



# IMM Quarterly Markets Performance Report

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*Summer 2021 Report Highlights*  
*June 2021 – September 2021 outcomes*

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# Summary for Summer 2021

- Wholesale market costs totaled \$2.19bn, a 48% increase (up \$0.71bn) on Summer 2020 costs of \$1.48bn
  - Year-over-year increase large because Summer 2020 saw historically low natural gas prices as a result of warmer weather and reduced consumption due to the economic shutdown associated with COVID-19
- Higher energy costs driven by a large increase in natural gas prices and slightly higher loads
  - Avg. day-ahead and real-time Hub LMPs were \$41.29/MWh and \$40.22/MWh; 84% and 79% higher than Summer 2020, respectively
  - Avg. natural gas price was \$3.39/MMBtu, up 109% on the Summer 2020 price of \$1.62/MMBtu
  - Avg. hourly load of  $\approx 15,298$  MW was up by 0.3% ( $\approx 320$  MW) on Summer 2020, driven by increased humidity and less BTM solar generation
- Capacity market costs were down by 12% (totaled nearly \$530m, down by \$73m) on Summer 2020
  - Summer 2021 was the first quarter of the FCA 12 commitment period, with clearing prices of \$4.63/kW-month for rest-of-system, compared to an FCA 11 price of \$5.30/kW-month

Seasons: Winter: Dec-Feb Spring: Mar-May **Summer: Jun-Aug** Fall: Sep-Nov

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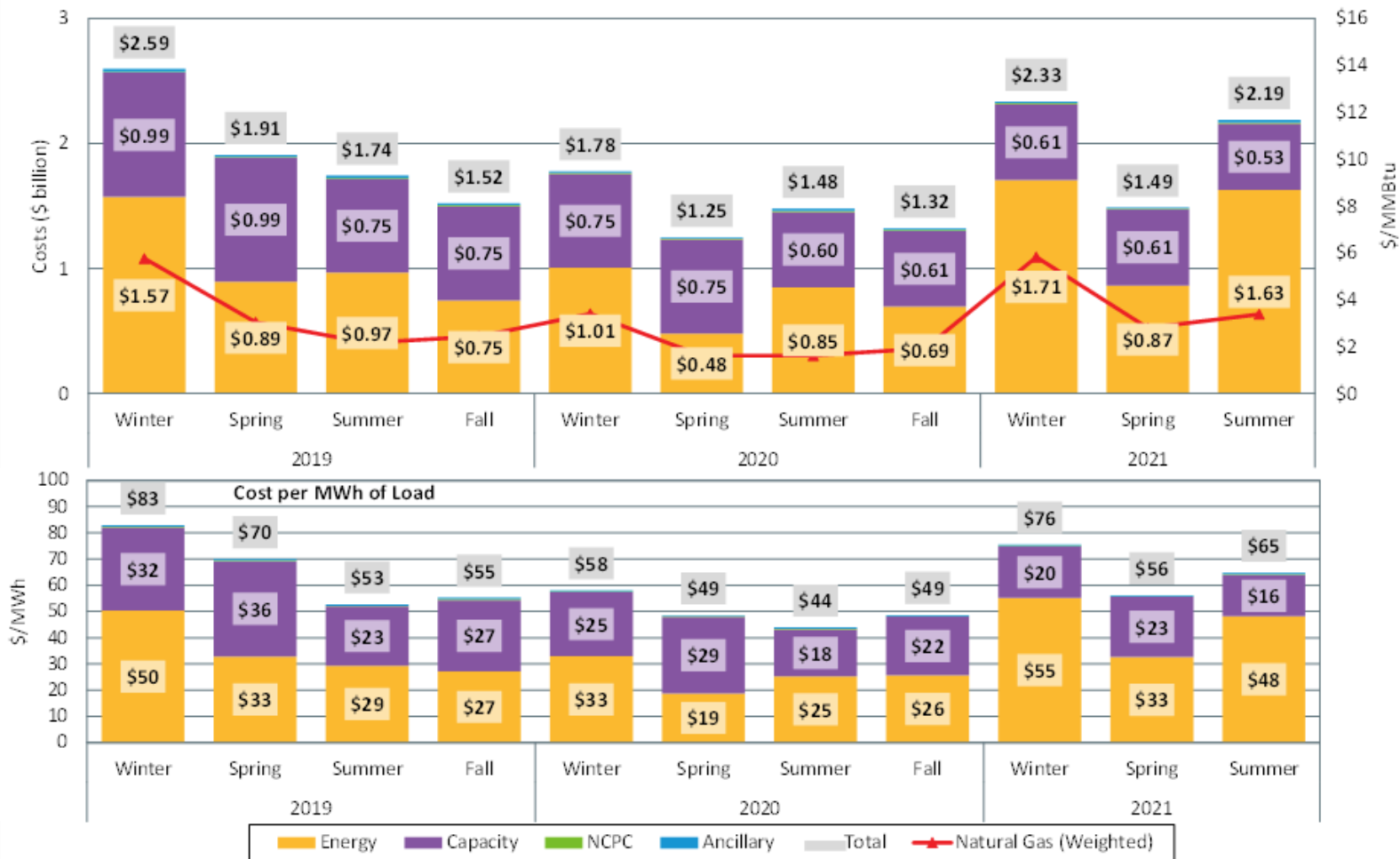
# Summary for Summer 2021 (cont.)

- Gross real-time reserve payments totaled \$9.0m, a 105% increase from \$4.4m in Summer 2020
  - Ten-minute non-spinning reserve (TMNSR) and thirty-minute operating reserve (TMOR) payments increased by \$1.9 million and \$432 thousand, respectively
  - Non-zero TMSR pricing occurred in 386 hours in Summer 2021, down from 506 hours in Summer 2020
  - However, the average non-zero spinning reserve price increased relative to Summer 2020, from \$9.81 to \$14.27/MWh
  - Increase was consistent with the higher natural gas and real-time energy prices in Summer 2021
- Total regulation payments were \$7.6m, up by \$1.2m (19%) compared to Summer 2020
  - Average real-time Hub LMPs were significantly higher in Summer 2021 compared to the previous summer, leading to a \$1 million increase in regulation capacity payments
- Net Commitment Period Compensation (NCPC) costs totaled \$10.0m, up by 44% (by \$3.1m) on the prior summer
  - Similar to Summer 2020, NCPC costs represented less than 1% of the total energy costs
  - Economic payments made up 77% (\$7.7m) of the total, up by \$2.1m on Summer 2020 costs
    - Economic out-of-merit payments increased by 34%, from \$3.71 million in Summer 2020 to \$4.98 million in Summer 2021
  - Local reliability payments were \$1.6m, an increase of 72% on Summer 2020
    - 96% of LSCPR payments were paid out in the day-ahead market with 70% paid out in June to generators in NEMA/Boston or New Hampshire

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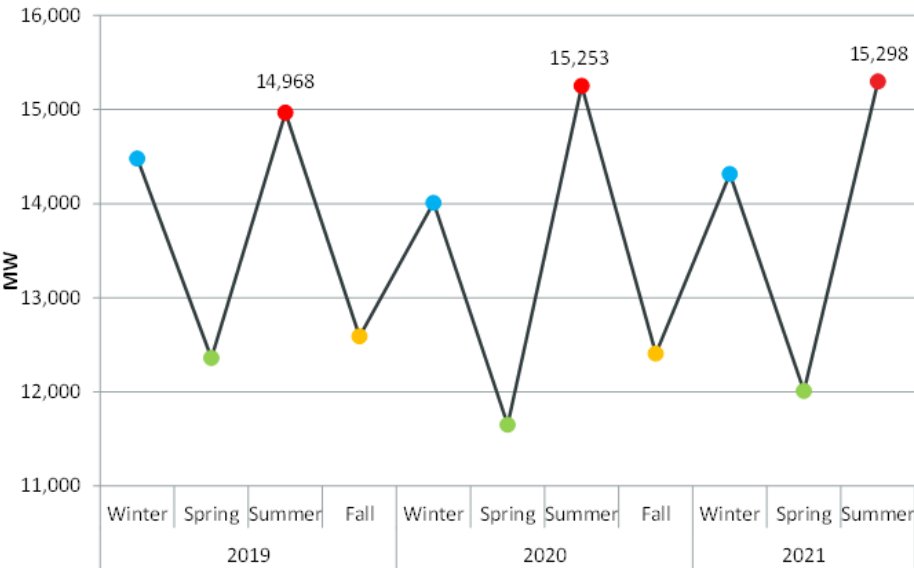
# Wholesale electricity cost up 48% on prior summer driven by higher natural gas prices



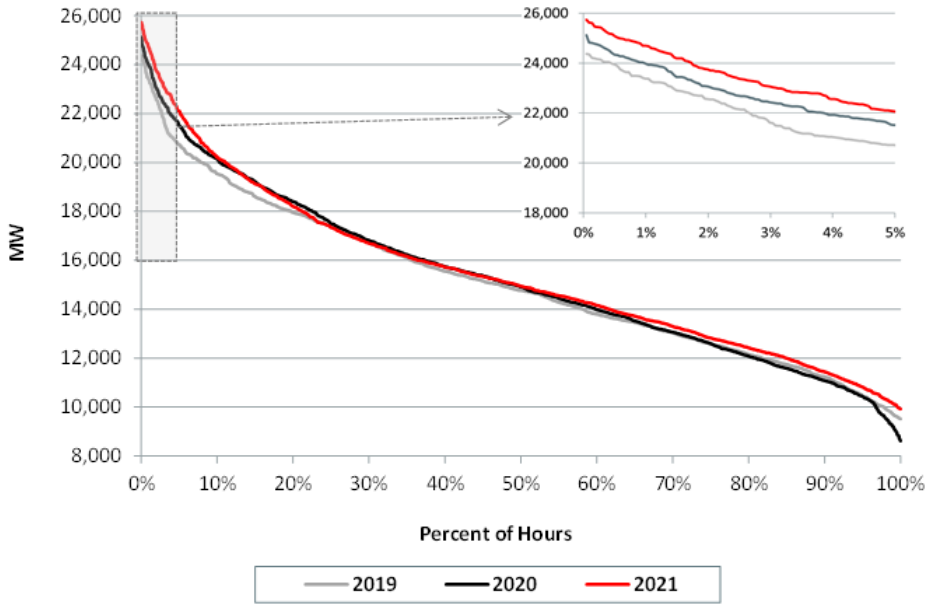
Seasons: Winter: Dec-Feb Spring: Mar-May Summer: Jun-Aug Fall: Sep-Nov

# Despite cooler temperatures, average loads were up slightly, driven by higher humidity

### Average Hourly Load



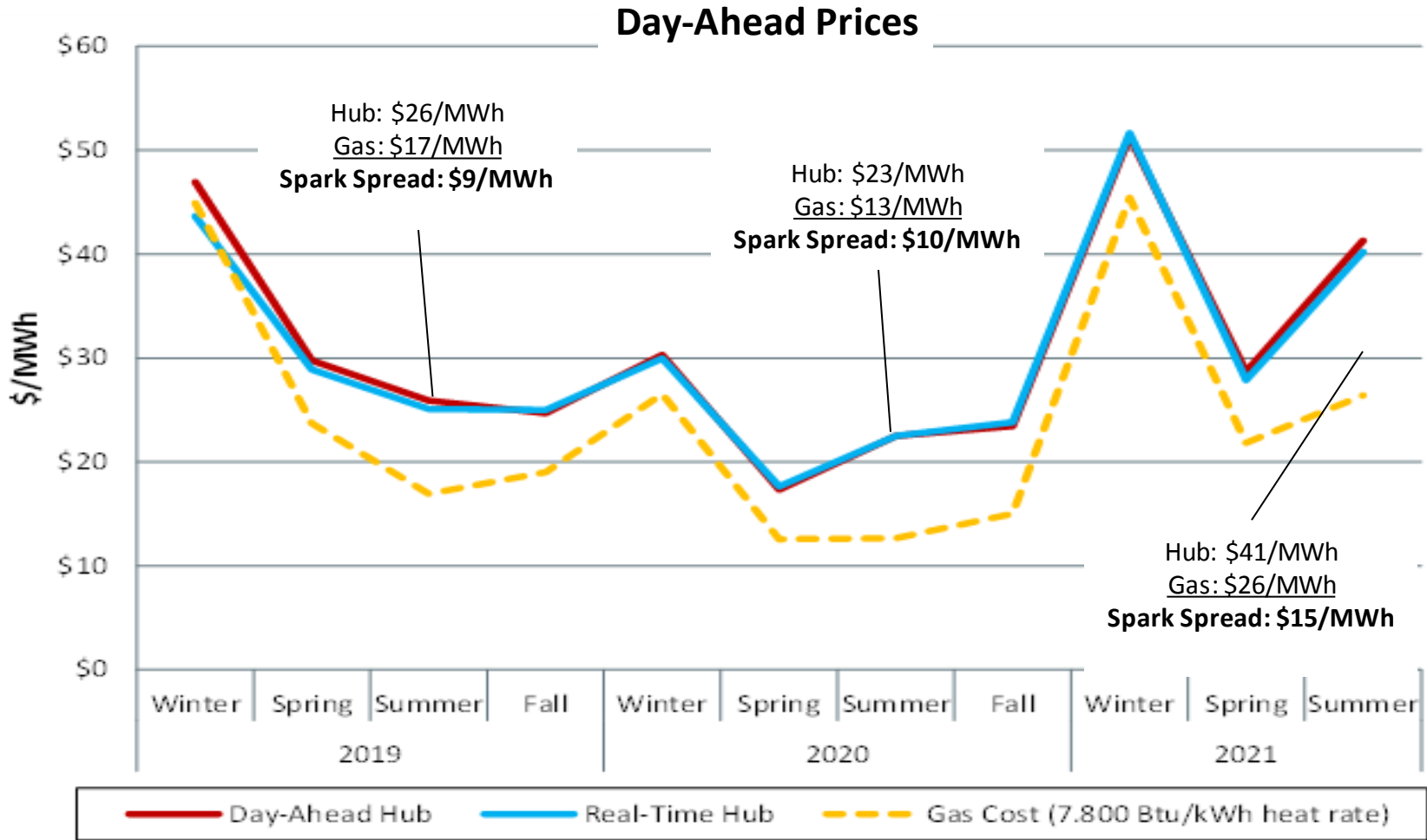
### Load Duration Curves



Seasons: Winter: Dec-Feb    Spring: Mar-May    **Summer: Jun-Aug**    Fall: Sep-Nov



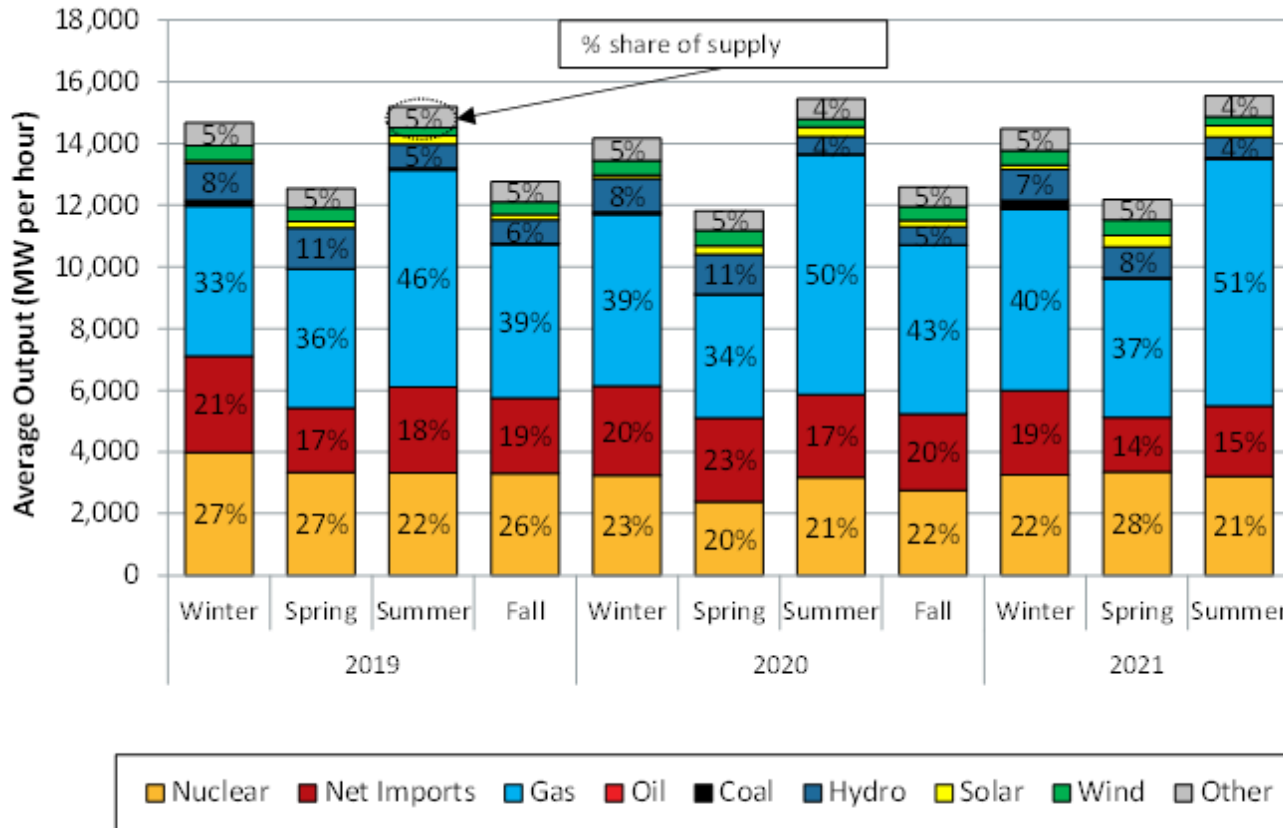
# Higher gas prices drove higher energy prices



Seasons: Winter: Dec-Feb Spring: Mar-May Summer: Jun-Aug Fall: Sep-Nov

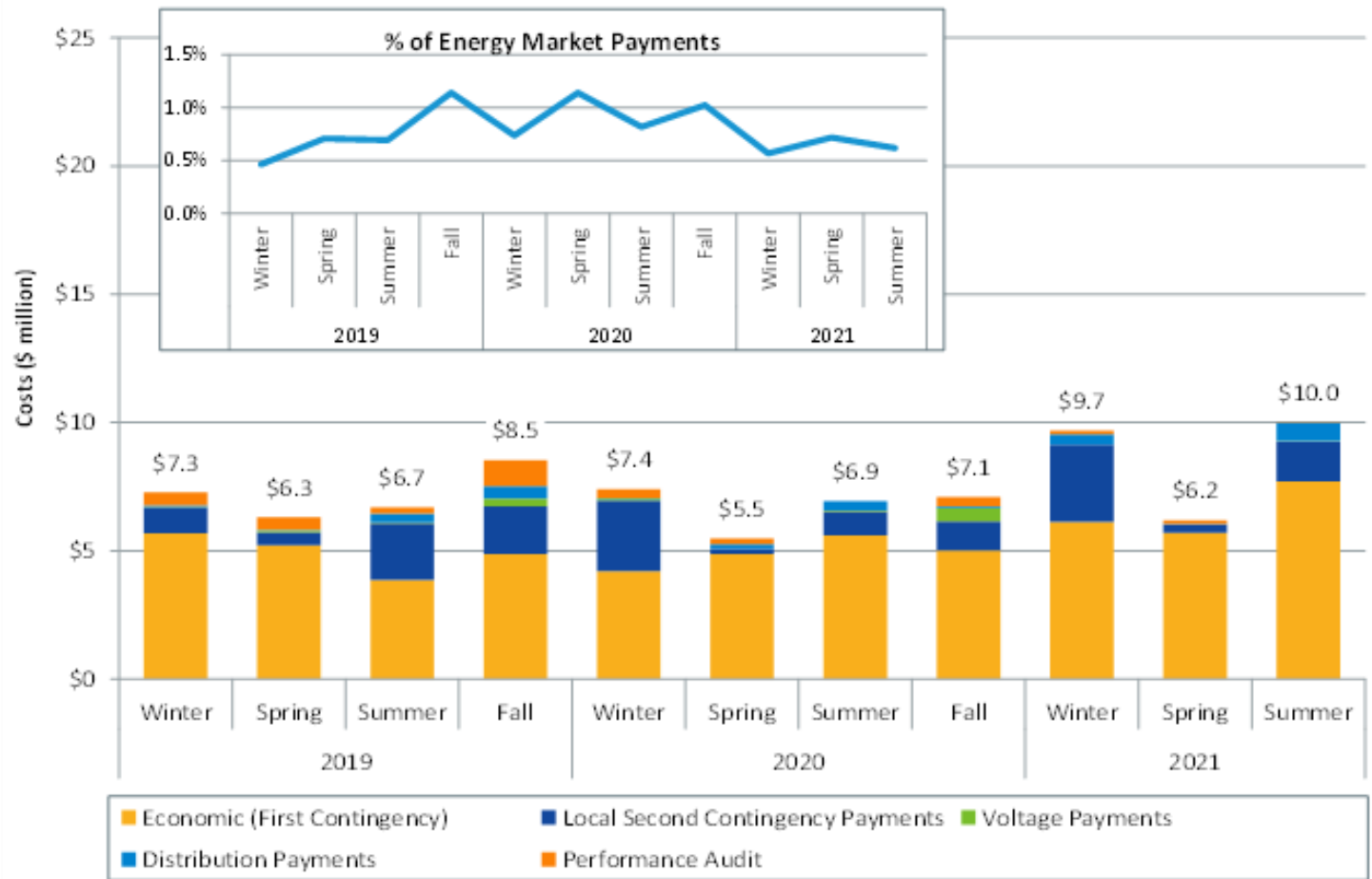
# Increase in gas generation offset a decline in net imports

Share of Electricity Generation by Fuel Type



Seasons: Winter: Dec-Feb Spring: Mar-May Summer: Jun-Aug Fall: Sep-Nov

# NCPC payments up by 44% from Summer 2020

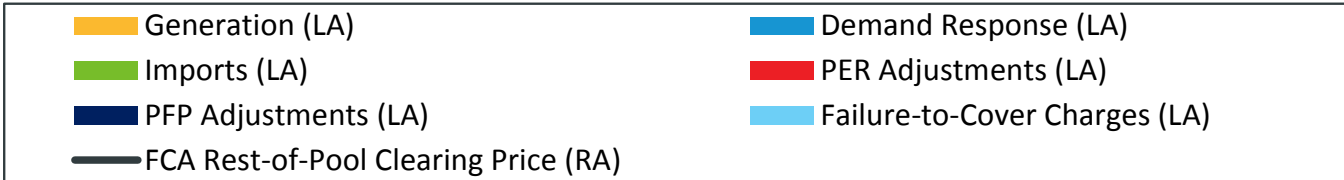
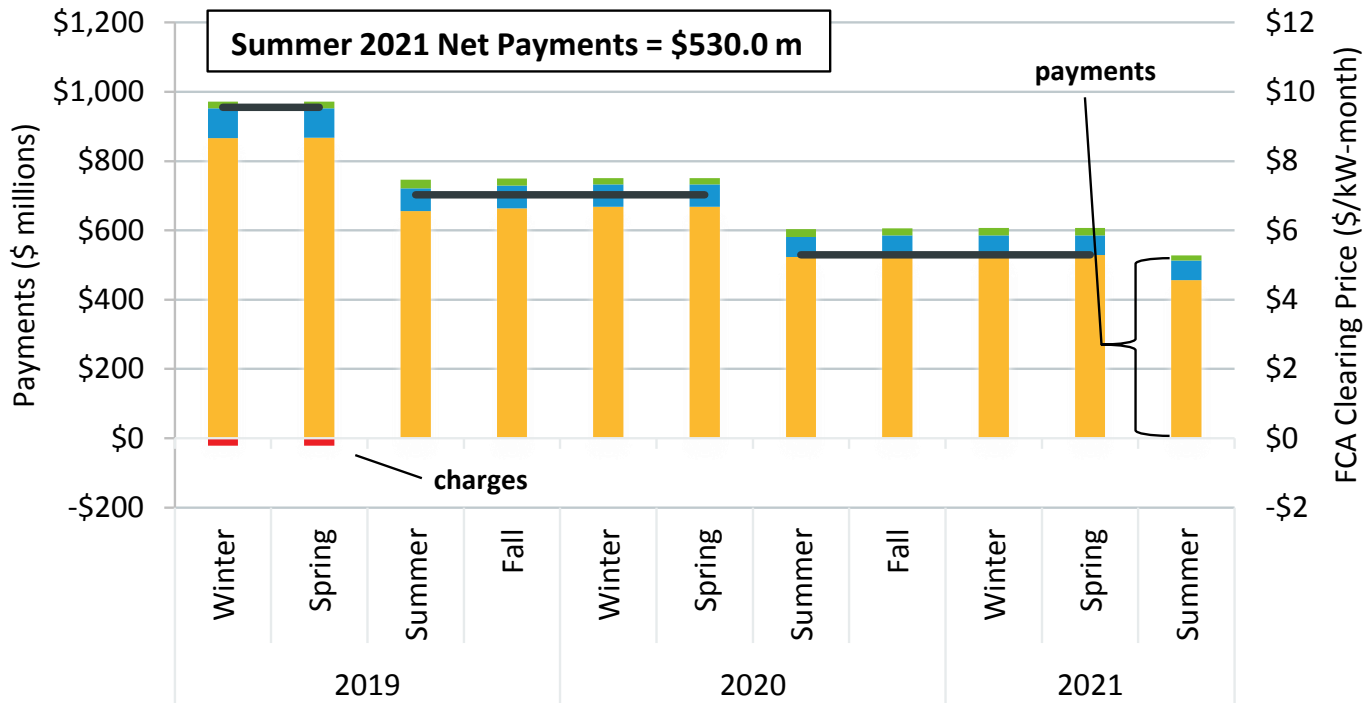


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# First quarter of FCA12; lower clearing prices

FCA 12 prices: \$4.63/kW-month; was 13% lower than the previous year



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# Energy Market Competitiveness

This section of the QMR examines the potential for market power and summarizes mitigation instances

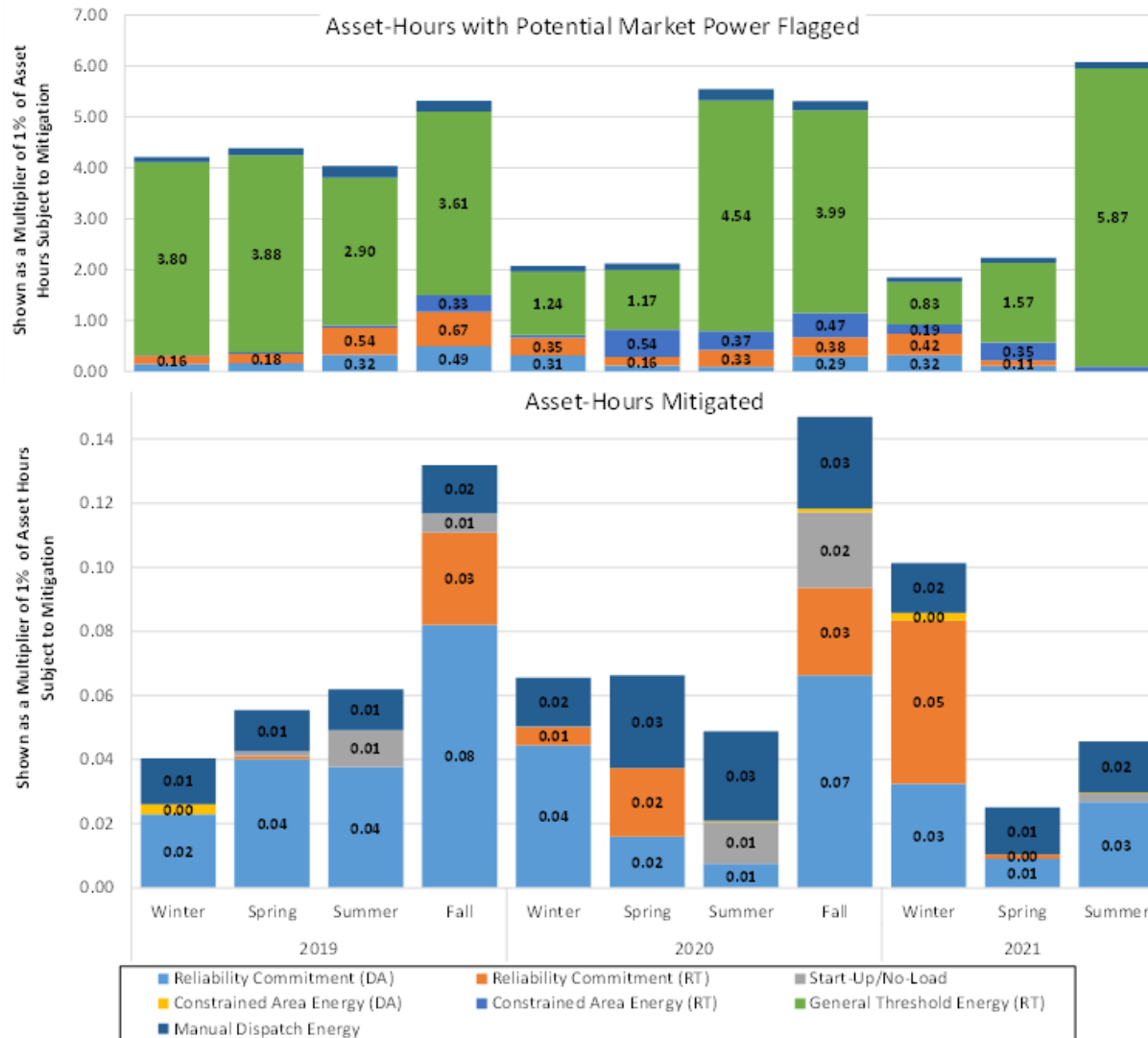
- There was at least one pivotal supplier present in the real-time market for 27% of 5-minute intervals in Summer 2021
- The residual supply index for the real-time market in Summer 2021 was 104.7, indicating that on average, the ISO could meet load and the reserve requirement without energy and reserves from the largest supplier

Residual Supply Index and Intervals with Pivotal Suppliers (Real-Time)

Quarter	RSI	% of Intervals With At Least 1 Pivotal Supplier
Winter 2019	106.3	11%
Spring 2019	107.5	8%
Summer 2019	106.7	18%
Fall 2019	104.8	21%
Winter 2020	108.6	8%
Spring 2020	109.2	8%
Summer 2020	104.8	27%
Fall 2020	105.1	24%
Winter 2021	107.9	8%
Spring 2021	106.6	14%
Summer 2021	104.7	27%

# Market Power Mitigation in the Energy Market

- In general, mitigation occurs very infrequently relative to the structural test failures



# Questions

