

2024-2025 IRP Technical Conference

Docket No. 24-057-04

February 15, 2024



**Dominion
Energy**[®]

2024-2025 IRP Schedule

February 15, 2024

- Review IRP Standards and Guidelines
- Review 2023 PSC Order regarding IRP
- Pricing Update/Under-collection
- Supply Sourcing – Volumes and Locations

April 23, 2024

- Heating Season Review (LNG)
- Gas Supply Hedging
- IRP Project Detail Discussion

July 8, 2024

- Final Presentation

March 19, 2024

- System Integrity
- Rural Expansion Update
- Transportation and Storage Planning
- Supply Modeling Update

May 1, 2024

- Long-Term Planning
- Wexpro Matters (Confidential)
- RFP Review (Confidential)

IRP Standards and Guidelines (2009)

Guideline	Update
Report changes to customer growth models	IRP Report – Customer and Gas Demand Forecast Section
Report changes to linear programming optimization (LPO) model	IRP Report – Final Model Results Section
Report changes to DSM models	IRP Report – Energy Efficiency Section
Report supply/demand forecasts and DMS results	IRP Report – Customer and Gas Demand Section
Report gas quality and gas storage issues	IRP Report – Gathering, Transportation and Storage Section
Report changes to Gas Network Analysis (GNA) models	IRP Report – System Capabilities and Constraints Section
Report GNA model results	IRP Report – System Capabilities and Constraints Section
Report integrity management issues	IRP Report – Integrity Management Section

Review of 2023 DPU and OCS Comments Regarding IRP

- Division of Public Utilities Comments:
 - “the most complete and beneficial [IRP submitted] to regulators to-date”
 - DPU recommends the PSC acknowledge the 2023 IRP as compliant with the Standards and Guidelines

- Office of Consumer Services Comments:
 - OCS recommends the PSC acknowledge the 2023 IRP
 - Additionally, OCS recommends the PSC require DEU to:
 - add additional long-term planning analysis to its price stabilization, supply reliability, and storage sections of the IRP
 - include all data and analyses discussed and presented in IRP technical conferences in the IRP document
 - continue to keep parties updated on the status and operations of the Magna LNG facility in quarterly variance reports
 - provide status updates on the ownership of the Mountain West pipeline and the possible implications to the Joint Operating Agreement in quarterly variance reports

Review of 2023 PSC Order Regarding IRP

- Utah Public Service Commission Order, dated December 14, 2023:
 - “Based on our review of the 2023 IRP, the comments and recommendations submitted by DPU and OCS, and given the lack of opposition along with DEU’s commitment to incorporate the suggestions from OCS, we conclude the 2023 IRP generally complies with the Standards and Guidelines.”

2024-2025 IRP Outline

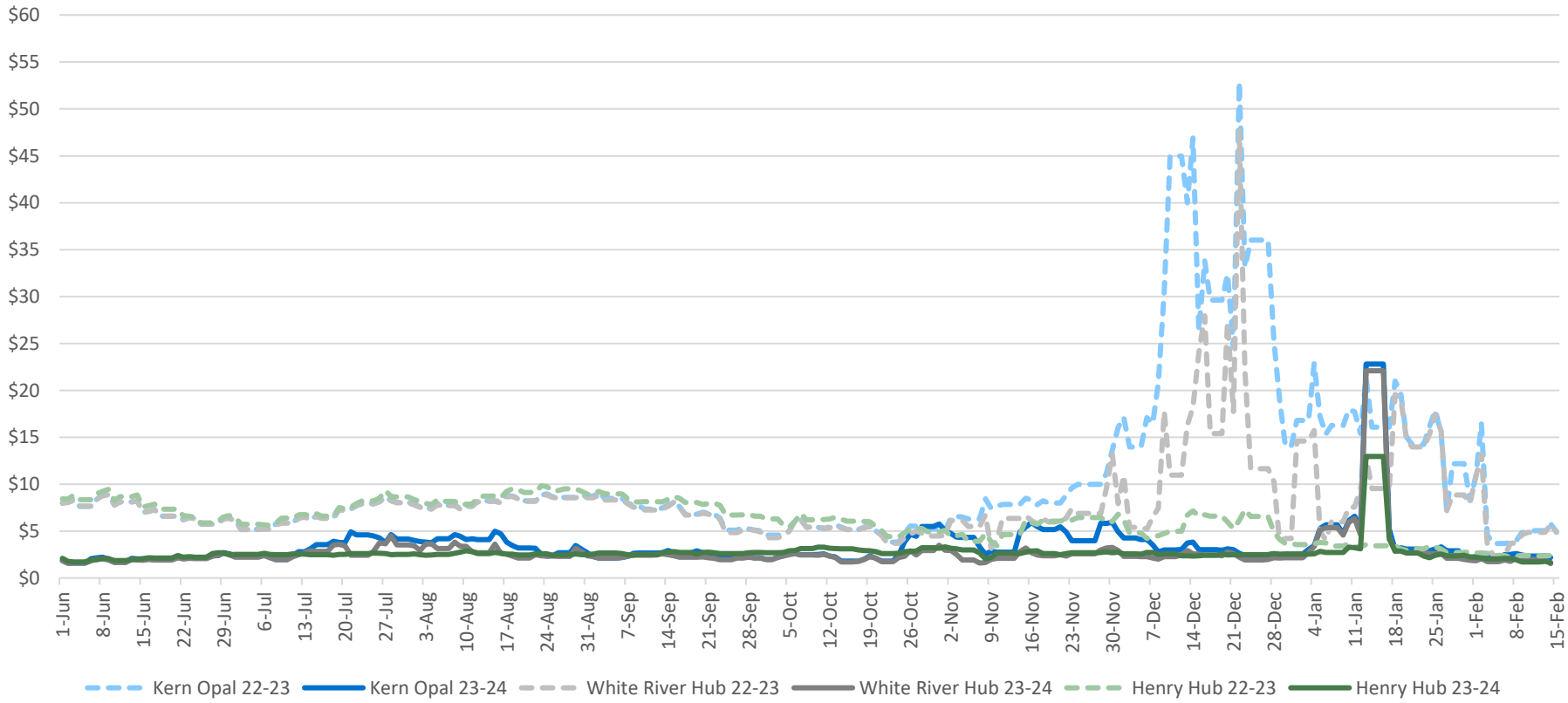
- Executive Summary
- Introduction
- Customer and Gas Demand Forecast
- System Capabilities and Constraints
 - Long-Term Planning
- Distribution System Action Plan
- Integrity Management
- Environmental Review
- Purchased Gas
 - Long-Term Planning
- Cost-of-Service Gas
- Gathering, Transportation, and Storage
 - Long-Term Planning
- Supply Reliability
 - Long-Term Planning
- Sustainability
- Energy Efficiency
- Model Results
- Guidelines
- Appendix
- Glossary

January 23, 2024 - Stakeholder Meeting

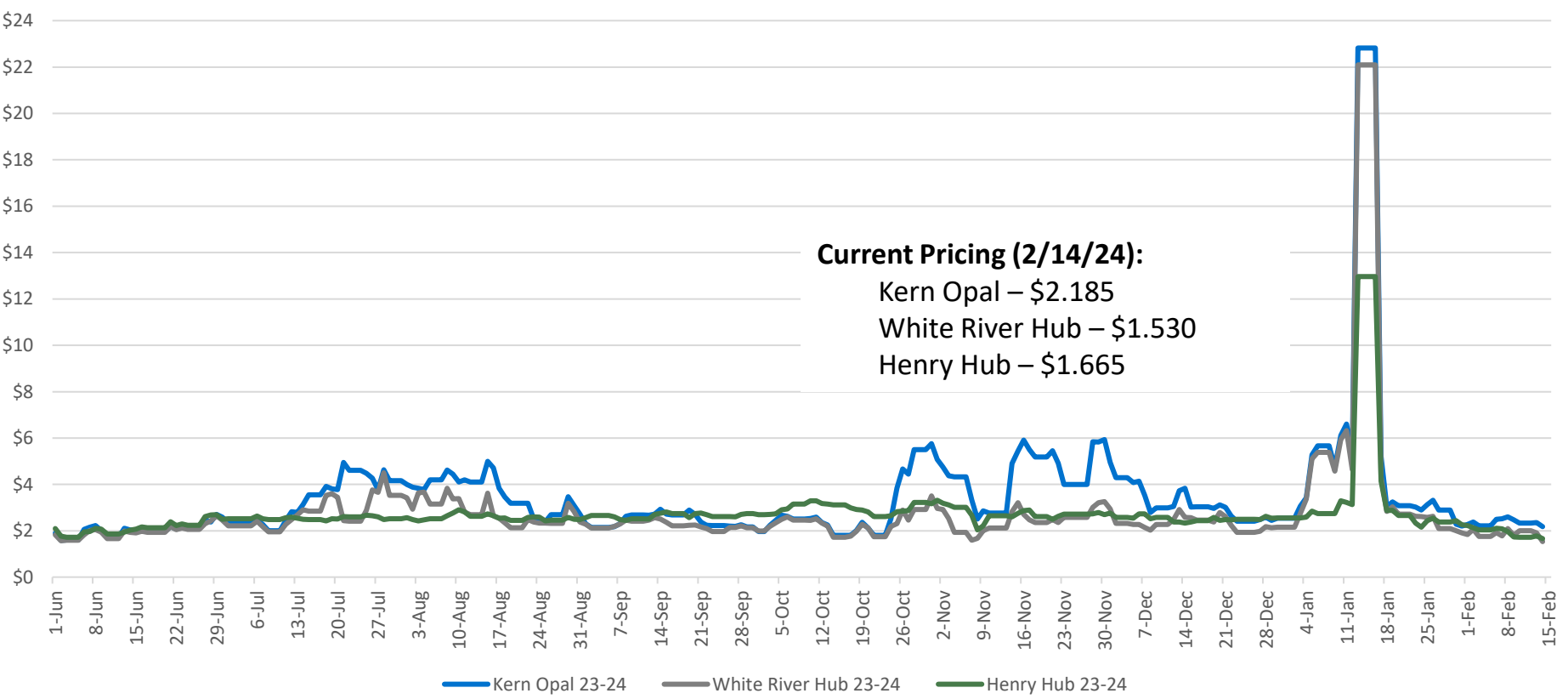
- Attended by representatives from DEUWI, the Office, and the Division
- Discussed details related to the OCS Comments on the 2023-2024 IRP
 - Received clarification to ensure the requests are adequately met
- Discussed the inclusion of volumes and locations for purchases and Wexpro production
- Discussed the change in Linear Programming Optimization modeling
 - SENDOUT to Plexos
 - DEUWI agreed to include a comparison in the IRP process

Pricing Update

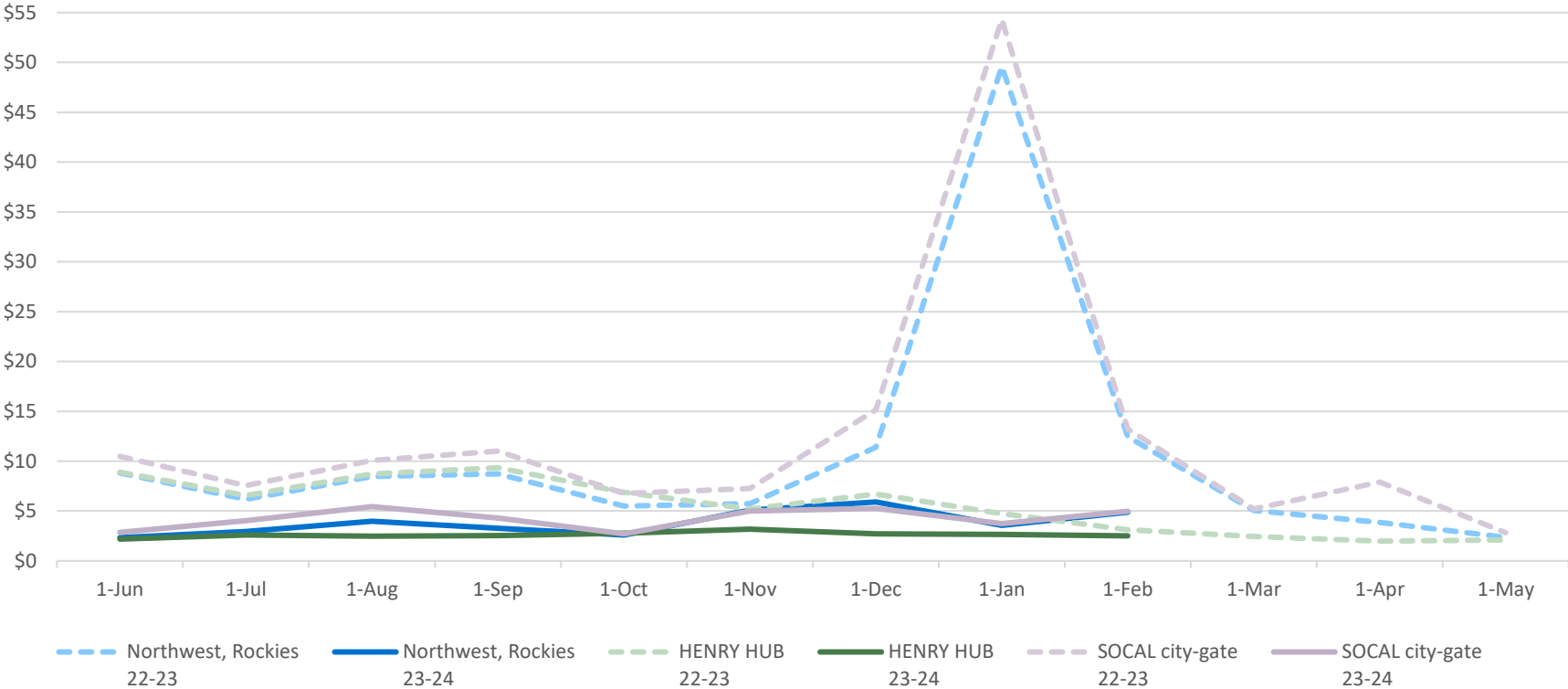
Daily Spot Pricing 2022-2023 vs 2023-2024



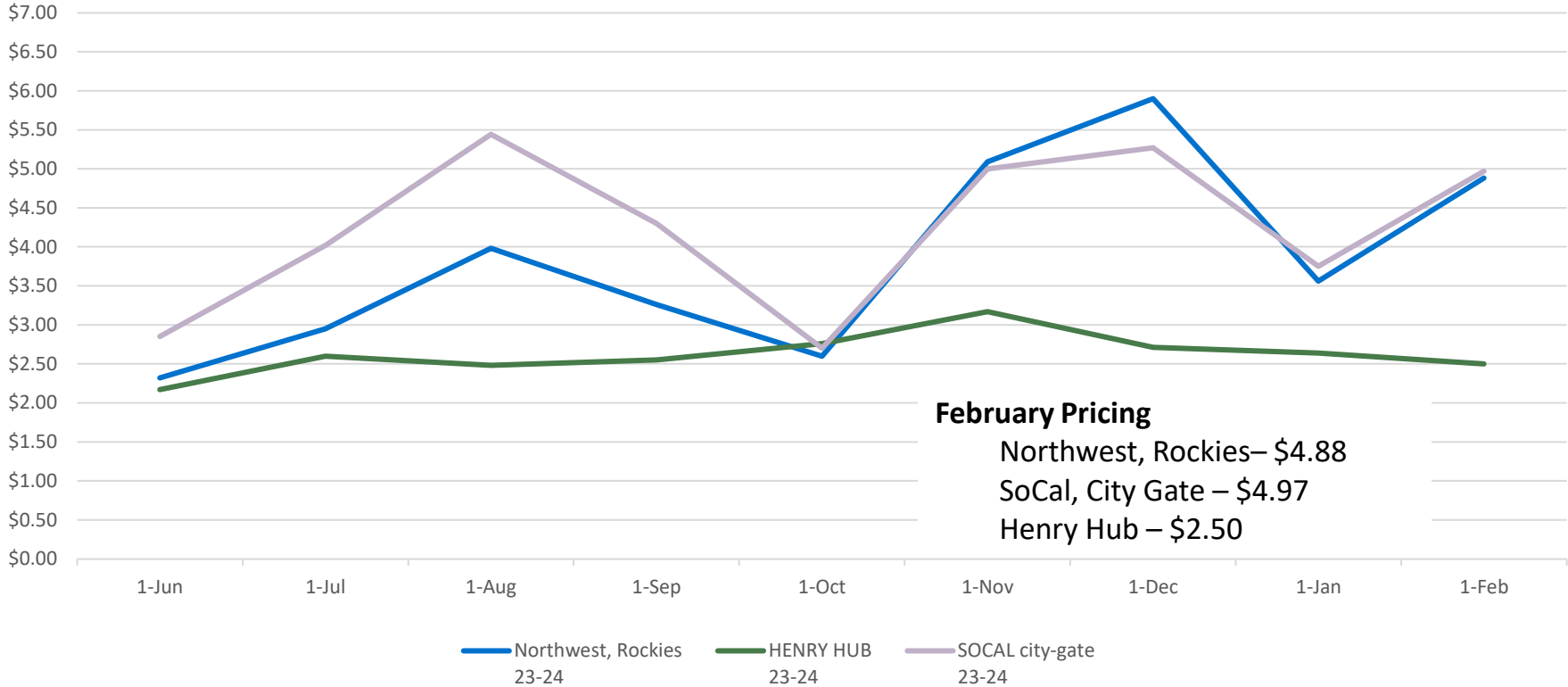
Daily Spot Pricing 2023-2024



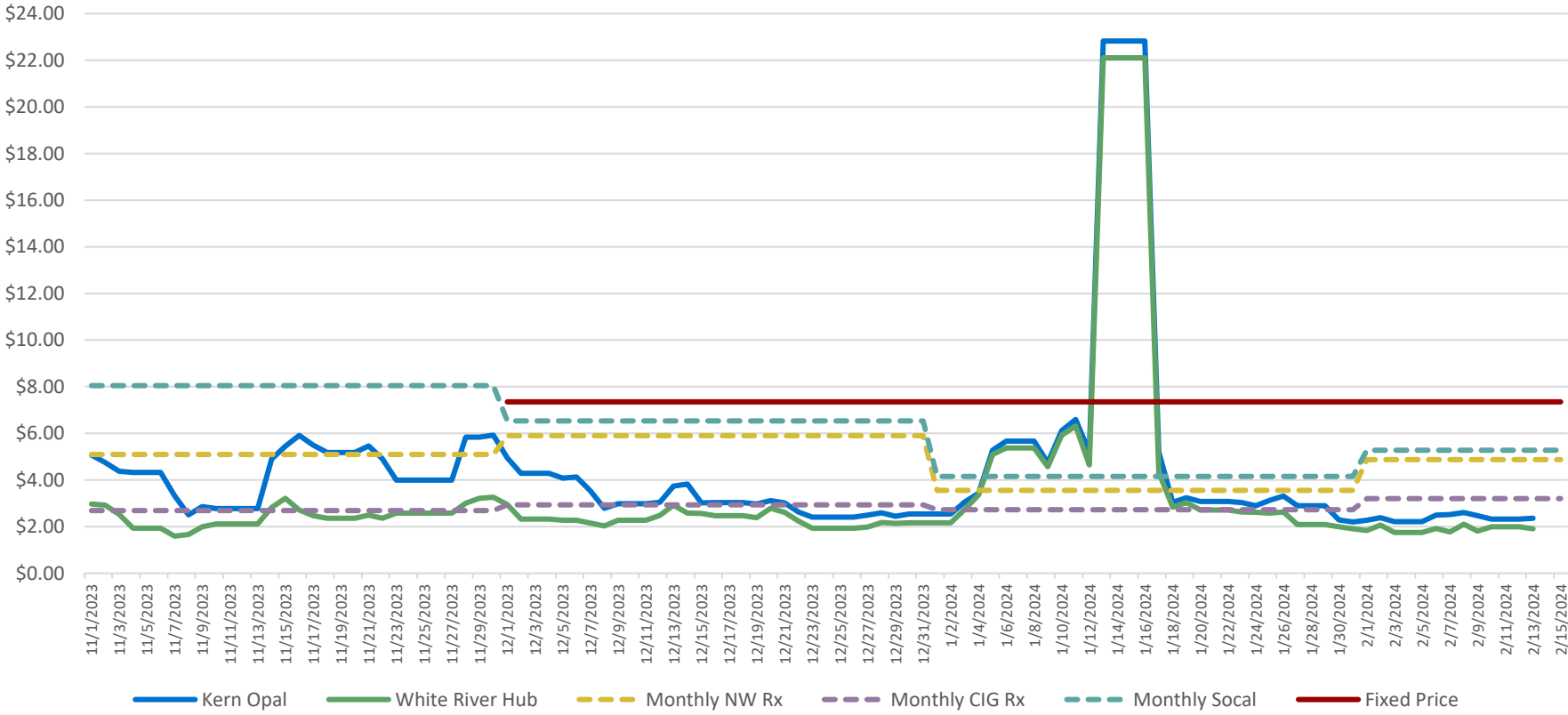
Monthly Pricing 2022-2023 vs 2023-2024



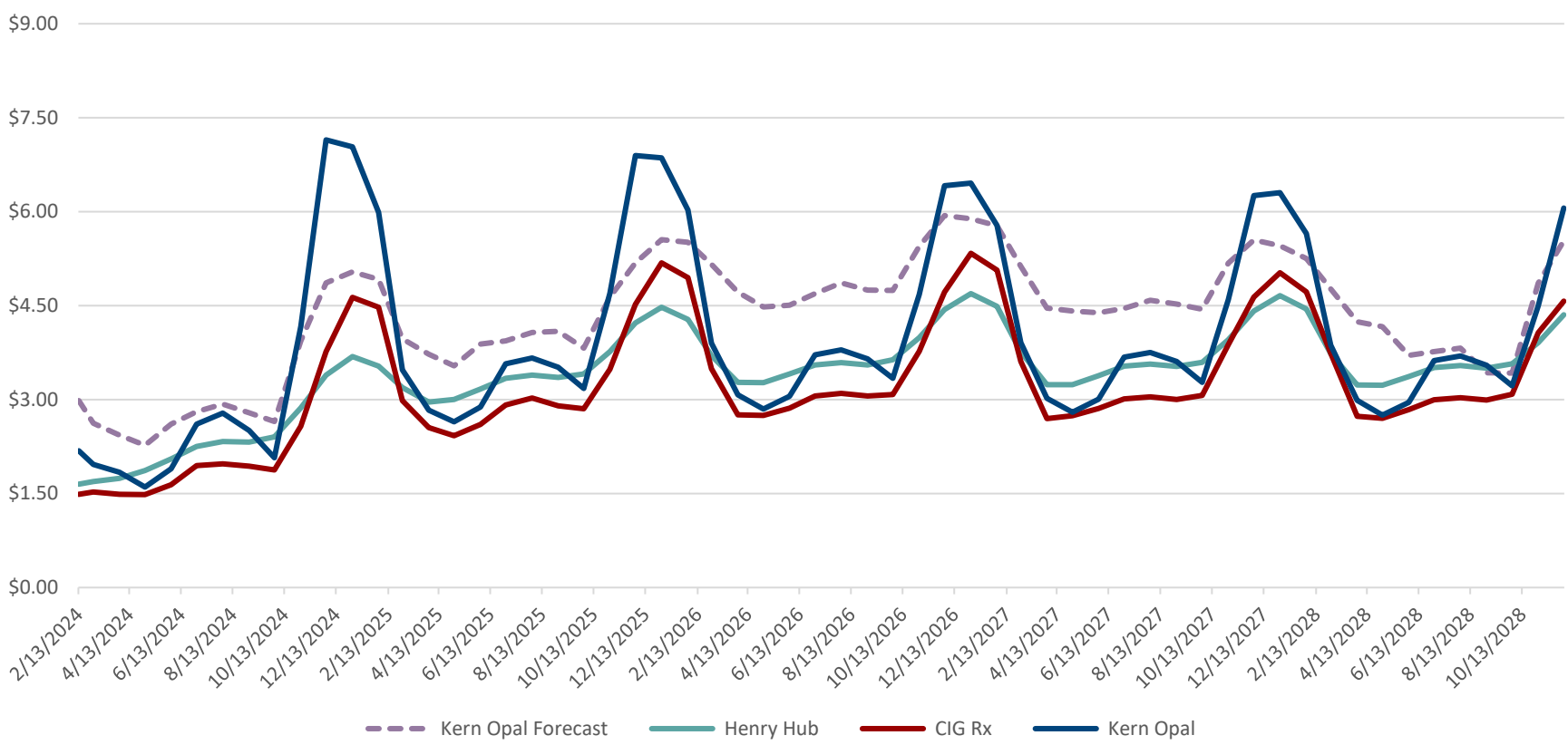
Monthly Pricing 2023-2024



2023-2024 Supply Pricing



Forward Pricing and Forecast



1. Forward Curve Source - www.spglobal.com/commodityinsights [spglobal.com] Platts M2MS Modeled Natural Gas Curves, 120-Month Daily Assessments Curve Date:2/13/24
 2. Forecast - <https://connect.ihsmarket.com> North American Natural Gas Short-Term Outlook 1/24/24

Predicting Pricing

- Historically used an average of two forecasts (CERA/PIRA)
 - Both of these services were purchased by S&P Global and recently consolidated to one forecast
- A study was completed to determine the best approach to predicting prices
 - Combinations of three options were considered (S&P forecast, forward curves, and WoodMac forecast)

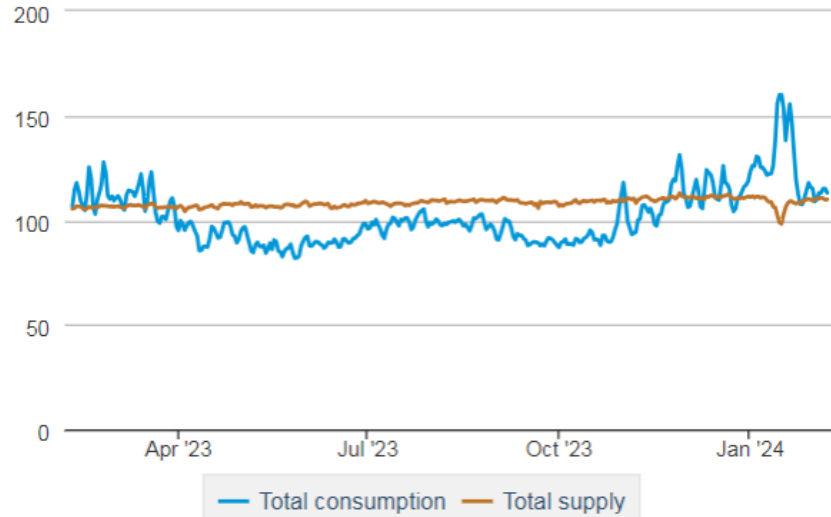
- Results:

Scenario	R-squared	Std. error
S&P and FORWARD AVG	0.714	1.384
S&P FORECAST	0.708	1.3977
FORWARD	0.703	1.4088
WM and FORWARD AVG	0.687	1.447
S&P and WM AVG	0.683	1.456
WOOD MACKENZIE FORECAST	0.644	1.543

- The best predictor was to average the S&P forecast and the forward curves
- This will be used going forward

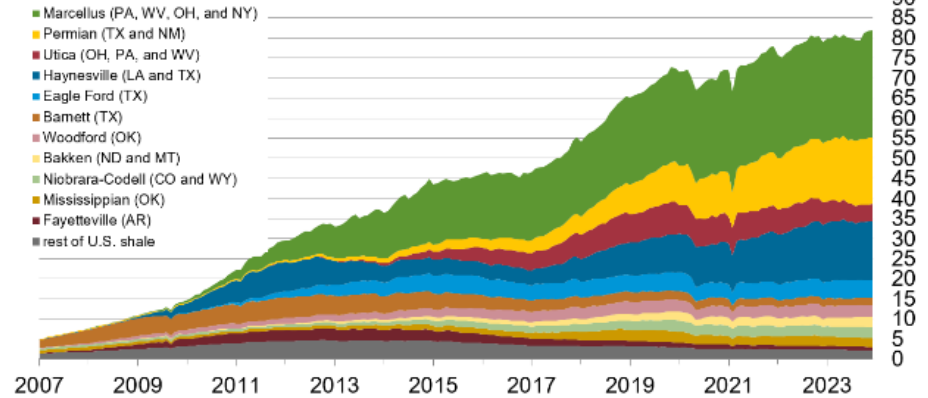
Key Metrics –Supply and Demand

Total supply/demand balance (last 365 days)
billion cubic feet per day



Data source: S&P Global Commodity Insights

Monthly dry shale gas production
billion cubic feet per day

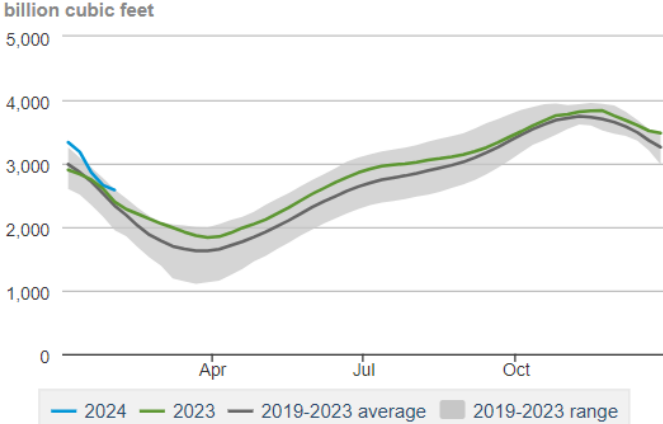


Data source: Enverus.

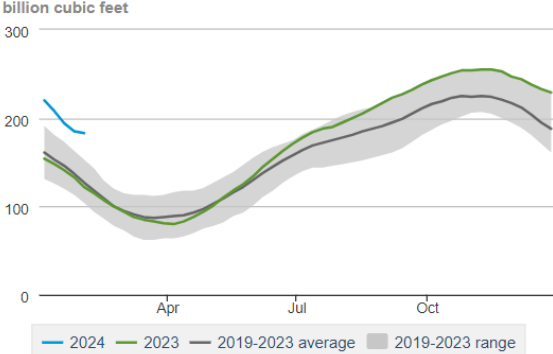
Note: We derived these shale gas estimates from Enverus state administrative data. Data are through December 2023. We updated the factors we use to convert gross natural gas to dry natural gas based on the latest *Natural Gas Annual* data. This update affected historical production volumes from some formations. PA=Pennsylvania, WV=West Virginia, OH=Ohio, NY=New York, TX=Texas, NM=New Mexico, LA=Louisiana, OK=Oklahoma, ND=North Dakota, MT=Montana, CO=Colorado, WY=Wyoming, AR=Arkansas

Key Metrics - Storage

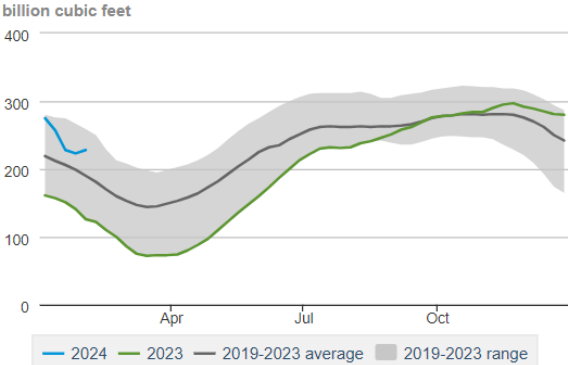
Lower 48 weekly working gas in underground storage ↓



Mountain region weekly working gas in underground storage ↓

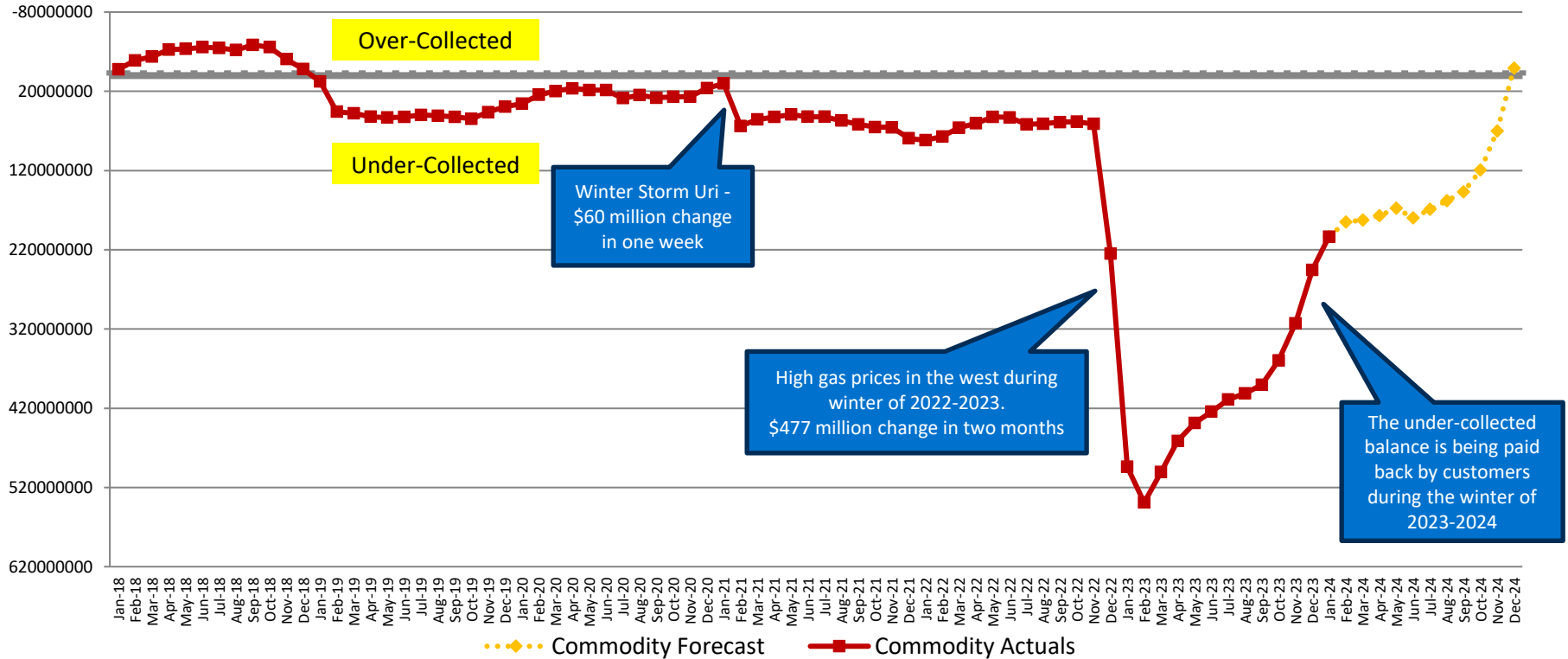


Pacific region weekly working gas in underground storage ↓



Under-Collection Update

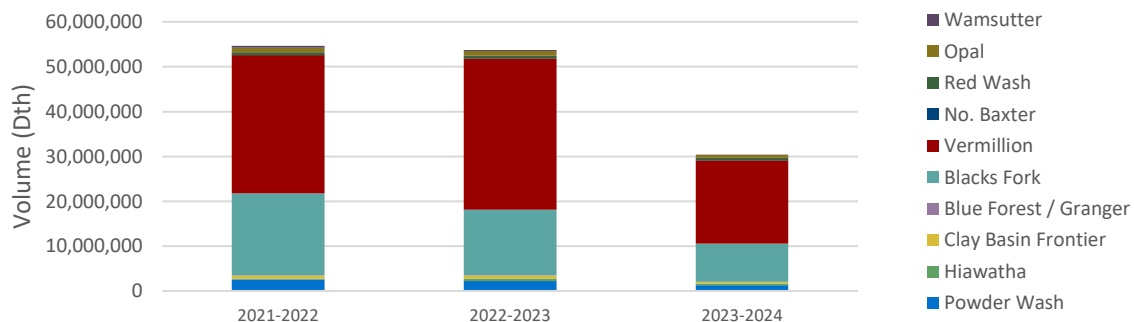
191 acct. for Utah



Supply Sourcing

Wexpro Production by Location

Location	State	2021-2022	2022-2023	2023-2024 (YTD)
Powder Wash	Colorado	2,551,466	2,190,097	1,297,762
Hiawatha	Colorado	163,510	531,082	328,786
Clay Basin Frontier	Utah	715,349	747,794	449,797
Blue Forest / Granger	Wyoming	65,785	67,575	34,074
Blacks Fork	Wyoming	18,267,455	14,609,387	8,449,765
Vermillion	Wyoming	30,816,885	33,650,076	18,536,394
No. Baxter	Wyoming	40,137	27,735	40,664
Red Wash	Utah	593,164	667,682	554,932
Opal	Wyoming	1,012,315	1,020,926	620,334
Wamsutter	Wyoming	472,736	229,079	54,009
Grand Total		54,698,802	53,741,433	30,366,517



Purchases by Location

Location	State	2021-2022	2022-2023	2023-2024 (YTD)
ALTAMONT MM	Utah	0	603,344	463,150
BIG PINEY EXCHANGE	Wyoming	92,451	131,228	70,651
BLUE FOREST TAP	Wyoming	3,292,969	3,721,977	120,000
CHIPETA PLANT (REC)	Utah	126,000	1,720,528	2,180,000
CLAY BASIN QPC WD	Utah	3,626,211	4,597,795	1,819,989
CLAY BASIN RESERVOIR	Utah	100,000	1,320,000	56,500
DRIPPING ROCK	Wyoming	0	357,588	0
FT GOSHEN POOL	Utah	6,371,964	3,825,469	3,630,000
FT MUDDY CREEK POOL	Wyoming	13,216,646	17,962,537	10,689,454
HUNTER PARK - QUESTAR GAS	Utah	0	0	1,818,786
KANDA/COL CIG DEL	Wyoming	0	1,244,188	1,138,176
KANDA/COL CIG REC	Wyoming	4,142,648	2,377,634	1,111,500
KANDA/COL OTPL DEL	Wyoming	915,240	4,226,845	2,786,311
LABARGE EXCHANGE	Wyoming	21,069	27,381	13,129
OPAL PLANT TO QPC/WTNY	Wyoming	267,255	207,084	455,000
OTPL TO QPC X016 REC	Wyoming	880,000	929,440	909,975
OVERTHRUST JL 36 MS	Wyoming	3,933,701	6,992,041	6,789,388
QGC WASATCH FRONT	Utah	0	0	2,000
QGC/104	Utah	10,000	280,000	40,000
RED WASH - FIDLAR	Utah	314,600	865,753	524,000
RIVERTON - QUESTAR GAS	Utah	704,584	885,876	40,000
ROBERSON CREEK RCPT	Wyoming	80,000	0	0
SHUTE CREEK MM	Wyoming	4,478,115	4,122,105	1,499,148
VERMILLION PLT OUT	Wyoming	0	67,680	6,000
WHITE RIVER HUB (R)	Colorado	14,024,991	17,952,009	11,739,365
WIC WAMSUTTER TO QPC	Wyoming	852,636	1,333,375	810,750
XO-16 NWP REC	Wyoming	2,013,517	5,569,491	2,618,641
Grand Total		59,464,597	81,321,368	51,331,913

Questions?