Load Forecast Model Development

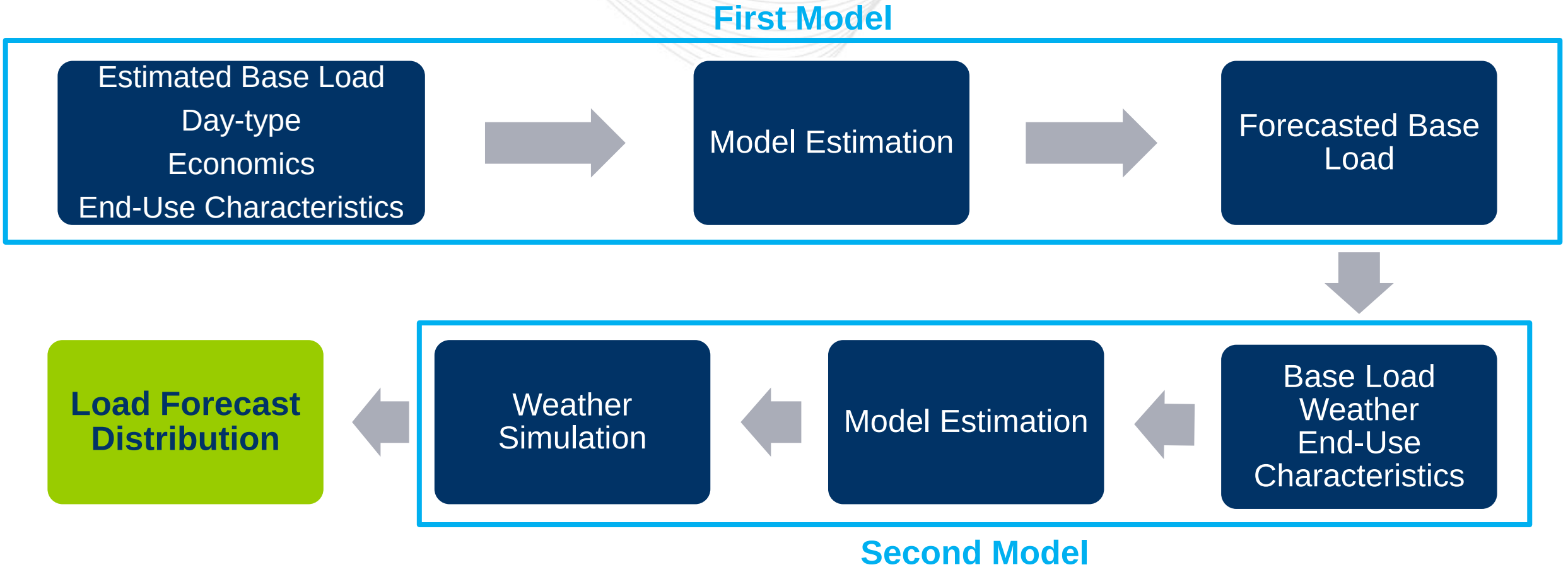
Load Analysis Subcommittee

July 18, 2018

Disclaimer

- This is the current status of ongoing model development. The results are not final and are only indicative of what potential impacts on the forecast might be.

Potential Process



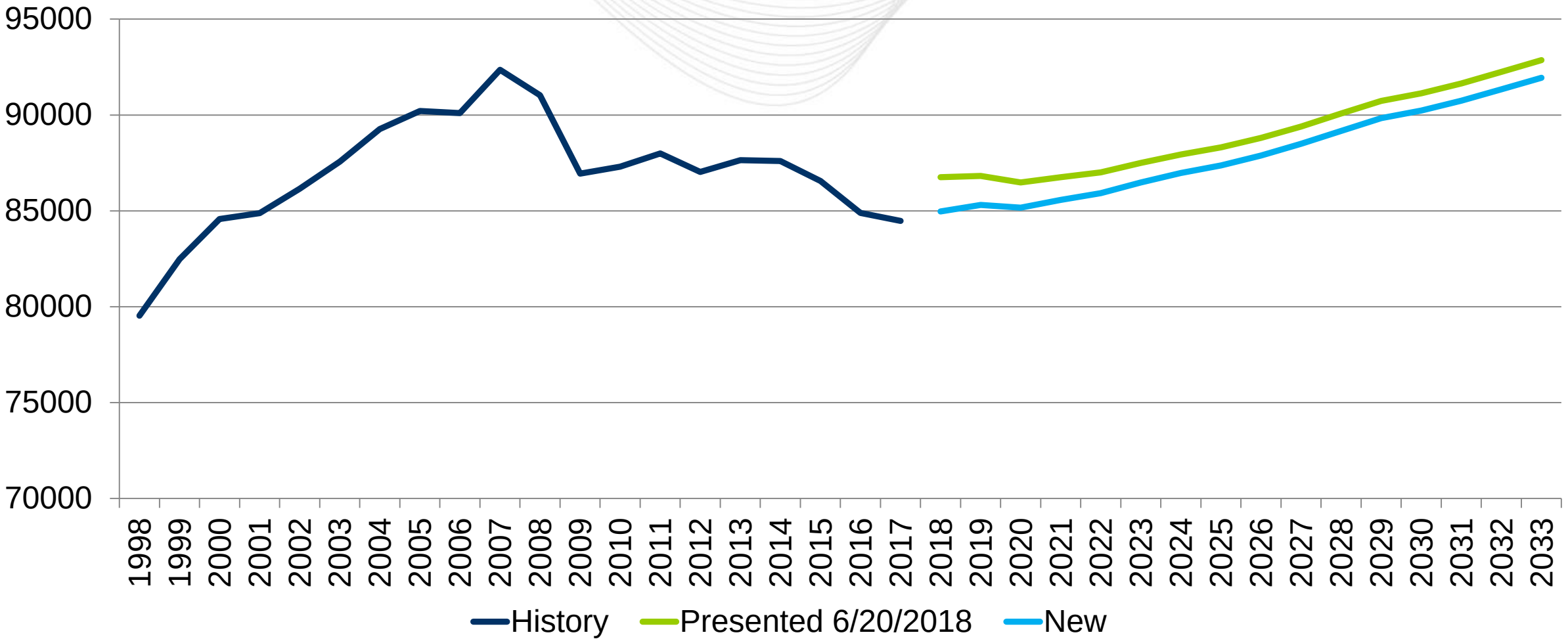
Changes to Base Forecast Driver

- The base forecast driver is a combination of forecasting customers and average usage. Both leveraged FERC Form 1 data.
  - For usage, we have switched to using the end-use variables as both the historical and the forecast values
    - There was concern as to whether it was possible to adequately control for weather variability in annual values
    - Process was needlessly complicated
    - This change doesn't have much of an effect
  - Customers variable will continue to leverage FERC Form 1

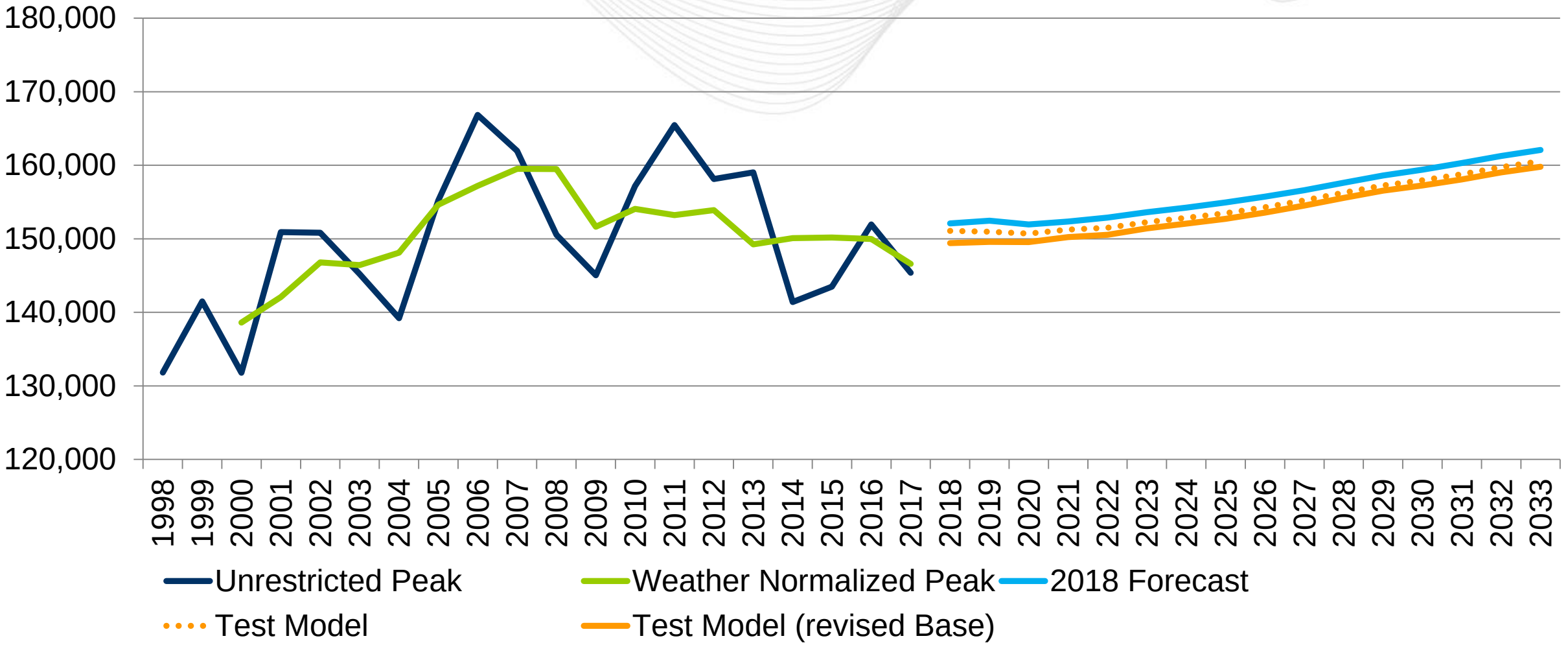
Changes to Base Forecast Process

- Some base forecasts exhibited a disconnect between last “historical” year and first forecast year. We introduced an autoregressive (AR) term into the model.
  - Better reflects most recent observations
  - Seems to produce more reasonable base forecasts, both for RTO and for zones
    - Data spreadsheet with meeting materials has original and new base values

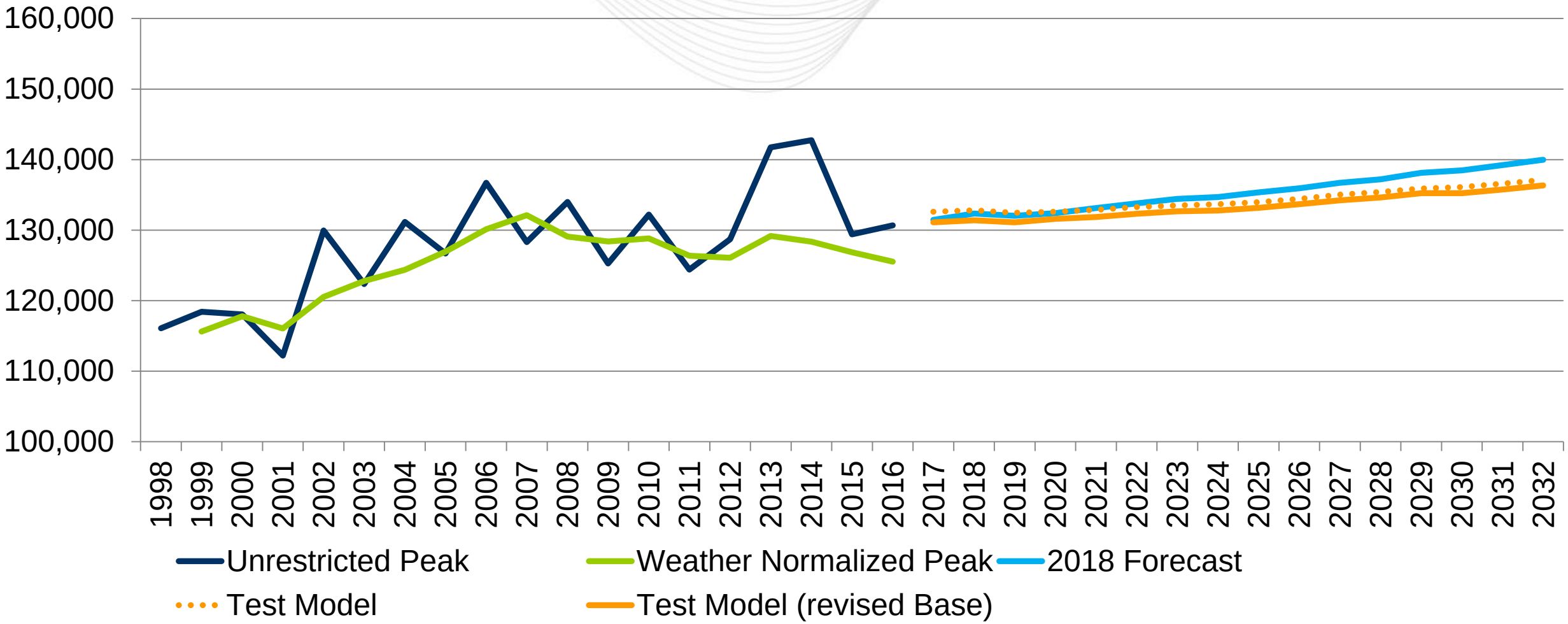
RTO Base Forecast



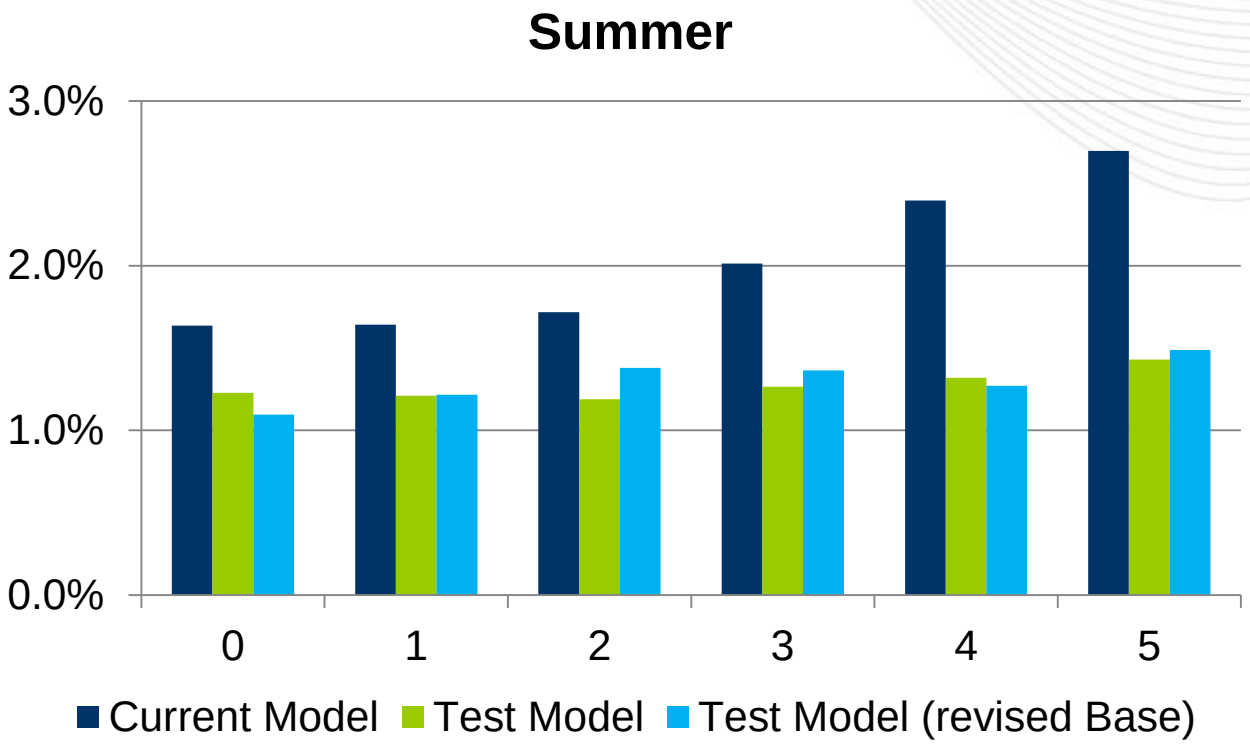
RTO Summer Peak Forecast with Updated Base Forecast

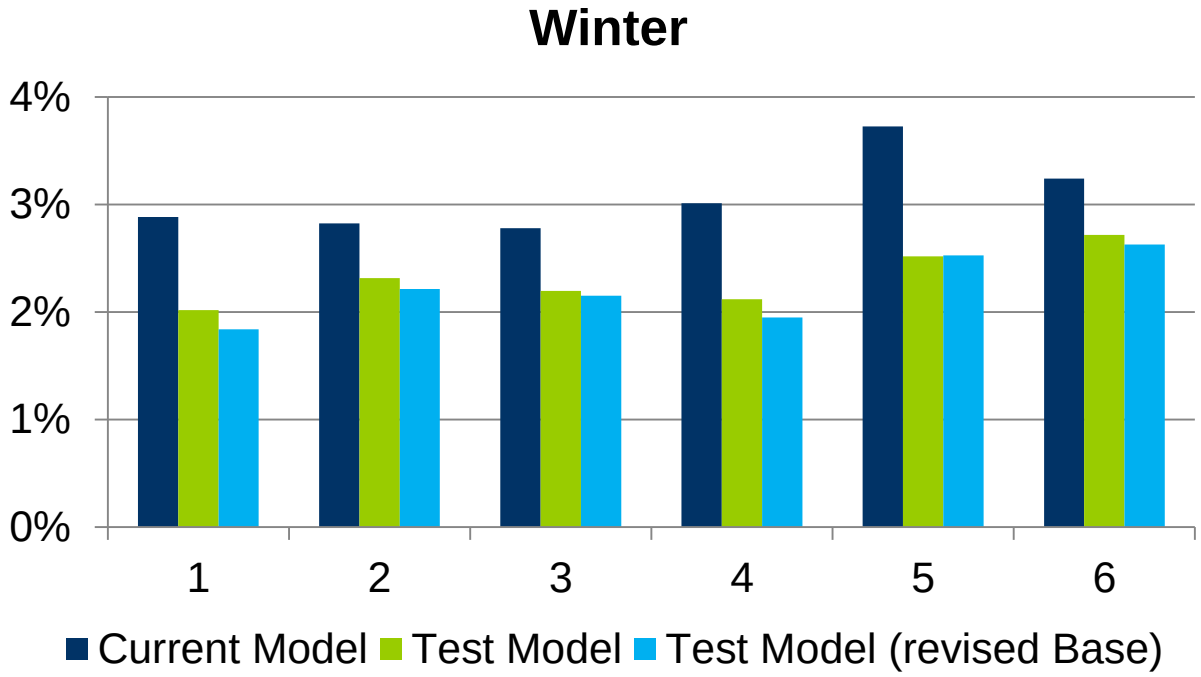


RTO Winter Peak Forecast with Updated Base Forecast



Impact to Model Accuracy

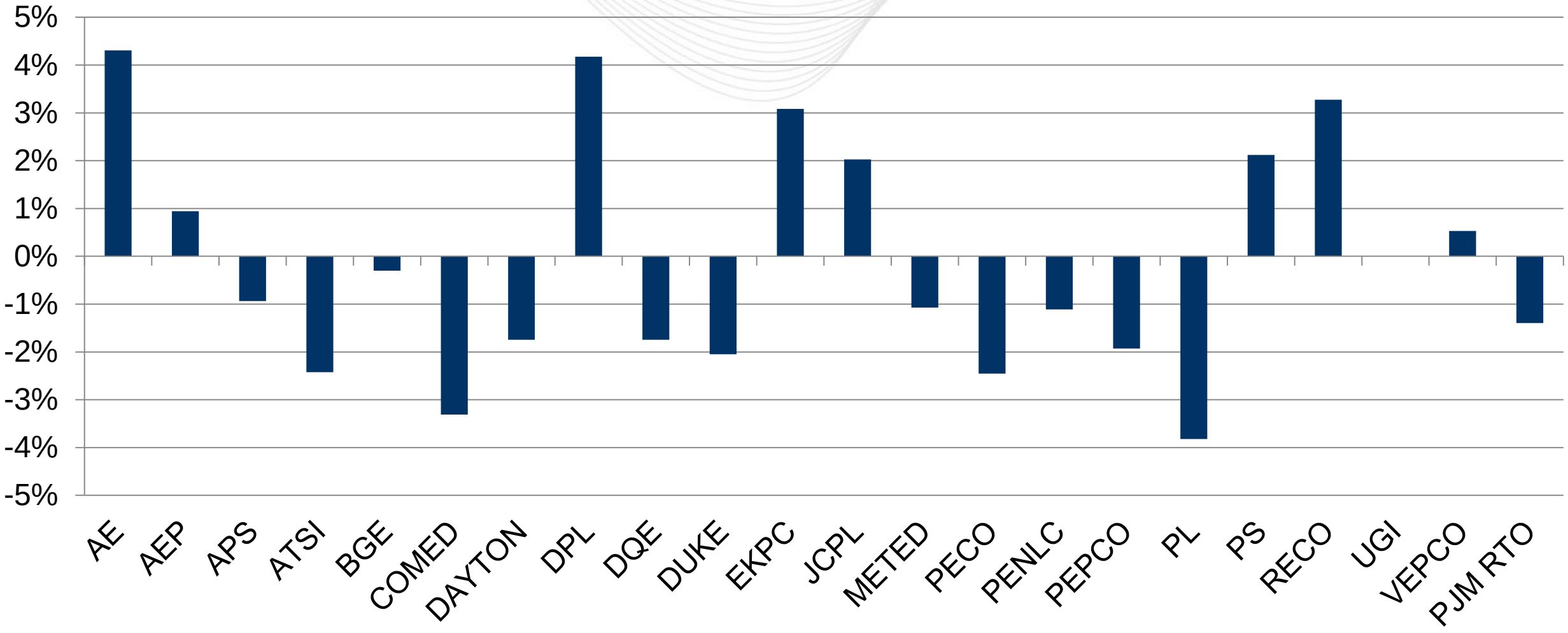




Zonal NCP

- Developed Non-Coincident Peak forecasts using the same methodology. Spreadsheet with meeting materials contains:
  - Coefficients
    - Model parameters from the “Second Model”
  - Residuals
    - Model Estimates and Residuals
  - Results
    - Official 2018 forecast and Test forecast results

Summer NCP Forecast Difference – 2021 Delivery Year



Winter NCP Forecast Difference – 2021 Delivery Year