Fuel Supply Update

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Operating Committee
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Key Topics

Coal

- Railroad workers strike risk averted!

Natural Gas

- Supply fundamentals remain very strong

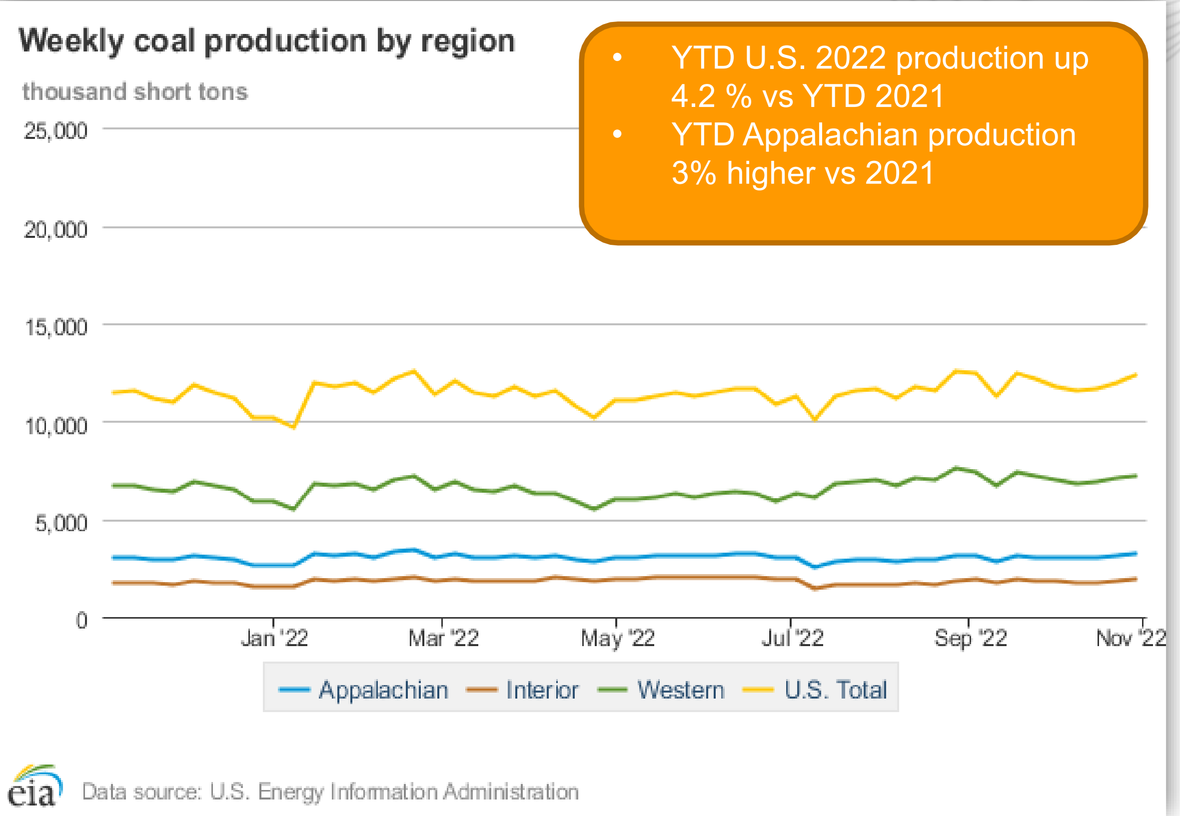
Oil

- East coast distillate fuel inventory near record lows

Coal Focus

Production	Transportation	Prices	PJM Activity
• Appalachian coal production rates continue to run nearly 3% higher YTD compared to last year at the same time	• Rail workers strike averted but remains to be seen if improvement will be seen in rail delivery inefficiencies which have been pronounced over the past couple of years	• High prices continue on strong worldwide demand • Appalachian price ~$200/ton • European price ~$250/ton • Asian price ~$350/ton	• Annual GO Fuel and Emissions data request recently completed • Weekly data requests continuing to help identify and track supply and transportation issues • Communicating with individual resource owners to address emergent supply concerns

Coal Production and Price



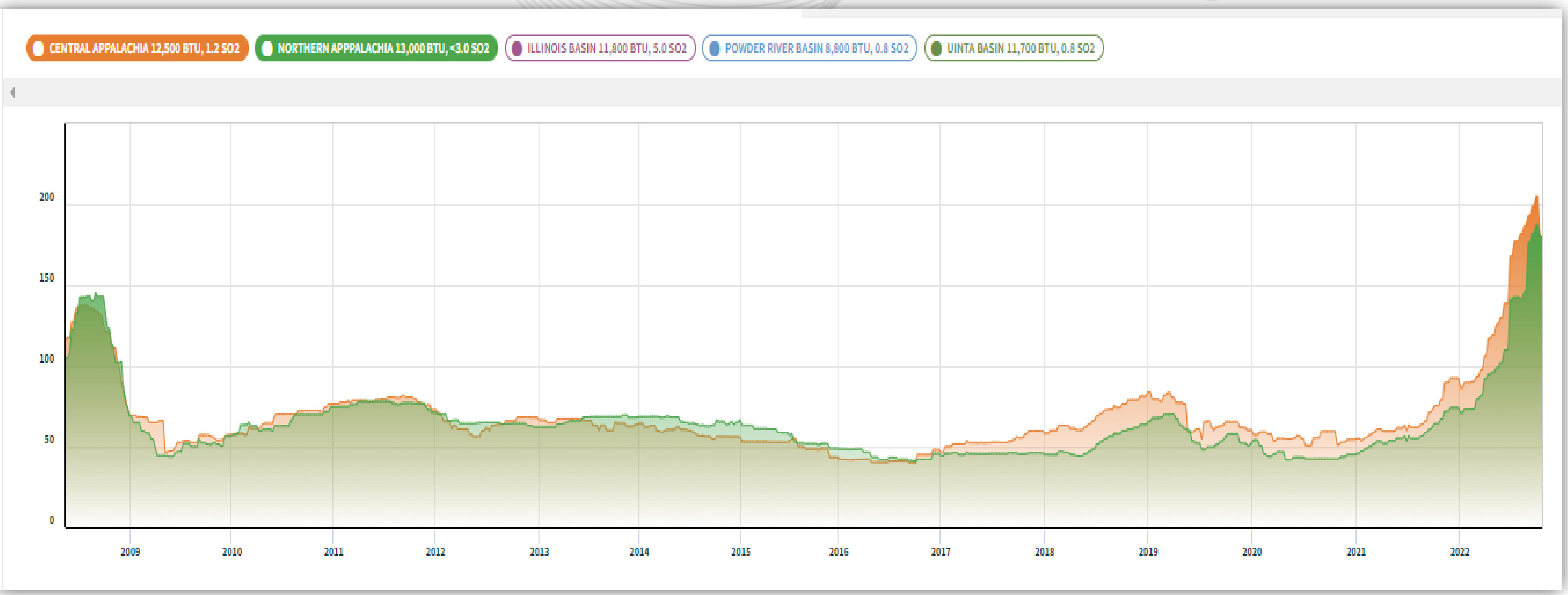
- YTD U.S. 2022 production up 4.2 % vs YTD 2021
- YTD Appalachian production 3% higher vs 2021

Average weekly coal commodity spot prices

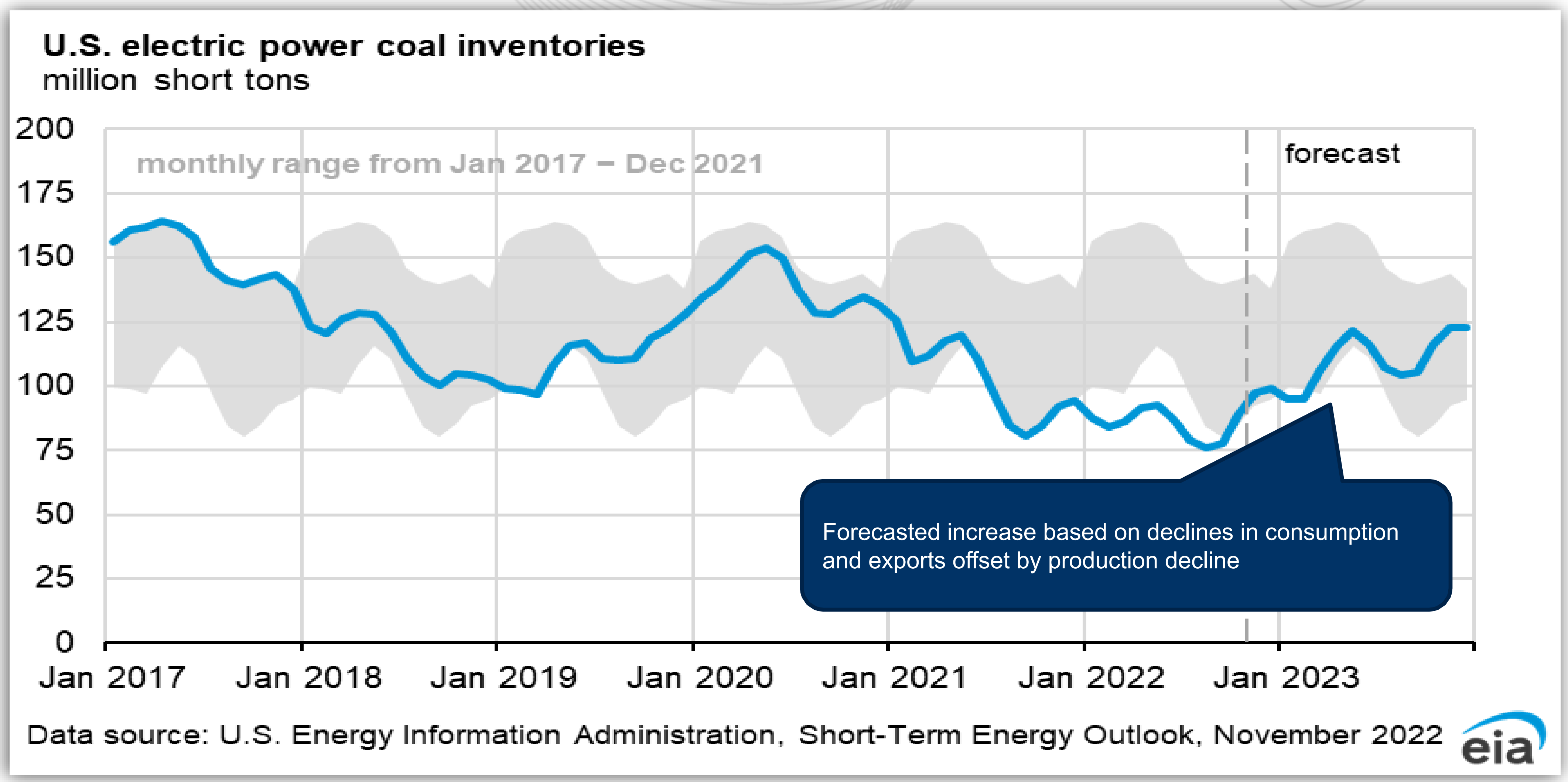
dollars per short ton

	Week ending					Week ago
	11/04/22	11/11/22	11/18/22	11/25/22	12/02/22	change
Central Appalachia *12,500 Btu, 1.2 SO_2*	$182.10	$182.10	$187.70	$187.70	$193.45	$5.75
Northern Appalachia *13,000 Btu, < 3.0 SO_2*	$185.80	$185.80	$191.50	$191.50	$197.40	$5.90
Illinois Basin *11,800 Btu, 5.0 SO_2*	$186.50	$186.50	$186.50	$186.50	$168.25	$-18.25
Powder River Basin *8,800 Btu, 0.8 SO_2*	$17.15	$17.15	$17.10	$17.10	$15.85	$-1.25
Uinta Basin *11,700 Btu, 0.8 SO_2*	$41.80	$41.80	$41.65	$41.65	$41.50	$-0.15

Regional Spot Coal Price History (2008 – Present)



Electric Power Coal Inventories



Natural Gas Focus

Production

- Average daily production 4% higher vs 2021 YTD
- Current production rate remains strong averaging between 95 – 100 Bcf/day
- 35 Bcf/day of the total production coming from Marcellus and Utica shale

Storage

- Winter season withdrawals have started
- Storage inventory 2.4% below the 5 year average
- Currently 3.5 Tcf inventory vs 3.7 Tcf 5 yr. average

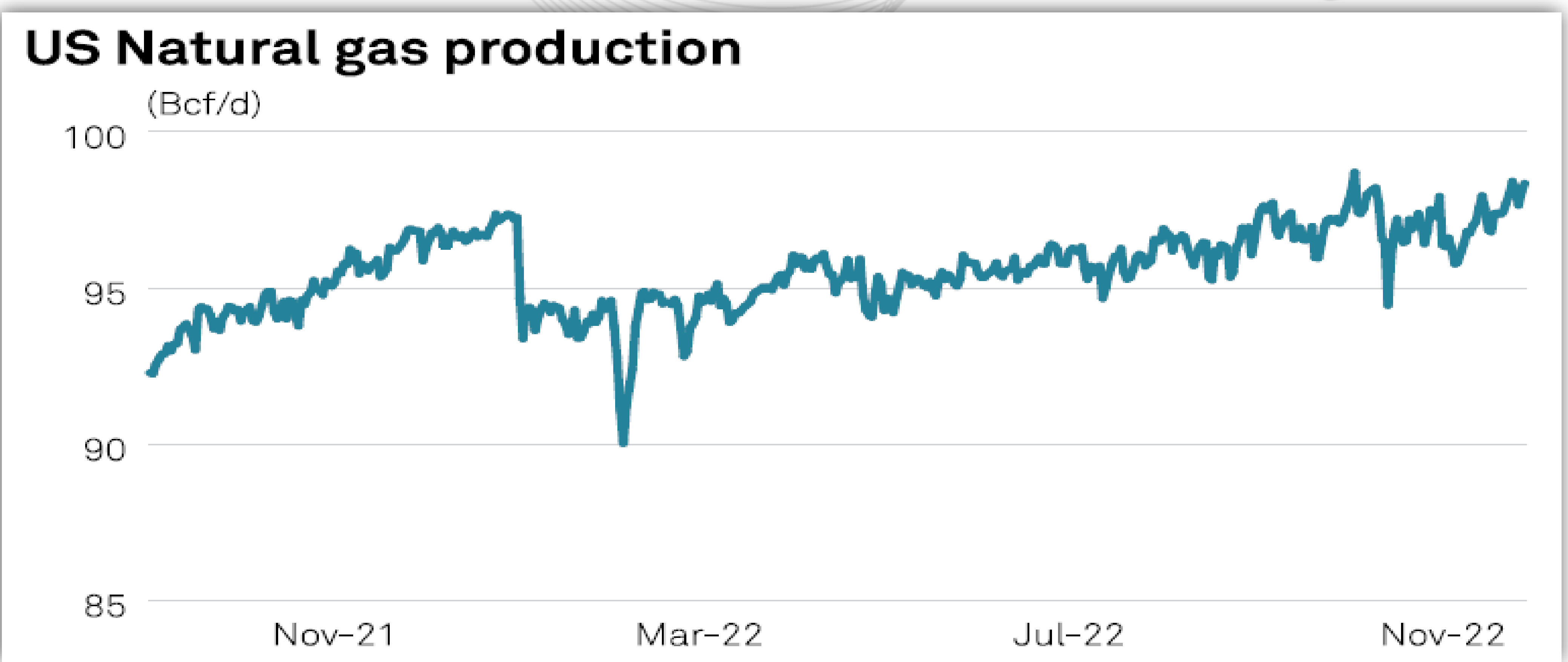
Prices

- Volatility remains high
- Winter price range at regional hubs $8 - $14/mmbtu
- Henry Hub winter price approx. $7.25/mmbtu
- European and Asian prices starting to climb from recent lows currently ranging between $30/mmbtu and $50/mmbtu

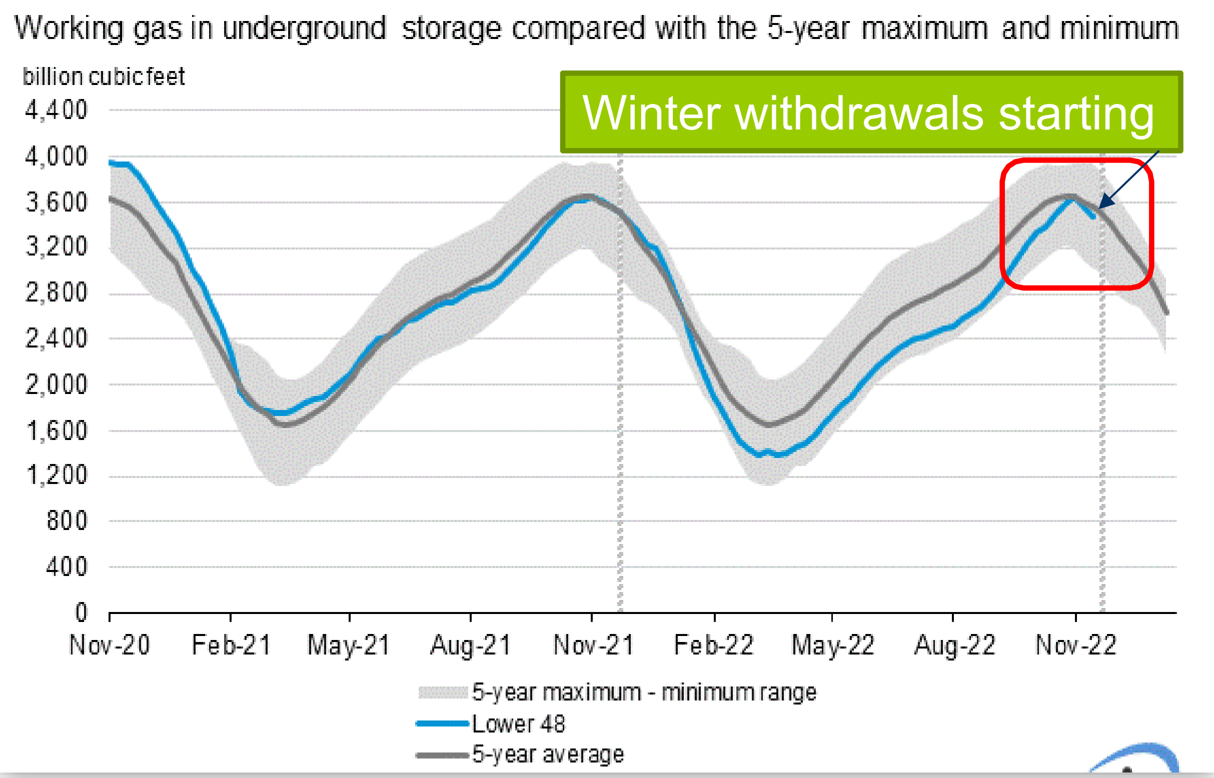
LNG

- Total U.S. export capacity is 14 Bcf/day
- 2 Bcf/day remains offline with partial return of Freeport terminal now delayed until January with full return March 2023
- Export volumes currently between 11 and12 Bcf/day

Natural Gas Production
Record Production Levels



Natural Gas Underground Storage – As Of 11/25/22

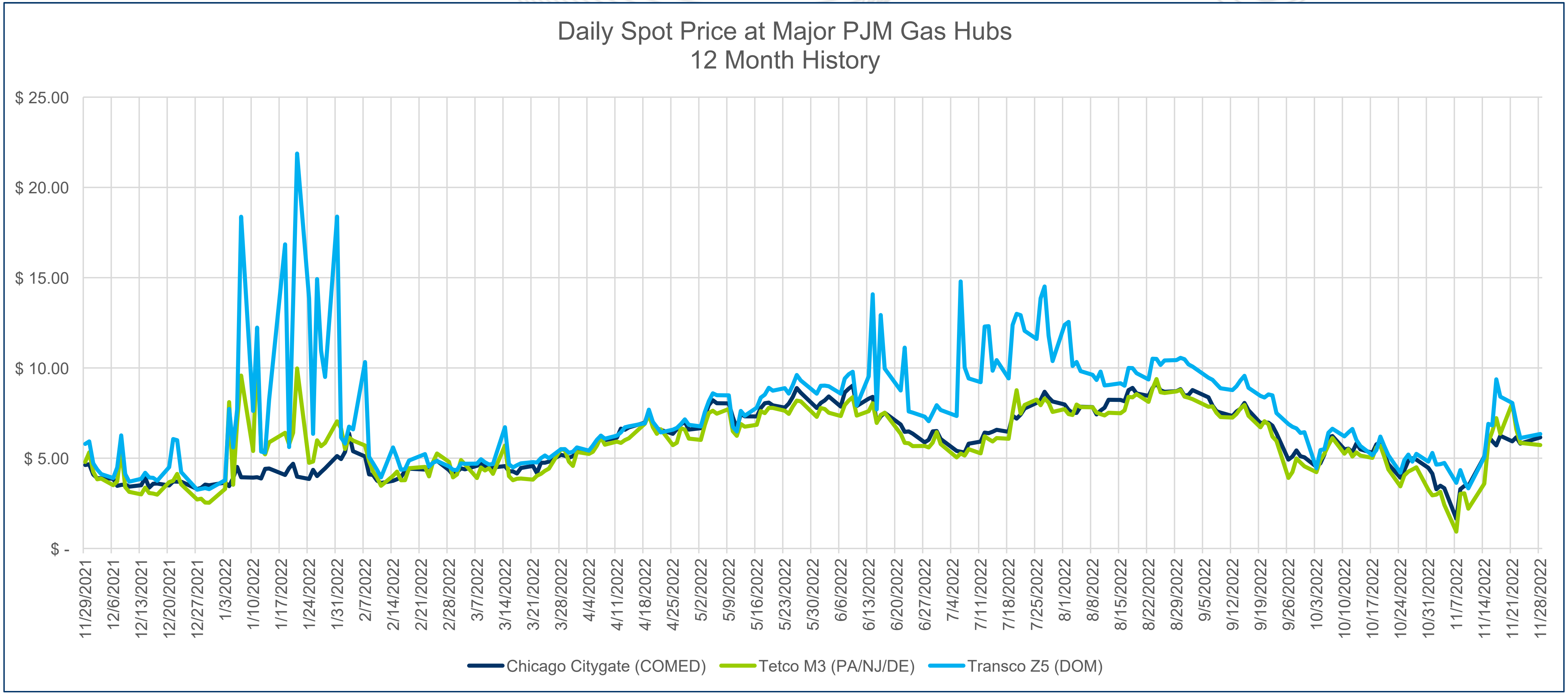


Working gas in underground storage, Lower 48 states

Summary text CSV JSN

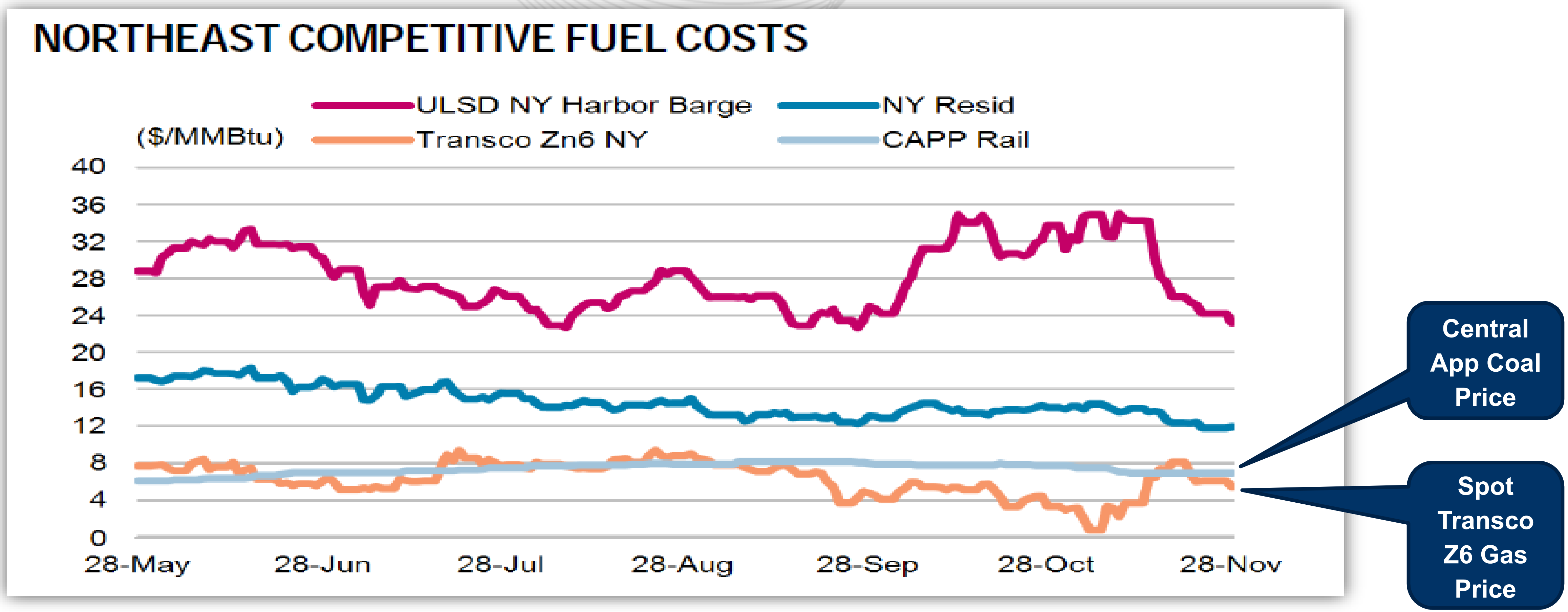
	Stocks billion cubic feet (Bcf)				Historical Comparisons: Year ago (11/25/21)		Historical Comparisons: 5-year average (2017-21)	
Region	11/25/22	11/18/22	net change	implied flow	Bcf	% change	Bcf	% change
East	840	866	-26	-26	870	-3.4	868	-3.2
Midwest	1,040	1,063	-23	-23	1,046	-0.6	1,043	-0.3
Mountain	197	203	-6	-6	207	-4.8	208	-5.3
Pacific	226	232	-6	-6	263	-14.1	288	-21.5
South Central	1,181	1,200	-19	-19	1,187	-0.5	1,161	1.7
Salt	314	318	-4	-4	335	-6.3	324	-3.1
Nonsalt	867	882	-15	-15	852	1.8	838	3.5
Total	3,483	3,564	-81	-81	3,572	-2.5	3,569	-2.4

Daily Spot NG Prices – PJM Hubs



Competitive Fuel Cost Comparison

Coal back in the price lead…for now



Distillate and Residual Fuel Oil Focus

Regional Inventory

- EIA PADD 1 (East Coast) inventories remain well below 5 year average
- Roughly 30-40 days of inventory
- Refining capacity at maximum
- Main drivers for low inventory
  - Refineries shut down
  - Reduced imports
  - Reduced supply from other regions
  - Strong demand from Europe

Prices

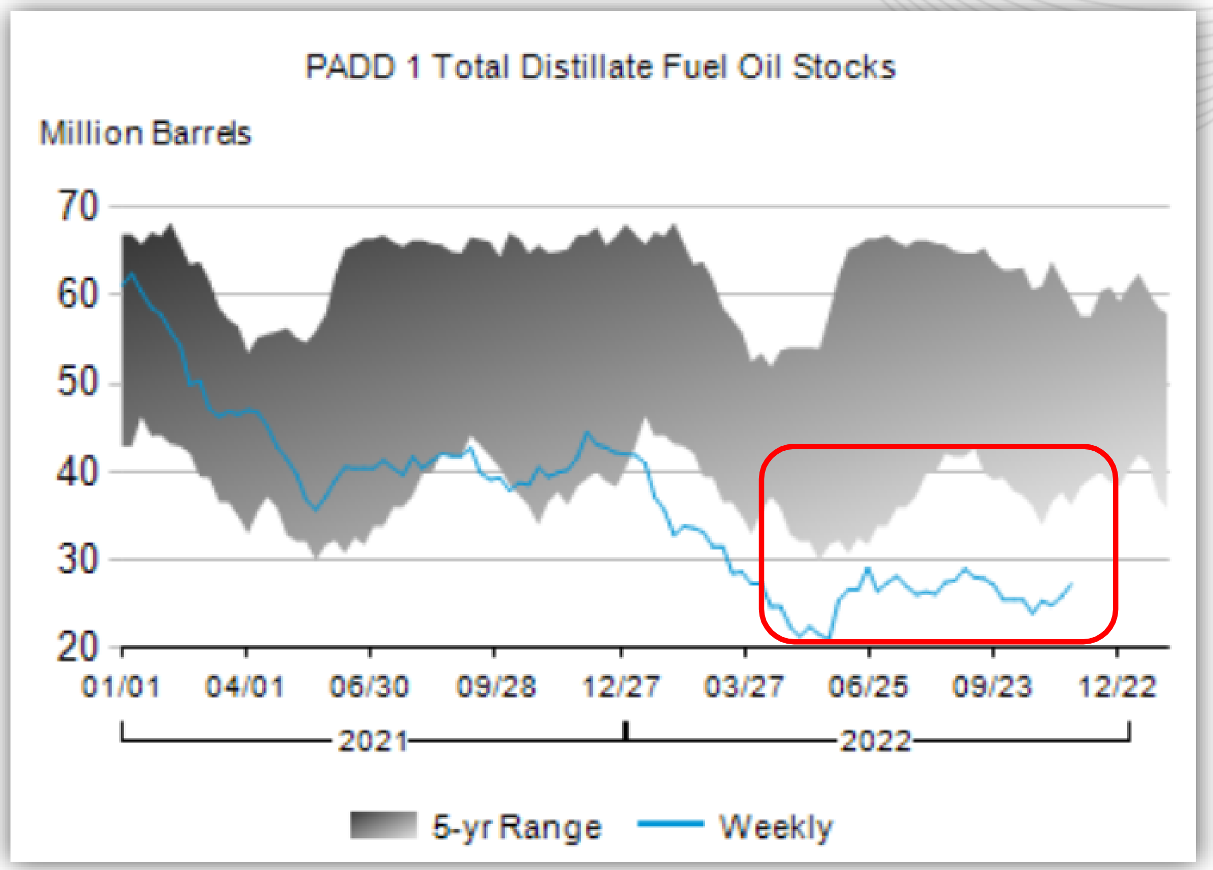
- Volatility continues
- Higher prices balancing low inventory/winter demand
- >$5/gal. for Ultra Low Sulfur Diesel

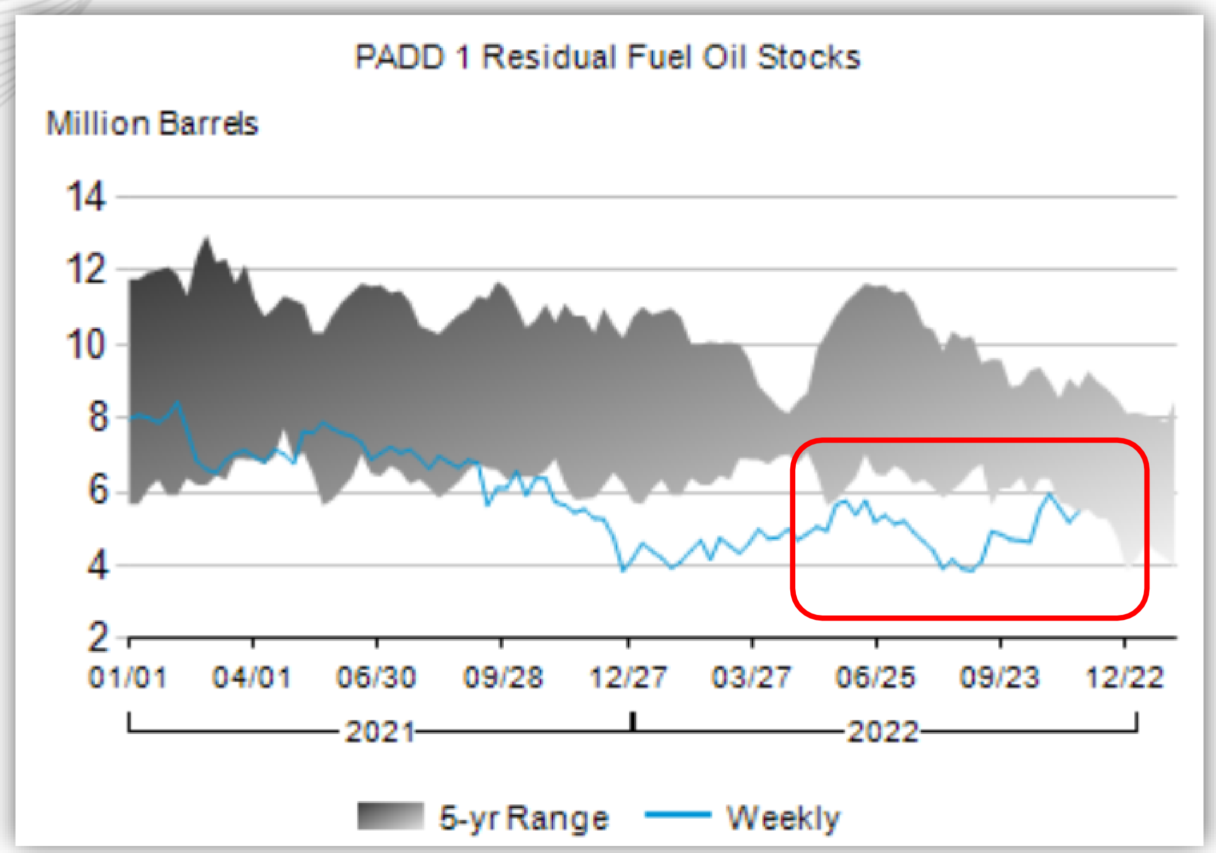
PJM Activity

- 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 well below 5 year average

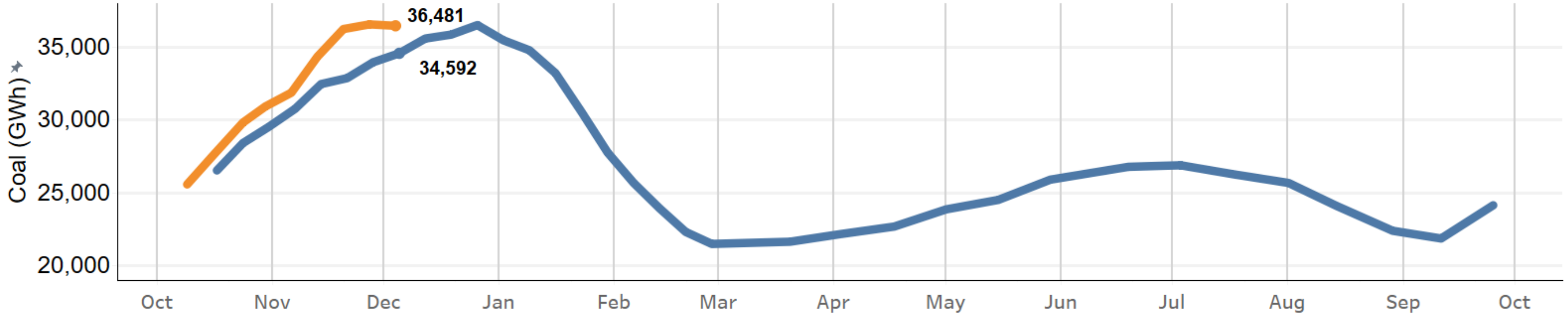




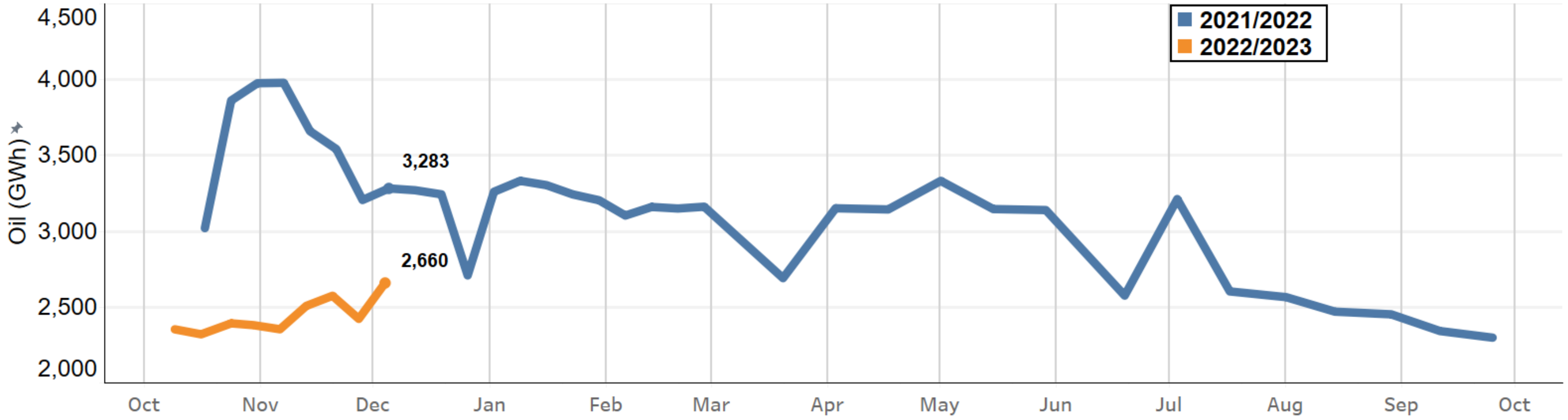
ULSD Spot Price at NY Harbor

GWh of Fuel Inventory

Coal



Oil



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Fuel Supply Update

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