

Estimated Impacts of COVID-19 on NYISO Load & NYCA Economic Forecast Update

Information current as of 6/13/2020

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Demand Forecasting & Analysis

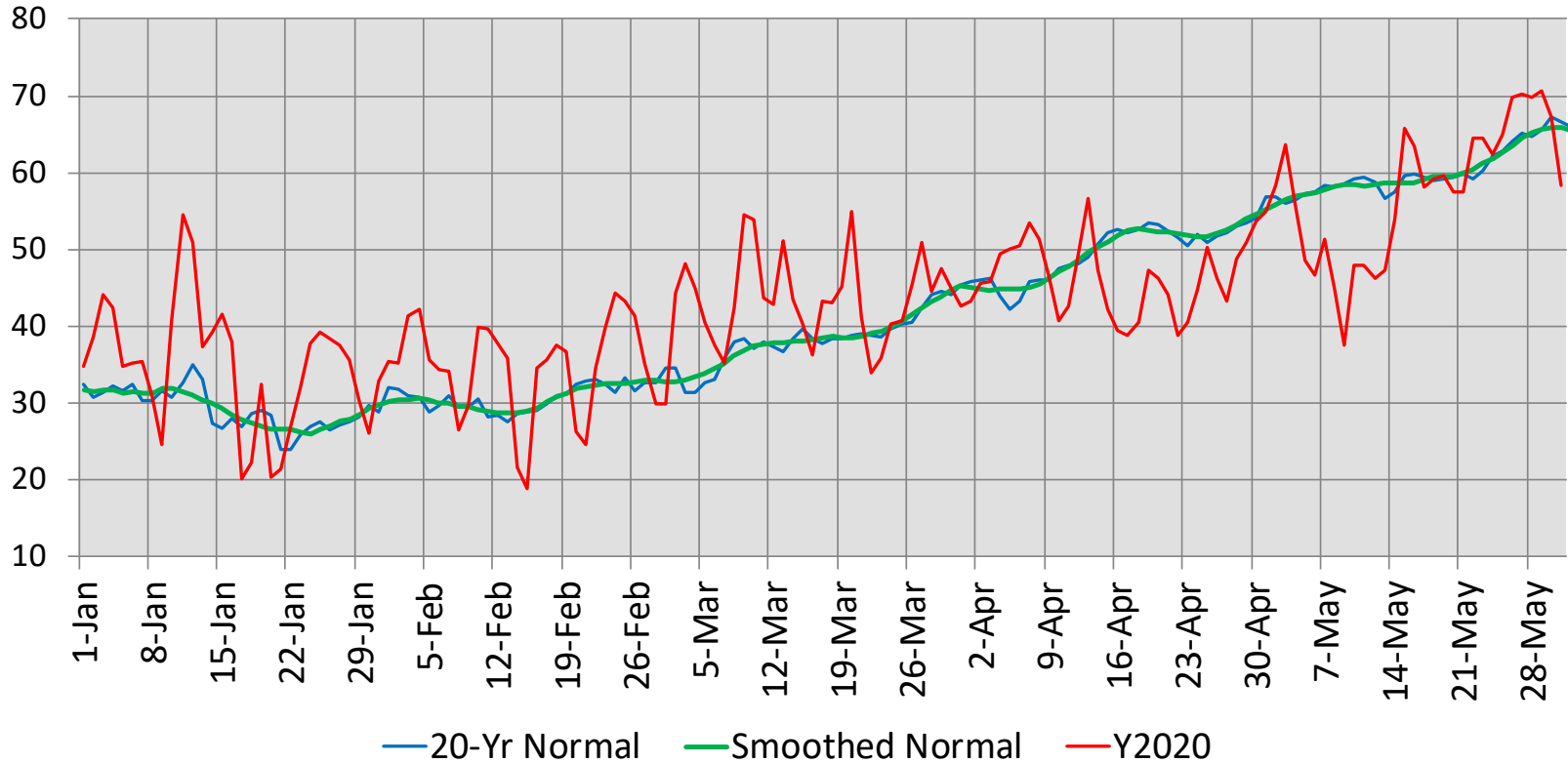
Load Forecasting Task Force

June 17, 2020, Teleconference

Recent COVID-19 Impacts on NYISO Load

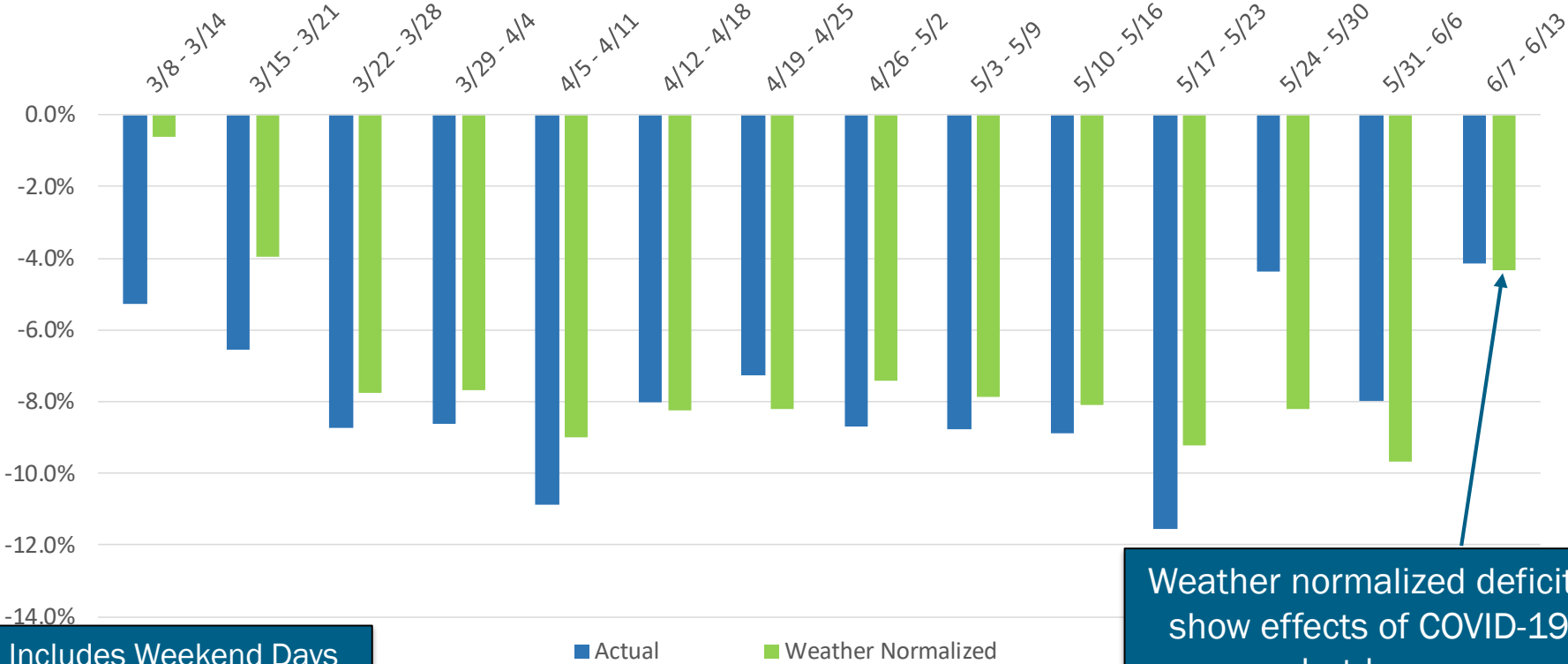
NYCA Recent Temperature Trends

NYCA Daily Average Temperature



Recent Impacts on Daily Energy by Week

Weekly Energy Use - % Versus Expected (NYCA)

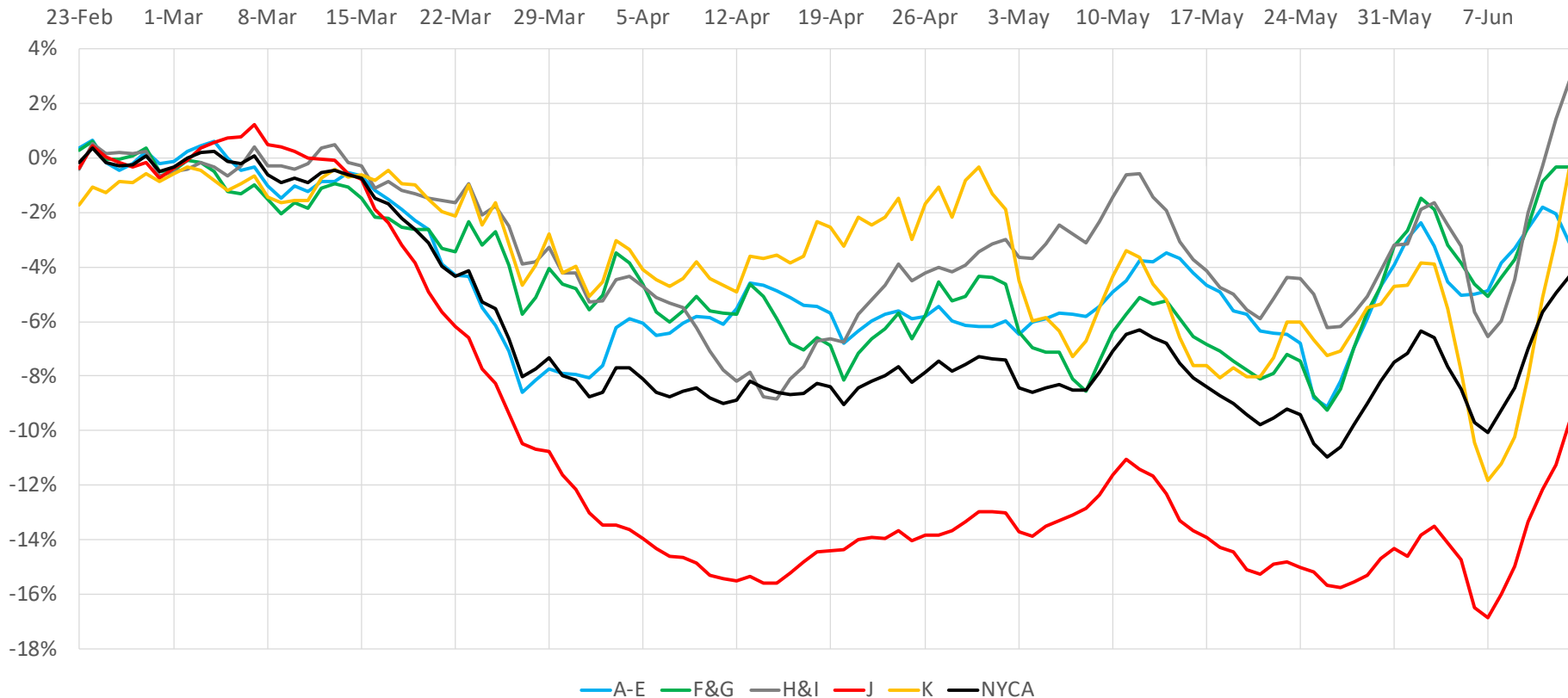


Includes Weekend Days

Weather normalized deficits show effects of COVID-19 shutdowns

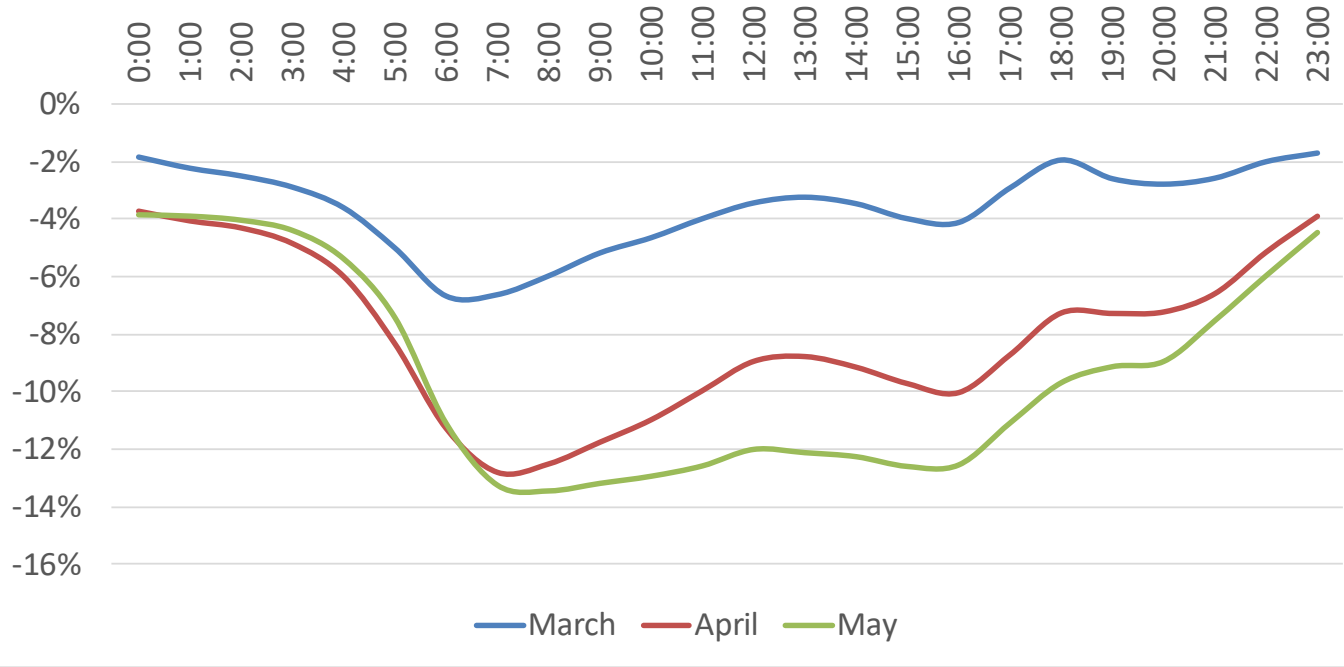
Regional Impacts on Daily Energy Patterns

2020 Weather Normalized Load Relative to Expected Load, 7-Day Moving Average (Daily Energy)



Monthly Impacts on Hourly Load Patterns

NYCA Load Profile - Diurnal Deviations



Hour	March	April	May
0:00	-2%	-4%	-4%
1:00	-2%	-4%	-4%
2:00	-3%	-4%	-4%
3:00	-3%	-5%	-4%
4:00	-4%	-6%	-5%
5:00	-5%	-8%	-7%
6:00	-7%	-11%	-11%
7:00	-7%	-13%	-13%
8:00	-6%	-13%	-13%
9:00	-5%	-12%	-13%
10:00	-5%	-11%	-13%
11:00	-4%	-10%	-13%
12:00	-3%	-9%	-12%
13:00	-3%	-9%	-12%
14:00	-3%	-9%	-12%
15:00	-4%	-10%	-13%
16:00	-4%	-10%	-13%
17:00	-3%	-9%	-11%
18:00	-2%	-7%	-10%
19:00	-3%	-7%	-9%
20:00	-3%	-7%	-9%
21:00	-3%	-7%	-7%
22:00	-2%	-5%	-6%
23:00	-2%	-4%	-4%

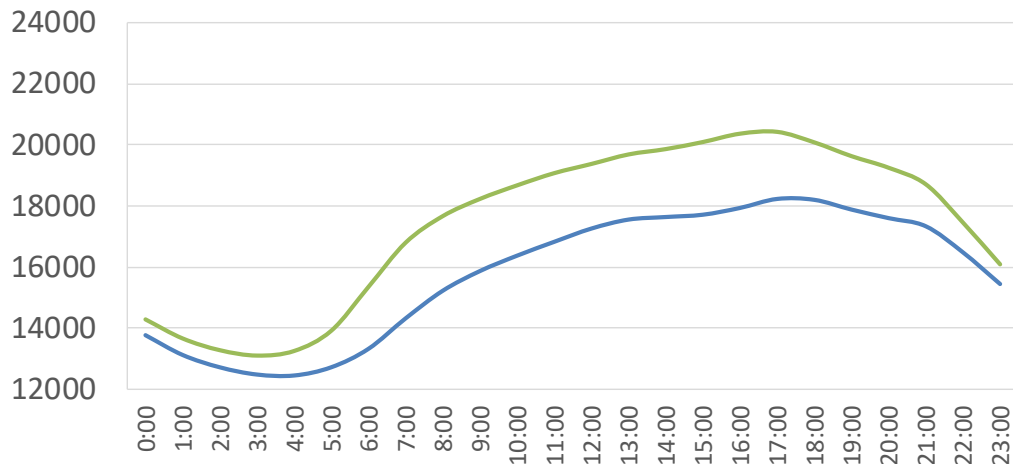
Peak Hour

Recent Impacts on Hourly Load Patterns

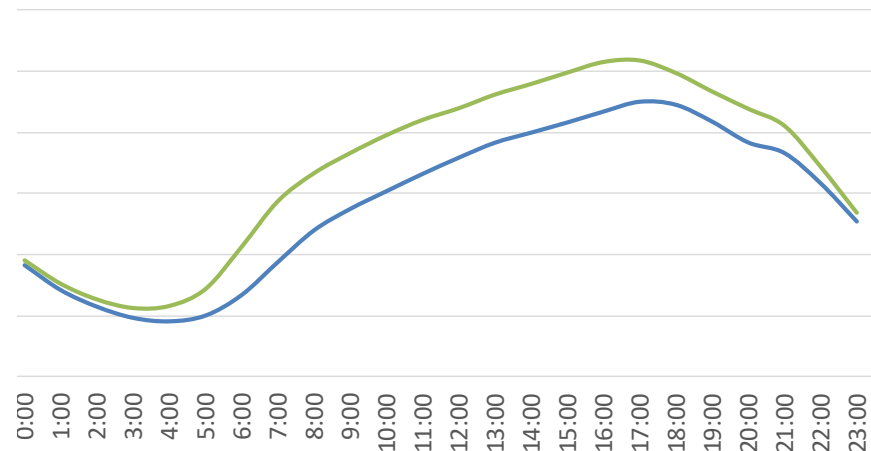
— Actual — Simulated

June 1 - June 5 (MW)

June 8 - June 12 (MW)



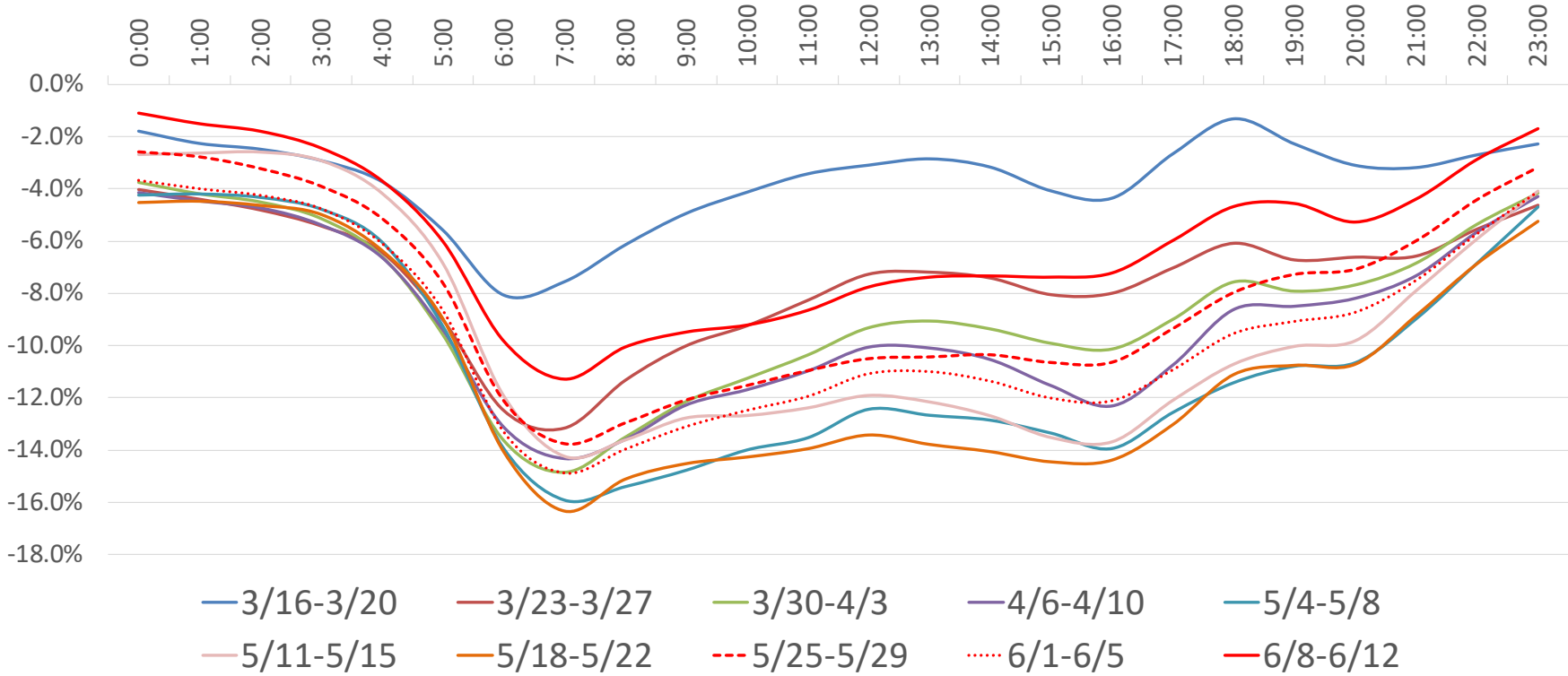
Week 12



Week 13

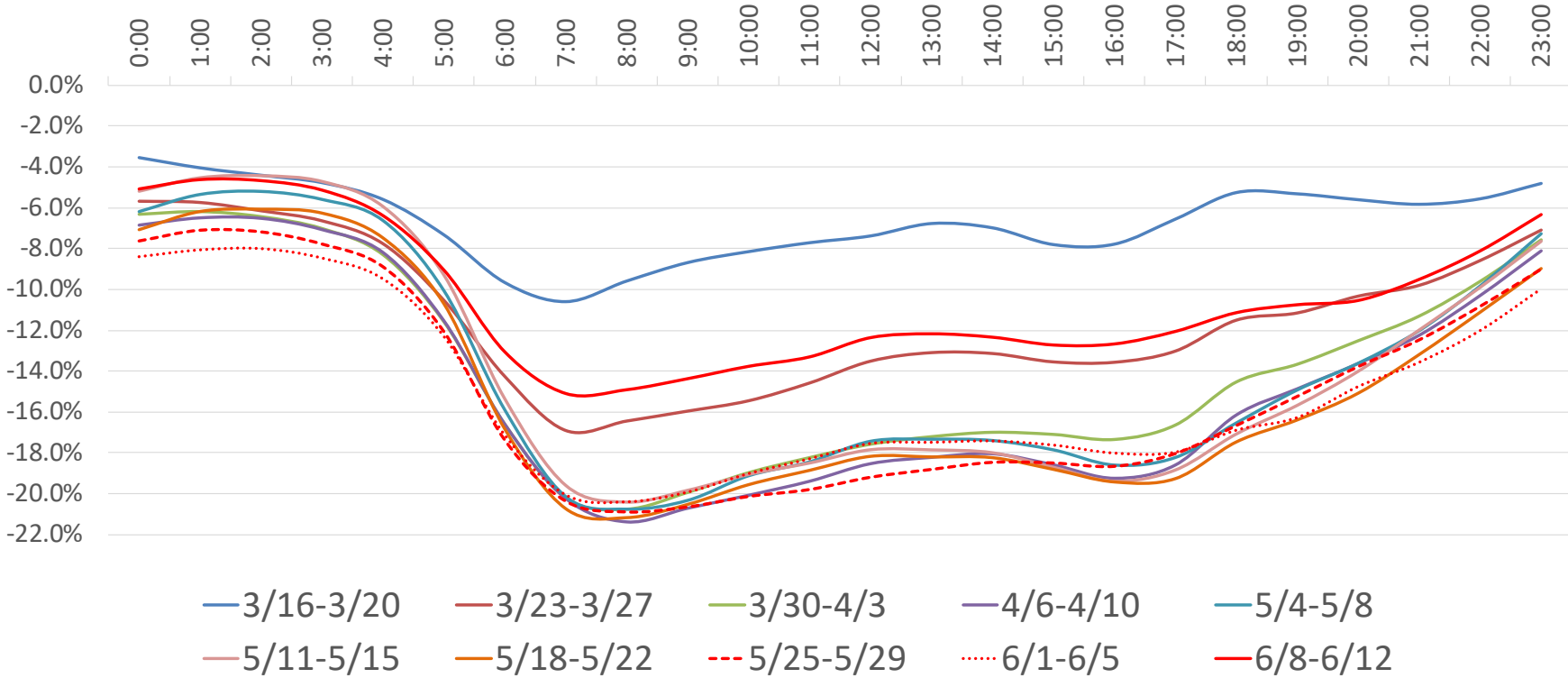
Impacts on Hourly Load Patterns

NYCA Load Profile - Weekday Diurnal Load Changes



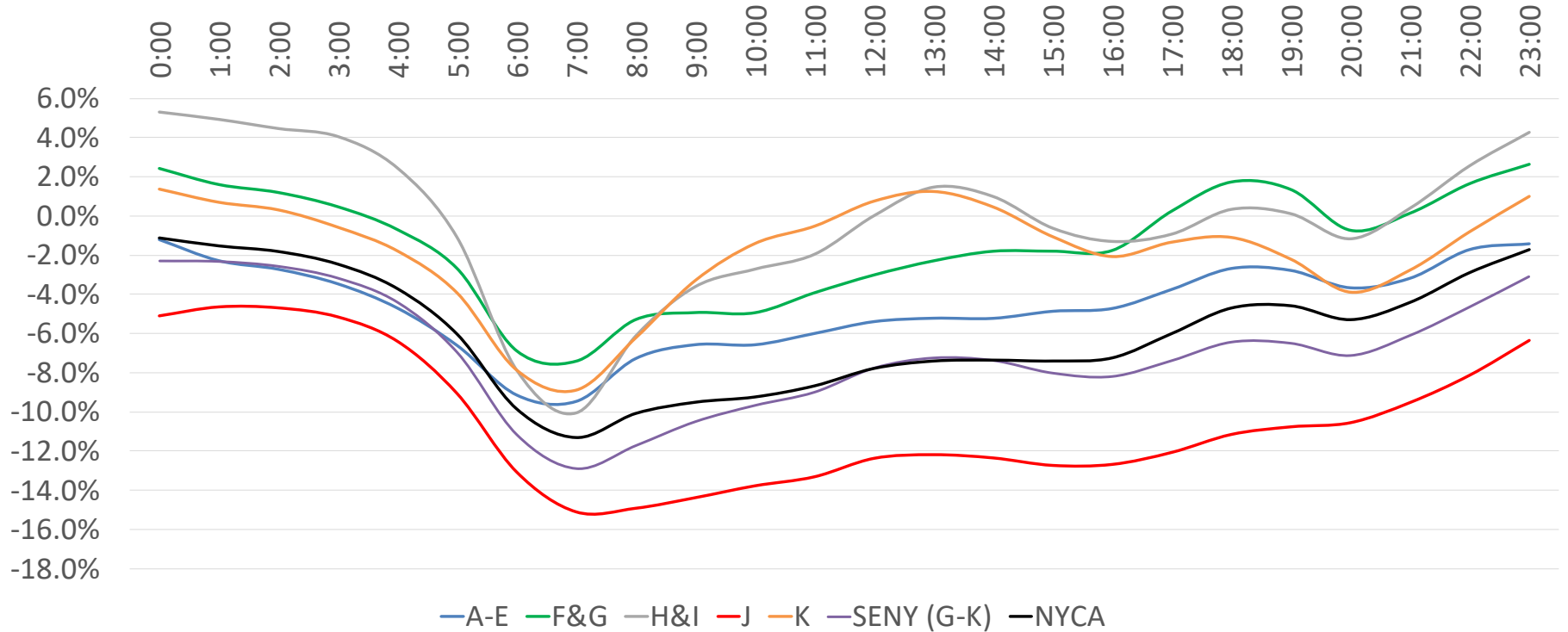
Impacts on Hourly Load Patterns

Zone-J Load Profile - Weekday Diurnal Load Changes



Impacts on Hourly Load Patterns (Area)

Average Hourly Deficit by Area - Week of 6/8 - 6/12 (Weekdays)



Impacts on Hourly Load Patterns (Area)

Hour	A-E	F&G	H&I	J	K	SENY (G-K)	NYCA
0:00	-1.2%	2.4%	5.3%	-5.1%	1.4%	-2.3%	-1.1%
1:00	-2.3%	1.6%	4.9%	-4.6%	0.7%	-2.3%	-1.5%
2:00	-2.7%	1.2%	4.5%	-4.7%	0.3%	-2.6%	-1.8%
3:00	-3.5%	0.5%	4.1%	-5.1%	-0.6%	-3.2%	-2.4%
4:00	-4.7%	-0.7%	2.5%	-6.4%	-1.8%	-4.4%	-3.7%
5:00	-6.6%	-2.7%	-1.1%	-9.1%	-3.9%	-7.0%	-6.0%
6:00	-9.1%	-6.9%	-7.9%	-13.1%	-7.9%	-11.2%	-9.8%
7:00	-9.5%	-7.4%	-10.0%	-15.1%	-8.9%	-12.9%	-11.3%
8:00	-7.3%	-5.3%	-6.1%	-14.9%	-6.2%	-11.7%	-10.1%
9:00	-6.6%	-4.9%	-3.6%	-14.4%	-3.3%	-10.5%	-9.5%
10:00	-6.6%	-4.9%	-2.7%	-13.8%	-1.4%	-9.7%	-9.2%
11:00	-6.0%	-3.9%	-1.9%	-13.3%	-0.5%	-9.0%	-8.7%
12:00	-5.4%	-3.0%	0.0%	-12.4%	0.8%	-7.8%	-7.8%
13:00	-5.2%	-2.3%	1.5%	-12.2%	1.2%	-7.3%	-7.4%
14:00	-5.2%	-1.8%	1.0%	-12.3%	0.5%	-7.4%	-7.3%
15:00	-4.9%	-1.8%	-0.6%	-12.7%	-1.1%	-8.0%	-7.4%
16:00	-4.7%	-1.8%	-1.3%	-12.7%	-2.1%	-8.2%	-7.2%
17:00	-3.7%	0.2%	-0.9%	-12.1%	-1.3%	-7.4%	-6.0%
18:00	-2.7%	1.7%	0.3%	-11.1%	-1.1%	-6.4%	-4.7%
19:00	-2.8%	1.3%	0.1%	-10.8%	-2.2%	-6.5%	-4.6%
20:00	-3.7%	-0.7%	-1.2%	-10.5%	-3.9%	-7.1%	-5.3%
21:00	-3.2%	0.1%	0.4%	-9.5%	-2.8%	-6.1%	-4.4%
22:00	-1.7%	1.6%	2.6%	-8.1%	-0.8%	-4.7%	-2.9%
23:00	-1.4%	2.6%	4.3%	-6.3%	1.0%	-3.1%	-1.7%

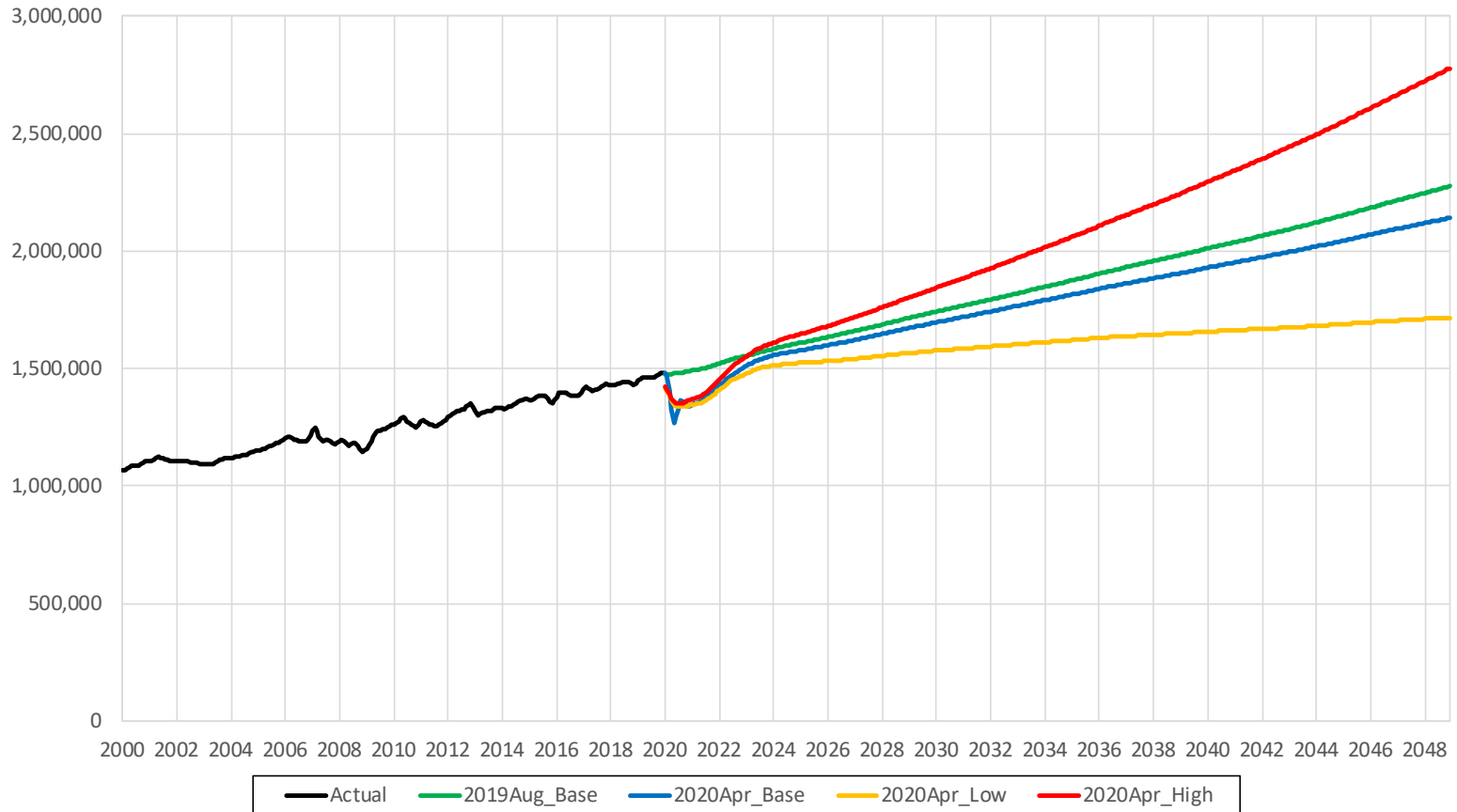
Average Hourly
Load Deficit
By Area
Week of
6/8 - 6/12

NYCA Economic Forecast Update

Economic Forecast Summary

- Updated statewide economic forecast from April 2020 Moody's delivery
- Base, High, and Low Forecasts
- Total GDP, Population, Employment, Households, and Real Income
- Comparison with August 2019 Moody's forecast

Statewide Total GDP - Actual & Forecast (2012 \$M)

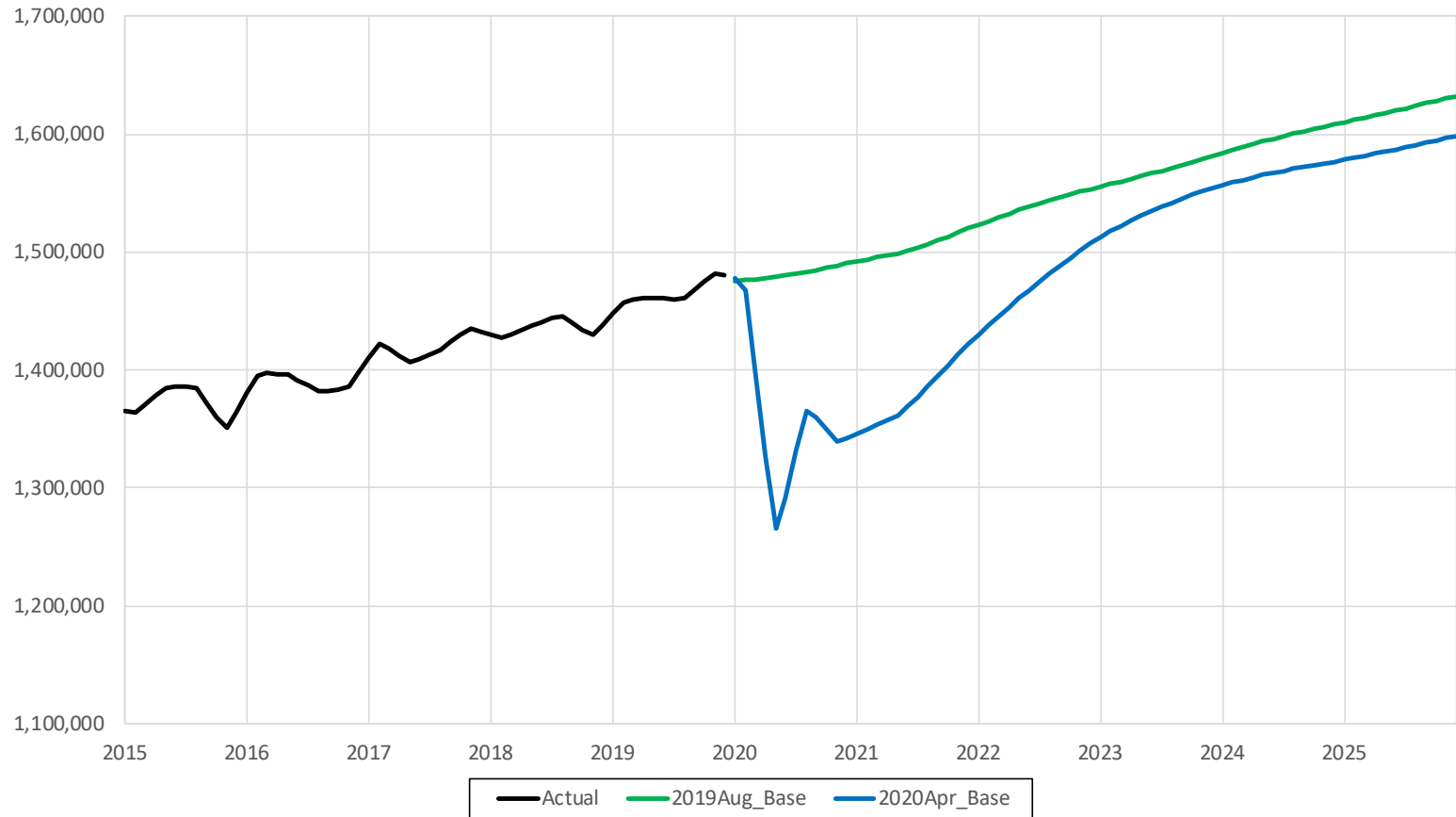


— Actual — 2019Aug_Base — 2020Apr_Base — 2020Apr_Low — 2020Apr_High

Data from Moody's Analytics, August 2019 and April 2020



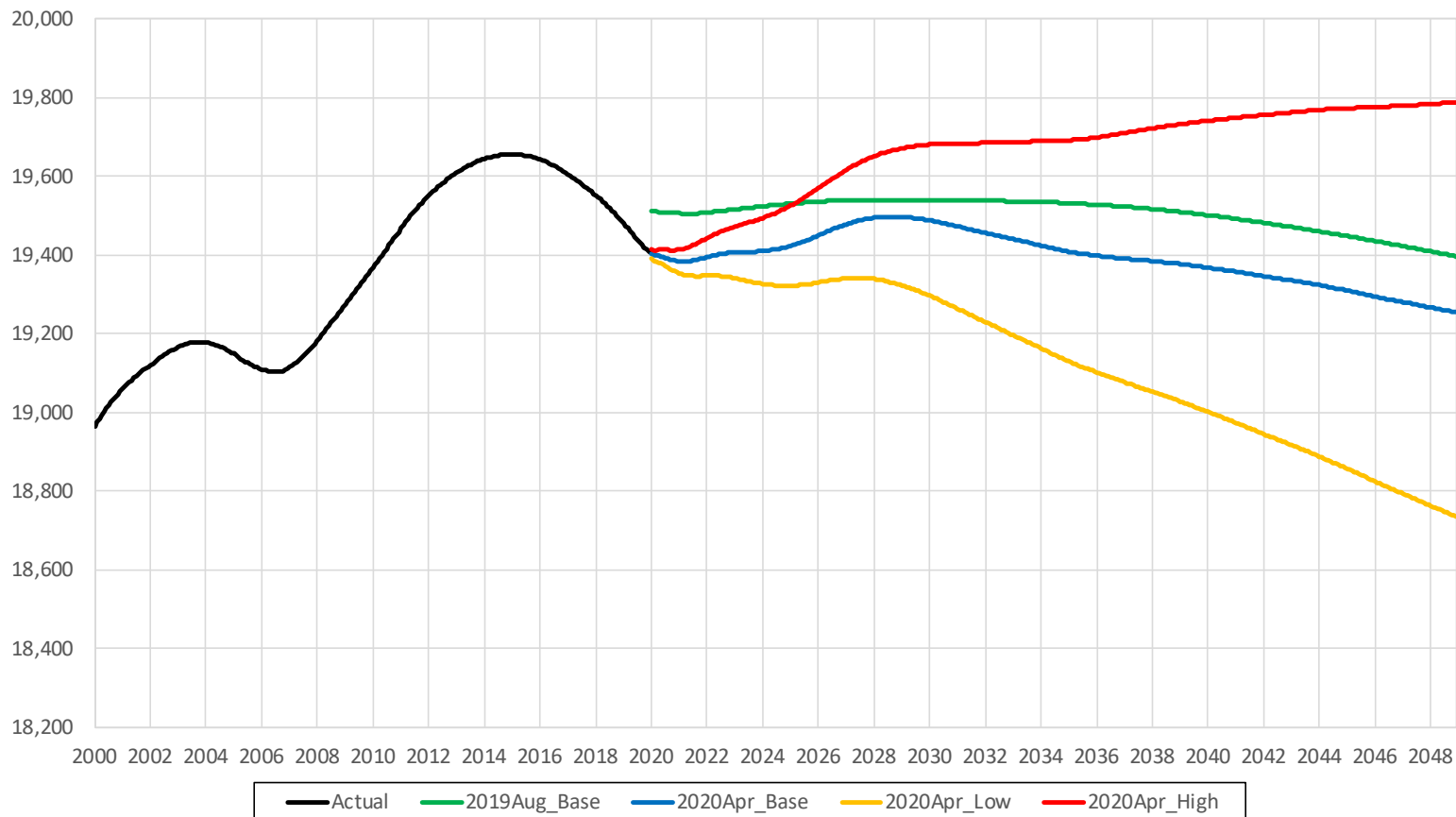
Statewide Total GDP - Actual & Forecast (2012 \$M)



Data from Moody's Analytics, August 2019 and April 2020



Statewide Population - Actual & Forecast (Thousands)

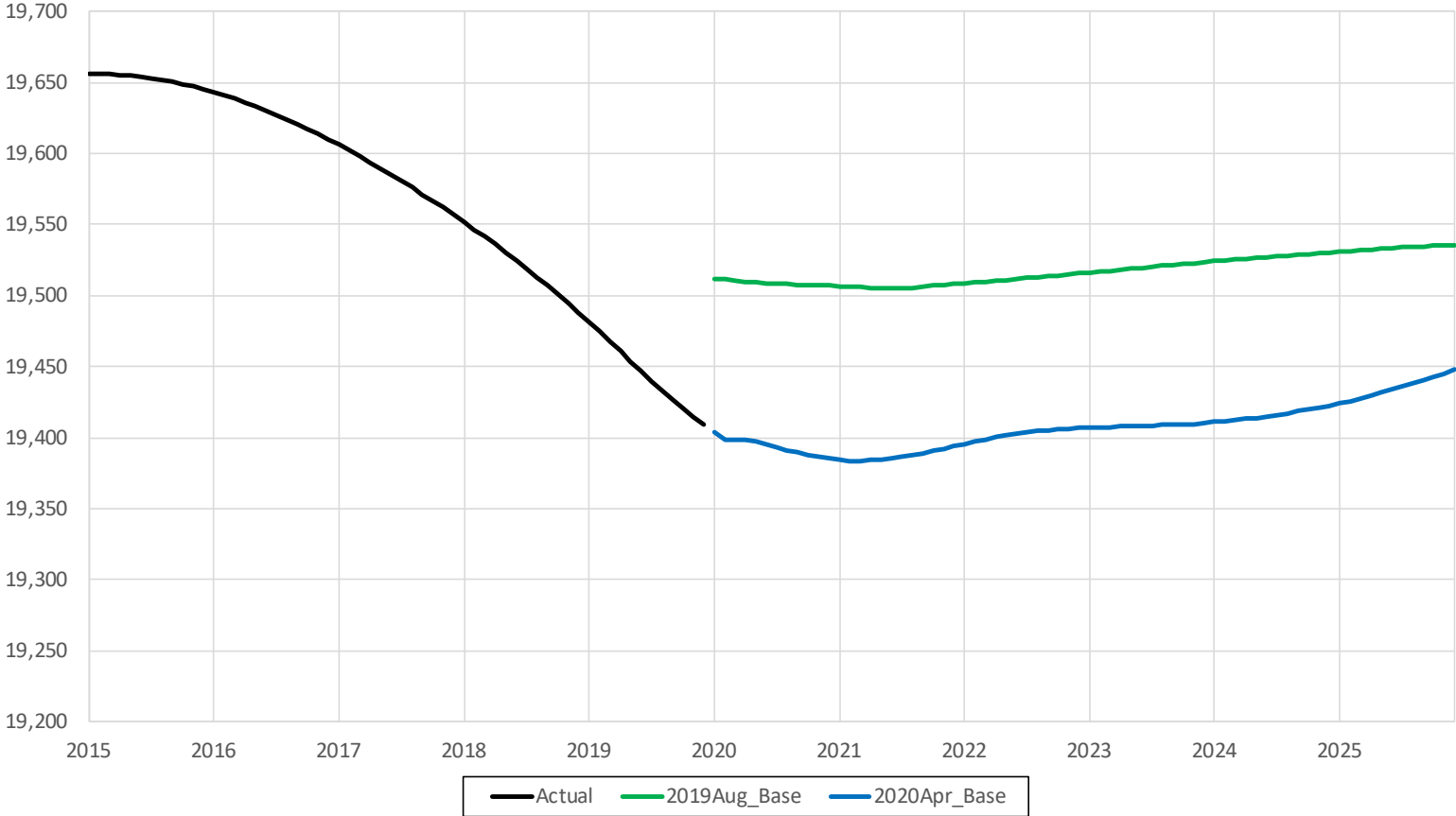


— Actual — 2019Aug_Base — 2020Apr_Base — 2020Apr_Low — 2020Apr_High

Data from Moody's Analytics, August 2019 and April 2020

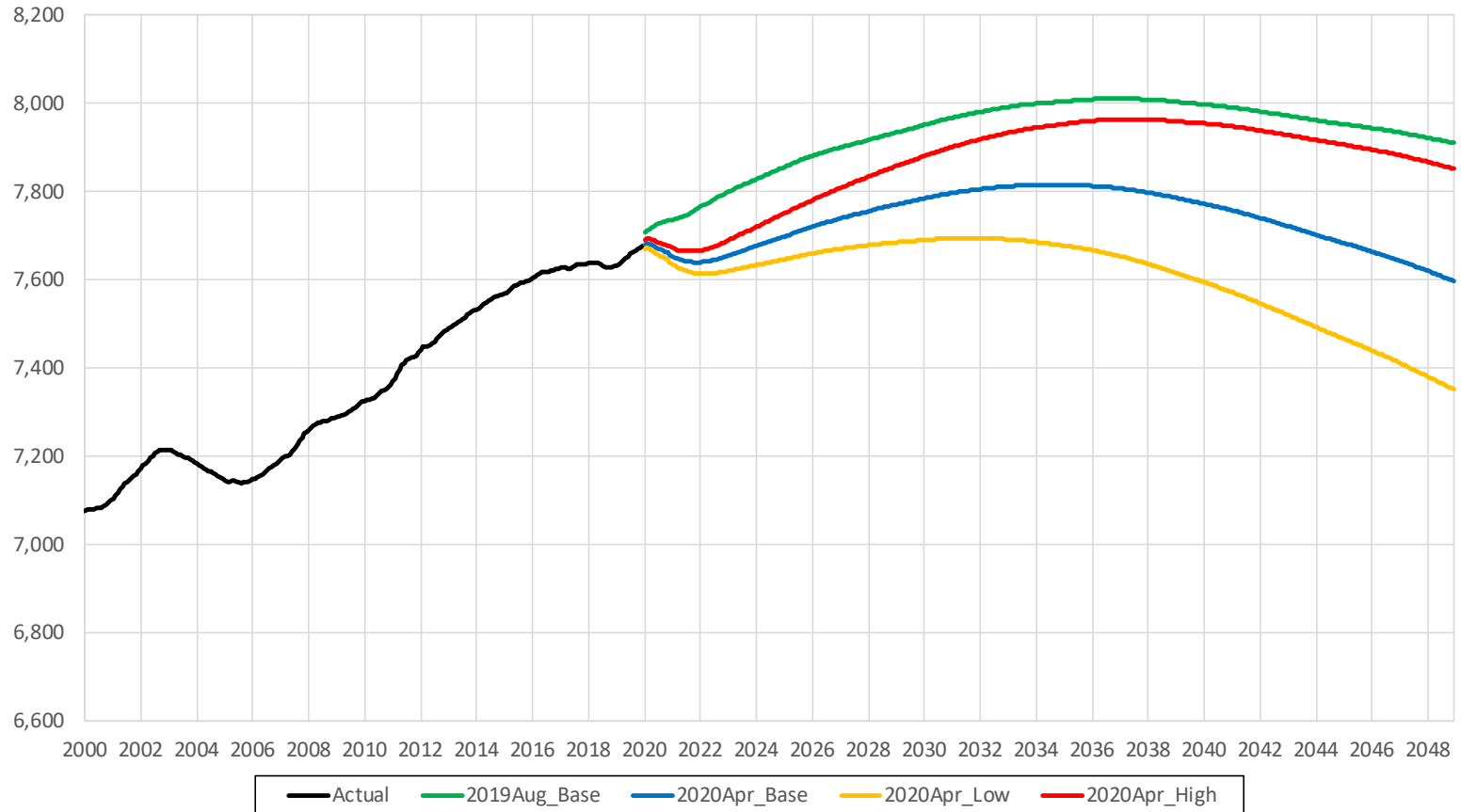


Statewide Population - Actual & Forecast (Thousands)



Data from Moody's Analytics, August 2019 and April 2020

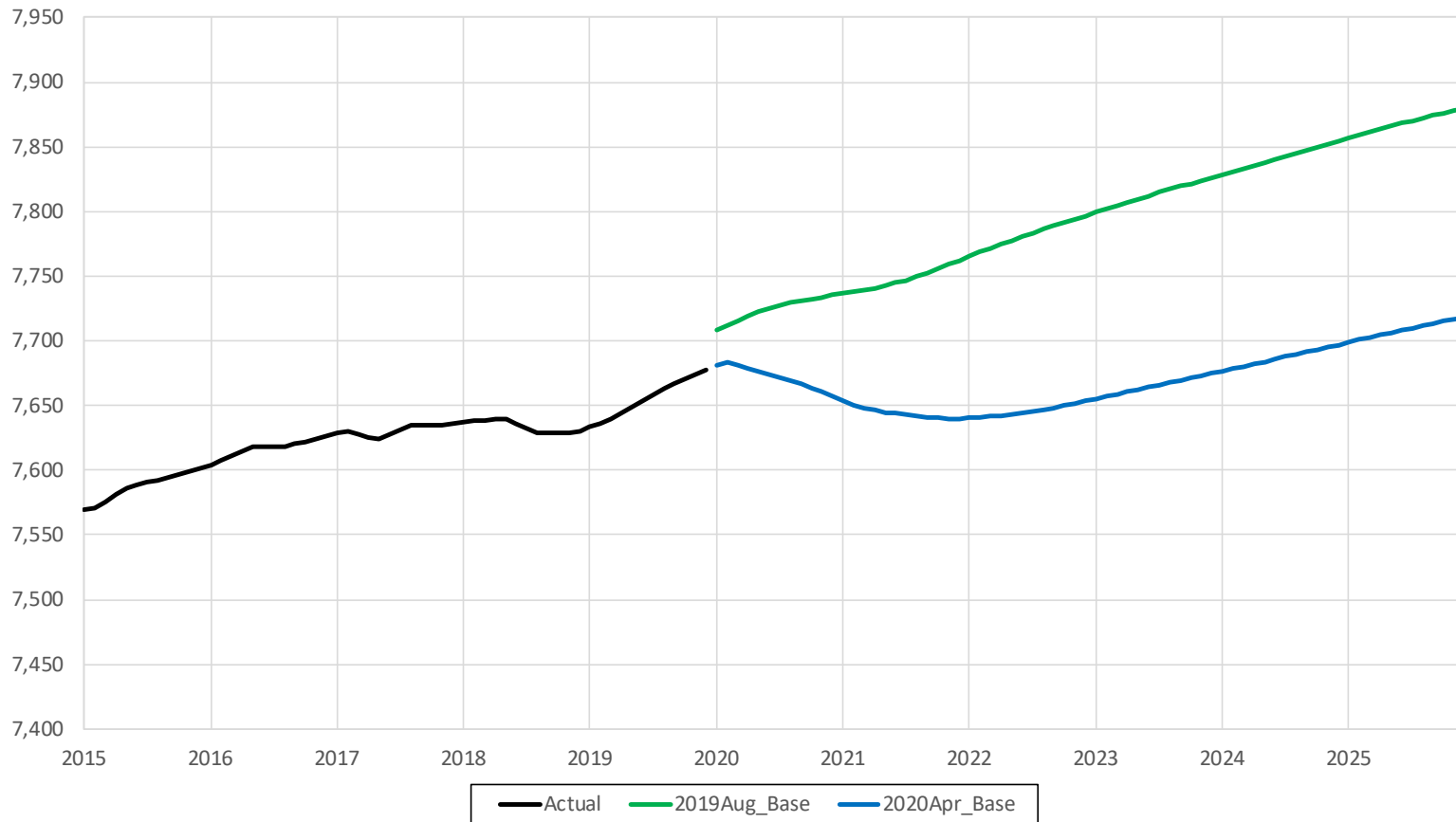
Statewide Households - Actual & Forecast (Thousands)



— Actual — 2019Aug_Base — 2020Apr_Base — 2020Apr_Low — 2020Apr_High

Data from Moody's Analytics, August 2019 and April 2020

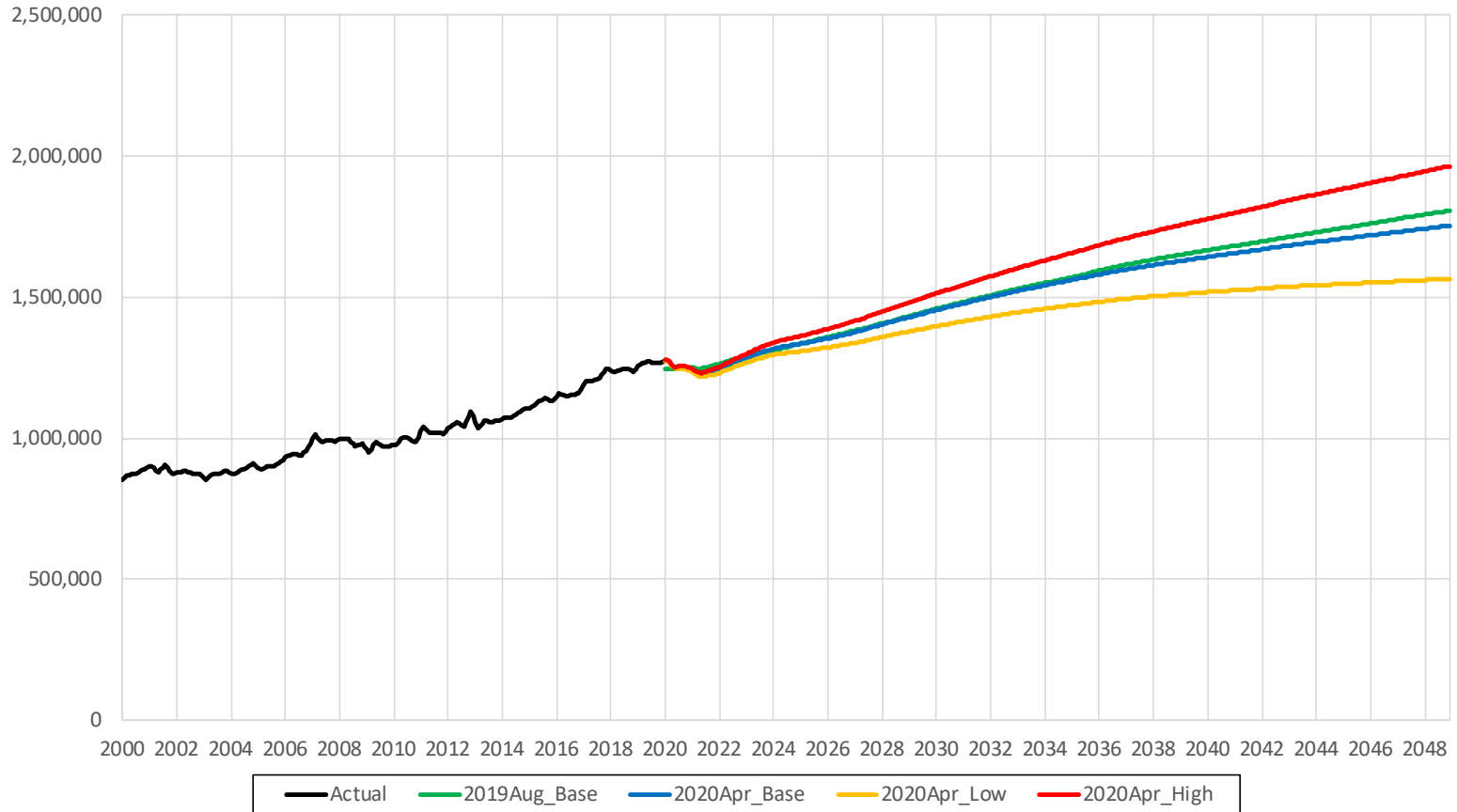
Statewide Households - Actual & Forecast (Thousands)



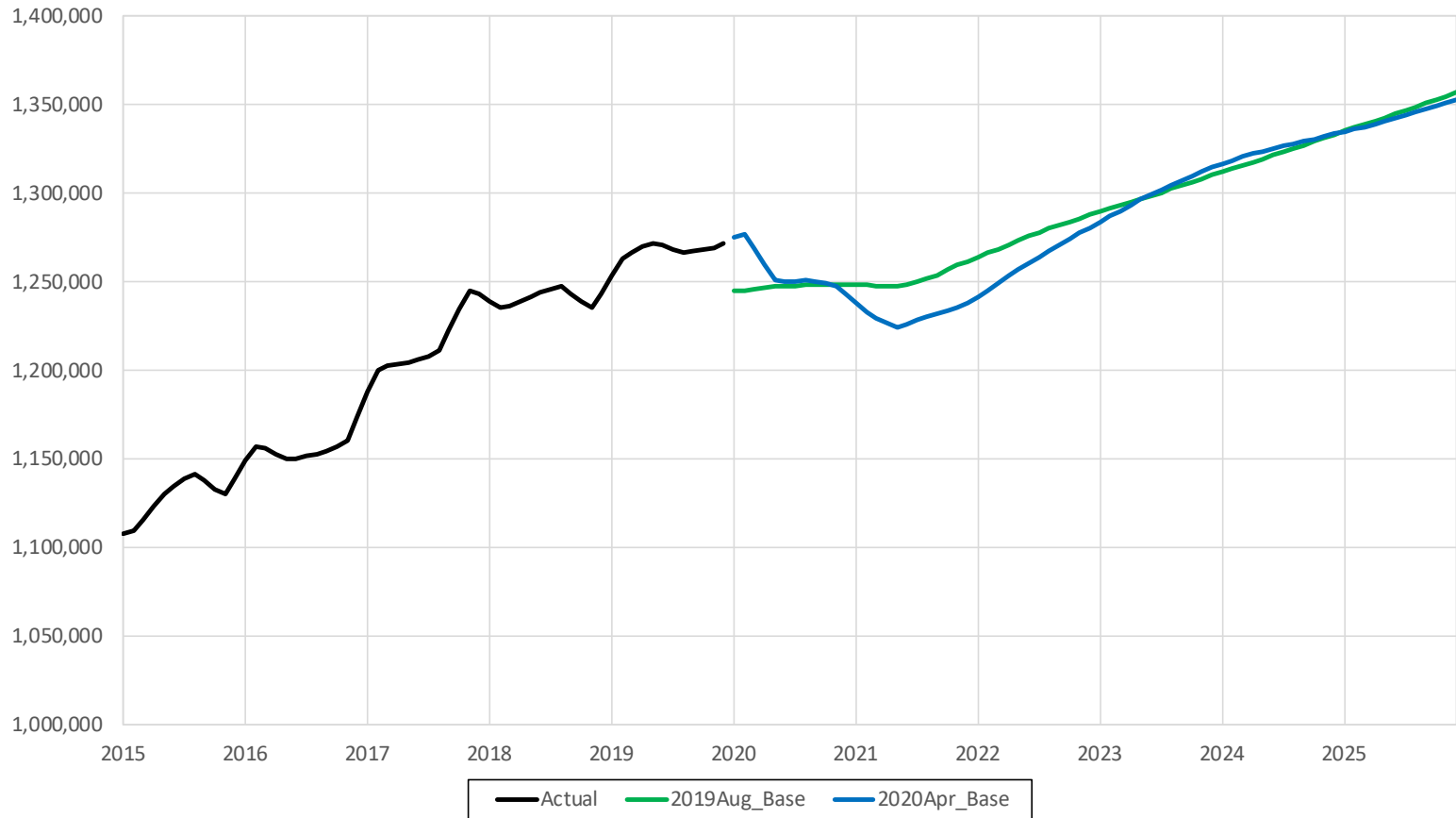
— Actual — 2019Aug_Base — 2020Apr_Base

Data from Moody's Analytics, August 2019 and April 2020

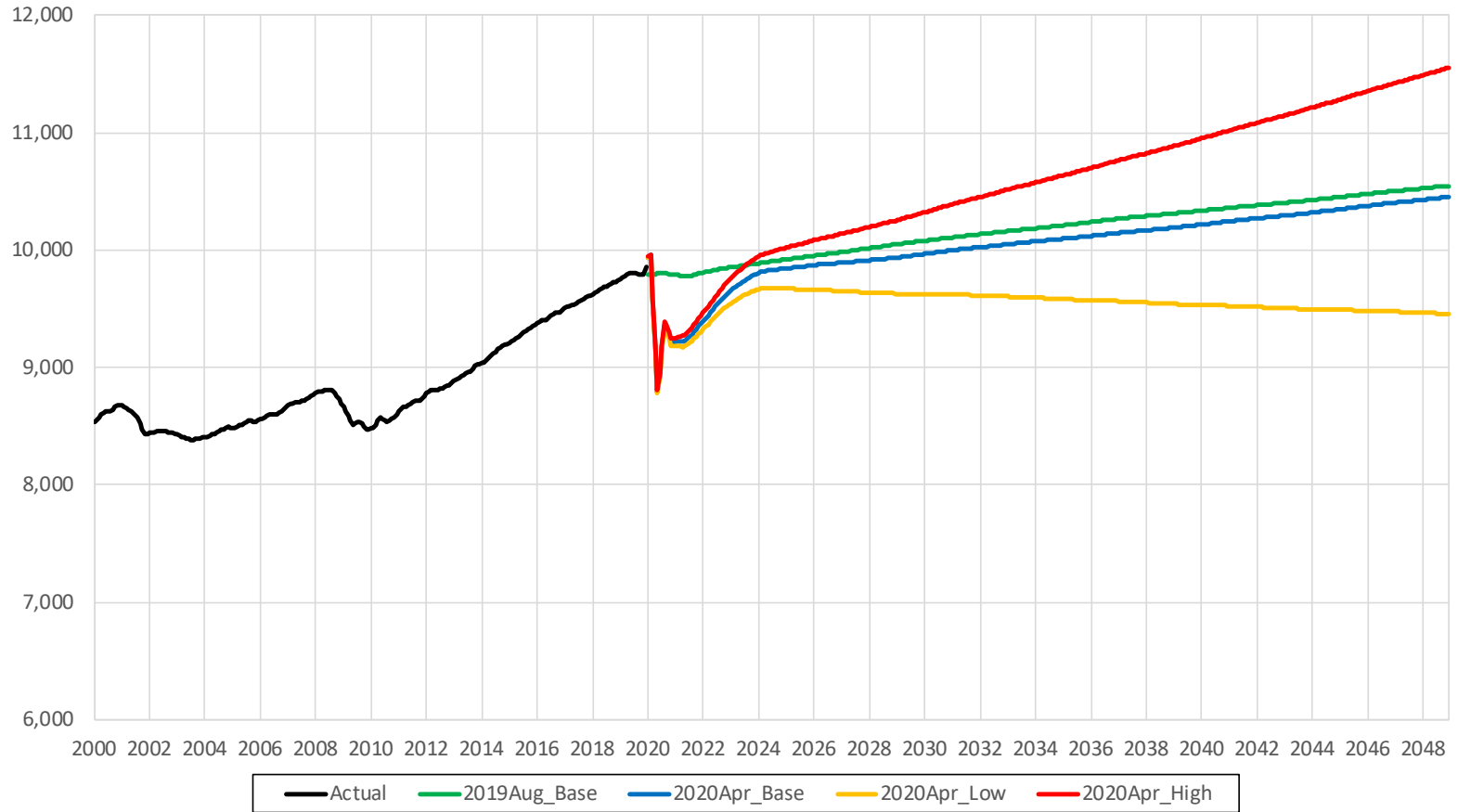
Statewide Real Income - Actual & Forecast (2012 \$M)



Statewide Real Income - Actual & Forecast (2012 \$M)



Statewide Employment - Actual & Forecast (Thousands)

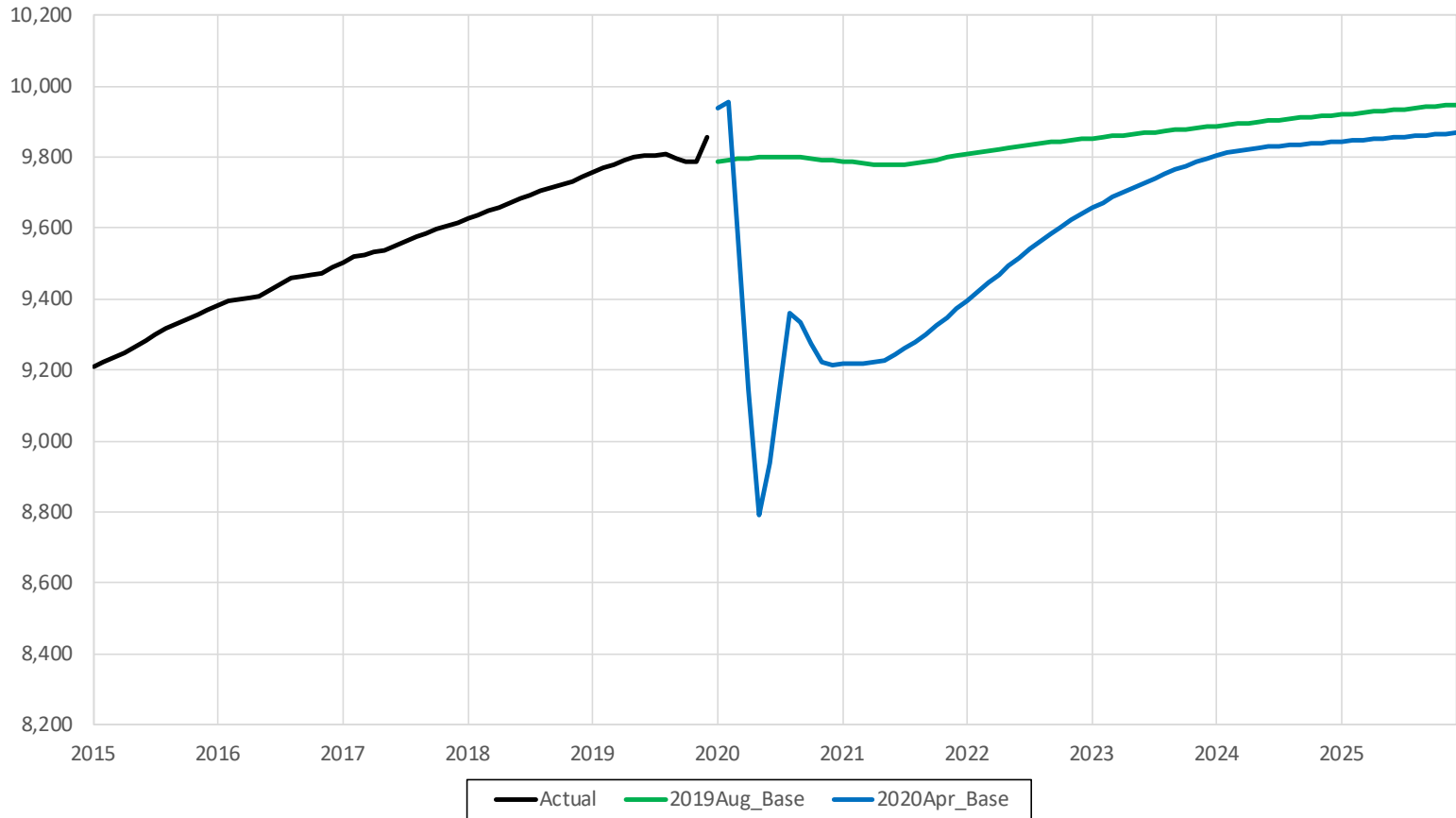


— Actual — 2019Aug_Base — 2020Apr_Base — 2020Apr_Low — 2020Apr_High

Data from Moody's Analytics, August 2019 and April 2020

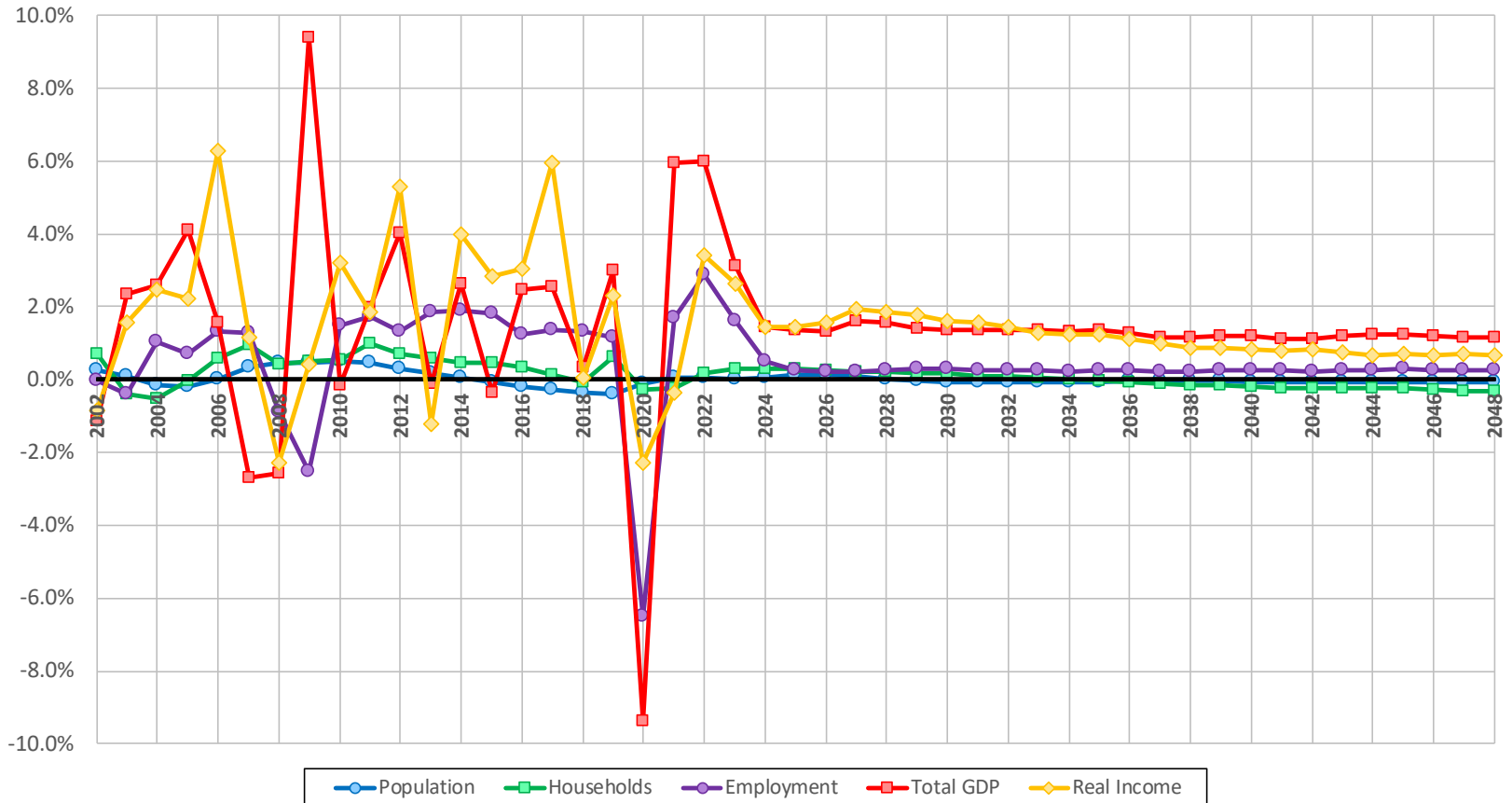


Statewide Employment - Actual & Forecast (Thousands)



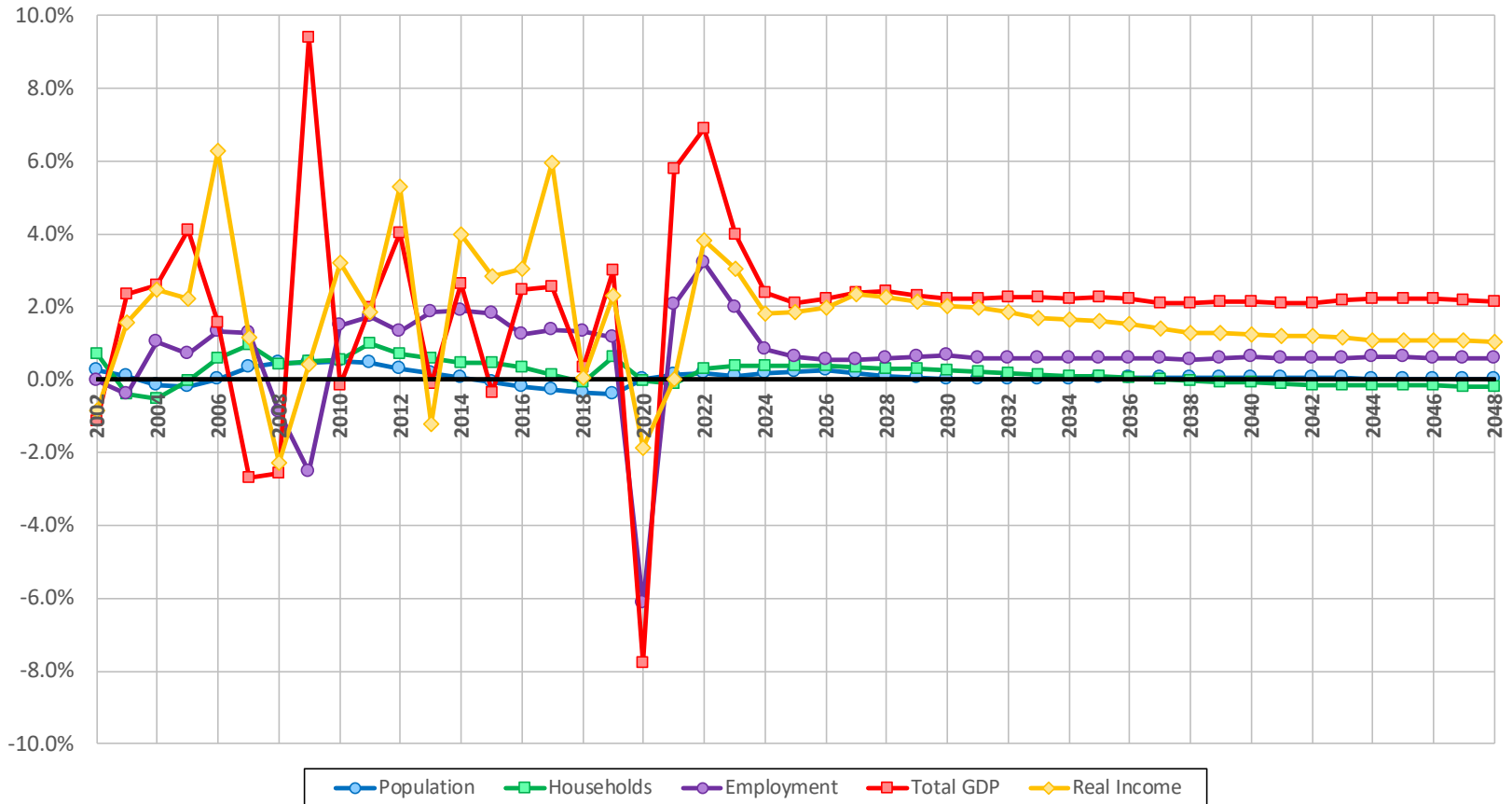
Data from Moody's Analytics, August 2019 and April 2020

Growth Rates for Selected Economic Indices - Statewide Base Forecast



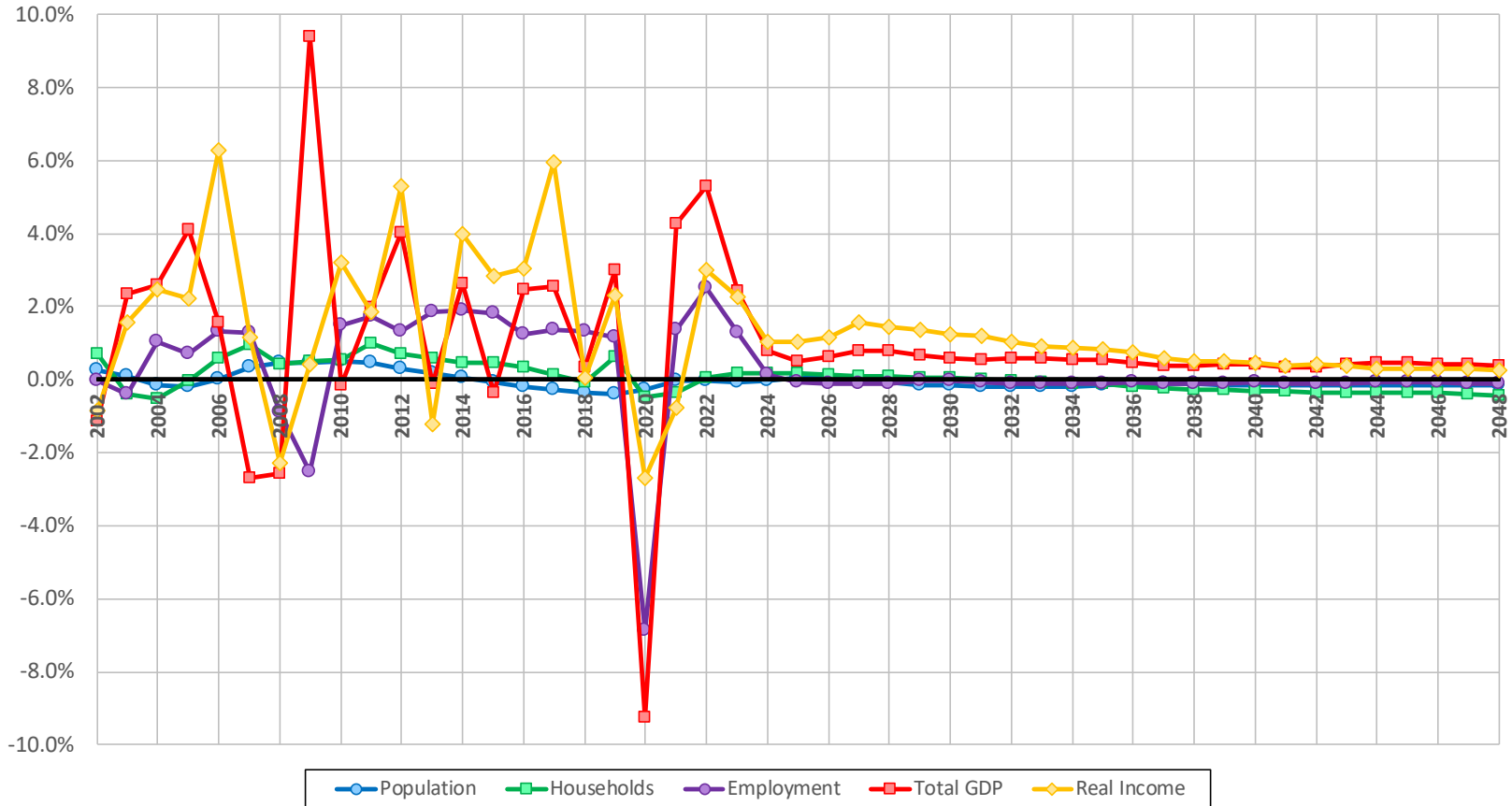
Data from Moody's Analytics, April 2020

Growth Rates for Selected Economic Indices - Statewide High Forecast



Data from Moody's Analytics, April 2020

Growth Rates for Selected Economic Indices - Statewide Low Forecast



Data from Moody's Analytics, April 2020

Next Steps

- **NYISO Operations and Demand Forecasting Team continue to monitor and assess the impacts of the COVID-19 shutdowns**
 - Track economic forecasts and consult with Transmission Owners on sector impacts
- **Mid-Year Forecast Update:**
 - Update Baseline Energy Forecast with Peak Considerations (June & July)
- **Forecasting system updates for Day-Ahead and Real Time (in-day) forecasts**

Questions and Discussion

Our mission, in collaboration with our stakeholders, is to serve the public interest and provide benefit to consumers by:

- Maintaining and enhancing regional reliability
- Operating open, fair and competitive wholesale electricity markets
- Planning the power system for the future
- Providing factual information to policymakers, stakeholders and investors in the power system

