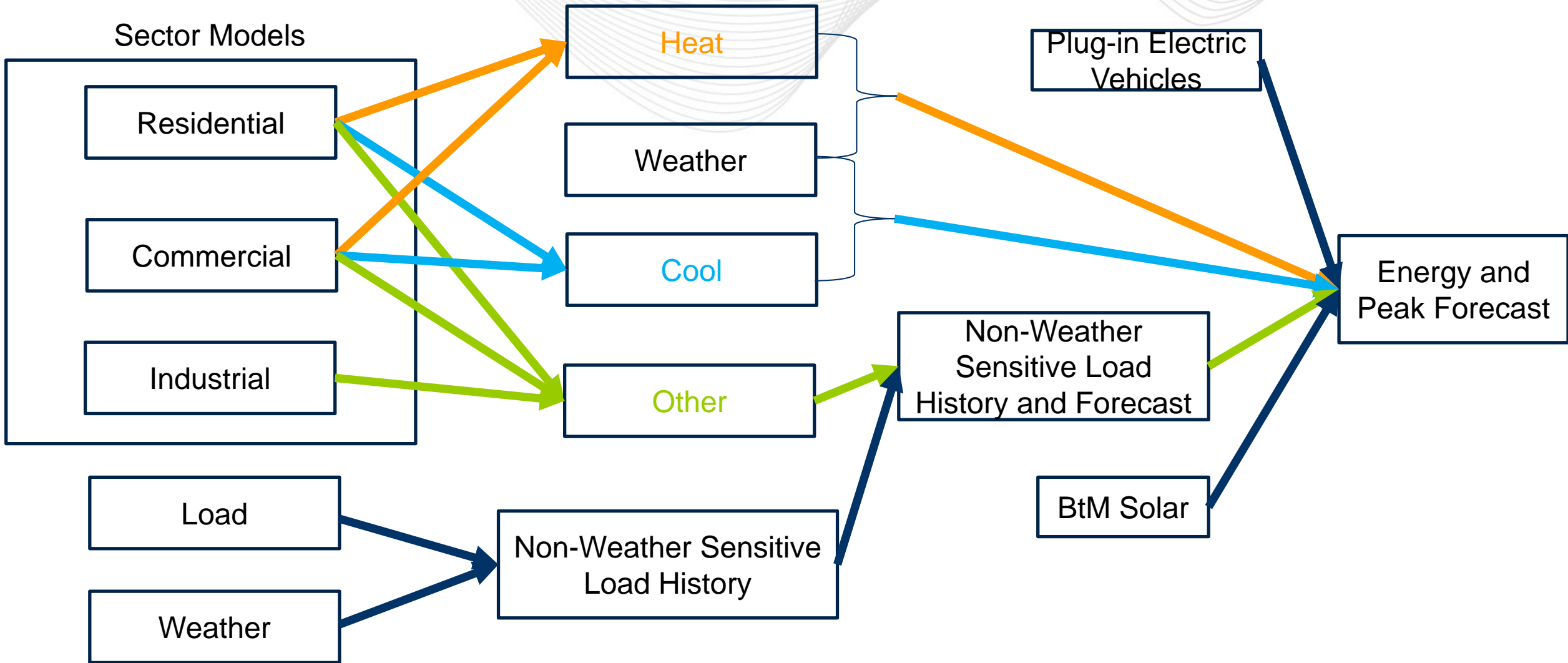


# Estimation Period Analysis

Load Analysis Subcommittee  
November 9, 2021

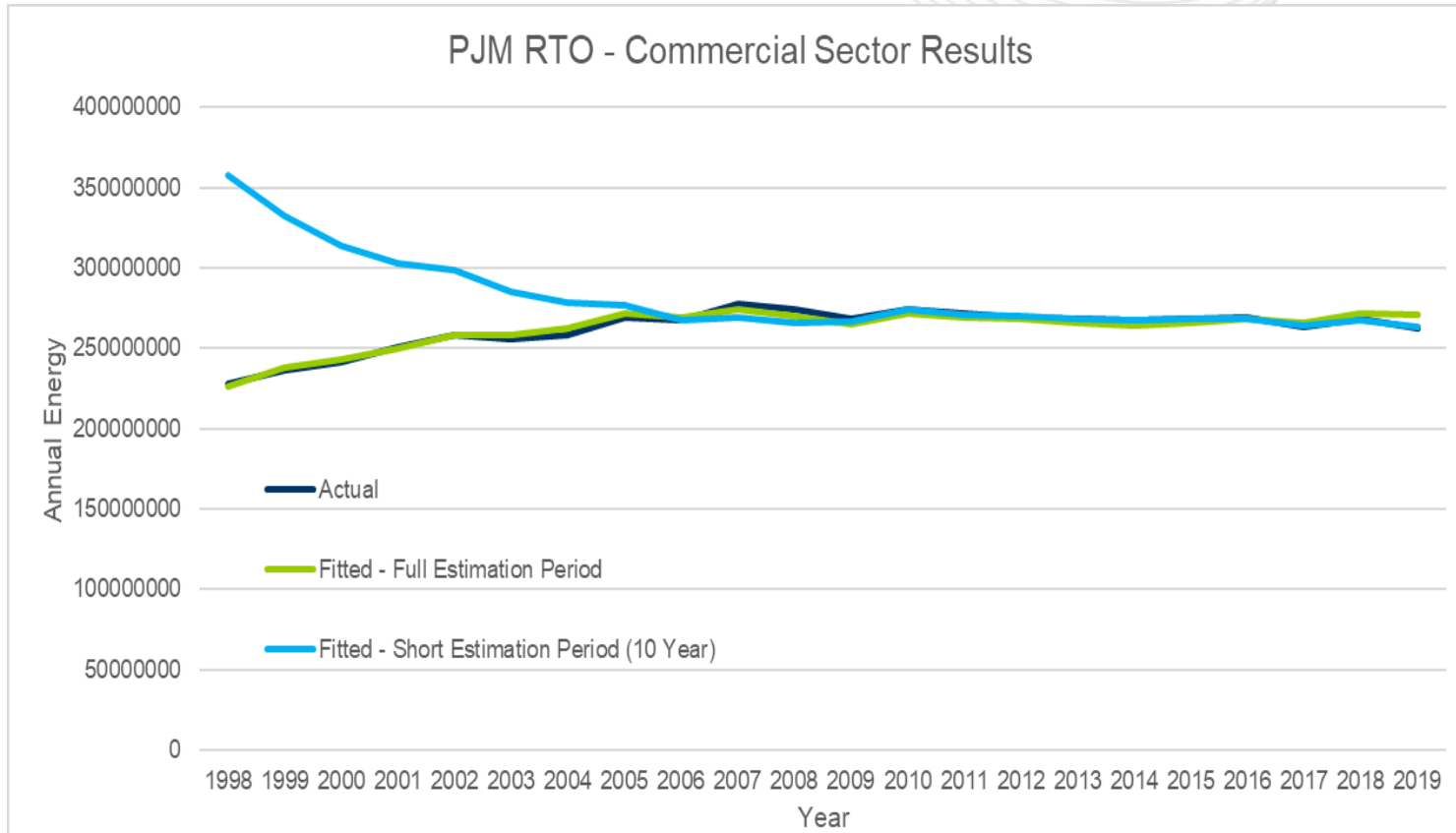
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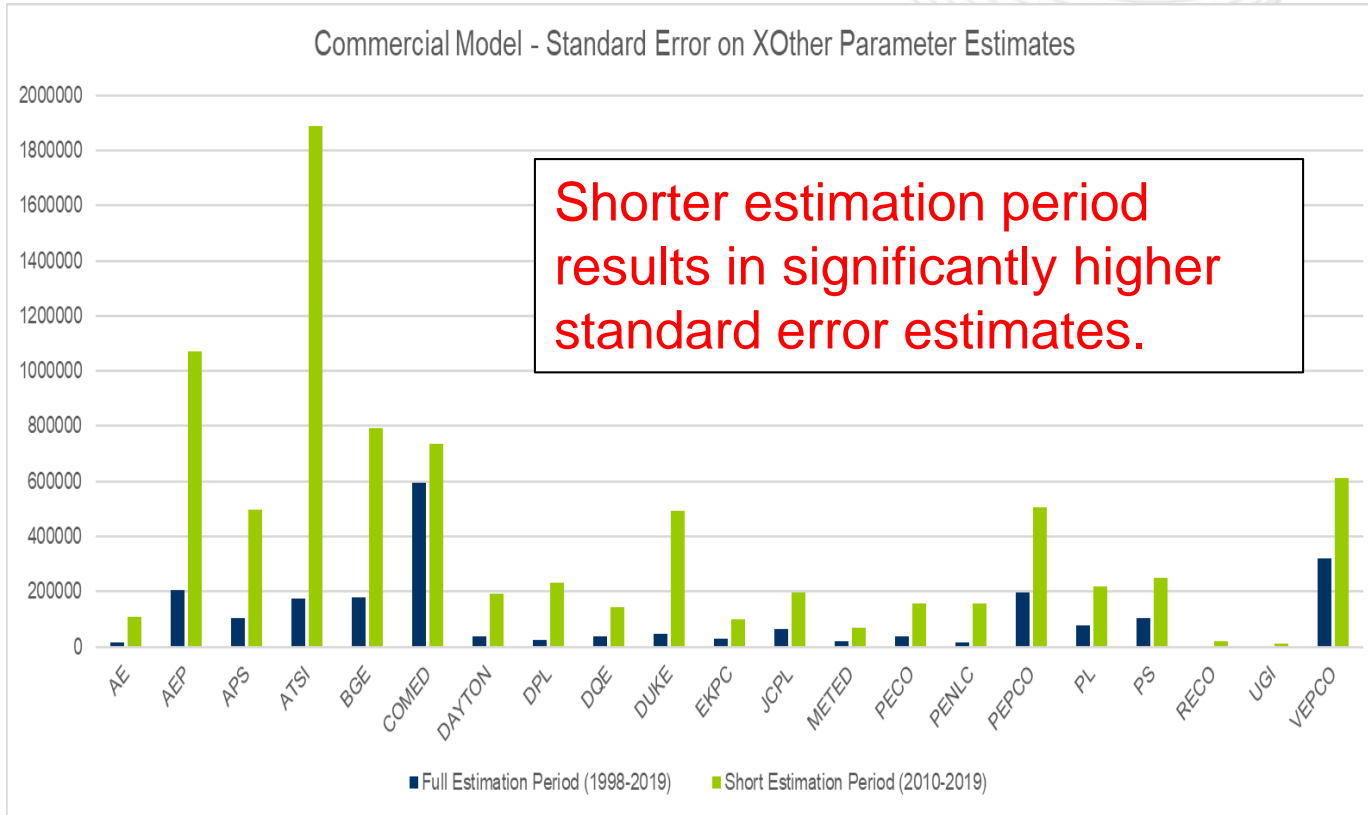
- Sector Models and Non-Weather Sensitive Model
  - Current: Use all data available back to 1998
  - Test: Use only last 10 years
- Energy and Peak Model
  - Continue to use last 10 years

- Starting point is annual data from EIA-861 for Residential, Commercial, and Industrial
- Modeled against economics and end-use (intensity) trends
- Informs expectations for Heat, Cool, and Other

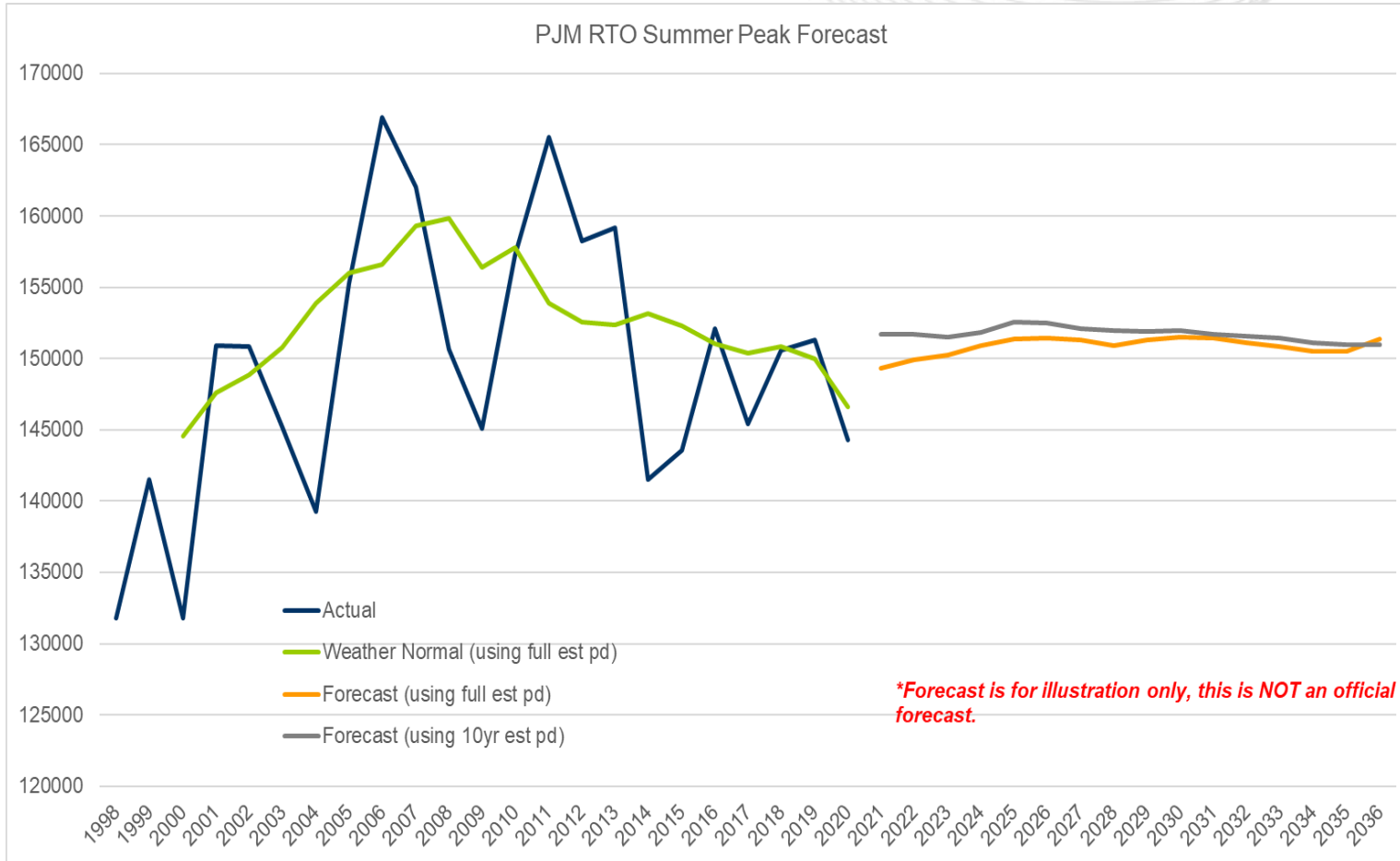
- Posted document summarizes findings and detailed results are available in posted spreadsheets. Some high-level observations of using a 10-year estimation period for the sector models.
  - Sector results do not reflect history well.
  - Establishing coefficient estimates is problematic with a limited number of observations.
  - Sector results flow down to the energy/peak model and result in a forecast that is slightly higher.



Computing back-casts with the 10-year estimation period shows a disconnect between the fitted results and actuals.



- Using only 10 observations makes it more difficult to establish coefficient estimates.
- More of the weight gets put on the model intercept and provides uncertain estimates on independent variables.
- High standard errors in parameter estimates impacts confidence on forecast values.



- Changing the estimation period of the sector model impacts the inputs that go into the model, namely non-weather sensitive load, which will change how the model fits.
- Forecast results using inputs produced from a 10-year estimation period have a higher starting point and slower growth.



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## **Forecast Model Estimation Period Analysis**



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