Energy Tidbits

Permian DUCs Down to June 2014 Levels, When Permian Oil Production was 1.59 mmb/d, 28% of 5.69 mmb/d in March 2023

Produced by: Dan Tsubouchi

April 23, 2023

Dan Tsubouchi
Chief Market Strategist
dtsubouchi@safgroup.ca

Ryan Dunfield
CEO
rdunfield@safgroup.ca

Aaron Bunting
COO, CFO
abunting@safgroup.ca

Ryan Haughn
Managing Director
rhaughn@safgroup.ca

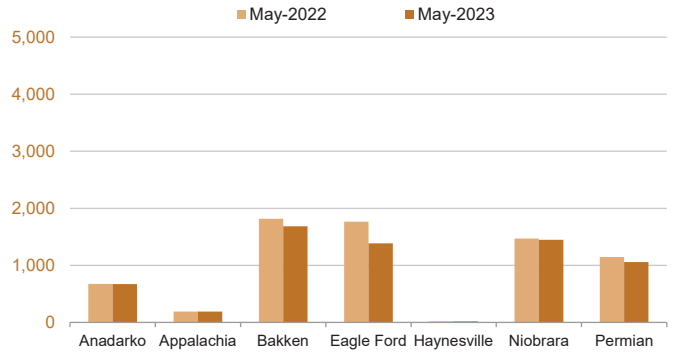
Year-over-year summary

Drilling Productivity Report

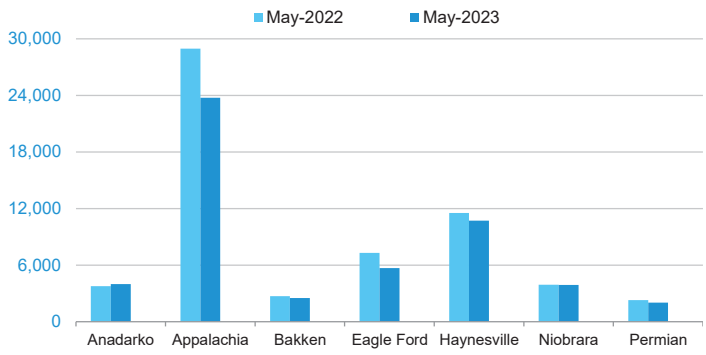
April 2023

drilling data through March
projected production through May

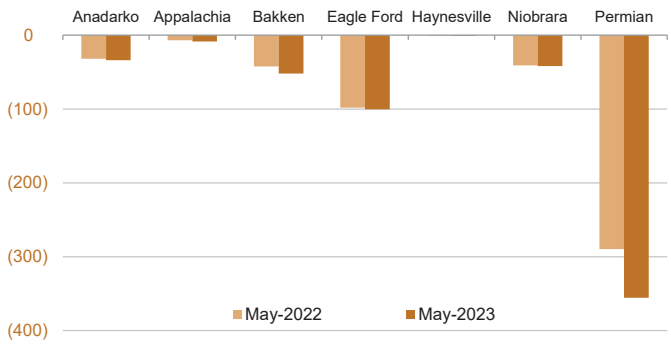
New-well oil production per rig
barrels/day



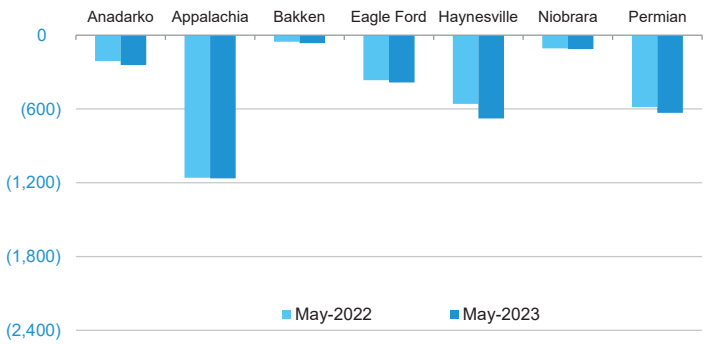
New-well gas production per rig
thousand cubic feet/day



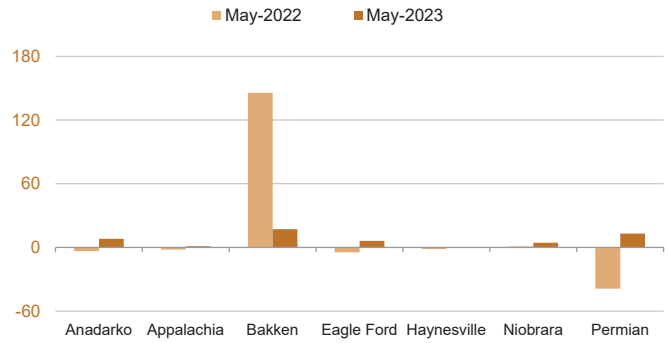
Legacy oil production change
thousand barrels/day



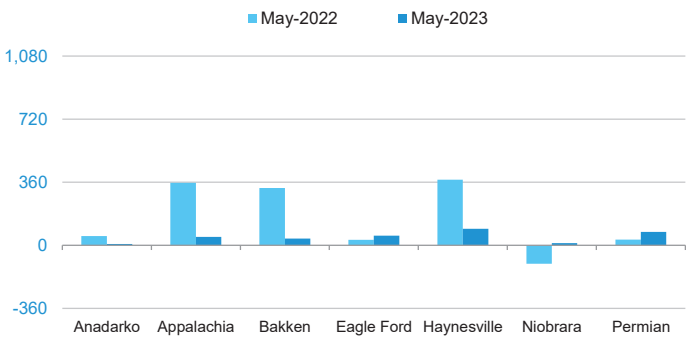
Legacy gas production change
million cubic feet/day



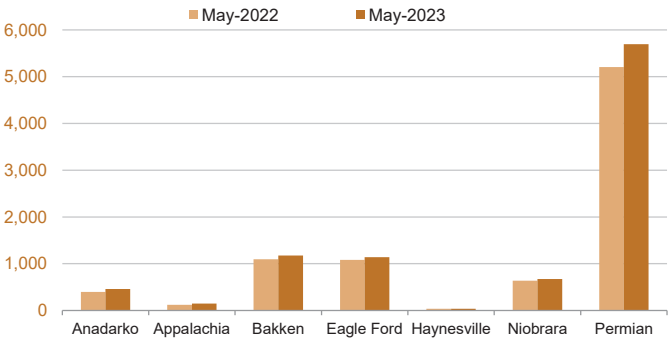
Indicated monthly change in oil production (May vs. Apr)
thousand barrels/day



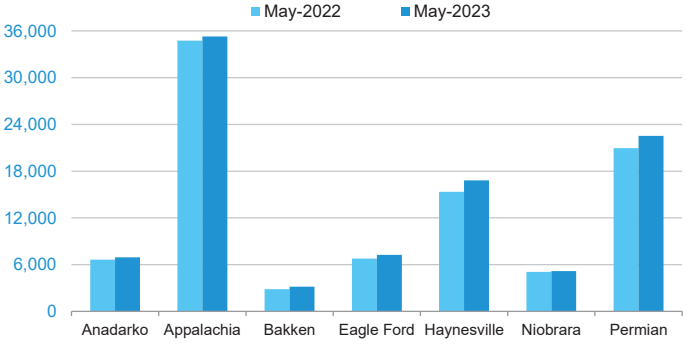
Indicated monthly change in gas production (May vs. Apr)
million cubic feet/day



Oil production
thousand barrels/day



Natural gas production
million cubic feet/day



Anadarko Region

Drilling Productivity Report

April 2023

drilling data through March
projected production through May

Oil +1
barrels/day
month over month

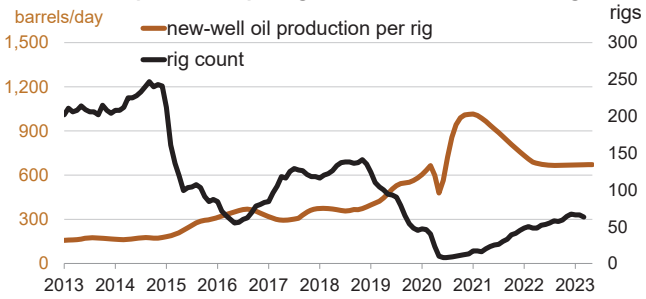
672 *May*
671 *April*
barrels/day

Monthly additions from one average rig

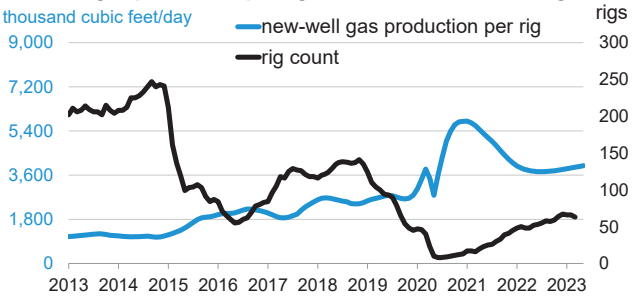
May **3,984**
April **3,953**
thousand cubic feet/day

Gas +31
thousand cubic feet/day
month over month

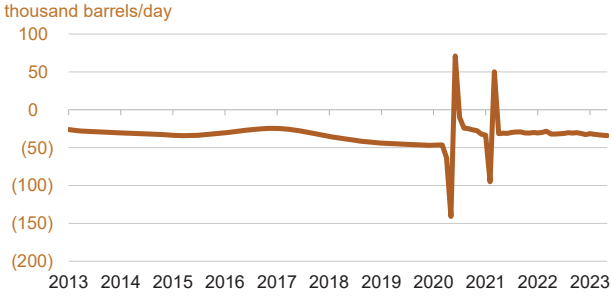
Anadarko Region
New-well oil production per rig



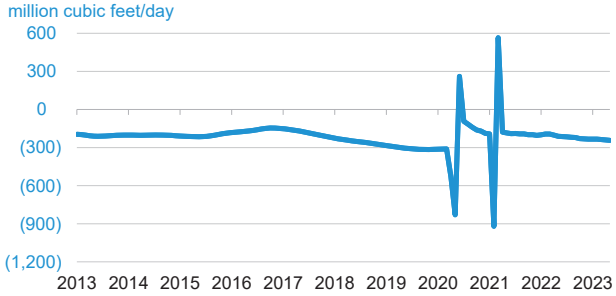
Anadarko Region
New-well gas production per rig



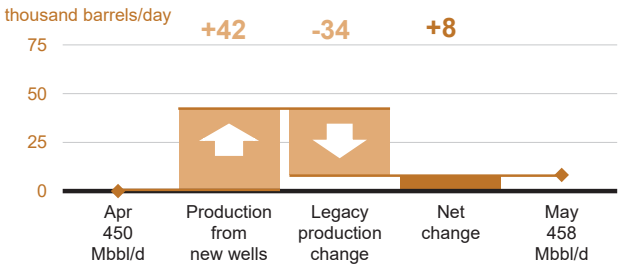
Anadarko Region
Legacy oil production change



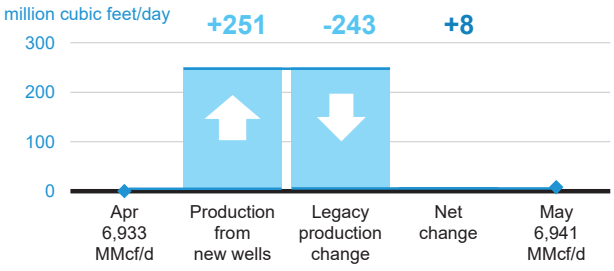
Anadarko Region
Legacy gas production change



Anadarko Region
Indicated change in oil production (May vs. Apr)

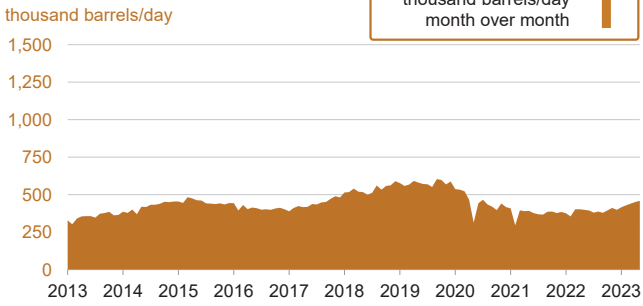


Anadarko Region
Indicated change in natural gas production (May vs. Apr)



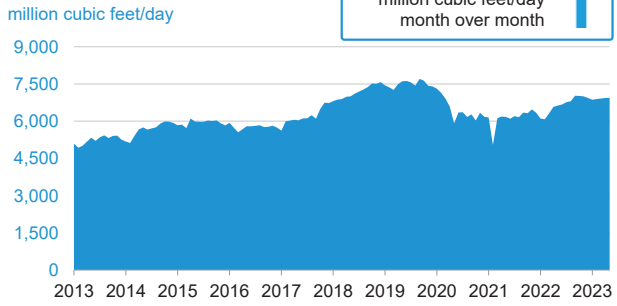
Anadarko Region
Oil production

Oil +8
thousand barrels/day
month over month



Anadarko Region
Natural gas production

Gas +8
million cubic feet/day
month over month



Appalachia Region
Drilling Productivity Report

April 2023
drilling data through March
projected production through May

Oil 0 barrels/day month over month

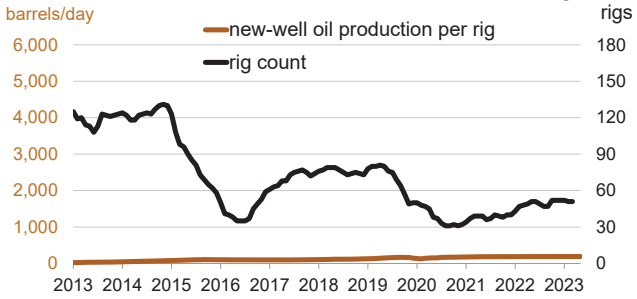
191 *May*
191 *April*
barrels/day

Monthly additions from one average rig

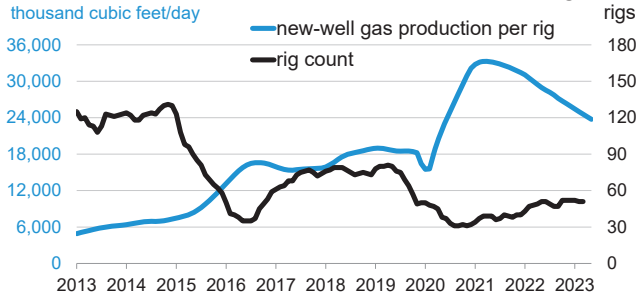
May **23,750**
April **24,161**
thousand cubic feet/day

Gas -411 thousand cubic feet/day month over month

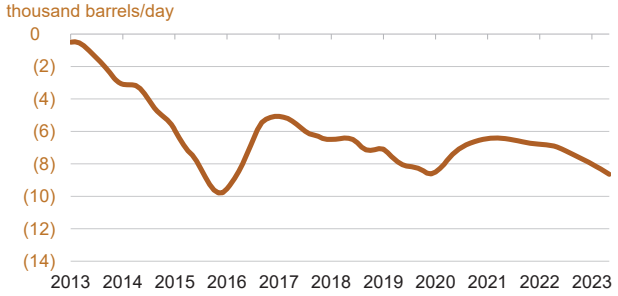
Appalachia Region
New-well oil production per rig



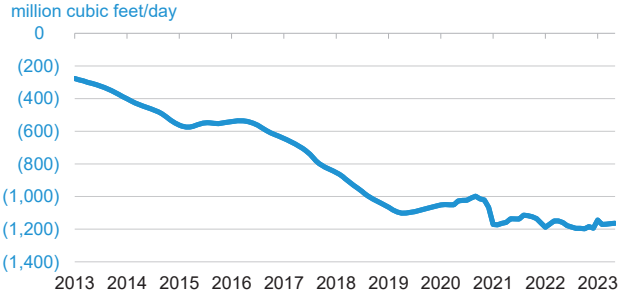
Appalachia Region
New-well gas production per rig



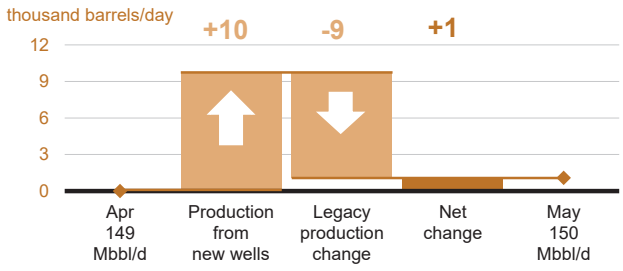
Appalachia Region
Legacy oil production change



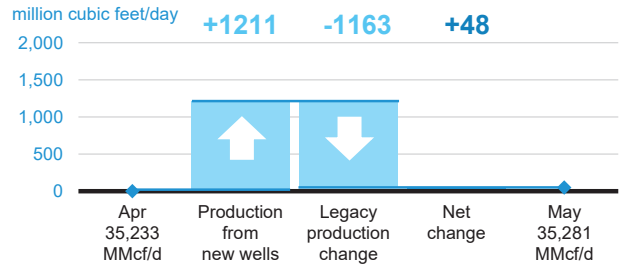
Appalachia Region
Legacy gas production change



Appalachia Region
Indicated change in oil production (May vs. Apr)

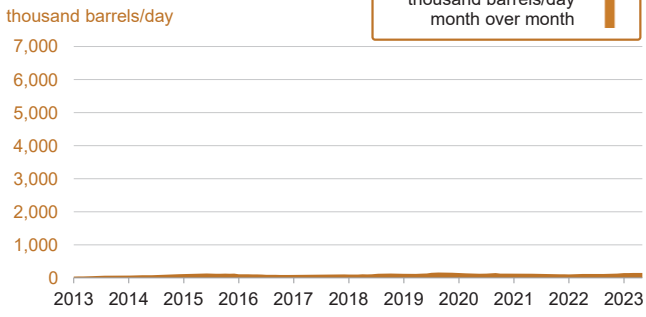


Appalachia Region
Indicated change in natural gas production (May vs. Apr)



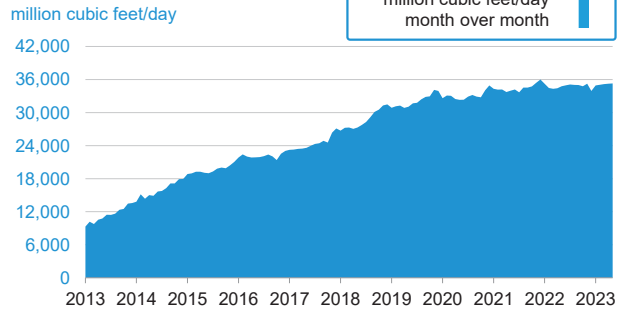
Appalachia Region
Oil production

Oil +1 thousand barrels/day month over month



Appalachia Region
Natural gas production

Gas +48 million cubic feet/day month over month



Bakken Region
Drilling Productivity Report

April 2023
drilling data through March
projected production through May

Oil +1
barrels/day
month over month

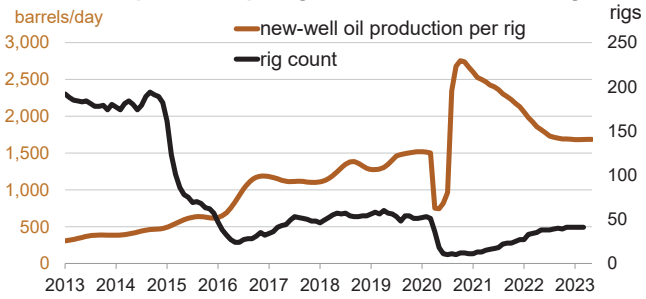
1,686 *May*
1,685 *April*
barrels/day

Monthly additions from one average rig

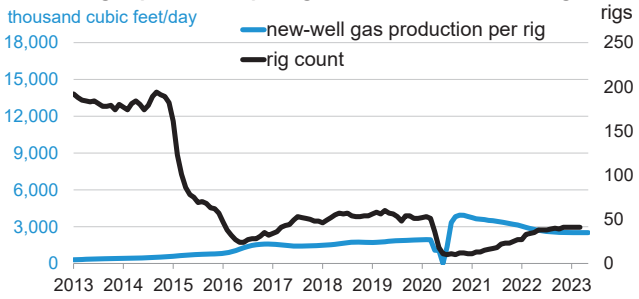
May **2,512**
April **2,510**
thousand cubic feet/day

Gas +2
thousand cubic feet/day
month over month

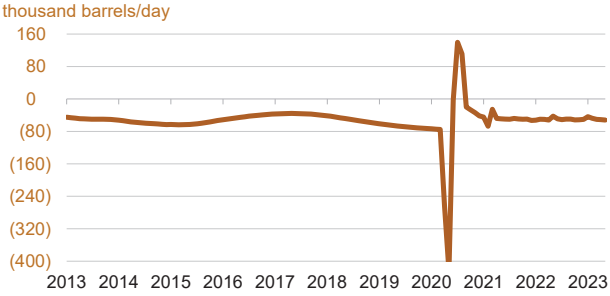
Bakken Region
New-well oil production per rig



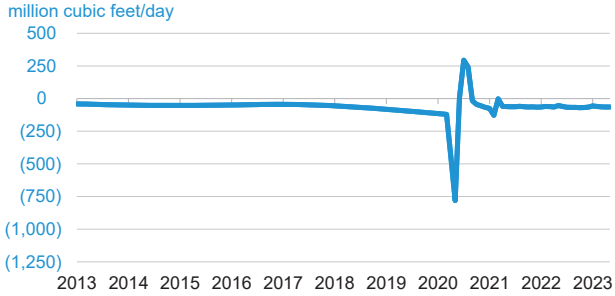
Bakken Region
New-well gas production per rig



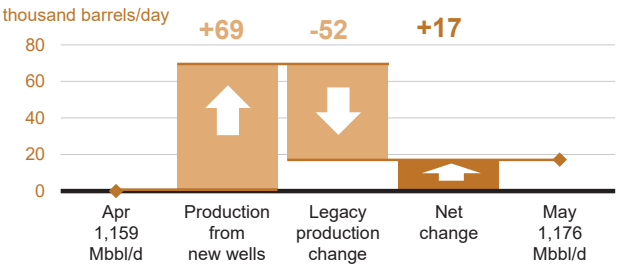
Bakken Region
Legacy oil production change



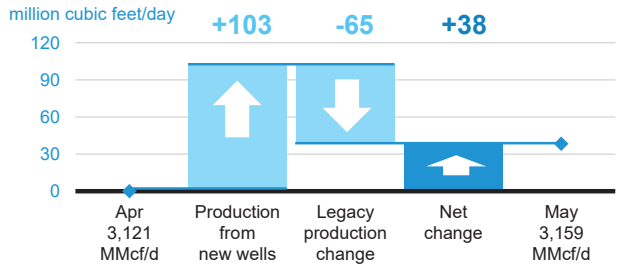
Bakken Region
Legacy gas production change



Bakken Region
Indicated change in oil production (May vs. Apr)

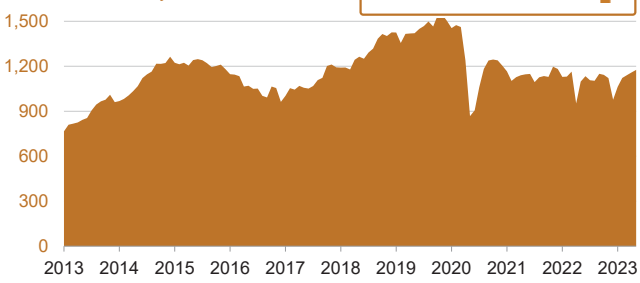


Bakken Region
Indicated change in natural gas production (May vs. Apr)



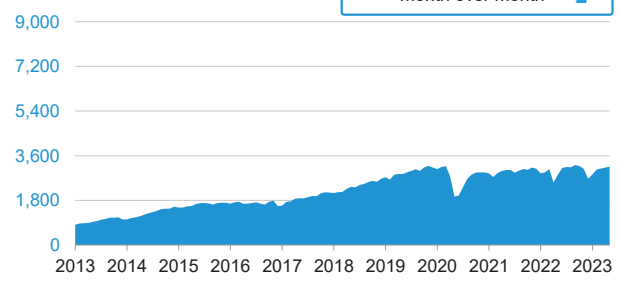
Bakken Region
Oil production

Oil +17
thousand barrels/day
month over month



Bakken Region
Natural gas production

Gas +38
million cubic feet/day
month over month



Eagle Ford Region

Drilling Productivity Report

April 2023

drilling data through March
projected production through May

Oil -15 barrels/day month over month

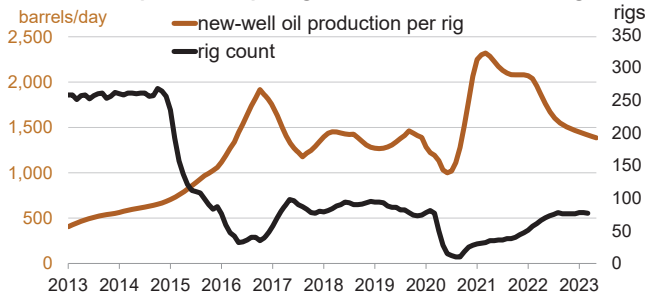
1,385 *May*
1,400 *April*
barrels/day

Monthly additions from one average rig

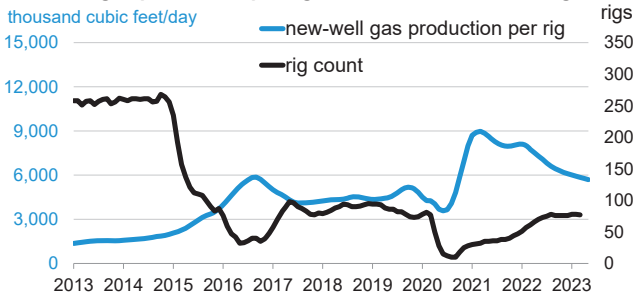
May **5,697**
April **5,772**
thousand cubic feet/day

Gas -75 thousand cubic feet/day month over month

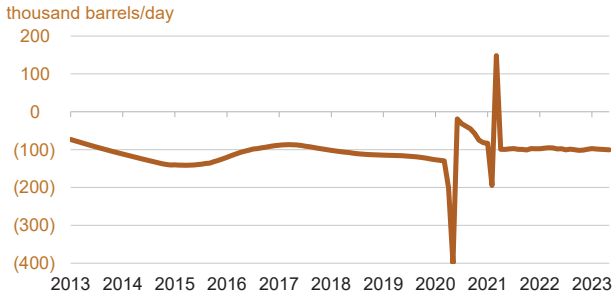
Eagle Ford Region
New-well oil production per rig



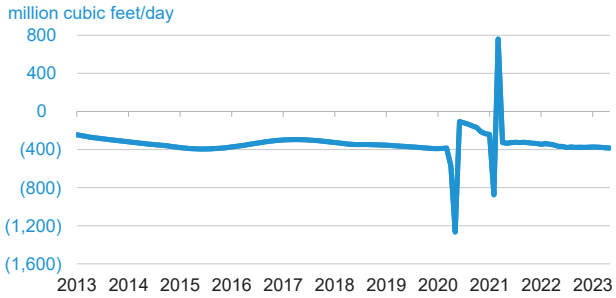
Eagle Ford Region
New-well gas production per rig



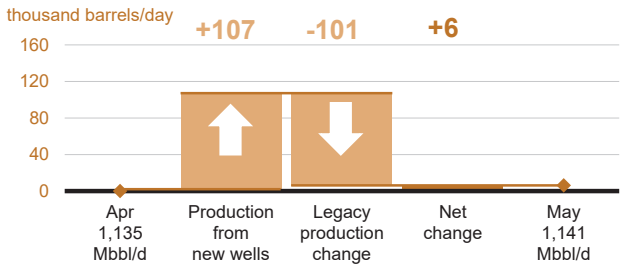
Eagle Ford Region
Legacy oil production change



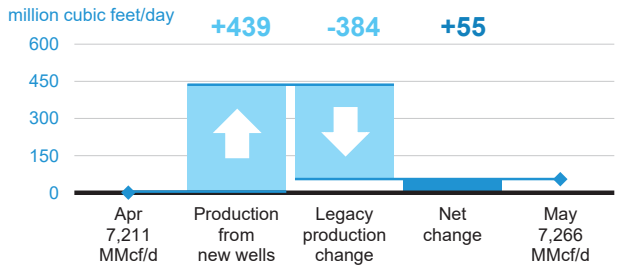
Eagle Ford Region
Legacy gas production change



Eagle Ford Region
Indicated change in oil production (May vs. Apr)

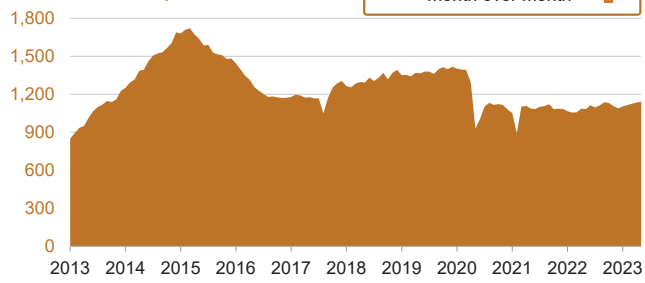


Eagle Ford Region
Indicated change in natural gas production (May vs. Apr)



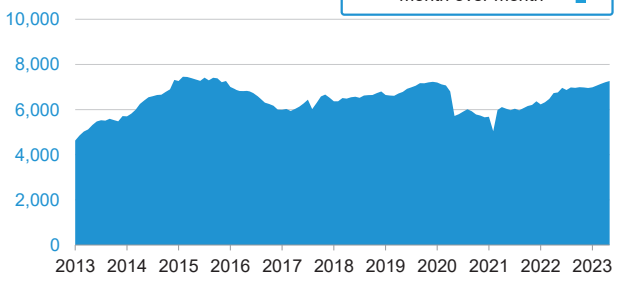
Eagle Ford Region
Oil production

Oil +6 thousand barrels/day month over month



Eagle Ford Region
Natural gas production

Gas +55 million cubic feet/day month over month



Haynesville Region

Drilling Productivity Report

April 2023

drilling data through March
projected production through May

Oil 0
barrels/day
month over month

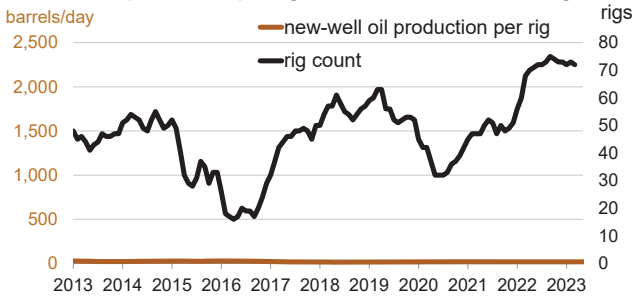
19 *May*
19 *April*
barrels/day

Monthly additions from one average rig

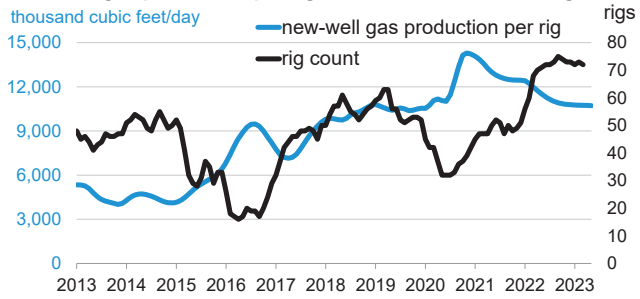
May **10,722**
April **10,732**
thousand cubic feet/day

Gas -10
thousand cubic feet/day
month over month

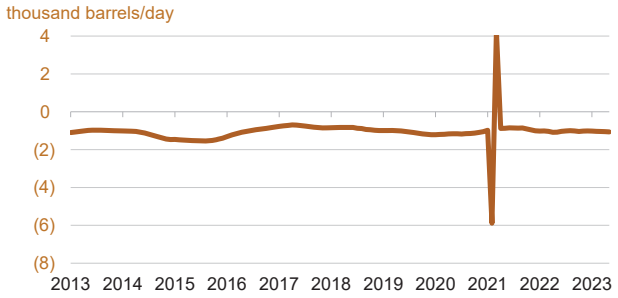
Haynesville Region
New-well oil production per rig



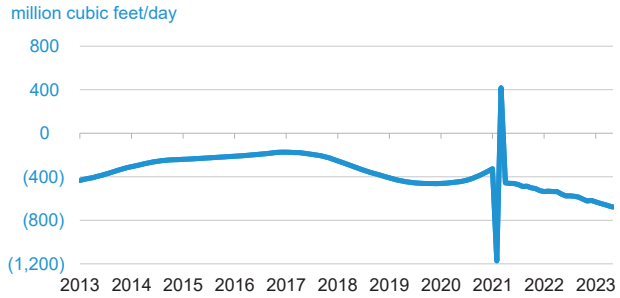
Haynesville Region
New-well gas production per rig



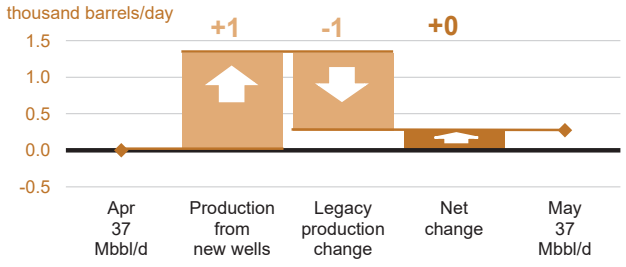
Haynesville Region
Legacy oil production change



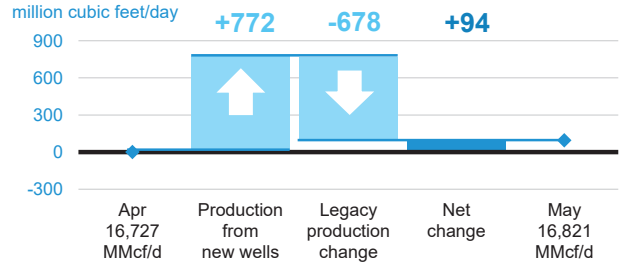
Haynesville Region
Legacy gas production change



Haynesville Region
Indicated change in oil production (May vs. Apr)

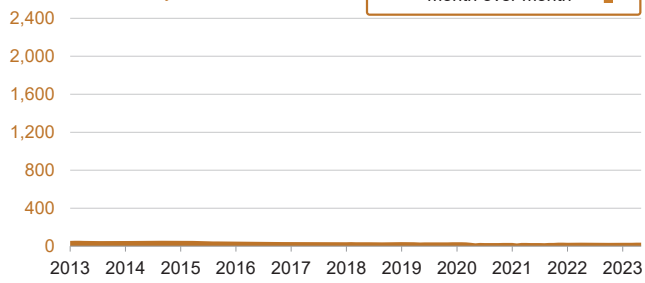


Haynesville Region
Indicated change in natural gas production (May vs. Apr)



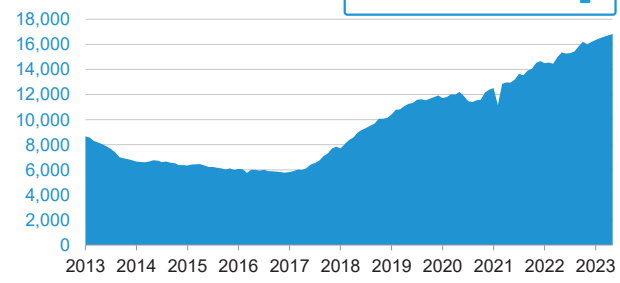
Haynesville Region
Oil production

Oil +0
thousand barrels/day
month over month



Haynesville Region
Natural gas production

Gas +94
million cubic feet/day
month over month



Niobrara Region
Drilling Productivity Report

April 2023
drilling data through March
projected production through May

Oil +15
barrels/day
month over month

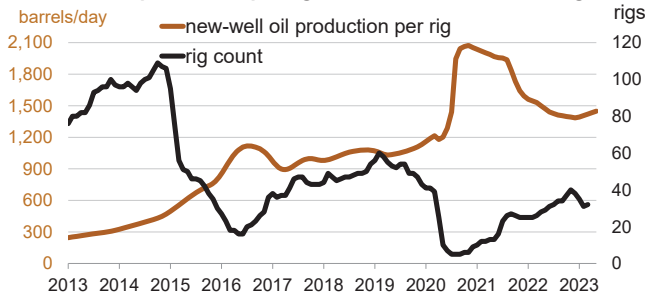
1,449 *May*
1,434 *April*
barrels/day

Monthly additions from one average rig

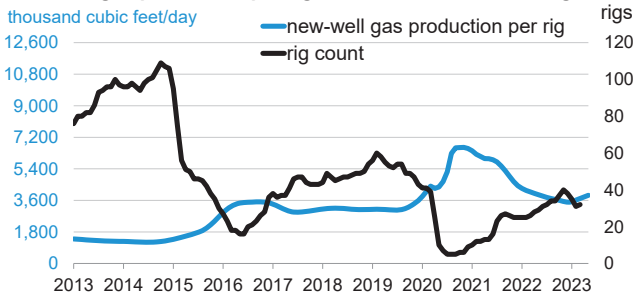
May **3,893**
April **3,798**
thousand cubic feet/day

Gas +95
thousand cubic feet/day
month over month

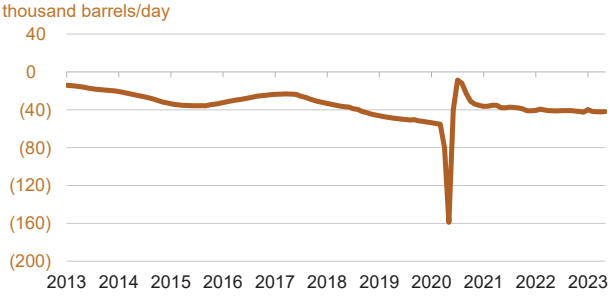
Niobrara Region
New-well oil production per rig



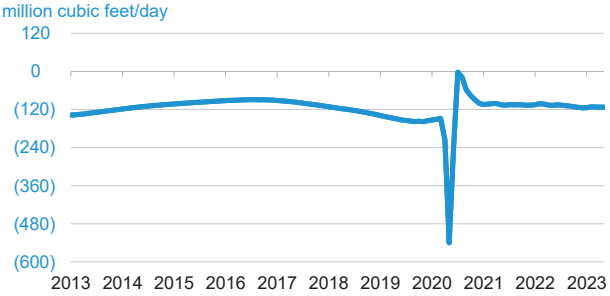
Niobrara Region
New-well gas production per rig



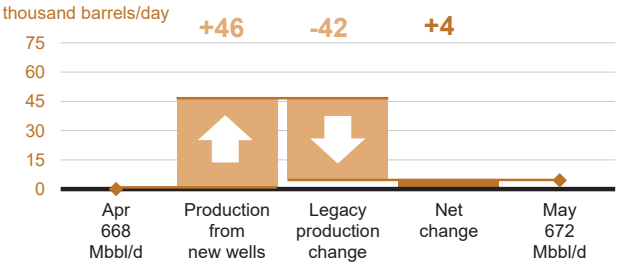
Niobrara Region
Legacy oil production change



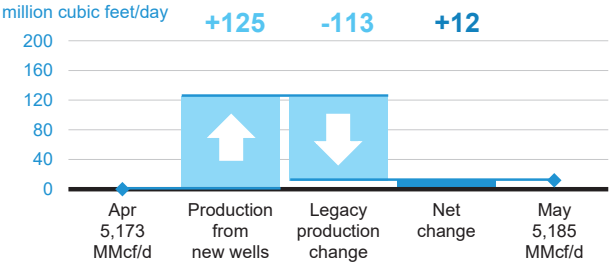
Niobrara Region
Legacy gas production change



Niobrara Region
Indicated change in oil production (May vs. Apr)

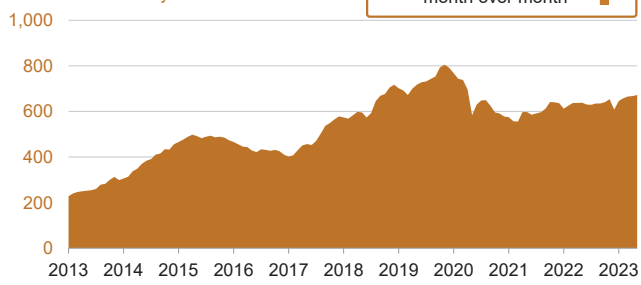


Niobrara Region
Indicated change in natural gas production (May vs. Apr)



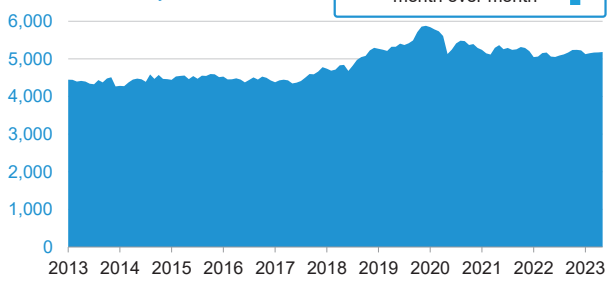
Niobrara Region
Oil production

Oil +4
thousand barrels/day
month over month



Niobrara Region
Natural gas production

Gas +12
million cubic feet/day
month over month



Permian Region
Drilling Productivity Report

April 2023
drilling data through March
projected production through May

Oil -1 barrels/day month over month

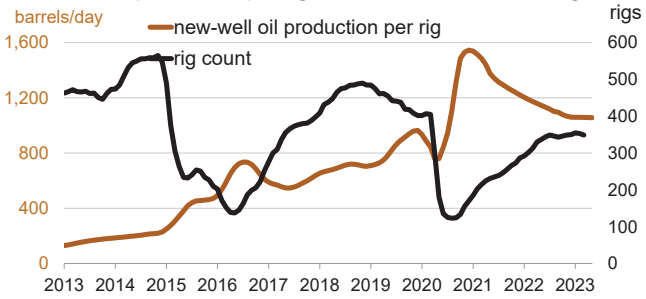
1,056 *May*
1,057 *April*
barrels/day

Monthly additions from one average rig

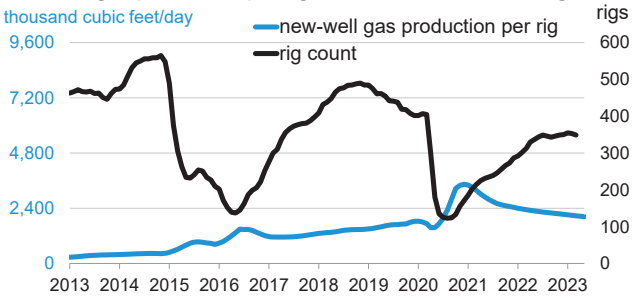
May **2,032**
April **2,053**
thousand cubic feet/day

Gas -21 thousand cubic feet/day month over month

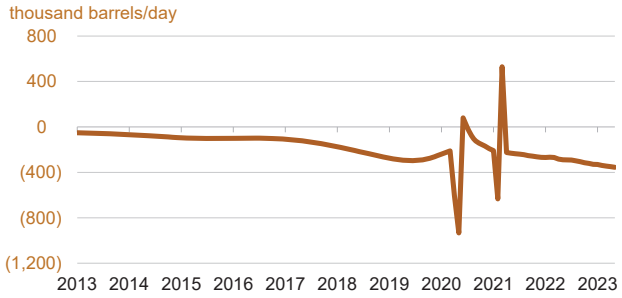
Permian Region
New-well oil production per rig



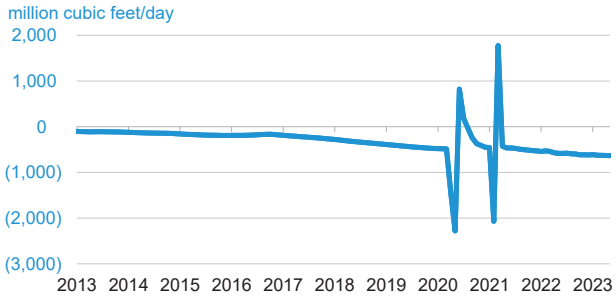
Permian Region
New-well gas production per rig



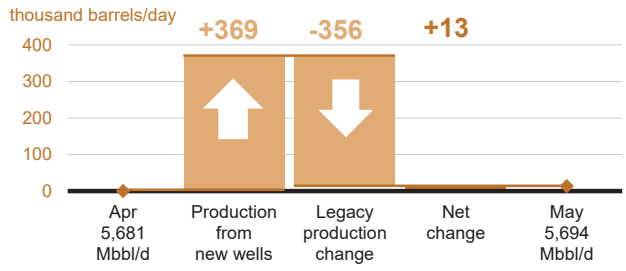
Permian Region
Legacy oil production change



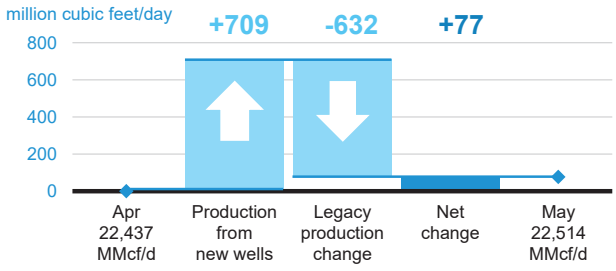
Permian Region
Legacy gas production change



Permian Region
Indicated change in oil production (May vs. Apr)

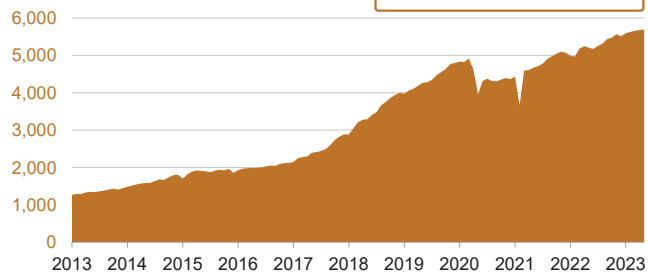


Permian Region
Indicated change in natural gas production (May vs. Apr)



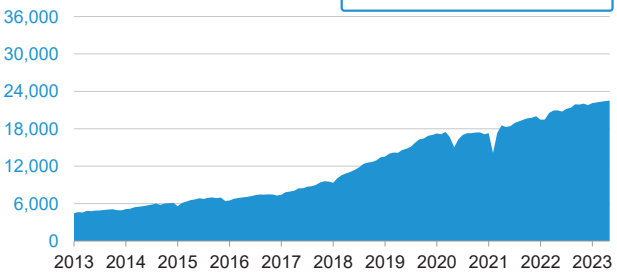
Permian Region
Oil production
thousand barrels/day

Oil +13 thousand barrels/day month over month



Permian Region
Natural gas production
million cubic feet/day

Gas +77 million cubic feet/day month over month



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[1] and natural gas[2] 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[3] contribution to production of oil and natural gas from new wells.[4] 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.[5] 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.

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

https://investors.bakerhughes.com/news-releases/news-release-details/baker-hughes-company-announces-first-quarter-2023-results

Baker Hughes Company Announces First Quarter 2023 Results

April 19, 2023 at 7:00 AM EDT

“We were pleased with our first quarter results and remain optimistic on the outlook for 2023. We maintained our strong order momentum in IET and SSPS. We also delivered solid operating results at the high end of our guidance in both business segments, booked almost $300 million of New Energy orders and generated approximately $200 million of free cash flow,” said Lorenzo Simonelli, Baker Hughes chairman and chief executive officer.

“While 2023 has already started off with some macro volatility, we remain optimistic on the outlook for energy services and Baker Hughes. Our diverse portfolio features long cycle and short cycle businesses that position us well to navigate any periods of variability that may occur across the energy sector.”

“We continue to believe that the current environment remains unique, with a spending cycle that is more durable and less sensitive to commodity price swings, relative to prior cycles. Another notable characteristic of this cycle is the continued shift towards the development of natural gas and LNG. As the world increasingly recognizes the crucial role natural gas will play in the energy transition, serving as both a transition and destination fuel, the case for a multi-decade growth opportunity in gas is steadily improving as both a transition and destination fuel.”

“In addition to capitalizing on the commercial opportunities presented by this favorable macro backdrop, Baker Hughes remains committed in 2023 to transforming the Company operationally and positioning it for growth in the energy and industrial markets. I want to thank our shareholders, customers, and our employees for their continued hard work to deliver against our strategic goals,” concluded Simonelli.

Excerpts Bloomberg Transcripts: Baker Hughes CEO Simonelli on Baker Hughes Q1 call on April 18, 2023

Lorenzo Simonelli {BIO 15243700 <GO>}

Another notable characteristic of this cycle is the continued shift towards the development of natural gas and LNG. As the world increasingly recognizes the crucial role natural gas will play in the energy transition, serving as both a transition and destination fuel, the case for a multi-decade growth opportunity in gas is steadily improving. This is driving operators of all sizes to dedicate more spending towards natural gas development, as well as LNG projects and associated infrastructure.

We are seeing the early stages of this shift through a step-up in the exploration and development of gas reserves in regions like Africa, the Middle East and the Eastern Mediterranean. We are also seeing the introduction of new technologies and entrants into the LNG sector more broadly, as well as an evolution in contracting structures for LNG offtake volumes.

For these reasons, LNG project sanctioning activity has gotten off to a strong start in 2023, with 20 MTPA already reaching FID and other projects likely to soon follow. Contrary to conventional wisdom, we believe that recent declines in global LNG prices from the unsustainably high levels reached last year is a net positive for the sector, by supporting demand growth in key developing markets and bringing closer alignment on LNG pricing expectations between buyers and sellers.

Based on conversations with existing and new customers, we see the potential for this LNG cycle to extend for several years with a pipeline of new international opportunities expanding project visibility out to 2026 and beyond. We remain confident that we will see 65 MTPA to 115 MTPA of LNG projects reach FID in 2023, and continue to see solid project activity in 2024 and 2025.

A - Lorenzo Simonelli {BIO 15243700 <GO>}

(Technical Difficulty) Near-term and also the long-term prospects for natural gas and LNG. And I think you've seen some of the comments made by the G7 and others that natural gas and LNG has a role to play not just as a transition, but as a destination fuel. So even though 2022 saw the pace of FIDs slowed down somewhat because of the high interest rates and also the inflation, the customer conversations have continued.

And I'm very pleased that we were able to book the Qatar NFS expansion, also Sempra Port Arthur and also some smaller projects in Asia Pacific and West Africa during the course of the first quarter. And there is still several more projects that we're tracking for FID this year. You've seen some of the external press around Rio Grande and what they're expecting from the FAC [ph], et cetera. And so we remain confident that this year, we'll see between 65 MTPA to 115 MTPA of FIDs in '23.

And in terms of pipeline of opportunities, they continue to grow as well. I think a good example is Cheniere's 20 MTPA expansion that they've communicated at Sabine Pass. And so we're seeing a number of also international projects. So based on what we see today, there's a reasonable expectation that LNG FIDs in '24 could be approaching the same FID levels we see in 2023. Still early to call, but there are a number of projects that are moving towards that.

And then it continues in '25 and '26, we also see a set of opportunities improving and with the potential for FID ranges between 30 MTPA to 60 MTPA each year. So again, the market is very active at the moment, and we like the position that we have and helping our customers.

Highlights for the month

- Indigenous crude oil and condensate production during March 2023 was down by 2.8 % than that of March 2022 as compared to a de-growth of 4.9 % during February 2022. OIL registered a growth of 7.2 % and ONGC registered a de - growth of 1.5 % during March 2023 as compared to March 2022. PSC registered de-growth of 11.1 % during March 2023 as compared to March 2022. De-growth of 1.7 % was registered in the total crude oil and condensate production during April - March 2023 over the corresponding period of the previous year.
- 'Crude oil processed during March 2023 was 23.0 MMT, which was 3.0 % higher than March 2022 as compared to a growth of 2.0 % during February 2022. Growth of 5.6 % was registered in the total crude oil processing during April- March 2023 over the corresponding period of the previous year.
- Crude oil imports increased by 7.9% and 9.4% during March 2023 and April- March 2023 respectively as compared to the corresponding period of the previous year. The net import bill for Oil & Gas was $10.5 billion in March 2023 compared to $12.1 billion in March 2022. In this the crude oil imports constitutes $11.6 billion, LNG imports $1.5 billion and the exports were $4.6 billion during March 2023.
- The price of Brent Crude averaged $78.56/bbl during March 2023 as against $82.49/bbl during February 2023 and $118.81/bbl during March 2022. The Indian basket crude price averaged $78.54/bbl during March 2023 as against $82.28/bbl during February 2023 and $112.87 /bbl during March 2022.
- Production of petroleum products saw a growth of 1.5 % during March 2023 over March 2022 as compared to a growth of 3.3 % during February 2022. Growth of 4.8 % was registered in the total POL production during April- March 2023 over the corresponding period of the previous year.
- POL products imports decreased by 7.8% and increased by 11.7% during March 2023 and April- March 2023 respectively as compared to the corresponding period of the previous year. Increase in POL product imports during April- March 2023 were mainly due to increase in import of all products except lubes/LOBS, fuel oil (FO) and bitumen etc.

•	Exports of POL products decreased by 24.1% and 4.1% during March 2023 and April- March 2023 respectively as compared to the corresponding period of the previous year. Decrease in POL products exports during April- March 2023 were mainly due to decrease in exports of motor spirit (MS), naphtha, superior kerosene oil (SKO), high speed diesel (HSD) and petcoke/CBFS etc.
•	The consumption of petroleum products during April-Mar 2023 with a volume of 222.3 MMT reported a growth of 10.2% compared to the volume of 201.7 MMT during the same period of the previous year. This growth was led by 13.4% growth in MS, 12% in HSD & 47.1% in ATF consumption besides FO/LSHS, Petcoke, LPG and others during the period. The consumption of petroleum products during Mar 2023 recorded a growth of 5.0% with a volume of 20.5 MMT compared to the same period of the previous year.
•	Ethanol blending with Petrol was 12.1% during March 2023 and cumulative ethanol blending during December 2022- March 2023 was 11.6%.
•	Total Natural Gas Consumption (including internal consumption) for the month of March 2023 was 5126 MMSCM which was 5.9% lower than the corresponding month of the previous year. The cumulative consumption of 60311 MMSCM for the current financial year till March 2023 was lower by 6.0 % compared with the corresponding period of the previous year.
•	Gross production of natural gas for the month of March 2023 (P) was 2956 MMSCM which was higher by 2.4% compared with the corresponding month of the previous year. The cumulative gross production of natural gas of 34450 MMSCM for the current financial year till March 2023 was higher by 1.3% compared with the corresponding period of the previous year.
•	LNG import for the month of March 2237 (P) was 2237 MMSCM which was 15.2% lower than the corresponding month of the previous year. The cumulative import of 26647(P) MMSCM for the current financial year till March 2023 was lower by 14.1% compared with the corresponding period of the previous year.

2. Crude oil, LNG and petroleum products at a glance

	Details	Unit/ Base	2020-21	2021-22 (P)	Mar		April-Mar	
					2021-22 (P)	2022-23 (P)	2021-22 (P)	2022-23 (P)
1	Crude oil production in India[#]	MMT	30.5	29.7	2.5	2.5	29.7	29.2
2	Consumption of petroleum products*	MMT	194.3	201.7	19.5	20.5	201.7	222.3
3	Production of petroleum products	MMT	233.5	254.3	24.1	24.5	254.3	266.5
4	Gross natural gas production	MMSCM	28,672	34,024	2,886	2,956	34,024	34,450
5	Natural gas consumption	MMSCM	60,982	64,159	5,450	5,126	64,159	60,311
6	Imports & exports:							
	Crude oil imports	MMT	196.5	212.4	19.0	20.5	212.4	232.4
		$ Billion	62.2	120.7	14.9	11.6	120.7	158.3
	Petroleum products (POL) imports*	MMT	43.2	39.0	3.7	3.4	39.0	43.6
		$ Billion	14.8	23.7	2.7	2.1	23.7	26.7
	Gross petroleum imports (Crude + POL)	MMT	239.7	251.4	22.7	23.9	251.4	275.9
		$ Billion	77.0	144.3	17.6	13.6	144.3	185.1
	Petroleum products (POL) export	MMT	56.8	62.8	6.7	5.1	62.8	60.2
		$ Billion	21.4	44.4	7.0	4.6	44.4	57.5
	LNG imports*	MMSCM	33,198	31,028	2,637	2,237	31,028	26,647
		$ Billion	7.9	13.5	1.5	1.5	13.5	17.9
	Net oil & gas imports	$ Billion	63.5	113.4	12.1	10.5	113.4	145.4
7	Petroleum imports as percentage of India's gross imports (in value terms)	%	19.5	23.6	27.9	23.5	23.5	25.9
8	Petroleum exports as percentage of India's gross exports (in value terms)	%	7.3	10.6	15.6	12.0	10.5	12.9
9	Import dependency of crude oil (on POL consumption basis)	%	84.4	85.5	87.7	88.6	85.5	87.3

#Includes condensate; *Private direct imports are prorated for the period Jan'23 to Mar'23 for POL. RIL data prorated. LNG Imports figures from DGCIS are prorated for Feb-Mar 2023. Total may not tally due to rounding off.

3. Indigenous crude oil production (Million Metric Tonnes)

Details	2020-21	2021-22	Mar			April-Mar		
			2021-22	2022-23 Target*	2022-23 (P)	2021-22	2022-23 Target*	2022-23 (P)
ONGC	19.1	18.5	1.6	1.8	1.6	18.5	21.1	18.4
Oil India Limited (OIL)	2.9	3.0	0.3	0.3	0.3	3.0	3.4	3.2
Private / Joint Ventures (JVs)	7.1	7.0	0.6	0.8	0.5	7.0	7.4	6.2
Total Crude Oil	**29.1**	**28.4**	**2.4**	**2.9**	**2.3**	**28.4**	**31.9**	**27.8**
ONGC condensate	1.1	0.9	0.08	0.0	0.1	0.9	0.0	1.0
PSC condensate	0.3	0.30	0.02	0.0	0.03	0.30	0.0	0.31
Total condensate	**1.4**	**1.2**	**0.11**	**0.0**	**0.1**	**1.2**	**0.0**	**1.4**
Total (Crude + Condensate) (MMT)	**30.5**	**29.7**	**2.5**	**2.9**	**2.5**	**29.7**	**31.9**	**29.2**
Total (Crude + Condensate) (Million Bbl/Day)	0.61	0.60	0.60	0.69	0.58	0.60	0.64	0.59

*Provisional targets inclusive of condensate.

4. Domestic and overseas oil & gas production (by Indian Companies)

Details	2020-21	2021-22 (P)	Mar		April-Mar	
			2021-22 (P)	2022-23 (P)	2021-22 (P)	2022-23 (P)
Total domestic production (MMTOE)	59.2	63.7	5.4	5.4	63.7	63.6
Overseas production (MMTOE)	21.9	21.8	1.8	1.7	21.8	19.5

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

5. High Sulphur (HS) & Low Sulphur (LS) crude oil processing (MMT)

Details		2020-21	2021-22	Mar		April-Mar	
				2021-22	2022-23 (P)	2021-22	2022-23 (P)
1	High Sulphur crude	161.4	185.0	17.3	18.0	185.0	197.9
2	Low Sulphur crude	60.3	56.7	5.1	5.1	56.7	57.3
Total crude processed (MMT)		**221.8**	**241.7**	**22.3**	**23.0**	**241.7**	**255.2**
Total crude processed (Million Bbl/Day)		4.45	4.85	5.28	5.44	4.85	5.13
Percentage share of HS crude in total crude oil processing		**72.8%**	**76.6%**	**77.4%**	**78.0%**	**76.6%**	**77.5%**

6. Quantity and value of crude oil imports			
Year	**Quantity (MMT)**	**$ Million**	**Rs. Crore**
2020-21	196.5	62,248	4,59,779
2021-22 (P)	212.4	120,675	9,01,262
April-Mar 2022-23(P)	232.4	158,309	12,65,810

7. Self-sufficiency in petroleum products (Million Metric Tonnes)							
Particulars		**2020-21**	**2021-22 (P)**	**Mar**		**April-Mar**	
				2021-22 (P)	**2022-23 (P)**	**2021-22 (P)**	**2022-23 (P)**
1	Indigenous crude oil processing	28.0	27.0	2.2	2.2	27.0	26.4
2	Products from indigenous crude (93.3% of crude oil processed)	26.1	25.2	2.1	2.0	25.2	24.7
3	Products from fractionators (Including LPG and Gas)	4.2	4.1	0.3	0.3	4.1	3.5
4	Total production from indigenous crude & condensate **(2 + 3)**	30.3	29.3	2.4	2.3	29.3	28.2
5	Total domestic consumption	194.3	201.7	19.5	20.5	201.7	222.3
% Self-sufficiency (4 / 5)		**15.6%**	**14.5%**	**12.3%**	**11.4%**	**14.5%**	**12.7%**

8. Refineries: Installed capacity and crude oil processing (MMTPA / MMT)

Sl. no.	Refinery	Installed capacity (01.01.2022) MMTPA	Crude oil processing (MMT)							
			2020-21	2021-22	Mar			April-Mar		
					2021-22	2022-23 (Target)	2022-23 (P)	2021-22	2022-23 (Target)	2022-23 (P)
1	Barauni (1964)	6.0	5.5	5.6	0.6	0.6	0.6	5.6	6.5	6.8
2	Koyali (1965)	13.7	11.6	13.5	1.3	1.3	1.3	13.5	14.3	15.6
3	Haldia (1975)	8.0	6.8	7.3	0.7	0.7	0.7	7.3	8.2	8.5
4	Mathura (1982)	8.0	8.9	9.1	0.9	0.8	0.9	9.1	9.4	9.6
5	Panipat (1998)	15.0	13.2	14.8	1.3	1.3	1.3	14.8	14.9	13.8
6	Guwahati (1962)	1.0	0.8	0.7	0.09	0.0	0.1	0.73	1.0	1.1
7	Digboi (1901)	0.65	0.6	0.7	0.06	0.06	0.06	0.7	0.6	0.7
8	Bongaigaon(1979)	2.70	2.5	2.6	0.2	0.2	0.3	2.6	2.7	2.8
9	Paradip (2016)	15.0	12.5	13.2	1.4	1.4	1.4	13.2	14.0	13.6
	IOCL-TOTAL	**70.1**	**62.4**	**67.7**	**6.6**	**6.4**	**6.7**	**67.7**	**71.6**	**72.4**
10	Manali (1969)	10.5	8.2	9.0	1.1	0.9	1.0	9.0	10.7	11.3
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**	**8.2**	**9.0**	**1.1**	**0.9**	**1.0**	**9.0**	**10.7**	**11.3**
12	Mumbai (1955)	12.0	12.9	14.4	1.3	1.3	1.4	14.4	14.0	14.5
13	Kochi (1966)	15.5	13.3	15.4	1.5	1.4	1.5	15.4	15.5	16.0
14	Bina (2011)	7.8	6.2	7.4	0.7	0.7	0.7	7.4	7.8	7.8
	BPCL-TOTAL	**35.3**	**32.4**	**37.2**	**3.5**	**3.3**	**3.6**	**37.2**	**37.2**	**38.4**
15	Numaligarh (1999)	3.0	2.7	2.6	0.2	0.2	0.2	2.6	2.9	3.1

Sl. no.	Refinery	Installed capacity (1.01.2022) (MMTPA)	Crude oil processing (MMT)							
			2020-21	2021-22	Mar			April-Mar		
					2021-22	2022-23 (Target)	2022-23 (P)	2021-22	2022-23 (Target)	2022-23 (P)
16	Tatipaka (2001)	0.066	0.081	0.075	0.006	0.004	0.005	0.075	0.063	0.073
17	MRPL-Mangalore (1996)	15.0	11.5	14.9	1.5	1.5	1.5	14.9	17.0	17.1
	ONGC-TOTAL	**15.1**	**11.6**	**14.9**	**1.5**	**1.5**	**1.5**	**14.9**	**17.1**	**17.2**
18	Mumbai (1954)	9.5	7.4	5.6	0.7	0.8	0.9	5.6	8.5	9.8
19	Visakh (1957)	8.3	9.1	8.4	0.8	1.0	0.9	8.4	9.3	9.3
20	HMEL-Bathinda (2012)	11.3	10.1	13.0	1.1	1.0	1.1	13.0	11.5	12.7
	HPCL- TOTAL	**29.1**	**26.5**	**27.0**	**2.6**	**2.7**	**2.9**	**27.0**	**29.3**	**31.8**
21	RIL-Jamnagar (DTA) (1999)	33.0	34.1	34.8	3.1	3.1	2.8	34.8	34.8	34.4
22	RIL-Jamnagar (SEZ) (2008)	35.2	26.8	28.3	2.1	2.1	2.5	28.3	28.3	27.9
23	NEL-Vadinar (2006)	20.0	17.1	20.2	1.7	1.7	1.7	20.2	20.2	18.7
All India (MMT)		**251.2**	**221.8**	**241.7**	**22.3**	**21.8**	**23.0**	**241.7**	**252.0**	**255.2**
All India (Million Bbl/Day)		**5.02**	**4.45**	**4.85**	**5.28**	**5.16**	**5.44**	**4.85**	**5.06**	**5.13**

Note: Provisional Targets; Some sub-totals/ totals may not add up due to rounding off at individual levels.

9. Major crude oil and product pipeline network (as on 01.04.2023)

Details		ONGC	OIL	Cairn	HMEL	IOCL	BPCL	HPCL	Others*	Total
Crude Oil	Length (KM)	1,284	1,193	688	1,017	5,301	937			**10,420**
	Cap (MMTPA)	60.6	9.0	10.7	11.3	48.6	7.8			**147.9**
Products	Length (KM)		654			11,731	2,596	5,121	2,386	**22,488**
	Cap (MMTPA)		1.7			70.6	22.6	36.3	9.4	**140.6**

*Others include GAIL and Petronet India. HPCL and BPCL lubes pipeline included in products pipeline data

11. Production and consumption of petroleum products (Million Metric Tonnes)												
Products	2020-21		2021-22 (P)		Mar 2022		Mar 2023 (P)		Apr-Mar 2022		Apr-Mar 2023 (P)	
	Prod	Cons	Prod	Cons	Prod	Cons	Prod	Cons	Prod	Cons	Prod	Cons
LPG	12.1	27.6	12.2	28.3	1.1	2.5	1.1	2.4	12.2	28.3	12.8	28.5
MS	35.8	28.0	40.2	30.8	3.9	2.9	4.1	3.1	40.2	30.8	42.8	35.0
NAPHTHA	19.4	14.1	20.0	13.2	1.8	1.1	1.5	1.1	20.0	13.2	17.0	12.2
ATF	7.1	3.7	10.3	5.0	1.0	0.5	1.4	0.7	10.3	5.0	15.0	7.4
SKO	2.4	1.8	1.9	1.5	0.1	0.1	0.1	0.0	1.9	1.5	0.9	0.5
HSD	100.4	72.7	107.2	76.7	10.5	7.7	10.3	7.8	107.2	76.7	113.8	85.9
LDO	0.7	0.9	0.8	1.0	0.10	0.08	0.08	0.08	0.8	1.0	0.6	0.7
LUBES	1.1	4.1	1.2	4.5	0.1	0.5	0.1	0.4	1.2	4.5	1.3	3.8
FO/LSHS	7.4	5.6	8.9	6.3	0.8	0.6	0.8	0.6	8.9	6.3	10.4	6.9
BITUMEN	4.9	7.5	5.1	7.8	0.6	0.9	0.6	0.9	5.1	7.8	4.9	7.8
PET COKE	12.0	15.6	15.5	14.3	1.5	1.4	1.4	1.4	15.5	14.3	15.4	17.9
OTHERS	30.2	12.8	30.9	12.3	2.6	1.1	3.0	1.9	30.9	12.3	31.5	15.7
ALL INDIA	**233.5**	**194.3**	**254.3**	**201.7**	**24.1**	**19.5**	**24.5**	**20.5**	**254.3**	**201.7**	**266.5**	**222.3**
Growth (%)	**-11.0%**	**-8.9%**	**8.9%**	**3.8%**	**5.8%**	**4.8%**	**1.5%**	**5.0%**	**8.9%**	**3.8%**	**4.8%**	**10.2%**

Note: Prod - Production; Cons - Consumption

15. LPG consumption (Thousand Metric Tonne)

LPG categorv	2020-21	2021-22	Mar			April-Mar		
			2021-22	2022-23 (P)	Growth (%)	2021-22	2022-23 (P)	Growth (%)
1. PSU Sales :								
LPG-Packed Domestic	25,128.1	25,501.6	2,215.1	2,181.2	-1.5%	25,501.6	25,381.5	-0.5%
LPG-Packed Non-Domestic	1,886.0	2,238.8	206.6	192.5	-6.8%	2,238.8	2,606.0	16.4%
LPG-Bulk	361.9	390.9	39.6	24.8	-37.4%	390.9	408.9	4.6%
Auto LPG	118.4	122.0	11.0	7.9	-28.2%	122.0	106.7	-12.5%
Sub-Total (PSU Sales)	27,494.3	28,253.3	**2,472.3**	**2,406.4**	**-2.7%**	**28,253.3**	**28,503.1**	**0.9%**
2. Direct Private Imports*	64.2	0.1	0.00	0.0	3583.8%	0.1	0.1	0.2%
Total (1+2)	27,558.4	28,253.4	**2,472.3**	**2,406.4**	**-2.7%**	**28,253.4**	**28,503.2**	**0.9%**

*Jan'23 -Mar'23 DGCIS data is prorated

16. LPG marketing at a glance

Particulars (As on 1st of April)	Unit	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	1.04.23 (P)
LPG Active Domestic Customers	(Lakh)					1486	1663	1988	2243	2654	2787	2895	3053	3140
	Growth						11.9%	19.6%	12.8%	18.3%	5.0%	3.9%	5.5%	2.9%
LPG Coverage (Estimated)	(Percent)					56.2	61.9	72.8	80.9	94.3	97.5	99.8	-	-
	Growth						10.1%	17.6%	11.1%	16.5%	3.4%	2.3%	-	-
PMUY Beneficiaries	(Lakh)							200	356	719	802	800.4	899.0	958.6
	Growth								77.7%	101.9%	11.5%	-0.2%	12.2%	6.6%
LPG Distributors	(No.)	10541	11489	12610	13896	15930	17916	18786	20146	23737	24670	25083	25269	25386
	Growth	8.8%	9.0%	9.8%	10.2%	14.6%	12.5%	4.9%	7.2%	17.8%	3.9%	1.7%	0.7%	0.5%
Auto LPG Dispensing Stations	(No.)	604	652	667	678	681	676	675	672	661	657	651	601	526
	Growth	12.7%	7.9%	2.3%	1.6%	0.4%	-0.7%	-0.1%	-0.4%	-1.6%	-0.6%	-0.9%	-8.5%	-12.5%
Bottling Plants	(No.)	183	184	185	187	187	188	189	190	192	196	200	202	208
	Growth	0.5%	0.5%	0.5%	1.1%	0.0%	0.5%	0.5%	0.5%	1.1%	2.1%	2.0%	1.0%	4.5%

Source: PSU OMCs (IOCL,BPCL and HPCL)

1.Growth rates as on 01.04.2023 are with respect to figs as on 01.04.2022. Growth rates as on 1 April of any year are with respect to figs as on 1 April of previous year.

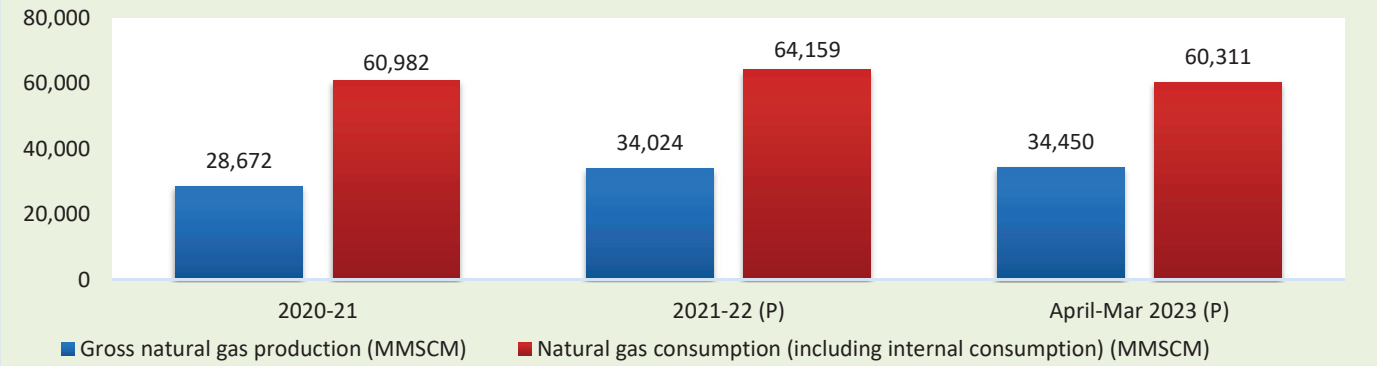
2. The LPG coverage is calculated by PSU OMCs based upon the active LPG domestic connections and the estimated number of households. The number of households has been projected by PSU OMCs based on 2011 census data. Factors like increasing nuclearization of families, migration of individuals/ families 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	2020-21 (P)	2021-22 (P)	Mar			April-Mar		
			2021-22 (P)	2022-23 (Target)	2022-23 (P)	2021-22 (P)	2022-23 (Target)	2022-23 (P)
(a) Gross production	28,672	34,024	2,886	3,373	2,956	34,024	36,782	34,450
- ONGC	21,872	20,629	1,756	1,877	1,696	20,629	21,568	19,969
- Oil India Limited (OIL)	2,480	2,893	250	284	261	2,893	3,245	3,041
- Private / Joint Ventures (JVs)	4,321	10,502	880	1,212	999	10,502	11,968	11,440
(b) Net production (excluding flare gas and loss)	27,784	33,131	2,813		2,889	33,131		33,664
(c) LNG import#	33,198	31,028	2,637		2,237	31,028		26,647
(d) Total consumption including internal consumption (b+c)	60,982	64,159	5,450		5,126	64,159		60,311
(e) Total consumption **(in BCM)**	61.0	64.2	5.5		5.1	64.2		60.3
(f) Import dependency based on consumption (%), {c/d*100}	54.4	48.4	48.4		43.6	48.4		44.2

Feb - Mar 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	Sq. KM
Total available coal bearing areas with MoPNG/DGH		17652	Sq. KM
Area awarded		20460	Sq. KM
Blocks awarded*		36	Nos.
Exploration initiated (Area considered if any boreholes were drilled in the awarded block)		10670***	Sq. KM
Production of CBM gas	April-Mar 2023 (P)	673.45	MMSCM
Production of CBM gas	Mar 2023 (P)	55.77	MMSCM

*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 01.04.2023) (Provisional)

Particulars	Units	IOCL	HPCL	BPCL	GAIL	IGL	Total
LOIs issued	No. of plants	3043	457	240	307	..42	**4089**
Expected CBG production against LOI issued	Tons per day	22391	2506	956	1795	201	**27849**
No. of CBG plants commissioned/ Sale initiated	No. of plants	22	4	2[$]	9	3	**40**
Start of CBG sale from retail outlet(s)	Nos.	46	25*	41**	1		**113**
Injection/Supply of CBG in CGD network	GA Nos.	-	-	-	16[#]	2	**18**
Total Sale of CBG (since Sep'2019)	Tons	11086	1854*	2741**			**15,681**
Total Sale of CBG by GAIL under synchronization scheme	Tons				5333[##]		**5,333**

Total no. of GA where supply of CBG initiated is 16. ## Sale of CBG by GAIL includes sales through its own channels as well as through other CGDs for CBG sourced under synchronization scheme from OMCs & IGL's LoI holders. *2 HPCL Retail Outlets sourcing CBG from HPCL LOI holder plants, 23 HPCL Retail Outlets sourcing CBG from other than HPCL LOI holder plants. ** BPCL initiated CBG sales from 41 ROS. Out of 41 ROS, for one RO BPCL is sourcing CBG from its own LOI holder in other ROs CBG is being sourced from other OMC's LOI. [$] Total No. of CBG and Bio gas plants commissioned is 8.

20. Common Carrier Natural Gas pipeline network as on 31.12.2022

Nature of pipeline		GAIL	GSPL	PIL	IOCL	AGCL	RGPL	GGL	DFPCL	ONGC	GIGL	GITL	Others*	Total
Operational	Length	9,582	2,695	1,479	143	107	304	73	42	24				**14,449**
	Capacity	167.2	43.0	85.0	20.0	2.4	3.5	5.1	0.7	6.0				-
Partially commissioned[#]	Length	4,778			282						1,255	365		**6,680**
	Capacity				-						-	-		-
Total operational length		**14,360**	**2,695**	**1,479**	**425**	**107**	**304**	**73**	**42**	**24**	**1,255**	**365**	**0**	**21,129**
Under construction	Length	5,095	100		1,149						1,077	1,666	2,915	**12,002**
	Capacity	-	3.0		-						-	-	-	-
Total length		**19,455**	**2,795**	**1,479**	**1,574**	**107**	**304**	**73**	**42**	**24**	**2,332**	**2,031**	**2,915**	**33,131**

Source: PNGRB; Length in KMs ; Authorized Capacity in MMSCMD; *Others-APGDC, HEPL, IGGL, IMC, Consortium of H-Energy. Total authorized Natural Gas pipelines including Tie-in connectivity, dedicated & STPL is 35335 Kms (P)

21. Existing LNG terminals

Location	Promoters	Capacity as on 01.04.2023	% Capacity utilisation (April-Feb 2023)
Dahej	Petronet LNG Ltd (PLL)	17.5 MMTPA	77.8
Hazira	Shell Energy India Pvt. Ltd.	5.2 MMTPA	36.2
Dabhol	Konkan LNG Limited	*5 MMTPA	36.5
Kochi	Petronet LNG Ltd (PLL)	5 MMTPA	18.4
Ennore	Indian Oil LNG Pvt Ltd	5 MMTPA	13.0
Mundra	GSPC LNG Limited	5 MMTPA	16.7
Total Capacity		**42.7 MMTPA**	

* 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 across India (Nos.), as on 28.02.2023(P)

State/UT (State/UTs are clubbed based on the GAs authorised by PNGRB)	CNG Stations	PNG connections		
		Domestic	Commercial	Industrial
Andhra Pradesh	161	248,716	420	32
Andhra Pradesh, Karnataka & Tamil Nadu	35	170	0	5
Assam	2	48,958	1,332	439
Bihar	88	89,907	67	3
Bihar & Jharkhand	1	6,567	0	0
Bihar & Uttar Pradesh	3	0	0	0
Chandigarh (UT), Haryana, Punjab & Himachal Pradesh	25	25,214	118	23
Dadra & Nagar Haveli (UT)	7	10,968	56	55
Daman & Diu (UT)	4	5,134	47	43
Daman and Diu & Gujarat	14	1,764	3	0
Goa	12	10,644	15	30
Gujarat	974	2,948,293	22,269	5,735
Haryana	323	308,722	799	1,622
Haryana & Himachal Pradesh	10	0	0	0
Haryana & Punjab	22	2	0	0
Himachal Pradesh	7	5,120	4	0
Jharkhand	69	104,957	5	0
Karnataka	271	381,437	514	291
Kerala	104	39,690	19	15
Kerala & Puducherry	9	343	0	0
Madhya Pradesh	207	200,197	330	425
Madhya Pradesh and Chhattisgrah	5	0	0	0
Madhya Pradesh and Rajasthan	28	255	0	0
Madhya Pradesh and Uttar Pradesh	16	0	0	2
Maharashtra	677	2,774,007	4,633	845
Maharashtra & Gujarat	60	140,711	4	14
Maharashtra and Madhya Pradesh	1	0	0	0
National Capital Territory of Delhi (UT)	473	1,385,730	3,502	1,801
Odisha	51	80,545	5	0
Puducherry	1	0	0	0
Puducherry & Tamil Nadu	8	163	0	0
Punjab	191	65,621	321	234
Rajasthan	220	199,090	81	246
Tamil Nadu	171	71	0	6
Telangana	143	189,462	77	95
Telangana and Karnataka	1	0	0	0
Tripura	18	58,959	506	62
Uttar Pradesh	738	1,333,977	2,165	2,620
Uttar Pradesh & Rajasthan	40	18,958	37	340
Uttar Pradesh and Uttrakhand	17	6,940	0	0
Uttrakhand	29	65,173	57	83
West Bengal	47	49	0	0
Total	**5,283**	**10,756,514**	**37,386**	**15,066**

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.

23. Domestic natural gas price and gas price ceiling (GCV basis)

Period	Domestic 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	6.61
October 2016 - March 2017	2.5	5.3
April 2017 - September 2017	2.48	5.56
October 2017 - March 2018	2.89	6.3
April 2018 - September 2018	3.06	6.78
October 2018 - March 2019	3.36	7.67
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	3.62
October 2021 - March 2022	2.9	6.13
April 2022 - September 2022	6.1	9.92
October 2022 - March 2023	8.57	12.46
1 April 2023 - 7 April 2023	9.16	12.12

Period	Domestic Gas calculated price in US$/MMBTU	Domestic Gas ceiling price for ONGC/OIL in US$/MMBTU	Period	HP-HT Gas price ceiling in US$/MMBTU
8 April 2023 - 30 April 2023	7.92	6.50	April 2023 - September 2023	12.12

Natural Gas prices are on GCV basis

24. CNG/PNG prices

City	CNG (Rs/Kg)	PNG (Rs/SCM)	Source
Delhi	73.59	48.59	IGL website (09.04.2023)
Mumbai	79.00	49.00	MGL website (08.04.2023)

Indian Natural Gas Spot Price for Physical Delivery

IGX Price Index Month	Avg. Price		Volume (MMSCM)	Source
	INR/MMBtu	$/MMBtu		
Mar 2022	1169	14.21	7.90	As per IGX website: www.igxindia.com

*Prices are weighted average prices |$1=INR 82.28| 1 MMBtu=25.2 SCM (Data Excluding Ceiling Price Gas)

For Immediate Release
April 17, 2023
Lynn Helms, Ph.D., Director ND Department of Mineral Resources

NORTH Dakota | Mineral Resources
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North Dakota Department of Mineral Resources April Director's Cut and February 2023 Production Numbers

Oil Production Numbers

January	32,881,958 barrels	= 1,060,708 barrels/day (final) **RF +6%**
New Mexico	51,726,816 barrels	= 1,668,607 barrels/day **+2%**
February	32,404,470 barrels	= 1,157,303 barrels/day **+9%** **RF +16%**
	1,519,037	all-time high Nov 2019
	1,116,541 barrels/day	= 97% from Bakken and Three Forks
	40,762 barrels/day	= 3% from Legacy Pools

Revised Revenue Forecast **1,000,000 barrels/day**

Crude Price ($barrel)	**ND Light Sweet**	**WTI**	**ND Market**	
January	73.35	78.16	73.25	**RF-2.3%**
February	71.32	76.86	72.43	**RF-3.4%**
Today	78.50	82.52	80.51	**RF+7.3%**
All-time high (6/2008)	125.62	134.02	126.75	
Revised Revenue Forecast			**75.00**	

Gas Production and Capture

January - Final	87,884,616 MCF	=	2,834,988 MCF/Day	
95% Capture	83,095,999 MCF	=	2,680,516 MCF/Day	
February	85,019,972 MCF	=	3,036,428 MCF/Day	**+7%**
95% Capture	80,425,526 MCF	=	2,872,340 MCF/Day	
			3,175,779 all-time high 9/2022	
			3,021,655 all-time high 9/2022	

Wells Permitted	Drilling	
January	79	
February	70	
March	89	All-time high 370 in 10/2012

Rig Count		
January	46	
February	46	
March	45	
Today	41	All-time high 218 in 5/29/2012
Federal Surface	0	
New Mexico	103	

Waiting on Completions	
January	469
February	487

Inactive	
January	1,998
February	1,900

Completed		
January	67 (Preliminary)	
February	96 (Preliminary)	
March	62 (Preliminary)	**RF+3%**
Revised Rev Forecast	30-40-50-60	

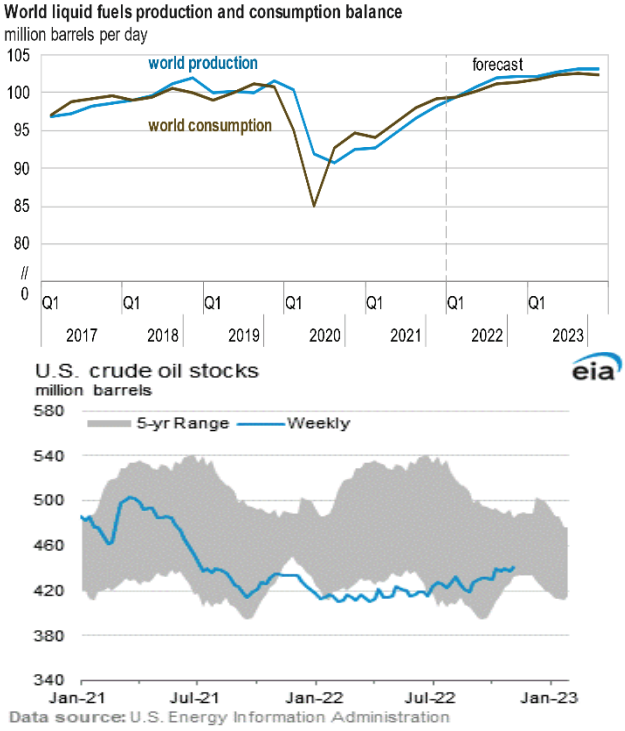
Producing		
January	17,366	
February	17,497 (Preliminary)	All-time high 17,791 in 10/2022
	15,269 wells	87% are now unconventional Bakken/Three Forks Wells
	2,228 wells	13% produced from legacy conventional pools

Fort Berthold Reservation Activity

	Total	Fee Land	Trust Land
Oil Production (barrels/day)	152,640	54,939	97,701
Drilling Rigs	4	3	1
Active Wells	2,641	649	1,992
Waiting on Completion	25		
Approved Drilling Permits	230	33	197
Potential Future Wells	3,911	1,115	2,796

Comments:

The drilling rig count has stalled in the mid-forties, with a gradual increase expected over the next two years.



There are 21 frac crews currently active.

OPEC+ announced unilateral oil production cuts earlier this month amounting to 1.7 million barrels per day (bpd), bringing total cuts by the group to 3.7 million bpd until the end of the year. Russia sanctions, China economic activity, looming recessions, and shifting crude oil supply chains continue to create significant price volatility.

Crude oil transportation capacity including rail deliveries to coastal refineries is adequate, but could be disrupted due to:

US Appeals Court for the ninth circuit upholding of a lower court ruling protecting the Swinomish Indian Tribal Community's right to sue to enforce an agreement that restricts the number of trains that can cross its reservation in northwest Washington state.

DAPL Civil Action No. 16-1534 continues, but the courts have now ruled that DAPL can continue normal operations until the USACOE EIS is completed.

Potential railroad worker strike – reported that a tentative deal has been reached.

Drilling activity is expected to slowly increase with operators maintaining a permit inventory of approximately 12 months.

There are 0 active, 1 recording, 0 NDIC reclamation projects, 0 remediating, 0 permitted, 6 suspended surveys.

US natural gas storage is 19% above the five-year average. Both US and world crude oil inventories are slightly above average while the US strategic petroleum reserve is at the lowest level since 1983.

The price of natural gas delivered to Northern Border at Watford City has decreased to $1.75/MCF today, the lowest level since September 2020 during the pandemic. There is currently enormous oversupply in the Midwest US while LNG prices in Europe have decreased to August 2021 levels. Current oil to gas price ratio is 46 to 1. The state-wide gas flared volume from January to February increased 9.6 MMCFD to 164.1 MMCF per day, the statewide percent flared was unchanged at 5% and Bakken gas capture percentage was unchanged at 95%. The historical high flared percent was 36% in 09/2011.

Gas capture details are as follows:

Statewide	95%
Statewide Bakken	95%
Non-FBIR Bakken	95%
FBIR Bakken	97%
Trust FBIR Bakken	97%
Fee FBIR	95%
Big Bend	92%
Deep Water Creek Bay	78%
Twin Buttes	57%
Charlson	89%

The Commission established the following gas capture goals:

74%	October 1, 2014 - December 31, 2014
77%	January 1, 2015 - March 31, 2016
80%	April 1, 2016 - October 31, 2016
85%	November 1, 2016 - October 31, 2018
88%	November 1, 2018 - October 31, 2020
91%	November 1, 2020

BLM on 1/20/21 DOI issued order 3395 implementing a 60-day suspension of Federal Register publications; issuing, revising, or amending Resource Management Plans; granting rights of way and easements; approving or amending plans of operation; appointing, hiring or promoting personnel; leasing; and permits to drill. On 1/27/21 President Biden issued an executive order that mandates a "pause" on new oil and gas leasing on federal lands, onshore and offshore, "to the extent consistent with applicable law," while a comprehensive review of oil and gas permitting and leasing is conducted by the Interior Department. There is no time limit on the review, which means the president's moratorium on new leasing is indefinite. The order does not restrict energy activities on lands the government holds in trust for Native American tribes.

What is the percentage of federal lands in ND?

Mineral ownership in ND is 85% private, 9% federal (4% Indian lands and 5% federal public lands), and 6% state. 66% of ND spacing units contain no federal public or Indian minerals, 24% contain federal public minerals, 9% contain Indian minerals,1% contain both.

How many potential wells could be delayed or not drilled by a Biden administration ban on drilling permits and hydraulic fracturing on federal lands?

A spatial query found 3,443 undrilled wells in spacing units that would penetrate federal minerals, 2,902 undrilled wells in spacing units would penetrate BIA Trust minerals (700 tribal minerals and 2,202 allotted minerals), and the total number of wells potentially impacted is 6,345. The minimum number of future Bakken wells is 24,000 so the 3,443 wells on federal public lands = 14%, and the 2,902 wells on trust lands = 12%.

What is the potential federal royalty loss from a Biden administration ban on drilling permits and hydraulic fracturing on federal lands?

A recent study from University of Wyoming estimated the ND loss as follows: 2021-2025 $76 million, 2026-2030 $113 million, 2031-2035 $160 million, and 2036-2040 $221 million for a total of $570 million over 15 years. Please note that 50% of the royalties on federal public lands go to the state and 50% of the state share goes to the county where the oil was produced.

On 7/7/21 North Dakota sued the Department of Interior (DOI), Secretary of Interior Debra Haaland, Bureau of Land Management (BLM), Director of the BLM Nada Culver, and Director of the Montana-Dakotas BLM John Mehlhoff in US District Court for the District of North Dakota. The lawsuit requested the court:

Compel the Federal Defendants to hold quarterly lease sales. Oral arguments are scheduled for 1/12/22 in Bismarck.

Compel the Federal Defendants to hold quarterly lease sales. Oral arguments are scheduled for 1/12/22 in Bismarck.

Prohibit the Federal Defendants from cancelling quarterly lease sales.

Enjoin the Secretary implementing a moratorium on federal lease sales.

Declare that Federal Defendants are in violation of MLA, FLPMA, NEPA, and APA.

Grant other relief sought and as the court deems proper to remedy the violations.

There are 811 tracts nominated for pending lease sales in ND:

> 569 are pending NEPA or surface manager concurrence.
>
> 242 are fully evaluated with Record of Decision by US Forest Service and Corp of Engineers, and waiting for scheduled auction – value to ND 1,037 wells and $4.9 billion (GPT, OET, NDTL royalties, federal royalties, sales tax and income tax)

On 01/14/2022 Judge Traynor denied North Dakota's motion without prejudice. In the Order on Mandamus, the Court noted that "a fully developed factual record is necessary to resolve the instant dispute." The Court also held that because Federal Defendants had given the Court "assurances at the hearing the process to start Federal oil and gas leasing sales in North Dakota was imminent" mandamus relief was "unnecessary." However, the Court noted that "if the Defendants do not hold to their word and cancel any planned future sale, North Dakota may bring this action for review of the specifically cancelled sales once this Court has the benefit of a complete record.". Federal Defendants have canceled the Q1 2022 lease sale but have now published a potential Q2 sales listing with a protest period ending 5/18/22.

North Dakota filed a motion for preliminary injunction on 1/6/23, a hearing on the motions was held 2/21/23 in Minot with final briefing documents filed 3/14/23. On 3/27/23 U.S. District Judge Daniel Traynor in Bismarck ordered the

MONTHLY UPDATE

APRIL 2023 PRODUCTION & TRANSPORTATION

Published: April 17, 2023

Justin J. Kringstad, Director

North Dakota Pipeline Authority

Office: 701.220.6227

www.northdakotapipelines.com

MONTHLY UPDATE

APRIL 2023 PRODUCTION & TRANSPORTATION

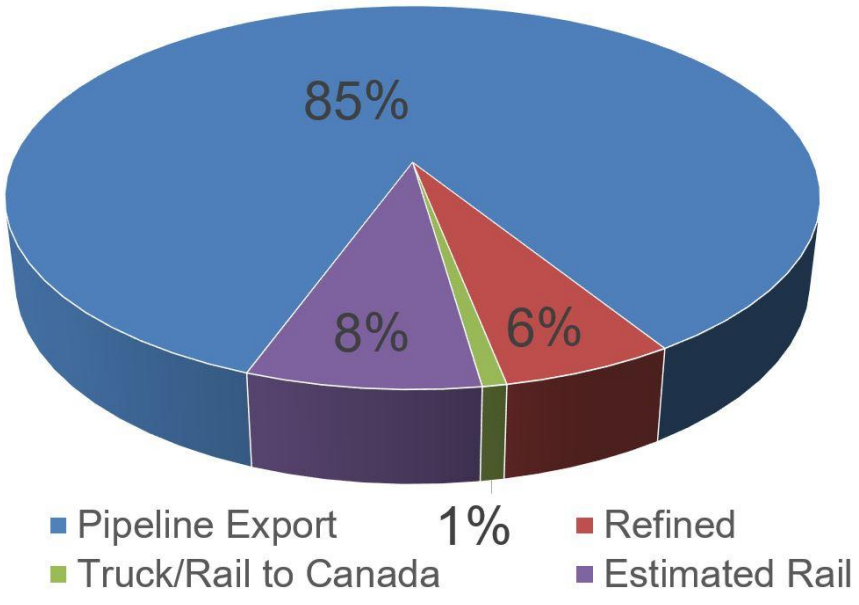
North Dakota Oil Production

Month	Monthly Total, BBL	Average, BOPD
Jan. 2023 - Final	32,881,958	1,060,708
Feb. 2023 - Prelim.	32,404,470	1,157,303

North Dakota Natural Gas Production

Month	Monthly Total, MCF	Average, MCFD
Jan. 2023 - Final	87,884,616	2,834,988
Feb. 2023 - Prelim.	85,019,972	3,036,428

Estimated Williston Basin Oil Transportation, Feb. 2023



CURRENT DRILLING ACTIVITY:

NORTH DAKOTA[1]

41 Rigs

EASTERN MONTANA[2]

1 Rigs

SOUTH DAKOTA[2]

0 Rigs

SOURCE (APR 17, 2023):

1. ND Oil & Gas Division
2. Baker Hughes

PRICES:

Crude (WTI): $80.67

Crude (Brent): $84.56

NYMEX Gas: $2.27

SOURCE: BLOOMBERG (APR 17 2023 1PM EST)

GAS STATS*

95% CAPTURED & SOLD

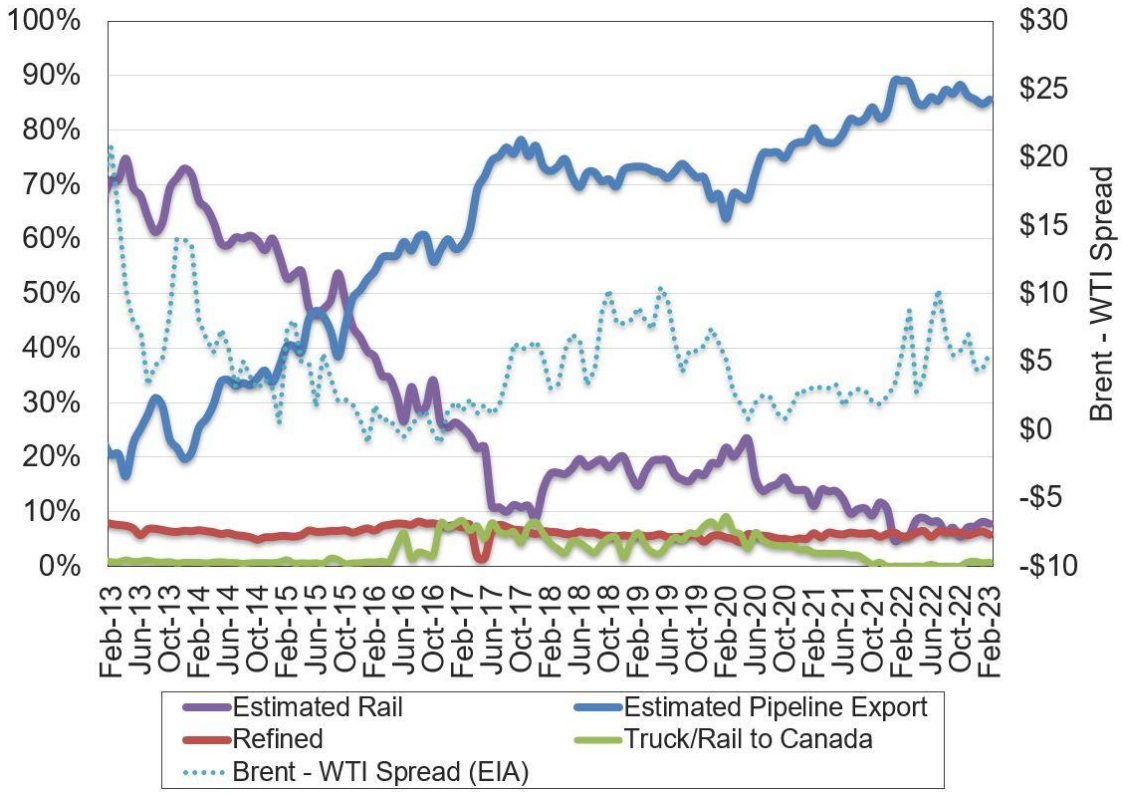
4% FLARED DUE TO CHALLENGES OR CONSTRAINTS ON EXISTING GATHERING SYSTEMS

1% FLARED FROM WELL WITH ZERO SALES

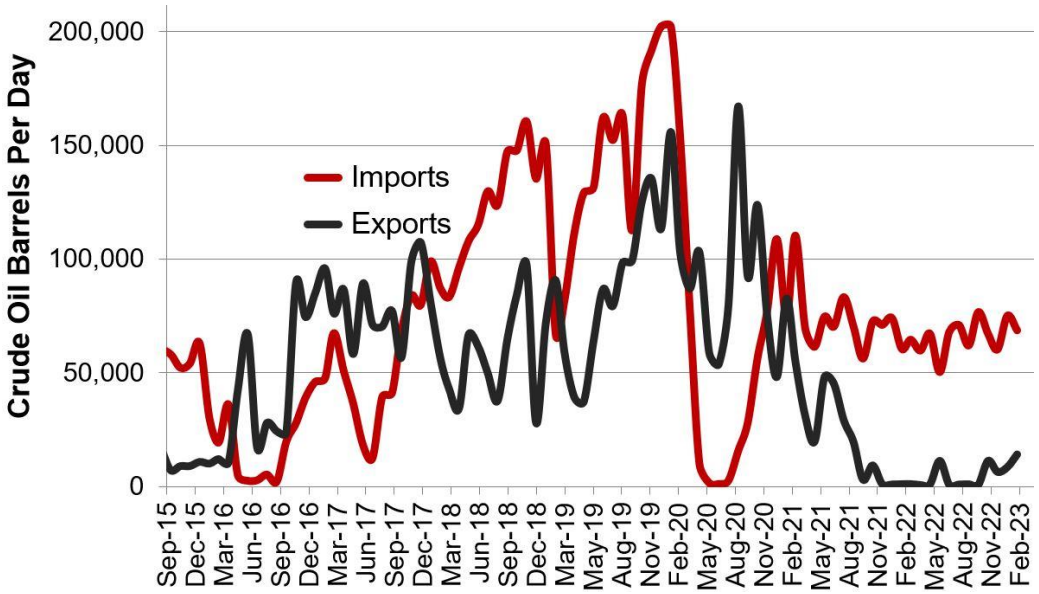
FEB. 2023 NON-CONF DATA

Estimated North Dakota Rail Export Volumes

Estimated Williston Basin Oil Transportation

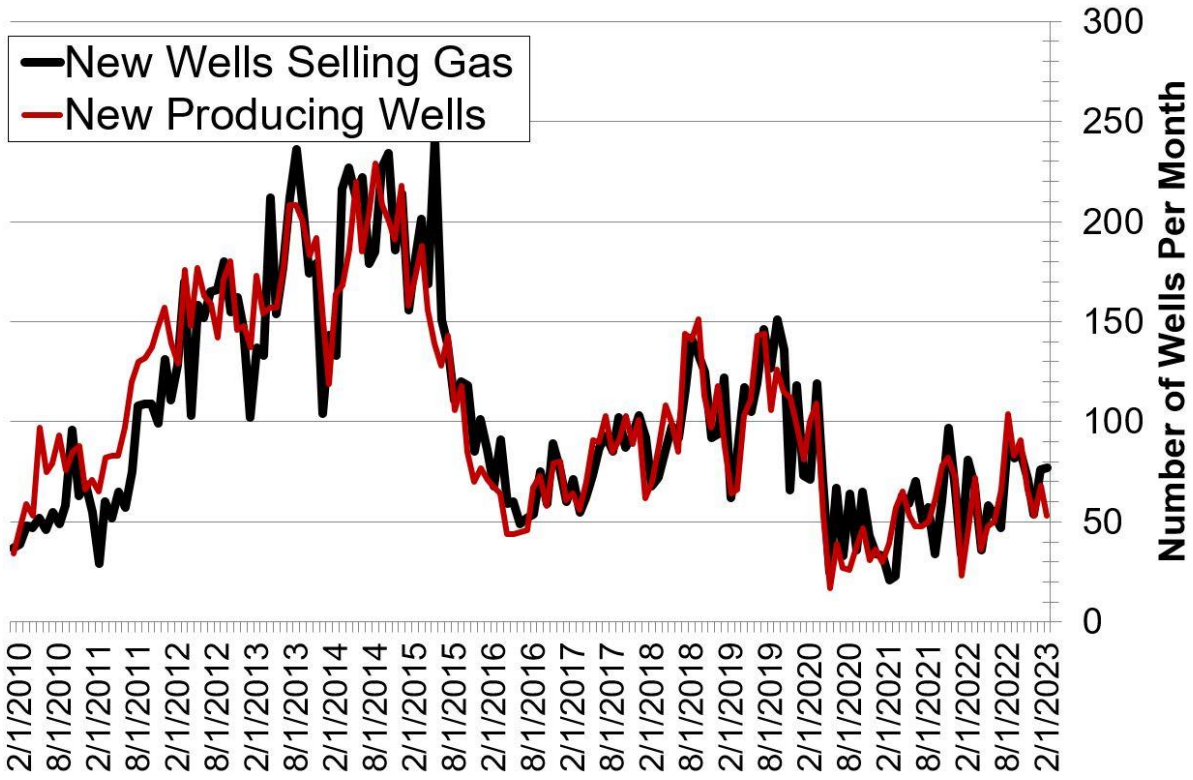


Williston Basin Truck/Rail Imports and Exports with Canada



Data for imports/exports chart is provided by the US International Trade Commission and represents traffic across US/Canada border in the Williston Basin area.

New Gas Sales Wells per Month



US Williston Basin Oil Production, BOPD

2022

MONTH	ND	EASTERN MT*	SD	TOTAL
January	1,091,932	51,895	2,709	1,146,536
February	1,095,458	51,165	2,742	1,149,365
March	1,129,880	54,580	2,709	1,187,169
April	908,339	54,118	2,338	964,795
May	1,062,157	52,499	2,648	1,117,304
June	1,099,408	63,258	2,764	1,165,430
July	1,073,610	60,602	2,774	1,136,986
August	1,075,289	60,514	2,756	1,138,559
September	1,121,063	58,102	2,679	1,181,845
October	1,121,754	53,983	2,621	1,178,357
November	1,098,389	56,155	2,682	1,157,227
December	957,864		2,199	

2023

MONTH	ND	EASTERN MT*	SD	TOTAL
January	1,060,708		2,610	
February	1,157,303			
March				
April				
May				
June				
July				
August				
September				
October				
November				
December				

**** Eastern Montana production composed of the following Counties: Carter, Daniels, Dawson, Fallon, McCone, Powder River, Prairie, Richland, Roosevelt, Sheridan, Valley, Wibaux***

https://www.npd.no/en/facts/news/Production-figures/2023/production-figures-march-2023/

Production figures March 2023

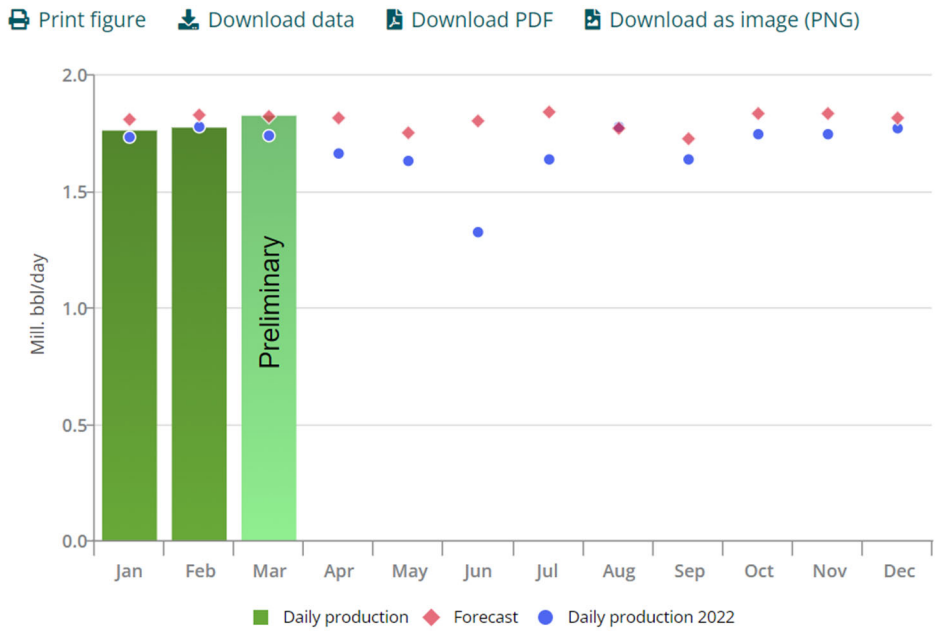
19/04/2023 Preliminary production figures for March 2023 show an average daily production of 2 049 000 barrels of oil, NGL and condensate.

Total gas sales were 10.6 billion Sm3 (GSm3), which is 0.7 (GSm3) more than the previous month.
Average daily liquids production in March was: 1 826 000 barrels of oil, 201 000 barrels of NGL and 23 000 barrels of condensate.
Oil production in March is 0.1 percent higher than the NPD's forecast and 1.7 percent lower than the forecast so far this year.

Production figures March 2023

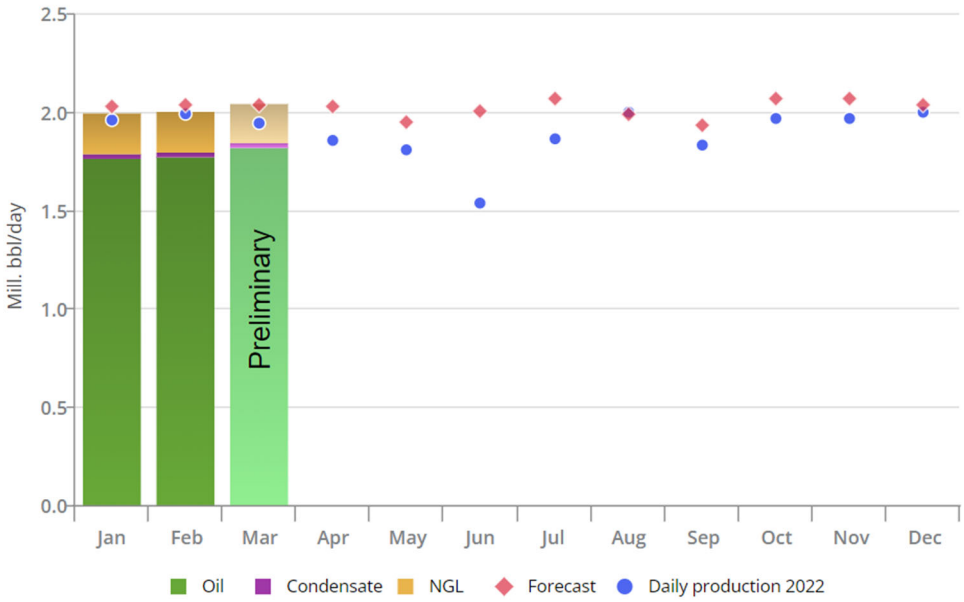
		Oil mill bbl/day	Sum liquid mill bbl/day	Gas MSm³/day	Total MSm³ o.e/day
Production	**March 2023**	**1.826**	**2.049**	**340.4**	**0.666**
Forecast for	March 2023	1.823	2.037	352.8	0.677
Deviation from forecast		0.003	0.012	-12.4	-0.011
Deviation from forecaset in %		0.2 %	0.6 %	-3.5 %	-1.6 %
Production	February 2023	1.774	2.003	354.5	0.673
Deviation from	February 2023	0.052	0.046	-14.1	-0.007
Deviation in % from	February 2023	2.9 %	2.3 %	-4 %	-1 %
Production	March 2022	1.742	1.946	338.4	0.648
Deviation from	March 2022	0.084	0.103	2	0.018
Deviation in % from	March 2022	4.8 %	5.3 %	0.6 %	2.8 %

Oil production March 2023



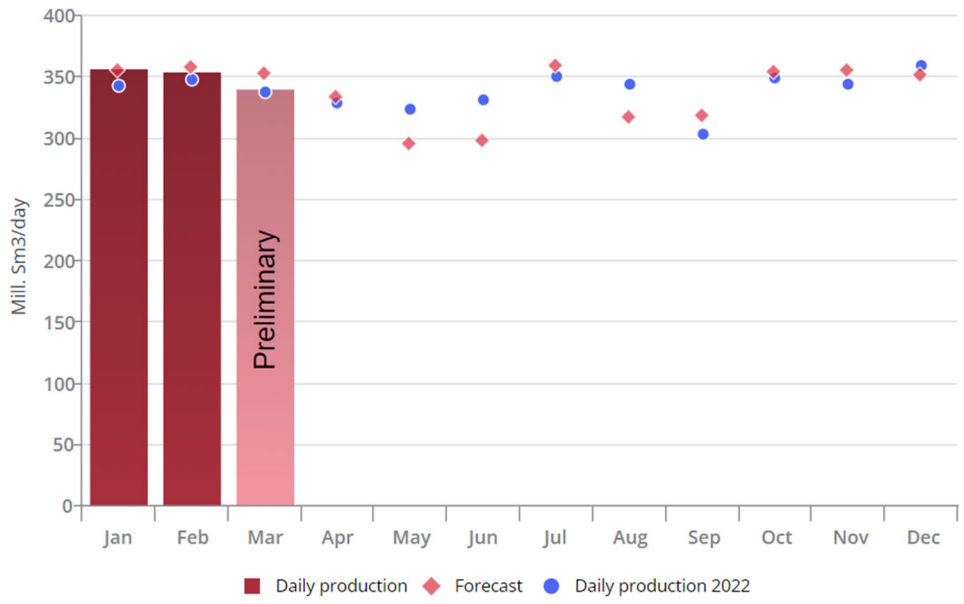
Liquid production March 2023

Print figure Download data Download PDF Download as image (PNG)



Gas production March 2023

Print figure Download data Download PDF Download as image (PNG)



The total petroleum production so far in 2023 is about 60,4 million Sm3 oil equivalents (MSm3 o.e.), broken down as follows: about 25.6 MSm3 o.e. of oil, about 3.3 MSm3 o.e. of NGL and condensate and about 31.5 MSm3 o.e. of gas for sale.
The total volume is 1.3 MSm3 o.e. higher than in 2022.

Updated: 19/04/2023

https://www.reuters.com/world/asia-pacific/pakistan-places-first-order-discounted-russian-crude-says-minister-2023-04-20/

4 minute readApril 20, 20236:39 AM MDTLast Updated a day ago

Exclusive: Pakistan makes its first purchase of discounted Russian oil

By Asif Shahzad

- Summary
- Companies
- First cargo to arrive next month: minister
- Pakistan to import crude only, not refined oil
- Islamabad wants purchases to reach 100,000 bpd
- Energy makes up majority of Pakistan's import bill

ISLAMABAD, April 20 (Reuters) - Pakistan has placed its first order for discounted Russian crude oil under a deal struck between Islamabad and Moscow, the country's petroleum minister said, with one cargo to dock at the port of Karachi in May.

Pakistan's purchase gives Russia a new outlet, adding to Moscow's growing sales to India and China, as it redirects oil from western markets because of the Ukraine conflict.

As a long-standing Western ally and the arch-rival of neighbouring India, which historically is closer to Moscow, analysts say the crude deal would have been difficult for Pakistan to accept, but its financing needs are great.

Discounted crude offers respite as Pakistan faces an acute balance of payments crisis, risking a default on its debt obligations. The foreign exchange reserves held by the central bank are scarcely enough to cover four weeks of controlled imports.

Energy imports make up the majority of the country's external payments.

Under the deal, Pakistan will buy only crude, not refined fuels, Minister Musadik Malik told Reuters late on Wednesday. Imports are expected to reach 100,000 barrels per day (bpd) if the first transaction goes through smoothly, he said.

"Our orders are in, we have placed that already," he said, confirming source-based information that the country would not buy refined products.

A source in Moscow who is familiar with the negotiations told Reuters that the final deal was reached in recent days.

The Russian government did not respond to a request for comment.

Major Russian oil companies have discussed the possible supply of oil to Pakistan over recent months, two trading sources familiar with the talks said, but declined to disclose the names of possible suppliers. One of the sources, speaking on condition of anonymity, said Russia plans to supply Urals crude to Pakistan.

Islamabad imported 154,000 bpd of oil in 2022, around steady with the previous year, data from analytics firm Kpler showed.

The crude was predominantly supplied by the world's top exporter Saudi Arabia followed by the United Arab Emirates. The 100,000 bpd from Russia in theory greatly reduces Pakistan's need for Middle Eastern fuel.

Asked about the impact of the Russian imports on local pricing, Malik said that would be apparent once the crude had been refined and was ready to sell.

The U.S. dollar historically has been the currency of oil trade, but the Ukraine war has eroded its dominance as Russia avoids receiving a currency it has been largely blocked from using by Western sanctions.

Pakistan's economic crisis meanwhile means it is desperately short of hard currency.

Malik declined to say whether Chinese yuan and the UAE dirham would be used for transactions. He also did not comment on the rate of imports.

"I will not disclose anything about the commercial side of the deal," he said.

Pakistan's Refinery Limited (PRL) (PKRF.PSX) will initially refine the Russian crude in a trial run, followed by Pak-Arab Refinery Limited (PARCO) and other refineries, Malik said.

As part of sanctions on Moscow, Western nations have imposed a $60 a barrel price cap on purchases of Russian oil to try to limit Russia's revenues for fighting in Ukraine.

India and China, however, have paid prices above the cap, according to traders and Reuters calculations.

Russian Energy Minister Nikolay Shulginov led a delegation to Islamabad in January, after which he said oil exports to Pakistan could begin after March.

Malik in turn took a delegation to Moscow to negotiate the deal late last year.

Pakistan and the International Monetary Fund (IMF) have been locked in negotiations since early February for the release of a$1.1 billion tranche of a $6.5 billion bailout agreed in 2019.

Reporting by Asif Shahzad

Our Standards: The Thomson Reuters Trust Principles.

https://www.presstv.ir/Detail/2023/04/18/701769/Raeisi-Iran-destroy-Haifa-Tel-Aviv-in-case-slightest-Israeli-action

Raeisi: Iran will destroy Tel Aviv, Haifa in case of slightest Israeli action

Tuesday, 18 April 2023 6:13 AM **[Last Update: Tuesday, 18 April 2023 8:14 AM]**

Iranian President Ebrahim Raeisi addresses a parade to mark National Army Day in Tehran on April 18, 2023. (Photo by Tasnim news agency)

Iranian President Ebrahim Raeisi strongly warns the apartheid Israeli regime against taking even the slightest action against the Islamic Republic, saying Iran will react to such a move with "destruction of Haifa and Tel Aviv."

Raeisi made the remarks while addressing a parade to mark National Army Day in Tehran on Tuesday, when he said the Iranian Army's capabilities are based on domestic know-how.

"The enemies, especially the Zionist regime (Israel), have received this message that the slightest move against the country will evoke a severe response from the armed forces and will be accompanied by the destruction of Haifa and Tel Aviv," he added.

He also said the message of Iran's Army and Armed Forces to the US troops is that they must leave the region as soon as possible.

"The extra-regional and American forces should leave the region as soon as possible because it is in their own interest and in the interest of the region," the Iranian president said.

"The presence of foreign forces threatens regional security but our armed forces provide security wherever they are present in the region," he added.

He noted that the Iranian Armed Forces have resisted terrorists and improved security in the region, while foreign forces only pose a threat to the regional states.

The Iranian Armed Forces' power is beneficial to the security of the region and "it is no secret to anyone that our armed forces have protected the territorial integrity and security of the countries in the region," he said.

He reiterated that the presence of foreign troops, Americans in particular, would never protect the integrity of the Persian Gulf region.

He said the brave and heroic Iranian army has taken the lead from the armies of the regional countries in various fields of science and technology and everyone acknowledges this fact.

The Iranian chief executive said the country's army has turned into a strong fortress against anti-revolutionary elements, Takfiri groups, and thugs, adding that it is in charge of safeguarding Iran's borders and protecting national interests and security in the oceans.

Raeisi, who also serves as head of the Supreme National Security Council (SNSC), emphasized that the National Army Day conveys the message of peace and friendship to regional countries.

He noted that Iran's sky is among the most secure in the region, adding, "The Islamic Republic of Iran's Army creates opportunities for the country from all threats and shortcomings."

The Iranian chief executive also vowed to equip the Army with state-of-the-art technologies.

The National Army Day, which is celebrated annually on April 18, was established by the founder and first Leader of the Islamic Revolution, Ayatollah Khomeini, in 1979.

Two months after the fall of the deposed Shah, Mohammad Reza Pahlavi, Ayatollah Khomeini met with the soldiers of the Armed Forces who had made an invaluable contribution to the victory of the Revolution. A few days later, Ayatollah Khomeini named April 18 "the Army Day," calling for military parades to exhibit the nation's military preparedness.

https://www.ndtv.com/world-news/benjamin-netanyahu-says-israel-will-continue-to-fight-against-iran-nuclear-arms-3957068

Netanyahu Says Israel Will Continue To Fight Against Iran Nuclear Arms

Recalling a recent visit to Berlin, Benjamin Netanyahu noted that since Nazi-era Germany "the world has changed, but the calls for our extermination have not ceased, and today come from the regime of horror in Tehran."

World NewsAgence France-PresseUpdated: April 18, 2023 6:03 am IST

Jerusalem:
Prime Minister Benjamin Netanyahu vowed Monday that Israel would continue its "fight" to prevent arch-foe Tehran from developing nuclear weapons, during a Holocaust ceremony attended by Iran's exiled crown prince.
Recalling a recent visit to Berlin, Netanyahu noted that since Nazi-era Germany "the world has changed, but the calls for our extermination have not ceased, and today come from the regime of horror in Tehran."
"We are fighting resolutely against any nuclear deal with Iran that will pave its way to nuclear arms," the Israeli premier said in a speech on the eve of Holocaust Remembrance Day.

n

"And for the same reason, we are fighting resolutely against Iran's terror proxies around us," he said at the Yad Vashem Holocaust memorial in Jerusalem, warning of Israel's "crushing response" to any enemy approaches.

https://www.libyaherald.com/2023/02/libya-will-produce-more-than-1-5-million-barrels-of-oil-per-day-in-2023-agoco-chairman/

Libya will produce more than 1.5 million barrels of oil per day in 2023: AGOCO chairman

Provision of budget, continued and fast development, stability in Libya and oil sector - all contributing factors

by **Ibrahim Senusi** February 14, 2023

AGOCO chairman Gatrani said Libya can increase production to 1.5 million bpd this year (Photo: AGOCO).

The continuation of the Arabian Gulf Oil Company's (AGOCO) development operations at this pace will inevitably lead to Libya reaching a production rate of more than 1.5 million barrels of oil per day in 2023, AGOCO chairman Salah Gatrani said in an exclusive statement to *Libya Herald*.
He said this was because of the stability witnessed by the country in general, and by the oil sector in particular. Therefore, he continued, the Gulf Company has developed its own plan within the efforts of the National Oil Corporation (NOC). Libya has been unable to maintain production beyond 1.2 million bpd.

Gatrani was commenting to *Libya Herald* following Sunday's AGOCO's meeting on developing reserves and increasing oil production in the sector companies, attended by relevant AGOCO and NOC management.
The AGOCO chairman said that his company has already begun to implement the plan prepared by the NOC to raise production and increase reserves.

Training, localising and developing new techniques
He said AGOCO had actually delayed several projects to raise the efficiency of the employees in the company, including a cooperation project with KAMCO Oil Services Company to raise the efficiency

of employees, localize and develop technology in the company, and keep pace with global updates in the fields of drilling oil wells and extracting crude oil.

Gatrani referred to the conclusion of a training course for workers in the Nafoura field in the field of production engineering on the use of new techniques of electrical narratives and their applications to evaluate rock layers in oil-producing wells as well as water injection wells.

NOC is providing finance after securing it from government

He commended the NOC for supporting its oil companies financially, especially after allocating a good budget to the sector from the Abd Alhamid Aldabaiba government, which positively affected the entire oil sector, as several oil wells have returned to production and the completion of preparations in several new wells.

At the meeting Gatrani referred to the speech by NOC chairman Farhat Bengdara at a previous expanded meeting on the NOC's strategic plan to raise production and develop reserves. He pointed to the importance of this plan, which he said requires concerted efforts to achieve it and provide the necessary capabilities that would ensure access to the target smoothly. The most important of these capabilities, he said, is the steady cash flow as well as overcoming and developing all the problems that hinder the productive process.

AGOCO expected to increase most production

Speaking at the meeting, Khalifa Abdul Sadig, NOC board member, said that this meeting is very important and strategic to increase production and develop reserves in AGOCO, which, he said, constitutes the largest percentage of this plan. He said the NOC is counting on AGOCO to Increase production, develop reserves, and counting on it for the success of the NOC's increased production plan. He admitted that the challenges are great, but with a strong will and wise management, Libya will be able to achieve the goals and results.

Tags: AGOCO Arabian Gulf Oil Company

https://news.cathaypacific.com/cathay-pacific-releases-traffic-figures-for-march-2023

Cathay Pacific releases traffic figures for March 2023

Cathay Pacific today released its traffic figures for March 2023, which saw passenger load factor surpass 90% reflecting the ongoing strong demand for travel. The Cathay Pacific Group, comprising passenger airlines Cathay Pacific and HK Express, reached 50% of pre-pandemic passenger flight capacity levels as planned, covering more than 70 destinations as of the end of March.

Cathay Pacific carried a total of 1,322,180 passengers last month, an increase of 4,217% compared with March 2022. The month's revenue passenger kilometres (RPKs) increased 4,828% year-on-year. Passenger load factor increased by 44.8 percentage points to 90.4%, while capacity, measured in available seat kilometres (ASKs), increased by 2,384% year-on-year. In the first three months of 2023, the number of passengers carried increased by 3,907% against a 2,174% increase in capacity and a 4,432% increase in RPKs, as compared with the same period for 2022.

The airline carried 121,776 tonnes of cargo last month, an increase of 25.3% compared with March 2022, when our cargo capacity was significantly reduced due to stricter aircrew quarantine measures. The month's cargo revenue tonne kilometres (RFTKs) increased 102.5% year-on-year. The cargo load factor decreased by 14.6 percentage points to 66.9%, while capacity, measured in available cargo tonne kilometres (AFTKs), increased by 146.7% year-on-year. In the first three months of 2023, the tonnage increased by 35.6% against a 178.4% increase in capacity and a 128.1% increase in RFTKs, as compared with the same period for 2022.

Travel

Chief Customer and Commercial Officer Lavinia Lau said: "The first quarter of 2023 has been one of continued improvement for our travel business as we maintain our focus on reconnecting Hong Kong with the world. Cathay Pacific's passenger numbers continued to increase month on month in March, growing 19% to more than 1.3 million compared with February.

“We resumed services to three more destinations – Shanghai Hongqiao airport, Haikou and Nagoya in March. Hongqiao in particular saw huge demand for both business and leisure travel. Our Japan and South Korea flights benefited from good passenger traffic for the cherry blossom season and demand ahead of the Easter holiday. Demand between Hong Kong and Taiwan was similarly strong, including transit traffic from Taiwan to Europe and Indonesia via the Hong Kong hub.

“We were also delighted to bring back more customer experience highlights, with First class returning on select flights on our Beijing and Los Angeles routes, and our airport lounges in Bangkok, Beijing and Manila also reopening, all of which were very welcomed by our customers who missed those special Cathay touches over the past three years.

Cargo

“For our cargo business, tonnage carried in March saw double-digit growth of 17% over February as volumes recovered after the Lunar New Year holiday, and we operated an enhanced freighter schedule to capture expected demand. E-commerce shipments from Hong Kong and the Chinese Mainland were the key drivers of growth; however, other regions remained relatively flat, reflecting the ongoing weaker demand for global airfreight.

“We continued to enhance our cargo customer proposition in March, with the launch of our Cathay Mail solution. The refreshed suite of digitised tools allows greater transparency for our post office customers, enabling package-level track-and-trace visibility and improved efficiencies in mail capacity planning and administrative handling which their customers expect, especially as they compete in the express e-commerce segment.

Outlook

“Turning to April, we were thrilled to see the Cathay/HSBC Hong Kong Sevens back in full force earlier this month. Cathay has long been a supporter of mega events that help build Hong Kong’s international status. As the first mask-free Sevens after the Hong Kong border reopened, it was great to see visitors from around the world once again coming to Hong Kong to experience this incredible sporting weekend filled with fun and laughter.

“Regarding our travel business, we continued to see strong demand into the Easter holidays, reflecting positive and robust sentiment for travel. On 9 April, we broke the 50,000 mark for the first time since the pandemic, carrying 53,233 passengers on that day. We are actively working to add more flights to our schedule to satisfy customer demand, in particular between Hong Kong and the Chinese Mainland. Between now and the end of October, the number of return flights will be progressively increased to about 160 per week, covering 16 airports in 15 cities. This includes four return flights per day to Beijing, six return flights per day to Shanghai Pudong airport and nine return flights per week to Shanghai Hongqiao airport.

“Meanwhile on the cargo side, in April we expect that the Ching Ming Festival, Easter and Ramadan will dampen market demand. We will adjust our freighter capacity in an agile manner to reflect the demand picture, which remains variable but overall softer than prior periods. We are nevertheless continuing to expand market coverage for our customers, as the cargo belly space and network offered by our widebody passenger fleet continues to grow.

“Earlier this month, Hong Kong International Airport was once again named the busiest cargo airport in the world in 2022. As the city’s home carrier, we worked hard to ensure the movement of important cargo was maintained despite significant challenges and operational constraints last year. We are very proud to have contributed to this achievement and remain committed to rebuilding the Hong Kong international aviation hub to surpass pre-pandemic levels of airfreight tonnage ahead.”

The full March figures and glossary are on the following pages.

CATHAY PACIFIC TRAFFIC	MAR 2023	% Change VS MAR 2022	Cumulative MAR 2023	% Change YTD
RPK (000)				
- Chinese Mainland	258,917	1,130.4%	596,423	887.9%
- North East Asia	691,911	35,578.5%	1,851,819	33,613.3%
- South East Asia	726,353	7,166.6%	1,938,003	7,669.1%
- South Asia, Middle East & Africa	242,440	-	638,436	290,890.3%
- South West Pacific	645,581	3,635.7%	2,090,688	3,952.0%
- North America	1,454,777	5,871.3%	3,954,358	4,054.7%
- Europe	1,471,931	3,897.1%	3,743,305	4,102.6%
RPK Total (000)	5,491,910	4,827.8%	14,813,032	4,431.7%
Passengers carried	1,322,180	4,216.9%	3,468,800	3,906.5%
Cargo revenue tonne km (000)	729,860	102.5%	1,914,246	128.1%
Cargo carried (000kg)	121,776	25.3%	320,847	35.6%
Number of flights	3,030	140.7%	8,198	128.3%

CATHAY PACIFIC CAPACITY	MAR 2023	% Change VS MAR 2022	Cumulative MAR 2023	% Change YTD
ASK (000)				
- Chinese Mainland	349,990	300.4%	864,197	227.3%
- North East Asia	800,560	6,432.2%	2,290,319	7,041.4%
- South East Asia	850,704	3,648.6%	2,302,957	3,404.7%
- South Asia, Middle East & Africa	288,081	-	762,236	26,875.2%
- South West Pacific	755,201	2,756.3%	2,479,049	2,967.0%
- North America	1,500,777	3,462.0%	4,156,864	2,414.3%
- Europe	1,528,770	2,752.7%	3,995,575	2,970.6%
ASK Total (000)	6,074,084	2,384.0%	16,851,197	2,174.3%
Passenger load factor	90.4%	44.8%pt	87.9%	43.8%pt
Available cargo tonne km (000)	1,090,725	146.7%	2,928,233	178.4%
Cargo load factor	66.9%	-14.6%pt	65.4%	-14.4%pt
ATK (000)	1,670,195	258.8%	4,536,780	304.1%

Glossary

Terms:

Available seat kilometres (“ASK”)

Passenger seat capacity, measured in seats available for the carriage of passengers on each sector multiplied by the sector distance.

Available tonne kilometres (“ATK”)

Overall capacity measured in tonnes available for the carriage of passengers, excess baggage, cargo on each sector multiplied by the sector distance.

Available cargo tonne kilometres (“AFTK”)

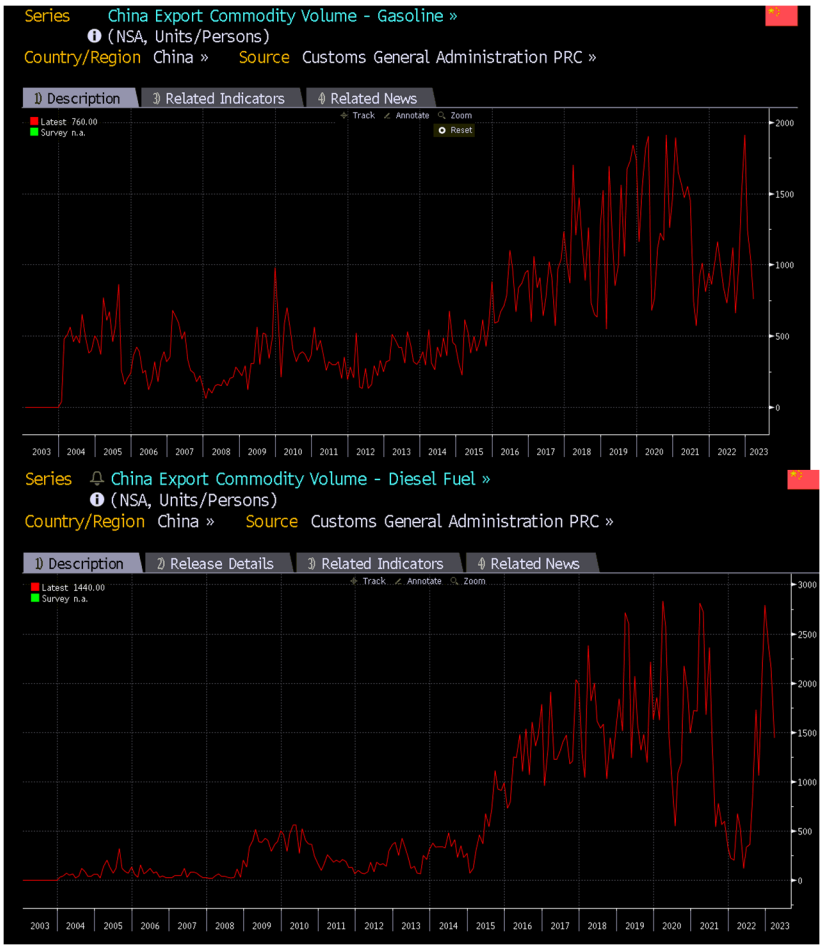
Cargo capacity measured in tonnes available for the carriage of freight on each sector multiplied by the sector distance.

Revenue passenger kilometres (“RPK”)

Number of passengers carried on each sector multiplied by the sector distance.

Cargo revenue tonne kilometres (“RFTK”)

Amount of cargo, measured in tonnes, carried on each sector multiplied by the sector distance.



Source: Bloomberg

China Ships Out Less Gasoline and Diesel as Local Market Heals

2023-04-18 07:38:50.340 GMT

By Bloomberg News

(Bloomberg) -- Refiners in China cut exports of gasoline and diesel in March as they prioritized domestic sales in a further sign of recovery in the world's largest crude oil importer.

Gasoline exports eased to 760,000 tons last month, while flows of diesel fell to 1.44 million tons, reducing monthly totals to the lowest since September and October, respectively, customs data showed on Tuesday. On-year, gasoline exports were lower, but diesel volumes were up.

Energy demand in Asia's largest economy is surging after Beijing ditched its restrictive Covid Zero policies, paving the way for a rebound in activity. Other official figures from Beijing on Tuesday pointed to a rise in apparent oil demand and unprecedented daily throughput at refiners nationwide. Gasoline consumption, however, appears to be on a much stronger footing than diesel.

For this month, fuel exports are expected to hold near March's level of about 2 million tons, according to industry consultant OilChem. Flows will include gasoline, diesel and jet fuel even as domestic supply tightens, it said.

To contact Bloomberg News staff for this story: John Liu in Beijing at jliu42@bloomberg.net;
Sarah Chen in Beijing at schen514@bloomberg.net
To contact the editors responsible for this story: Serene Cheong at scheong20@bloomberg.net
Jake Lloyd-Smith, Rob Verdonck

To view this story in Bloomberg click here: https://blinks.bloomberg.com/news/stories/RTAQJVT0AFB4

Excerpt https://investorcenter.slb.com/news-releases/news-release-details/slb-announces-first-quarter-2023-results

SLB Announces First-Quarter 2023 Results

21 April 2023

A Resilient Cycle—Powered by the International and Offshore Markets

"Looking at the macro, we maintain our very constructive multiyear outlook as the upcycle attributes and key activity drivers continue to evolve very positively. The international and offshore markets continue to experience a strong resurgence of activity driven by resilient long-cycle development and capacity expansion projects. In contrast, the North American land market, which has led this upcycle in the early innings, could potentially result in an activity plateau in 2023 due to lower gas prices and capital restraint by private E&P operators.

"On balance, the global activity outlook for the full year remains very solid. Through the first quarter, the resilience, breadth, and durability of this upcycle have become more evident, particularly in the international markets. These attributes are highlighted by the following factors.

"First, there is broader recognition of the positive long-term demand outlook for oil and gas and the potential for a stronger demand rebound in the second half of the year. In addition, recent OPEC+ decisions continue to keep commodity prices at supportive levels—providing operators increased confidence to execute their projects.

"Second, broad-based investments to expand oil capacity and diversify gas supply have been reinforced by the capex plans recently announced by major IOCs and NOCs. Most of the announced budgets highlight a significant increase in spending that supports multiyear activity growth in key resource basins all over the world. In fact, we expect investments will become even more extensive internationally as the pursuit of supply diversity remains a global priority and gathers greater urgency.

"And third, the durability of the current cycle is underscored by the nature of the ongoing investments with the emergence of gas as a long-term energy transition fuel and enabler of energy security, the prominence of long-cycle projects, and the pivot to the Middle East and offshore basins as the anchors of supply growth. Finally, the return of global exploration and appraisal will likely extend this cycle of investment for a number of years.

"Taken together, these market dynamics play to our strengths and create an advantaged position for SLB. Our strategy, global footprint, unique integration capabilities, and portfolio actions have strengthened our ability to support our customers.

Excerpt https://investorcenter.slb.com/news-releases/news-release-details/slb-announces-fourth-quarter-and-full-year-2022-results-0

SLB Announces Fourth-Quarter and Full-Year 2022 Results

20 January 2023

Primed for Strong Growth and Returns—A Distinctive New Phase in the Upcycle

Le Peuch said, “The fourth quarter affirmed a distinctive new phase in the upcycle. In the Middle East, revenue increased by double digits sequentially, with growth in Saudi Arabia, Iraq, and the United Arab Emirates in the solid teens, affirming the much-anticipated acceleration of activity in the region. Offshore activity continued to strengthen, partially offset by seasonality in the Northern Hemisphere. In North America, US land rig count remains at robust levels, although the pace of growth is moderating. Additionally, pricing continues to trend favorably, extending beyond North America and into the international regions, supported by new technology and very tight equipment and service capacity in certain markets.

“These activity dynamics, improved pricing, and our commercial success—particularly in the Middle East, offshore, and North American markets—combine to set a very strong foundation for outperformance in 2023.

“Looking ahead, we believe the macro backdrop and market fundamentals that underpin a strong multi-year upcycle for energy remain very compelling in oil and gas and in low-carbon energy resources. First, oil and gas demand is forecast by the International Energy Agency (IEA) to grow by 1.9 million barrels per day in 2023 despite concerns for a potential economic slowdown in certain regions. In parallel, markets remain very tightly supplied. Second, energy security is prompting a sense of urgency to make further investments to ensure capacity expansion and diversity of supply. And third, the secular trends of digital and decarbonization are set to accelerate with significant digital technology advancements, favorable government policy support, and increased spending on low-carbon initiatives and resources.

“Based on these factors, global upstream spending projections continue to trend positively. Activity growth is expected to be broad-based, marked by an acceleration in international basins. These positive activity dynamics will be amplified by higher service pricing and tighter service sector capacity. The impact of loosening COVID-19 restrictions and an earlier than expected reopening of China could support further upside potential over 2023.

“Overall, the combination of these effects will result in a very favorable mix for SLB with significant growth opportunities in our Core, Digital, and New Energy. We expect another year of very strong growth and margin expansion. We have a clear strategy, an advantaged portfolio, and the right team in place to drive our business forward. I look forward to another successful year for our customers and our shareholders.”

I therefore refer you to our latest or refer you to our latest 10-K filing and our other SEC filings. Our comments today may also include non-GAAP financial measures. Additional details and reconciliation to the most directly comparable GAAP financial measures can be found in our first quarter press release, which is on our website. With that, I will turn the call over to Olivier.

Olivier Le Peuch {BIO 16885975 <GO>}

Thank you, Andy. Ladies and gentlemen, thank you for joining us on the call today. In my prepared remarks, I will cover three topics. I will begin with an update on our first quarter results.

Then I will share our latest view on the macro and our positioning for long-term success. And finally, I will close with our outlook for the second quarter and full year. (Foreign Language) will then provide more details on our financial results and will open for your questions. It has been a great start of the year, as we have achieved results that set set us on a solid footing for a full year financial ambitions.

On a year-on-year basis, our financial and operation results were strong across all geographies and divisions. Following the remarks that I shared in our earnings release this morning, I would like to emphasize a few key highlights from the quarter. First, we delivered very solid year-on-year growth at the magnitude last seen more than a decade ago. Geographically, year-on-year growth rates in North America internationally were comparable.

More importantly, the rate of change is ticking more in favor of the international market, where sequentially we experienced the smallest decline, seasonal decline in recent times. Collectively, our core divisions grew year-on-year by more than 30% and expanded operating margins by more than 300 basis points. We continue to position the core for long term success. with significant contract wins and technology innovations that improve efficiency and lower carbon emissions.

A great example is EcoShield, a geopolymer-based, cement-free, well-integrated system and one of our latest transition technologies launched earlier this quarter. You will find many examples of these contract wins and the performance impact of our new technologies in today's press release. In digital, we maintain strong growth momentum and also secure more contract wins. At the division levels, the amount of year-on-year revenue growth in digital was somewhat masked by significantly lower APS revenue due to production interruption in Ecuador and lower project revenue in the Palliser asset in Canada.

Additionally, digital continues to help us elevate our efficiency and margin performance in the core, as we deploy these solutions at scale in our global operations and in new energy, we continue to make progress across our portfolio, notably with new carbon capture and sequestration activities that raise our involvement to around 30 projects globally. CCS is recognized as one of the fastest growing opportunities to reduce carbon emissions. And with the tailwinds from the US Inflation Reduction Act and other initiatives around the world, we expect more projects to move forward to final investment decisions

in the next few years. Finally, we are delivering on our commitment to increase returns to shareholders.

During the quarter, we relaunched our share buyback program with repurchases totaling more than $200 million worth of shares. I would like to really thank the entire SLB team for their hard work and for delivering yet another successful quarter. Moving to the macro, we maintain a constructive multi-year growth outlook. Through the first quarter the resilience, breadth and durability of the upcycle has only become more evident.

I would like to take a few minutes to describe these factors. To begin, down-tallying demand, investment and activity during this cycle are resilient despite short-term economic and demand uncertainties. The combination of energy security, the initiation of long-cycle projects and OPEC's policy sets the condition for decoupling of the activity outlook for short-term demand uncertainties. Indeed, energy security remains a top priority for most countries and is driving structural investments that are governed primarily by national interest.

The extent of these investments is resulting into a broad-ranging growth outlook comprised predominantly of resilient long-cycle projects in the Middle East, the international offshore basins and in gas projects. Collectively, we expect this market segment to reach or exceed more than two-thirds of the total global upstream spent and support a long tail of resident activity of the next few years. In parallel, the North American market, characterized by higher short cycle exposure, is also set to benefit from positive demand outlook and supportive community pricing. However, this will be impacted by an anticipated activity plateau in the short term, which will subsequently be reflected in production volumes.

Moving to the dimension of breadth and duration. These are also best emphasized by the latest activity outlook for the Middle East and offshore market segments. Fundamentally, the pivot to both segments as anchors of supply growth is a defining attribute of this cycle. This is providing an unprecedented level of investment on visibility and a scale that is setting many records.

In the Middle East, the largest ever investment cycle has now commenced. This will support ongoing capacity expansion project over the next four years in both oil and gas. Consequently, this year we expect to post the highest revenue ever in the Middle East, putting us on track to achieve our multi-year growth aspiration. Simultaneously, we are witnessing further activity expansion in the offshore market.

Offshore activity continues to surprise to the upside with breadth and a diversity of opportunities across all major basins. In addition, the latest FID projections and industry reports indicate that the offshore sector is set for its highest growth in a decade with more than $200 billion in new projects through the next two years. This growth will be supported by three layers of activity. First, the resumption of infill and tieback activity in major basins, which was very visible across Africa in 2022.

This will continue to strengthen in multiple geographies from this year onward. Second, ongoing large development projects in both oil and gas that are ramping up and starting to scale. This is evident in Latin America, such as in Guyana and Brazil, and in the Middle East, such as in Saudi Arabia, UAE and Qatar. And third, the resurgence of exploration and appraisal activity, which is starting to gather strong momentum in existing basins and new frontiers.

From West and South Africa to the East Mediterranean, we are starting to see exploration appraisal at a pace that was unforeseen just a few months ago. Additionally, the activity pipeline continues to elongate with new licensing rounds and new blocks awarded. As a as a result, we believe that we will continue to witness durable offshore investment for many years to come. Let me spend a couple of minutes highlighting what this means for SLB As the cycle unfolds, the characteristics I have just described continue to align with major strengths in our core.

This will support additional activity intensity for well construction, accelerated growth opportunity in our reservoir performance to the return of exploration and appraisal activity and further long-term growth potential for production systems. One such example is the TPAO Sakarya project in the Southern Black Sea offshore Turkey. This project involves all our core divisions supporting the development of a challenging subsea gas asset and a simultaneous construction of a gas production facility, demonstrating SLB's unique ability to integrate at scale from pore to process. looking more in depth, our production systems division is in a unique position as a long-cycle level of growth for us, with quarterly year-on-year results demonstrating our ability to fully harness its potential.

We believe momentum is set to continue, benefiting from our strong market presence in the Middle East and in offshore basins. In this division, we anticipate cumulative bookings in the range of $10 billion to $12 billion in 2023, up significantly from 2022. We have taken a strong step forward towards this ambition, with more than $3 billion bookings in the first quarter, and the outlook supports continued strong bookings through at least 2025. Overall, this will provide durable revenue growth and a significant install base for services in the years to come.

In this context, our exposure to the deepwater subsea market remains an essential component of our growth opportunity and we continue to strengthen this part of our portfolio with much success. In subsea, we have grown 20% over the last two years and are already generating EBITDA margins in the high teens, building on our technology, performance in execution and the depth of our processing portfolio. We expect strong momentum for this part of our business to be sustained through 2025 and beyond. To conclude, we are in the midst of a unique cycle with qualities that enhance the long-term outlook for our industry, resilience, breadth and durability, all reinforced by a pivot to the Middle East, offshore, gas and return of E&A We could not ask for a better backdrop to execute our returns-focused strategy.

During the early phase of this cycle, led by North America, our results have already demonstrated our ability to capture growth ahead of activity and expand margins visibly beyond pre-pandemic levels. Looking forward, we are positioned to fully harness the International and offshore momentum that is now underway and to further our margins

4.4 million shares during the quarter for a total purchase price of $230 million. We will continue to repurchase shares in the coming quarters, and as previously announced, we are targeting to return a total of $2 billion to our shareholders this year between dividends and stock buybacks.

I will now turn the conference call back to Olivier. Thank you, Stephan. Ladies and gentlemen, I think, we will open now the floor to your questions.

Questions And Answers

Operator

Question And Answer

Thank you.

(Operator Instructions) We go to the line of James West with Evercore ISI Please go ahead.

Q - James C West {BIO 19758684 <GO>}

Hey, good morning-- So, Olivier, you and Stephan, you outlined kind of an unprecedented, quite frankly, amount of contract awards, amount of visibility into the cycle. And curious, as you talk to your customers now, what you see as the durability of those awards, given the global volatility in economies and things of that nature. How are you thinking about the the next several years, how are you guys perceiving kind of the steadiness of these contract awards and their ability to continue to go forward, even if we were to have a recession or something like that, and how that would influence your revenue and results?

A - Unidentified Speaker

No, James, thank you.

Indeed, we are highlighted and I think in my prepared remarks, I shared the view that in the recent months and -- in the last quarter and I have been traveling in Asia, Middle East and South America, I have seen customers taking commitments and being ready to commit to the supply capacity and to the partnership they need to deploy and develop the assets going forward. As we believe this cycle is unique through, as we said a level of resilience the nature of investment that goes through it, including the long-term capacity expansion committed in the Middle East, including the large long-cycle elements that are growing in proportion led by offshore deepwater coming back. The breadth, I think, everywhere we go, every geo-unit is seeing a customer, reaching out to mobilize resource, sometimes for short-cycle pollution enhancements, most of the time for development, commitment of assets and redevelopment, expansion from infield to large-scale development. And durability is certainly improving.

Duration of the cycle, I think, is improving, as we see, because beyond the Middle East, 27 targets of capacity expansion for certain other countries are targeting this towards the end of the decade. And here I am in a city in Brazil, and Brazil has a clear has a clear ambition for 4 million barrels by 2030 and I've already committed up to 20 FPA, so contract that will continue to build the pipeline of offshore activities, subsea in particular, going forward. So I'm very, very positive about the mix, if you like, of short cycle on production enhancements to address the anticipated supply risk and the commitment, long commitment from Middle East from deepwater and offshore operator to complement the long cycle is not to offset and now take precedence over this short cycle and to turn, as we indicated to turn into the cycle towards International offshore and Middle East in particular. So, that's where we are very confident.

Q - Analyst

Okay, that's perfect Olivier, thank you. And then a follow-up for me. In terms of pricing, international and offshore versus maybe North America, what you're seeing there in terms of the level of concern or maybe not concern, but willingness to accept pricing increases. It seems to me like customers internationally and offshore are more looking at our concerned about availability of service capacity rather than what it actually costs.

A - Unidentified Speaker

Yeah, I think, we are seeing pricing tailwinds and we have seen pricing tailwinds in the global market for quite a few quarters and starting in North America, it has turned to international based on two things. First indeed, securing capacity going forward, considering the tight supply of equipment, unique technology, giving a level of sense of urgency to secure contract and and elongating the contract. We have seen example of nine years contract into the announcement we made today. And at the same time, I think performance matters.

Performance matters to offshore operator, performance matters for first gas, first oil, and there's a sense of urgency to accelerate the cycle. This is one of the priority. And technology integration also makes a difference and is recognized and is driving a pricing premium. So the combination of supply capacity, the combination of, I would say, a sense of urgency and quest for performance, integration, and technology deployment is driving pricing tailwinds that are serving us very well.

Q - Analyst

Great. Thanks, Claudio.

A - Unidentified Speaker

Thank you

Operator

Next we go to David Anderson with Barclays. Please go ahead.

Q - J David Anderson {BIO 6875231 <GO>}

Hi, good morning, Olivier.

A - Olivier Le Peuch {BIO 16885975 <GO>}

Good morning, Dave. So, question on kind of the duration of the cycle in your core business. Well construction is obviously a big part of that.

I was hoping maybe you could talk about the pace of well construction that you see in front of you this year and where we should see the greatest uptick in activity and kind of the greatest shift in technology as well. Notice that America, North America is at 9% sequential, which is a bit of a surprise. But where does that Middle East ramp up sit in here? And kind of also a similar question to what James was asking about, the question of capacity. If I'm one of your customers, what am I most worried about today? Is it well construction? Does that kind of be--I would have to think that has to be kind of towards the top of the list.

But if you can sort of help us understand that a little bit? Thank you.

Yeah, no, I think you are correct. I think the supply of high high-performance equipment in the well construction domain is on the stretch today. And I think we are working very closely with our customers to prioritize equipment, price technology, application, and use integration, use digital to help deliver the performance they expect.

So there is a stretch indeed in this, but going forward, I think we are committing the resource when we see the returns to be accretive to our margins and align with our expectation and ambition to continue to expand margins. So where we see the most activity, clearly this year as an uptick, and this will be the case sequentially next quarter, is in Middle East and offshore. I think the combination of an integrated contract we have in offshore with relatively complex asset on occasion that demands a lot of technology deployment and the intensity of activity in Middle East that is a mix of short cycle and long and long cycle development project. This combination is unique and I think is will be pulling more resource, more equipment, more technology and will drive revenue forward up.

Q - Analyst

And was the North America uptick, was that more offshore driven than onshore this quarter?

A - Unidentified Speaker

Yes, it was indeed, absolutely. I think offshore is not only international, I think offshore is happening in North America. North America is Northeast Canada, Alaska offshore and Gulf of Mexico, the combination of which is set to grow and now pace this year, I would say the US land and North American land activity. So we are also getting the benefit of our fit-for-basin, success in North America that continues to hold and help us maintain, grow our share and come on a premium, on pricing.

Q - Analyst

A - Unidentified Speaker

Thank you.

Q - Chase Mulvehill {BIO 17240736 <GO>}

Hey, good morning, Olivier.

A - Olivier Le Peuch {BIO 16885975 <GO>}

Good morning, Chase.

Q - Chase Mulvehill {BIO 17240736 <GO>}

So, my question, good morning. I guess coming back to international and just kind of focusing there, we get questions on this international ramp, because the last six months, we've seen some oil price volatility, we've seen a couple of OPEC plus cuts. And so we kind of get a lot of investor questions, if there's been any signs of OPEC slowing down any kind of planned projects or CapEx plans.

So let me just ask you, if you've seen any indications of OPEC plus members slowing things down at all in the Middle East?

A - Olivier Le Peuch {BIO 16885975 <GO>}

No, we have not seen it. We have not seen any impact of this decision. And we don't believe there will be any and we believe that these companies and the national companies are really set and fully and fully focused on mobilizing resource to execute their very ambitious capacity expansion plan. I think you are aware of all the commitments.

And it's not only UAE and Saudi. This is across many countries in GCC And I think this is to grow both oil capacity and also gas and commercial and commercial gas across the region. So I think I've been recently in the Middle East and I've not seen any sign of adopting and challenging and again, the multiplicity of contract award that were tendered in the last 18 months and most of them multi-year, if not beyond five years, really indicative of the commitments and the capacity expansion plan that I've started. Inflection has happened and you will see this growing for the rest of the year.

So we don't foresee any impact.

Q - Analyst

Okay, awesome. Appreciate the color there, the follow up is really kind of on CCUS, you had a lot of announcements in your press release, which really highlighted your experience on the sequestration side. But there are other parts, obviously, of the value chain.

And are there other parts that you would actually think that would be a good fit for SLB? Like possibly the capture technology side?

provider with our partner Subsea 7 into the product of TPO that you heard about, where the first gas-to-flare was realized yesterday and celebrated by the in-country.

And this is quite unique, so that's differentiated. We have end-to-end integration capability. We can design and deploy and develop a gas facility, and we have done it in the past, and we can link it to with our partners to our subsea development and participate to the completion architecture. So this end-to-end is quite unique and gives us an opportunity to participate at a large scale into development.

Now, very specific to subsea, I think we are also quite differentiated into the way that we can connect to the subsurface and we have this integration capability from the subsea to the completion architecture and one thing in particular in particular, I would like to highlight two things. First is the electrical capability, electrical capability of transforming this subsea trees, this subsea control, and the subsea and well-completion control into electric, full electric capability. This is a game changer in the deepwater industry, game changer for low carbon and control, digital control of subsea equipment and control of zone equipment in completion. This is very much again the case in Brazil.

We are very fortunate to have established here a unique Center of Excellence and we are under the sponsorship of ANP, working with multiple operators that have joined us into a joint development program, where we are deploying and we will soon deploy everything from subsea tree to safety valve to flow control valve, full electric that will change the game and creating a new step. So, that's differentiated. the other differential of UC is our processing, boosting, and processing capability. You remember the award that we got last year into a Shell for gas processing subsea equipment into a large installation, and you have seen two awards this quarter in Brazil highlighting our boosting capability.

So, we are unique in that position. And again, the ability we have to integrate processing equipment subsea with the rest of the equipment, well or surface, is unique. And that's something that is adding to our digital capability as well. So, when it comes to the announced JV, I think we are still in the process of going to the regulatory bodies in different parts of the world, so I cannot comment any further than what we commented earlier.

This is an exciting outlook, exciting opportunity, but until close, we will move move forward.

Q - Analyst

Great. Olivier, my follow-up, you and the Board are in Rio this week. I was wondering if you could characterize on what you're seeing on the ground in terms of the upstream spending picture? And obviously we've had a regime change recently with the new administration, are you seeing any potential changes to the fiscal or regulatory regime that could impact spending over the next couple two, three years?

A - Olivier Le Peuch {BIO 16885975 <GO>}

If anything, this visit has been outstanding, outstanding for the Board, outstanding for the engagement we have with customers, and highlighting the potential of Brazil to be

fulfilling a significant supply growth in the future.

As I said, A&P and Brazil have the ambition to reach or exceed 4 billion barrels from 3.3 billion today a million barrels per day. And they have already laid out the foundation of this of both production enhancement into the metro basin, the compost compost basins or the land basins and accelerating, continue to accelerate the development of the sub-salt deep water with up to 20 FPSO already into the play. So, I think they also are pushing forward to the next frontier. They are about to explore equatorial margin that give us another leg, if you like of Brazil growth in the future beyond the already committed multi-year FPSO contract that are in place.

So, we don't see any change. If anything, we see an acceleration, an extension of the duration of this Brazil outlook. And if I had to highlight one noticeable change that I've seen, a commitment to de-carbonize, a commitment to digitalize, that I think is the new leadership is really committed to. And we have seen it and you will see it in future, digital digital operation will accelerate in Brazil by the main operator here, and the country will accelerate its commitment to CCS We are very fortunate to be on the first and only bio-energy CCS project in Latin America with FS Bioenergia, and we met the team two days ago, and they are very pleased with the progress we are making on this CCS project in Brazil.

So you will see more activity and no slowdown, but only upside to the offshore environment, and then low carbon and digital transition accelerating as well.

Q - Analyst

Great. Thanks for the detailed comments.

A - Unidentified Speaker

Thank you.

Operator

Next, we go to Neil Mehta with Goldman Sachs. Please go ahead.

Q - Neil Mehta {BIO 16213187 <GO>}

Good morning, team. First question was around cash flow, and working capital specifically.

It was a bigger outflow than we we had modeled in the quarter. Is does that all reverse over the course of the year? And you could talk about some of the moving pieces around that.

A - Unidentified Speaker

Sure, Neil. So, yes, it does reverse.

significant support to the G&G team of our customers and to not slow down, but actually actually accelerate and improve the productivity and ability to generate prospects. So, I'm not concerned and I believe that you will see this prospect to be fast-tracked from exploration to appraisal to development going forward.

Q - Analyst

That's great. Just how would you compare the strengths of this exploration cycle to those of the past? Is the trajectory trending us back towards that 2011 to 2014 period? Could we possibly get back to the mid to late 2000s levels, just as tieback opportunities are consumed? Just some color on the potential strength of this exploration cycle relative to history would be great.

A - Olivier Le Peuch {BIO 16885975 <GO>}

So, I think I would contrast it more by saying the type of activity and exploration that is happening. And I think, there are a lot of near-field exploration as it is called or backyard exploration, that is being used by the most operators that have gained access to critical assets, critical basins or advantage assets and they want to explore and do near-field exploration across and beyond and use tieback.

So there is a lot of exploration happening across every basin, major basin, that characterizes this and this trend has been going up and this trend is certainly different from the green field frontier exploration that characterized maybe the last cycle. However, this cycle I think beyond the near-field exploration, we are seeing a return of frontier exploration driven by energy security, driven by the desire to replace reserve and to secure new gas particularly and we see it happening across many basins. I mentioned before the equatorial margin as one, you heard about the continuous exploration, which is almost becoming a near-field exploration across Guyana. But if you go across the Atlantic, you will find a lot of exploration happening in the south part of Africa, part of some huge success for two or three operators into Namibia that are here on the onset of something that could be very significant for the industry in oil development.

And then gas in East Med, I think, has been developing and you heard about the development that we had fast track on the Black sea, that was also gas. So security is incentivizing people to invest and operators to invest into certain regions with access to the demand market and near field is is continued to grow very well. So in combination, it is different from the past and I will not try to compare the scale but if in the quality of this exploration and the diversity in terms of customers and interval Basin is quite unique, and is really accelerating this year.

Q - Analyst

I appreciate the color.

Thank you.

A - Olivier Le Peuch {BIO 16885975 <GO>}

Thank you.

A - Olivier Le Peuch {BIO 16885975 <GO>}

So look, Roger, on APS, we really have to distinguish Ecuador, these are service contracts, tariff based, there's no intention to exit and we do need to maintain a minimum level of investment. But rest assured, these projects are highly positive in terms of not only earnings, but cash flow. The Canada asset is a bit different. This is a pure equity position and it's also very accretive in terms of cash flow even at current commodity prices.

And as you know, we run a process on that particular asset last year. We were not satisfied with the offers we received. So at the moment, we are happy with keeping that asset and the cash flows it generates, but if one day there is an offer at the right price, we'll certainly consider it.

Q - Analyst

Okay, I appreciate it.

Thank you.

A - Olivier Le Peuch {BIO 16885975 <GO>}

So ladies and gentlemen, I think I want to give a close to this call. It's almost to the hour. So to conclude today's call, I would like to leave you with the following takeaways.

takeaways. First, the quality of the unfolding of cycling oil and gas is improving with unique attributes of resilience, breadth and duration. This is very much evidenced by the strengthening outlook in both Middle East and offshore markets and further reinforced by the tight supply balance as demand forecasts approach new highs at the year-end. Second, our strong style of the year gives us further confidence in our full year financial ambition.

Directionally, the dynamics in international markets will likely offset the moderation of activity growth in North America. In fact, we are witnessing a gradual shift from short to long cycle investment and a further transition to international, with both effects closely aligned with our strengths and paving the way for an exciting outlook for years to come. Third, our overall performance demonstrates the strength of our portfolio, focused on the most attractive and resident market segments globally, both in oil and gas and low carbon solutions solutions. Our divisions continue to align with customers' utmost priorities on value delivered through performance and integration, with digital transformation and decarbonization as industry mandates.

Additionally, pricing continues to trend positively, enabling us to extract more value for our products and services. As a result, we reaffirm our ambition to further expand margins as the cycle unfolds, to grow earnings to new levels in this cycle, and to significantly increase returns to shareholders as further demonstrated this quarter. I remain very confident in the alignment of our strategy with the fundamental trends in the energy market, and fully trust the SLB team to continue outperforming in this context. Now, before I close, I wanted to announce that ND Maduemezia will be moving to a new career position in SLB, after a remarkable stance in his position as Investor Relations VP for the past three years.

Italy March Oil Consumption: Statistical Summary (Table)
2023-04-20 10:24:38.801 GMT

By Giovanni Salzano
(Bloomberg) -- Following is a summary of the March oil consumption report from the ministry of productive activities in Rome:
*T

	March 2023	March 2022	YoY% Change	Jan.-March 2023	Jan.-March 2022	YoY% Change
	000/metric tons					
Tot. Consumption	4,877	4,826	1.1%	13,650	13,476	1.3%
Gasoline	677	618	9.5%	1,833	1,664	10.2%
Jet-fuel	310	240	29.2%	810	613	32.1%
Total Gasoil	2,271	2,287	-0.7%	6,134	6,184	-0.8%
Auto Diesel	2,034	2,041	-0.3%	5,585	5,573	0.2%
Heating Diesel	51	71	-28.2%	199	253	-21.3%
Fuel for Electr.						
Generation	68	22	209.1%	273	66	313.6%

NOTE: All figures are expressed in 000/metric tons.

SOURCE: Ministry of Ecological Transition

To contact the reporter on this story:
Giovanni Salzano in Rome at gsalzano@bloomberg.net
To contact the editors responsible for this story:
Joshua Robinson at jrobinson37@bloomberg.net
Mark Evans

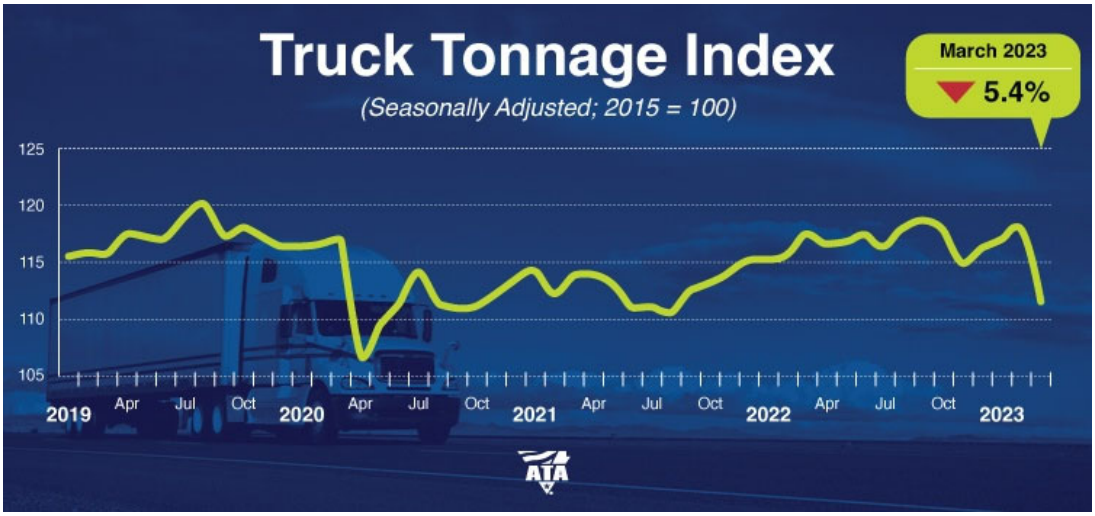
https://www.trucking.org/news-insights/ata-truck-tonnage-index-decreased-54-march

ATA Truck Tonnage Index Decreased 5.4% in March

Media Contact: Sean McNally

Apr 18, 2023

Washington — American Trucking Associations' advanced seasonally adjusted (SA) For-Hire Truck Tonnage Index fell 5.4% in March after increasing 0.9% in February. In March, the index equaled 111.6 (2015=100) compared with 118 in February.



"After increasing a total of 2.6% during the three previous months, March's sequential decline was the largest monthly drop since April 2020 during the start of the pandemic," said **ATA Chief Economist Bob Costello**. "Falling home construction, decreasing factory output and soft retail sales all hurt contract freight tonnage – which dominates ATA's tonnage index – during the month. Despite the largest year-over-year drop since October 2020, contract freight remains more robust than the spot market, which continues to see prolonged weakness."

Compared with March 2022, the SA index decreased 5%, which was the first year-over-year decrease since August 2021. In February, the index was up 1.9% from a year earlier. During the first quarter, tonnage was 0.6% below the same three month period in 2022.

The not seasonally adjusted index, which represents the change in tonnage actually hauled by the fleets before any seasonal adjustment, equaled 117.2 in March, 9.3% above the February level (107.2). In calculating the index, 100 represents 2015. ATA's For-Hire Truck Tonnage Index is dominated by contract freight as opposed to spot market freight.

Trucking serves as a barometer of the U.S. economy, representing 72.2% of tonnage carried by all modes of domestic freight transportation, including manufactured and retail goods. Trucks hauled 10.93 billion tons of freight in 2021. Motor carriers collected $875.5 billion, or 80.8% of total revenue earned by all transport modes.

ATA calculates the tonnage index based on surveys from its membership and has been doing so since the 1970s. This is a preliminary figure and subject to change in the final report issued around the 5th day of each month. The report includes month-to-month and year-over-year results, relevant economic comparisons, and key financial indicators.

TIPRO Highlights Increase in Oil and Gas Employment, Job Postings and Production

Apr 21 Posted by Kelli Way in Uncategorized

Austin, Texas - Citing the latest Current Employment Statistics (CES) report from the U.S. Bureau of Labor Statistics (BLS), the Texas Independent Producers and Royalty Owners Association (TIPRO) today highlighted new employment figures showing a gain in Texas upstream employment last month. According to TIPRO's analysis, direct Texas upstream employment for March 2023 totaled 198,700, an increase of 1,500 jobs from revised February employment numbers. Texas upstream employment in March 2023 represented the addition of 20,000 positions compared to March 2022, including an increase of 1,100 jobs in oil and natural gas extraction and 18,900 jobs in the services sector.

TIPRO's new employment data yet again indicated strong job postings for the Texas oil and natural gas industry during the month of March. According to the association, there were 14,491 active unique jobs postings for the Texas oil and natural gas industry in March, including 6,193 new job postings added in the month by companies. March active unique job postings reflect a 21 percent increase compared to February, and a 35 percent increase in new job postings for the month.

Among the updated 17 specific industry sectors TIPRO uses to define the Texas oil and natural gas industry, Support Activities for Oil and Gas Operations led in the rankings for unique job listings in March with 4,027 postings, followed by Gasoline Stations with Convenience Stores (2,002) and Crude Petroleum Extraction (1,548). The leading three cities by total unique oil and natural gas job postings were Houston (4,949), Midland (1,284) and Odessa (659), said TIPRO.

The leading three companies ranked by unique job postings in March were Love's (833), John Wood Group (822) and Halliburton (589), according to TIPRO. Of the top ten companies listed by unique job postings last month, five companies were in the services sector, followed by three midstream companies, one in gasoline stations with convenience stores, and one in oil and natural gas extraction. Top posted industry occupations for March included maintenance and repair workers (469), heavy tractor-trailer truck drivers (428) and managers (402). The top posted job titles for March included lease operators (96), field service technicians (96) and maintenance technicians (86).

Top qualifications for unique job postings included valid driver's license (2,515), commercial driver's license (CDL) (334), and CDL Class A license (282). TIPRO reports that 40 percent of unique job postings required a bachelor's degree, 31 percent required a high school diploma or GED, and 30 percent had no education requirement listed. There were 1,605 advertised salary observations (11 percent of the 14,491 matching postings) with a median salary of $48,000.

Additional TIPRO workforce trends data:

- Average annual wages for the Texas oil and natural gas industry can be viewed here.
- Leading industry positions in Texas with median hourly earnings, education, work experience and typical on-the-job training is available here.
- A sample of 500 active industry job postings in Texas for March 2023 - April 2023 can be viewed here. Please note, some positions may no longer be available.
- The top three posting sources in March included indeed.com (5,674), simplyhired.com (3,010) and workintexas.com (1,438).

TIPRO also highlights recent data released from the Texas comptroller's office showing strong levels of tax contributions paid by the Texas oil and natural gas industry. In March, Texas energy producers paid $427 million in oil production taxes and $267 million in natural gas production taxes. Oil and natural gas severance taxes are

extremely important to the state and local governments and are used help to support road and infrastructure investments, water conservation projects, schools and education, first responders and other essential public services. Texas Comptroller Glenn Hegar, who spoke recently at TIPRO's 77th Annual Convention in early April, emphasized the powerful impact of the industry to the state economy and also highlighted how tax revenue generated from oil and gas production has contributed heavily to the state's record budgetary surplus.

Additionally, TIPRO reports that oil and natural gas output is poised to further increase in the months to come. New data from the U.S. Energy Information Administration (EIA) projects that U.S. oil production in May will grow by 49,000 barrels per day (b/d) and top 9.328 million b/d. In the Permian Basin, the most nation's most prolific shale oil basin, output will rise by 13,000 b/d to hit 5.694 million b/d. Oil production in the Eagle Ford Shale in South Texas is also expected to increase by 6,000 b/d to total 1.141 million bpd. According to the latest EIA estimates, domestic natural gas production also will climb in May and reach 97 billion cubic feet per day (bcf/d) next month. This in part will be driven by production gains from the Permian, where natural gas production is expected to grow to 22.5 bcf/d and in the Eagle Ford, where natural gas production will total 7.26 bcf/d.

“The Texas oil and natural gas industry continues to ramp up employment and production in-line with growing demand for our product here and abroad,” said Ed Longanecker, president of TIPRO. “With global oil and natural gas demand projected to increase by 34 percent by the year 2050, it’s imperative that policy at the state and federal level reflect this reality and that our elected officials support continued investment in energy infrastructure and domestic production. By not doing so, energy prices will only increase for Americans and our country will become more reliant on other countries for oil and natural gas that do not adhere to the same environmental standards as the U.S. No other industry sector is more pervasive or important to our everyday lives and national security than oil and natural gas,” concluded Longanecker.

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AccuWeather's 2023 Atlantic hurricane season forecast

Florida will once again be at risk for land-falling tropical systems this upcoming season, which begins in two months. AccuWeather forecasters urge people to prepare now.

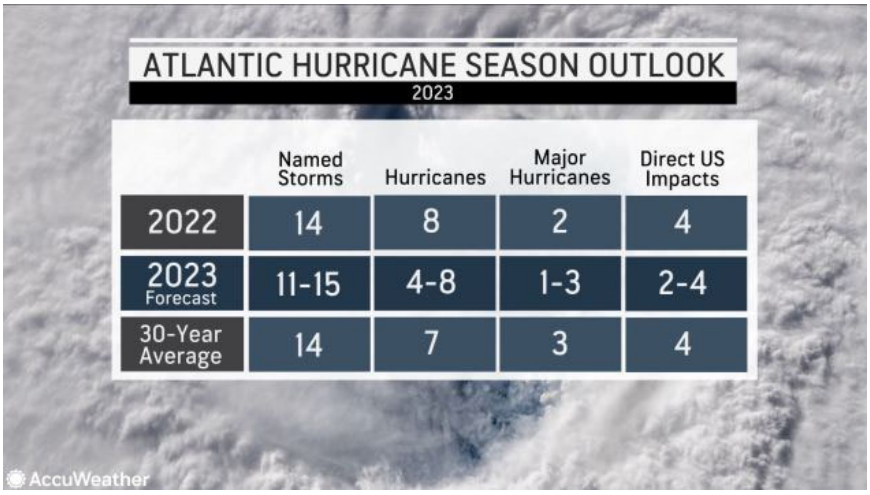
By Kevin Byrne, AccuWeather senior editor
Published Mar 29, 2023 9:36 PM JST | Updated Mar 30, 2023 4:47 AM JST

AccuWeather long-range forecasters say the upcoming season, which starts on June 1, could likely be similar to the 2022 hurricane season.

AccuWeather meteorologists recently put the final touches on their initial forecast for the upcoming Atlantic hurricane season, and they are emphasizing that preparations should begin in earnest even though the official start date is two months away.
Mother Nature threw a bit of an atmospheric curveball in 2022 despite the presence of a moderate to strong La Niña. The Atlantic generated no named storms in August, but three hurricanes roamed the basin in November. The overall number of named storms was 14, which is average and a much lower number than what the prolific 2020 and 2021 seasons produced.

So what does 2023 have in store? According to AccuWeather's team of tropical weather forecasters, it will be less active than the majority of seasons since 1995 and may feature a similar number of storms when compared to 2022. But that doesn't mean there won't be dangers.

Current projections indicate that the 2023 season will be near the historical average with 11-15 named storms. Four to eight of those named storms are expected to reach hurricane strength, with one to three of those hurricanes achieving major hurricane status. A major hurricane is one that has maximum sustained winds of 111 mph or greater and is rated 3-5 on the Saffir-Simpson Hurricane Wind Scale.



“We are also projecting two to four direct impacts on the United States, including Puerto Rico and the Virgin Islands,” said Senior Meteorologist and Hurricane Expert Dan Kottlowski, who has been issuing forecasts for AccuWeather for over four decades.

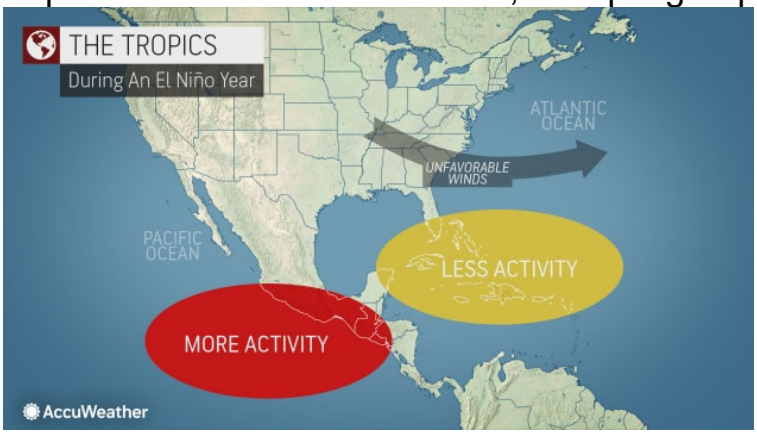
Based on the 30-year average from 1990 to 2020, a typical hurricane season consists of 14 named storms, seven hurricanes, three major hurricanes and four direct impacts on the U.S.

The 2023 forecast was crafted meticulously and took a number of critical environmental factors into account. A few of the factors that will influence the season include the expected transition to El Niño, sea surface temperatures in the tropical hotbeds of the Atlantic and the strength of a wind pattern over Africa known as the African easterly jet. Continue reading for a comprehensive analysis of how the season is expected to play out and why.

Goodbye La Niña, hello El Niño?

In early March, NOAA’s Climate Prediction Center (CPC) declared an end to the “triple-dip” La Niña that was in place through the past three hurricane seasons. The hyperactive 2020 season produced a record-setting number of named storms with 30, while it was followed by 21 more in the extremely busy 2021 season.
During a La Niña phase, vertical wind shear becomes less prevalent over the traditional breeding grounds for tropical storms and hurricanes. Wind shear can inhibit a tropical cyclone's formation, so when there is less wind shear in the atmosphere forecasters tend to predict a higher number of tropical systems to develop when issuing seasonal prognostications.
With El Niño, it’s the opposite.

An El Niño pattern causes the winds at higher levels of the atmosphere to dip southward and deep into the tropics more frequently, resulting in more episodes of vertical wind shear. Vertical wind shear causes thunderstorms and convective clouds within emerging tropical disturbances to be tilted, disrupting tropical development, Kottlowski explained.



This graphic illustrates the general trends in the tropics when an El Niño pattern is fully underway.

La Niña and El Niño make up two-thirds of the broader three-pronged recurring climate pattern known as the El Niño Southern Oscillation (ENSO). The third phase is ENSO-neutral.

As of March 29, the CPC said an ENSO-neutral phase was in effect, meaning sea surface temperatures across the equatorial East Pacific were right around historical averages. Over the next four to six months, AccuWeather meteorologists expect the waters south of Hawaii and along both sides of the equator to warm to levels above the historical average. As a result, an evolving El Niño is likely to unfold by the second half of the summer. However, there remains a question about how strong El Niño will be from late August to early October, which is historically when tropical activity is at its highest.

Hurricane seasons with emerging El Niño patterns tend to be less active than normal, Kottlowski stated.

But, there can still be some windows where favorable conditions develop across parts of the basin for tropical development to take place.

There are many breeding grounds for tropical cyclones in the Atlantic, including the Caribbean, Gulf of Mexico and along the Atlantic coast of the U.S. During the heart of the hurricane season, the far eastern Atlantic off the coast of Africa is another hot spot. Tropical waves, which are areas of low pressure in the atmosphere, are pushed from the deserts of northern Africa into the Atlantic, where they often quickly organize into robust tropical cyclones.
The strength of the African easterly jet usually plays a big role in the number of tropical waves that enter the Atlantic from Africa. The impending arrival of El Niño, however, is expected to result in a weaker African easterly jet, thus resulting in fewer tropical waves emerging off the African coast.

Which parts of the United States will be at the greatest risk?

In 2022, parts of the hurricane-fatigued Gulf Coast finally got a bit of a reprieve. Areas from southern Texas to the Florida Panhandle were peppered by numerous storms in 2020 and 2021, with Louisiana serving as the bull's-eye for many of them, including Category 4 Hurricane Laura in 2020 and Category 4 Hurricane Ida in 2021.

Instead, Florida, Puerto Rico and South Carolina endured the worst of 2022, which included strikes from menacing tempests such as hurricanes Ian and Fiona in September then Nicole, which made a rare late-season landfall on Florida’s east coast in November. Unfortunately for those in the Sunshine State who are still recovering from those punishing hurricanes, AccuWeather forecasters say the state will once again be at a higher risk than other parts of the country.

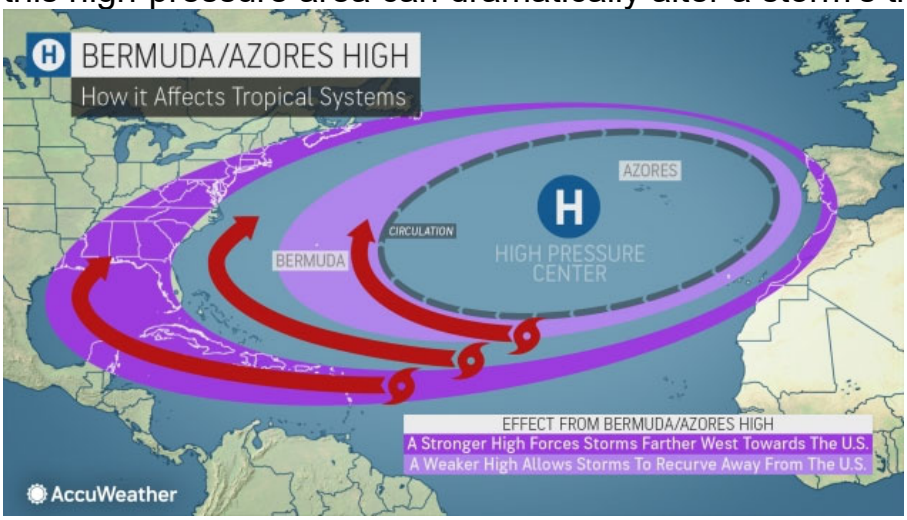
“Based on climatology and an evolving El Niño pattern during August through October, the highest chance for direct and significant impacts will be from the Florida Panhandle around the entire state of Florida to the Carolina coast,” Kottlowski said. “There appears to

be a lower chance for direct impacts over the western Gulf of Mexico and for the Northeast U.S."

AccuWeather forecasters were able to determine areas at most significant risk in part based on analog years, which are past years that bear similarities to current and expected weather patterns. Some recent analog years for this year's forecast include 2006 (below-average amount of Atlantic storms), 2009 (below average), 2012 (above average) and 2018 (above average).

The 2012 season was memorable for the late-season landfall of Superstorm Sandy and its devastating effects in the mid-Atlantic, while 2018 was defined by the historic deluge unleashed on the Carolinas by Hurricane Florence and the intense force of Category 5 Hurricane Michael on the Florida Panhandle.

Another key determinant in the locations where storms make landfall each year is an area of high pressure over the Atlantic known as the Bermuda Azores high. The orientation of this high-pressure area can dramatically alter a storm's track.



A weaker Bermuda high typically allows storms to recurve away from the United States. But stronger ones have the opposite effect and can guide storms closer to U.S. shores. As of March 29, Kottlowski's team says the strength of the Bermuda high will be one of the biggest storylines to monitor throughout the season.

Above-normal water temperatures will once again play a major role

Preseason tropical activity has been a common occurrence over the past decade, but in 2022, there were no named storms before the official June 1 start date for the first time since 2014.

Kottlowski believes that there is a good chance for preseason development once again this year, due in large part to warm waters in the Gulf of Mexico and off the Southeast coast of the U.S., the locations where storms typically form in the late spring and early summer in the basin.

Waters were already warmer than average in the Gulf of Mexico as of late March and have played a big role in the active start to the severe weather year in the United States.

Water temperatures across the Caribbean and Gulf of Mexico as of March 27, 2023.

The unusually warm waters could once again provide the fuel necessary for a storm to intensify rapidly into a major hurricane. And as Ian proved, it only takes one storm to affect millions of lives.

“Even if this season were to turn out to be less active than normal, abundant warm water could lead to the development of a couple of very strong hurricanes, as we saw with Ian,” Kottlowski said. “Anyone living near or at the coast must have a hurricane plan in place to deal with what could be a life-threatening or very damaging hurricane. Now is the time to create or update your plan.”

Hurricane season officially ends on Nov. 30, and in 2022, the season finished with an active November. However, due to the anticipated arrival of El Niño, the chances for late-season development this year during November and even December will be low.

Will this be an intense season?

Accumulated cyclone energy (ACE) is a way to measure a tropical cyclone’s intensity as well as its longevity. Adding up every storm’s ACE value can help meteorologists define the season as a whole. An average value for any given season is between 80 and 130 ACE units.

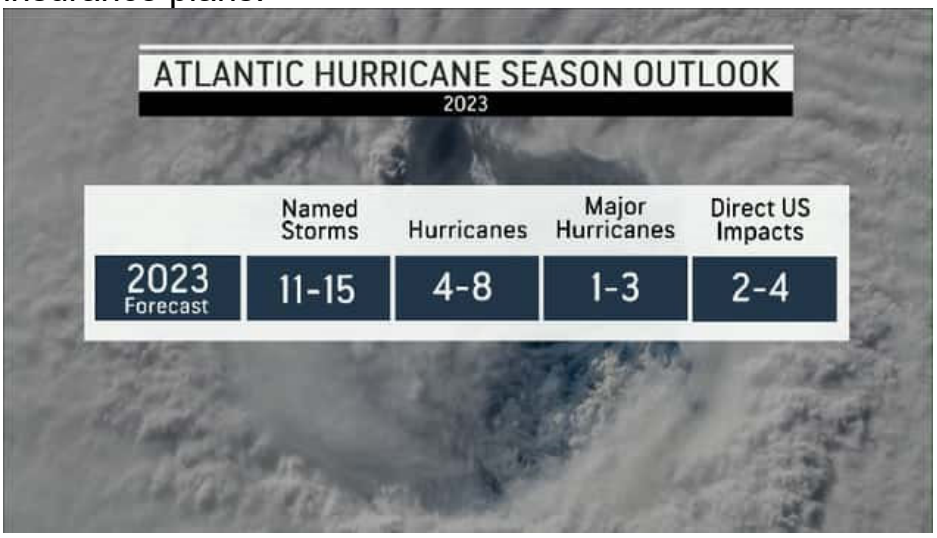
Some seasons that have more named storms can end up having lower overall ACE values than those with fewer storms. For instance, although 2020 had more named storms on record than any other with 30, its ACE value of 179.8 was lower than years such as 2017 (224.9) and 2005 (245.3), according to Colorado State University figures. The 2005 season had 28 named storms, and the 2017 season had 17.
“Last year produced 95 ACE units, and this year is expected to be very similar, in other words, near-normal ACE,” Kottlowski said. Specifically, AccuWeather is calling for a total ACE between 75 and 105 this year.

Hurricane safety plans should be made now, not in June

Experts emphasize that it's never too early to organize a hurricane-safety strategy, and it's not just residents who live directly along the coast that must be mindful. Kottlowski said people living within 100 miles of the coastline should be taking action now too.

Recent studies have found that hurricanes are maintaining their strength for longer periods of time after landfall, causing more significant flooding and wind damage farther inland.
And it's not just hurricanes. A high-end tropical storm can also unleash life-threatening impacts, with Tropical Storm Imelda's devastating flooding in Texas in 2019 being one example.

Steps to take toward making yourself as hurricane ready as possible include studying local evacuation routes, organizing an emergency preparedness kit, mitigating opportunities for damage around your property and conducting a checkup on your insurance plans.



AccuWeather's 2023 Atlantic hurricane season forecast

AccuWeather’s Dan Kottlowski reflects on the impacts of last year’s hurricane season and gives the current outlook of this year’s upcoming hurricane season.

https://www.reuters.com/business/environment/g7-climate-ministers-drop-language-growing-lng-demand-draft-2023-04-11/?taid=64356ef9eea76d00011ee59b&utm_campaign=trueAnthem:+Trending+Content&utm_medium=trueAnthem&utm_source=twitter

3 minute read April 11, 202310:00 AM MDTLast Updated 2 hours ago

G7 climate ministers drop language on growing LNG demand in draft

By Kate Abnett and Makiko Yamazaki

A liquefied natural gas (LNG) tanker is tugged towards a thermal power station in Futtsu, east of Tokyo, Japan November 13, 2017. REUTERS/Issei Kato/File Photo

BRUSSELS/TOKYO, April 11 (Reuters) - Climate ministers of the Group of Seven countries have backtracked for now on earlier language touting growing future demand for liquefied natural gas (LNG), instead noting there may be "considerable uncertainty" for consumption.

A previous draft communique for this week's meeting of G7 climate change and energy ministers had called for "necessary upstream investments in LNG and natural gas" amid the energy fallout from Russia's invasion of Ukraine and said "demand for LNG will continue to grow".

But, as negotiations over the communique resumed on Tuesday ahead of the ministerial meeting on April 15-16 in Sapporo, Japan, the wording was changed, the latest draft reviewed by Reuters showed.

"We recognize that, based on the IEA's (International Energy Agency) analyses, there would be considerable uncertainty for future demand of natural gas and LNG and consequently there are risks of supply and demand gap to be addressed," the document dated April 5 said.

The draft also altered the earlier language on LNG and gas investments to say they would be needed to "bridge the gap in a manner consistent with our climate objectives and commitments."

It added a line saying, "Furthermore we will accelerate the clean energy transition through energy savings and gas demand reductions in the process of decarbonization."

It was not clear from the document why the language was changed. But Italy, Germany, France and the European Union had opposed the initial proposal on LNG demand increasing, the draft showed.

An official dealing with international affairs at the Japanese industry ministry declined to comment on the draft, saying the negotiations are ongoing.

Scientists and analysts have warned that new fossil fuel investments would negate globally agreed climate change goals.

Japan plans to keep LNG as a transition fuel for at least 10-15 years, and many Japanese companies are exposed to super-chilled gas projects globally.

The document may still change before it is adopted. The latest text showed countries are still at odds over other issues.

The EU, the United States and Japan have opposed a proposal by Britain to commit to phase out domestic unabated coal power generation by 2030 and call for the global pipeline of new coal plants to be cancelled, the latest draft showed.

Japan wants to start widely co-firing ammonia in its coal-fuelled power plants as a way to reduce CO2 emissions, and is seeking the endorsement of other G7 countries for this plan.

The latest draft acknowledged that some countries plan to use "hydrogen and its derivatives" - which include ammonia - to cut power sector emissions in line with limiting global warming to 1.5 degrees Celsius (2.7 degrees Fahrenheit), wording that would be a win for Tokyo.

Additional reporting by Yuka Obayashi; Writing by Katya Golubkova; Editing by Christian Schmollinger

https://www.reuters.com/business/sustainable-business/key-excerpts-g7-statement-energy-climate-change-2023-04-16/?taid=643bc0215fd9f800017b1e6b&utm_campaign=trueAnthem:+Trending+Content&utm_medium=trueAnthem&utm_source=twitter
5 minute readApril 16, 20233:29 AM MDTLast Updated 37 min ago

Factbox: Key excerpts from G7 statement on energy and climate change

SAPPORO, Japan, April 16 (Reuters) - The Group of Seven rich nations on Sunday set big new targets for solar power and offshore wind capacity, agreeing to speed up renewable energy development and move toward a quicker phase-out of fossil fuels.

Below are key extracts from the G7 climate, energy and environment ministers' communique, including the annex.

RUSSIA

"We condemn Russia's illegal, unjustifiable, and unprovoked war of aggression against Ukraine;
"We stand ready to support the sustainable and resilient recovery and green reconstruction of Ukraine."

GAS INVESTMENTS

"Recognising the primary need to accelerate the clean energy transition through energy savings and gas demand reduction, investment in the gas sector can be appropriate to help address potential market shortfalls provoked by the crisis, subject to clearly defined national circumstances, and if implemented in a manner consistent with our climate objectives and without creating lock-in effects, for example by ensuring that projects are integrated into national strategies for the development of low-carbon and renewable hydrogen."

RENEWABLE ENERGY

"The G7 contributes to expanding renewable energy globally and bringing down costs by strengthening capacity including through a collective increase in offshore wind capacity of 150 gigawatt by 2030 based on each country's existing targets and a collective increase of solar (photovoltaic) to more than 1 terawatt by 2030."

COAL-FIRED PLANTS

"(We) reaffirm our commitment to achieving a fully or predominantly decarbonised power sector by 2035, and prioritising concrete and timely steps towards the goal of accelerating the phase-out of domestic unabated coal power generation in a manner consistent with keeping a limit of 1.5°C temperature rise;
"We call on and will work with other countries to end new unabated coal-fired power generation projects globally as soon as possible to accelerate the clean energy transition in a just manner."

HYDROGEN AND AMMONIA

"We recognise low-carbon and renewable hydrogen and its derivatives such as ammonia should be developed and used where they are impactful as effective emission reduction tools to advance decarbonisation across sectors and industries, notably in hard-to-abate sectors in industry and transportation.
"We also note that some countries are exploring the use of low-carbon and renewable hydrogen and its derivatives in the power sector to work towards zero-emission thermal power generation if this can be aligned with a 1.5°C pathway and our collective goal for a fully or predominantly decarbonised power sector by 2035."

CRITICAL MINERALS

"We reaffirm the growing importance of critical minerals for the clean energy transition and the need to prevent economic and security risks caused by vulnerable supply chains, monopolisation, lack of diversification of existing suppliers of critical minerals;

"We are fully committed to maintain products containing critical minerals and raw materials in the economy as long as possible;
"We emphasise the importance of countering geopolitical risks, including with respect to critical minerals, for the clean energy transition.
"We boost up developing new mines and supply chains for critical minerals in a responsible manner that promotes transparency and traceability to meet the rising demand.
"Currently $13 billion fiscal support that can be used for domestic and foreign projects is prepared across the G7 countries."

PHASING OUT UNABATED FOSSIL FUELS
"We underline our commitment, in the context of a global effort, to accelerate the phase-out of unabated fossil fuels so as to achieve net zero in energy systems by 2050 at the latest;
"We stress that fossil fuel subsidies are inconsistent with the goals of the Paris Agreement."

NUCLEAR ENERGY
"Those countries that opt to use nuclear energy recognise its potential to provide affordable low-carbon energy that can reduce dependence on fossil fuels;
"They also commit to support the development and construction of nuclear reactors, such as small modular and other advanced reactors with advanced safety systems in line with (International Atomic Energy Agency) safety standards."

PLASTIC POLLUTION
"We are committed to end plastic pollution, with the ambition to reduce additional plastic pollution to zero by 2040."

TRANSPORTATION
"We reaffirm our commitment to a highly decarbonised road sector by 2030;
"We recognise the range of pathways that G7- and beyond-G7 members are adopting to approach this goal. We are committed to the goal of achieving net-zero emissions in the road sector by 2050, and underline that a transition over the coming decade to infrastructure and a vehicle fleet that supports zero emissions transport is critical."
"We highlight the various actions that each of us is taking to decarbonise our vehicle fleet, including such domestic policies that are designed to achieve 100% or the overwhelming penetration of sales of light duty vehicles (LDVs) as zero emission vehicles (ZEV) by 2035 and beyond; to achieve 100 percent electrified vehicles in new passenger car sales by 2035."
"We note the opportunity to collectively reduce by at least 50%, CO2 emissions from G7 vehicle stock by 2035 or earlier relative to the level in 2000 as a halfway point to achieving net zero."

Reporting by Katya Golubkova; Editing by David Dolan and William Mallard

https://www.mitsui.com/jp/en/release/2023/1246395_13943.html

Acquisition of unconventional gas asset in Texas, U.S.A.

Apr. 20, 2023
Mitsui & Co., Ltd. ("Mitsui", Head Office: Tokyo, President and CEO: Kenichi Hori) through its U.S. based subsidiary has completed the acquisition of approx. 92% working interest in an unconventional gas asset in Texas, U.S.A. from the operator, Silver Hill Eagle Ford E&P, LLC, a subsidiary of Silver Hill Energy Partners, LP.

This asset (a part of the Hawkville field, approx. gross 8,500 acre) is in South Texas with access to the Gulf Coast industrial area, which includes liquefied natural gas (LNG) export terminals and ammonia plants. Additional gas production is expected from this asset with further development and Mitsui E&P USA LLC, a wholly owned subsidiary of Mitsui, will develop and operate the asset, aiming for stable gas production of over 200 million cubic feet per day from the field, while maintaining a focus on the safety of employees, the community, and the environment.

Mitsui is also promoting liquefaction and export of U.S. natural gas to global markets, and methanol production businesses using natural gas as feedstock. In addition to proactively pursuing upstream development projects, we will strengthen the natural gas value chain, including adjacent businesses, and work toward achieving further low-carbon solutions and decarbonization through the use of CCS (Carbon Capture and Storage) and other measures.

Mitsui believes that natural gas and LNG will play an important role as a "pragmatic solution" for energy transition, and we will continue to contribute to stable energy supply, enhanced quality of life, and sustainable development of society by further promoting our global natural gas and LNG businesses.

Unconventional gas asset in Texas, U.S.A.

https://www.reuters.com/business/energy/german-cabinet-approves-bill-phase-out-oil-gas-heating-systems-2023-04-19/

4 minute readApril 19, 20236:15 AM MDTLast Updated 30 min ago

German cabinet approves bill to phase out oil and gas heating systems

By Riham Alkousaa and Markus Wacket

[1/3] German Economy Minister Robert Habeck attends a news conference to present a planned reform to the law on householding heating in Berlin, Germany, April 19, 2023. REUTERS/Christian Mang

1 2 3

- Summary
- New heating systems must run on 65% renewable energy from 2024, law says
- Heating switch to cost 9 billion euros annually
- Govt to subsidise replacement with up to 50% cover
- Heating contributed to 15% of German greenhouse emissions in 2022

BERLIN, April 19 (Reuters) - The German cabinet on Wednesday approved a bill that bans most new oil and gas heating systems from 2024, the economy minister said, a policy designed to cut greenhouse gas emissions but that critics warned could be costly for poorer households.

Berlin's ruling coalition last month agreed that almost all newly installed heating systems in Germany should run on 65% renewable energy from 2024, both in new and old buildings.

The plan is part of Germany's ambition to become climate neutral by 2045 as the construction sector was responsible for 112 million tonnes of greenhouse emissions last year or 15% of the country's emissions.

Houses could also use heat pumps that run on renewable electricity, district heating, electric heating or solar thermal systems as acceptable alternatives to fossil fuel heating, according to the bill, which was seen by Reuters.

The policy has met resistance from within Chancellor Olaf Scholz's coalition, with critics calling it too costly and a burden on low- and medium-income households and tenants.

Such a shift could cost Germans around 9.16 billion euros ($10 billion) annually until 2028, the draft bill showed. The costs would fall to 5 billion from 2029 as Berlin expects renewable energy expansion and a ramp up of heating pumps production to make the switch cheaper.

The government will offer a subsidy of 30% for residential properties occupied by owners and 10% extra if the owners opt for an earlier climate-friendly heating switch than required by law, regardless of the household income.

Homeowners who receive income-related welfare benefits could get 20% extra subsidy for the switch.

The money will come from the Climate and Transformation Fund, a supplementary budget to push green investments, with some 180 billion euros earmarked for 2023 to 2026.

"The financing is secured," Economy Minister Robert Habeck told journalists in a news conference presenting the bill. Habeck declined to give a figure of how much this would cost the government but the sum would be "moderate".

The bill gives some exemptions, for instance for homeowners who are over 80 years old and living in hardship.

Those who violate the new rules face a fine of 5,000 euros, said the draft law, which will be now be debated in parliament.

Germany's push to phase out gas in heating became more urgent after Moscow's invasion of Ukraine prompted Berlin to halt Russian fossil fuel imports.

Heating uses up more than 40% of Germany's annual gas consumption as almost half of the country's 41 million households heat with natural gas while almost 25% use heating oil.

"We're starting comparatively late with this. Other countries have done this earlier," Habeck said, citing the heating sector in Scandinavian countries that are much less reliant on fossil fuel to keep their homes warm.

The bill means Germany would have to shut down more than 90% of its 500,000-km (310,685-mile) gas distribution network in the next 20 years, a study by Agora think-tank showed on Tuesday.

($1 = 0.9143 euros)

Around 78% of Germans are against the planned law, a survey by Forsa pollster published by ntv and RTL broadcasters showed on Wednesday. About 62% of those surveyed expect heating bills to rise after a switch to renewables, the poll showed.

Germany's association of local utilities, VKU, said the law was an "emotional roller coaster" as the time given for the changes it required was too short.

"The deadlines should therefore be extended. At least transitional periods are urgently needed," VKU said in a statement.

Environmental group Greenpeace called the bill a "milestone" for climate protection in Germany, and was long "overdue".

"In this way, Germany can achieve the climate protection goals in the future, which the building sector has exceeded for three years," it said.

Reporting by Riham Alkousaa, Markus Wacket and Christian Kraemer; editing by Matthias Williams and Emelia Sithole-Matarise

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President of the Republic, Gabriel Boric Font, presents National Lithium Strategy

20 APR 2023

The President made the announcement through a National Chain held at the Palacio de La Moneda.

The President of the Republic, Gabriel Boric Font, presented the National Lithium Strategy through a national chain held at the Palacio de La Moneda.

Here are his words:

Being nine o'clock at night I greet you from La Moneda. And I imagine them today, right now, embracing their children, their families thinking about the challenging future that lies ahead.

You have given me the honor and responsibility of being the President of Chile and a fundamental duty of this position is to build and lead the paths to face the great challenges and opportunities that we have as a country. That is precisely what the National Lithium Strategy that I come to present to you today is about.

Chile has the largest reserves of lithium in the world, a mineral that, being in the batteries of energy storage, cars and electric buses, is key in the fight against the climate crisis and an opportunity for economic growth that is unlikely to be repeated in the short term. Together with the development of green hydrogen and the knowledge generated in our universities and communities, it is the best chance we have to move towards a sustainable and developed economy. We cannot afford to miss it.

In Chile, today lithium is only extracted in the Salar de Atacama and, yet, even so, the production of our country represents more than 30% of the global market. The potential we have is enormous. In addition to the Salar de Atacama, there are more than 60 salt flats and saline lagoons. This policy, therefore, will also be a crusade to explore them, evaluate their extractive potential and very importantly, also delimit the protected areas and lagoons where no work will be installed.

These salt flats and lagoons are not only lithium, they are people, they are communities, they are the water of the desert, they are biotechnologies and other minerals, they are the house of millenary cultures and that are witnesses of the past that today we will preserve for a better future. Our development strategy must therefore be built in response to the climate crisis and therefore ensuring the least possible environmental impact on these ecosystems. We will make from the State a profound difference in the human and technological development of the country if we do it well and compatriots, I have no doubt that we can do it well.

Our challenge is for our country to become the main producer of lithium in the world, thus increasing its wealth and development, distributing it precisely at the same time that we protect the biodiversity of the salt flats.

I want to highlight five fundamental elements of the National Lithium Strategy that will allow us to achieve these and other objectives.

In the first place, the State will participate in the entire production cycle of this mineral, creating a National Lithium Company.

Secondly, the effort of exploration, exploitation and value addition will be based on the principle of virtuous public-private collaboration.

Third, we will move towards the use of new lithium extraction technologies that minimize the impact on salt flat ecosystems. At the same time, we will promote theTo know how to take better care of them, we will establish a network for the protection of salt flats, fulfilling the commitment of 30% of protected ecosystems by 2030.

Fourth, all this development will be done with the participation and involvement of the communities surrounding the mining operations. Understanding, by the way, the concern that this news could learn in our history that can not be otherwise. Understanding, by the way, the concern that this news could generate in the communities, I want to promise you that the first milestone of this process will begin with a direct conversation between the Council of Atacameño Peoples and myself. Our own history has taught us that no development is possible without community.

And fifth, we will promote not only extraction, not only preservation, but also the generation of value-added lithium products. Thus, the scientific and technological innovation associated with this task will allow us to move towards a development that is durable, of greater complexity and of greater diversity.

Compatriots: When in this same place 56 years ago President Eduardo Frei Montalva promoted the Chilenization of Copper,

he did so with the firm conviction that this mineral would be "the master beam" of the Chilean economy. In 1971, a few years later, this idea also accompanied and inspired President Salvador Allende who at the time of nationalizing the Great Copper Mining, with unanimous support of Congress, called it the "Salary of Chile". I hope that today, with that high vision, we will also be able to count on that transversality.

In order for the State to be actively involved in the entire lithium cycle, in the second half of this year, after the dialogue we will hold with the different communities that coexist with the salt flats, we will send to the Congress of the Republic the bill that creates the National Lithium Company.

This will seek partners for the development of value addition projects. And this implies making an additional effort not only to extract raw material, but to convert it into new products of high technological value, we can do it in Chile. In this area we hope to have the participation and protagonism of the Regional Governments.

Given its importance in lithium production and reserves, the Salar de Atacama in particular deserves special attention in our strategy.

And in that sense here in Chile and the world, we know that we are a serious and reliable country, we have respected and will continue to respect the current contracts and we know that only in 2030 the lease to private of an important part of the Salar de Atacama ends. If we decided to do nothing, this would simply continue.

For this reason, I have instructed Corfo, the institution that manages our lithium reserves, to send Codelco the search for the best ways to achieve, from now on, the participation of the Chilean State in the extraction of lithium in the Salar de Atacama. Thus, Codelco will be our representative before the companies that are currently in the Salar to have a participation of the State before the expiration of the current contracts..

In this regard, two brief considerations.

In the first place, if a public-private company is formed to exploit the lithium of the Salar de Atacama, it will be controlled by the State through Codelco.

Secondly, the State of Chile shall fully respect the provisions of the contracts in force. That is, an anticipated participation of the State in the Salar de Atacama will be the result of an agreement with those who currently have the rights to exploit lithium.

In addition to this, exploration and exploitation contracts will be awarded to Enami and Codelco in those places where there are currently projects that are in different stages of development. These companies will be able to decide whether or not it is convenient to associate, in these specific projects, with other private ones.

For the other salt flats that have been considered susceptible to exploitation, a public, transparent and informed process of bidding to private exploration contracts will be initiated, in addition to the prospections that we will carry out from the same State. In the event that the results of the exploration show potential, the private sector will have a preferential option to apply for an exploitation contract in association with a state company such as, for example, the National Lithium

Company.

It should be said that for projects of strategic value of the country, this association must have a majority participation of the State.

This process, compatriots, will accelerate the exploration of the salt flats and will provide a space for the different actors, national and international interested, to enter the industry strongly promoting the virtuous public-private articulation.

We know that salt flats are unique and highly biodiverse complex ecosystems and are suffering significant degradation globally as in our homeland. Therefore, this strategy contemplates the creation of a network of protected salt salt systems in line with Chile's obligations to the international obligations committed to in the Convention on Biodiversity.

In turn, in the salt flats that are exploited, the implementation of technologies that minimize the environmental impact in the recovery of lithium will be required, such as, for example, the direct extraction with reinjection of brine.

With science and technology on our side, as a tool, we will be able to develop the best extraction techniques, add value to the ore and also guarantee exploitation processes according to the highest standards of care. The exploitation of lithium evolves along with biodiversity and communities. For this reason, we will create the Technological and Public Research Institute of Lithium and Salt Flats, which will combine efforts in the field of technological development with research capacities in ecology, geology and social sciences, on the salt flats, their biodiversity and the communities that live around them.

This strategy must also strengthen the process of economic decentralization, which is why this institute, of which I have mentioned, will be located entirely in the Region of Antofagasta.

As I have That said, my Government will guarantee that the indigenous peoples and those who inhabit the territories in which this industry will be developed are direct participants in the benefits that this brings no more mining for a few, we must be able to distribute the benefits of our country among all Chileans.

Therefore, we will soon initiate a participatory process with all the actors involved, local authorities, academics, scientists and experts, productive companies and representatives of civil society, to determine together with them the new governance of lithium deposits and salt flats.

The National Lithium Strategy is, compatriots, good news for the country, for the children who are watching us, for the young people and their families who live throughout the width and length of our territory, it is more wealth for Chile that will be able to finance new schools, hospitals, commissaries, in short, a more dignified life for all.

But it is important to point out, and I will end here, that we will be responsible with public finances. Therefore, following the recommendations of the Autonomous Fiscal Council, a rule will be generated that defines an expenditure threshold for lithium revenues. In this way, the transitory part of lithium revenues will be saved to ensure long-term financing of social, technological and productive investments, thus promoting the sustainable and inclusive development of the country over time.

Consequently, and this is important, given the nature of lithium revenues, they cannot replace a necessary Tax Reform for purposes of financing permanent social expenses such as the increase in the Universal Guaranteed Pension or the National Care System. Therefore, I call on all political actors to agree on this important issue, as I pointed out this morning in Enade.

Chileans:

Today we present a technically solid and ambitious National Lithium Strategy, which includes concrete and relevant spaces for participation.

This strategy gathers the experience of those who preceded us and I have the deep conviction that we are taking the right steps for the lithium industry to help us create a more prosperous Chile, with scientific development, a clean Chile that takes care of its people and its ecosystems, a Chile that innovates, improving the lives of all the inhabitants of our country. A Chile that distributes fairly the wealth that we all generate. We are building a more dignified Chile and we will work together with you to make it so, advancing today towards a better future.

Thank you so much.

https://www.reuters.com/markets/commodities/germany-support-critical-minerals-rich-countries-build-processing-capacity-2023-04-16/

1 minute readApril 16, 202312:00 PM MDTLast Updated 8 hours ago

Germany to support critical minerals-rich countries build processing capacity

Reuters

German Chancellor Olaf Scholz delivers a speech during the opening ceremony of the annual industry trade fair Hannover Messe in Hanover, Germany April 16, 2023. REUTERS/Fabian Bimmer

BERLIN, April 16 (Reuters) - Germany wants to help countries that are rich in critical minerals such as Chile, Indonesia and Namibia to build their own processing infrastructure to cut dependency on China, Chancellor Olaf Scholz said on Sunday.

Berlin is trying to rebalance its relationship with China and reduce reliance on Asia's powerhouse for key inputs, such as nickel and other critical minerals.

"If we succeed in locating more processing steps where the raw materials are in the ground, then that will not only create greater local prosperity ... we will ensure that we have more than just one supplier in the future," Scholz said in a speech at Germany's industrial trade fair Hannover Messe.

Scholz said he supported a free trade agreement between the European Union and Indonesia, which the two parties have been negotiating since 2016.

"I am committed to ensuring that we finally get this agreement across the finish line now," he said, adding that geopolitical developments in Europe and in Asia argued for similar deals with other countries such as Mexico and Australia, Kenya and India.

Reporting by Riham Alkousaa and Andreas Rinke; Editing by Emelia Sithole-Matarise

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https://www.usnews.com/news/world/articles/2023-01-29/scholz-seeks-to-secure-more-critical-minerals-on-south-america-tour

Scholz Seeks to Secure More Critical Minerals on South America Tour

By Reuters

Jan. 29, 2023, at 8:04 p.m.

Chile's President Gabriel Boric and German Chancellor Olaf Scholz visit an area recreating the old office of former Chilean President Salvador Allende at La Moneda government palace in Santiago, Chile, January 29, 2023. Sebastian Rodriguez/Chilean Presidency/Handout via REUTERSREUTERS

By Sarah Marsh

SANTIAGO (Reuters) -German Chancellor Olaf Scholz lobbied this week for South America to prioritize cooperating with Germany in its commodities sector as Berlin joins the race for critical minerals, with lithium key for its auto industry.

Europe's largest economy has fallen behind in the race for critical minerals, in part due to a distaste for the dirty business of mining as well as faith in the open market, German government officials say.

That has led to a reliance on China, which has invested widely in the mining sector in resource-rich South America and in processing commodities.

Now though, soaring demand for critical minerals and geopolitical concerns are sparking a push to better secure and diversify supply - for example through offtake agreements, stakes in mines, or possibly the establishment of Germany's own processing capacity.

On his first tour of South America this week, Scholz visited both Argentina and Chile, which sit atop the region's "lithium triangle," the world's largest trove of the ultra-light metal key to making batteries for electric vehicles.

In Santiago, he signed a new, expanded commodities partnership aiming at intensifying cooperation in the sector. That will include an annual bilateral forum and state instruments like investment guarantees to promote trade.

Given the environmental, labor and social concerns regarding mining - which have sparked anger and thwarted some projects in the sector - Germany's high standards made it an ideal partner, Scholz said.

A new act that recently came into force, for example, insists high standards are observed throughout company supply chains.

"We want to help Chile on the way to a sustainable mining sector," Scholz said in a news conference with his Chilean counterpart, pointing to a new cooperation deal signed between Europe's largest copper producer Aurubis and Chilean state copper company Codelco.

Scholz did not announce any such agreements in Argentina, where investment conditions are considered trickier. Bolivia, also part of the lithium triangle, has been slow to move to production. A Bolivian-German lithium joint venture signed in 2018 fell apart two years later amid domestic political turmoil.

Germany wants to ensure mining generates jobs in the countries where it takes place, Scholz said.

"The question is: can we not ensure that the first round of processing, that generates hundreds if not thousands of jobs, can take place in the (source) countries? That would also save on a lot of transport," Scholz said.

Green hydrogen was another sector where there was great scope for cooperation between Germany and South America, Scholz said, given the region's huge potential for generating renewable energy and Germany's pioneering technology.

Germany and Chile recently launched a hydrogen pilot project in Patagonia drawing on wind energy, with support from the German government and technology from Siemens Energy, he said.

(Reporting by Sarah Marsh; Additional Reporting by Brendan O'Boyle and Noe Torres; Editing by Christopher Cushing and Rosalba O'Brien)

https://tass.ru/ekonomika/17587513

23 April, 04:29,

Updated April 23, 04:38

Russia will increase pipeline gas supplies to China by 2023% in 50

According to Russian Deputy Prime Minister Alexander Novak, they will amount to 22 billion cubic meters

MOSCOW, April 23. /TASS/. This year, Russia will increase pipeline gas supplies to China by 50%, to 22 billion cubic meters of gas. In the next two years, the Russian Federation will reach the design capacity of the Power of Siberia pipeline, said Deputy Prime Minister Alexander Novak in an interview with the program "Moscow. Kremlin. Putin" on the TV channel "Russia-1", a fragment of which journalist Pavel Zarubin published on Sunday in his Telegram channel.

"At the end of 2022, the supply of oil, gas, and coal increased. Last year, 15 billion cubic meters were supplied for gas, in 2023 we expect 22 billion - this is almost a 50% increase. In the next two years, we will reach our design capacity," Novak said.

Power of Siberia is the largest gas transportation system in eastern Russia, with an export capacity of 38 billion cubic meters of gas per year. The first pipeline deliveries of Russian gas to China via the eastern route began in December 2019 under a 2014-year contract concluded in 30 between Gazprom and China's CNPC. The annual volume of gas supplies is 38 billion cubic meters, the contract amount is $400 billion, and it is expected to reach its design capacity by 2025.

Tags:

https://english.news.cn/20230423/05ada026cbb542d8a111f7ec26723210/c.html

China's air passenger trips to reach 9 million during May Day holiday

Source: Xinhua Editor: huaxia

2023-04-23 16:26:45

China Southern Airlines flight CZ309 bound for south China's Hong Kong takes off at the Beijing Daxing International Airport in Beijing, capital of China, Jan. 17, 2023. (Xinhua/Ju Huanzong)

BEIJING, April 23 (Xinhua) -- China's air passenger trips are expected to reach 9 million during the upcoming May Day holiday, according to the Civil Aviation Administration of China.

Flight bookings have already exceeded 6 million, indicating that the market has generally returned to the level registered during the May Day holiday in 2019, said the administration.

To meet passengers' travel needs, domestic and foreign airlines will handle 3,500 international flights during the period, about 30 percent of the level of 2019.

Domestic flights will reach 65,000, offering more than 12 million seats. The capacity will exceed that of the May Day holiday in 2019.

Popular flight routes include Chengdu to Beijing, Guangzhou to Beijing, and Beijing to Shanghai, among others, said the administration.

This year's May Day holiday will start on April 29 and end on May 3.