Energy Tidbits

Vortexa: 3rd Consecutive Week of Very Low Oil in Floating Storage, Lowest Since Covid

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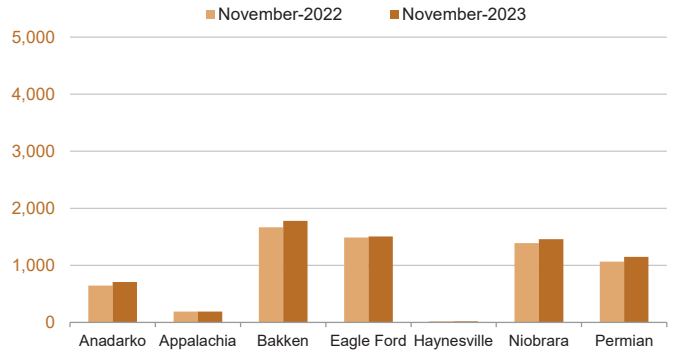
Year-over-year summary

Drilling Productivity Report

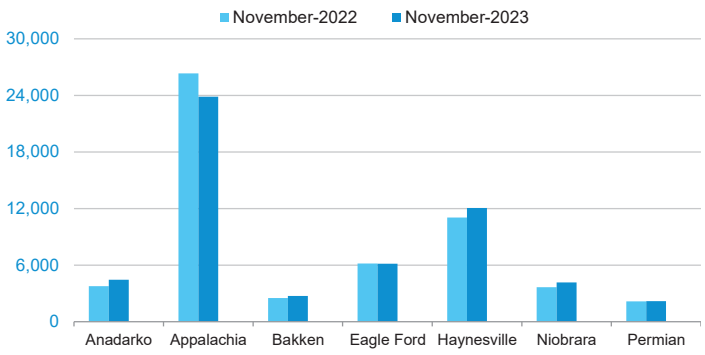
October 2023

drilling data through September
projected production through November

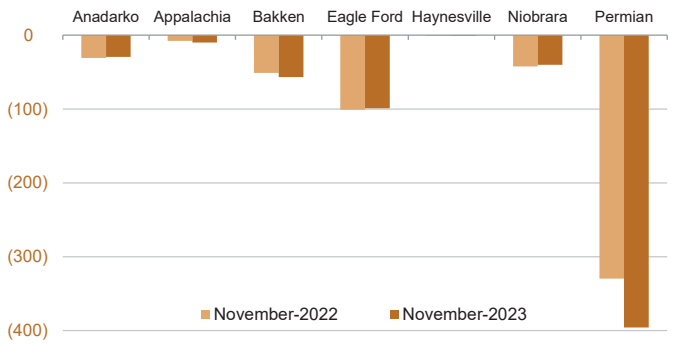
New-well oil production per rig
barrels/day



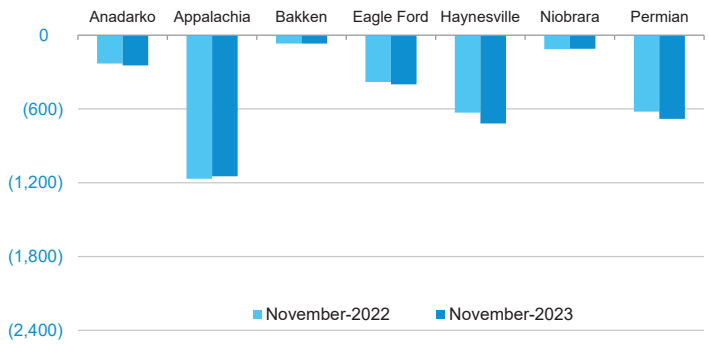
New-well gas production per rig
thousand cubic feet/day



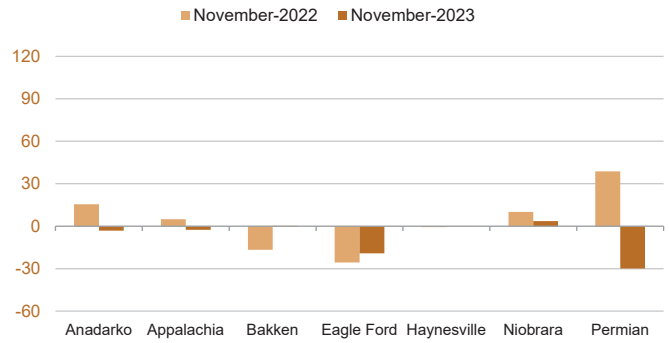
Legacy oil production change
thousand barrels/day



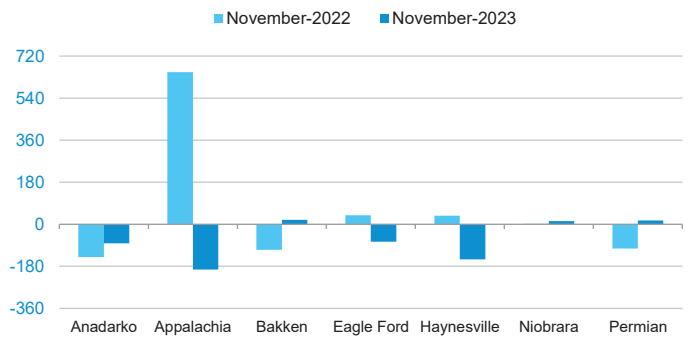
Legacy gas production change
million cubic feet/day



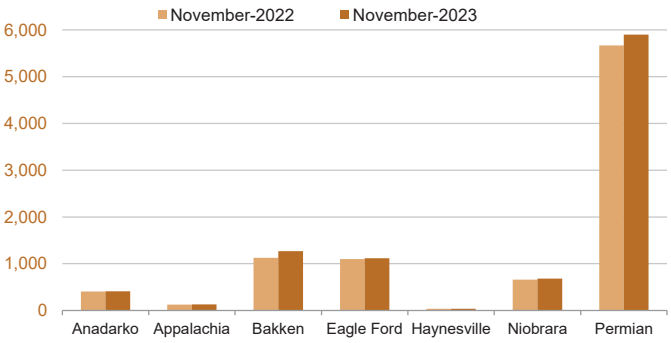
Indicated monthly change in oil production (Nov vs. Oct)
thousand barrels/day



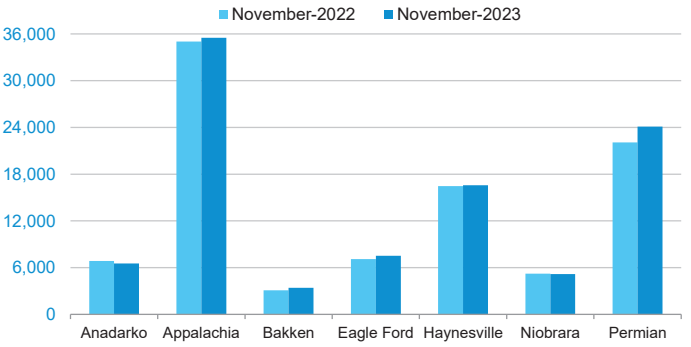
Indicated monthly change in gas production (Nov vs. Oct)
million cubic feet/day



Oil production
thousand barrels/day



Natural gas production
million cubic feet/day



Anadarko Region

Drilling Productivity Report

October 2023

drilling data through September
projected production through November

Oil +9
barrels/day
month over month

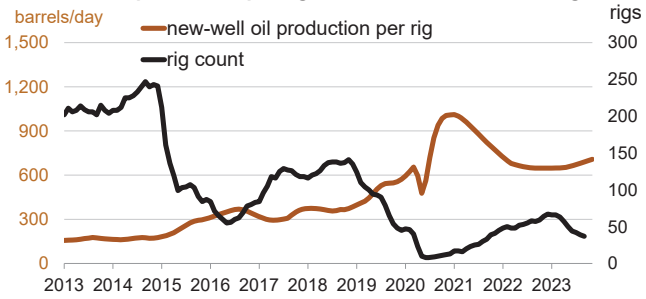
708 *November*
699 *October*
barrels/day

Monthly additions from one average rig

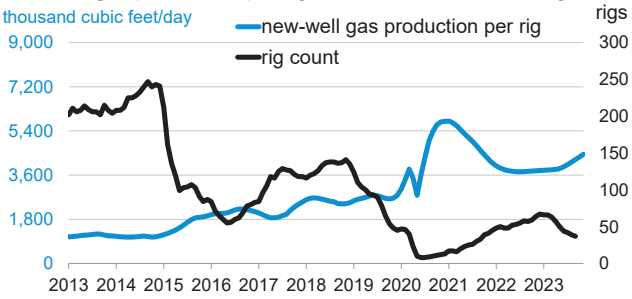
November **4,450**
October **4,341**
thousand cubic feet/day

Gas +109
thousand cubic feet/day
month over month

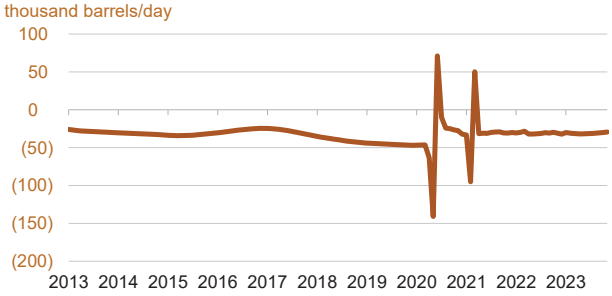
Anadarko Region
New-well oil production per rig



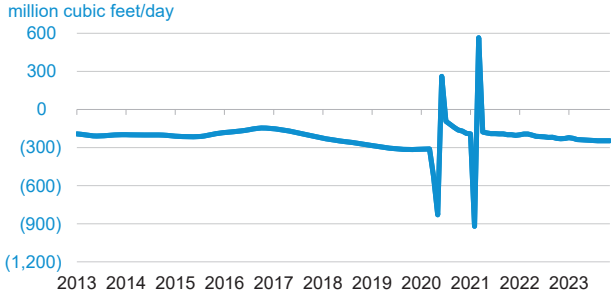
Anadarko Region
New-well gas production per rig



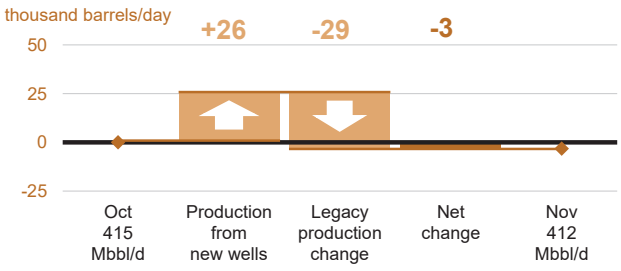
Anadarko Region
Legacy oil production change



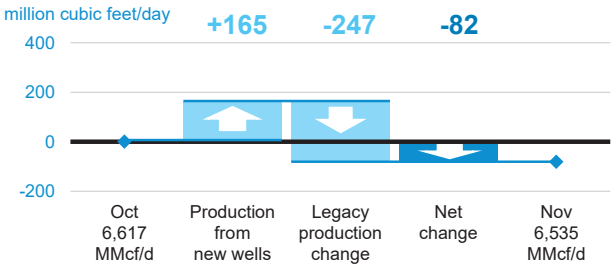
Anadarko Region
Legacy gas production change



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



Anadarko Region
Indicated change in natural gas production (Nov vs. Oct)

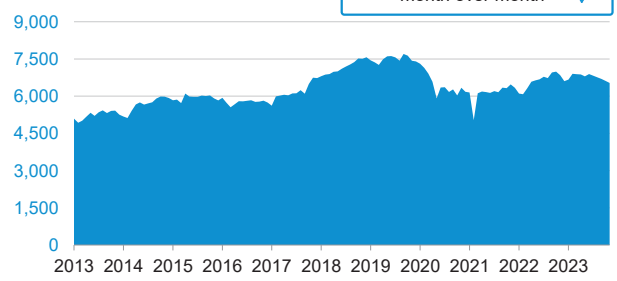


Anadarko Region
Oil production

Oil -3
thousand barrels/day
month over month

Anadarko Region
Natural gas production

Gas -82
million cubic feet/day
month over month



Appalachia Region
Drilling Productivity Report

October 2023

drilling data through September
projected production through November

Oil 0 barrels/day month over month

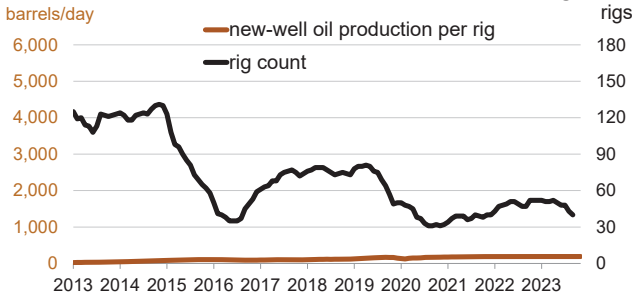
191 *November*
191 *October*
barrels/day

Monthly additions from one average rig

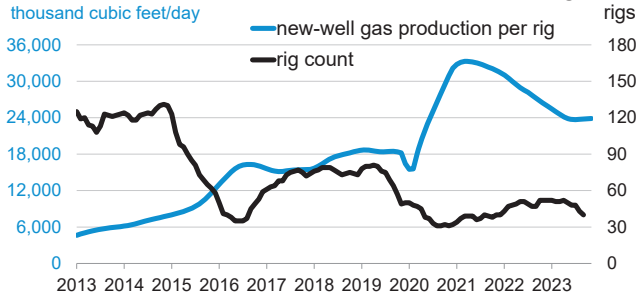
November **23,868**
October **23,825**
thousand cubic feet/day

Gas +43 thousand cubic feet/day month over month

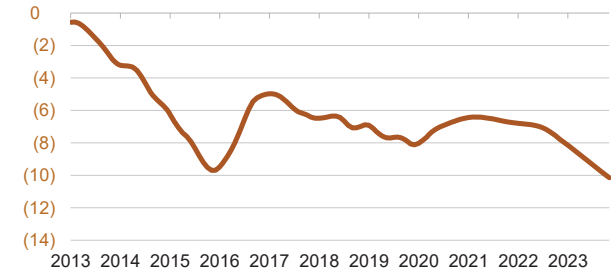
Appalachia Region
New-well oil production per rig



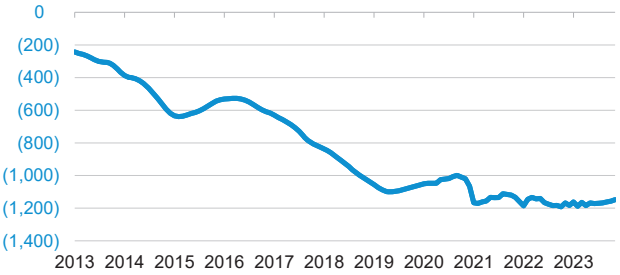
Appalachia Region
New-well gas production per rig



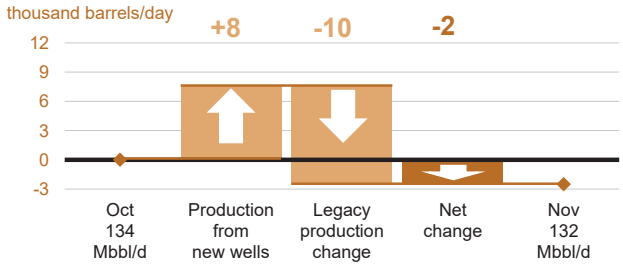
Appalachia Region
Legacy oil production change



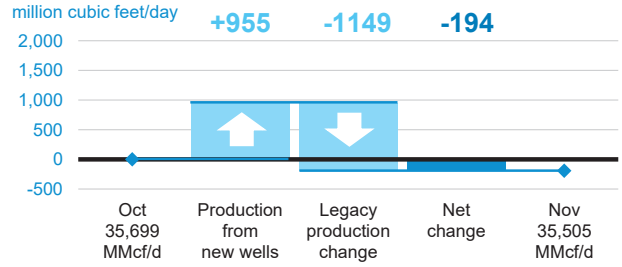
Appalachia Region
Legacy gas production change



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

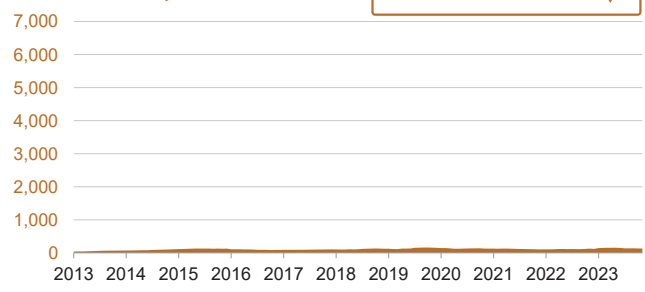


Appalachia Region
Indicated change in natural gas production (Nov vs. Oct)



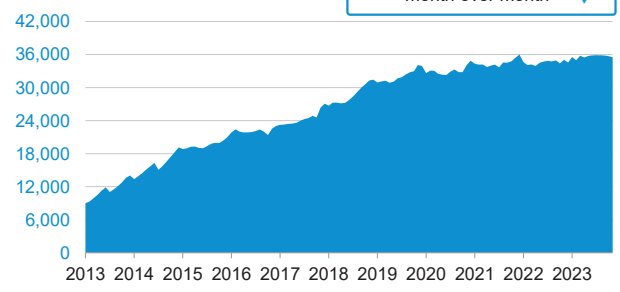
Appalachia Region
Oil production

Oil -2 thousand barrels/day month over month



Appalachia Region
Natural gas production

Gas -194 million cubic feet/day month over month



Bakken Region

Drilling Productivity Report

October 2023

drilling data through September
projected production through November

Oil +35 barrels/day month over month

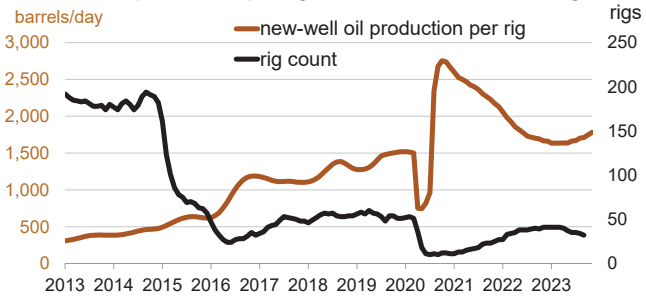
1,781 *November*
1,746 *October*
barrels/day

Monthly additions from one average rig

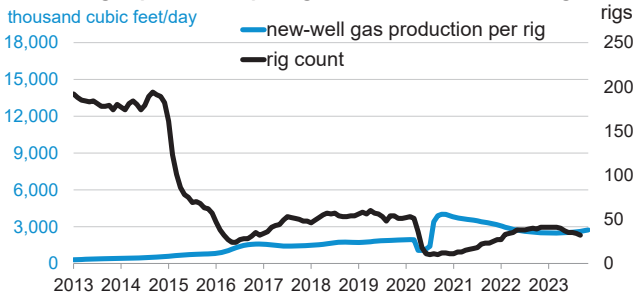
November **2,730**
October **2,673**
thousand cubic feet/day

Gas +57 thousand cubic feet/day month over month

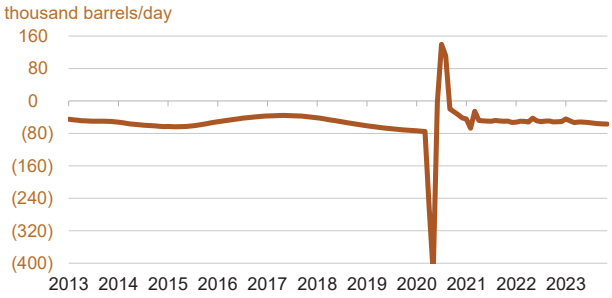
Bakken Region
New-well oil production per rig



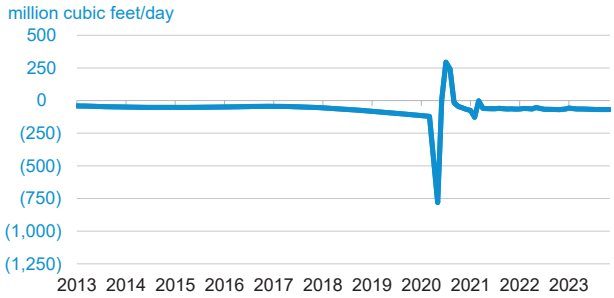
Bakken Region
New-well gas production per rig



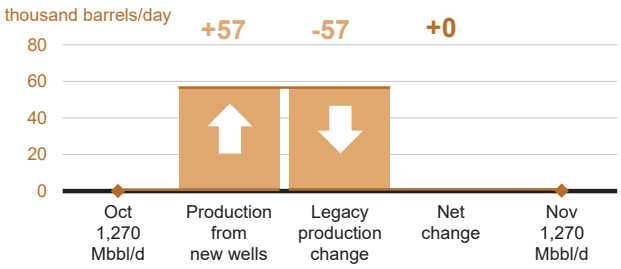
Bakken Region
Legacy oil production change



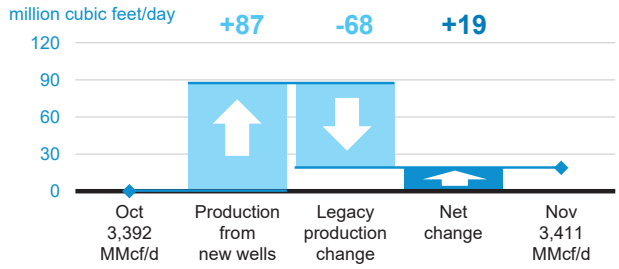
Bakken Region
Legacy gas production change



Bakken Region
Indicated change in oil production (Nov vs. Oct)

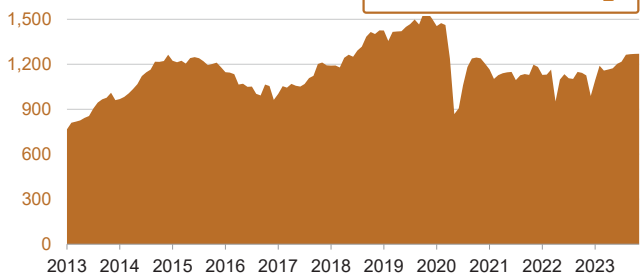


Bakken Region
Indicated change in natural gas production (Nov vs. Oct)



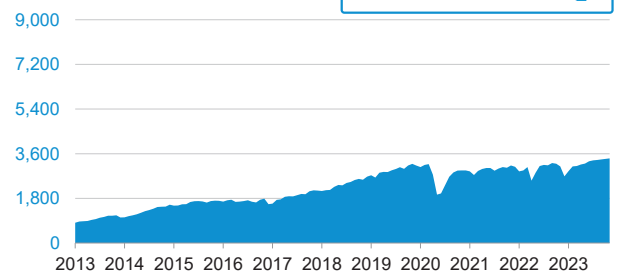
Bakken Region
Oil production

Oil +0 thousand barrels/day month over month



Bakken Region
Natural gas production

Gas +19 million cubic feet/day month over month



Eagle Ford Region
Drilling Productivity Report

October 2023

drilling data through September
projected production through November

Oil +15 barrels/day month over month

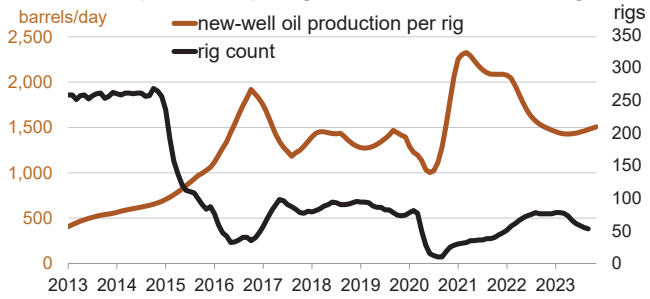
1,507 *November*
1,492 *October*
barrels/day

Monthly additions from one average rig

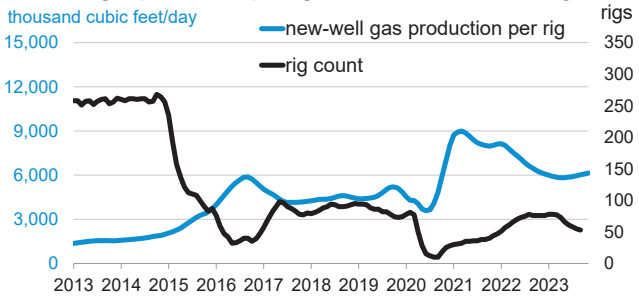
November **6,142**
October **6,081**
thousand cubic feet/day

Gas +61 thousand cubic feet/day month over month

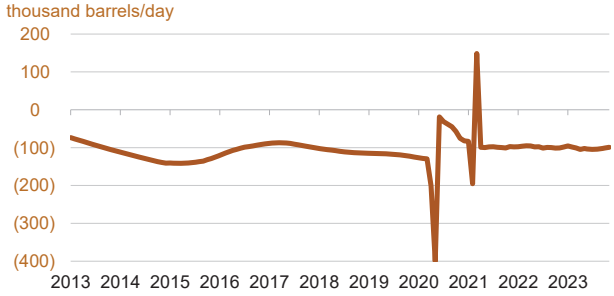
Eagle Ford Region
New-well oil production per rig



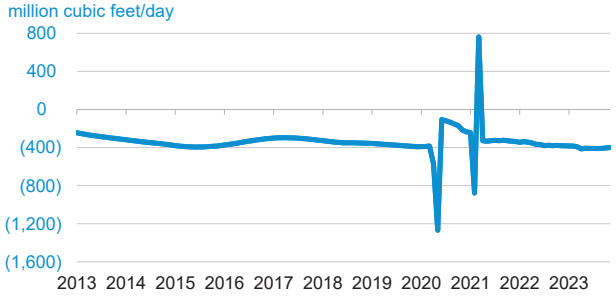
Eagle Ford Region
New-well gas production per rig



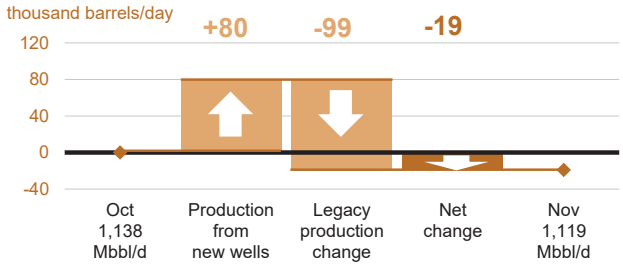
Eagle Ford Region
Legacy oil production change



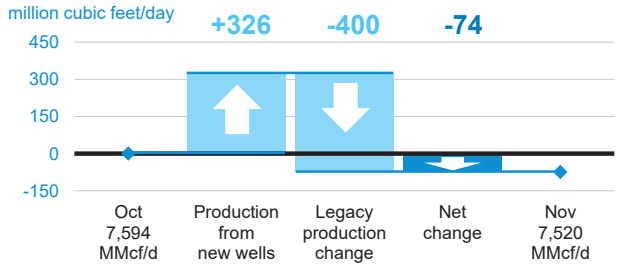
Eagle Ford Region
Legacy gas production change



Eagle Ford Region
Indicated change in oil production (Nov vs. Oct)

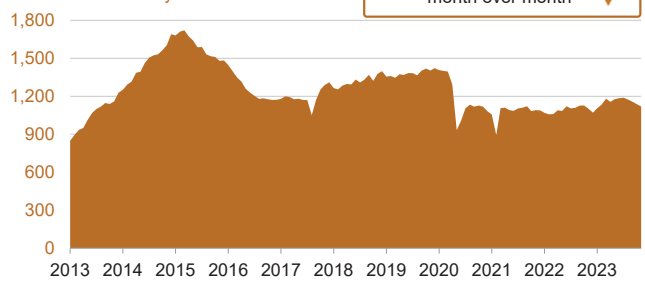


Eagle Ford Region
Indicated change in natural gas production (Nov vs. Oct)



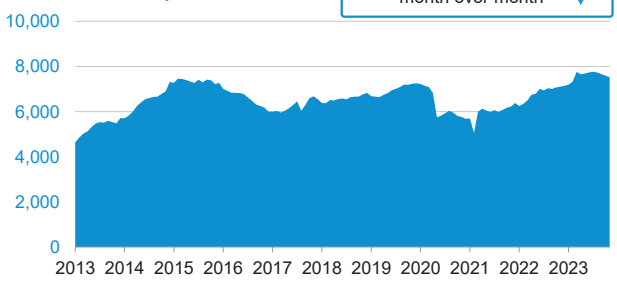
Eagle Ford Region
Oil production

Oil -19 thousand barrels/day month over month



Eagle Ford Region
Natural gas production

Gas -74 million cubic feet/day month over month



Haynesville Region

Drilling Productivity Report

October 2023

drilling data through September
projected production through November

Oil 0
barrels/day
month over month

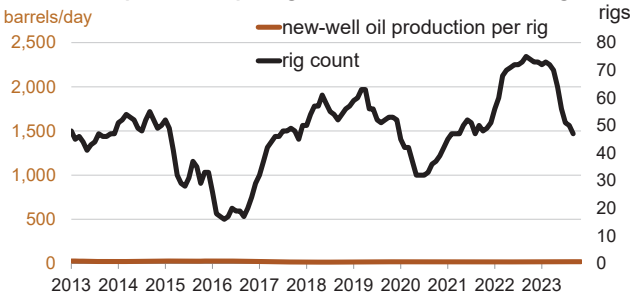
19 *November*
19 *October*
barrels/day

Monthly additions from one average rig

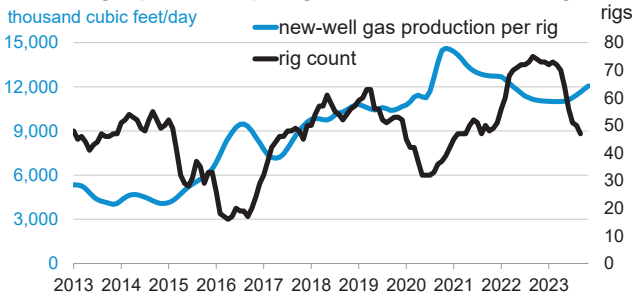
November **12,064**
October **11,851**
thousand cubic feet/day

Gas +213
thousand cubic feet/day
month over month

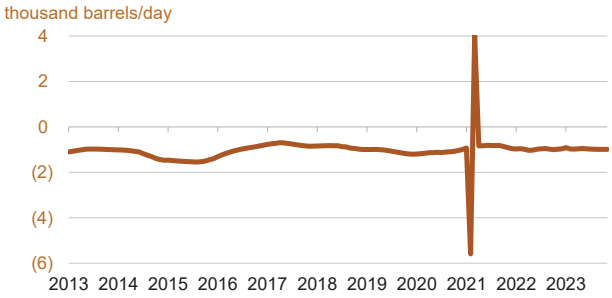
Haynesville Region
New-well oil production per rig



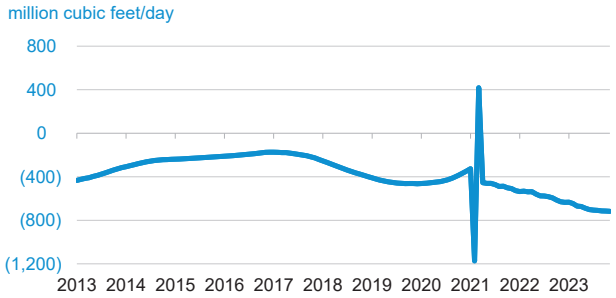
Haynesville Region
New-well gas production per rig



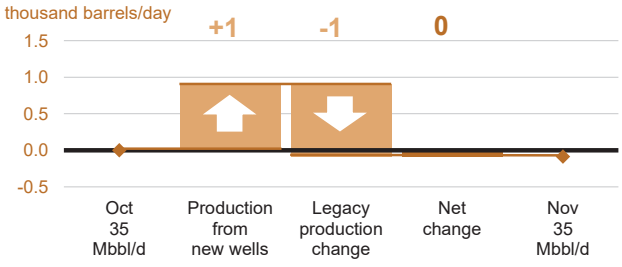
Haynesville Region
Legacy oil production change



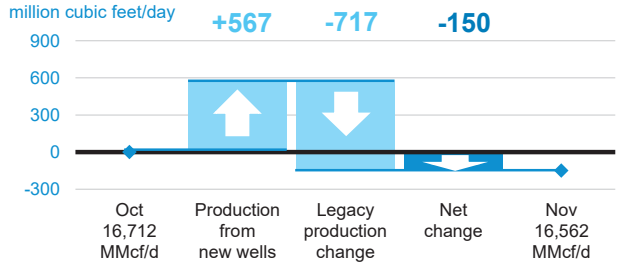
Haynesville Region
Legacy gas production change



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

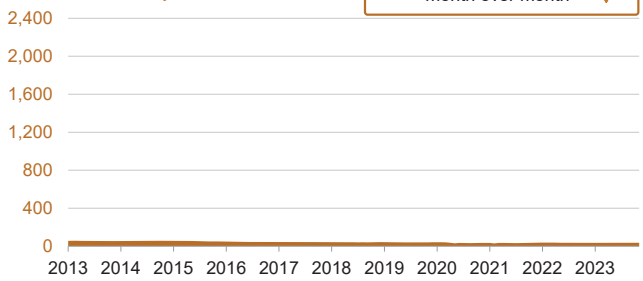


Haynesville Region
Indicated change in natural gas production (Nov vs. Oct)



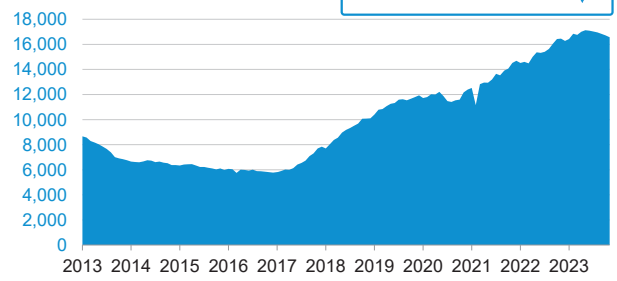
Haynesville Region
Oil production

Oil 0
thousand barrels/day
month over month



Haynesville Region
Natural gas production

Gas -150
million cubic feet/day
month over month



Niobrara Region
Drilling Productivity Report

October 2023

drilling data through September
projected production through November

Oil +7
barrels/day
month over month

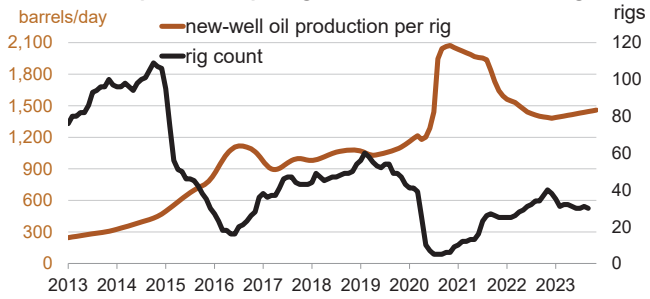
1,459 *November*
1,452 *October*
barrels/day

Monthly additions from one average rig

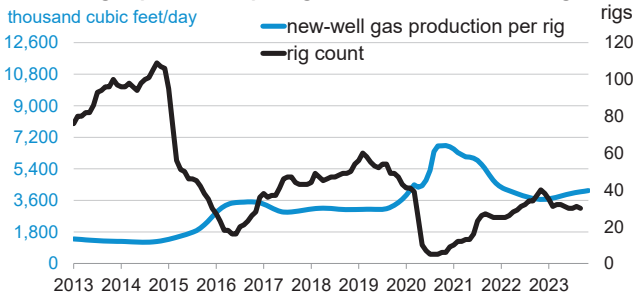
November **4,157**
October **4,124**
thousand cubic feet/day

Gas +33
thousand cubic feet/day
month over month

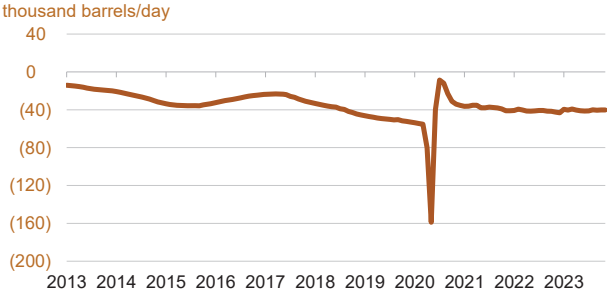
Niobrara Region
New-well oil production per rig



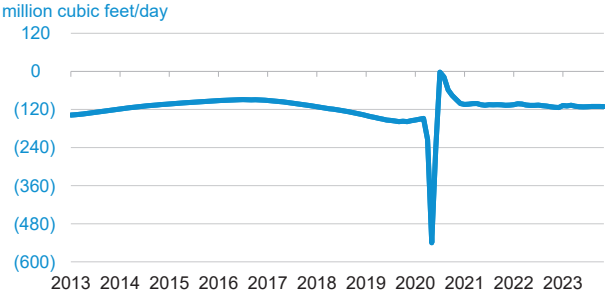
Niobrara Region
New-well gas production per rig



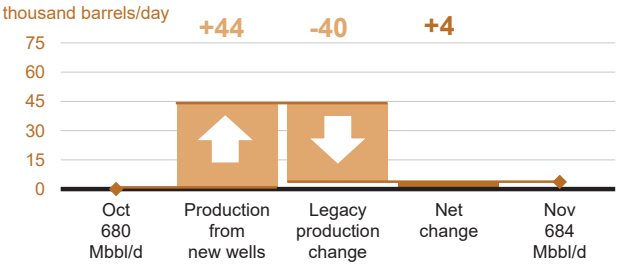
Niobrara Region
Legacy oil production change



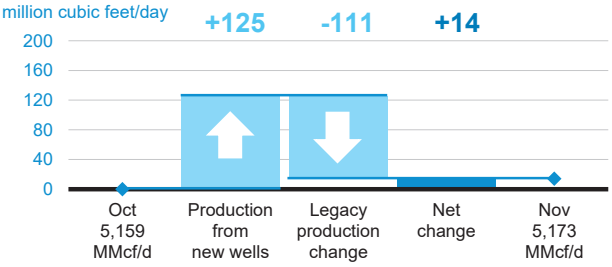
Niobrara Region
Legacy gas production change



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

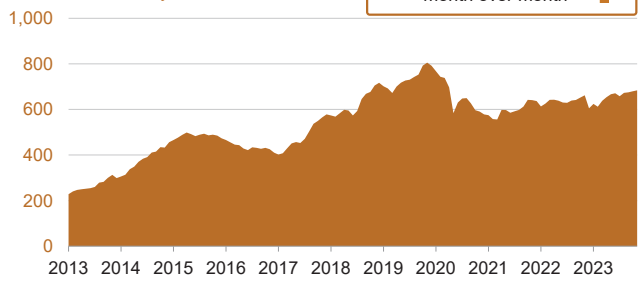


Niobrara Region
Indicated change in natural gas production (Nov vs. Oct)



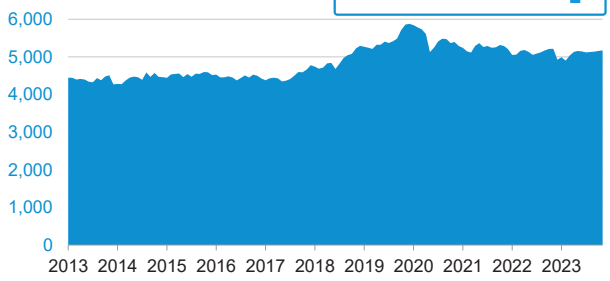
Niobrara Region
Oil production

Oil +4
thousand barrels/day
month over month



Niobrara Region
Natural gas production

Gas +14
million cubic feet/day
month over month



Permian Region
Drilling Productivity Report

October 2023

drilling data through September
projected production through November

Oil +26 barrels/day month over month

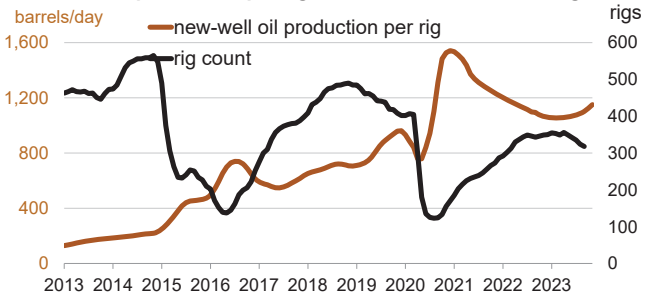
1,150 *November*
1,124 *October*
barrels/day

Monthly additions from one average rig

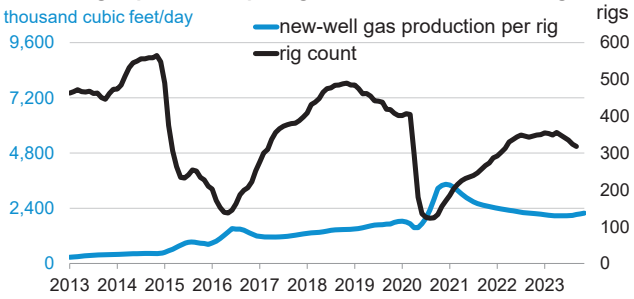
November **2,190**
October **2,155**
thousand cubic feet/day

Gas +35 thousand cubic feet/day month over month

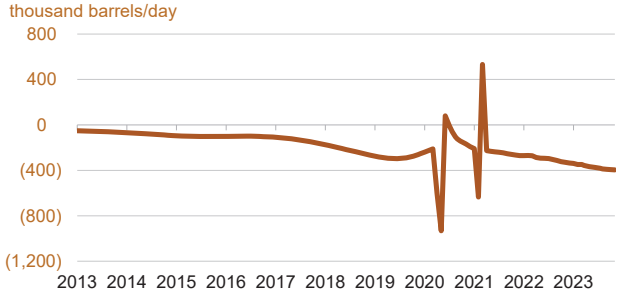
Permian Region
New-well oil production per rig



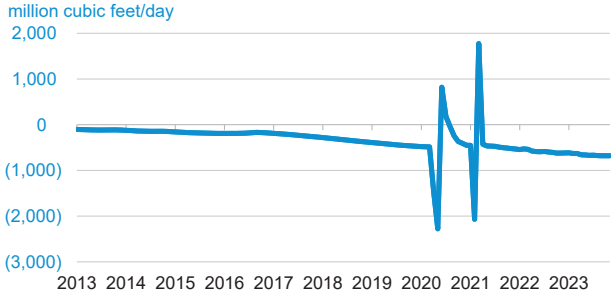
Permian Region
New-well gas production per rig



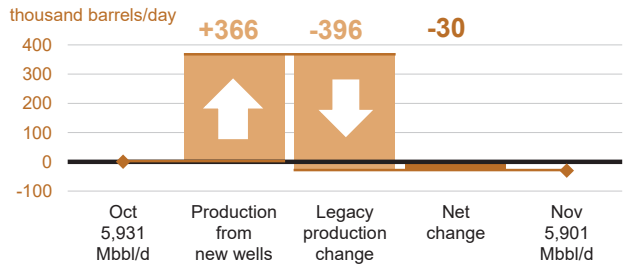
Permian Region
Legacy oil production change



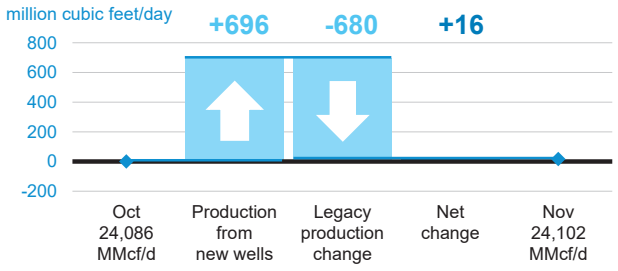
Permian Region
Legacy gas production change



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

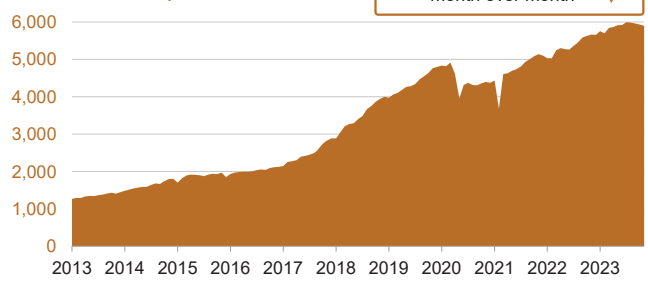


Permian Region
Indicated change in natural gas production (Nov vs. Oct)



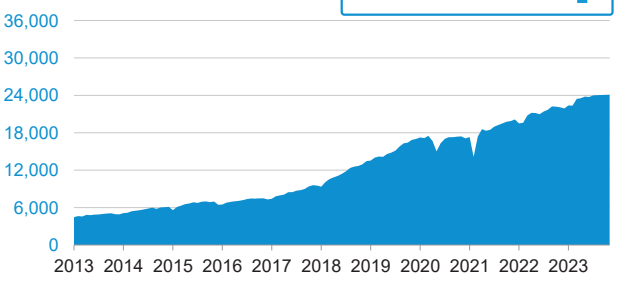
Permian Region
Oil production

Oil -30 thousand barrels/day month over month



Permian Region
Natural gas production

Gas +16 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

Summary

Overview of Activity for August 2023

- **Top five countries of destination, representing 48.9% of total U.S. LNG exports in August 2023**
  - Netherlands (57.4 Bcf), South Korea (34.9 Bcf), France (34.3 Bcf), Japan (24.2 Bcf), and Italy (21.5 Bcf)
- **353.0 Bcf of exports in August 2023**
  - 1.1% increase from July 2023
  - 17.7% more than August 2022
- **114 cargos shipped in August 2023**
  - Sabine Pass (35), Cameron (27), Freeport (25), Corpus Christi (18), Cove Point (7), and Elba (2)
  - 116 cargos in July 2023
  - 99 cargos in August 2022

1a. Table of Exports of Domestically-Produced LNG Delivered by Region (Cumulative from February 2016 through August 2023)

Region	Number of Countries Receiving Per Region	Volume Exported (Bcf)	Percentage Receipts of Total Volume Exported (%)	Number of Cargos*
East Asia and Pacific	8	5,069.3	30.9%	1511
Europe and Central Asia	15	7,641.1	46.6%	2388
Latin America and the Caribbean**	14	2,341.3	14.3%	856
Middle East and North Africa	5	408.4	2.5%	119
South Asia	3	942.8	5.7%	279
Sub-Saharan Africa	0	0.0	0.0%	0
Total LNG Exports	**45**	**16,402.9**	**100.0%**	**5,155**

*Split cargos counted as both individual cargos and countries

**Number of cargos does not include the shipments by ISO container

1b. Shipments of Domestically-Produced LNG Delivered – by Country
(Cumulative from February 2016 through August 2023)

Country of Destination	Region	Number of Cargos	Volume (Bcf of Natural Gas)	Percentage of Total U.S LNG Exports (%)
South Korea*	East Asia and Pacific	546	1,887.2	11.5%
Japan*	East Asia and Pacific	419	1,428.7	8.7%
United Kingdom*	Europe and Central Asia	395	1,313.3	8.0%
France*	Europe and Central Asia	393	1,276.0	7.8%
Spain*	Europe and Central Asia	394	1,227.5	7.5%
Netherlands*	Europe and Central Asia	339	1,149.1	7.0%
China*	East Asia and Pacific	327	1,095.0	6.7%
India*	South Asia	215	731.8	4.5%
Turkiye*	Europe and Central Asia	209	667.7	4.1%
Brazil*	Latin America and the Caribbean	227	629.4	3.8%
Mexico*	Latin America and the Caribbean	167	555.1	3.4%
Chile*	Latin America and the Caribbean	143	450.5	2.7%
Italy*	Europe and Central Asia	136	441.2	2.7%
Taiwan*	East Asia and Pacific	125	398.0	2.4%
Poland*	Europe and Central Asia	106	351.3	2.1%
Argentina*	Latin America and the Caribbean	142	342.2	2.1%
Portugal*	Europe and Central Asia	99	314.9	1.9%
Greece*	Europe and Central Asia	90	204.7	1.2%
Dominican Republic*	Latin America and the Caribbean	86	204.2	1.2%
Kuwait	Middle East and North Africa	53	184.9	1.1%
Lithuania	Europe and Central Asia	59	182.1	1.1%
Belgium*	Europe and Central Asia	57	179.7	1.1%
Croatia	Europe and Central Asia	49	148.5	0.9%
Germany	Europe and Central Asia	43	138.9	0.8%
Pakistan*	South Asia	40	128.9	0.8%
Jordan*	Middle East and North Africa	37	127.5	0.8%
Thailand*	East Asia and Pacific	35	123.4	0.8%
Singapore*	East Asia and Pacific	37	120.8	0.7%
Bangladesh*	South Asia	24	82.1	0.5%
Panama*	Latin America and the Caribbean	34	64.5	0.4%
Jamaica*	Latin America and the Caribbean	33	59.6	0.4%
United Arab Emirates	Middle East and North Africa	15	51.1	0.3%
Colombia*	Latin America and the Caribbean	23	30.2	0.2%
Israel*	Middle East and North Africa	9	28.0	0.2%
Finland	Europe and Central Asia	10	26.0	0.2%
Malta*	Europe and Central Asia	11	20.1	0.1%
Egypt*	Middle East and North Africa	5	16.9	0.1%
Indonesia*	East Asia and Pacific	21	12.5	0.1%
Malaysia	East Asia and Pacific	1	3.7	0.0%
El Salvador	Latin America and the Caribbean	1	0.0	0.0%
Total Exports by Vessel		**5,155**	**16,397.2**	
Jamaica	Latin America and the Caribbean	182	2.0	0.0%
Bahamas	Latin America and the Caribbean	779	1.9	0.0%
Barbados	Latin America and the Caribbean	305	1.3	0.0%
Haiti	Latin America and the Caribbean	153	0.5	0.0%
Antigua and Barbuda	Latin America and the Caribbean	61	0.1	0.0%
Nicaragua	Latin America and the Caribbean	1	0.0	0.0%
Germany	Europe and Central Asia	1	0.0	0.0%
Total Exports by ISO		**1,482**	**5.8**	
Total Exports by Vessel and ISO		**6,637**	**16,402.9**	

Note:

Volume and Number of Cargos are the cumulative totals of each individual Country of Destination by Region starting from February 2016.

Jamaica has received U.S. LNG exports by both vessel and ISO container. The volumes are totaled separately

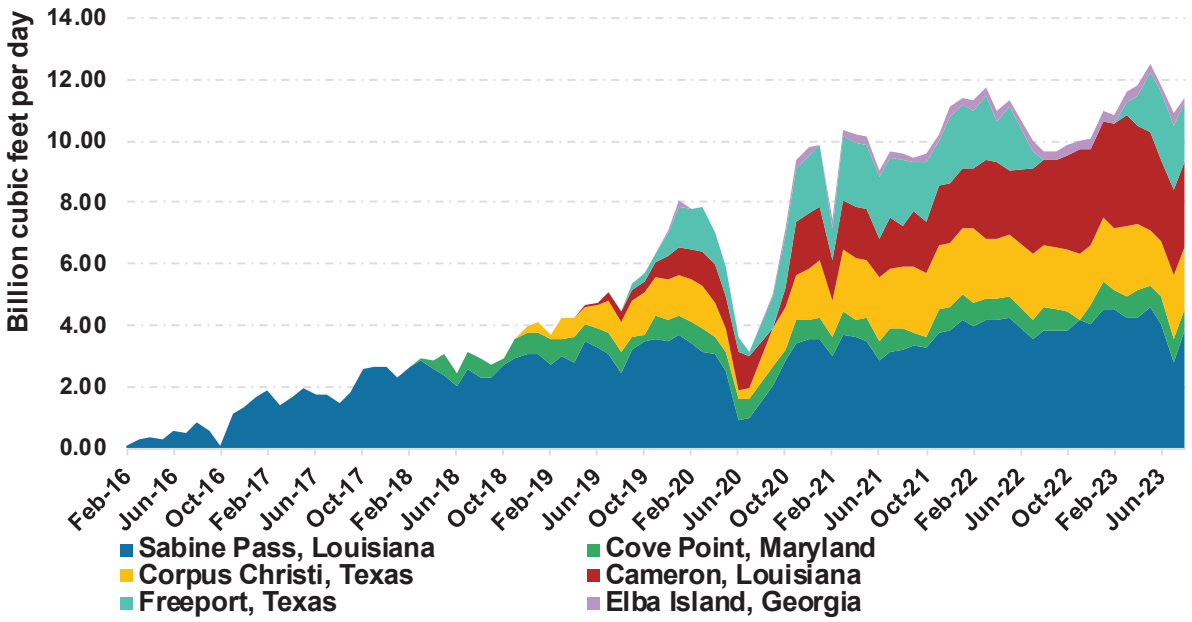
* Split cargos counted as both individual cargos and countries.

Vessel = LNG Exports by Vessel and ISO container = LNG Exports by Vessel in ISO Containers.

Does not include re-exports of previously-imported LNG. See table 2c for re-exports data.

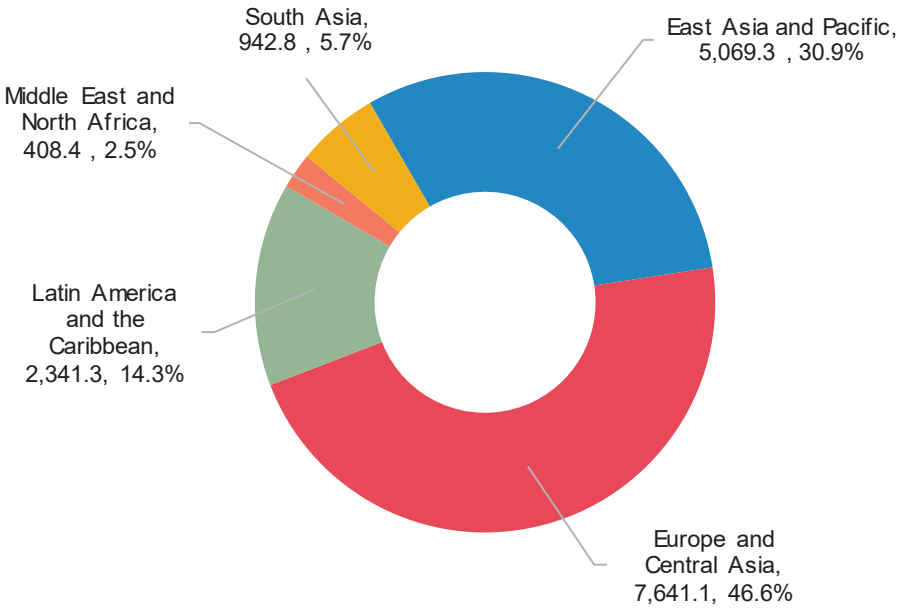
Totals may not equal sum of components because of independent rounding.

1c. Domestically-Produced LNG Exported by Point of Exit
(February 2016 through August 2023)



The Cameron, LA point of exit includes exports from Cameron LNG and Venture Global Calcasieu Pass.

1d. Domestically-Produced LNG Exported by Region
(Cumulative from February 2016 through August 2023)
(Bcf, %)



World Lacks Enough LNG for Energy Transition, Key Trader Says
2023-10-16 21:00:00.8 GMT

By Shoko Oda and Grace Huang
(Bloomberg) -- Global demand for liquefied natural gas is likely to prove stronger than expected and the current pipeline of projects won't be enough to keep up, according to one of Japan's top traders of the fuel.
"Announced projects in the world still won't make up for the supply needed when considering theenergy transition that will take several decades," said Kenichi Hori, president of Japanese trading house Mitsui & Co., in an interview in Tokyo last week.
Hori echoed major exporters including Chevron Corp. and Shell Plc in saying gas will play a long-term role in the energy transition. His comments come as competition for LNG has intensified after Russia's invasion of Ukraine, with Europe seeking to curb its dependency on Moscow for gas and emerging nations targeting long-term deals to avoid future shortages.
Read More: Gas Is Here to Stay for Decades, Say Fossil Fuel Heavyweights
Mitsui and Japan's other major trading houses are heavily involved in oil, gas and coal. Warren Buffett's Berkshire Hathaway Inc. earlier this year raised its stake in the firms, after they saw a surge in profits on the back of high commodity prices and the weak yen.
Countries and companies are seeing LNG as a cleaner fossil fuel that can lower emissions, but supply is expected to be tight until around 2026, when new projects are scheduled to start operating. Global LNG demand is forecast to increase by 3.4% annually over 2022-2026 to reach 444 million metric tons, according to BloombergNEF.
Ensuring diversity of supply sources is likely to prove crucial for energy security in Japan, according to Hori. "We have projects in the US, Middle East and Africa," he said.
When asked about whether Mitsui is interested in signing a contract with Qatar, which has been seeking buyers from its huge output expansion, Hori said the Middle Eastern nation is an "important source of LNG" as Japan pursues further diversification.
Along with gas and LNG, it's important for Mitsui to have "several pathways" for the energy transition, including renewable energy, ammonia and hydrogen, Hori said. The company recently announced a 960 billion yen ($6.4 billion) investment in an offshore wind project off Taiwan's east coast, and is exploring opportunities in e-methanol — a synthetic ingredient made from hydrogen and carbon emissions.
"All these projects are going to shape the future of our portfolio that is transitioning from a traditional energy business to a low-carbon-intensive era," he said.
Here are other highlights from the interview:
* Mitsui will raise dividends when it can see its "base profit earnings power has been elevated, and I think we're on track to

make this happen”
* Hori sees gap between US and Japan interest rates remaining for the short term, and the company will factor in volatility in currency and rates
* Around 20% of Mitsui’s global managers are female, but the percentage is only 8.5% in Japan
** Firm targets raising that figure to 10% by 2025; company has its “work cut out for us in Japan”
** Mitsui has implemented a mentoring program that pairs current executives with rising female managers to develop their careers

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https://www.qatarenergy.qa/en/MediaCenter/Pages/newsdetails.aspx?ItemId=3776

QATARENERGY, SHELL SIGN 27-YEAR LNG SUPPLY AGREEMENTS FOR UP TO 3.5 MTPA TO THE NETHERLANDS -

DOHA, Qatar • 18 October 2023 – Affiliates of QatarEnergy and Shell signed two long-term LNG sale and purchase agreements (SPAs) for the supply of up to 3.5 million tons per annum (MTPA) of LNG from Qatar to the Netherlands.

Pursuant to the SPAs, the LNG will be delivered to Gate LNG terminal located in the port of Rotterdam starting in 2026 for a term of 27 years.

The LNG volumes will be sourced from the two joint ventures between QatarEnergy and Shell that hold interests in Qatar's North Field East (NFE) and North field South (NFS) expansion projects.

The SPAs were signed by His Excellency Mr. Saad Sherida Al-Kaabi, the Minister of State for Energy Affairs, the President and CEO of QatarEnergy, and Mr. Wael Sawan, the CEO of Shell, at a special event held in Doha in the presence of senior executives from both companies.

Commenting on this occasion, His Excellency Minister Al-Kaabi said: "We are delighted to sign these two long-term LNG sale and purchase agreements with Shell that will further enhance our decades-long relationship and strategic partnership in Qatar and around the world. There is no doubt that the contracted LNG volumes underscore the vital role natural gas plays in the energy transition and in supporting energy security of customers across the globe."

His Excellency Minister Al-Kaabi added: "These agreements reaffirm Qatar's commitment to help meeting Europe's energy demands and bolstering its energy security with a source known for its superior economic and environmental qualities. We look forward to work closely with our partner, Shell, in delivering on this shared endeavor."

Shell's partnership in the North Field LNG Expansion Projects is made up of a 6.25% share in the 32 MTPA NFE project and a 9.375% share in the 16 MTPA NFS project.

Asian LNG Buyers Abruptly Change and Lock in Long Term Supply – Validates Supply Gap, Provides Support For Brownfield LNG FIDs

Posted 11am on July 14, 2021

The last 7 days has shown there is a sea change as Asian LNG buyers have made an abrupt change in their LNG contracting and are moving to lock in long term LNG supply. This is the complete opposite of what they were doing pre-Covid when they were trying to renegotiate Qatar LNG long term deals lower and moving away from long term deals to spot/short term sales. Why? We think they did the same math we did in our April 28 blog "*Multiple Brownfield LNG FIDs Now Needed To Fill New LNG Supply Gap From Mozambique Chaos? How About LNG Canada Phase 2?*" and saw a much bigger and sooner LNG supply gap driven by the delay of 5 bcf/d of Mozambique LNG that was built into most, if not all LNG supply forecasts. Asian LNG buyers are committing real dollars to long term LNG deals, which we believe is the best validation for the LNG supply gap. Another validation, Shell, Total and others are aggressively competing to invest long term capital to partner in Qatar Petroleum's massive 4.3 bcf/d LNG expansion despite plans to reduce fossil fuels production in the 2020s. And even more importantly to LNG suppliers, the return to long term LNG contracts provides the financing capacity to commit to brownfield LNG FIDs. The abrupt change by Asian LNG buyers to long term contracts is a game changer for LNG markets and sets the stage for brownfield LNG FIDs likely as soon as before year end 2021. It has to be brownfield LNG FIDs if the gap is coming bigger and sooner. And we return to our April 28 blog point, if brownfield LNG is needed, what about Shell looking at 1.8 bcf/d brownfield LNG Canada Phase 2? LNG Canada Phase 1 at 1.8 bcf/d capacity is already a material positive for Cdn natural gas producers. A FID on LNG Canada Phase 2 would be huge, meaning 3.6 bcf/d of Cdn natural gas will be tied to Asian LNG markets and not competing in the US against Henry Hub. And with a much shorter distance to Asian LNG markets. This is why we focus on global LNG markets for our views on the future value of Canadian natural gas.

Sea change in Asian LNG buyers is also the best validation of the LNG supply gap and big to LNG supply FIDs. Has the data changed or have the market participants changed in how they react to the data? We can't recall exactly who said that on CNBC on July 12, it's a question we always ask ourselves. In the LNG case, the data has changed with Mozambique LNG delays and that has directly resulted in market participants changing and entering into long term contracts. We can't stress enough how important it is to see Asian LNG buyers move to long term LNG deals. (i) Validates the sooner and bigger LNG supply gap. We believe LNG markets should look at the last two weeks of new long term deals for Asian LNG buyers as being the validation of the LNG supply gap that clearly emerged post Total declaring force majeure on its 1.7 bcf/d Mozambique LNG Phase 1 that was under construction and on track for first LNG delivery in 2024. Since then, markets have started to realize the Mozambique delays are much more than 1.7 bcf/d. They have seen major LNG suppliers change their outlook to a more bullish LNG outlook and, most importantly, are now seeing Asian LNG buyers changing from trying to renegotiate long term LNG deals lower to entering into long term LNG deals to have security of supply. Asian LNG buyers are cozying up to Qatar in a prelude to the next wave of Asian buyer long term deals. What better validation is there than companies/countries putting their money where their mouth is. (ii) Provides financial commitment to help push LNG suppliers to FID. We believe these Asian LNG buyers are doing much more than validating a LNG supply gap to markets. The big LNG suppliers can move to FID based on adding more LNG supply to their portfolio, but having more long term deals provides the financial anchor/visibility to long term capital commitment from the buyers. Long term contracts will only help LNG suppliers get to FID.

It was always clear that the Mozambique LNG supply delay was 5.0 bcf/d, not just 1.7 bcf/d from Total Phase 1. LNG markets didn't really react to Total's April 26 declaration of force majeure on its 1.7 bcf/d Mozambique LNG Phase 1. This was an under construction project that was on time to deliver first LNG in 2024. It was in all LNG supply forecasts. There was no timeline given but, on the Apr 29 Q1 call, Total said that it expected any restart decision would be least a year away. If so, we believe that puts any actual construction at least 18 months away. There will be work to do just to get back to where they were when they were forced to stop development work on Phase 1. Surprisingly, markets didn't look the broader implications, which is why we posted our 7-pg Apr 28 blog "*Multiple Brownfield LNG FIDs Now Needed To Fill New LNG Supply Gap From Mozambique Chaos? How About LNG Canada Phase 2?*" [LINK] We highlighted that Mozambique LNG delays were actually 5 bcf/d, not 1.7 bcf/d. And this 5 bcf/d of Mozambique LNG supply was built into most, if not all, LNG supply forecasts. The delay in Total Phase 1 would lead to a commensurate delay in its Mozambique LNG Phase 2 of 1.3 bcf/d. Total Phase 2 was to add 1.3 bcf/d. There was no firm in service date, but it was expected to

follow closely behind Phase 1 to maintain services. That would have put it originally in the 2026/2027 period. But if Phase 1 is pushed back at least 2 years, so will the follow on Phase 2, so more likely, it will be at least 2028/2029. The assumption for most, if not all, LNG forecasts was that Phase 2 would follow Phase 1. Exxon Rozuma Phase 1 of 2.0 bcf/d continues to be pushed back in timeline especially following Total Phase 1. Exxon's Mozambique Rozuma Phase 1 LNG will add 2.0 bcf/d and, pre-Covid, was originally expected to be in service in 2025. The project was being delayed and Total's force majeure has added to the delays. Rozuma onshore LNG facilities are right by Total. On June 20, we tweeted [LINK] on the Reuters report "*Exclusive: Galp says it won't invest in Rovuma until Mozambique ensures security*" [LINK]. Galp is one of Exxon's partners in Rozuma. Reuters reported that Galp said they won't invest in Exxon's Rozuma LNG project until the government ensures security, that this may take a while, they won't be considering the project until after Total has reliably resumed work on its Phase 1, which likely puts any Rozuma decision until at least end of 2022 at the earliest. Galp has taken any Rozuma Phase 1 capex out of their new capex plans thru 2025 and will have to take out projects in their capex plan if Rozuma does come back to work. This puts Rozuma more likely 2028 at the earliest as opposed to before the original expectations of before 2025. Pre-pandemic, Exxon's March 6, 2019 Investor Day noted their operated Mozambique Rovuma LNG Phase 1 was to be 2 trains each with 1.0 bcf/d capacity for total initial capacity of 2.0 bf/d with FID expected in 2019 and first LNG deliveries sometime before 2025. LNG forecasts had been assuming Exxon Rozuma would be onstream around 2025. The 2019 FID expectation was later pushed to be expected just before the March 2020 investor day. But the pandemic hit, and on March 21, 2020, we tweeted [LINK] on the Reuters story "*Exclusive: Coronavirus, gas slump put brakes on Exxon's giant Mozambique LNG plan"* [LINK] that noted Exxon was expected to delay the Rovuma FID. There was no timeline, but now, any FID is not expected until late 2022 at the earliest, that would push first LNG likely to at least 2028. What this means is that the Mozambique LNG delays are not 1.7 bcf/d but 5.0 bcf/d of projects that were in all, if not most, LNG supply forecasts. There is much more in our 7-pg blog. But Mozambique is what is driving a much bigger and sooner LNG supply gap starting ~2025 and stronger outlook for LNG prices

<u>One of the reasons why it went under the radar is that major LNG suppliers played stupid on the Mozambique impact.</u> It makes it harder for markets to see a big deal when the major LNG suppliers weren't making a big deal of Mozambique or playing stupid in the case of Cheniere in their May 4 Q1 call. In our May 9, 2021 Energy Tidbits memo, we said we had to chuckle when we saw Cheniere's response in the Q&A to its Q1 call on May 4 that they only know what we know from reading the Total releases on Mozambique and its impact on LNG markets. It's why we tweeted [LINK] "*Hmm! $LNG says only know what we read on #LNG market impact from $TOT $XOM MZ LNG delays. Surely #TohokuElectric & other offtake buyers are reaching out to #Cheniere. MZ LNG delays is a game changer to LNG in 2020s, see SAF Group blog. Thx @olympe_mattei @TheTerminal #NatGas".* How could they not be talking to LNG buyers for Total and /or Exxon Mozambique LNG projects. In the Q1 Q&A, mgmt was asked about Mozambique and didn't know any more than what you or I have read. Surely, they were speaking to Asian LNG buyers who had planned to get LNG supply from Total Mozambique or Exxon Rozuma Mozambique or both. Mgmt is asked "*wanted to just kind of touch on the color use talking about for these supply curve. And are you able to kind of provide any thoughts on the Mozambique and a deferral with the project of that size on 13 and TPA being deferred by we see you have you noticed any impact to the market has is there any impact for stage 3 with that capacity? Thanks*." Mgmt replies "*No. Look, I only know about the Mozambique delay with what I read as well as what you read that from total and an Exxon. And it's a sad situation and I hope everybody is safe and healthy that were there to experience that unrest but no I don't think it's, again it's a different business paradigm than what we offer. So, we offer a full value product, the customer doesn't have to invest in equity, customer doesn't have to worry about the E&P side of the business because, we've been able to both the by at our peak almost 7 Dee's a day of US NAT gas from almost a 100 different producers on 26 different pipelines and deliver it to our to facilities. So we take care of a lot of what the customer needs".*

<u>There are other LNG supply delays/interruptions beyond Mozambique.</u> There have been a number of other smaller LNG delay or existing supply interruptions that add to Asian LNG buyers feeling less secure about the reliability of mid to long term LNG supply. Here are just a few examples. (i) Total Papua LNG 0.74 bcf/d. On June 8, we tweeted [LINK] *"Timing update Papua #LNG project. $OSH June 8 update "2022 FEED, 2023 FID targeting 2027 first gas". $TOT May 5 update didn't forecast 1st gas date. Papua is 2 trains w/ total capacity 0.74 bcf/d."* We followed the tweet saying [LINK] *"Bigger #LNG supply gap being created >2025. Papua #LNG originally expected FID in 2020 so 1st LNG is 2 years delayed.*

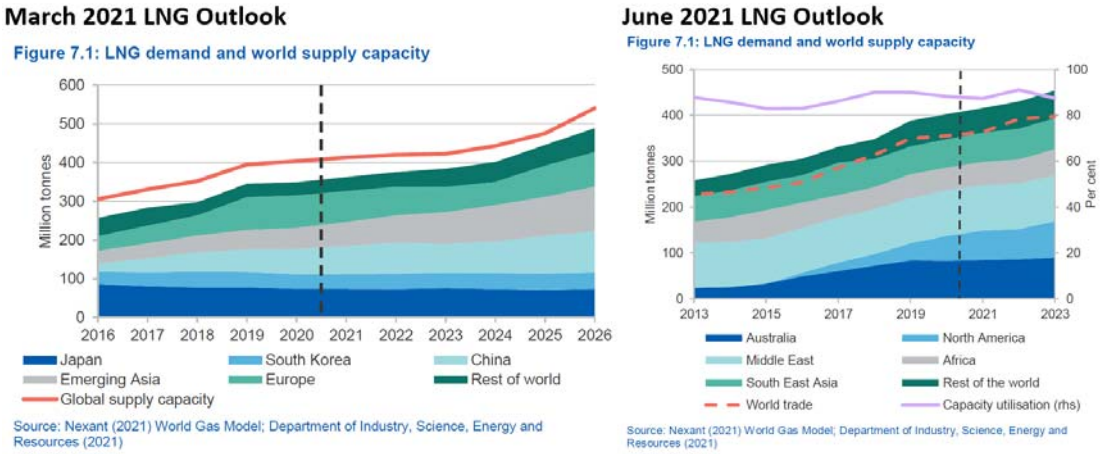
Common theme - new LNG supply is being delayed ie. [Total] Mozambique. Don't forget need capacity>demand due to normal maintenance, etc. Positive for LNG." (ii) Chevron's Gorgon. A big LNG story in H2/20 was the emergence of weld quality issues in the propane heat exchangers at Train 2, which required additional downtime for repair. Train 2 was shut on May 23 with an original restart of July 11, but the repairs to the weld quality issues meant it didn't restart until late Nov. The same issue was found in Train 1 but repairs were completed. However extended downtime for the trains led to lower LNG volumes. Gorgon produced ~2.3 bcf/d in 2019 but was down to 2.0 bcf/d in 2020. (iii) Equinor's Melkoeya 0.63 bcf/d shut down for 18 months due to a fire. A massive fire led to the Sept 28, 2020 shutdown of the 0.63 bcf/d Melkoeya LNG facility in Norway. On April 26, Equinor released "*Revised start-up date for Hammerfest LNG*" [LINK] with regard to the 0.63 bcf/d Melkoeya LNG facility. The original restart date was Oct 1, 2021 (ie. a 12 month shut down), but Equinor said "*Due to the comprehensive scope of work and Covid-19 restrictions, the revised estimated start-up date is set to 31 March 2022".* When we read the release, it seemed like Equinor was almost setting the stage for another potential delay in the restart date. Equinor had two qualifiers to this March 31, 2022 restart date. Equinor said "*there is still some uncertainty related to the scope of the work*" and "*Operational measures to handle the Covid-19 situation have affected the follow-up progress after the fire. The project for planning and carrying out repairs of the Hammerfest LNG plant must always comply with applicable guidelines for handling the infection situation in society. The project has already introduced several measures that allow us to have fewer workers on site at the same time than previously expected. There is still uncertainty related to how the Covid-19 development will impact the project progress."*

Cheniere stopped the game playing the game on June 30. Our July 4, 2021 Energy Tidbits memo noted that it looks like Cheniere has stopped playing stupid with respect to the strengthening LNG market in 2021. We can't believe they thought they were fooling anyone, especially their competitors. Bu that week, they came out talking about how commercial discussions have picked up in 2021 and it's boosted their hope for a Texas (Corpus Christi) LNG expansion. On Wednesday, Platts reported "*Pickup in commercial talks boosts Cheniere's hopes on mid-scale LNG project*" [LINK] Platts wrote "*Cheniere Energy expects to make a "substantial dent" by the end of 2022 in building sufficient buyer support for a proposed mid-scale expansion at the site of its Texas liquefaction facility, Chief Commercial Officer Anatol Feygin said June 30 in an interview." " As a result, he said, " The commercial engagement, I think it is very fair to say, has really picked up steam, and we are quite optimistic over the coming 12-18 months to make a substantial dent in that Stage 3 commercialization."* Platts also reported that Cheniere noted this has been a tightening market all year (ie would have been known by the May 4 Q1 call). Platts wrote "*We obviously find ourselves at the beginning of this year and throughout in a very tight market where prices today into Asia and into Europe are at levels that we frankly haven't seen in a decade-plus," Feygin said. "We've surpassed the economics that the industry saw post the Fukushima tragedy in March 2011, and that's happened in the shoulder period."* It's a public stance as to a more bullish LNG outlook

But we still see major LNG suppliers like Australia hinting but not outright saying that LNG supply gap is coming sooner. We have to believe Australia will be unveiling a sooner LNG supply gap in their September forecast. On June 28, we tweeted [LINK] on Australia's Resources and Energy Quarterly released on Monday [LINK] because there was a major change to their LNG outlook versus their March forecast. We tweeted "*#LNGSupplyGap. AU June fcast now sees #LNG mkt tighten post 2023 vs Mar fcast excess supply thru 2026. Why? $TOT Mozambique delays. See below SAF Apr 28 blog. Means brownfield LNG FID needed ie. like #LNGCanada Phase 2. #OOTT #NatGas".* Australia no longer sees supply exceeding demand thru 2026. In their March forecast, Australia said "*Nonetheless, given the large scale expansion of global LNG capacity in recent years, demand is expected to remain short of total supply throughout the projection period."* Note this is thru 2026 ie. a LNG supply surplus thru 2026. But on June 28, Australia changed that LNG outlook and now says the LNG market may tighten beyond 2023. Interestingly, the June forecast only goes to 2023 and not to 2026 as in March. Hmmm! On Monday, they said "*Given the large scale expansion of global LNG capacity in recent years, import demand is expected to remain short of export capacity throughout the outlook period. Beyond 2023, the global LNG market may tighten, due to the April 2021 decision to indefinitely suspend the Mozambique LNG project, in response to rising security issues. This project has an annual nameplate capacity of 13 million tonnes, and was previously expected to start exporting LNG in 2024*." 13 million tonnes is 1.7 bcf/d so they are only referring to Total Mozambique LNG Phase 1. So no surprise the change is Mozambique LNG driven but we have to believe the reason why they cut their forecast off this time at 2023 is that they are looking at trying to figure out what to forecast beyond 2023 in addition to Total Phase 1. And, importantly, we believe they will be changing their LNG forecast for more than Mozambique ie. India

demand that we highlight later in the blog. They didn't say anything else specific on Mozambique but, surely they have to also be delaying the follow on Total Phase 2 of 1.3 bcf/d and Exxon Rozuma Phase 1 of 2.0 bcf/d.

Australia's LNG Outlook: March 2021 vs June 2021 Forecasts

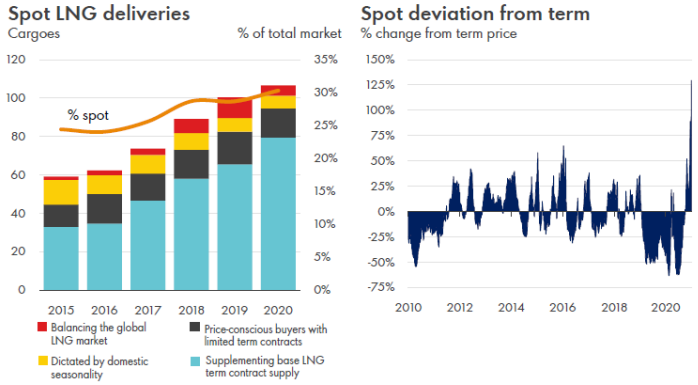


Source: Australia Resources and Energy Quarterly

Clearly Asian LNG buyers did the math, saw the new LNG supply gap and were working the phones in March/April/May trying to lock up long term supply. We wrote extensively on the Total Mozambique LNG situation before the April 26 force majeure as it was obvious that delays were coming to a project counted on for first LNG in 2024. Total had shut down Phase 1 development in December for 3 months due to the violence and security risks. It restarted development on Wed March 24, violence/attacks immediately resumed for 3 consecutive days, and then Total suspended development on Sat March 27. That's why no one should have been surprised by the April 26 force majeure. Asian LNG buyers were also seeing this and could easily do the same math we were doing and saw a bigger and sooner LNG supply gap. They were clearly working the phones with a new priority to lock up long term LNG supply. Major long term deals don't happen overnight, so it makes sense that we started to see these new Asian long term LNG deals start at the end of June.

A big pivot from trying to renegotiate down long term LNG deals or being happy to let long term contracts expire and replace with spot/short term LNG deals. This is a major pivot or abrupt turn on the Asian LNG buyers contracting strategy for the 2020s. There is the natural reduction of long term contracts as contracts reach their term. But with the weakness in LNG prices in 2019 and 2020, Asian LNG buyers weren't trying to extend long term contracts, rather, the push was to try to renegotiate down its long term LNG deals. The reason was clear, as spot prices for LNG were way less than long term contract prices. And this led to their LNG contracting strategy – move to increase the proportion of spot LNG deliveries out of total LNG deliveries. Shell's LNG Outlook 2021 was on Feb 25, 2021 and included the below graphs. The spot LNG price derivation from long term prices in 2019 and 2020 made sense for Asian LNG buyers to try to change their contract mix. Yesterday, Maeil Business News Korea reported on the new Qatar/Kogas long term LNG deal with its report "*Korea may face LNG supply cliff or pay hefty price after long-term supplies run out*" [LINK], which highlighted this very concept – Korea wasn't worried about trying to extend expiring long term LNG contracts. Maeil wrote "*Seoul in 2019 secured a long-term LNG supply contract with the U.S. for annual 15.8 million tons over a 15-year period. But even with the latest two LNG supply contracts, the Korean government needs extra 6 million tons or more of LNG supplies to keep up the current power pipeline. By 2024, Korea's long-term supply contracts for 9 million tons of LNG will expire - 4.92 million tons on contract with Qatar and 4.06 million tons from Oman, according to a government official who asked to be unnamed."*

Spot LNG deliveries and Spot deviation from term price



Source: Shell LNG Outlook 2021 on Feb 25, 2021

Asian LNG buyers moving to long term LNG deals provide financing capacity for brownfield LNG FIDs. We believe this abrupt change and return to long term LNG deals is even more important to LNG suppliers who want to FID new projects. The big LNG players like Shell can FID new LNG supply without new long term contracts as they can build into their supply options to fill their portfolio of LNG contracts. But that doesn't mean the big players don't want long term LNG supply deals, as having long term LNG contracts provide better financing capacity for any LNG supplier. It takes big capex for LNG supply and long term deals make the financing easier.

Four Asian buyer long term LNG deals in the last week. It was pretty hard to miss a busy week for reports of new Asian LNG buyer long term LNG deals. There were two deals from Qatar Petroleum, one from Petronas and one from BP. The timing fits, it's about 3 months after Total Mozambique LNG problems became crystal clear. And as noted later, there are indicators that more Asian buyer LNG deals are coming.

> Petronas/CNOOC is 10 yr supply deal for 0.3 bcf/d. On July 7, we tweeted [LINK] on the confirmation of a big positive to Cdn natural gas with the Petronas announcement [LINK] of a new 10 year LNG supply deal for 0.3 bcf/d with China's CNOOC. The deal also has special significance to Canada. (i) Petronas said "*This long-term supply agreement also includes supply from LNG Canada when the facility commences its operations by middle of the decade*". This is a reminder of the big positive to Cdn natural gas in the next 3 to 4 years – the start up of LNG Canada Phase 1 is ~1.8 bcf/d capacity. This is natural gas that will no longer be moving south to the US or east to eastern Canada, instead it will be going to Asia. This will provide a benefit for all Western Canada natural gas. (ii) First ever AECO linked LNG deal. It's a pretty significant event for a long term Asia LNG deal to now have an AECO link. Petronas wrote "*The deal is for 2.2 million tonnes per annum (MTPA) for a 10-year period, indexed to a combination of the Brent and Alberta Energy Company (AECO) indices. The term deal between PETRONAS and CNOOC is valued at approximately USD 7 billion over ten years.*" 2.2 MTPA is 0.3 bcf/d. (iii) Reminds of LNG Canada's competitive advantage for low greenhouse gas emissions. Petronas said "*Once ready for operations, the LNG Canada project paves the way for PETRONAS to supply low greenhouse gas (GHG) emission LNG to the key demand markets in Asia."*
>
> Qatar Petroleum/CPC (Taiwan) is 15 yr supply deal for 0.16 bcf/d. Pre Covid, Qatar was getting pressured to renegotiate lower its long term LNG contract prices. Now, it's signing a 15 year deal. On July 9, they entered in a new small long term LNG sales deal [LINK], a 15-yr LNG Sale and Purchase Agreement with CPC Corporation in Taiwan to supply it ~0.60 bcf/d of LNG. LNG deliveries are set to begin in January 2022. H.E. Minister for Energy Affairs & CEO of Qatar Petroleum Al-Kaabi said *"We are pleased to enter into this long term LNG SPA, which is another milestone in our relationship with CPC, which dates back to almost three decades. We look forward to commencing deliveries under this SPA and to continuing our supplies as a trusted and reliable global LNG provider."* The pricing was reported to be vs a basket of crudes.

BP/Guangzhou Gas, a 12-yr supply deal for 0.13 bcf/d. On July 9, there was a small long term LNG supply deal with BP and Guangzhou Gas (China). Argus reported [LINK] BP had signed a 12 year LNG supply deal with Guangzhou Gas (GG), a Chinese city's gas distributor, which starts in 2022. The contract prices are to be linked to an index of international crude prices. Although GG typically gets its LNG from the spot market, it used a tender in late April for ~0.13 bcf/d starting in 2022. BP's announcement looks to be for most of the tender, so it's a small deal. But it fit into the trend this week of seeing long term LNG supply deals to Asia. This was intended to secure deliveries to the firm's Xiaohudao import terminal which will become operational in August 2022.

Qatar/Korea Gas is a 20-yr deal to supply 0.25 bcf/d. On Monday, Reuters reported [LINK] "*South Korea's energy ministry said on Monday it had signed a 20-year liquefied natural gas (LNG) supply agreement with Qatar for the next 20 years starting in 2025. South Korea's state-run Korea Gas Corp (036460.KS) will buy 2 million tonnes of LNG annually from Qatar Petroleum".* There was no disclosure of pricing.

More Asian buyer long term LNG deals (ie. India) will be coming. There are going to be more Asian buyer long term LNG deals coming soon. Our July 11, 2021 Energy Tidbits highlighted how India's new petroleum minister Hardeep Singh Puri (appointed July 8) hit the ground running with what looks to be a priority to set the stage for more India long term LNG deals with Qatar. On July 10, we retweeted [LINK] "*New India Petroleum Minister hits ground running. What else w/ Qatar but #LNG. Must be #Puri setting stage for long term LNG supply deal(s). Fits sea change of buyers seeing #LNGSupplyGap (see SAF Apr 28 blog http://safgroup.ca) & wanting to tie up LNG supply. #OOTT".* It's hard to see any other conclusion after seeing what we call a sea change in LNG buyer mentality with a number of long term LNG deals this week. Puri tweeted [LINK] "*Discussed ways of further strengthening mutual cooperation between our two countries in the hydrocarbon sector during a warm courtesy call with Qatar's Minister of State for Energy Affairs who is also the President & CEO of @qatarpetroleum HE Saad Sherida Al-Kaabi".* As noted above, we believe there is a sea change in LNG markets that was driven by the delay in 5 bcf/d of LNG supply from Mozambique (Total Phase 1 & Phase 2, and Exxon Rozuma Phase 1) that was counted on all LNG supply projections for the 2020s. Puri's tweet seems to be him setting the stage for India long term LNG supply deals with Qatar.

Supermajors are aggressively competing to commit 30+ year capital to Qatar's LNG expansion despite stated goal to reduce fossil fuels production. It's not just Asian LNG buyers who are now once again committing long term capital to securing LNG supply, it's also supermajors all bidding to be able to commit big capex to part of Qatar Petroleum's 4.3 bcf/d LNG expansion. Qatar Petroleum received a lot of headlines following the their June 23 announcement on its LNG expansion [LINK] on how they received bids for double the equity being offered. And there were multiple reports that these are on much tougher terms for Qatar's partners. Qatar Petroleum CEO Saad Sherida Al-Kaabi specifically noted that, among the bidders, were Shell, Total and Exxon. Shell and Total have two of the most ambitious plans to reduce fossil fuels production in the 2020's, yet are competing to allocate long term capital to increase fossil fuels production. And Shell and Total are also two of the global LNG supply leaders. It has to be because they are seeing a bigger and sooner LNG supply gap.

Remember Qatar's has a massive expansion but India alone needs 3x the Qatar expansion LNG capacity. In addition to the competition to be Qatar Petroleum's partners, we remind that, while this is a massive 4.3 bcf/d LNG expansion, India alone sees its LNG import growing by ~13 bcf/d to 2030. The Qatar announcement reminded they see a LNG supply gap and continued high LNG prices. We had a 3 part tweet. (i) First, we highlighted [LINK] "*1/3. #LNGSupplyGap coming. big support for @qatarpetroleum expansion to add 4.3 bcf/d LNG. but also say "there is a lack of investments that could cause a significant shortage in gas between 2025-2030" #NatGas #LNG".* This is after QPC accounts for their big LNG expansion. The QPC release said "*However, His Excellency Al-Kaabi voiced concern that during the global discussion on energy transition, there is a lack of investment in oil and gas projects, which could drive energy prices higher by stating that "while gas and LNG are important for the energy transition, there is a lack of investments that could cause a significant shortage in gas between 2025-2030, which in turn could cause a spike in the gas market."* (ii) Second, this is a big 4.3 bcf/d expansion, but India alone has 3x the increase in LNG import demand. We tweeted [LINK] "*2/3. Adding 4.3 bcf/d is big, but dwarfed by items like India. #Petronet gave 1st specific forecast for what it means if #NatGas is to be 15%*

of energy mix by 2030 - India will need to increase #LNG imports by ~13 bcf/d. See SAF Group June 20 Energy Tidbits memo." (iii) Third, Qatar's supply gap warning is driven by the lack of investments in LNG supply. We agree, but note that the lack of investment is in great part due to the delays in both projects under construction and in FIDs that were supposed to be done in 2019. We tweeted [LINK] "3/*3. #LNGSupplyGap is delay driven. $TOT Mozambique Phase 1 delay has chain effect, backs up 5 bcf/d. See SAF Group Apr 28 blog Multiple Brownfield LNG FIDs Now Needed To Fill New #LNG Supply Gap From Mozambique Chaos? How About LNG Canada Phase 2? #NatGas*."

Seems like many missed India's first specific LNG forecast to 2030. Our June 20, 2021 Energy Tidbits memo highlighted the first India forecast that we have seen to estimate the required growth in natural gas consumption and LNG imports if India is to meet its target for natural gas to be 15% of its energy mix by 2030. India will need to increase LNG imports by ~13 bcf/d or 3 times the size of the Qatar LNG expansion. Our June 6, 2021 Energy Tidbits noted the June 4 tweet from India's Energy Minister Dharmendra Pradhan [LINK] reinforcing the 15% goal "*We are rapidly deploying natural gas in our energy mix with the aim to increase the share of natural gas from the current 6% to 15% by 2030."* But last week, Petronet CEO AK Singh gave a specific forecast. Reuters report "*LNG's share of Indian gas demand to rise to 70% by 2030: Petronet CEO"* [LINK] included Petronet's forecast if India is to hit its target for natural gas to be 15% of energy mix by 2030. Singh forecasts India's natural gas consumption would increase from current 5.5 bcf/d to 22.6 bcf/d in 2030. And LNG shares would increase from 50% to 70% of natural gas consumption ie. an increase in LNG imports of ~13 bcf/d from just under 3 bcf/d to 15.8 bcf/d in 2030. Singh did not specifically note his assumption for India's natural gas production, but we can back into the assumption that India natural gas production grows from just under 3 bcf/d to 6.8 bcf/d. It was good to finally see India come out with a specific forecast for 2030 natural gas consumption and LNG imports if India is to get natural gas to 15% of its energy mix in 2030. Petronet's Singh forecasts India natural gas consumption to increase from 5.5 bcf/d to 22.6 bcf/d in 2030. This forecast is pretty close to our forecast in our Oct 23, 2019 blog "*Finally, Some Visibility That India Is Moving Towards Its Target For Natural Gas To Be 15% Of Its Energy Mix By 2030*". Here part of what we wrote in Oct 2019. "*It's taken a year longer than we expected, but we are finally getting visibility that India is taking significant steps towards India's goal to have natural gas be 15% of its energy mix by 2030. On Wednesday, we posted a SAF blog [LINK] "Finally, Some Visibility That India Is Moving Towards Its Target For Natural Gas To Be 15% Of Its Energy Mix By 2030".* Our 2019 blog estimate was for India natural gas demand to be 24.0 bcf/d in 2030 (vs Singh's 22.6 bcf/d) and for LNG import growth of +18.4 bcf/d to 2030 (vs Singh's +13 bcf/d). The difference in LNG would be due to our Oct 2019 forecast higher natural gas consumption by 1.4 bcf/d plus Singh forecasting India natural gas production +4 bcf/d to 2030. Note India production peaked at 4.6 bcf/d in 2010.

Bigger, nearer LNG supply gap + Asian buyers moving to long term LNG deals = LNG players forced to at least look at what brownfield LNG projects they could advance and move to FID. All we have seen since our April 28 blog is more validation of the bigger, nearer LNG supply gap. And now market participants (Asian LNG buyers) are reacting to the new data by locking up long term supply. Cheniere noted how the pickup in commercial engagement means they "*are quite optimistic over the coming 12-18 months to make a substantial dent in that Stage 3 commercialization."* Cheniere can't be the only LNG supplier having new commercial discussions. It's why we believe the Mozambique delays + Asian LNG buyers moving to long term deals will effectively force major LNG players to look to see if there are brownfield LNG projects they should look to advance. Prior to March/April, no one would think Shell or other major LNG players would be considering any new LNG FIDs in 2021. Covid forced all the big companies into capital reduction mode and debt reduction mode. But Brent oil is now solidly over $70, and LNG prices are over $13 this summer and the world's economic and oil and gas demand outlook are increasing with vaccinations. And we are starting to see companies move to increasing capex with the higher cash flows. The theme in Q3 reporting is going to be record or near record oil and gas cash flows, reduced debt levels and increasing returns to shareholders. And unless new mutations prevent vaccinations from returning the world to normal, we suspect that major LNG players, like other oil and gas companies, will be looking to increase capex as they approve 2022 budgets. The outlook for the future has changed dramatically in the last 8 months. The question facing major LNG players like Shell is should they look to FID new LNG brownfield projects in the face of an increasing LNG supply gap that is going to hit faster and harder and Asian LNG buyers prepared to do long term deals. We expect these decisions to be looked at before the end of 2021 for 2022 capex budget/releases. One wildcard that could force these decisions sooner is the already stressed out global supply chain. We have to believe that discussion there will be pressure for more Asian LNG buyer long term deals sooner than later.

For Canada, does the increasing LNG supply gap provide the opportunity to at least consider a LNG Canada Phase 2 FID over the next 6 months? Our view on Shell and other LNG players is unchanged since our April 28 blog. Shell is no different than any other major LNG supplier in always knowing the market and that the oil and gas outlook is much stronger than 9 months ago. Even 3 months post our April 28 blog, we haven't heard any significant talks on how major LNG players will be looking at FID for new brownfield LNG projects. We don't have any inside contacts at Shell or LNG Canada, but that is no different than when we looked at the LNG markets in September 2017 and saw the potential for Shell to FID LNG Canada in 2018. We posted a September 20, 2017 blog *"China's Plan To Increase Natural Gas To 10% Of Its Energy Mix Is A Global Game Changer Including For BC LNG*" [LINK]. Last time, it was a demand driven supply gap, this time, it's a supply driven supply gap. We have to believe any major LNG player, including Shell, will be at least looking at their brownfield LNG project list and seeing if they should look to advance FID later in 2021. Shell has LNG Canada Phase 2, which would add 2 additional trains or approx. 1.8 bcf/d. And an advantage to an FID would be that Shell would be able to commit to its existing contractors and fabricators for a continuous construction cycle following on LNG Canada Phase 1 ie. to help keep a lid on capital costs. We believe maintaining a continuous construction cycle is even more important given the stressed global supply chain. No one is talking about the need for these new brownfield LNG projects, but, unless some major change in views happen, we believe its inevitable that these brownfield LNG FID internal discussions will be happening in H2/21. Especially since the oil and gas price outlook is much stronger than it was in the fall and companies will be looking to increase capex in 2022 budgets.

A LNG Canada Phase 2 would be a big plus to Cdn natural gas. LNG Canada Phase 1 is a material natural gas development as its 1.8 bcf/d capacity represents approx. 20 to 25% of Cdn gas export volumes to the US. The EIA data shows US pipeline imports of Cdn natural gas as 6.83 bcf/d in 2020, 7.36 bcf/d in 2019, 7.70 bcf/d in 2018, 8.89 bcf/d in 2017, 7.97 bcf/d in 2016, 7.19 bcf/d in 2015 and 7.22 bcf/d in 2014. A LNG Canada Phase 2 FID would be a huge plus for Cdn natural gas. It would allow another ~1.8 bcf/d of Cdn natural gas to be priced against pricing points other than Henry Hub. And it would provide demand offset versus Trudeau if he moves to make electricity "emissions free" and not his prior "net zero emissions". Mozambique has been a game changer to LNG outlook creating a bigger and sooner LNG supply gap. And with a stronger tone to oil and natural gas prices in 2021, the LNG supply gap will at least provide the opportunity for Shell to consider FID for its brownfield LNG Canada Phase 2 and provide big support to Cdn natural gas for the back half of the 2020s. And perhaps if LNG Canada is exporting 3.6 bcf/d from two phases, it could help flip Cdn natural gas to a premium vs US natural gas especially if Biden is successful in reducing US domestic natural gas consumption for electricity. The next six months will be very interesting to watch for LNG markets and Cdn natural gas valuations. Imagine the future value of Cdn natural gas is there was visibility for 3.6 bcf/d of Western Canada natural gas to be exported to Asia.

https://www.nea.gov.cn/2023-10/17/c_1310745851.htm

国家能源局
National Energy Administration

The National Energy Administration organized a special conference on natural gas supply guarantee in the 2023-2024 heating season

Release time:2023-10-17 Source:National Energy Administration Large, medium and small

On October 10, the National Energy Administration organized a special conference on natural gas supply in the 16-2023 heating season, deeply implemented the spirit of the 2024th National Congress of the Communist Party of China, studied and implemented Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, and took the heating season to ensure warm supply and ensure that the people are warm in winter as an important part of promoting the continuous deepening of theme education and promoting the high-quality development of the industry. Zhang Jianhua, Secretary of the Party Group and Director of the National Energy Administration, attended and spoke at the meeting, which was presided over by Ren Jingdong, member of the Party Group and Deputy Director of the National Energy Administration, and attended by Li Yong, General Manager of CNOOC, Zhang Daowei, Deputy General Manager of CNPC, Niu Shuowen, Deputy General Manager of Sinopec Group, and He Zhongwen, Deputy General Manager of State Pipe Network Group.

The meeting pointed out that since the last heating season, in the face of the complex international geopolitical environment and energy situation, the construction of China's natural gas production, supply, storage and marketing system has been coordinated and strengthened, the central and local enterprises have coordinated with each other, and the industry has taken the initiative to basically achieve the coordinated and stable development of natural gas. The national natural gas consumption showed a recovery growth trend, and the natural gas supply and demand situation was generally stable throughout the year and heating season.

The meeting required that central oil and gas enterprises should continue to take the lead in ensuring supply and price stability, adhere to the domestic all-out efforts to increase reserves and production, ensure that the gas storage is full in winter, and the "national network" operates safely and stably, and do everything possible to ensure the stable supply of natural gas during the heating season. The meeting emphasized that it is necessary to adhere to the direction of natural gas market-oriented development and reform, strengthen the signing and performance of gas supply contracts, and do a good job in emergency response within the contract and guarantee supply within the contract. The meeting also sorted out the situation of ensuring supply in the heating season, and made targeted arrangements for natural gas supply in some key areas, key periods or key links, and put forward relevant work requirements.

Responsible comrades of relevant departments and bureaus of the National Development and Reform Commission and the National Energy Administration, and responsible comrades of relevant departments of PetroChina, Sinopec, CNOOC and State Pipe Network Group attended the meeting.

https://www.energy.gov/ceser/articles/us-department-energy-announces-monthly-solicitations-purchase-oil-strategic

Department of Energy Announces Monthly Solicitations to Purchase Oil for Strategic Petroleum Reserve Replenishment

OCTOBER 19, 2023

October Solicitation for 6 Million Barrels Continues Biden-Harris Administration's Commitment to Replenish Reserve at a Good Deal for American Taxpayers, Maintain the SPR's Operational Readiness, and Protect the Nation's Energy Security

WASHINGTON, D.C. — Today, the U.S. Department of Energy's (DOE) Office of Petroleum Reserve announced that that it will post monthly **solicitations** to purchase oil for the Strategic Petroleum Reserve (SPR) through at least May 2024, beginning with a solicitation for up to 6 million barrels of oil for delivery in December 2023 and January 2024. DOE will purchase oil in those months where it can do so at a good deal for taxpayers: a price of $79 dollars per barrel or below, far less than the average $95 per barrel DOE received for 2022 emergency SPR sales.

Today's announcement advances the President's commitment to safeguard and replenish this critical energy security asset, following his historic release from the SPR to address the significant global supply disruption caused by Putin's war on Ukraine and provide a wartime bridge to keep the domestic market well supplied, which ultimately helps bring down prices for American consumers and businesses. Analysis from the Department of the Treasury indicates that SPR releases last year, along with coordinated releases from international partners, reduced gasoline prices by as much as 40 cents per gallon.

Bids for the first solicitation for the purchase of up to 3 million barrels of crude oil, for December receipt, are due no later than 10:00 a.m. Central Time on October 24, 2023. Bids for the second solicitation for the purchase of up to 3 million barrels of crude oil, for January receipt, are due no later than 10:00 a.m. Central Time on November 1, 2023. Each delivery will be received by the Big Hill storage facility. DOE will continue to release monthly solicitations for any available capacity through at least May 2024.

By providing transparency in cadence of solicitations, qualified bidders can more easily submit comprehensive and competitive bids that deliver a good deal for taxpayers.

DOE has already purchased 4.8 million barrels for SPR replenishment for an average less than $73 per barrel – far lower than the average of about $95 per barrel that SPR crude was sold for in 2022.

The Administration's ongoing three-part replenishment strategy to get the best deal for taxpayers while increasing SPR stocks includes: (1) Direct purchases with revenues from emergency sales; (2) Exchange returns that include a **premium to volume** delivered; and (3) Securing legislative solutions that avoid unnecessary sales unrelated to supply disruptions. DOE has already secured cancellation of 140 million barrels in congressionally mandated sales scheduled for Fiscal Years 2024 through 2027. This cancellation has led to significant progress toward replenishment.

The SPR continues to be the world's largest supply of emergency crude oil, and the federally owned oil stocks are stored in underground salt caverns at four sites in Texas and Louisiana. Through scheduled maintenance periods and the Life Extension 2 program, DOE continues to prioritize the operational integrity of the SPR to ensure that the SPR can continue to meet its mission as a critical energy security asset. The SPR has a long history of protecting the economy and American livelihoods in times of emergency oil shortages.

For more information on the SPR please visit **Infographic: Strategic Petroleum Reserve** and **Fact Sheet: Strategic Petroleum Reserve**.

https://www.cer-rec.gc.ca/en/about/news-room/news-releases/2023/canada-energy-regulator-issues-reasons-decision-trans-mountain-application.html

Canada Energy Regulator issues reasons for decision for the Trans Mountain deviation application

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News Release
For Immediate Release

October 20, 2023

Today, the Commission of the Canada Energy Regulator (CER) released its reasons for approving the Trans Mountain Expansion Project (TMEP) route deviation application.

There are several considerations behind the Commission's decision including those related to ongoing engagement and prior agreements between the parties that are outlined further in the Reasons for Decision.

The Commission heard from Stk'emlúpsemc te Secwépemc Nation (SSN) including one of its Knowledge Keepers, about the cultural and spiritual significance of the Pípsell area to the SSN. Trans Mountain indicated however that micro-tunnelling of the 1.3-kilometre (km) segment is not technically feasible and continuing to pursue it could cause more surface disturbance to the area.

In their decision of September 25, 2023, the Commission approved Trans Mountain's application to change the route and method of construction for a 1.3 km section of the pipeline route in the Pípsell (Jacko Lake) area. The Commission found that continuing micro-tunnelling would most likely fail and could delay the completion of the TMEP by at least ten months. This delay could result in an estimated $2 billion of lost revenue for Trans Mountain and cause negative impacts on shippers and other parties.

Trans Mountain initially agreed to construct a 4.2-km-long segment using micro-tunnelling. However, they encountered technical challenges with micro-tunnelling in a 1.3 km section of the pipeline in the Pípsell (Jacko Lake) area. Even after several attempts, it was not successful.

Trans Mountain then applied to revise the route within the approved corridor, to change the construction methodology from micro-tunnelling to a combination of horizontal directional drilling and conventional open trench.

Based on Trans Mountain's engagement efforts, the Commission's hearing process, and the mitigation measures Trans Mountain is required to implement, the Commission determined that there has been adequate consultation and accommodation with Indigenous Peoples for this decision. The Commission also considered its duties and obligations in light of the United Nations Declaration on the Rights of Indigenous Peoples Act and the CER's commitment to Reconciliation. The Commission finds that any additional requirements stemming from that Act and the CER's commitments were adequately addressed through its regulatory processes that allowed for deep consultation and supported several key objectives of the UN Declaration.

Quick Facts:

- The oral hearing was held from September 18-20, 2023, in Calgary, Alberta. Oral Indigenous Knowledge was heard on September 18, 2023.

- The TMEP was previously found to be in the public interest and approved by the Governor in Council following a rigorous multi-year review process.
- Trans Mountain said it was confident that approximately 80 percent of construction within the approximately 4.2-km-long Pípsell Corridor would be completed using trenchless construction.
- In a deviation application, the Commission does not reconsider main issues from previous proceedings but assesses whether the deviation is required according to the CER Act.
- The burden of proof rests on the applicant, in this case, Trans Mountain, to persuade the Commission that a deviation is required.
- The Commission is responsible for adjudicative decisions and recommendations, operating as a quasi-judicial body that is arm's length from other parts of the CER governance structure and the federal government.

Associated Links:

- Decision [Folder 3874457]
- Project webpage
- News Release from September 25, 2023
- Backgrounder
- Trans Mountain Interim Tolling webpage

The Canada Energy Regulator (CER) works to keep energy moving safely across the country. We review energy development projects and share energy information, all while enforcing some of the strictest safety and environmental standards in the world. To find out how the CER is working for you visit us online or connect on social media

Contacts

https://www.wsj.com/business/energy-oil/bp-oil-refinery-brothers-tragedy-6e90f1b0?mod=hp_lead_pos8

He Feared His Refinery Job. His Brother Stayed to Help. The Explosion Hit at 6:46 P.M.

America's aging oil refineries faced pressure to ramp back up quickly after the pandemic. BP's Ohio site spiraled into tragedy.

By Jenny Strasburg
Follow
| Photographs by Brittany Greeson for The Wall Street Journal
Oct. 15, 2023 8:00 am ET

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OREGON, Ohio—Ben Morrissey wasn't supposed to be at the refinery the night it blew up.

A new-hire trainee, Ben stuck around after his shift ended to help his big brother, Max, try to regain control over a facility that was belching smoke and flashing an unusually bright, towering flare that could be seen all over town.

The overtime was just part of the lure for Ben, a 32-year-old with a second baby on the way, an old house to remodel and a decade of hard-fought sobriety under his belt.

Ben also had reasons for wanting to stay close to his older brother.

Max, 34, had recently told friends and family that he was nervous about going to work. Over the summer, he took a brief leave, citing the stress of the job and concerns about safety.

Coming out of the pandemic in 2022, London energy giant

BP had ordered a costly and complicated maintenance tuneup, a monthslong project called a turnaround. An army of employees and contractors put much of the facility, located in the Toledo suburb of Oregon, through a complete shutdown and systematic restart.


Brothers Ben, left, and Max Morrissey.

It is accepted wisdom in the industry that, just as airplane takeoffs and landings are the most dangerous times of flight, refinery risks can run highest during a turnaround.

By the end of July, BP was ready to ramp back up**,** but complications continued to emerge, as workers struggled to regulate pressures and curb a troublesome buildup of liquids.

On Sept. 20 of last year, Max had been back from leave for about a month when his supervisors asked him to come in before his shift to help resolve the latest problems. He declined, opting instead to keep working in the pizza and ice cream shop he had recently opened, and which he believed would be his ticket out of the refinery.

Max's father, Bob Morrissey, was helping in the shop that day. "I told you guys, you guys are f—ed up over there, and I'm not coming in until I have to," he heard Max say over the phone.

By the time Max arrived at the refinery for his 5 p.m. shift, workers had spent the prior 12 hours wrestling a cascade of malfunctions into submission, in part by shutting down several key units.

The lull was deceiving. All of the problems and temporary fixes had changed the underlying recipe of the oil flowing into the refinery's production machinery, according to preliminary government findings and BP's own internal assessment of what happened that day.

Among the changes: After being diverted earlier, liquid was accumulating in a drum where it wasn't supposed to be.

About an hour into Max's scheduled evening shift, the Morrissey brothers were among a small team dispatched over crackling radios to tackle the liquid buildup—apparently unaware that it was naphtha, a highly flammable substance distilled from crude. They were working outside surrounded by towering equipment. Some of the naphtha could be routed to the flare, where it could burn off, and some of it could be sent to the refinery's self-contained sewer system.

But the drum kept filling too quickly. Alarms blared in the control room.

Photos of Max on a pillow at their home. Max's wife, Darah, with their boys Recker and Wilde.

The brothers—wearing breathing apparatuses and protective gloves—began draining naphtha to the ground. A vapor cloud formed around them.

Refinery veterans say a vapor cloud, like a shimmery mirage over a highway on a hot day, is difficult to see when you're close to it. But other nearby workers could see the telltale distortions at the edges of the cloud, with Ben and Max standing inside it.

When the wind shifted on the path of an approaching storm, it pushed the cloud toward a giant nearby furnace.

At 6:46 p.m., a boom reverberated for miles and blasted a wall of flame and smoke through the heart of the refinery.

One worker nearby, Thomas Newman, saw Max stumble out of the flames, engulfed from head to toe.

Max screamed at Newman to find Ben.

Newman blasted Max with water and struggled to drag him away from the fire, trying not to pull off chunks of his severely burned skin. Max screamed to let him try to walk.

Then Max asked Newman to call his wife, Darah.

"Darah, this is Tom, I work with Max," Newman told her. "He's hurt really bad."

Darah sensed the panic in Newman's voice. She asked if Max was going to the hospital.

"And he just said, 'I don't know. I don't know. Oh, my God, I just gotta get him out of here.'"

Both of the brothers died before sunrise.

Family photos of BP employees and brothers Ben and Max Morrissey at their sister Carolyn's home.

A watch, keys and cellphone that Max Morrissey had with him the day he died last year.

This account of what happened that day and in the months leading up to it is based on conversations with dozens of people who have worked at the refinery or are familiar with its operations, as well as hundreds of pages of documents including BP's own nonpublic reports on the accident, internal BP emails and records tied to refinery staffing, finances and maintenance. It is also based on photographs, audio and video recordings related to the refinery and public reports from government investigations.

Three federal agencies have issued final or preliminary findings about the explosion, with two regulators citing the refinery operator for a range of training and operational deficiencies. One of the agencies, the Occupational Safety and Health Administration, identified 10 violations it called

serious, including the failure to train workers about the presence of naphtha and to control how refinery equipment is drained. Two other investigations are continuing.

BP has spent years working to come out of the shadow of two of the most devastating industrial accidents in U.S. history, including a 2010 explosion that destroyed the Deepwater Horizon drilling platform in the Gulf of Mexico, killing 11 workers and causing billions of dollars in environmental damage. In 2005, a deadly explosion at its Texas City, Texas, refinery killed 15 workers and injured more than 170 others.

The company is contesting OSHA's findings about the Toledo explosion. In a statement, a BP spokesman said the company is cooperating with accident investigations, adding, "Wherever we work, safety is BP's priority. We are determined to learn from last year's terrible accident at the Toledo refinery that resulted in the deaths of Ben and Max Morrissey."

America's Aging Refineries

Ben Morrissey with his son, Weslee. Now 3, Weslee plays in their yard in June.

There hasn't been a major new oil refinery built in the U.S. since the 1970s, and many plants are more than 100 years old, including the one in Toledo. U.S. petroleum-refining capacity peaked in early 2020, according to federal data, and by the start of this year there were 124 refineries in operation nationwide, 51 fewer than three decades ago.

The costly work of maintaining refineries dropped off sharply in 2020 as Covid-19 stifled fuel demand. Refineries postponed planned maintenance and improvement projects—first during Covid and then amid supply-chain disruptions and pressure to ramp back up to take advantage of high profits from resurgent demand. Shareholders in big oil companies and refinery operators were hungry for cash following huge losses in 2020.

"A lot of refiners, if they could, pushed projects into 2022 so they could take advantage of high margins," said Hillary Stevenson, an analyst with energy-research and data firm IIR Energy, who wasn't referring specifically to BP. With their shrunken capacity, she said, "refiners had to do more with less."

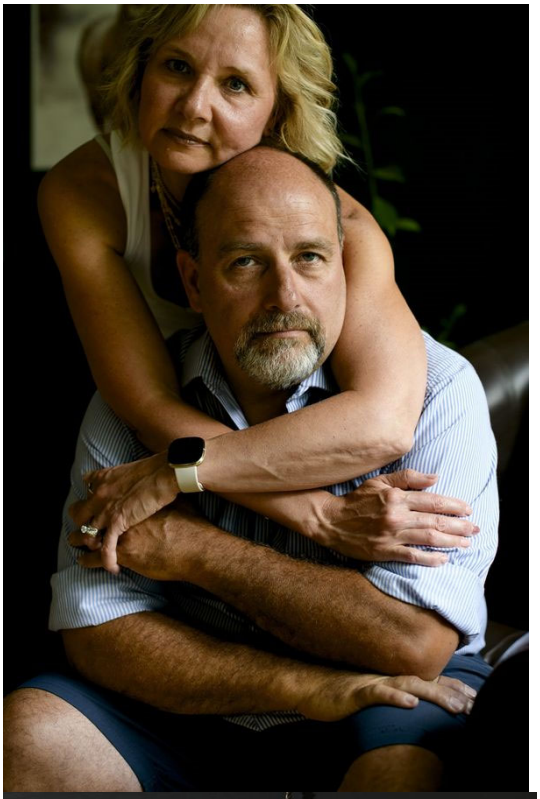
As the pandemic wore on, safety suffered. Industry statistics compiled by American Fuel & Petrochemical Manufacturers, an industry lobbying group, show that 2021 was the worst year for serious incidents at U.S. refineries since 2015, measured by hours worked, with the rate of so-called process-safety events 25% higher than in 2019 and 2020.

The incidents, including releases of chemicals, crude, vapors and other substances serious enough to cause injuries, evacuations or other consequences, ticked down last year but remained above the 2019 level. The AFPM notes that over recent decades, industry safety has improved significantly.

For BP, its sprawling U.S. refining business long conflicted with an effort to recast itself as a green company that was "Beyond Petroleum." From 2010 to last year, the company sold off refineries, cutting the number globally to seven from 16, with the U.S. refinery count reduced to three from five, including fully and partially owned sites. After Bernard Looney took over as CEO in February 2020, he redoubled efforts to cut harmful greenhouse-gas emissions and oil production, in a strategy he dubbed "Reinvent BP."

Its workers didn't know it yet, but the Ohio refinery would soon find itself on the BP discard pile.

'We have a lot of things that can go 'boom' in this town'



Thomas and Kelly Newman, along with one of his former refinery uniforms, at their home in Bowling Green, Ohio. A video Newman took before the explosion that killed the Morrissey brothers.

Since 1919, the former Standard Oil plant in the Toledo suburb of Oregon has been churning out some mix of gasoline, diesel, asphalt, propane and jet fuel through its snaking labyrinth of tanks, valves, towers, furnaces and piping sprawled across the south shore of Lake Erie.

With its long main drag of aging strip malls, chain family-style restaurants and local watering holes, Oregon has about 20,000 residents and a suburban-rural-industrial vibe, with webs of railroad tracks passing neighborhoods with brick and clapboard houses and farms with duck ponds.

Refinery workers in this union stronghold can routinely pull in $140,000 a year including overtime and bonuses, plus good benefits, without a college degree.

Oregon's two big refineries protrude from the pancake-flat landscape 4 miles apart on opposite sides of town, just across the Maumee River from Toledo. The landmark Veterans' Glass City Skyway bridge connects Oregon to Toledo.

Four workers died in 2004 when a massive crane being used to construct the bridge collapsed. One of them, a 42-year-old ironworker, was Ben and Max's uncle.

A Refinery Town

Oregon
OHIO

*Now fully owned by Cenovus Energy
Note: Satellite image has been stylized
Source: Google Earth (satellite image)

The risks associated with the heavy industry that powers the local economy are embedded in daily life.

“We have a lot of things that can go boom in this town,” said former Oregon fire chief Denny Hartman, who retired in 2022.

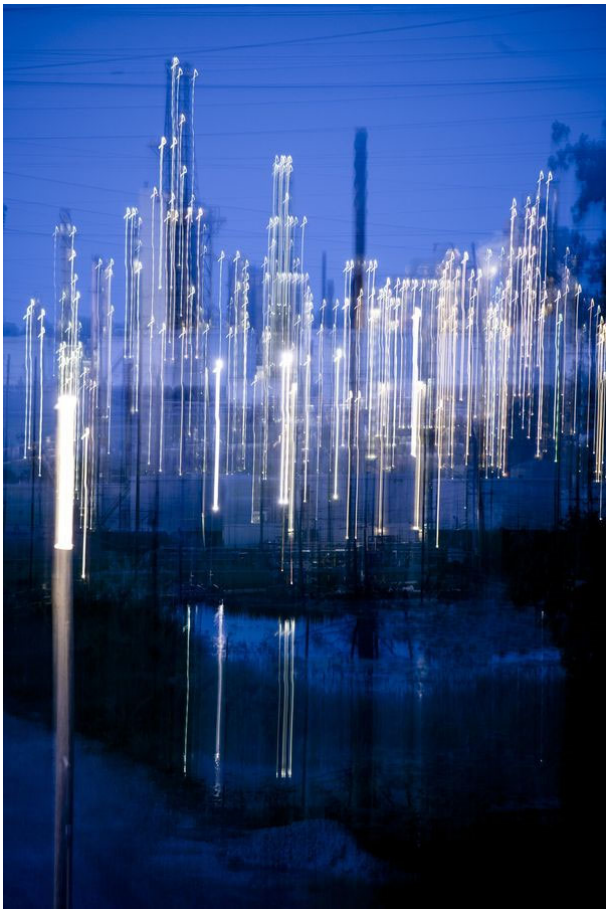
BP, operating as British Petroleum, bought into the Toledo refinery in the 1980s. Through restructurings it came to be known as the BP-Husky Toledo Refinery.

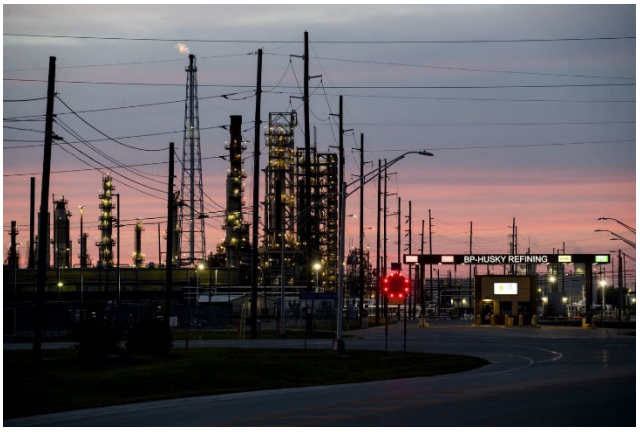
After Looney took over as CEO, executives said BP would streamline refinery maintenance including turnarounds, and put that business under one roof in the corporate structure with its global oil-and-gas production.

Looney’s Reinvent strategy also eliminated thousands of jobs globally. At the Toledo refinery, the cost-cutting meant more than one out of every 10 salaried employees left, many through a wave of buyouts, leading managers to backfill jobs with less-experienced workers, according to internal documents and people close to the decisions.

Looney, who resigned from BP in September over what the company described as failures to disclose details of past relationships with colleagues, referred requests for comment to BP.

A turnaround is a crucial maintenance project to enable repairs and upgrades. It is like tearing apart and rebuilding a life-size industrial Erector Set, with the complexity of shutting down and restarting furnaces, boilers and flares with toxic liquids and vapors that can be deadly even when operations are in a steady state.





The former BP-Husky Toledo refinery, now fully owned by Cenovus Energy.

The plan in late 2021 was for BP and its refinery co-owner, Calgary-based

Cenovus Energy
, to invest more than $400 million in the plant during the 2022 turnaround, according to internal communications.
But the turnaround was messy, with cost overruns, a spate of fires that delayed work and operating problems that continued even after the formal end of the project, internal refinery documents show.

During the first half of 2022, the plant's roughly 600-strong workforce ballooned with the addition of around 5,000 third-party contractors on site each day at the project's peak, according to internal refinery communications.

The thousands of contract workers, many from petrochemical and refining hubs in Texas, filled Oregon's hotel rooms and bedrooms that locals rented out across town. For much of spring and summer, locals say, hangouts like Luckies Barn & Grill were teeming every night with out-of-town workers.

On March 23, 2022, Des Gillen, then the Toledo refinery's general manager, sent an email memo to all Toledo staff. It marked the 17-year anniversary of BP's Texas City refinery disaster.

"This tragedy affected BP to the core, and changed the way we view safety forever," Gillen wrote. He urged managers to pull their teams together and talk about Texas City and how to apply its lessons to the coming turnaround, including responding to safety alarms and closely following written procedures.

"Where that can't be done safely then we should stop, assess the risk and document any changes," Gillen wrote.

Yet problems persisted. Over one 10-day period in July, the refinery suffered more than 20 instances known as "loss of primary containment," spills and accidental releases of both toxic and nontoxic materials. Several were serious, causing management to call for extra vigilance around valves and pressure readings, documents show.

Patrons sit at the bar at Luckies Barn & Grill in Oregon, Ohio, in June.

Some workers in charge of operating refinery equipment complained supervisors were rushing safety checks and asking employees to sign off on procedures that hadn't been completed to show progress with the turnaround, according to private communications and people involved in some of the discussions.

The undertaking meant that as soaring margins fueled huge profits at U.S. refineries, BP-Husky was almost entirely offline for three months. The documents show the refinery lost $404.2 million during the first seven months of 2022, more than BP had forecast, by a measure BP calls replacement cost profit that is similar to net income.

Immediately after the turnaround, in early August, BP disclosed that it would sell its half-ownership of the refinery to Cenovus for $300 million and relinquish its operating role. The Canadian company said in its Aug. 8 announcement that the just-finished turnaround would "improve operational reliability" at the refinery.

Before BP had a chance to turn over the keys, the refinery would claim two lives.

The Morrissey Brothers

Maxwell Morrissey was a prankster, famous among his classmates for doing a backflip off the stage at his high-school graduation.

A marathon runner and triathlete, he tried for two and a half years to qualify as a Navy SEAL but left the service in frustration after repeated injuries.

He got work on the assembly line of the massive Jeep plant in Toledo, following in the footsteps of his father, a former senior automotive-union leader, before moving into better-paying refinery work. He started at the BP plant in April 2020, the early depths of the pandemic.

Max's sons Recker and Wilde play at the lakeside where Darah grew up spending time with her family. Wilde cooking with Max.

The more reserved of the two, Benjamin Morrissey took a more tortured path.

A drug addiction that his parents said had started in high school with weight-loss pills to manage his bulk for wrestling escalated to include narcotics for minor injuries. That soon devolved into a heroin habit.

Ben's parents tried to push him into rehab, but it didn't take. They said he overdosed twice and had to be rushed to the hospital.

"We thought we were going to lose him," said his father.

Ben decided he couldn't clean up close to home, and in late 2011, he looked farther afield. He soon enrolled in an inpatient center run by Franciscans an hour's drive north of New York City. He spent several months at a shelter that provided 24-hour support, transitioned to outpatient care and came out clean for good.

"Are you guys ready to have 110% fun?" newly sober Ben would ask friends before they headed out on beaten-up dirt bikes or fired up the grill for a beer-free barbecue, remembers Mark Choinski, a financial planner who went through recovery with Ben and stayed close with him. "He always wanted to be at the party, without having to party."

Living in New York's Hudson Valley, Ben hired on as an ironworker, got certified to weld on bridges and showed a knack for fixing up motorcycles and boat engines. He met his future wife, Kaddie, at Max's 2016 wedding in Mexico.

She remembers asking why he wasn't drinking, and he said he was sober. She found him cute and awkward, "but it was like a good awkward." They danced and talked all night, then dated long-distance before marrying three years later.

Ben eventually moved back to Oregon, where his sisters Carolyn and Erin were living with their families near Max and their parents. They were all still grieving the 2014 suicide of their sister Katie at age 29.

Having Ben back home, sober and in love, with a toddler son, pulled the family together in new ways.

Kaddie Morrissey at home with Weslee and her newborn daughter Benna, as well as her mother, Kelley Rowland.

Ben found nearby support meetings and was soon leading some of them. Now he was organizing get-togethers and cooking meals for the whole family.

“It was joyful,” said sister Carolyn. “I had my guard up just because I was worried about him falling into old habits….But he was holding his own.”

Max, who by now had two small boys with his wife Darah, vouched for Ben with his bosses at the refinery.

The boys were close. They grew up wrestling together in high school and shared dreams of building lake houses and hosting family cookouts and fishing trips as their own children grew. In his obituary, Max’s family said his nieces and nephews called him “the Fun-cle.”

About six months into their marriage, “Max came to my work and said, ‘I need to borrow your car. I need to drive to Detroit real quick,’” Darah recalled.

“And he came home with a pizza oven.”

A couple of days later, he added a food-service truck that he planned to park in downtown Toledo to serve people coming out of minor-league baseball games and bars at night. That morphed into Red Eye Pie and Frozen Fantasty’s, a carryout pizza and ice cream restaurant.

With a sliding window at the walk-up counter, picnic tables and kids’ bikes parked out front, the restaurant had its grand opening in May—four months before the accident.

Max usually didn’t talk much about the details of his refinery job, Darah said, but last year, he told her, one of his sisters and a close friend that he was nervous about going to work. He battled with supervisors and took off about a month of “stress leave” during the summer.

“His safety concerns were genuine,” said friend and colleague Dustin Jones, 42, who worked closely with Max and was with him minutes before he died.

Red Eye Pie and Frozen Fantasty’s, a pizza and ice cream shop opened by Max and Darah Morrissey.

In late 2021, Max and his colleague Thomas Newman shot cellphone video of a relatively new piece of equipment, the piping of a heat exchanger connected to a gas plant. In the video, liquid is spewing from seams in the piping and pooling on the ground. It was naphtha.

Max sent one of the videos to colleagues, in which he complained that people at the refinery wouldn’t take his safety alerts seriously. He told co-workers that the refinery across town, where he worked for several years before joining BP, wouldn’t have let such malfunctions and leaks go unfixed.

It couldn’t be learned whether BP addressed any of Max’s complaints.

Max’s complaints made him unpopular to some of his bosses, and frustrated co-workers who thought he could have been more measured when he spoke up about what he saw as problems at the plant.

“I think everybody liked Max, but Max couldn’t go with the flow. He liked to stir the pot,” Jones said. “But he was right.”

At home, Max appeared increasingly anxious.

“He told me I didn’t understand how dangerous his job was,” Darah said. “He told me that BP was going to kill him.”

She told him that if he wanted to, he should quit and they would figure out the money and health insurance, which she lacked working as a hairdresser. But she also said she thought he was being dramatic in his impatience to be his own boss.

“You’re fine,” she said. “You’re not going to die there.”

‘Our lives are just forever changed’

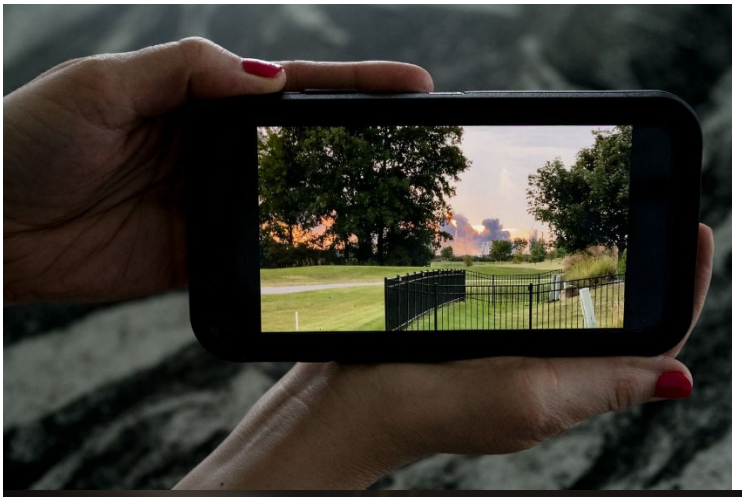
The refinery started to show signs of trouble late on the night of Sept. 19 and got worse in the early-morning hours before workers arrived for the 5 a.m. daytime shift.

In and around a unit known as Crude 1, the towering heart of the refinery’s production machinery, valve pressures and liquid levels climbed to dangerous levels.

One of those valves was labeled “Process Safety Valve 1457,” in keeping with refinery practices of tagging equipment for maintenance and record-keeping. PSV-1457 was a heavy cylinder about two feet tall. Its purpose was to relieve pressure above set operating limits to prevent harm to equipment and people when things went wrong.

The valve had been worked on during the turnaround, including testing and quality-control checks, according to detailed turnaround records, some of which list names of a BP supervisor and an outside contractor alongside tasks to be performed.

But on this morning, PSV-1457 couldn’t handle the pressure. BP and outside investigators would later say it was wrongly configured for the job—wrong design, wrong pressure rating, according to BP’s internal assessment—making it a root cause of the refinery’s accelerating instability. Increased naphtha flows pushed PSV-1457 past its limits, leading it to chatter, or rapidly open and close, which caused a deafening racket as nearby equipment shook violently.



Carolyn Berryman recorded the 2022 refinery fire from her backyard without realizing her brothers Max and Ben were at the scene. She keeps a small branch from the site where Max's ashes were spread.

An operator called for a shutdown of the unit. A supervisor said no, according to accounts of workers who were there.

The severe vibrations continued. At around 8 a.m., workers found naphtha spewing to the ground from a failed weld—eventually enough to fill a small backyard swimming pool. Over the next two hours, they fought to beat down the resulting naphtha vapor cloud with water from high-capacity jets while they raced to isolate the valves and stop the bleeding. Several suffered chemical burns on their legs and feet.

The vapor cloud could have been catastrophic, but the water blasts managed to dissipate it.

Through the morning and afternoon, Oregon residents circulated photos on social media and text chats of the apparent troubles at the refinery, evidenced by the larger-than-normal flare atop the main tower.

Hartman, the fire chief, also noticed it, and drove over to the main refinery entrance to see what needed to be done.

“When you see a change in that flare stack, you know something is wrong. They were burning big and bright,” he said.

Hartman ran into his assistant chief there, who had also noticed the flare. They phoned the BP fire chief inside and asked what was going on.

“We have an unusual event, it’s under control, we’re not going to need you,” Hartman said he was told. They left.

The naphtha hydrotreater and another nearby unit were shut down. The gas plant that Max had complained about—with the video showing the naphtha spray—was bypassed.

Ben on Max's shoulders; the brothers after Max finished a triathlon in 2016; and Max at home with his sons.

Crude 1 kept running, but at a rate of around 84,000 barrels a day, less than its normal 100,000 or more. Crude 1 is where Max and Ben would soon be working side by side, after Ben overstayed his shift and Max arrived.

They hugged as they greeted each other outside amid the roaring machinery.

But soon there was chaos inside the refinery control room—a cacophony of alarms with lights flashing red, yellow and magenta.

Different supervisors gave overlapping and conflicting instructions about how to handle the plant's spiraling issues, partly because they themselves had incomplete knowledge of everything going wrong, according to workers and documents tied to some of the investigations. Both inside the control room and outside with the roaring machinery, some employees making split-second decisions that changed the course of the day's events had barely any experience in the jobs they were filling that night.

Several units of the facility had already been turned off, and some people inside the control room pushed to shut down the central crude unit.

One control-room operator, Doug Andrews, had come on duty at 4:15 p.m. Andrews had spent years operating the equipment outside, but he had just come out of training in the control room. It was buzzing with more people than normal, confusing the reporting lines.

Andrews, growing increasingly worried about the level of the liquid in the fuel-gas mix drum, made three requests to more-senior employees to shut down the heat sources feeding the main crude tower, according to notes from an interview that was conducted as part of BP's accident investigation and accounts of workers who were there.


Bob and Patty Morrissey at their dining room table as photos of their sons Ben and Max hang behind them.

“Don’t quit,” one of the more-senior control room operators told Andrews. “You’ve got this,” another said, standing behind him and his flashing computer screens. Still another colleague didn’t say anything at that moment, but later said he was worried they were going to lose the refinery.

“I don’t have control,” Andrews said as smoke poured out of the refinery stacks. He was losing pressure readings. He moved to shut down key furnaces without anyone giving him permission, he later told BP lawyers. But it was too late.

Max and Ben were among the four workers who responded to requests from control-room operators to drain the mix drum, according to federal investigators with the U.S. Chemical Safety and Hazard Investigation Board. At that time, personnel were unaware the liquid was naphtha, according to BP’s internal report.

Co-workers said the protective equipment Ben and Max were wearing would have made it difficult, if not impossible, for them to smell or feel the liquid to help them know what they were draining. It might have been more-benign wastewater, for all they knew. And exactly what orders were given, or how clear they were—there were also problems with radio transmissions, and confusion over who was in charge, several workers say—remains in dispute.

After a while, two of the workers dashed off to troubleshoot other problems, leaving Ben and Max. BP, in its internal report about the evening of Sept. 20, refers to the brothers as unnamed “outside operators” and says they drained the liquid directly to the ground, against refinery rules.

OSHA in its findings said BP failed to evaluate how the mix drum might over fill and how to drain it, which it said “exposed employees to fire and explosion hazards from potential releases of flammable liquids or gasses.”

Darah Morrissey at home with her sons.

From a house about a mile away from the refinery, Randy Tharpe II, an Applebee's manager who used to work at the BP plant, heard the blast and called 911.

"I just heard 'boom.' I see smoke. And I see gas plumes in the sky," Tharpe told a 911 operator, according to a recording of the call.

His voice took on more urgency.

"I don't want to blow up."

At home 2 miles away, Max's wife Darah was making dinner for their boys, Wilde and Recker, ages 4 and 2 at the time, and looking online at flights for a trip she and Max were planning to Walt Disney World at Christmas. She didn't want to go to the theme park again—it wasn't exactly relaxing—but Max had insisted it should be an annual tradition.

Her cellphone rang. She didn't recognize the number and let it go to voicemail. It rang again immediately.

It was a man, and in the background, someone unrecognizable to her, screaming.

Newman told her about the blast and that Max was hurt. Shortly after hanging up, he snapped photos of Max with his cellphone, at Max's request. Max's own phone was charred.


Only two of Patty and Bob Morrissey's children are still living: Erin Besgrove, far left, and Carolyn Berryman, second from left.

In one of the images, Max is sitting on a plastic bucket, looking down where most of his clothes are missing except for part of his shirt and his boots. In another, his eyes, wide-open and wild, look straight into the camera. He looks shocked but also capable of standing up and walking away.

Ben was likewise lucid, giving hope to co-workers who continued fighting the fire after the brothers were rushed to the hospital—first in Toledo, and then to Ann Arbor, Mich., by ambulance.

Darah got to Ann Arbor about the same time as the ambulance, and the rest of the family gathered together as the prognosis for the brothers grew increasingly dire.

"We literally watched them die," sister Erin said. "Sixteen minutes apart."

That night, Kaddie told family members that she and Ben were expecting another child—a daughter, Benna, who would be born the following year.

Bob and Patty Morrissey say the family is broken in ways that may never be fixed.

"Everybody's in therapy. People are on antidepressants," Patty Morrissey said. "Our lives are just forever changed."

In the driveway of their Oregon home, there was a fishing boat with a new motor, welded in place one night by Ben as a surprise for his dad. Out back by the pond was the barbecue where the brothers would hold family cookouts. In the dining room, Bob Morrissey showed a wall of high-school graduation portraits of their five children.

“Yeah,” he said, “the two on the left are the only ones left.


Wilde and Recker play in their backyard with Darah, as a power plant looms in the distance.

Family videos and photographs of Max and Ben Morrissey provided by the Morrissey family. The refinery video at the top of the story is by Ryan Rohm via Storyful

Design by Kara Dapena

https://home.treasury.gov/news/press-releases/jy1822

In Response to Electoral Roadmap, Treasury Issues New Venezuela General Licenses

October 18, 2023

WASHINGTON – In response to the signing of an electoral roadmap agreement between Venezuela's Unitary Platform and representatives of Maduro, and in support of the Venezuelan people, the U.S. Department of the Treasury's Office of Foreign Assets Control (OFAC) today issued 4 General Licenses suspending select sanctions.

Under Secretary of the Treasury for Terrorism and Financial Intelligence Brian E. Nelson issued the following statement on the General Licenses:

"The United States welcomes the signing of an electoral roadmap agreement between the Unitary Platform and Maduro representatives. Consistent with U.S. sanctions policy, in response to these democratic developments, the U.S. Department of the Treasury has issued General Licenses authorizing transactions involving Venezuela's oil and gas sector and gold sector, as well as removing the ban on secondary trading.

Treasury is prepared to amend or revoke authorizations at any time, should representatives of Maduro fail to follow through on their commitments. All other restrictions imposed by the United States on Venezuela remain in place, and we will continue to hold bad actors accountable. We stand with the Venezuelan people and support Venezuelan democracy."

Treasury today:

- Issued a six-month general license temporarily authorizing transactions involving the oil and gas sector in Venezuela. The license will be renewed only if Venezuela meets its commitments under the electoral roadmap as well as other commitments with respect to those who are wrongfully detained.
- Issued a second general license authorizing dealings with Minerven – the Venezuelan state-owned gold mining company – which Treasury assesses would have the effect of reducing black-market trading in gold.
- Amended two relevant licenses to remove the secondary trading ban on certain Venezuelan sovereign bonds and PdVSA debt and equity. The ban on trading in the primary Venezuelan bond market remains in place. Treasury assesses that this, too, would have the positive effect of displacing nefarious players in this market, and with negligible financial benefit to the Venezuelan regime.

OFAC has also provided several Frequently Asked Questions (FAQs), available here.

October 18, 2023

Frequently Asked Questions Related to the Suspension of Certain U.S. Sanctions with Respect to Venezuela on October 18, 2023

On October 18, 2023, the United States welcomed the announcement of a political agreement between representatives of Maduro and the Unitary Platform, as part of the longstanding policy to support the peaceful restoration of democracy, competitive elections, and respect for the rights and freedoms of the Venezuelan people. In line with this policy, and in recognition of the concrete steps taken, the United States is authorizing certain transactions that would otherwise be prohibited pursuant to the Venezuela sanctions program. The U.S. government retains the authority to rescind authorizations should the representatives of Maduro fail to follow through on their commitments, and all other sanctions prohibitions imposed by the United States with respect to Venezuela, including on the Government of Venezuela, remain in place.

1. What transactions did the United States government authorize in response to the political agreement of October 17, 2023 between the Unitary Platform and representatives of Maduro?

On October 18, the U.S. government suspended certain sanctions measures on Venezuela's oil and gas sector operations; the gold sector of the Venezuelan economy; and U.S. person purchases in the secondary market of certain Venezuela sovereign bonds and equity. Specifically, OFAC issued:

- Venezuela General License (GL) 44, temporarily authorizing all transactions that are related to oil and gas sector operations in Venezuela, including authorizing ordinarily incident and necessary financial transactions with certain blocked Venezuelan banks related to the oil and gas sector;

- Venezuela GL 43, authorizing certain transactions involvingh CVG Compania General de Mineria de Venezuela CA (Minerven), the Venezuelan state-owned mining company designated pursuant to Executive Order (E.O.) 13850, and guidance that the U.S. government does not intend to sanction any person solely for operating in the gold sector of the Venezuelan economy;

- Venezuela GL 3I and GL 9H, removing the secondary market trading bans on purchases of certain Venezuelan sovereign bonds and pre-2017 bonds or equity issued by Petróleos de Venezuela S.A. (PdVSA).

The U.S. government has suspended these sanctions measures in response to recent concrete steps toward a democratic solution in Venezuela. However, as with any general or specific license, the U.S. Department of the Treasury's Office of Foreign Assets Control (OFAC) is prepared to revoke these authorizations, if appropriate, to support U.S. foreign policy and national security priorities. For more information, please see herein FAQs 2 through 6, and updated or new FAQs 661, 662, and 1136 on OFAC's website.

Issued on October 18, 2023

2. What does General License (GL) 44, "Authorizing Transactions Related to Oil or Gas Sector Operations in Venezuela" do?

GL 44 temporarily authorizes all transactions prohibited by the Venezuela Sanctions Regulations, 31 CFR part 591 (the VSR), related to oil and gas sector operations in Venezuela, including transactions with PdVSA, subject to certain conditions. The authorization in GL 44 suspends Venezuela-related sanctions applicable to most oil and gas sector operations in Venezuela, including the sale of oil and gas from Venezuela to the United States and other jurisdictions, as well as the payment of taxes, royalties, costs, fees, dividends, and profits related to oil and gas sector operations or transactions involving PdVSA. To provide added clarity, GL 44 provides a non-exhaustive list of transactions covered by the authorization, including: (1) the production, lifting, sale, and exportation of oil or gas from Venezuela, and provision of related goods and services; (2) the payment of invoices for goods or services related to oil or gas sector operations in Venezuela; (3) new investment in oil or gas sector operations in Venezuela; and (4) the delivery of oil and gas from Venezuela to creditors of the Government of Venezuela, including creditors of PdVSA entities, for the purposes of debt repayment.

While GL 44 provides broad relief to oil and gas sector operations in Venezuela, several key prohibitions remain in place.

- ***Designated financial institutions***. Paragraph (b)(1) provides that GL 44 does not authorize any transactions involving any financial institution blocked pursuant to E.O. 13850 other than Banco Central de Venezuela or Banco de Venezuela SA Banco Universal.

- ***Russia-related operations***. Paragraph (b)(2) provides that GL 44 does not authorize the provision of goods or services to, or new investment in, an entity located in Venezuela that is owned or controlled by, or a joint venture with, an entity located in the Russian Federation. Paragraph (b)(3) provides that GL 44 does not authorize any transactions related to new investment in oil or gas sector operations in Venezuela by a person located in the Russian Federation or any entity owned or controlled by a person located in the Russian Federation. See FAQ 1058 for more information.

- ***Certain financial restrictions in E.O. 13808***. Paragraph (b)(4) prohibits any transactions prohibited by subsections 1(a)(i) – (iii) or 1(b) of E.O. 13808, other than the transactions described in GL 44 paragraphs (a)(2) (payment of invoices for goods or services related to oil or gas sector operations in Venezuela) and (a)(4) (delivery of oil and gas for the purpose of debt repayment to creditors). Accordingly, new debt transactions, such as the provision of loans to PdVSA, that are not for the payment of invoices or repayment of debt through delivery of oil or gas, are not authorized by GL 44. See FAQ 533 for a definition of "new debt" under E.O. 13808 and FAQ 511 for examples of debt and equity.

- ***Transactions prohibited by E.O. 13827 and E.O. 13835***. Paragraph (b)(5) provides that GL 44 does not authorize any transactions prohibited by E.O. 13827 (relating to certain virtual assets issued by, for, or on behalf of the Government of Venezuela) or E.O. 13835

(relating to debt that is owed to the Government of Venezuela, as well as certain transactions involving any equity interest in any entity in which the Government of Venezuela has a 50 percent or greater ownership interest). See FAQs 564, 565, and 566 for more information on E.O. 13827 and FAQs 511, 595, and 596 for more information on E.O. 13835.

- ***Blocked property.*** Paragraph (b)(6) provides that GL 44 does not authorize the unblocking of any property blocked pursuant to the VSR. Accordingly, all property blocked pursuant to the VSR in the United States, or in the possession or control of a U.S. person, as of October 18, 2023, will remain blocked unless separately authorized.

- ***Blocked persons.*** Transactions involving any person blocked pursuant to a sanctions authority other than the VSR are not authorized pursuant to GL 44.

As with any general or specific license, OFAC is prepared to revoke this authorization if appropriate to support U.S. foreign policy and national security priorities.

Issued on October 18, 2023

3. When does General License (GL) 44 expire? Does the U.S. government intend to renew this GL?

GL 44 authorizes transactions through 12:01 a.m. eastern daylight time, April 18, 2024. The U.S. government intends to renew GL 44 only if the representatives of Maduro follow through with their commitments and take continued concrete steps toward a democratic election by the end of 2024.

Issued on October 18, 2023

4. Do the Venezuela-related sanctions suspended on October 18, 2023 affect the U.S. government's posture on litigation brought by creditors seeking to attach assets of the Government of Venezuela in the United States?

No. Please see FAQs 808, 1123, and 1124.

Issued on October 18, 2023

5. Executive Order (E.O.) 13850 of November 1, 2018, "Blocking Property of Additional Persons Contributing to the Situation in Venezuela," authorizes the imposition of sanctions on persons operating in Venezuela's gold sector. For purposes of this E.O. and in light of the announcements on October 18, 2023, how will OFAC target those who "operate in the gold sector of the Venezuelan economy or in any other sector of the Venezuelan economy as may be determined by the Secretary of the Treasury, in consultation with the Secretary of State"?

Given recent positive steps taken towards competitive elections in Venezuela, OFAC does not intend to target any person solely for operating in the gold sector of the Venezuelan economy. This policy is contingent on continued concrete steps toward a democratic solution in Venezuela.

OFAC also issued General License (GL) 43 on October 18, 2023, which authorizes all transactions involving CVG Compania General de Mineria de Venezuela CA (Minerven)—the only entity designated by OFAC for operating in the gold sector of the Venezuelan economy—that are prohibited by the Venezuela Sanctions Regulations, 31 CFR part 591, subject to the limitations described in GL 43. As with any general or specific license, OFAC is prepared to revoke this authorization if appropriate to support U.S. foreign policy and national security priorities, including if the representatives of Maduro fail to follow through with their commitments. This FAQ supersedes FAQ 629.

Issued on October 18, 2023

https://www.argusmedia.com/en/news/2403155-high-hurdles-to-grow-chevrons-venezuela-oil-output

High hurdles to grow Chevron's Venezuela oil output

Published date: 21 December 2022

An internal Chevron plan to increase Venezuelan oil production to 200,000 b/d by mid-2023 relies on efforts to rehabilitate some 18,000 wells in various states of disrepair in the country's once-prolific Occidente region.

According to a report from Venezuela state-owned PdV obtained by *Argus*, about 7pc of existing wells in Occidente are operating. The 1,400 or so "Category 1" wells are producing oil, but many at declining rates.

About 8,700 wells fall into Category 2, which includes non-operating wells that may just need minor work to become operational. These wells may need around $500,000 each in new investment to be viable, according to sources familiar with the field.

In Category 3 are more than 7,900 wells that need between $5mn-$6mn of investment each to be commercially viable.

Hundreds of wells in the PdV report are reportedly shut down just for a lack of reliable electricity, which plagues many parts of the country. Many more have been stripped bare of any surface equipment by thieves.

Production in Occidente has declined from 150,000 b/d earlier this year to around 90,000 b/d in November.

Much of Chevron's work in Venezuela has been curtailed in recent years by US sanctions. The US eased some sanctions in late November when the government agreed to resume talks with the opposition about new elections, which will allow Chevron to sell crude from its Venezuela joint ventures.

Chevron was expected to send its first cargo of Venezuelan crude to a US Gulf coast refiner since 2018 by the end of December, but it is not yet clear if that will happen. Government officials are anxious to send a symbolic message with a cargo before the new year, while Chevron appears less concerned with rushing any shipments.

Chevron plans to increase its global spending in 2023 to $17bn, up from around $15bn in 2022, but has not disclosed any specific plans for Venezuela.

By Carlos Camacho

https://www.wsj.com/articles/chevron-waiting-it-out-in-venezuela-tells-u-s-now-is-the-time-to-pump-oil-11647959248?mod=newsviewer_click&adobe_mc=MCMID%3D43904269652561322512265019543051439235%7CMCORGID%3DCB68E4BA55144CAA0A4C98A5%2540AdobeOrg%7CTS%3D1647963540

Chevron, Waiting It Out in Venezuela, Tells U.S. Now Is the Time to Pump Oil

An oil refinery in Venezuela, where the U.S. has banned American oil companies from operating since 2019. YURI CORTEZ/AFP/GETTY IMAGES

By Christopher M. Matthews and José de Córdoba
March 22, 2022 10:27 am ET

HOUSTON—For months, Biden administration officials snubbed top executives and lobbyists for Chevron Corp. who had pressed officials in Washington to ease sanctions so the company could boost production in Venezuela, where the U.S. has banned such activities since 2019.

Then Vladimir Putin invaded Ukraine.

Now the Biden administration is listening closely to Chevron, say people familiar with the conversations, which says it can help double Venezuela's 800,000 barrels-a-day production within months. That could replace the loss of roughly 700,000 barrels a day the U.S. was importing from Russia before it attacked Ukraine. And it could help lower gasoline prices—a major concern for the Biden administration in a tough election year.

"Chevron came in November, they pitched it around, but got laughed out of town," said Juan Cruz, a former National Security Council official in charge of the Western Hemisphere who has closely followed the Biden administration's policy toward Venezuela. "But what was really funny in November is a plan today."

Since the Russians invaded on Feb. 24 and Mr. Biden canceled Russian oil imports, Chevron Chief Executive Officer Mike Wirth has offered the company's help to Secretary of Energy Jennifer Granholm in shoring up U.S. energy supplies by ramping up production in Venezuela, according to people briefed on the talks. Chevron is the only major U.S. producer to retain assets in Venezuela following nationalizations by the Socialist government and, much later, U.S. sanctions.

Granting the San Ramon, California-based company and other U.S. producers permits to operate could boost Venezuelan production while keeping other sanctions in effect. Broadly easing sanctions on Venezuela faces stiff opposition in the U.S. over concerns it would prop up the country's autocratic regime. U.S. officials are divided over the issue, say people familiar with the situation.

Asked recently by CNN about the outreach to Venezuela and Saudi Arabia for more oil, Ms. Granholm, said, “I think Americans should see the administration calling right now for an increase in supply as something that helps them,” naming the benefit of reducing costs at the pump.

Shortly after Mr. Wirth talked to the energy secretary, three senior U.S. officials—Juan Gonzalez, the senior National Security Council official in charge of Latin America; James Story, the U.S. ambassador to Venezuela; and Roger D. Carstens, a special envoy—flew to Caracas on March 5 and met with President Nicolás Maduro and other top Venezuelan officials.

Another person who spoke with senior Venezuelan officials after the invasion was Ali Moshiri, a charismatic Iranian-American who had headed Chevron’s Latin America division and was considered a “dear friend” by the late Hugo Chávez, the founder of the political movement now led by Mr. Maduro, with whom Mr. Moshiri also has close a close relationship. Mr. Moshiri retired from Chevron in 2017 but now consults for the company in Venezuela, where he has deep ties with senior officials, say people familiar with the matter.

Many oil industry executives say that Mr. Moshiri was essential to Chevron’s controversial decision to stay in the country even as other Western oil companies exited after the Venezuelan government in 2007 nationalized billions of dollars of assets owned by ConocoPhillips, Exxon Mobil Corp. and others. He has also lobbied Biden officials to loosen sanctions on Venezuela, where Chevron has operated for nearly a century.

“You cannot ignore Venezuela,” Mr. Moshiri said in an interview last week. “Venezuela will always be part of our energy security.”

The White House declined to comment about Chevron’s possible role or its own talks in Venezuela. The Energy Department declined to comment.

People briefed on the talks say Mr. Moshiri has argued to U.S. officials that the U.S. can’t cede influence of Venezuelan energy to rivals like China and Russia, which have increased their activities in the country in recent years. He has also spoken with Venezuelan officials for months to try to win the release of Americans imprisoned in Venezuela, these people said.

A Chevron spokesman said Mr. Moshiri isn’t representing the company in negotiations with the U.S. or with Venezuelan officials. Mr. Moshiri declined to provide details about his contract with Chevron. After leaving Chevron, he founded a firm, Amos Global Energy, which seeks investment opportunities in Venezuela, people familiar with the matter said.

A few days after the March 5 meeting in Caracas with U.S. officials, the Maduro government freed two American captives, one of them an executive of Citgo, the U.S. refining subsidiary of state-run oil company Petróleos de Venezuela SA, or PdVSA. The government also agreed to restart negotiations in Mexico with representatives of Venezuela's opposition, who want officials to agree to free and fair presidential elections in 2024.

News of the meeting in Caracas, though, has caused a political backlash in Washington and in Florida, where exiled Venezuelans live and have forged links to the state's powerful and conservative Cuban American community.

"The democratic aspirations of the Venezuelan people, much like the resolve and courage of the people of Ukraine, are worth much more than a few thousand barrels of oil," New Jersey Sen. Robert Menendez, the Democratic chairman of the Senate Foreign Affairs Committee, wrote in a statement. Those sentiments were echoed by both Democratic and Republican lawmakers in Florida.

SHARE YOUR THOUGHTS

Should the U.S. ease sanctions on Venezuela to get more oil? Why or why not? Join the conversation below.

Venezuelan opposition leader Juan Guaidó, whom the U.S. recognizes as Venezuela's legitimate president, was told of the U.S.-Venezuela meeting after it had taken place. Mr. Guaidó wrote a letter to Mr. Biden, according to a person with knowledge of the matter, saying that lifting sanctions on Venezuela would do little to ease the world's crude supply shortages while rewarding Mr. Maduro, a Putin ally whose rule is blamed for leading six million Venezuelans to flee the country.

"Today, more than ever we should be firm and morally consistent," said Mr. Guaidó in a video press conference from Caracas last week. He said any lifting of sanctions on Venezuela or permission for Chevron to pump oil there should only come in exchange for democratic concessions by the regime.

Answering reporters' questions last week White House press secretary Jen Psaki said, "There is no dialogue between us and the regime." She said the administration would consider lifting sanctions on the basis of progress in talks between Mr. Maduro and the opposition.

Chevron officials still say the company could win a license permitting it, along with European oil companies such as Eni Spa and Repsol SA, to operate in Venezuela.

A refinery of state-owned Petróleos de Venezuela in El Palito. Venezuelan oil production has plummeted since the 1990s due to mismanagement.

PHOTO: MANAURE QUINTERO/BLOOMBERG NEWS

Venezuela claims to have the world's largest proven oil reserves. But years of mismanagement, corruption and nationalization of oil ventures led production to fall from 3.2 million barrels a day in

the 1990s to a 10th of that in 2020. Since then, production has more than doubled as Venezuela turned to opaque foreign companies to boost production, say industry executives. Chevron's lobbyists assert that the recent production increases show that the U.S. sanctions aren't working as intended.

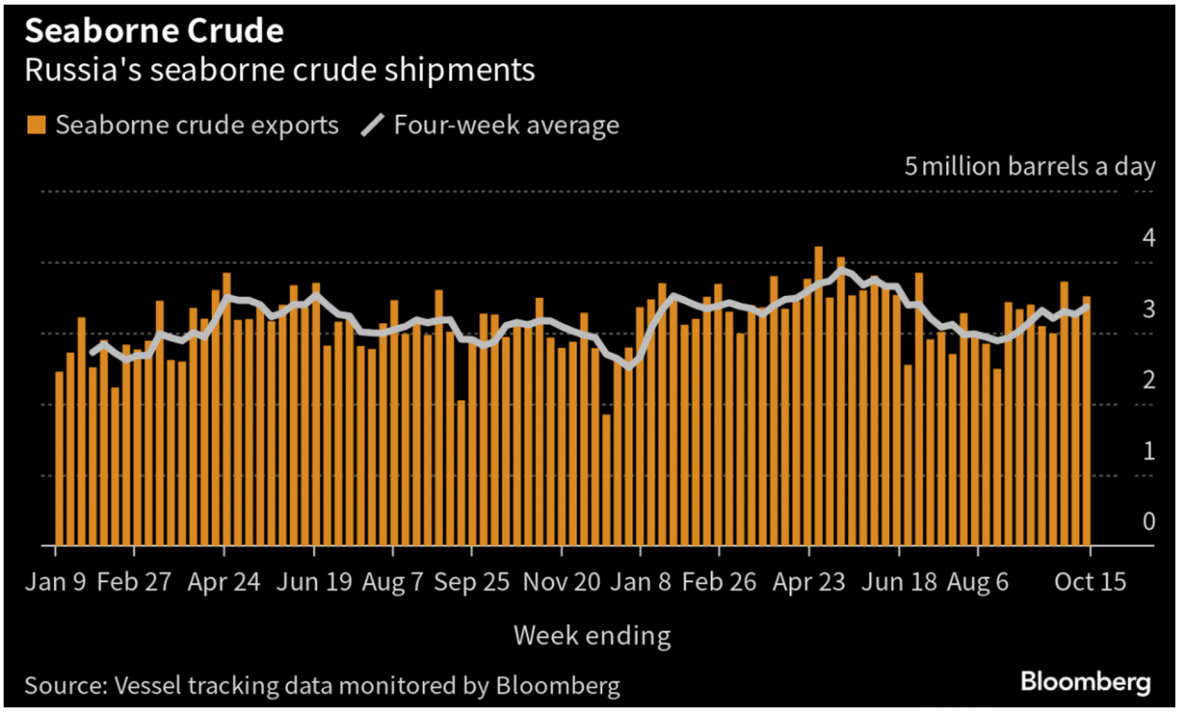
But though Chevron has told U.S. officials it could jack up production quickly, some oil analysts who closely track Venezuela doubt the company could deliver. Even in good times, Venezuela had never increased production anywhere near the level of recent optimistic projections, according to Francisco Monaldi, director of the Latin America Energy Program at Rice University's Baker Institute. Chevron's perseverance in Venezuela has come as the company has tried to get Venezuela to pay money owed under production-sharing agreements. The company wrote down all of its assets there in 2020, taking a charge of $2.6 billion. Nonetheless, it stayed, receiving periodic licenses from the U.S. government to retain but not operate assets.

—Timothy Puko in Washington contributed to this article.

Write to Christopher M. Matthews at christopher.matthews@wsj.com and José de Córdoba at jose.decordoba@wsj.com

Russia’s Crude Oil Shipments Are Creeping Up Again
2023-10-17 09:21:24.786 GMT

By Julian Lee
(Bloomberg) -- Russia’s oil flows are steadily climbing again after months of careful adherence to a pact with Saudi Arabia to keep barrels off the global market.
The nation’s seaborne crude exports rebounded in the seven days to Oct. 15, boosting four-week average flows to their highest in more than three months.
About 3.51 million barrels a day of crude was shipped from Russian ports last week, a rise of about 285,000 barrels a day from the previous seven days, tanker-tracking data monitored by Bloomberg show. That lifted the less volatile four-week average to about 3.36 million barrels a day.
The increase came from a jump in Black Sea flows to a six-week high and a recovery in shipments from the Arctic port of Murmansk after a slump in the previous week.



Deputy Prime Minister Alexander Novak said in early August that Moscow would prolong export restrictions at a reduced level of 300,000 barrels a day below their May-June average until the end of the year. Bloomberg calculations indicate that shipments through ports should be running now at about 3.28 million barrels a day.
Four-week average shipments have been creeping up relative to that target since the start of September, exceeding it by abut 80,000 barrels a day in the most recent period. That said, compliance has so far been good compared with the country’s past performance against OPEC+ targets. Since the export restriction was introduced at the start of August, flows have averaged about

15,000 barrels a day below their required level, assuming pipeline deliveries have remained unchanged.

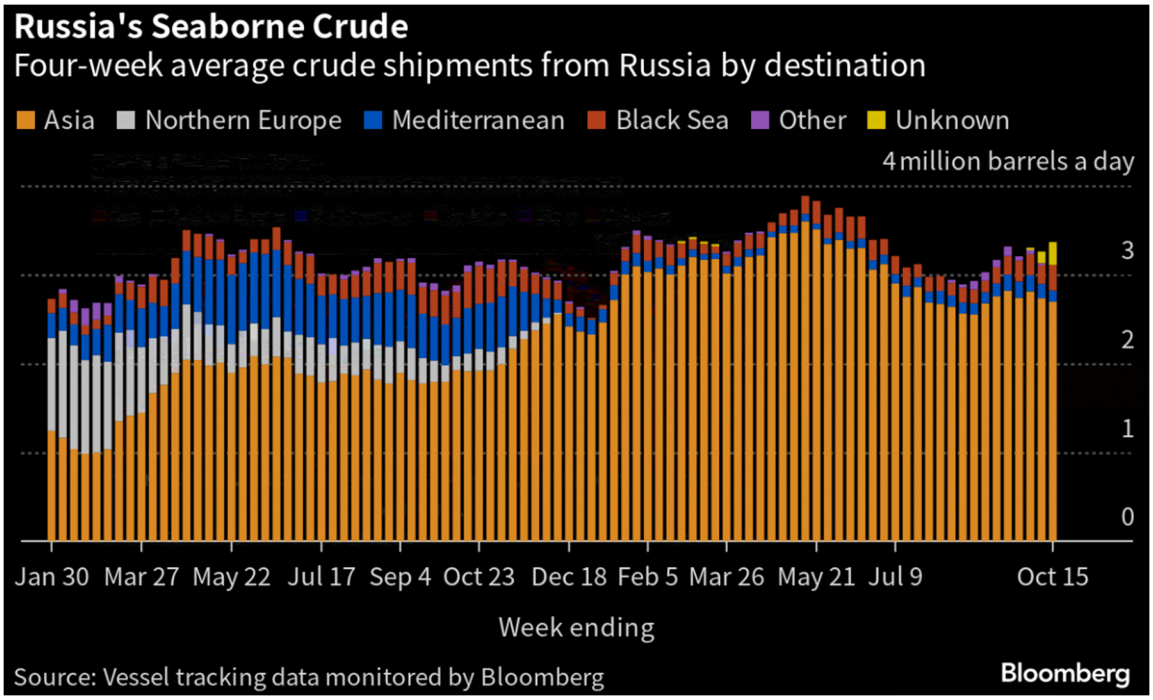
The increase in volumes raised the Kremlin's weekly revenues from oil export duties, while the four-week average rose for an 11th straight week, setting a new high for the period since mid-January.

Russia's rising oil income has called into question the effectiveness of the price cap imposed on its exports by the Group of Seven nations and European Union that's supposed to restrict it. The US Treasury responded by imposing sanctions on two tankers accused of carrying cargoes sold at prices above the $60-a-barrel ceiling. The sanctions are the first time there's been an effort to enforce the cap since it came into effect in December.

Russia's oil refiners are increasing daily processing rates as October progresses. Oil processing in the country rose by the most in more than a month in the week ended Oct. 11. But ongoing maintenance and temporary diesel export restrictions, which have now been lifted, meant that rates during the Oct. 1-11 period totaled about 150,000 barrels a day below the average for most of September.

Flows by Destination

Russia's seaborne crude flows rose in four weeks to Oct. 15 averaged 3.36 million barrels a day. That's the highest since July 4 and up from 3.26 million barrels a day in the period to Oct. 8. Shipments remain about 220,000 barrels a day below the highs seen between April and June.



All figures exclude cargoes identified as Kazakhstan's KEBCO grade. Those are shipments made by KazTransoil JSC that transit Russia for export through Novorossiysk and the Baltic port of Ust-Luga and are not subject to European Union sanctions or a price cap.

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

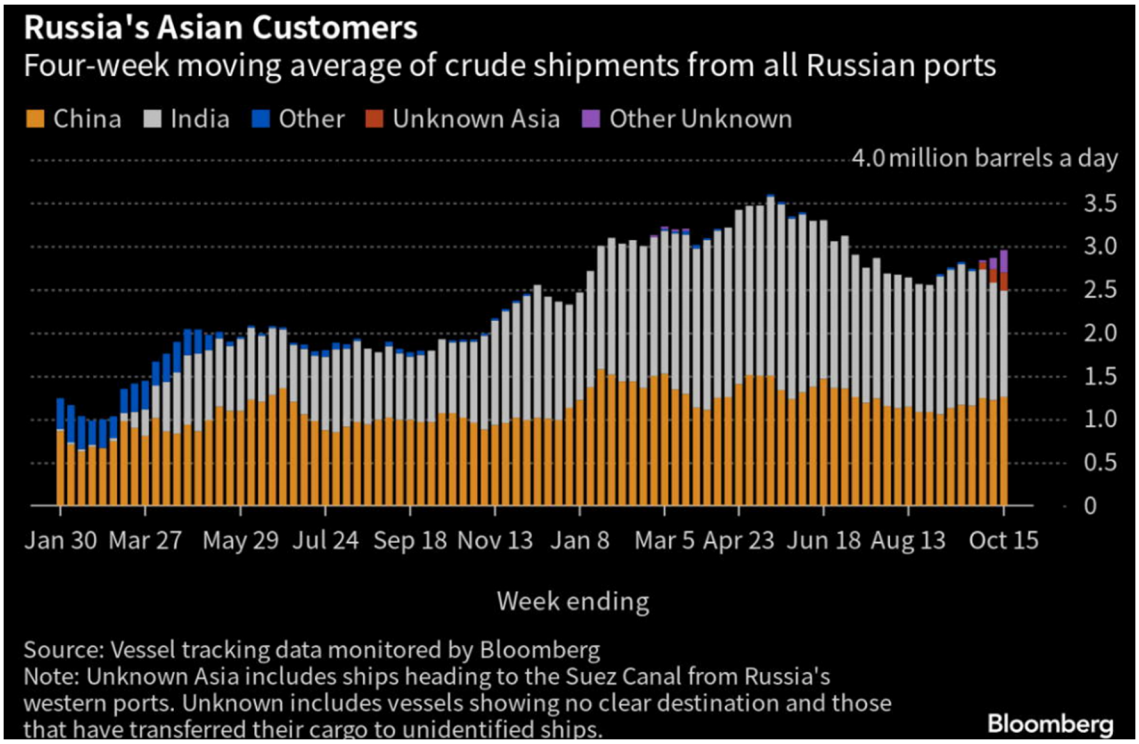
*** Asia**

Observed shipments to Russia's Asian customers, including those showing no final destination, rose for a third week. Flows edged higher to 2.95 million barrels a day in the four weeks to Oct. 15, from a revised 2.86 million barrels a day in the period to Oct. 8. That's still well below a peak of about 3.6 million barrels a day seen in May.

Even if all of the cargoes on ships without an initial destination eventually end up in India, shipments to the country will still be about 450,000 barrels a day, or 21%, down from their May high. Adding the "Unknown Asia" and "Other Unknown" volumes to the total for India gives a figure of 1.7 million barrels a day in the four weeks to Oct. 15. That's the most in 15 weeks, but down from a high of 2.15 million barrels a day in the period to May 21.

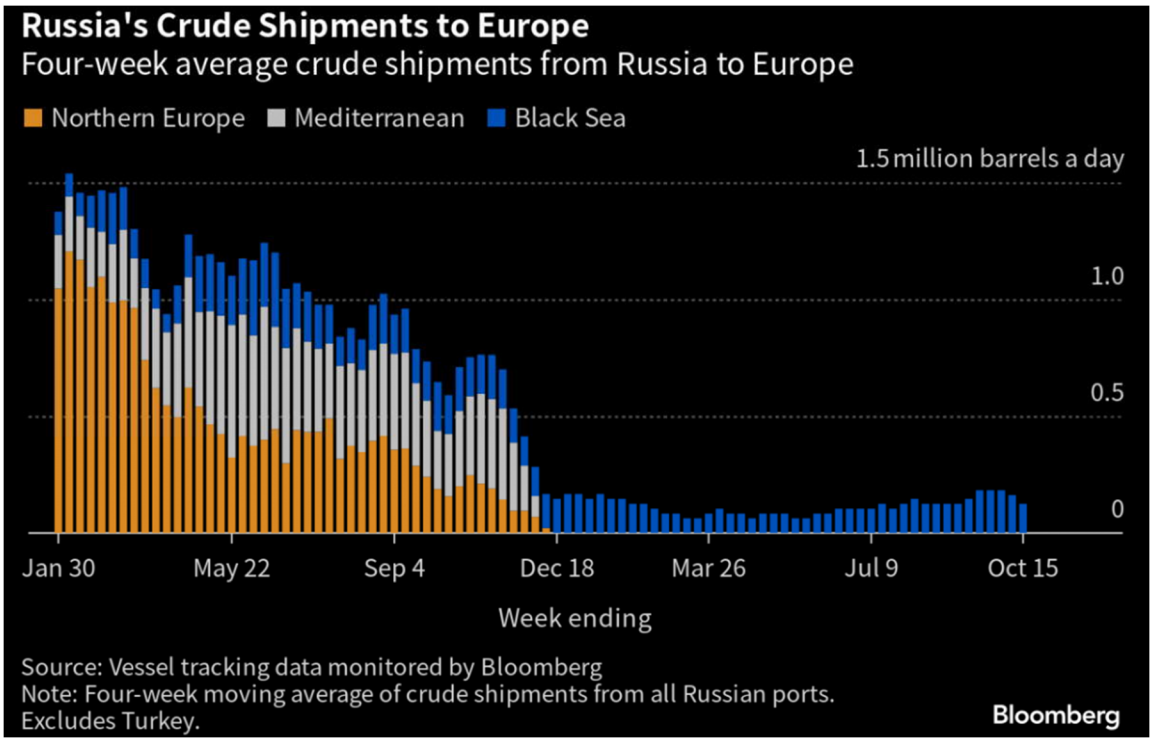
The equivalent of about 210,000 barrels a day was on vessels signaling Port Said or Suez in Egypt, or are expected to be transferred from one ship to another off the South Korean port of Yeosu. Those voyages typically end at ports in India or China and show up in the chart below as "Unknown Asia" until a final destination becomes apparent.

The “Other Unknown” volumes, running at about 260,000 barrels a day in the four weeks to Oct. 15, are those on tankers showing no clear destination. Most of those cargoes originate from Russia’s western ports and go on to transit the Suez Canal, but some could end up in Turkey. Others could be moved from one vessel to another, with most such transfers now taking place in the Mediterranean.



*** Europe**

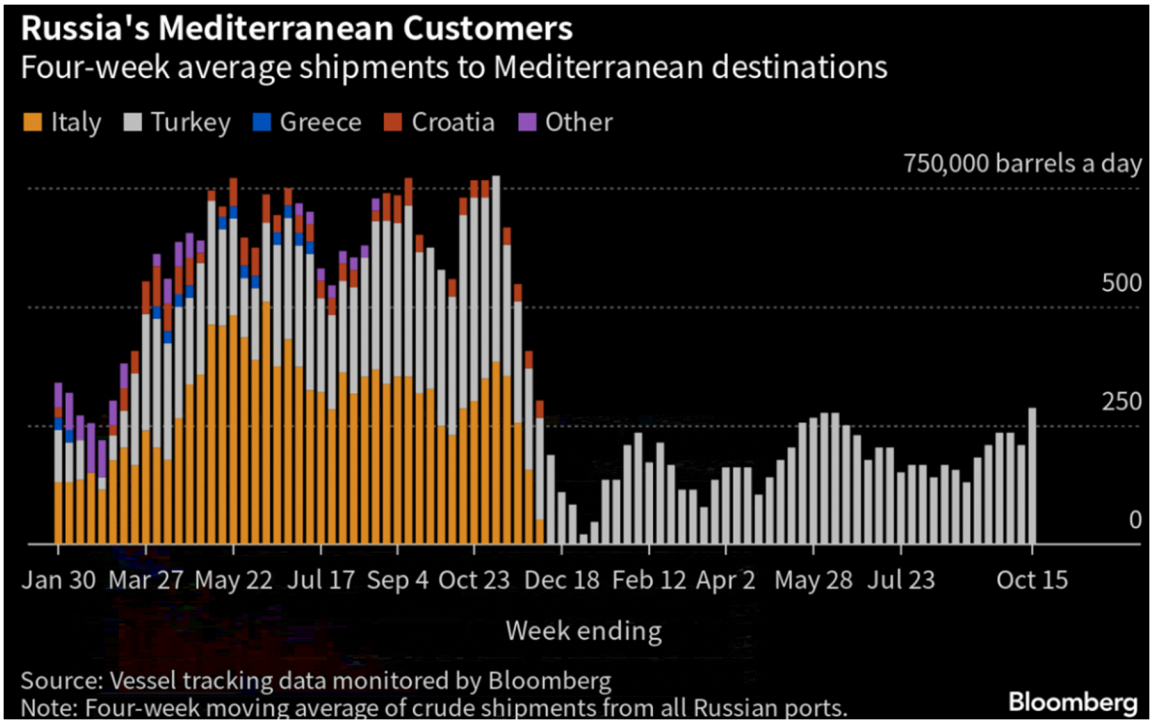
Russia’s seaborne crude exports to European countries fell to equal their lowest level in 14 weeks of about 125,000 barrels a day in the 28 days to Oct. 15, with Bulgaria the sole destination. These figures do not include shipments to Turkey. A market that consumed about 1.5 million barrels a day of short-haul seaborne crude, coming from export terminals in the Baltic, Black Sea and Arctic has been lost almost completely, to be replaced by long-haul destinations in Asia that are much more costly and time-consuming to serve.



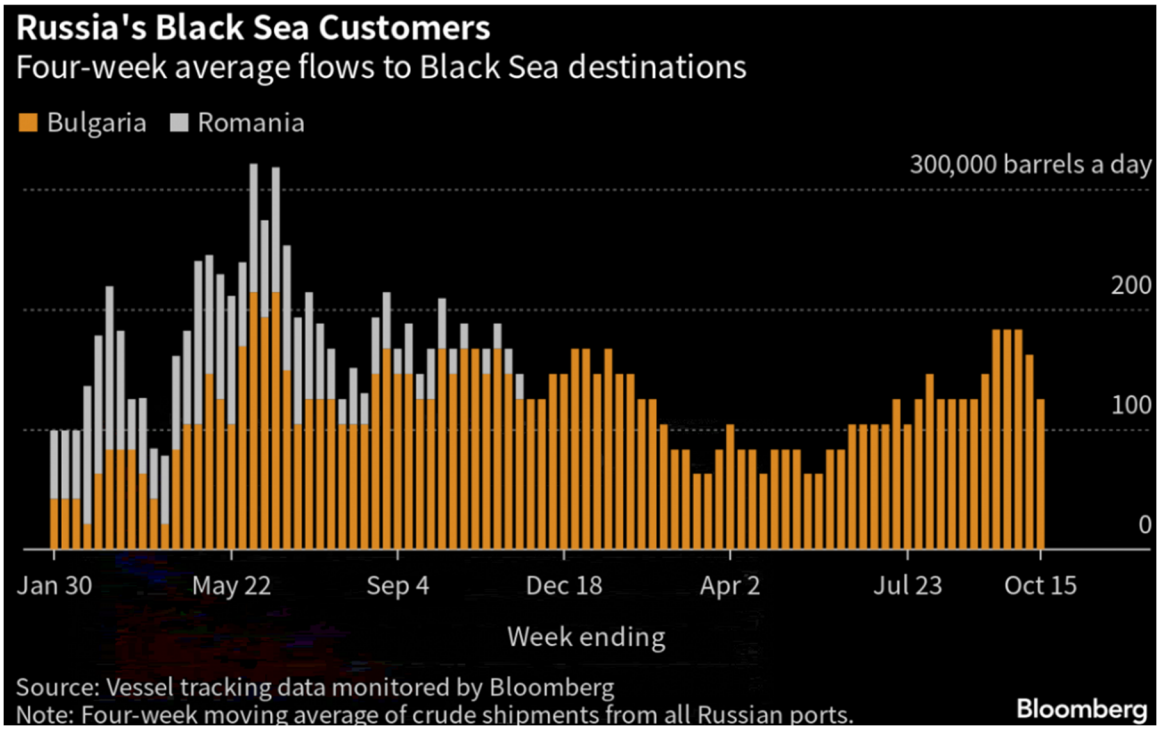
No Russian crude was shipped to northern European countries in the four weeks to Oct. 15.

Exports to Turkey, Russia's only remaining Mediterranean customer, jumped to about 290,000 barrels a day in the four weeks to Oct. 15. That's the highest in eleven months. Flows had topped 425,000 barrels a day in October 2022, before falling sharply after a Group of Seven price cap came into effect in early December.

The jump in flows comes after Lukoil resumed deliveries to the Azerbaijani-owned Star refinery at Aliaga. Supplies are expected at about 100,000 barrels a day, equivalent to half of the refinery's capacity.



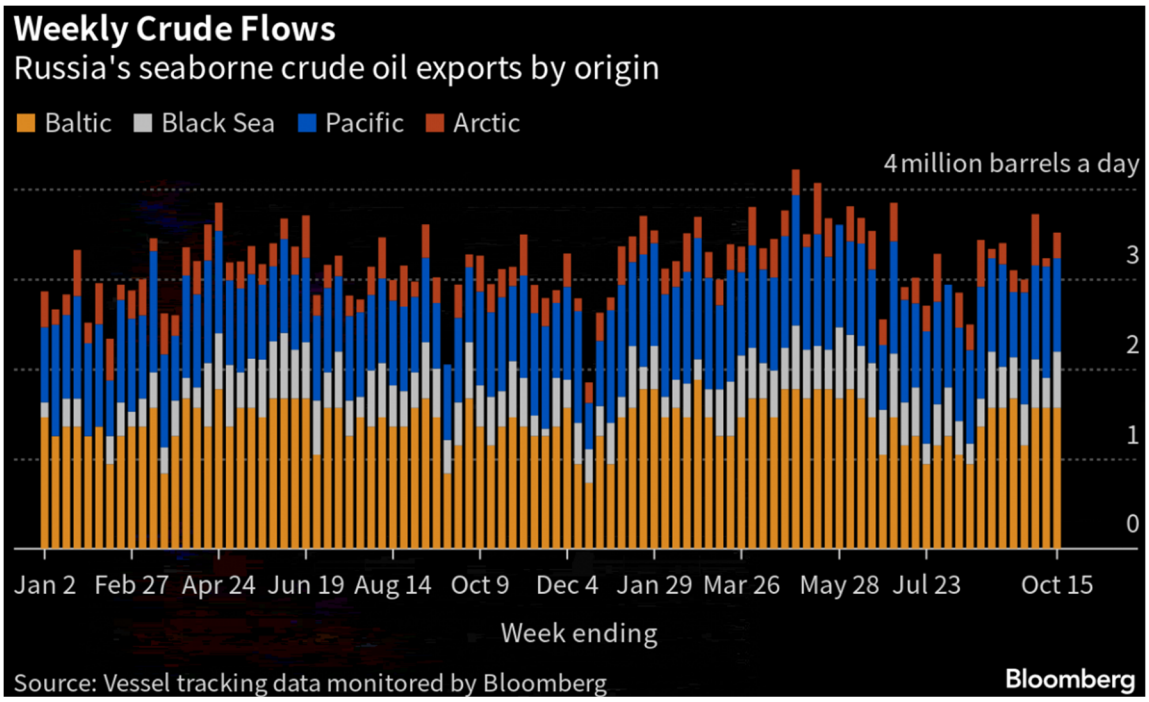
Flows to Bulgaria, now Russia's only Black Sea market for crude, fell to a six-week low of about 125,000 barrels a day. High levels of imports seen in recent weeks have come despite lawmakers recently approving a motion to end Bulgaria's dependence on Russian crude sooner than permitted under a European Union import ban.



Flows by Export Location

Aggregate flows of Russian crude rebounded, making up more than half of the previous week's drop. Seaborne exports averaged 3.51 million barrels a day in the seven days to Oct. 15. The increase of about 285,000 barrels a day was driven by higher flows from the Arctic and the Black Sea.

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

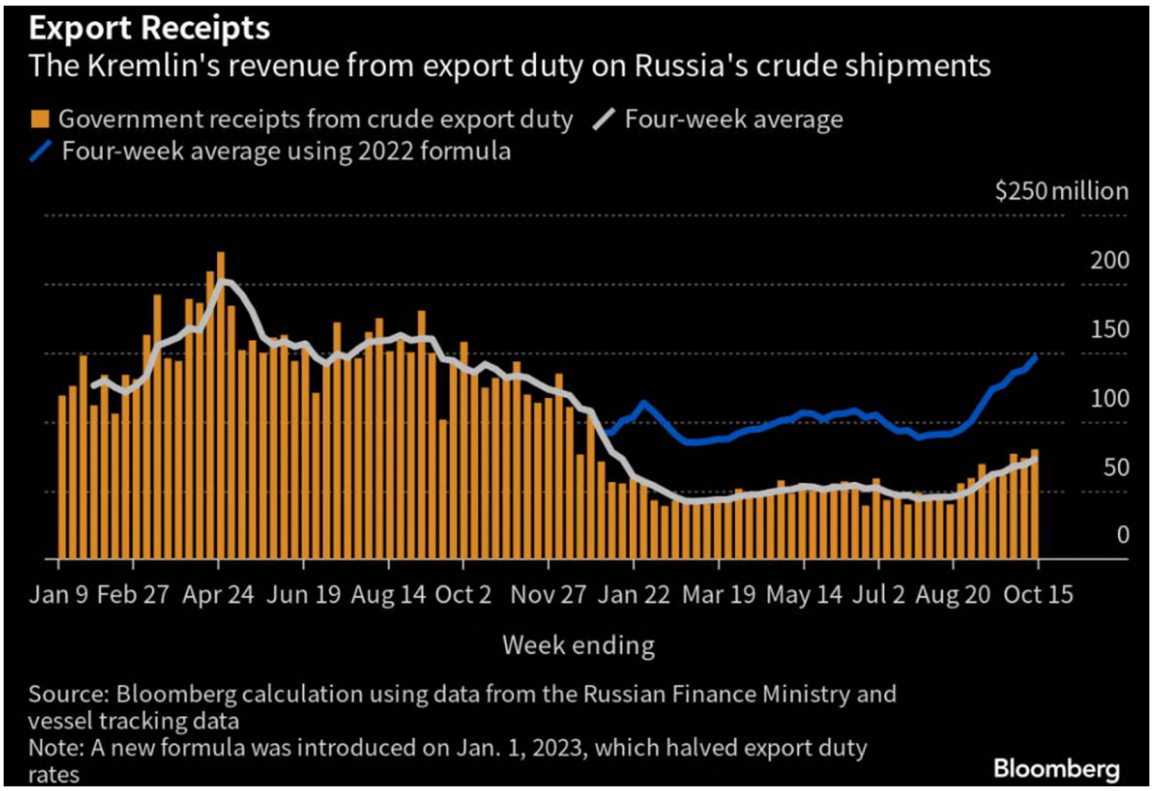


Vessel-tracking data are cross-checked against port agent reports as well as flows and ship movements reported by other information providers including Kpler and Vortexa Ltd.

Export Revenue

Inflows to the Kremlin's war chest from its crude-export duty jumped to $80 million in the seven days to Oct. 15, while four-week average income edged up to $73 million. The four-week average set a new high for the period since mid-January. Rising oil prices and the rebound in flows are both contributing to the increase in receipts.

Russia's government calculates oil taxes — including export duty — using a discount to global benchmark Brent, which sets the floor price for the nation's crude for budget purposes. If Russian oil trades above that threshold, the Finance Ministry uses the market price for tax calculations, as has been the case in recent months. The discount used to calculate taxes including export duty is set at $20 a barrel for September and subsequent months.



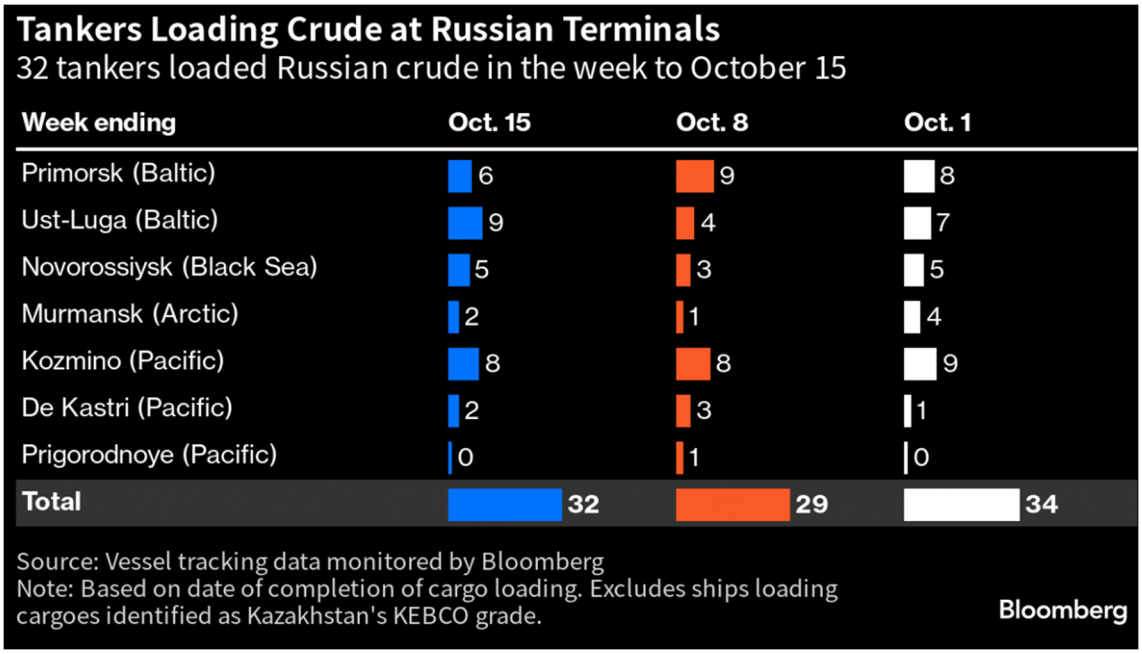
The duty rate for October has been set at $3.26 a barrel, based on an average Urals price of $77.03 during the calculation period between Aug. 15 and Sept. 14. That was $11.60 a barrel below Brent over the same period. October's duty rate sets a new high for the year. The rate for November has been set at $3.57 a barrel, based on an average Urals price of $83.35 during the calculation period between Sept. 15 and Oct. 14. That was about $7.70 a barrel below Brent over the same period. November's duty rate sets a new high for the year.

Origin-to-Location Flows

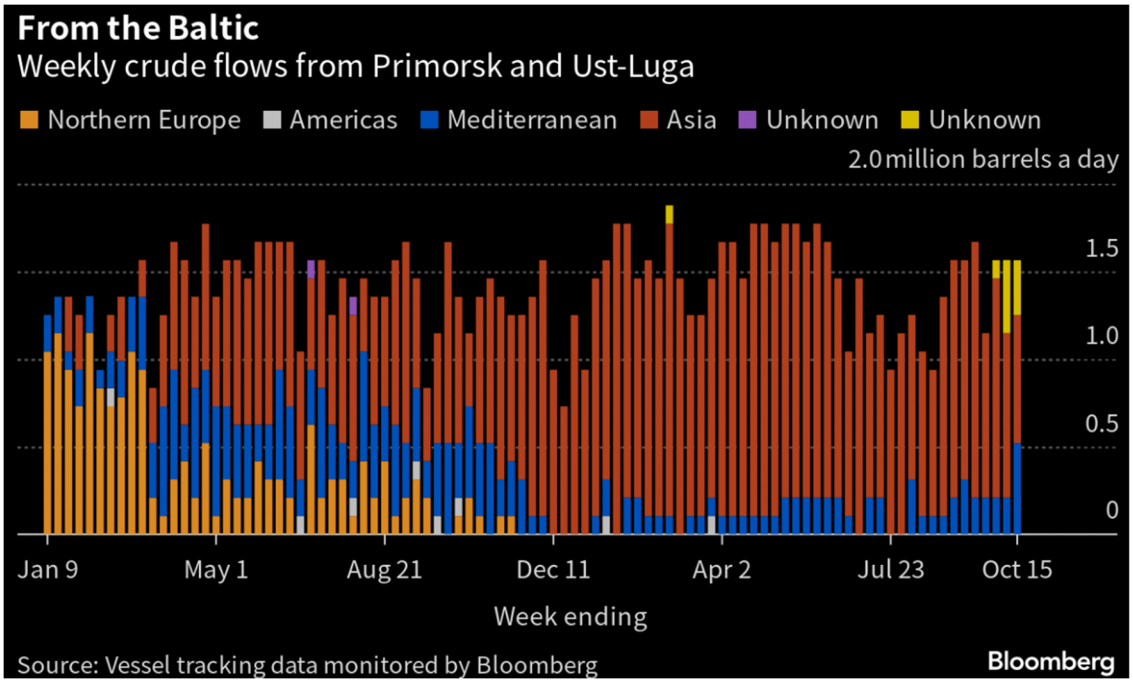
The following charts show the number of ships leaving each export terminal and the destinations of crude cargoes from the four export regions.

A total of 32 tankers loaded 24.6 million barrels of Russian crude in the week to Oct. 15, vessel-tracking data and port agent reports show. That's up 2 million barrels from the previous week.

A jump in shipments from Ust-Luga in the Baltic more than offset a drop in the number of vessels leaving nearby Primorsk. Destinations are based on where vessels signal they are heading at the time of writing, and some will almost certainly change as voyages progress. All figures exclude cargoes identified as Kazakhstan's KEBCO grade.

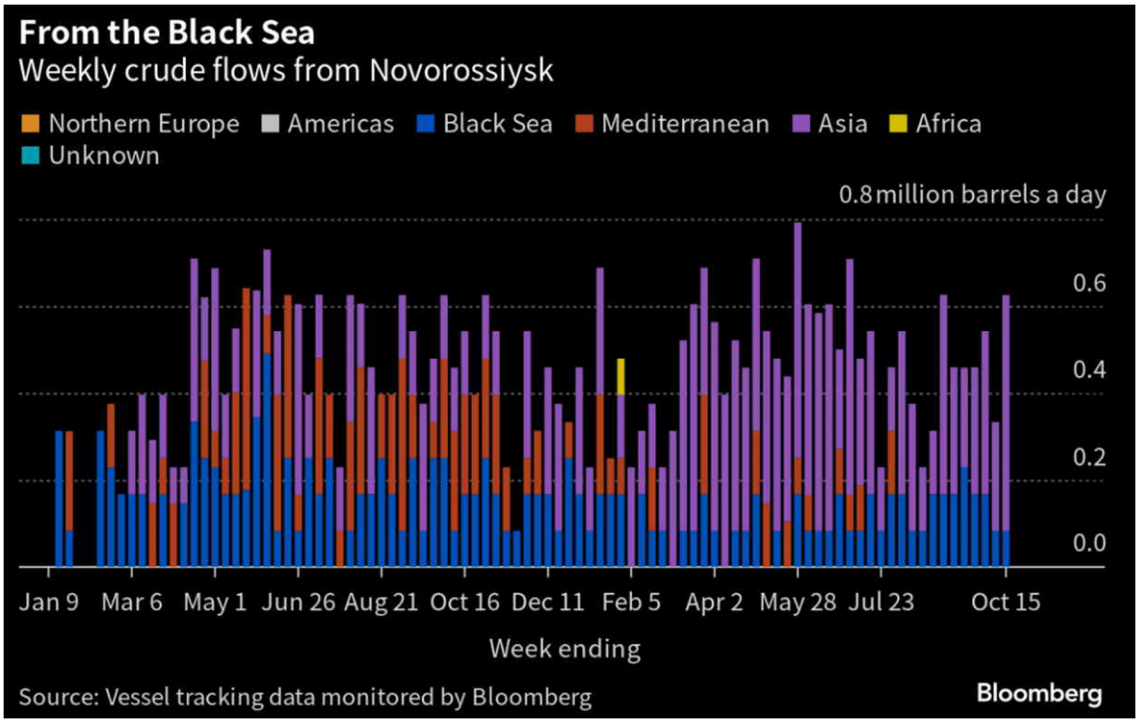


The total volume on ships loading Russian crude from the Baltic terminals was unchanged, averaging 1.56 million barrels a day for a third week.

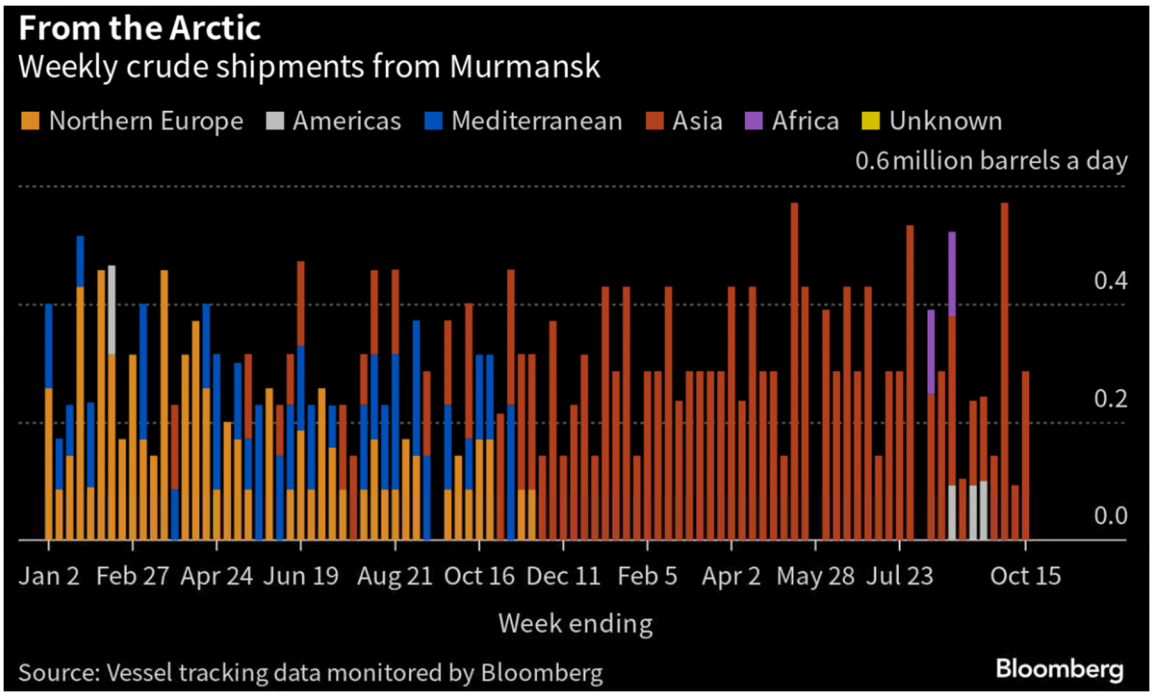


Shipments of Russian crude from Novorossiysk jumped to 625,000 barrels a day, equal to the highest since the week ending July 2.

Two cargoes of Kazakh crude were loaded at the port during the week, up from one during the previous seven days.

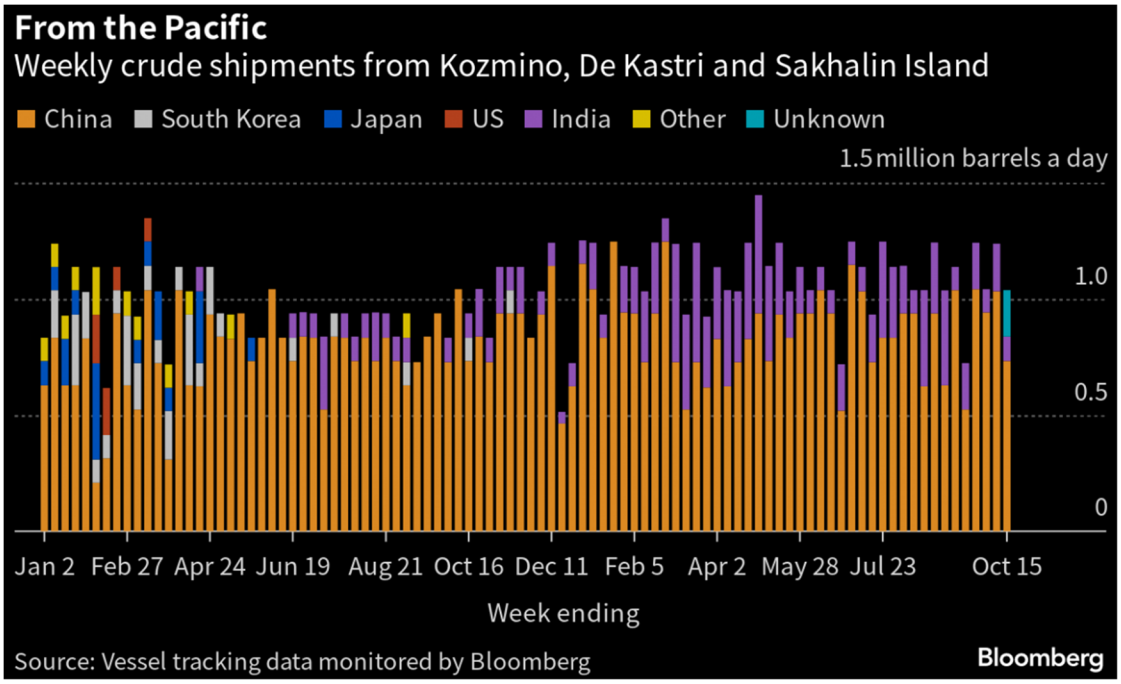


Two Suezmax tankers completed loading cargoes at the Arctic port of Murmansk in the week to Oct. 15, boosting flows to about 285,000 barrels a day.
Two tankers were drifting outside the port waiting to load at the end of the week.



Ten tankers loaded at Russia's three Pacific export terminals, down by two from the previous week. The volume of crude shipped from the region fell to just over 1 million barrels a day, down by 200,000 barrels a day from the previous seven days.
The drop in flows was driven by fewer ships lading Sokol

grade from the terminal at De Kastri and no tankers completing loading of Sakhalin Blend crude. Shipments from the Sakhalin Island terminal are running at one every other week.



The volumes heading to unknown destinations are Sokol cargoes that are currently being shuttled to an area off the South Korean port of Yosu from the loading terminal at De Kastri. Most of these are ending up in India.NOTES
Note: This story forms part of a weekly series tracking shipments of crude from Russian export terminals and the export duty revenues earned from them by the Russian government. Weeks run from Monday to Sunday. The next update will be onTuesday, Oct. 24.
Note: All figures exclude cargoes owned by Kazakhstan's KazTransOil JSC, which transit Russia and are shipped from Novorossiysk and Ust-Luga as KEBCO grade crude.
If you are reading this story on the Bloomberg terminal, click here for a link to a PDF file of four-week average flows from Russia to key destinations.

--With assistance from Sherry Su.

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Israel vows to cut off 'the head of the snake' and launch a military attack against Iran if Hezbollah joins the war with Hamas

- Nir Barkat, Israel's Minister of Economy, gave exclusive Mail on Sunday interview

By NATALIE LISBONA and MARK HOOKHAM and ANNA MIKHAILOVA
PUBLISHED: 17:09 EDT, 21 October 2023 | UPDATED: 05:56 EDT, 22 October 2023

Israel last night vowed to cut off 'the head of the snake' and launch a military attack against Iran if Tehran-backed terror group Hezbollah joins the war.
In an exclusive interview with The Mail on Sunday, Nir Barkat, Israel's Minister of Economy, warned that Iran's Ayatollahs will be 'wiped off the face of the earth' should Hezbollah, their proxy terror group in Lebanon, attack Israel.

His incendiary comments raise the grave spectre of a rapidly escalating regional conflict and come ahead of an expected Israeli ground invasion of the Gaza Strip to 'annihilate' Hamas.

Tens of thousands of Israeli soldiers are in position on the borders of the territory, where Hamas – which is also backed by Iran – is holding around 200 hostages seized in the violent assault on southern Israel on October 7.

But fears are growing that Israel could be forced to fight on two fronts, with Hezbollah and the Israel Defence Forces last week repeatedly trading fire across Israel's northern border with Lebanon.

In an exclusive interview with The Mail on Sunday, Nir Barkat (right, pictured next to Israeli Prime Minister Benjamin Netanyahu, centre), Israel's Minister of Economy, warned that Iran's Ayatollahs will be 'wiped off the face of the earth' should Hezbollah, their proxy terror group in Lebanon, attack Israel

His incendiary comments raise the grave spectre of a rapidly escalating regional conflict and come ahead of an expected Israeli ground invasion of the Gaza Strip to 'annihilate' Hamas (pictured: a plume of smoke erupting in northern Gaza after Israeli bombardment on October 21)

In a direct threat to deter Tehran from intervening further, Mr Barkat warned that not only would Israel 'eliminate Hezbollah', if it believes the terror group is opening up a 'northern front', but 'we will actually target Iran.'

'The plan of Iran is to attack Israel on all fronts. If we find they intend to target Israel, we will not just retaliate to those fronts, but we will go to the head of the snake, which is Iran.

If our enemies attack, we will wipe them out

'The Ayatollahs in Iran are not going to sleep good at night, we are going to make sure they pay a heavy price if, God forbid, they open the northern front.

'Lebanon and Hezbollah are going to pay a heavy price, similar to what Hamas is going to pay. But that's not enough.

'The very clear message is that we are going to be going after the heads of Iran as well. When will we do that? When we decide.

'Israel has a very clear message to our enemies. We are saying to them, look what's happening in Gaza – you are going to get the same treatment if you attack us. We are going to wipe you off the face of the Earth.'

Barkat said: 'The Ayatollahs in Iran are not going to sleep good at night, we are going to make sure they pay a heavy price if, God forbid, they open the northern front' (pictured: Iranian Supreme Leader Ayatollah Ali Khamenei)

In a direct threat to deter Tehran from intervening further, Mr Barkat warned that not only would Israel 'eliminate Hezbollah', if it believes the terror group is opening up a 'northern front', but 'we will actually target Iran' (pictured: Israeli soldiers near the border with Gaza)

Mr Barkat's uncompromising warning came as:

- A deal to release 50 more hostages – following the release of an American mother and her daughter on Friday – collapsed;
- Hardline Islamists took to the streets of London and called for Muslim armies to rise up against Israel;
- Chaos broke out at the Rafah border crossing with Egypt as aid trucks entered Gaza, but foreign passport holders were blocked from getting out;
- Young British Jewish women spoke of their determination to defend Israel after volunteering to fight in its war on terror;
- Palestine claimed the Gaza death toll has hit 4,385, with 13,651 injured; Israeli losses have exceeded 1,400.

Despite increasing tensions, Prime Minister Rishi Sunak said there was still 'room for politics and diplomacy even at this darkest hour' and said 'good progress' had been made to open up humanitarian access.

'Too many lives have already been lost following Hamas's horrific act of terror. The loss of every innocent life diminishes us all – regardless of faith or nationality,' Mr Sunak wrote in The Sunday Telegraph.

With 20,000 fighters, Hezbollah is one of the most powerful paramilitary forces in the Middle East, with Iran believed to funnel hundreds of millions of dollars to the Islamists each year.

A major war broke out in 2006 between Israel and Lebanon after Hezbollah launched missiles at Israeli cities.

During his incendiary interview, Mr Barkat, an ex-mayor of Jerusalem, said Hezbollah 'will not escalate without the order of Iran', adding: 'In many ways... Hezbollah is Iran.'

He said Mr Sunak and US President Joe Biden, who both visited Israel last week, understand there is a 'global alignment of evil' between Iran, Hamas and Hezbollah.

However Foreign Secretary James Cleverly has warned that the Israel-Hamas dispute must not trigger wider instability. Speaking at a peace summit in Cairo, he said: 'We must work together to prevent the tragic situation in Gaza becoming a regional conflict because that is exactly what Hamas wants.'

Military experts last night warned that the Israeli minister's comments risked a serious escalation which could push the region to all-out war.

General Sir Richard Barrons, a former head of the British Army's Joint Forces Command, warned: 'If Israel strikes Iran, that is an act of war against Iran, so Iran is going to respond.

'And when that happens then the Muslim world as a whole will feel that this has become a war between Israel and Islam and where does that take you?

'There is every risk in the Middle East of events spiralling out of control and the world ending up in a place which no one wants to be in.'

A wider conflict is just what Hamas wants

Michael Clarke, of the war studies department at King's College London, said US officials are believed to have urged Israel against making the kind of threats Mr Barkat deliverd.

He said: 'The Iranians are talking ferociously, the Israelis are speaking ferociously and the rumours are that the US leant very heavily on Tel Aviv not to make pre-emptive statements of the sort that you have just quoted because that would inflame the situation.

'The Israelis are saying these things partly as an act of deterrence [But] it's entirely plausible that the Iranians won't be able to control the forces acting in their name.'

In his interview, Mr Barkat likened Israel's situation to the 1940 Blitz in London. He also warned that a failure to 'wipe out' Hamas will lead to copycat terror attacks in the UK.

Amid criticism of the BBC's refusal to call Hamas terrorists, Mr Barkat, a former Israel Defence Forces paratrooper, said he had taken some of the broadcaster's reporters to Kfar Aza, a kibbutz where more than 70 people were massacred.

'We witnessed the atrocities in the rooms and the smell of death that is still around. It's more than a war zone, it's a hell zone. Can they describe what they saw? If this is not a terrorist organisation then what is?'

He also said Israeli officials have seen a video in which Hamas terrorists doused a woman with petrol and burned her alive in the street.

Israel has for years carried out air strikes attacks against what it has described as Iran-linked targets in Syria, where Tehran has supported President Bashar al-Assad in the civil war that began in 2011.

In September, Dozens of Israeli Air Force fighters, spy planes and refuelling aircraft flew thousands of miles from Israel to Greece and back to simulate a long-range strike on Iran and its nuclear facilities.

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National day 28/5

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Member since 1969
National day 25/5

Islamic Republic of AFGHANISTAN
Member since 1969
National day 19/8

Republic of ALBANIA
Member since 1992
National day 28/11


State of The UNITED ARAB EMIRATES
Member since 1972
National day 2/12

Republic of INDONESIA
Member since 1969
National day 17/8

Republic of UZBEKISTAN
Member since 1996
National day 1/9

Republic of UGANDA
Member since 1974
National day 9/10


Islamic Republic of IRAN
Member since 1969
National day 11/2

Islamic Republic of PAKISTAN
Member since 1969
National day 23/3

Kingdom of BAHRAIN
Member since 1972
National day 16/12

BRUNEI-DARUSSALAM
Member since 1984
National day 23/2


People's Republic of BANGLADESH
Member since 1974
National day 26/3

Republic of BENIN
Member since 1983
National day 1/8

BURKINA-FASO (then Upper Volta)
Member since 1974
National day 11/12

Republic of TAJIKISTAN
Member since 1992
National day 9/9


Republic of Türkiye
Member since 1969
National day 29/10

Turkmenistan
Member since 1992
National day 27/9

Republic of CHAD
Member since 1969
National day 11/8

Republic of TOGO
Member since 1997
National day 27/4


Republic of TUNISIA
Member since 1969
National day 20/3

People's Democratic Republic of ALGERIA
Member since 1969
National day 1/11

Republic of DJIBOUTI
Member since 1978
National day 27/6

Kingdom of SAUDI ARABIA
Member since 1969
National day 23/9


Republic of SENEGAL
Member since 1969
National day 4/4

Republic of The SUDAN
Member since 1969
National day 1/1

SYRIAN Arab Republic
Member since 1972
National day 17/4

Republic of SURINAME
Member since 1996
National day 25/11


Republic of SIERRA LEONE
Member since 1972
National day 27/4

Republic of SOMALIA
Member since 1969
National day 1/7

Republic of IRAQ
Member since 1975
National day --/--

Sultanate of OMAN
Member since 1972
National day 18/11


Republic of GABON
Member since 1974
National day 17/8

Republic of The Gambia
Member since 1974
National day 18/2

Republic of GUYANA
Member since 1998
National day 23/2

Republic of GUINEA
Member since 1969
National day 2/10


Republic of GUINEA-BISSAU
Member since 1974
National day 24/9

State of PALESTINE
Member since 1969
National day 15/11

Union of The COMOROS
Member since 1976
National day 6/7

KYRGYZ Republic
Member since 1992
National day 31/8


State of QATAR
Member since 1972
National day 18/12

Republic of KAZAKHSTAN
Member since 1995
National day 16/12

Republic of CAMEROON
Member since 1974
National day 20/5

Republic of COTE D'IVOIRE
Member since 2001
National day 7/8


State of KUWAIT
Member since 1969
National day 25/2

Republic of LEBANON
Member since 1969
National day 22/11

Libya
Member since 1969
National day 24/12

Republic of MALDIVES
Member since 1976
National day 26/7


Republic of MALI
Member since 1969
National day 22/9

MALAYSIA
Member since 1969
National day 31/8

Arab Republic of EGYPT
Member since 1969
National day 23/7

Kingdom of MOROCCO
Member since 1969
National day 30/7


Islamic Republic of MAURITANIA
Member since 1969
National day 28/11

Republic of MOZAMBIQUE
Member since 1994
National day 25/6

Republic of NIGER
Member since 1969
National day 18/12

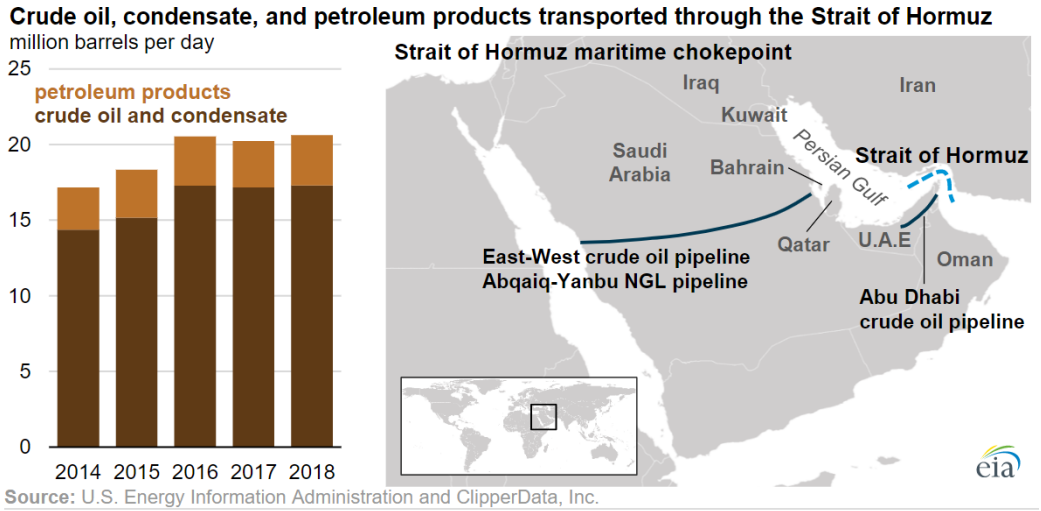
Federal Republic of NIGERIA
Member since 1986
National day 1/10


Republic of YEMEN
Member since 1969
National day 22/5

https://www.eia.gov/todayinenergy/detail.php?id=39932

JUNE 20, 2019

The Strait of Hormuz is the world's most important oil transit chokepoint



Source: U.S. Energy Information Administration and ClipperData, Inc.

Source: U.S. Energy Information Administration and ClipperData, Inc.

The Strait of Hormuz, located between Oman and Iran, connects the Persian Gulf with the Gulf of Oman and the Arabian Sea. The Strait of Hormuz is the world's most important oil chokepoint because of the large volumes of oil that flow through the strait. In 2018, its daily oil flow averaged 21 million barrels per day (b/d), or the equivalent of about 21% of global petroleum liquids consumption. Chokepoints are narrow channels along widely used global sea routes that are critical to global energy security. The inability of oil to transit a major chokepoint, even temporarily, can lead to substantial supply delays and higher shipping costs, resulting in higher world energy prices. Although most chokepoints can be circumvented by using other routes that add significantly to transit time, some chokepoints have no practical alternatives.

Volumes of crude oil, condensate, and petroleum products transiting the Strait of Hormuz have been fairly stable since 2016, when international sanctions on Iran were lifted and Iran's oil production and exports returned to pre-sanctions levels. Flows through the Strait of Hormuz in 2018 made up about one-third of total global seaborne traded oil. More than one-quarter of global liquefied natural gas trade also transited the Strait of Hormuz in 2018.

Crude oil, condensate, and petroleum products transported through the Strait of Hormuz

million barrels per day

	2014	2015	2016	2017	2018
Total oil flows through Strait of Hormuz	**17.2**	**18.4**	**20.6**	**20.3**	**20.7**
Crude and condensate	14.4	15.2	17.3	17.2	17.3
Petroleum products	2.8	3.2	3.3	3.1	3.3
World maritime oil trade	**56.4**	**58.9**	**61.2**	**62.5**	**N/A**
World total petroleum and other liquids consumption	**93.9**	**95.9**	**96.9**	**98.5**	**99.9**
LNG flows through Strait of Hormuz (Tcf per year)	**4.0**	**4.2**	**4.2**	**4.1**	**4.1**

Source: U.S. Energy Information Administration, based on *Short-Term Energy Outlook* (June 2019), ClipperData, Saudi Aramco bond prospectus, Saudi Aramco annual reports, Saudi Ports Authority, International Group of Liquefied Natural Gas Importers, and U.N. Conference on Trade and Development
Note: LNG is liquefied natural gas; Tcf is trillion cubic feet

There are limited options to bypass the Strait of Hormuz. Only Saudi Arabia and the United Arab Emirates have pipelines that can ship crude oil outside the Persian Gulf and have the additional pipeline capacity to circumvent the Strait of Hormuz. At the end of 2018, the

total available crude oil pipeline capacity from the two countries combined was estimated at 6.5 million b/d. In that year, 2.7 million b/d of crude oil moved through the pipelines, leaving about 3.8 million b/d of unused capacity that could have bypassed the strait.

Operating pipelines that bypass the Strait of Hormuz, 2018

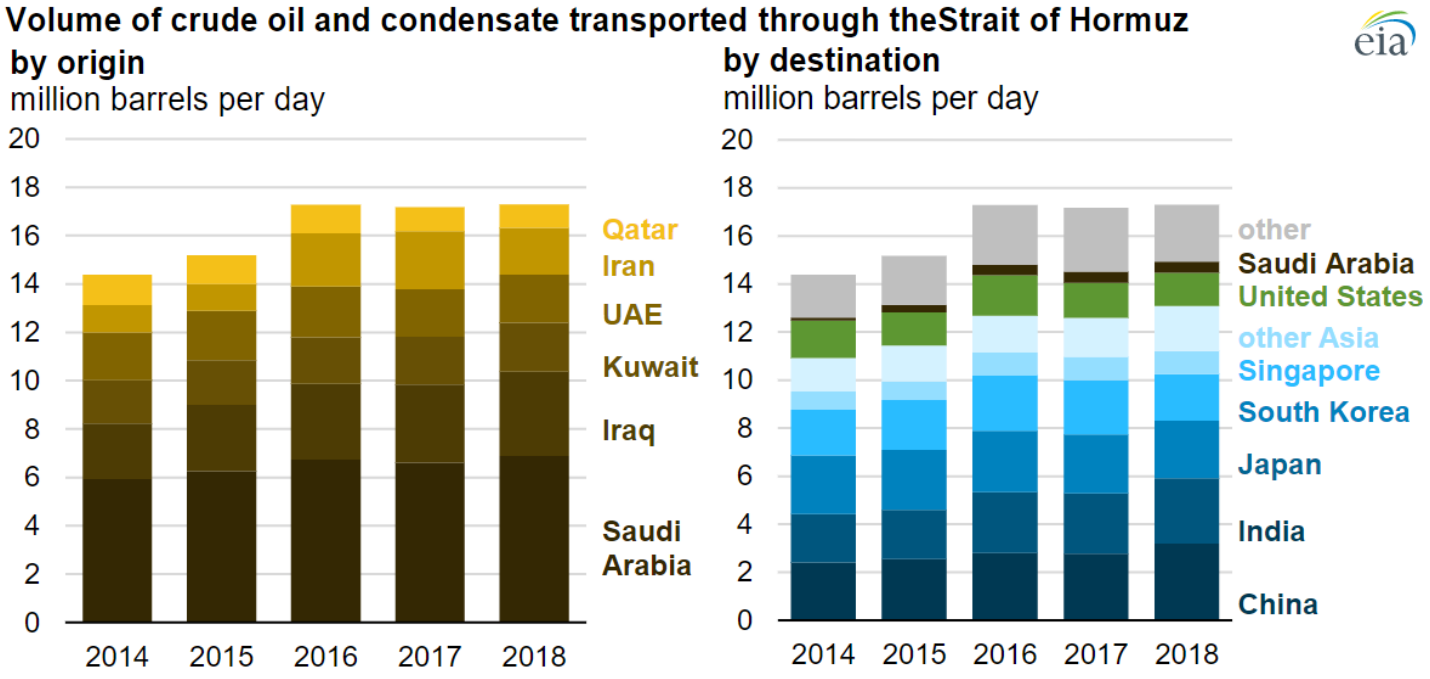
million barrels per day

Pipeline name	Country	Capacity	Throughput	Unused capacity
Petroline (East-West Pipeline)	Saudi Arabia	5.0	2.1	2.9
Abu Dhabi Crude Oil Pipeline	United Arab Emirates	1.5	0.6	0.9
Abqaiq-Yanbu Natural Gas Liquids Pipeline	Saudi Arabia	0.3	0.3	0.0
TOTAL		**6.8**	**3.0**	**3.8**

Source: U.S. Energy Information Administration, based on ClipperData, Saudi Aramco bond prospectus (April 2019)
Note: Unused capacity is defined as pipeline capacity that is not currently used but can be readily available.

Based on tanker tracking data published by ClipperData, Saudi Arabia moves the most crude oil and condensate through the Strait of Hormuz, most of which is exported to other countries (less than 0.5 million b/d transited the strait in 2018 from Saudi ports in the Persian Gulf to Saudi ports in the Red Sea).

EIA estimates that 76% of the crude oil and condensate that moved through the Strait of Hormuz went to Asian markets in 2018. China, India, Japan, South Korea, and Singapore were the largest destinations for crude oil moving through the Strait of Hormuz to Asia, accounting for 65% of all Hormuz crude oil and condensate flows in 2018.



Source: U.S. Energy Information Administration, based on tanker tracking data published by ClipperData, Inc.

In 2018, the United States imported about 1.4 million b/d of crude oil and condensate from Persian Gulf countries through the Strait of Hormuz, accounting for about 18% of total U.S. crude oil and condensate imports and 7% of total U.S. petroleum liquids consumption.

Principal contributor: Justine Barden

Tags: liquid fuels, crude oil, oil/petroleum, map

https://ina.iq/eng/29339-pm-al-sudani-iraq-vehemently-opposes-any-efforts-to-forcibly-displace-the-population-of-gaza-strip.html

PM Al-Sudani: Iraq vehemently opposes any efforts to forcibly displace the population of Gaza Strip

- Yesterday, 14:14

Baghdad-INA

Prime Minister Mohammed S. Al-Sudani affirmed on Saturday that Iraq vehemently opposes any efforts to forcibly displace the population of the Gaza Strip and it stands ready to provide any available assistance without delay.
The media office of the Prime Minister said in a statement, received by The Iraqi News Agency- INA that “The Prime Minister highlighted the dire situation in the occupied Palestinian territories by affirming that The Palestinian people are facing genocide and a grave humanitarian crisis with the targeting of civilians in residential areas, places of worship, and healthcare facilities.

He added, “The recent tragedy of the massacre at the Al-Ahli Baptist Hospital exposed the true nature of the Zionist occupation, revealing actions that have crossed all red lines.”

“The ongoing events represent a clear and heinous war crime, commencing with the killing of unarmed individuals and the imposition of a suffocating blockade on those who remain among the living,” he said.

PM Al-Sudani stressed that” Words cannot adequately describe the horrific acts and daily massacres, with innocent lives buried beneath the debris of their homes on the very land from which they were originally displaced during the Nakba of 1948” pointing out that “The situation in Gaza presents a fresh challenge and a test to the international community, which has repeatedly fallen short in realizing the principles of humanity, justice, and freedom it advocates. Palestine stands as a living testament to this recurring failure”.

“ The time has come to stop this oppressive occupation and bring an end to the enduring suffering of the Palestinian people,” PM stated. “Injustice cannot lead to lasting peace, and true security and the ending of violence can only be achieved by addressing their root causes which are the occupation and discriminatory policies”.

Al-Sudani continued,"The Zionist entity persists in its transgressions against international laws, including

those pertaining to warfare, affirming “This will impact global security, escalate regional conflict, jeopardize energy supplies, exacerbate economic crises, and invite further conflicts.

The prime minister also added “The occupation forces consistently breached the III Geneva Convention Relative to the Treatment of Prisoners of War and the IV Geneva Convention Relative to the Protection of Civilian Persons in Time of War,” confirming that The Zionist entity persistently disregards the International Covenant on Civil and Political Rights, the Universal Declaration of Human Rights, and over 78 Security Council resolutions regarding the Palestinian conflict.”

“If international resolutions were upheld and international bodies fulfilled their responsibilities, the Palestinian situation would not have deteriorated to its current tragic state”.

Al-Sudani stated that “Iraq vehemently opposes any efforts to forcibly displace the population of the Gaza Strip” adding that “Resettlement, refugee camps, and displacement have no place in the talks regarding the Palestinians; No place for the Palestinians except their own land.”

“We emphasize the urgent need for an immediate ceasefire, the opening of border crossings to allow humanitarian aid and relief supplies, and the subsequent efforts to facilitate a safe and inclusive exchange of prisoners and detainees,”

He continued, “Efforts should focus on the complete lifting of the Gaza Strip's siege to prevent any recurrence of this tragedy, noting that “We advocate for the creation of a fund to aid in the reconstruction of the Gaza Strip, and Iraq stands ready to provide any available assistance without delay.”

He affirmed that “The efforts to dilute and bury the Palestinian issue must cease, and no one has the right to negotiate, or make decisions on behalf of the Palestinian people, who are the rightful guardians of their land and their legitimate claims”.

“International legitimacy, representing all free nations, continues to advocate for an independent Palestinian state with Al Quds as its capital, free from the encroachment of settlements and the hardship imposed by border crossings and food deprivation policies”.

PM Al-Sudani clarified that “Neglecting the legitimate rights of the Palestinian people only fuels more violence, extremism, and instability in both the region and the world”.

https://www.reuters.com/world/middle-east/iraq-turkey-oil-pipeline-ready-resume-operations-soon-turkish-minister-2023-09-15/?taid=6504209efee5c1000187d519&utm_campaign=trueAnthem:+Trending+Content&utm_medium=trueAnthem&utm_source=twitter

Iraq-Turkey oil pipeline ready to resume operations soon - Turkish minister

By Can Sezer

September 15, 20231:27 AM MDTUpdated 2 hours ago

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

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

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

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

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

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

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

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

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

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

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

“this is also the message this morning, you cannot cut oil and gas from now till then” Siemens CEO Roland Busch

SAF Group created transcript of comments by Siemens CEO Roland Busch with CNBC’s Dan Murphy posted on CNBC on Oct 20, 2023. https://www.cnbc.com/video/2023/10/02/we-are-running-out-of-time-siemens-ceo-says-on-energy-transition.html?&qsearchterm=siemens

Items in “italics” are SAF Group created transcript.

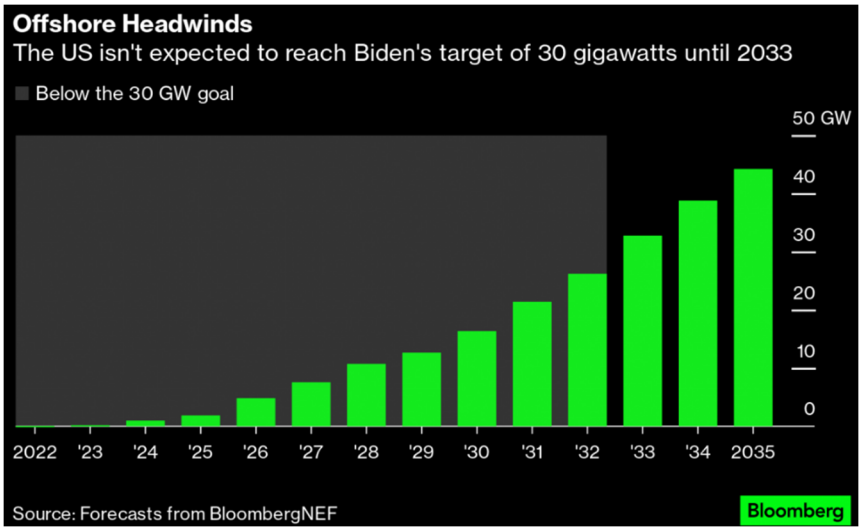
Busch “*On a high level view, we are moving our energy system from an OPEX based system to a CAPEX based system. What I am saying here is the following. You currently can build a very cheap power plant for gas for example but then you have to spend money for gas over the lifetime. This is what I call OPEX based. When you install renewables like solar or wind, you spend a lot of money at the beginning but then service and operational costs are basically zero. But that means you have to invest money now and enjoy the benefits later once the assets are written off. At the same time, it is obviously you have intermittent energy which is coming in so therefore you have to talk about a market which is more driven by the source than by the demand. You need storage at the same time. We are in the midst of this transition, it costs a lot of money. The players have to change. At the same time, and this is also the message this morning, you cannot cut oil and gas from now till then. So it needs a transition, a fair transition, and a timely one. The only problem is we are running out of time. Seven years to go, we have to cut for more than 40% in that time and this is the big challenge I would say*.”

Prepared by SAF Group https://safgroup.ca/news-insights/

A 48% Surge in Costs Wrecks Biden's Much-Lauded Wind-Power Plans
2023-10-18 11:00:16.563 GMT

By Will Wade and Jennifer A Dlouhy
(Bloomberg) -- When President Joe Biden in 2021 laid out a target of deploying 30 gigawatts of offshore wind capacity during the next nine years, the plan was deemed bold and ambitious. Best of all, many saw it as within reach.
Two years later, the industry has another word for it: impossible.
After a cascading series of setbacks, from sobering cost revisions to billions in possible impairment charges, the US offshore wind industry's 2030 generation goal now looks further away than ever.
BloombergNEF, which even early on had been dubious about the goal, has slowly been paring back its outlook. In June, the forecast was for 23.1 gigawatts in 2030. But then, the industry suffered another blow last week after New York forcefully rejected developers' pleas for higher rates, raising serious questions about some of their projects. That prompted Atin Jain, senior wind analyst at BNEF, to slash his estimate by 29% on Wednesday. The researcher now expects total US capacity to reach just 16.4 gigawatts by the end of the decade — a little more than half of Biden's target.

"The 30-gigawatt target is a pipe dream," Jain said.



The big picture shows further unsettling in an industry viewed as key to meeting US climate commitments, including the country's Paris Agreement pledge to at least halve greenhouse gas emissions from 2005 levels by the end of the decade.
Offshore wind farms have the potential to supply vast amounts of power to big cities along US coasts, where more than 40% of the country's population resides.
In an industry where weather puns run rampant, developers have called America's challenging environment for offshore wind a "storm of inflation" battered by "headwinds." Although the more than a dozen sites planned off the coast of the Eastern US

made financial sense when they were first modeled years ago, costs for every component of the multi-billion-dollar projects have skyrocketed, from the raw materials that go into the towering structures to the corporate credit that finances them. Just two years ago, companies were making plans — and signing massive power purchase agreements — based on a projected cost of $77 per megawatt hour, BNEF calculates. Today, it's jumped 48% to $114.

The White House isn't deterred. Spokesperson Angelo Fernández Hernández said the administration "is using every legally available tool to advance American offshore wind opportunities and achieve the goal of 30 GW by 2030," including approving major offshore wind projects and leveraging federal infrastructure investments to nurture a new domestic supply chain. Investments in the US offshore wind industry have increased by $7.7 billion since enactment of the Inflation Reduction Act last year, with more progress to come in collaboration with states, developers and other stakeholders, he said.

Still, as the price of construction climbs, developers are rapidly backpedaling on their plans or asking to re-negotiate their deals. Equinor ASA, BP Plc, Orsted A/S and Eversource Energy were the most recent developers to hear "no." The companies had asked New York state to let them raise their rates, a request that the New York Public Service Commission unanimously denied on Oct. 12, leaving the developers at a loss for how best to move forward.

"These projects must be financially sustainable to proceed," Molly Morris, president of Equinor Renewables Americas, said following the ruling, referring to its Empire and Beacon wind farms being developed with BP. David Hardy, chief executive officer for the Americas at Orsted, said the viability of the Sunrise project it's co-developing with Eversource east of Long Island was "extremely challenged" due to the state's decision.

In total, developers building about 9 gigawatts of capacity for five East Coast states have sought to renegotiate deals. That's in addition to the more than 3 gigawatts of power contracts that have been outright canceled in recent months — at great cost. In July, Avangrid Inc. agreed to pay around $48 million in fines to get out of its deal to supply power to three utilities from its Commonwealth project off the coast of Massachusetts. The next month, a Shell Plc unit and its joint-venture partners agreed to pay more than $60 million to exit their own deals. In October, Avangrid agreed to pay $16 million to terminate contracts for its Park City project near Connecticut. Companies may participate in a new round of auctions, though whether the developers can square their costs with households' needs remains to be seen.

Companies have also taken massive write-downs. Eversource reported a $331 million after-tax impairment charge in the second quarter for its offshore wind operations, while Orsted announced a potential $2.3 billion charge on its US portfolio.

Six governors have implored Biden to "utilize every federal tool available" to keep offshore wind projects competitive,

warning that without interventions from the US government, "offshore wind deployment in the US is at serious risk of stalling."
States aren't the only ones under pressure to renegotiate power purchase agreements that were inked before a runup in costs. Developers have also been asking for the maximum tax policy support possible under last year's sweeping climate law. The Inflation Reduction Act expanded tax credits so offshore wind power projects generally can claim a base rate of 30% and, in some cases, get bonus incentives for using US-sourced materials and building in so-called energy communities, such as former coal towns. Now, some offshore wind developers see those bonus credits — worth as much as 20% — as key to survival. Without more help, Orsted has threatened to "walk away" from some of its US offshore wind projects.

Biden's 30-gigawatt target "was once an ambitious goal," said Timothy Fox, an analyst at ClearView Energy Partners. "Now, it's a not-going-to-happen goal."
Still, Biden's goal was always a non-binding target primarily meant to signal the administration's enthusiastic support for a nascent offshore wind industry that depends on permit approvals, lease sales and other actions in the nation's capital. In that sense, "it may have served its purpose," Fox said, adding that the point was to send "an indication that you have friends in this administration, you have people who support your industry and what you're trying to develop."
And, even if Biden were to win a second term, the 2030 target would fall beyond his time in office.
There are two offshore projects already under construction in the US, which were able to line up supply deals before inflation drove up costs. Two others have been operational for years: Dominion Energy Inc.'s pilot off the coast of Virginia and Orsted's five-turbine project near Block Island, Rhode Island. Together, those four projects would get the US to less than 5% of its 2030 goal.
It's unclear when the others might come online, though most agree they probably still will. Wind farms that may have once been on track to deliver power by the end of the decade are now more likely to connect to the grid in the early 2030s, BNEF's Jain said.
"It's not that it's not going to happen. It's just not going to happen as fast as they initially anticipated," said Fox of ClearView Energy. "Offshore wind has a lot of growth potential in the United States; it's just likely to be on a trajectory that is flatter than what was initially anticipated."

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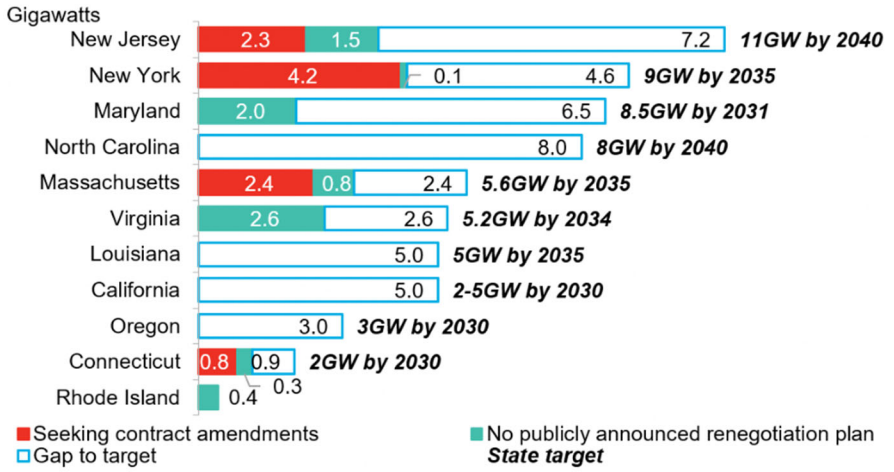
To view this story in Bloomberg click here:
https://blinks.bloomberg.com/news/stories/S2Q18GDWX2PS

Offshore Wind Goals in US Are Imperiled by Deal Revisions: BNEF
2023-07-10 14:00:00.0 GMT

By Atin Jain
(BloombergNEF) -- Several US states face a growing risk of missing their offshore wind goals due to a spate of contract renegotiation or cancellation attempts by project developers citing rising costs.
New York state has a target to add 9 gigawatts of cumulative offshore wind capacity by 2035 and contracted 4.36GW of projects in its two concluded solicitations. But renegotiation attempts mean that 95% of the contracted capacity is at risk of delays. Neighboring Massachusetts sees 75% of contracted capacities being delayed by renegotiation attempts. In Connecticut it's 73%. New Jersey, which is targeting of 11GW, risks delays to 60% of its contracted pipeline.
About 9.7GW of US offshore wind projects, or just over half of the 17.8GW total contracted, face delays, and more projects may soon face the same fate. Developers such as Avangrid, Shell-Ocean Winds, BP-Equinor and Orsted-Eversource have cited deteriorating economics due to rising costs in trying to renegotiate or cancel contracts.
The renegotiation efforts mean ambitious goals by state governments and the Biden administration to achieve 30GW of offshore wind capacity by 2030 are drifting further away from reality. The current situation highlights the challenges and complexities inherent in developing large-scale offshore wind projects.

Status of contracted offshore wind capacity and targets across US states



Source: BloombergNEF, news reports, company petitions

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Is there a perfect storm brewing in the offshore wind industry?

In recent weeks, for the first time, offshore wind projects in Europe and the U.S. have been stopped, mainly citing cost increases. In other news, turbine manufacturers were once again in the red in their latest quarterly reports, with losses running into billions.

This is not good news, it's in fact the worst-case scenario for the energy transition when large projects that have already been awarded are not realised as planned. Happening at a time when the entire offshore industry has to scale up to achieve expansion targets, this quickly calls into question the achievement of climate protection goals.

This dilemma is fuelled by a combination of factors, including cost increases due to ongoing inflation and rising interest rates, as well as structural supply shortages and the strained state of supply chains.

This development must serve as a wake-up call for policymakers to adapt the regulatory framework to market realities. Five areas of action can help navigate through the storm.

1. A frontloaded auction schedule can increase the investment certainty for the whole industry. That includes the early auctioning of large sea areas.

2. Grid connection of offshore wind farms have to be accelerated and developers need to have certainty about connection dates.

3. Allowance for dual route-to-market: 2-sided Contracts for Difference (CfDs) with inflation indexation as one element, and a second element which allows the marketing of offshore power to industrial customers through private PPAs. In addition, qualitative auction criteria can strengthen the European supply chain, sustainability, and deliverability.

4. When auction schemes cap budgets, for example like CfDs in the UK, governments need to recognise the inflationary environment and that costs have gone up significantly. Sticking with the old assumptions of nominal cost reduction will simply slow down or stop offshore technology deployment.

5. Direct and indirect financial support to stimulate investments in European manufacturing capacities and a master plan to secure access to vital raw materials.

In a nutshell: we need a framework that allows for more investment certainty for both manufacturers and

developers.

At RWE, we are building and driving forward the development of several projects where we have been awarded the seabeds: in Germany, the UK, the Netherlands, Denmark, Ireland, Poland and the U.S. To deal with the challenging market situation, securing financing and strong relationships with your supply chain are key.

However, the right framework and policies, as outlined here, are imperative for offshore wind energy to realise its fullest potential in the future.

Executive summary

Modern, smart and expanded grids are essential for successful energy transitions

The backbone of today's electricity systems, grids are set to become increasingly important as clean energy transitions progress, but they currently receive too little attention. Grids have been delivering power to households, businesses and industry for over 100 years. Clean energy transitions are now driving the transformation of our energy systems and expanding the role of electricity across economies. As a result, countries' transitions to net zero emissions need to be underpinned by bigger, stronger and smarter grids.

To achieve countries' national energy and climate goals, the world's electricity use needs to grow 20% faster in the next decade than it did in the previous one. Electricity demand needs to grow even more rapidly in a global pathway to net zero emissions by 2050, which is consistent with limiting the rise in global temperatures to 1.5 °C. Expanded grids are critical to enable such levels of growth as the world deploys more electric vehicles, installs more electric heating and cooling systems, and scales up hydrogen production using electrolysis.

Reaching national goals also means adding or refurbishing a total of over 80 million kilometres of grids by 2040, the equivalent of the entire existing global grid. Grids are essential to decarbonise electricity supply and effectively integrate renewables**.** In a scenario in which countries' national energy and climate goals are met on time and in full, wind and solar PV account for over 80% of the total increase in global power capacity in the next two decades, compared with less than 40% over the past two decades. In the International Energy Agency's (IEA) Net Zero Emissions by 2050 Scenario, wind and solar account for almost 90% of the increase. The acceleration of renewable energy deployment calls for modernising distribution grids and establishing new transmission corridors to connect renewable resources – such as solar PV projects in the desert and offshore wind turbines out at sea – that are far from demand centres like cities and industrial areas.

Modern and digital grids are vital to safeguard electricity security during clean energy transitions. As the shares of variable renewables such as solar PV and wind increase, power systems need to become more flexible to accommodate the changes in output. In a scenario consistent with meeting national climate goals, the need for system flexibility doubles between 2022 and 2030. Grids need to both operate in new ways and leverage the benefits of distributed resources,

such as rooftop solar, and all sources of flexibility. This includes deploying grid-enhancing technologies and unlocking the potential of demand response and energy storage through digitalisation.

Grids risk becoming the weak link of clean energy transitions

At least 3 000 gigawatts (GW) of renewable power projects, of which 1 500 GW are in advanced stages, are waiting in grid connection queues – equivalent to five times the amount of solar PV and wind capacity added in 2022. This shows grids are becoming a bottleneck for transitions to net zero emissions. The number of projects awaiting connection worldwide is likely to be even higher, as data on such queues is accessible for countries accounting for half of global wind and solar PV capacity. While investment in renewables has been increasing rapidly – nearly doubling since 2010 – global investment in grids has barely changed, remaining static at around USD 300 billion per year.

Delays in grid investment and reform would substantially increase global carbon dioxide (CO_2) emissions, slowing energy transitions and putting the 1.5 °C goal out of reach. For this report, we developed the Grid Delay Case to explore the impacts of more limited investment, modernisation, digitalisation and operational changes than are envisioned in the IEA's climate-focused scenarios. The Grid Delay Case shows transitions stalling, with slower uptake of renewables and higher fossil fuel use. Cumulative CO_2 emissions from the power sector to 2050 would be 58 gigatonnes higher in the Grid Delay Case than in a scenario aligned with national climate targets. This is equivalent to the total global power sector CO_2 emissions from the past four years. It would also mean that the global long-term temperature rise would go well above 1.5 °C, with a 40% chance of it exceeding 2 °C.

At a time of fragile natural gas markets and concerns about gas supply security, failing to build out grids increases countries' reliance on gas. In the Grid Delay Case, global gas imports are over 80 billion cubic metres (bcm) a year higher after 2030 than in a scenario aligned with national climate targets – and coal imports nearly 50 million tonnes higher. Delayed grid development also increases the risk that economically damaging outages would multiply. Today, such outages already cost around USD 100 billion a year, or 0.1% of global GDP.

Action today can secure grids for the future

Regulation needs to be reviewed and updated to support not only deploying new grids but also improving the use of assets. Grid regulation needs to incentivise grids to keep pace with the rapid changes in electricity demand and supply. This requires addressing administrative barriers, rewarding high

performance and reliability, and spurring innovation. Regulatory risk assessments also need to improve to enable accelerated buildout and efficient use of infrastructure.

Planning for transmission and distribution grids needs to be further aligned and integrated with broad long-term planning processes by governments. New grid infrastructure often takes five to 15 years to plan, permit and complete, compared with one to five years for new renewables projects and less than two years for new EV charging infrastructure. Grid plans need to integrate inputs from long-term energy transition plans across sectors, anticipating and enabling the growth of distributed resources, connecting resource-rich regions including offshore wind, and reflecting links with other sectors including transport, buildings and industry, and fuels such as hydrogen. Robust stakeholder and public engagement is key to inform scenario development. The public needs to be aware and informed about the link between grids and successful energy transitions.

To meet national climate targets, grid investment needs to nearly double by 2030 to over USD 600 billion per year after over a decade of stagnation at the global level, with emphasis on digitalising and modernising distribution grids. Concerningly, emerging and developing economies, excluding China, have seen a decline in grid investment in recent years, despite robust electricity demand growth and energy access needs. Advanced economies have seen steady growth in grid investment, but the pace needs to step up to enable rapid clean energy transitions. Investment continues to rise in all regions beyond 2030.

Building out grids requires secure supply chains and a skilled workforce. Governments can support the expansion of supply chains by creating firm and transparent project pipelines and by standardising procurement and technical installations. They also need to build in future flexibility by ensuring interoperability of all the different elements of the system. There is also a significant need for skilled professionals across the entire supply chain, as well as at operators and regulatory institutions. It will be essential to build out a pipeline of talent, ensure digital skills are integrated into power industry curricula and manage the impacts of the energy transition and increased automation on workers through reskilling and on-the-job training.

The most important barriers to grid development differ by region. The financial health of utilities is a central challenge in some countries, including India, Indonesia and Korea, while access to finance and high cost of capital are key barriers in many emerging market and developing economies, particularly in Sub-Saharan Africa. Financial barriers can be addressed by improving the way grid companies are remunerated, driving targeted grid funding and increasing cost transparency. For other jurisdictions, such as Europe, the United States, Chile and Japan, the strongest barriers relate to public acceptance of new projects and the need for regulatory reform. Here, policy makers can speed up progress on grids by enhancing planning, ensuring regulatory risk assessments allow for anticipatory investments and streamlining administrative processes.

https://investors.solaredge.com/news-releases/news-release-details/solaredge-announces-preliminary-financial-results-will-announce
October 19, 2023

SolarEdge Announces Preliminary Financial Results; Will Announce Financial Results for the Third Quarter 2023 on Wednesday, November 1, 2023

MILPITAS, Calif.--(BUSINESS WIRE)--Oct. 19, 2023-- SolarEdge Technologies, Inc. (Nasdaq: SEDG), a global leader in smart energy technology, today provided selected preliminary unaudited financial results for the third quarter ended September 30, 2023.

“During the second part of the third quarter of 2023, we experienced substantial unexpected cancellations and pushouts of existing backlog from our European distributors,” said Zvi Lando, Chief Executive Officer of SolarEdge. “We attribute these cancellations and pushouts to higher than expected inventory in the channels and slower than expected installation rates. In particular, installation rates for the third quarter were much slower at the end of the summer and in September where traditionally there is a rise in installation rates.”

As a result, third quarter revenue, gross margin and operating income will be below the low end of the prior guidance range. Additionally, the Company anticipates significantly lower revenues in the fourth quarter of 2023 as the inventory destocking process continues.

“The adjusted guidance is unrelated to the tragic events that have unfolded in Israel. While there has been some impact on daily routines at our headquarters, our offices and facilities are open worldwide, including in Israel, and we are manufacturing and providing customer support without interruption,” added Lando.

Third quarter revenue is now expected to be in the range of $720 million to $730 million, compared to the previous expectation of $880 million to $920 million.

GAAP gross margin is now expected to be within the range of 19% to 20%.

Non-GAAP gross margin* is now expected to be within the range of 20.1% to 21.1%, compared to the previous expectation of 28% to 31%.

GAAP operating loss is now expected to be within the range of $9 million to $28 million.

Non-GAAP operating income* is now expected to be within the range of $12 million to $31 million, compared to the previous expectation of $115 million to $135 million.

* Non-GAAP financial measure. See “Non-GAAP Financial Measures” for additional information on non-GAAP financial measures and a reconciliation to the most comparable GAAP measures.

Conference Call

The Company will host a conference call to discuss its results for the third quarter ended September 30, 2023 at 4:30 p.m. ET on Wednesday, November 1, 2023. The call will be available, live, to interested parties by dialing 800-343-4136. For international callers, please dial +1 203-518-9843. The Conference ID is SEDG. **To avoid a delay in connecting to the call, please dial in 10 minutes prior to the start time.** A live webcast will also be available in the Investors Relations section of the Company’s website at: http://investors.solaredge.com

A replay of the webcast will be available in the Investor Relations section of the Company’s web site approximately two hours after the conclusion of the call and will remain available for approximately 30 calendar days.

warn

https://www.globaltimes.cn/page/202310/1299902.shtml

Marriage age increases as ratio of couples aged 25-39 rises

By Global Times Published: Oct 15, 2023 11:04 PM

Newlyweds hold a giant paper cutting shaped as the Chinese character xi or "double happiness," after getting their marriage certificate at the Haidian district civil affairs bureau in Beijing on the day of the Qixi Festival, the Chinese Valentine's day which fell this year on August 22, 2023. Photo: Li Hao/Global Times

From 2013 to 2022, people aged between 25 and 29 made up the highest proportion of couples registering for marriage in the Chinese mainland, and the ratio of couples aged between 30 and 34 and between 35 and 39 continued to rise, according to statistics released by China's Ministry of Civil Affairs.

In 2022, the proportion of the married couples aged between 25 and 29 was 37.24 percent, an increase of 1.96 percentage points compared to a year ago, said the latest statistical bulletin released by the ministry. The ratio of couples aged between 30 and 34 and aged between 35 and 39 respectively rose to 20.7 and 9.1 percent in 2022 from 11.3 and 6.6 percent in 2010.

The ratio of couples aged between 20 and 24, however, dropped to 15.2 percent in 2022, a continuous decline since 2010, when the ratio was 37.6 percent.

Post-1990 and later generations, who are the main groups of prime marriage and childbearing age, mostly grew up and worked in cities and towns, and they have more years of education and face greater employment pressure, Yang Jinrui, a senior official on population matters at the National Health Commission, said in January.

The ministry said earlier in 2023 that a total of 6.84 million couples registered for marriage in 2022, a drop of 10.6 percent compared to 2021, which hit the lowest point since records began in 1986. The number of divorced couples reached 2.879 million in 2022, a 1.4 percentage point rise compared to 2021, said the latest bulletin.

In the first half of 2023, 3.93 million couples registered for marriage in China, an increase of 196,000 registrations compared to the same period in 2022 CCTV News reported.

According to the National Health Commission (NHC), the Chinese mainland had 9.56 million newborns in 2022, with the second child of a married couple and three or more children in a family accounting for 38.9 percent and 15 percent, respectively.

In response to the phenomenon of fewer marriages and low fertility, China has released a series of support policies in finance, taxes, housing, employment, education and other fields to create a marriage-friendly and fertility-friendly society, as the country faces growing pressure from falling birth rates.

https://www.globaltimes.cn/page/202310/1300097.shtml

China's population quality improving at faster pace, despite decrease in size: NBS

By Global Times Published: Oct 18, 2023 06:32 PM

Sheng Laiyun, deputy head of the National Bureau of Statistics. Photo: Courtesy of State Council Information Office of China

China's population quality is improving at a faster pace, which provides a good resource guarantee for the country's high-quality economic development, although the country's population size has declined, the National Bureau of Statistics (NBS) noted on Wednesday.

China's population structure has undergone profound changes along with its economic and social development, which includes declining birth rate and accelerated aging, according to the Seventh National Population Census in 2020 and sample surveys on population changes in the past two years, Sheng Laiyun, deputy head of the NBS, told a press conference.

Additionally, the population in the Chinese mainland recorded negative growth for the first time in 61 years, decreasing by 850,000 in 2022, according to the NBS.

However, Sheng emphasized that China's total population is still relatively large, especially with nearly 900 million people of working age. The quality of the population is improving, with new data showing that average years of education for the working-age population has reached 10.93 years, and that there are 240 million people who have received higher education in China, Sheng said.

"Therefore, although the population has declined, quality has improved faster, which provides a basis for the high-quality development of China's economy," Sheng noted.

The nationwide population sample survey in 2023 is based on an estimate of 1.4 million people in 500,000 households, and will start on November 1, lasting about two weeks, according to Sheng.

The purpose of the survey is to reflect the population changes accurately, and to provide a scientific basis for formulating population policies, the NBS official added.

According to the Statistical Bulletin on Health Development in China 2022 released by the National Health Commission on October 12, the ratios of second-child and third-child among newborns were 38.9 percent and 15 percent respectively.

Global Times

Dan Tsubouchi @Energy_Tidbits · 2h

Challenge for #EV forecasts - will huge rate of growth in EV sales to higher income continue in middle/lower income.

Median family household income.
New ICE car buyers = $122k
New EV buyers = $186k
@timhiggins reporting on Strategic Vision's survey
#OOTT

1 1 3 788

Dan Tsubouchi @Energy_Tidbits · 2h

Hmmm!

Wouldn't have expected Israel Economy Minister to be the one to warn Iran of what happens if Hezbollah gets involved.

Know it's a pipe dream but really hope somehow find a peace as an escalating regional conflict would bring no winners.
#OOTT

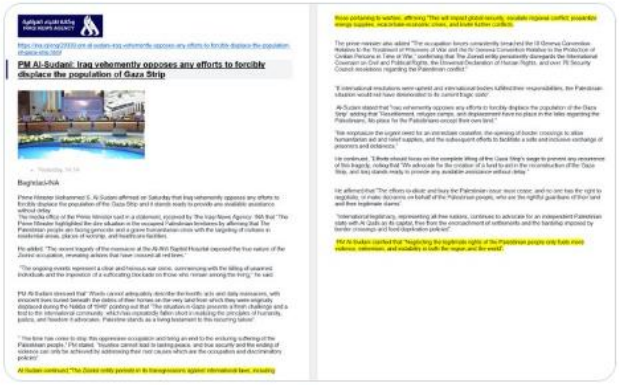
1 3 1,238

Dan Tsubouchi @Energy_Tidbits · 4h

Iraq warns on #Oil supply risk.

Iraq PM Al-Sudani warns Israel "... *including those pertaining to warfare, affirming "This will impact global security, escalate regional conflict, jeopardize energy supplies, exacerbate economic crises, and invite further conflicts"*

#OOTT



PM Al-Sudani: Iraq vehemently opposes any efforts to forcibly displace the population of Gaza Strip

Baghdad-Iraqi

1 9 15 2,175

Dan Tsubouchi @Energy_Tidbits · 18h

#EnergyTransition reality from @Siemens CEO.

"*intermittent energy which is coming in ... a market which is more driven by source than by the demand*"

"*it costs a lot of money*"

"*you cannot cut #Oil and #NatGas from now till then*"

Thx @dan_murphy. #OOTT

"this is also the message this morning, you cannot cut oil and gas from now till then" Siemens CEO Roland Busch

SAF Group created transcript of comments by Siemens CEO Roland Busch with CNBC's Dan Murphy posted on CNBC on Oct 20, 2023. https://www.cnbc.com/video/2023/10/02/we-are-running-out-of-time-siemens-ceo-says-on-energy-transition.html?&qsearchterm=siemens

Items in "italics" are SAF Group created transcript.

Busch *"On a high level view, we are moving our energy system from an OPEX based system to a CAPEX based system. What I am saying here is the following. You currently can build a very cheap power plant for gas for example but then you have to spend money for gas over the lifetime. This is what I call OPEX based. When you install renewables like solar or wind, you spend a lot of money at the beginning but then service and operational costs are basically zero. But that means you have to invest money now and enjoy the benefits later once the assets are written off. At the same time, it is obviously you have intermittent energy which is coming in so therefore you have to talk about a market which is more driven by the source than by the demand. You need storage at the same time. We are in the midst of this transition, it costs a lot of money. The players have to change. At the same time, and this is also the message this morning, you cannot cut oil and gas from now till then. So it needs a transition, a fair transition, and a timely one. The only problem is we are running out of time. Seven years to go, we have to cut for more than 40% in that time and this is the big challenge I would say."*

Prepared by SAF Group https://safgroup.ca/news-insights/

2 5 27 4,994

Dan Tsubouchi @Energy_Tidbits · Oct 21

#Oil Bulls will really like this.

Lowest oil in floating storage since Covid, 3rd consecutive week of very low levels.

10/20: 64.27 mmb
10/13 : 71.76 (~zero revisions)
10/06: 69.55 mmb

Down ~70 mmb vs recent 06/23/23 peak 134.36 mmb....
Show more

5 46 145 18.1K

Dan Tsubouchi @Energy_Tidbits · Oct 21

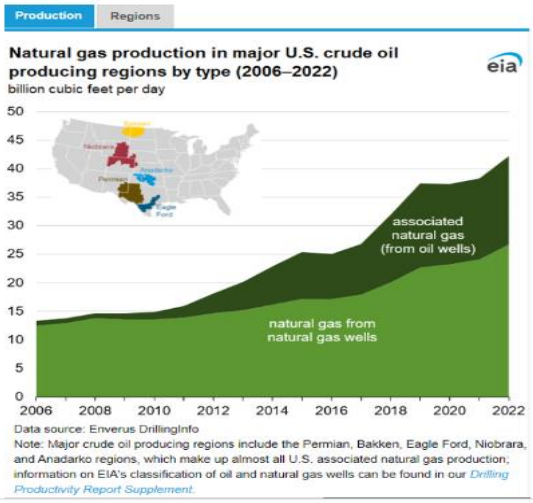
Who doesn't love a good graph.,

@EIA reminds associated natural gas from oil wells is now almost half of US natural gas production from shale/tight wells.

EIA DPR est for Nov has associated natural gas at 46.741 bcfd, or 47.3% of total shale/tight of 98.808 bcfd

#OOTT #NatGas

> **EIA** @EIAgov · Oct 20
>
> #NaturalGasWeeklyUpdate - Associated natural gas production increased 9% in 2022 due to higher crude oil production eia.gov/naturalgas/wee...



1 3 14 4,168

Dan Tsubouchi @Energy_Tidbits · 47m

Was a little surprised that #ClimateChange didn't make this list of shown issues that worry Americans even if just in the group that had <10% of Americans worried about.

#OOTT

> **Dan Tsubouchi** @Energy_Tidbits · 3h
>
> Why Biden hopes more Venezuela #Oil = lower gasoline price in 2024.
>
> #CNBC survey issues worry Americans: Cost of living 34%. immigration/border security 18%, then issues that had <10% ie. deficit, healthcare, national security, crime, abortion, unemployment....
> Show more
>
> 
>

2 4 1,005

Dan Tsubouchi @Energy_Tidbits · 3h

Why Biden hopes more Venezuela #Oil = lower gasoline price in 2024.

#CNBC survey issues worry Americans: Cost of living 34%. immigration/border security 18%, then issues that had <10% ie. deficit, healthcare, national security, crime, abortion, unemployment.
#OOTT @steveliesman

2 2 1,969

Dan Tsubouchi @Energy_Tidbits · 41m

Leaders better not take a victory lap too early on #inflation coming down.

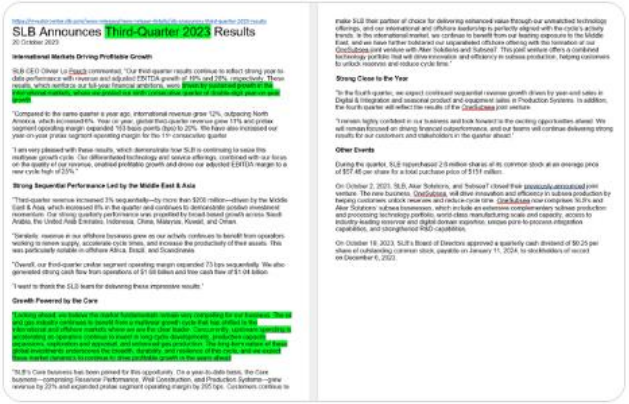
"*really what the public is clamoring about, what they're upset about is the price level and the Fed is addressing the rate of price change*" says @steveliesman @SquawkCNBC ie. #CostofLiving is still high!

1 · 1 · 510

Dan Tsubouchi @Energy_Tidbits · 4h

NOCs/IOCs see #Oil #NatGas here to stay

$SLB "*multiyear growth cycle that has shifted to the international & offshore markets…upstream spending is accelerating as operators continue to invest in long-cycle developments .. breadth, durability, & resilience of this cycle*"
#OOTT


SLB Announces Third-Quarter 2023 Results

1 · 6 · 1,364

Dan Tsubouchi @Energy_Tidbits · 4h

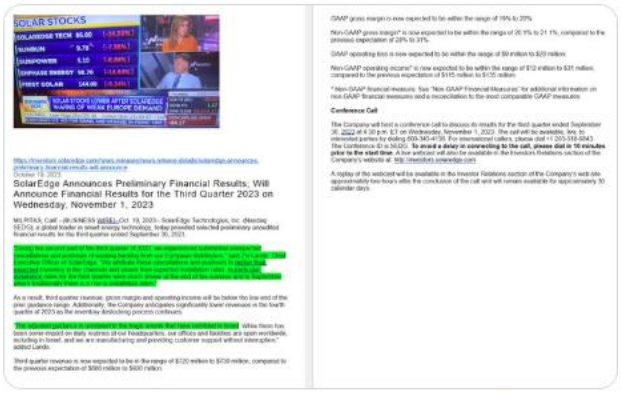
Ouch!

#Solar stocks hit by $SEDG warning.

"experienced substantial unexpected cancellations and pushouts"

"installation rates for the 3Q were much slower at the end of the summer & in Sept where traditionally there is a rise in installation rates"

#OOTT #NatGas @SquawkCNBC



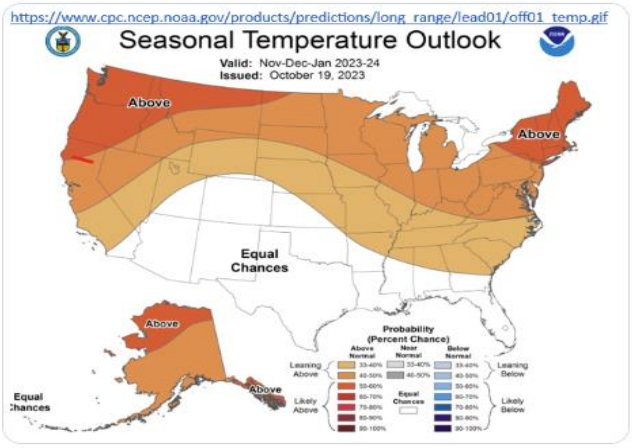
4 5 1,572

Dan Tsubouchi @Energy_Tidbits · 14h

Also @NOAA updated start to winter temperature probability calls for warmer than normal start to winter in Nov/Dec/Jan.

Should keep a lid on #NatGas until there is some cold weather

#OOTT #NatGas



> **Dan Tsubouchi** @Energy_Tidbits · 15h
>
> 
>
> No surprise, @NOAA winter outlook DJF is for warmer than normal temps with El Nino.
>
> Reminder 👇 10/14 tweet, also expect a warm start to Nov....
>
> Show more

2 8 2,718

Dan Tsubouchi @Energy_Tidbits · 15h

No surprise, @NOAA winter outlook DJF is for warmer than normal temps with El Nino.

Reminder 👇 10/14 tweet, also expect a warm start to Nov.

A warm start to winter should keep a lid on #NatGas until there is some visibility for colder weather.

#OOTT

U.S. Winter Outlook: Wetter South, warmer North

Drought improvement likely across the Southeast, Gulf Coast and Texas amid ongoing El Nino

October 19, 2023

This year, El Nino is in place heading into winter for the first time in four years, driving the outlook for warmer-than-average temperatures for the northern tier of the continental United States, according to NOAA's U.S. Winter Outlook released today by the Climate Prediction Center — a division of the National Weather Service.

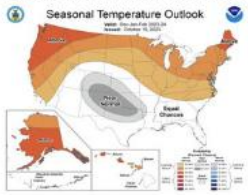
"These outlooks provide critical guidance on the upcoming season for many industries and sectors of our economy, from energy producers to commodities markets to agricultural interests to tourism," said Sarah Kapnick, Ph.D., NOAA chief scientist. "With a strengthening El Nino and more potential climate extremes in an already record-breaking year, we're lucky to have scientists like those at the Climate Prediction Center helping to build a Weather and Climate-Ready Nation by providing critical operational seasonal climate predictions."

From December through February, NOAA predicts wetter-than-average conditions for northern Alaska, portions of the West, the southern Plains, Southeast, Gulf Coast and lower mid-Atlantic and drier-than-average conditions across the northern tier of the U.S., especially in the northern Rockies and High Plains and near the Great Lakes.

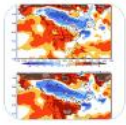
"An enhanced southern jet stream and associated moisture often present during strong El Nino events supports high odds for above-average precipitation for the Gulf Coast, lower Mississippi Valley and Southeast states this winter," said Jon Gottschalck, chief of the Operational Prediction Branch of the Climate Prediction Center.

NOAA forecasters, in collaboration with the National Integrated Drought Information System (NIDIS), continue to monitor extreme, ongoing drought conditions that have persisted through the southern and central U.S. and worsening drought in Hawaii.

"According to the Oct. 17 U.S. Drought Monitor, a third of the country, including Puerto Rico, is in drought," said Brad Pugh, operational drought lead with NOAA's Climate Prediction Center. "During late October, heavy precipitation is likely to result in drought improvement for the central U.S. El Nino with its enhanced precipitation is expected to provide drought relief to the southern U.S. during the next few months."



The 2023-2024 U.S. Winter Outlook map for temperature shows the greatest chances for warmer-than-average conditions are in the northern tier of the continental United States. (Image credit: NOAA)

> **Dan Tsubouchi** @Energy_Tidbits · Oct 14
>
> 
>
> Weather forecasts aren't always right, but 👇 @NOAA latest update still sees warm start to Nov.
>
> Dec/Jan/Feb are the key months to be cold but a warm Nov can keep a lid on tone & price for #NatGas until ...
> Show more

1 2 5 5,881

Dan Tsubouchi @Energy_Tidbits · 15h

Houthi missiles POTENTIALLY at Israel, where if not there?
👇@ErinBurnett missile path up Red Sea. Really hope Houthis haven't decided to reopen KSA attacks after months of relative calm. But huge Red Sea path target would be Aramco oil export terminal, refineries at Yanbu.
#OOTT

> **Dan Tsubouchi** @Energy_Tidbits · 16h
>
> 
>
> Breaking!
>
> Add to #Oil geopolitical risk premium.
>
> @wolfblitzer reports US navy warship shot down ...
> Show more

1 2 11 4,716

Dan Tsubouchi @Energy_Tidbits · 16h

Breaking!

Add to #Oil geopolitical risk premium.

@wolfblitzer reports US navy warship shot down missiles & drones launched from Yemen and potentially headed to Israel.

#OOTT

2 5 16 7,992

Dan Tsubouchi @Energy_Tidbits · 4h

Don't count your chickens before they hatch.

Hurricane season is supposed to be winding down but it looks like Hurricane Norma will be the first hurricane of the season to make a direct hit on #SanJosedelCabo.

We're were supposed to fly in tomorrow.

2 1 8 1,401

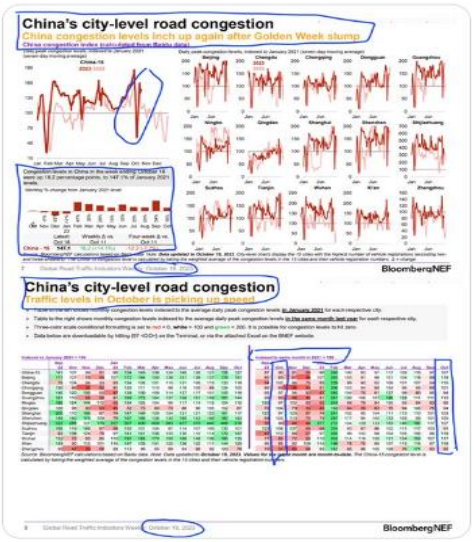
Dan Tsubouchi @Energy_Tidbits · 12h

Positive China mobility indicator.

China Baidu city-level road congestion MTD Oct 18 for Top 15 cities are now 107% of Oct 2021 levels.

Up big YoY as still had Covid restrictions in Q4/22.

Thx @BloombergNEF.
#OOTT



1 4 8 2,621

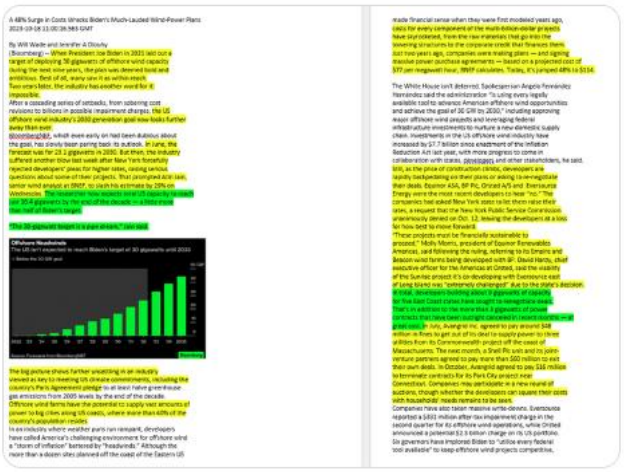
Dan Tsubouchi @Energy_Tidbits · Oct 18

#NatGas will be needed for longer.

@BloombergNEF slashed wind capacity fcast to 16.4 GW by 2030, "*[Biden] 30-GW target is a pipe dream*"

Here's why: Approved offshore wind projects has 9 GW trying to renegotiate plus 3 GW cancelled.

Thx @willwwade @jendlouhyhc @atinjai
#OOTT



4 17 5,584

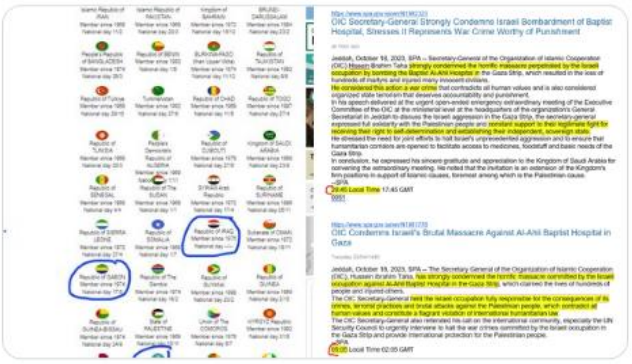
Dan Tsubouchi @Energy_Tidbits · Oct 18

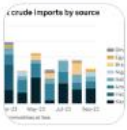
Geopolitical risk for oil.

See 👇 @jcgnana tweet, ex Brazil, all other Israel #Oil sources are @OIC_OCI members.

OIC 11:45am MT, still blames Israel "*strongly condemned the horrific massacre perpetrated by the Israeli occupation by bombing the Baptist Al-Ahli Hospital*"

#OOTT



> **Jennifer Gnana** @jcgnana · Oct 18
>
> 
>
>
> Replying to @jcgnana
>
> OPEC has played down Iranian calls for an oil embargo against Israel following the latest escalation in the ongoing conflict in Gaza. OPEC suppliers have so far shunned the use of oil as a weapon. Below, a list of various suppliers of crude to Israel since Jan. #OOTT

1 · 4 · 4 · 4,686

Dan Tsubouchi @Energy_Tidbits · Oct 18

For those not near their laptops. At 830am MT, @EIAgov released its #Oil #Gasoline #Distillates inventory as of Oct 13. Table below compares EIA data vs @business expectations and vs @APIenergy yesterday. Prior to release, WTI was $87.75. #OOTT

Oil/Products Inventory Oct 13: EIA, Bloomberg Survey Expectations, API			
(million barrels)	EIA	Expectations	API
Oil	-4.49	-0.55	-4.38
Gasoline	-2.37	-0.10	-1.58
Distillates	-3.19	-1.00	-0.61
	-10.05	-1.65	-6.57
Note: Oil is commercial so builds in no change in SPR for the Oct 13 week			
Note: Included in the oil data, Cushing had a 0.76 mmb draw for Oct 13 week			
Source EIA, Bloomberg			
Prepared by SAF Group https://safgroup.ca/news-insights/			

2 · 6 · 1,607

Dan Tsubouchi @Energy_Tidbits · Oct 18

bifurcation of air travel into those that can and do raise fares vs those competing in the low pricing model. united ceo says no sign of consumer pull back but they are 1 of 2 airlines seeing 98% of revenue growth. the other 8 may feel differently. @SquawkCNBC #OOTT

1 5 1,799

Dan Tsubouchi @Energy_Tidbits · Oct 18

China ".. in the face of the complex international geopolitical environment and energy situation ...."ensure that the #NatGas storage is full in winter"

This was Oct 10 meet.

See 👇 10/15/23 tweet, absent supply interruption, biggest factor for gas is how cold is it.

#OOTT

https://www.nea.gov.cn/2023-10/17/c_1310745851.htm

国家能源局
National Energy Administration

The National Energy Administration organized a special conference on natural gas supply guarantee in the 2023-2024 heating season

Release time: 2023-10-17 Source: National Energy Administration Large, medium and small

On October 10, the National Energy Administration organized a special conference on natural gas supply in the 16-2023 heating season, deeply implemented the spirit of the 2024th National Congress of the Communist Party of China, studied and implemented Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, and took the heating season to ensure warm supply and ensure that the people are warm in winter as an important part of promoting the continuous deepening of theme education and promoting the high-quality development of the industry. Zhang Jianhua, Secretary of the Party Group and Director of the National Energy Administration, attended and spoke at the meeting, which was presided over by Ren Jingdong, member of the Party Group and Deputy Director of the National Energy Administration, and attended by Li Yong, General Manager of CNOOC, Zhang Daowei, Deputy General Manager of CNPC, Niu Shuowen, Deputy General Manager of Sinopec Group, and He Zhongwen, Deputy General Manager of State Pipe Network Group.

The meeting pointed out that since the last heating season, in the face of the complex international geopolitical environment and energy situation, the construction of China's natural gas production, supply, storage and marketing system has been coordinated and strengthened, the central and local enterprises have coordinated with each other, and the industry has taken the initiative to basically achieve the coordinated and stable development of natural gas. The national natural gas consumption showed a recovery growth trend, and the natural gas supply and demand situation was generally stable throughout the year and heating season.

The meeting required that central oil and gas enterprises should continue to take the lead in ensuring supply and price stability, adhere to the domestic all-out efforts to increase reserves and production, ensure that the gas storage is full in winter, and the "national network" operates safely and stably, and do everything possible to ensure the stable supply of natural gas during the heating season. The meeting emphasized that it is necessary to adhere to the direction of natural gas market-oriented development and reform, strengthen the signing and performance of gas supply contracts, and do a good job in emergency response within the contract and guarantee supply within the contract. The meeting also sorted out the situation of ensuring supply in the heating season, and made targeted arrangements for natural gas supply in some key areas, key periods or key links, and put forward relevant work requirements.

Responsible comrades of relevant departments and bureaus of the National Development and Reform Commission and the National Energy Administration, and responsible comrades of relevant departments of PetroChina, Sinopec, CNOOC and State Pipe Network Group attended the meeting.

Dan Tsubouchi @Energy_Tidbits · Oct 15

Reminder any military conflict that interrupts tankers via Strait of Hormuz will have a huge impact.

It is the most important tanker transit chokepoint for #Oil #PetroleumProducts #LNG tankers. ...
Show more

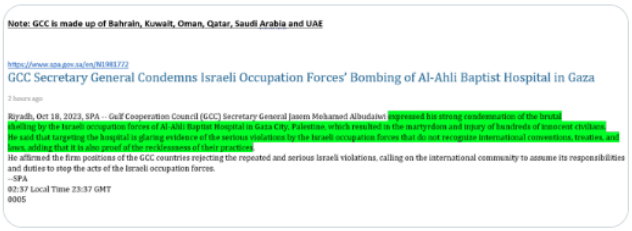
Dan Tsubouchi @Energy_Tidbits · 16m

Brent +$1.80 to $91.70 at 7:45pm MT.

Tragic bombing of Gaza hospital increasing risk to expanding war.

See👇 Key Arab states, GCC "*targeting the hospital is glaring evidence of the serious violations by the Israeli occupation forces*"

#OOTT



Note: GCC is made up of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and UAE

https://www.spa.gov.sa/en/N1981722

GCC Secretary General Condemns Israeli Occupation Forces' Bombing of Al-Ahli Baptist Hospital in Gaza

2 hours ago

Riyadh, Oct 18, 2023, SPA -- Gulf Cooperation Council (GCC) Secretary General Jasem Mohamed Albudaiwi expressed his strong condemnation of the brutal shelling by the Israeli occupation forces of Al-Ahli Baptist Hospital in Gaza City, Palestine, which resulted in the martyrdom and injury of hundreds of innocent civilians.

He said that targeting the hospital is glaring evidence of the serious violations by the Israeli occupation forces that do not recognize international conventions, treaties, and laws, adding that it is also proof of the recklessness of their practices.

He affirmed the firm positions of the GCC countries rejecting the repeated and serious Israeli violations, calling on the international community to assume its responsibilities and duties to stop the acts of the Israeli occupation forces.

--SPA

02:37 Local Time 23:37 GMT

0005

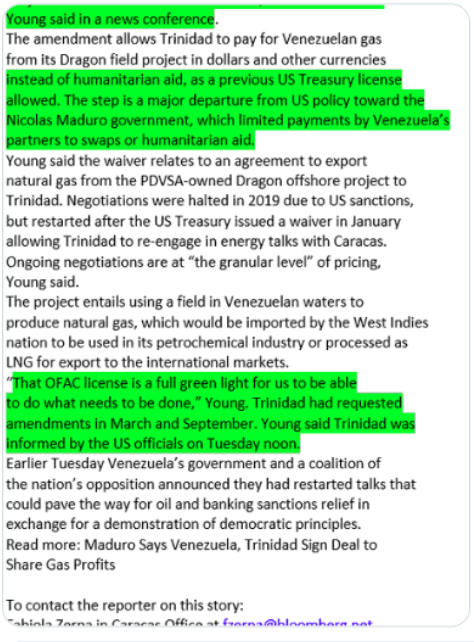
1 1 5 513

Dan Tsubouchi @Energy_Tidbits · 52m

Good indicator US will go ahead with relax sanctions vs Maduro.

"*major departure from US policy*" toward Maduro govt, Trinidad gets amended license from US that will allow them to pay VEN in cash for #NatGas instead of humanitarian aid in prior license.

Thx @zerpius
#OOTT



Young said in a news conference.
The amendment allows Trinidad to pay for Venezuelan gas from its Dragon field project in dollars and other currencies instead of humanitarian aid, as a previous US Treasury license allowed. The step is a major departure from US policy toward the Nicolas Maduro government, which limited payments by Venezuela's partners to swaps or humanitarian aid.
Young said the waiver relates to an agreement to export natural gas from the PDVSA-owned Dragon offshore project to Trinidad. Negotiations were halted in 2019 due to US sanctions, but restarted after the US Treasury issued a waiver in January allowing Trinidad to re-engage in energy talks with Caracas.
Ongoing negotiations are at "the granular level" of pricing, Young said.
The project entails using a field in Venezuelan waters to produce natural gas, which would be imported by the West Indies nation to be used in its petrochemical industry or processed as LNG for export to the international markets.
"That OFAC license is a full green light for us to be able to do what needs to be done," Young. Trinidad had requested amendments in March and September. Young said Trinidad was informed by the US officials on Tuesday noon.
Earlier Tuesday Venezuela's government and a coalition of the nation's opposition announced they had restarted talks that could pave the way for oil and banking sanctions relief in exchange for a demonstration of democratic principles.
Read more: Maduro Says Venezuela, Trinidad Sign Deal to Share Gas Profits

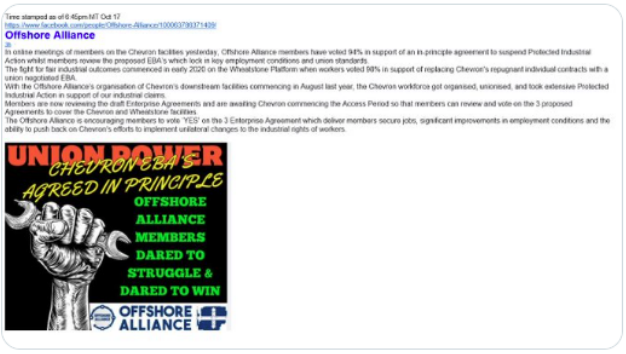
To contact the reporter on this story:
Fabiola Zerpa in Caracas Office at fzerpa@bloomberg.net

Dan Tsubouchi @Energy_Tidbits · 1h

Union suspends any strike action at Chevron 2.1 bcf/d Gorgon LNG and 1.2 bcf/d Wheatstone LNG while members review proposed labor deal.

Offshore Alliance says members voted 94% in support of in-principle agreement.

#OOTT #LNG #NatGas



> **Dan Tsubouchi** @Energy_Tidbits · Oct 15
>
> 
>
> Still on track for strike actions starting Thurs at Chevron 2.1 bcfd Gorgon & 1.2 bcfd Wheatstone #LNG.
>
> Chevron & union agreed to FWC terms to end strike But haven't been able to paper deal in >3 wks....
> Show more

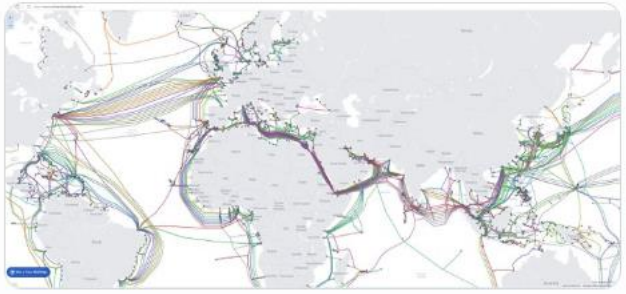
1 · 2 · 1,531

Dan Tsubouchi @Energy_Tidbits · 1h

Overlooked global security & economy risk - back door hacking and/or damage (ie explosion) to submarine communications cables.

Sweden says underwater cable Estonia/Sweden damaged in explosion that hit Finnish-Estonian #NatGas pipeline.

#OOTT
submarinecablemap.com



> **Carl-Oskar Bohlin** @CarlOskar · 11h
>
> Tillsammans med Försvarsministern, Marinenchefen och GD KBV har jag idag redogjort för information som ger vid handen att det vid sidan av de tidigare kända skadorna på en Finsk-Estnisk gasledning och en närliggande kommunikationskabel också finns en skada på en...
> Show more

1 · 6 · 1,763

Dan Tsubouchi @Energy_Tidbits · 24m

"*Russia's Crude Oil Shipments Are Creeping Up Again*", reports @JLeeEnergy on @business tanker tracking.

Latest 4-wk average to Oct 15 creeped up to 3.36 mmb/d, 80,000 b/d over commitment to cut to 3.28 mmb/d.

#OOTT

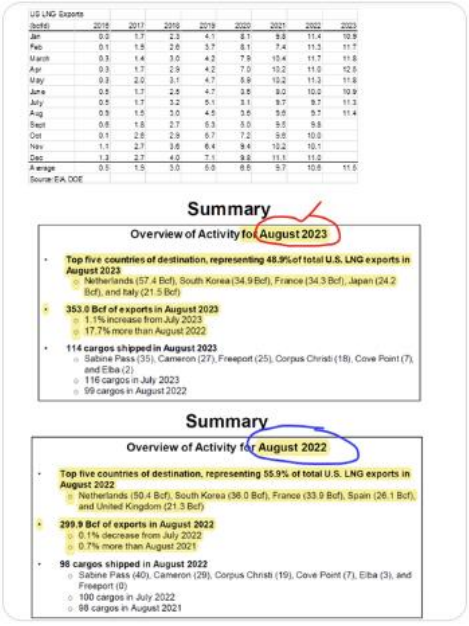
1 5 606

Dan Tsubouchi @Energy_Tidbits · 40m

US #LNG exports Aug/23 11.4 bcfd, +1.1% MoM, +17.7% YoY. Freeport LNG was out in Aug/22.

Aug/23 top 5 export mkts: Dutch, Korea, France, Japan, Italy. Aug/22: Dutch, Korea, France, Spain, UK.

This DOE LNG data is posted 2 wks before same data in @EIAgov #NatGas Monthly #OOTT



US LNG Exports

(bcfd)	2016	2017	2018	2019	2020	2021	2022	2023
Jan	0.0	1.7	2.3	4.1	8.1	9.8	11.4	10.9
Feb	0.1	1.5	2.6	3.7	8.1	7.4	11.3	11.7
March	0.3	1.4	3.0	4.2	7.9	10.4	11.7	11.8
Apr	0.3	1.7	2.9	4.2	7.0	10.2	11.0	12.5
May	0.3	2.0	3.1	4.7	5.9	10.2	11.3	11.8
June	0.5	1.7	2.5	4.7	3.8	9.0	10.0	10.9
July	0.5	1.7	3.2	5.1	3.1	9.7	9.7	11.3
Aug	0.5	1.5	3.0	4.5	3.5	9.6	9.7	11.4
Sept	0.6	1.6	2.7	5.3	5.0	9.5	9.8	
Oct	0.1	2.6	2.9	5.7	7.2	9.6	10.0	
Nov	1.1	2.7	3.6	6.4	9.4	10.2	10.1	
Dec	1.3	2.7	4.0	7.1	9.8	11.1	11.0	
Average	0.5	1.9	3.0	5.0	6.6	9.7	10.6	11.5

Source: EIA, DOE

Summary

Overview of Activity for August 2023

- **Top five countries of destination, representing 48.9% of total U.S. LNG exports in August 2023**
  - Netherlands (57.4 Bcf), South Korea (34.9 Bcf), France (34.3 Bcf), Japan (24.2 Bcf), and Italy (21.5 Bcf)
- **353.0 Bcf of exports in August 2023**
  - 1.1% increase from July 2023
  - 17.7% more than August 2022
- **114 cargos shipped in August 2023**
  - Sabine Pass (35), Cameron (27), Freeport (25), Corpus Christi (18), Cove Point (7), and Elba (2)
  - 116 cargos in July 2023
  - 99 cargos in August 2022

Summary

Overview of Activity for August 2022

- **Top five countries of destination, representing 55.9% of total U.S. LNG exports in August 2022**
  - Netherlands (50.4 Bcf), South Korea (36.0 Bcf), France (33.9 Bcf), Spain (26.1 Bcf), and United Kingdom (21.3 Bcf)
- **299.9 Bcf of exports in August 2022**
  - 0.1% decrease from July 2022
  - 0.7% more than August 2021
- **98 cargos shipped in August 2022**
  - Sabine Pass (40), Cameron (29), Corpus Christi (19), Cove Point (7), Elba (3), and Freeport (0)
  - 100 cargos in July 2022
  - 98 cargos in August 2021

1 3 832

Dan Tsubouchi @Energy_Tidbits · 5h

Too optimistic #s, but more international flights up = more domestic feeder lights.

Scheduled +355/wk increase for next 4-wks in international flights is driver for huge jump in China scheduled domestic flights over next 4 wks to 137,469.

Thx @BloombergNEF Claudio Lubis
#OOTT

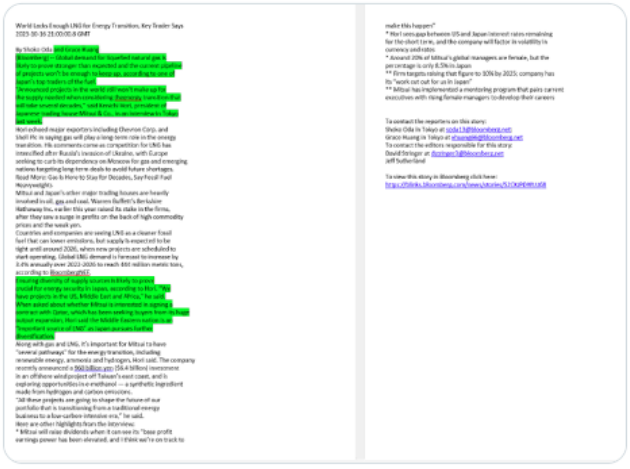
2 8 1,440

Dan Tsubouchi @Energy_Tidbits · 15h

#LNG supply short looking ahead.

"*Announced projects in the world still won't make up for the supply needed when considering the #EnergyTransition that will take several decades*" Mitsui President Hori.

Thx @shoko_oda Grace Huang
#OOTT #NatGas



2 7 11 3,908

Dan Tsubouchi @Energy_Tidbits · 20h

Timely to get more VEN #Oil into PADD 3 refineries to help lower #Gasoline prices in 2024 election year.

More VEN oil = Less call on Cdn oil in PADD 3.

Fortunately, est start TMX by end Q1/24 = 590,000 b/d new capacity Cdn oil to BC for export.

#OOTT

...

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> **Samantha Schmidt** @schmidtsam7 · Oct 16
>
> EXCLUSIVE: The Biden administration and the Venezuelan government have agreed to a deal in which the U.S. would ease sanctions on Venezuela's oil industry and Maduro would allow a competitive, internationally monitored presidential election next year.
>
> ...
>
> Show more

1 4 14 5,167