

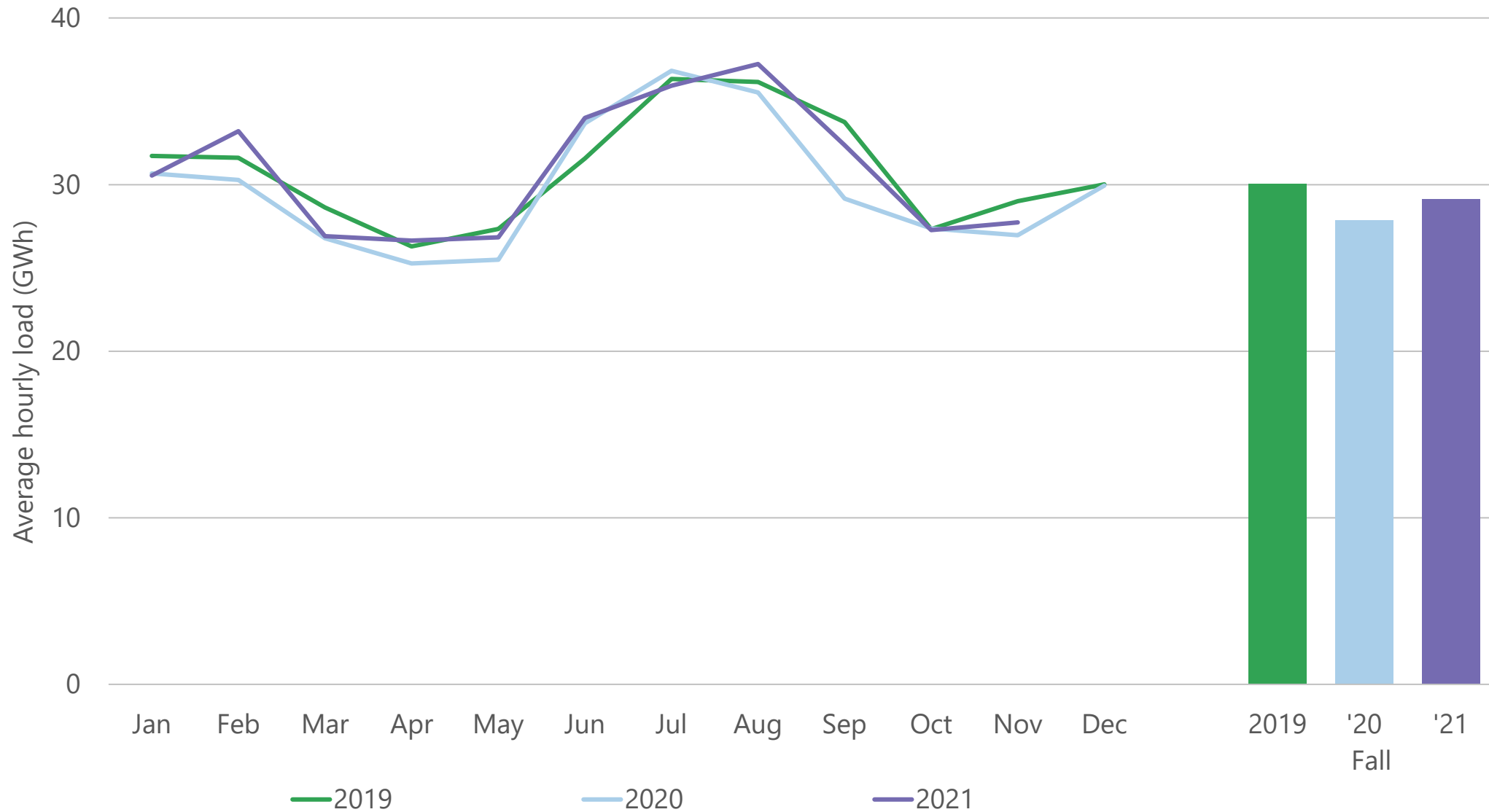
FALL 2021

QUARTERLY REPORT

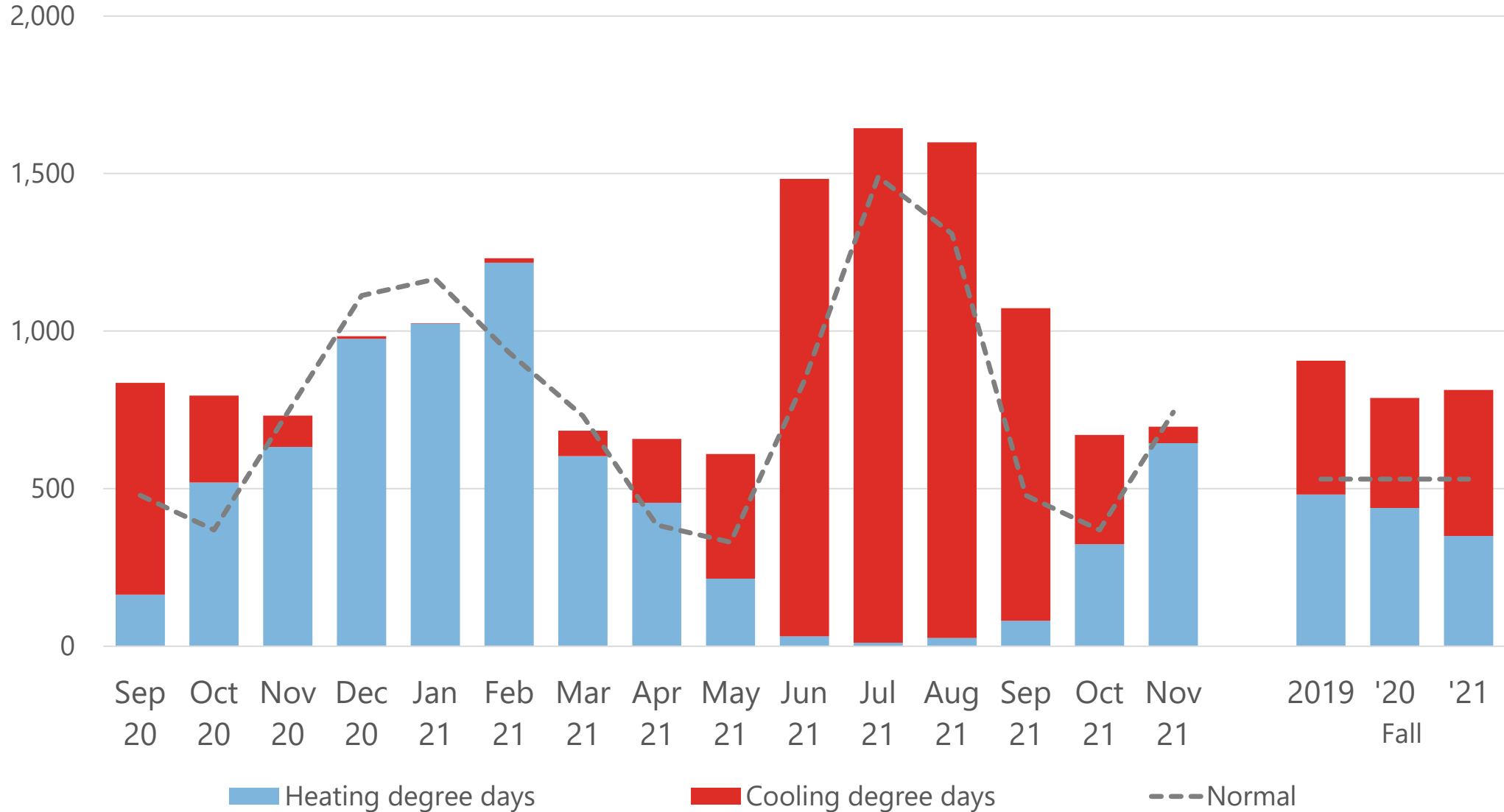
FALL 2021 HIGHLIGHTS

- Wind generation supplied 38 percent of total generation for fall 2021; coal supplied 35 percent of total generation.
- Gas price increased by 143% from \$1.99/MMBtu in fall 2020 to \$4.84/MMBtu in summer 2021. (October \$5.16/MMBtu)
- Electricity prices also increased from fall 2020 to 2021. Day-ahead prices increased from an average of \$18.21/MWh in fall 2020 to \$33.72/MWh in 2021, an increase of 85 percent. Real-time prices increased from an average of \$17.57/MWh in fall 2020 to \$31.27/MWh in 2021, an increase of 78 percent.
- Intervals with a real-time flowgate breach increased from 48 percent of all intervals in fall 2019 to 72 percent in 2021. This increase can primarily be attributed to breaches in market-to-market flowgates.

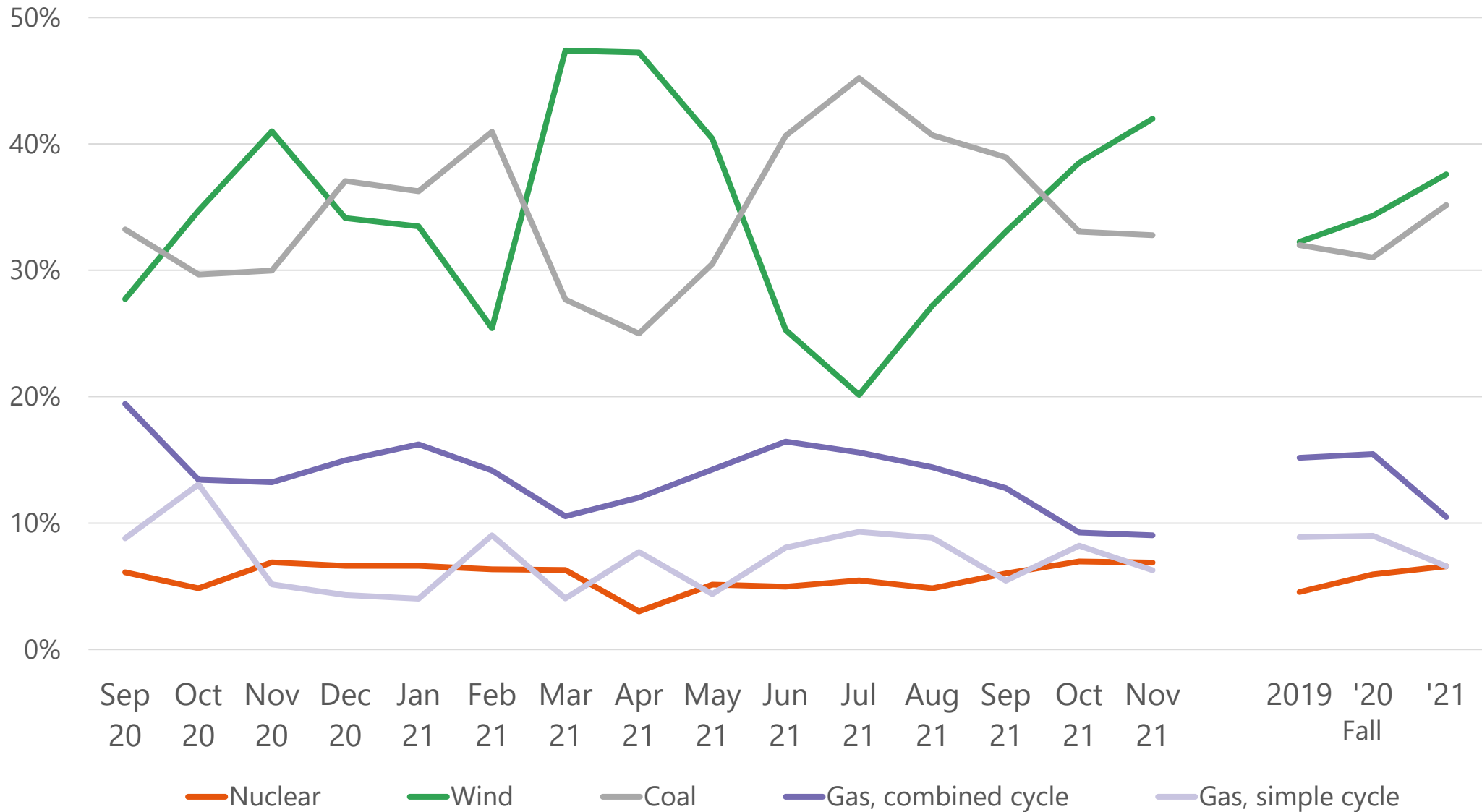
OVERALL LOAD UP SLIGHTLY



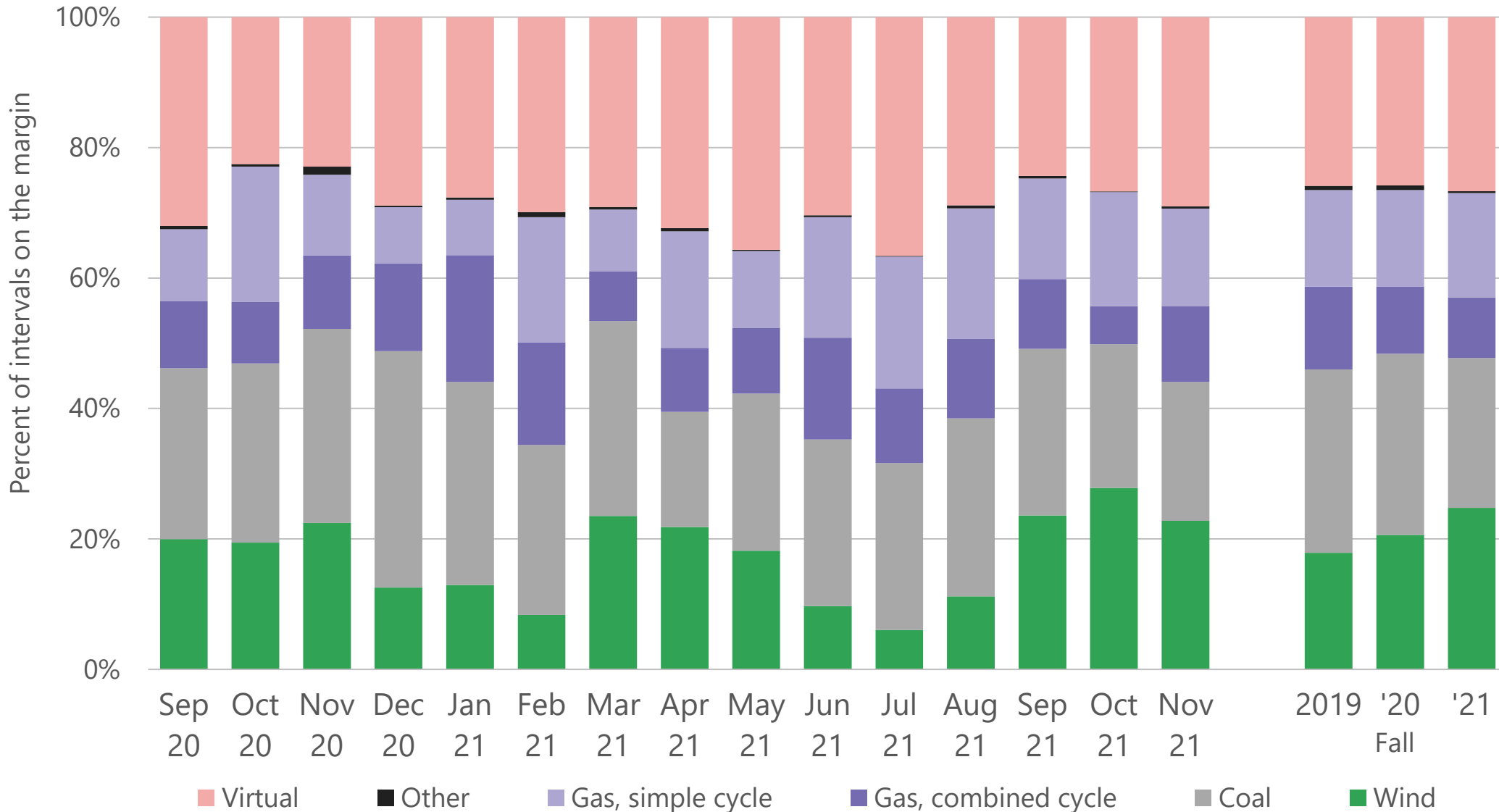
HIGHER DEGREE DAY IMPACT IN FALL 2021



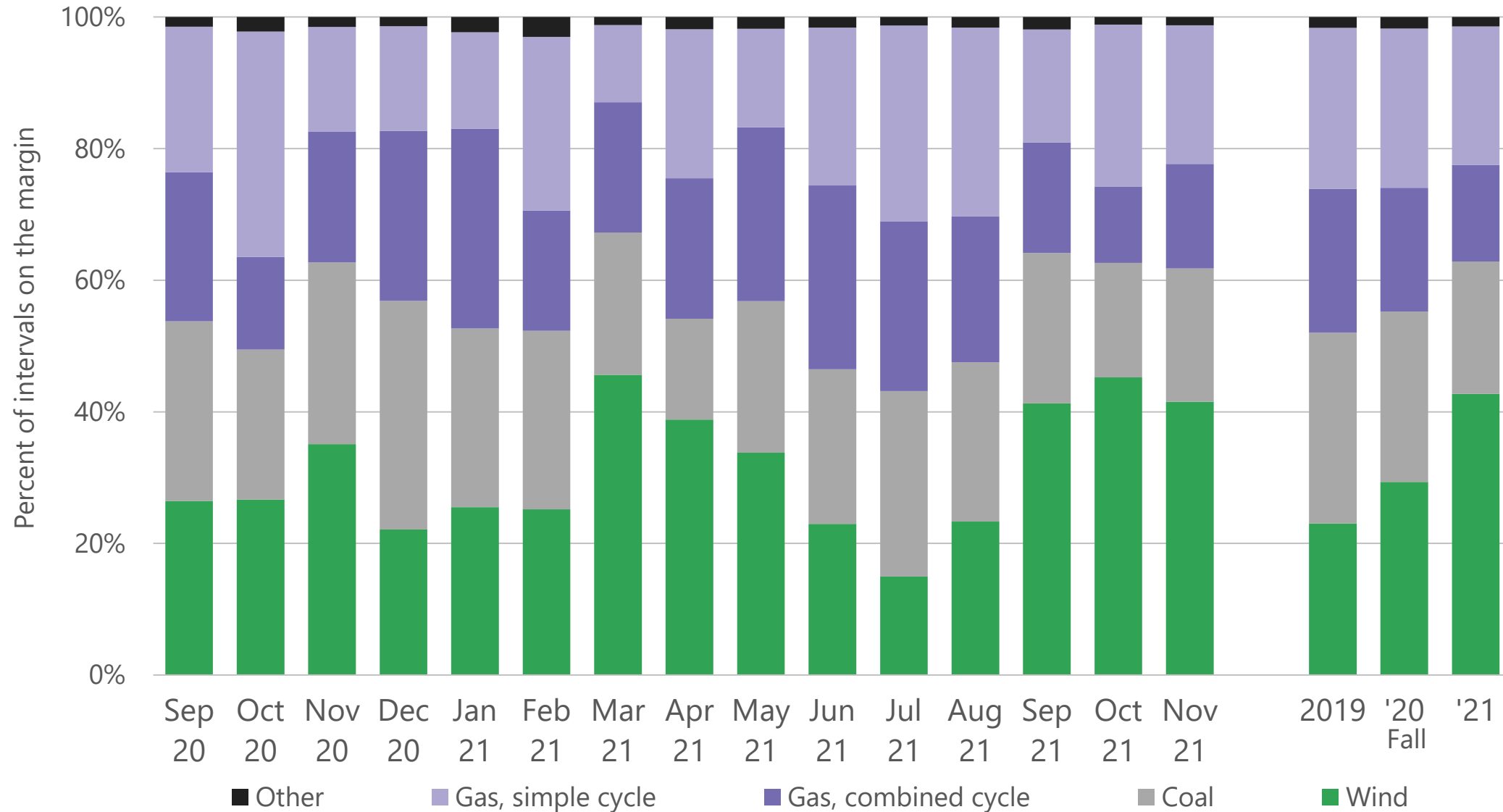
WIND HAD HIGHEST GENERATION BY FUEL TYPE



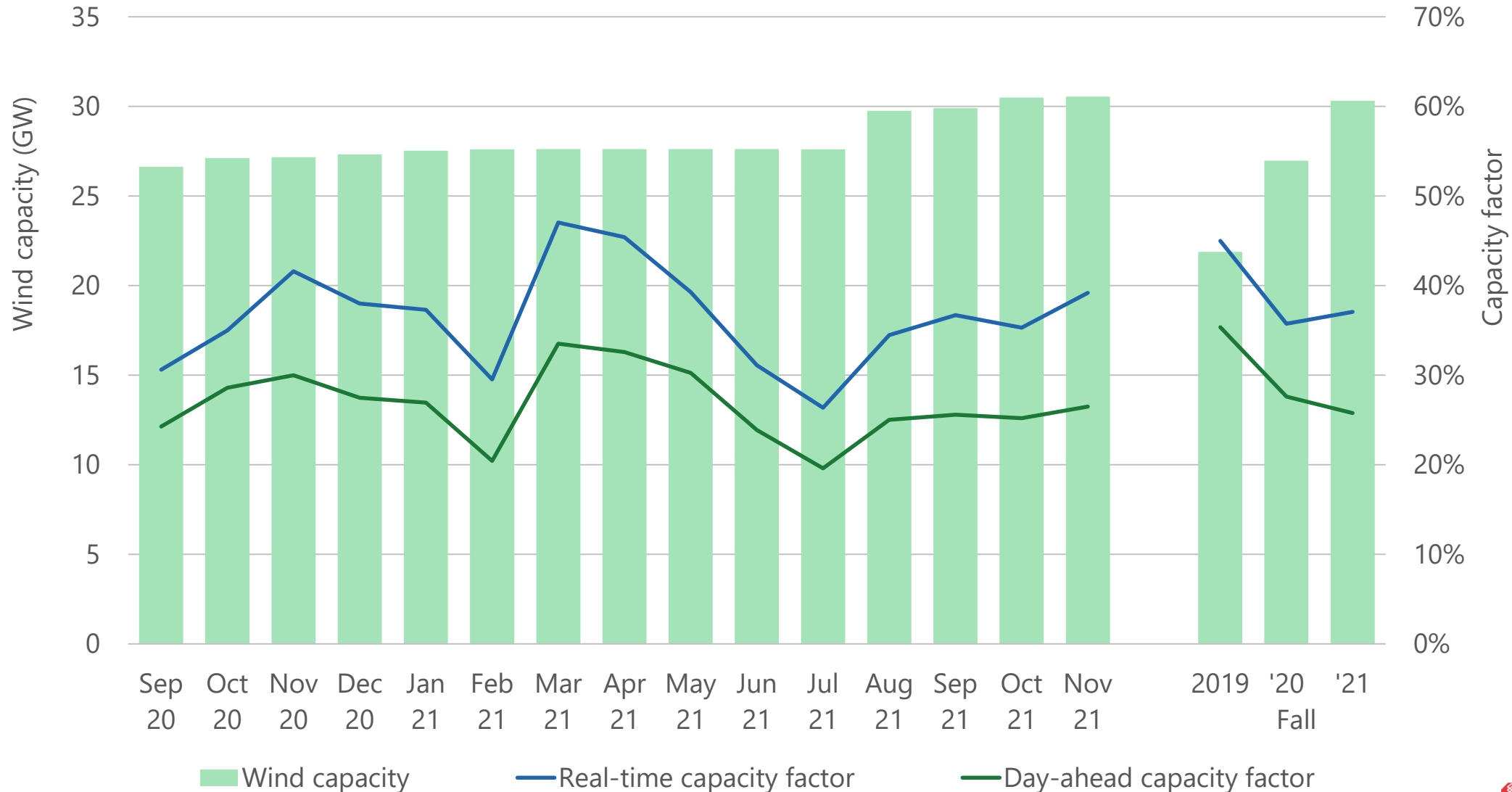
VIRTUALS SET PRICES MOST FREQUENTLY IN DAY-AHEAD



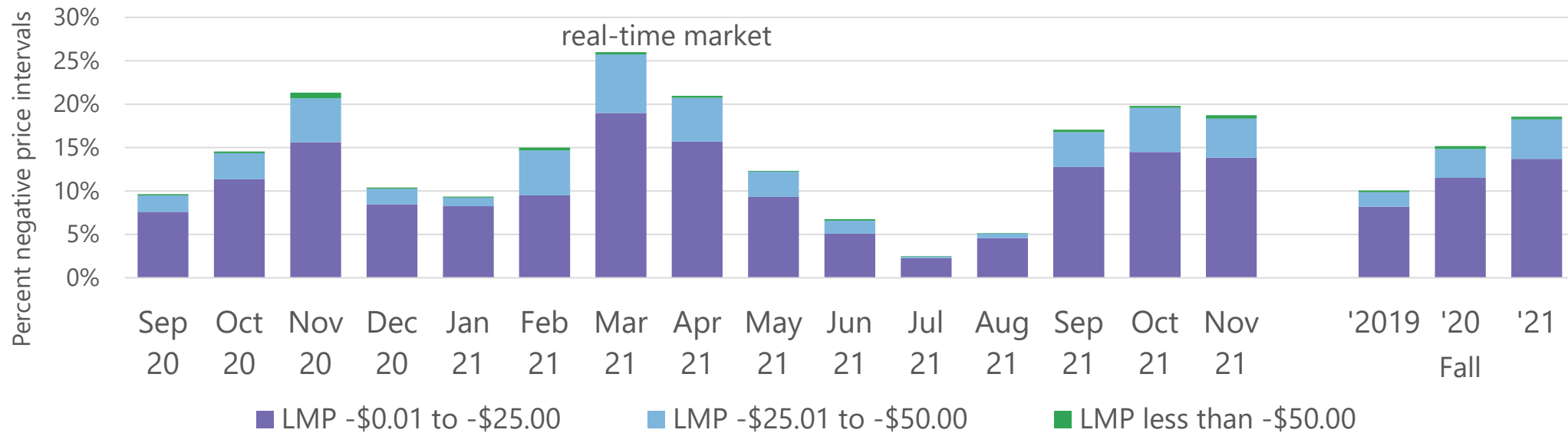
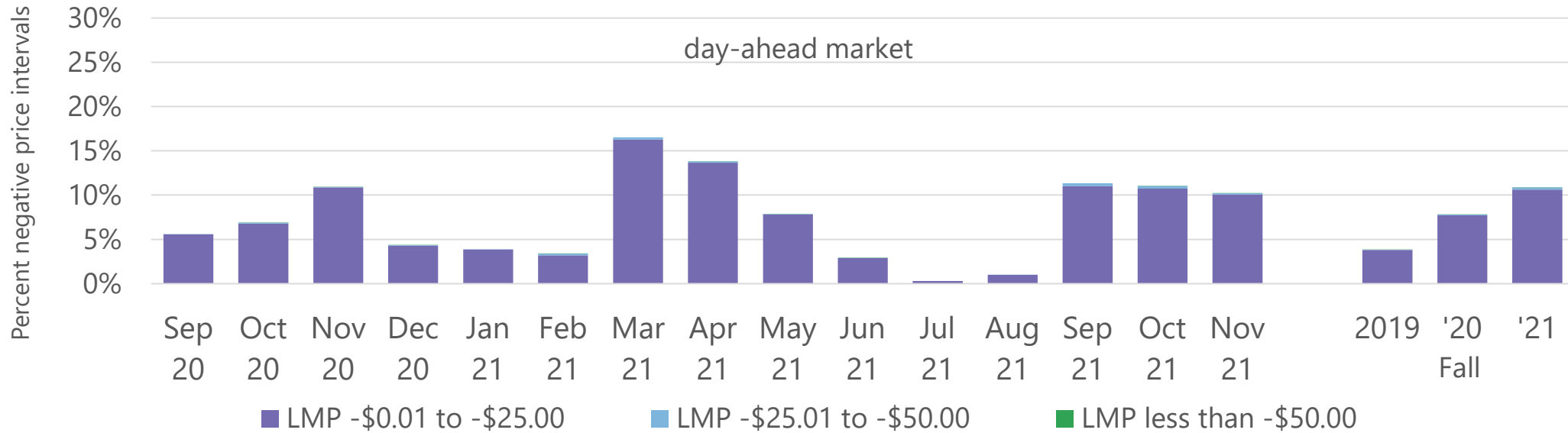
WIND SETS PRICES MOST IN REAL-TIME



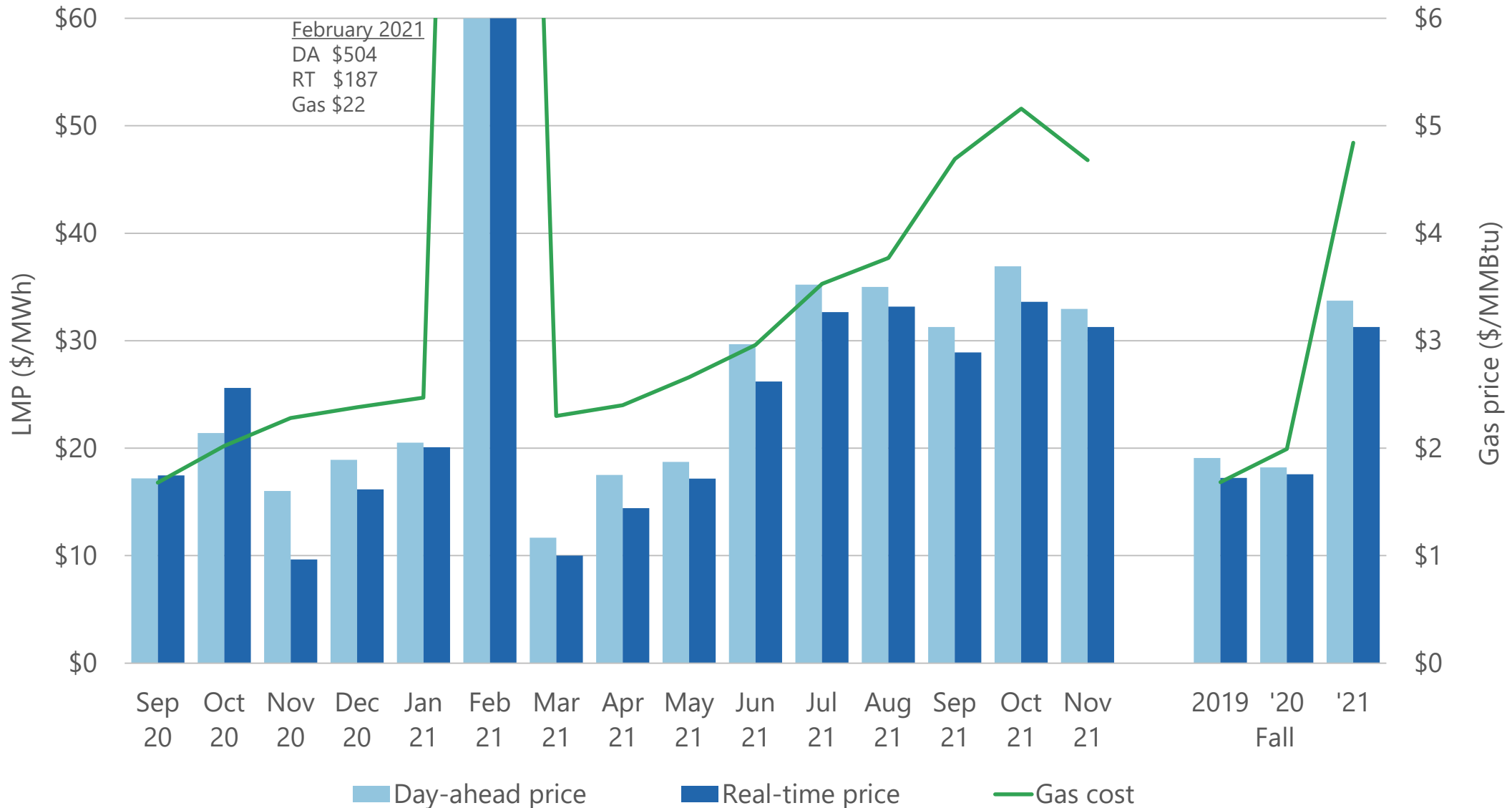
WIND CAPACITY STEADY, REAL-TIME CAPACITY FACTOR UP, DAY-AHEAD DOWN



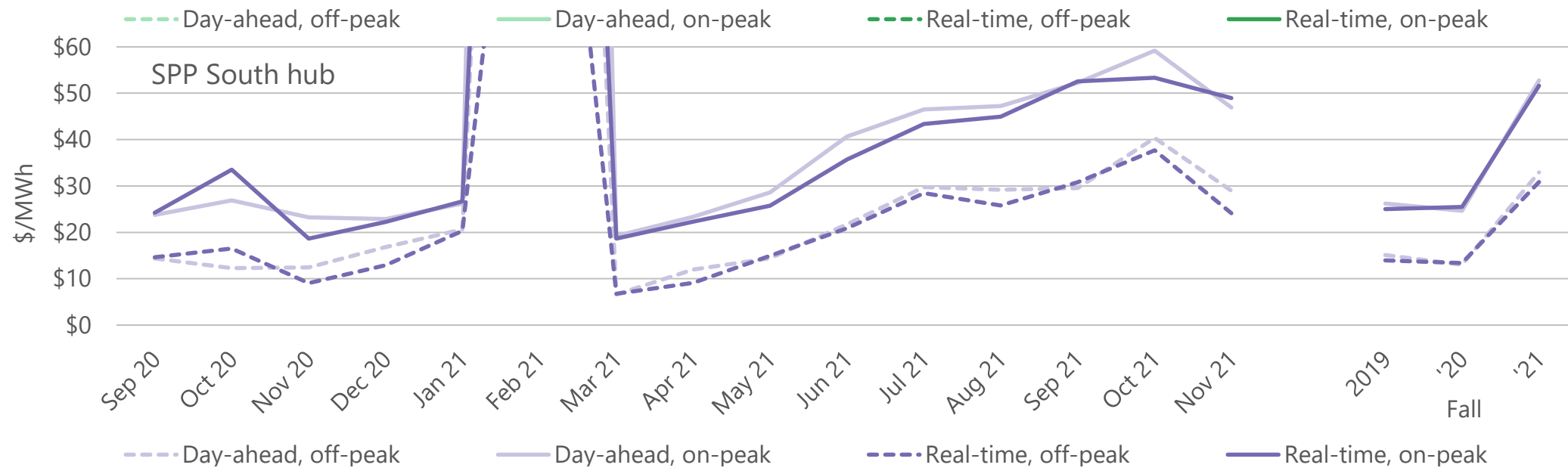
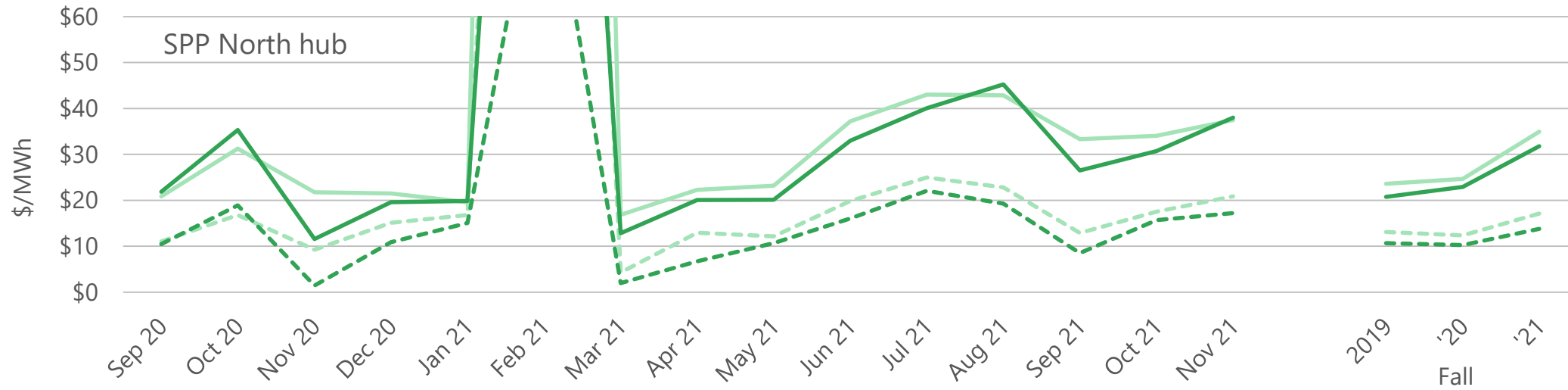
NEGATIVE PRICE INTERVALS INCREASED



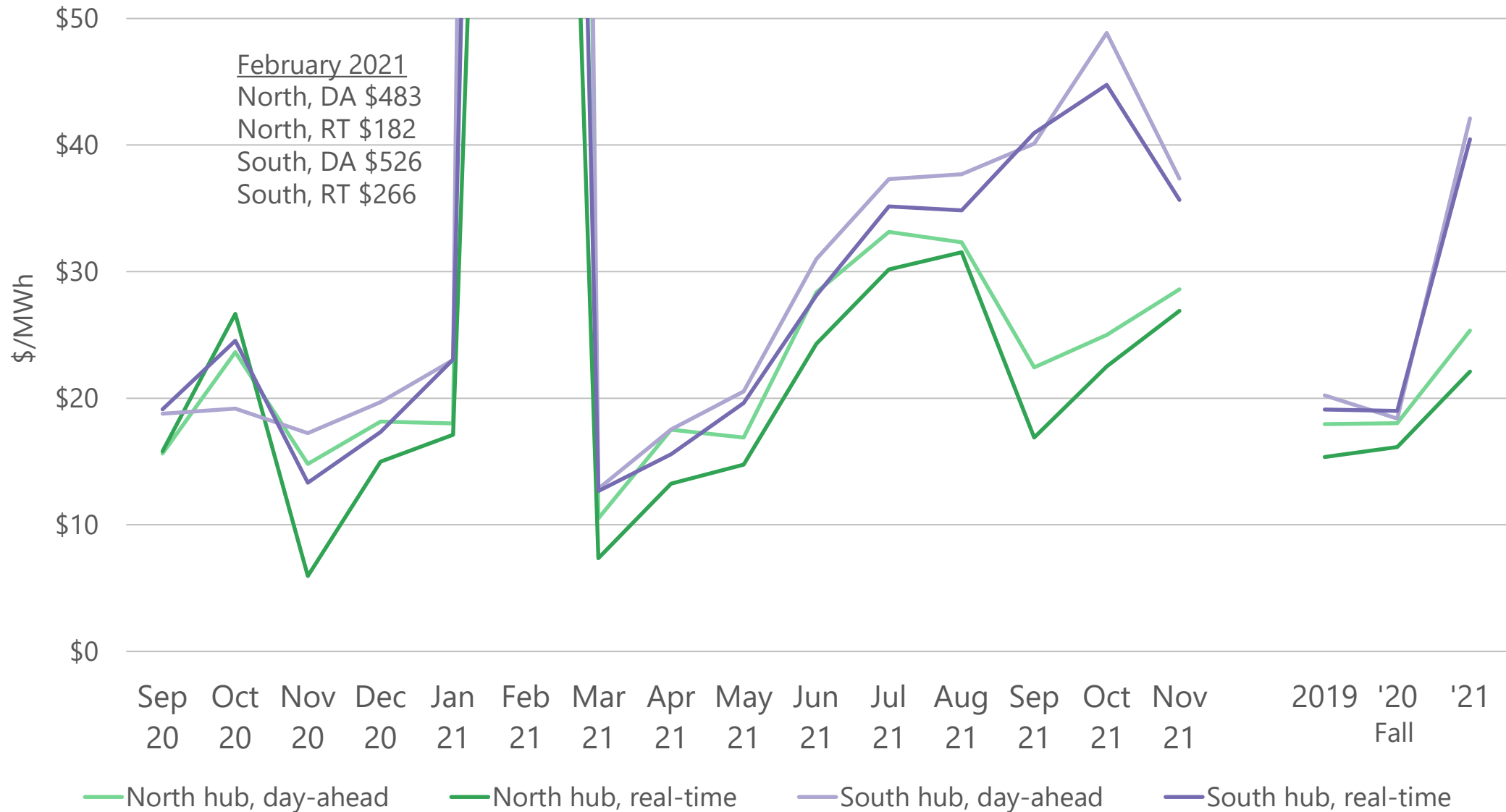
ELECTRICITY AND GAS INCREASED



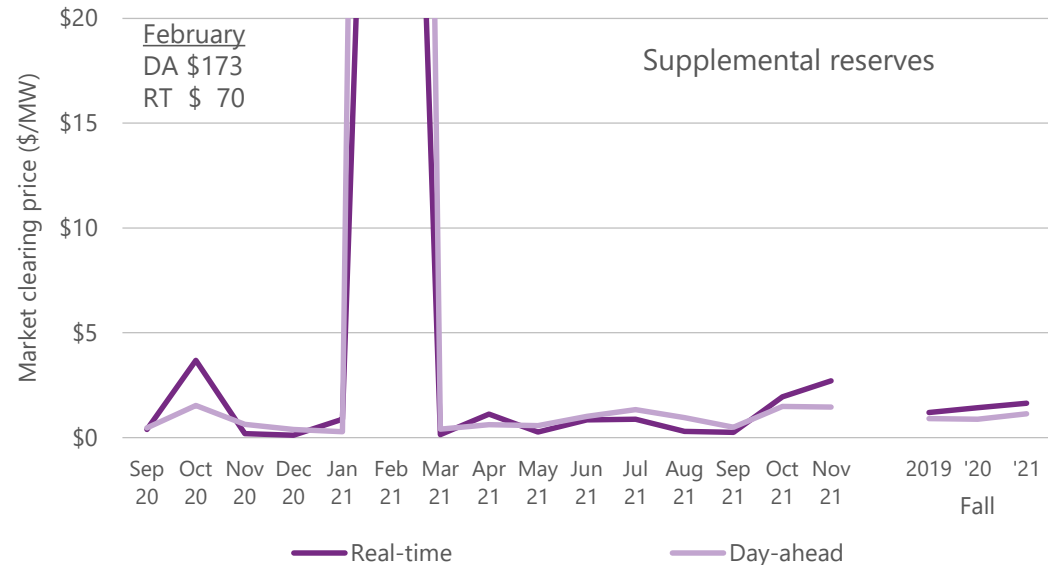
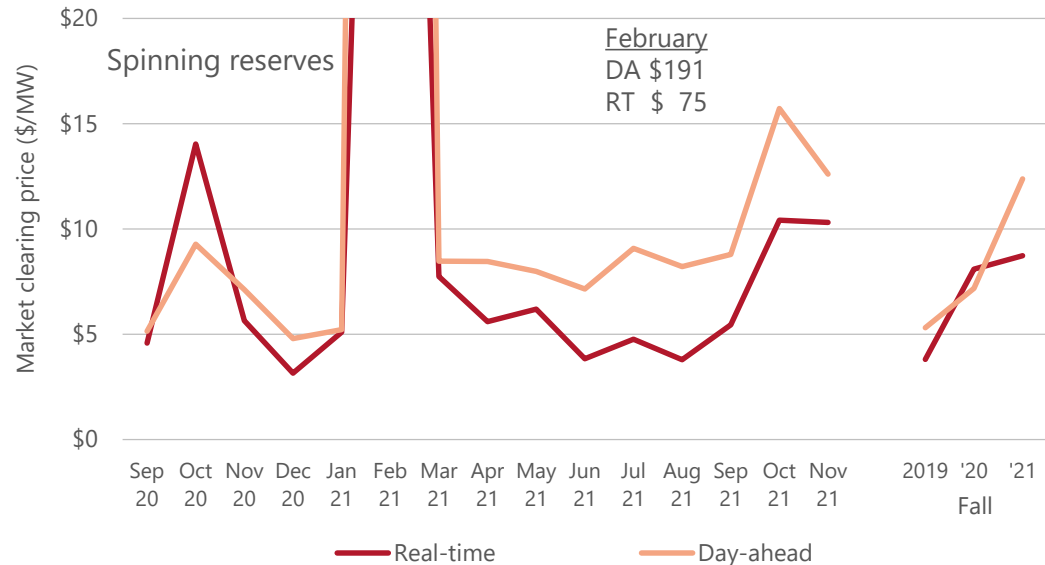
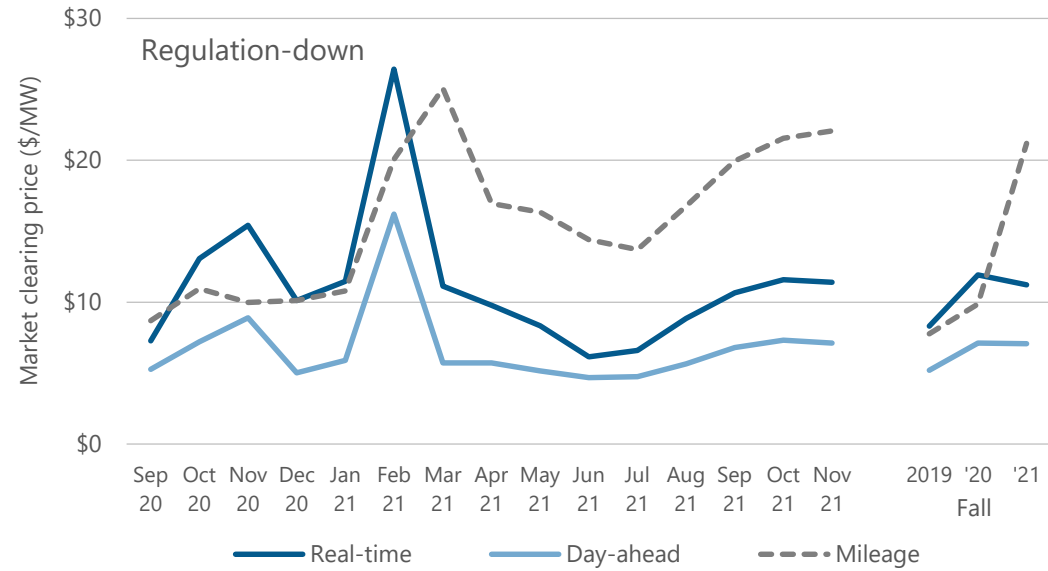
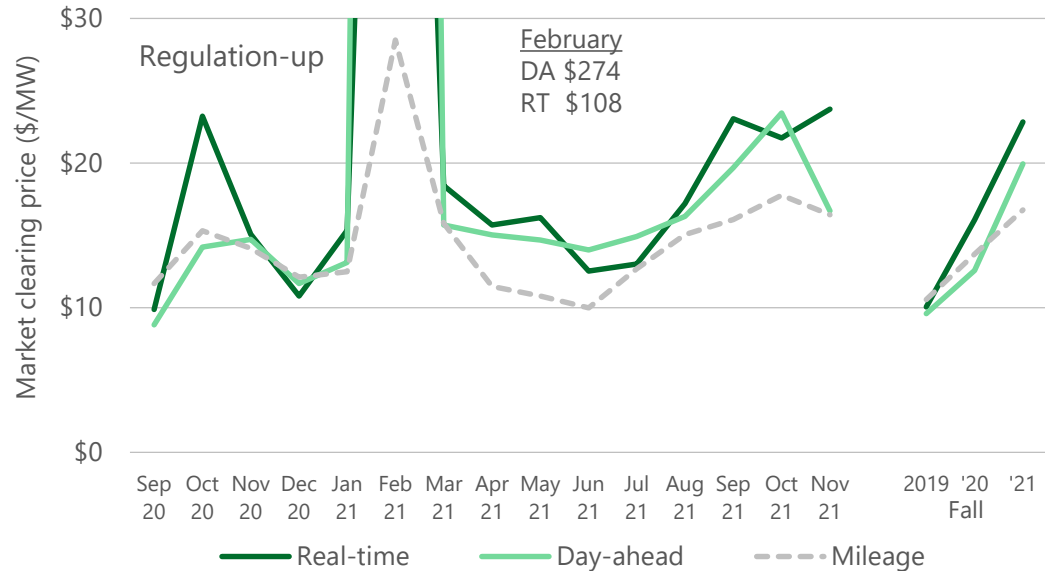
SPREAD BETWEEN ON-PEAK AND OFF-PEAK PRICES INCREASED



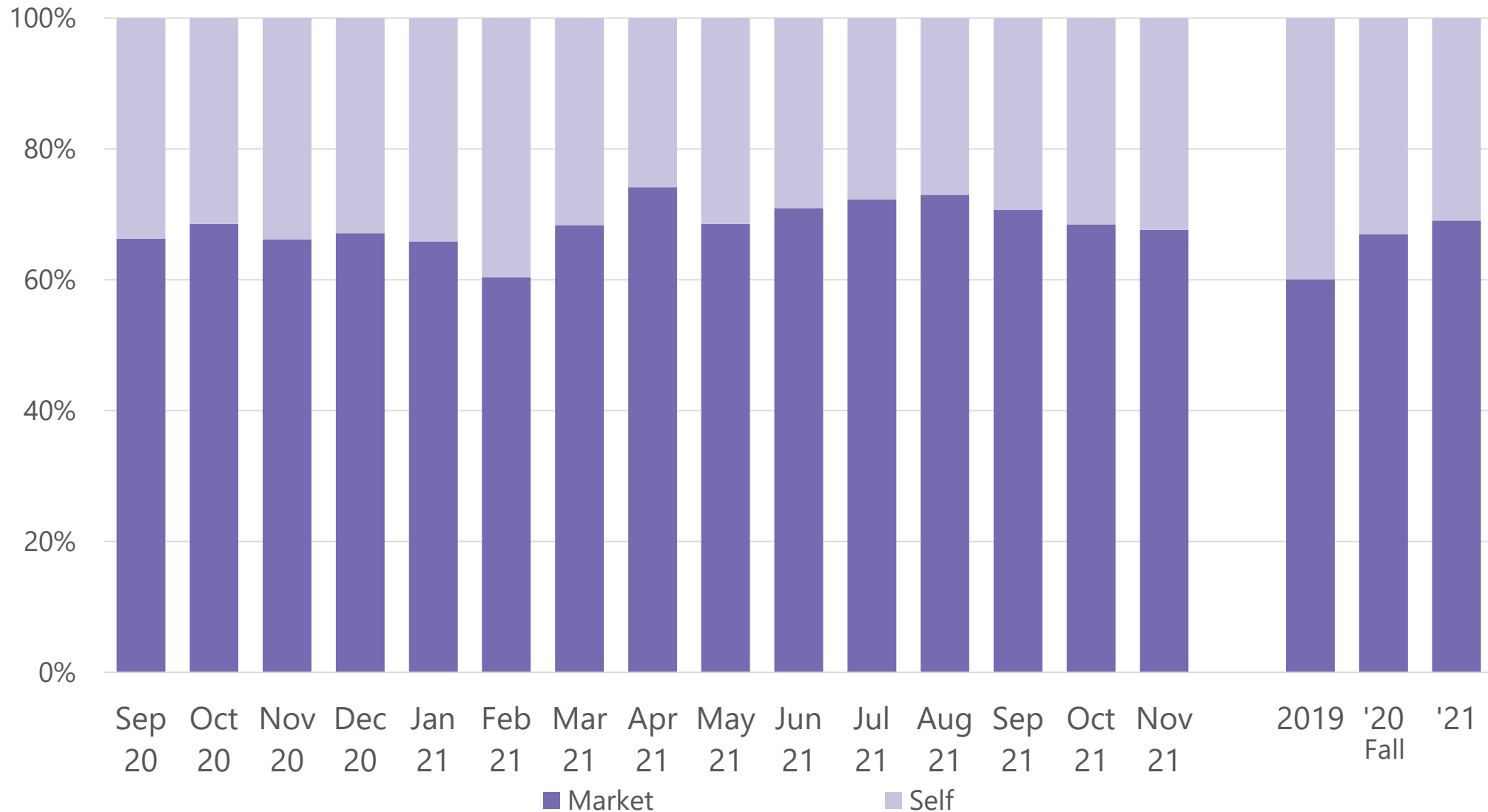
SPREAD BETWEEN NORTH AND SOUTH HUB HAS INCREASED



REGULATION-UP, SPIN, AND SUPPLEMENTAL CLIMBED



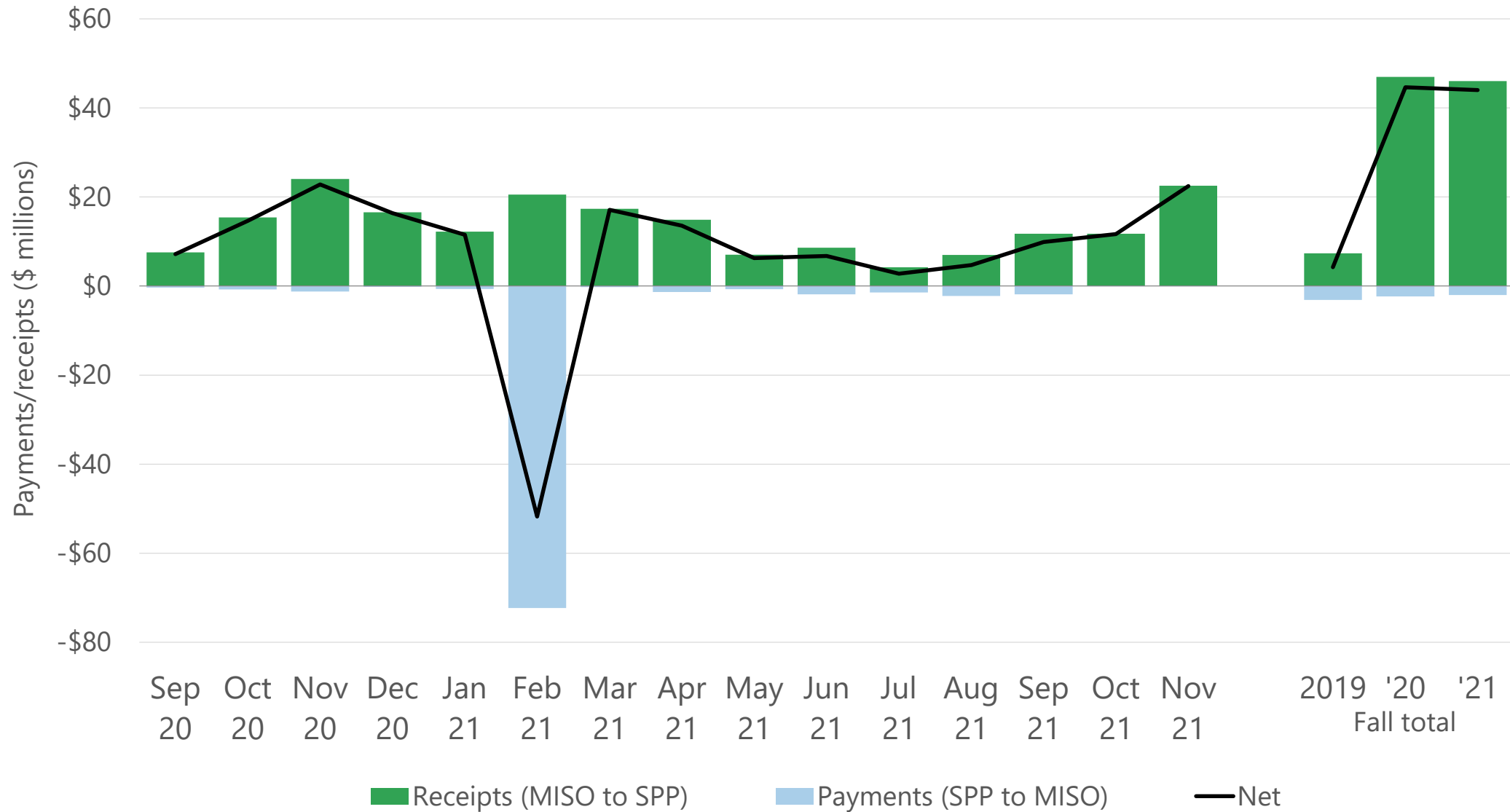
MARKET DISPATCH CONTINUES TO INCREASE



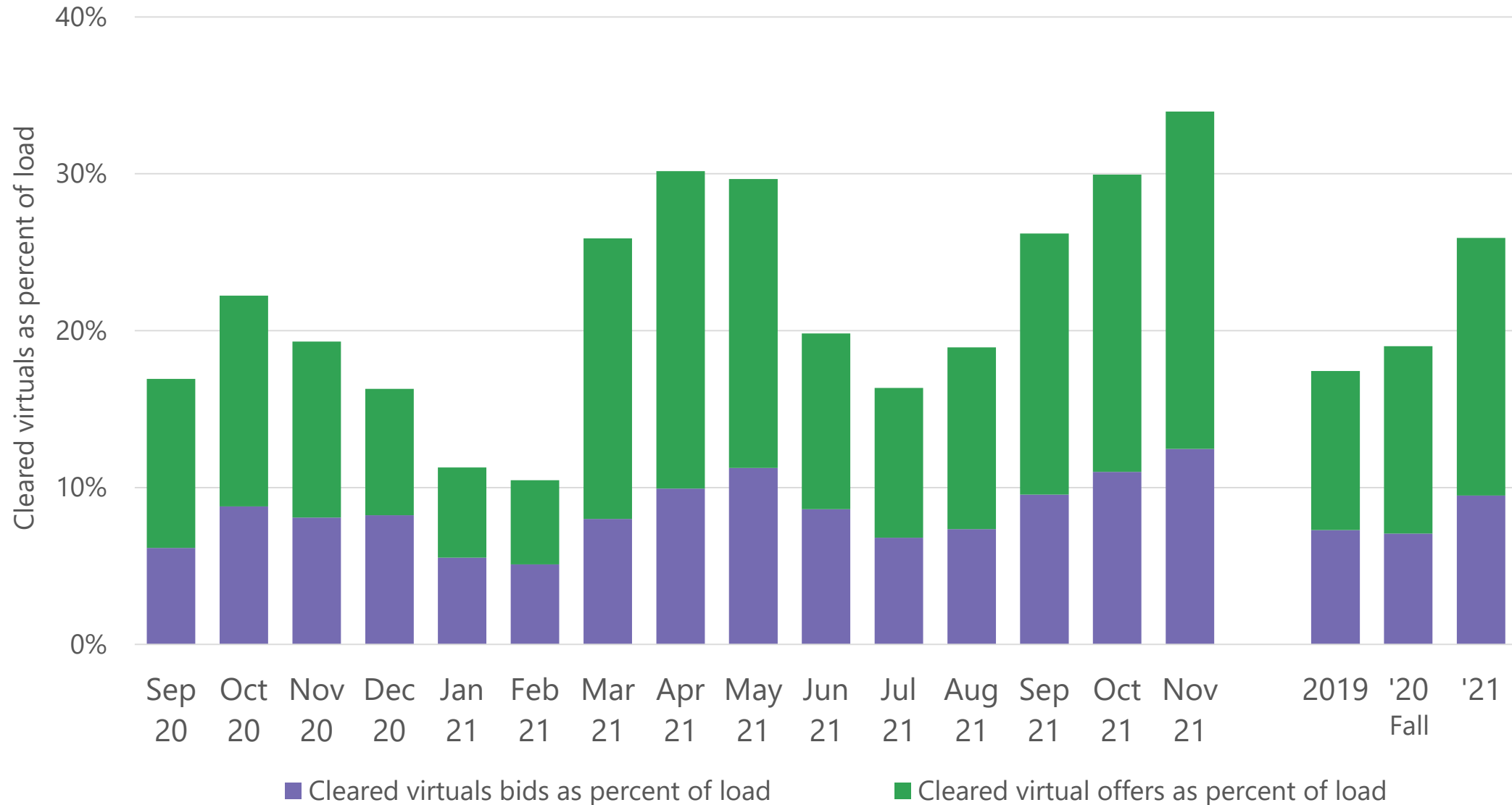
REGULATION-UP SCARCITY INCREASED; REGULATION-DOWN DECREASED



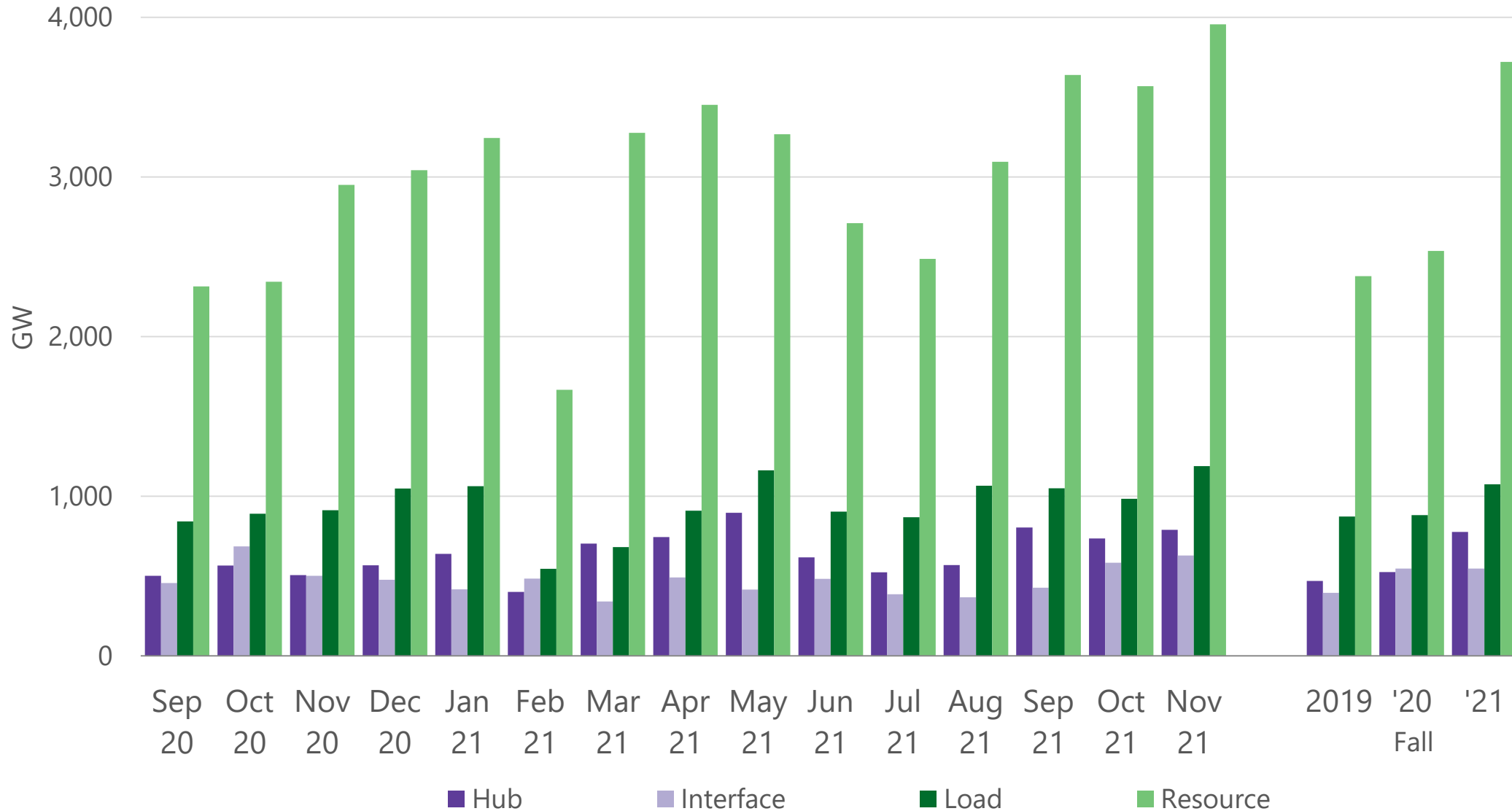
MARKET-TO-MARKET PAYMENTS REMAINED HIGH



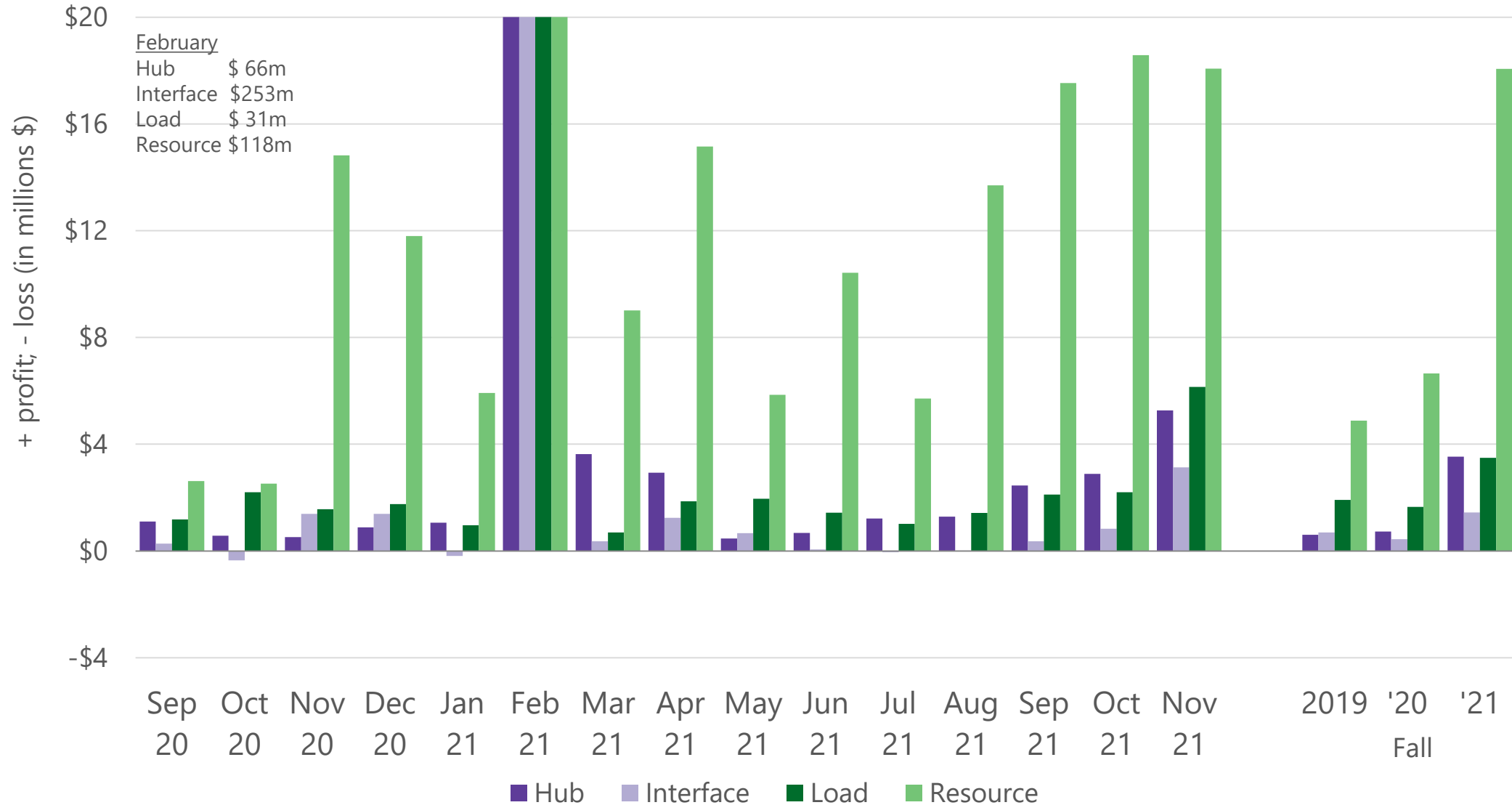
VIRTUAL TRANSACTIONS CONTINUED TO GROW



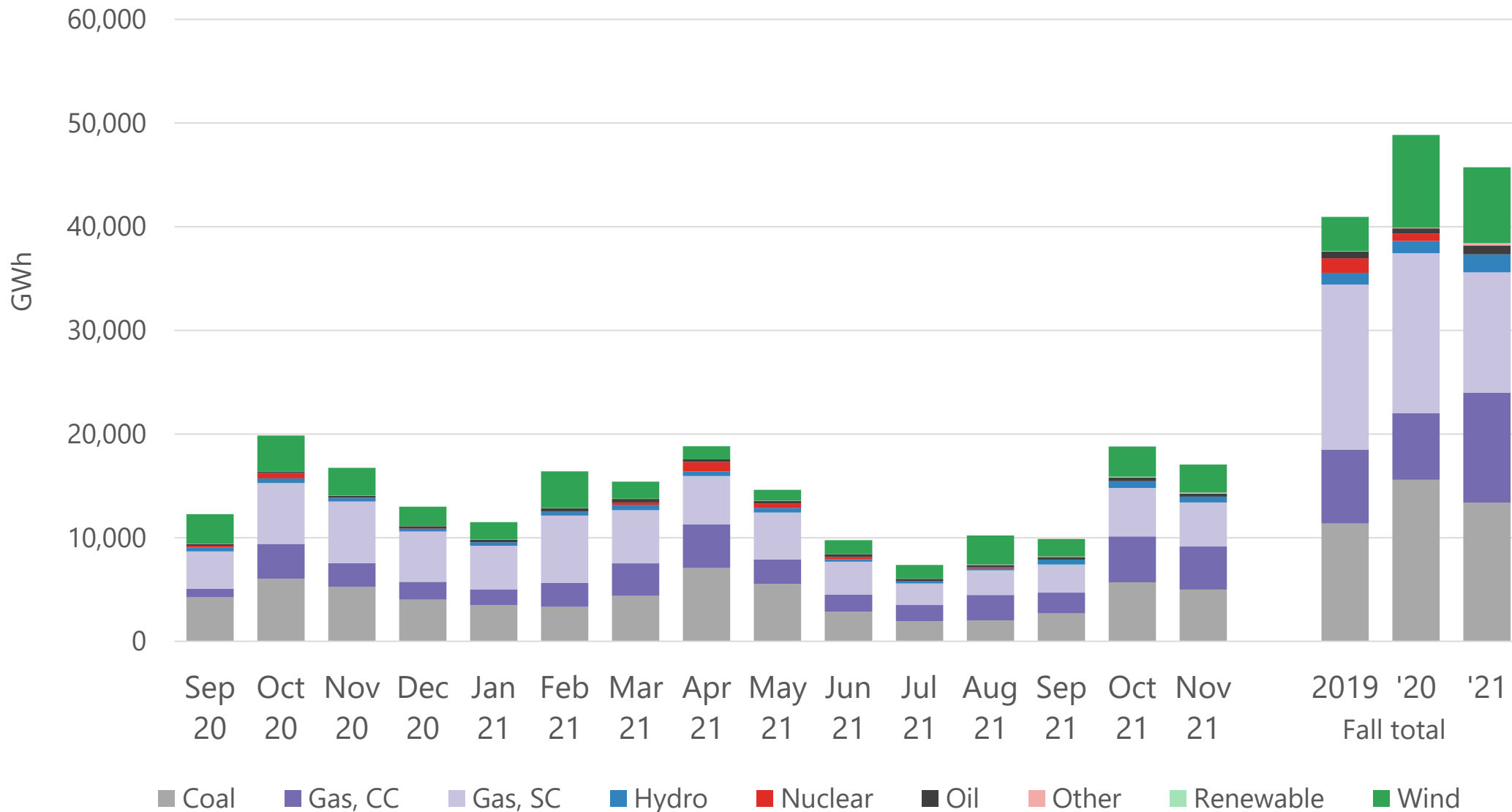
MOST VIRTUALS AT RESOURCE LOCATIONS



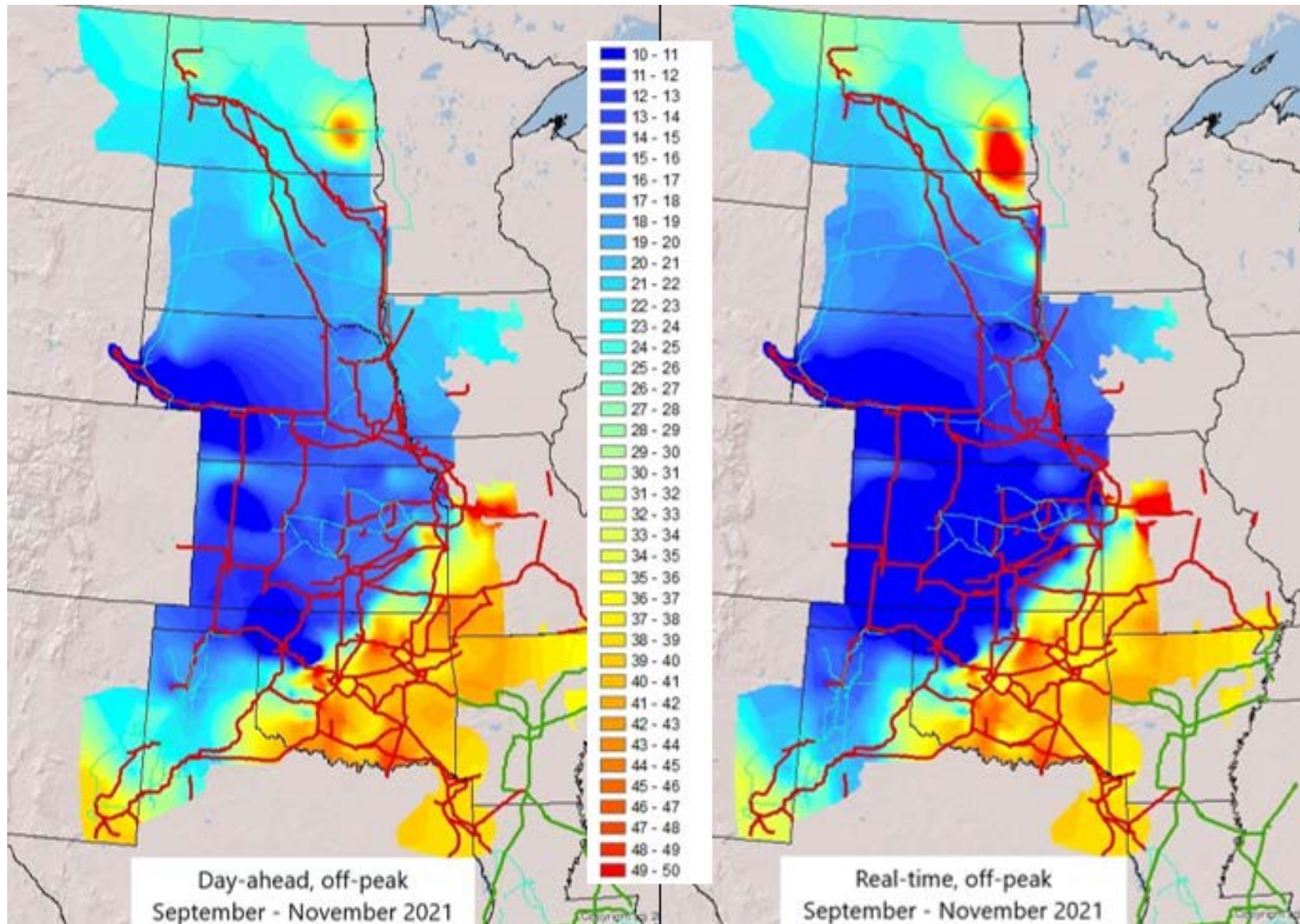
VIRTUAL PROFITS INCREASED



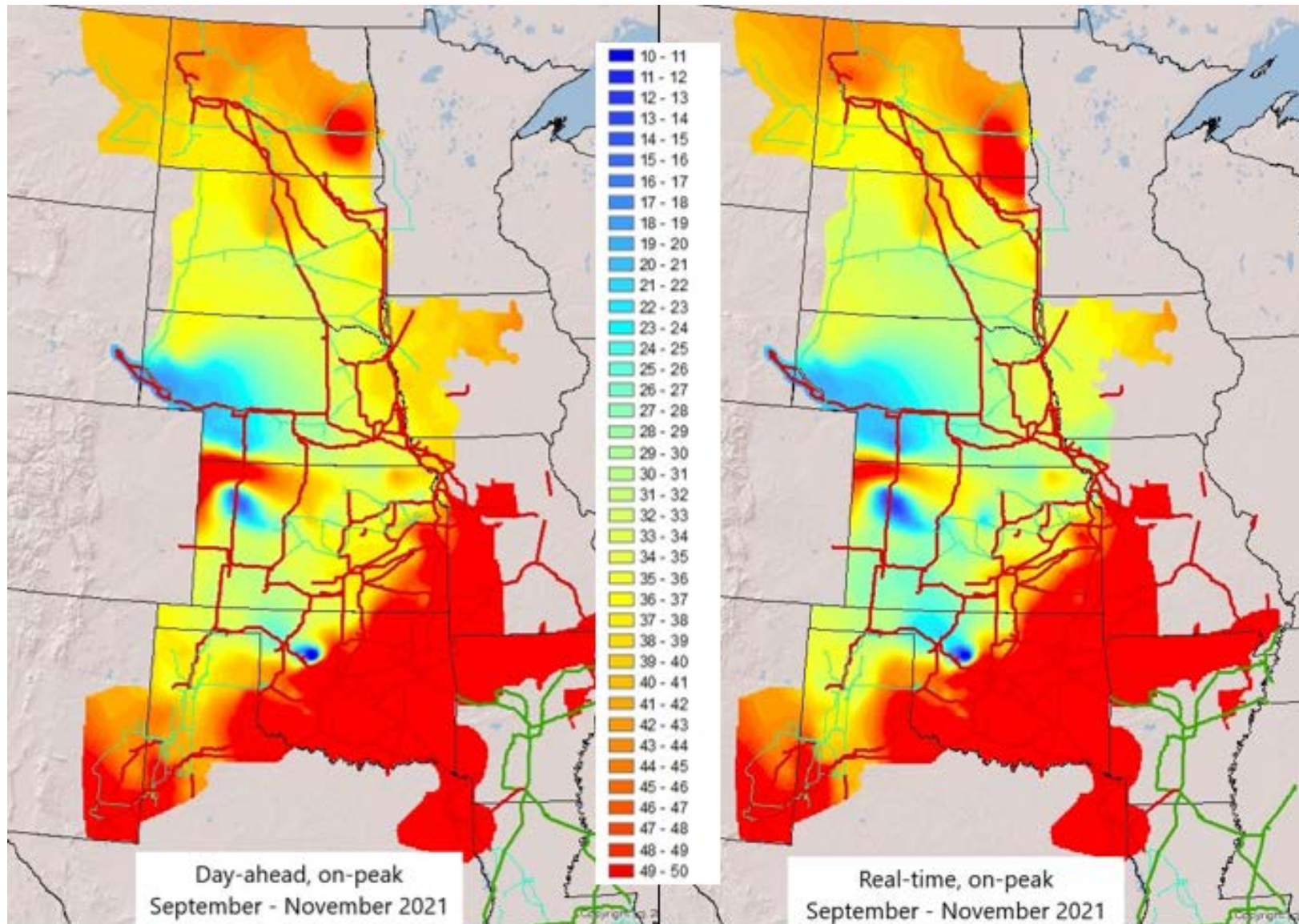
OUTAGES DECREASED



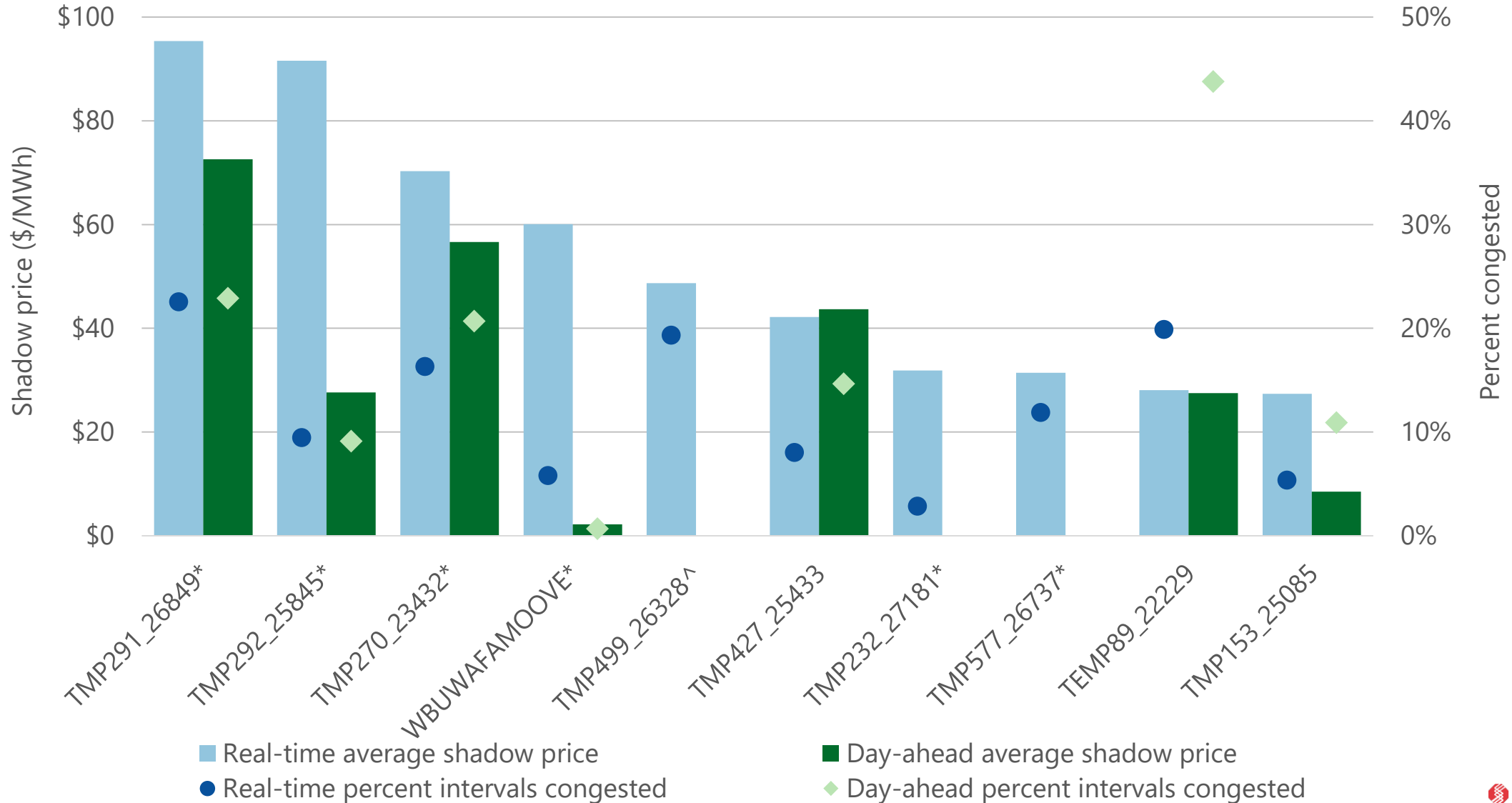
OFF-PEAK PRICES



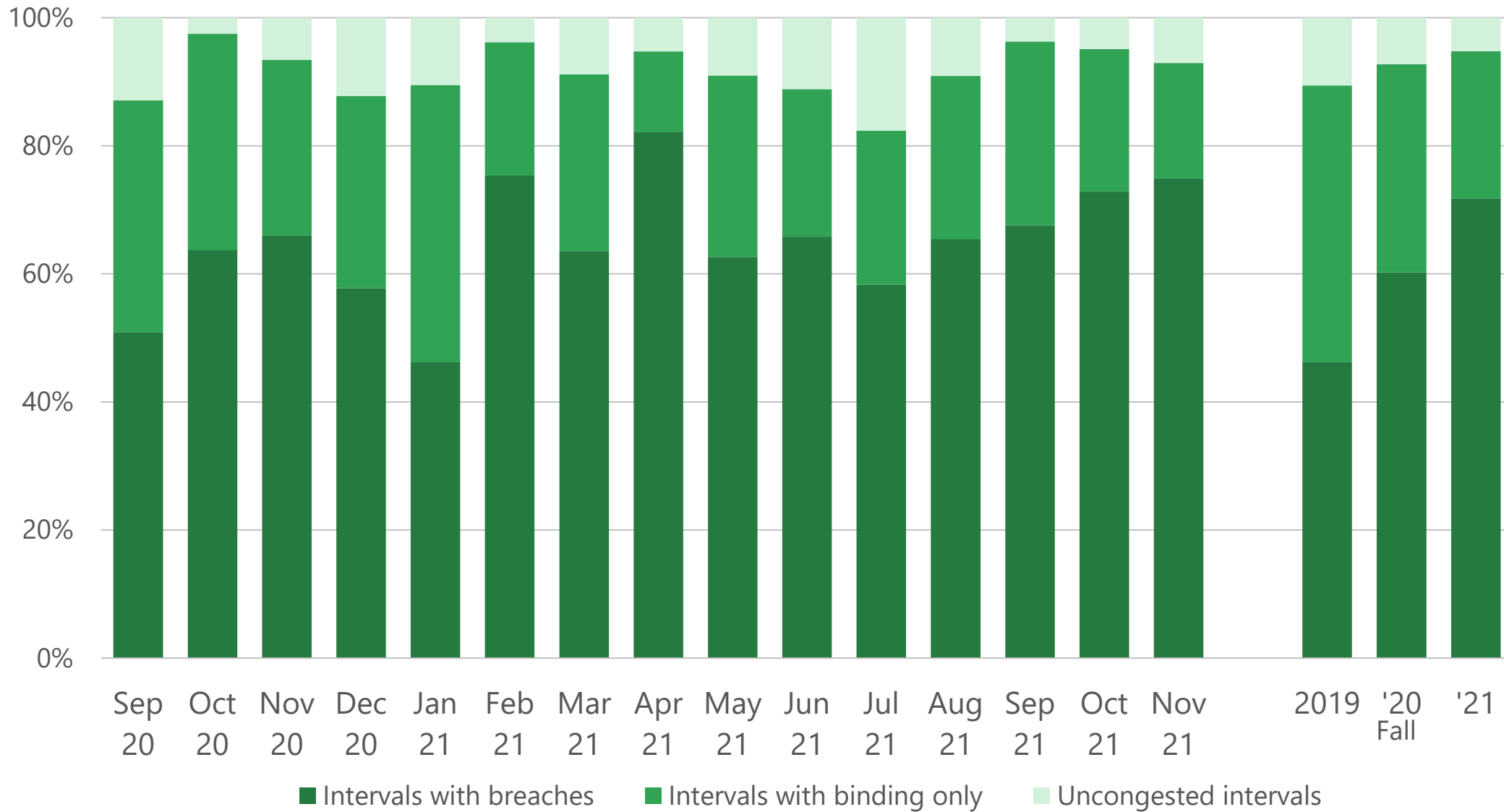
ON-PEAK PRICES



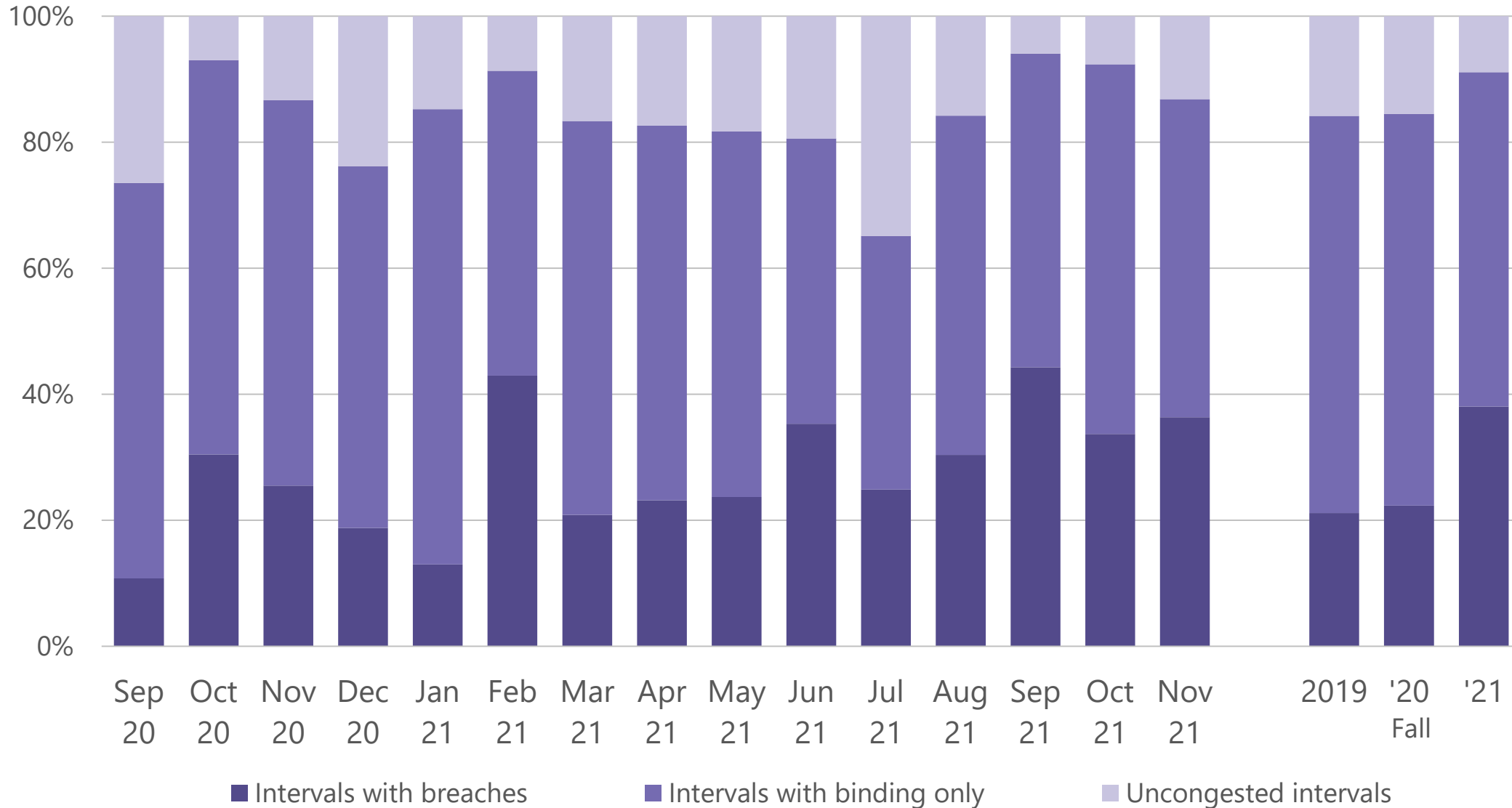
HIGHEST CONGESTION SPREAD ACROSS FOOTPRINT



REAL-TIME BREACHED INTERVALS INCREASED



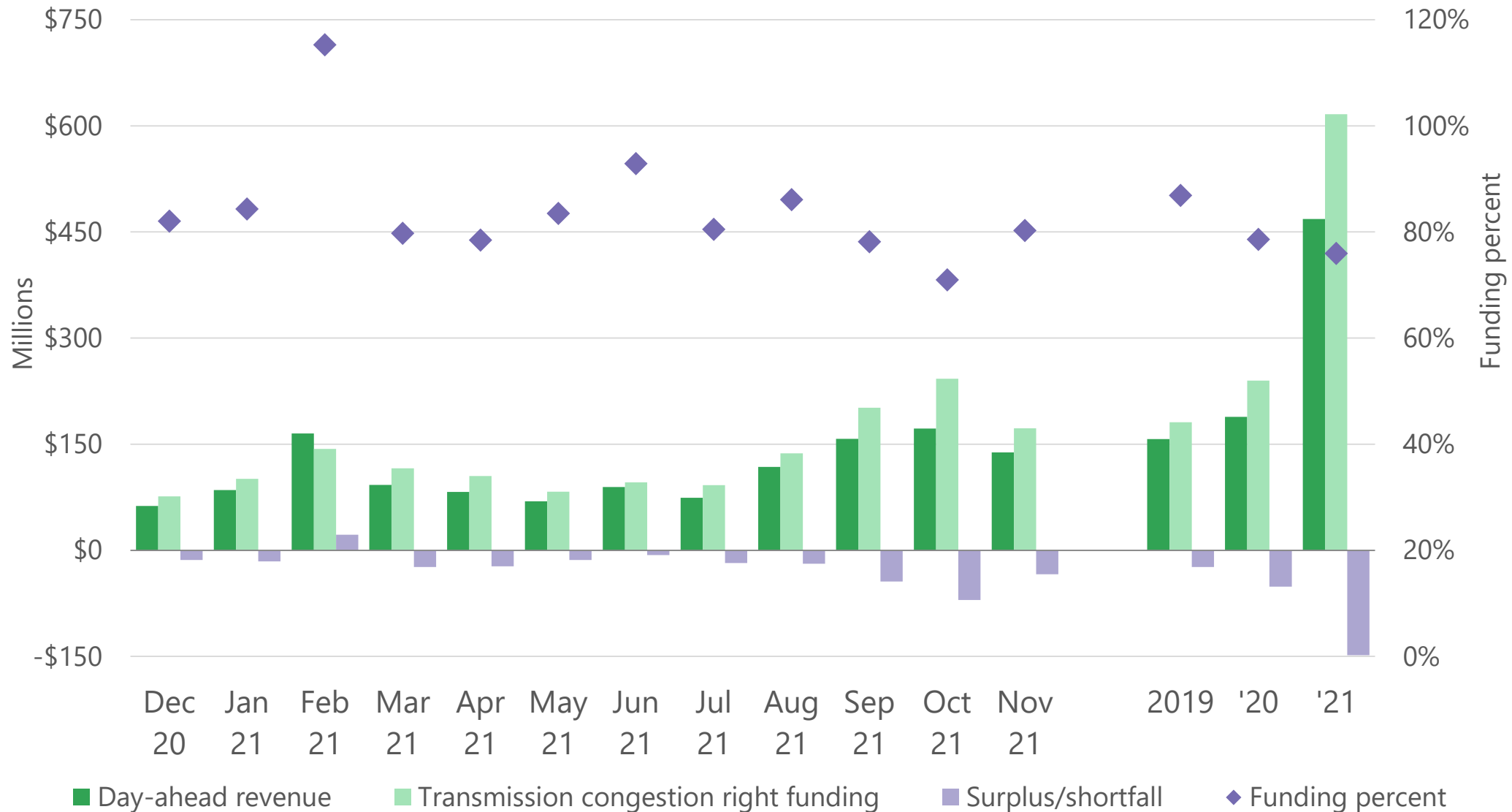
REAL-TIME BREACHED INTERVALS WITHOUT MARKET-TO-MARKET INCREASED



BREACHED INTERVALS, BY FLOWGATE TYPE

	Excluding market-to-market flowgates	Market-to-market flowgates only	All flowgates
Fall 2017	25%	14%	33%
Fall 2018	16%	22%	31%
Fall 2019	21%	38%	46%
Fall 2020	22%	55%	60%
Fall 2021	38%	61%	72%

TCRs UNDERFUNDED FOR FALL



REMINDER

OFFERS ABOVE \$1,000

- Cold weather advisory issued – February 2 – 6, 2022
 - <https://www.spp.org/markets-operations/current-grid-conditions/>
- Tariff process for offers above \$1,000
 - Attachment AF, Section 3.2 (k)

QUESTIONS?

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