Energy Tidbits

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Supplemental Documents

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Bloomberg @TheTerminal
Future of 'Broken' Oil Program Under Review, Interior Head Says
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April 2 (National Post) -- (Bloomberg) - The U.S. government program for selling drilling rights on federal land is so "fundamentally broken" that changes could be needed to address climate change and ensure taxpayers get a greater value from extracted oil and gas, Interior Secretary Deb Haaland said Friday.

"The American taxpayers deserve to have a return on on their investment," Haaland said, stressing that the public lands managed by Interior are a shared asset.

"They don't just belong to one sector or one industry. They belong to the outdoor economy, they belong to the kids who take their first breath, on a hike out on a trail," Haaland told reporters. "They belong to everyone, and it's our job to make sure that every voice is heard with respect to how we manage those lands."

A week after taking office, President Joe Biden ordered the Interior Department to pause selling new oil and gas leases on federal lands and waters while the agency studies possible requirements on any future sales - such as higher royalty payments, location restrictions and even limits on the number of tracts held by individual companies.

Although Haaland has repeatedly stressed the leasing pause is temporary, it could take months or years to implement substantive changes - and the overhaul could have profound impacts on the future of energy development on public lands and waters now responsible for 22% of U.S. oil production and 12% of the country's natural gas.

The Interior Department is taking public comment on how to proceed through April 15, with plans to issue an interim analysis outlining recommended changes this summer. That report "will wrestle with some fundamental questions about the oil and gas program, including whether it's delivering a fair return to American taxpayers, whether it fairly accounts for the impacts of climate, whether there's adequate opportunity for public input, including from Indian tribes, and whether we have the right mechanisms in place to avoid irreparable harm to wildlife, water, sacred sites and beyond," Haaland said.

Some environmentalists have urged a permanent halt to the sale of drilling rights on federal land and waters, arguing the territory should be enlisted in the fight against climate change, rather than used to produce the fossil fuels that drive the phenomenon. That dovetails with views that Haaland espoused long before she became Interior secretary, when she encouraged the end of fracking on federal lands.

But the oil industry has warned that an extended moratorium or a sharp crackdown on future leasing opportunities would curtail domestic energy supplies, harming U.S. national security interests while depriving federal coffers of revenue tied to the activity.

While oil leasing is paused, Interior is seeking to advance renewable energy development, including new coastal wind farms along the East Coast.

Haaland also emphasized her plans to boost conservation of federal lands, with a focus on stemming the decline of biodiversity, fighting climate and addressing inequities in the public's access to nature.

Haaland, a former Democratic lawmaker from New Mexico who was sworn in as secretary last month, is also examining the boundaries of the Bears Ears National Monument in Utah, which was shrunk under former President Donald Trump. Haaland's review, which will include meetings with local leaders and other stakeholders next week, could result in enlarging boundaries for the protected site.

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https://thehill.com/policy/energy-environment/546207-haaland-on-public-lands-drilling-taxpayers-deserve-a-return-on

Haaland on public lands drilling: Taxpayers deserve 'a return on their investment'

BY RACHEL FRAZIN - 04/02/21 02:14 PM EDT 283

Interior Secretary Deb Haaland said Friday that taxpayers deverve “a return on their investment” when asked what changes or different approaches are needed for the country’s oil and gas program.

Currently, the Biden administration has paused new leasing on federal lands and waters “pending completion of a comprehensive review and reconsideration of federal oil and gas permitting and leasing practice.”

An interim report is expected to be completed this summer.

Asked what changes need to be made to fix the oil and gas leasing program, Haaland told reporters that “the American taxpayers deserve to have a return on their investment.”

“Because the program hasn’t been reviewed in a long time, they’ll be looking at a lot of things,” she added of federal scientists. “We have an obligation to make sure that this industry does the best it can for the American people.”

While on the campaign trail, President Biden called for banning new permits for oil and gas on public land and waters and adjusting fees paid to the government for these activities to account for climate costs. It’s currently unclear whether these changes will be pursued.

Asked what Trump administration changes will be on the top of her list to reverse, Haaland said, “I don’t know what to say. There’s so much ... there are a number of those issues that we want to look at.”

She mentioned rollbacks to protections for endangered species and migratory birds as among those she’d take on.

“I am positive that whatever we feel needs to be changed or reversed, that we’ll do that according to the science,” Haaland added.

The Interior Department has already said it would aim to reverse the Trump administration’s changes that removed penalties for industry when they accidentally or incidentally kill migratory birds.

Haaland also addressed reports that chief of staff Jennifer Van der Heide had been reassigned after planning a 50-person party that was eventually canceled, saying she’ll be “remaining on my senior staff.”

She said the same of Elizabeth Klein, who Biden had planned to nominate as Haaland’s No. 2. The White House later reversed, saying it would not nominate Klein amid reports of disagreement from Sens. Lisa Murkowksi (R-Alaska) and Joe Manchin (D-W.Va.).

https://www.dallasfed.org/research/economics/2021/0304.aspx

Anticipated Federal Restrictions Would Slow Permian Basin Production

Garrett Golding and Kunal Patel

March 04, 2021

Possible changes to oil leasing and permitting requirements governing federal lands could shift oil production, prompting a realignment of Permian Basin activity between Texas and New Mexico. Half of New Mexico's production comes from federal acreage in the Permian Basin, and the anticipated actions would slow economic growth, adversely affecting that state's employment and tax collections.

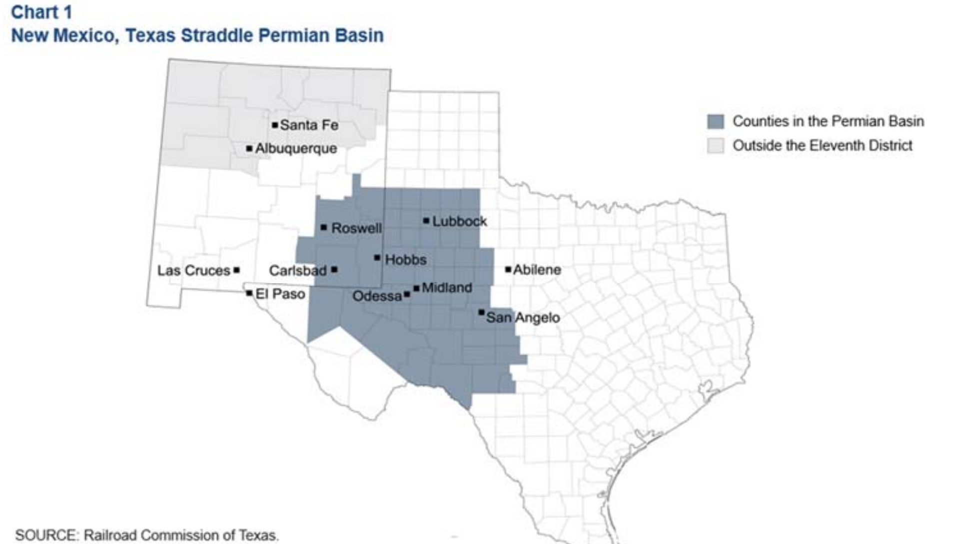
In January, federal agencies temporarily halted new leasing and permitting for oil and gas activity on federal lands and began a concurrent government-wide review of policies on fossil fuel development.

Although the timing and outcome of this process are uncertain, we consider two possible regulatory scenarios and their impact on Permian Basin oil production.

Taking both into account, we estimate that by the end of 2025, the Permian will produce between 230,000 and 490,000 barrels per day less than if drilling activity continued at its current pace. As a result, production and employment across the basin will gradually shift from federal lands in New Mexico to private and state lands in New Mexico and Texas, with wide-ranging economic implications for the region.

Federal Lands Critical to New Mexico's Oil Production

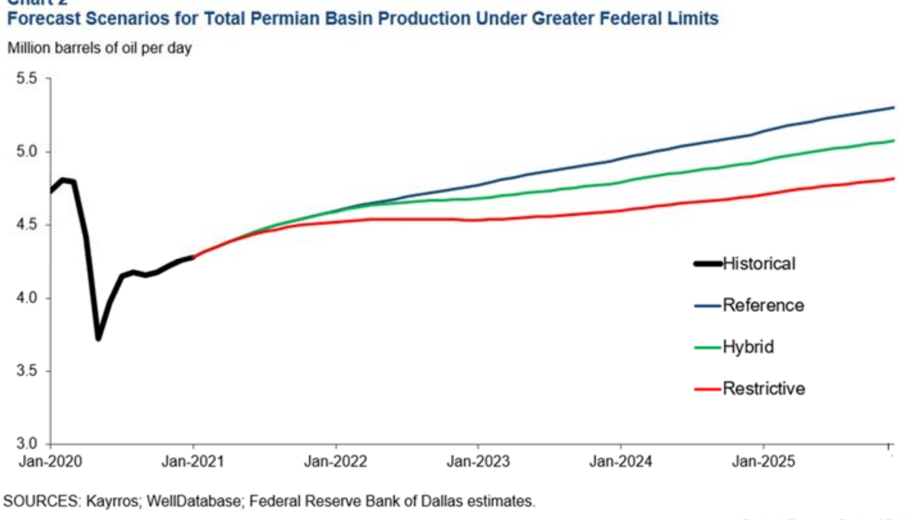
The Permian Basin is the world's largest shale oil and gas field, straddling the Texas–New Mexico border (Chart 1). The Texas side produced 3.3 million barrels per day (mb/d) of oil on average in 2020, while the New Mexico portion pumped 1.0 mb/d. In New Mexico, half of Permian production in 2020 came from wells on federal lands. All production in Texas is on private and state-owned land. Wells on federal leases are, on average, higher performing than those in other parts of the basin.



Energy companies historically have leased acreage for 10-year periods and applied for permits from the federal government to drill wells. Permits are valid for two years; if a permit goes unused during the period, leaseholders have historically been able to obtain a two-year extension.

Restrictions on Leasing, Permitting Examined

Based on media reports and discussions with stakeholders, we consider two scenarios and a reference scenario to evaluate the impacts of potential policies in the Permian Basin. An average price of $50 for benchmark West Texas Intermediate is assumed (Chart 2).



- Reference Case: This serves as the benchmark and assumes little-changed leasing, permitting and drilling from first-quarter 2021 levels.

  Under this scenario, Permian Basin production grows from 4.3 mb/d today to 5.3 mb/d in December 2025. New Mexico's production expands from 1.0 mb/d to 1.5 mb/d.

- Hybrid Case: It assumes no new federal leasing, but existing leaseholders continue receiving drilling permits. Permit reviews are more rigorous, leading to slower approvals and a costlier operating environment beginning in 2022. Based on companies' public statements, firms that hold acreage across the basin gradually relocate drilling rigs and completion crews to their nonfederal locations.

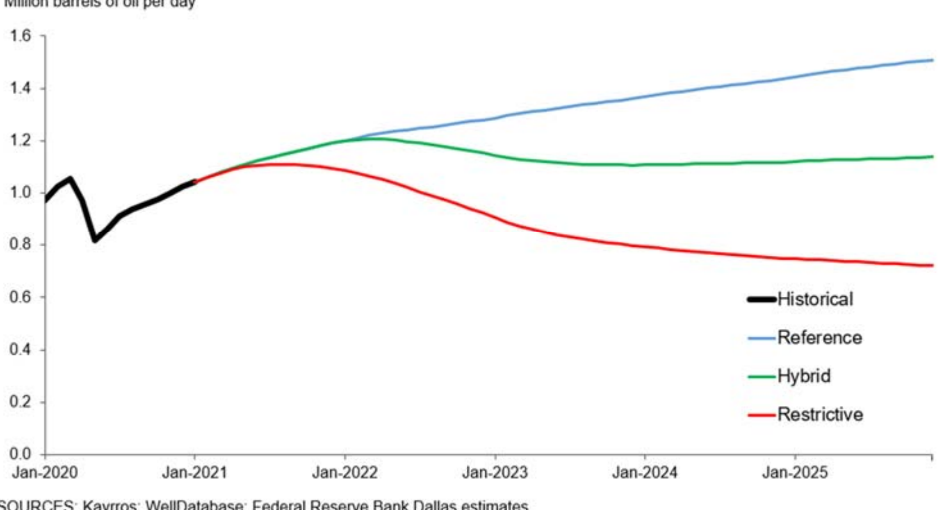
  Permian Basin production increases to 5.1 mb/d in 2025, or 0.2 mb/d below the Reference Case. New Mexico's oil output is 1.1 mb/d, or 0.4 mb/d below the Reference Case in 2025.

- Restrictive Case: No new federal permits or extensions are granted starting in 2023. This is when the most-recently issued permits will expire. The existing permitting freeze adversely affects production in the near-term due to a lack of approvals of permit modifications and pipeline rights-of-way. As in the Hybrid Case, companies shift their focus to nonfederal acreage.

  Permian production climbs to 4.8 mb/d in 2025, or 0.5 mb/d below the Reference Case. New Mexico's output drops to 0.7 mb/d, or 0.8 mb/d less than the Reference Case.

New Mexico More Vulnerable than Texas

These production forecasts have notable impacts across the region, notably in New Mexico (Chart 3).



With an expected shift in drilling from federal acreage, employment moves across state borders from New Mexico to Texas.

We assume that a standard three-well pad on average requires 240 workers. In the Hybrid and Restrictive cases, between 3,500 and 6,600 drilling and completions workers will not be needed in New Mexico from now through year-end 2025, while Texas will require between 5,400 and 7,400 more workers. The ramifications of the shift extend to support and corporate jobs, with secondary effects on local retail and hospitality sectors.

The fiscal impact will also be large. New Mexico received $2.6 billion from oil and gas industry taxes, royalties and fees during fiscal 2020 ended June 30, 2020—one-third of the state's general fund. A total of $809 million came from the state's share of minerals revenue on federal properties.

The slowdown in activity and production levels in the Restrictive Case puts a large and growing portion of state revenue at risk after this year. Under the Hybrid Case, production stabilizes and preserves state royalty and tax revenue closer to current levels.

At the same time, oil refineries and chemical facilities on the Gulf Coast would need to adapt to losing barrels from the Permian Basin. These industries expanded capacity in recent years to consume the specific variety of light and super-light crude oil produced in the Permian. Similar oil from West Africa and the Arabian Gulf could most easily substitute for the lost inputs. Suppliers in those regions could also replace Permian volumes previously destined for the export market—primarily to East Asia and South America.

Wide-Ranging Policy Implications

New policies are likely months away, but oil companies, state governments and municipalities are in the process of examining the potential outcomes. Our analysis focuses on the Permian Basin given its location and economic significance to the Dallas Fed's Eleventh District service area.

We expect production from other basins to decline against business-as-usual forecasts as well, especially in the Gulf of Mexico, where the federal government manages nearly all oil and gas activity.

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April 1, 2021

Energy Insights

Trans Mountain Pipeline Expansion—Update with Ian Anderson

Our recent discussion with Trans Mountain Corporation's President and CEO, Ian Anderson, and CFO, Mark Maki, was instructional and walked through the 590,000 bbl/d expansion that is under way. We look upon the Trans Mountain Expansion as Canada's most important energy infrastructure project of this decade.

Logistically, the expansion project sat 23% complete at the end of 2020—short of the earlier ~30% completion target. The expansion has incurred some schedule challenges, though it is now on track and well heeled for 60–65% completion by the end of 2021 and mechanical completion by the end of 2022. While 2020 was the year in which construction commenced in all earnest, delays were experienced amid adverse weather, construction stand-down following safety incidents (and consequent re-evaluation of contractor guidelines), permitting delays, and Covid-19 related impacts. While delays in 2020 added some costs (including standby costs on equipment and management personnel), the overall impact on the schedule is not likely to be significant; the expansion pipeline is expected to be in-service in early 2023.

From the company's perspective, the most critical segments of the project in 2021 involve finishing the Coquihalla work, which remains challenging given the short construction window. Crucial clearing of about 25 km of land was completed last fall, and with permits expected in hand, the company will be laying pipe this summer. Other segments of importance include completion of the tunnel boring and dock work. These are important milestones but will be less critical given progress in 2020.

More than 5,000 people are currently involved in construction activity—most inside the Burnaby terminal and Westridge—and a peak workforce of exceeding 8,000 is expected by summer 2021. Construction activity remains very busy in spreads 1 and 2. In Edmonton, 95% of work has been completed, with a couple of tanks left to be built at the Edmonton terminal. A lot of the preparatory work has been completed on the tunnel between Westridge and the Burnaby terminal; two regulatory conditions remain outstanding before tunneling commences, which is expected in late April and will be a major component of the project.

Indigenous engagement in the project is now well established with open lines of communication between virtually all groups along the right-of-way and project management. A total of $1.5 billion in project-related contracts have been signed with Indigenous contractors, while Indigenous people comprise more than 1,000 of the project's total workforce. With regard to eventual Indigenous ownership, the Canadian government is committed to involving 125 communities in the process, and Indigenous ownership will be meaningful—not just in the expansion project but also in the broader corporation.

Operationally, the existing Trans Mountain Pipeline carries a base nameplate capacity of 300,000 bbl/d. While products transported are dictated by market demand, the line is roughly 65% weighted toward light oil, with about 20% allocated toward refined products (gasoline and diesel) and the remaining 15% occupied by heavy oil. Interestingly, throughputs can trend higher than nameplate capacity depending on the product flowing, with light crudes and refined products enabling the line to flow at rates above 300,000 bbl/d. The existing line has remained full virtually every day since 2008, and it experienced its highest throughput levels in July and August last year (around 335,000–340,000 bbl/d)—despite Covid-19. Looking into 2021, throughput is expected to be about 315,000 bbl/d on average.

Following the Trans Mountain Pipeline Expansion, the entire base system is expected to serve light oil and refined products, while heavy oil will flow through the 590,000 bbl/d expansion line. *Cont. on page 2*

Priced as of prior trading day's market close, EST (unless otherwise noted). All values in CAD unless otherwise noted
Disseminated: Apr 1, 2021 00:15EDT; Produced: Mar 31, 2021 19:29EDT
For Required Non-U.S. Analyst and Conflicts Disclosures, see page 3

Continued from page1

At the Westridge Marine Terminal, oil loadings currently average about 2–3 Aframax vessels per month, with capacity to serve up to five tankers per month. The expansion of the terminal will see three brand-new berths constructed (35–40% complete now), which will allow loadings of up to 35 tankers per month. For reference, Aframax vessels can handle about 550,000–600,000 barrels of oil but are limited to around 85% of capacity at Westridge given the shallow nature of parts of the Burrard Inlet. The majority of tankers loading at Westridge are ultimately destined for California (given that its refineries are geared toward heavy oil), with some traveling to the US Gulf Coast and others to Southeast Asia.

From a legal perspective, Trans Mountain does not believe that it has any major legal obstacles in front of it on items such as authority, permits, certificates, or approvals. While some noise or protests may always arise with infrastructure projects of this size, the company does not believe that it would meaningfully impact work or progress timeliness.

In terms of shipping commitments, around 80% of volumes will be underpinned by long-term contracts post expansion, while the remaining 20% will remain open for spot volumes. The majority of the long-term contracts will span 20 years in length, with some operating under 15-year agreements. While the main goal is to operate the pipeline at full rates, the company viewed the 80/20 split as sufficient to provide certainty to longer-term large shippers while also providing an opportunity for smaller participants (who may not necessarily carry the requisite credit capacity for long-term arrangements) to also participate in shipping via the pipeline.

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Repsol to halt all fuels output at Puertollano

Published date: 01 April 2021

Share:

Spanish integrated firm Repsol has shut the crude distillation unit (CDU) at its 135,000 b/d Puertollano refinery in Spain, in response to the challenging economic environment.

The company confirmed the shutdown today and said the refinery will go on to halt all fuels production, although it did not give a timeframe for the wider stoppage. It will not restart until market conditions improve.

European fuels demand is slumping as some of the continent's major economies tighten lockdown restrictions in response to a recent surge in Covid-19 cases. France will will enter a new four-week national lockdown from 3 April. Germany recently extended its lockdown measures.

Europe's refiners have been cutting back production, both for economic reasons and for seasonal maintenance. Some refineries in the region are shutting permanently. Finland's Neste said yesterday that it has now completed the permanent closure of its 55,000 b/d Naantali refinery. Portugal's Galp was scheduled to permanently halt fuels production at its 110,000 b/d Porto refinery last month.

By Benedict George and Jonathan Gleave

Bloomberg @TheTerminal

Mexico Boosts Growth Forecasts on Vaccines, U.S. Recovery (1)
2021-03-31 17:47:47.118 GMT

By Max de Haldevang
(Bloomberg) -- Mexico's Finance Ministry increased its growth forecast for this year and next, as the Covid-19 vaccine roll-out and a stronger U.S. economy drive the recovery. Latin America's second-largest economy will grow 5.3% in 2021, compared to a previous projection of 4.6%, and 3.6% in 2022, higher than the 2.6% estimated before, the Finance Ministry wrote in a preliminary budget proposal published Wednesday.
Unlike many of its peers, Mexico has declined to borrow money for a fiscal stimulus, meaning it exits the crisis with a comparatively low debt burden. The approach has left its recovery heavily dependent on trade with the U.S. while internal demand remains weak.
"This is a fiscally conservative plan, in which they continue working to have a contained fiscal deficit and are continuing to bet on a recovery supported by external demand," said Janneth Quiroz Zamora, an economist at Monex Casa de Bolsa.
Higher revenue will allow the government to cut its debt burden by nearly a percentage point of gross domestic product to 51.4% this year and a further 0.3 points in 2022, it said. The budget deficit this year will be 0.1 point lower than previously expected -- at 2.8% -- and it will fall to 2.4% in 2022, the government projects.
The U.S. recovery and vaccination program "will more than compensate for the effects of the partial activity suspension implemented at the start of the year to contain the spread of Covid-19," according to the document, which is the first version of the 2022 budget sent to Congress.
The Finance Ministry also sees oil at $55 per barrel in 2021 and $53.1 next year. It expects oil output to be 1.794 million barrels per day this year, down from 1.857 million in its September forecast, and 1.867 million in 2022.
The oil production numbers are "hard to believe," which is a "concern" for public finances going forward, said Marco Oviedo, an economist at Barclays. "Pick-up in production could take longer than expected, and it would require additional support from the Federal Government," he said.

--With assistance from Cyntia Barrera Diaz and Dale Quinn.

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Brazil Oil Output 2.819m B/d in Feb.: Regulator
2021-04-01 12:31:30.474 GMT

By Danielle Chaves
(Bloomberg) -- Brazil's oil production fell 1.9% compared
to Jan. and decreased 5.1% compared to Feb./2020, according to
regulator ANP’s report.
* Gas production totaled 131m m^3/d, -3.9% m/m and +1.7% y/y
* Oil and gas production in Brazil totaled 3.643m boe/d
* Petrobras’s total production reached 2.692m boe/d
* Total oil and gas production in the pre-salt area was 2.596m
boe/d, -1.2% m/m and +4.0% y/y

Original Story:
ANP: Produção de petróleo no Brasil 2,819 mi B/d em fev.

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https://www.livemint.com/news/world/venezuela-president-offers-oil-for-vaccines-11616986574477.html

Venezuela president offers ‘oil for vaccines’

1 min read . Updated: 29 Mar 2021, 08:41 AM ISTAFP

- Venezuela has the oil tankers, it has customers ready to buy oil from us. It would devote part of its production to obtain the vaccines it needs, said Nicolas Maduro

Venezuelan President Nicolas Maduro on Sunday offered "oil for vaccines" as his country, which is under economic sanctions affecting the oil sector in particular, faces a second wave of coronavirus. "Venezuela has the oil tankers, it has customers ready to buy oil from us. It would devote part of its production to obtain the vaccines it needs. Oil for vaccines!" said Maduro during an appearance on public television.

Venezuela has so far only authorized the use of the Russian Sputnik V vaccine and the one produced by Chinese company Sinopharm.

On March 15, Venezuela informed the Pan American Health Organization (PAHO) that it would not accept the AstraZeneca vaccine, despite having ordered between 1.4 and 2.4 million doses of it through Covax, the initiative aimed at ensuring an equitable distribution of coronavirus vaccines.

None of those vaccines have yet been delivered to Venezuela due to outstanding debts it has with the WHO.

Venezuela began vaccinating health workers in February but has released few details about its immunization program.

According to official figures, strongly questioned by the opposition and NGOs, Venezuela has registered around 150,000 coronavirus cases and a little under 1,500 deaths.

Authorities, though, have become concerned recently about a rise in infections and the appearance of the highly contagious Brazilian strain of the virus.

Russian March Oil Output Grew Amid More Generous OPEC+ Quota
2021-04-02 06:43:20.257 GMT

April 2 (National Post) -- (Bloomberg) - Russia increased its oil production in March amid a more generous OPEC+ quota, even as rising coronavirus cases threaten oil demand in the short-term.
The nation pumped 43.34 million tons of crude and condensate last month, according to preliminary data from the Energy Ministry's CDU-TEK unit. That equates to 10.249 million barrels a day, based on 7.33 barrel-per-ton conversion ratio, or 1.3% more than in February.
The CDU-TEK doesn't provide a breakdown between crude and condensate - a light oil extracted from natural gas, which is excluded from the OPEC+ deal, and it's difficult to assess Russia's compliance. If March condensate output was in line with February's, then daily crude-only output would be around 9.41 million barrels a day, some 165,000 barrels above than its OPEC+ quota.
From February to April, Russia and its neighbor Kazakhstan are the only two nations allowed to pump more under the agreement between the Organization of Petroleum Exporting Countries and its partners. Russia's quota rose by 65,000 barrels a day in March, having increased by the same amount in February, and will grow another 130,000 barrels a day in April. Saudi Arabia voluntarily took 1 million barrels a day from the market.
OPEC+ reached a deal on Thursday to gradually increase production from May to July, adding a total of more than 2 million barrels a day to global supplies, with the agreed ramp-up schedule still subject to monthly revisions. Included in that is the phased rollback of Saudi Arabia's voluntary cut over the next three months.
Even though Europe is toughening its lockdowns amid a third wave of coronavirus, data from the U.S. and Asia support the alliance's decision to return the barrels to the market.
Russia is set to increase its output "evenly" by a total 114,000 barrels a day in May-July, according to Deputy Prime Minister Alexander Novak. This will allow the nation to reach its output quota under the original OPEC+ schedule established last year.
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-0- Apr/02/2021 06:43 GMT

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15th OPEC and non-OPEC Ministerial Meeting concludes

No 10/2021
Vienna, Austria
01 Apr 2021

The 15th Meeting of OPEC and non-OPEC Ministers took place via videoconference on Thursday, 1 April 2021, under the Chairmanship of HRH Prince Abdul Aziz bin Salman, Saudi Arabia's Minister of Energy, and Co-Chair HE Alexander Novak, Deputy Prime Minister of the Russian Federation.

The Meeting emphasized the ongoing positive contributions of the Declaration of Cooperation (DoC) in supporting a rebalancing of the global oil market. These outcomes are in line with the historic decisions taken at the 10th (Extraordinary) OPEC and non-OPEC Ministerial Meeting on 12 April 2020 to adjust downwards overall crude oil production, and subsequent decisions.

The Ministers noted, with gratitude, the value of the prudent policy approach by Saudi Arabia of maintaining its additional voluntary adjustments of 1 mb/d in April 2021 for third month in a row.

The Meeting approved the adjustment of the production levels for May, June and July 2021, while continuing to adhere to the mechanism agreed upon in the 12th OPEC and non-OPEC Ministerial Meeting (December 2020) to hold monthly OPEC and non-OPEC Ministerial Meetings to assess market conditions and decide on production level adjustments for the following month, with every adjustment being no more than 0.5 mb/d.

The Ministers reviewed the monthly report prepared by the Joint Technical Committee (JTC), including the crude oil production data for February.

They recognized the improvements in the market supported by global vaccination programmes and stimulus packages in key economies but noted that the volatility observed in recent weeks warrants a continued cautious and vigilant approach in monitoring market developments.

The Meeting observed that in February, oil stocks in OECD countries fell for the seventh consecutive month, but still remained above the 2015-2019 average.

The Meeting welcomed the positive performance of participating countries. Overall conformity reached 115 per cent in February 2021, reinforcing the trend of aggregate high conformity by participating countries.

The Ministers noted that since the April 2020 meeting, OPEC and non-OPEC Participating Countries in the DoC had contributed to adjusting downward global oil supply by 2.6 billion barrels of oil by the end of February 2021, which has accelerated the rebalancing of the oil market.

The Ministers expressed their thanks to those countries that have submitted plans for previous compensation shortfalls and continue to work towards compensating for overproduced volumes. They urged all participants to achieve full conformity to reach the objective of market rebalancing and avoid undue delay in the process.

In this regard, the Ministers agreed to the request by several countries that have not yet completed their compensation for an extension of the compensation period until the end of September 2021.

The Ministers agreed to that participating countries with outstanding overproduced volumes will submit their plans for implementation of any required compensation for overproduced volumes to the OPEC Secretariat by 15 April 2021.

The Meeting commended Saudi Arabia for its recently announced “Saudi Green Initiative” and “Middle East Green Initiative” as important contributions to global efforts to combat climate change, and welcomed Saudi Arabia’s commitment to transfer knowledge and share experiences as art of these initiatives.

The oil and gas industry can be part of the solution to climate change. OPEC possesses critical resources and expertise that can help meet the challenge of reducing global greenhouse gas emissions.

The group will explore ways to enhance collaboration in this important area. G20 Leaders have already endorsed the strategy advanced by Saudi Arabia to deal with climate change – the Circular Carbon Economy and its 4Rs – reduce, reuse, recycle, and remove – as an inclusive and balanced solution for dealing with greenhouse gas emissions.

The Ministers thanked the JTC and the OPEC Secretariat for their contributions to the meeting. The next meetings of the Joint Ministerial Monitoring Committee (JMMC) and OPEC and non-OPEC Ministers are scheduled for 28 April 2021.

Production adjustments table

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Month		May 21		June 21		July 21	
	Reference Production	Adjustment	Required Production	Adjustment	Required Production	Adjustment	Required Production
Algeria	1057	-170	887	-159	898	-145	912
Angola	1528	-245	1283	-230	1298	-209	1319
Congo	325	-52	273	-49	276	-44	281
Eq.Guinea	127	-20	107	-19	108	-17	110
Gabon	187	-30	157	-28	159	-26	161
Iraq	4653	-748	3905	-699	3954	-637	4016
Kuwait	2809	-451	2358	-422	2387	-384	2425
Nigeria	1829	-294	1535	-275	1554	-250	1579
Saudi Arabia	11000	-1768	9232	-1653	9347	-1505	9495
UAE	3168	-509	2659	-476	2692	-433	2735
Azerbaijan	718	-115	603	-108	610	-98	620
Bahrain	205	-33	172	-31	174	-28	177
Brunei	102	-16	86	-15	87	-14	88
Kazakhstan	1709	-246	1463	-240	1469	-234	1475
Malaysia	595	-96	499	-89	506	-81	514
Mexico	1753	0	1753	0	1753	0	1753
Oman	883	-142	741	-133	750	-121	762
Russia	11000	-1582	9418	-1543	9457	-1505	9495
Sudan	75	-12	63	-11	64	-10	65
South Sudan	130	-21	109	-20	110	-18	112
OPEC 10	26683	-4287	22396	-4010	22673	-3650	23033
Non-OPEC	17170	-2263	14907	-2190	14980	-2109	15061
OPEC+	43853	-6550	37303	-6200	37653	-5759	38094

https://www.wsj.com/articles/biden-trimming-forces-sent-to-mideast-to-help-saudi-arabia-11617279687?mod=politics_lead_pos5

WSJ NEWS EXCLUSIVE

Biden Trimming Forces Sent to Mideast to Help Saudi Arabia

A Patriot antimissile battery last year at the Prince Sultan Air Base in Saudi Arabia. IMAN AL-DABBAGH FOR THE WALL STREET JOURNAL

By
Gordon Lubold
and
Warren P. Strobel
Updated April 1, 2021 5:24 pm ET

1x

WASHINGTON—President Biden has directed the Pentagon to begin removing some military capabilities and forces from the Gulf region in the first steps of an effort to realign the U.S. global military footprint away from the Mideast, changes that come as Saudi Arabia endures rocket and drone attacks from inside Yemen and Iraq.

In moves that haven't been previously reported, the U.S. has removed at least three Patriot antimissile batteries from the Gulf region, including one from Prince Sultan Air Base in Saudi Arabia, that had been put in place in recent years to help protect American forces.
Other capabilities, including an aircraft carrier and surveillance systems, are being diverted from the Middle East to answer military needs elsewhere around the globe, according to U.S. officials. Additional reductions are under consideration, officials said.

Mr. Biden pledged after taking office that he would recalibrate the U.S.-Saudi relationship, taking several tough steps against the kingdom, including freezing the sale of offensive weapons that Riyadh has used in its six-year military intervention in Yemen. He also made public an intelligence report saying Crown Prince Mohammed bin Salman, the country's de facto leader, approved the operation that led to the 2018 killing of journalist Jamal Khashoggi.
But administration officials also have said they don't want to destroy the U.S.-Saudi relationship, and have said they will seek ways to help Riyadh defend against rocket and missile attacks from militant fighters.

The removal of Patriot batteries, the permanent aircraft-carrier presence and other military capabilities means that several thousand troops may leave the region over time. As of late last

year there were about 50,000 U.S. troops in the region, down from a high of about 90,000 at the height of tensions between the Trump administration and Iran about two years ago

The aircraft carrier USS Nimitz during a Strait of Hormuz transit in September 2020.
PHOTO: ELLIOT SCHAUDT/U.S. NAVY/AGENCE FRANCE-PRESSE/GETTY IMAGES

Defense officials declined to provide specifics about the reductions in military capabilities or forces. Saudi officials didn't respond to a request for comment about the U.S. plans.

A missile defense system known as a Terminal High Altitude Area Defense, or Thaad, which protects against the kinds of ballistic missiles used frequently by Iranian allies, was also proposed to be removed, but officials said it would remain in the region for now.

The military withdrawals amount to the early stages of a Biden administration effort to further reduce the U.S. posture in the Mideast after several decades of military engagement there, officials said.

Some equipment, including surveillance drones and antimissile batteries, may be redeployed to focus on what officials consider to be leading global competitors, including China and Russia.

Aircraft carriers in recent years have been deployed as symbols of U.S. deterrence in the Middle East. Earlier this year, the USS Nimitz left the region, and the USS Eisenhower now is headed there. However, the Eisenhower isn't expected to stay for the duration of a normal monthslong deployment, leaving what Navy officials refer to as a "carrier gap" in the area overseen by U.S. Central Command.

Amid the withdrawals, officials said, a Pentagon team is looking at what equipment and training it can share with Saudi Arabia as it continues to come under withering rocket and missile attacks from fighters believed allied with Iran. The idea is to shift more of the burden of defending Saudi territory from Washington to Riyadh.

Saudi Arabia has come under what U.S. officials say is an unacceptable level of violence from rocket and drone attacks from Iranian-backed Houthis in Yemen and pro-Iranian militias in Iraq. Since January, there have been more than 80 such attacks, some involving multiple, simultaneous drone assaults, that have U.S., Saudi and other allies in the region on high alert.

In Riyadh, Saudi Arabia, a house was damaged in February by what a Saudi-led coalition said was a thwarted Houthi missile attack.
PHOTO: AHMED YOSRI/REUTERS

"By far that's worse than any other period since before the beginning of the conflict," a U.S. official said, referring to the war inside Yemen. Iran has denied it controls the Houthis or sponsors attacks through other groups.

As the U.S. moves toward reducing its own military capabilities there, the Pentagon in recent weeks assembled a "tiger team"—an ad hoc group of defense policy and military experts—to find ways to help the oil-rich kingdom protect its facilities and oil installations, U.S. officials said.

Options on the table include sales of specific, defensive weapons, such as missile interceptors; expanded intelligence-sharing; additional training; and military-to-military exchange programs, officials said.

The Pentagon effort to find additional ways to help the kingdom to defend itself hasn't been previously disclosed.

President Biden spoke about foreign policy at the State Department in Washington on Feb. 4.
PHOTO: EVAN VUCCI/ASSOCIATED PRESS

In the meantime, the Saudis' efforts to bolster their own defenses, including their Patriot missile systems, long considered to be undermanned and overworked, are improving, U.S. officials said. For the past several years, the U.S. military has worked closely with the Saudis to improve the systems, officials said.

"The Saudis have been pretty effective at knocking this stuff down. They are doing better and better," a senior U.S. official said, referring to incoming rockets and drones.

While officials said that most attacks against Saudi Arabia emanate from the Houthi militia inside Yemen, they couldn't explain why the Houthis have escalated at this time. The militant group has claimed responsibility for many of the attacks.

"The bottom line is that the Houthis need to know that we are standing with the Saudis and we will continue to support their right to self-defense," another U.S. official said.

The defensive help is intended to make good on Mr. Biden's promise to lend the Saudis a defensive hand, after he took a series of steps signaling his administration would deal differently with Riyadh than did former President Donald Trump.

Mr. Biden in late January froze the sale to Riyadh of U.S. offensive weapons, specifically precision-guided munitions, that have caused widespread civilian casualties in Saudi-led air assaults in Yemen. U.S. officials are trying to define which defensive weapons they will permit Riyadh to buy.

In February, the Biden administration also publicly shamed Prince Mohammed by releasing the U.S. intelligence report on the death of Mr. Khashoggi in Turkey.

With those steps behind it, the Biden administration is moving to show it isn't breaking the 76-year alliance with the Saudis.

"We're going to continue to support and help Saudi Arabia defend its sovereignty and its territorial integrity and its people," Mr. Biden said in a Feb. 4 speech announcing the offensive weapons freeze and a new U.S. initiative to end the Yemen war.

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Appeared in the April 2, 2021, print edition as 'U.S. Trims Its Forces Stationed In Mideast.'

China's Iran oil imports seen hitting new high in March, curbing OPEC output options
2021-03-30 03:43:20.563 GMT

China's Iran oil imports seen hitting new high in March,
curbing OPEC output options

March 29 (National Post) -- SINGAPORE - China will receive
another large influx of cheap Iranian oil in March passed off
as crude from other origins, curbing the top importer's
appetite for crudes from other suppliers, according to traders
and analysts.
Close to 1 million barrels per day of Iranian crude could
arrive at China this month, nearly half the volume that the
world's top exporter Saudi Arabia supplied to China in the
first two months this year.
Refinitiv Oil Research estimates this month's arrivals at
3.75 million tonnes (27 million barrels), topping the previous
record in January of 3.37 million tonnes.
"The trend seems to be continuing, though buying appetite
is waning because of high inventories at ports and abundant
supplies," said Emma Li, a senior Refinitiv analyst.
Separately, a trade source familiar with Iranian ship
movements pegged China-bound cargoes at 30 million barrels for
March, while Sara Vakhshouri, president of SVB Energy
International, estimated Iran oil exports this month exceeded 1
million bpd.
Reuters reported last month that China quietly accepted
record amounts of Iranian oil in early 2021, despite U.S.
sanctions designed to penalize buyers. Analysts say the buying
was a key factor behind the slide in global Brent oil pries
from $70 per barrel, limiting room for OPEC to increase
production.
"The recent jump in Iranian crude exports, notably to
China, and crude going out of inventories are contributing to
the weakness of the oil market, undermining OPEC+ efforts to
limit supply and setting prices for a third weekly drop,"
Rystad Energy analysts said ahead of the OPEC+ meeting on April
1.
China, Iran's top oil client, said last week it will work
to safeguard the Iran nuclear deal and defend the legitimate
interests of Sino-Iranian relations.
China's commerce, foreign and energy ministries had not
responded to faxes and messages at time of publication.
U.S. President Joe Biden has sought to revive talks with
Iran on a nuclear deal abandoned by former President Donald
Trump in 2018, although harsh economic measures remain in place
that Tehran insists be lifted before negotiations resume.
"Iran is exporting more oil to China and that poses a
challenge to the U.S. sanctions regime," Eurasia Group analyst
Henry Rome said.
"However, the structure of the sanctions is not on the
verge of collapse by any means especially because Iran is not

able to repatriate much of that revenue."
According to Refinitiv's Li, about 650,000 bpd of Iranian
oil were discharged in the first 19 days of March, mainly via
the eastern province of Shandong, the hub for China's
independent refiners.
This compared with 490,000 bpd discharged in February and
a record 797,000 bpd in January, she added.
Chinese buyers are attracted to low prices for the crude
which is being offered at discounts of $4-$6 a barrel to ICE
Brent on a delivered basis, traders said, adding that sellers
were sometimes packaging the sale with import quotas.
"The ultimate rule for private Chinese buyers is cost and
margin...and they find the Iranian barrels offered at steep
discounts hard to resist," said a Beijing-based trader.
Reuters was unable to identify the buyers of the cargoes.
Officially, China skipped imports from Iran in March for
the second month in a row as no cargo has been marked for its
Strategic Petroleum Reserve (SPR), according to Refinitiv.
Tankers carrying Iranian oil typically switch off their
transponders when loading to avoid detection, but then become
traceable via satellites near ports in Oman, the UAE and Iraq.
Some transfer part of their cargoes to other ships near
Singapore or Malaysia before sailing to China.
China maintained small monthly purchases of Iranian oil
that averaged 2.4 million barrels over the whole of 2020,
according to Chinese customs.
(Reporting by Asia energy team; Additional reporting by
Jonathan Saul and Alex Lawler in London; Editing by Florence
Tan and Edwina Gibbs)

-0- Mar/30/2021 03:43 GMT

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https://www.thenationalnews.com/world/europe/talks-on-us-return-to-iran-nuclear-deal-on-right-track-1.1195813

Tim Stickings

April 2, 2021

SHARE

Talks on US return to Iran nuclear deal 'on right track'

Powers will meet in Vienna on Tuesday to resume negotiations

US President Joe Biden's administration has been looking to engage Iran in talks. AFP

World powers will resume talks on the Iran nuclear deal in Vienna next week after initial online discussions on a possible US return to the pact took place on Friday.

The virtual talks came as US President Joe Biden's administration looks to engage Tehran in negotiations over both sides resuming compliance with the deal.

Russia was the first to respond, saying talks were "on the right track" after Moscow's delegate to the UN's International Atomic Energy Agency joined the summit with representatives from the EU, Britain, France, Germany, China and Iran.

"Discussions were quite business-like and will continue," said Russian ambassador Mikhail

"The impression is that we are on the right track but the way ahead will not be easy and will require intensive efforts. The stakeholders seem to be ready for that."

Tehran's foreign ministry described the talks as "frank and serious", according to Iran's ISNA news agency, and said an in-person meeting would take place in the Austrian capital on Tuesday.

Iran's deputy foreign minister Seyed Abbas Araghchi was quoted as telling the meeting that Tehran will stop breaching the pact's nuclear restrictions as soon as US sanctions are lifted.

Under the 2015 agreement, economic sanctions on Iran were lifted in return for curbs on Iran's nuclear programme.

Mr Biden's predecessor, Donald Trump, withdrew from the deal in 2018 and re-imposed US sanctions. Iran breached some of the pact's nuclear restrictions in retaliation.

The US and Iran have yet to agree on meeting to try to revive the deal and are communicating through European nations, officials have said.

Friday’s talks were chaired by EU official Enrique Mora, the political director of the bloc’s External Action Service.

Brussels had said that delegates would "discuss the prospect of a possible return of the US to the [deal] and how to ensure the full and effective implementation of the agreement by all sides".

Diplomatic sources said Britain, France and Germany held earlier talks with Iran on Monday and one said there had been talks about a proposal from Tehran.

US State Department spokesman Ned Price had said that Washington welcomed the meeting as "a positive step".

"We have been clear for weeks now that we are ready to pursue a return to compliance with our [deal] commitments, consistent with Iran also doing the same," Mr Price said.

He said Washington was willing to achieve that "through a series of initial mutual steps".

France's Foreign Ministry spokeswoman Agnes von der Muhll had said European powers were working closely with Russia and China to find a solution to the deadlock.

"These exchanges are more than necessary because Iran has not accepted taking part in direct contacts between the other participants and the United States ... which would have eased discussions," she said.

Ms von der Muhll said they were looking at alternative formats to enable talks.

Published: April 2, 2021 03:42 PM

https://www.reuters.com/article/us-iran-nuclear-vienna/u-s-iran-head-to-vienna-for-indirect-nuclear-deal-talks-idUSKBN2BP0QY

on Reuters ARIL 2, 2021 5:18 AMUPDATED 25 MINUTES AGO

U.S, Iran head to Vienna for indirect nuclear deal talks

By John Irish, Robin Emmott, Parisa Hafezi

PARIS/BRUSSELS (Reuters) -Iran and the United States said on Friday they would hold indirect talks in Vienna from Tuesday as part of broader negotiations to revive the 2015 nuclear deal between Tehran and global powers.

Tehran has ruled out face-to-face bilateral discussions, but the presence of both Iran and the United States in the Austrian capital - welcomed by Washington as a "healthy step forward" - will help to focus efforts to bring all sides back into compliance with the accord.

The aim is to reach an agreement within two months, said a senior official with the European Union, the coordinator of the deal. Iran holds elections in June.

Former U.S. President Donald Trump pulled out of the deal in 2018 and reimposed sanctions on Iran, prompting it to violate some of the pact's nuclear restrictions. His successor Joe Biden wants to revive the accord, but Washington and Tehran have been at odds over who should take the first step.

"Iran and the U.S. will be in the same town, but not the same room," a European diplomatic source said.

A Western diplomat said a shuttle diplomacy approach would be adopted.

U.S. State Department spokesman Ned Price said the talks would be structured around working groups that the EU is going to form with remaining participants, including Iran.

"We don't anticipate an immediate breakthrough as there will be difficult discussions ahead. But we believe this is a healthy step forward," he said in a statement, adding that Washington remained open to direct talks with Tehran.

The EU official said negotiating lists of sanctions that the United States could lift and nuclear obligations that Iran should meet, the EU official said "should marry at some point".

"In the end, we are approaching this in a parallel way. I do think we can do it in less than two months," the official said.

Iran, China, Russia, France, Germany and Britain - all parties to the 2015 deal - held virtual talks on Friday to see how to progress.

"Aim: Rapidly finalize sanction-lifting & nuclear measures for choreographed removal of all sanctions, followed by Iran ceasing remedial measures," Iran's Foreign Minister Mohammad Javad Zarif said on Twitter. "No Iran-US meeting. Unnecessary."

Two diplomats said the first round of talks could last several days, followed by two or three subsequent rounds in the following weeks to tackle tricky issues.

Under the 2015 accord, U.S. and other economic sanctions on Tehran were removed in return for curbs on Iran's nuclear programme to make it harder to develop a nuclear weapon - an ambition Tehran denies.

Diplomats said last month that the odds of Washington and Tehran making progress to revive the deal before Iran's election had dwindled after Iran toughened its stance.

"If we don't get there in two months ...it will be definitely bad news," the EU official said.

Additional reporting by Francois Murphy in Vienna and Patricia Zengerle in WashingtonEditing by Gareth Jones and John Stonestreet
Our Standards: [The Thomson Reuters Trust Principles.]

Excerpts Bloomberg transcripts Friday press conference State Dept Principal Deputy spokesperson Jalina Porter press briefing.

Bloomberg transcript.
"QUESTION: Hi, thank you for taking my question. I wonder if you can give more details on the meeting next week in Vienna with signatories to the Iran nuclear deal, what U.S. officials are going to be at the meeting? And what type of sanctions relief may be proposed for Iran to take steps to reverse its breaches of the agreement? Thank you.

PORTER: Thank you for the question. We don't have any specific announcements to make about details of who will participate from the U.S. in that meeting. And just as a reminder, this is a healthy first step forward. And we kind of -- we definitely want to underscore that. And obviously when it comes to issues that are discussed, we're going to talk about nuclear steps that Iran would need to take in order to return to compliance with the terms of the JCPOA. And we won't preview any specific sanctions, but we'll definitely say that sanction relief steps that the U.S. would need to take in order to return to that compliance as well will up for discussion.

Let's go to the line of Sean Tandem (ph), please.

QUESTION: (INAUDIBLE), can I just follow up on Iran? What exactly do you think will be the -- what you're looking for there? I know you mentioned actions by Iran. There has been some talk by the E.U. of having some sort of synchronized action. Is that something that you are going to look to do there in Vienna to try to coordinate the action?

And if you don't mind, could I also ask you the latest on Burma? There was an announcement yesterday by the junta of shutting down all internet connections -- all internet service. Do you have any reaction to that? Is there any way to circumvent that? Thanks.

PORTER: Thank you. To your first question on talks in Vienna, I won't get ahead of the meeting. But I will underscore that obviously a goal is a mutual return to compliance of the JCPOA.

QUESTION: Thanks. I wanted to ask if the U.S. consulted with its allies in the Gulf and Israel ahead of next week's talks? And secondly, will you guys be carrying any of their concerns into the talks next week? Thank you.

PORTER: So we certainly won't preview any private diplomatic discussions. But again, I'll reiterate what was shared earlier, in that the issues that will be discussed are nuclear (ph) steps that

Iran would need to take in order to return to compliance with the terms of the JCPOA, as well as the sanction release steps that the United States would need to take in order to return to the compliance as well.”

https://www.presstv.com/Detail/2021/04/03/648640/Iran-Khatibzadeh-JCPOA

Press TV exclusive: Iran rules out step-by-step lifting of sanctions

Saturday, 03 April 2021 6:23 AM **[Last Update: Saturday, 03 April 2021 5:11 PM]**

This file photo shows Foreign Ministry spokesman Saeed Khatibzadeh fielding questions from reporters.

In an exclusive interview with Press TV, Iran's Foreign Ministry spokesman Saeed Khatibzadeh rules out any step-by-step lifting of sanctions imposed on the Islamic Republic under former US president Donald Trump.

"As has been clearly stated many times, no step-by-step plan is being considered," Khatibzadeh said on Saturday.

"The definitive policy of the Islamic Republic of Iran is the lifting of all US sanctions, whether those which Trump reimposed after withdrawing from the JCPOA or those which he initiated, as well as sanctions imposed under any other heading," he said.

"Obviously, this lifting of sanctions must be effective and must be verified by Iran," Khatibzadeh added.

His remarks came in response to claims made by US State Department deputy spokeswoman Jalina Porter about a planned meeting by representatives of Iran and other countries in Vienna Tuesday to discuss the troubled 2015 nuclear deal.

Restoring the nuclear agreement would be a major step, nearly three years after Trump scrapped it and imposed new sanctions or reimposed others lifted under the deal, forcing Iran to take a series of "remedial" measures in response to the decision.

Porter said Friday that the discussion would focus on "the nuclear steps that Iran would need to take in order to return to compliance with the terms of the JCPOA", using initials for what is formally known as the Joint Comprehensive Plan of Action.

In the talks, American officials would be down the hall while British, German, French, Chinese and Russian officials meet with Iran.

And that would be joined with discussion of "the sanctions relief steps that the United States would need to take in order to return to compliance, as well," Porter said, an acknowledgment that the United States is currently in violation of the accord.

Khatibzadeh stressed that "the suspension of Iran's remedial measures and their reversal will take place only after the lifting of all sanctions and its verification" by the Islamic Republic.

In a tweet on Friday, Iran's Foreign Minister Mohammad Javad Zarif said the aim of the Vienna session would be to "rapidly finalise sanction-lifting & nuclear measures for choreographed removal of all sanctions, followed by Iran ceasing remedial measures".

"No Iran-US meeting. Unnecessary," he added Friday.

American officials have said they were willing to meet directly with the Iranians, but the Iranian government has insisted on working through the Europeans, a stance which Deputy Foreign Minister Abbas Araqchi reiterated Friday.

"We only negotiate with the members of the JCPOA. The parties that are now known as the P4+1 will be our negotiating partners. They can talk to the other sides as they wish. We have no direct or indirect dialogue with the Americans," he said.

Press TV's website can also be accessed at the following alternate addresses:

https://www.spglobal.com/platts/en/market-insights/latest-news/oil/040121-feature-waf-crude-exporters-in-quandary-amid-fading-chinese-demand

- 01 Apr 2021 | 10:13 UTC

FEATURE: WAF crude exporters in quandary amid fading Chinese demand

- Author **Eklavya Gupte** **Nicholas Baldwin**
- Editor **Debiprasad Nayak**

HIGHLIGHTS

Chinese 'teapots' favoring cheaper Iranian crude

Setback for Angola, Republic of Congo on falling Chinese demand

WAF flows to China near four-year lows

London — China, the world's largest crude importer, has started to reduce its reliance on West African oil, smitten by the lure of cheaper Iranian oil amid a backdrop of swollen inventories and higher flat prices.

This is a huge setback for Angola and Republic of Congo, which are heavily reliant on Chinese demand, for its foreign oil revenues, trading sources said this week.

"It is almost as if China took a look at $70/b oil and the state of COVID-19 in the West and said we are not paying any longer at these elevated levels -- with a subtext that Iran is more than willing to oblige with lower prices," said a Europe-based crude oil trader. "I don't blame the Iranians...after all selling at $60/b or so is still very attractive for them no doubt and for China it is a win (economically and also a poke in the eye to the US)," he added.

Many West African crudes most of which heavy and medium sweet are staples for China's industrialized refining system, with barrels from Angola and Republic of Congo making up an integral part of the country's baseload. This crude is heavy but sweet – oil that is low in sulfur, but, when refined, yields a lot of residual fuels and some distillates.

West African crude exports to China so far this year have averaged only 1.24 million b/d, according to data intelligence firm Kpler, the lowest in four years.

This compares with 1.45 million b/d and 1.50 million b/d in 2020 and 2019 respectively. In 2016, WAF flows to China averaged 1.13 million b/d and levels have been consistently above 1 million b/d since 2015.

The fall in exports is also due to a fall in production in some of these countries, which have been exacerbated by falling upstream investment and OPEC+ cuts.

Discouraging signs

Sellers of West African crude have suffered reduced demand from Chinese refiners since the start of the year.

Refreshed import quotas for China's independent refiners provided little respite against higher outright prices, unfavorable arbitrage economics, refinery maintenance season, and brief lockdowns on the back of an uptick in coronavirus levels around the time of the Lunar New Year holiday.

Chinese refineries were in maintenance for much of March and April, which meant weaker demand. But with focus shifting to barrels that will arrive in June, expectations of a recovery are fading.

"Having underbought for three months, and with the change in market structure [from steep backwardation to mild contango] it theoretically opens the arbitrage. But at this stage with some people showing [May WAF] cargoes it seems China is muted again," a West African crude trader said.

This has also affected the values of West African crudes. Crude differentials for Republic of Congo's Djeno, a crude beloved by Chinese refiners, sunk around $2/b through the first quarter to Dated Brent minus $2/b, according S&P Global Platts data.

Enticed by cheaper oil

Sources also said that swollen oil inventories in China kept a lid of imports of some crudes.

Chinese oil inventories were at 932 million barrels at the end of March compared with 914 million barrels in end-January, according to Kpler data. Oil stockpiles in China averaged 919 million barrels and 799 million barrels in 2020 and 2019 respectively.

China's independent refiners knowns as 'teapots' have in particular reduced their appetite of African crudes, and have instead binged on Iranian barrels so far this year.

Even though Iranian oil is heavy and sour while African crude is mostly sweet, the former is much cheaper, making it more appealing in a time of higher flat prices.

Crude traders said that there were obvious reasons to favor Iranian oil: a wide spread between Brent and Dubai favored Iranian barrels which are priced against Dubai; cheaper values due to the US sanctions on Iran crude which still remain in place; and some deals were sweetened with preferential terms, such as delayed payment schedules.

Iran's oil exports to China have likewise seen an uptick, market sources say. Kpler estimates Iran will export some 896,000 b/d of crude oil and dirty petroleum products to China in March, up from 406,000 b/d in February and the highest level since April 2019.

Iran is using ship-to-ship transfers to sell its oil at ports in the Persian Gulf and parts of Southeast Asia to evade the stringent US sanctions. Iranian crude is shipped to these regions using feeder

ships and then transferred to smaller vessels that do not mention Iran as their point of origin, several shipping sources have said.

Although China's refiners are not new to Iranian crude, the recent rise may well be sustained after the two countries signed a trade and security cooperation pact earlier this month.

China has also recently increased its appetite for medium gravity North Sea crudes. It imported 940,000 b/d of medium gravity crude from the North Sea in March, up from 543,000 b/d a year earlier, Kpler data showed. The bulk of this is Norway's medium sour crude Johan Sverdrup, which is proving to be very popular in China.

Swing barrels

West African oil producers have encountered some problems marketing their crudes over the past decade as this region has become the world's swing producer despite it having the geographical flexibility to sell oil east or west as demand requires.

In fact, a glut of WAF crude has been a feature of oil markets in recent years. These countries have been forced to cut prices to sell barrels, with low prices, oversupply and high stocks remaining fairly constant during this period.

Amid this backdrop, Angolan production has also fallen sharply, which is another contributing factor for the fall in import volumes.

Angola, makes up the main chunk of West African crude, that flows to China.

So far this year Angola has produced around 1.15 million b/d, its lowest in over a decade, representing a decline of 40%, or 680,000 b/d, in the past five years, according to Platts estimates.

The OPEC member's crude output has been on a steady decline in the past four years due to technical and operational problems at some fields, aggravated by a lack of upstream investment and incentives.

Nigeria, which is Africa's largest oil producer, is much reliant on China, and is very dependent of Europe and India for its oil.

https://www.reuters.com/article/uk-india-oil-analysis-idUKKBN2BP0FX?taid=6066ccafa0a3570001acbab7&utm_campaign=trueAnthem:+Trending+Content&utm_medium=trueAnthem&utm_source=twitter

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Analysis: Power play: India wields oil 'weapon' to cut dependence on Saudi

By Nidhi Verma
7 MIN READ

NEW DELHI (Reuters) - When India's government last month asked refiners to speed up diversification and reduce dependence on the Middle East - days after OPEC+ said it would maintain production cuts - it sent a message about its clout and foreshadowed changes to the world's energy maps.

FILE PHOTO: India's Oil Minister Dharmendra Pradhan speaks at a road show organised by the Directorate General of Hydrocarbon (DGH) in Mumbai, India, October 26, 2017. REUTERS/Shailesh Andrade/File Photo/File Photo

It was a move that had been in the works for years, fuelled by repeated comments from Indian Oil Minister Dharmendra Pradhan, who in 2015 called oil purchases a "weapon" for his country.

When the Organisation of Oil Exporting Countries and Major Producers (OPEC+) extended the production cuts into April, India unsheathed that weapon. Indian refiners plan to cut imports from the Kingdom by about a quarter in May, sources told Reuters, dropping them to 10.8 million barrels from monthly average of 14.7-14.8 million barrels.

Oil secretary Tarun Kapoor, the top bureaucrat in the ministry, told Reuters that India is asking state refiners to jointly negotiate with oil producers to get better deals, but declined to comment on plans to cut Saudi imports.

"India is a big market so sellers have to be mindful of our country's demand as well to keep the long-term relationship intact," he said.

The Saudi state oil company Saudi Aramco and the Saudi energy ministry declined to comment.

Pradhan, who sees high oil prices as a threat to India's recovering economy, said he was saddened by the OPEC+ decision. India's fuel import bill has rocketed, and fuel prices – inflated by government taxes imposed last year - have hit records.

The International Energy Agency forecasts India's consumption to double and its oil import bill to nearly triple from 2019 levels to more than $250 billion by 2040.

An oil ministry official, who declined to be named because of the sensitivity of the matter, said the OPEC+ cuts have created uncertainty and made it difficult for refiners to plan for procurement and price risk.

It also creates opportunities for companies in the Americas, Africa, Russia and elsewhere to fill the gap.

If India is successful, it will set an example for other countries. As buyers see more affordable choices and renewable energy becomes increasingly common, the influence of big producers like Saudi Arabia could wane, altering geopolitics and trade routes.

DIVERSIFICATION DRIVE

India's oil demand has risen by 25% in the last seven years - more than any other major buyer - and the country has surpassed Japan as the world's third-largest oil importer and consumer.

The country has already curbed its reliance on the Middle East from more than 64% of imports in 2016 to below 60% in 2019.

That trend reversed in 2020, however, when the pandemic pummelled fuel demand and forced Indian refiners to make committed oil purchases from the Middle East under term contracts, shunning spot purchases.

As India shifts gears again after Pradhan's call for faster diversification, refineries are looking for new suppliers, the oil ministry official said.

Costly refinery upgrades that allow for the processing of cheaper, heavier oil grades have encouraged importers to seek out far-flung sources. HPCL-Mittal Energy Ltd bought the country's first cargo from Guyana this month, and Mangalore Refinery and Petrochemicals Ltd just imported Brazilian Tupi crude for the first time.

In past years, refiners have jointly negotiated here oil deals with sanctions-hit Iran, which offered free shipping here and price discounts, and now plan to do the same with other producers.

Since the break with Saudi Arabia began, Pradhan has had meetings with United Arab Emirates' minister of state and chief executive of Abu Dhabi National Oil Co (ADNOC), Sultan Ahmed Al Jaber, and U.S. energy secretary Jennifer Granholm to strengthen energy partnerships.

Pradhan recently said African nations could play a central role in India's oil diversification. The country is looking at signing long-term oil supply deal with Guyana and exploring options to raise imports from Russia, the oil ministry source said.

A separate Indian government source said the government expects Iranian sanctions to ease in three to four months, potentially offering India a cheaper alternative to Saudi oil.

Two traders agreed that Iran stood a good chance to benefit from India's shift, as did Venezuela, Kuwait and the United States. An Indian refinery source said the U.S., Africa, Kazakhstan's CPC Blend and Russian oil would probably get a look too.

Although Indian importers will scoop up increasing volumes of attractively priced global grades, most analysts expect the Middle East to remain India's primary oil supplier, mainly because of lower shipping costs.

India's oil ministry is working with refiners on a framework to jointly negotiate terms with suppliers.

"Buyers have alternatives in today's market and these alternatives are going to multiply going forward," Kapoor said. "There are so many companies in India that do buying at their own level, so these companies coming together also becomes quite a big bloc."

On Thursday, Saudi Arabia and OPEC+ agreed after discussions with U.S. officials to ease oil curbs beginning in May.

Saudi energy minister Prince Abdulaziz bin Salman conceded that the production cuts had put state oil company Aramco "in some difficulty with some of its partners."

THE RELATIONSHIP

Analysts say the oil spat does not need to spill over into broader strategic ties in other sectors, including defence.

“Until recently, the balance of power was skewed towards Saudi Arabia, but increasingly, India is using access to its market and the diversity of options to put pressure on Saudi Arabia,” consultancy Eurasia said in a note. “For Saudi Arabia, losing market share in a global environment in which most developed economies are already seeing their oil demand decline due to green policy implementation, would be a blow.”

Abdulaziz confirmed that Aramco had maintained normal April oil supplies to Indian refiners while cutting volumes for other buyers - a sign Saudi Arabia is concerned about India’s search for new sources.

Saudi Arabia is India’s fourth-biggest trade partner, importing a slew of items, including food. Saudi Armaco is looking at buying a 20% stake in Reliance Industries’ oil and chemicals business. It is also a part of a joint venture to build a 1.2 million barrels per day refinery in India.

But Amitendu Palit, senior research fellow at National University of Singapore, said it would be difficult for Saudi to find a stable alternative buyer if India continues with reduced purchases for too long.

“This bilateral relationship should not be impacted due to any decisions on one commodity. However in a global surplus, market buyers have a lot of negotiating power and sources,” Palit said.

Reporting by Nidhi Verma; Editing by Florence Tan and Gerry Doyle
Our Standards: The Thomson Reuters Trust Principles.

https://www.livemint.com/industry/energy/oil-marketing-companies-may-find-it-tough-to-shift-to-non-opec-crude-11617384484296.html

Oil marketing companies may find it tough to shift to non-Opec crude

The government should instead focus on reducing the tax on fuel to bring down prices, an analyst said. **(HT)**

3 min read **.** Updated: 02 Apr 2021, 11:01 PM IST**Kalpana Pathak**

- The OMCs, Indian Oil Corporation Ltd, Bharat Petroleum Corporation Ltd and Hindustan Petroleum Corporation Ltd (HPCL), have been asked to scout for other regions to source crude and potentially cut imports from Opec by at least a quarter

State-owned oil marketing companies (OMCs) may find it hard to comply with the government's recent order to cut crude imports from West Asia, especially Saudi Arabia, three senior OMC executives said. This has implications for costs and supplies, they said. Saudi Arabia is one of the biggest members of the Organization of the Petroleum Exporting Countries (Opec), the world's largest bloc of crude exporting countries.

State-owned refiners are likely to face a challenge in attempts to find a reliable crude oil supplier, according to the three persons, all of whom requested anonymity.

They also spoke about the increased costs involved in importing non-Opec crude because of additional freight charges.

"We have been building our refineries substantially on Middle Eastern crude not only because of the availability of a variety of crude cocktails but also because we are ensured a continuous and voluminous supply, something other countries promise often but fail to deliver," said one of the three people cited above.

Union minister for oil, petroleum and natural gas Dharmendra Pradhan recently urged refiners to speed up diversification of crude resources and reduce dependence on West Asia. Indian consumers have been hit hard by rising oil prices, but the government's repeated entreaties for Opec and its allies to ease supply curbs have fallen on deaf ears.

The OMCs, Indian Oil Corporation Ltd, Bharat Petroleum Corporation Ltd and Hindustan Petroleum Corporation Ltd (HPCL), have been asked to scout for other regions to source crude and potentially cut imports from Opec by at least a quarter. Last month, HPCL-Mittal Energy Ltd, a

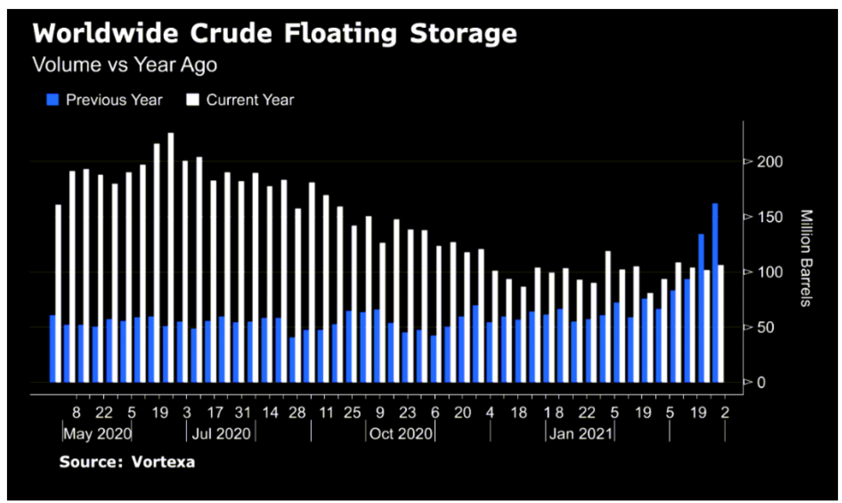
joint venture between HPCL and Mittal Energy Ltd, bought cargo from Guyana for the first time as part of the shift.

India is the world's third-largest oil importer after the US and China, and Opec makes up about 83% of the country's oil imports. Diversification may be a tall order with around 79.4% of the world's proven oil reserves located in Opec+ countries, according to experts.

"Every time there is a crude oil pricing issue, OMCs are directed to look for alternative geographies to import crude from. We try. But given the other dynamics of cost, supply, volume and freight charges, we are back to square one in a few months," said another of the officials mentioned above.

Crude Oil in Floating Storage Rises 4.5% in Past Week: Vortexa
2021-03-29 07:00:05.616 GMT

By Bloomberg Automation
(Bloomberg) -- The amount of crude oil held around the world on tankers that have been stationary for at least 7 days rose to 105.35m bbl as of March 26, Vortexa data show.
* That's up 4.5% from 100.77m bbl on March 19
* Asia Pacific down 1.5% w/w to 71.81m bbl
* Europe up 39% w/w to 10.72m bbl
* Middle East down 31% w/w to 6.14m bbl
* U.S. Gulf Coast up 32% w/w to 4.64m bbl
* North Sea up 12% w/w to 4.26m bbl
* West Africa up 197% w/w to 2.40m bbl



* Company Exposure:
** Asia: Cosco Shipping Energy Transportation Co., HMM Co. Ltd., Mitsui O.S.K. Lines Ltd., Nippon Yusen KK
** Europe: Euronav NV, Frontline, Vopak
** U.S.: DHT Holdings, International Seaways, Nordic American Tankers, Teekay Tankers, Tsakos Energy Navigation
* NOTE:
** Vortexa data exclude FPSO units, oil products and Iranian condensate
** Crude oil transferred by STS isn't included until that volume has been stationary on receiving vessel for 7 days
** Data don't include vessels booked for floating storage until they are actually stationary for the minimum period
** See VTXA or DATA FLOAT for more data, which is subject to revisions, and see NI TANTRA for all tanker-tracking stories
** See SPOT FREIGHT for freight rate assessments using shipbroker data

To contact Bloomberg News for this story:
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Saldanha Bay Oil Stockpile Drains as Supertanker Heads for China
2021-03-29 09:11:38.739 GMT

By Julian Lee
(Bloomberg) -- VLCC Maria P. Lemos left Saldanha Bay on Saturday, with a draft indicating it is full with a cargo of about 2 million barrels of crude, ship tracking data monitored by Bloomberg show.
* Vessel moored empty at Saldanha Bay on March 25
* It's the 9th cargo lifted from the terminal since the start of December, taking the volume of crude withdrawn from storage tanks at the site since then to 17m bbl
* Storage levels at Saldanha Bay had fallen to 34.2m barrels on March 18, their lowest since April, according to oil data analytics company OilX
* NOTE: Saldanha Bay's location offers traders flexibility to quickly send cargoes to different geographical markets
** The terminal is also used to supply crude to the nearby 110k b/d Astron Energy refinery, although the plant has been shut since an explosion and fire in July

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To view this story in Bloomberg click here:
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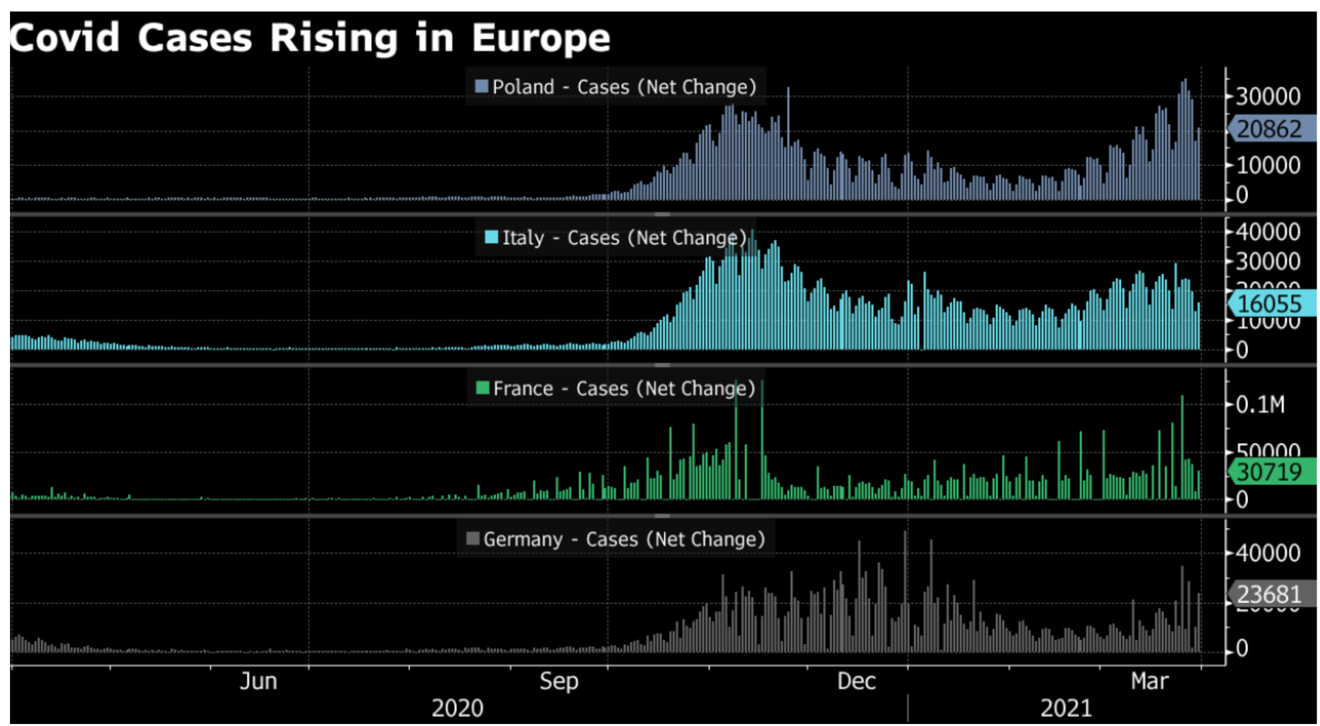
OIL DEMAND MONITOR: Europe's Covid Relapse Visible on Roads
2021-03-31 06:34:04

By Stephen Voss
(Bloomberg) -- Stricter lockdown rules in parts of Europe are showing up in traffic data and fuel use as governments battle against another surge in coronavirus infections across a continent that's still largely unvaccinated.

Rome, Paris, Madrid and Berlin all had less traffic congestion on Monday morning than a week earlier, according to location technology company TomTom NV. A journey in Paris at 8 a.m. on Monday that would take an hour on empty roads had 22 extra minutes of congestion, down from 26 minutes a week earlier and 40 minutes two weeks earlier. The latest congestion level is 50% less than typical 2019 levels for that time of the week.

Further east, in Poland, passenger car traffic in the week ended Sunday was 16% less than the same week in 2019, a wider gap than 12% a week earlier, according to automatic measurement stations monitored by the country's General Directorate for National Roads and Motorways.



The Health Ministry in Poland, one of Europe's virus hotspots, on Tuesday reported 20,870 new coronavirus cases over the previous 24 hours, a 25% increase from a week earlier.

Shanghai and Beijing were the only places out of 13 world cities regularly studied in this weekly monitor that showed traffic congestion above 2019 levels. Tokyo was next, 16% below the typical level in the year before

Covid-19 infections became a pandemic. London traffic slipped back from more intense levels in mid-March but is still registering heavier conditions than its European and North American peers.

Gasoline Demand

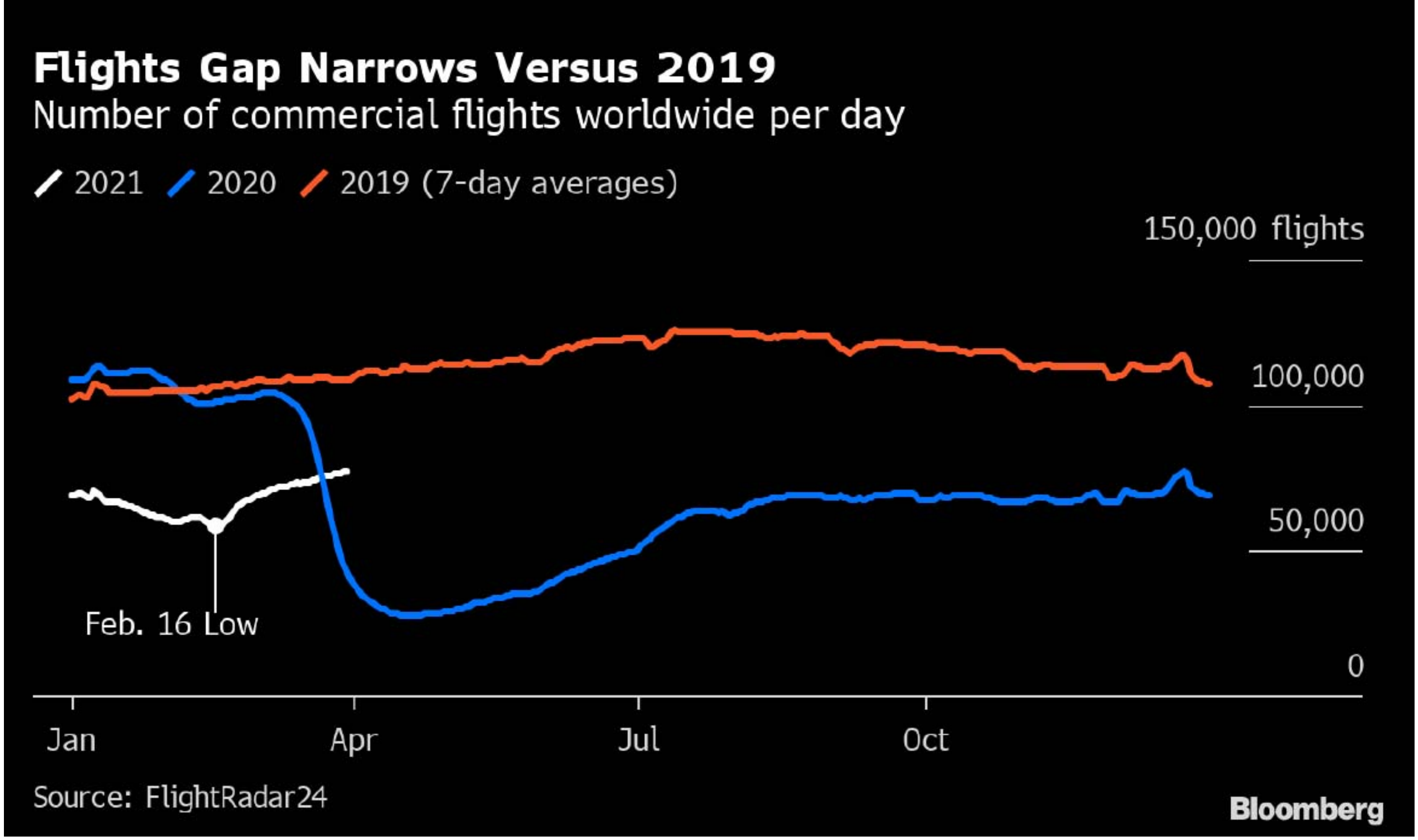
U.S. gasoline demand is almost back to year-ago levels, according to the latest weekly estimates from the Energy Information Administration, though the narrowing of the gap is mostly because demand was in freefall at this time in 2020, rather than because of a recent boost. When compared against the same week in 2019 -- a more useful measure -- consumption is still down about 6%, somewhat better than a 9% deficit in early February.

The EIA will issue a new batch of data, for the week ended March 26, at 10:30 a.m. Eastern time Wednesday.
IHS Markit analysts, using its OPIS demand data, said on Tuesday that U.S. gasoline sales have caught up with, and now are 10% above, 2020 levels though they still trail pre-pandemic levels by 16%.

"The real measure of recovery will be a return to pre-pandemic levels," said Brian Norris, OPIS executive director of retail fuels. "It's there that progress remains slow and, looking at gasoline, we still have a long way to go."
In the U.K., gasoline consumption is 28% below a year ago. The government's weekly tracking of fuel sales wasn't started early enough to provide a comparison against 2019. Diesel demand is stronger, down only 18%.

More Planes

Air traffic is improving. A global estimate of all commercial flights on Tuesday from FlightRadar24 shows activity was 29% lower than two years ago. That's a significant improvement from the middle of February, when the gap was 45%.



The recovery is much more pronounced in Asia and North America, which are broadly speaking about one-third lower than the equivalent week in 2019, using seat capacity estimates from OAG Aviation.

American Airlines Group Inc. said on Monday that it expects to put most of its fleet back in service in the second quarter following "recent strength in domestic and short-haul international bookings."
Latin America, the Middle East and Africa are about at half strength and Europe trails in last place, at 71% below 2019 capacity, according to the OAG data. Separate data from Eurocontrol shows air traffic in Europe on Tuesday was 62% down from two years ago.

China began localized Covid-19 lockdowns in late January 2020, while most places in Europe and North America waited until mid-March last year and by the end of that month, virtually all nations were under strict lockdown, according to government response tracking by Oxford University. Consequently, comparisons versus 2019 are more useful than straight year-over-year calculations.

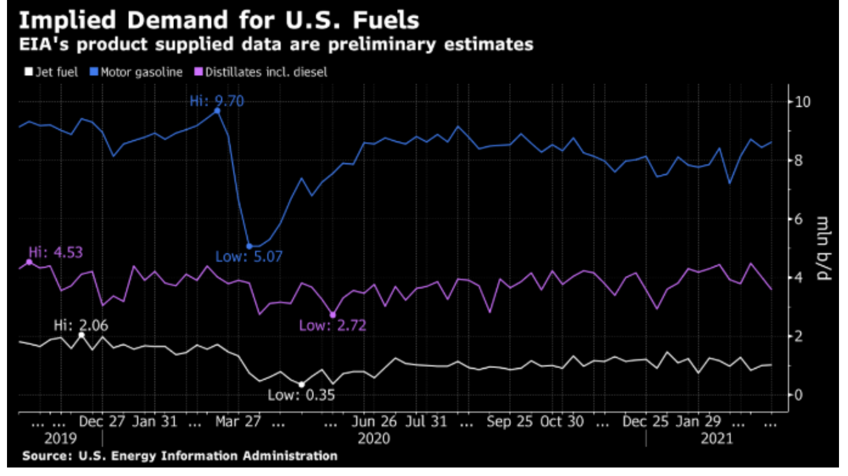
The Bloomberg weekly oil-demand monitor uses a range of high-frequency data series to help identify trends that may become clearer later in more comprehensive monthly figures.

Following are the latest indicators, in the four tables below. The first two show fuel demand and mobility, the next shows air travel globally and the last is refinery activity:

Measure	Location	% y/y	% vs 2019	% m/m	Freq.	Latest as of Date	Latest Value	Source
Gasoline demand	U.S.	-2.5	-5.6	+20	w	March 19	8.62m b/d	EIA
Distillates demand	U.S.	-5.3	-15	-8.6	w	March 19	3.59m b/d	EIA
Jet fuel demand	U.S.	-29	-37	+5.9	w	March 19	1.04m b/d	EIA
Total oil products demand	U.S.	-3.7	-7	+0.1	w	March 19	18.7m b/d	EIA
All vehicles miles traveled	U.S.		-7		w	March 21	14.5b miles	DoT
Passenger car VMT	U.S.		-9		w	March 21	n/a	DoT
Truck VMT	U.S.		+7		w	March 21	n/a	DoT
All motor vehicle use index	U.K.	+16		+14	d	March 22	80	DfT
Car use	U.K.	+14		+16	d	March 22	73	DfT
Heavy goods vehicle use	U.K.	+9.3		+3.9	d	March 22	106	DfT
Gasoline (petrol) avg sales per filling station	U.K.	-28		+18	w	March 21	5,154 liters/d	BEIS
Diesel avg sales per station	U.K.	-18		+9.2	w	March 21	8,429 liters/d	BEIS
Total road fuels sales per station	U.K.	-22		+12	w	March 21	13,582 liters/d	BEIS
Light vehicle traffic	France	-19	-12		m	February	n/a	Vinci
Heavy vehicle traffic	France	-2.8	+1.5		m	February	n/a	Vinci
Gasoline	India	+5.3		+1	2/m	March 1-15	1.05m tons	Bberg

Diesel	India	+7.4		unch	2/m	March 1-15	2.84m tons	Bberg
Jet fuel	India	-37		-2.6	2/m	March 1-15	204k tons	Bberg
Passenger car traffic	Poland	+67	-16	-9.3	w	March 28	18,125	GDDKiA
Heavy goods traffic	Poland	+19	+11	+4.3	w	March 28	4,896	GDDKiA
Road fuels	Spain	-24		-20	m	January	1.7m tons	CORES
Gasoline (road)	Spain	-30		-24	m	January	293k tons	CORES
Diesel (road)	Spain	-23		-19	m	January	1.4m tons	CORES
Jet fuel	Spain	-73		-20	m	January	128k tons	CORES
All vehicles traffic	Italy	-18		+27	m	February	n/a	Anas
Heavy vehicle traffic	Italy	-2		+18	m	February	n/a	Anas
Gasoline	Portugal	-40	-37	-17	m	February	48k tons	ENSE
Diesel	Portugal	-23	-23	-7.5	m	February	292k tons	ENSE
Jet fuel	Portugal	-83	-80	-49	m	February	18k tons	ENSE
Gasoline	Colombia	-7.4		+8	m	February	5.2m gal/d	Ministry
Diesel	Colombia	-1.5		+16	m	February	4.7m gal/d	Ministry
Jet fuel	Colombia	-43		-15	m	February	700k gal/d	Ministry

The frequency column shows d for data updated daily, w for weekly, 2/m for twice a month and m for monthly.

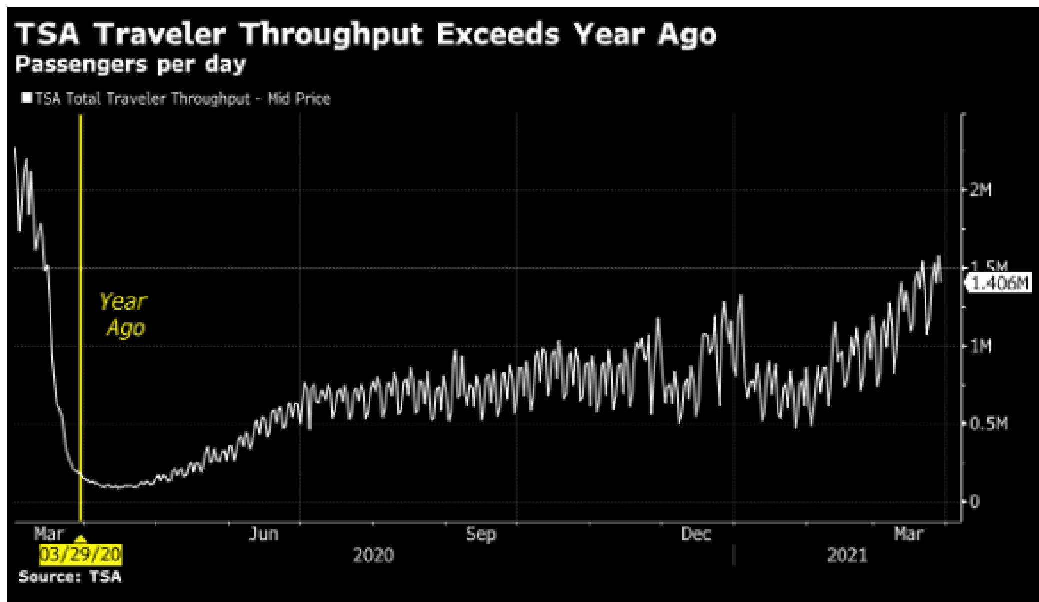


Measure	Location	% chg vs 2019	% chg m/m	Mar. 29	Mar. 22	Mar. 15	Mar. 8	Mar. 1	Feb. 22	Feb. 15	Feb. 8	Feb. 1
		(for Mar. 29)		Minutes of congestion at 8am local time								
Congestion	Shanghai	+16	-7	47	47	47	44	50	34	0	17	37
Congestion	Beijing	+13	-6	48	47	49	43	51	27	0	20	29
Congestion	Tokyo	-16	unch	31	32	34	37	31	33	29	31	32
Congestion	Mumbai	-100	-100	0	7	6	7	8	8	9	8	9
Congestion	New York	-65	-44	11	18	17	16	19	16	4	17	25
Congestion	Los Angeles	-56	-4	16	16	19	15	16	17	5	11	11
Congestion	London	-21	+47	30	40	40	32	20	19	23	22	19
Congestion	Rome	-68	-59	16	19	13	53	38	32	36	34	33
Congestion	Madrid	-86	-75	5	20	22	19	19	8	16	18	15
Congestion	Paris	-50	-31	22	26	40	34	32	21	25	32	34
Congestion	Berlin	-52	-27	16	23	23	4	22	20	18	23	19
Congestion	Mexico City	-62	unch	19	20	1	19	19	17	14	14	0
Congestion	Sao Paulo	-78	-58	10	15	14	17	23	25	11	20	18

Source: TomTom. Note: M/m comparison is March 29 vs March 1. Mumbai had a public holiday March 29.

Air Travel:

Measure	Location	y/y	vs 2019	m/m	Freq.	of Date	Value	Source
Airline passenger throughput	U.S.	+813		+34	d	March 29	1.41m people	TSA
Commercial flights	Worldwide	+82	-29	+13	d	March 30	77,269	FlightRadar24
Air traffic (flights)	Europe		-62	+18	d	March 30	10,549	Eurocontrol
Scheduled flights	Worldwide	-15		+6.7	w	March 29	427,000	OAG
Seat capacity	Worldwide	+27	-43		w	March 29	62.1m	OAG
Seat cap.	Asia-Pac	+53	-27		w	March 29	30.24m	OAG
Seat cap.	North America	-9.2	-35		w	March 29	15.63m	OAG
Seat cap.	Europe	+34	-71		w	March 29	7.72m	OAG
Seat cap.	Latin America	+37	-46		w	March 29	4.55m	OAG
Seat cap.	Middle East	+34	-52		w	March 29	2.35m	OAG
Seat cap.	Africa	+47	-47		w	March 29	1.64m	OAG
Seat cap.	China	+93	+4.5		w	March 29	16.19m	OAG
Seat cap.	U.S.	-8.1	-31		w	March 29	15.28m	OAG
Seat cap.	India	+189	-18		w	March 29	3.09m	OAG



Refineries:

Measure	Location	y/y chg	m/m chg	Latest as of Date	Latest Value	Source
Crude intake	U.S.	-9.1%	+18%	March 19	14.4m b/d	EIA
Utilization	U.S.	-5.7 ppt	+13 ppt	March 19	81.6%	EIA
Utilization	Gulf Coast U.S.	-12 ppt	+16 ppt	March 19	78.9 %	EIA
Utilization	East Coast U.S.	+20 ppt	+7.8 ppt	March 19	78.4%	EIA
Utilization	Midwest U.S.	-0.9 ppt	+11 ppt	March 19	87.2%	EIA
Apparent Oil Demand	China	+17%		Jan.-Feb. 2021	13.33m b/d	NBS
Independent refs run rate	Shandong province, China	+9.9 ppt	-1.6 ppt	March 26	71.8 %	SCI99
State refs run rate	East China	+21 ppt	-3 ppt	March 16	76.1 %	SCI99
State refs run rate	South China	+23 ppt	-13 ppt	March 16	74.7 %	SCI99
NOTE: All of the refinery data is weekly, except for SCI99 state refineries, which is twice per month, and the NBS apparent demand, which is usually monthly.						

NOTE: All of the refinery data is weekly, except for SCI99 state refineries, which is twice per month.

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Caixin China General Manufacturing PMI ™

Manufacturing output continues to expand modestly in March

Chinese manufacturing companies signalled a further improvement in operating conditions in March. Production and new orders continued to expand, albeit at mild rates, while employment moved closer to stabilisation. New export business meanwhile returned to growth, as global economic conditions continued to recover from the coronavirus disease 2019 (COVID-19) outbreak. At the same time, inflationary pressures intensified, with both input costs and output charges rising at steeper rates.

At 50.6 in March, the headline seasonally adjusted Purchasing Managers' Index ™ (PMI ™) – a composite indicator designed to provide a single-figure snapshot of operating conditions in the manufacturing economy – signalled a sustained improvement in the health of China's manufacturing sector. The reading was down from 50.9 in February, however, to indicate a marginal rate of improvement that was the softest seen in the current 11-month period of expansion.

As has been the case in each of the past 13 months, Chinese manufacturers increased production during March. The rate of growth edged down to an 11-month low and remained modest overall. Firms frequently mentioned that a further recovery from the pandemic and rising customer orders had supported the latest upturn.

Total new work likewise expanded at a fractionally weaker pace than in February, and only slightly overall. Underlying data suggested that a softening of domestic demand was largely offset by increased foreign sales, which rose for the first time in three months. Companies often mentioned that overseas demand had picked up as global economic conditions continued to recover from the COVID-19 outbreak.

The sustained upturn in new orders led to renewed pressure on capacities, with backlogs of work rising modestly after a marginal drop in February. Concurrently, the rate of job shedding eased to a marginal pace. Where lower staff numbers were reported, it was often linked to the non-replacement of voluntary leavers.

After a solid deterioration in February, average vendor performance deteriorated only marginally during March. Notably, the degree to which delivery times lengthened was the softest since last June.

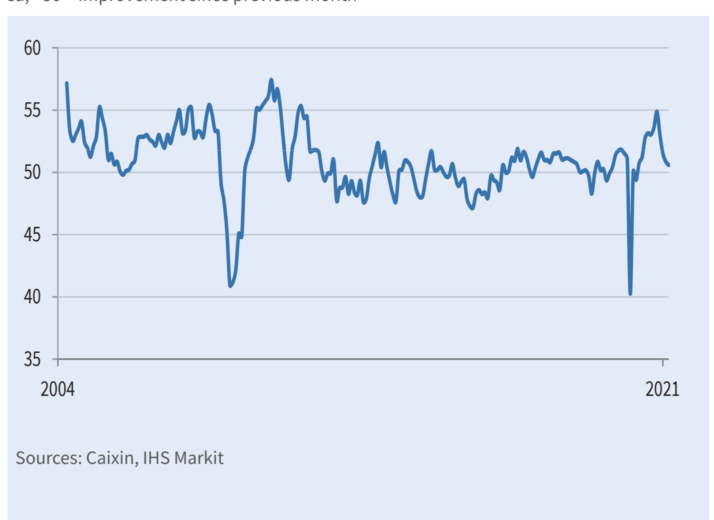
Although supply chain disruption eased, firms reported a sharp and accelerated rise in input costs during March amid reports of greater raw material prices. Notably, the rate of cost inflation was the steepest recorded for 40 months. Consequently, firms raised their selling prices and at the most marked rate since November 2016.

Input buying fell for the first time in 11 months in March, albeit only fractionally. A number of firms commented on having sufficient stocks in the latest survey period. On the inventories front, stocks of inputs fell marginally, while stocks of finished items were broadly stable.

Looking ahead, manufacturers were highly confident that output would continue to rise over the next year, with the level of positive sentiment among the highest seen over the past seven years. Growth projections were heavily linked to expectations that the pandemic will end, and that global demand will recover.

China General Manufacturing PMI

sa, >50 = improvement since previous month



Sources: Caixin, IHS Markit

Key findings:

Production increases again amid further uptick in sales

Export orders rise for first time in three months

Inflationary pressures pick up

New Export Orders Index

sa, >50 = growth since previous month

Sources: Caixin, IHS Markit

Employment Index

sa, >50 = growth since previous month

Sources: Caixin, IHS Markit

Commenting on the China General Manufacturing PMI ™ data, Dr. Wang Zhe, Senior Economist at Caixin Insight Group said:

"The Caixin China General Manufacturing PMI came in at 50.6 in March, down from 50.9 the previous month. The March reading was the lowest since April 2020, despite marking the 11th consecutive month of expansion. That indicates the post-epidemic recovery was continuing to falter.

1. Both supply and demand in the manufacturing sector continued to expand, but the pace of expansion has slowed for four straight months. Overseas demand became a bright spot, with the gauge of new export orders reaching into positive territory for the first time this year. Surveyed manufacturers said overseas demand largely increased as the epidemic situation improved.

2. The slower growth in both supply and demand added pressure to the labor market. Employment in March shrank for a fourth straight month, though at a slower pace than in February. Employment remained low because manufacturers weren't very motivated to replace departing workers.

3. The gauges for input and output prices both rose at a faster pace, indicating added inflationary pressure. Prices of raw materials, including industrial metals and crude oil, further rose, causing costs for manufacturing enterprises to soar. The gauge for input costs in March hit the highest level since November 2017. As a result, the gauge for factory gate prices reached the highest since November 2016. Surveyed companies said that rising prices also suppressed any further recovery of demand.

4. The economic slowdown further weakened manufacturers' motivation to replenish their stocks. The measure for stocks of purchased items remained in negative territory for the third consecutive month, and the measure for quantity of purchases plunged into contractionary territory. Stocks of finished goods remained stable. The gauge for suppliers' delivery times increased, though it was still in negative territory, indicating that logistic delays were getting shorter.

"Overall, the manufacturing sector continued to recover in March, but the momentum of both supply and demand weakened. Overseas demand largely improved. The sector remained under employment pressure. Manufacturing enterprises were still confident that the economy will continue to recover and that the pandemic will be brought under control, with the gauge for future output expectations exceeding the long-term average. We should pay attention to inflation in future as the gauges for input and output prices have been rising for several months. The growing inflationary pressure limits the room for future policies and is not a good thing for sustaining an economic recovery in the post-epidemic period."

https://www.whitehouse.gov/briefing-room/statements-releases/2021/03/31/fact-sheet-the-american-jobs-plan/

BRIEFING ROOM

FACT SHEET: The American Jobs Plan

MARCH 31, 2021 • STATEMENTS AND RELEASES

While the American Rescue Plan is changing the course of the pandemic and delivering relief for working families, this is no time to build back to the way things were. This is the moment to reimagine and rebuild a new economy. The American Jobs Plan is an investment in America that will create millions of good jobs, rebuild our country's infrastructure, and position the United States to out-compete China. Public domestic investment as a share of the economy has fallen by more than 40 percent since the 1960s. The American Jobs Plan will invest in America in a way we have not invested since we built the interstate highways and won the Space Race.

The United States of America is the wealthiest country in the world, yet we rank 13th when it comes to the overall quality of our infrastructure. After decades of disinvestment, our roads, bridges, and water systems are crumbling. Our electric grid is vulnerable to catastrophic outages. Too many lack access to affordable, high-speed Internet and to quality housing. The past year has led to job losses and threatened economic security, eroding more than 30 years of progress in women's labor force participation. It has unmasked the fragility of our caregiving infrastructure. And, our nation is falling behind its biggest competitors on research and development (R&D), manufacturing, and training. It has never been more important for us to invest in strengthening our infrastructure and competitiveness, and in creating the good-paying, union jobs of the future.

Like great projects of the past, the President's plan will unify and mobilize the country to meet the great challenges of our time: the climate crisis and the ambitions of an autocratic China. It will invest in Americans and deliver the jobs and opportunities they deserve. But unlike past major investments, the plan prioritizes addressing long-standing and persistent racial injustice. The plan targets 40 percent of the benefits of climate and clean infrastructure investments to disadvantaged communities. And, the plan invests in rural communities and communities impacted by the market-based transition to clean energy. Specifically, President Biden's plan will:

Fix highways, rebuild bridges, upgrade ports, airports and transit systems. The President's plan will modernize 20,000 miles of highways, roads, and main-streets. It will fix the ten most economically significant bridges in the country in need of reconstruction. It also will repair the worst 10,000 smaller bridges, providing critical

linkages to communities. And, it will replace thousands of buses and rail cars, repair hundreds of stations, renew airports, and expand transit and rail into new communities.

Deliver clean drinking water, a renewed electric grid, and high-speed broadband to all Americans. President Biden's plan will eliminate all lead pipes and service lines in our drinking water systems, improving the health of our country's children and communities of color. It will put hundreds of thousands of people to work laying thousands of miles of transmission lines and capping hundreds of thousands of orphan oil and gas wells and abandoned mines. And, it will bring affordable, reliable, high-speed broadband to every American, including the more than 35 percent of rural Americans who lack access to broadband at minimally acceptable speeds.

Build, preserve, and retrofit more than two million homes and commercial buildings, modernize our nation's schools and child care facilities, and upgrade veterans' hospitals and federal buildings. President Biden's plan will create good jobs building, rehabilitating, and retrofitting affordable, accessible, energy efficient, and resilient housing, commercial buildings, schools, and child care facilities all over the country, while also vastly improving our nation's federal facilities, especially those that serve veterans.

Solidify the infrastructure of our care economy by creating jobs and raising wages and benefits for essential home care workers. These workers – the majority of whom are women of color – have been underpaid and undervalued for too long. The President's plan makes substantial investments in the infrastructure of our care economy, starting by creating new and better jobs for caregiving workers. His plan will provide home and community-based care for individuals who otherwise would need to wait as many as five years to get the services they badly need.

Revitalize manufacturing, secure U.S. supply chains, invest in R&D, and train Americans for the jobs of the future. President Biden's plan will ensure that the best, diverse minds in America are put to work creating the innovations of the future while creating hundreds of thousands of quality jobs today. Our workers will build and make things in every part of America, and they will be trained for well-paying, middle-class jobs.

Create good-quality jobs that pay prevailing wages in safe and healthy workplaces while ensuring workers have a free and fair choice to organize, join a union, and bargain collectively with their employers. By ensuring that American taxpayers' dollars benefit working families and their communities, and not multinational corporations or foreign governments, the plan will require that goods and materials are made in America and shipped on

U.S.-flag, U.S.-crewed vessels. The plan also will ensure that Americans who have endured systemic discrimination and exclusion for generations finally have a fair shot at obtaining good paying jobs and being part of a union.

Alongside his American Jobs Plan, President Biden is releasing a Made in America Tax Plan to make sure corporations pay their fair share in taxes and encourage job creation at home. A recent study found that 91 Fortune 500 companies paid $0 in federal taxes on U.S. income in 2018. Another study found that the average corporation paid just 8 percent in taxes. President Biden believes that profitable corporations should not be able to get away with paying little or no tax by shifting jobs and profits overseas. President Biden's plan will reward investment at home, stop profit shifting, and ensure other nations won't gain a competitive edge by becoming tax havens.

The President's American Jobs Plan is a historic public investment – consisting principally of one-time capital investments in our nation's productivity and long-term growth. It will invest about 1 percent of GDP per year over eight years to upgrade our nation's infrastructure, revitalize manufacturing, invest in basic research and science, shore up supply chains, and solidify our care infrastructure. These are investments that leading economists agree will give Americans good jobs now and will pay off for future generations by leaving the country more competitive and our communities stronger. In total, the plan will invest about $2 trillion this decade. If passed alongside President Biden's Made in America corporate tax plan, it will be fully paid for within the next 15 years and reduce deficits in the years after.

BUILD WORLD-CLASS TRANSPORTATION INFRASTRUCTURE: FIX HIGHWAYS, REBUILD BRIDGES, AND UPGRADE PORTS, AIRPORTS AND TRANSIT SYSTEMS

President Biden is calling on Congress to make a historic and overdue investment in our roads, bridges, rail, ports, airports, and transit systems. The President's plan will ensure that these investments produce good-quality jobs with strong labor standards, prevailing wages, and a free and fair choice to join a union and bargain collectively. These investments will advance racial equity by providing better jobs and better transportation options to underserved communities. These investments also will extend opportunities to small businesses to participate in the design, construction, and manufacturing of new infrastructure and component parts. President Biden's plan will deliver infrastructure Americans can trust, because it will be resilient to floods, fires, storms, and other threats, and not fragile in the face of these increasing risks. President Biden is calling on Congress to:

Transform our crumbling transportation infrastructure:

Decades of declining public investment has left our roads, bridges, rail, and transit systems in poor condition, with a trillion-dollar backlog of needed repairs. More than 35,000 people die in traffic crashes on U.S. roads each year, and millions more are seriously and often permanently injured. The United States has one of the highest traffic fatality rates in the industrialized world, double the rate in Canada and quadruple that in Europe. Across cities, suburbs, and rural areas, President Biden's plan will help parents get to work reliably and affordably, reduce the impacts of climate change for our kids, and make sure fewer families mourn the loss of a loved one to road crashes. His investments will use more sustainable and innovative materials, including cleaner steel and cement, and component parts Made in America and shipped on U.S.-flag vessels with American crews under U.S. laws. And, his infrastructure investments will mitigate socio-economic disparities, advance racial equity, and promote affordable access to opportunity.

The President's plan invests an additional $621 billion in transportation infrastructure and resilience. It will:

- Repair American roads and bridges. One in five miles, or 173,000 total miles, of our highways and major roads are in poor condition, as well as 45,000 bridges. Delays caused by traffic congestion alone cost over $160 billion per year, and motorists are forced to pay over $1,000 every year in wasted time and fuel. The President is proposing a total increase of $115 billion to modernize the bridges, highways, roads, and main streets that are in most critical need of repair. This includes funding to improve air quality, limit greenhouse gas emissions, and reduce congestion. His plan will modernize 20,000 miles of highways, roads, and main streets, not only "fixing them first" but "fixing them right," with safety, resilience, and all users in mind. It will fix the most economically significant large bridges in the country in need of reconstruction, and it will repair the worst 10,000 smaller bridges, including bridges that provide critical connections to rural and tribal communities. The plan includes $20 billion to improve road safety for all users, including increases to existing safety programs and a new Safe Streets for All program to fund state and local "vision zero" plans and other improvements to reduce crashes and fatalities, especially for cyclists and pedestrians.

- Modernize public transit. Households that take public transportation to work have twice the commute time, and households of color are twice as likely to take public transportation. Our current transit infrastructure is inadequate – the Department of Transportation estimates a repair backlog of over $105

billion, representing more than 24,000 buses, 5,000 rail cars, 200 stations, and thousands of miles of track, signals, and power systems in need of replacement. This translates to service delays and disruptions that leave riders stranded and discourage transit use. President Biden is calling on Congress to invest $85 billion to modernize existing transit and help agencies expand their systems to meet rider demand. This investment will double federal funding for public transit, spend down the repair backlog, and bring bus, bus rapid transit, and rail service to communities and neighborhoods across the country. It will ultimately reduce traffic congestion for everyone.

- Invest in reliable passenger and freight rail service. The nation's rail networks have the potential to offer safe, reliable, efficient, and climate-friendly alternatives for moving people and freight. However, unlike highways and transit, rail lacks a multi-year funding stream to address deferred maintenance, enhance existing corridors, and build new lines in high-potential locations. There are currently projects just waiting to be funded that will give millions more Americans reliable and fast inter-city train service. President Biden is calling on Congress to invest $80 billion to address Amtrak's repair backlog; modernize the high traffic Northeast Corridor; improve existing corridors and connect new city pairs; and enhance grant and loan programs that support passenger and freight rail safety, efficiency, and electrification.

- Create good jobs electrifying vehicles. U.S. market share of plug-in electric vehicle (EV) sales is only one-third the size of the Chinese EV market. The President believes that must change. He is proposing a $174 billion investment to win the EV market. His plan will enable automakers to spur domestic supply chains from raw materials to parts, retool factories to compete globally, and support American workers to make batteries and EVs. It will give consumers point of sale rebates and tax incentives to buy American-made EVs, while ensuring that these vehicles are affordable for all families and manufactured by workers with good jobs. It will establish grant and incentive programs for state and local governments and the private sector to build a national network of 500,000 EV chargers by 2030, while promoting strong labor, training, and installation standards. His plan also will replace 50,000 diesel transit vehicles and electrify at least 20 percent of our yellow school bus fleet through a new Clean Buses for Kids Program at the Environmental Protection Agency, with support from the Department of Energy. These investments will set us on a path to 100 percent clean buses, while ensuring that the American workforce is trained to operate and maintain this 21st century infrastructure. Finally, it will utilize the vast tools of federal procurement to electrify the federal fleet, including the United States Postal Service.

- Improve ports, waterways, and airports. The United States built modern aviation, but our airports lag far behind our competitors. According to some rankings, no U.S. airports rank in the top 25 of airports

worldwide. Our ports and waterways need repair and reimagination too. President Biden is calling on Congress to invest $25 billion in our airports, including funding for the Airport Improvement Program, upgrades to FAA assets that ensure safe and efficient air travel, and a new program to support terminal renovations and multimodal connections for affordable, convenient, car-free access to air travel. President Biden is calling on Congress to invest an additional $17 billion in inland waterways, coastal ports, land ports of entry, and ferries, which are all essential to our nation's freight. This includes a Healthy Ports program to mitigate the cumulative impacts of air pollution on neighborhoods near ports, often communities of color. These investments will position the United States as a global leader in clean freight and aviation.

- Redress historic inequities and build the future of transportation infrastructure. The President's plan for transportation is not just ambitious in scale, it is designed with equity in mind and to set up America for the future. Too often, past transportation investments divided communities – like the Claiborne Expressway in New Orleans or I-81 in Syracuse – or it left out the people most in need of affordable transportation options. The President's plan includes $20 billion for a new program that will reconnect neighborhoods cut off by historic investments and ensure new projects increase opportunity, advance racial equity and environmental justice, and promote affordable access. The President's plan will inspire basic research, like advanced pavements that recycle carbon dioxide, and "future proof" investments that will last decades to leave coming generations with a safe, equitable, and sustainable transportation system. And, the President's plan will accelerate transformative investments, from pre-development through construction, turning "shovel worthy" ideas into "shovel ready" projects. This includes $25 billion for a dedicated fund to support ambitious projects that have tangible benefits to the regional or national economy but are too large or complex for existing funding programs.

- Invest resources wisely to deliver infrastructure projects that produce real results. America lags its peers – including Canada, the U.K., and Australia – in the on-time and on-budget delivery of infrastructure, and is falling behind countries like China on overall investment. Delivering this historic investment will require partnership across government, unions, and industry, to produce meaningful outcomes for the American people – reliable transportation, safe water, affordable housing, healthy schools, clean electricity, and broadband for all. When President Biden managed the implementation of the Recovery Act, he insisted on the strongest possible accountability and transparency measures to ensure public dollars were invested efficiently and effectively. When Congress enacts the American Jobs Plan, the President will bring the best practices from the Recovery Act and models from around the world to break down barriers and drive

implementation of infrastructure investments across all levels of government to realize the President's vision of safe, reliable, and resilient infrastructure. Critically, in order to achieve the best outcomes on cost and performance for the American people, the Administration will support the state, local, and tribal governments delivering these projects through world-class training, technical assistance, and procurement best practices. In addition, the President's plan will use smart, coordinated infrastructure permitting to expedite federal decisions while prioritizing stakeholder engagement, community consultation, and maximizing equity, health, and environmental benefits.

Make our infrastructure more resilient:

Millions of Americans feel the effects of climate change each year when their roads wash out, airport power goes down, or schools get flooded. Last year alone, the United States faced 22 extreme weather and climate-related disaster events with losses exceeding $1 billion each – a cumulative price tag of nearly $100 billion. Chronic underinvestment in resilience has harmed American transportation infrastructure, disrupting service, making travel conditions unsafe, causing severe damage, and increasing maintenance and operating costs.

In 2020, the United States endured 22 separate billion-dollar weather and climate disasters, costing $95 billion in damages to homes, businesses, and public infrastructure. In Louisiana, Hurricane Laura caused $19 billion of damage, resulting in broken water systems and a severely damaged electrical grid that impeded a quick recovery. Building back better requires that the investments in this historic plan make our infrastructure more resilient in the face of increasingly severe floods, wildfires, hurricanes, and other risks. Every dollar spent on rebuilding our infrastructure during the Biden administration will be used to prevent, reduce, and withstand the impacts of the climate crisis. Additionally, the President is calling for $50 billion in dedicated investments to improve infrastructure resilience and:

- Safeguard critical infrastructure and services, and defend vulnerable communities. People of color and low-income people are more likely to live in areas most vulnerable to flooding and other climate change-related weather events. They also are less likely to have the funds to prepare for and recover from extreme weather events. In the wake of Hurricane Harvey, Black and Hispanic residents were twice as likely as white residents to report experiencing an income shock with no recovery support. President Biden's plan increases resilience in the most essential services, including the electric grid; food systems; urban infrastructure; community health and hospitals; and our roads, rail, and other transportation assets. His plan also targets investments to support infrastructure in those communities most vulnerable physically

and financially to climate-driven disasters and to build back above existing codes and standards. The President's plan will invest in vulnerable communities through a range of programs, including FEMA's Building Resilient Infrastructure and Communities program, HUD's Community Development Block Grant program, new initiatives at the Department of Transportation, a bipartisan tax credit to provide incentives to low- and middle-income families and to small businesses to invest in disaster resilience, and transition and relocation assistance to support community-led transitions for the most vulnerable tribal communities.

- Maximize the resilience of land and water resources to protect communities and the environment. President Biden's plan will protect and, where necessary, restore nature-based infrastructure – our lands, forests, wetlands, watersheds, and coastal and ocean resources. Families and businesses throughout the United States rely on this infrastructure for their lives and livelihoods. President Biden is calling on Congress to invest in protection from extreme wildfires, coastal resilience to sea-level rise and hurricanes, support for agricultural resources management and climate-smart technologies, and the protection and restoration of major land and water resources like Florida's Everglades and the Great Lakes. Additionally, the President's plan provides funding for the western drought crisis by investing in water efficiency and recycling programs, Tribal Water Settlements, and dam safety. President Biden's plan will empower local leaders to shape these restoration and resilience project funds in line with the Outdoor Restoration Force Act.

REBUILD CLEAN DRINKING WATER INFRASTRUCTURE, A RENEWED ELECTRIC GRID, AND HIGH-SPEED BROADBAND TO ALL AMERICANS

Too many American families drink polluted water, lack access to affordable, high-speed internet, or experience power outages too often – all while paying more for those services. President Biden's plan invests in the infrastructure necessary to finally deliver the water, broadband, and electricity service that Americans deserve. Specifically, his plan will:

Ensure clean, safe drinking water is a right in all communities:

Across the country, pipes and treatment plants are aging and polluted drinking water is endangering public health. An estimated six to ten million homes still receive drinking water through lead pipes and service lines. The President's investments in improving water infrastructure and replacing lead service lines will create good jobs, including union and prevailing wage jobs. President Biden's plan invests $111 billion to:

- Replace 100 percent of the nation's lead pipes and service lines. According to the CDC, there is no safe level of lead exposure for children. Lead can slow development and cause learning, behavior, and hearing problems in children, as well as lasting kidney and brain damage. President Biden believes that no American family should still be receiving drinking water through lead pipes and service lines. To eliminate all lead pipes and service lines in the country, he is calling on Congress to invest $45 billion in the Environmental Protection Agency's Drinking Water State Revolving Fund and in Water Infrastructure Improvements for the Nation Act (WIIN) grants. In addition to reducing lead exposure in homes, this investment also will reduce lead exposure in 400,000 schools and childcare facilities.

- Upgrade and modernize America's drinking water, wastewater, and stormwater systems, tackle new contaminants, and support clean water infrastructure across rural America. Aging water systems threaten public health in thousands of communities nationwide. President Biden will modernize these systems by scaling up existing, successful programs, including by providing $56 billion in grants and low-cost flexible loans to states, Tribes, territories, and disadvantaged communities across the country. President Biden's plan also provides $10 billion in funding to monitor and remediate PFAS (per- and polyfluoroalkyl substances) in drinking water and to invest in rural small water systems and household well and wastewater systems, including drainage fields.

Revitalize America's digital infrastructure:

Generations ago, the federal government recognized that without affordable access to electricity, Americans couldn't fully participate in modern society and the modern economy. With the 1936 Rural Electrification Act, the federal government made a historic investment in bringing electricity to nearly every home and farm in America, and millions of families and our economy reaped the benefits. Broadband internet is the new electricity. It is necessary for Americans to do their jobs, to participate equally in school learning, health care, and to stay connected. Yet, by one definition, more than 30 million Americans live in areas where there is no broadband infrastructure that provides minimally acceptable speeds. Americans in rural areas and on tribal lands particularly lack adequate access. And, in part because the United States has some of the highest broadband prices among OECD countries, millions of Americans can't use broadband internet even if the infrastructure exists where they live. In urban areas as well, there is a stark digital divide: a much higher percentage of White families use home broadband internet than Black or Latino families. The last year made painfully clear the cost of these disparities, particularly for students who struggled to connect while learning remotely, compounding learning loss and social isolation for those students.

The President believes we can bring affordable, reliable, high-speed broadband to every American through a historic investment of $100 billion. That investment will:

- Build high-speed broadband infrastructure to reach 100 percent coverage. The President's plan prioritizes building "future proof" broadband infrastructure in unserved and underserved areas so that we finally reach 100 percent high-speed broadband coverage. It also prioritizes support for broadband networks owned, operated by, or affiliated with local governments, non-profits, and co-operatives—providers with less pressure to turn profits and with a commitment to serving entire communities. Moreover, it ensures funds are set aside for infrastructure on tribal lands and that tribal nations are consulted in program administration. Along the way, it will create good-paying jobs with labor protections and the right to organize and bargain collectively.

- Promote transparency and competition. President Biden's plan will promote price transparency and competition among internet providers, including by lifting barriers that prevent municipally-owned or affiliated providers and rural electric co-ops from competing on an even playing field with private providers, and requiring internet providers to clearly disclose the prices they charge.

- Reduce the cost of broadband internet service and promote more widespread adoption. President Biden believes that building out broadband infrastructure isn't enough. We also must ensure that every American who wants to can afford high-quality and reliable broadband internet. While the President recognizes that individual subsidies to cover internet costs may be needed in the short term, he believes continually providing subsidies to cover the cost of overpriced internet service is not the right long-term solution for consumers or taxpayers. Americans pay too much for the internet – much more than people in many other countries – and the President is committed to working with Congress to find a solution to reduce internet prices for all Americans, increase adoption in both rural and urban areas, hold providers accountable, and save taxpayer money.

Reenergize America's power infrastructure:

As the recent Texas power outages demonstrated, our aging electric grid needs urgent modernization. A Department of Energy study found that power outages cost the U.S. economy up to $70 billion annually. The President's plan will create a more resilient grid, lower energy bills for middle class Americans, improve air

quality and public health outcomes, and create good jobs, with a choice to join a union, on the path to achieving 100 percent carbon-free electricity by 2035. President Biden is calling on Congress to invest $100 billion to:

- Build a more resilient electric transmission system. Through investments in the grid, we can move cheaper, cleaner electricity to where it is needed most. This starts with the creation of a targeted investment tax credit that incentivizes the buildout of at least 20 gigawatts of high-voltage capacity power lines and mobilizes tens of billions in private capital off the sidelines – right away. In addition, President Biden's plan will establish a new Grid Deployment Authority at the Department of Energy that allows for better leverage of existing rights-of-way – along roads and railways – and supports creative financing tools to spur additional high priority, high-voltage transmission lines. These efforts will create good-paying jobs for union laborers, line workers, and electricians, in addition to creating demand for American-made building materials and parts.

- Spur jobs modernizing power generation and delivering clean electricity. President Biden is proposing a ten-year extension and phase down of an expanded direct-pay investment tax credit and production tax credit for clean energy generation and storage. These credits will be paired with strong labor standards to ensure the jobs created are good-quality jobs with a free and fair choice to join a union and bargain collectively. President Biden's plan will mobilize private investment to modernize our power sector. It also will support state, local, and tribal governments choosing to accelerate this modernization through complementary policies – like clean energy block grants that can be used to support clean energy, worker empowerment, and environmental justice. And, it will use the federal government's incredible purchasing power to drive clean energy deployment across the market by purchasing 24/7 clean power for federal buildings. To ensure that we fully take advantage of the opportunity that modernizing our power sector presents, President Biden will establish an Energy Efficiency and Clean Electricity Standard (EECES) aimed at cutting electricity bills and electricity pollution, increasing competition in the market, incentivizing more efficient use of existing infrastructure, and continuing to leverage the carbon pollution-free energy provided by existing sources like nuclear and hydropower. All of this will be done while ensuring those facilities meet robust and rigorous standards for worker, public, and environmental safety as well as environmental justice – and all while moving toward 100 percent carbon-pollution free power by 2035.

- Put the energy industry to work plugging orphan oil and gas wells and cleaning up abandoned mines. Hundreds of thousands of former orphan oil and gas wells and abandoned mines pose serious

safety hazards, while also causing ongoing air, water, and other environmental damage. Many of these old wells and mines are located in rural communities that have suffered from years of disinvestment. President Biden's plan includes an immediate up-front investment of $16 billion that will put hundreds of thousands to work in union jobs plugging oil and gas wells and restoring and reclaiming abandoned coal, hardrock, and uranium mines. In addition to creating good jobs in hard-hit communities, this investment will reduce the methane and brine that leaks from these wells, just as we invest in reducing leaks from other sources like aging pipes and distribution systems.

- Remediate and redevelop idle real property, and spur the buildout of critical physical, social, and civic infrastructure in distressed and disadvantaged communities. In thousands of rural and urban communities around the country, hundreds of thousands of former industrial and energy sites are now idle – sources of blight and pollution. Through a $5 billion investment in the remediation and redevelopment of these Brownfield and Superfund sites, as well as related economic and workforce development, President Biden's plan will turn this idle real property into new hubs of economic growth and job creation. But it's not enough to redevelop old infrastructure. President Biden's plan also will bring these communities new critical physical, social, and civic infrastructure. This means investing in the Economic Development Agency's Public Works program (while lifting the cap of $3 million on projects) and in "Main Street" revitalization efforts through HUD and USDA. President Biden's plan also will spur targeted sustainable, economic development efforts through the Appalachian Regional Commission's POWER grant program, Department of Energy retooling grants for idled factories (through the Section 132 program), and dedicated funding to support community-driven environmental justice efforts – such as capacity and project grants to address legacy pollution and the cumulative impacts experienced by frontline and fenceline communities.

- Build next generation industries in distressed communities. President Biden believes that the market-based shift toward clean energy presents enormous opportunities for the development of new markets and new industries. For example, by pairing an investment in 15 decarbonized hydrogen demonstration projects in distressed communities with a new production tax credit, we can spur capital-project retrofits and installations that bolster and decarbonize our industrtay. The President's plan also will establish ten pioneer facilities that demonstrate carbon capture retrofits for large steel, cement, and chemical production facilities, all while ensuring that overburdened communities are protected from increases in cumulative pollution. In addition, in line with the bipartisan SCALE Act, his plan will support large-scale sequestration efforts that leverage the best science and prioritize community engagement. And to

accelerate responsible carbon capture deployment and ensure permanent storage, President Biden's plan reforms and expands the bipartisan Section 45Q tax credit, making it direct pay and easier to use for hard-to-decarbonize industrial applications, direct air capture, and retrofits of existing power plants.

- Mobilize the next generation of conservation and resilience workers. This $10 billion investment will put a new, diverse generation of Americans to work conserving our public lands and waters, bolstering community resilience, and advancing environmental justice through a new Civilian Climate Corps, all while placing good-paying union jobs within reach for more Americans.

BUILD, PRESERVE, AND RETROFIT MORE THAN TWO MILLION HOMES AND COMMERCIAL BUILDINGS; MODERNIZE OUR NATION'S SCHOOLS, COMMUNITY COLLEGES, AND EARLY LEARNING FACILITIES; AND UPGRADE VETERANS' HOSPITALS AND FEDERAL BUILDINGS

There is a severe shortage of affordable housing options in America, and the American Society of Civil Engineers gives our school infrastructure a "D+." President Biden believes we must invest in building and upgrading modern, resilient, and energy-efficient homes and buildings, including our nation's schools, early learning facilities, veterans' hospitals and other federal buildings, and in the process, employ American workers in jobs with good wages and benefits. President Biden's plan will:

Build, preserve, and retrofit more than two million homes and commercial buildings to address the affordable housing crisis:

There is a severe shortage of affordable housing options in America. Millions of families pay more than half their income on rent, and home energy costs are a significant concern for American renters as well. And, across the country, people are struggling to purchase their first home.

The President's plan invests $213 billion to produce, preserve, and retrofit more than two million affordable and sustainable places to live. It pairs this investment with an innovative new approach to eliminate state and local exclusionary zoning laws, which drive up the cost of construction and keep families from moving to neighborhoods with more opportunities for them and their kids. The President's plan will help address the growing cost of rent and create jobs that pay prevailing wages, including through project labor agreements with a free and fair choice to join a union and bargain collectively.

President Biden is calling on Congress to:

- Produce, preserve, and retrofit more than a million affordable, resilient, accessible, energy efficient, and electrified housing units. Through targeted tax credits, formula funding, grants, and project-based rental assistance, President Biden's plan will extend affordable housing rental opportunities to underserved communities nationwide, including rural and tribal areas.

- Build and rehabilitate more than 500,000 homes for low- and middle-income homebuyers. President Biden is calling on Congress to take immediate steps to spur the construction and rehabilitation of homes for underserved communities. Specifically, he is calling on Congress to pass the innovative, bipartisan Neighborhood Homes Investment Act (NHIA). Offering $20 billion worth of NHIA tax credits over the next five years will result in approximately 500,000 homes built or rehabilitated, creating a pathway for more families to buy a home and start building wealth.

- Eliminate exclusionary zoning and harmful land use policies. For decades, exclusionary zoning laws – like minimum lot sizes, mandatory parking requirements, and prohibitions on multifamily housing – have inflated housing and construction costs and locked families out of areas with more opportunities. President Biden is calling on Congress to enact an innovative, new competitive grant program that awards flexible and attractive funding to jurisdictions that take concrete steps to eliminate such needless barriers to producing affordable housing.

- Address longstanding public housing capital needs. Years of disinvestment have left our public housing in disrepair. President Biden is calling on Congress to invest $40 billion to improve the infrastructure of the public housing system in America. This funding will address critical life-safety concerns, mitigate imminent hazards to residents, and undertake energy efficiency measures which will significantly reduce ongoing operating expenses. These improvements will disproportionately benefit women, people of color, and people with disabilities.

- Put union building trade workers to work upgrading homes and businesses to save families money. President Biden's plan will upgrade homes through block grant programs, the Weatherization Assistance Program, and by extending and expanding home and commercial efficiency tax credits. President Biden's plan also will establish a $27 billion Clean Energy and Sustainability Accelerator to mobilize private investment into distributed energy resources; retrofits of residential, commercial and municipal buildings; and clean transportation. These investments have a particular focus on disadvantaged communities that have not yet benefited from clean energy investments.

Modernize our nation's schools and early learning facilities:

Too many students attend schools and child care centers that are run-down, unsafe, and pose health risks. These conditions are dangerous for our kids and exist disproportionately in schools with a high percentage of low-income students and students of color. And even before COVID-19, 43 percent of parents reported struggling to find an adequate child care facility for their children. President Biden is calling on Congress to:

- Modernize our public schools. President Biden believes we can't close the opportunity gap if low-income kids go to schools in buildings that undermine health and safety, while wealthier students get access to safe buildings with labs and technology that prepare them for the jobs of the future. The President's plan invests $100 billion to upgrade and build new public schools, through $50 billion in direct grants and an additional $50 billion leveraged through bonds. These funds will first go toward making sure our schools are safe and healthy places of learning for our kids and work for teachers and other education professionals, for example by improving indoor air quality and ventilation. As we make our schools safer, we also will invest in cutting-edge, energy-efficient and electrified, resilient, and innovative school buildings with technology and labs that will help our educators prepare students to be productive workers and valued students. Under the President's plan, better operating school facilities will reduce their greenhouse gas emissions and also will become environments of community resilience with green space, clean air, and safe places to gather, especially during emergencies. Funds also will be provided to improve our school kitchens, so they can be used to better prepare nutritious meals for our students and go green by reducing or eliminating the use of paper plates and other disposable materials.
- Investing in community college infrastructure. Investing in community college facilities and technology helps protect the health and safety of students and faculty, address education deserts (particularly for rural communities), grow local economies, improve energy efficiency and resilience, and narrow funding inequities in the short-term, as we rebuild our higher education finance system for the long-run. President Biden is calling on Congress to invest $12 billion to address these needs. States will be responsible for using the dollars to address both existing physical and technological infrastructure needs at community colleges and identifying strategies to address access to community college in education deserts.
- Upgrade child care facilities and build new supply in high need areas. Lack of access to child care makes it harder for parents, especially mothers, to fully participate in the workforce. In areas with the greatest shortage of child care slots, women's labor force participation is about three percentage points less than in

areas with a high capacity of child care slots, hurting families and hindering U.S. growth and competitiveness. President Biden is calling on Congress to provide $25 billion to help upgrade child care facilities and increase the supply of child care in areas that need it most. Funding would be provided through a Child Care Growth and Innovation Fund for states to build a supply of infant and toddler care in high-need areas. President Biden also is calling for an expanded tax credit to encourage businesses to build child care facilities at places of work. Employers will receive 50 percent of the first $1 million of construction costs per facility so that employees can enjoy the peace of mind and convenience that comes with on-site child care. These investments will provide safe, accessible, energy efficient, high-quality learning environments for providers to teach and care for children. Public investments in schools and childcare improves children's outcomes—the foundation for future productivity gains. In classrooms with poor ventilation, for example, student absences are 10 to 20 percent higher.

Upgrade VA hospitals and federal buildings:

The federal government operates office buildings, courthouses, and other facilities in every state, where millions of workers serve the public from outdated, inefficient, and sometimes unsafe working conditions. While the median age of U.S. private sector hospitals is roughly 11 years, the Veterans Affairs' hospital portfolio has a median age of 58. The President believes our veterans deserve state-of-the-art hospitals and care. President Biden's plan provides $18 billion for the modernization of Veterans Affairs hospitals and clinics. President Biden's plan also invests $10 billion in the modernization, sustainability, and resilience of federal buildings, including through a bipartisan Federal Capital Revolving Fund to support investment in a major purchase, construction or renovation of Federal facilities. And, President Biden's plan utilizes the vast tools of federal procurement to purchase low carbon materials for construction and clean power for these newly constructed VA hospitals and federal buildings.

SOLIDIFY THE INFRASTRUCTURE OF OUR CARE ECONOMY BY CREATING JOBS AND RAISING WAGES AND BENEFITS FOR ESSENTIAL HOME CARE WORKERS

Even before COVID-19, our country was in the midst of a caregiving crisis. In addition to caring for children, families feel the financial burden of caring for aging relatives and family members with disabilities, and there is a financial strain for people with disabilities living independently to ensure that they are getting care in their homes. At the same time, hundreds of thousands of people who need better care are unable to access it, even though they qualify under Medicaid. In fact, it can take years for these individuals to get the services they badly need. Aging relatives and people with disabilities deserve better. They deserve high-quality services and support

that meet their unique needs and personal choices.

Caregivers – who are disproportionally women of color – have been underpaid and undervalued for far too long. Wages for essential home care workers are approximately $12 per hour, putting them among the lowest paid workers in our economy. In fact, one in six workers in this sector live in poverty. President Biden is calling on Congress to make substantial investments in the infrastructure of care in our country. Specifically, he is calling on Congress to put $400 billion toward expanding access to quality, affordable home- or community-based care for aging relatives and people with disabilities. These investments will help hundreds of thousands of Americans finally obtain the long-term services and support they need, while creating new jobs and offering caregiving workers a long-overdue raise, stronger benefits, and an opportunity to organize or join a union and collectively bargain. Research shows that increasing the pay of direct care workers greatly enhances workers' financial security, improves productivity, and increases the quality of care offered. Another study showed that increased pay for care workers prevented deaths, reduced the number of health violations, and lowered the cost of preventative care.

President Biden's plan will:

- Expand access to long-term care services under Medicaid. President Biden believes more people should have the opportunity to receive care at home, in a supportive community, or from a loved one. President Biden's plan will expand access to home and community-based services (HCBS) and extend the longstanding Money Follows the Person program that supports innovations in the delivery of long-term care.
- Put in place an infrastructure to create good middle-class jobs with a free and fair choice to join a union. The HCBS expansion under Medicaid can support well-paying caregiving jobs that include benefits and the ability to collectively bargain, building state infrastructure to improve the quality of services and to support workers. This will improve wages and quality of life for essential home health workers and yield significant economic benefits for low-income communities and communities of color.

INVEST IN R&D, REVITALIZE MANUFACTURING AND SMALL BUSINESSES, AND TRAIN AMERICANS FOR THE JOBS OF THE FUTURE

Half the jobs in our high growth, high wage sectors are concentrated in just 41 counties, locking millions of Americans out of a shot at a middle-class job. President Biden believes that, even in the face of automation and globalization, America can and must retain well-paid union jobs and create more of them all across the country.

U.S. manufacturing was the Arsenal of Democracy in World War II and must be part of the Arsenal of American Prosperity today, helping fuel an economic recovery for working families. From the invention of the semiconductor to the creation of the Internet, new engines of economic growth have emerged due to public investments that support research, commercialization, and strong supply chains. President Biden is calling on Congress to make smart investments in research and development, manufacturing and regional economic development, and in workforce development to give our workers and companies the tools and training they need to compete on the global stage. Specifically, President Biden is calling on Congress to:

<u>Invest in R&D and the technologies of the future:</u>

Public investments in R&D lay the foundation for the future breakthroughs that over time yield new businesses, new jobs, and more exports. However, we need more investment if we want to maintain our economic edge in today's global economy. We are one of the few major economies whose public investments in research and development have declined as a percent of GDP in the past 25 years. Countries like China are investing aggressively in R&D, and China now ranks number two in the world in R&D expenditures. In addition, barriers to careers in high-innovation sectors remain significant. We must do more to improve access to the higher wage sectors of our economy. In order to win the 21st century economy, President Biden believes America must get back to investing in the researchers, laboratories, and universities across our nation. But this time, we must do so with a commitment to lifting up workers and regions who were left out of past investments. He is calling on Congress to make an $180 billion investment that will:

- Advance U.S. leadership in critical technologies and upgrade America's research infrastructure. U.S. leadership in new technologies—from artificial intelligence to biotechnology to computing—is critical to both our future economic competitiveness and our national security. Based on bipartisan proposals, President Biden is calling on Congress to invest $50 billion in the National Science Foundation (NSF), creating a technology directorate that will collaborate with and build on existing programs across the government. It will focus on fields like semiconductors and advanced computing, advanced communications technology, advanced energy technologies, and biotechnology. He also is calling on Congress to provide $30 billion in additional funding for R&D that spurs innovation and job creation, including in rural areas. His plan also will invest $40 billion in upgrading research infrastructure in laboratories across the country, including brick-and-mortar facilities and computing capabilities and networks. These funds would be allocated across the federal R&D agencies, including at the Department of Energy. Half of those funds will be reserved for Historically Black College and Universities (HBCUs)

and other Minority Serving Institutions, including the creation of a new national lab focused on climate that will be affiliated with an HBCU.

- Establish the United States as a leader in climate science, innovation, and R&D. The President is calling on Congress to invest $35 billion in the full range of solutions needed to achieve technology breakthroughs that address the climate crisis and position America as the global leader in clean energy technology and clean energy jobs. This includes launching ARPA-C to develop new methods for reducing emissions and building climate resilience, as well as expanding across-the-board funding for climate research. In addition to a $5 billion increase in funding for other climate-focused research, his plan will invest $15 billion in demonstration projects for climate R&D priorities, including utility-scale energy storage, carbon capture and storage, hydrogen, advanced nuclear, rare earth element separations, floating offshore wind, biofuel/bioproducts, quantum computing, and electric vehicles, as well as strengthening U.S. technological leadership in these areas in global markets.

- Eliminate racial and gender inequities in research and development and science, technology, engineering, and math. Discrimination leads to less innovation: one study found that innovation in the United States will quadruple if women, people of color, and children from low-income families invented at the rate of groups who are not held back by discrimination and structural barriers. Persistent inequities in access to R&D dollars and to careers in innovation industries prevents the U.S. economy from reaching its full potential. President Biden is calling on Congress to make a $10 billion R&D investment at HBCUs and other MSIs. He also is calling on Congress to invest $15 billion in creating up to 200 centers of excellence that serve as research incubators at HBCUs and other MSIs to provide graduate fellowships and other opportunities for underserved populations, including through pre-college programs.

<u>Retool and revitalize American manufacturers and small businesses:</u>

The U.S. manufacturing sector accounts for 70 percent of business R&D expenditure, 30 percent of productivity growth, and 60 percent of exports. Manufacturing is a critical node that helps convert research and innovation into sustained economic growth. Workers on the factory floor work hand-in-hand with engineers and scientists to sharpen and maintain our competitive edge. While manufacturing jobs have been a ladder to middle-class life, we have let our industrial heartland be hollowed out, with quality jobs moving abroad or to regions with lower wages and fewer protections for workers. President Biden is calling on Congress to invest $300 billion in order to:

- Strengthen manufacturing supply chains for critical goods. President Biden believes we must produce, here at home, the technologies and goods that meet today's challenges and seize tomorrow's opportunities. President Biden is calling on Congress to invest $50 billion to create a new office at the Department of Commerce dedicated to monitoring domestic industrial capacity and funding investments to support production of critical goods. The President also is calling on Congress to invest $50 billion in semiconductor manufacturing and research, as called for in the bipartisan CHIPS Act.

- Protect Americans from future pandemics. This funding provides $30 billion over 4 years to create U.S. jobs and prevent the severe job losses caused by pandemics through major new investments in medical countermeasures manufacturing; research and development; and related biopreparedness and biosecurity. This includes investments to shore up our nation's strategic national stockpile; accelerate the timeline to research, develop and field tests and therapeutics for emerging and future outbreaks; accelerate response time by developing prototype vaccines through Phase I and II trials, test technologies for the rapid scaling of vaccine production, and ensure sufficient production capacity in an emergency; enhance U.S. infrastructure for biopreparedness and investments in biosafety and biosecurity; train personnel for epidemic and pandemic response; and onshore active pharmaceutical ingredients. COVID-19 has claimed over 500,000 American lives and cost trillions of dollars, demonstrating the devastating and increasing risk of pandemics and other biological threats. Over the past two decades, outbreaks of SARS, Ebola, influenza, Zika and others have cost billions in lost productivity. The risk of catastrophic biological threats is increasing due to our interconnected world, heightened risk of spillover from animals to humans, ease of making and modifying pandemic agents, and an eroding norm against the development and use of biological weapons. The American Rescue Plan serves as an initial investment of $10 billion. With this new major investment in preventing future pandemics, the United States will build on the momentum from the American Rescue Plan, bolster scientific leadership, create jobs, markedly decrease the time from discovering a new threat to putting shots in arms, and prevent future biological catastrophes.

- Jumpstart clean energy manufacturing through federal procurement. The federal government spends more than a half-a-trillion dollars buying goods and services each year. As a result, it has the ability to be a first-mover in markets. This incredible purchasing power can be used to drive innovation and clean energy production, as well as to support high quality jobs. To meet the President's goals of achieving net-zero emissions by 2050, the United States will need more electric vehicles, charging ports, and electric heat pumps for residential heating and commercial buildings. The President is calling on Congress to

enable the manufacture of those cars, ports, pumps, and clean materials, as well as critical technologies like advanced nuclear reactors and fuel, here at home through a $46 billion investment in federal buying power, creating good-paying jobs and reinvigorating local economies, especially in rural areas.

- Make it in ALL of America. The President believes we must build social infrastructure to support innovation and productivity across the country. He is calling on Congress to invest $20 billion in regional innovation hubs and a Community Revitalization Fund. At least ten regional innovation hubs will leverage private investment to fuel technology development, link urban and rural economies, and create new businesses in regions beyond the current handful of high-growth centers. The Community Revitalization Fund will support innovative, community-led redevelopment projects that can spark new economic activity, provide services and amenities, build community wealth, and close the current gaps in access to the innovation economy for communities of color and rural communities that have suffered from years of disinvestment. And, President Biden is calling on Congress to invest $14 billion in NIST to bring together industry, academia, and government to advance technologies and capabilities critical to future competitiveness. He is calling on Congress to quadruple support for the Manufacturing Extensions Partnership —increasing the involvement of minority-owned and rurally-located small- and-medium-sized enterprises in technological advancement.

- Increase access to capital for domestic manufacturers. America's manufacturing industry needs to innovate, adapt, and scale to win the industries of the future. President Biden is calling on Congress to invest more than $52 billion in domestic manufacturers. The President is calling on Congress to invest in existing capital access programs with a proven track record of success, with a focus on supporting rural manufacturing and clean energy. The President's plan also includes specific supports for modernizing supply chains, including in the auto sector, like extending the 48C tax credit program. He also will call for the creation of a new financing program to support debt and equity investments for manufacturing to strengthen the resilience of America's supply chains.

- Create a national network of small business incubators and innovation hubs. Almost all manufacturers (98 percent) are small- and medium-sized firms. Furthermore, small business ownership is a cornerstone of job creation and wealth building. However, even before the pandemic, many entrepreneurs struggled to compete in a system that is so often tilted in favor of large corporations and wealthy individuals. President Biden is calling on Congress to invest $31 billion in programs that give small businesses access to credit, venture capital, and R&D dollars. The proposal includes funding for community-based small business

incubators and innovation hubs to support the growth of entrepreneurship in communities of color and underserved communities.

- Partner with rural and Tribal communities to create jobs and economic growth in rural America. Today, despite the fact that rural and Tribal communities across the country are asset-rich, more than 8 in 10 persistent poverty counties fall outside of a metropolitan area. President Biden's plan invests in rural and Tribal communities, including by providing 100 percent broadband coverage, rebuilding crumbling infrastructure like roads, bridges, and water systems, providing research and development funding to land grant universities, and positioning the U.S. agricultural sector to lead the shift to net-zero emissions while providing new economic opportunities for farmers. President Biden also is proposing to transform the way the federal government partners with rural and Tribal communities to create jobs and spur inclusive economic growth. Rural communities often don't have the same budget as big cities to hire staff needed to navigate and access federal programs. On top of that, they have to navigate a myriad of programs all with different purposes and requirements. As part of his plan to ensure that all communities recover – regardless of geography – President Biden is proposing a $5 billion for a new Rural Partnership Program to help rural regions, including Tribal Nations, build on their unique assets and realize their vision for inclusive community and economic development. This program will empower rural regions by supporting locally-led planning and capacity building efforts, and providing flexible funding to meet critical needs.

Invest in Workforce Development:

As more Americans rejoin the workforce or seek out new opportunities in a changing economy, there is a greater need for skills development opportunities for workers of all kind. In order to ensure workers have ready access to the skills they will need to succeed, and to improve racial and gender equity, President Biden is calling on Congress to invest $100 billion in proven workforce development programs targeted at underserved groups and getting our students on paths to careers before they graduate from high school. His plan will:

- Pair job creation efforts with next generation training programs. President Biden is calling on Congress to invest in evidence-based approaches to supporting workers. This includes wraparound services, income supports, counseling, and case management, paired with high-quality training and effective partnerships between educational institutions, unions, and employers. Specifically, he is calling for a $40 billion investment in a new Dislocated Workers Program and sector-based training. This funding will ensure comprehensive services for workers, who have lost jobs through no fault of their own, to gain new skills and to get career services they need with in-demand jobs. Sector-based training programs will be focused

on growing, high demand sectors such as clean energy, manufacturing, and caregiving, helping workers of all kinds to find good-quality jobs in an ever-changing economy.

- Target workforce development opportunities in underserved communities. Structural racism and persistent economic inequities have undermined opportunity for millions of workers. All of the investments in workforce training will prioritize underserved communities and communities hit hard by a transforming economy. President Biden also will call upon Congress to ensure that new jobs created in clean energy, manufacturing, and infrastructure are open and accessible to women and people of color. President Biden is calling on Congress to also specifically target funding to workers facing some of the greatest challenges, with a $12 billion investment. This includes $5 billion over eight years in support of evidence-based community violence prevention programs. He is calling on Congress to invest in job training for formerly incarcerated individuals and justice-involved youth and in improving public safety. He also is calling on Congress to tackle long-term unemployment and underemployment through a new subsidized jobs program. And, he is calling on Congress to eliminate sub-minimum wage provisions in section 14(c) of the Fair Labor Standards Act and expand access to competitive, integrated employment opportunities and fair wages for workers with disabilities.

- Build the capacity of the existing workforce development and worker protection systems. The United States has underinvested in the workforce development system for decades. In fact, we currently spend just one-fifth of the average that other advanced economies spend on workforce and labor market programs. This lack of investment impacts all of us: better educated workers create spillover effects for other workers and lack of employment has negative social impacts on communities. President Biden is calling on Congress to invest a combined $48 billion in American workforce development infrastructure and worker protection. This includes registered apprenticeships and pre-apprenticeships, creating one to two million new registered apprenticeships slots, and strengthening the pipeline for more women and people of color to access these opportunities through successful pre-apprenticeship programs such as the Women in Apprenticeships in Non-Traditional Occupations. This will ensure these underserved groups have greater access to new infrastructure jobs. These investments include the creation of career pathway programs in middle and high schools, prioritizing increased access to computer science and high-quality career and technical programs that connect underrepresented students to STEM and in-demand sectors through partnerships with both institutions of higher education and employers. The President's plan also will support community college partnerships that build capacity to deliver job training programs based on in-demand skills. His plan will better tailor services to workers' job seeking and career development

needs through investments in Expanded Career Services and the Title II adult literacy program.The President's plan includes funding to strengthen the capacity of our labor enforcement agencies to protect against discrimination, protect wages and benefits, enforce health and safety safeguards, strengthen health care and pensions plans, and promote union organizing and collective bargaining.

CREATE GOOD-QUALITY JOBS THAT PAY PREVAILING WAGES IN SAFE AND HEALTHY WORKPLACES WHILE ENSURING WORKERS HAVE A FREE AND FAIR CHOICE TO ORGANIZE, JOIN A UNION, AND BARGAIN COLLECTIVELY WITH THEIR EMPLOYERS

As America works to recover from the devastating challenges of a deadly pandemic, an economic crisis, and a reckoning on race that reveals deep disparities, we need to summon a new wave of worker power to create an economy that works for everyone. We owe it not only to those who have put in a lifetime of work, but to the next generation of workers who have only known an America of rising inequality and shrinking opportunity. This is especially important for workers of color and for women, who have endured discrimination and systematic exclusion from economic opportunities for generations. All of us deserve to enjoy America's promise in full — and our nation's leaders have a responsibility to overcome racial, gender, and other inequalities to make it happen. To that end, the President is calling on Congress to create new, good-quality union jobs for American workers by leveraging their grit and ingenuity to address the climate crisis and build a sustainable infrastructure. Increased unionization can alsoimpact our economic growth overall by improving productivity. President Biden's plan will:

- Empower Workers. President Biden is calling on Congress to update the social contract that provides workers with a fair shot to get ahead, overcome racial and other inequalities that have been barriers for too many Americans, expand the middle class, and strengthen communities. He is calling on Congress to ensure all workers have a free and fair choice to join a union by passing the Protecting the Right to Organize (PRO) Act, and guarantee union and bargaining rights for public service workers. His plan also ensures domestic workers receive the legal benefits and protections they deserve and tackles pay inequities based on gender.
- Create good jobs. The President's plan demands that employers benefitting from these investments follow strong labor standards and remain neutral when their employees seek to organize a union and bargain collectively. He is asking Congress to tie federal investments in clean energy and infrastructure to prevailing wages and require transportation investments to meet existing transit labor protections. He also

is calling for investments tied to Project Labor, Community Workforce, local hire, and registered apprenticeships and other labor or labor-management training programs so that federal investments support good jobs and pathways to the middle class. Finally, he is asking Congress to include a commitment to increasing American jobs through Buy America and Ship American provisions.

- Protect workers. President Biden is calling on Congress to provide the federal government with the tools it needs to ensure employers are providing workers with good jobs – including jobs with fair and equal pay, safe and healthy workplaces, and workplaces free from racial, gender, and other forms of discrimination and harassment. In addition to a $10 billion investment in enforcement as part of the plan's workforce proposals, the President is calling for increased penalties when employers violate workplace safety and health rules.

THE MADE IN AMERICA TAX PLAN

Alongside the American Jobs Plan, the President is proposing to fix the corporate tax code so that it incentivizes job creation and investment here in the United States, stops unfair and wasteful profit shifting to tax havens, and ensures that large corporations are paying their fair share.

The 2017 tax law only made an unfair system worse. A recent independent study found that 91 Fortune 500 companies paid $0 in federal corporate taxes on U.S. income in 2018. In fact, according to recent analysis by the Joint Committee on Taxation, the 2017 tax bill cut the average rate that corporations paid in half from 16 percent to less than 8 percent in 2018. A number of the provisions in the 2017 law also created new incentives to shift profits and jobs overseas. President Biden's reform will reverse this damage and fundamentally reform the way the tax code treats the largest corporations.

President Biden's reform will also make the United States a leader again in the world and help bring an end to the race-to-the-bottom on corporate tax rates that allows countries to gain a competitive advantage by becoming tax havens. This is a generational opportunity to fundamentally shift how countries around the world tax corporations so that big corporations can't escape or eliminate the taxes they owe by offshoring jobs and profits from the United States.

Together these corporate tax changes will raise over $2 trillion over the next 15 years and more than pay for the mostly one-time investments in the American Jobs Plan and then reduce deficits on a permanent basis:

- Set the Corporate Tax Rate at 28 percent. The President's tax plan will ensure that corporations pay their fair share of taxes by increasing the corporate tax rate to 28 percent. His plan will return corporate tax revenue as a share of the economy to around its 21st century average from before the 2017 tax law and well below where it stood before the 1980s. This will help fund critical investments in infrastructure, clean energy, R&D, and more to maintain the competitiveness of the United States and grow the economy.

- Discourage Offshoring by Strengthening the Global Minimum Tax for U.S. Multinational Corporations. Right now, the tax code rewards U.S. multinational corporations that shift profits and jobs overseas with a tax exemption for the first ten percent return on foreign assets, and the rest is taxed at half the domestic tax rate. Moreover, the 2017 tax law allows companies to use the taxes they pay in high-tax countries to shield profits in tax havens, encouraging offshoring of jobs. The President's tax reform proposal will increase the minimum tax on U.S. corporations to 21 percent and calculate it on a country-by-country basis so it hits profits in tax havens. It will also eliminate the rule that allows U.S. companies to pay zero taxes on the first 10 percent of return when they locate investments in foreign countries. By creating incentives for investment here in the United States, we can reward companies that help to grow the U.S. economy and create a more level playing field between domestic companies and multinationals.

- End the Race to the Bottom Around the World. The United States can lead the world to end the race to the bottom on corporate tax rates. A minimum tax on U.S. corporations alone is insufficient. That can still allow foreign corporations to strip profits out of the United States, and U.S. corporations can potentially escape U.S. tax by inverting and switching their headquarters to foreign countries. This practice must end. President Biden is also proposing to encourage other countries to adopt strong minimum taxes on corporations, just like the United States, so that foreign corporations aren't advantaged and foreign countries can't try to get a competitive edge by serving as tax havens. This plan also denies deductions to foreign corporations on payments that could allow them to strip profits out of the United States if they are based in a country that does not adopt a strong minimum tax. It further replaces an ineffective provision in the 2017 tax law that tried to stop foreign corporations from stripping profits out of the United States. The United States is now seeking a global agreement on a strong minimum tax through multilateral negotiations. This provision makes our commitment to a global minimum tax clear. The time has come to level the playing field and no longer allow countries to gain a competitive edge by slashing corporate tax rates.

- Prevent U.S. Corporations from inverting or claiming tax havens as their residence. Under current law, U.S. corporations can acquire or merge with a foreign company to avoid U.S. taxes by claiming to be a foreign company, even though their place of management and operations are in the United States. President Biden is proposing to make it harder for U.S. corporations to invert. This will backstop the other reforms which should address the incentive to do so in the first place.

- Deny Companies Expense Deductions for Offshoring Jobs and Credit Expenses for Onshoring. President Biden's reform proposal will also make sure that companies can no longer write off expenses that come from offshoring jobs. This is a matter of fairness. U.S. taxpayers shouldn't subsidize companies shipping jobs abroad. Instead, President Biden is also proposing to provide a tax credit to support onshoring jobs.

- Eliminate a Loophole for Intellectual Property that Encourages Offshoring Jobs and Invest in Effective R&D Incentives. The President's ambitious reform of the tax code also includes reforming the way it promotes research and development. This starts with a complete elimination of the tax incentives in the Trump tax law for "Foreign Derived Intangible Income" (FDII), which gave corporations a tax break for shifting assets abroad and is ineffective at encouraging corporations to invest in R&D. All of the revenue from repealing the FDII deduction will be used to expand more effective R&D investment incentives.

- Enact A Minimum Tax on Large Corporations' Book Income. The President's tax reform will also ensure that large, profitable corporations cannot exploit loopholes in the tax code to get by without paying U.S. corporate taxes. A 15 percent minimum tax on the income corporations use to report their profits to investors—known as "book income"—will backstop the tax plan's other ambitious reforms and apply only to the very largest corporations.

- Eliminate Tax Preferences for Fossil Fuels and Make Sure Polluting Industries Pay for Environmental Clean Up. The current tax code includes billions of dollars in subsidies, loopholes, and special foreign tax credits for the fossil fuel industry. As part of the President's commitment to put the country on a path to net-zero emissions by 2050, his tax reform proposal will eliminate all these special preferences. The President is also proposing to restore payments from polluters into the Superfund Trust Fund so that polluting industries help fairly cover the cost of cleanups.

- Ramping Up Enforcement Against Corporations. All of these measures will make it much harder for the largest corporations to avoid or evade taxes by eliminating parts of the tax code that are too easily abused. This will be paired with an investment in enforcement to make sure corporations pay their fair share. Typical workers' wages are reported to the IRS and their employer withholds, so they pay all the taxes

they owe. By contrast, large corporations have at their disposal loopholes they exploit to avoid or evade tax liabilities, and an army of high-paid tax advisors and accountants who help them get away with this. At the same time, an under-funded IRS lacks the capacity to scrutinize these suspect tax maneuvers: A decade ago, essentially all large corporations were audited annually by the IRS; today, audit rates are less than 50 percent. This plan will reverse these trends, and make sure that the Internal Revenue Service has the resources it needs to effectively enforce the tax laws against corporations. This will be paired with a broader enforcement initiative to be announced in the coming weeks that will address tax evasion among corporations and high-income Americans.

These are key steps toward a fairer tax code that encourages investment in the United States, stops shifting of jobs and profits abroad, and makes sure that corporations pay their fair share. The President looks forward to working with Congress, and will be putting forward additional ideas in the coming weeks for reforming our tax code so that it rewards work and not wealth, and makes sure the highest income individuals pay their fair share.

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Biden To Put US On "Irreversible Path to Achieve Net-Zero Emissions, Economy-Wide" Is a Major Negative To US Natural Gas in 2020s

Posted Tuesday July 28, 2020. 11:15am MT

Oil and natural gas followers should know that Biden's new clean energy plan is a major negative, in particular, to US natural gas in the 2020s. We know there is still 97 days to the US elections and a lot can change but, with Biden's big polling lead nationally and even in some key battleground states, it's the right time to start to look at what he means to oil and natural gas. Our concern is that Biden states he plans to put the US on an irreversible path to achieve net-zero emissions economy-wide by 2050 and, to do so, he will need to move quickly and strongly on new pro-climate change policies. This not an item that doesn't impact for 30 years and shows up in 2050, rather, the impacts will be in 2020s. Biden's new clean energy plan has multiple game changers to oil and natural gas. This blog focuses on one that will have a major impact on US natural gas in the 2020s – he plans to only have "*carbon-pollution free*" electricity by 2035. Not zero net emissions, "*carbon pollution-free*" ie. no fossil fuels. We don't think this is attainable as fossil fuels provide 60% of US electricity. But if he puts the US on an irreversible path to this goal, even if he is only 25% or 50% successful, it would be a massive hit to future US natural gas consumption. Electricity currently represents ~40% or ~33.5 bcf/d of total US natural gas consumption. If Biden is 50% successful, it will knock of 16.8 bcf/d or 20% of total US natural gas consumption. If he is 25% successful, it will knock of 8.4 bcf/d or 10% of total US natural gas consumption. If markets see Biden is serious about making this happen, it will very quickly impact the long term value of US natural gas and that some investors will soon look to avoid US natural gas ie. not consider it investible for the mid/long term.. Its why we believe Biden's carbon-pollution free electricity plan will be a major negative to US natural gas in the 2020s

Biden's plan to put the US on "an *irreversible path to achieve net-zero emissions, economy-wide, by no later than 2050*", but the impacts on oil and gas will be hitting right away. We know a lot can happen in the 97 days to the election but, given Biden's current wide lead, the time is right to get energy investors on how he plans to turn the US energy mix upside down. The reason why this is part 1 of our blogs on Biden is that his clean energy plan (and his other potential policies) has multiple potential game changers to today's energy mix. And there is too much in it to include in one blog. Two weeks ago, Biden released "*The Biden Plan to Build a Modern, Sustainable Infrastructure and an Equitable Clean Energy Future*". [LINK] We believe the most important takeaway for energy markets to understand is that Biden wants to put the US on "*an irreversible path to achieve net-zero emissions, economy-wide, by no later than 2050*". Our worry is that, to put the US on an "*irreversible path*", he will have to move fast and big in his first four years. Biden's plan, if implemented, will dramatically change the US energy mix to hugely reduce fossil fuels.

There will be an immediate impact on oil and natural gas as climate change will be a Day 1 priority and much more than recommitting to Paris. We have highlighted in the title Biden's target for 2050, but his clean energy plan has many mid term targets that provide clear indicators for materially reduced oil and natural gas demand. Climate change is a Day 1 priority for Biden. Biden's platform has made it clear that climate change is a priority and, not just for his first 100 days, rather his first day. Biden's plan says the US "*Re-enter the Paris Agreement on day one of the Biden Administration and lead a major diplomatic push to raise the ambitions of countries' climate targets*". And it says "*He will not only recommit the United States to the Paris Agreement on climate change – he will go much further than that. He will lead an effort to get every major country to ramp up the ambition of their domestic climate targets. He will make sure those commitments are transparent and enforceable, and stop countries from cheating by using America's economic leverage and power of example. He will fully integrate climate change into our foreign policy and national security strategies, as well as our approach to trade. Biden will rejoin the Paris Agreement, but simply rejoining is not enough. Biden will use every tool of American foreign policy to push the rest of the world to raise their ambitions alongside the United States".* Biden has clearly listened to the Sanders/Warren side and has stepped up his ambitions on climate change. He wants to go beyond the Paris Agreement.

United Nations' COP26 gives the perfect global forum for the world to join Biden's push for the world to raise their climate change ambitions. We continue to believe one of the major global energy themes for 2021 will be the world is behind its targets to meet its climate change targets/ambitions. The IEA has just completed a series of reports that provide data on being behind target, which we included in our June 11, 2020 blog "Will The Demise Of Oil Take Longer, Just Like Coal? IEA and Shell Highlight Delays/Gaps To A Smooth Clean Energy Transition." [LINK] There will be a global spotlight on

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climate change in 2021 with COP26 (the UN Climate Change Conference UNFCCC CO26) being held Nov 1-12 in Glasgow, Scotland. The Paris Agreement on climate change was signed on April 22, 2016 in the last year of the Obama administration. Given Trump pulled the US out of the Paris Agreement, it provides Biden a global stage for the US to re-engage with the world and step back into a global leadership role on climate change. On June 1, 2017, Trump announced the US would cease all participation in the Paris Agreement and gave formal notice to withdraw on Nov 4, 2019. The withdraw takes 12 months to take effect ie. on Nov 4, 2020, which is one day after the Nov 3 presidential election. We don't expect Trump to change the US position whether he loses or wins the election. But as we have seen in all other UN climate change forums, there will be a focus on climate change in the months leading up to Glasgow as countries try to find a consensus position. Biden says he wants to push the rest of the world to raise their ambitions. Biden doesn't say it specifically, but his plan to push the world is consistent with the fact that the world is behind in meeting their climate goals. On July 11, we tweeted [LINK] "*Key 2021 energy theme: #CleanEnergy transition is not on track. UN Guterres 22:10 min "nations must commit to net zero emissions by 2050 and submit more ambitious national climate plans before COP26 next year". Can't make up for lost COVID19 time"*. UN Secretary General Guterres spoke at this week's IEA Clean Energy transitions summit and he reminded of why markets should see a great global focus on the clean energy transition and that is not on track to meet its timing. At the 22:10 min mark [LINK] Guterres said "*nations must commit to net zero emissions by 2050 and submit more ambitious national climate plans before COP26 next year*". The world being behind its clean energy transition targets, Biden's climate change priority and COP26 provide the perfect scenario for Biden's return to US global leadership.

Biden's clean energy plan will dramatically change the future US energy mix away from fossil fuels. Our first blog in this Biden series is focused on Biden's target to "*achieve carbon-pollution free energy in electricity generation by 2035*" because we see this as an item that will impact US natural gas right away. This is a huge target and it means that Biden plans to turn the US energy mix upside down. The other big headline is to push EVs by doing things like federal fleets, mandating all transit and other buses must be EV by 2030, etc. One item that seems to be mostly overlooked so far is one that can have a material impact on oil and natural gas – his focus on improving energy efficiency. Biden says he will "*Reform and extend the tax incentives we know generate energy efficiency and clean energy jobs".* We have always viewed efficiency standards as low hanging fruit that can have a material impact. Its not just car fuel efficiency, but also commercial and residential buildings. Our concern is that efficiency gains end up taking away demand from coal, oil and natural gas as opposed to solar, wind, etc. We expect one of our likely follow on Biden blogs will be on efficiency. There are many other items in the Biden plan. One noticeable omission is no discussion on carbon tax or carbon price.

Biden looks like he is trying to skip over natural gas as the transition fuel to the clean energy world. Natural gas has been universally viewed as the key transition fuel to a world of clean energy. Biden doesn't specifically say so, but it seems like Biden's plan is trying to skip over, or dramatically lower, natural gas role as a transition fuel to a world of clean energy (in this case electricity) and in being the primary fuel source for a new hydrogen world. We will more on hydrogen in the future, but Bide also wants to skip over natural gas as the primary hydrogen source by "u*sing renewables to produce carbon-free hydrogen at a lower cost than hydrogen from shale gas through innovation in technologies like next generation electrolyzers".* Today's blog focuses on the impact of Biden's "carbon pollution-free" electricity target by 2035, but he is trying to eliminate or ensure there are carbon offsets for all fossil fuels in the US energy mix by 2050.

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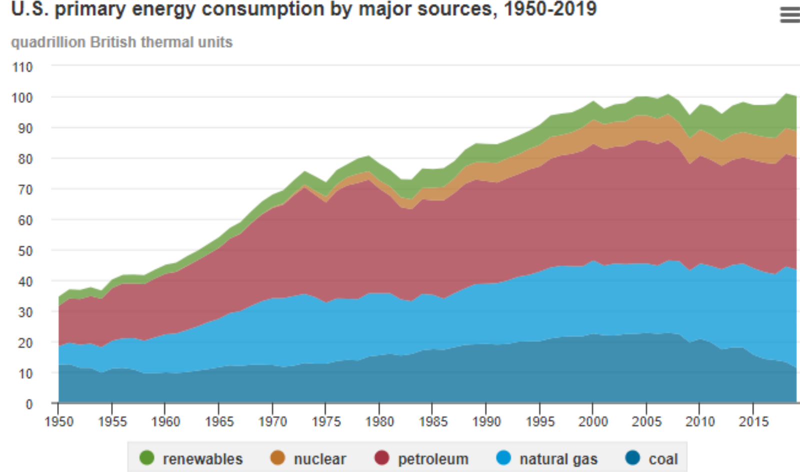
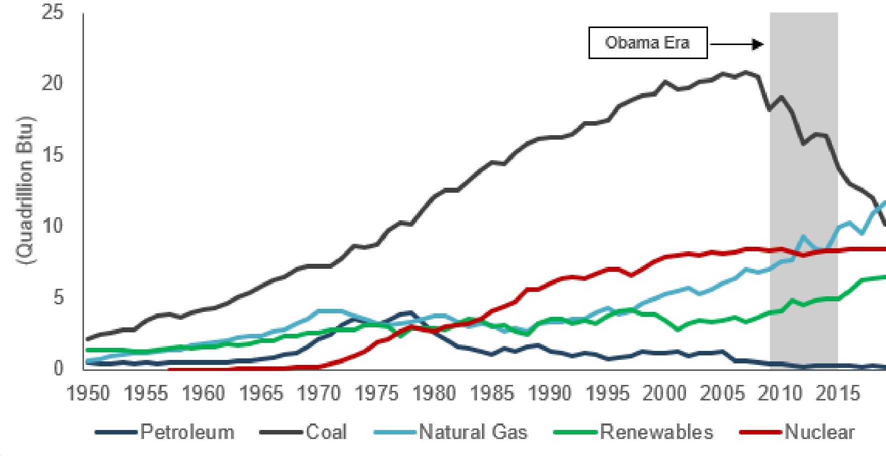
US Energy Mix



Source: EIA

Biden plans means he has to replace 60% of today's fuel for electricity by "*carbon pollution-free"* electricity by 2035. Biden power sector plan is to "*move ambitiously to generate clean, American-made electricity to achieve a carbon pollution-free power sector by 2035. This will enable us to meet the existential threat of climate change while creating millions of jobs with a choice to join a union*." We are a little surprised that we haven't seen a huge market focus on this point. Biden says "*carbon pollution-free*" electricity. Biden doesn't say its "net zero emissions" for electricity but "*carbon pollution free*", which means no fossil fuels. We think this is impossible as it means that in less than 15 years, they will replace ~60% of fuel sources for US 2019 electric power and, perhaps even more difficult, have an integrated power system originally set up for fossil fuels to be able to deliver reliable 24/7 electricity. Its not just the fuel but having the integrated electricity grid to support all clean electricity. In 2019, carbon fuels (oil, natural gas, and coal) provided 60% of fuel for US electric power. But whether it is impossible or not isn't the point. Rather if Biden tends to put the US on an irreversible course, then he will be moving in the first four years to set in place programs, taxes, incentives, etc. And if they start moving to that 2035 target and make any significant progress, it should materially reduce US natural gas consumption over the 2020s.

US Electricity By Fuel Source



Source: EIA

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<u>If Biden is successful in generating only "*carbon pollution-free*" electricity, he could eliminate ~40% (33.5 bcf/d) of current US natural gas consumption.</u> We chose this for our first blog because we see it having a material impact on US natural gas consumption in the 2020s. The EIA estimates 37% (31.0 bcf/d) of US natural gas consumption is for the power sector. In addition, the EIA estimates 27% (23.0 bcf/d) is for industrial consumers, wherein the EIA includes natural gas used for generating power in the industrial consumption. The EIA doesn't split out the % used for electric power, but we have just included 3% to round up natural gas for electric power to 40% or ~33.5 bcf/d of total US natural gas consumption. Note our US natural gas consumption excludes natural gas exports via pipeline or LNG.

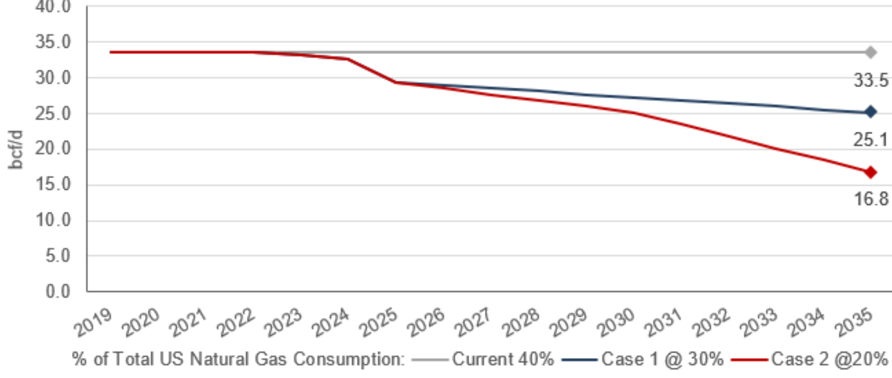
US 2019 Natural Gas Consumption by Sector/Grouping

bcf/d	Residential Consumers	Commercial Consumers	Industrial Consumers	Electric Power Consumers	Other	Total
2019	13.7	9.6	23.0	31.0	7.7	85.0
% of Total Consumption	16%	11%	27%	37%	9%	100%

Source: EIA

<u>Even if Biden is only 25% successful by 2035, it will materially reduce US natural gas consumption.</u> We just don't see how Biden can replace all carbon sources for electricity and have an integrated power system based solely on clean energy by 2035. Regardless, if he puts the US irreversibly on this course in the first four years and is only 25% successful, it is a material reduction to US natural gas consumption. We ran two cases with both assuming no change to the natural gas supplied to electricity for 2021 and 2022, and then any new policies start to impact natural gas for electricity in 2023, consistently decrease until 2030 and then decrease faster to 2035. We ran two cases: natural gas consumption for electricity is reduced by 25% and 50% in 2035, which, by 2030 reduce natural gas consumption by 6.3 bcf/d and 8.4 bcf/d, and by 2035 by 8.4 bcf/d and 16.8 bcf/d. Note we have not included any increasing electricity consumption as we assume Biden's move on efficiency are able to at least offset any estimated small annual growth ie. +0.5% or more.

Natural Gas Lost Consumption If Biden Is 25% or 50% Successful



Source: SAF Group

<u>Once Biden shows he is serious about carbon pollution free electricity, it will inevitably impact the view of long term value of US natural gas.</u> Our concern gets back to the title of our blog that Biden says he wants to put the US on an irreversible path and, to do so, this means he plans to take early actions on climate change. Once it becomes clear that he is taking action to move the US to carbon pollution free electricity by 2035 and that this will happen over the 2020's, there will be the realization that it will materially reduce US natural gas consumption (even if only 25% successful) and this should reduce the long term value of US natural gas.

<u>Moving to a hydrogen economy will not save US natural gas as Biden wants to produce "carbon-free" hydrogen.</u> One of the big global energy themes for the 2020s is moving to a hydrogen world. Right now, the primary (and cheapest) fuel to generate hydrogen is natural gas. Normally, most would expect to that natural gas would be the big winner in the move to a hydrogen economy. And no question if Biden wants to move to hydrogen quickly, natural gas would be the proven (and cheapest) source. However, Biden's clean energy plan notes his priority to produce "carbon-free" hydrogen. Biden wants to be "*using renewables to produce carbon-free hydrogen at a lower cost than hydrogen from shale gas through*

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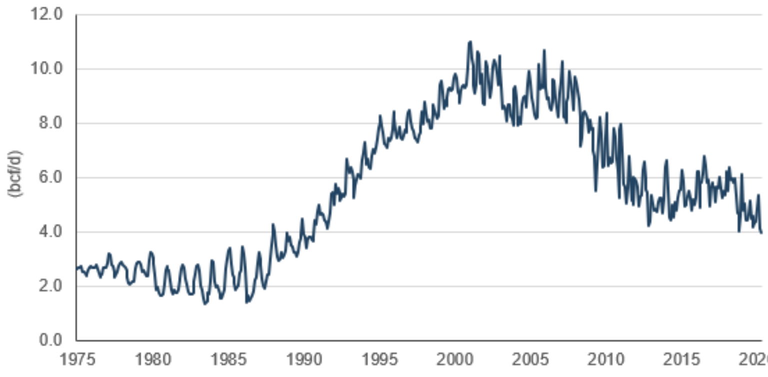
innovation in technologies like next generation electrolyzers;" If Biden wants to add hydrogen quickly, we believe producing "carbon-free" hydrogen at a reasonable price will be another area where there will be a gap between the aspiration and reality.

It's a good thing Canada has LNG Canada and TMX under construction. If Biden moves quickly on the "carbon pollution-free" electricity and US natural gas demand drops, the reality is that it will cause a natural US gas supply correction. There will be less capital provided to a sector that will be viewed to be in decline. But it will also force more US natural gas to look for more export markets. It will also reduce, but not eliminate, US natural gas imports from Canada, which have been on the decline, down to 4.7 bcf/d in 2019 vs 5.4 bcf/d in 2018 and less than half the 10.2 bcf/d in 2007. In a declining US natural gas consumption market, we would not expect to see any capital provided for either new or increasing capacity in US natural gas pipelines to markets to currently served by imports of Cdn natural gas. We expect Cdn natural gas to do better than US natural gas with LNG Canada Phase 1 adding add 1.8 bcf/d of new demand around 2025 and LNG Canada Phase 2, if approved, would add another 1.8 bcf/d of demand. Any potential reduction in US natural gas demand is a reminder of the strategic importance of access to new export markets for Canada's oil and natural gas via under construction LNG Canada and TMX.

US Net Natural Gas Imports From Canada (bcf/d)



Source: EIA

Stay tuned for futures blogs on the impact of a Biden win on oil and natural gas.

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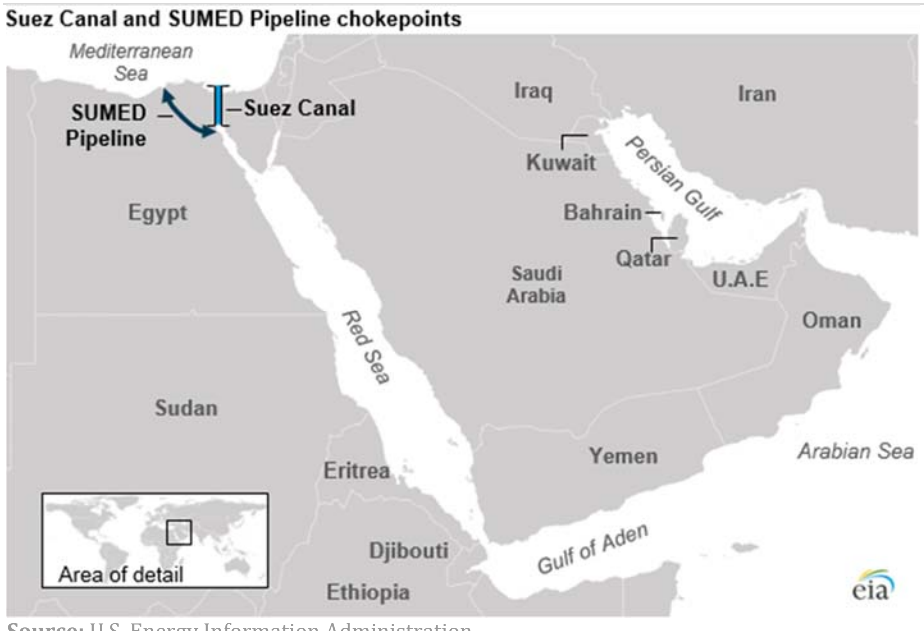
https://www.eia.gov/todayinenergy/detail.php?id=40152

JULY 23, 2019

The Suez Canal and SUMED Pipeline are critical chokepoints for oil and natural gas trade

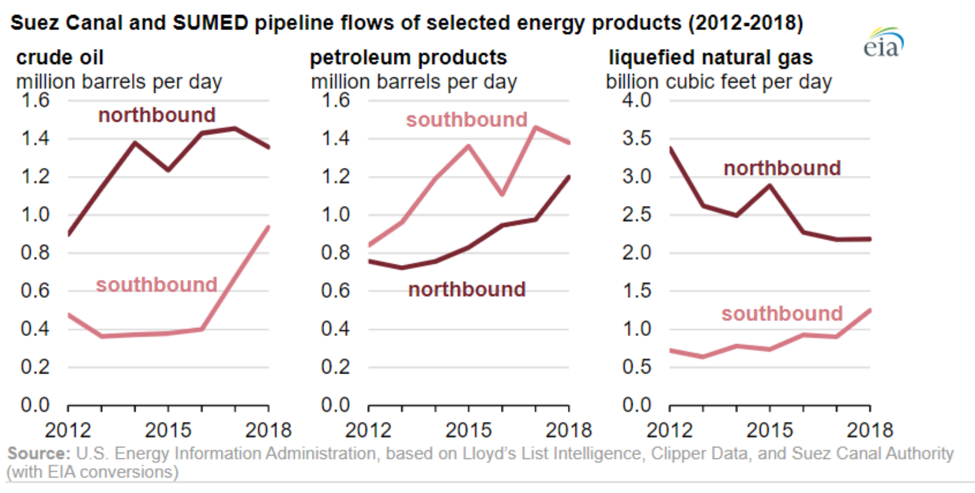


Source: U.S. Energy Information Administration

The Suez Canal and the SUMED Pipeline are strategic routes for Persian Gulf crude oil, petroleum products, and liquefied natural gas (LNG) shipments to Europe and North America. Located in Egypt, the Suez Canal connects the Red Sea with the Mediterranean Sea, and it is a critical chokepoint because of the large volumes of energy commodities that flow through it.

Chokepoints are narrow channels along widely used global sea routes that are critical to global energy security. Total oil flows through the Suez Canal and the SUMED pipeline accounted for about 9% of total seaborne traded petroleum (crude oil and refined petroleum products) in 2017, and LNG flows through the Suez Canal and the SUMED pipeline accounted for about 8% of global LNG trade.

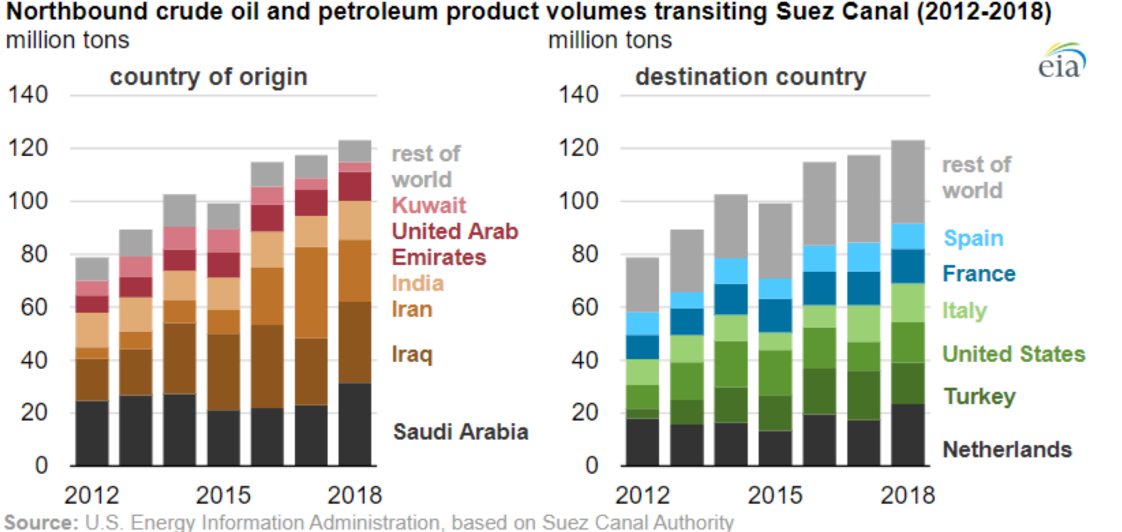
Since 2016, growth in northbound total petroleum flows through the Suez Canal and the SUMED pipeline has slowed, and southbound flows through the canal have risen substantially. In particular, the Suez Canal is gaining importance as a southbound route for U.S. and Russian crude oil and petroleum products to destinations in Asia and the Middle East.



Source: U.S. Energy Information Administration, based on Lloyd's List Intelligence, Clipper Data, and Suez Canal Authority (with EIA conversions)

Slightly more than half of total petroleum transiting the Suez Canal in 2018 was sent northbound to destinations in Europe and North America. Petroleum exports from Persian Gulf countries, such as Saudi Arabia, Iraq, and Iran, accounted for 85% of Suez Canal

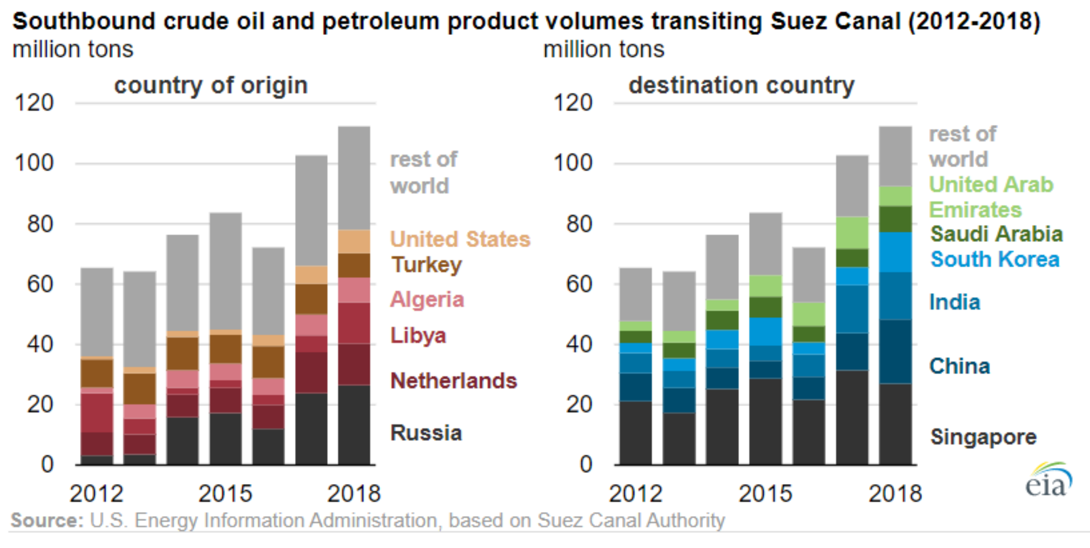
northbound traffic. Northbound flows of petroleum products have risen in recent years, particularly as more ultra-low sulfur diesel fuel has been shipped from Saudi Arabia to European countries.



Northbound crude oil flows decreased in 2018 for several reasons:

- Higher U.S. crude oil exports displaced Persian Gulf crude oil that had been historically sent to Europe.
- Key Middle East producers, mainly Saudi Arabia and Iraq, have been increasing crude oil exports to China and other growing Asian oil markets using eastbound routes rather than the Suez Canal.
- Renewed U.S. oil sanctions on Iran, imposed in late 2018, contributed to a decrease in Iran's crude oil exports to Europe.

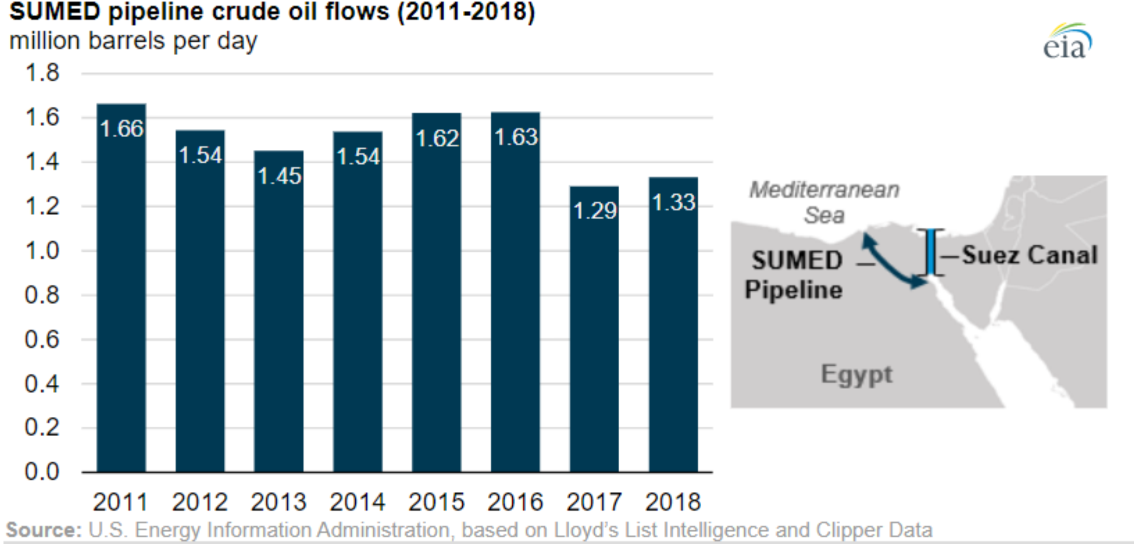
Southbound crude oil shipments, mainly to Asian markets such as Singapore, China, and India, have more than doubled in the past two years. Petroleum exports from Russia accounted for the largest share (24%) of Suez southbound petroleum traffic. Increases in Libya's crude oil production and exports in 2018 also contributed to a rise in southbound shipments. In the past two years, increased production and exports of U.S. crude oil and petroleum products—especially liquefied petroleum gas—have also increased southbound traffic through the canal.



Overall LNG flows through the Suez Canal have declined in recent years. Nearly all (98%) of the northbound LNG transit is from Qatar and mainly destined for European markets. Although Qatar remains a key exporter of LNG through the canal, it has been diverting more cargoes to Asia in recent years.

Changes in LNG traffic through the Suez Canal also reflect the growth in U.S. shale gas production and LNG exports, falling LNG demand in some European countries, and competition for LNG in the global market, especially in Asia.

The 200-mile long SUMED Pipeline transports crude oil northbound through Egypt from the Red Sea to the Mediterranean Sea. Crude oil flows through two parallel pipelines that have a total maximum flow capacity of 2.8 million barrels per day. The SUMED Pipeline is the only alternative route to transport crude oil from the Red Sea to the Mediterranean Sea if ships cannot navigate through the Suez Canal. Crude oil flows through the SUMED Pipeline have declined since 2016 as a result of the shifting oil trade patterns and a widening of the Suez Canal.



Source: U.S. Energy Information Administration, based on Lloyd's List Intelligence and Clipper Data

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Principal contributors: Candace Dunn, Natalie Kempkey

https://www.business-standard.com/article/automobile/bs-reads-why-evs-can-be-only-marginally-better-than-petrol-cars-in-india-121040200380_1.html

BS READS: Why EVs can be only slightly cleaner than petrol cars in India

Given India's reliance on coal, electric vehicles could at best be 10% more efficient than petrol in terms of CO2 savings, show BS calculations. Petrol cars more environment-friendly in some states

Topics

Electric Vehicles | petrol car | BS Reads

Ishaan Gera | New Delhi Last Updated at April 2, 2021 17:35 IST

In March, Delhi Power Minister Satyendar Jain announced that the city government would install 500 electric charging points at 100 locations under the first phase of its electric vehicle (EV) policy unveiled last year. Besides the installation of an extensive city-wide network of EV charging points, the policy entails discounts for those buying electric vehicles and duty concessions.

The aim is to increase EVs' proportion in new vehicle registrations to at least a fourth by 2024. It is not the Delhi government alone that is gung ho about EVs. In the Union Budget two years ago, the Centre had announced tax rebates, under Section 80EEB of the Income Tax Act, on up to Rs 1.5 lakh interest for people purchasing electric vehicles.

The rebates and subsidies are expected to push more people towards EVs. While it currently takes two to four years to recover the extra cost of an electric vehicle, the Delhi government's policy would reduce the recovery time to one to three years.

But, if the objective is to save the environment, the government also needs to switch to a more efficient energy mix. EVs would add only marginally to carbon dioxide savings if the country's grid remains heavily reliant on thermal energy.

Unlike conventional internal combustion engines (ICE), which run on petrol and diesel, electric vehicles have no tank-to-wheel emissions or tailpipe emissions, as these use electricity to convert energy. However, given that these require charging from a power source, the well-to-wheel emissions need to be considered.

In cases where countries or states are more reliant on non-renewable sources, electric vehicles can be as polluting as, or only slightly less polluting than, ICE vehicles.

A 2015 analysis by Alternative Fuels Data Center of the US department of energy revealed that states that relied excessively on coal showed only a slight difference in annual emissions per vehicle when compared with states that used renewable sources of energy.

For instance, in the US, where 40 per cent of energy comes from natural gas and 20 per cent from coal, annual emissions from an all-electric car are equivalent of 3,774 pounds of carbon dioxide, whereas a gasoline vehicle emits 11,435 pounds of carbon dioxide-equivalent.

However, for West Virginia, where the energy mix is heavily dependent on coal, 88 per cent of the energy comes from coal-based power plants, the annual emissions from electric vehicles are 2.5 times higher at 8,945 pounds. Add to this the fact that the carbon emission from producing an electric vehicle is higher than that from manufacturing an ICE vehicle, and there remains only a 16 per cent difference in overall carbon emissions between electric and gasoline-run vehicles.

Findings of a more recent study by the European Federation for Transport and Environment are also noteworthy. Comparing the emissions from gasoline and electric vehicles in EU member states (including emissions during production), the study estimates 63 per cent CO2 savings across the EU member states for electric vehicles.

According to the study, while a petrol vehicle emits 253g of carbon dioxide per kilometre, an electric vehicle in EU27 member states emits just 99g per km. The estimates are based on people driving a mid-sized car with an average of 13.3 km per litre for 15,000 km annually and an electric vehicle with a battery efficiency of 17.5kwh for every 100km with the battery produced in China.

Over its lifetime (estimated at 15 years), the Transport and Environment model assumes that a petrol vehicle would emit 57 tonnes of CO2, whereas an electric car would emit 22.4 tonnes.

However, it should be noted that there is a wide variation among the EU states. Sweden, which relies entirely on renewable sources of power, shows 79 per cent CO2 savings, but in Poland, where coal power generation accounts for 72 per cent of the energy mix, the savings reduce to just 29 per cent.

Now, contrast that with India, where the energy mix has 75 per cent coal and 4 per cent natural gas. Extrapolating the results from the EU study and using IPCC data to compute the carbon emissions from the energy mix indicates that there will be only marginal carbon dioxide savings with the adoption of electric vehicles. While the gasoline vehicle emits 253g of carbon dioxide per km, an electric vehicle in India would emit 235 gm of carbon dioxide — only a 7 per cent CO_2 saving. In terms of lifetime emissions, an electric vehicle would emit 52.9 tonnes of carbon dioxide, compared with 57 tonnes that would be emitted by an electric vehicle.

If the fuel efficiency of a gasoline vehicle rises to 15 km per litre, it would emit only 227 gm of CO_2 and would be more efficient than an electric one. And, if the fuel efficiency rises to 19km per litre, which is the case with most sub-compact cars — these are in a majority in India — the petrol car would turn 23 per cent more efficient than an electric car.

However, there has been a drastic improvement in the efficiency of electric cars as well. The EU assumes a battery efficiency of 17.5kwh for 100 km, Tata's Nexon EV promises a 312-km range for 30.2 kwh, which translates into 10.4kwh for 100 km range.

If 18.5 per cent transmission and distribution losses are taken into consideration (all-India average), along with a 20 per cent reduction in range (the reported mileage for EV is 250 km on a single charge), the total carbon dioxide emissions come to 163 g — still only 10 per cent more efficient.

While these calculations are based on global grid averages, lower efficiency of Indian plants could bring further lower the savings.

Much like the EU, there is a wide variation between states and regions across India. While Delhi would witness a 13 per cent CO_2 savings based on the above assumptions of better fuel and electric efficiency, Haryana, where the grid is more reliant on coal energy, would see only a 4 per cent saving.

In Uttar Pradesh, an electric car and a gasoline vehicle would produce the same amount of carbon dioxide. According to the Central Electricity Authority (CEA), 89 per cent of the energy comes from coal power plants.

The worst-performing state would Chhattisgarh, where a petrol-run vehicle would turn out to be 6 per cent more efficient than an electric car. The case with Jharkhand and West Bengal would be similar.

While the Northeast will have the highest carbon dioxide savings from electric vehicles (36 per cent), followed by the southern and northern region, the eastern and western regions would fare the worst in terms of savings from EVs.

In case the electric charging points are powered by solar energy, the efficiency gains would be a whopping 67 per cent. So, if EVs are to bring any meaningful environmental benefits, there would be a dire need to change the electricity mix in the country.

https://www.japantimes.co.jp/news/2020/11/13/business/fossil-fuels-electric-vehicles/

Japan's reliance on fossil fuels diminishes EV advantages

BY TAKUYA OKAMOTO
KYODO
Nov 13, 2020

Japan's high reliance on fossil fuels in electricity generation is blunting the impact of the rollout of electric vehicles in cutting the country's carbon emissions, experts say.

Prime Minister Yoshihide Suga, who took office in September, recently pledged to make the country carbon neutral by 2050, but over 75% of its electricity is still generated by coal, liquefied natural gas and oil.

"To cut emissions, Japan has to increase the ratio of electricity generated by renewable energies to at least 30%, or to the average level of European Union countries," said Atsushi Inaba, president of the Japan Life Cycle Assessment Facilitation Center.

"Japan has to accelerate a shift to renewable resources including hydrogen to build up the country's new energy strategy to lower carbon emissions not only from EVs but also from society as a whole," Inaba said.

His organization and a research team of Mazda Motor Corp. conducted a life cycle assessment of EVs in Japan and the EU to measure the carbon footprint they leave from extraction and processing of raw materials to manufacturing, shipment and use.

Models in Japan were found to emit more carbon dioxide than gasoline engine vehicles until their driving distance reaches 111,511 kilometers, and then exceed gasoline vehicles again once their driving distance exceeds 160,000 km because their batteries need to be replaced, Inaba said.

EVs in the EU, however, emit less carbon dioxide than gasoline engine cars once they have run 76,545 km regardless of battery replacement owing to the larger dependence on electricity generated by renewable energy, he said.

In 2019, electricity generated by wind, water and solar power combined accounted for 30% of the total in the EU, according to the 27-nation bloc.

The EU is urging automakers to produce more EVs, with its stricter emission rules from next year requiring carbon dioxide emissions of new vehicles sold in the bloc to be 95 grams or less per km on average.

Some governments have already announced schedules for full transition to zero-emission vehicles.

The U.K., China and the U.S. state of California will ban sales of new gasoline cars by 2035, with France following suit by 2040.

With many EU member countries subsidizing consumer purchases of EVs, the number of electrified cars including hybrid vehicles sold in September in the bloc jumped 139% from a year earlier to 327,800 units, surpassing that of diesel engine vehicles for the first time, according to data provided by Jato Dynamics Ltd.

EVs are being introduced more slowly in Japan, where automakers face a milder target requiring 50 to 70% of their vehicles to have a "next-generation" power source including clean diesel engines by 2030.

Among Japanese automakers, Honda Motor Co. recently launched the Honda e, its first mass-production electric vehicle, in Japan following its earlier introduction in Europe. The company plans to make EVs, fuel-cell vehicles and hybrids account for two-thirds of its cars sold globally by 2030.

The model's launch came as the automaker, which has a long history of participation in motorsports, announced a decision to stop supplying power units for Formula One racing after the 2021 season as part of its shift of focus.

Nissan Motor Co. and Mazda are each introducing new electric sport utility vehicles next year, with the Ariya and MX-30, respectively.

Of the 5.04 million vehicles sold in Japan in fiscal 2019 through last March, 1.48 million were electrified vehicles including hybrid models.

Sales of pure EVs, plug-in hybrids and fuel cell vehicles combined totaled 38,585 units, or 0.8% of the overall figure, despite government subsidies worth, for instance, ¥420,000 ($4,000) for the purchase of a Nissan Leaf EV.

But with vehicle emissions accounting for a relatively small share of overall greenhouse gasses released into the atmosphere by human activities, some auto industry experts say it does not make much sense, at least economically for now, to focus on EVs.

Koichi Sugimoto, a senior analyst at Mitsubishi UFJ Morgan Stanley Securities Co., said tightened emission rules are restricting consumer choice.

"The regulators are pushing more expensive vehicles with lower performance on consumers," as EVs offer shorter travel distances on a single charge than internal combustion engine vehicles do, he said.

"People have a right to choose their purchases from a wide range of vehicles, but they would lose that if they have to pick from a lineup unrealistically leaning toward EVs," he said.

Takaki Nakanishi, auto industry analyst and CEO at the Nakanishi Research Institute, said stricter emission regulations around the world are placing a financial burden on automakers.

"EVs are currently not profitable for automakers due to large costs for batteries," he told reporters at a recent news briefing. "It is too early to say, 'The age of EVs has come.' The EV boom in Europe is overheating."

https://thehill.com/opinion/energy-environment/546181-banning-natural-gas-in-homes-will-increase-the-consumption-of

Banning natural gas in homes will increase the consumption of natural gas

BY OGNJEN MILJANIĆ, OPINION CONTRIBUTOR — 04/02/21 03:00 PM EDT 281

Since 2019, several dozen U.S. cities — beginning with Berkeley, Calif., and expanding to other liberal strongholds — have prohibited natural gas hookups in new residential (and some commercial) construction. Instead, these cities are mandating the use of electricity for heating.

This shift is part of a larger push to phase out fossil fuels in the residential energy consumption sector. Since 2000, the residential energy consumption sector has also seen the smallest drop in its carbon emissions, especially compared to the sharp lowering of emissions in the electricity generation sector.

While proposing the elimination of natural gas may seem environmentally sound, it will likely lead to an increase in carbon emissions in most jurisdictions and — counterintuitively — it will increase in natural gas consumption.

Heating homes with natural gas is straightforward and efficient. The gas is piped into the house and then burned in a furnace with efficiency exceeding 90 percent in modern models. This means that 90 percent of the energy contained in the natural gas ends as useful heat for the home's residents. However, that use — as all fossil fuels — produces carbon dioxide emissions.

An electric heater can be just as efficient and produces no emissions. But what about the electricity used to run it? When natural gas is being burned in a power plant, only about 45 percent of the energy contained in it will be converted into electricity. As that electricity is transported and distributed, additional 6 to 10 percent is lost; and the amount of electrical energy delivered to a house is typically just one-third of the energy contained in the natural gas fuel. Consequently, the overall efficiency of a gas heater is almost three times as high than that of its all-electric counterpart.

Of course, electricity can be produced from sources other than natural gas, including emission-free wind, solar, hydro or nuclear power. But the U.S. is not doing that at scale today. As the price of natural gas plummeted during the fracking revolution, it became a dominant player in U.S. electricity production. According to the New York Times, it provides 38 percent of all electricity in the U.S., 39 percent in California, 53 percent in Texas and almost 90 percent in Delaware. In fact, the overall lowering of carbon dioxide emissions in the electricity generation sector has less to do with renewables and more with the switch from coal to natural gas: per unit of energy, natural gas emits just half the carbon dioxide from coal. The reason why residential carbon emissions have not dropped much is twofold. First, the sizes and amenities of the newly built houses are continuously increasing. Second, while natural gas could displace coal in electricity generation, it could not in residential heating — since it was already established in that sector decades ago.

With the current state of electricity generation, increasing electricity consumption means increasing natural gas consumption, which is ill-advised when using electricity for heating. Making electricity is hard and using it for heating is a waste akin to carving a beautiful wooden sculpture and then burning it to boil water for soup.

A broader lesson behind these policies is that politicization of energy leads to bad decisions — both on the political left and right. Energy issues are always complex and the two-party U.S. political landscape tends to treat most choices as binary. They are not — and nowhere is that clearer than in the case of natural gas. It is a carbon-emitting fossil fuel, on one hand. On the other hand, it is cheap, much cleaner than coal and produced domestically. It has evolved into the transitional fuel of our time, allowing the U.S. to quickly ditch coal while giving renewables time to expand to the scale needed to power the entire electricity-hungry country. Once those renewables have reached that scale, banning natural gas in residential construction starts making environmental sense. Until then, these proposals are ultimately increasing our carbon footprint.

Ognjen Miljanić is a professor of chemistry at the University of Houston, where he teaches about energy and sustainability.

https://www.worldbank.org/en/news/statement/2021/04/02/world-bank-group-president-statement-on-climate-change-action-plan

STATEMENT **APRIL 2, 2021**

World Bank Group President's Statement on Climate Change Action Plan

WASHINGTON, April 2, 2021 — World Bank Group President David Malpass today issued the following statement on the World Bank Group's new Climate Change Action Plan:

"I am pleased to announce that yesterday we presented to our Board the key elements of the World Bank Group's new Climate Change Action Plan. Our collective responses to climate change, poverty and inequality are defining choices of our age. The World Bank Group is already the largest multilateral provider of climate finance for developing countries, and has increased financing to record levels over the past two years. To deliver on our twin goals of reducing poverty and boosting shared prosperity, it is critical that the World Bank Group help countries fully integrate climate and development. It is also important we help countries maximize the impact of climate finance, with measurable improvements in livelihoods through adaptation, and measurable reductions in greenhouse gas emissions through mitigation.

We will achieve this by:

- *Increasing our climate finance: 35% of World Bank Group financing will have climate co-benefits, on average, over the next five years; and 50% of World Bank – IBRD and IDA – climate financing will support adaptation and resilience. This represents a big step up from the 26% achieved on average in FY16-20 and an even bigger step up in dollar terms as the Bank Group's total financing has also expanded.*
- *Focusing on climate results and impact: We will focus on measuring results and achieving impact, through a greater focus on greenhouse gas emissions reduction, adaptation and resilience goals, supported by new metrics.*
- *Improving and expanding climate diagnostics: We will build a strong analytical base at the global and country level, including introducing new Country Climate and Development Reports that will support preparation and implementation of*

Nationally Determined Contributions (NDCs) and Long-Term Strategies (LTSs), and which will feed in to all WBG Country Partnership Frameworks.

- *Reducing Emissions and Climate Vulnerabilities in Key Systems: We will support transformative investments in key systems that contribute the most to emissions and have the greatest climate vulnerabilities: for example, energy, food systems, transport, and manufacturing.*
- *Supporting a Just Transition out of Coal: We will significantly increase our support for the transition away from coal in client countries that request assistance. Importantly, we will seek to mobilize the further large-scale resources to support this. One example is the jobs and skills transition for people working in the coal sector. Another is helping countries replace coal with affordable, reliable and cleaner alternatives as they expand electricity access.*
- *Aligning our financing flows with the goals of the Paris Agreement: The Bank Group is committed to aligning financing flows with the objectives of the Paris Agreement. For the World Bank, we plan to align all new operations by July 1, 2023. For IFC and MIGA, 85% of new operations will be aligned by July 1, 2023 and 100% of these by July 1, 2025.*

The World Bank Group has been instrumental in helping countries address climate change: including delivering over $83 billion in climate finance over the past five years and reaching the highest level in a single year in 2020 at $21.4 billion. Through this plan, we will be doing more in terms of both dollars and impact.

Today, the world has a historic opportunity and necessity to change course – to overcome the rising dangers of hunger, social division, conflict, violence and climate change. The World Bank Group will work with all stakeholders to address these challenges head on and support our clients to unlock the benefits of green, resilient and inclusive development.”

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https://www.census.gov/content/dam/Census/library/stories/2021/03/major-league-baseball-is-back-map-1.jpg

Baseball Is Back! All 30 MLB Teams Play on Opening Day

MLB has 15 games scheduled for April 1. Map your team and compare metro areas by population.

Populations shown below are for each team's metropolitan statistical area (MSA). There are 25 MSAs with MLB teams in the United States—four have two teams (Chicago, New York, Los Angeles, and San Francisco-Oakland)—and one in Canada (Toronto).

Team Locations

American League   National League

Bold = Opening day home team

West Division

League	Team	Population
American League	Houston Astros	7,066,141
American League	**Los Angeles Angels**	**13,214,799**
American League	**Oakland Athletics**	**4,731,803**
American League	**Seattle Mariners**	**3,979,845**
American League	Texas Rangers	7,573,136
National League	Arizona Diamondbacks	4,948,203
National League	**Colorado Rockies**	**2,967,239**
National League	Los Angeles Dodgers	13,214,799
National League	**San Diego Padres**	**3,338,330**
National League	San Francisco Giants	4,731,803

Central Division

League	Team	Population
American League	Chicago White Sox	9,458,539
American League	Cleveland Indians	2,048,449
American League	**Detroit Tigers**	**4,319,629**
American League	**Kansas City Royals**	**2,157,990**
American League	Minnesota Twins	3,640,043
National League	**Chicago Cubs**	**9,458,539**
National League	**Cincinnati Reds**	**2,221,208**
National League	**Milwaukee Brewers**	**1,575,179**
National League	Pittsburgh Pirates	2,317,600
National League	St. Louis Cardinals	2,803,228

East Division

League	Team	Population
American League	Baltimore Orioles	2,800,053
American League	**Boston Red Sox**	**4,873,019**
American League	**New York Yankees**	**19,216,182**
American League	Tampa Bay Rays	3,194,831
American League	Toronto Blue Jays*	6,341,935
National League	Atlanta Braves	6,020,364
National League	**Miami Marlins**	**6,166,488**
National League	New York Mets	19,216,182
National League	**Philadelphia Phillies**	**6,102,434**
National League	**Washington Nationals**	**6,280,487**

U.S. Department of Commerce
U.S. CENSUS BUREAU
census.gov

*Toronto at a glance (July 2018) <www.toronto.ca>.
Source: Vintage 2019 Population Estimates.

Dan Tsubouchi @Energy_Tidbits · 2h

Saudi raises Asia OSP vs other regions. A teaching moment Saudi Abdulaziz isn't going to miss for his "friend" India energy minister Pradhan & for other Asian customers to note. See excerpt SAF Group March 28 Energy Tidbits on their tit-for-tat #OOTT

safgroup.ca/insights/trend...

Excerpt SAF Group March 28, 2021 Energy Tidbits Memo

Oil – Saudi suggests India take oil out of its strategic reserves
It may be interesting to watch the tit-for-tat between India and Saudi Arabia on the price of oil, but the reality is that, as unhappy India is right now with Saudi, they are also clear that they will ultimately buy oil from whoever gives India the best deal. One of the Friday headlines was India energy minister Pradhan calling Saudi's suggestions "undiplomatic", saying "*that was in a way (an) undiplomatic answer by some of our old friend. I politely disagree with that kind of approach. Certainly India has its own strategy, when and how to use our own storage, and we are conscious about our interests*". This was in response to Saudi energy minister Abdulaziz saying "*with regard to India, very simple. I would ask my friend that he (Dharmendra Pradhan) withdraw some of the cheap oil they bought in April, May and June (last year). There is an opportunity cost for not withdrawing it now.*" India has been very vocal in March about diversifying its oil supply. However, the Times of India reported [LINK] what we believe is a reminder that, tit-for-tat aside, it doesn't mean India won't be buying oil from Saudi. They just want the best deal from anyone. The Times quoted Pradhan "*We are an open, free market. Our oil marketing companies and private sector oil majors are free to take oil from any part of the world, whichever country will provide favourable business terms, whether it is America, or Iraq or UAE or Saudi Arabia. India's common interest is paramount in decision*".

Source: SAF Group http://www.safgroup.ca/insights/trends-in-the-market/]

CN Wire @Sino_Market · 5h

#Saudi May crude pricing. #OOTT

Show this thread

1 5

Dan Tsubouchi @Energy_Tidbits · 12h

the local #Canmore coyotes are noisy tonight and now have even got the geese riled up

1 3

Dan Tsubouchi @Energy_Tidbits · Apr 3

Pretty impressive clear up of the backlog. Call it >80 ships/day vs ~53 ships/day in 2019/20. #OOTT

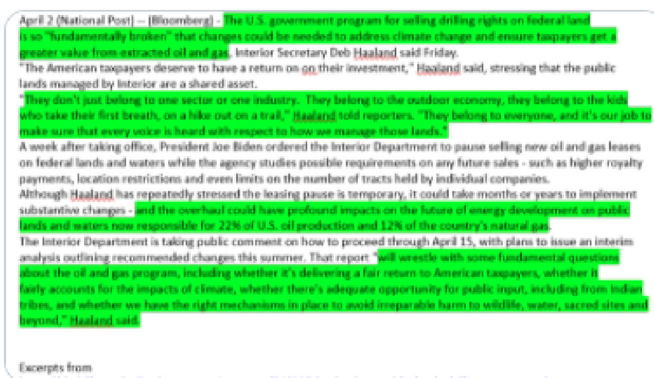
Chi @chigrl · Apr 3

Suez saga comes to an end >>
#SuezCanal shipping backlog to end on Saturday - canal authority
reut.rs/3wnAKrM

3 4

Dan Tsubouchi @Energy_Tidbits · Apr 2

Negative to #Permian #Bakken mid term production growth. @SecDebHaaland comments on "fundamentally broken" #Oil #Natgas leasing program on federal lands can't be a positive indicator for @Interior review. Thx @jendlouhyhc @RachelFrazin for quotes #OOTT



April 2 (National Post) -- (Bloomberg) - The U.S. government program for selling drilling rights on federal land is so "fundamentally broken" that changes could be needed to address climate change and ensure taxpayers get a greater value from extracted oil and gas, Interior Secretary Deb Haaland said Friday.

"The American taxpayers deserve to have a return on on their investment," Haaland said, stressing that the public lands managed by Interior are a shared asset.

"They don't just belong to one sector or one industry. They belong to the outdoor economy, they belong to the kids who take their first breath, on a hike out on a trail," Haaland told reporters. "They belong to everyone, and it's our job to make sure that every voice is heard with respect to how we manage those lands."

A week after taking office, President Joe Biden ordered the Interior Department to pause selling new oil and gas leases on federal lands and waters while the agency studies possible requirements on any future sales - such as higher royalty payments, location restrictions and even limits on the number of tracts held by individual companies.

Although Haaland has repeatedly stressed the leasing pause is temporary, it could take months or years to implement substantive changes - and the overhaul could have profound impacts on the future of energy development on public lands and waters now responsible for 22% of U.S. oil production and 12% of the country's natural gas.

The Interior Department is taking public comment on how to proceed through April 15, with plans to issue an interim analysis outlining recommended changes this summer. That report "will wrestle with some fundamental questions about the oil and gas program, including whether it's delivering a fair return to American taxpayers, whether it fairly accounts for the impacts of climate, whether there's adequate opportunity for public input, including from Indian tribes, and whether we have the right mechanisms in place to avoid irreparable harm to wildlife, water, sacred sites and beyond," Haaland said.

Excerpts from

Dan Tsubouchi @Energy_Tidbits · Mar 9

Should assume @DallasFed worst case est #Permian impact @POTUS federal lands risk ie. 0.5 mmb/d less growth. How can #Oil #NatGas be optimistic, @Interior outlines next steps in "fossil fuels" review. Emphasizing fossil fuels can't be good. #OOTT ...

3 4

Dan Tsubouchi @Energy_Tidbits · Apr 2

New Breaking: #JCPOA. US also in Vienna next week. Not face2face w/ Iran but shuttle back n' forth meetings. seems like real 1st momentum shift to push to get to a deal pre Iran elections. Increases risk for Iran #Oil back on market this summer. #OOTT

reuters.com/article/us-ira...

"Iran and the U.S. will be in the same town, but not the same room," a European diplomatic source said.

A Western diplomat said a shuttle diplomacy approach would be adopted.

U.S. State Department spokesman Ned Price said the talks would be structured around working groups that the EU is going to form with remaining participants, including Iran.

"We don't anticipate an immediate breakthrough as there will be difficult discussions ahead. But we believe this is a healthy step forward," he said in a statement, adding that Washington remained open to direct talks with Tehran.

The EU official said negotiating lists of sanctions that the United States could lift and nuclear obligations that Iran should meet, the EU official said "should marry at some point".

"In the end, we are approaching this in a parallel way. I do think we can do it in less than two months," the official said.

Iran, China, Russia, France, Germany and Britain - all parties to the 2015 deal - held virtual talks on Friday to see how to progress.

"Aim: Rapidly finalize sanction-lifting & nuclear measures for choreographed removal of all sanctions, followed by Iran ceasing remedial measures," Iran's Foreign Minister Mohammad Javad Zarif said on Twitter. "No Iran-US meeting. Unnecessary."

Two diplomats said the first round of talks could last several days, followed by two or three subsequent rounds in the following weeks to tackle tricky issues.

Under the 2015 accord, U.S. and other economic sanctions on Tehran were removed in return for curbs on Iran's nuclear programme to make it harder to develop a nuclear weapon - an ambition Tehran denies.

> **Dan Tsubouchi** @Energy_Tidbits · Apr 2
> Breaking: #JCPOA, positive comments coming out of Iran, RUS, CN, UK, FR, DE virtual meeting. In-person followup Apr 6 in Vienna. Seems like 1st momentum shift for potential return to JCPOA and return for more Iran oil to markets. #Oil #OOTT
> ...

3

Dan Tsubouchi @Energy_Tidbits · Apr 2

Breaking: #JCPOA, positive comments coming out of Iran, RUS, CN, UK, FR, DE virtual meeting. In-person followup Apr 6 in Vienna. Seems like 1st momentum shift for potential return to JCPOA and return for more Iran oil to markets. #Oil #OOTT

Talks on US return to Iran nuclear deal 'on right track'
Powers will meet in Vienna on Tuesday to resume negotiations
thenationalnews.com

2 1

Dan Tsubouchi @Energy_Tidbits · Apr 1

#OPEC+ off camera ministers meeting play by play stream coming from @Amena__Bakr. this is just one of her stream of updates #OOTT

> **Amena Bakr** @Amena__Bakr · Apr 1
> The UAE supports a 1 month rollover. Saudi Arabia did not express its view yet. #OOTT #opec
> Show this thread

1

Dan Tsubouchi @Energy_Tidbits · Apr 1

Unfortunately, this traditional priority "to ensure affordable and reliable" energy concept doesn't appear in @POTUS 28-pg American Jobs Plan. Reminds why #EnergyTransition will happen, but take longer, be bumpy road and cost more.

#OOTT

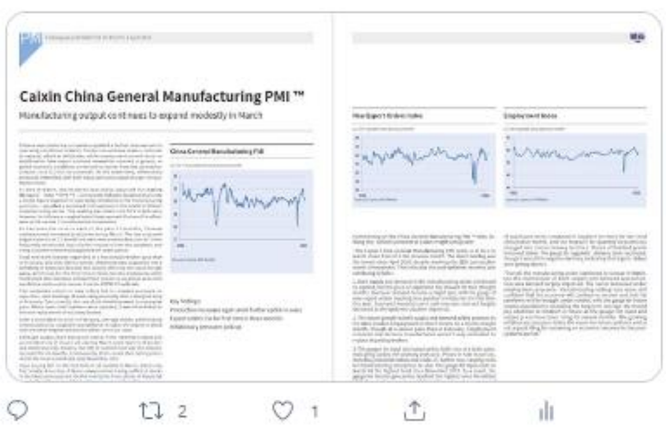
whitehouse.gov/briefing-room/...

> Secretary Jennifer Granholm @SecGranholm · Mar 31
>
> I had a productive call with Saudi Energy Minister Abdulaziz bin Salman al-Saud today. We reaffirmed the importance of international cooperation to ensure affordable and reliable sources of energy for consumers. 1/
>
> Show this thread

2

Dan Tsubouchi @Energy_Tidbits · Mar 31

China Caixin manufacturing PMI hits 10 month low in Mar at 50.6 vs 51.4 est, 11th consecutive month of expansion, but lowest since Apr "indicates post-epidemic recovery was continuing to falter". Worth a read for good China recap Thx @IHSMarkitPMI
#OOTT


Caixin China General Manufacturing PMI ™

Manufacturing output continues to expand modestly in March

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Dan Tsubouchi @Energy_Tidbits · Mar 31

Bloomberg @lkassai reports VEN tanker #Oil loadings 430 kb/d in Mar v 412 kb/d in Feb. China is primary market with Mar loadings 392 kb/d. India is zero v 245 kb/d in Mar 2020, Maduro was messaging to them with oil for vaccines. #OOTT

Bloomberg Tanker Tracker Loadings For Venezeula as of March 31, 2021

b/d	March 21	Feb 21	March 20
China	391,613	361,000	303,449
Cuba	38,065	15,000	58,000
India	0	0	245,398
Malaysia	0	0	76,467
Spain	0	0	16,129
Unknown	0	35,714	0
Total Loadings	429,678	411,714	699,443

Source: Bloomberg Tanker Tracker

> Dan Tsubouchi @Energy_Tidbits · Mar 30
>
> More VEN oil to hit export markets in China, India? @livemint (India financial news) reports #Maduro offers "Oil for vaccines". Seems difficult for @POTUS to stop this on humanitarian reasons even if just a shrewd play by Maduro? #OOTT
>
> ...

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Dan Tsubouchi @Energy_Tidbits · Mar 31

No surprises here, MEX admits 2021 #Oil production fcast too high. @MddeH reports finance ministry fcasts 1.794 mmb/d vs their Sept 1.857 fcast. But @Pemex Jan 28 fcast was 1.944 mmb/d. Closer but still looks a little high, needs >1.8 mmb/d for last 10 mths to get there. #OOTT

Pemex released a new investor slide deck last week (Jan 28, 2021). (i) There was no change to their 2021 production budget of 1.944 mmb/d, +0.239 mmb/d YoY vs 2020 production in their slide of 1.705 mmb/d. Last week's memo noted the Pemex Dec data that was 1.650 mmb/d for Dec and 1.659 mmb/d for 2020 average. Regardless, we believe everyone believes the 1.944 mmb/d for 2021 is too high. (ii) Once again, the major item not included in the deck was refinery volumes or exports for 2021. In Oct, Pemex forecast refinery processing 681,000 b/d in 2020 and that would be +433,000 b/d to 1,114,000 b/d in 2021, which was the key disclosure we highlighted in their October deck. Again, we have to wonder if this is because they are significantly behind expectations as normal practice of companies is not to include if its inconsistent with the 2021 forecast.

Figure 25: Pemex Oct Slide Not Included in New Slide Deck

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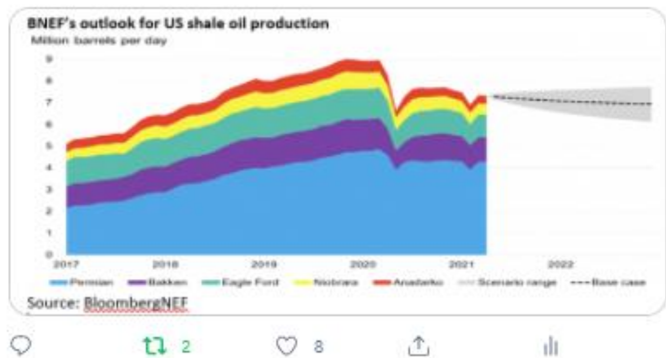
Dan Tsubouchi @Energy_Tidbits · Mar 31

Positive support for #Oil. @HMSJeffBair says @BloombergNEF expects shale production will lose another 485,000 b/d by the end of this year. As usual, good tidbits from @TheTerminal TOPLive coverage of weekly EIA oil inventory data. #OOTT



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Dan Tsubouchi @Energy_Tidbits · Mar 31

For those not near their laptop. @EIAgov weekly crude #Oil #Gasoline #Distillates inventory data as of March 26 just out. Prior to release, WTI was $60.62 #OOTT

ir.eia.gov/wpsr/overview....

Oil/Products Inventory March 26: EIA, Bloomberg Survey Expectations, API			
(million barrels)	EIA	Expectations	API
Oil	-0.88	-1.50	3.91
Gasoline	-1.74	0.70	-6.00
Distillates	2.54	0.50	2.60
	-0.07	-0.30	0.51
Note: SPR had no change for March 26 week			
Note: Cushing increased 0.782 mmb for March 26 week			
Source EIA, Bloomberg			

○ 4

Dan Tsubouchi @Energy_Tidbits · Mar 30

US #LNG exports hit record 9.9 bcf/d in Jan driven by cold Asia temp with top 3 destinations Japan 2.1 bcf/d, South Korea 1.8 bcf/d, China 1.4 bcf/d. Reminder actuals come out day earlier in @ENERGY LNG Monthly vs @EIAgov #NatGas Monthly

energy.gov/sites/default/...

US LNG Exports

(bcf/d)	2016	2017	2018	2019	2020	2021
Jan	0.0	1.7	2.3	4.1	8.1	9.9
Feb	0.1	1.9	2.6	3.7	7.8	
March	0.3	1.4	3.0	4.2	7.9	
Apr	0.3	1.7	2.9	4.2	7.0	
May	0.3	2.0	3.1	4.7	5.9	
June	0.5	1.7	2.5	4.7	3.6	
July	0.5	1.7	3.2	5.1	2.7	
Aug	0.9	1.5	3.0	4.5	3.6	
Sept	0.6	1.8	2.7	5.4	5.0	
Oct	0.1	2.6	2.9	5.7	7.2	
Nov	1.1	2.7	3.6	6.3	9.4	
Dec	1.3	2.7	4.0	7.1	9.8	
Full Year	0.5	1.9	3.0	5.0	6.5	
Full Year bcf	186	708	1,084	1,817	2,390	

Source: EIA Natural Gas Monthly, DOE LNG Monthly

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Dan Tsubouchi @Energy_Tidbits · Mar 30

More VEN oil to hit export markets in China, India? @livemint (India financial news) reports #Maduro offers "Oil for vaccines". Seems difficult for @POTUS to stop this on humanitarian reasons even if just a shrewd play by Maduro? #OOTT

Venezuela president offers 'oil for vaccines'

Venezuela has the oil tankers, it has customers ready to buy oil from us. It would devote part of its production to obtain the vaccines it needs, ...

livemint.com

4

Dan Tsubouchi @Energy_Tidbits · Mar 29

Support for #OPEC+ rollover? Big hit to KSA Net Foreign Assets. Feb/21 $436.7b, -$8.8b MoM v Jan/21 $445.5b. -$54.9b YoY v Feb/20 $491.6b. -$300.3b v Aug/14 peak $737.0b. Need to stop dipping in piggy bank ie. want/need $60 oil, potential #Aramco debt/equity issue potential #OOTT

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Dan Tsubouchi @Energy_Tidbits · Mar 29

Thx @S_Elwardany for you and your @business partners for multiple updates a day for the past week. makes it easy for other #Oil market followers.

> **Salma Elwardany** @S_Elwardany · Mar 29
>
> And she has arrived at the bitter lakes. The moment she's entering the waters. Live!

3

Dan Tsubouchi @Energy_Tidbits · Mar 29

wonder how they will prioritize the order of ships waiting to get thru the @SuezCanal #OOTT

Bloomberg Quicktake @Quicktake · Mar 29

LATEST: The Ever Given container ship that was stuck in the Suez Canal is now fully afloat.

The vessel was finally pulled free, allowing the crucial trade route to reopen to traffic trib.al/KJynJS0

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Dan Tsubouchi @Energy_Tidbits · Mar 29

update @pertamina 125,000 b/d Balongan refinery explosion/fire. CEO reportedly says fire concentrated in storage tanks and main equipment in refinery not affected. thx @Joes_Gaffes for reply back last night noting the fire location. #OOTT

straitstimes.com/asia/se-asia/f...

Dan Tsubouchi @Energy_Tidbits · Mar 28

Breaking so no details on cause, but @RT_com and others reporting explosion & fire at @pertamina 125,000 b/d Balongan refinery, just east of Jakarta. given current markets, shouldn't be a big factor by itself. #Oil #OOTT

rt.com/news/519442-in...

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Dan Tsubouchi @Energy_Tidbits · Mar 29

#SuezCanal #Evergreen @CNN reporting Suez Canal Authority confirms Ever Given mostly free. stern now shifted 102 meters away, waiting for high tide to get fully free. #OOTT

Ever Given ship freed in the Suez Canal, authority confirms

The Ever Given container ship has been freed and is now floating, after being stranded in the Suez Canal for almost a week, authorities say, ...

cnn.com

3

Dan Tsubouchi @Energy_Tidbits · Mar 28

Breaking so no details on cause, but @RT_com and others reporting explosion & fire at @pertamina 125,000 b/d Balongan refinery, just east of Jakarta. given current markets, shouldn't be a big factor by itself. #Oil #OOTT

rt.com/news/519442-in...

2 2 9

Dan Tsubouchi @Energy_Tidbits · Mar 28

Our weekly SAF March 28, 2021 Energy Tidbits memo was just posted our SAF Group website. This 36-pg energy research piece expands upon and covers many more items than tweeted this week. See the research section of the SAF website. #Oil #OOTT #OPEC #LNG safgroup.ca/insights/trend...

SAF GROUP

Energy Tidbits

March 28, 2021

Produced by: Dan Tsubouchi

Supreme Court Carbon Tax Ruling Seems To Effectively Set No Limit As To How High It Can Go

Welcome to new Energy Tidbits memo readers. We are continuing to add new readers to our Energy Tidbits memo, energy blogs and tweets. The focus and concept for the memo was set in 1999 with input from PMs, who were looking for research (both positive and negative items) that helped them shape their investment thesis to the energy space, and not just focusing on daily trading. Our priority was and still is to not just report on events, but also try to interpret and point out implications therefrom. The best example is our review of investor days, conferences and earnings calls focusing on sector developments that are relevant to the sector and not just a specific company results. Our target is to write on 48 to 50 weekends per year and to post by noon mountain time on Sunday.

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