# IMM Quarterly Report: Winter 2022

MISO Independent Market Monitor

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* To show year-over-year market trends in this report, we remove the estimated incremental effects of the 2021 Arctic Event (Feb. 13-19) for most comparisons as noted.

# Highlights and Findings: Winter 2022

- The MISO markets performed competitively this winter – market power mitigation was infrequent, and conduct was competitive overall.
- Energy prices rose 65 percent this quarter, largely because gas prices were 50 percent higher than last winter.*
  - ✓ Coal supply was limited during most of the quarter, but limitations are easing.
- Although average load increased by one percent, peak load fell 3 percent as temperatures were milder in December and February than last winter.
- Day-ahead and real-time congestion rose 142 and 118 percent, respectively.*
  - ✓ Approximately half of real-time congestion was attributable to wind output.
  - ✓ Average hourly wind output continued to grow, rising 45 percent compared to last year, and a new output record of 23.6 GW was set on January 18.
- Day-ahead and real-time RSG increased 80 and 12 percent, respectively.*
  - ✓ MISO declared a Maximum Generation Warning on January 7 and real-time RSG exceeded $2 million on that day.
  - ✓ Improvements in the commitment process should reduce MISO’s RSG costs.

* For select year-over-year comparisons, we remove the incremental impact of the 2021 Arctic Event (Feb. 13-19).

# Quarterly Summary

| Winter | Value | Change[1] Prior Qtr. | Change[1] Prior Year |
|---|---|---|---|
| **RT Energy Prices ($/MWh)*** | $41.44 | *-18%* | *65%* |
| **Fuel Prices ($/MMBtu)** | | | |
| Natural Gas - Chicago* | $4.07 | *-18%* | *50%* |
| Natural Gas - Henry Hub* | $4.20 | *-19%* | *50%* |
| Western Coal* | $1.45 | *3%* | *114%* |
| Eastern Coal* | $3.53 | *11%* | *188%* |
| **Load (GW)[2]** | | | |
| Average Load | 78.4 | *9%* | *1%* |
| Peak Load | 100.6 | *2%* | *-3%* |
| % Scheduled DA (Peak Hour) | 98.6% | 98.1% | 97.9% |
| **Transmission Congestion ($M)** | | | |
| Real-Time Congestion Value* | $750.8 | *-4%* | *118%* |
| Day-Ahead Congestion Revenue* | $461.2 | *-8%* | *142%* |
| Balancing Congestion Revenue[3] | $2.2 | $21.0 | $45.2 |
| **Ancillary Service Prices ($/MWh)** | | | |
| Regulation* | $13.87 | *-17%* | *48%* |
| Spinning Reserves* | $2.55 | *-36%* | *35%* |
| Supplemental Reserves* | $0.67 | *-15%* | *75%* |

| | Value | Change[1] Prior Qtr. | Change[1] Prior Year |
|---|---|---|---|
| **FTR Funding (%)** | 102% | 96% | 102% |
| **Wind Output (MW/hr)** | 13,072 | *28%* | *45%* |
| **Guarantee Payments ($M)[4]** | | | |
| Real-Time RSG* | $18.7 | *-26%* | *12%* |
| Day-Ahead RSG* | $24.0 | *19%* | *80%* |
| Day-Ahead Margin Assurance* | $7.8 | *-27%* | *35%* |
| Real-Time Offer Rev. Sufficiency* | $1.0 | *-39%* | *51%* |
| **Price Convergence[5]** | | | |
| Market-wide DA Premium | 1.6% | -1.8% | 0.9% |
| **Virtual Trading** | | | |
| Cleared Quantity (MW/hr) | 21,031 | *9%* | *20%* |
| % Price Insensitive | 54% | 48% | 31% |
| % Screened for Review | 3% | 3% | 2% |
| Profitability ($/MW) | $0.95 | $1.14 | $2.00 |
| **Dispatch of Peaking Units (MW/hr)** | 862 | 1302 | 588 |
| **Output Gap- Low Thresh. (MW/hr)** | 255 | 688 | 237 |
| **Other:** | | | |

Key:
- Expected
- Monitor/Discuss
- Concern

* Prior year comparison removes impact of the 2021 Arctic Event (Feb 13-19)

Notes:
1. Values not in italics are the values for the past period rather than the change.
2. Comparisons adjusted for any change in membership.
3. Net real-time congestion collection, unadjusted for M2M settlements.
4. Includes effects of market power mitigation.
5. Values include allocation of RSG.



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# Highlights for Winter 2022

**<u>Coal Output, Coal Limitations, and Net Revenues (Slides 15-16)</u>**

- Higher gas prices in January and February* made coal resources more economic this winter, but coal capacity factors remained relatively low.
  - ✓ Coal resources' average net revenues exceeded $12 per MWh this winter compared to roughly of $4.50 per MWh last year.*
  - ✓ Nonetheless, coal resources ran at lower capacity factors this winter.
- Beginning in the fall quarter, many coal facilities implemented coal conservation measures to ensure adequate winter inventories.
  - ✓ High coal generation in summer 2021, issues with coal transportation, and higher than normal demand for reagents drove the need to conserve coal.
  - ✓ We provided several coal-fired resource owners with opportunity cost-based references to support coal conservation measures beginning in the fall.
  - ✓ By February, lower-than-expected December gas prices and continued coal conservation allowed many resources to build up their coal inventories.
  - ✓ At the end of the winter quarter, the number of coal resources receiving opportunity cost-based references to maintain inventories fell by 40 percent.
  - ✓ We are maintaining reference levels reflecting ongoing conservation measures.

* These year-over-year comparisons exclude the incremental impact of the 2021 Arctic Event (Feb. 13-19).

# Highlights for Winter 2022

**<u>High Quarterly Congestion (Slides 17-19)</u>**

- Day-ahead and real-time congestion more than doubled over last year.*
  - ✓ Higher natural gas prices contributed by increasing the marginal cost of moving generation to manage system flows.
  - ✓ Half of the quarterly congestion was attributable to wind generation.
    - – SPP and PJM wind units contributed to wind-related MISO congestion.
  - ✓ We continue to find that improving transmission ratings (by employing ambient-adjusted ratings and emergency ratings) and implementing economic reconfigurations could lower congestion in MISO substantially.
- Approximately 20 percent of the total quarterly congestion accrued on two constraints impacted by a JOU resource that participates in MISO and SPP.
  - ✓ SPP does not bind MISO's constraints in its day-ahead market, so the unit appears to be economic in SPP's day-ahead market (but not in MISO's).
  - ✓ A significant amount of congestion could be eliminated were MISO and SPP to coordinate day-ahead commitments that impact both Balancing Areas.
  - ✓ A reconfiguration exists for the most impacted constraint, and MISO did employ the reconfiguration at times when it bound severely during the quarter.

* For this year-over-year comparison, we remove the incremental impact of the 2021 Arctic Event (Feb. 13-19).

# Highlights for Winter 2022

**<u>Real Time RSG  and Jan. 7 Maximum Generation Warning (Slides 14, 21-22)</u>**

- Although MISO's commitment practices have improved, we continued to see that excess RSG was incurred throughout the quarter:
  - ✓ We estimated that approximately 12 percent of the real-time capacity RSG was associated with commitments that were ultimately needed.
  - ✓ Forecasting errors contributed to approximately 14 percent of capacity RSG.
  - ✓ Nearly three quarters of the real-time capacity RSG could be reduced by improving the commitment process – 17% of this was incurred on January 7.
  - ✓ MISO has begun to make better use of existing tools to produce more efficient commitment decisions and decommit resources when no longer needed.
- On January 7, MISO declared a Max Gen Warning in the Midwest for 6 a.m. that terminated early at 9:30 a.m. because of sufficient available supply.
  - ✓ After midnight, nearly 1.4 GW of units tripped offline, 270 MW were unable to procure fuel, and 550 MW slated for 5 a.m. starts were delayed 3 hours.
  - ✓ MISO incurred more than $2 million in real-time RSG on that day, and we have estimated that 85 percent of that was due to excess commitments.
    - – Ex-ante STR pricing did not reflect conditions and MISO re-priced it later.

# Highlights for Winter 2022

**High Day-Ahead RSG Payments and VLR Commitments (Slide 23)**

- Day-ahead RSG was up 80 percent from last year, and up 33 percent even after adjusting for fuel price increases.*
- Most of the increase was attributable to a 60 percent increase in the fuel-adjusted RSG for VLR commitments in the South region.*
- Forced and planned transmission outages led to higher day-ahead VLR RSG for resources committed in the Amite South load pocket.
- In the Western load pocket, RSG was high and inflated by inefficiencies in the implementation of the operating guide.
  - ✓ A large unit came online in the Western load pocket in December 2020, but MISO and the participant have yet to complete a re-assessment of the operating guide.
  - ✓ The legacy op guide was also not implemented optimally after the entry of new unit.
  - ✓ Together, these issues have resulted in higher production costs of $35 million over the past 12 months and almost $14 million during the quarter, and they have led to day-ahead RSG increases of $5.6 million and $2 million in these timeframes.
  - ✓ We encourage MISO to work with its members to implement more timely updates to the operating guide when significant system changes occur.

* These year-over-year comparisons exclude the incremental impact of the 2021 Arctic Event (Feb. 13-19).

# Submittals to External Entities and Other Issues

- We responded to several FERC questions related to prior referrals and FERC investigations, and we responded to requests for information on market issues.
- In December, FERC Issue Order 881 which requires AARs and Emergency Ratings subject to facility evaluations and reliability limitations.
  - ✓ We filed for rehearing on the required implementation schedule.
  - ✓ However, we believe MISO and the TOs can implement many of these requirements and achieve most of the benefits in a much shorter timeframe.
- In January, we presented our Fall Quarterly Report to the Mkt Subcommittee.
- In January, we filed comments supporting MISO's proposed seasonal capacity market and accreditation proposals but opposing the minimum capacity obligation.
- In February, we presented a report on results in MISO South to the ERSC.
- We continue to meet with states on the need to reform MISO's capacity market demand to meet the Reliability Imperative and the benefits to the regulated utilities.
- We also continued working with MISO and others on:
  - ✓ Developing processes to identify and implement transmission reconfigurations that can reliably reduce congestion costs.
  - ✓ Reviewing the proposals for allocating economic property rights to transmission (Firm Flow Entitlements) under the market-to-market processes.



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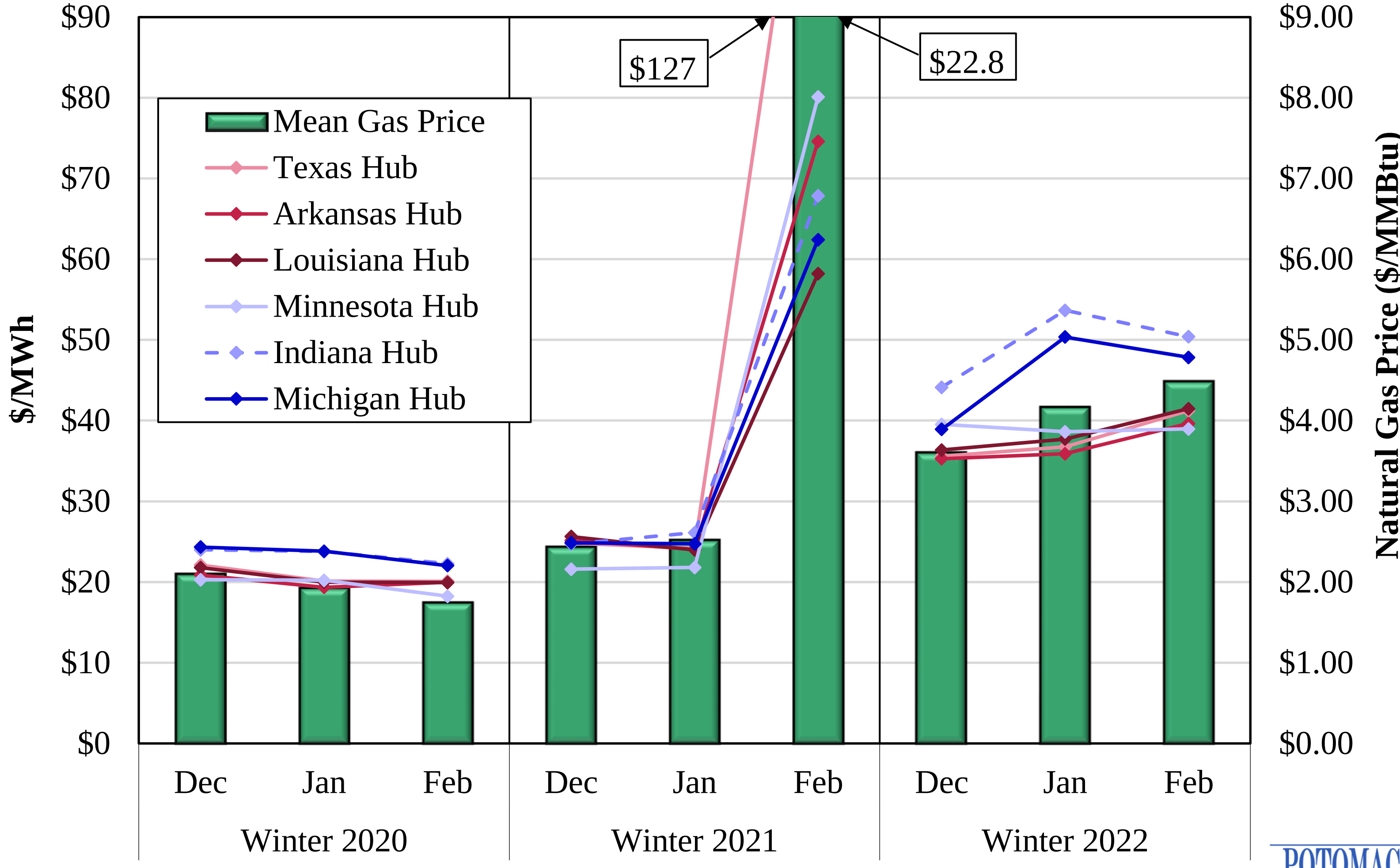
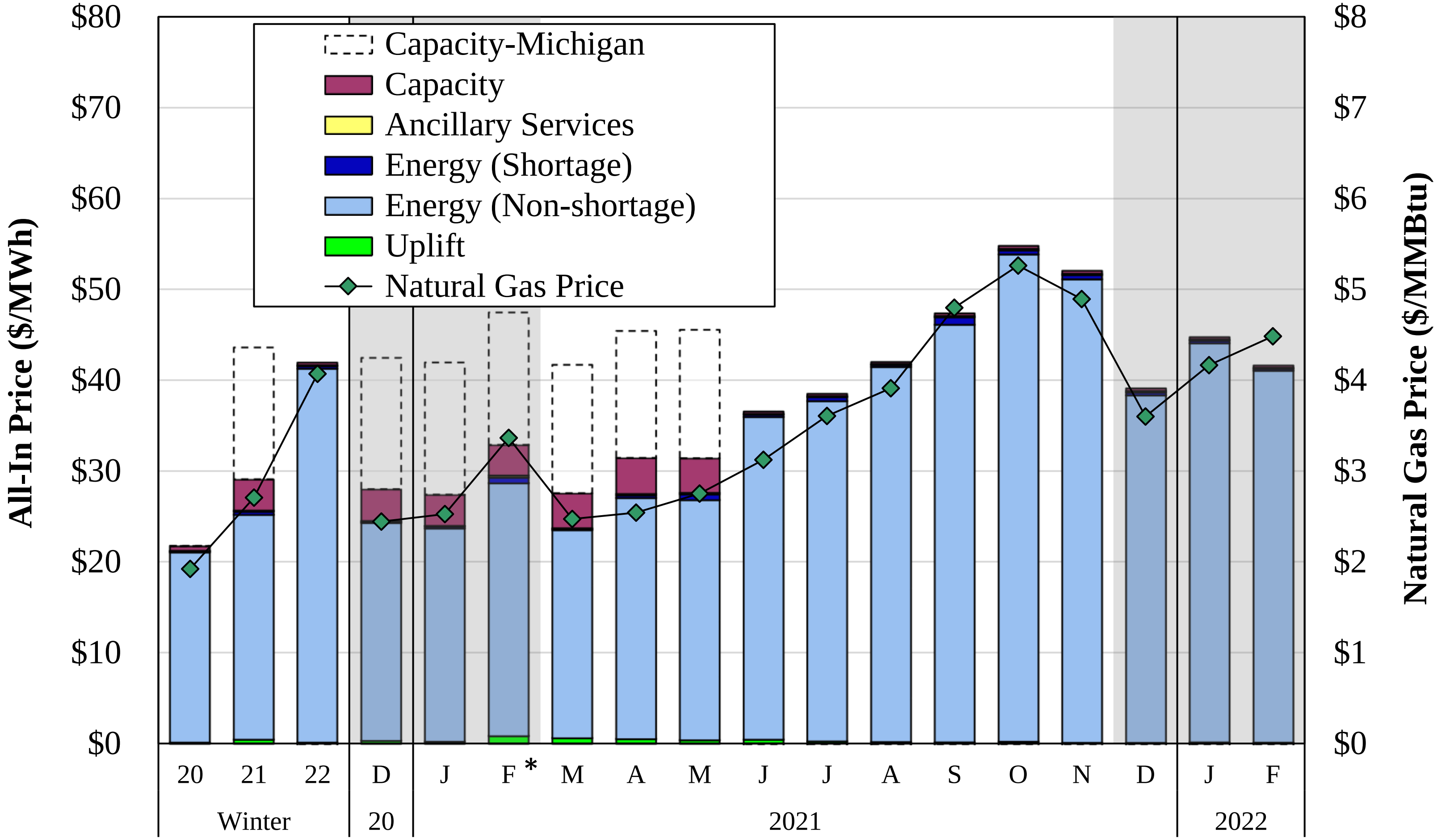
# Day-Ahead Average Monthly Hub Prices
# Winter 2020–2022



# All-In Price
# Winter 2020 – 2022




*** *Removes impact of the 2021 Arctic Event (Feb 13-19).***





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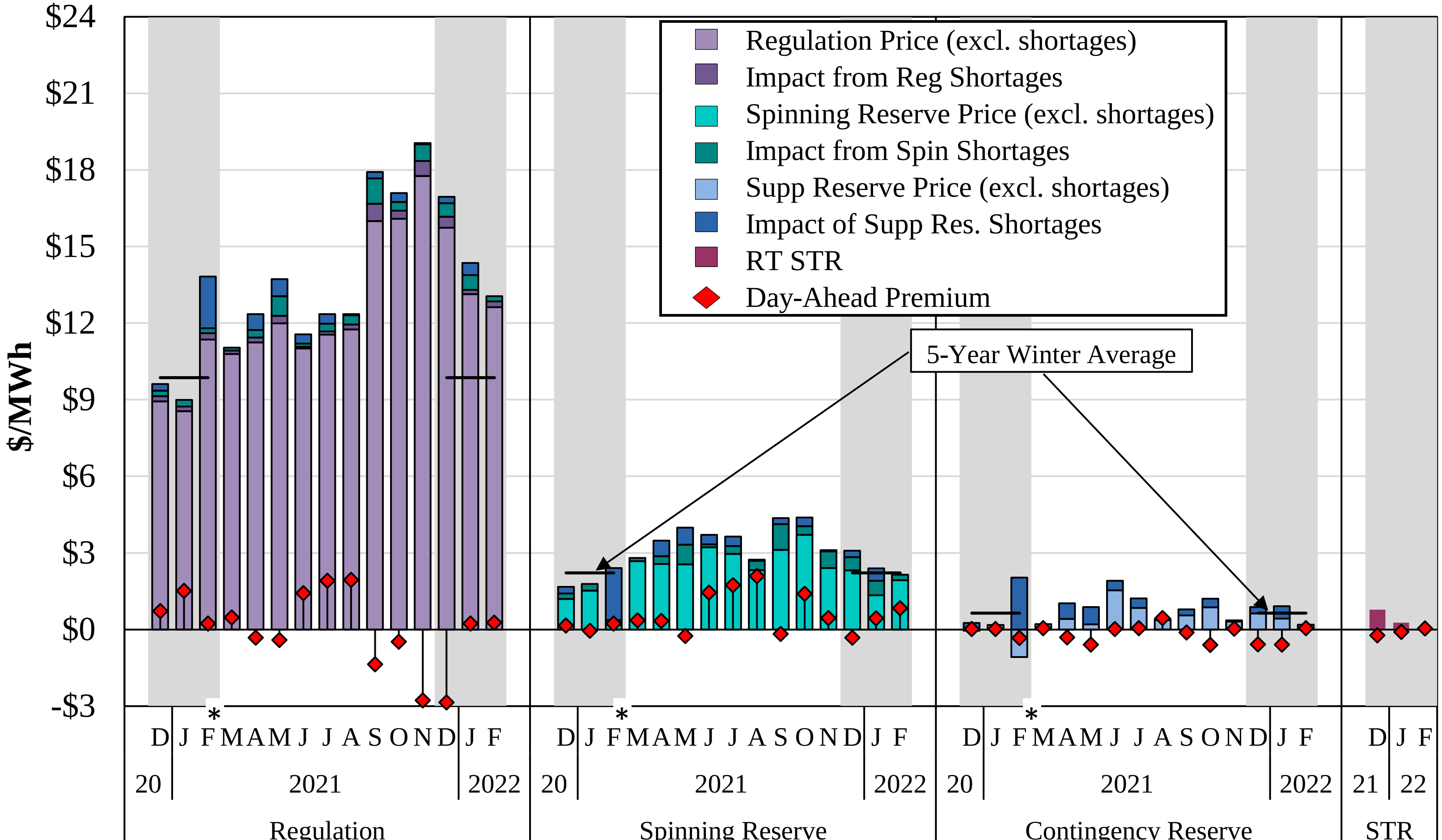
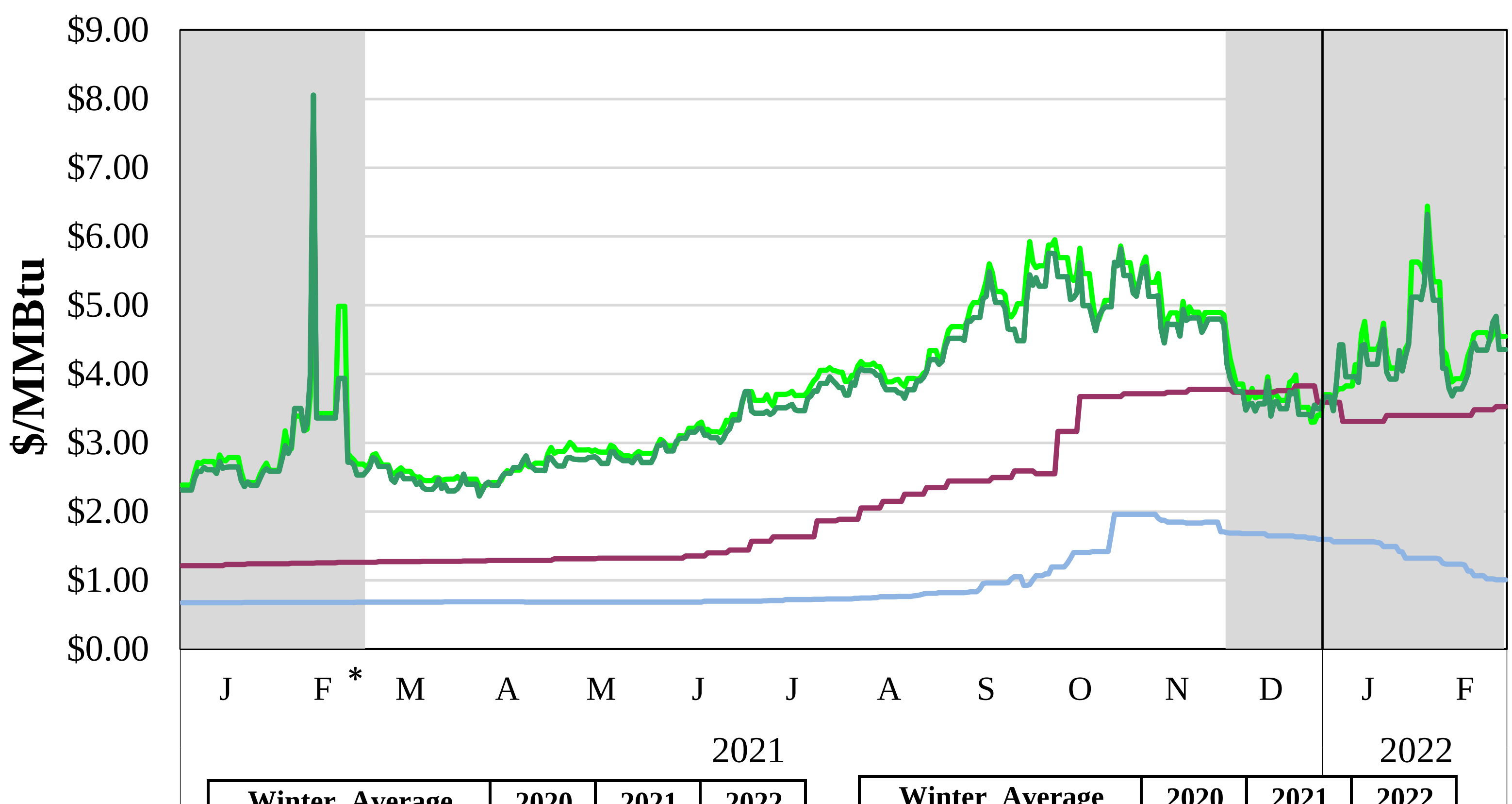
# Ancillary Service Prices
# Winter 2021–2022




*** Removes impact of the 2021 Arctic Event (Feb 13-19).***

# MISO Fuel Prices
# 2021–2022

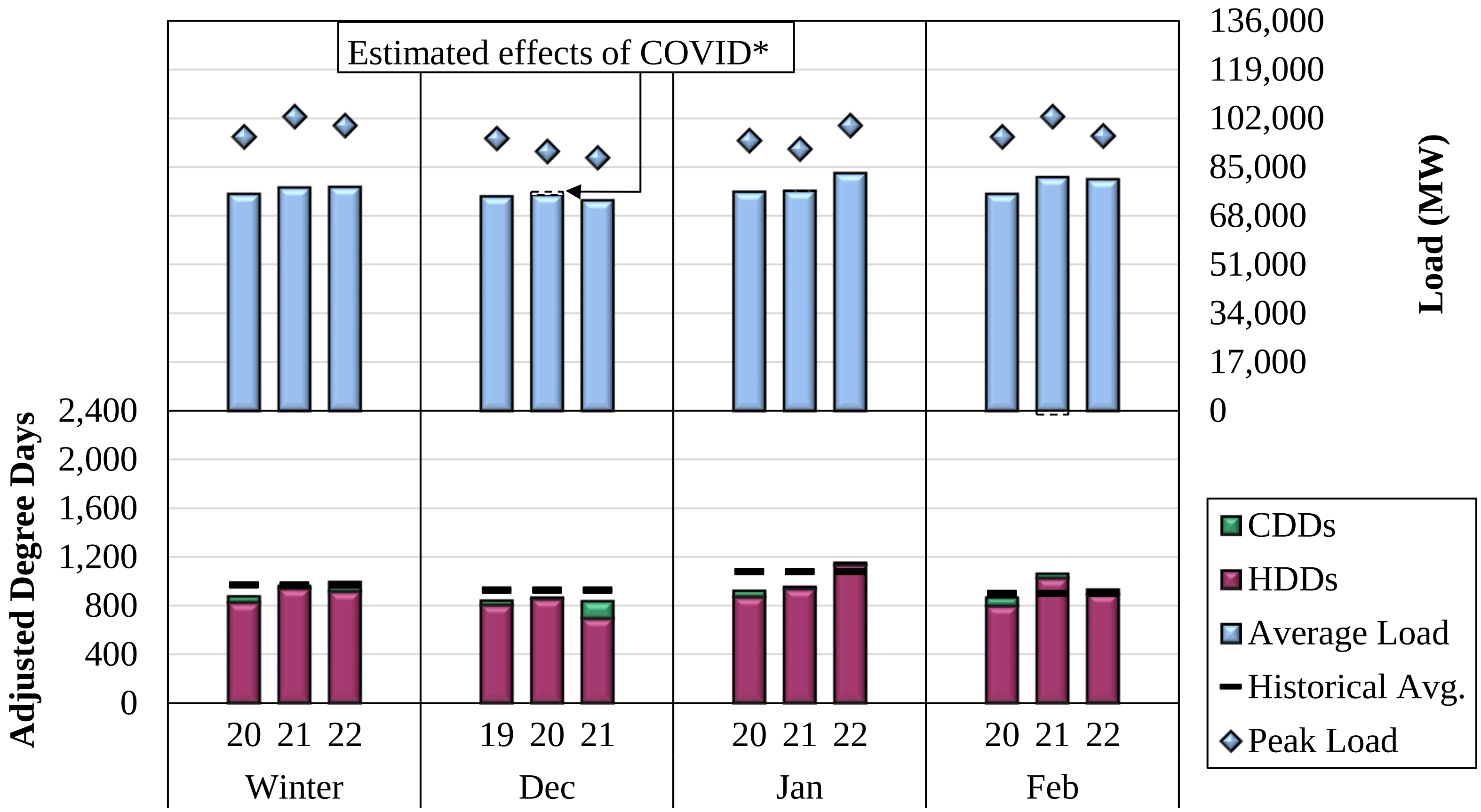



| Winter Average | 2020 | 2021 | 2022 |
|---|---|---|---|
| Chicago NG | $1.92 | $2.71 | $4.07 |
| Henry NG | $2.03 | $2.80 | $4.20 |

| Winter Average | 2020 | 2021 | 2022 |
|---|---|---|---|
| IB Coal | $1.32 | $1.23 | $3.53 |
| PRB Coal | $0.69 | $0.68 | $1.45 |

*** *Removes impact of the 2021 Arctic Event (Feb 13-19).***

# Load and Weather Patterns Winter 2020–2022




Notes: Midwest degree day calculations include four reprentative cities: Indianapolis, Detroit, Milwaukee and Minneapolis. The South region includes Little Rock and New Orleans.
*Effects estimated by MISO through back-casting using its load forecasting model.

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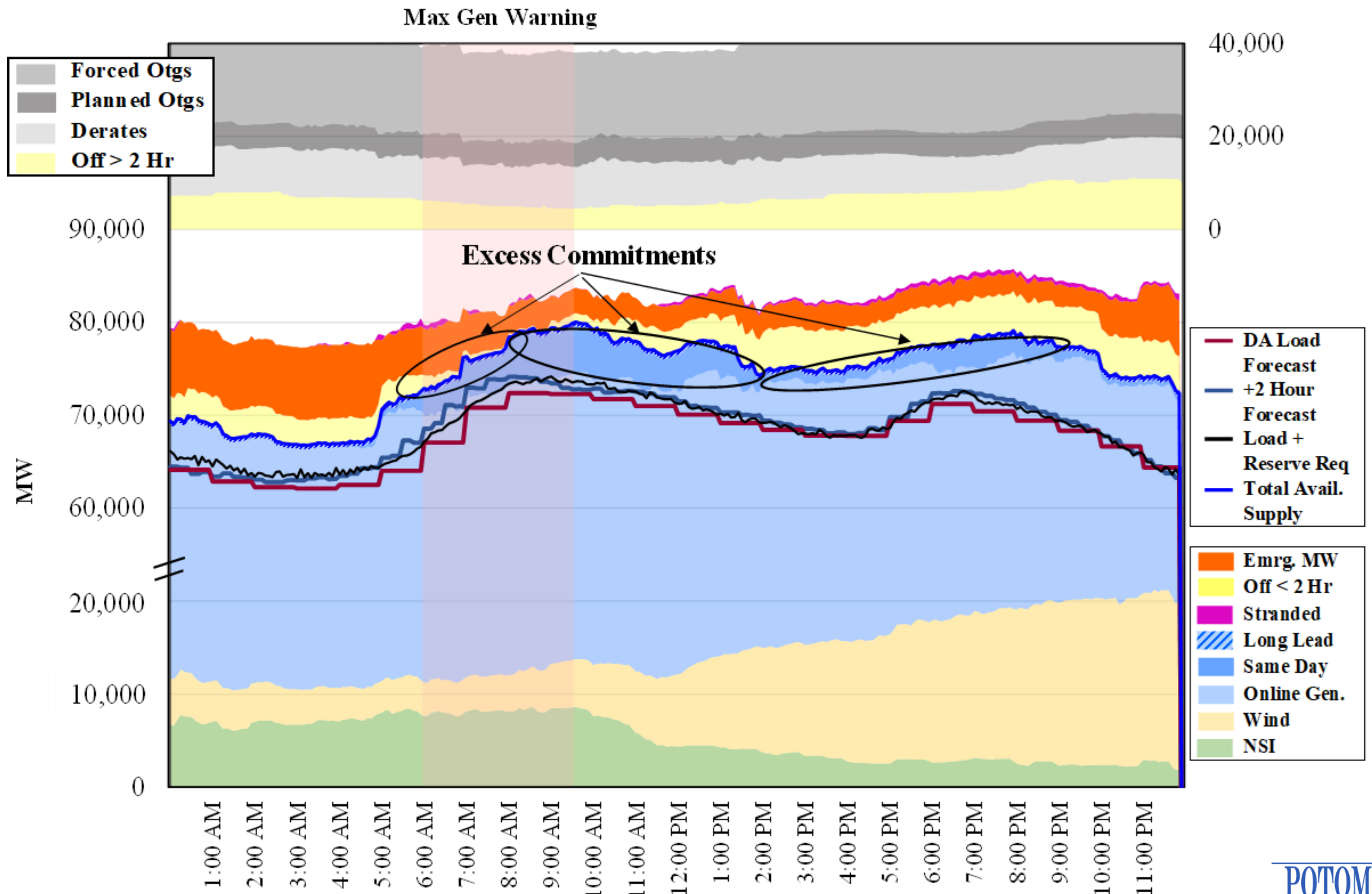
# Maximum Generation Warning
# Midwest, January 7, 2022



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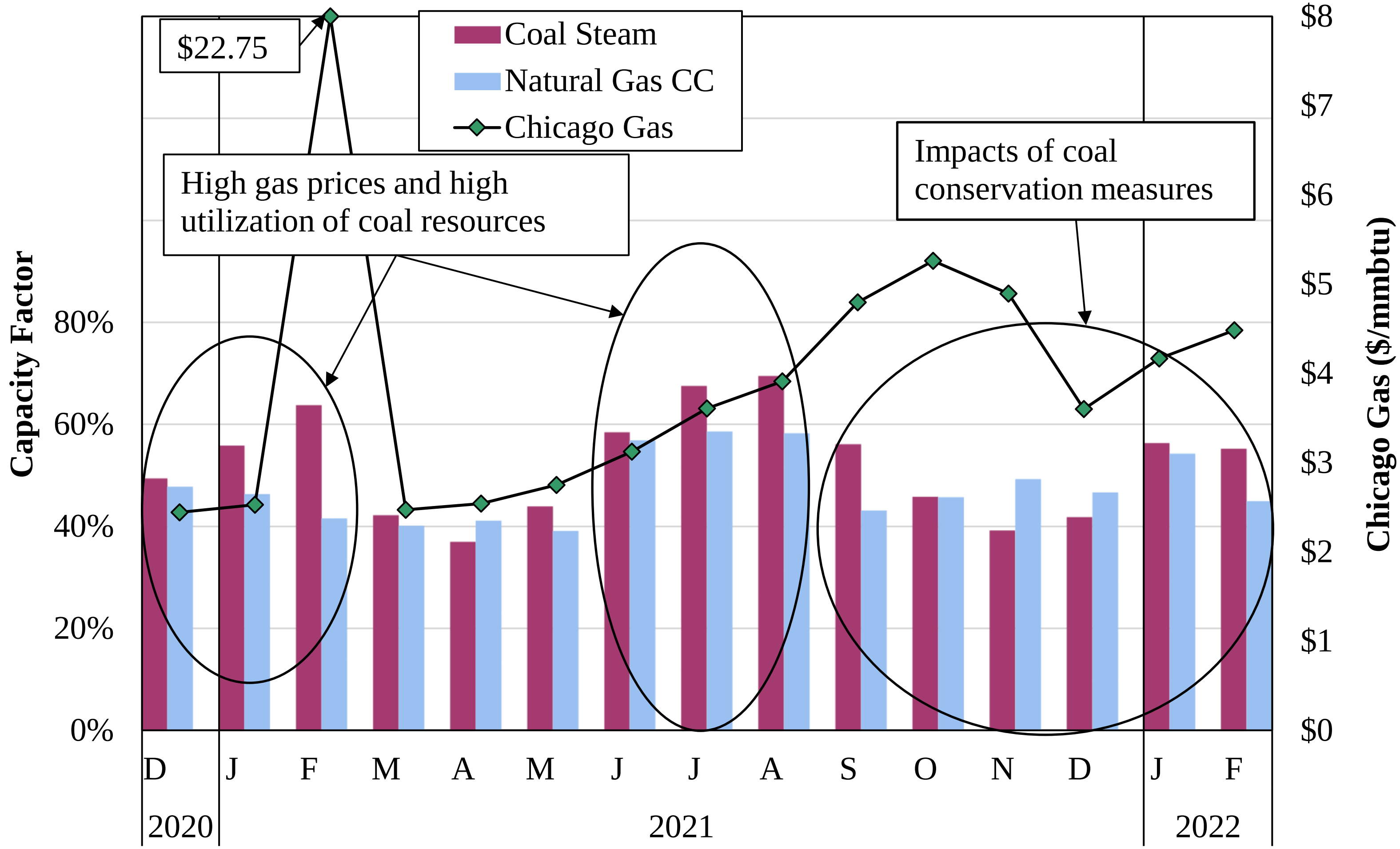
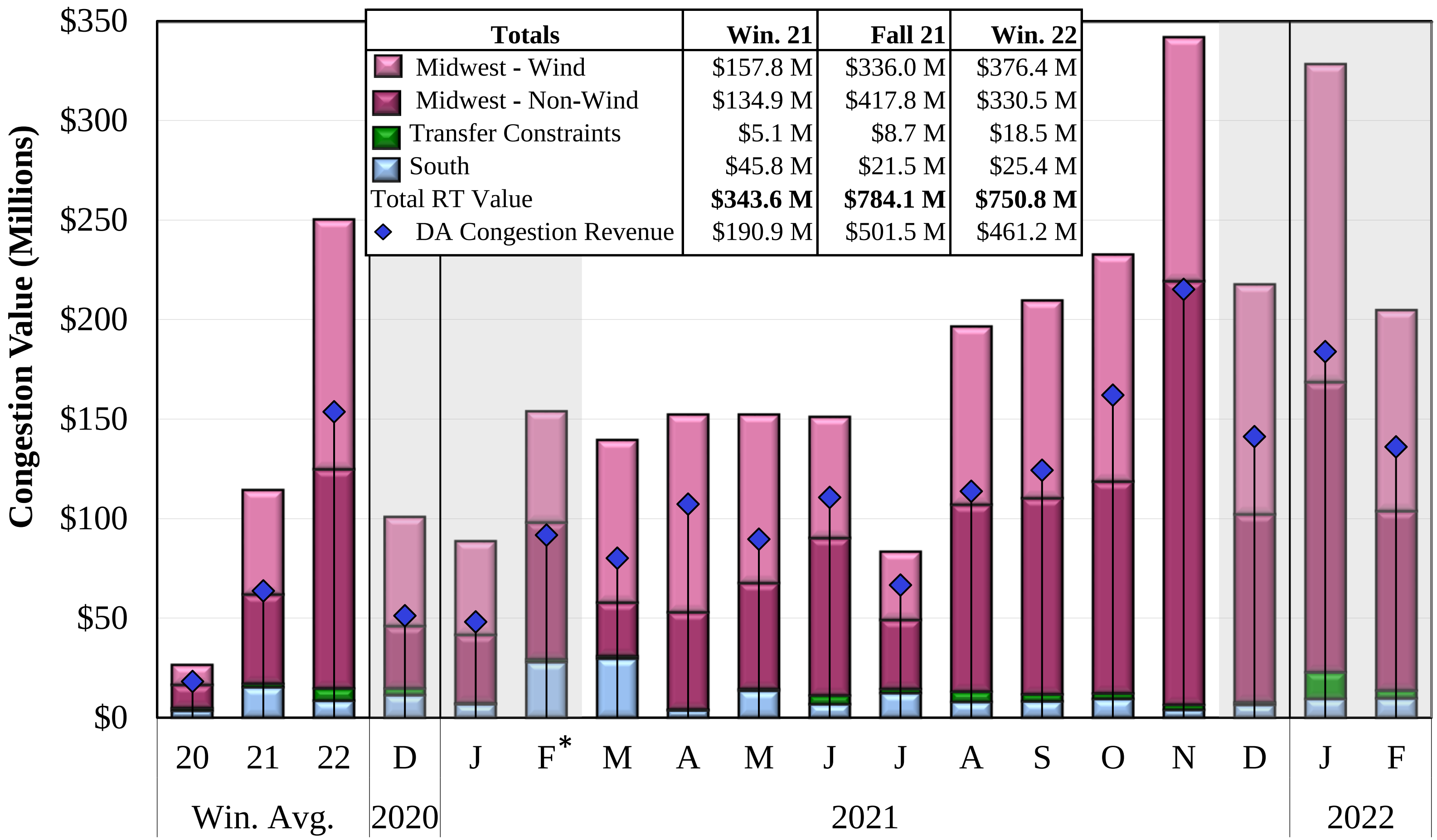
# Capacity, Energy and Price Setting Share Winter 2021–2022

| Winter | Unforced Capacity | | | | Energy Output | | Price Setting | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Total (MW) | | Share (%) | | Share (%) | | SMP (%) | | LMP (%) | |
| | 2021 | 2022 | 2021 | 2022 | 2021 | 2022 | 2021 | 2022 | 2021 | 2022 |
| **Nuclear** | 11,866 | 11,866 | 9% | 9% | 16% | 16% | 0% | 0% | 0% | 0% |
| **Coal** | 46,740 | 44,603 | 36% | 34% | 41% | 36% | 45% | 32% | 87% | 76% |
| **Natural Gas** | 58,431 | 59,168 | 45% | 46% | 26% | 29% | 53% | 68% | 98% | 93% |
| **Oil** | 1,636 | 1,626 | 1% | 1% | 0% | 0% | 0% | 0% | 1% | 0% |
| **Hydro** | 3,671 | 3,700 | 3% | 3% | 1% | 1% | 2% | 0% | 2% | 0% |
| **Wind** | 4,304 | 4,467 | 3% | 3% | 12% | 17% | 0% | 0% | 56% | 79% |
| **Other** | 3,145 | 3,881 | 2% | 3% | 3% | 1% | 0% | 0% | 12% | 11% |
| **Total** | **129,794** | **129,311** | | | | | | | | |

# Capacity Factors By Fuel Type 2020–2022



# Value of Real-Time Congestion Winter 2021–2022

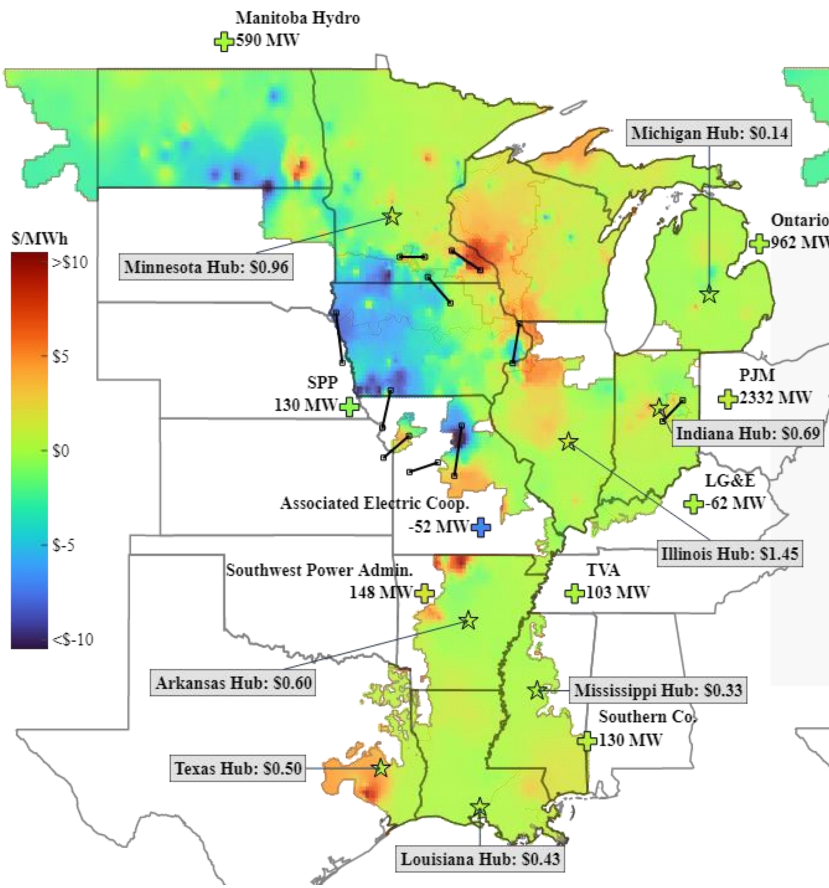



| Totals | Win. 21 | Fall 21 | Win. 22 |
|---|---|---|---|
| Midwest - Wind | $157.8 M | $336.0 M | $376.4 M |
| Midwest - Non-Wind | $134.9 M | $417.8 M | $330.5 M |
| Transfer Constraints | $5.1 M | $8.7 M | $18.5 M |
| South | $45.8 M | $21.5 M | $25.4 M |
| Total RT Value | **$343.6 M** | **$784.1 M** | **$750.8 M** |
| DA Congestion Revenue | $190.9 M | $501.5 M | $461.2 M |

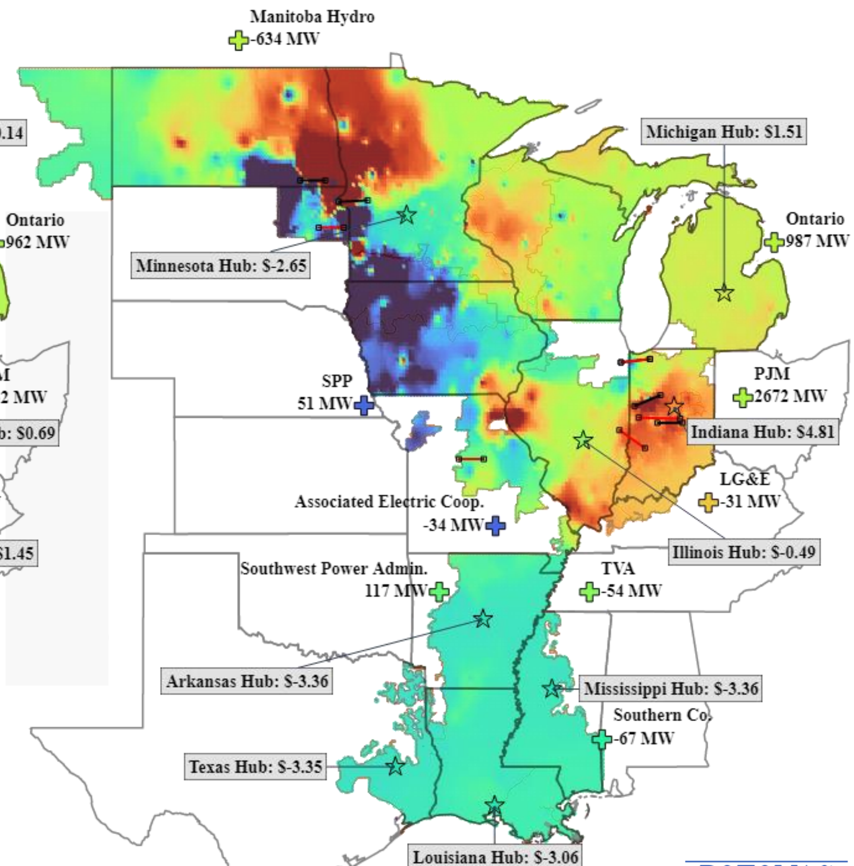
* ***$211 MM and $526 MM Congestion in Midwest and South are excluded for Feb 13 through Feb 19, 2021.***

# Average Real-Time Congestion Components Winter 2021–2022

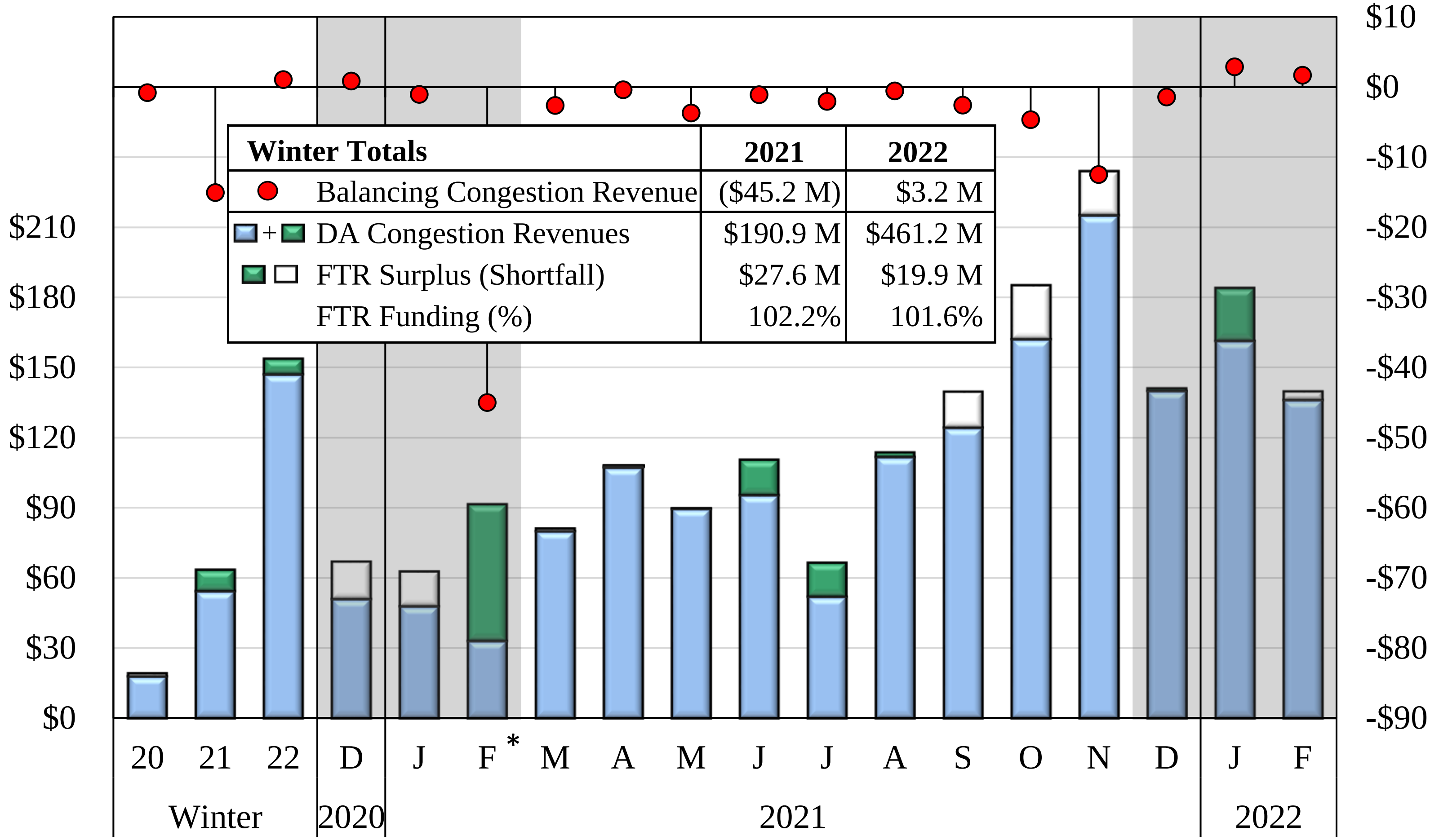
## Winter 2021




## Winter 2022



# Day-Ahead Congestion, Balancing Congestion and FTR Underfunding

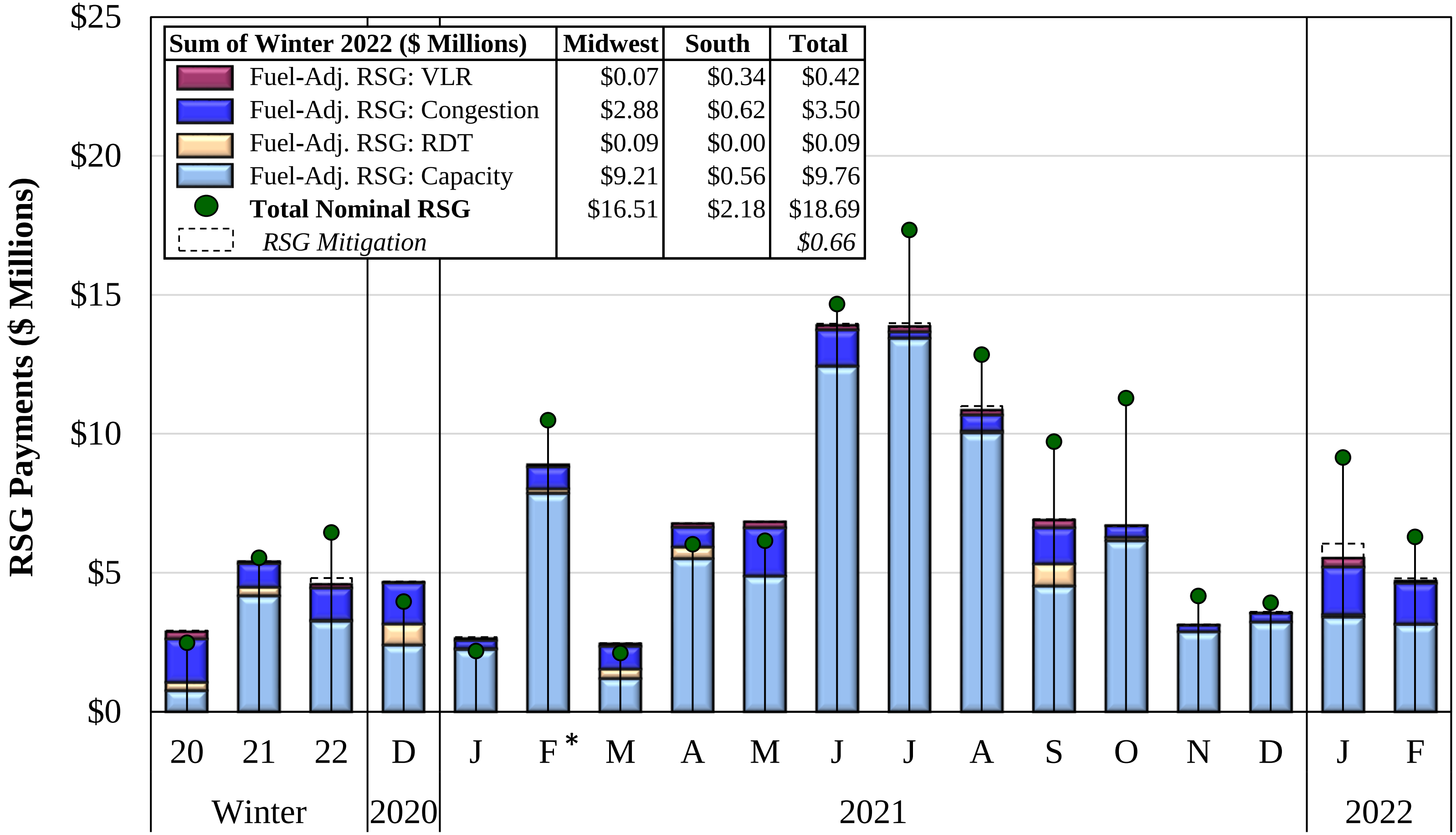



* *$277 MM DA Congestion is excluded for Feb 13 through Feb 19, 2021.*

# Benefits of Ambient-Adjusted and Emergency Ratings Winter 2021–2022

| Winter | | Savings ($ Millions) | | | # of Facilites for 2/3 of Savings | Share of Congestion |
|---|---|---|---|---|---|---|
| | | Ambient Adj. Ratings | Emergency Ratings | Total | | |
| **2021** | **Midwest** | $35.3 | $24.47 | $59.8 | 5 | 12.6% |
| | **South** | $25.8 | $33.36 | $59.1 | 1 | 10.6% |
| | **Total** | **$61.1** | **$57.8** | **$118.9** | **6** | **11.5%** |
| **2022** | **Midwest** | $93.7 | $37.10 | $130.8 | 6 | 18.5% |
| | **South** | $0.6 | $1.13 | $1.8 | 1 | 12.6% |
| | **Total** | **$94.4** | **$38.2** | **$132.6** | **7** | **18.4%** |

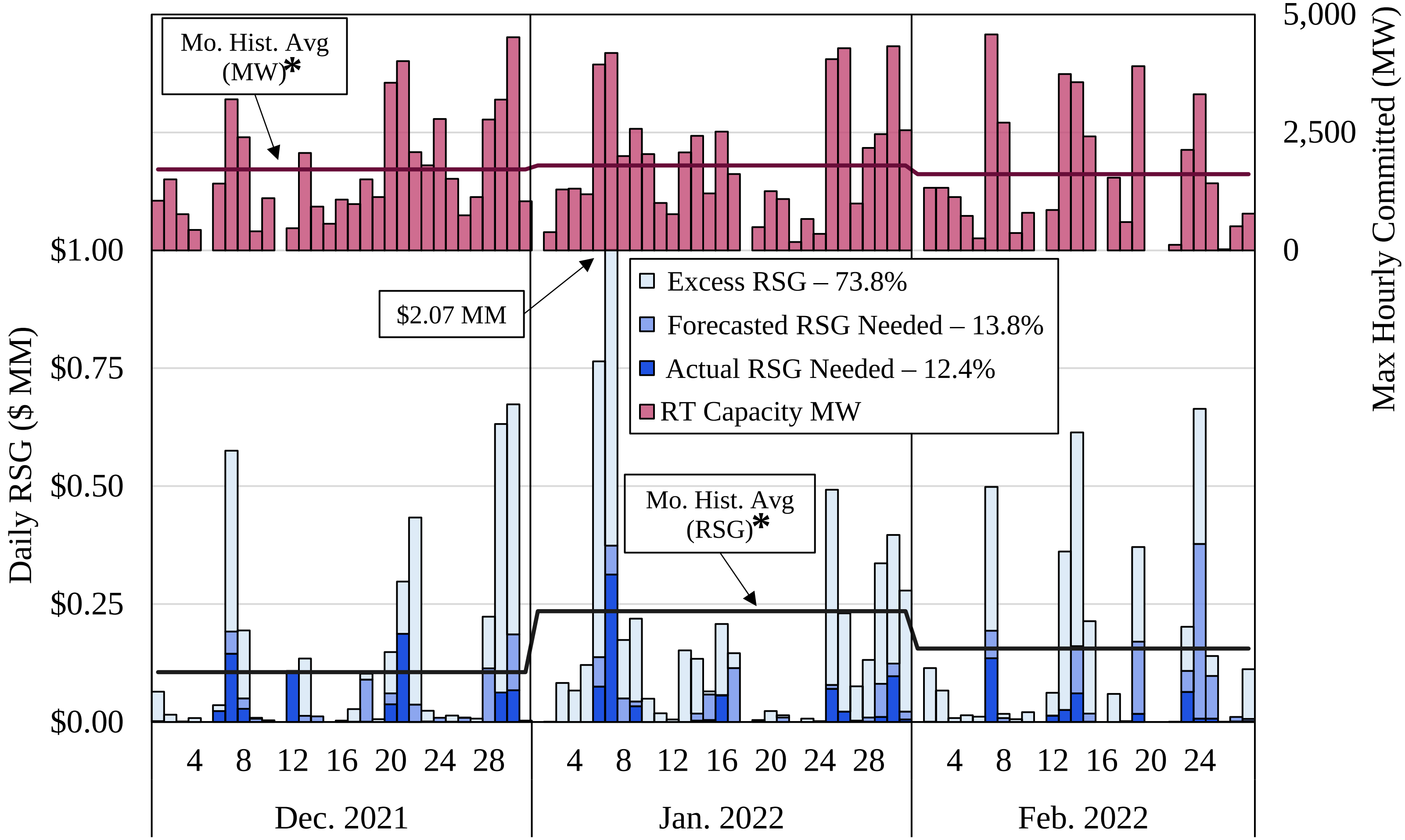
# Real-Time RSG Payments
# Winter 2021–2022




| Sum of Winter 2022 ($ Millions) | Midwest | South | Total |
|---|---|---|---|
| Fuel-Adj. RSG: VLR | $0.07 | $0.34 | $0.42 |
| Fuel-Adj. RSG: Congestion | $2.88 | $0.62 | $3.50 |
| Fuel-Adj. RSG: RDT | $0.09 | $0.00 | $0.09 |
| Fuel-Adj. RSG: Capacity | $9.21 | $0.56 | $9.76 |
| **Total Nominal RSG** | $16.51 | $2.18 | $18.69 |
| *RSG Mitigation* | | | *$0.66* |

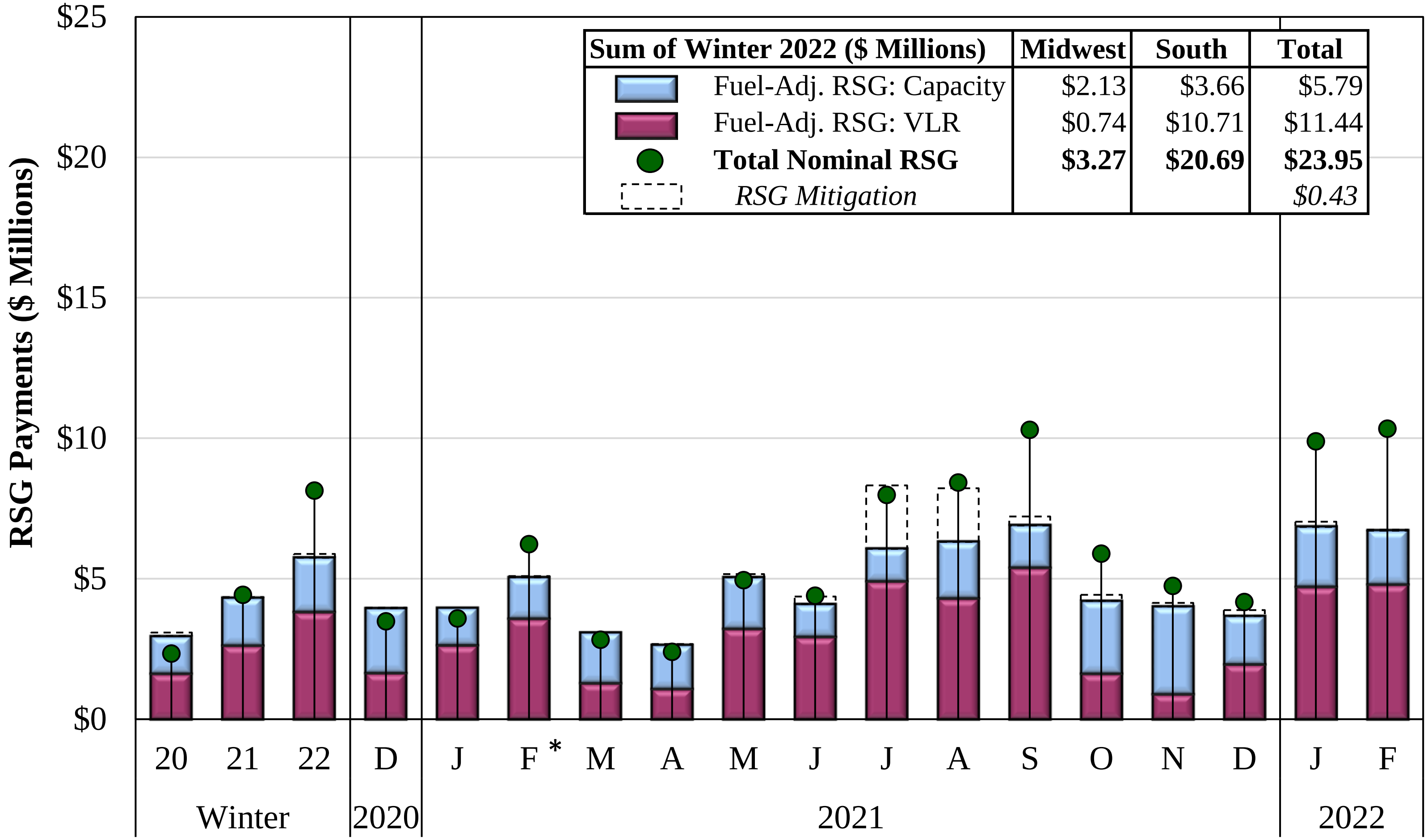
* ***$106 MM RSG is excluded for Feb 13 through Feb 19, 2021.***

# Real-Time Capacity Commitment and RSG




*** February historical averages exclude impact of the 2021 Arctic Event (Feb 13-19).***

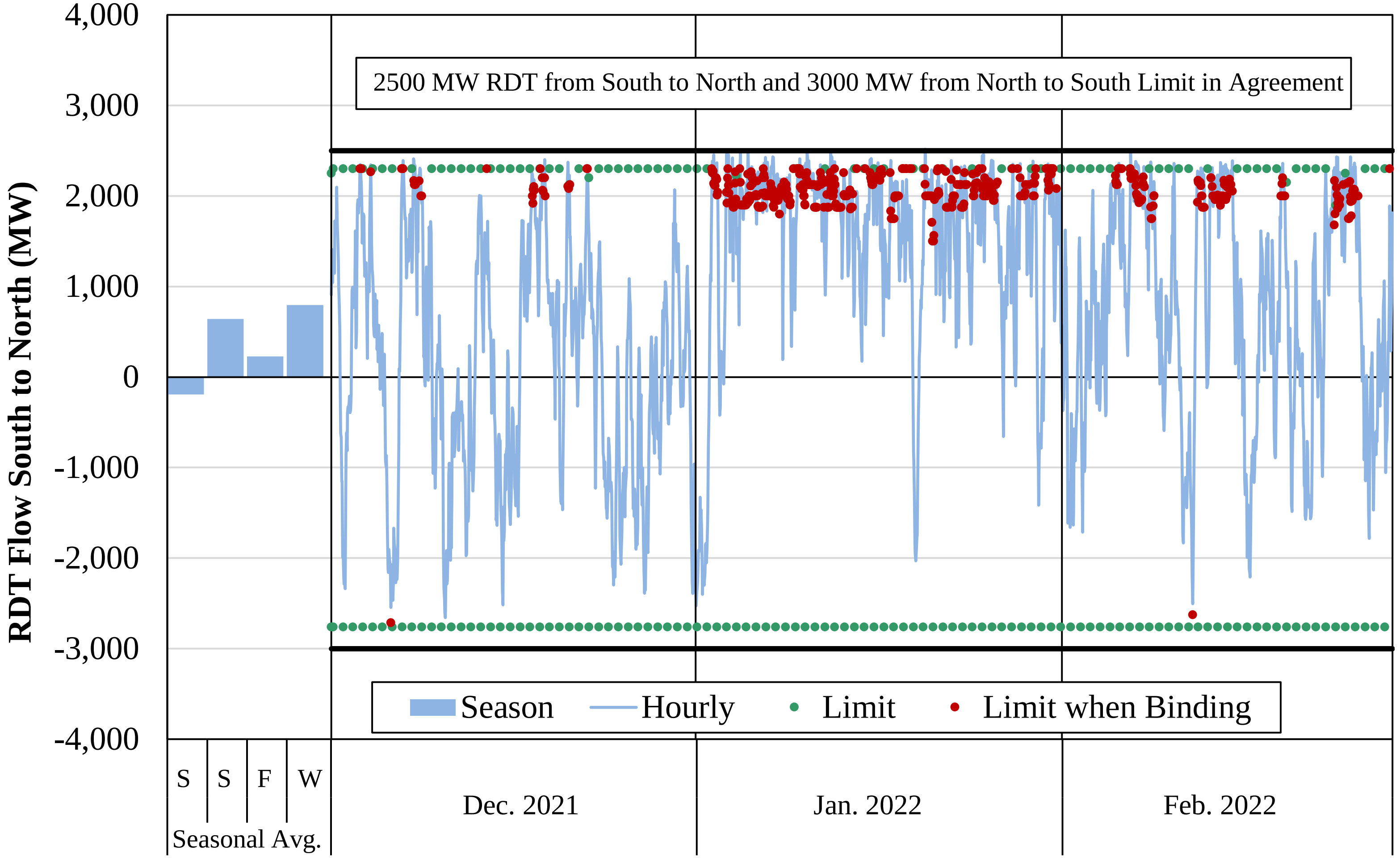
# Day-Ahead RSG Payments Winter 2021–2022



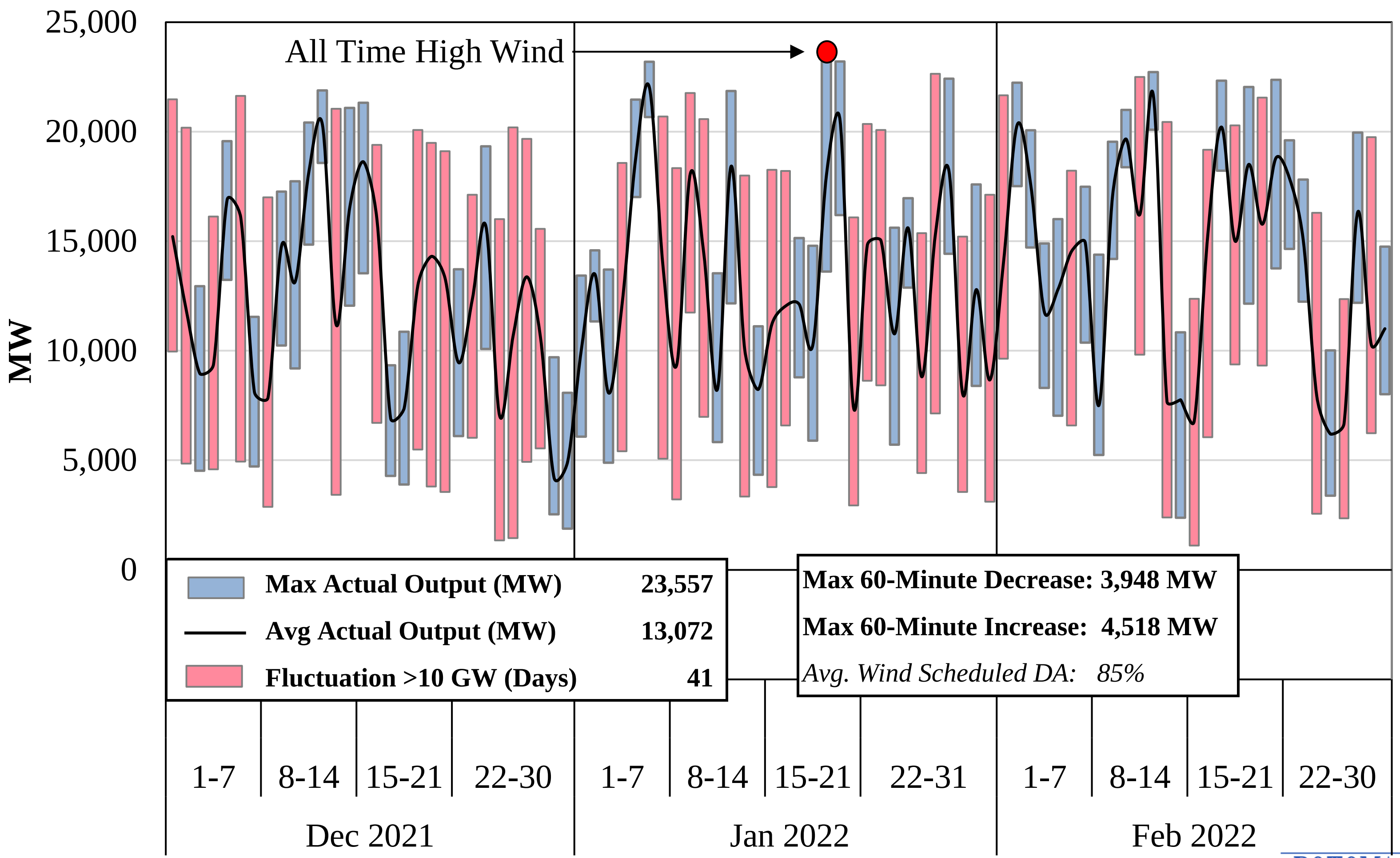

| Sum of Winter 2022 ($ Millions) | Midwest | South | Total |
|---|---|---|---|
| Fuel-Adj. RSG: Capacity | $2.13 | $3.66 | $5.79 |
| Fuel-Adj. RSG: VLR | $0.74 | $10.71 | $11.44 |
| **Total Nominal RSG** | **$3.27** | **$20.69** | **$23.95** |
| *RSG Mitigation* | | | *$0.43* |

* ***$34 MM RSG and $10 MM RSG mitigation is excluded for Feb 13 through Feb 19, 2021.***

# Real-Time Hourly Inter-Regional Flows
# Winter 2022



# Wind Output in Real Time
# Daily Range and Average





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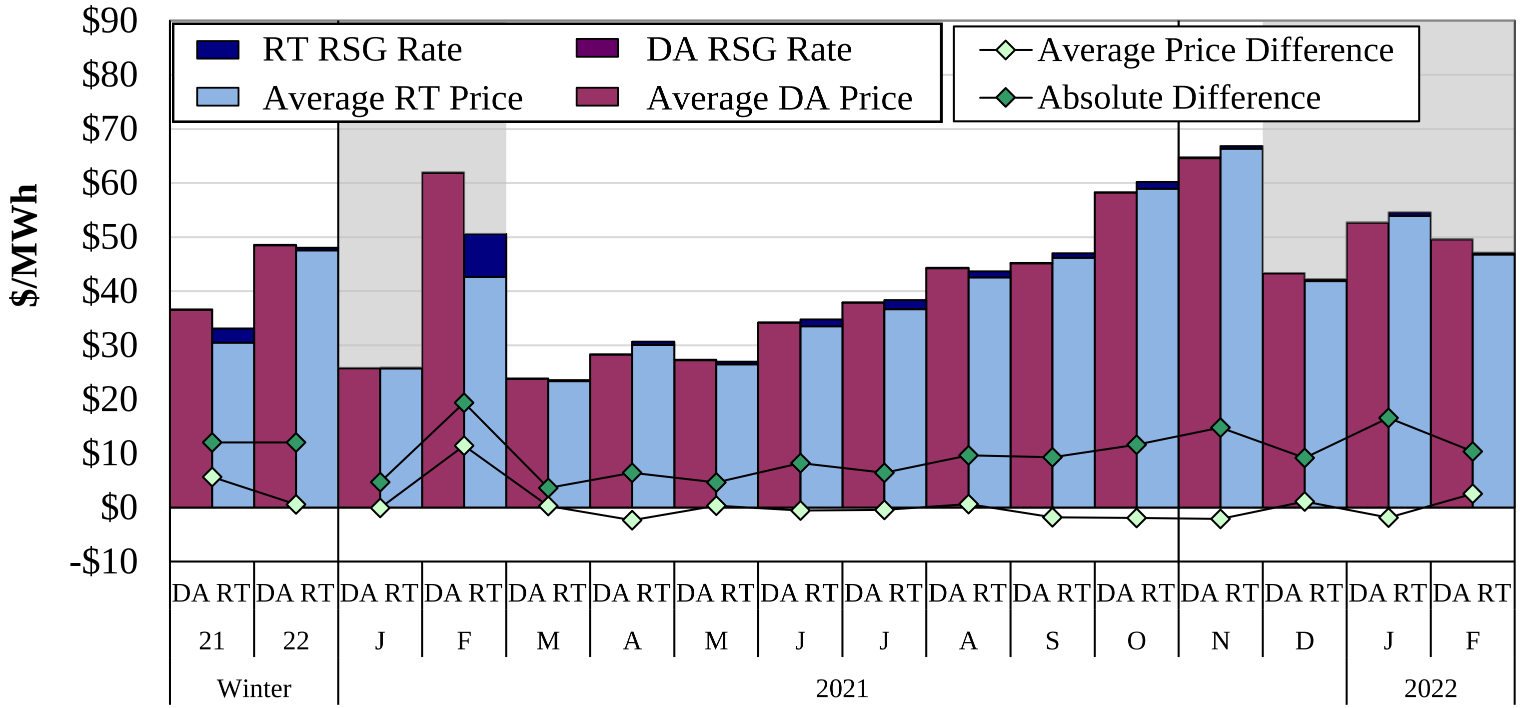
# Day-Ahead and Real-Time Price Convergence Winter 2021–2022




**Average DA-RT Price Difference Including RSG (% of Real-Time Price)**

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Indiana Hub | 7 | 1 | 0 | 23 | 1 | -8 | 1 | -2 | -1 | 1 | -4 | -3 | -3 | 3 | -3 | 5 |
| Michigan Hub | 4 | 2 | 0 | 14 | -1 | -4 | 1 | -3 | 0 | 1 | -3 | -1 | -1 | 1 | -3 | 6 |
| Minnesota Hub | 0 | 4 | -1 | 6 | 3 | -15 | -9 | -5 | 1 | 1 | -7 | -2 | 2 | 0 | 3 | 8 |
| Arkansas Hub | -4 | 0 | 3 | -14 | -3 | -6 | -1 | 1 | -5 | 3 | -5 | -2 | 5 | -2 | -2 | 3 |
| Texas Hub | -3 | 0 | 0 | -10 | -6 | 0 | -2 | 4 | -1 | 3 | -4 | 2 | 6 | -1 | -4 | 4 |
| Louisiana Hub | -3 | 0 | 1 | -14 | -10 | 0 | 1 | 2 | 0 | 8 | -5 | 3 | 3 | -1 | -3 | 5 |



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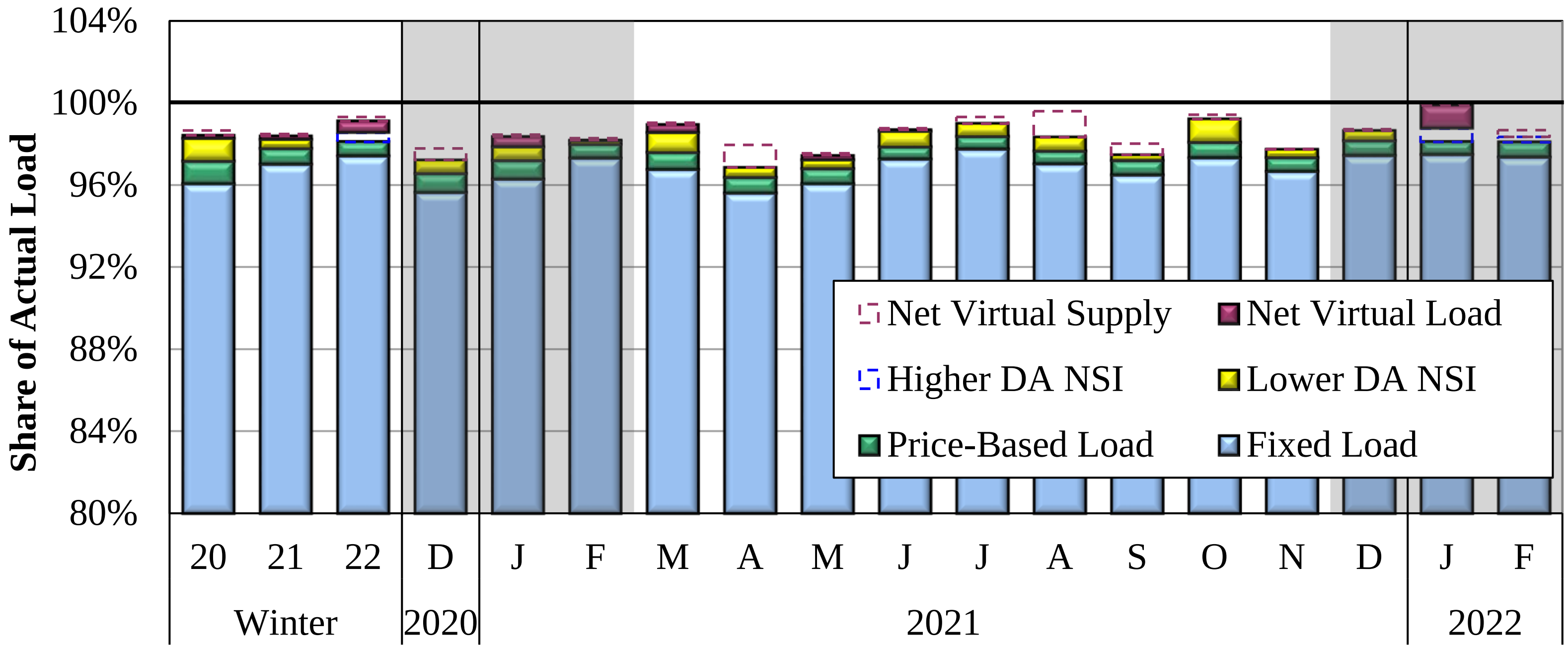
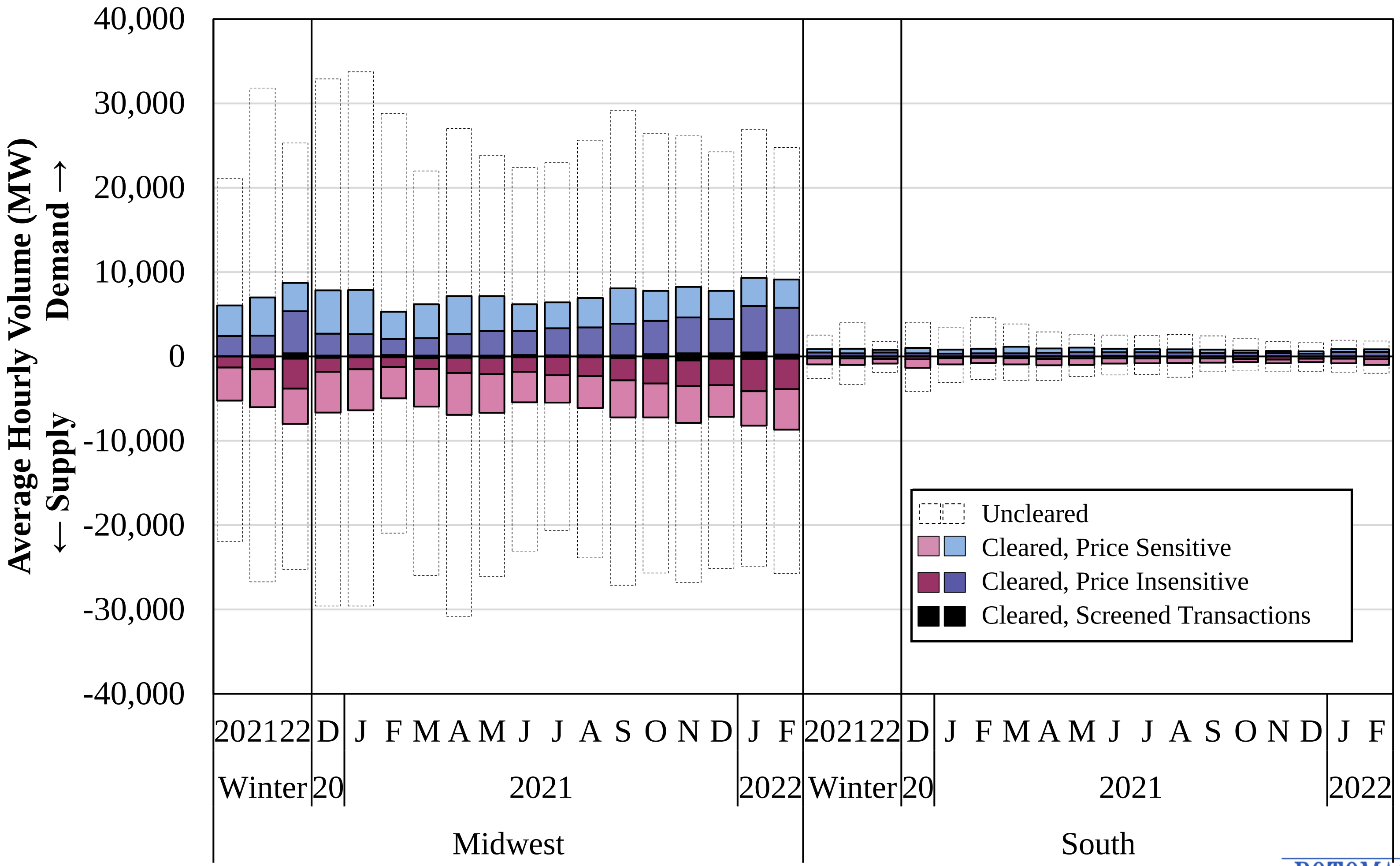
# Day-Ahead Peak Hour Load Scheduling Winter 2021–2022



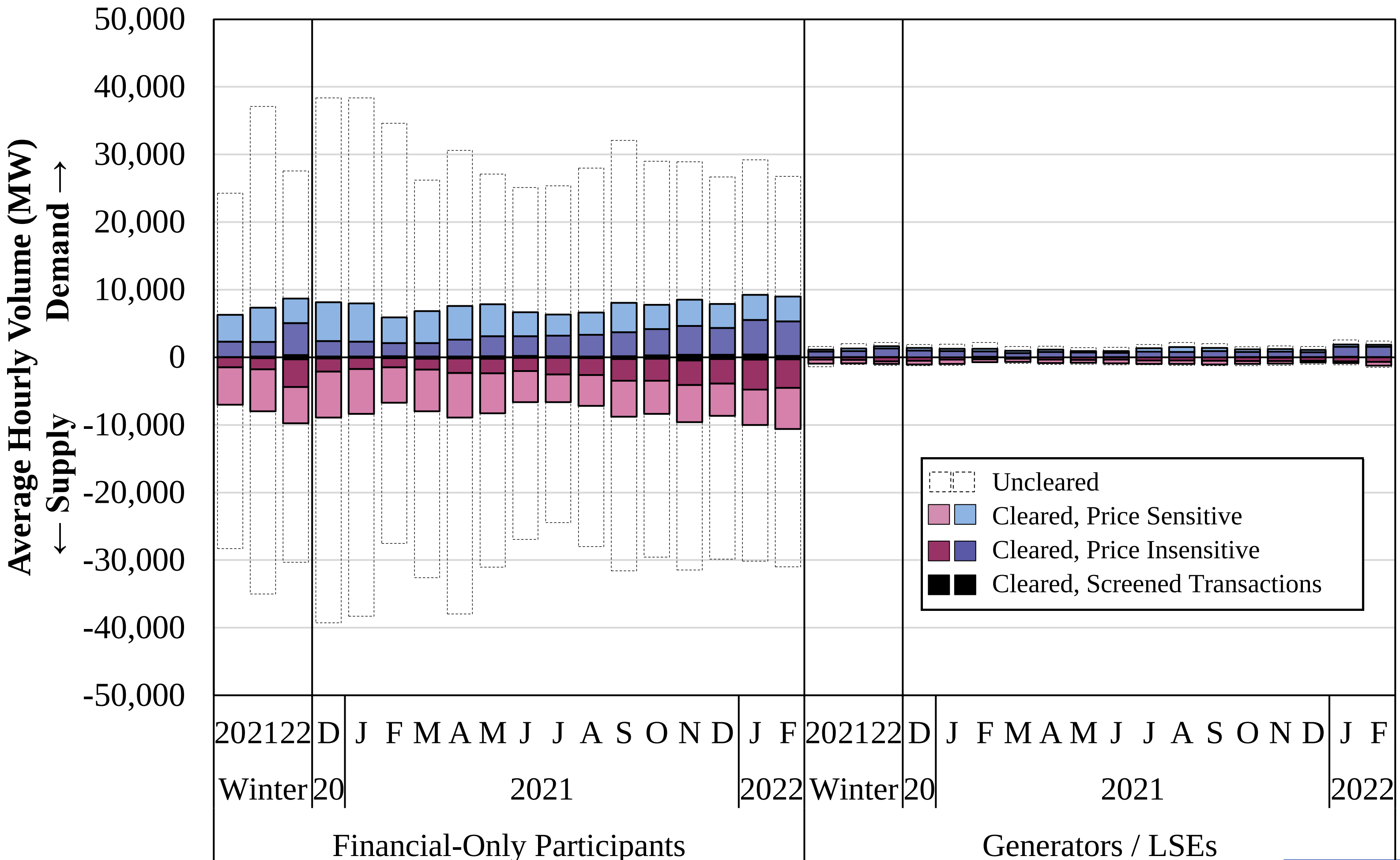

**Share of Actual Load (%)**

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| All Hours | 98.7 | 98.7 | 98.4 | 97.8 | 98.5 | 98.5 | 98.3 | 97.2 | 97.7 | 98.9 | 99.7 | 99.8 | 98.3 | 99.2 | 97.8 | 98.9 | 98.9 | 97.8 |
| Peak Hours Midwest | 98.4 | 98.3 | 99.0 | 96.6 | 98.5 | 97.4 | 97.3 | 96.0 | 96.5 | 97.6 | 98.3 | 96.9 | 97.0 | 98.7 | 97.6 | 99.0 | 99.8 | 98.1 |
| Peak Hours South | 98.6 | 102.1 | 99.4 | 98.2 | 101.3 | 103.6 | 102.3 | 100.3 | 99.2 | 101.6 | 100.9 | 101.8 | 99.3 | 100.2 | 101.4 | 101.3 | 98.8 | 100.0 |

# Virtual Load and Supply
# Winter 2021–2022



# Virtual Load and Supply by Participant Type Winter 2021–2022



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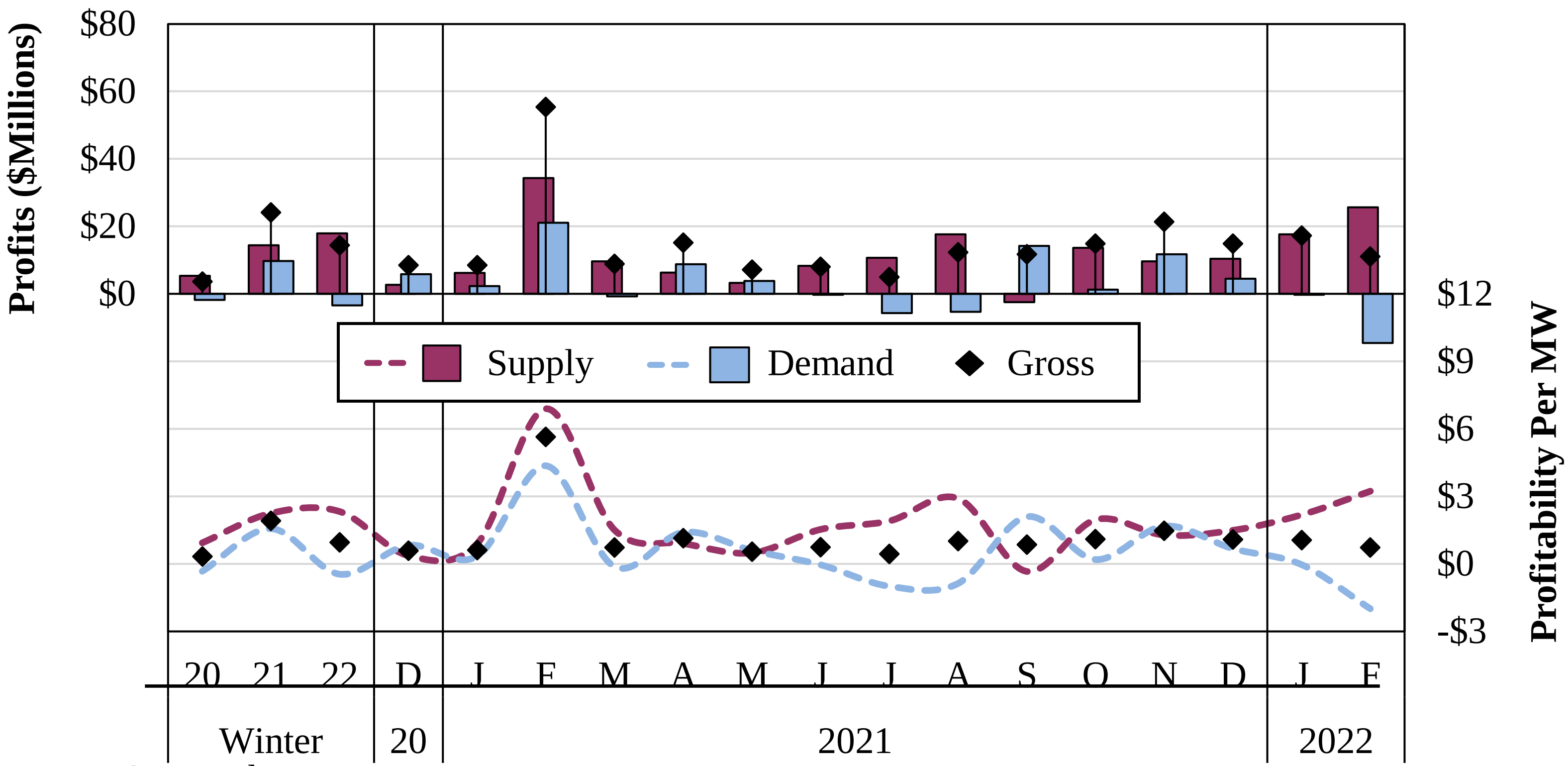
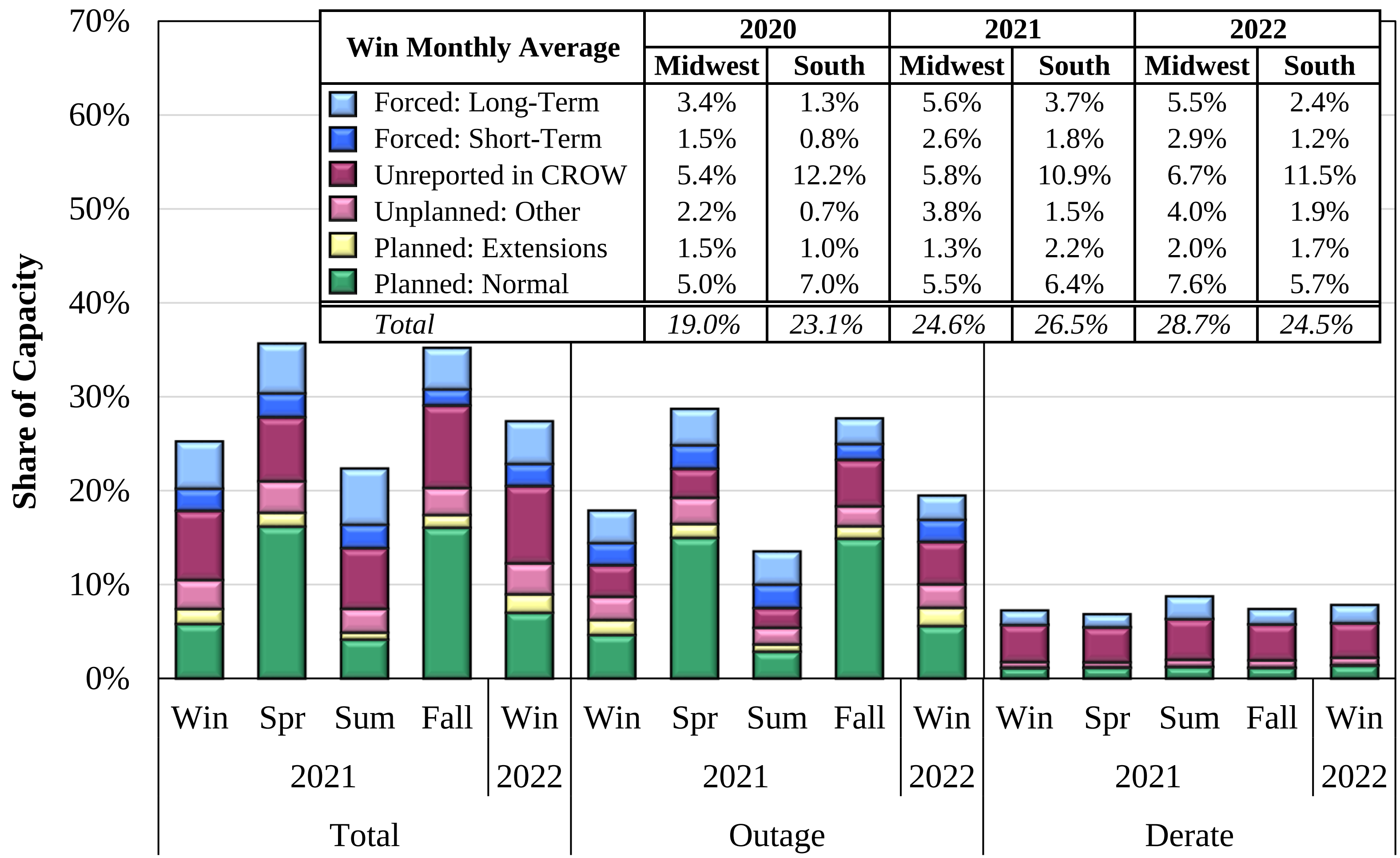
# Virtual Profitability
# Winter 2021–2022




Percent Screened

| | Winter 20 | Winter 21 | Winter 22 | D 20 | J 2021 | F | M | A | M | J | J | A | S | O | N | D | J 2022 | F |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Supply | 0.1 | 1.5 | 2.9 | 1.7 | 1.0 | 1.8 | 2.5 | 2.0 | 2.4 | 1.4 | 1.4 | 1.6 | 2.8 | 2.7 | 4.9 | 2.9 | 3.3 | 2.6 |
| Demand | 0.5 | 2.0 | 3.7 | 1.3 | 1.4 | 3.7 | 1.4 | 1.7 | 1.8 | 3.0 | 2.0 | 1.6 | 1.7 | 3.5 | 4.3 | 4.5 | 4.4 | 2.3 |
| Total | 0.3 | 1.7 | 3.3 | 1.5 | 1.2 | 2.7 | 2.0 | 1.9 | 2.1 | 2.2 | 1.7 | 1.6 | 2.3 | 3.1 | 4.6 | 3.7 | 3.9 | 2.5 |

# Generation Outages and Deratings Winter 2021–2022



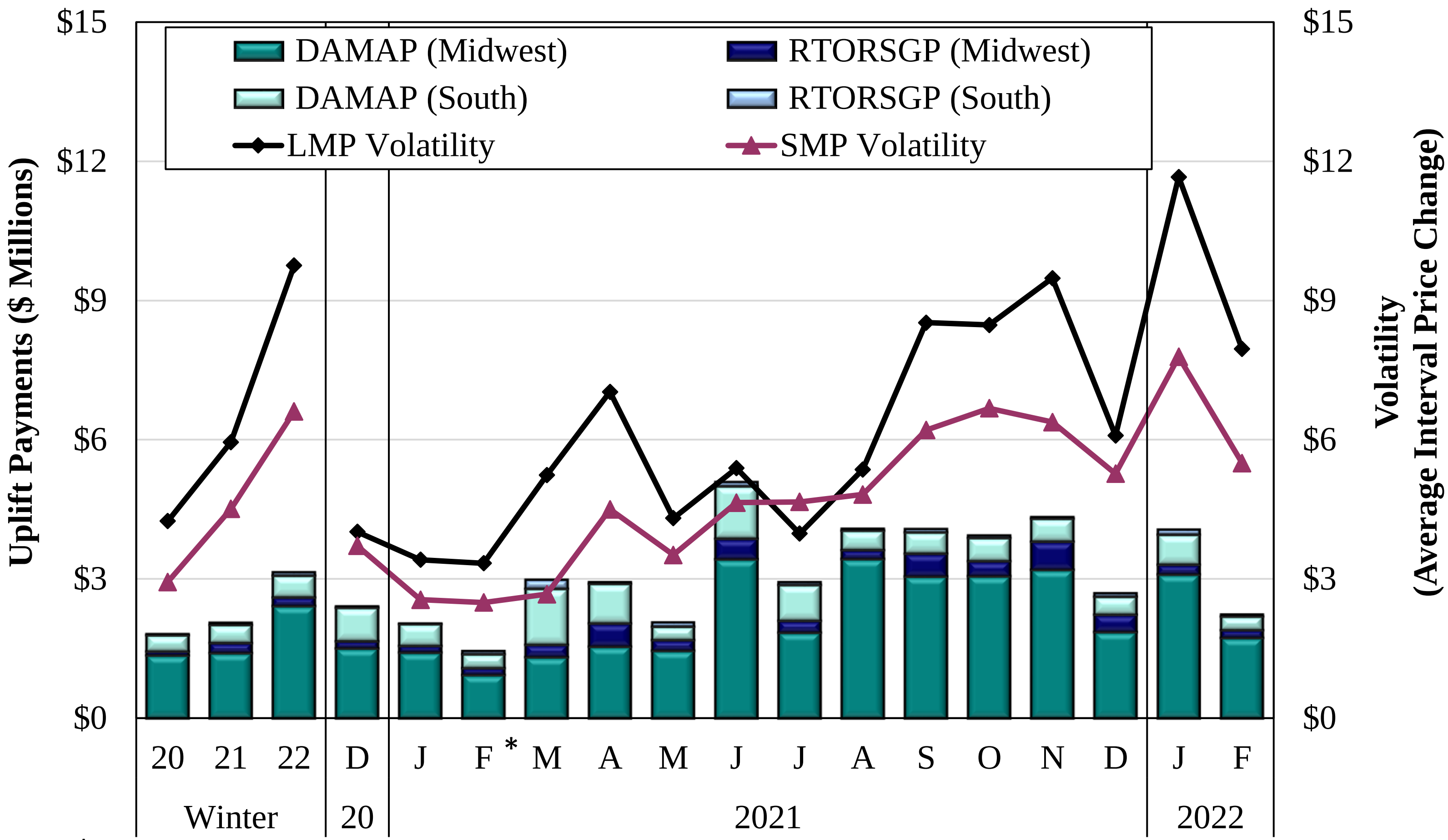

| Win Monthly Average | 2020 Midwest | 2020 South | 2021 Midwest | 2021 South | 2022 Midwest | 2022 South |
|---|---|---|---|---|---|---|
| Forced: Long-Term | 3.4% | 1.3% | 5.6% | 3.7% | 5.5% | 2.4% |
| Forced: Short-Term | 1.5% | 0.8% | 2.6% | 1.8% | 2.9% | 1.2% |
| Unreported in CROW | 5.4% | 12.2% | 5.8% | 10.9% | 6.7% | 11.5% |
| Unplanned: Other | 2.2% | 0.7% | 3.8% | 1.5% | 4.0% | 1.9% |
| Planned: Extensions | 1.5% | 1.0% | 1.3% | 2.2% | 2.0% | 1.7% |
| Planned: Normal | 5.0% | 7.0% | 5.5% | 6.4% | 7.6% | 5.7% |
| *Total* | *19.0%* | *23.1%* | *24.6%* | *26.5%* | *28.7%* | *24.5%* |





POTOMAC ECONOMICS

# Price Volatility Make Whole Payments Winter 2021–2022



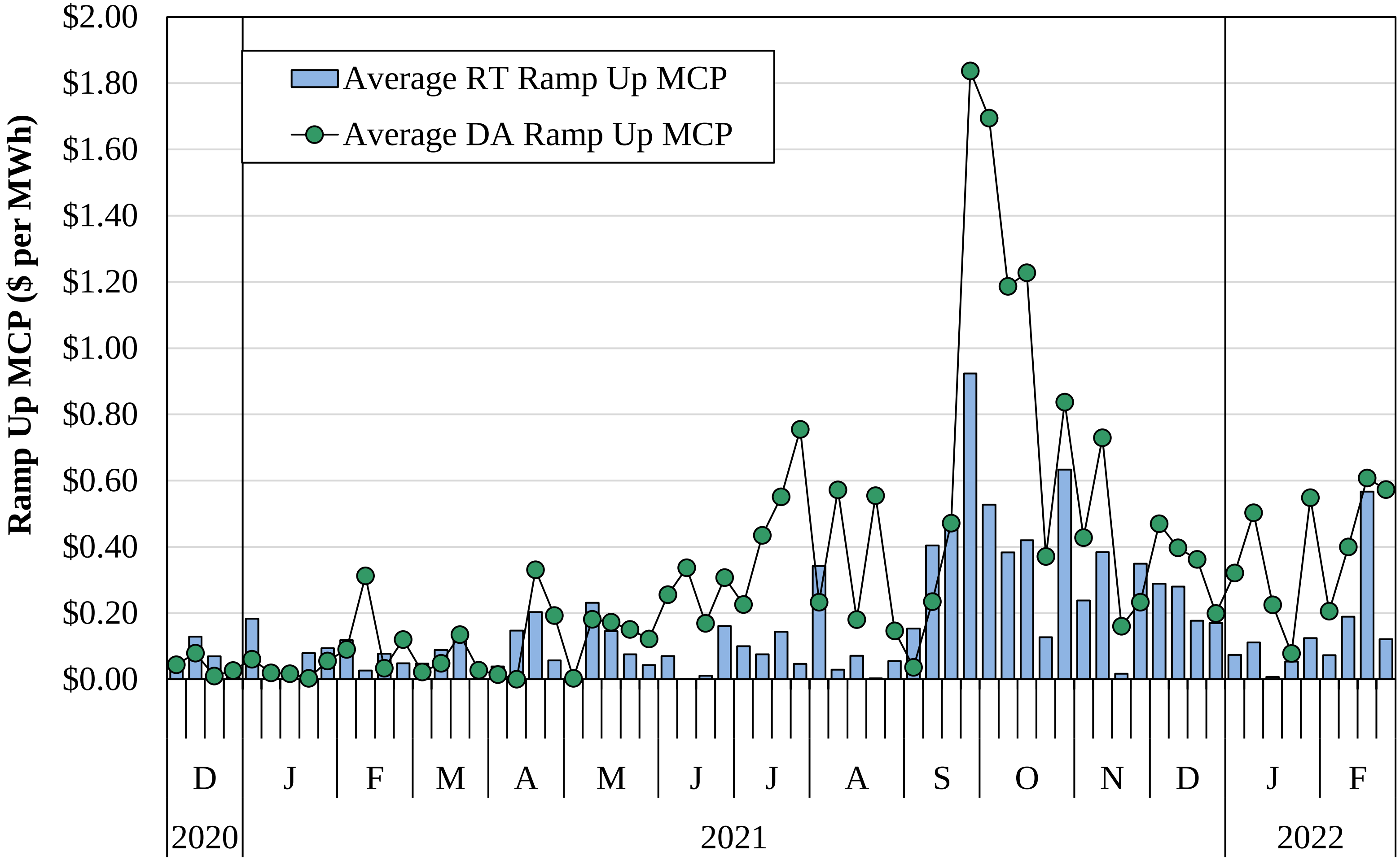

* *$13 MM DAMAP and $1 MM RTORSGP are excluded for Feb 13 through Feb 19, 2021.*



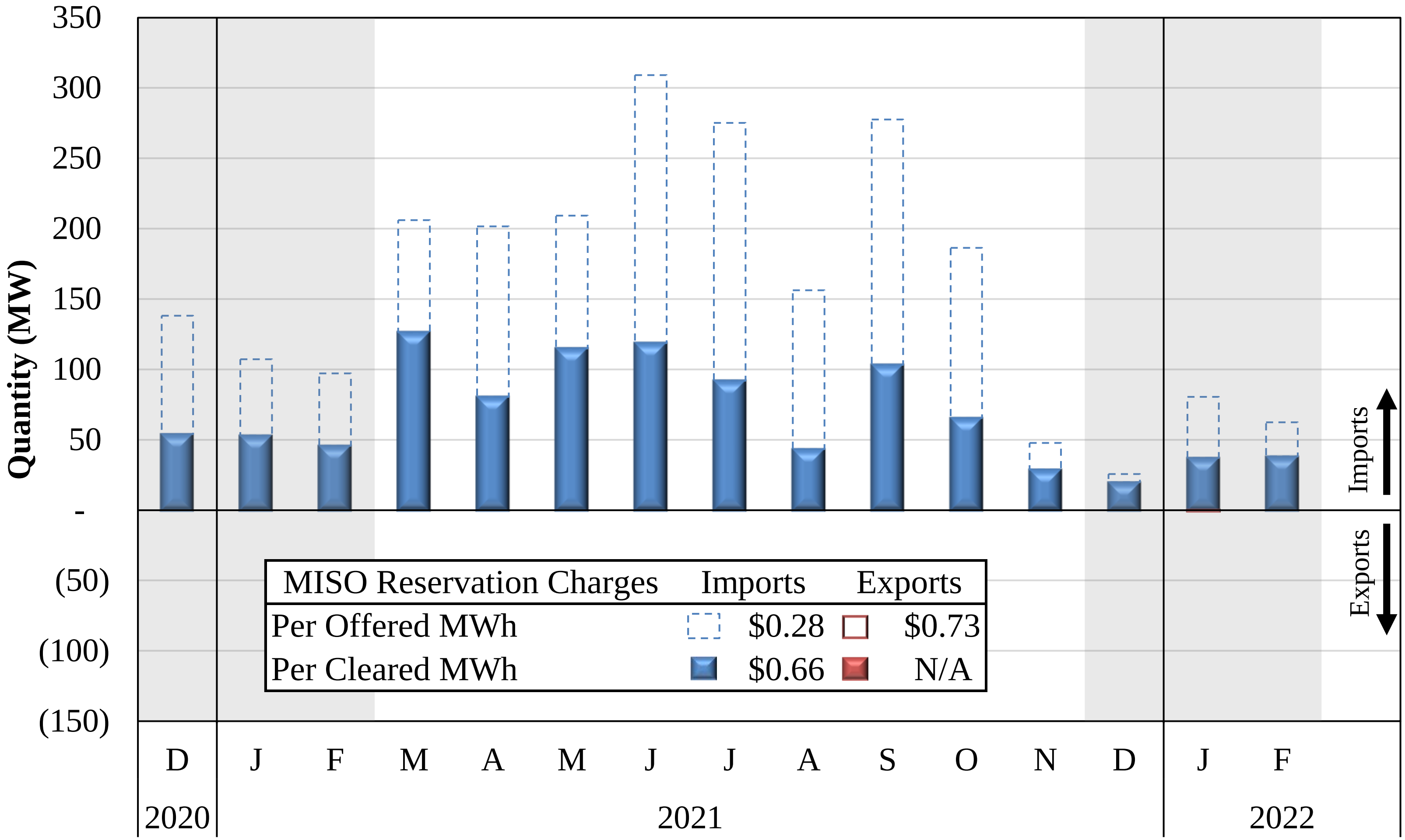


POTOMAC ECONOMICS

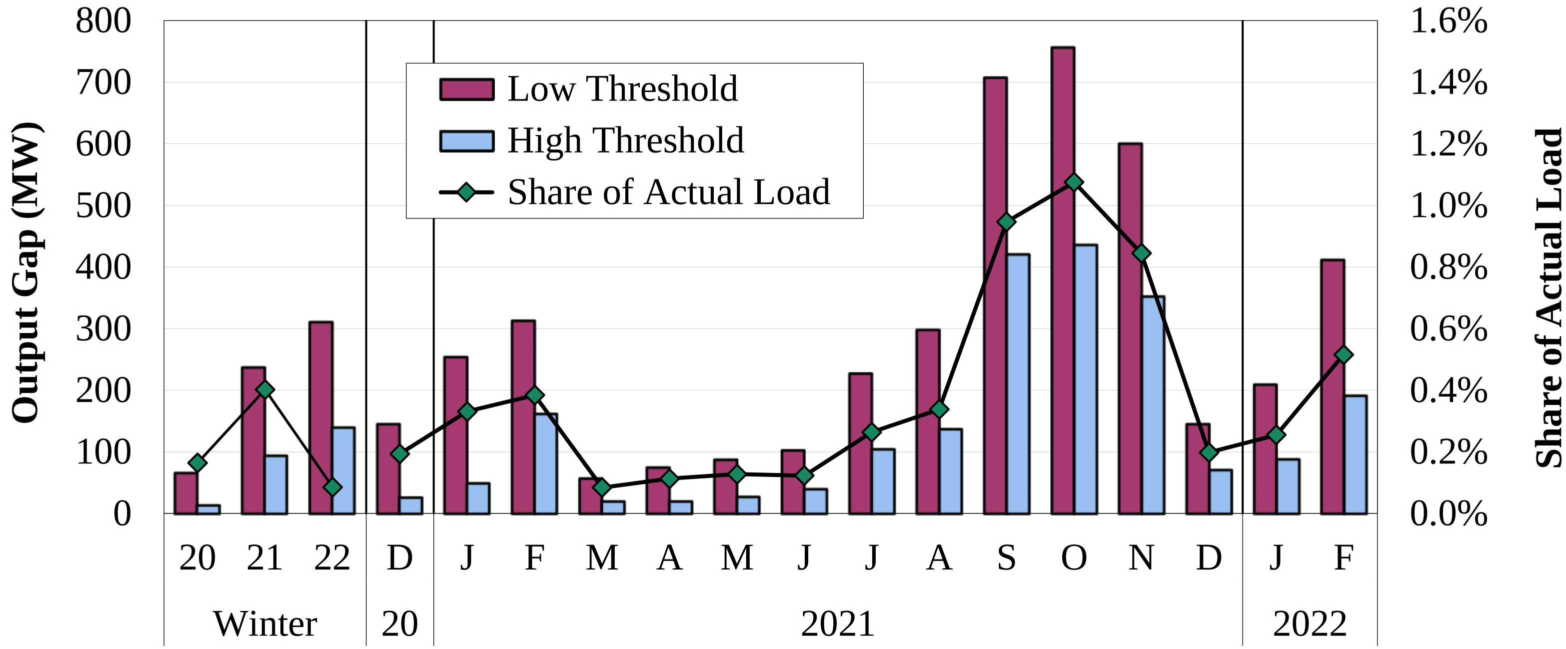
# Day-Ahead and Real-Time Ramp Up Price Winter 2021–2022



# Coordinated Transaction Scheduling (CTS) Winter 2021–2022



# Monthly Output Gap
# Winter 2021–2022




**Low Threshold Results by Unit Status (MW)**

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Offline | 2 | 31 | 18 | 2 | 0 | 90 | 3 | 0 | 9 | 8 | 27 | 46 | 129 | 103 | 35 | 9 | 22 | 24 |
| Online | 36 | 207 | 237 | 144 | 254 | 223 | 55 | 75 | 79 | 96 | 201 | 252 | 577 | 652 | 565 | 136 | 188 | 387 |

**High Threshold Results by Unit Status (MW)**

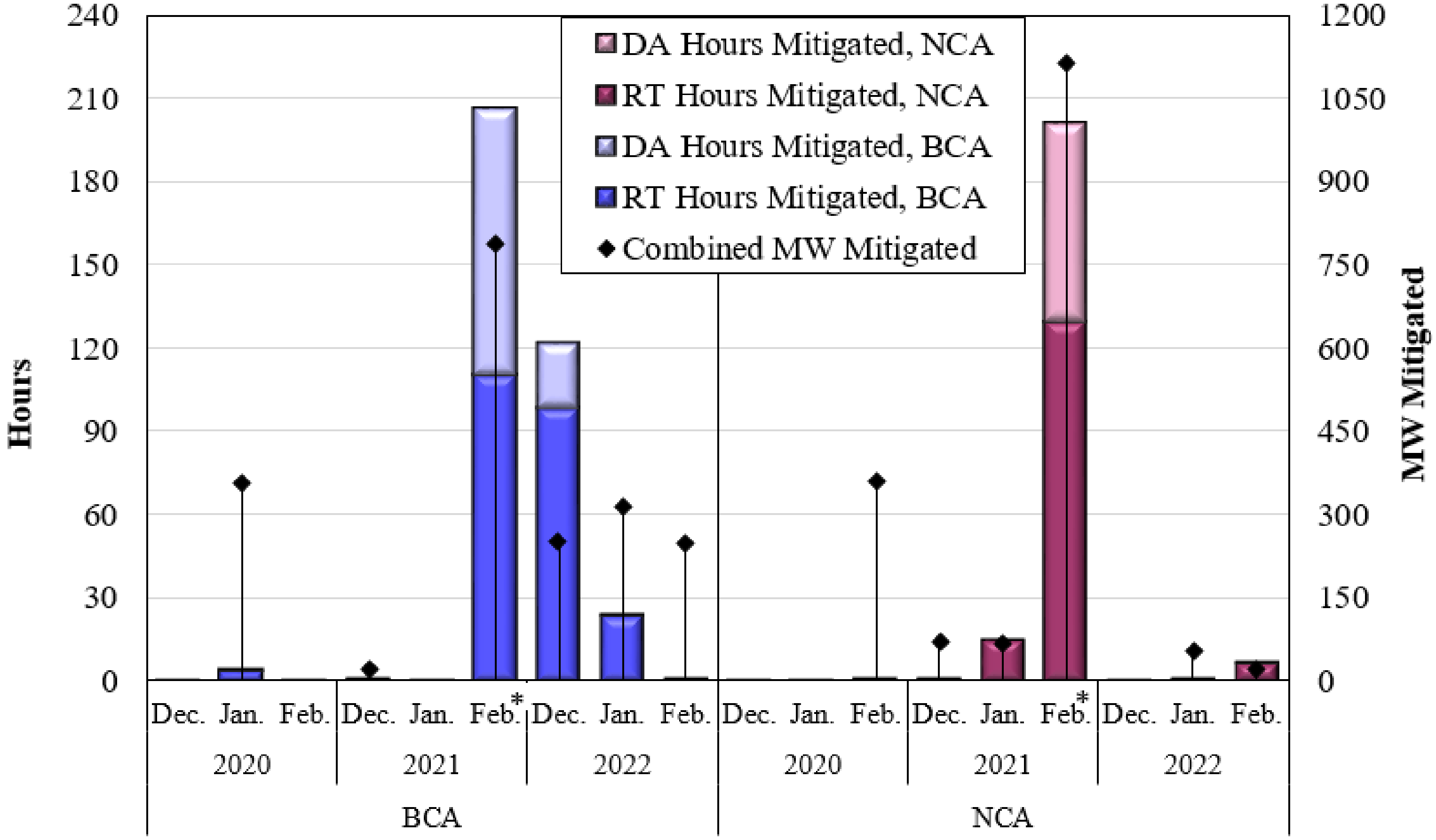
| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Offline | 2 | 24 | 16 | 2 | 0 | 70 | 2 | 0 | 8 | 7 | 22 | 38 | 98 | 62 | 19 | 7 | 21 | 20 |
| Online | 8 | 55 | 101 | 25 | 49 | 91 | 18 | 20 | 20 | 33 | 82 | 100 | 322 | 373 | 333 | 64 | 67 | 171 |





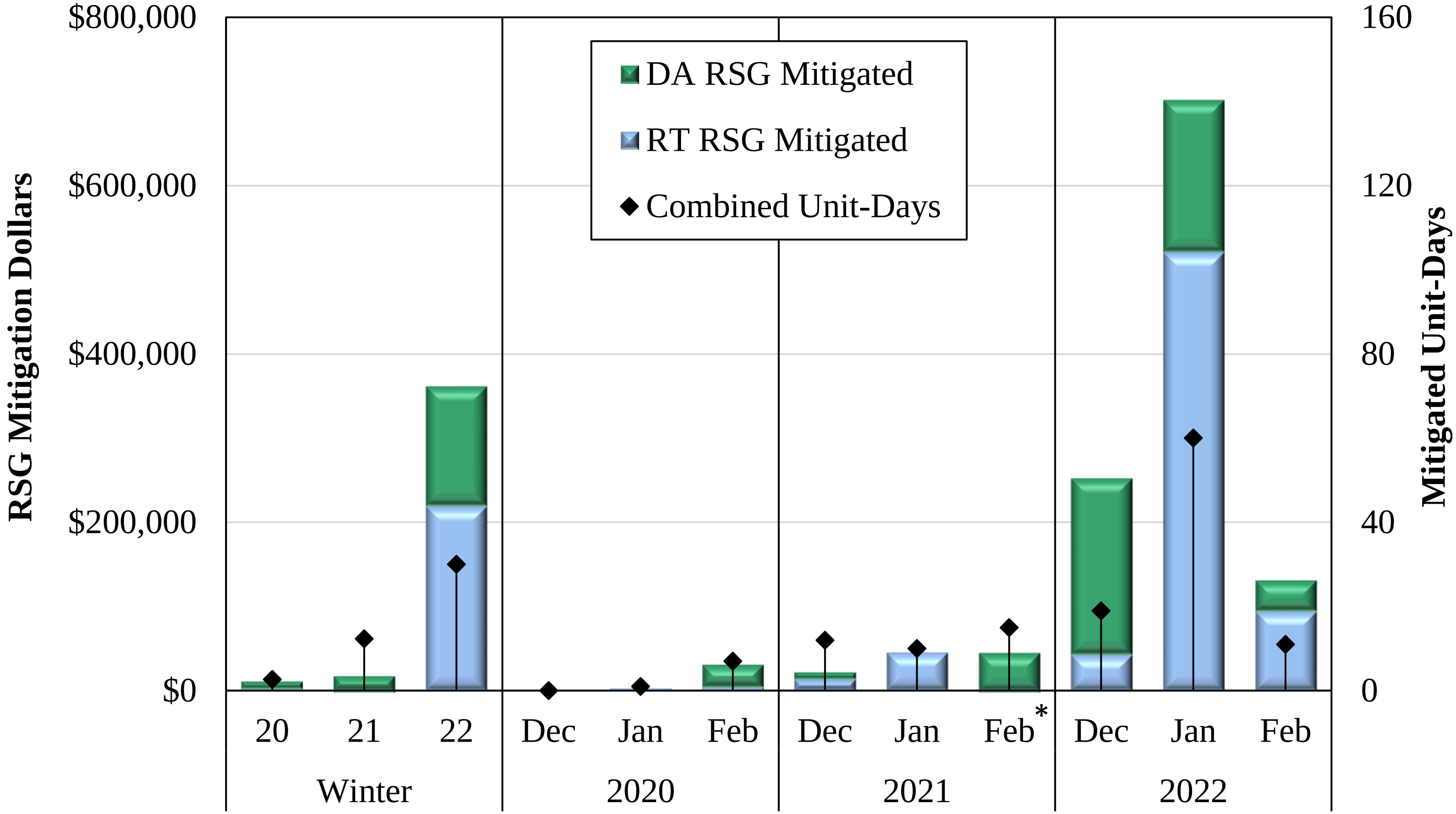
POTOMAC ECONOMICS

# Day-Ahead And Real-Time Energy Mitigation Winter 2021 and 2022




* *14450 and 12232 mitigated unit hours in BCA and NCA are excluded for Feb 13 through Feb 19, 2021.*

# Day-Ahead and Real-Time RSG Mitigation Winter 2021 - 2022




**$10 MM DA RSG mitigation is excluded for Feb 13 through Feb 19, 2021.***

# List of Acronyms

- AAR Ambient-Adjusted Ratings
- AMP Automated Mitigation Procedures
- BCA Broad Constrained Area
- CDD Cooling Degree Days
- CMC Constraint Management Charge
- CTS Coordinated Transaction Scheduling
- DAMAP Day-Ahead Margin Assurance Payment
- DDC Day-Ahead Deviation & Headroom Charge
- DIR Dispatchable Intermittent Resource
- HDD Heating Degree Days
- ELMP Extended Locational Marginal Price
- JCM Joint and Common Market Initiative
- JOA Joint Operating Agreement
- LAC Look-Ahead Commitment
- LSE Load-Serving Entities
- M2M Market-to-Market
- MSC MISO Market Subcommittee
- NCA Narrow Constrained Area
- ORDC Operating Reserve Demand Curve
- PITT Pseudo-Tie Issues Task Team
- PRA Planning Resource Auction
- PVMWP Price Volatility Make Whole Payment
- RAC Resource Adequacy Construct
- RDT Regional Directional Transfer
- RSG Revenue Sufficiency Guarantee
- RTORSGP Real-Time Offer Revenue Sufficiency Guarantee Payment
- SMP System Marginal Price
- SOM State of the Market
- STE Short-Term Emergency
- STR Short-Term Reserves
- TLR Transmission Loading Relief
- TCDC Transmission Constraint Demand Curve
- VLR Voltage and Local Reliability
- WUMS Wisconsin Upper Michigan System