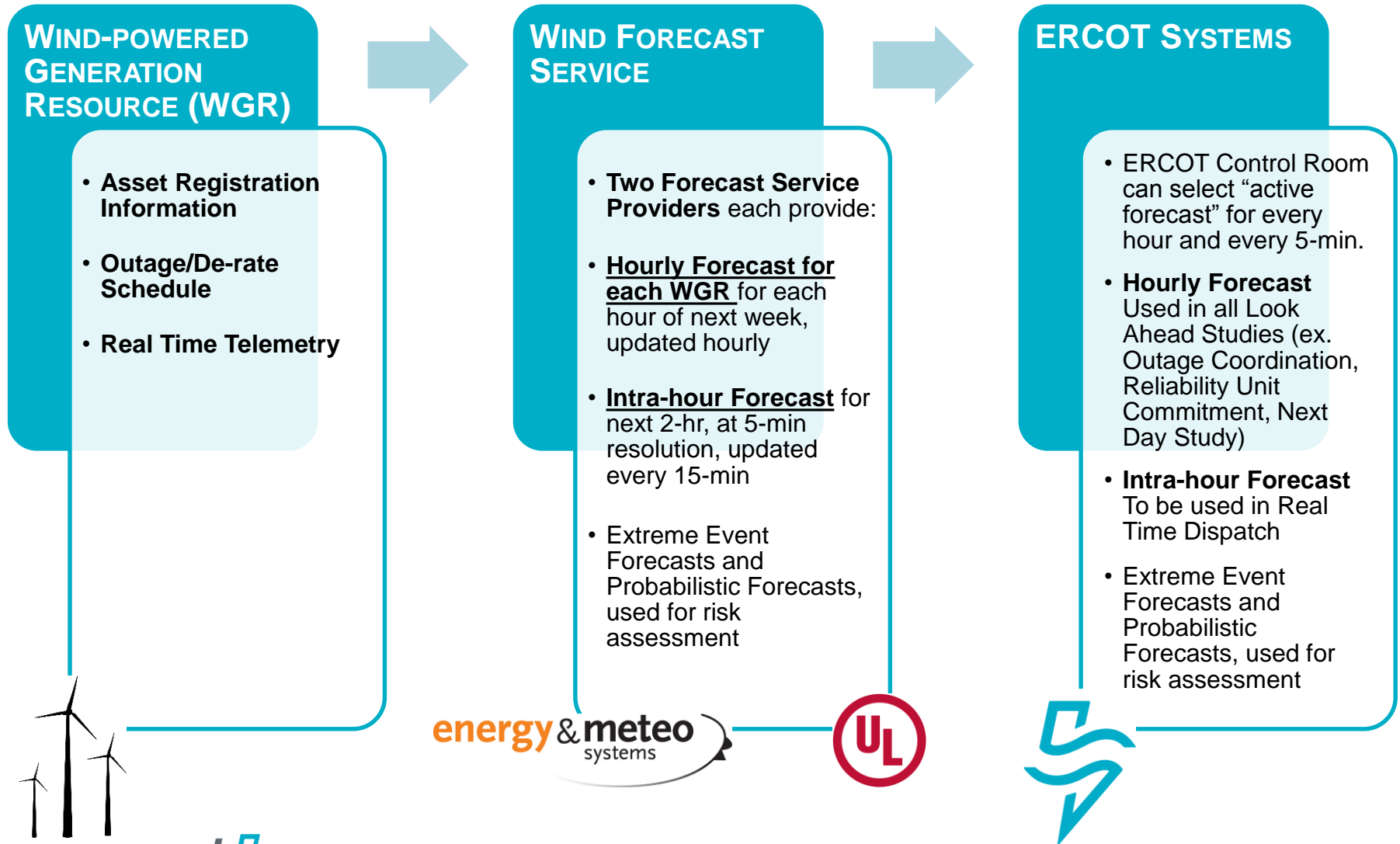


# Utility Scale Solar Generation Capacity – December 2018

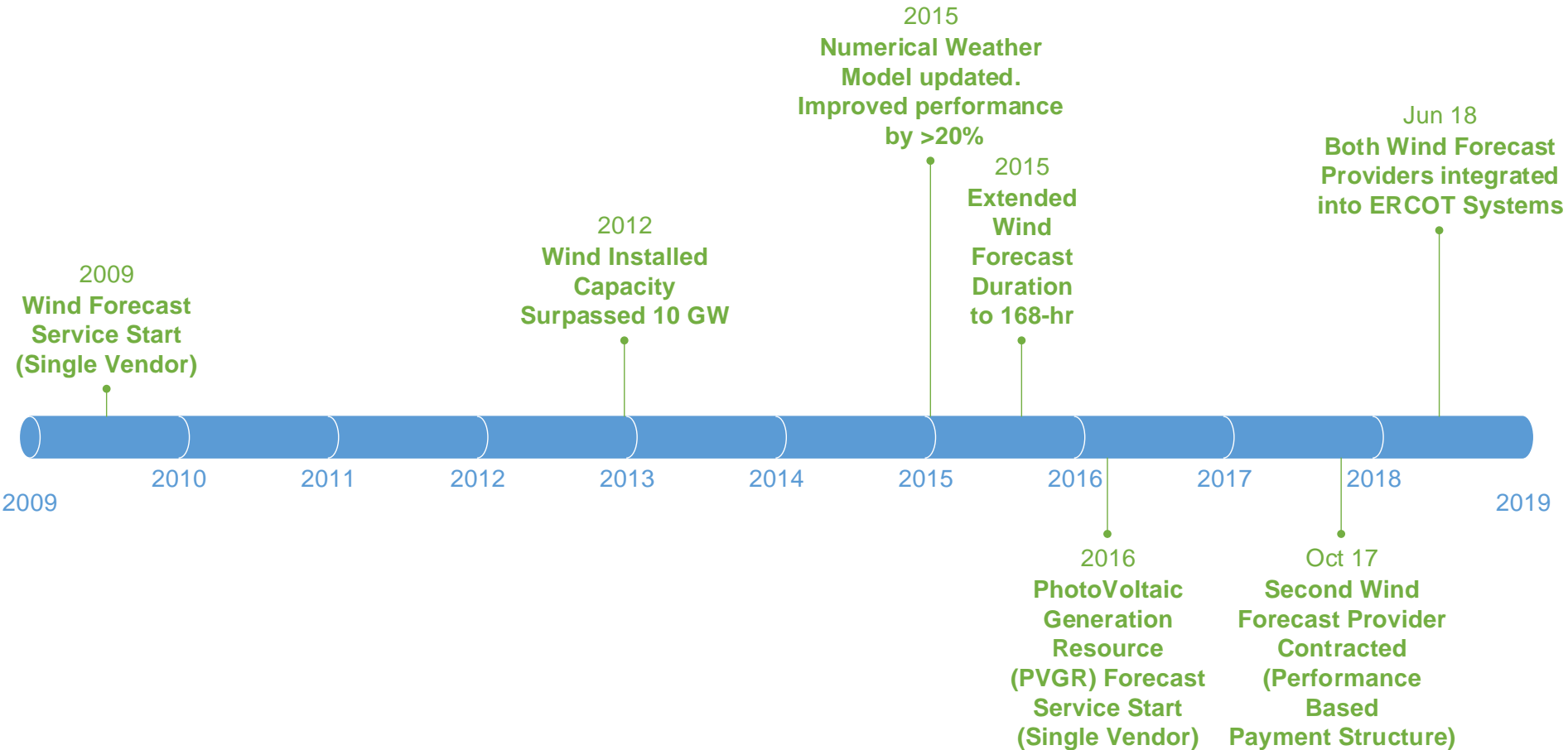
ERCOT Solar Installations by Year  
(through December 31, 2018)



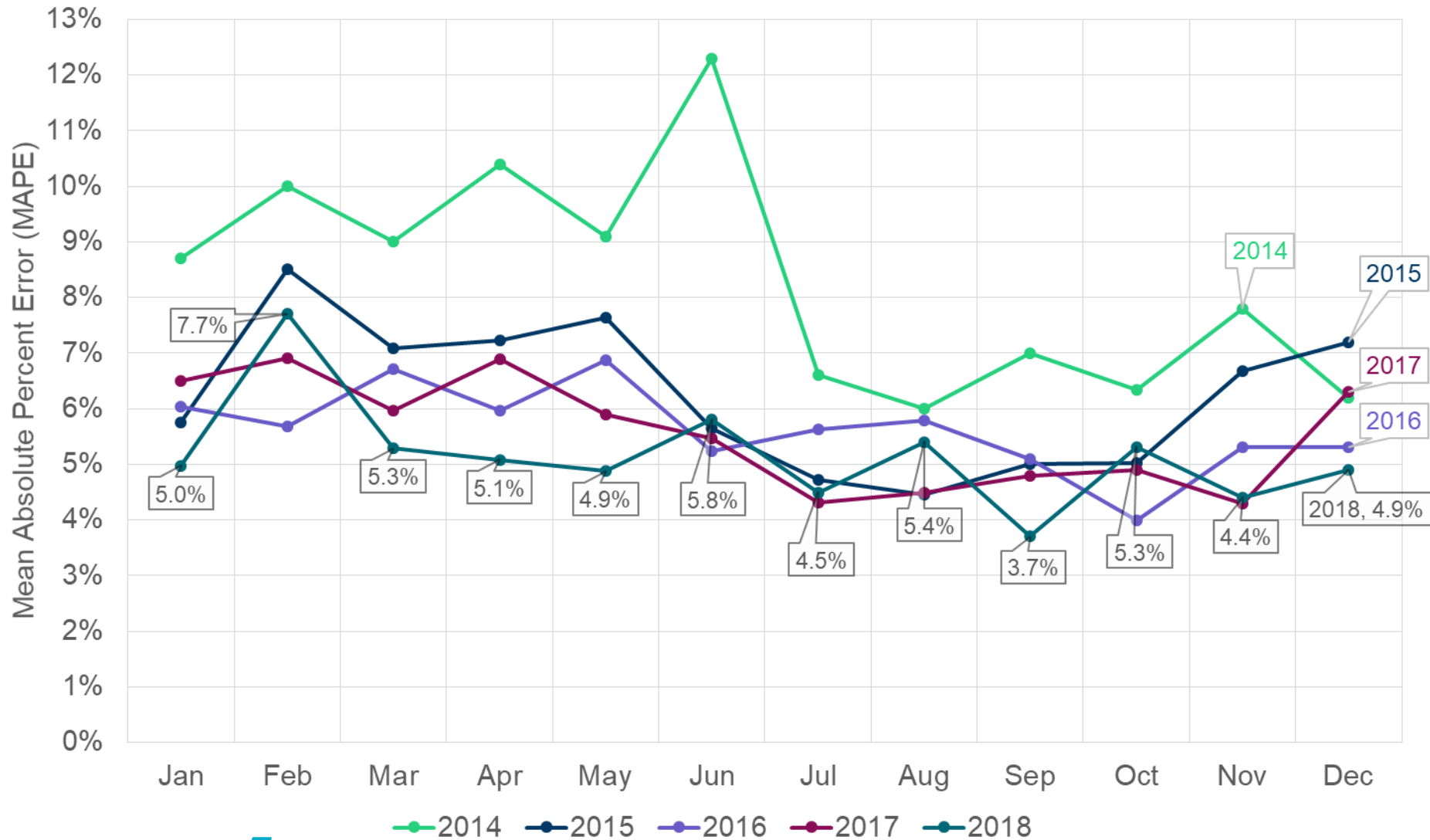
# Wind Forecasting at ERCOT



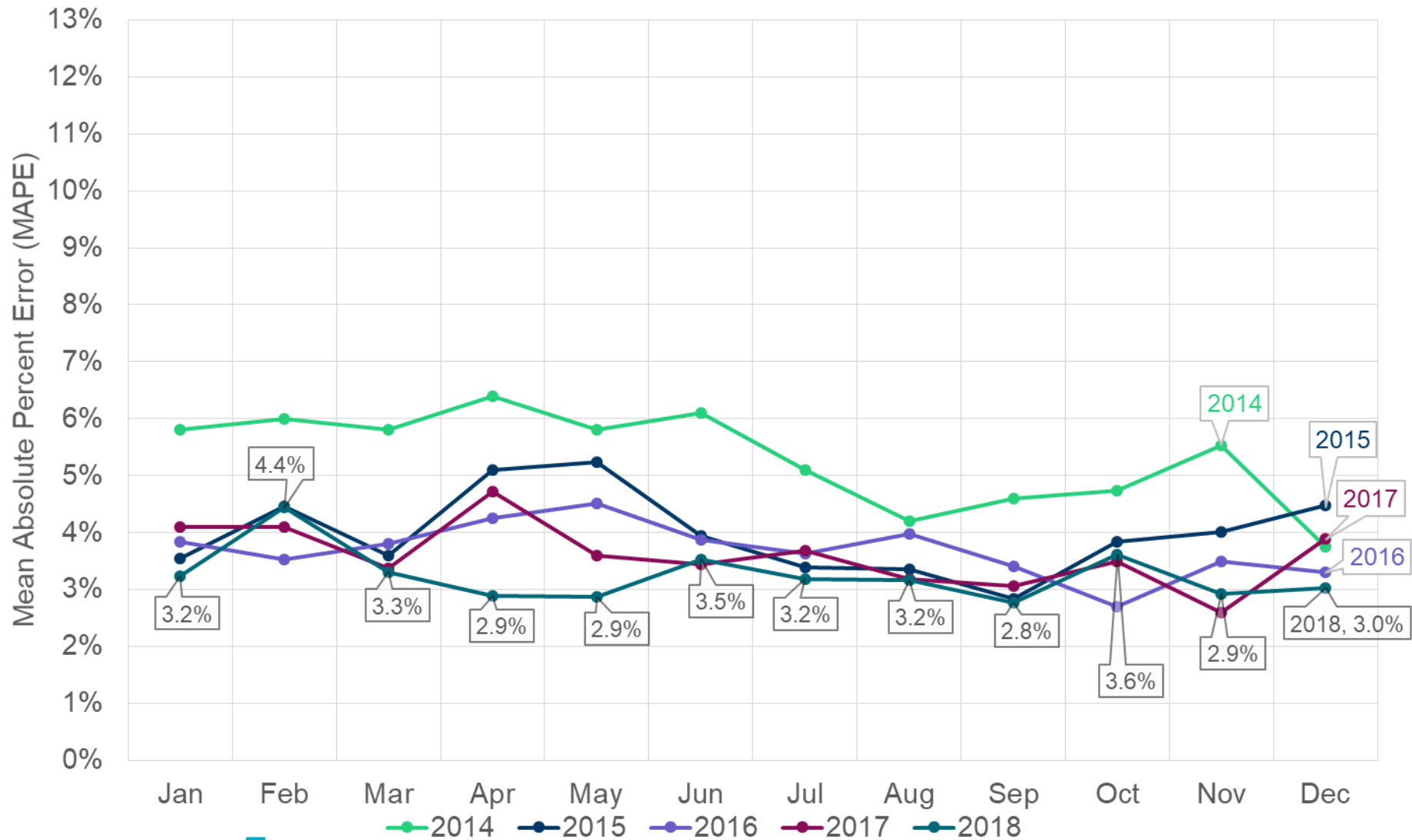
# Timeline of Renewables Forecast



# Wind Forecast Errors (Day-Ahead)

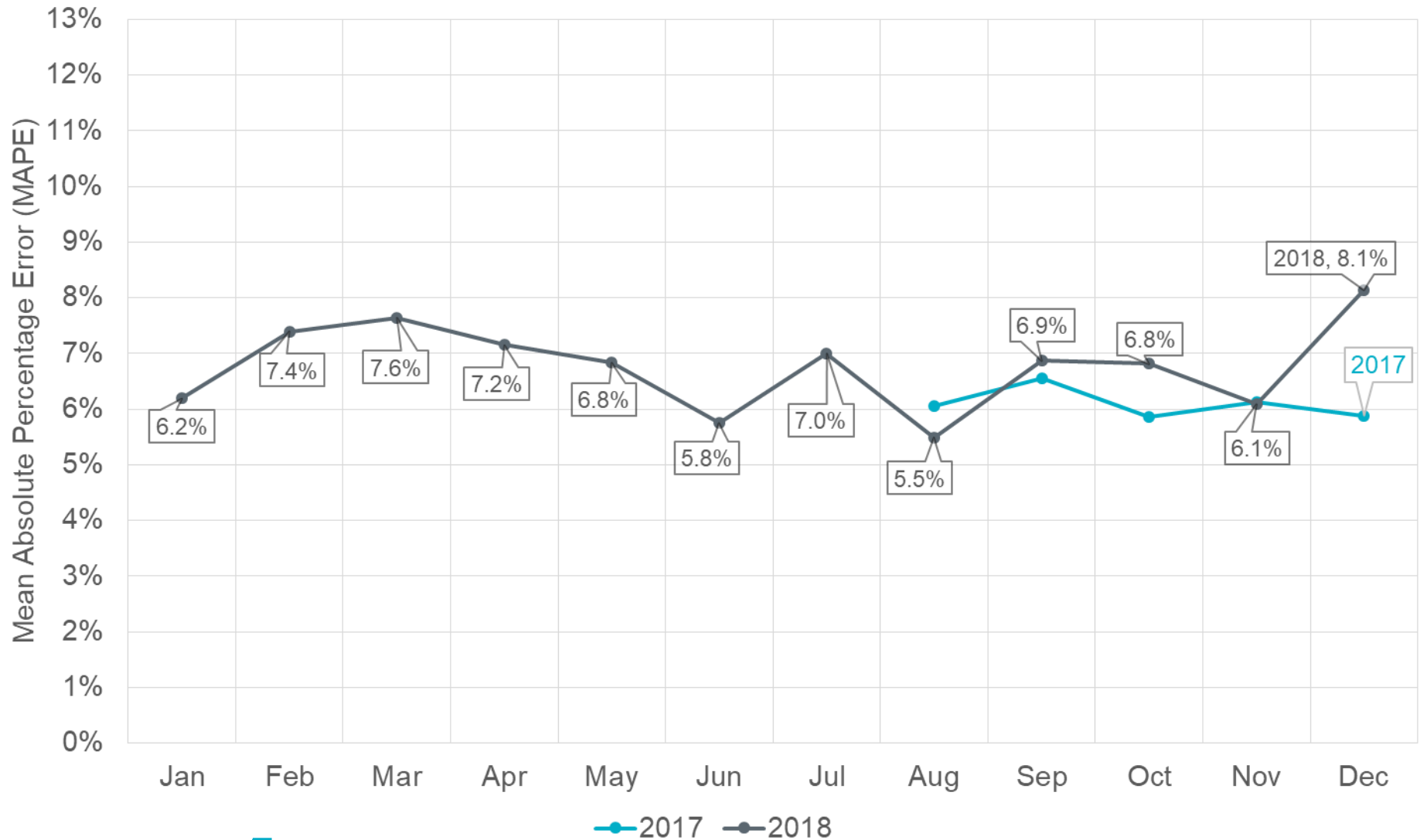


# Wind Forecast Errors (Hour-Ahead)

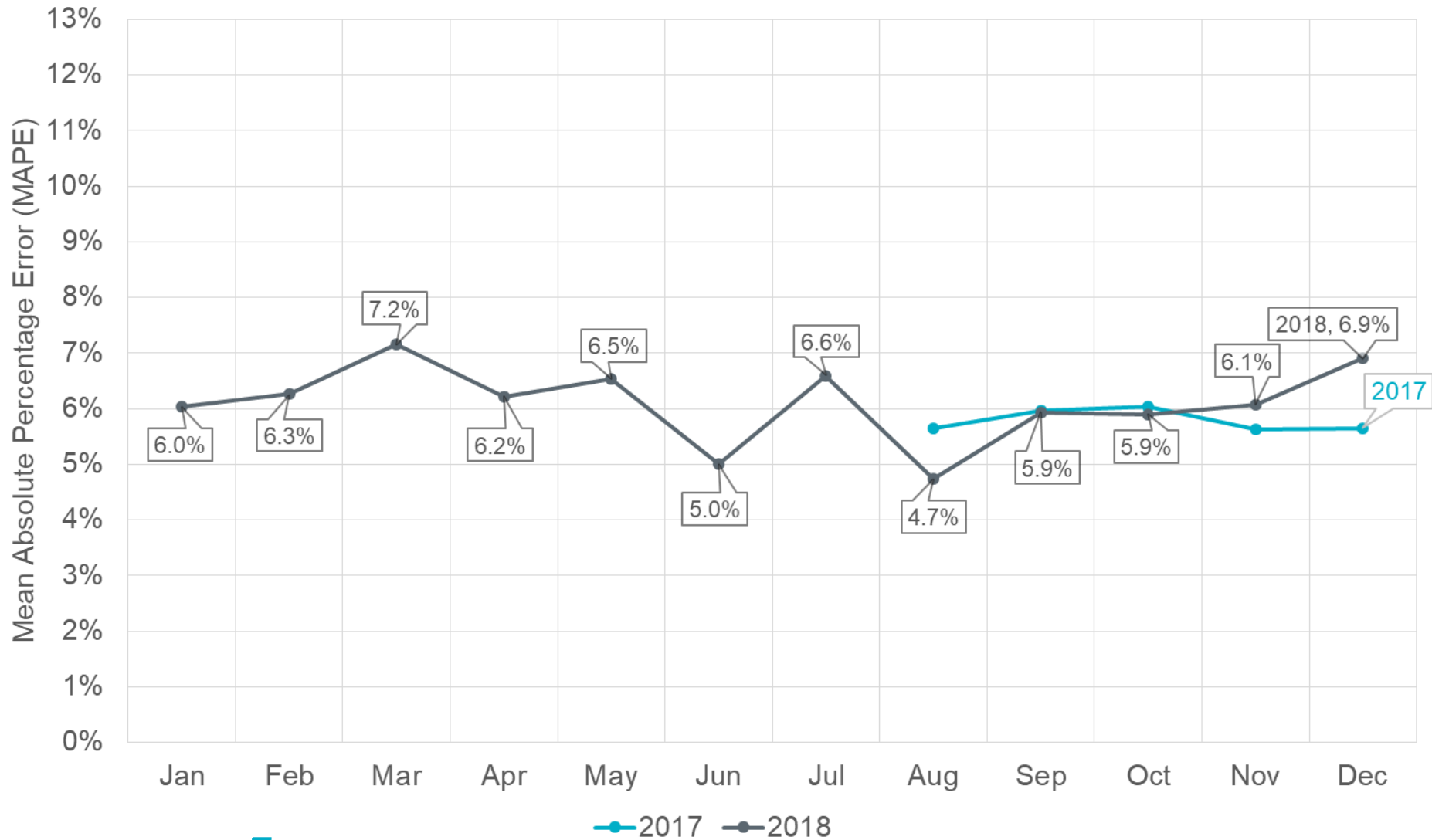




# PVGR Forecast Errors (Day-Ahead)



# PVGR Forecast Errors (Hour-Ahead)



## Future Endeavors

- Improve existing wind integration platform to incorporate manual override functionality including Wind-powered Generation Resource Production Potential (WGRPP) and weighted forecasts
- Integrate hourly and intra-hour PVGR forecast into EMS and SCED
- Enhance probabilistic forecasts for both Wind and PVGR
- Create Intra-hour Capacity Assessment Tool (ICAT) that factors in Intra-Hour Load, PVGR and Wind Forecasts

Questions?