



Fuel Supply Update

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Operating Committee
November 3, 2022

Coal

- Supply and Demand
- Transportation
 - Rail Workers Strike Risk Looms Larger
- Regional Pricing

Oil

- Regional Inventory

Natural Gas

- Supply
- Regional Pricing

Production

- Appalachian coal production rates approximately 2.5% higher YTD compared to last year

Transportation

- Transportation, particularly rail, remains a significant concern for resupply
- Risk of Rail workers strike
 - 6 of 12 unions ratified
 - 2 union rejected
 - 4 still haven't voted
 - 11/17/22 ratification deadline
 - Earliest date for strike – first half of December

Prices

- High prices continue on worldwide demand
- Appalachian prices around \$175/ton based on EIA reporting
- Coal price significantly higher than gas currently

PJM Activity

- Annual GO Fuel and Emissions data request currently active
- Weekly data requests continuing to help identify and track supply and transportation issues
- Communicating with individual resource owners to address emergent supply concerns

Dollars per short ton

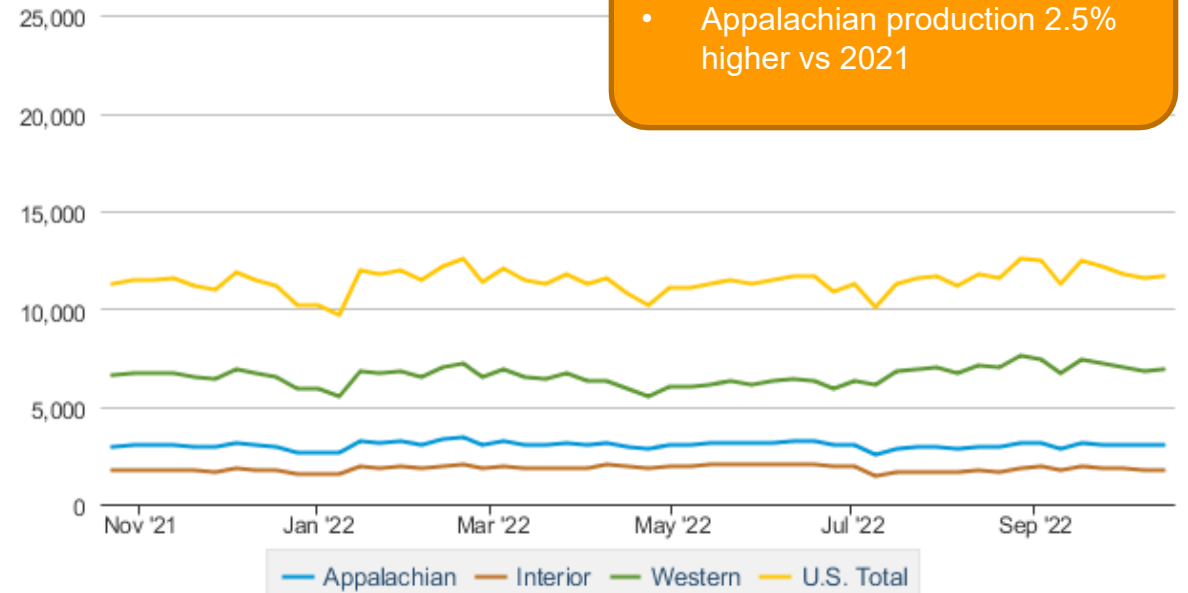
Dollars per mmbtu

Average weekly coal commodity spot prices dollars per short ton

	Week ending					Week ago change
	09/23/22	09/30/22	10/07/22	10/14/22	10/21/22	
Central Appalachia 12,500 Btu, 1.2 SO ₂	\$198.85	\$204.95	\$204.95	\$176.65	\$176.65	\$0.00
Northern Appalachia 13,000 Btu, < 3.0 SO ₂	\$181.95	\$187.55	\$187.55	\$180.25	\$180.25	\$0.00
Illinois Basin 11,800 Btu, 5.0 SO ₂	\$196.75	\$196.75	\$196.75	\$186.50	\$186.50	\$0.00
Powder River Basin 8,800 Btu, 0.8 SO ₂	\$16.15	\$16.25	\$16.25	\$17.45	\$17.45	\$0.00
Uinta Basin 11,700 Btu, 0.8 SO ₂	\$42.55	\$42.40	\$42.40	\$41.95	\$41.95	\$0.00

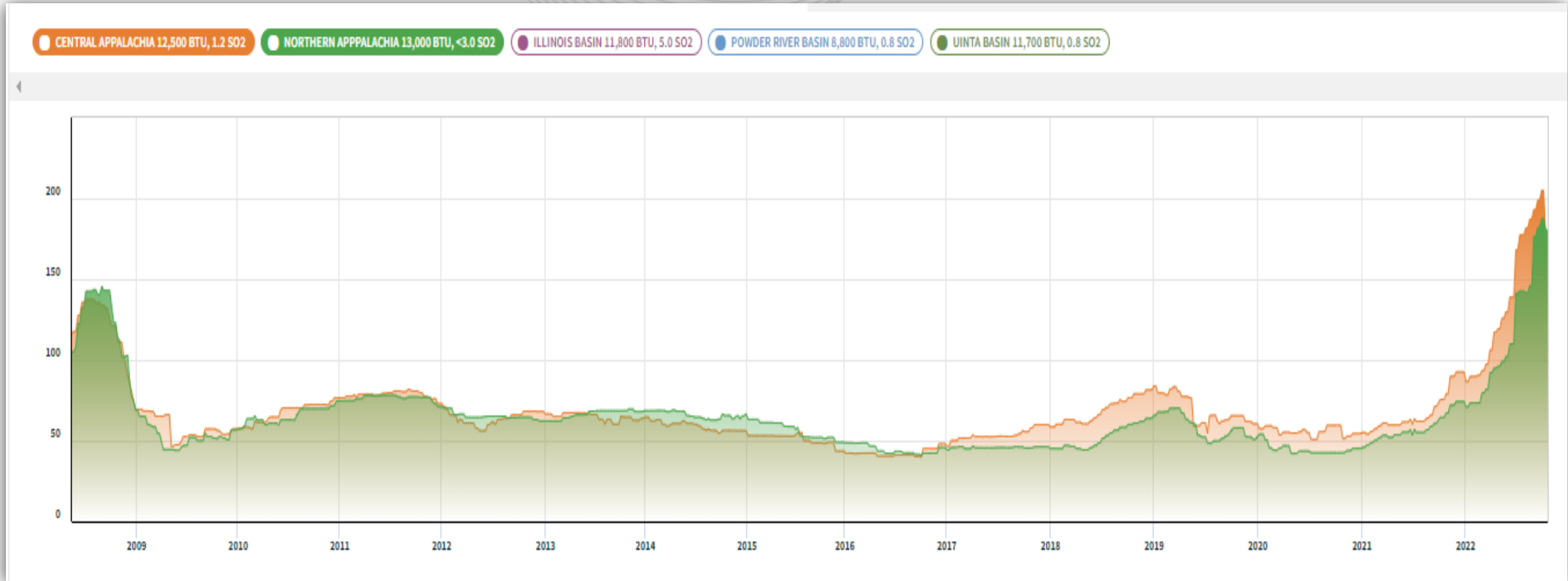
Weekly coal production by region

thousand short tons

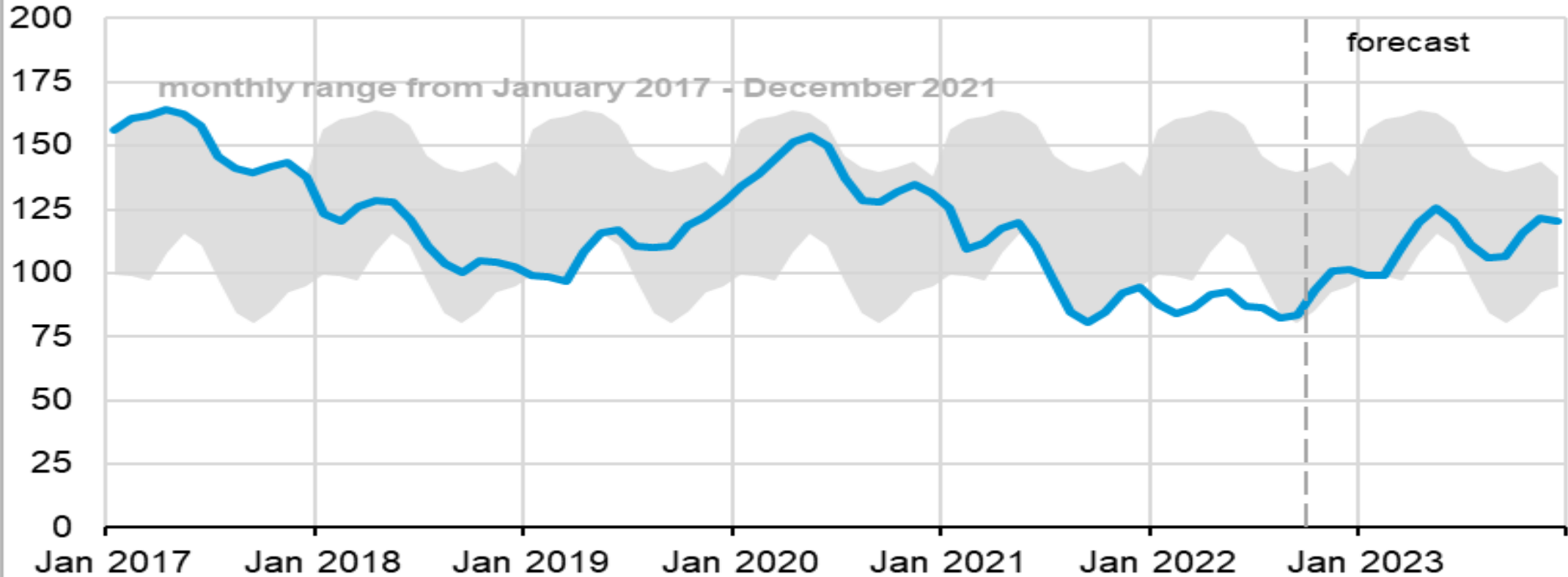


eia Data source: U.S. Energy Information Administration

Regional Spot Coal Price History (2008 – Present)



U.S. electric power coal inventories million short tons



Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2022



Regional Inventory

- EIA PADD 1 (East Coast) inventories remain well below 5 year average

Prices

- Volatility continues
 - \$80 - \$90/barrel price range
 - Recession fears and strong dollar vs. low inventories and geopolitical tension

PJM Activity

- Weekly data requests to identify and track supply and transportation issues
- No significant concerns raised at this point

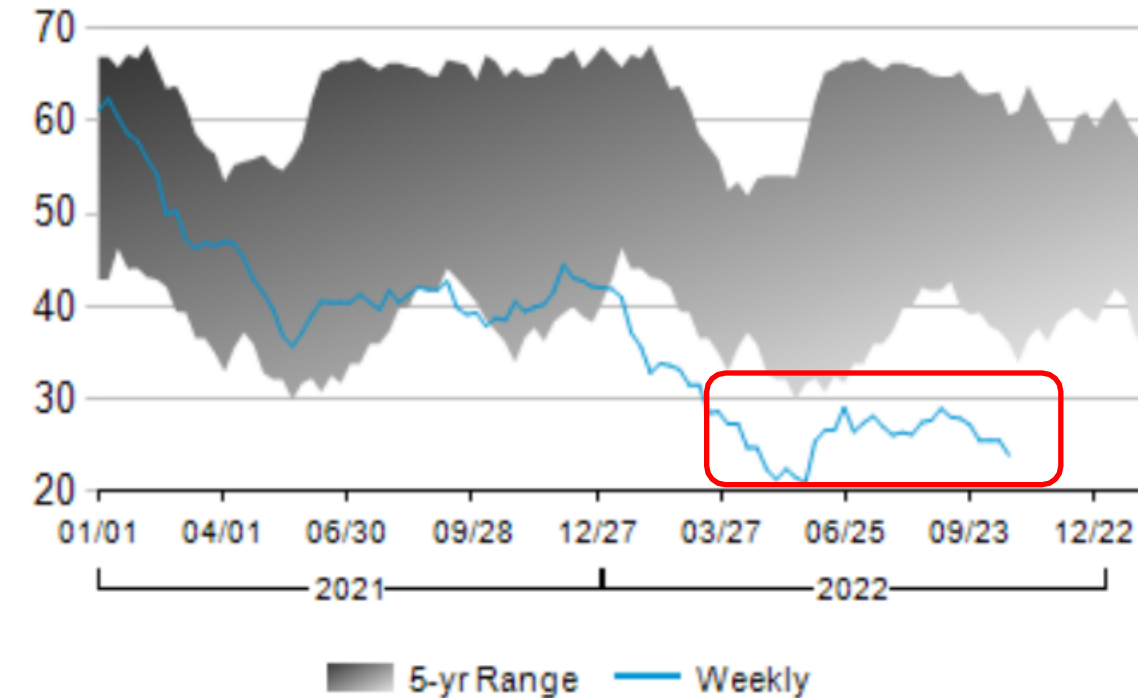


PADD 1 East Coast Distillate and Residual Fuel Inventory

Inventories remain well below 5 year average

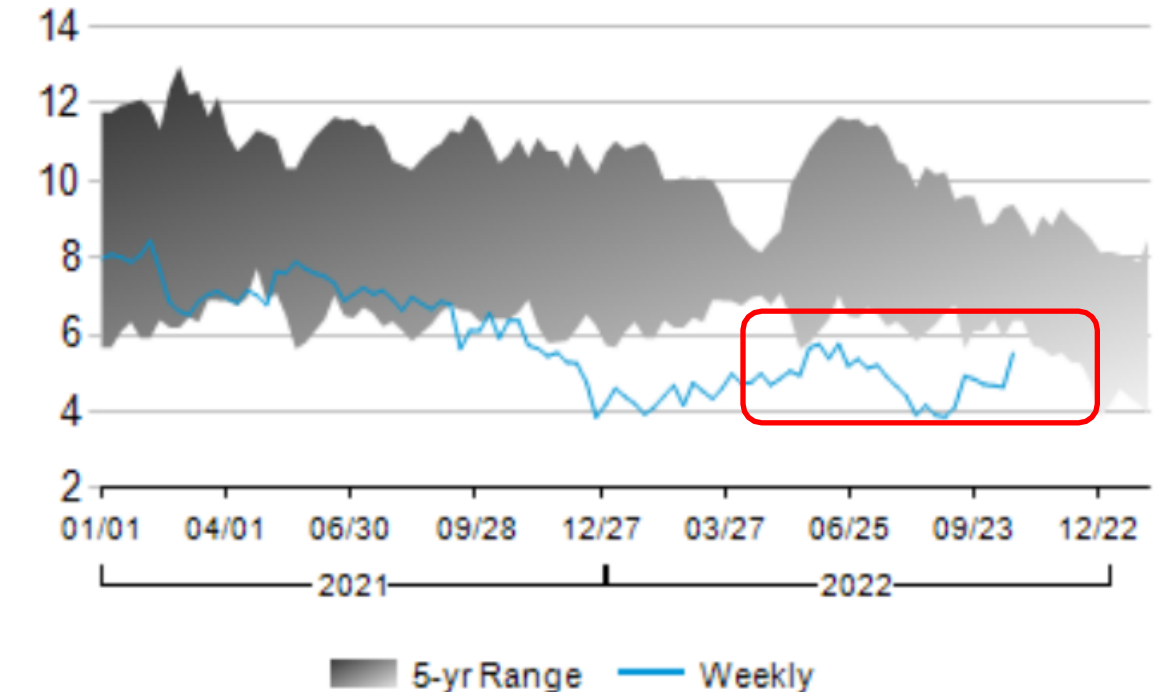
PADD 1 Total Distillate Fuel Oil Stocks

Million Barrels



PADD 1 Residual Fuel Oil Stocks

Million Barrels



Production

- Average daily production 5% higher vs 2021 YTD
- Current production rate remains strong; currently between 95 – 100 Bcf/day

Storage

- Storage deficit currently 5.5% below 5 year average
- Currently 3.4 Tcf inventory vs 4 Tcf capacity
- Another strong injection volume expected in this week's report
- Starting winter inventory likely to be around 2.5% below 5 year average

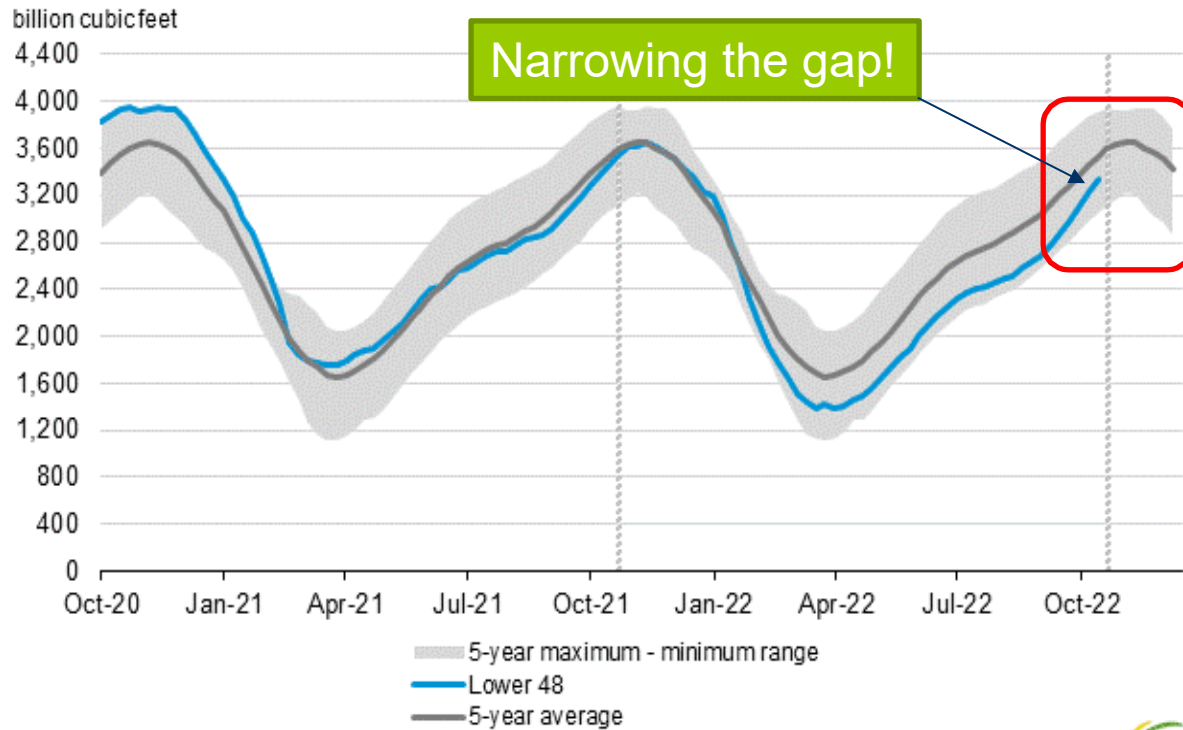
Prices

- Volatility continues though currently in downtrend
- Winter strip price at regional eastern gas hubs \$6 - \$12/mmbtu
- Henry Hub winter price approx. \$6.25/mmbtu
- European and Asian prices continue to soften; currently around \$30/mmbtu

LNG

- Total U.S. export capacity is 14 Bcf/day
- 2 Bcf/day is offline with partial return mid November
- Export capacity continue to be maxed out at 12 Bcf/day

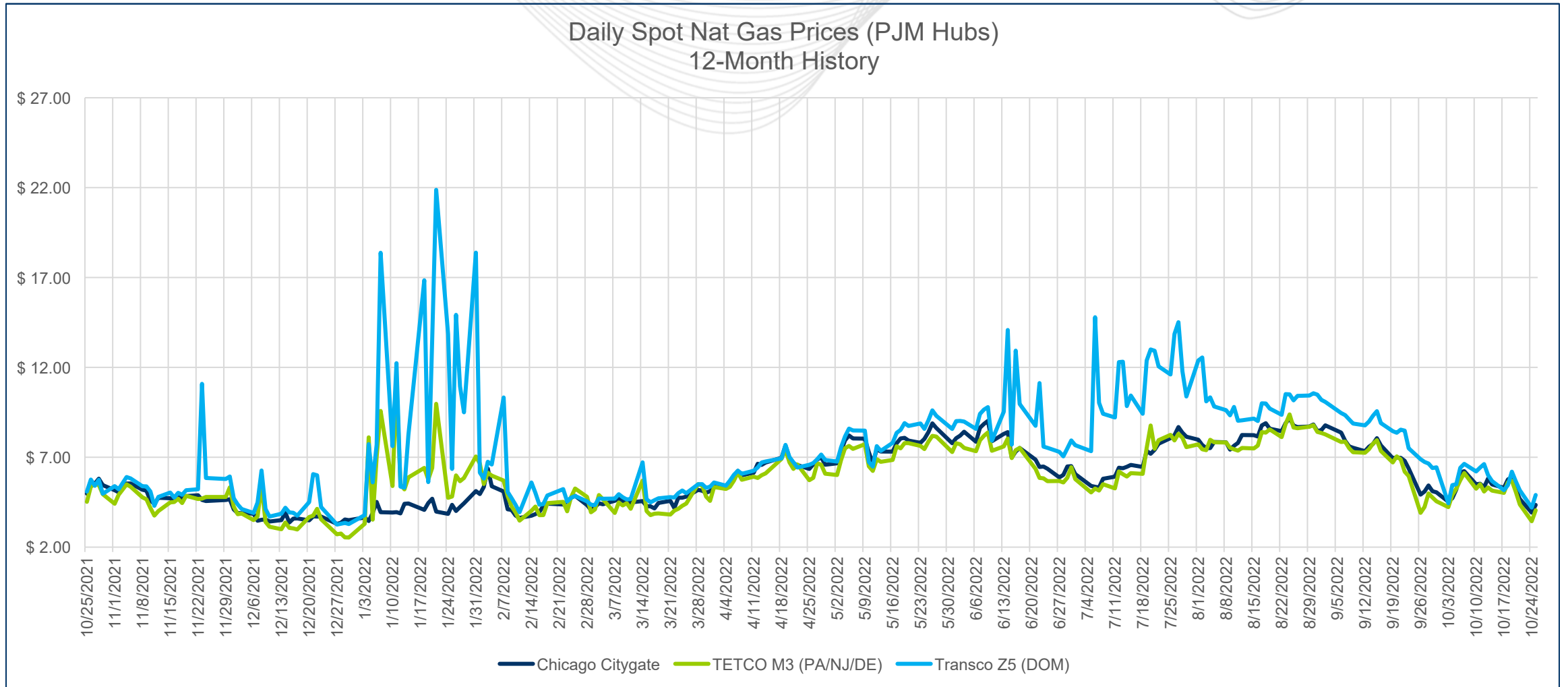
Working gas in underground storage compared with the 5-year maximum and minimum

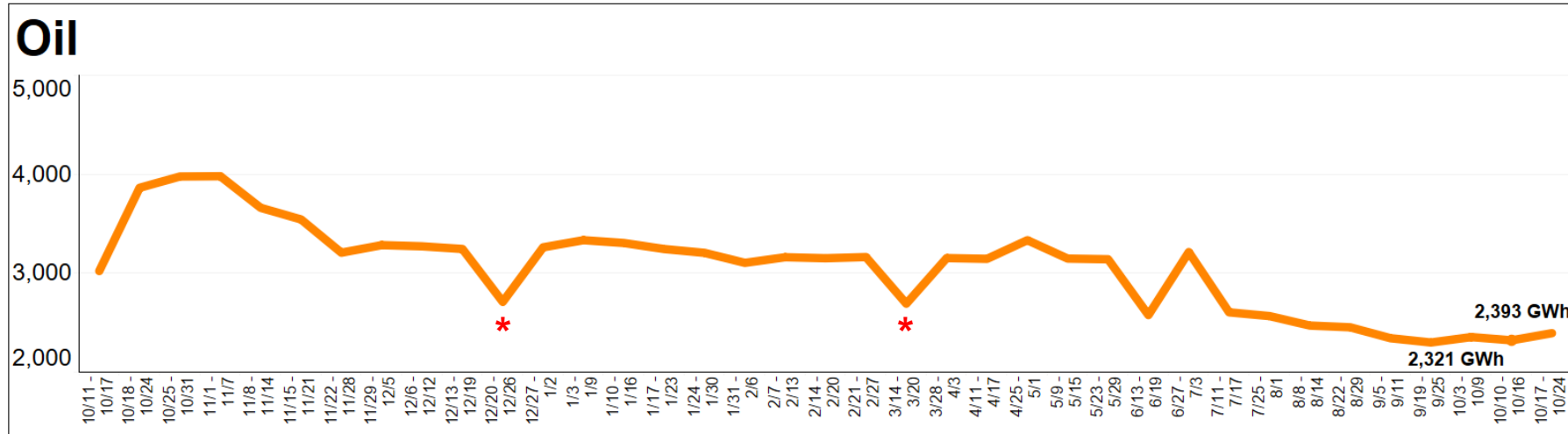
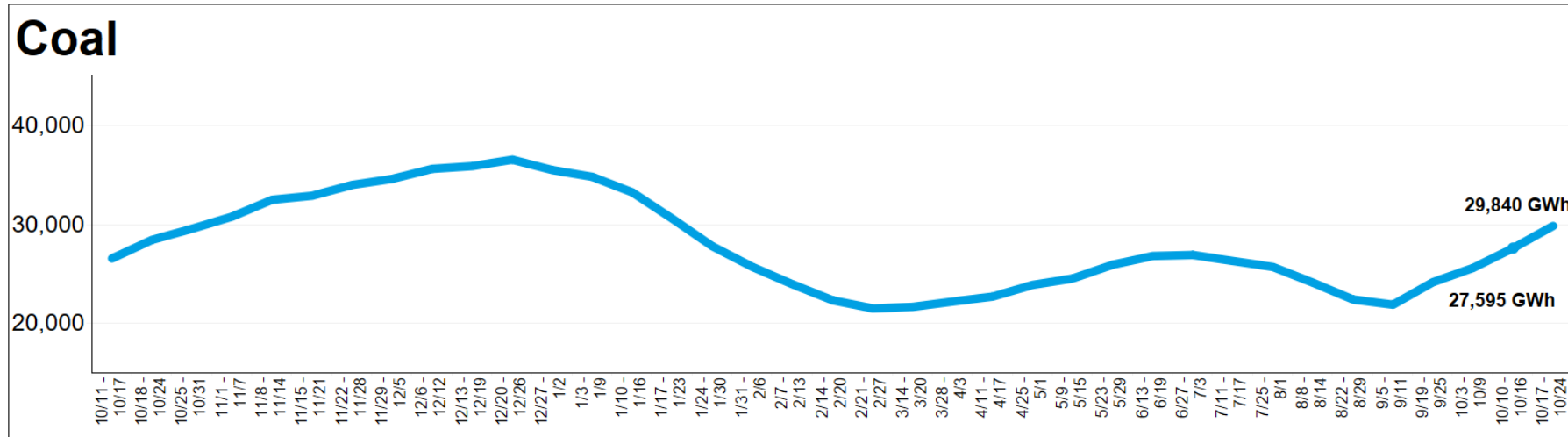


Working gas in underground storage, Lower 48 states

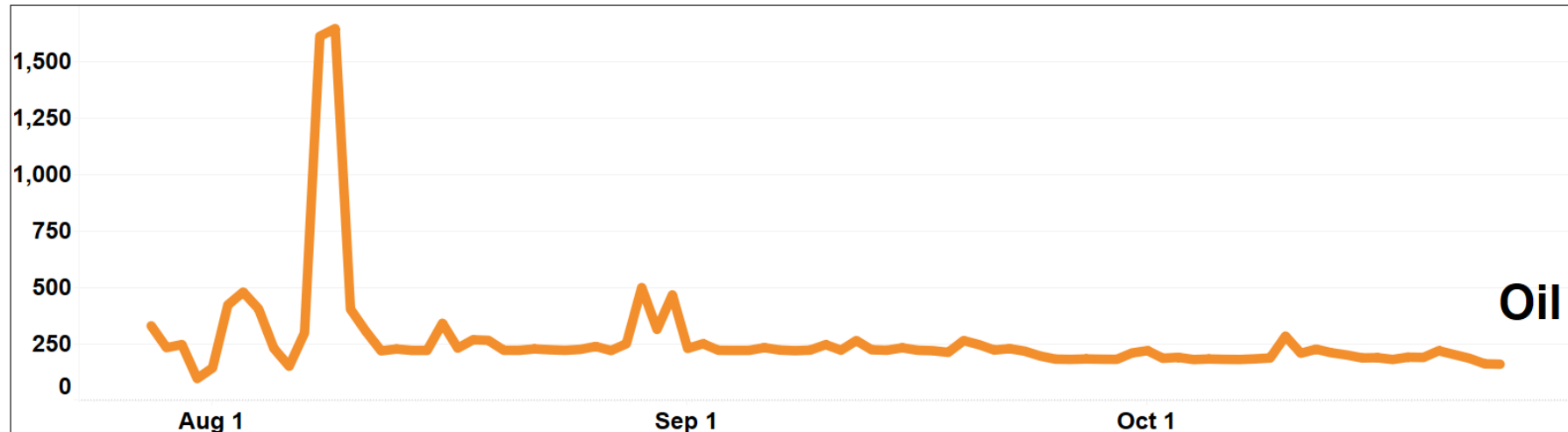
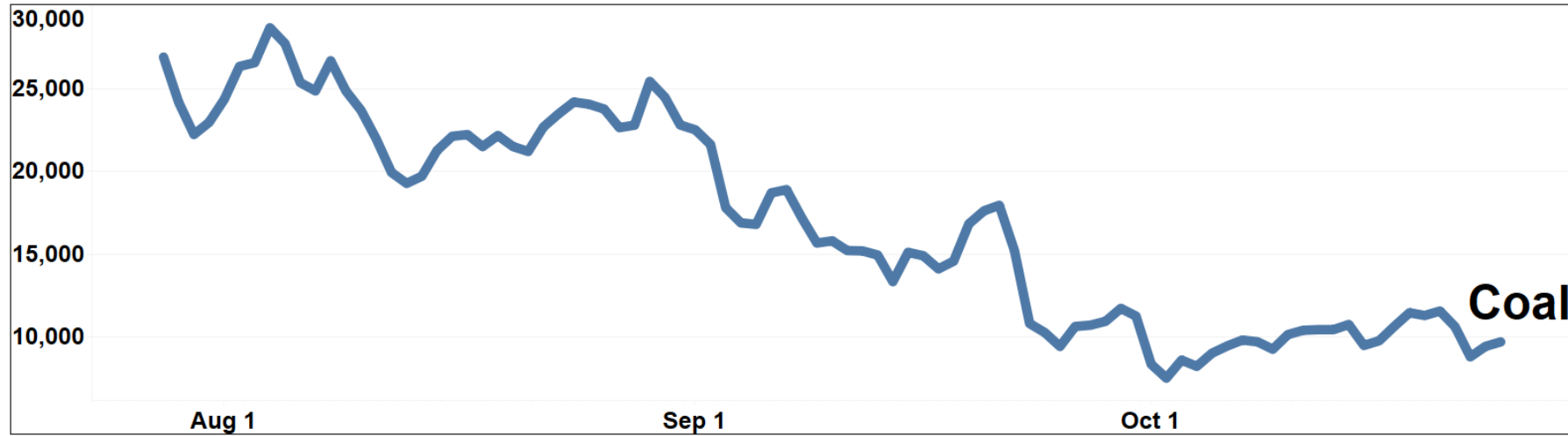
[Summary text](#) [CSV](#) [JSON](#)

Region	Stocks billion cubic feet (Bcf)				Historical Comparisons			
	10/21/22	10/14/22	net change	implied flow	Year ago (10/21/21)		5-year average (2017-21)	
					Bcf	% change	Bcf	% change
East	825	812	13	13	882	-6.5	893	-7.6
Midwest	1,007	987	20	20	1,048	-3.9	1,054	-4.5
Mountain	199	195	4	4	212	-6.1	214	-7.0
Pacific	248	249	-1	-1	255	-2.7	290	-14.5
South Central	1,116	1,099	17	17	1,139	-2.0	1,140	-2.1
Salt	277	271	6	6	301	-8.0	295	-6.1
Nonsalt	839	828	11	11	838	0.1	845	-0.7
Total	3,394	3,342	52	52	3,536	-4.0	3,591	-5.5





***A lower oil unit response rate for the indicated weeks impacted the inventory levels for those periods. The numbers on the chart only reflect data provided by units that submitted responses to the data request.**



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Fuel Supply Update



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