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August 2023

### KEY POINTS

- **Solid demand.** Domestic petroleum demand, which was 3.5% above its seasonal average for August, surpassed 21 mb/d for the first time since August 2019.
- **Record level refining activities.** U.S. refining activity exceeded 17.0 mb/d for three straight months and the capacity utilization rate was over 93% from June to August.
- **Historically low crude oil inventories.** A combination of solid demand, record-level refining and high exports resulted in the lowest U.S. commercial since November 2022.
- **Higher crude oil and gasoline prices.** Higher crude oil prices prompted by tighter supply dynamics rose to levels not seen since November 2022.

### EXECUTIVE SUMMARY

An overall tightness in the global oil market had the U.S. crude oil benchmark rising to a nine-month high and motor gasoline prices moving to 90 cents above the five-year average. The price increase was primarily a result of the contraction in global supply from the oil production cuts from Saudi Arabia and Russia of more than 1 million barrels per day. Refinery disruptions in Texas and Louisiana, partially due to the prolonged heatwave, also contributed. These dynamics were reflected in the Consumer Price Index, which is a measure of price inflation in the U.S. and shapes the financial well-being of American households, which rose 0.6% over the month to the largest increase since June 2022, due to this sharp jump in gasoline prices. Still, prices were below the levels seen last year – gasoline was 13 cents and crude oil was nearly \$13 per barrel lower than last summer's seasonal record.

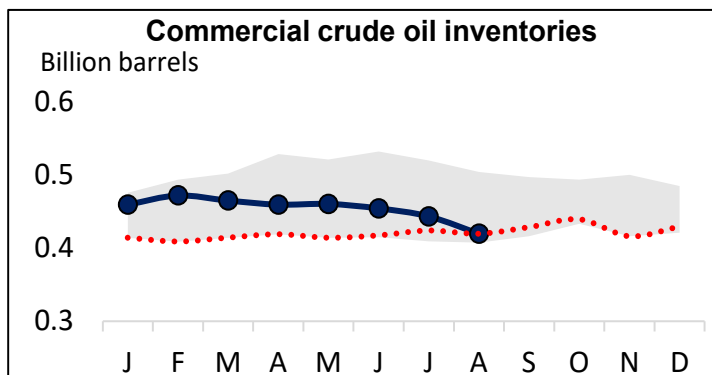
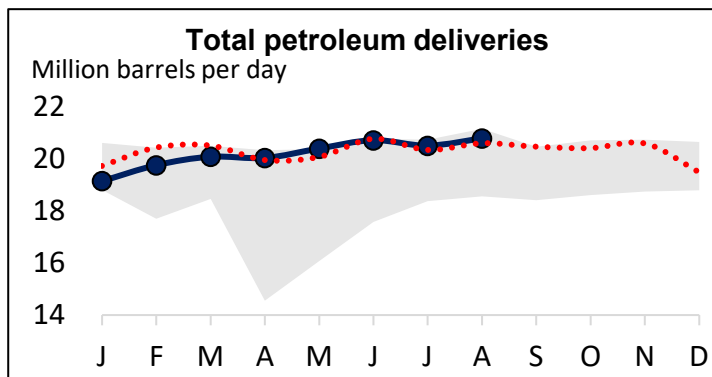
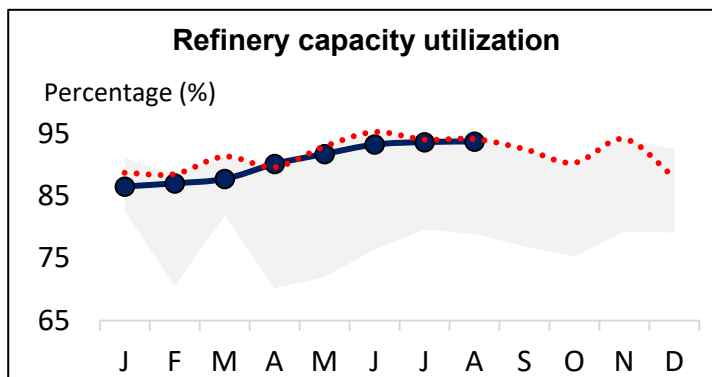
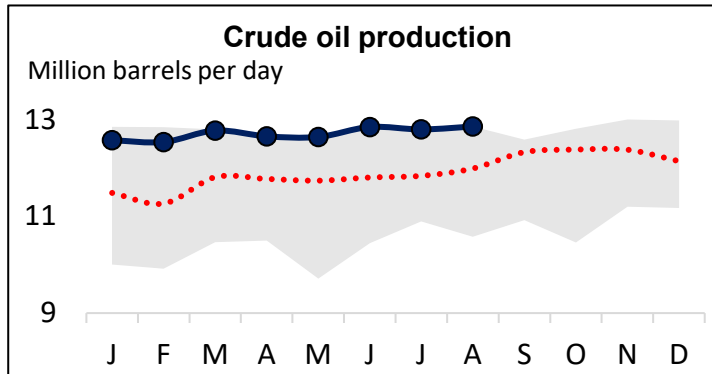
Comparably lower prices on a year-over-year basis stemmed from mounting U.S. crude oil production, which rose by 62,000 b/d m/m to 12.9 Mb/d and was the highest for any month since Dec 2019 and approached the all-time peak of 13.0 Mb/d set in November 2019. Overall U.S. liquids production (crude oil and NGL) rose by 1.2 Mb/d to 19.3 Mb/d – numbers not seen in 50 years.

Despite the increase in domestic production, August saw the largest draw-down on U.S. commercial crude inventory since June 2021. Those stockpiles - which have been falling month-over-month since June by an average of 3% or 13.6 million barrels – experienced the largest decline for any August on record in a decade, putting inventories back on par with August 2022 levels. Some of this decline may be attributed to U.S. refiners processing 17.1 Mb/d of crude oil - the largest inputs into refinery since December 2019. The August refinery utilization rate, which stood at 93.7% was 3.0% higher than the 5-year average and helped to supply the rise in U.S. total petroleum demand.

This refining activity helped supply product to meet consumer petroleum demand, as measured by total domestic petroleum deliveries, which grew by 599,000 b/d m/m to 21.1 million barrels per day and surpassed its five-year seasonal average for August by 3.5%. The month-over-month growth in demand, which was driven by increases in other oils (394,000 b/d), motor gasoline (132,000 b/d), distillate fuel (59,000 b/d), k-jet fuel (9,000 b/d), fully offset the 215,000 b/d decline in residual fuel, which is used in marine shipping and sometimes in electricity generation.

Motor gasoline demand, which has a history of rising over the July to August period of the past decade, rose by 1.5% m/m. This could reflect an increase in driving activity for the month, which would continue a 7-month trend in the year-over-year miles driven since January 2023, per the Federal Highway Association ([FHWA](#)). Motor gasoline inventories, which typically fall from July to August, fell by 1.2% m/m to the third lowest volume for any month since October 2014.

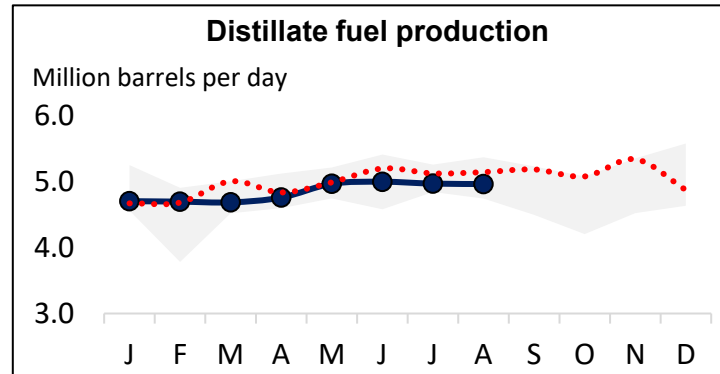
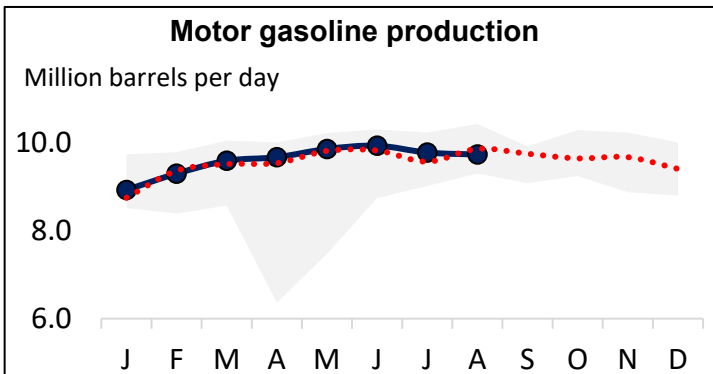
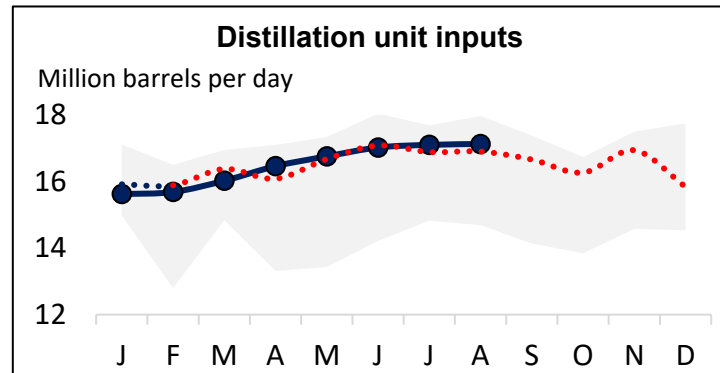
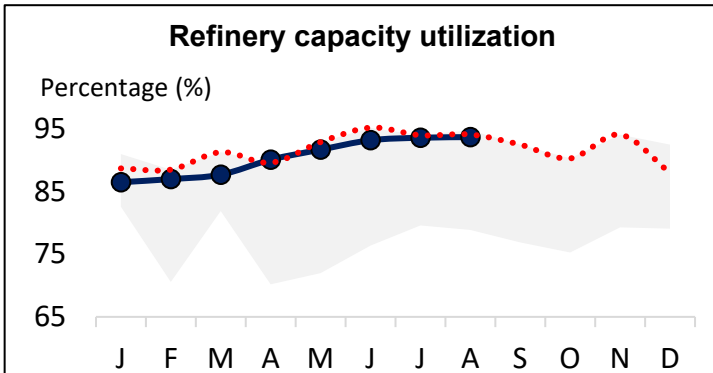
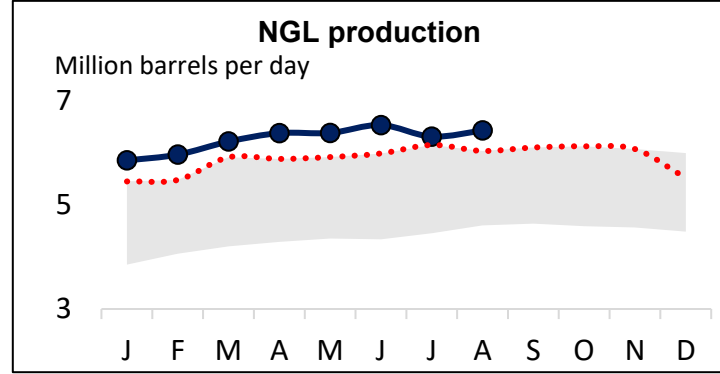
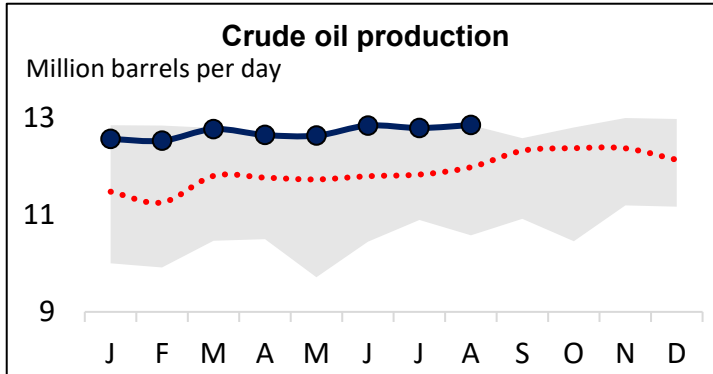
## KEY CHARTS





# MSR Energy Charts

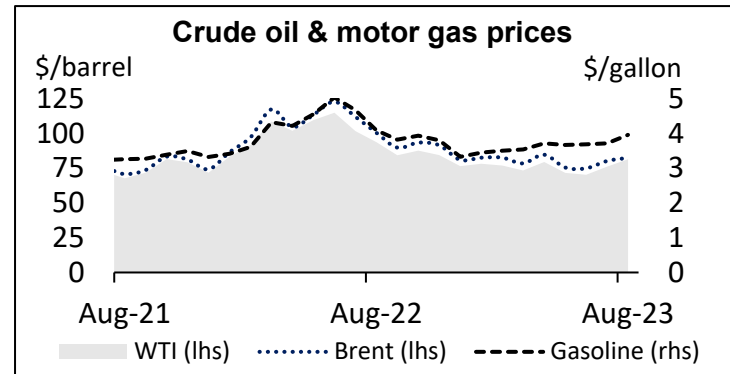
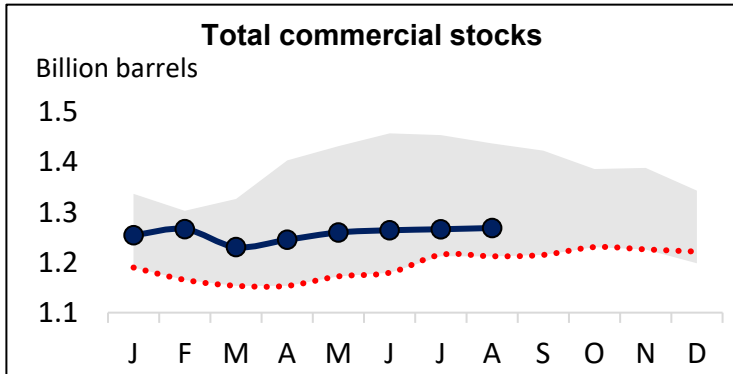
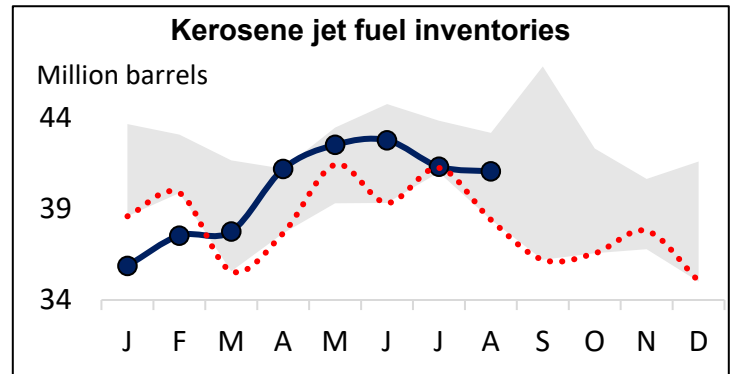
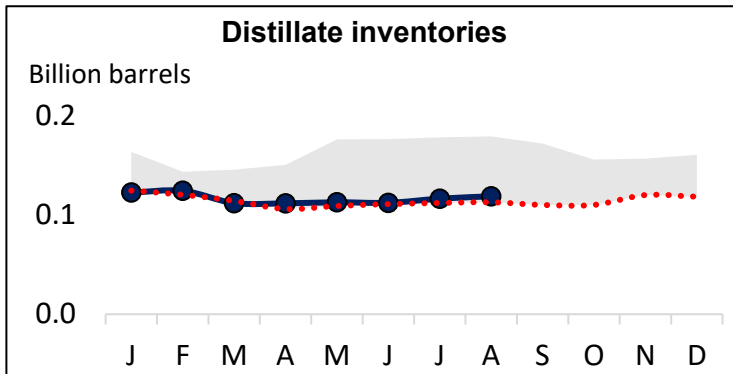
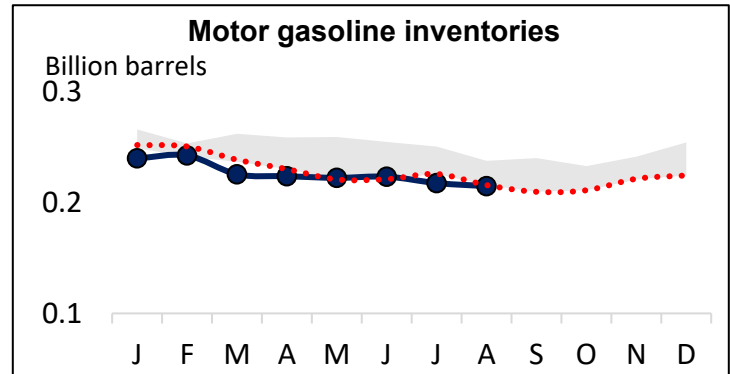
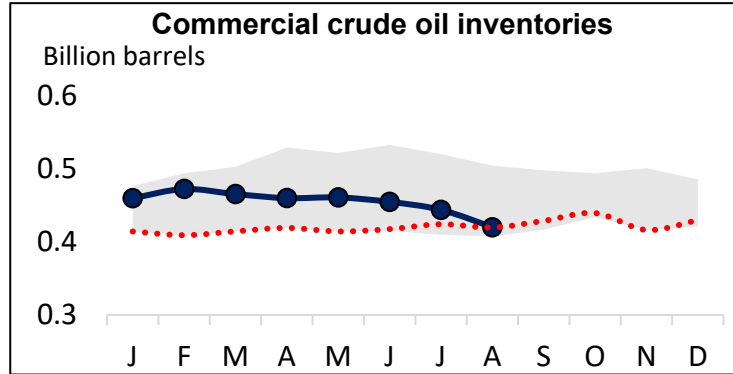
5-year range 2023 2022





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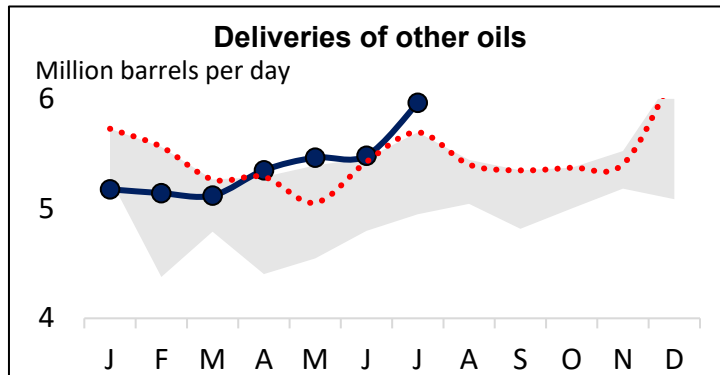
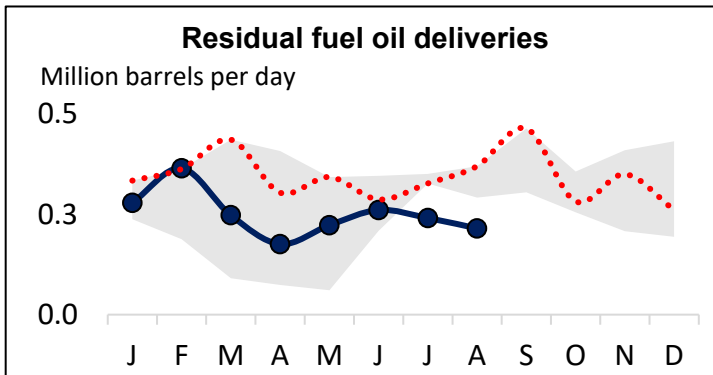
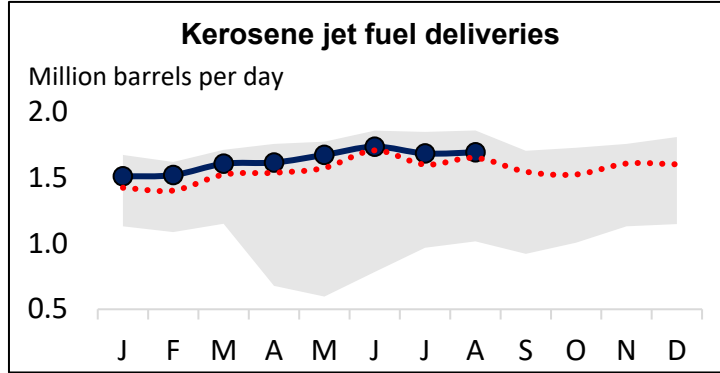
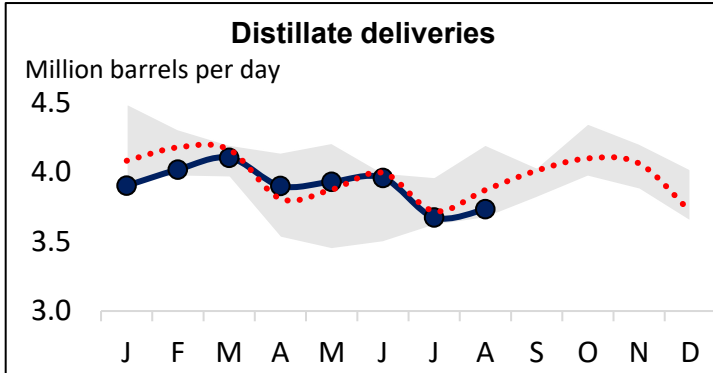
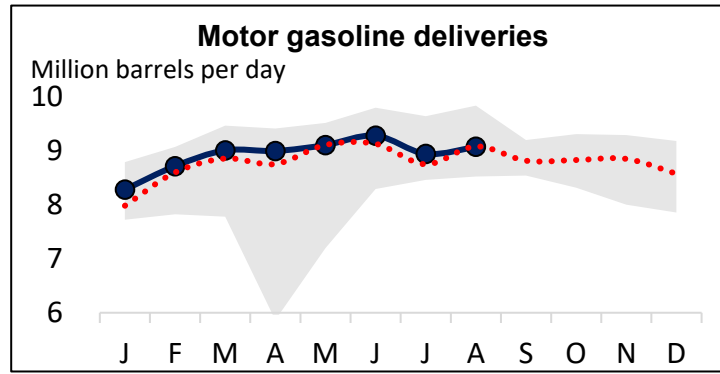
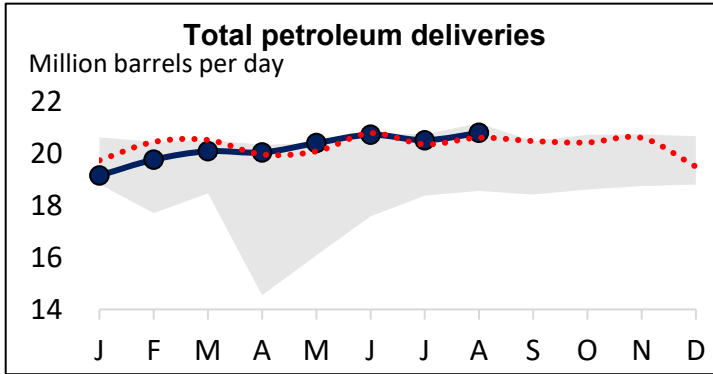
5-year range 2023 2022





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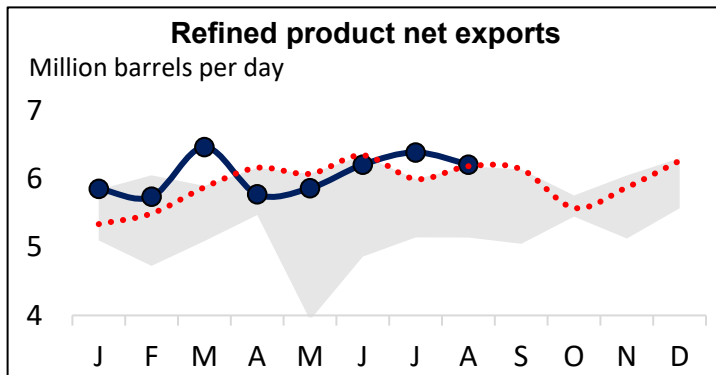
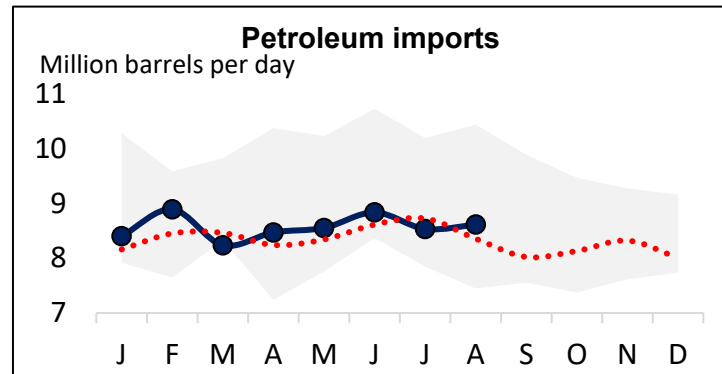
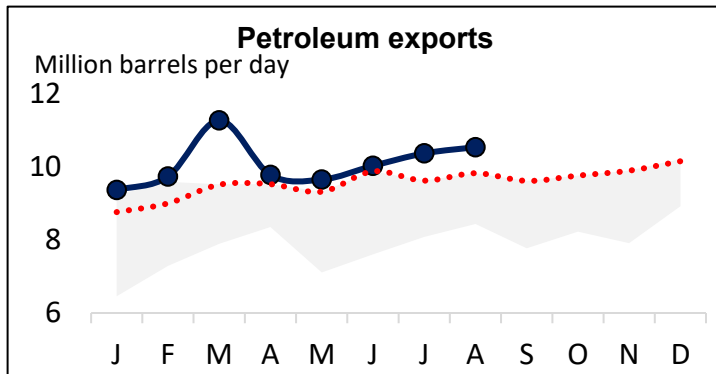
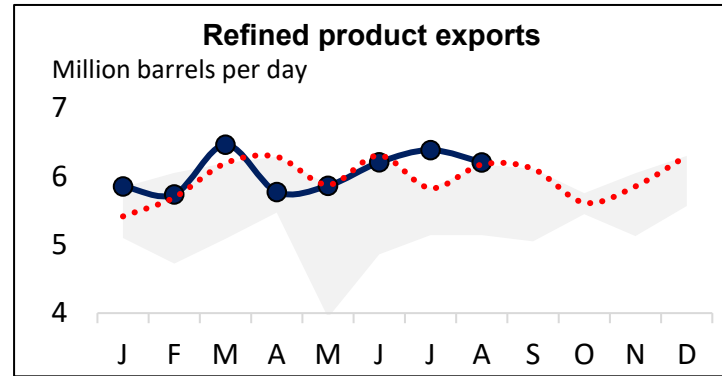
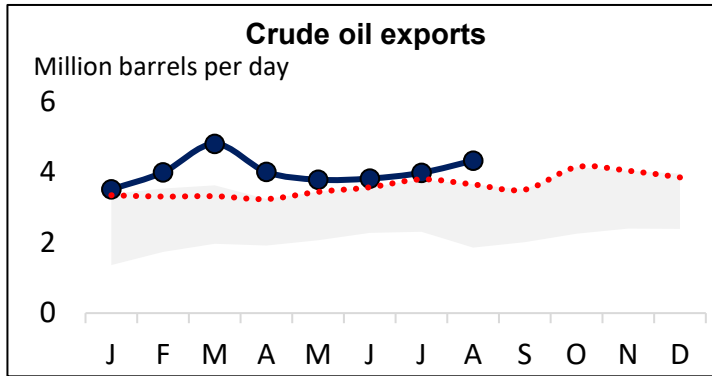
5-year range 2023 2022





# MSR Energy Charts

5-year range 2023 2022



**ESTIMATED UNITED STATES PETROLEUM BALANCE<sup>1</sup>**  
(Daily average in thousands of 42 gallon barrels)

Disposition and Supply	August			Year-to-Date		
	2023 <sup>2</sup>	2022	% Change	2023 <sup>3</sup>	2022	% Change
<b>Disposition:</b>						
Total motor gasoline.....	9,074	9,115	(0.4)	8,926	8,831	1.1
Finished reformulated.....	2,840	2,965	(4.2)	2,752	2,798	(1.7)
Finished conventional.....	6,234	6,150	1.4	6,174	6,033	2.3
Kerosene-jet.....	1,693	1,654	2.4	1,630	1,556	4.8
Distillate fuel oil.....	3,733	3,940	(5.3)	3,901	4,026	(3.1)
≤ 500 ppm sulfur.....	3,726	3,939	(5.4)	3,871	4,006	(3.4)
≤ 15 ppm sulfur.....	3,711	3,939	(5.8)	3,854	4,000	(3.6)
> 500 ppm sulfur.....	7	1	600.0	30	20	50.0
Residual fuel oil.....	215	376	(42.8)	250	323	(22.6)
All other oils (including crude losses) .....	6,114	4,997	22.4	5,264	5,162	2.0
Reclassified <sup>4</sup> .....	276	183	na	253	161	na
Total domestic product supplied.....	21,105	20,265	4.1	20,223	20,058	0.8
Exports.....	10,537	9,747	8.1	10,099	9,349	8.0
Total disposition.....	31,642	30,012	5.4	30,322	29,407	3.1
<b>Supply:</b>						
Domestic liquids production						
Crude oil (including condensate).....	12,855	11,985	7.3	12,708	11,713	8.5
Natural gas liquids.....	6,424	6,061	6.0	6,256	5,893	20.0
Other supply <sup>5</sup> .....	1,132	1,204	(6.0)	1,245	1,218	2.2
Total domestic supply.....	20,411	19,250	6.0	20,208	18,824	7.4
Imports:						
Crude oil (excluding SPR imports).....	6,781	6,333	7.1	6,474	6,328	2.3
From Canada.....	3,629	3,856	(5.9)	3,799	3,829	(0.8)
All other.....	3,152	2,477	27.3	2,675	2,499	7.0
Products.....	1,958	2,034	(3.8)	2,114	2,099	0.8
Total motor gasoline (incl. blend.comp).....	801	725	10.5	762	672	13.4
All other.....	1,157	1,309	(11.6)	1,352	1,426	(5.2)
Total imports.....	8,739	8,367	4.4	8,589	8,426	1.9
Total supply.....	29,150	27,617	5.6	28,797	27,250	5.7
Stock change, all oils.....	(2,492)	(2,395)	na	(1,525)	(2,157)	na
<b>Refinery Operations:</b>						
Input to crude distillation units.....	17,127	16,903	1.3	16,483	16,517	(0.2)
Gasoline production.....	9,744	9,872	(1.3)	9,610	9,540	0.7
Kerosene-jet production.....	1,773	1,683	5.3	1,698	1,625	4.5
Distillate fuel production.....	4,962	5,142	(3.5)	4,843	4,958	(2.3)
Residual fuel production.....	254	274	(7.3)	264	247	7.0
Operable capacity.....	18,270	17,955	1.8	18,216	17,939	1.5
Refinery utilization <sup>6</sup> .....	93.7%	94.1%	na	90.5%	92.1%	na
Crude oil runs.....	16,618	16,428	1.2	15,925	16,001	(0.5)

1. Total supply, i.e., production plus imports adjusted for net stock change is equal to total disposition from primary storage. Total disposition from primary storage less exports equals total domestic products supplied. Information contained in this report is derived from information published in the API *Weekly Statistical Bulletin* and is based on historical analysis of the industry. All data reflect the most current information available to the API and include all previously published revisions.

2. Based on API estimated data converted to a monthly basis.

3. Data for most current two months are API estimates. Other data come from U.S. Energy Information Administration (including any adjustments).

4. An adjustment to avoid double counting resulting from differences in product classifications among different refineries and blenders.

5. Includes unaccounted-for crude oil, withdrawals from the SPR when they occur, processing gain, field production of other hydrocarbons and alcohol, and downstream blending of ethanol.

6. Represents "input to crude oil distillation units" as a percent of "Operable capacity".

R: Revised. na: Not available.

**ESTIMATED UNITED STATES PETROLEUM BALANCE<sup>1</sup>**

(Daily average in thousands of 42 gallon barrels)

	August 2023	July 2023	August 2022	% Change From	
				Month Ago	Year Ago
<b>Stocks (at month-end, in millions of barrels):</b>					
Crude oil (excluding lease & SPR stocks).....	419.9	443.8	419.8	(5.4)	0.0
Unfinished oils.....	84.3	85.5	86.4	(1.4)	(2.4)
Total motor gasoline.....	214.7	217.4	215.6	(1.2)	(0.4)
Finished reformulated.....	0.0	0.0	0.0	0.8	55.2
Finished conventional.....	16.2	17.1	17.0	(5.3)	(4.8)
Blending components.....	198.5	200.3	198.6	(0.9)	(0.0)
Kerosene-jet.....	41.0	41.3	38.4	(0.7)	6.7
Distillate fuel oil.....	119.2	116.8	113.1	2.1	5.4
≤ 500 ppm sulfur.....	111.3	109.8	105.5	1.4	5.5
≤ 15 ppm sulfur.....	108.6	107.6	102.9	0.9	5.6
> 500 ppm sulfur.....	7.9	7.0	7.6	12.9	3.9
Residual fuel oil.....	27.3	28.6	28.6	(4.5)	(4.6)
All other oils.....	362.5	333.0 R	310.7	8.9	16.7
Total all oils.....	1,268.9	1,266.4 R	1,212.7	0.2	4.6