

# **Energy Tidbits**

"Did US/Iran Deal Also Unlock >\$12b Iraq Owes to Iran for Natural Gas That Won't be Restricted to Humanitarian Uses?"

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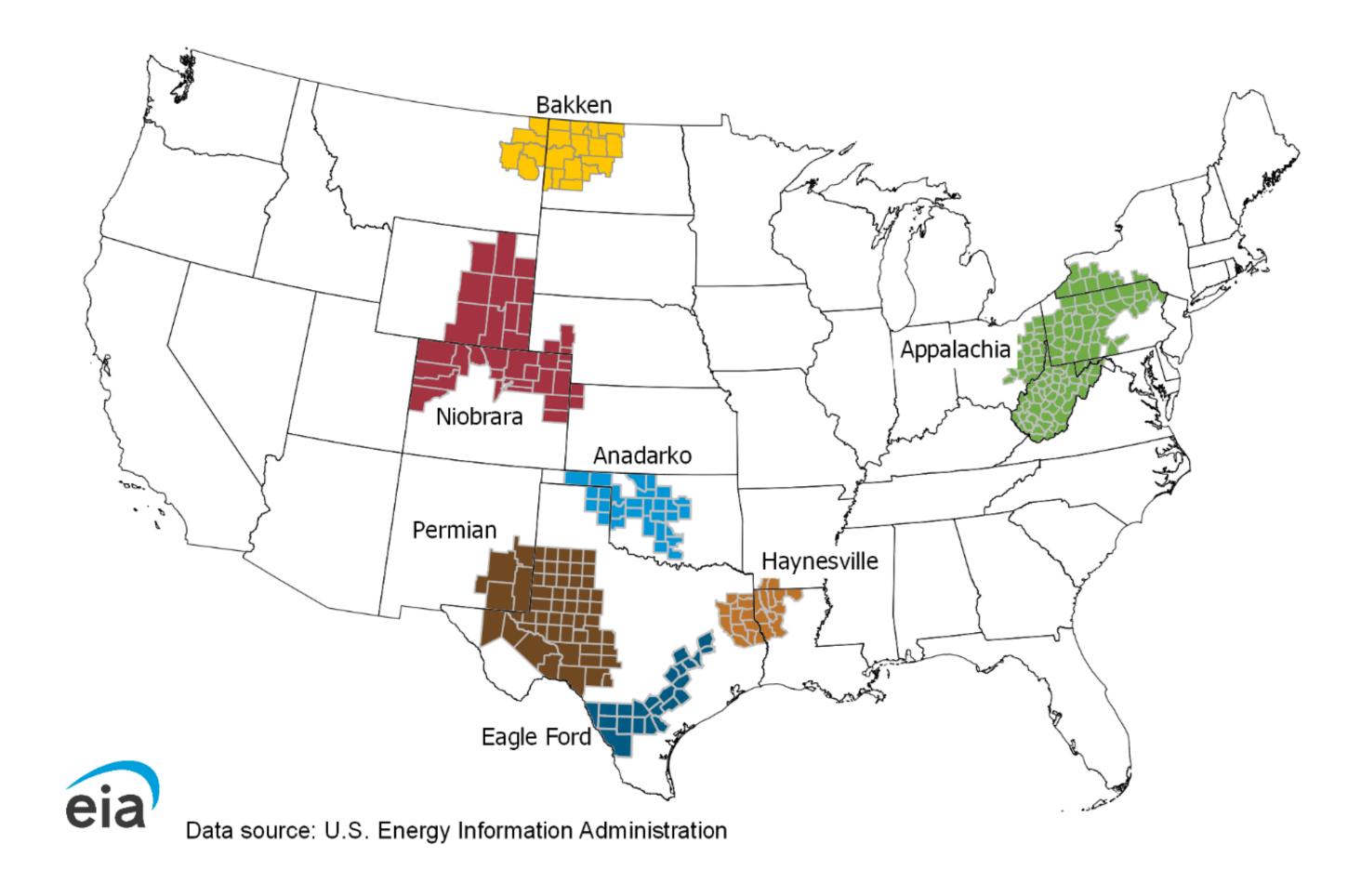
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# U.S. Energy Information Administration

# Drilling Productivity Report

For key tight oil and shale gas regions



# **Contents**

Year-over-year summary	2
Anadarko Řegion	3
Appalachia Region	4
Bakken Region	5
Eagle Ford Region	6
Haynesville Region	7
Niobrara Region	8
Permian Region	9
Explanatory notes	10
Sources	11



# Year-over-year summary

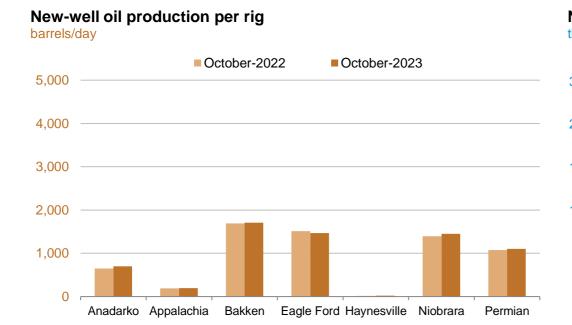
September 2023

**Drilling Productivity Report** 

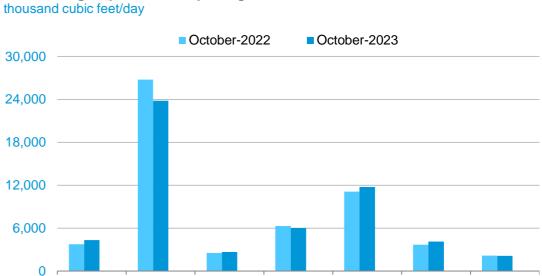
drilling data through August projected production through October

Eagle Ford Haynesville Niobrara

Permian



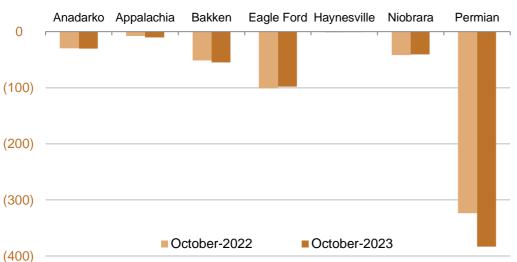
### New-well gas production per rig



Bakken

### Legacy oil production change

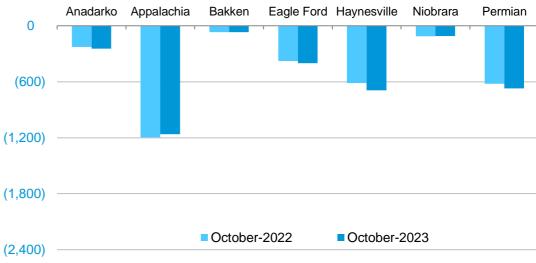
thousand barrels/day



### Legacy gas production change

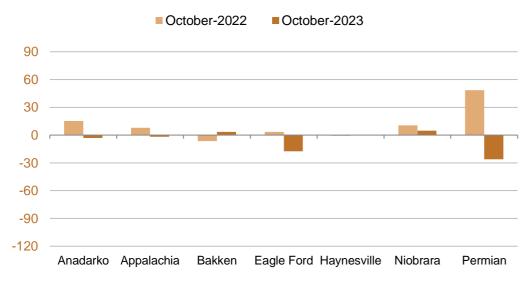
Anadarko Appalachia

million cubic feet/day



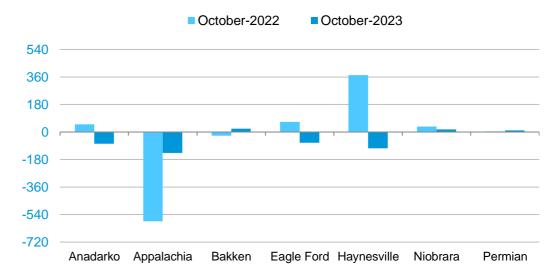
### Indicated monthly change in oil production (Oct vs. Sep)

thousand barrels/day



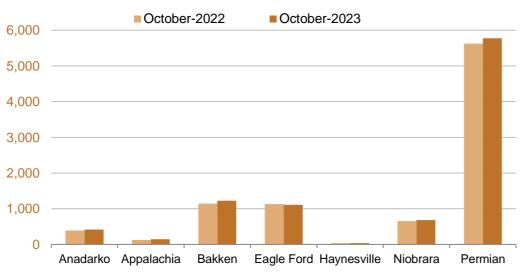
### Indicated monthly change in gas production (Oct vs. Sep)

million cubic feet/day



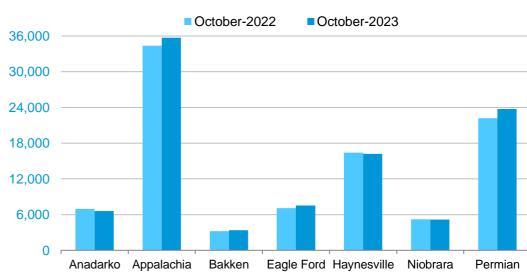
### Oil production

thousand barrels/day

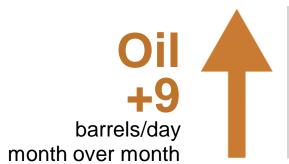


### Natural gas production

million cubic feet/day



drilling data through August projected production through October

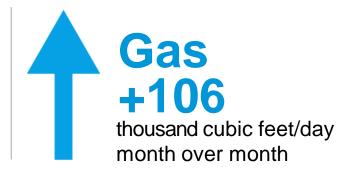


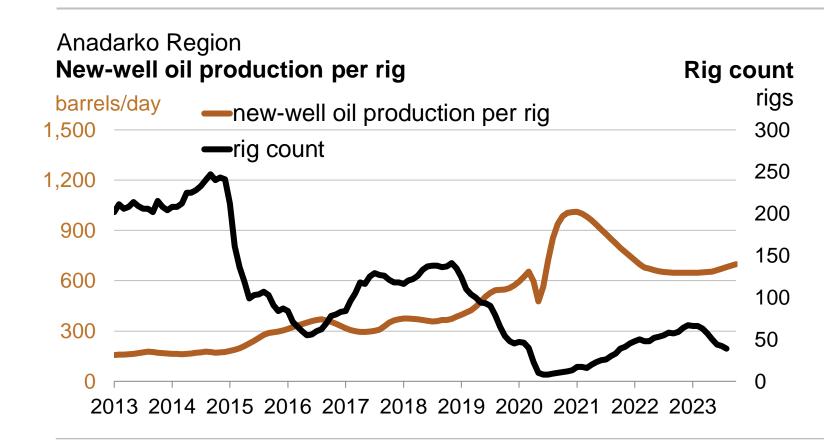
Anadarko Region

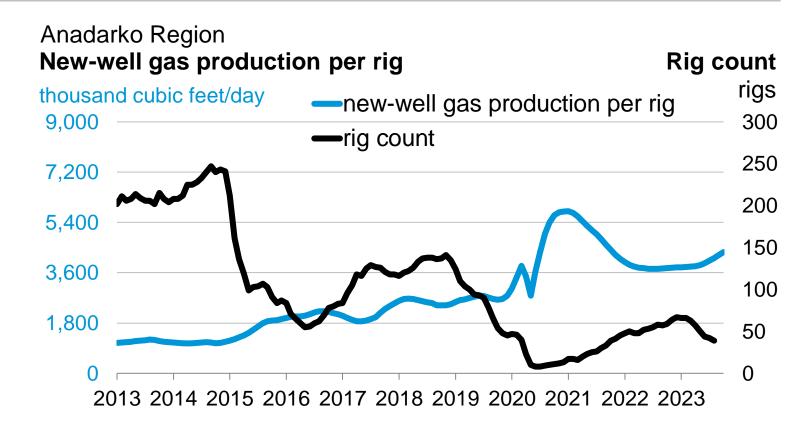
699 October
690 September
barrels/day

Monthly additions from one average rig

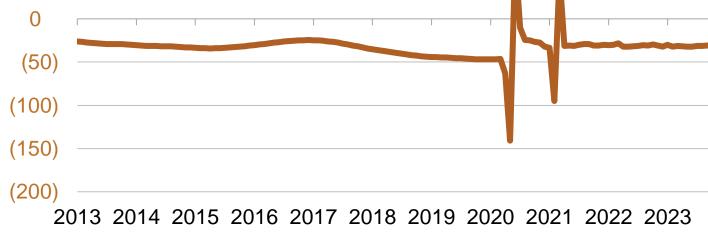
October 4,341
September 4,235
thousand cubic feet/day



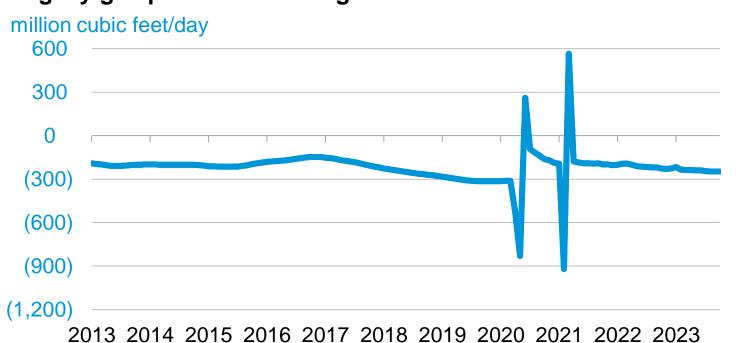




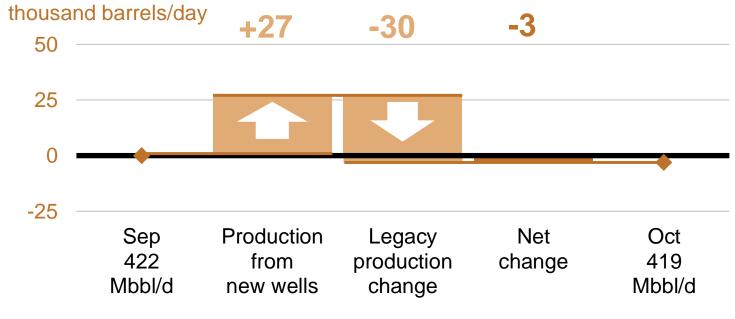
# Legacy oil production change thousand barrels/day 100 50 (50)



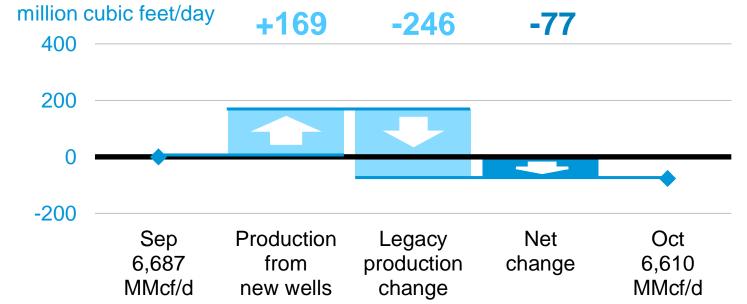
# Anadarko Region Legacy gas production change

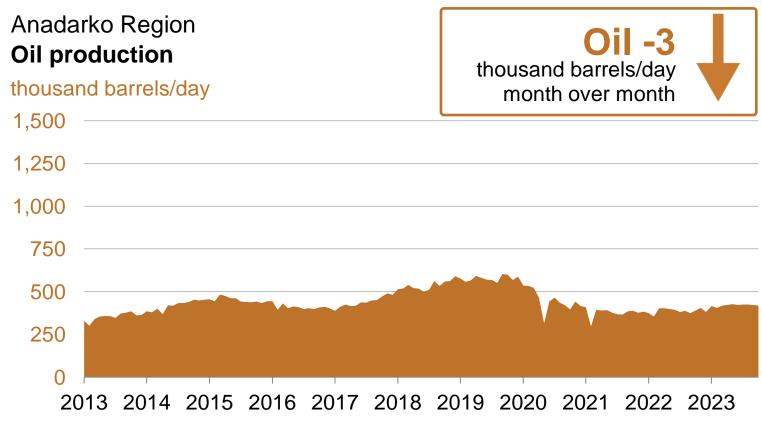


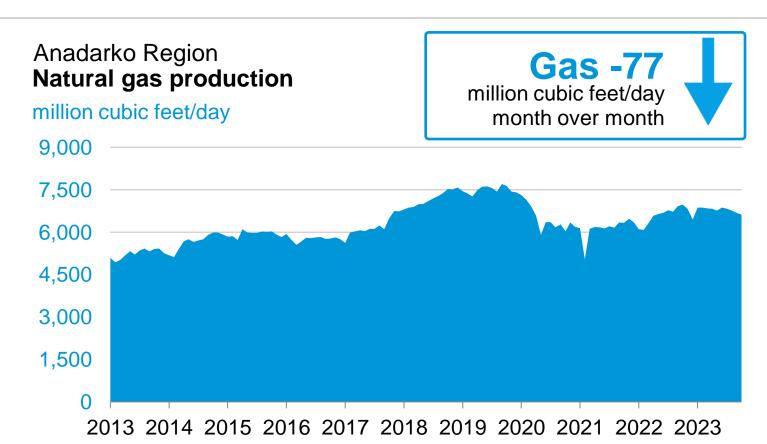
# Anadarko Region Indicated change in oil production (Oct vs. Sep)











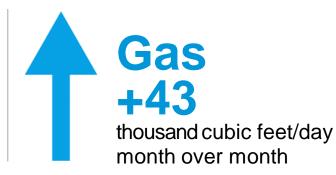
drilling data through August projected production through October

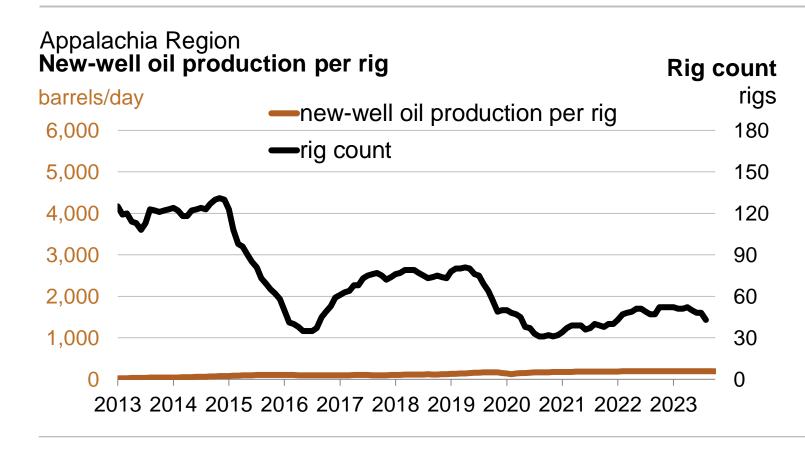


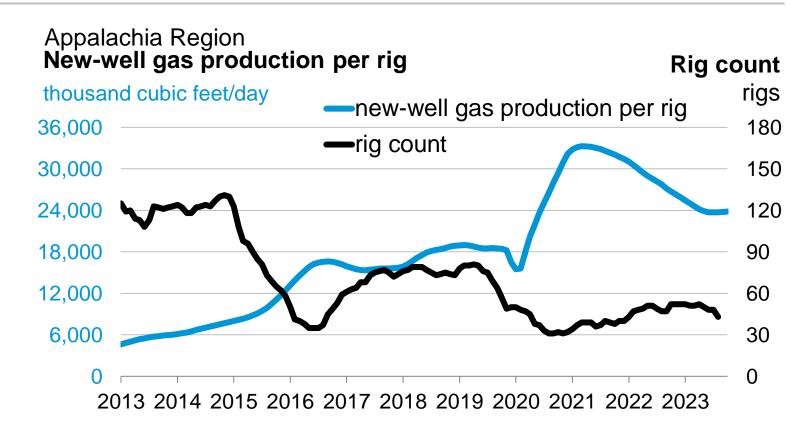
September barrels/day

**Monthly** additions from one average rig

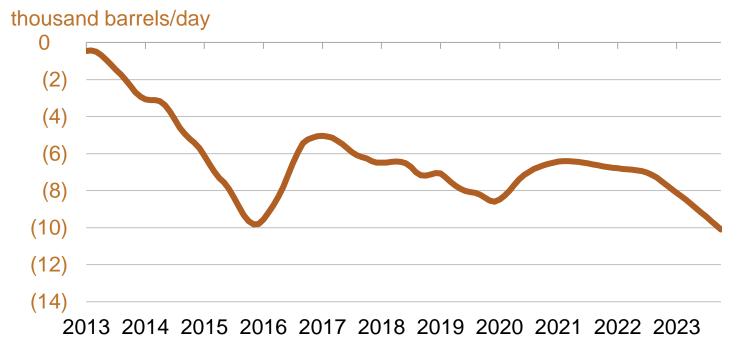
October **23,825** September **23,782** thousand cubic feet/day



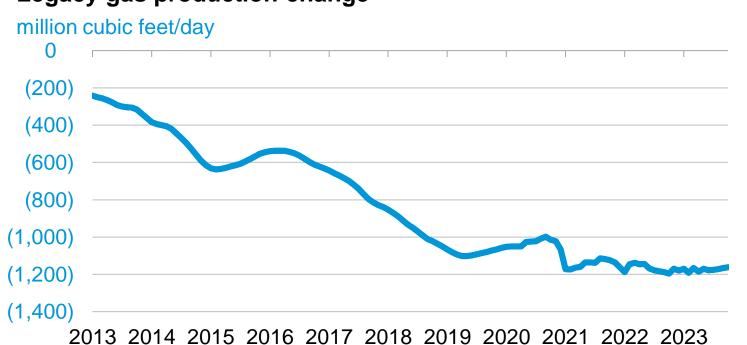




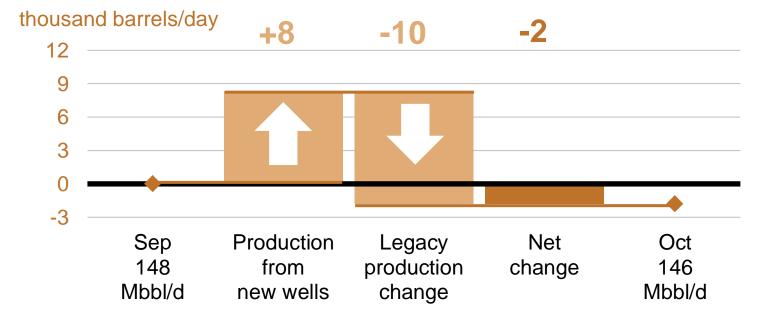
### Appalachia Region Legacy oil production change



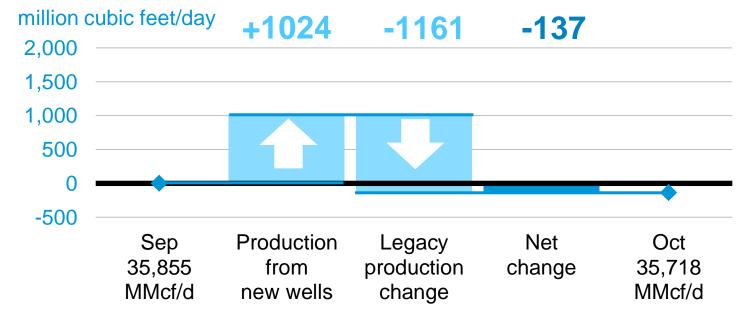
### Appalachia Region Legacy gas production change

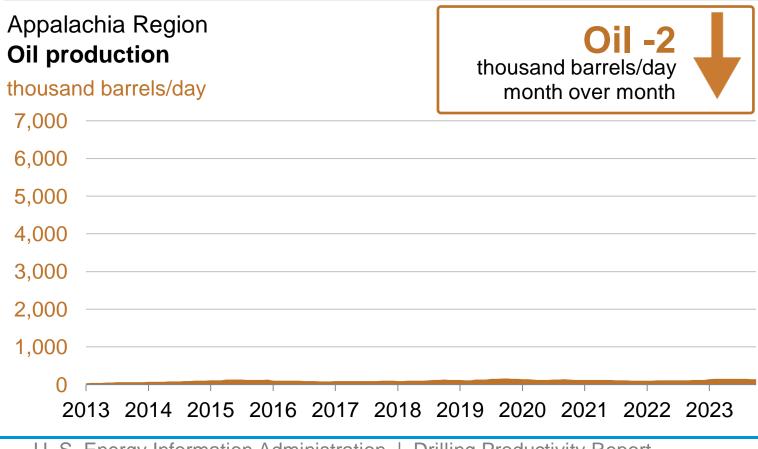


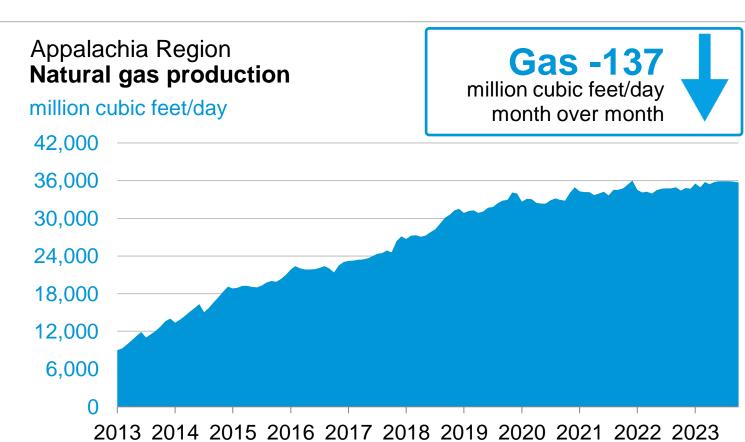
# Appalachia Region Indicated change in oil production (Oct vs. Sep)



## Appalachia Region Indicated change in natural gas production (Oct vs. Sep)







drilling data through August projected production through October



Bakken Region

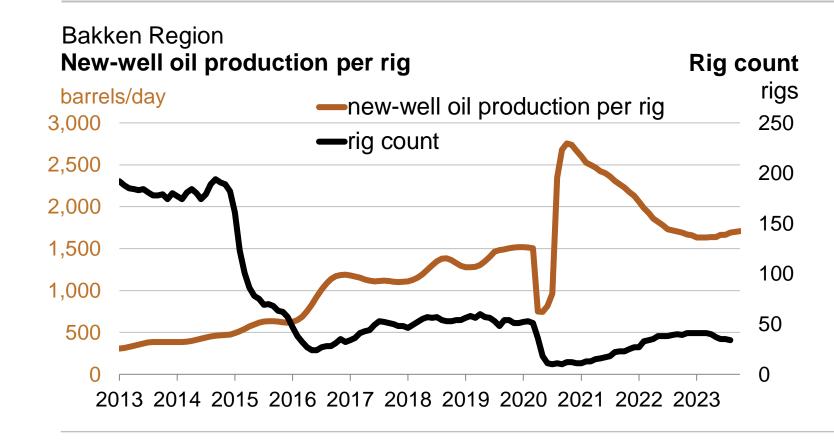
1,709 October1,697 September

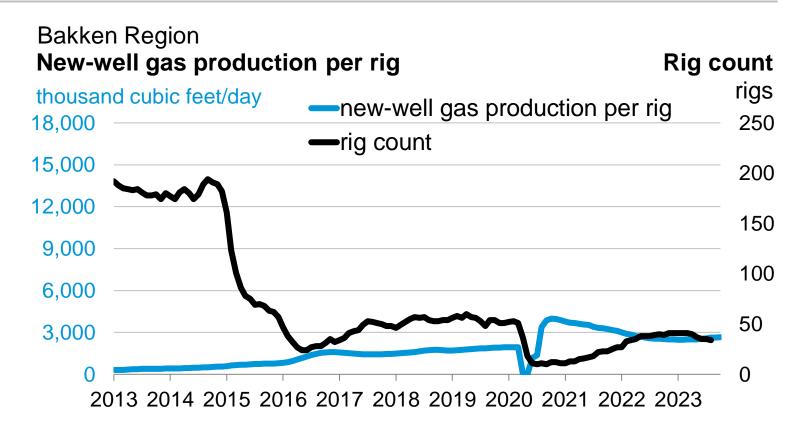
barrels/day

Monthly additions from one average rig

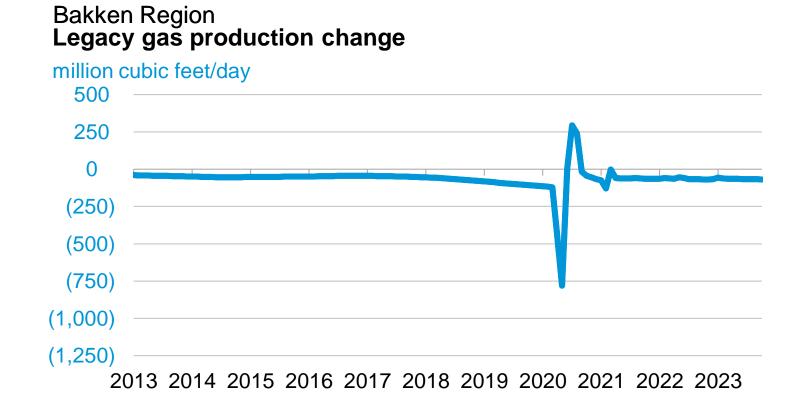
October 2,670
September 2,644
thousand cubic feet/day

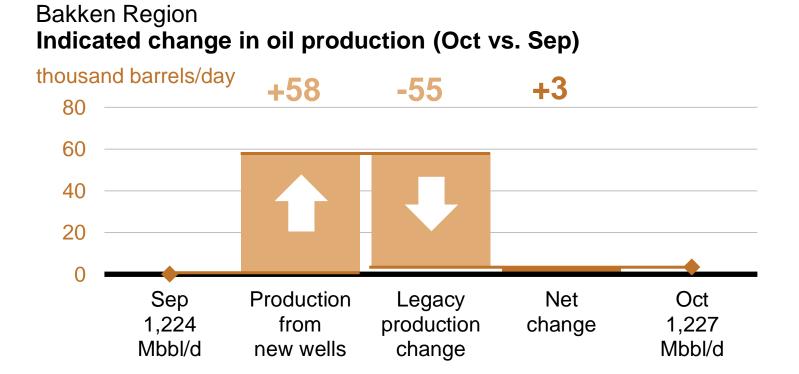


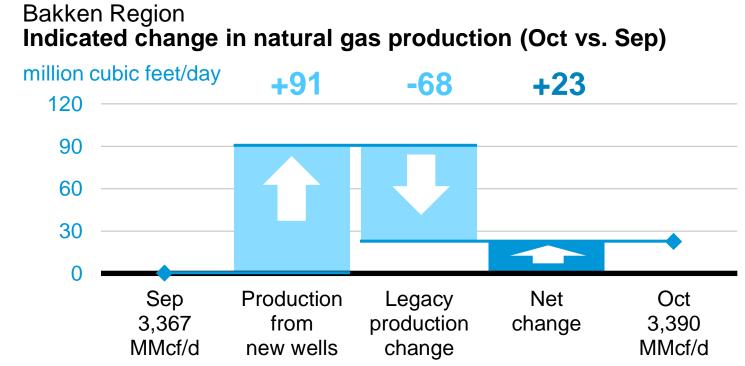


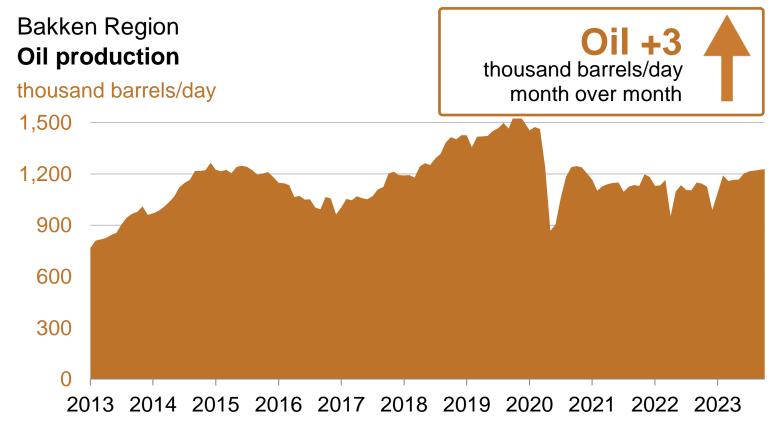


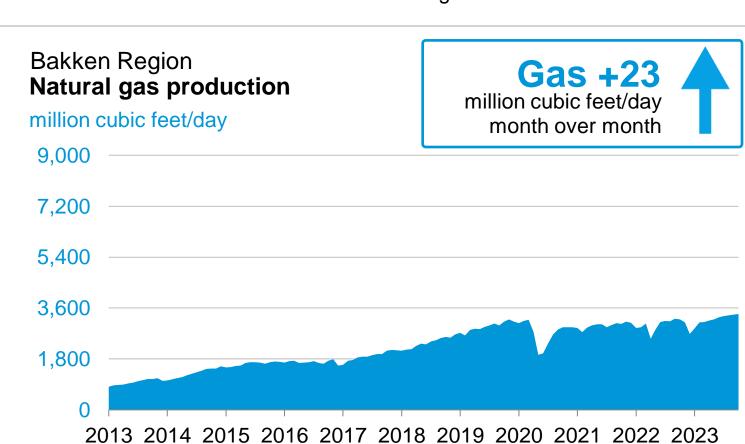
# Legacy oil production change thousand barrels/day 160 80 0 (80) (160) (240) (320) (400) 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023













drilling data through August projected production through October

Oil +14 barrels/day

month over month

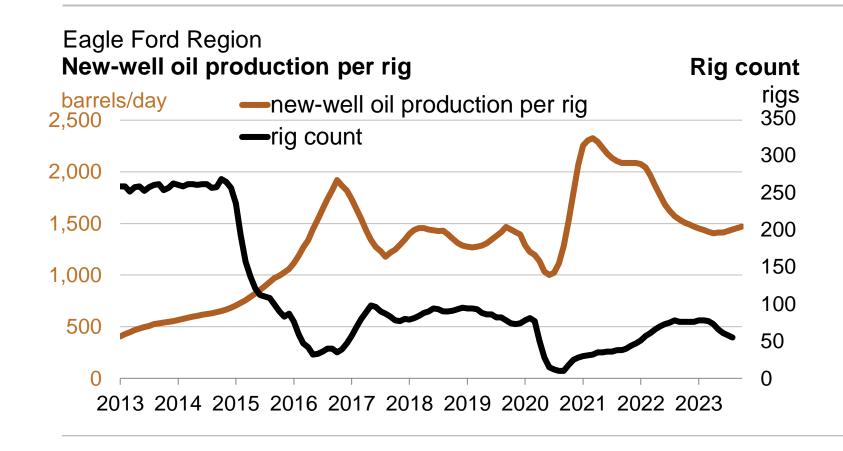
**Eagle Ford Region** 

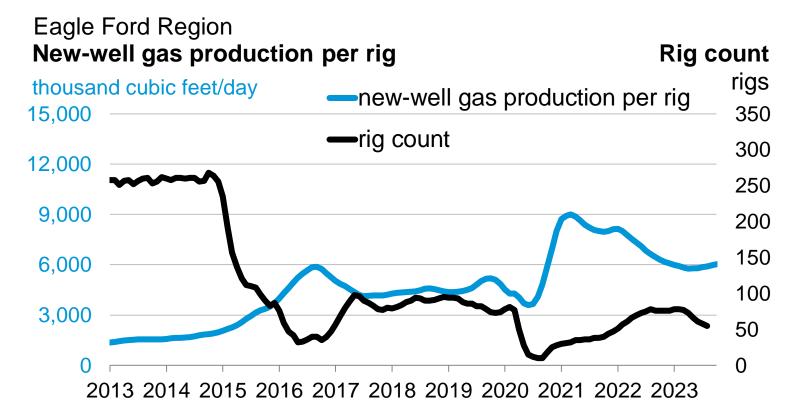
1,469 October1,455 Septemberbarrels/day

Monthly additions from one average rig

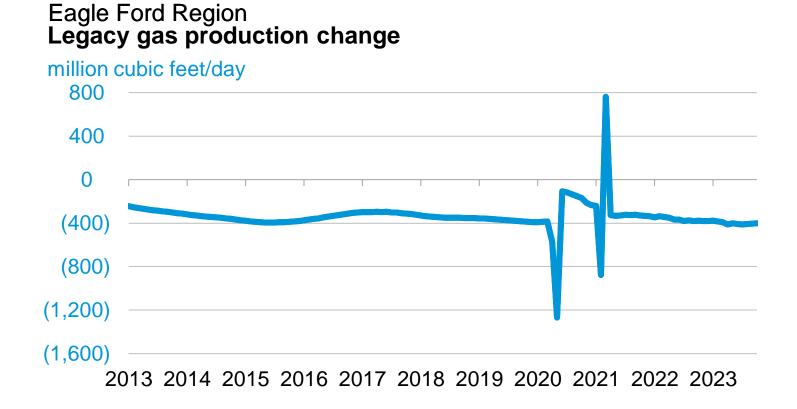
October 6,026
September 5,966
thousand cubic feet/day

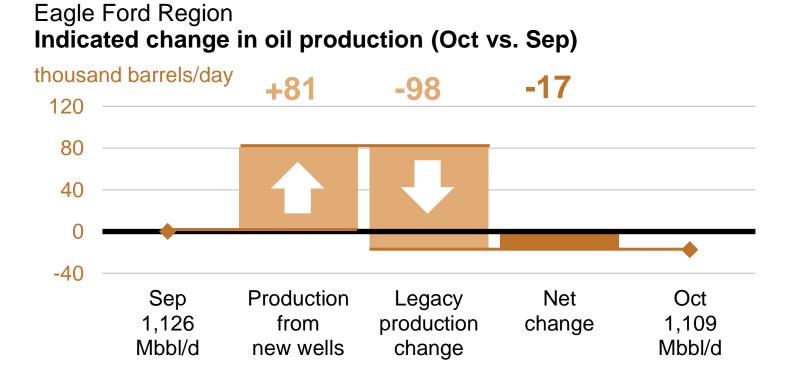


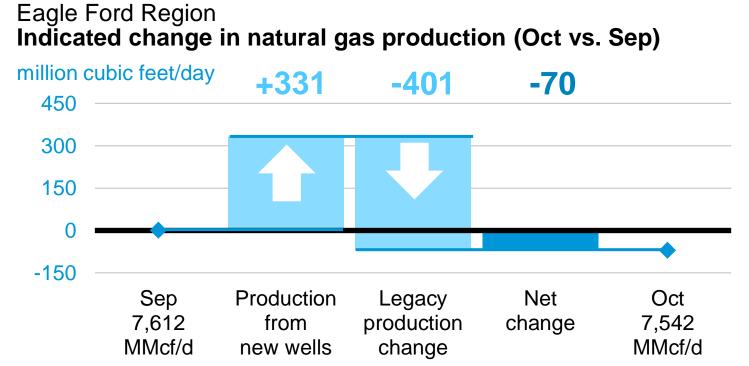


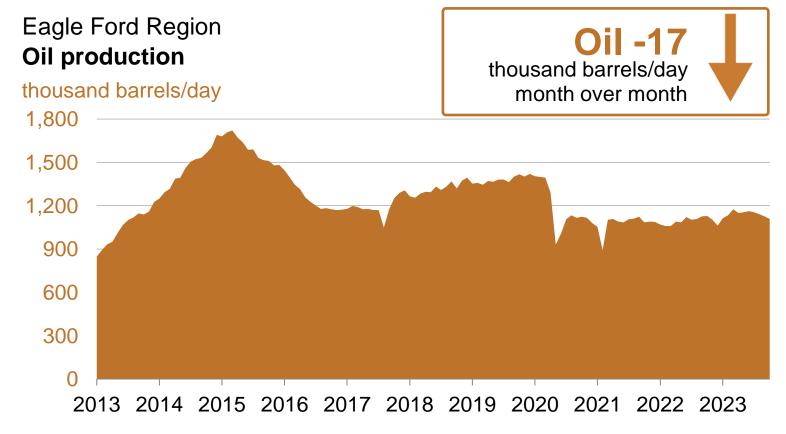


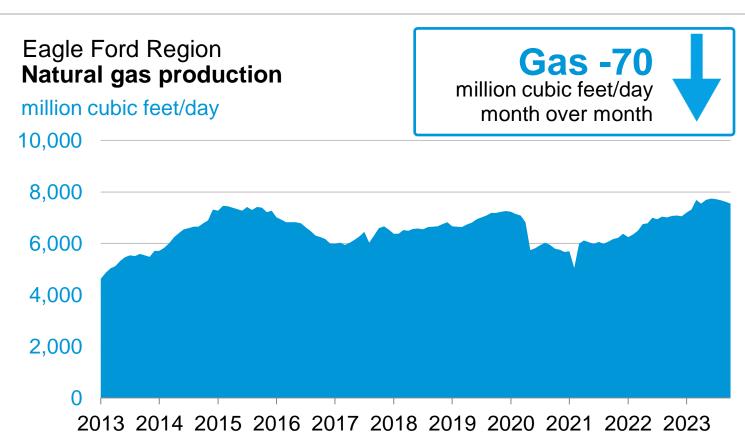
# Legacy oil production change thousand barrels/day 200 100 (100) (200) (300) (400) 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023











drilling data through August projected production through October

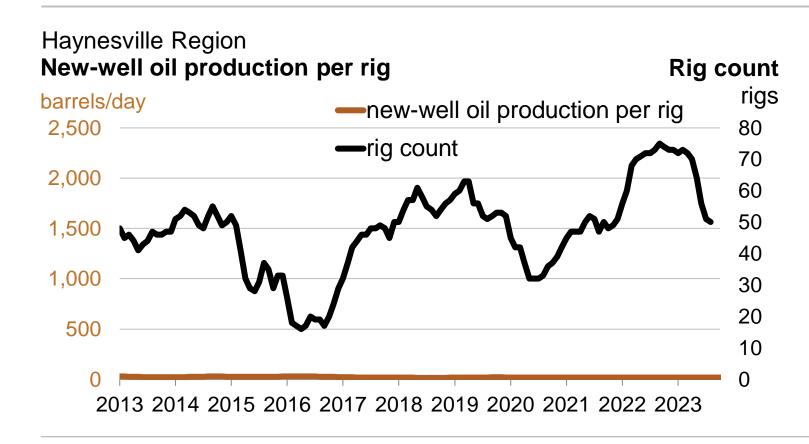


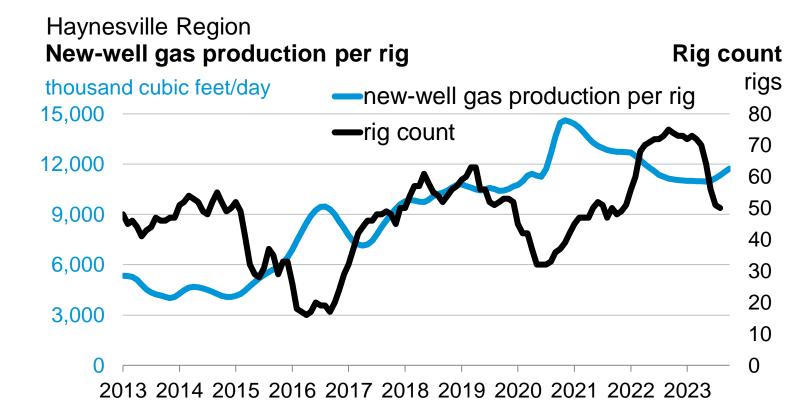
19 October19 Septemberbarrels/day

Monthly additions from one average rig

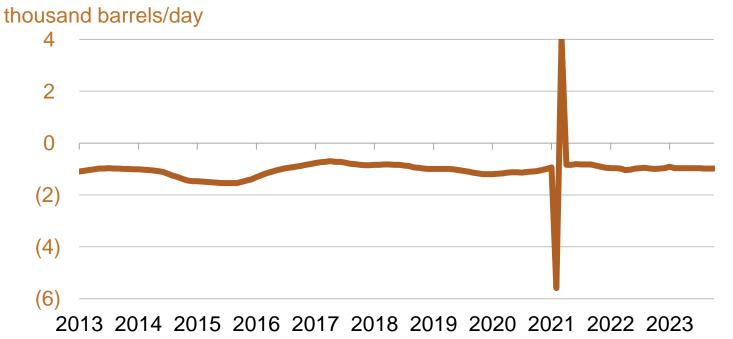
October 11,739
September 11,531
thousand cubic feet/day



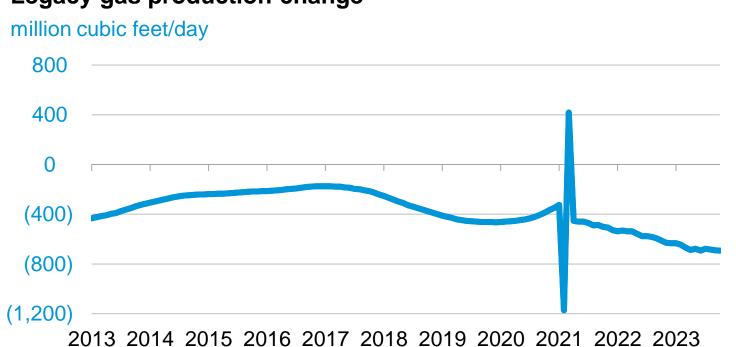




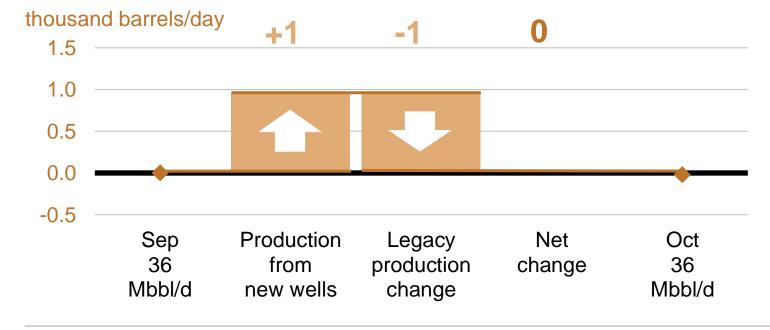
# Haynesville Region Legacy oil production change



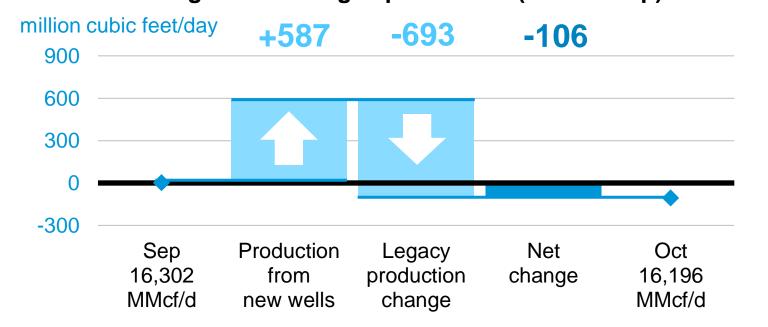
# Haynesville Region Legacy gas production change

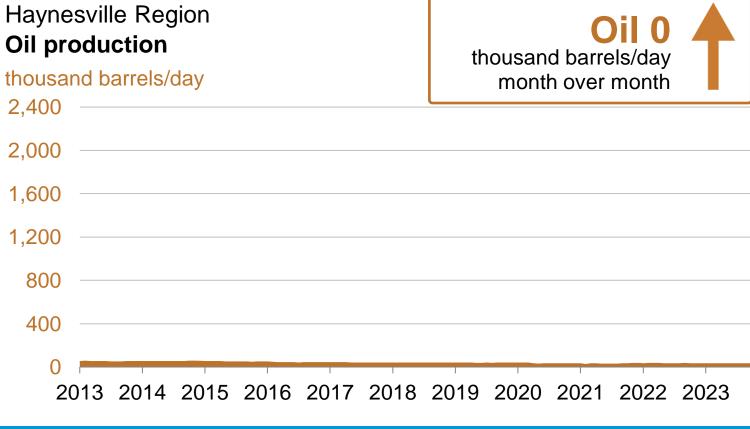


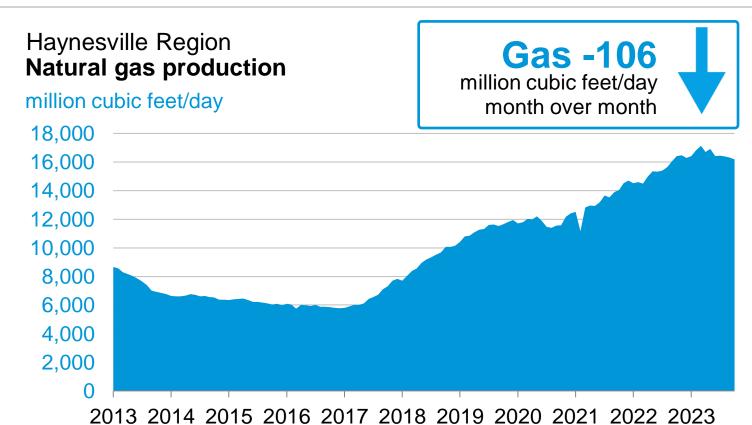
# Haynesville Region Indicated change in oil production (Oct vs. Sep)



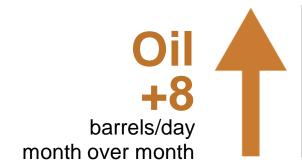
# Haynesville Region Indicated change in natural gas production (Oct vs. Sep)







drilling data through August projected production through October

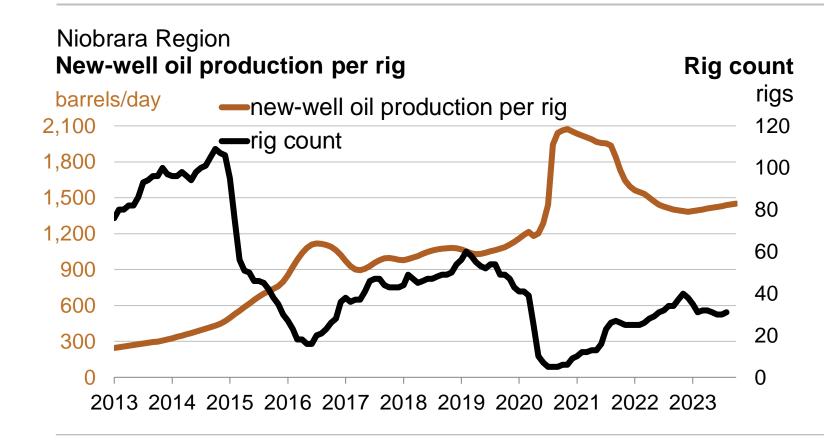


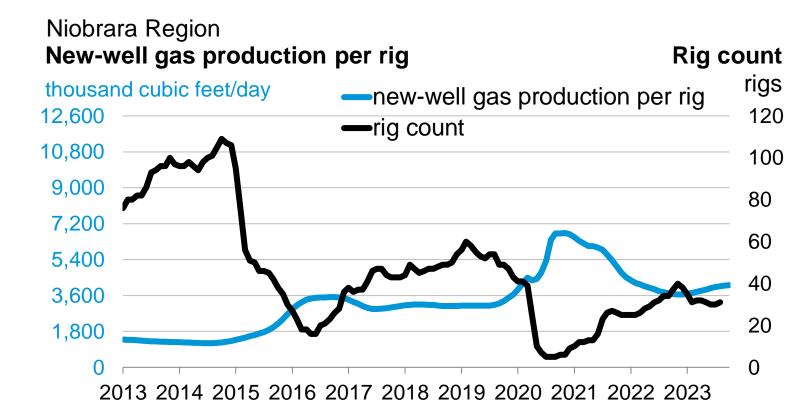
1,452 October
1,444 September
barrels/day

Monthly additions from one average rig

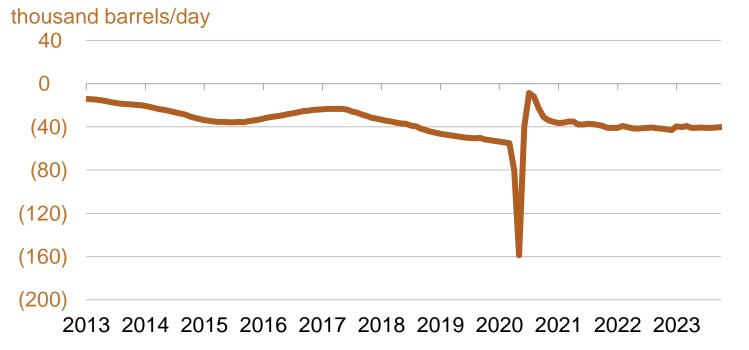
October 4,124
September 4,091
thousand cubic feet/day



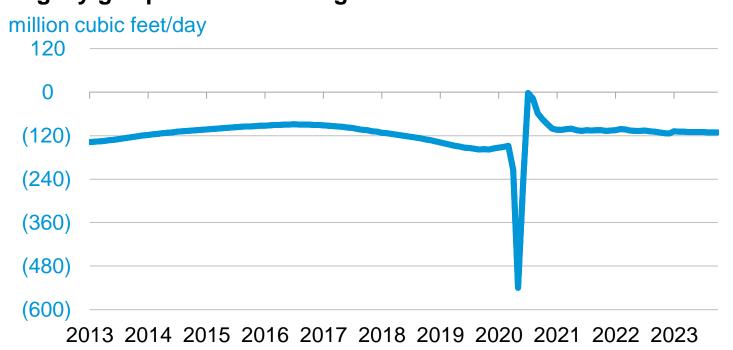




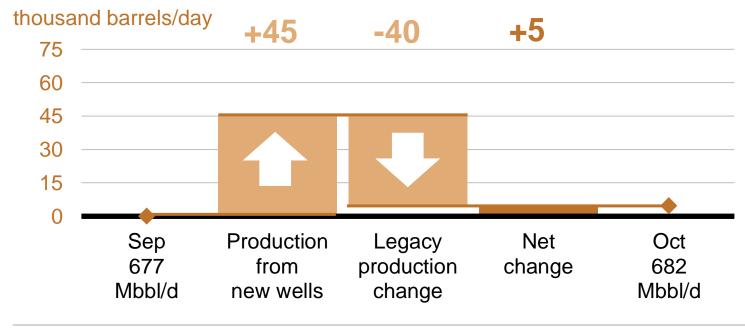
## Niobrara Region Legacy oil production change



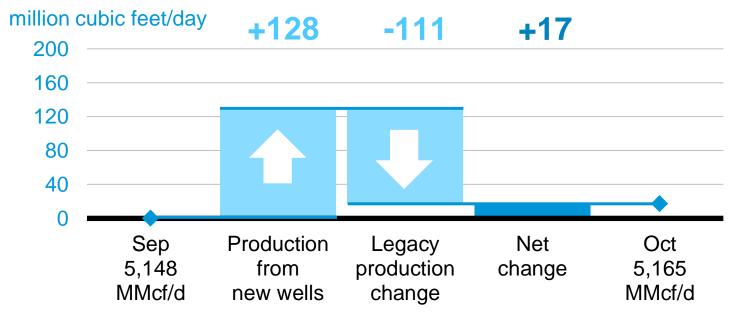
# Niobrara Region Legacy gas production change

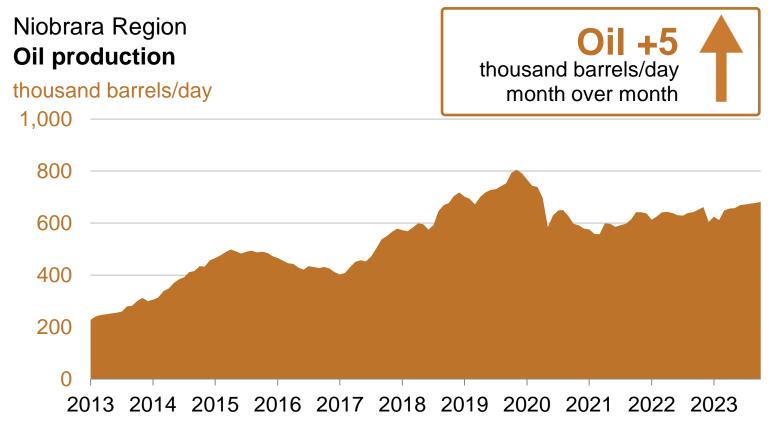


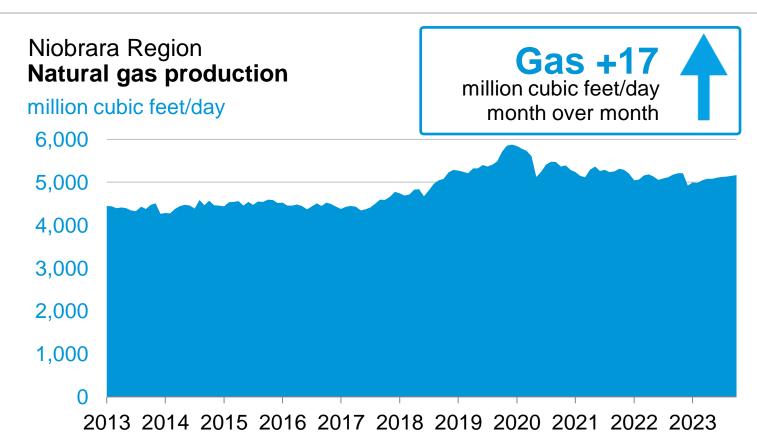
# Niobrara Region Indicated change in oil production (Oct vs. Sep)



# Niobrara Region Indicated change in natural gas production (Oct vs. Sep)







drilling data through August projected production through October



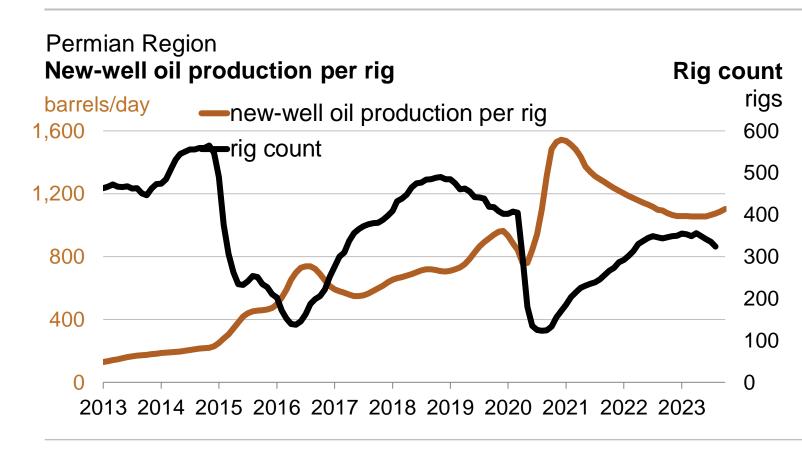
Permian Region

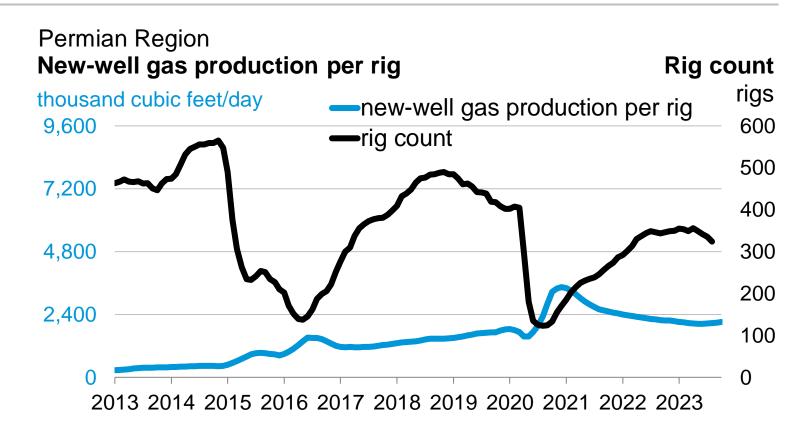
1,102 October
1,085 September
barrels/day

Monthly additions from one average rig

October 2,108
September 2,083
thousand cubic feet/day



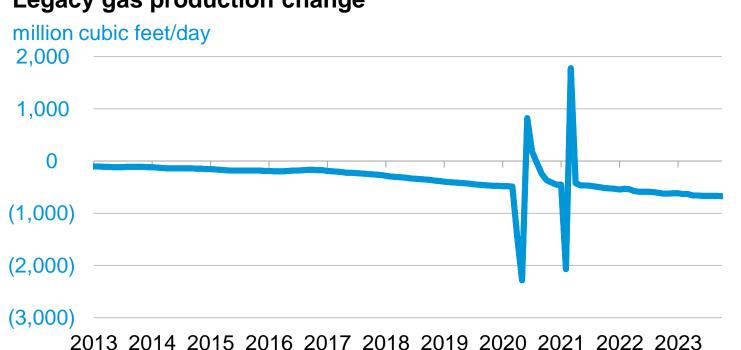




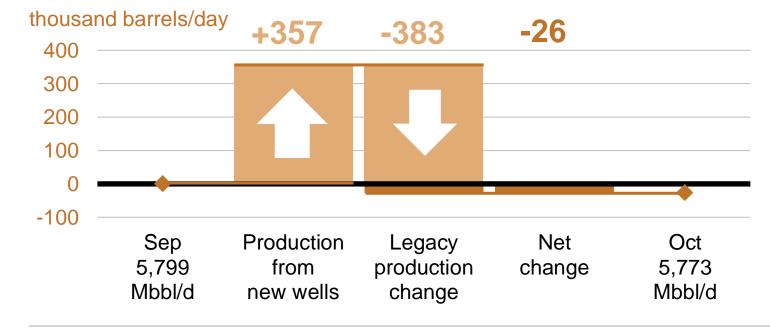
# Legacy oil production change thousand barrels/day 800 400



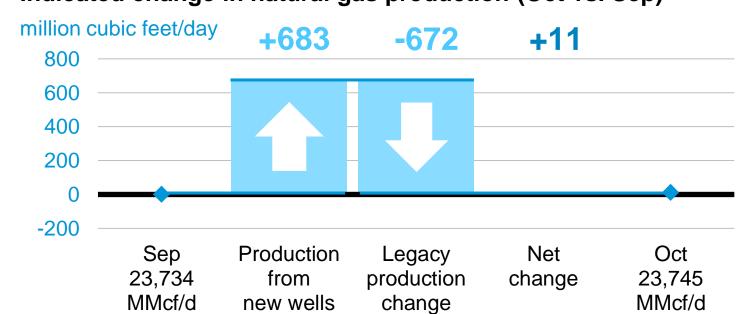
# Permian Region Legacy gas production change

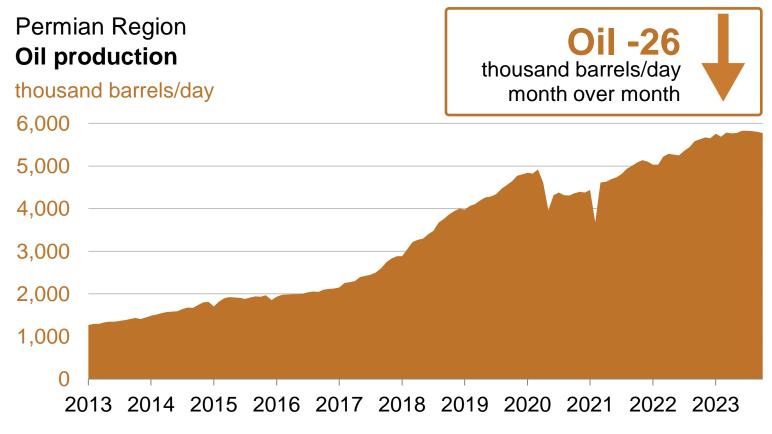


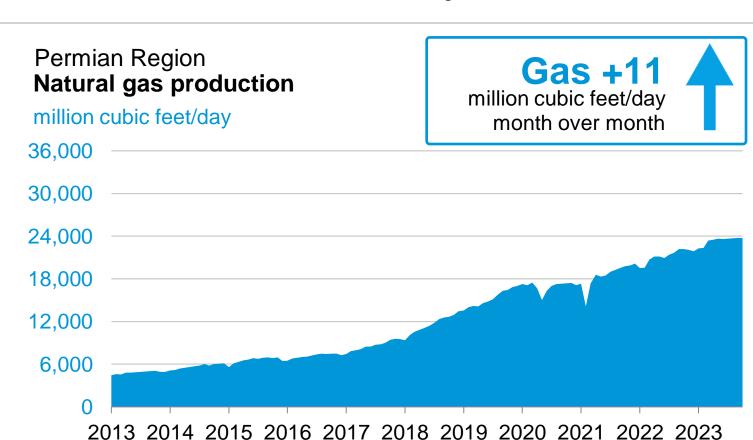
# Permian Region Indicated change in oil production (Oct vs. Sep)



# Permian Region Indicated change in natural gas production (Oct vs. Sep)









# Explanatory notes

September 2023

**Drilling Productivity Report** 

The Drilling Productivity Report uses recent data on the total number of drilling rigs in operation along with estimates of drilling productivity and estimated changes in production from existing oil and natural gas wells to provide estimated changes in oil<sup>1</sup> and natural gas<sup>2</sup> production for seven key regions. EIA's approach does not distinguish between oil-directed rigs and gas-directed rigs because once a well is completed it may produce both oil and gas; more than half of the wells do that.

# Monthly additions from one average rig

Monthly additions from one average rig represent EIA's estimate of an average rig's<sup>3</sup> contribution to production of oil and natural gas from new wells.<sup>4</sup> The estimation of new-well production per rig uses several months of recent historical data on total production from new wells for each field divided by the region's monthly rig count, lagged by two months.<sup>5</sup> Current- and next-month values are listed on the top header. The month-over-month change is listed alongside, with +/- signs and color-coded arrows to highlight the growth or decline in oil (brown) or natural gas (blue).

# New-well oil/gas production per rig

Charts present historical estimated monthly additions from one average rig coupled with the number of total drilling rigs as reported by Baker Hughes.

# Legacy oil and natural gas production change

Charts present EIA's estimates of total oil and gas production changes from all the wells other than the new wells. The trend is dominated by the well depletion rates, but other circumstances can influence the direction of the change. For example, well freeze-offs or hurricanes can cause production to significantly decline in any given month, resulting in a production increase the next month when production simply returns to normal levels.

# Projected change in monthly oil/gas production

Charts present the combined effects of new-well production and changes to legacy production. Total new-well production is offset by the anticipated change in legacy production to derive the net change in production. The estimated change in production does not reflect external circumstances that can affect the actual rates, such as infrastructure constraints, bad weather, or shut-ins based on environmental or economic issues.

# Oil/gas production

Charts present all oil and natural gas production from both new and legacy wells since 2007. This production is based on all wells reported to the state oil and gas agencies. Where state data are not immediately available, EIA estimates the production based on estimated changes in new-well oil/gas production and the corresponding legacy change.

## **Footnotes:**

- 1. Oil production represents both crude and condensate production from all formations in the region. Production is not limited to tight formations. The regions are defined by all selected counties, which include areas outside of tight oil formations.
- 2. Gas production represents gross (before processing) gas production from all formations in the region. Production is not limited to shale formations. The regions are defined by all selected counties, which include areas outside of shale formations.
- 3. The monthly average rig count used in this report is calculated from weekly data on total oil and gas rigs reported by Baker Hughes.
- 4. A new well is defined as one that began producing for the first time in the previous month. Each well belongs to the new-well category for only one month. Reworked and recompleted wells are excluded from the calculation.
- 5. Rig count data lag production data because EIA has observed that the best predictor of the number of new wells beginning production in a given month is the count of rigs in operation two months earlier.



# Sources

September 2023

**Drilling Productivity Report** 

The data used in the preparation of this report come from the following sources. EIA is solely responsible for the analysis, calculations, and conclusions.

**Drilling Info** (http://www.drillinginfo.com) Source of production, permit, and spud data for counties associated with this report. Source of real-time rig location to estimate new wells spudded and completed throughout the United States.

Baker Hughes (http://www.bakerhughes.com) Source of rig and well counts by county, state, and basin.

North Dakota Oil and Gas Division (https://www.dmr.nd.gov/oilgas) Source of well production, permit, and completion data in the counties associated with this report in North Dakota

Railroad Commission of Texas (http://www.rrc.state.tx.us) Source of well production, permit, and completion data in the counties associated with this report in Texas

# Pennsylvania Department of Environmental Protection

(https://www.paoilandgasreporting.state.pa.us/publicreports/Modules/Welcome/Welcome.aspx) Source of well production, permit, and completion data in the counties associated with this report in Pennsylvania

**West Virginia Department of Environmental Protection** (http://www.dep.wv.gov/oil-and-gas/Pages/default.aspx) Source of well production, permit, and completion data in the counties associated with this report in West Virginia

Colorado Oil and Gas Conservation Commission (http://cogcc.state.co.us) Source of well production, permit, and completion data in the counties associated with this report in Colorado

Wyoming Oil and Conservation Commission (http://wogcc.state.wy.us) Source of well production, permit, and completion data in the counties associated with this report in Wyoming

Louisiana Department of Natural Resources (http://dnr.louisiana.gov) Source of well production, permit, and completion data in the counties associated with this report in Louisiana

Ohio Department of Natural Resources (http://oilandgas.ohiodnr.gov) Source of well production, permit, and completion data in the counties associated with this report in Ohio

**Oklahoma Corporation Commission** (http://www.occeweb.com/og/oghome.htm) Source of well production, permit, and completion data in the counties associated with this report in Oklahoma

### Highlights for the month

- Indigenous crude oil and condensate production during August 2023 was 2.49 MMT. OIL registered a production of 0.28 MMT, ONGC registered a production of 1.61 MMT whereas PSC registered production of 0.60 MMT during August 2023.A growth of 2.1% has been achieved in total Crude Oil & Condensate Production in August 2023 as compared to August 2022.
- 'Total Crude oil processed during August 2023 was 21.9 MMT which is 12.2% higher than August 2022, where PSU/JV Refiners processed 14.7 MMT and PVT Refiners Processed 7.2 MMT of Crude Oil. Total Indigenous Crude Oil processed was 2.1 MMT and total Imported Crude oil processed was 19.8 by all Indian Refineries (PSU+JV+PVT). A growth of 2.6 % has been achieved in total Crude oil processed in April- August FY 2023–24 as compared to same period of FY 2022–23.
- Crude oil imports increased by 6.2% and decreased by 0.6% during August 2023 and April-August 2023 respectively as compared to the corresponding period of the previous year. As compared to net import bill for Oil & Gas for August 2022 of \$11.8 billion, the net import bill for Oil & Gas for August 2023 was \$9.3 billion. Out of which, crude oil imports constitutes \$10.9 billion, LNG imports \$1.3 billion and the exports were \$4.9 billion during August 2023.
- The price of Brent Crude averaged \$86.22/bbl during August 2023 as against \$80.05/bbl during July 2023 and \$99.99/bbl during August 2022. The Indian basket crude price averaged \$86.43/bbl during August 2023 as against \$80.37/bbl during July 2023 and \$97.40 /bbl during August 2022.
- 'Production of petroleum products was 22.9 MMT during August 2023 which is 9.5% higher than August 2022. Out of 22.9 MMT, 22.6 MMT was from Refinery production & 0.3 MMT was from Fractionators. There was a growth of 3.7 % in Production of petroleum products in April-August FY 2023 24 as compared to same period of FY 2022 23. Out of total POL production, in August 2023, HSD has 41.3 % share,MS has 16.7 %, Naphtha has 6.8 %, ATF has 6.5 %, Pet Coke has 5.4, % LPG has 4.3%, which are the major products and rest are shared by Bitumen, FO/LSHS, LDO, Lubes & others.
- POL products imports increased by 26.6% and 7.3% during August 2023 and April-August 2023 respectively as compared to the corresponding period of the previous year. Increase in POL products imports during April-August 2023 were mainly due to increase in imports of bitumen, petcoke, naphtha etc.

- Exports of POL products increased by 11.2% and decreased by 2.6% during August 2023 and April-August 2023 respectively
  as compared to the corresponding period of the previous year. Decrease in POL products exports during April-August 2023
  were mainly due to decrease in exports of high-speed diesel (HSD), naphtha etc.
- The consumption of petroleum products during April-August 2023, with a volume of 95.6 MMT, reported a growth of 5.5% compared to the volume of 90.5 MMT during the same period of the previous year. This growth was led by 5.9% growth in MS, 6.7% in HSD & 13.8% in ATF & 10.8% in Naptha consumption besides LPG, Lubes, Bitumen, Petcoke and LDO during the period. The consumption of petroleum products during August 2023 recorded a growth of 6.5% with a volume of 18.6 MMT compared to the same period of the previous year.
- Ethanol blending with Petrol was 11.3% during August 2023 and cumulative ethanol blending during December 2022-August 2023 was 11.7%.
- Total Natural Gas Consumption (including internal consumption) for the month of August 2023 was 5345 MMSCM which was 10% higher than the corresponding month of the previous year. The cumulative consumption of 26743 MMSCM for the current financial year till August 2023 was higher by 3.7% compared with the corresponding period of the previous year.
- Gross production of natural gas for the month of August 2023 (P) was 3166 MMSCM which was higher by 9.3% compared with the corresponding month of the previous year. The cumulative gross production of natural gas of 14852 MMSCM for the current financial year till August 2023 was higher by 3.6% compared with the corresponding period of the previous year.
- LNG import for the month of August 2023 (P) was 2234 MMSCM which was 10.1% higher than the corresponding month of the previous year. The cumulative import of 12215 (P) MMSCM for the current financial year till August 2023 was higher by 3.5% compared with the corresponding period of the previous year.

2. Crude o	2. Crude oil, LNG and petroleum products at a glance										
Details	Unit/ Base	2021-22	2022-23	Aug	gust	April-	August				
		(P)	(P)	2022-23 (P)	2023-24 (P)	2022-23 (P)	2023-24 (P)				
1 Crude oil production in India <sup>#</sup>	MMT	29.7	29.2	2.4	2.5	12.3	12.3				
2 Consumption of petroleum products*	MMT	201.7	223.0	17.4	18.6	90.5	95.6				
3 Production of petroleum products	MMT	254.3	266.5	20.9	22.9	111.0	115.1				
4 Gross natural gas production	MMSCM	34,024	34,450	2,896	3,166	14,332	14,852				
5 Natural gas consumption	MMSCM	64,159	59,969	4,858	5,345	25,782	26,743				
6 Imports & exports:											
Crude oil imports	MMT	212.4	232.7	17.6	18.7	99.0	98.4				
·	\$ Billion	120.7	157.6	13.1	10.9	77.4	52.7				
Petroleum products (POL)	MMT	39.0	44.5	3.2	4.1	17.5	18.8				
imports*	\$ Billion	23.7	26.8	2.0	2.0	12.1	8.6				
Gross petroleum imports	MMT	251.4	277.3	20.8	22.8	116.5	117.3				
(Crude + POL)	\$ Billion	144.3	184.4	15.1	12.9	89.6	61.3				
Petroleum products (POL)	MMT	62.8	61.0	5.2	5.8	26.6	25.9				
export	\$ Billion	44.4	57.3	4.9	4.9	28.6	19.3				
LNG imports*	MMSCM	31,028	26,304	2,029	2,234	11,802	12,215				
Live imports	\$ Billion	13.5	17.1	1.5	1.3	8.1	6.0				
Net oil & gas imports	\$ Billion	113.4	144.2	11.8	9.3	69.0	48.0				
7 Petroleum imports as percentage of India's gross imports (in value terms)	%	23.6	25.8	24.5	22.0	29.0	22.6				
Petroleum exports as percentage of India's gross exports (in value terms)	%	10.5	12.7	13.1	14.3	14.6	11.2				
9 (on POL consumption basis)	%	85.5	87.4	86.8	87.9	86.5	87.8				

#Includes condensate; \*Private direct imports are prorated for the period July'23 to Aug'23 for POL. LNG Imports figure from DGCIS are prorated for July 2023 & August 2023. Total may not tally due to rounding off.

3. Indig	genous cr	ude oil pi	roductior	(Million	Metric To	onnes)		
Details	2021-22	2022-23		August			April-August	:
		(P)	2022-23 2023-24 2023-24 (P) 2		2022-23 (P)	2023-24 Target*	2023-24 (P)	
ONGC	18.5	18.4	1.5	1.6	1.5	7.8	8.1	7.6
Oil India Limited (OIL)	3.0	3.2	0.3	0.3	0.3	1.3	1.4	1.4
Private / Joint Ventures (JVs)	7.0	6.2	0.5	0.6	0.5	2.7	3.0	2.5
Total Crude Oil	28.4	27.8	2.3	2.6	2.3	11.8	12.5	11.5
ONGC condensate	0.9	1.0	0.08	0.0	0.09	0.4	0.0	0.5
PSC condensate	0.3	0.31	0.03	0.0	0.11	0.11	0.0	0.39
Total condensate	1.2	1.4	0.11	0.0	0.2	0.5	0.0	0.8
Total (Crude + Condensate) (MMT)	29.7	29.2	2.4	2.6	2.5	12.3	12.5	12.3
Total (Crude + Condensate) (Million Bbl/Day)	0.60	0.59	0.58	0.60	0.59	0.59	0.60	0.59

<sup>\*</sup>Provisional targets inclusive of condensate.

4. Domestic and overseas oil & gas production (by Indian Companies)											
Details 2021-22 2022-23 August April-August											
		(P)	2022-23 (P)	2023-24 (P)	2022-23 (P)	2023-24 (P)					
Total domestic production (MMTOE)	63.7	63.6	5.3	5.7	26.7	27.2					
Overseas production (MMTOE)	21.8	19.5	1.6	1.7	8.1	8.3					

Source: ONGC Videsh, GAIL, OIL , IOCL, HPCL & BPRL

	5. High Sulphur (HS) & Low Sulphur (LS) crude oil processing (MMT)											
	Details	2021-22	2022-23	Aug	gust	April-August						
			(P)	2022-23 (P)	2023-24 (P)	2022-23 (P)	2023-24 (P)					
1	High Sulphur crude	185.0	197.9	15.0	16.7	83.2	85.0					
2	Low Sulphur crude	56.7	57.4	4.5	5.3	23.5	24.5					
Total c	rude processed (MMT)	241.7	255.2	19.5	21.9	106.8	109.5					
Total c	rude processed (Million Bbl/Day)	4.85	5.13	4.62	5.18	5.11	5.25					
Percen	tage share of HS crude in total crude oil processing	76.6%	77.5%	76.7%	76.0%	78.0%	77.6%					

6. Qua	ntity and value of cruc	le oil imports	
Year	Quantity (MMT)	\$ Million	Rs. Crore
2021-22 (P)	212.4	120,675	9,01,262
2022-23 (P)	232.7	157,597	12,60,910
April-August 2023-24(P)	98.4	52,708	4,33,828

	7. Self-sufficiency in petroleum products (Million Metric Tonnes)											
	Particulars	2021-22	2022-23	Aug	gust	April-A	August					
	Faiticulais		(P)	2022-23 (P)	2023-24 (P)	2022-23 (P)	2023-24 (P)					
1	Indigenous crude oil processing	27.0	26.4	2.2	2.1	11.5	10.9					
2	Products from indigenous crude (93.3% of crude oil processed)	25.2	24.7	2.0	2.0	10.7	10.2					
3	Products from fractionators (Including LPG and Gas)	4.1	3.5	0.3	0.3	1.5	1.5					
4	Total production from indigenous crude & condensate (2 + 3)	29.3	28.2	2.3	2.2	12.2	11.7					
5	Total domestic consumption	201.7	223.0	17.4	18.6	90.5	95.6					
% Self	-sufficiency (4 / 5)	14.5%	12.6%	13.2%	12.1%	13.5%	12.2%					

	8. Refineries: Installed capacity and crude oil processing (MMTPA / MMT)												
Sl. no.	Refinery	Installed			Crı	ıde oil prod	essing (MN	/IT)					
		capacity	2021-22	2022-23		August		April-August					
		(01.04.2023)		(P)	2022-23	2023-24	2023-24	2022-23	2023-24	2023-24			
		MMTPA			(P)	(Target)	(P)	(P)	(Target)	(P)			
1	Barauni (1964)	6.0	5.6	6.8	0.6	0.6	0.6	2.8	2.7	2.8			
2	Koyali (1965)	13.7	13.5	15.6	1.3	1.2	1.3	6.6	5.5	6.3			
3	Haldia (1975)	8.0	7.3	8.5	0.7	0.2	0.7	3.5	2.9	3.5			
4	Mathura (1982)	8.0	9.1	9.6	0.6	0.7	0.7	3.9	3.6	3.6			
5	Panipat (1998)	15.0	14.8	13.8	1.2	1.4	1.2	6.0	6.3	6.2			
6	Guwahati (1962)	1.0	0.7	1.1	0.09	0.1	0.1	0.46	0.5	0.5			
7	Digboi (1901)	0.65	0.7	0.7	0.06	0.06	0.02	0.3	0.3	0.3			
8	Bongaigaon(1979)	2.70	2.6	2.8	0.2	0.3	0.3	1.0	1.2	1.3			
9	Paradip (2016)	15.0	13.2	13.6	0.0	1.3	1.4	5.3	6.4	6.6			
	IOCL-TOTAL	70.1	67.7	72.4	4.8	5.7	6.3	29.9	29.3	31.0			
10	Manali (1969)	10.5	9.0	11.3	0.9	0.5	1.0	4.8	4.2	4.7			
11	CBR (1993)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
	CPCL-TOTAL	10.5	9.0	11.3	0.9	0.5	1.0	4.8	4.2	4.7			
12	Mumbai (1955)	12.0	14.4	14.5	1.2	1.3	1.4	5.4	6.3	6.7			
13	Kochi (1966)	15.5	15.4	16.0	1.4	1.1	1.3	6.9	6.5	7.1			
14	Bina (2011)	7.8	7.4	7.8	0.4	0.7	0.5	3.0	2.4	2.4			
	BPCL-TOTAL	35.3	37.2	38.4	3.0	3.1	3.2	15.3	15.2	16.1			
15	Numaligarh (1999)	3.0	2.6	3.1	0.3	0.3	0.3	1.3	0.9	0.6			

Sl. no.	Refinery	Installed			Cruc	le oil proce	essing (MM	IT)		
		capacity	2021-22	2022-23		August		Д	pril-Augus	it
		(01.04.2023)			2022-23	2023-24	2023-24	2022-23	2023-24	2023-24
		MMTPA				(Target)	(P)		(Target)	(P)
16	Tatipaka (2001)	0.066	0.075	0.073	0.004	0.006	0.005	0.028	0.025	0.029
17	MRPL-Mangalore (1996)	15.0	14.9	17.1	1.2	0.9	1.0	6.9	6.6	6.8
	ONGC-TOTAL	15.1	14.9	17.2	1.2	0.9	1.0	7.0	6.6	6.9
18	Mumbai (1954)	9.5	5.6	9.8	0.8	0.8	0.8	4.1	3.9	4.1
19	Visakh (1957)	11.0	8.4	9.3	0.6	0.9	1.1	3.6	4.6	5.2
20	HMEL-Bathinda (2012)	11.3	13.0	12.7	1.0	1.0	1.1	5.4	4.9	5.4
	HPCL- TOTAL	31.8	27.0	31.8	2.3	2.7	3.0	13.1	13.4	14.7
21	RIL-Jamnagar (DTA) (1999)	33.0	34.8	34.4	3.0	3.0	2.9	15.1	15.1	14.4
22	RIL-Jamnagar (SEZ) (2008)	35.2	28.3	27.9	2.1	2.1	2.5	11.8	11.8	12.6
23	NEL-Vadinar (2006)	20.0	20.2	18.7	1.8	1.8	1.7	8.6	8.6	8.4
All India	(MMT)	253.9	241.7	255.2	19.5	20.1	21.9	106.8	105.0	109.5
All India	(Million Bbl/Day)	5.02	4.85	5.13	4.62	4.76	5.18	5.11	5.03	5.25

Note: Provisional Targets; Some sub-totals/ totals may not add up due to rounding off at individual levels. The Inputs to Refinery includes both Crude Oil and Other Inputs (OI), however Other Inputs (OI) do not form part of the above data.

	9. N	lajor crude	oil and p	roduct pi	peline ne	twork (a	s on 01.0	9.2023)		
Det	ails	ONGC	OIL	Cairn	HMEL	IOCL	BPCL	HPCL	Others*	Total
Crude Oil	Length (KM)	1,284	1,193	688	1,017	5,819	937			10,938
	Cap (MMTPA)	60.6	9.0	10.7	11.3	53.8	7.8			153.1
Products	Length (KM)		654			12,200	2,599	5,121	2,399	22,973
	Cap (MMTPA)		1.7			70.6	22.6	35.2	10.2	140.3

<sup>\*</sup>Others include GAIL and Petronet India. HPCL and BPCL lubes pipeline included in products pipeline data

	11. Pro	duction	and cor	sumption	on of pe	troleun	n produ	cts (Mil	lion Me	tric Ton	nes)	
Duradicata	202	1-22	2022-	·23 (P)	Augus	t 2022	August	2023 (P)	Apr-Au	ıg 2022	Apr-Aug	2023 (P)
Products	Prod	Cons	Prod	Cons	Prod	Cons	Prod	Cons	Prod	Cons	Prod	Cons
LPG	12.2	28.3	12.8	28.5	1.0	2.4	1.0	2.5	5.3	11.3	5.4	11.6
MS	40.2	30.8	42.8	35.0	3.3	3.0	3.8	3.1	17.9	14.6	18.9	15.5
NAPHTHA	20.0	13.2	17.0	12.2	1.4	1.1	1.5	1.1	7.5	5.0	7.5	5.5
ATF	10.3	5.0	15.0	7.4	1.2	0.6	1.5	0.7	5.7	2.9	7.1	3.3
SKO	1.9	1.5	0.9	0.5	0.0	0.0	0.1	0.1	0.5	0.2	0.4	0.2
HSD	107.2	76.7	113.8	85.9	8.9	6.3	9.5	6.7	47.7	35.1	48.3	37.5
LDO	0.8	1.0	0.6	0.7	0.04	0.1	0.08	0.1	0.3	0.3	0.3	0.3
LUBES	1.2	4.5	1.3	3.7	0.1	0.2	0.1	0.3	0.5	1.5	0.6	1.5
FO/LSHS	8.9	6.3	10.4	7.0	1.0	0.6	1.1	0.5	4.4	2.8	4.8	2.8
BITUMEN	5.1	7.8	4.9	8.0	0.2	0.3	0.3	0.6	1.9	2.9	2.1	3.6
PET COKE	15.5	14.3	15.4	18.3	1.2	1.2	1.2	1.5	6.4	7.4	6.4	7.9
OTHERS	30.9	12.3	31.5	15.8	2.6	1.5	2.7	1.5	13.0	6.5	13.4	5.8
ALL INDIA	254.3	201.7	266.5	223.0	20.9	17.4	22.9	18.6	111.0	90.5	115.1	95.6
Growth (%)	-3.1%	-5.4%	4.8%	10.6%	7.0%	14.6%	9.5%	6.5%	10.7%	15.9%	3.7%	5.5%

Note: Prod - Production; Cons - Consumption

		15. LPG cons	sumption (The	ousand Metr	ic Tonne)			
LPG category	2021-22	Д	April-August					
			2022-23	2023-24 (P)	Growth (%)	2022-23	2023-24 (P)	Growth (%)
1. PSU Sales :								
LPG-Packed Domestic	25,501.6	25,381.5	2,136.8	2,108.2	-1.3%	10,224.3	10,221.7	0.0%
LPG-Packed Non-Domestic	2,238.8	2,606.0	212.4	257.7	21.3%	915.9	1,116.1	21.9%
LPG-Bulk	390.9	408.9	29.8	86.0	188.9%	146.8	206.5	40.7%
Auto LPG	122.0	106.7	9.2	8.6	-5.7%	46.4	39.8	-14.2%
Sub-Total (PSU Sales)	28,253.3	28,503.1	2,388.1	2,460.6	3.0%	11,333.4	11,584.0	2.2%
2. Direct Private Imports*	0.1	0.1	0.00	0.01	-	0.02	0.05	170.8%
Total (1+2)	28,253.4	28,503.2	2,388.1	2,460.6	3.0%	11,333.4	11,584.1	2.2%

July Hug 25 Deci5 data is	16. LPG marketing at a glance													
Particulars	Unit	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	1.09.23
(As on 1st of April)														(P)
LPG Active Domestic	(Lakh)				1486	1663	1988	2243	2654	2787	2895	3053	3140	3150
Customers	Growth					11.9%	19.6%	12.8%	18.3%	5.0%	3.9%	5.5%	2.9%	1.1%
LPG Coverage (Estimated)	(Percent)				56.2	61.9	72.8	80.9	94.3	97.5	99.8	-	-	-
LPG Coverage (Estimated)	Growth					10.1%	17.6%	11.1%	16.5%	3.4%	2.3%	-	-	-
PMUY Beneficiaries	(Lakh)						200.3	356	719	802	800	899.0	958.6	958.5
PIVIOT Belleficiaries	Growth							77.7%	101.9%	11.5%	-0.2%	12.2%	6.6%	0.0%
LPG Distributors	(No.)	11489	12610	13896	15930	17916	18786	20146	23737	24670	25083	25269	25386	25416
LPG DISTIBUTORS	Growth	9.0%	9.8%	10.2%	14.6%	12.5%	4.9%	7.2%	17.8%	3.9%	1.7%	0.7%	0.5%	0.4%
Auto LPG Dispensing	(No.)	652	667	678	681	676	675	672	661	657	651	601	526	496
Stations	Growth	7.9%	2.3%	1.6%	0.4%	-0.7%	-0.1%	-0.4%	-1.6%	-0.6%	-0.9%	-8.5%	-12.5%	-13.0%
Pottling Plants	(No.)	184	185	187	187	188	189	190	192	196	200	202	208	208
Bottling Plants	Growth	0.5%	0.5%	1.1%	0.0%	0.5%	0.5%	0.5%	1.1%	2.1%	2.0%	1.0%	4.5%	2.5%

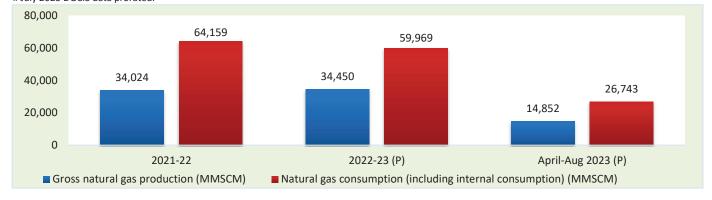
Source: PSU OMCs (IOCL, BPCL and HPCL)

<sup>1.</sup> Growth rates as on 01.09.2023 are with respect to figs as on 01.09.2022. Growth rates as on 1 April of any year are with respect to figs as on 1 April of previous year.

<sup>2.</sup> The LPG coverage is calculated by PSU OMCs based upon the active LPG domestic connections and the estimated number of households. The number of households has been projected by PSU OMCs based on 2011 census data. Factors like increasing nuclearization of families, migration of individuals/ families due to urbanization and reduction in average size of households etc. impact the growth of number of households. Due to these factors, the estimated no. of households through projection of 2011 census data may slightly differ from the actual no. of households in a State/UT. Further, this methodology does not include PNG (domestic) connections.

18. Natural gas at a glance										
								(MMSCM)		
Details	2021-22 2022-23 August April-August			<b>April-Augus</b>	gust					
	(P)	(P)	2022-23	2023-24	2023-24	2022-23	2023-24	2023-24 (P)		
			(P)	(Target)	(P)	(P)	(Target)			
(a) Gross production	34,024	34,450	2,896	3,238	3,166	14,332	15,229	14,852		
- ONGC	20,629	19,969	1,662	1,717	1,650	8,411	8,598	8,173		
- Oil India Limited (OIL)	2,893	3,041	265	274	265	1,271	1,292	1,261		
- Private / Joint Ventures (JVs)	10,502	11,440	969	1,247	1,250	4,650	5,338	5,419		
(b) Net production (excluding flare gas and loss)	33,131	33,664	2,829		3,111	13,981		14,528		
(c) LNG import <sup>#</sup>	31,028	26,304	2,029		2,234	11,802		12,215		
(d) Total consumption including internal consumption (b+c)	64,159	59,969	4,858		5,345	25,782		26,743		
(e) Total consumption (in BCM)	64.2	60.0	4.9		5.3	25.8		26.7		
(f) Import dependency based on consumption (%), {c/d*100}	48.4	43.9	41.8		41.8	45.8		45.7		

# July 2023 DGCIS data prorated.



19. Coal Bed Methane (CBM) gas development in India									
Prognosticated CBM resources	91.8	TCF							
Established CBM resources		10.4	TCF						
CBM Resources (33 Blocks)		62.8	TCF						
Total available coal bearing areas (India)	32760	Sg. KM							
Total available coal bearing areas with MoPNG/DGH	17652	Sg. KM							
Area awarded		20460	Sg. KM						
Blocks awarded*		36	Nos.						
Exploration initiated (Area considered if any boreholes were drilled	10670***	Sg. KM							
Production of CBM gas	April-Aug 2023 (P)	271.43	MMSCM						
Production of CBM gas	Aug 2023 (P)	55.25	MMSCM						

<sup>\*</sup>ST CBM Block awarded & relinquished twice- in CBM Round II and Round IV -Area considered if any boreholes were drilled in the awarded block. \*\*MoPNG awarded 04 new CBM Blocks (Area 3862 sq. km) under Special CBM Bid Round 2021 in September 2022. \*\*\*Area considered if any boreholes were drilled in the awarded block.

19a. Status of Compressed Bio Gas (CBG) projects under SATAT (as on 01.09.2023) (Provisional)									
Particulars	Units	IOCL	HPCL	BPCL	GAIL	IGL	Total		
No. of CBG plants commissioned and initiated sale of CBG	No. of plants	22	6	3	10	3	44		
Start of CBG sale from retail outlet(s)	Nos.	51	30	45	1	2	129		
Sale of CBG in 2022-23	Tons	5,822	77	6	5322#		11,227		
Sale of CBG in 2023-24 (up to July, 2023)	Tons	2738	27	58	3829#		6,652		
Sale of CBG in CGD network	GA Nos.				18		18		

<sup>#</sup> Sale of CBG sourced under CBG-CGD synchronization scheme through its own marketing channels as well as other CGDs/OMCs.

	20. Common Carrier Natural Gas pipeline network as on 31.03.2023													
Nature of pi	peline	GAIL	GSPL	PIL	IOCL	AGCL	RGPL	GGL	DFPCL	ONGC	GIGL	GITL	Others*	Total
Operational	Length	10,932	2,716	1,479	143	107	304	73	42	24				15,820
	Capacity	43.0	85.0	20.0	2.4	3.5	5.1	0.7	6.0					-
Partially	Length	4,342			386						1,279		365	6,006
commissioned#	Capacity													-
Total operational len	gth	15,273	2,716	1,479	529	107	304	73	42	24	1,279	0	365	22,191
Under construction	Length	4,327	100		1,110						1,053	220	4,361	11,172
Onder Construction	Capacity	-	3.0						, and		-	-	-	-
Total leng	h	19,601	2,816	1,479	1,639	107	304	73	42	24	2,332	220	4,726	33,141

Source: PNGRB; Length in KMs; Authorized Capacity in MMSCMD (Arithmetic sum taken for each entity -capacity may vary from pipeline to pipeline); \*Others-APGDC, , IGGL, IMC,GTIL,HPPL Consortium of

H-Energy, Total authorized Natural Gas pipelines including Tie-in connectivity, dedicated & STPL is 33,515 Kms (P)

	21. Existing LNG terminals									
Location	Promoters	Capacity as on 01.09.2023	% Capacity utilisation (April-Aug 2023)							
Dahei	Petronet LNG Ltd (PLL)	17.5 MMTPA	93.4							
Hazira	Shell Energy India Pvt. Ltd.	5.2 MMTPA	36.0							
Dabhol	Konkan LNG Limited	*5 MMTPA	38.2							
Kochi	Petronet LNG Ltd (PLL)	5 MMTPA	20.1							
Ennore	Indian Oil LNG Pvt Ltd	5 MMTPA	14.3							
Mundra	GSPC LNG Limited	5 MMTPA	11.7							
Dhamra	Adani Total Private Limited	5 MMTPA	18.9							
	Total Capacity	47.7 MMTPA								

<sup>\*</sup> To increase to 5 MMTPA with breakwater. Only HP stream of capacity of 2.9 MMTPA is commissioned

22. Status of PNG connections and CNG stations acro	oss India (Nos	.), as on 31.07	7.2023(P)	
State/UT	CNG Stations		PNG connections	
(State/UTs are clubbed based on the GAs authorised by PNGRB)	CNG Stations	Domestic	Commercial	Industrial
Andhra Pradesh	165	259,602	446	36
Andhra Pradesh, Karnataka & Tamil Nadu	40	619	0	6
Assam	6	51,519	1,359	448
Bihar	107	112,468	86	4
Bihar & Jharkhand	4	7,558	1	0
Bihar & Uttar Pradesh	14	0	0	0
Chandigarh (UT), Haryana, Punjab & Himachal Pradesh	26	26,098	128	27
Chhattisgarh	10	0	0	0
Dadra & Nagar Haveli (UT)	7	11,472	56	60
Daman & Diu (UT)	5	5,162	55	45
Daman and Diu & Gujarat	15	2,775	11	0
Goa	12	11,204	18	34
Gujarat	1,002	3,078,162	22,722	5,733
Haryana	349	343,444	885	1,904
Haryana & Himachal Pradesh	10	4	0	0
Haryana & Punjab	25	402	0	0
Himachal Pradesh	10	6,476	4	0
Jharkhand	81	113,588	9	1
Karnataka	319	392,677	540	330
Kerala	112	49,808	24	16
Kerala & Puducherry	9	426	0	0
Madhya Pradesh	241	214,636	373	463
Madhya Pradesh and Chhattisgrah	7	0	0	0
Madhya Pradesh and Rajasthan	32	549	0	0
Madhya Pradesh and Uttar Pradesh	16	0	0	2
Maharashtra	778	2,940,463	4,684	923
Maharashtra & Gujarat	59	173,359	7	24
Maharashtra and Madhya Pradesh	11	0	0	0
National Capital Territory of Delhi (UT)	480	1,459,314	3,663	1,829

State/UT	CNC CLATTER	PNG connections			
(State/UTs are clubbed based on the GAs authorised by PNGRB)	CNG Stations	Domestic	Commercial	Industrial	
Odisha	69	92,435	5	0	
Puducherry	2	0	0	0	
Puducherry & Tamil Nadu	8	224	1	0	
Punjab	209	74,140	446	265	
Punjab & Rajasthan	12	0	0	0	
Rajasthan	257	232,576	135	1,557	
Tamil Nadu	220	5,868	4	11	
Telangana	159	194,364	86	107	
Telangana and Karnataka	3	0	0	0	
Tripura	18	59,946	506	62	
Uttar Pradesh	819	1,424,748	2,376	2,867	
Uttar Pradesh & Rajasthan	42	18,958	42	345	
Uttar Pradesh and Uttarakhand	26	10,700	0	0	
Uttarakhand	31	70,269	73	87	
West Bengal	72	633	3	1	
Total	5,899	11,446,646	38,748	17,187	

Source: PNGRB

**Note:** 1. All the GAs where PNG connections/CNG Stations have been established are considered as Operational, 2. Under normal conditions. Operation of any particular GA commences within around one year of authorization. 3. State/UTs wherever clubbed are based on the GAs authorised by PNGRB.

2	23. Domes	tic natural	gas price and gas pr	ice ceiling (GCV basis				
Period			ic Natural Gas price in	Gas price ceiling	in US\$/MMBTU			
November 2014 - March 2015			5.05	-				
April 2015 - September 2015			4.66	-				
October 2015 - March 2016			3.82	-				
April 2016 - September 2016			3.06	6.				
October 2016 - March 2017			2.5	5.				
April 2017 - September 2017			2.48	5.				
October 2017 - March 2018			2.89	6.				
April 2018 - September 2018			3.06	6.				
October 2018 - March 2019			3.36	7.0				
April 2019 - September 2019			3.69	9.32				
October 2019 - March 2020			3.23	8.43				
April 2020 - September 2020			2.39	5.61				
October 2020 - March 2021			1.79	4.06				
April 2021 - September 2021			1.79					
October 2021 - March 2022 April 2022 - September 2022			2.9 6.1	6.13 9.92				
October 2022 - March 2023			8.57	12.46				
1 April 2023 - 7 April 2023			9.16	12.				
1 April 2023 - 7 April 2023				12.				
Period	Domestic Ga	as calculated	Domestic Gas ceiling price for	Period	HP-HT Gas price ceiling			
Periou	price in US	\$/MMBTU	ONGC/OIL in US\$/MMBTU	Periou	in US\$/MMBTU			
8 April 2023 - 30 April 2023	7.	92	6.50					
1 May 2023 - 31May 2023	May 2023 - 31May 2023 8.27		6.50	]				
		58	6.50	1				
		48	6.50	April 2023 - September 2023	12.12			
1 Aug 2023 - 31 Aug 2023	7.	85	6.50	1				
4.4. 2022 24.4. 2022		0.5	C F O	1	ı			

1 Aug	2023	- 31	Aug	2023
1 Sep	2023 -	- 30	Sep:	2023
Matural	Gac pric	oc are	on G	CV hacic

24. CNG/PNG prices										
City	CNG (Rs/Kg)		PNG (Rs/SCM) Source							
Delhi	74.59		48.59	IGL website (15.09.2023)						
Mumbai	79.00		49.00 MGL website (15.0)							
	Indian Natural Gas Spot Price for Physical Delivery									
IGX Price Index Month	Avg.	Price	Volume	Course						
IGX Price Index Month	INR/MMBtu	\$/MMBtu	(MMSCM)	Source						
Aug 2023	880	10.60	98.10	As per IGX website:						
Aug 2023	1	19.00	38.10	www.igxindia.com						

6.50

6.50

7.85

8.60

<sup>\*</sup>Prices are weighted average prices |\$1=INR 82.79| 1 MMBtu=25.2 SCM (Data Excluding Ceiling Price Gas)

22 September, 03:30, Updated Sept. 22, 04:11 a.m.

# Peskov called timely restriction of exports of gasoline and diesel

According to the press secretary of the President of Russia, the restriction will be in effect for as long as necessary to ensure stability in the fuel market MOSCOW, September 22. /TASS/. Restricting the export of gasoline and diesel from the Russian Federation is a timely measure, it will be valid for as long as it takes to ensure stability in the fuel market, Russian presidential spokesman Dmitry Peskov said in an interview with reporters.

"The government has taken the necessary measures in a timely manner. How long will they last? As long as it takes to ensure stability in the market," he said.

The spokesman noted that the fuel market "is now quite unstable everywhere." "There were certain problems here, everything was clear. It was necessary to regulate this market against the background of harvesting, all agricultural processes, and against the background of ordinary consumers, [against the background] of not only the wholesale, but also the retail market," Peskov added.

He also stressed that there were no prerequisites for "social explosions" due to rising fuel prices, and the Russian government is simply doing its job. "What does social explosion have to do with it? No social explosions, nothing, it's all very much exaggerated wording," the Kremlin spokesman disagreed with one of the journalists. "It is the normal work of the government to ensure the stability of the fuel market. The government is doing its job," he concluded.

Since September 21, the Russian government has imposed a temporary restriction on the export of gasoline and diesel to stabilize the domestic market.

Tags:

RussiaPeskov, Dmitry Sergeevich

### By Bloomberg News

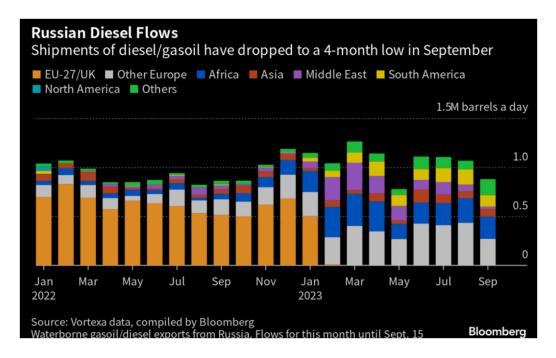
(Bloomberg) -- Russia temporarily banned exports of diesel in a bid to stabilize domestic supplies, driving European prices higher in already tight global fuel markets.

So far this year, Russia was the world's single biggest seaborne exporter of diesel-type fuel, narrowly ahead of the US, according to Vortexa data compiled by Bloomberg. The country shipped more than 1 million barrels a day during January to mid-September, with Turkey, Brazil and Saudi Arabia being among the main destinations.

The ban, which also applies to gasoline, comes into force on Sept. 21, and doesn't have a final date, according to the government decree.

Diesel prices in Europe jumped on concern the measure will aggravate global shortages. The world's oil refiners are struggling to produce enough of the fuel amid curbed crude supplies from Russia and Saudi Arabia, the biggest producers within the Organization of Petroleum Exporting Countries and its allies.

"Despite this being only a temporary ban, the impact is significant as Russia remains a key diesel exporter to global markets," said Alan Gelder, vice president of refining, chemicals and oil markets at consultancy Wood Mackenzie Ltd. "The global refining system will struggle to replace those lost Russian volumes at a time when global diesel inventories are already at low levels."



In northwest Europe, the premium of benchmark diesel futures to crude oil — known as the ICE Gasoil crack — climbed sharply, temporarily topping \$37 a barrel, according to fair

### value data compiled by Bloomberg.

### **Price Impact**

Diesel futures for delivery in October also grew more expensive relative to barrels for arrival the following month. The bullish structure, known as backwardation, surpassed \$35 per ton, before paring some of those gains.

"Temporary restrictions will help saturate the fuel market, that in turn will reduce prices for consumers" in Russia, the government's press office said on its website.

There are exemptions for minor supplies, including deliveries to trade alliance partners from some former Soviet republics, as well as intergovernmental agreements, humanitarian aid and transit, the decree said.

Under the decree, fuel cargoes already accepted for shipment by Russian Railways or those with loading papers for seaborne transportation can still be exported. That indicates diesel flows will only gradually decline, while these cargoes are shipped.

The tanker, Ellora, sailed from Russia's Black Sea port of Novorossiysk on Thursday, after loading about 35,000 tons of gasoil, according to vessel-tracking data monitored by Bloomberg and a port report.

The ban includes all types of diesel, including summer, winter and Arctic blends, as well as heavy distillates including gasoils, according to the decree.

Last year, Russia's seaborne exports of diesel-type fuel were about 0.95 million barrels a day, according to Vortexa data. That was about 3.4% of total global demand.

"This is a super big deal. We're talking exports of close to 1 million barrels a day being shut in," said Eugene Lindell, head of refined products at consultancy FGE. However, Russia won't be able to keep up a diesel export ban for long, because they'll soon run out of tank space, he added.

#### Inflation Battle

Russia's government has spent weeks in talks with oil producers to decide on measures to rein in rising fuel prices. President Vladimir Putin said last week that officials and companies had agreed on how to act in the future, but the wrangling continued, people familiar with the matter said. Surging car-fuel prices have been one the biggest contributors to inflation, a potential political headache as the Kremlin prepares for the presidential election in March. Retail gasoline and diesel prices in Russia have climbed 9.4% from the start of the year to Sept. 18 compared with an increase in overall consumer prices of 4%, according to Federal Statistics Service data.

Political sensitivity to rising fuel prices and the impact on farmers spilled into the open earlier this week, when the speaker of the lower house of parliament, Vyacheslav Volodin, a key Putin ally, criticized the Energy Ministry for failing to prevent the increase. The government considered "quite serious measures," First Deputy Energy Minister Pavel Sorokin told lawmakers who peppered him with questions.

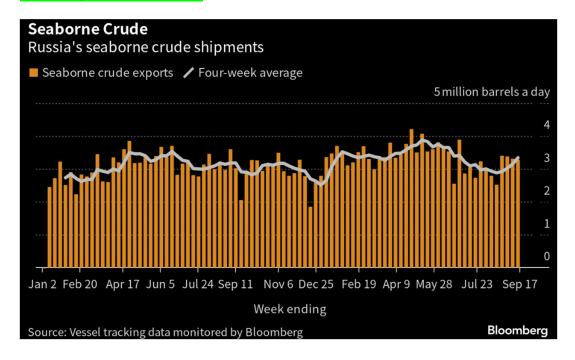
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### By Julian Lee

(Bloomberg) -- Moscow is pushing more crude onto the market even as it says it will extend supply curbs to the end of the year along with OPEC+ partner Saudi Arabia. That's boosted Russia's seaborne flows to a three-month high.

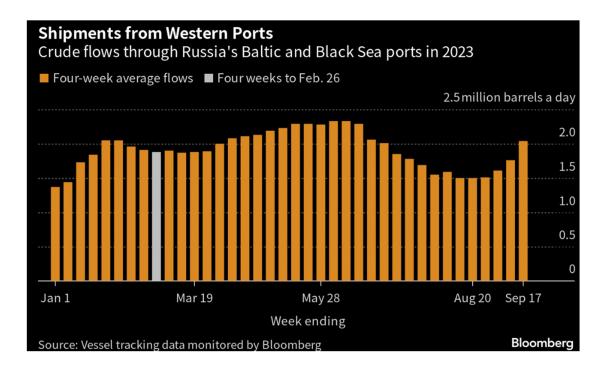
Average nationwide shipments in the four weeks to Sept. 17 rose to 3.34 million barrels a day, tanker-tracking data compiled by Bloomberg show. That's a jump of about 465,000 barrels a day from the period to Aug. 20, with the increases concentrated at the Baltic ports of Primorsk and Ust-Luga and Novorossiysk on the Black Sea.



Some increase in Russia's crude exports was to be expected.

Deputy Prime Minister Alexander Novak said early last month that Russia would extend its export cut, while tapering it to 300,000 barrels a day from September, compared with 500,000 barrels a day in August. But shipments have risen by more than twice as much as implied by Novak's statement.

More volatile weekly shipments edged lower in the seven days to Sept. 17, driven down by a brief mid-week halt to flows from the Pacific port of Kozmino, which appears to have been related to maintenance work at the terminal.



The export boost comes as crude prices are being driven higher by a combination of robust demand and output cuts by key producers — most notably Saudi Arabia. The kingdom has pledged to keep its production below 9 million barrels a day until the end of the year, the lowest its target has been since 2011, excluding the response to the Covid-19 pandemic in 2020. Saudi Arabia's early September announcement was mirrored by Russia, which committed to maintaining its export reduction to year-end. Brent crude is trading around \$95 a barrel, while Russia's key Urals export grade has been above a Group of Seven price cap of \$60 a barrel since mid-July. Cargoes sold at prices above the cap — part of a Western sanctions package designed to punish Moscow for the invasion of Ukraine — cannot be shipped on Western vessels, while insurance and other services can't be provided by Western companies. That's forcing Russian crude onto the country's own ships and a "shadow fleet" of vessels, owned by little-known companies that have sprung up since Moscow's troops invaded Ukraine in February 2022.

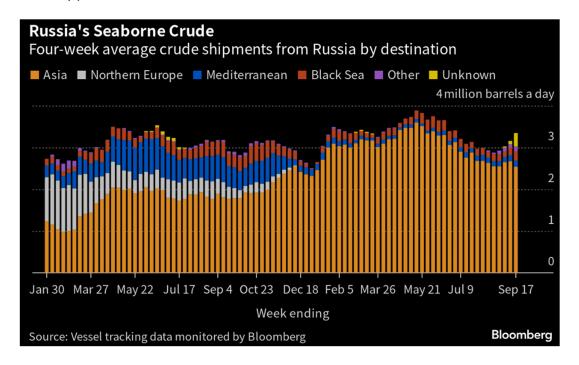
The combination of rising exports and soaring prices have boosted the Kremlin's revenues from oil export duties, which surged to the highest since January on a four-week average basis.

The jump in overseas flows of Russian crude comes as the country's oil refineries cut crude-processing rates, with seasonal maintenance at the facilities gathering pace.

### Flows by Destination

Russia's seaborne crude flows continued to recover in the period to Sept. 17 on a four-week average basis. Flows averaged 3.34 million barrels a day, their highest in 11 weeks. Shipments are back at the levels seen in February, the original baseline for Russia's output cut, but they remain about 390,000 barrels a day below the highs seen between April and June. Most of the increase in the past month is on tankers that

are yet to show a final destination. Flows on vessels heading to Asian ports remain more than 1 million barrels a day below their mid-May peak.



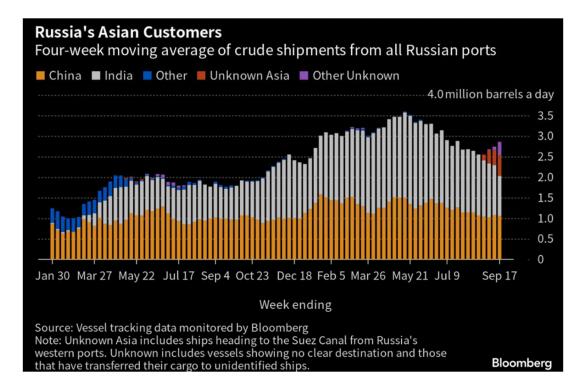
All figures exclude cargoes identified as Kazakhstan's KEBCO grade. Those are shipments made by KazTransoil JSC that transit Russia for export through Novorossiysk and the Baltic port of Ust-Luga.

The Kazakh barrels are blended with crude of Russian origin to create a uniform export grade. Since Russia's invasion of Ukraine, Kazakhstan has rebranded its cargoes to distinguish them from those shipped by Russian companies. Transit crude is specifically exempted from European Union sanctions.

### \* Asia

Observed shipments to Russia's Asian customers, including those showing no final destination, rose for a fourth week to reach 2.86 million barrels a day in the four weeks to Sept. 17, up from 2.74 million barrels a day in the period to Sept. 10 and from a seven-month low of 2.55 million barrels a day in the period to Aug. 27.

Most of the cargoes on ships without an initial destination eventually end up in India. Even so, the volumes heading to the country that has become the biggest buyer of Russia's seaborne crude are down from recent highs. Adding the "Unknown Asia" and "Other Unknown" volumes to the total for India gives a figure of 1.8 million barrels a day in the four weeks to Sept. 17, down from a high of 2.15 million barrels a day in the period to May 21, but up from 1.66 million barrels a day in the period to Sept. 10.

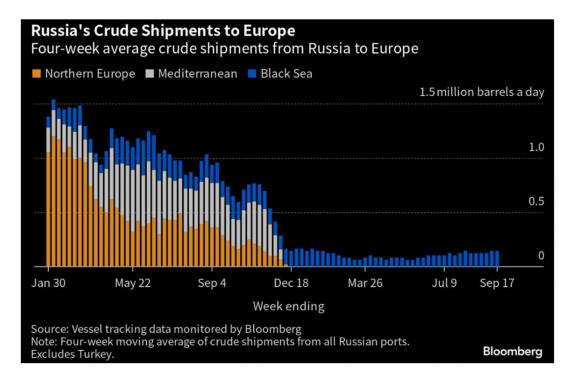


The equivalent of 505,000 barrels a day was on vessels signaling Port Said or Suez in Egypt, or which already have been or are expected to be transferred from one ship to another off the South Korean port of Yeosu. Those voyages typically end at ports in India or China and show up in the chart below as "Unknown Asia" until a final destination becomes apparent. The "Other Unknown" volumes, running at 324,000 barrels a day in the four weeks to Sept. 17, are those on tankers showing no clear destination. Most of those cargoes originate from Russia's western ports and go on to transit the Suez Canal, but some could end up in Turkey. Others could be moved from one vessel to another, with most such transfers now taking place in the Mediterranean.

### \* Europe

Russia's seaborne crude exports to European countries were unchanged at 146,000 barrels a day in the 28 days to Sept. 17, with Bulgaria the sole destination. These figures do not include shipments to Turkey.

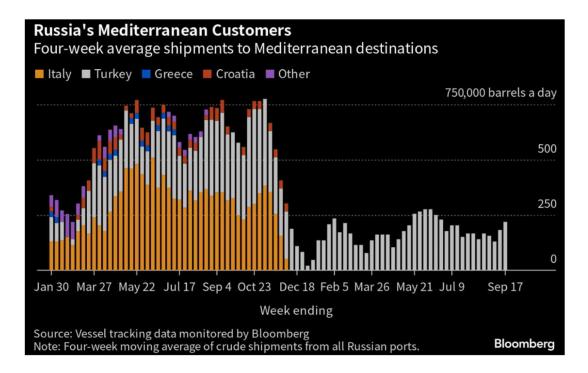
A market that consumed about 1.5 million barrels a day of short-haul seaborne crude, coming from export terminals in the Baltic, Black Sea and Arctic has been lost almost completely, to be replaced by long-haul destinations in Asia that are much more costly and time-consuming to serve.



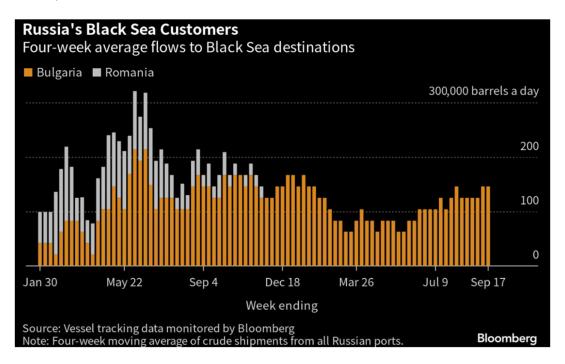
No Russian crude was shipped to northern European countries in the four weeks to Sept. 17.



Exports to Turkey, Russia's only remaining Mediterranean customer, rose to about 220,000 barrels a day in the four weeks to Sept. 17, the highest since June. Flows had topped 425,000 barrels a day in October, before falling sharply after the Group of Seven price cap came into effect in early December.



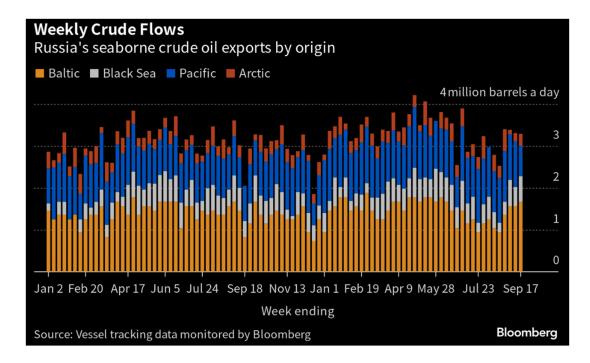
Flows to Bulgaria, now Russia's only Black Sea market for crude, were unchanged at 146,000 barrels a day. That's more than twice as much as the country was importing at the lowest points between March and May and equal to the highest levels seen since January.



### Flows by Export Location

Aggregate flows of Russian crude remained above 3.25 million barrels a day for a fourth week in the seven days to Sept. 17, as Moscow eases back on the export cut it implemented in July and most of August.

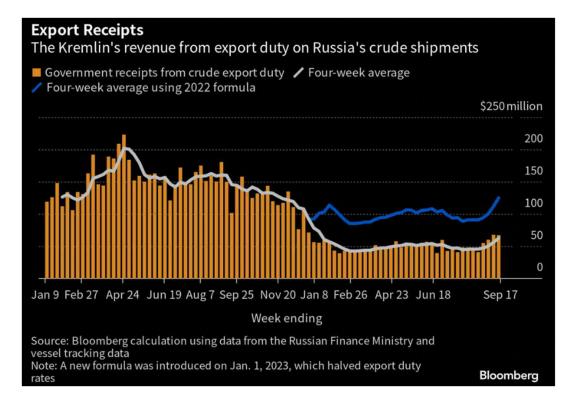
Figures exclude volumes from Ust-Luga and Novorossiysk identified as Kazakhstan's KEBCO grade.



Vessel-tracking data are cross-checked against port agent reports as well as flows and ship movements reported by other information providers including Kpler and Vortexa Ltd.

#### **Export Revenue**

Inflows to the Kremlin's war chest from its crude-export duty edged lower to \$67 million in the seven days to Sept. 17, but four-week average income rose to \$62.5 million, its highest level in eight months. Rising oil prices and the rebound in flows are both contributing to the increase in receipts. Russia's government calculates oil taxes — including export duty — using a discount to global benchmark Brent, which sets the floor price for the nation's crude for budget purposes. If Russian oil trades above that threshold, the Finance Ministry uses the market price for tax calculations, as has been the case in recent months. The discount used to calculate taxes including export duty is set at \$20 a barrel for September and subsequent months.



The duty rate for September has been set at \$2.92 a barrel, based on an average Urals price of \$70.33 during the calculation period between July 15 and Aug. 14. That was \$13.90 a barrel below Brent during the same dates.

The rate for October has been set at \$3.26 a barrel, based on an average Urals price of \$77.03 during the calculation period between Aug. 15 and Sept. 14. That was \$11.60 a barrel below Brent over the same period. October's duty rate sets a new high for the year.

#### **Origin-to-Location Flows**

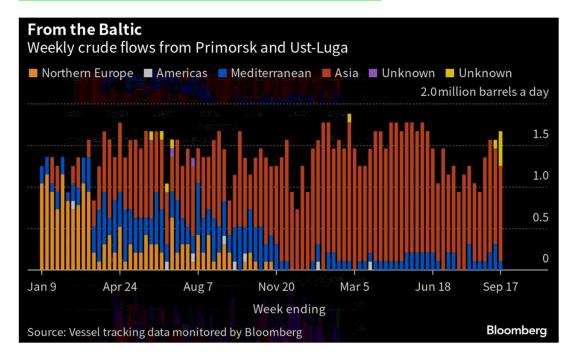
The following charts show the number of ships leaving each export terminal and the destinations of crude cargoes from the four export regions.

A total of 31 tankers loaded 23 million barrels of Russian crude in the week to Sept. 17, vessel-tracking data and port agent reports show. That's down slightly from the previous week's figure.

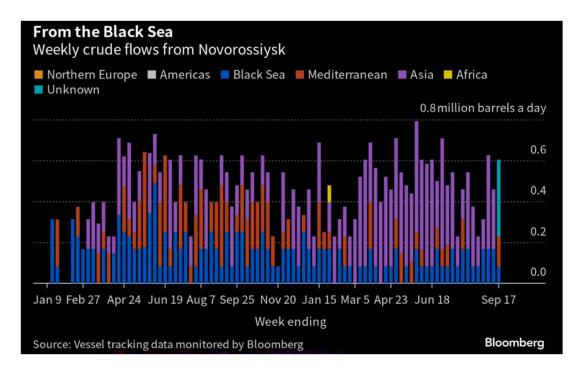
Shipments increased from all three western regions, but were offset by a dip in flows from the Pacific port of Kozmino. Destinations are based on where vessels signal they are heading at the time of writing, and some will almost certainly change as voyages progress. All figures exclude cargoes identified as Kazakhstan's KEBCO grade.

Week ending	Sep. 17	Sep. 10	Sep. 3	
Primorsk (Baltic)	9	9	9	
Ust-Luga (Baltic)	7	6	6	
Novorossiysk (Black Sea)	5	4	6	
Murmansk (Arctic)	2	2	1	
Kozmino (Pacific)	5	8	8	
De Kastri (Pacific)	2	2	2	
Prigorodnoye (Pacific)	<b>[</b> 1	1	1	
Total	31	32	33	3

The total volume on ships loading Russian crude from the Baltic terminals rose to a three-month high of 1.67 million barrels a day. No cargoes of Kazakh crude were loaded at Ust-Luga during the week. Shipments from the Baltic have remained above 1.5 million barrels a day for three weeks and were about 100,000 barrels a day below the highs seen in April and May.

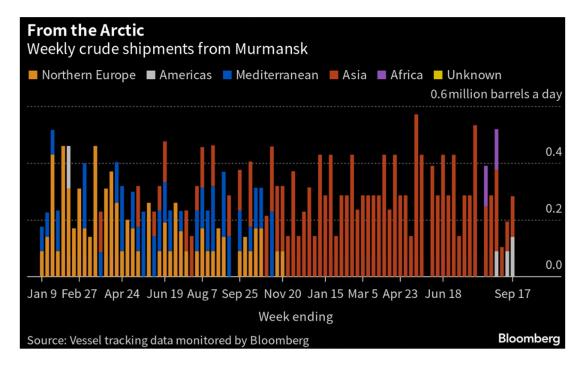


Shipments of Russian crude from Novorossiysk also increased, recovering most of the previous week's loss. Shipments have recovered to the average levels seen before the dip in flows that began in July. One cargo of Kazakh crude was also loaded at the port during the week.



Two Suezmax tankers completed loading cargoes at the Arctic port of Murmansk in the week to Sept. 17, boosting flows to a four-week high.

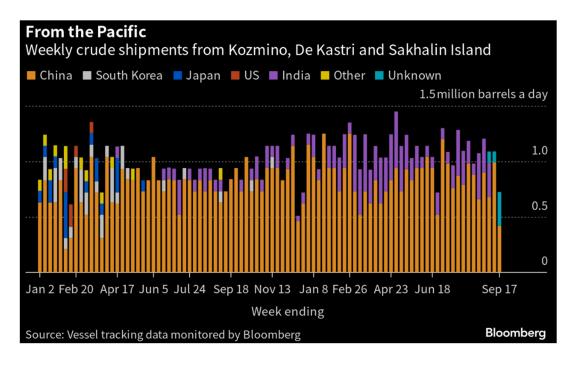
One tanker that loaded in the week to Sept. 17 is headed to Brazil, the third vessel to make the journey across the Atlantic since late August.



Eight tankers loaded at Russia's three Pacific export terminals, down by three from the previous week. The volume of crude shipped from the region slumped to a 12-week low of 724,000 barrels a day.

The drop in flows was driven by a brief halt to operations at Kozmino, with no ships completing cargo loadings between the 12th and the 16th.

Shipments from the Sakhalin Island terminal continue to be affected by maintenance at one of the Sakhalin 2 project's oil production platforms. The work is set to run until September. One vessel loaded a partial cargo of Sakhalin Blend crude from the terminal last week.



The volumes heading to unknown destinations are Sokol cargoes that recently have been transferred to other vessels at Yeosu, or are currently being shuttled to an area off the South Korean port from the loading terminal at De Kastri. Most of these are ending up in India.NOTES

Note: This story forms part of a weekly series tracking shipments of crude from Russian export terminals and the export duty revenues earned from them by the Russian government. Weeks run from Monday to Sunday. The next update will be onTuesday, Sept. 26.

Note: All figures exclude cargoes owned by Kazakhstan's KazTransOil JSC, which transit Russia and are shipped from Novorossiysk and Ust-Luga as KEBCO grade crude. If you are reading this story on the Bloomberg terminal, click here for a link to a PDF file of four-week average flows from Russia to key destinations.

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To view this story in Bloomberg click here: https://blinks.bloomberg.com/news/stories/S18BSRDWRGG0



SAF Group created transcript of comments by Dan Rahmat (Senior Energy Security Consultant, Tehran based) to Vandana Hari (Founder & CEO, Vanda Insights) who hosted the Gulf Intelligence Daily Energy Markets Sept 21 webcast. https://twitter.com/gulf\_intel/status/1704770830024999270

Items in "italics" are SAF Group created transcript.

Rahmat ".. Regarding the new deal between Iran and America, I believe it's part of a bigger deal, which cannot be considered limited to actually releasing some prisoners, also releasing some frozen funds in Korea or elsewhere.

Technically it said that the frozen assets of Iran in Korea or Iraq are going to be delivered to Qatar and also Oman and those are to be used for importing humanitarian goods including medicine, food ingredients and blah blah. So that would be big money for importing such amounts of goods. I don' believe Iran has the necessary needs of something. "First let me tell you something. The money is not limited to those \$6b as Iranian officials emphasize. They're telling that its about \$23b or something. Because it's not limited to the \$6b of Korea; But they're not very clearly telling us what the money actually is which banks are involved in that. But as long as I am concerned, the \$6b is already transferred from Korea to Qatar and they're transferred to the Iranian bank accounts in Qatari banks. "Hari. "So Danial, just to make sure, sorry, that I understand you correctly as do our viewers. Are you saying the release of this \$6b is part of a release of a total of \$23b, which is going to come about?" Rahmat "Right. It is said so. But you know different officials" [note connection lost]

Rahmat rejoins the webcast.

Hari "welcome back Danial. I hope your connection stays with all of us this time around. Please do continue. You were talking about. I asked you If the \$6b was just the beginning of a process of unfreezing \$23b, I believe you mentioned. You're on mute I think Danial". Rahmat "Yes. Yes. I believe so, it is said that the unfreezing of the \$6b is part of a bigger unfreezing of Iranian assets, mostly from Iraq left there or kept there for the gas [natural gas], for the price of the gas Iran exported to Iraq., And considering that there is another agreement between Iran and Iraq regarding the repayment of the Iranian gas money in Iraq where Iraqis since now are going to pay the money to Iranians via actually a sort of barter deal. Selling, actually exporting fuel oil to Iran and heavy oil, what they call black oil in Iran, to Iran."

Prepared by SAF Group <a href="https://safgroup.ca/news-insights/">https://safgroup.ca/news-insights/</a>

https://www.reuters.com/markets/commodities/iraq-trade-crude-oil-iranian-gas-resolve-power-debt-pm-2023-07-11/

# Iraq to trade crude oil for Iranian gas to settle power debt, prime minister says

Reuters

July 11, 20235:04 PM MDTUpdated 2 months ago



Iraqi Prime Minister Mohammed Shia al-Sudani, attends the Arab League Summit in Jeddah, Saudi Arabia, May 19, 2023. Iraqi Prime Minister Media Office/Handout via REUTERS /File Photo <u>Acquire Licensing Rights</u>

July 11 (Reuters) - Iraq will begin trading crude oil for Iranian gas to end the recurring issue of payment delays to Tehran due to the need for U.S. approval, Iraqi Prime Minister Mohammed Shia Sudani said on Tuesday.

Sudani said Iran had cut gas exports to Iraq by more than 50% as of July 1 after Baghdad failed to secure U.S. approval to disburse owed funds, but Tehran had now agreed to resume gas exports in exchange for crude oil.

The deal was reached during talks with an Iranian delegation that was in Baghdad since Saturday, Sudani said in a televised speech.

Iraq imports electricity and gas from Iran that total between a third and 40% of its power supply, especially crucial in sweltering summer months when temperatures can top 50 Celsius (122 Fahrenheit) and power consumption peaks.

Iraq has had trouble paying for those imports. It owes Iran around 11 billion euros (\$12.1 billion) in outstanding debts, Sudani said, and struggles to pay due to U.S. sanctions that only allow Iran to access funds to buy non-sanctioned goods, such as food and medicine.

Even those procedures are complicated, and "contribute to unwanted delays in making the payments, and subsequently the funds are not paid to the Iranians", Farhad Alaaldin, foreign affairs adviser to the prime minister, told Reuters.

By trading Iraqi crude for Iranian gas, Sudani said, Iraq would avoid rolling power cuts every summer while working to complete gas capture and extraction projects that would help make the country self-sufficient.

"We can't for the next two or three years come to citizens every summer and tell them: 'They stopped the gas, they started the gas'," he said.

A State Department spokesperson declined comment on the reported barter deal between Iraq and Iran, and did not address whether such an arrangement might violate U.S. sanctions.

"There has been no change in U.S. policy towards Iran or Iraq, and the Biden Administration continues to implement all U.S. sanctions on Iran," the spokesperson said, adding that Washington "strongly supports Iraq's path to energy autonomy."

Henry Rome, an analyst with the Washington Institute for Near East Policy think tank, said a barter pact was unlikely to stop Iran from continuing to seek hard currency from Iraq.

"I am not convinced that a pure barter arrangement as described by Sudani is satisfactory for Iran, given its need for hard currency," he said. "Even if this arrangement is implemented, it would likely not obviate Iran's pursuit of the billions of dollars still held in Iraqi accounts."

The United States has pushed Iraq, OPEC second-largest producer, to cut its reliance on Iranian gas.

Iraq spends roughly \$4 billion per year on imports of Iranian gas and power while burning massive quantities of natural gas as a byproduct of its hydrocarbons sector.

It has taken steps to change course. On Monday Iraq <u>signed</u> a massive deal with French oil major TotalEnergies that includes plans to capture gas from oilfields in the southern Basra region. (\$1 = 0.9083 euros)

Reporting by Timour Azhari in Erbil, Iraq; Additional reporting by Arshad Mohammed in Washington; Editing by David Gregorio and Stephen Coates

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https://www.reuters.com/world/middle-east/iraq-turkey-oil-pipeline-ready-resume-operations-soon-turkish-minister-2023-09-

<u>15/?taid=6504209efee5c1000187d519&utm\_campaign=trueAnthem:+Trending+Content&utm\_medium=trueAnthem&utm\_source=twitter</u>

### Iraq-Turkey oil pipeline ready to resume operations soon -

#### Turkish minister

By Can Sezer

September 15, 20231:27 AM MDTUpdated 2 hours ago

ANKARA, Sept 15 (Reuters) - Iraq's northern oil export route through Turkey will soon be ready to resume operation after checks on pipeline maintenance and repairs to flood damage, the Turkish energy minister said.

A survey of the oil pipeline is complete and it will soon be "technically" ready for operation, Alparslan Bayraktar said.

Turkey halted flows on Iraq's northern oil export route on March 25 after an arbitration ruling by the International Chamber of Commerce (ICC) ordered Ankara to pay Baghdad damages for unauthorised exports by the Kurdistan Regional Government (KRG) between 2014 and 2018.

Turkey then started maintenance work on the pipeline, which goes through a seismically active zone and which it says has been damaged by floods.

"As of today, the independent surveyor completed their survey and now they're preparing their report," Bayraktar said without mentioning a date for resumption of oil flows, in an embargoed press briefing held by the ministry on Thursday.

Iraq and Turkey previously agreed to wait until maintenance works were complete before resuming the pipeline that contributes about 0.5% of global oil supply. Sources said oil flows are not expected to start before October, with KRG losing roughly \$4 billion in lost exports.

Turkey also calculates Iraq owes \$950 million as a result of ICC arbitration, net of damages Turkey has to pay Iraq.

Ankara will also file in the Paris court for a "set-aside case", Bayraktar said. Iraq opened an enforcement case against Turkey in a U.S. federal court in April, to enforce a \$1.5 billion arbitration award.

"As two neighbouring countries, we need to find an amicable solution. But from the legality perspective, we need to take care of our interests. Most likely in the future we might face another court challenge. But the pipeline will be operational technically. It is more or less ready and we will start the operation soon", Bayraktar said.

Ankara wants Baghdad to withdraw a second arbitration case covering the period from 2018 onward, and negotiate a reduced payment. Turkey also wants Erbil and Baghdad to agree on a common position and negotiate the continuance of the pipeline agreement, which is set to expire in 2026.

Reporting by Can Sezer; Editing by Daren Butler, Miral Fahmy and Alexander Smith

Our Standards: The Thomson Reuters Trust Principles.

Turkey Seeks Iraq Revenue-Sharing Deal to Restart Oil Exports 2023-08-25 10:12:01.470 GMT

By Selcan Hacaoglu and Onur Ant

(Bloomberg) -- Turkey is attempting to broker a deal between the central Iraqi government and the semi-autonomous Kurdish administration over how to resume Iraqi crude-oil exports via its territory, according to two Turkish officials. Turkey halted flows through a twin-pipeline in March after an arbitration court ordered it to pay about \$1.5 billion in damages to Iraq for transporting oil without Baghdad's approval. Ankara has no intention of paying the fine and is asking the Kurds to pay it to Baghdad as they were the benefactors, the officials said.

A compromise over competing demands from Iraq and the Kurdish administration over revenue-sharing from oil exports is being sought, the officials who are familiar with the matter said. The two sides have been quarreling for years over rights to Kurdistan oil sales, part of Baghdad's long-running attempt to rein in the semi-autonomous region.

Officials from the Baghdad government didn't comment, while the KRG declined to comment.

Turkey's Foreign Minister Hakan Fidan discussed energy, economic and security relations both with the president and prime minister of the Kurdish government in Erbil on Thursday, after holding talks with his Iraqi counterpart in Baghdad earlier in the week. Turkish Energy Minister Alparslan Bayraktar also traveled to Erbil and has had discussions with Iraqi Oil Minister Hayyan Abdul Ghani.

#### **Repairing Ties**

Turkey is reaching out to Baghdad to repair ties after years of estrangement as part of a reset in relations with Arab nations. Ankara is offering the Kurdistan Regional Government, or KRG, as well as the central government in Baghdad help in building power plants and other infrastructure. Baghdad has asked Turkey to collect the money from oil exports and transfer it to Iraq after deducting 12.6% of the share allocated to the KRG, said the officials, speaking on condition of anonymity. The KRG, however, has told Turkey that it wants to claim the entire revenue from exports via its territory, arguing that it has been unable to collect funds from separate Iraqi oil exports, they said. The pipeline running from Kirkuk to Turkey's Mediterranean port of Ceyhan remains operational and Iraqi crude exports could start quickly once there is a deal in place, the Turkish officials said, adding that Turkey aims to resolve the conflict as soon as possible.

The closure of the pipeline has cut off nearly half a million barrels of crude from global markets as Ankara refused to pay the \$1.5 billion fine. Iraq had been exporting about 400,000 to 500,000 barrels a day from fields in the country's

north, including in the Kurdish region, via the now-halted pipeline.

It's unclear how much of that oil would flow back onto world markets if there was a deal, since Iraq is already pumping at very close to the limit under its OPEC quota.

--With assistance from Khalid Al-Ansary.

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https://www.gov.uk/government/speeches/pm-speech-on-net-zero-20-september-2023

#### PM speech on Net Zero: 20 September 2023

Prime Minister Rishi Sunak sets out his new approach to Net Zero.

From: Prime Minister's Office, 10 Downing Street and The Rt Hon Rishi Sunak MP Published 20 September 2023 Last updated 20 September 2023 — See all updates

Delivered on:

20 September 2023 (Transcript of the speech, exactly as it was delivered)

The Rt Hon Rishi Sunak MP

The Prime Minister Rishi Sunak's new approach to Net Zero

Let me get straight to it.

I know people in our country are frustrated with our politics.

I know they feel that much gets promised, but not enough is delivered.

I know they watch the news or read the papers and wonder why in the face of the facts as they have them, choices are made as they are.

I know that they dislike Westminster game playing, the short termism, and the lack of accountability.

But most of all I think people are tired of the false choice between two versions of change that never go beyond a slogan.

I have been Prime Minister for nearly a year now and it is the privilege of my life.

I know the fundamentals of our great country are solid and timeless.

Its people are its greatest strength, economically and socially.

Their hopes and genius are what propel us forward, not Government.

Government can set the framework, step in when needed, and step back when necessary.

It can make big decisions.

But what I have concluded during my time so far as Prime Minister, is that those decisions - the decisions that could bring real change, change that could alter the trajectory of our country - can be so caveated, so influenced by special interests, so lacking in debate and fundamental scrutiny that we've stumbled into a consensus about the future of our country, that no one seems to be happy with.

And this is because too often, motivated by short term thinking, politicians have taken the easy way out.

Telling people the bits they want to hear, and not necessarily always the bits they need to hear.

We are making progress, including on my five priorities.

Inflation – down again today and on track to be halved.

Fastest growth in the G7 over the last two years.

Debt - on target to be falling.

The NHS – treating more patients than last year.

And small boats – crossings significantly down on last year.

But put simply: that isn't enough.

If for too many, there remains a nagging sense that the path we're on no matter which party is in government isn't quite what we hoped for, and that no one seems to have the courage to say so.

That we make too little, that we spend too much, that things take too long and that even when we know these things, we seem powerless to change them.

Now, I am here today to tell you that we do not have to be powerless.

Our future doesn't have to be a foregone conclusion.

Our destiny can be of our own choosing.

But only if we change the way our politics works.

Can we be brave in the decisions we make, even if there is a political cost?

Can we be honest when the facts change, even if it's awkward?

And can we put the long-term interests of our country before the short-term political needs of the moment, even if it means being controversial?

I have spent my first year as Prime Minister bringing back stability to our economy, your government, and our country.

And now it is time to address the bigger, longer-term questions we face.

The real choice confronting us is do we really want to change our country and build a better future for our children, or do we want to carry on as we are.

I have made my decision: we are going to change.

And over the coming months, I will set out a series of long-term decisions to deliver that change.

And that starts today, with a new approach to one of the biggest challenges we face: climate change.

No one can watch the floods in Libya or the extreme heat in Europe this summer, and doubt that it is real and happening.

We must reduce our emissions.

And when I look at our economic future, I see huge opportunities in green industry.

The change in our economy is as profound as the industrial revolution and I'm confident that we can lead the world now as we did then.

So, I'll have no truck with anyone saying we lack ambition.

But there's nothing ambitious about simply asserting a goal for a short-term headline without being honest with the public about the tough choices and sacrifices involved and without any meaningful democratic debate about how we get there.

The Climate Change Committee have rightly said you don't reach net zero simply by wishing it.

Yet that's precisely what previous governments have done – both Labour and Conservative.

No one in Westminster politics has yet had the courage to look people in the eye and explain what's really involved.

That's wrong - and it changes now.

The plans made on your behalf assume this country will take an extraordinary series of steps that will fundamentally change our lives.

A ban on buying new boilers even if your home will never ever be suitable for a heat pump.

A ban that takes effect in just three years for those off the gas grid.

And mandatory home upgrades for property owners in just two years' time.

There have even been proposals for:

Taxes on eating meat New taxes on flying Compulsory car sharing if you drive to work And a government diktat to sort your rubbish into seven different bins.

Now I believe deeply that when you ask most people about climate change, they want to do the right thing, they're even prepared to make sacrifices.

But it cannot be right for Westminster to impose such significant costs on working people especially those who are already struggling to make ends meet and to interfere so much in people's way of life without a properly informed national debate.

That's especially true because we're so far ahead of every other country in the world.

We've had the fastest reduction in greenhouse gas emissions in the G7. Down almost 50% since 1990.

France? 22%.

The US? No change at all.

China? Up by over 300%.

And when our share of global emissions is less than 1%, how can it be right that British citizens, are now being told to sacrifice even more than others?

Because the risk here, for those of us who care about reaching Net Zero – as I do - is simple: If we continue down this path, we risk losing the consent of the British people.

And the resulting backlash would not just be against specific policies but against the wider mission itself, meaning we might never achieve our goal.

That's why we have to do things differently.

We need sensible, green leadership.

It won't be easy.

And it will require a wholly new kind of politics.

A politics that is transparent, and the space for a better, more honest debate about how we secure the country's long-term interest.

So, how do we do that? What is our new approach to achieving net zero?

First, we need to change the debate.

#### We're stuck between two extremes.

Those who want to abandon Net Zero altogether – because the costs are too high, the burdens too great or in some cases, they don't accept the overwhelming evidence for climate change at all.

And then there are others who argue with an ideological zeal: we must move even faster, and go even further no matter the cost or disruption to people's lives and regardless of how much quicker we're already moving than any other country.

Both extremes are wrong.

Both fail to reckon with the reality of the situation.

Yes, Net Zero is going to be hard and will require us to change.

But in a democracy, we must also be able to scrutinise and debate those changes, many of which are hidden in plain sight – in a realistic manner.

This debate needs more clarity, not more emotion.

The test should be: do we have the fairest credible path to reach Net Zero by 2050, in a way that brings people with us?

Since becoming Prime Minister, I've examined our plans and I don't think they meet that test.

We seem to have defaulted to an approach which will impose unacceptable costs on hard-pressed British families.

Costs that no one was ever told about, and which may not actually be necessary to deliver the emissions reduction that we need.

And why am I confident in saying that?

Because over the last decade or more, we've massively over delivered on every one of our carbon budgets despite continuous predictions we'd miss them.

We've seen rapid technological advances which have made things like renewables far cheaper:

Just consider offshore wind, where costs have fallen by 70% more than we projected in 2016.

And people are increasingly choosing to go green – look at how demand for electric vehicles has consistently outstripped forecasts.

Given these things, I'm confident that we can adopt a more pragmatic, proportionate, and realistic approach to meeting Net Zero that eases the burdens on working people.

And that's the second part of our new approach.

Now I'm not saying there will be no hard choices.

And nor am I abandoning any of our targets or commitments.

I am unequivocal that we'll meet our international agreements including the critical promises in Paris and Glasgow to limit global warming to 1.5 degrees.

I'm proud that our country leads the world on Net Zero, with the most ambitious 2030 target of any major economy.

And as we're as committed as ever to helping developing countries.

Just the other week I announced \$2bn for the Green Climate Fund – the single biggest commitment of its kind, the UK has ever made.

But we can do all this in a fairer, better way – and today I can set out the details of what our new approach will mean for people.

That starts with electric vehicles.

We're working hard to make the UK a world-leader.

I'm proud that we've already attracted billions of new investments from companies like Tata's Jaguar Land Rover gigafactory.

And I expect that by 2030, the vast majority of cars sold will be electric. Why?

Because the costs are reducing; the range is improving; the charging infrastructure is growing.

People are already choosing electric vehicles to such an extent that we're registering a new one every 60 seconds.

But I also think that at least for now, it should be you the consumer that makes that choice, not government forcing you to do it.

Because the upfront cost is still high – especially for families struggling with the cost of living.

Small businesses are worried about the practicalities.

And we've got further to go to get that charging infrastructure truly nationwide.

And we need to strengthen our own auto industry, so we aren't reliant on heavily subsidised, carbon intensive imports, from countries like China.

So, to give us more time to prepare, I'm announcing today that we're going to ease the transition to electric vehicles.

You'll still be able to buy petrol and diesel cars and vans until 2035.

Even after that, you'll still be able to buy and sell them second-hand.

We're aligning our approach with countries like Germany, France, Spain, Italy, Australia, Canada, Sweden, and US states such as California, New York and Massachusetts and still ahead of the rest of America and other countries like New Zealand.

Now, to get to Net Zero, we also need a fairer, better approach to decarbonising how we heat our homes.

We're making huge advances in the technologies that we need to do that, like heat pumps.

But we need a balance.

Between incentivising businesses to innovate, so heat pumps become even cheaper, more effective, and more attractive.

But without imposing costs on hard-pressed families, at a time when technology is often still expensive and won't work in all homes.

For a family living in a terraced house in Darlington, the upfront cost could be around £10,000.

Even the most committed advocates of Net Zero must recognise that if our solution is to force people to pay that kind of money support will collapse, and we'll simply never get there.

So, I'm announcing today that we will give people far more time to make the necessary transition to heat pumps.

We'll never force anyone to rip out their existing boiler and replace it with a heat pump.

You'll only ever have to make the switch when you're replacing your boiler anyway, and even then, not until 2035.

And to help those households for whom this will be hardest I'm introducing a new exemption today so that they'll never have to switch at all.

Now, this doesn't mean I'm any less committed to decarbonising our homes.

Quite the opposite.

But rather than banning boilers before people can afford the alternative; we're going to support them to make the switch.

I'm announcing today, that the Boiler Upgrade Scheme which gives people cash grants to replace their boiler, will be increased by 50% to £7,500.

There are no strings attached.

The money will never need to be repaid.

And this is one of the most generous schemes of its kind in Europe.

Next, energy efficiency.

This is critical to making our homes cheaper to heat.

That's why we've got big government grants like the Great British Insulation Scheme.

But under current plans, some property owners would've been forced to make expensive upgrades in just two years' time.

For a semi-detached house in Salisbury, you could be looking at a bill of £8,000.

And even if you're only renting, you'll more than likely see some of that passed on in higher rents.

That's just wrong.

So those plans will be scrapped, and while we will continue to subsidise energy efficiency - we'll never force any household to do it.

And that's not all.

The debate about how we get to Net Zero has thrown up a range of worrying proposals and today I want to confirm that under this government, they'll never happen.

The proposal for government to interfere in how many passengers you can have in your car.

I've scrapped it.

The proposal that we should force you to have seven different bins in your home.

I've scrapped it.

The proposal to make you change your diet – and harm British farmers - by taxing meat.

Or to create new taxes to discourage flying or going on holiday.

I've scrapped those too.

And nor will we ban new oil and gas in the North Sea which would simply leave us reliant on expensive, imported energy from foreign dictators like Putin.

We will never impose these unnecessary and heavy-handed measures on you, the British people but we will still meet our international commitments and hit Net Zero by 2050.

And if we're going to change politics in the way I'm talking about, we can never allow carbon budgets to be set in the same way again.

The last Carbon Budget process was debated in the House of Commons for just 17 minutes and voted through with barely any consideration given to the hard choices needed to fulfil it.

It was the carbon equivalent of promising to boost government spending with no way to pay for it.

That's not a responsible way to make decisions which have such a bearing on people's lives.

So, when Parliament votes on carbon budgets in the future, I want to see it consider the plans to meet that budget, at the same time.

If the first part of our new approach to meeting Net Zero is to change the debate and the second part is a more pragmatic, proportionate, and realistic approach that eases the burdens on families...

...then the third is to embrace with even greater enthusiasm, the incredible opportunities of green industry and take the necessary practical steps to create whole new sectors and hundreds of thousands of good, well-paid jobs right across the country.

We're already home to the four of the world's largest offshore wind farms, we're building an even bigger one at Dogger Bank and we're improving our auction process to maximise private investment into this world-leading industry.

We're lifting the ban on onshore wind.

We're investing in four new clusters to capture and store carbon from the atmosphere.

And we're building new nuclear power stations for the first time in thirty years.

Just this week, we took a significant long-term decision to raise funding for Sizewell C - putting beyond all doubt our commitment to decarbonising our power sector.

And later this autumn, we'll shortlist the companies to build the new generation of small modular reactors.

But one of our biggest constraints to reaching Net Zero and improving our energy security, is this:

We're investing billions in new energy projects, yet we don't have the grid infrastructure to bring that power to households and businesses.

And when energy security is national security – that's unacceptable.

Right now, it can take fourteen years to build new grid infrastructure.

There are enough projects waiting to be connected to generate over half of our future electricity needs.

So, I can announce today that the Chancellor and Energy Security Secretary will shortly bring forward comprehensive new reforms to energy infrastructure.

We'll set out the UK's first ever spatial plan for that infrastructure to give industry certainty and every community a say.

We'll speed up planning for the most nationally significant projects.

And we'll end the first-come-first-served approach to grid connections by raising the bar to enter the queue and make sure those ready first, will connect first.

So, from offshore wind, to nuclear, to a revolution in our energy infrastructure investors should have absolute confidence that we're getting on with the job and the UK will remain the best place in the world to invest in the green industries of the future.

Not least, because of something else this country has always excelled at: innovation in new technologies.

As a country that emits less than 1% of the world's carbon emissions, one of the most powerful contributions, we can make is our unique ability to develop new technologies that can help the world.

Like the SENSEWind team in Scotland developing the technology to service floating offshore wind turbines while still out at sea.

Or the researchers at Cambridge who pioneered a new way to turn sunlight into fuel.

And that's why today we're going further, creating the new, £150m Green Future Fellowship.

This will support at least 50 leading scientists and engineers to develop real, breakthrough green technologies.

And it builds on the £1 billion I invested as Chancellor, in the Net Zero Innovation Portfolio.

And finally, we can't tackle climate change without protecting nature; and vice versa.

Just the loss of forests alone accounts for the equivalent of ten times the global emissions of the entire United Kingdom.

And in the coming weeks, ahead of my attendance at COP28, I will set out the next stage in our ambitious environmental agenda.

So, in conclusion.

This country is proud to be a world leader in reaching Net Zero by 2050.

But we simply won't achieve it unless we change.

We're now going to have a better, more honest debate about how we get there.

We'll now have a more pragmatic, proportionate, and realistic approach that eases the burdens on families.

All while doubling down on the new green industries of the future.

In a democracy, that's the only realistic path to Net Zero.

Consent, not imposition.

Honesty, not obfuscation.

Pragmatism, not ideology.

That's how we'll turn the challenge of net zero into the greatest opportunity - and the proudest achievement - of our lifetimes.

And this is just the start.

What we begin today, is bigger than any single policy or issue.

We are going to change the way our politics works.

We are going to make different decisions.

We won't take the easy way out.

There will be resistance, and we will meet it.

Because I am determined to change our country and build a better future for our children.

Nothing less is acceptable.

Published 20 September 2023 Last updated 20 September 2023 + show all updates

# Government takes new direction with policy refocus



**RT HON CHRIS HIPKINS** 

#### Prime Minister

- Work on the TVNZ/RNZ public media entity to stop; Radio NZ and NZ on Air to receive additional funding
- Social insurance scheme will not proceed this term
- The Human Rights (Incitement on Ground of Religious Belief) Amendment Bill to be withdrawn and not progressed this term. The matter to be referred to the Law Commission for guidance
- Biofuels mandate to be stopped
- Government to consider changes to 3 Waters programme soon
- Minimum wage to increase by rate of inflation from 1 April

Prime Minister Chris Hipkins has announced a suite of programmes that are being cancelled or delayed in order to put the Government's focus on the cost of living.

"The Government is refocusing its priorities to put the cost of living front and centre of our new direction," Chris Hipkins said.

"I said the Government is doing too much too fast, and that we need to focus on the cost of living. Today we deliver on that commitment.

"Work on the TVNZ-RNZ public media entity will stop entirely. Support for public media needs to be at a lower cost and without such significant structural change.

"Cabinet has agreed to provide Radio New Zealand with additional funding to strengthen its public media role. New Zealand on Air will also receive additional funding to support public media content and that funding will be available to a wider range of broadcasters. Remaining funding will be redirected to other Government priorities.

"The social insurance scheme is off the table and will not proceed as proposed. We will need to see a significant improvement in economic conditions before anything is advanced.

"Work will continue to explore ways to best address these inequities in the long term when the economy is better placed to make change. But it is off the table for now.

"The Human Rights (Incitement on Ground of Religious Belief) Amendment Bill will be withdrawn and the matter referred to the Law Commission. This will allow the Law Commission the opportunity to consider a difficult and highly contested area of law in totality.

"Cabinet also agreed that the biofuels mandate will not proceed. The mandate would have increased the price of fuel, and given the pressure on households that's not something I'm prepared to do.

"Cabinet considered the 3 Waters programme. The need for reform is unquestionable. The events in Auckland have once again demonstrated the limits of our existing infrastructure and the need for change. But careful consideration is required.

"This is the first and most significant set of decisions that reprioritises the Government agenda and sets out our new direction. It will help to provide greater bandwidth and resource for where focus is needed most – the cost of living.

"When I became leader I promised that the Government would do more to help families with the cost of living. With this in mind, Cabinet today also set a new minimum wage in line with CPI.

"Cabinet has agreed to lift the minimum wage by \$1.50 – to \$22.70 per hour. It will apply from 1 April, 2023. The Starting-Out and Training minimum wage rates will be maintained at 80 per cent of the adult minimum wage.

"In tough times, it's critical to support those who struggle the most to make ends meet. Those on low incomes make impossible trade-offs between food and medical care, dry homes and a pair of shoes. These families need our support now more than ever and an inflation-adjusted lift in the minimum wage will means thousands of New Zealanders do not go backwards.

"We've tried to find the right balance. Analysis from MBIE that fed into our decision suggests this increase is unlikely to have a significant impact on unemployment, because it is broadly in line with existing average wage growth across the economy.

"The impact on inflation is negligible. In the 2022 Review, MBIE estimates that an increase of 7 per cent in the minimum wage will have only a minor inflationary impact of 0.1% on the wages portion of GDP.

"These decisions are a start and show the new direction of our Government. Increased support for business, increased support for those on low incomes and a reprioritisation of our work programme to shift it to the bread and butter issues New Zealanders want us focused on," Chris Hipkins said

#### Macron warns of threat to global economy from energy crisis

French president urges world leaders to act on climate change with more financial pledges ahead of COP26 summit

Leila Abboud in Paris and Leslie Hook in London YESTERDAY

President Emmanuel Macron has warned that an energy crisis threatens the world's post-pandemic recovery, calling for leaders at a G20 summit in Rome this weekend to work together to stabilise supplies.

In an interview, the French president also urged bigger financial commitments towards the fight against global warming on the eve of the COP26 climate summit in Scotland, and for particular attention to be paid to a deal to phase out coal power.

The G20 needed to co-ordinate between energy producers and consuming countries to prevent a supply breakdown this winter, which risked "extreme tensions both economically and socially", Macron said.

"In the coming weeks and months, we need to get better visibility and stability on prices so tension on the energy prices doesn't generate uncertainties, and undermine the global economic recovery," he told the Financial Times in the Elysée Palace. "What we expect is to have co-ordination to avoid soaring prices."

Global energy costs have surged this year, disrupting industry and hitting consumers with higher prices. Eurozone inflation surged in October to a 13-year-high of 4.1 per cent, according to a flash estimate published by the EU's statistics arm on Friday.

"I don't think we're going to be able to lower prices given tensions on the demand side," Macron said. "But what we need to avoid is to have a break in supply [and further] increases in prices, particularly as we're moving into the winter period for the northern hemisphere."

Emmanuel Macron: 'I don't think we're going to be able to lower [gas] prices given tensions on the demand side' © Magali Delporte/FT

Rapid economic recovery from the pandemic has pushed up energy prices "almost too rapidly" which risked "weighing on economic growth and putting a burden on households", Macron said.

France and a number of other EU governments have sought to protect consumers and businesses with billions in aid and price freezes.

Concerns have mounted that Russia's state-backed gas producer Gazprom has kept storage levels unusually low in western Europe, exacerbating fears over supplies and driving up prices.

Asked whether he blamed high European energy prices on Russia, Macron said: "I have no evidence that there's been manipulation of prices and I'm not accusing anybody. These are trading relations. They shouldn't be used for geopolitical reasons."

Asked about Gazprom's power over Europe, Macron said: "It's not a matter of whether we're too dependent on a company or not, it's how do we create alternatives. And the only alternatives are to have European renewables and of course, European nuclear."

France is the EU's biggest user of nuclear power, contrasting with a move away from atomic power by Germany and some other countries.

Macron called for Europe to develop a more diverse gas supply but also to speed up a transition away from fossil fuels, which will be necessary to slow rising temperatures and tame the climate disruptions caused by global warming.

"What is happening now is ironic, because we are building a system where in the medium and long term fossil energy will cost more and more, that's what we want [to fight climate change]," he said. "The problem is that industries and households will need to be accompanied in this transition . . . or it won't be sustainable."

The French president, who is facing national elections in April, has been a vocal advocate of multilateralism. He has pushed for more co-operation globally and at EU level to reach deals on issues including international taxation and global warming.

"The first subject for the G20 is to accelerate the exit from coal power" Emmanuel Macron

Against a backdrop of global tensions, a supply chain crisis and the Covid-19 pandemic, Macron said the G20 had a responsibility to work together, especially to help low-income countries. He urged leaders at the Rome summit to agree a plan for faster vaccine delivery to developing countries.

"France has always stressed the importance of maintaining multilateralism, but we have to get concrete results from it," he said.

The leaders of China, Russia and Japan will not attend the summit in Rome in person this weekend because of Covid-19 concerns and an election in Japan.

Macron said the G20 meeting, which is being hosted by Italian leader Mario Draghi on the eve of COP26, would also give countries a chance to hammer out more ambitious plans to fight climate change.

"When we'll be meeting in Rome, the major challenge is to ensure that members of G20 can usefully contribute in Glasgow, to making this COP26 a success," he said. "Nothing can be taken for granted before a COP," he added.

"The first subject for the G20 is to accelerate the exit from coal power," he said. G20 leaders expect a heated debate this weekend over including a pledge to end international coal financing.

"We need the G20 to go right through to the eradication of all international financing of coal-fired power plants," Macron said.

Macron also called for rich countries, particularly the US, to commit more financially to help developing countries meet their climate goals. And he called on China to bring forward the date at which it will peak emissions, from 2030, to 2025.

"So as not to lose more time, we have to do as much as is absolutely possible in terms of financing, and encourage the US administration so that they can convince Congress to front-load its financing."

Another issue will be to hold countries to their emissions targets for 2030 and 2050. "Our objective is to get maximum results from all countries," he said. "This pathway is possible, even if it's a challenge, especially for emerging countries which at the same time are trying to recover from the Covid crisis."

Macron also urged the G20 leaders to do more to help vaccinate the world against Covid-19. The group should end vaccine export bans, increase its donations of vaccine doses, and support vaccine production in Africa, he said.

"Every French person has given one vaccine to somebody else in the world," he said, referring to the roughly 60m doses that were on the way to Covax, the World Health Organisation's procurement scheme for low-income countries. "If everybody in the G20 could do that we would get to the 20 per cent of the population vaccinated. This is vital," he said.

Follow @ftclimate on Instagram

### '25-30 GW more thermal capacity may be needed'

ET Bureau Last Updated: Sep 16, 2023, 12:34 AM IST

#### **Synopsis**

India will also launch a pilot project using green hydrogen as storage for round the clock power having a capacity of 100 MW, Singh said. The current cost, as per preliminary calculations, of such a storage based power is ₹6 per unit, which is cheaper compared with last two months' average price of ₹8/unit on the power exchanges, Singh said.



India may need to add 25-30 GW of thermal power capacity over the 49 GW already planned or under construction to meet future requirements, power minister RK Singh said on Friday. The country's electricity demand is rising and will continue to grow, he said.

"We will make available the electricity required for our growth and we are not going to default on that," Singh added

Currently, India doesn't have round the clock renewable power so thermal power plants are required, he said at the Fourth International Conference & Exhibition on Clean Energy, organised by CII.

India also has an ambitious target of 500 GW of non-fossil fuel based power capacity by 2030.

For renewable energy, 88 GW of capacity is currently under construction and around 180 GW capacity is established as on date, Singh said.

The government has already laid down a strategy to add 50 GW of renewable energy capacity annually for five years starting this financial year.

India will also launch a pilot project using green hydrogen as storage for round the clock power having a capacity of 100 MW, Singh said.

The current cost, as per preliminary calculations, of such a storage based power is ₹6 per unit, which is cheaper compared with last two months' average price of ₹8/unit on the power exchanges, Singh said.

"If this is successful then it will establish a benchmark," he said.

India will be the largest producer of green hydrogen and ammonia in the world and the largest exporter because it has the cheapest renewable power, he said adding that the country has already amassed substantial manufacturing capacity for it, positioning itself as a global leader in this sector.

He said that the recent memorandum of understanding with Saudi Arabia on energy will bring investment in India in the sector and also encourage investment by Indian companies in the Middle East nation.

Ola Borten Moe is Minister of Research and Higher Education since 2021. Previously, he also served as Minister of Petroleum and Energy from 2011 to 2013.

https://www.facebook.com/SPolabortenmoe/posts/pfbid02FhTrNJAApZa6m392J41EqiRbFzG6ffgq12n3JAwqY QVL3cR7p9ztixMQiR1wG6qXI



Det er stadig mer åpenbart at vi alt for lenge har oppført som om det er ubegrenset tilgang på fornybar og rimelig strøm i Norge. Faktum er enkelt og greit at det er mangel på energi i kraftsystemene våre. Svært høye priser og frykt for forsyningssikkerheten dokumenterer dette. Vi må derfor selvsagt få et langt mer realistisk forhold til hva vi bruker energi på. Og vi må få et bevist forhold til enkle faktorer som ressurseffektivitet og virkningsgrad. Hydrogen er sikkert bra til mye, men faktum er at det er et høyeksplosivt lagringsmedium med store energitap i begge ender av prosessen. Om du bruker 100 kwh strøm til å produsere hydrogen vil du sitte igjen med en energimengde i hydrogen tilsvarende 50 kwh. Halvparten av energien er med andre ord tapt. Om du videre skal bruke dette hydrogenet i en brenselscelle taper du ytterligere 50%. Om du kjører det i en turbin for å produsere strøm taper du 70%. Med andre ord får du en utnyttelsesgrad i en bil på ca 25% eller 25 kwh av de opprinnelige 100 kwh pga energitap i prosessene. I en enkel turbin er tapet enda større. Denne strømmen/energien kunne alternativt blitt brukt direkte all den tid den tas fra nettet i Norge med en utnyttelsesgrad til for eksempel oppvarming, produksjon eller transport på 90-100%! Om Statkraft sammen med NEL lykkes med å etablere 2 gw elektrolyse av hydrogen i Norge tilsvarer det en energimengde på ca 17,5 twh, eller om lag 12-13% av all kraftproduksjon i Norge. Med 75% energitap er det 14 twh, eller 10% av all norsk kraftproduksjon rett i dass. Det er etter mitt skjønn lysår unna å være forsvarlig eller fornuftig. Vi trenger all den energien vi har og får til langt mer fornuftige ting enn å fyre for kråka.



STATKRAFT.NO

#### Nel og Statkraft legger grunnlaget for en verdikjede for grønt hydrogen i Norge

Hydrogenteknologiselskapet Nel og Europas største leverandør av fornybar energi, Statkraft, signerte nylig en kontrakt for leveranse av 40 MW elektrolysørutstyr og vil dermed samarbeide om å skape en sterk verdikjede...



161 comments 108 shares

#### Google Translate of Moe's above Facebook posting

It is increasingly obvious that for far too long we have acted as if there is unlimited access to renewable and affordable electricity in Norway. The fact is plain and simple that there is a lack of energy in our power systems. Very high prices and fears about security of supply document this. We must therefore of course have a far more realistic relationship with what we use energy for. And we must have a proven relationship with simple factors such as resource efficiency and effectiveness. Hydrogen is certainly good for many things, but the fact is that it is a highly explosive storage medium with large energy losses at both ends of the process. If you use 100 kwh of electricity to produce hydrogen, you will be left with an amount of energy in hydrogen corresponding to 50 kwh. In other words, half of the energy is lost. If you are going to use this hydrogen in a fuel cell, you lose a further 50%. If you run it in a turbine to produce electricity, you lose 70%. In other words, you get a utilization rate in a car of about 25% or 25 kwh of the original 100 kwh due to energy loss in the processes. In a simple turbine, the loss is even greater. Alternatively, this current/energy could have been used directly all the time it is taken from the grid in Norway with a utilization rate for, for example, heating, production or transport of 90-100%! If Statkraft together with NEL succeeds in establishing 2 gw electrolysis of hydrogen in Norway, this corresponds to an energy quantity of approximately 17.5 twh, or approximately 12-13% of all power production in Norway. With a 75% energy loss, that's 14 twh, or 10% of all Norwegian power production right there. It is, in my opinion, light years away from being justifiable or reasonable. We need all the energy we have and can do for far more sensible things than fighting for the crow.

Google Translate of Statkraft's press release [LINK] linked in Moe Facebook posting

#### **NEWS 2023**

## NEL AND STATKRAFT LAY THE FOUNDATION FOR A VALUE CHAIN FOR GREEN HYDROGEN IN NORWAY

Nel and Statkraft are laying the foundations for a value chain for green hydrogen in Norway

06 JAN., 2023

The hydrogen technology company Nel and Europe's largest supplier of renewable energy, Statkraft, recently signed a contract for the delivery of 40 MW electrolyser equipment and will thus work together to create a strong value chain for the production of green hydrogen in Norway.

#### Press releases

- We are determined to contribute to making Norway a leading producer of green hydrogen and establish an ecosystem of equipment suppliers, including the production of electrolysers, say Nels CEO Håkon Volldal and CEO of Statkraft, Christian Rynning-Tønnesen.

The announcement came in connection with German Vice-Chancellor Robert Habeck's visit to Nel's fully automatic electrolyser factory on Herøya. Industry Minister Jan Christian Vestre also joined the delegation together with his colleague, Energy and Energy Minister Terje Lien Aasland. The ministers are enthusiastic about the two companies' plans for a value chain for green hydrogen in Norway.

- It is gratifying that leading Norwegian players such as Nel and Statkraft are planning value chains for green hydrogen in Norway. This is an important step in the right direction to achieve our ambitions to build a coherent value chain for hydrogen and facilitate the production of hydrogen with no or low emissions to cover the national demand for hydrogen, says Oil and Energy Minister Terje Aasland.

From left: Habeck, Volldal, Rynning-Tønnesen, Aasland and Vestre Statkraft has recently signed a contract for the supply of 40 MW electrolyser equipment from Nel. The electrolysers will be manufactured at Nel's factory on Herøya and used for the production of green hydrogen in some of Statkraft's many hydrogen projects. As Europe's largest supplier of renewable energy, Statkraft has ambitions to reach an annual development rate of 4 GW of new power production and to have 2 GW of renewable hydrogen production in place by 2030. In Norway, Statkraft will strengthen its investment in developing new renewable power production and flexibility in hydropower and wind power both on- and offshore.

- The contract with Nel is the first important step towards realizing our ambitions of 2 GW of green hydrogen and securing production capacity for several of our hydrogen projects, says Rynning-Tønnesen. Volldal is very happy to have Statkraft on its customer list.
- Statkraft is Europe's largest supplier of renewable energy and a well-reputed and highly knowledgeable renewable company with an ambitious growth agenda, and we are very proud that they have chosen us as a supplier of green hydrogen technology, says Volldal.
- With this and other orders, Nel strengthens its position as a leading supplier and exporter of hydrogen equipment, which is crucial for the green shift in Europe and internationally, and for the development of new green jobs in Norway, says Volldal.

https://www.reuters.com/markets/commodities/bidens-ira-drives-surge-us-imports-chinese-used-cooking-oil-2023-09-22/

### Biden's IRA drives surge in US imports of Chinese used cooking oil

By Andrew Hayley

September 22, 20231:25 AM MDTUpdated 3 hours ago

BEIJING, Sept 22 (Reuters) - U.S. incentives to boost consumption of more environmentally friendly fuel has created a new market for used Chinese cooking oil, worth almost \$390 million in the last 12 months and growing rapidly, China's customs data shows.

China has been shipping more waste oil to the U.S. since October 2022, two months after the Biden administration passed the Inflation Reduction Act (IRA) to promote clean energy, which included tax credits for production of sustainable aviation fuel (SAF) and extended incentives for biodiesel.

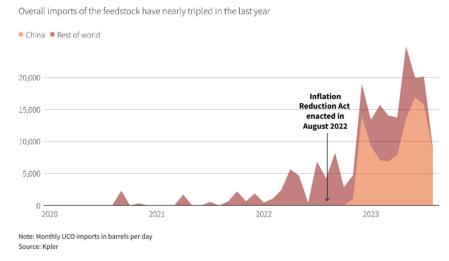
In the first eight months of 2023, Chinese exports of used cooking oil (UCO) to the U.S. totalled almost 384,000 metric tons, customs data shows. That accounted for around 65% of U.S. imports through August, data from shiptracking firm Kpler showed.

Used cooking oil can be refined into fuels such as biodiesel and SAF, which can be blended with conventional fuels to reduce carbon emissions. It is also a feedstock for renewable diesel, which is chemically equivalent to petroleum-based diesel.

The growth in the trade is "basically economically driven because of the funding of these programs and also the growth in these new facilities that have been invested into in the U.S. starting to come online and ramp up production," said Sophie Byron, global head of biofuels pricing at S&P Global Commodity Insights.

In the U.S., renewable diesel is mostly used in California because of its Low Carbon Fuel Standard that allows producers to generate tradable credits for using low-carbon feedstocks such as UCO.

## U.S. imports of used cooking oil from China have surged sintensigning of the Inflation Reduction Act



Reuters Graphics

State-run Chinese oil majors Sinopec and PetroChina, which are among those shipping UCO cargoes to the U.S., according to Kpler, did not respond to requests for comment.

Under the IRA, biodiesel producers are eligible for a \$1 per gallon tax credit. A new tax credit for SAF producers offers up to \$1.75 per gallon, with additional credits for fuel achieving a lifecycle carbon reduction of greater than 50%.

Used cooking oil can be one-third the price of fresh vegetable oil, and has lower carbon intensity than non-waste feedstocks such as palm or canola oil.

Biodiesel produced from UCO has slightly lower energy content than petroleum diesel but cuts greenhouse gas pollution by as much as 83%, according to a 2022 study by the Argonne National Laboratory in the U.S.

China is the world's largest producer of UCO, generating around 11.4 billion litres annually, according to data cited by the U.S. Department of Agriculture (USDA), but the lack of domestic policy support has limited its use in the country.

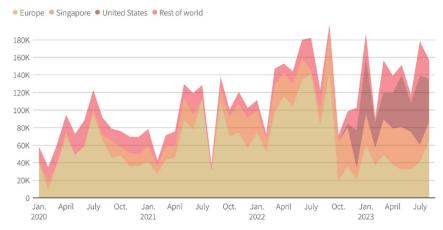
Powered by incentives, U.S. demand for UCO has displaced European purchases. Exports to Europe from China in the first eight months of 2023 fell by almost 56% from a year earlier, customs data shows.

In June, Germany asked the European Commission to investigate the flow of <u>possibly mislabelled</u> Chinese biofuels into the European Union.

These concerns have "made some of the EU buyers potentially a bit more nervous, so you might see the U.S. jumping on that opportunity as well," S&P Global's Byron said.

As of February, there are 72 U.S. plants that can produce biodiesel using UCO as a feedstock, according to the USDA.

## Rising demand for Chinese used cooking oil in the U.S. and Singapore has displaced European purchases



Note: Volumes of UCO in metric tons Source: China General Administration of Customs

#### **Reuters Graphics Reuters Graphics**

(\$1 = 7.2879 yuan)

Reporting by Andrew Hayley. Additional reporting by Stephanie Kelly; Editing by Christian Schmollinger

https://www.datacenterdynamics.com/en/news/microsoft-cloud-hiring-to-implement-global-small-modular-reactor-and-microreactor-strategy-to-power-data-centers/

## Microsoft Cloud hiring to "implement global small modular reactor and microreactor" strategy to power data centers

Nuclear technology program manager to help data center power crunch

September 22, 2023

By Sebastian Moss

Microsoft is hiring for a principal program manager of nuclear technology to "be responsible for maturing and implementing a global small modular reactor (SMR) and microreactor energy strategy."

Late last year, the company procured Clean Energy Credits (CECs) <u>from Canadian energy firm Ontario Power Generation (OPG)</u> to power its data centers. The credits include power from traditional nuclear sources, but could expand to include CECs from an upcoming SMR deployment OPG is planning.



The NuScale SMRs-Nuscale

The <u>new job listing</u> states that: "This senior position is tasked with leading the technical assessment for the integration of SMR and microreactors to power the data centers that the Microsoft Cloud and Al reside on.

"They will maintain a clear and adaptable roadmap for the technology's integration, diligently select and manage technology partners and solutions, and constantly evaluate the business implications of progress and implementation.

The role will also be responsible for research and developing other precommercial energy technologies.

The new hire would join the energy innovation team at Microsoft, working with P. Todd Noe, director of nuclear technologies engineering at Microsoft. Noe said on LinkedIn: "This is not just a job, it is a challenge. By joining us, you will be part of a global movement that is transforming the way we produce and consume energy. You will also have the chance to grow your skills, advance your career, and make an impact on millions of lives."

With grids around the world struggling, power availability has become a critical bottleneck for data center builders and delayed projects around the globe - <u>most notably in the sector's densest region</u>, <u>Northern Virginia</u>. The lack of clean power is even more of a challenge as data center companies try to shift to renewable sources.

While traditional nuclear power plants have often come in over-budget and long-delayed, small modular reactors are being pitched as a way to deploy smaller, cheaper, and faster modular reactors.

Such systems could either be deployed at a power plant, which is what Ontario Power Generation plans to do, or even at the site of a data center.

Rolls-Royce has <u>begun pitching 470MW modular power plants</u> to data centers, with a planned roll out of 2030, while Last Energy has <u>already found customers in the UK</u> for 20MW SMRs. Rival NuScale <u>received regulatory approval</u> for 50-77MW SMRs in the US this year, but it has struggled to keep its electricity costs in check. <u>Sam Altman-backed Oklo</u> is also planning 15MW+ SMRs, while Microsoft cofounder Bill Gates has backed TerraPower.

Data center operators are looking to SMRs as a potential solution to power constraints, with <u>Green Energy Partners planning to build multiple small modular nuclear reactors</u> next to the 1.6GW Surry Nuclear Power Plant to support 30 new data centers in Virginia.

Swedish nuclear company Kärnfull Next <u>has announced plans for a campus</u> of small modular reactors (SMRs) on the Swedish coast to build data centers.

## People age 80 and over top 10% of Japan's population for first time



Women make up 56.6% of Japan's elderly population, numbering 20.5 million compared with men, who stand at 15.7 million. | REUTERS

#### KYODO, JIJI, BLOOMBERG

Sep 18, 2023

People age 80 and over topped 10% of Japan's population for the first time, government data showed Sunday, as the country with the world's highest proportion of older people continues to grapple with a rapidly aging society.

The number of people in the age bracket swelled by 270,000 from the previous year to 10.1% of Japan's total population of around 124.6 million, the Ministry of Internal Affairs and Communications said ahead of Monday's Respect for the Aged Day.

In another record, those age 65 and older, defined as the elderly in Japan, accounted for 29.1% of the total population at 36.2 million, meaning the country continues to have the largest proportion of this age group worldwide, the data showed as of Friday.

Italy and Finland rank second and third, with those age 65 and over accounting for 24.5% and 23.6% of their respective populations.

Women make up 56.6% of Japan's elderly population, numbering 20.5 million compared with men, who stood at 15.7 million, with the difference said to be a reflection of women having a longer average life expectancy.

Those age 75 and older accounted for 16.1% of the total population, or 20.05 million people, surpassing the 20 million mark for the first time. This is apparently because some of the postwar baby boomers, born between 1947 and 1949, had reached 75.

Meanwhile, 25.2% of older people in Japan were employed in 2022, with the number rising for the 19th-straight year to 9.12 million, another record. The elderly compose 13.6% of the country's total workforce.

Of all workers age 65 or over, those in the wholesale and retail sectors made up the largest group, at 1.27 million, followed by 1.05 million people in the services industry and 1.04 million people in the medical and welfare sectors.

Of elderly employees, excluding executives at businesses and other organizations, 4.05 million were nonregular workers, such as part-timers and contract workers, accounting for 76.4% of the total.

The number of elderly nonregular workers was up by 2.26 million from the level 10 years before.

The share of the elderly is increasing year by year.

According to the National Institute of Population and Social Security Research, the proportion is expected to reach 34.8% in 2040, when the so-called second baby-boomer generation, or people born between 1971 and 1974 to post-World War II baby boomers, will be 65 or older.

The Japanese government has struggled to prevent the declining population from hurting the economy while responding to the pressing and growing needs of older citizens, with many living alone and in need of personal support.

Ballooning social security spending has added to Japan's massive debt and the shortage of young people has left many industries short of labor — not least carers for the elderly. Prime Minister Fumio Kishida has said the country risks losing its ability to function if it does not take radical measures.

Japan's steps to bolster the birthrate haven't been successful, while authorities have been hesitant to accept large numbers of migrant workers to make up the shortfall. Last year, the number of babies born fell to fewer than 800,000 for the first time since records began in the 19th century.

Similar problems with aging and shrinking populations are spreading across other parts of Asia, with South Korea expected to take over as the world's grayest nation in the coming decades. China's population began to shrink in 2022 for the first time in 60 years.





KSA Energy Min Abdulaziz to @CroftHelima.

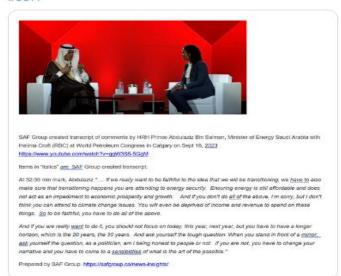
Need energy security, affordability, & doesn't act as impediment to economic growth.

if not "I'm sorry, but i don't think you can attend to climate change issues"

#Oil #NatGas needed for longer

SAF transcript.

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"Chevron have put out media statements saying that everything is back to normal on the Wheatstone facility [1.2 bcfd #LNG]. Sure thing, Chevron are still flaring" Offshore Alliance.

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Flaring does not equate to back to normal.

Hope safety isn't compromised.

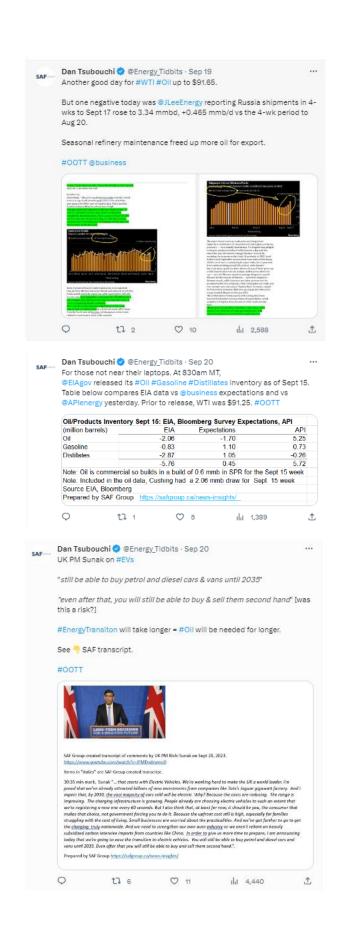


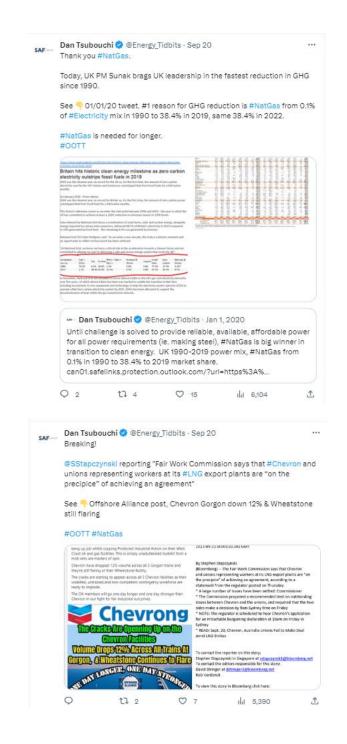
3rd consecutive WoW decline and more than expected in China schedule domestic flights post summer at -2.7% WoW to 95,853.

But expect big boost in air travel with 12-day National Day holidays end of Sept.

Thx @BloombergNEF Claudio Lubis.







Dan Tsubouchi 🤣 @Energy\_Tidbits - Sep 21

China Baidu city-level road congestion has 7th consecutive WoW increase with end of summer.

Up YoY but still below Sept 2021 levels.

But expect big drop in city road congestion & boost in air travel with 12-day National Day holidays end of Sept.

#### Thx @BloombergNEF, #OOTT



Dan Tsubouchi 🤣 @Energy\_Tidbits · Sep 21 SAF

> See  $\P$  @SStapczynski just reported "Chevron Accepts Regulator Proposal to End Australia LNG Strikes"

#### #LNG #NatGas #OOTT

BN 09/21 11:06 \*CHEVRON ACCEPTS REGULATOR'S RECOMMENDATION ON LNG UNION DISPUTE

Chevron Accepts Regulator Proposal to End Australia LNG Strikes 2023-09-21 11:13:36.690 GMT

By Stephon Stapczynski
[Bloomborg] — Chowon accepted the recommended agreement
from Australia's Fair Work Commission to resolve the depute
with the workers unions at its INO export plants, according to a
statement from the company.

\*We have informed the Commissioner of our position and written
to the unions and other employee bargaining representatives
confirming our acceptance," Chowon said

\* READ: Chowon and Unions Reviewing New Plan to End LING Strikes

To contact the reporter on this story:
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David Stringer at <u>debringers@bloomberg.net</u>
Stephen Stapczynski, John Deam

To view this story in Bloomberg click here: https://blinks.bloomberg.com/news/stories/S1C1NLTOAFB4

#### w- Dan Tsubouchi 📀 @Energy\_Tidbits · Sep 20



@SStapczynski reporting "Fair Work Commission says that #Chevron and unions representing workers at its #LNG export plants are "on the precipice" of achievi...

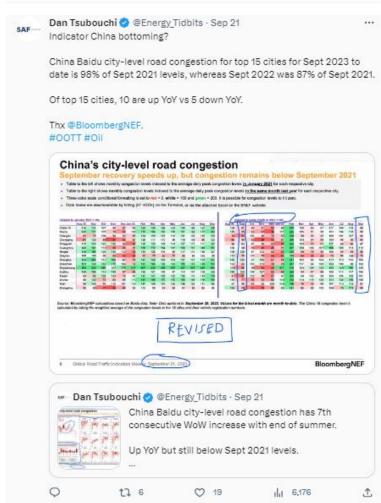


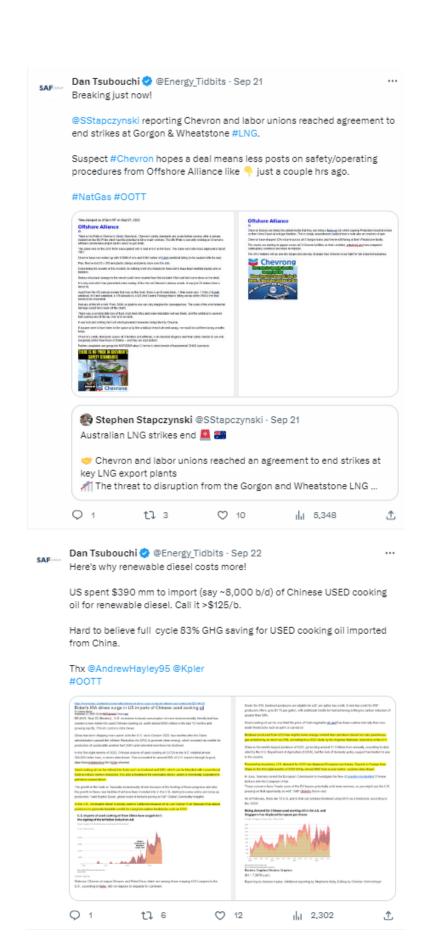
Warmer than normal temp forecast for Oct/Nov/Dec by JMA for Japan and by ECMWF for Europe.

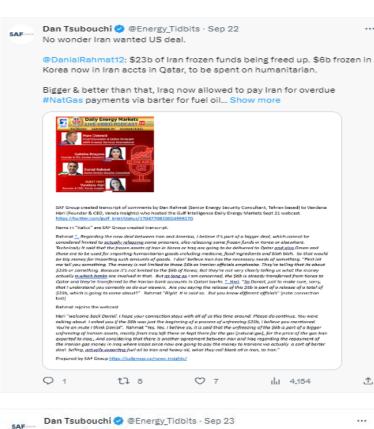
A warm start to winter makes it hard, but not impossible to catch up. But means need cold Jan/Feb.

#### #OOTT









Support for #Oil prices

#Vortexa crude #Oil floating storage 09/22 est 91.62 mmb, +5.20 mmb WoW vs 09/15 88.42 mmb.

09/15 revised up, but all other weeks revised down.

Last 5 week average 86 mmb, down 46 mmb vs recent 06/23/23 peak 132 mmb.

1

Thx @Vortexa @business. #OOTT





Their latest - and still haven't formally signed off on the Chevron offer of settlement.

But if replacement workers leaving, union must be arriving & #LNG operations should be normal right... Show more

Time stamped as of 11am MT on Sept 23, 2023

https://www.facebook.com/people/Offshore-Alliance/100063786371409/

#### Offshore Alliance

Chevron's non-competent BCP workforce are scuttling off the Gorgon and Wheelstone facilities as OA members consider the drafting of EBA changes to level progression, remuneration and key entitlements.

Chevron's lawyers have sent the Offshore Alliance legal team a draft of their offer of settlement and our lawyers are reviewing their proposed Agreements to ensure there are no weasel words which Chevron use to avoid their industrial obligations.

We told Chevron from the outset that our members will go one day longer and one day stronger in our bargaining campaign.

The Offshore Altiance will be meeting with members once our lawyers have reviewed Chevron's proposed settlement of claims.





