2020 PJM Load Forecast

PIEOUG

January 17, 2020

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Model Parameters

- Estimation Period: January 2010 through August 2019
- Weather Simulation: 1994 to 2018 (325 Scenarios)
- End Use Data: Based on Itron's 2019 release
  - Calibration 1998-2018 using EIA 861 data
- Economics: September 2019 vintage from Moody's Analytics
- AWS Solar Addbacks & IHS Solar Forecast (zonal & peak allocation by PJM)
- Forecast Adjustments – APS, BGE, COMED and Dominion

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Summer Forecast

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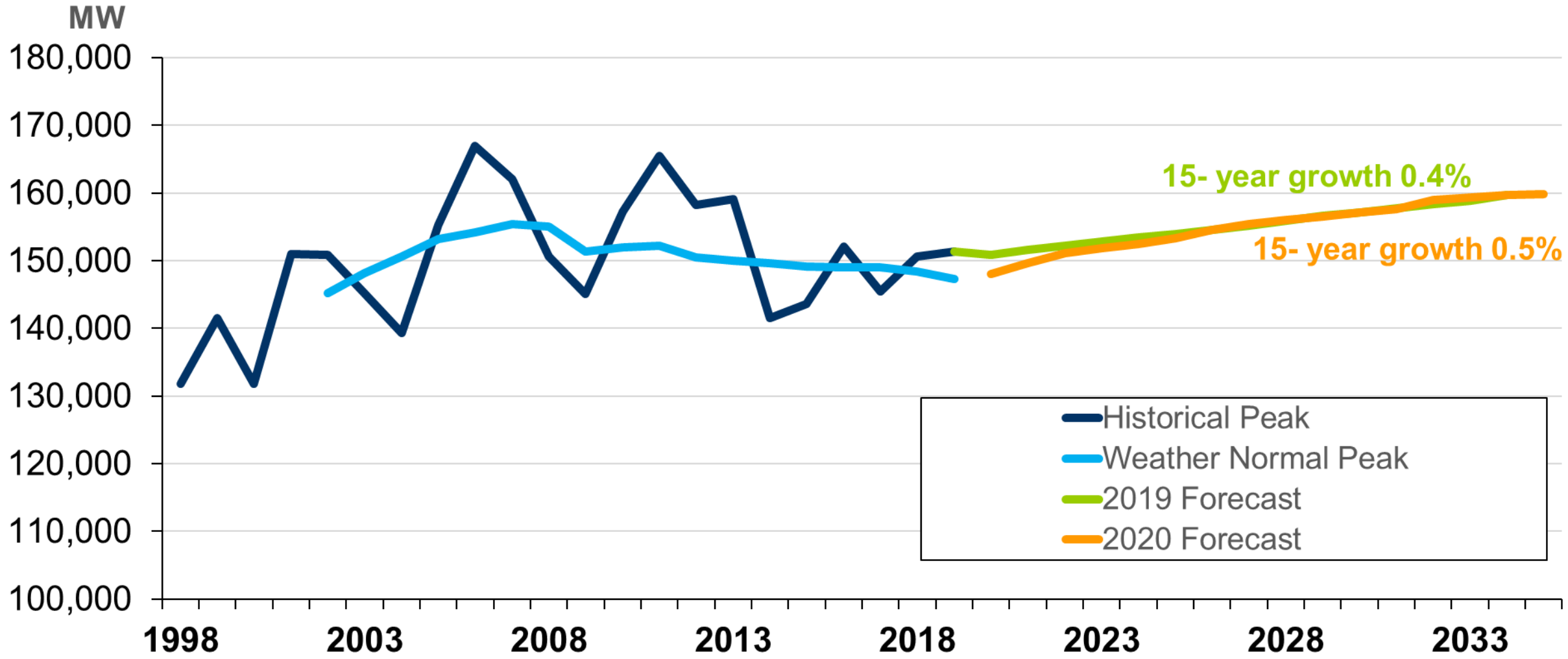
Summer Forecast



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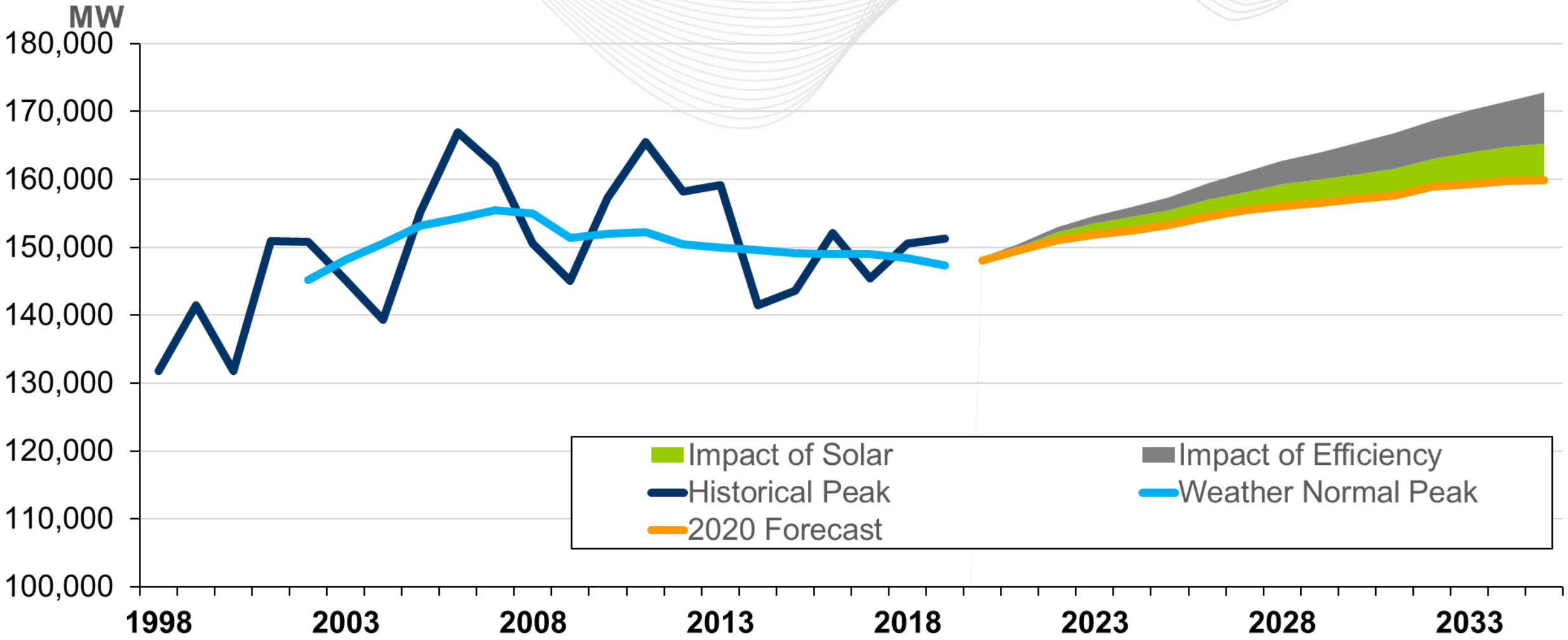
Energy Efficiency and Solar



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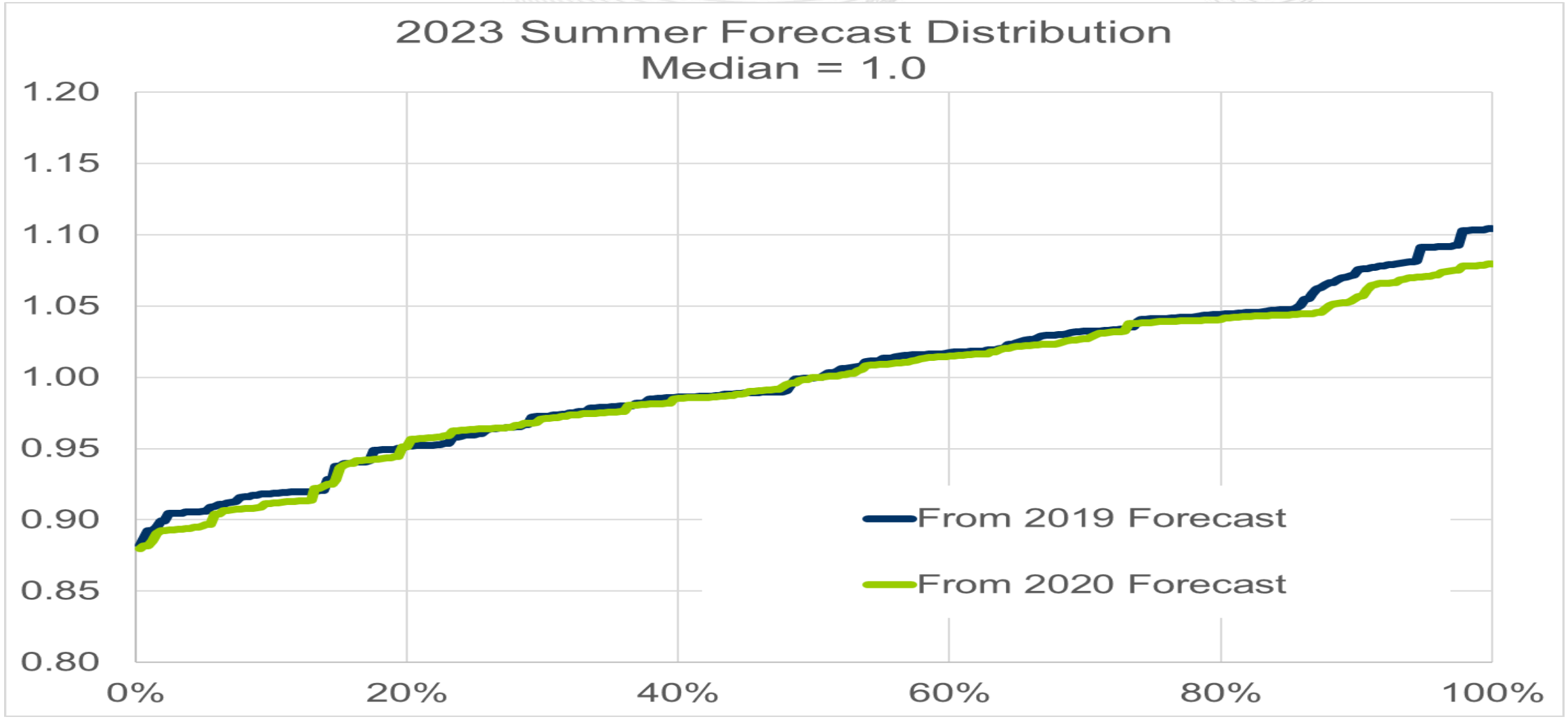
Summer Peak Distribution



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Summer Forecast Impacts

- *New Econ* –Sep2019 economics vintage from Sep2018
- *New SAE* – 2019 SAE vintage in calibration from 2018 SAE vintage
- *New Econ and SAE* – New vintages for economics and SAE
- *New Wthr Sim* – Using 1994-2018 instead of 1993-2017
- *New Solar Fcst* – 2019 Solar Cap forecast from 2018 Solar Cap Forecast
- *PEVs* – Adding PEVs to the model based result
- *Fcst Adjs* – Including forecast adjustments

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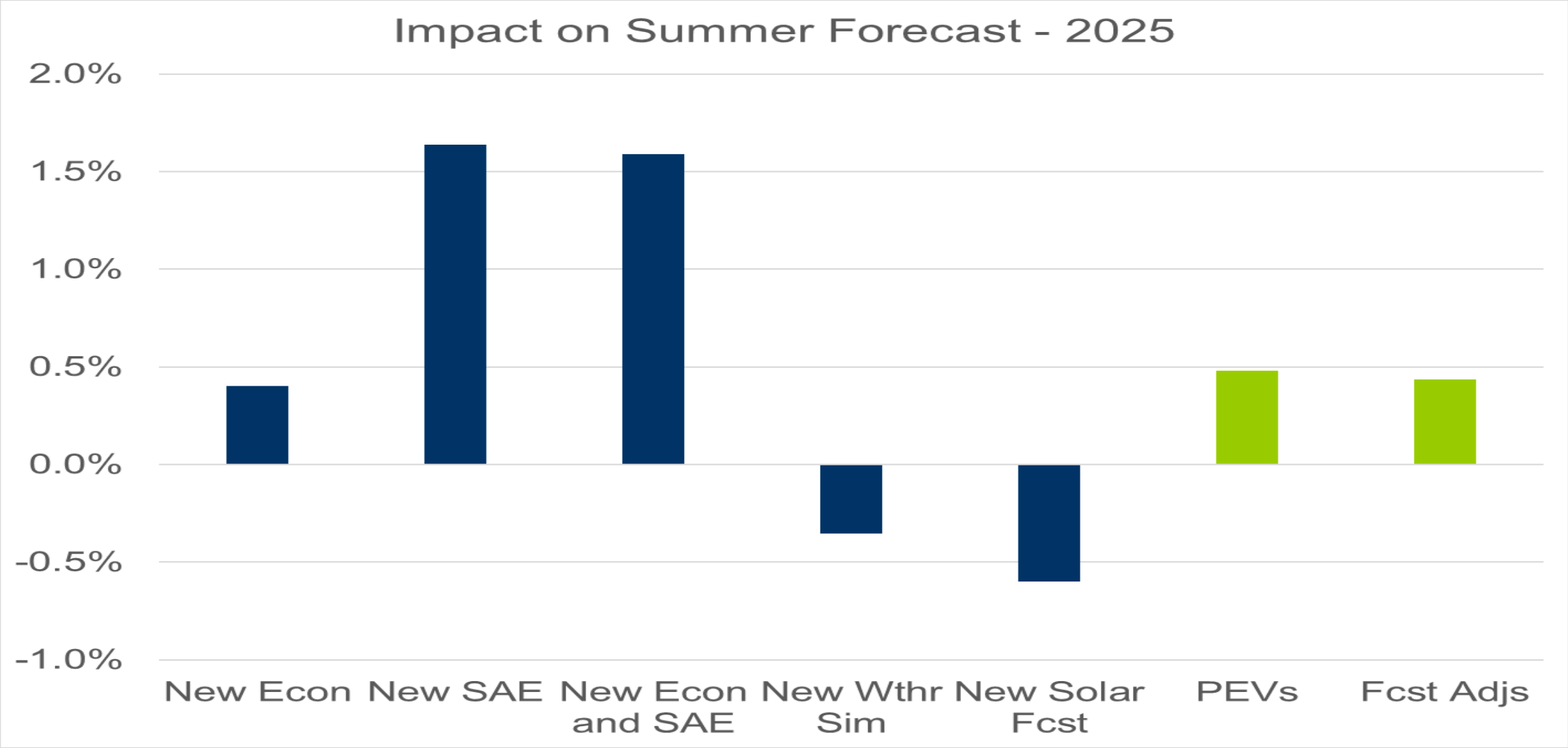
Summer Forecast Impacts



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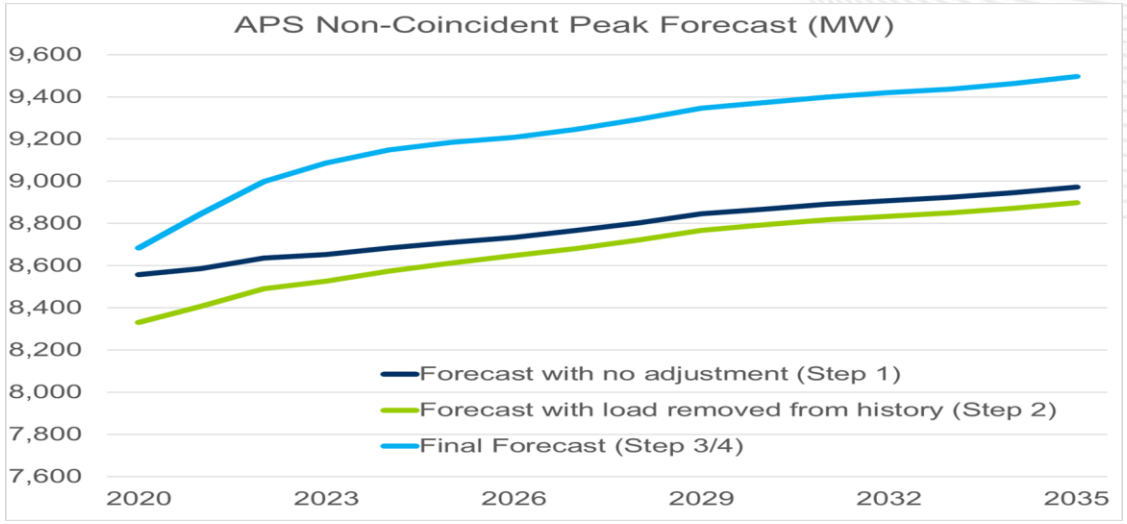
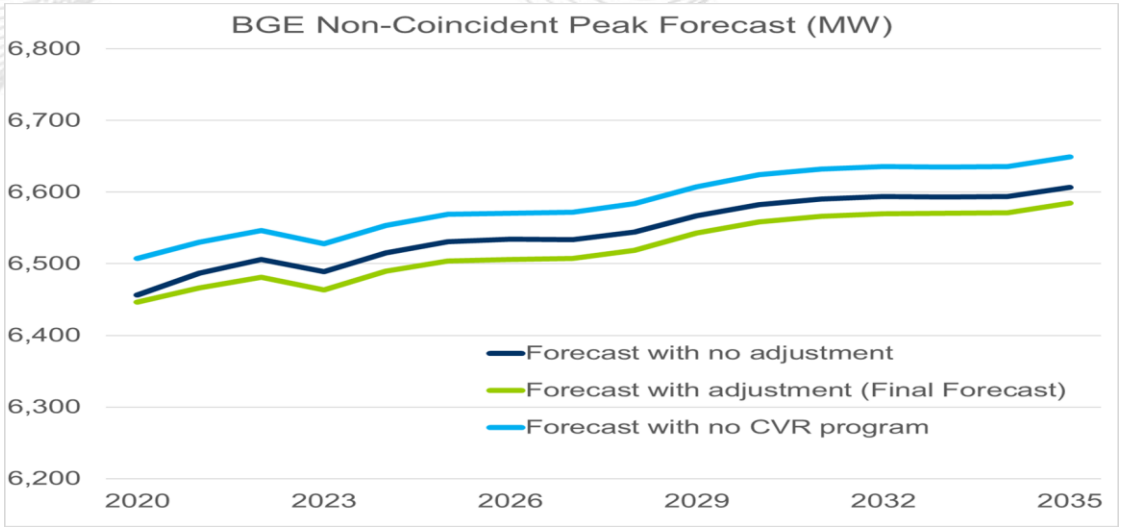
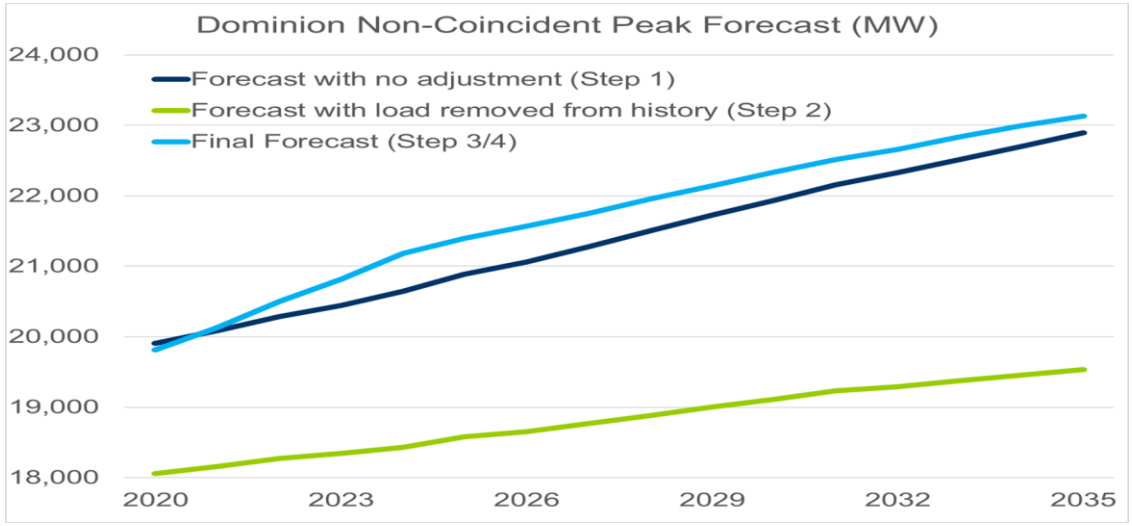
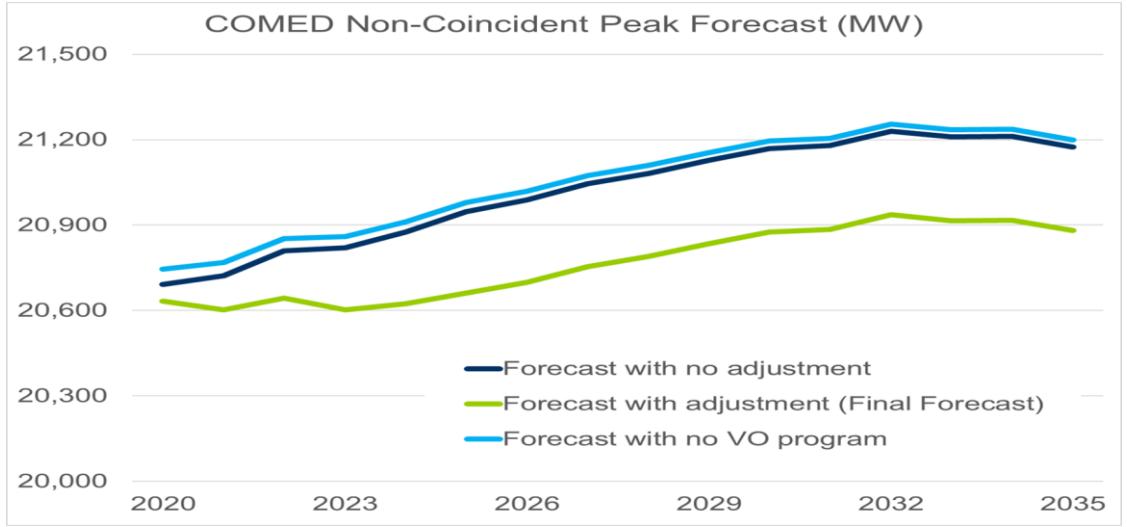
Forecast Adjustments









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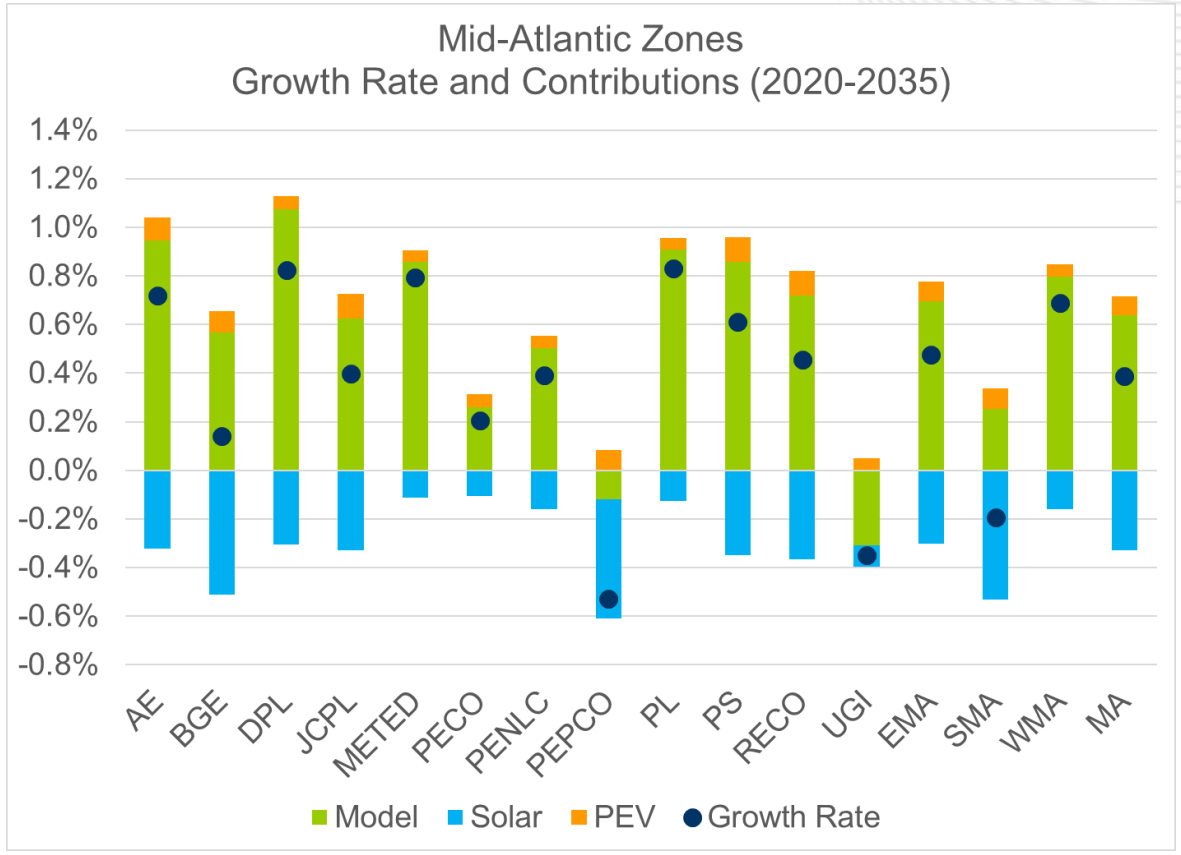
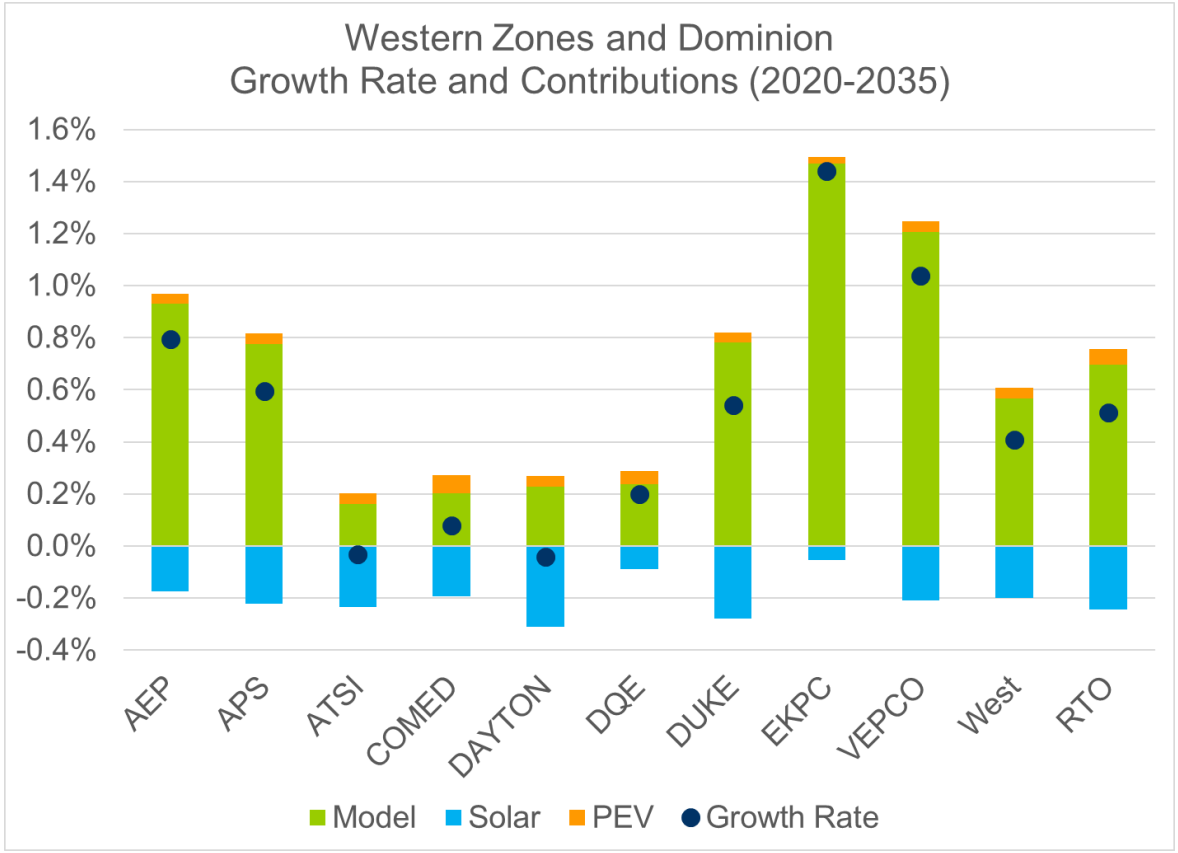
Growth Decomposition





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Model Framework & Drivers

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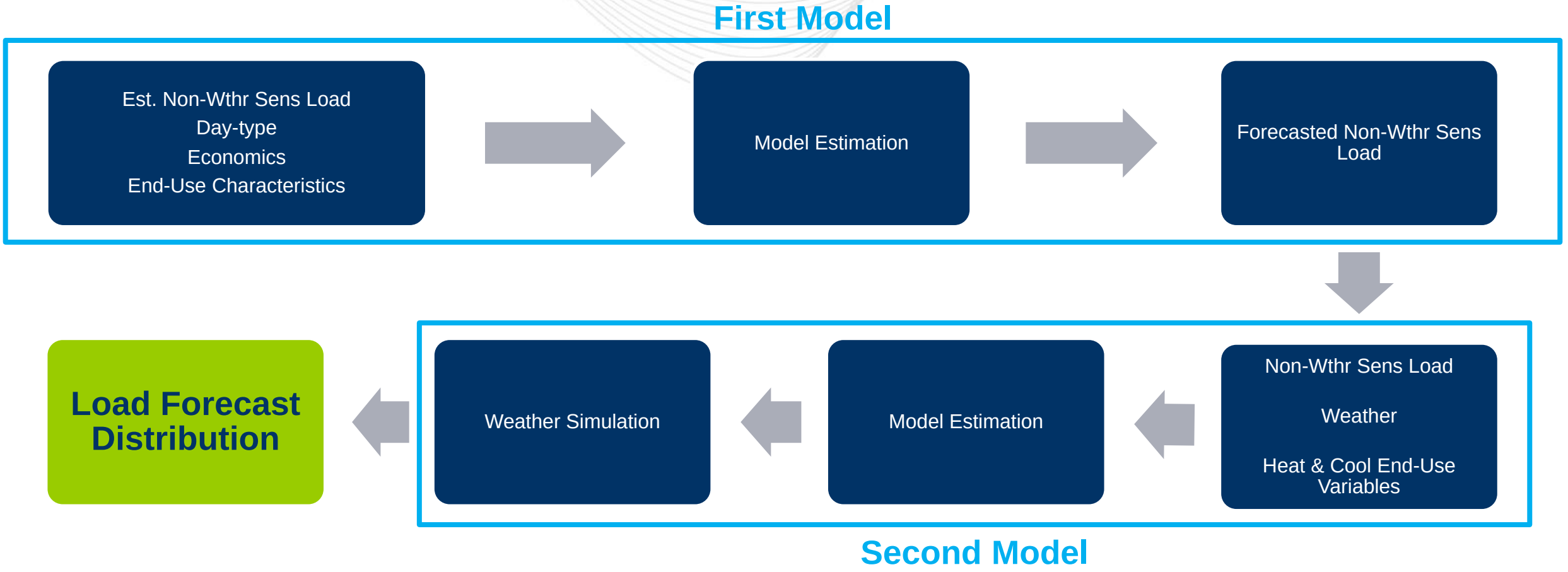
Model Setup



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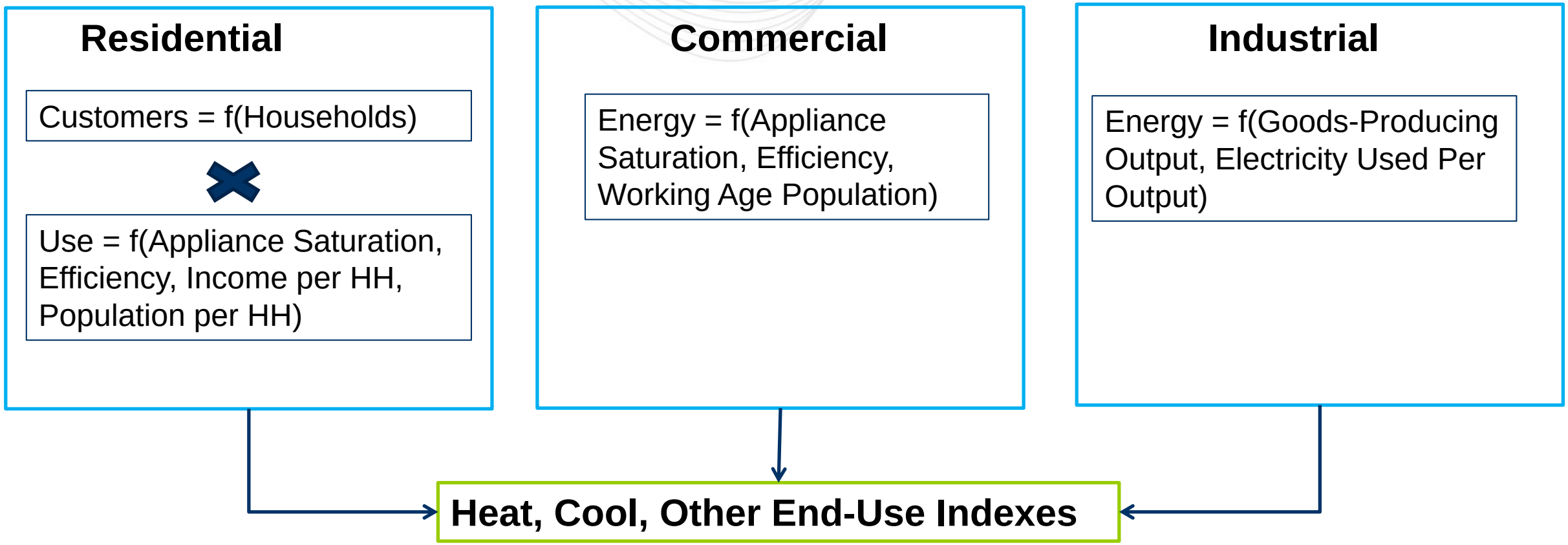
Driver Variables



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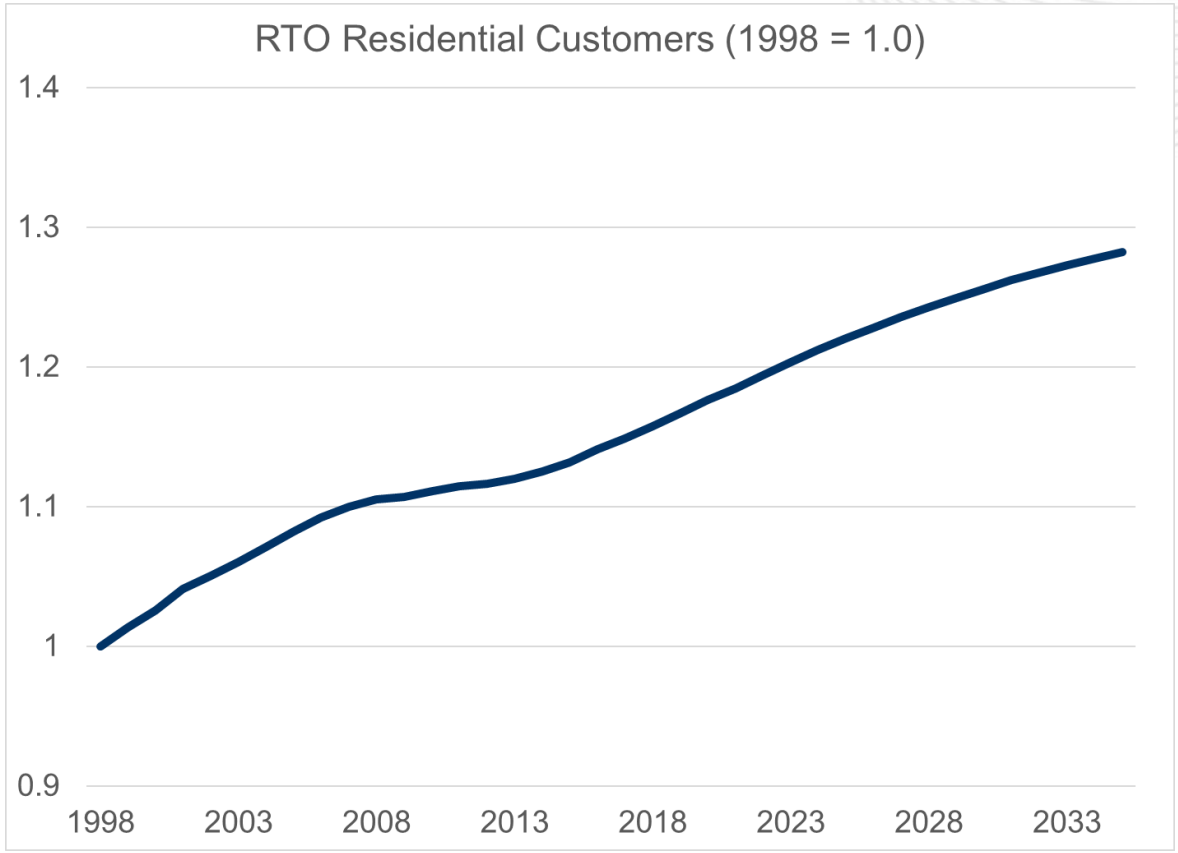
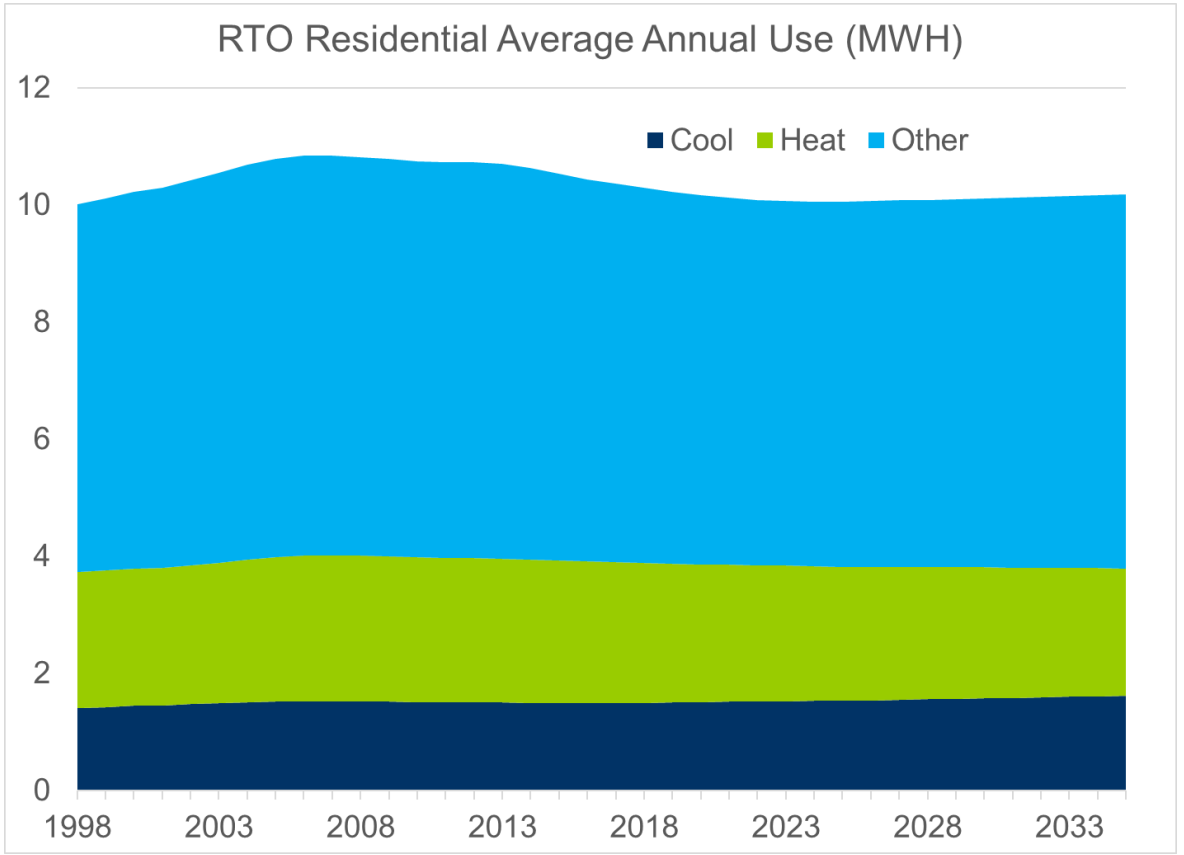
Residential





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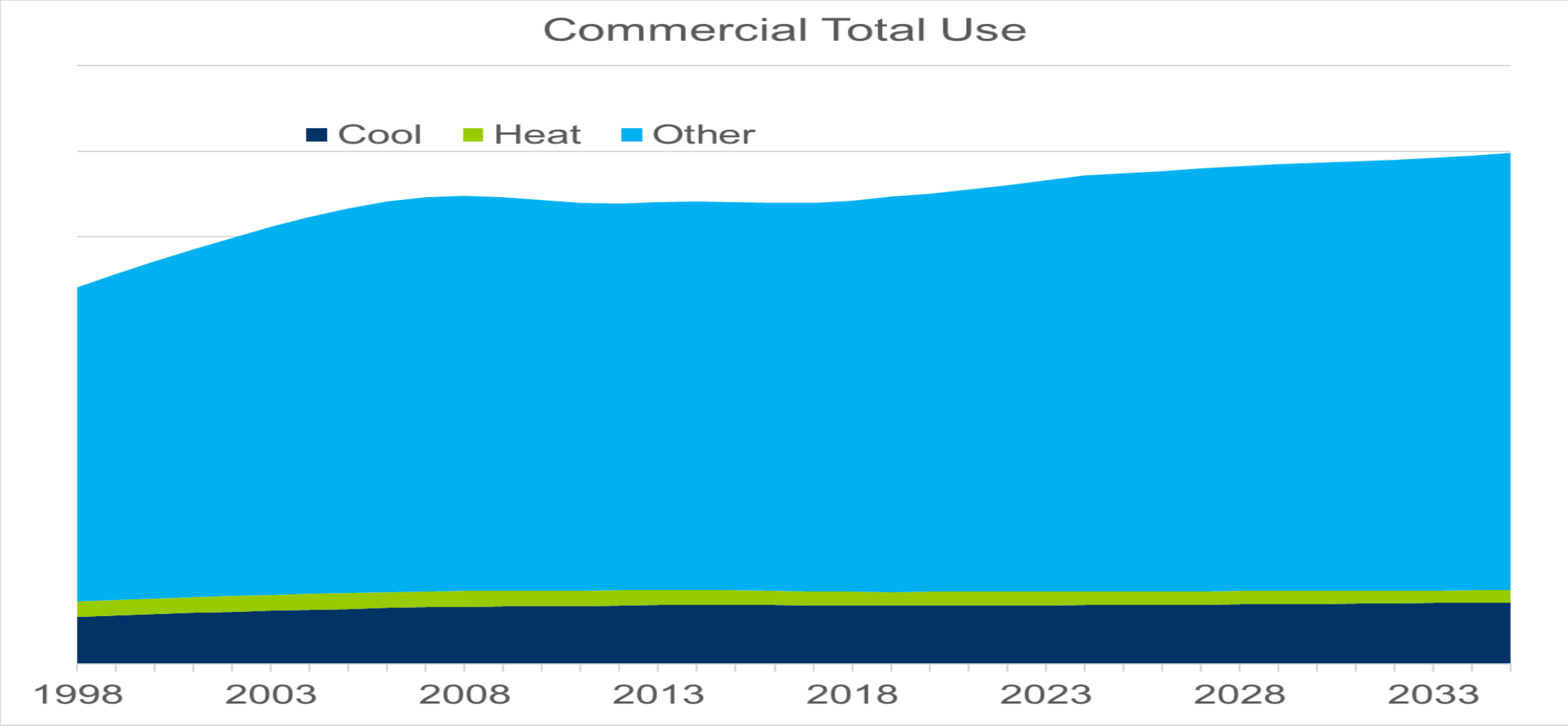
Commercial



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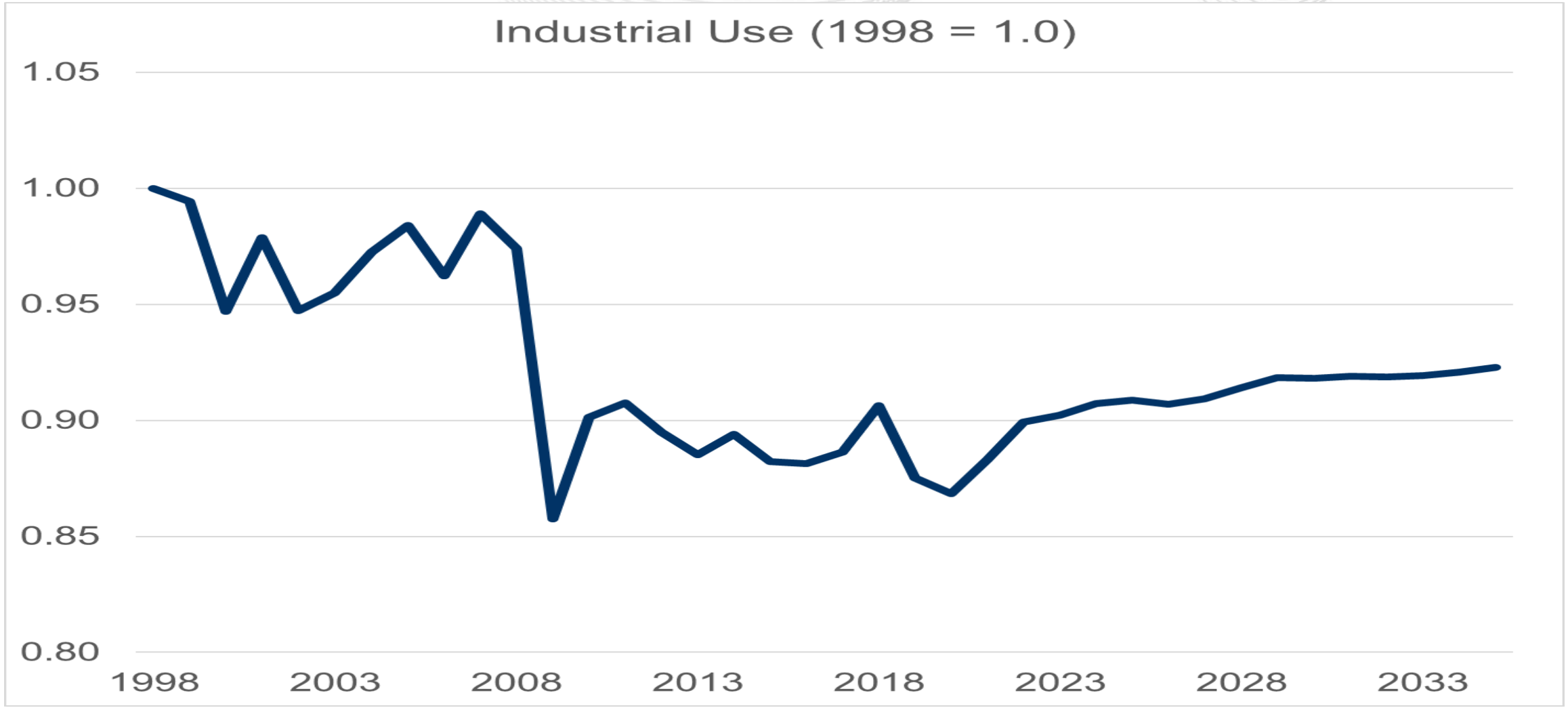
Industrial



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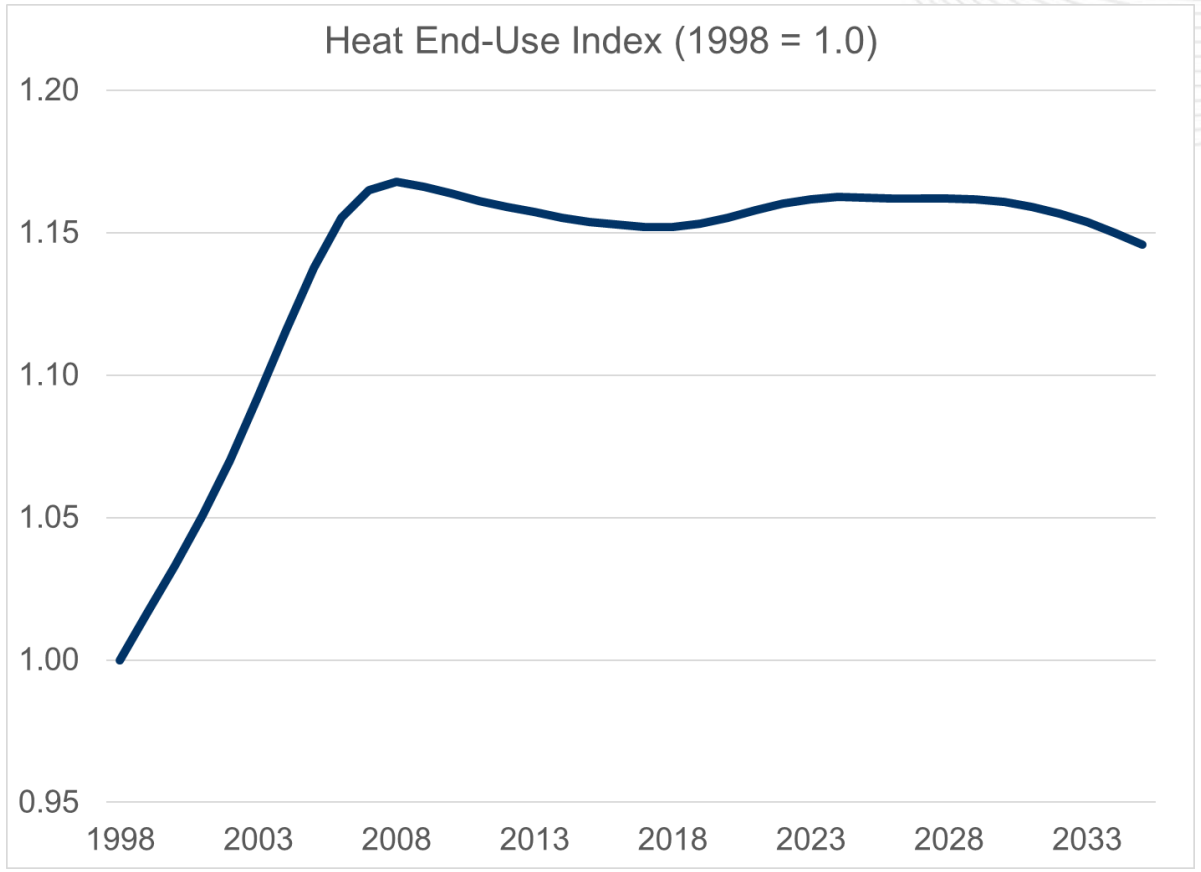
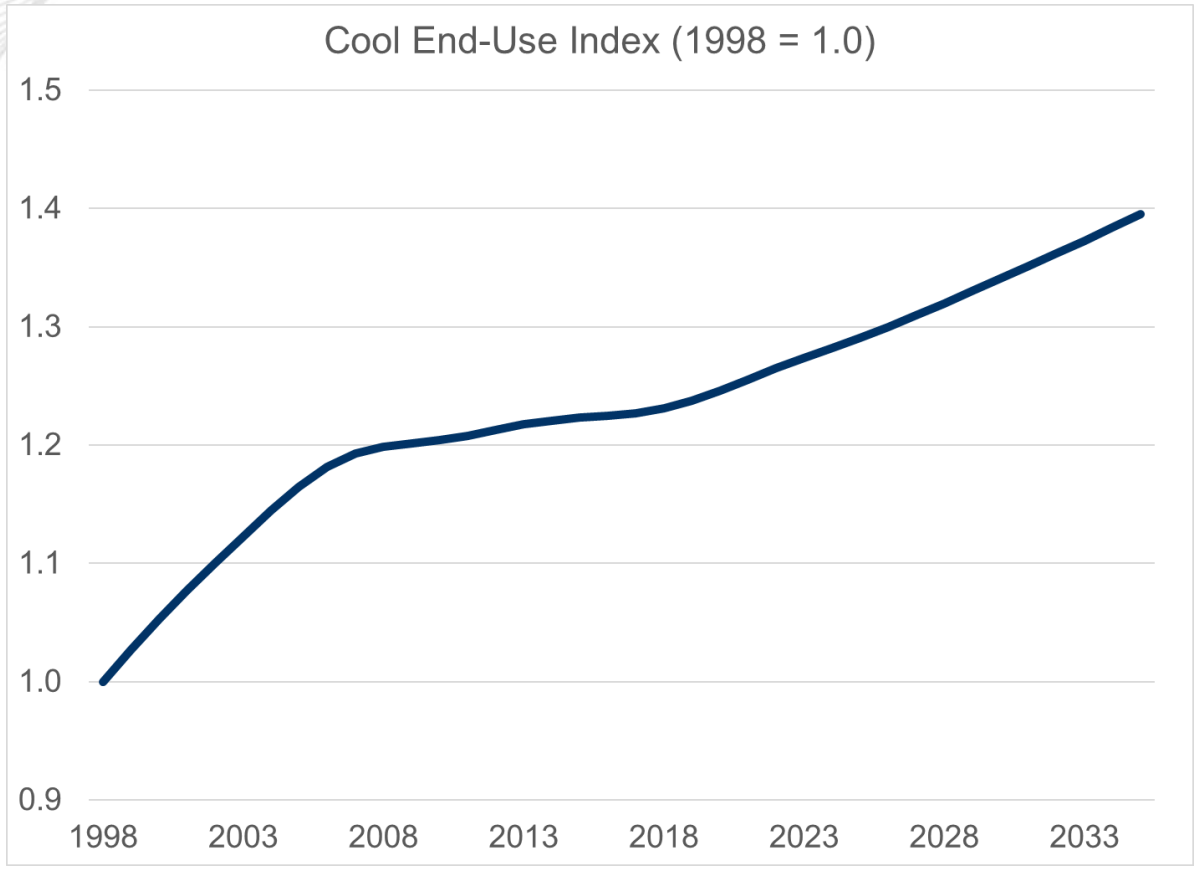
Heat and Cool End-Use Indexes





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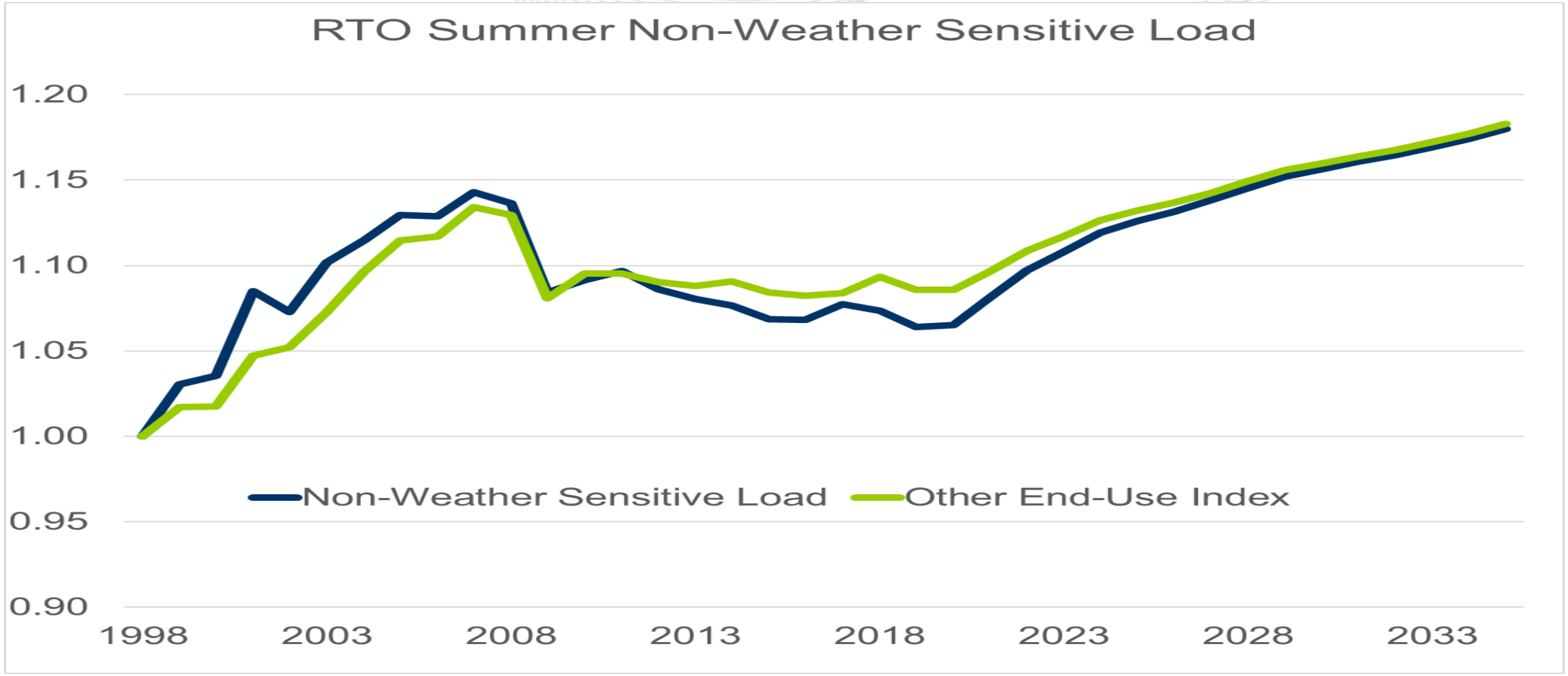
Other End-Use Index and Non-Weather Sensitive Load



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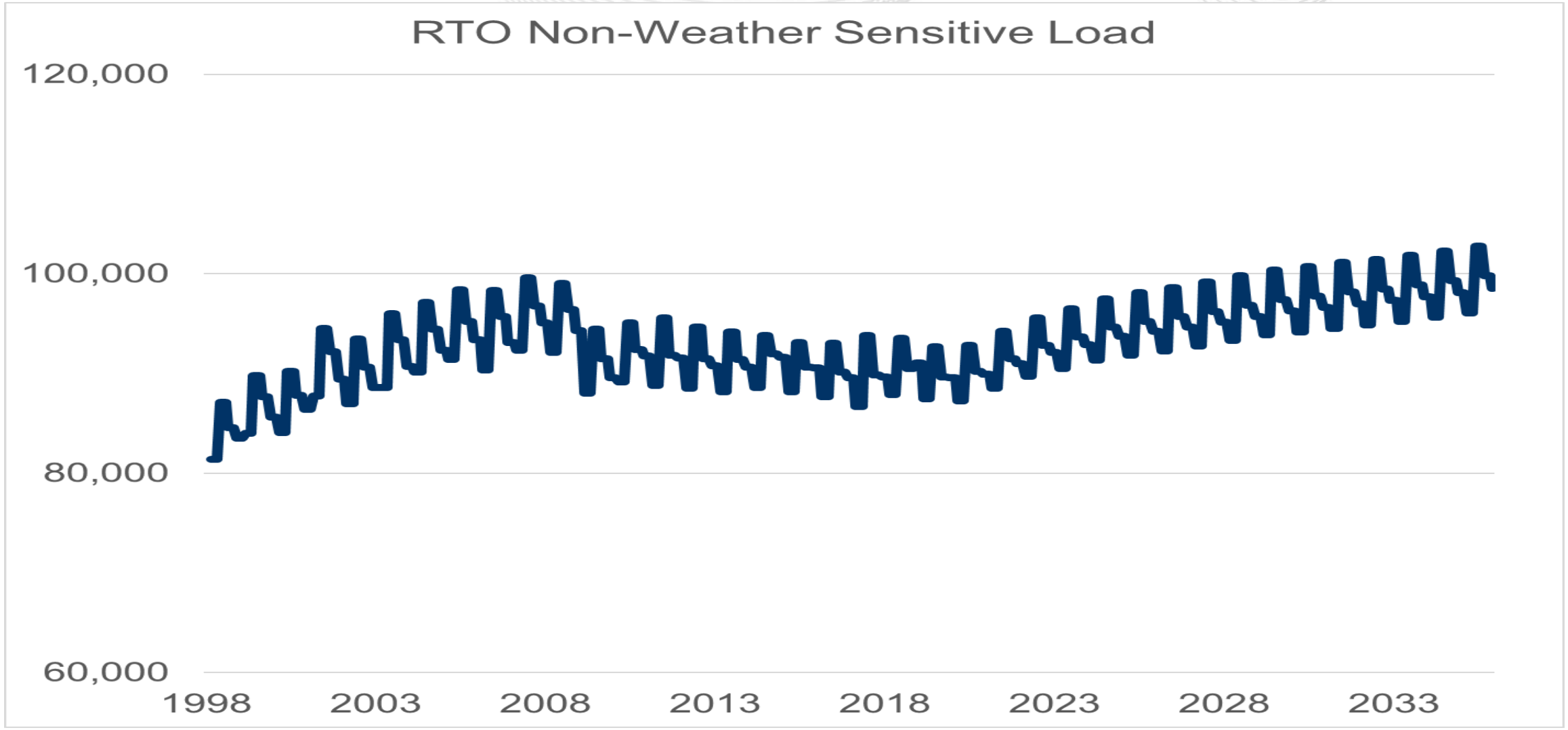
Non-Weather Sensitive Load



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Model Accuracy

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Overview

- Forecast model being evaluated is the current specification that goes into effect beginning with the 2020 Load Forecast Report.
- Forecast model is solved using up-to-date information, to help separate out the error attributable to forecast variables.
- Forecast adjustments are not considered.
- Comparison is forecasted load versus actual load.

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Forecast Parameter Summary

		End-Use		
Forecast Vintage	Estimation Through	Economics	SAE Data	Calibration enddate
2015	August 2014	September 2019	2019	2013
2016	August 2015	September 2019	2019	2014
2017	August 2016	September 2019	2019	2015
2018	August 2018	September 2019	2019	2016
2019	August 2019	September 2019	2019	2017

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Summer Evaluation Periods

	Forecast Horizon (Years Out)			
Forecast Vintage	Zero	One	Two	Three
2015	2015	2016	2017	2018
2016	2016	2017	2018	2019
2017	2017	2018	2019	
2018	2018	2019		
2019	2019			

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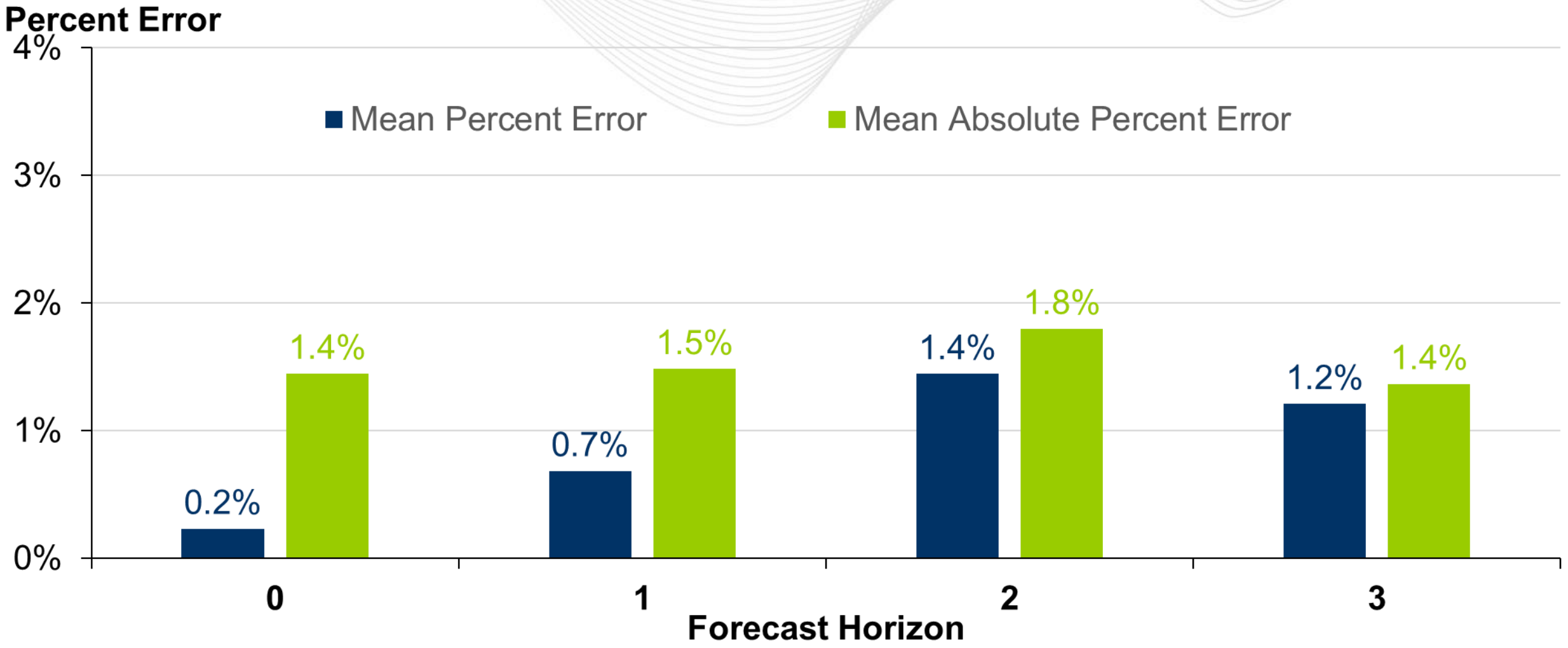
Summer Forecast Error on Top 10 Days Summary



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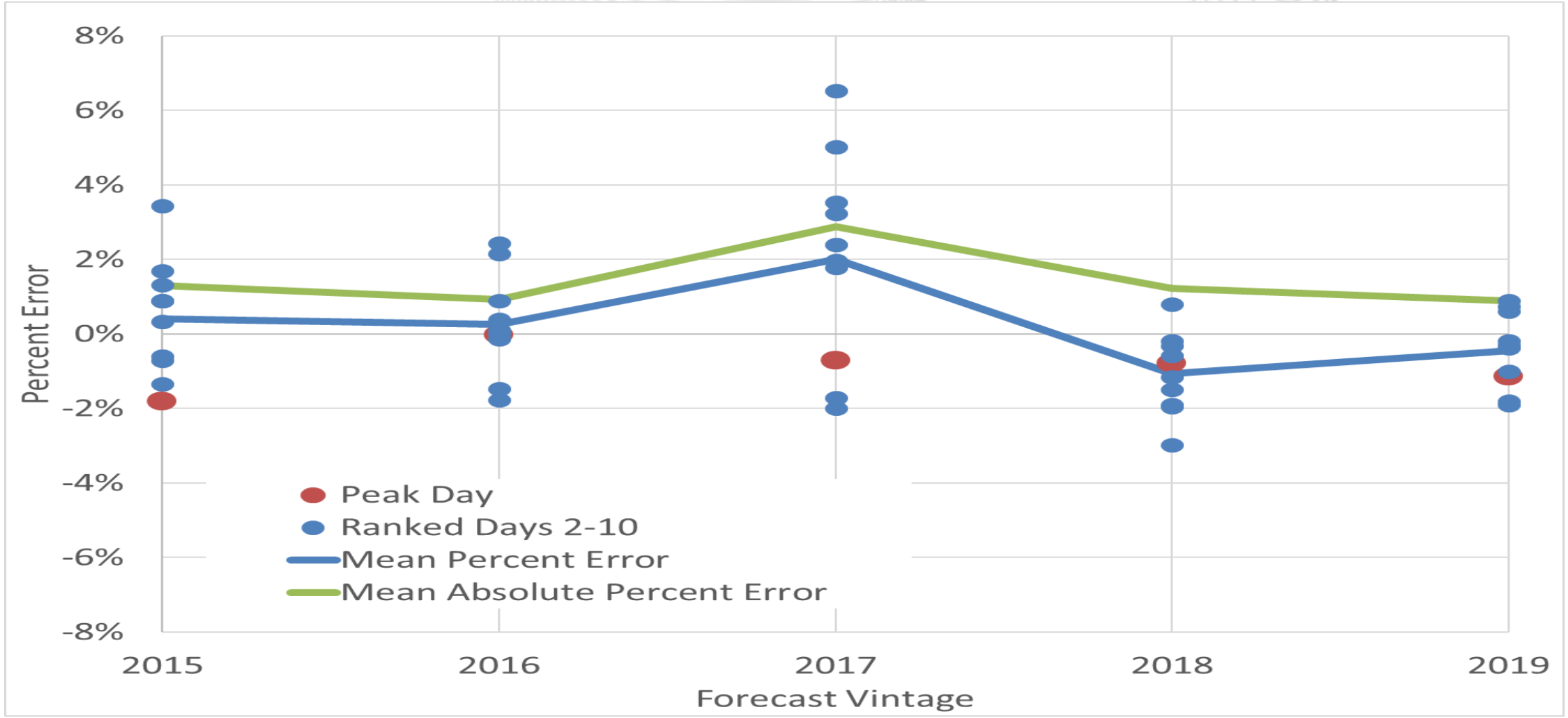
Summer Forecast Error on Top 10 Days
Forecast Horizon = Zero Years Out



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Additional Information

- 2020 Load Forecast Report
  - https://www.pjm.com/-/media/library/reports-notices/load-forecast/2020-load-report.ashx?la=en
- 2020 Load Forecast Supplement
  - https://www.pjm.com/-/media/planning/res-adeq/load-forecast/2020-load-forecast-supplement.ashx?la=en
- Load Analysis Subcommittee
  - https://www.pjm.com/committees-and-groups/subcommittees/las.aspx

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