

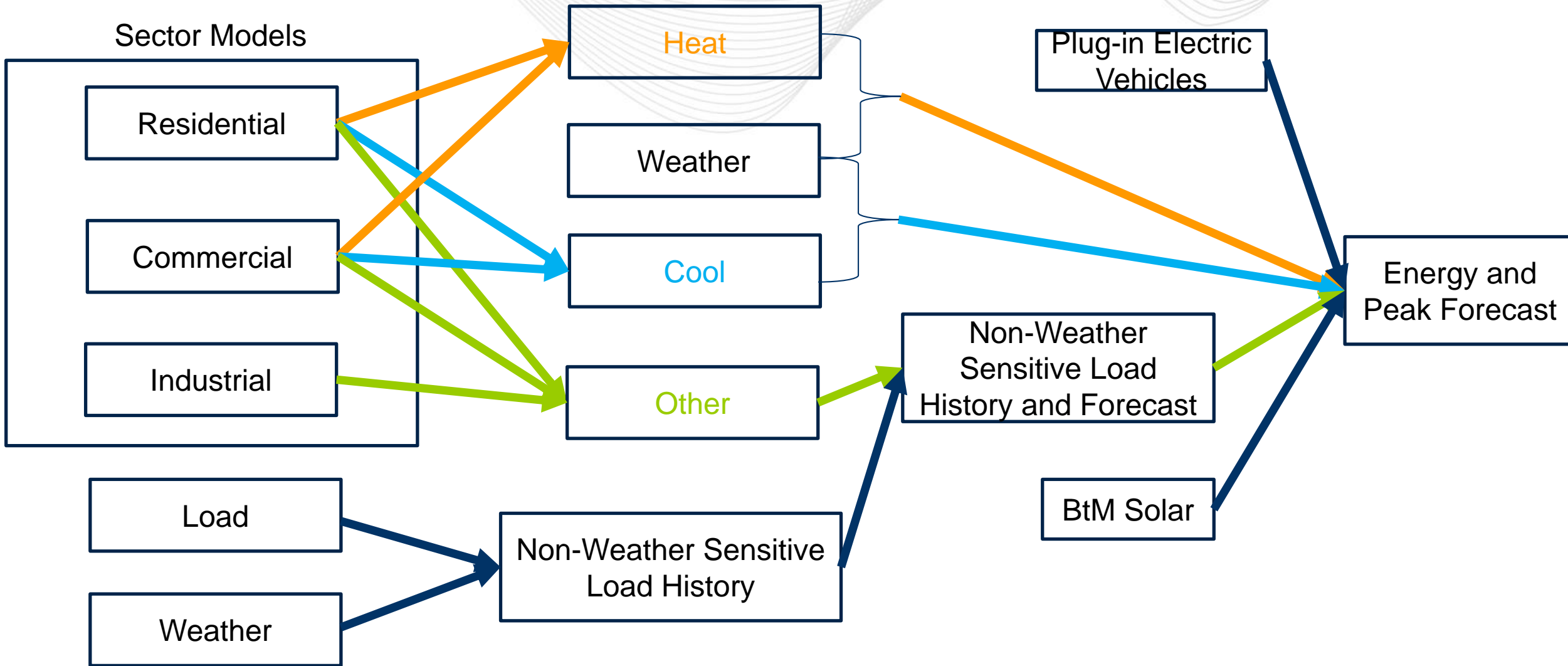


Load Forecast Discussion

Andrew Gledhill, Senior Analyst
Resource Adequacy Planning

Planning Committee
November 4, 2020

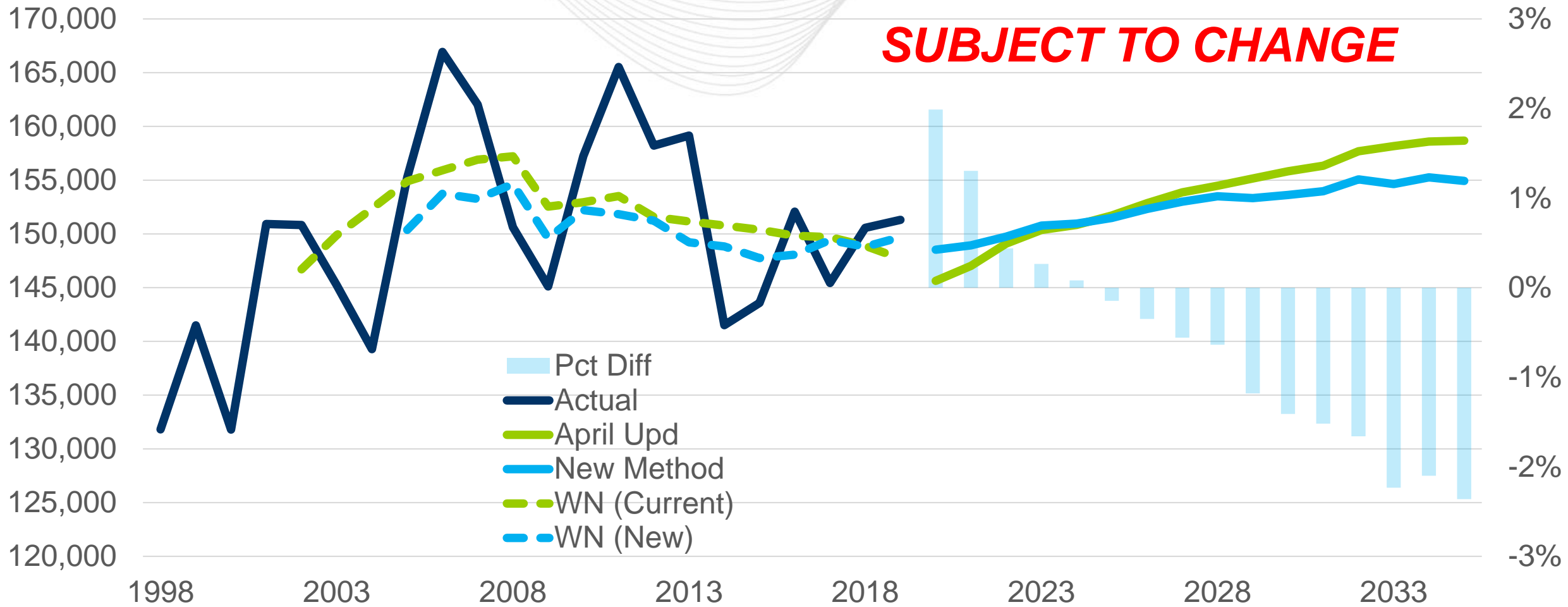
- Opportunity to discuss some concerns and criticisms
 - Model complexity
 - Forecast deviates from historical trend
 - Should use 10 year estimation period in sector models



- Yes, our model has gotten more complex over time, but as has the electric system. Future models are likely to become more complex not less.
- More complex, but also more accurate. Incorporation of energy efficiency trends and behind-the-meter solar began with the 2016 forecast. Refined techniques in 2020 and again in 2021 have allowed to better reflect system conditions.

PJM RTO Summer Peak Forecast

SUBJECT TO CHANGE



- Contention that forecast breaks from historical trend is based on a weather normalized series that we do not support.
 - Old WN values under-predicted loads in recent history, which leads to the illusion of declines.
 - New WN values show modest growth from 2015 to 2019.
- Models are built to understand the underlying drivers of historic trends in order to make informed judgements about the future.
 - Data we use show less headwinds to load growth from energy efficiency trends than were experienced from 2010 to 2019.

- Residential, Commercial, and Industrial sector models are based on annual data. Because of data limitations, we use back to 1998. The 2021 Forecast will have data from 1998-2019 or 22 observations.
 - There is no rule on minimum observations.
 - Some say should target at least 10 observations per explanatory variable (sector models have 1-3 variables), thus ideally would have a minimum of 10-30 observations.
 - Stakeholder has expressed an interest in sector models only being run on most recent 10 years.
 - We have concerns that this would add instability in model fit.

- Commercial model results indicate that reducing the estimation period to 10 years is not stable.
 - Model attributes a negative coefficient to the driver variable (economics + end-use). This is akin to saying that energy efficiency increases load.
- Non-weather sensitive results are not consistent with underlying drivers.
 - Negligible recovery from recession
 - Average annualized growth in the forecast period (-0.8%) exceeds that seen from 2010-2019 (-0.7%)
 - Realistic in the context of more modest efficiency gains?

Presenter:
Andrew Gledhill
andrew.gledhill@pjm.com

Load Forecast Model



Member Hotline

(610) 666 – 8980

(866) 400 – 8980

custsvc@pjm.com