

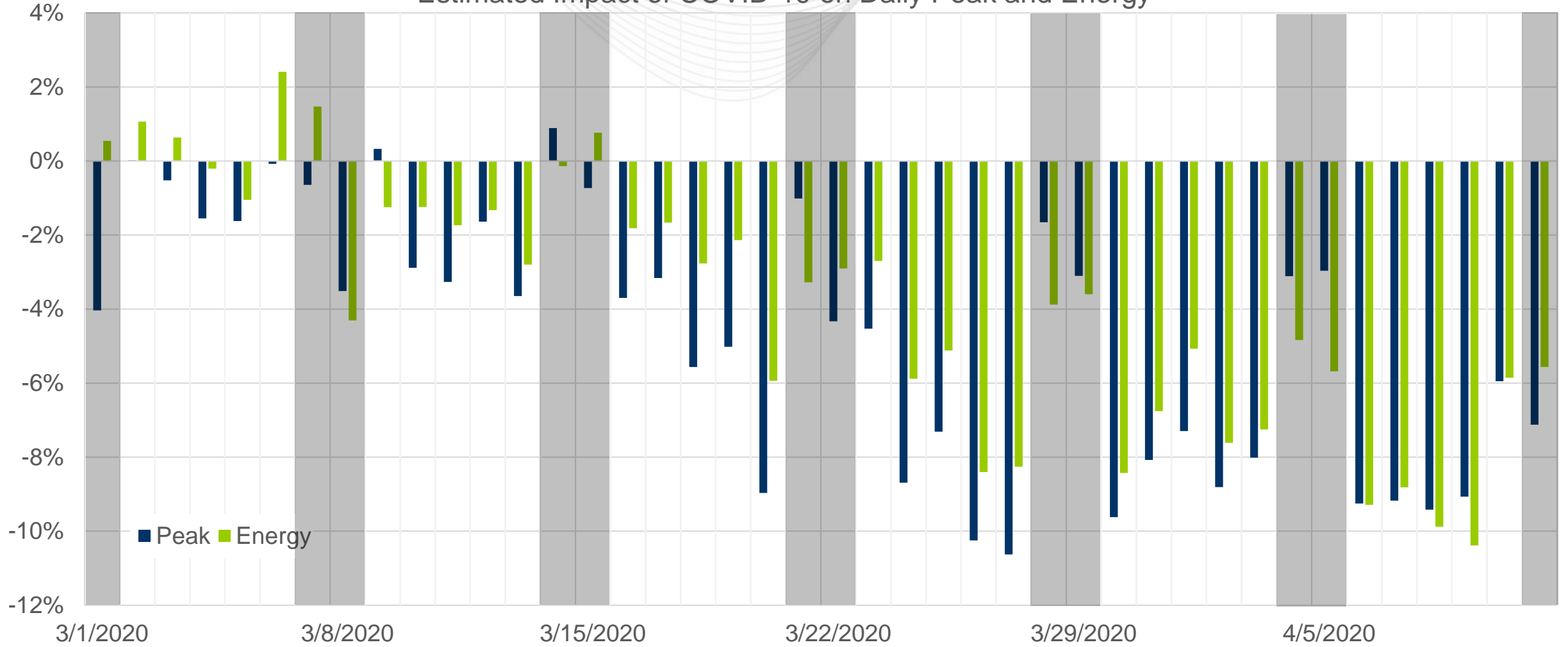
COVID-19 Update on Recent Load Impacts

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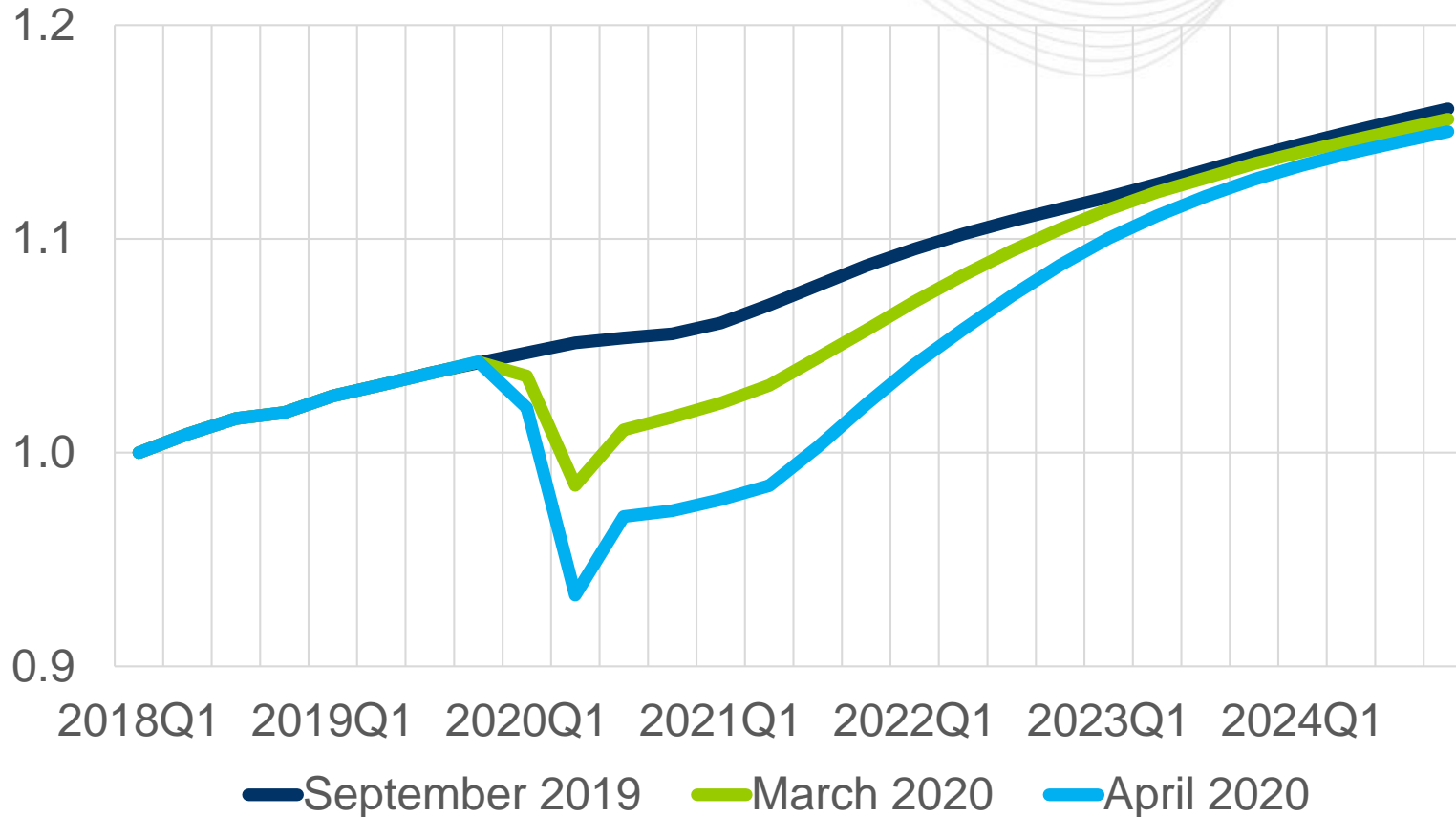
- For days with which there is complete data available (through 4/8), solve the long-term load forecast model with actual weather conditions
 - Assume average behind the meter solar production based on time of year
- For remaining days, impute a forecast value based on looking at daily forecast distributions and daily weather.
- See Appendix for more information on these methods.

Estimated Impact of COVID-19 on Daily Peak and Energy



- Impact of COVID on load
 - On weekdays last week, peak came in on average 8-9% lower (~7,500 MW) than what we would have anticipated.
 - The largest impacts thus far were around 10-11% on March 26th and 27th (~9,500 MW).
 - Energy has tended to be less affected, with the average weekday reduction since mid March being 7% (~140 GWH per day) compared with 8% on peak.
 - Weekends seem to have been impacted by less (~2-4%).

U.S. Real GDP (2018Q1 = 1.0)



- Economic forecast has been revised downward since the vintage used in the 2020 Load Forecast
- Still evolving situation. March was first to significantly reflect COVID19 impacts and April was revised down even further.
- Economic rebound/recovery will be dependent on progression of COVID cases as well as medical advancements such as a vaccine.
- Potential full recovery by mid 2023

**Forecasts were released 9/9/2019, 3/27/2020, and 4/10/2020*

- Load Analysis Subcommittee Meeting on May 5
 - Likely Topics
 - Continued update on evolving load impact
 - Load forecast using updated economics
 - Stakeholder presentations on their experience with COVID19
- Continued updates to Planning Committee

Appendix

1. Solve the long-term load forecast model for each day using actual weather conditions.* This provides an estimate of what the load would have been for each day without any COVID-19 related actions.
2. Compute the MW difference between the actual load on each day and the estimated load under actual weather conditions computed in Step 1.
3. Divide the result from Step 2 by the result from Step 1 to compute the estimated impact of COVID-19 on load.

* - Actual behind the meter solar production data is not yet available so the model assumes average behind the meter solar production based on time of year.

1. Estimated load for April 2 from forecast model assuming actual weather conditions = 90,873 MW
2. Average behind the meter solar adjustment for April 2 = 1,049 MW
3. Actual load on April 2 = 82,867 MW
4. Estimated MW impact of COVID-19 measures = -8,006MW
5. Estimated percent impact of COVID-19 measures = $-8,006/90,873$
= -8.8%

- Long-term forecast model produces a daily load distribution for each calendar day based on a range of historical weather patterns.
- For each calendar day, we computed a “best fit” curve that relates PJM load to an RTO-wide average daily temperature.
- The actual weather for each day was fitted to the curve to produce the expected load given knowledge of actual weather.
- The difference between the actual load and the estimated load given the actual weather provides an estimated percent impact of COVID-19 measures.