



ANGVA2U Info 06/2020 28th April 2020. (for ANGVA members only)

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1.0 Selected News / Articles

1.1 USA

Where Will The Oil Markets Be In Six Months?

By Robbie Diamond. *energyfuse.org* 21st April 2020

It is hard to believe what we are seeing in oil markets. The news alerts yesterday about oil prices sinking below \$0 were being exchanged by oil experts and traders in disbelief. In just one day, the price of West Texas Intermediate (WTI) oil—the American benchmark—slumped an astonishing 306 percent, dropping almost \$56 to a historic low of [minus \\$36.73](#).

The flattening of the COVID-19 curve is plummeting the oil price curve.

The flattening of the COVID-19 curve is plummeting the oil price curve, helped by the strategic effort of Russia and Saudi Arabia to drive domestic producers out of business. Energy policymakers in Moscow and Riyadh might not be health experts but they knew that just as COVID-19 sadly kills more humans with pre-existing conditions, it can also kill companies with pre-existing conditions like the domestic oil industry with soaring debt, higher production costs, and poor balance sheets. It was cool and calculated.

Despite any subsequent verbal agreement to remove oil from the market, the shut in barrels that are produced more cheaply than U.S. barrels and backed up by the financial reserves of these energy country behemoths can just be flooded into the market again when demand begins to show some signs of life.

On the one hand, this negative price for WTI is just a momentary event caused by the fact that the futures contract for May delivery expires today. The forward price for oil in June closed at \$20.43 and the price for November ended at around \$31.66, which is a sign that traders are betting that demand will bounce back. However, it should be noted that \$30 is still less than breakeven for many domestic producers.

This is not a criticism of the importance to the country of domestic production and the amazing innovative spirit of domestic producers, particularly independents, but an acknowledgement that their activities are just one more component of the diversity that is needed.

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The truth is that the United States is really energy dominant, except it is not just about oil dominance but rather all fuels—from natural gas to renewables, from hydropower to nuclear. We just need to harness Energy Dominance in a different way, which means using all those fuels in the transportation sector. No country can claim such fuel diversity and the ability to tap so many energy sources, from the sun in the south to the wind in the Midwest to the hydro in the west, and the natural gas in shale.

As noted above, oil prices in November are still just about \$30, which on one hand is a vote for economic confidence but also a sign of continued weakness. We can question when will things get back to some semblance of normal with people driving and flying again, but one can also ask the question about what might never go back to the way it was. Peter Tertzakian, a Canadian energy analyst from ARC Energy, wrote a great book in 2009 called *The End of Energy Obesity* discussing that it was the barrel we do not

use due to a change in habits that will have a much more profound effect on energy demand than solutions like efficiency or environmental efforts to leave oil in the ground.

With all the Zoom meetings, family gatherings, online religious events, the telemedicine, and the contactless delivery that is poised to be **electric while also autonomous**, will we just use less. We will, of course, as humans want to get together to see and hug family and interact with co-workers, but the question of how many airplanes might we not get on for out of town meetings or trips downtown we might not take has yet to be answered. It is just one example of what might change.

The work of SAFE always asked the question of what will happen to the international order if oil does become a low-priced commodity, and many countries who depend on that revenue for their state budgets become insolvent with no economic prospects. This was clearly one of the reasons that Saudi Arabia launched Saudi Vision 2030 and other countries talked about using this time to create more viable economies. The United States was once in a position financially, or even geopolitically, to help with this transition but the time might come in the months ahead when we see a resurgence in instability and conflict, particularly in the Middle East.

Is this the second pandemic for the region? We already see **Iran harassing the U.S. Navy** in the Persian Gulf. Iraq has seen months of protests against the government, which is struggling with budget shortfalls. The same can be said for a myriad of countries in the region. There may have been a time that the United States cared, but it seems increasingly unlikely. In the end, it might be a fall in supply—caused by the instability in the Middle East, upon which we have always depended for oil—that saves prices when demand fails to recover.

In the end, Churchill is once again correct and SAFE’s mission continues to find “security in diversity and diversity alone.” It is the diversity of fuel in transportation that will make any energy price curve in the future irrelevant to our economic and political wellbeing.

Source: <http://energyfuse.org/where-will-the-oil-markets-be-in-six-months/>

1.2 Iran

Monthly consumption of CNG falls 15%

www.tehrantimes.com

10th April 2020



TEHRAN- Monthly consumption of compressed natural gas (CNG) has dropped 15 percent in Iran during the last month of the previous Iranian calendar year (ended on March 19) from its preceding month, IRNA reported.

In General, CNG consumption has increased in Iran after the implementation of the gasoline rationing scheme in mid-November 2019, when the government increased fuel prices as it plans to use the revenue for supporting underprivileged families.

Later that month, Hassan Qolipour, the head of the CNG promotion program at the National Iranian Oil Product Distribution Company (NIOPDC) announced that CNG consumption in the country had increased by 10 percent only two weeks after the beginning of the program.

Mohammad Baqer Nobakht, head of the Planning and Budget Organization (PBO), said on November 12 that proceeds from the price hikes would be used to fund additional subsidies for 18 million underprivileged families, or about 60 million people.

There are currently 2,400 CNG stations across Iran and more than 2,478 compressors are installed in the country's CNG stations, Qolipour announced in February.

Source: <https://www.tehrantimes.com/news/446608/Monthly-consumption-of-CNG-falls-15>

1.3 Pakistan

CNG Sector on the brink of bankruptcy due to lockdown

By Wasim Iqbal. www.brecorder.com 23rd April 2020



The CNG sector has reached to the brink of bankruptcy as consumption has been reduced by almost 60 percent following lockdown.

Before the spread of coronavirus, the consumption of CNG stood 205 mmcf, which has now reduced to only 87 mmcf, after the announcement of the government to ban all kinds of public transport to contain spread of the virus.

The CNG usage in Sui Southern Gas Company (SSGC) is reduced to 29 mmcf from 66 mmcf.

The consumption of CNG in KP reduced from 78 mmcf to 43 mmcf, and RLNG usage also reduced from 61 mmcf to only 15 mmcf.

The CNG Association calculated that the consumption of CNG dropped nearly 85 percent and petroleum consumption dropped 75 percent.

Leader of the Petroleum Dealers Association and All Pakistan CNG Association Ghiyas Abdullah Paracha stated that the government should come forward immediately to rescue this important sector, which is moving the wheels of the economy.

He said that the cost of doing business is increasing while profit continue to decline, which has pushed dealers to the wall, therefore the government should provide them with some relief in electricity bills and taxes.

He further said that the recent oil price reduction by the government resulted in heavy losses to the oil dealers the lockdown has reduced the sale of fuel, while safety measures has increased cost of doing business.

Ghiyas Paracha said that the fuel supply chain has suffered a lot due to recent disruption compelling dealers to increase storage amid low sales, which is an added problem.

He said that cost of land and rent has increased a lot, making the petroleum business almost unfeasible, which can be countered with allowing commercial activities at filling stations, reducing distance between fuel filling machines, and new profit regime under the new rules and regulations.

The oil dealers are facing unprecedented losses but they are paying different fixed charges, while the dealers have not fired employees, which has added to the financial burden that must be noticed, he said, adding that all the sectors demand subsidies but petroleum and the CNG sector only demand its right, therefore the government should resolve their problems

Source: <https://www.brecorder.com/2020/04/23/591651/cng-sector-on-the-brink-of-bankruptcy-due-to-lockdown/>

1.4 USA

Los Angeles County to produce transportation fuel from biogas

usgasvehicles.com

17th April 2020.



In 2014, Los Angeles County Sanitation Districts (LACSD) saw the writing on the wall; SB 1383 requiring diversion of organics from landfill was not drafted yet but already the push was on to divert food from landfills. So, the agency began exploring what has since turned into a multimillion-dollar program to be able to co-digest food and biomass at its wastewater treatment plant. The end product will be transportation fuel it will sell at its public compressed natural gas (CNG) station and possibly inject into the pipeline.

“The project is currently under construction, and we anticipate pushing the start button in July of this year,” says Will Chen, supervising engineer, energy recovery engineering section of LACSD’s Solid Waste Department.

Partnering with Waste Management, the agency spent three years assessing the feasibility of using the existing anaerobic digestion operation at its wastewater treatment plant in Carson to co-digest food and sludge. They experimented at one of LACSD’s 24 anaerobic digesters to ensure parameters were acceptable such as pH, conductivity, total solids and contamination levels from inerts like plastics and glass.

The conclusion was that up to 62 tons of food waste could be handled per day.

“Enforcement of SB 1383 will be in two years, and haulers will primarily have two options for food waste: compost or anaerobic digestion. This project has enabled us to expand acceptance of these materials,” says Chen.

LACSD has invested in equipment and built a preprocessing plant at the materials recovery facility adjacent to the closed Puente Hills landfill in order to offer preprocessing to customers.

What’s unique about this project is that the existing fueling station is adjacent to where the facility will be built. “We have a CNG station that can use RNG (renewable natural gas) now, and our intent is to feed that station 100 percent of our RNG. We are also evaluating pipeline injection and/or gas-to-energy,” says Chen, who explains that LACSD is now assessing its carbon intensity score, which determines the value of gas under California’s low carbon fuel standard (LCFS) credit program.

“For now, the station is open to the public with most of the vehicles being buses, trash trucks and passenger cars. In time, we intend to expand to accommodate large tractor trailers. With LCFS and RINs (renewable identification number), it makes sense. We should recover capital, and it should be a revenue-generating project to fund other food waste infrastructure projects,” says Chen.

Source: <https://usgasvehicles.com/en/los-angeles-county-to-produce-transportation-fuel-from-biogas/>

1.5 USA

The LNG Market Is “Imploding”

By Nick Cunningham. oilprice.com

27th April 2020.



While everyone is understandably watching the meltdown in the crude oil market, the global market for natural gas is also cratering.

At least 20 cargoes of U.S. liquefied natural gas (LNG) have been cancelled by buyers in Asia and Europe, according to [Reuters](#). The global pandemic and the unfolding economic crisis have slashed demand for gas

worldwide. Cheniere Energy, one of the main exporters of U.S. LNG, has seen an estimated 10 cargoes cancelled by buyers halfway around the world, Reuters said.

The price for LNG in Asia was already crashing before the pandemic, owing to a substantial increase in supply last year. Prices for LNG in Asia for June delivery have recently traded at \$2/MMBtu, only slightly higher than Henry Hub prices in the U.S.

As recently as October, LNG prices in Asia traded at just under \$7/MMBtu.

The problem for American gas exporters is that after factoring in the cost of liquefaction and transportation, gas breakeven prices for delivering to Asia are around [\\$5.56/MMBtu](#), according to Reuters. But prices are trading at less than half of those levels.

Gas exports tend to be conducted under rigid contracts, but cargoes are now facing cancellation.

“The financial prospects for [LNG] – once one of the globe’s hottest energy commodities – seem to be imploding before our eyes,” Clark Williams-Derry wrote in a new [report](#) for the Institute for Energy Economics and Financial Analysis (IEEFA). He noted that LNG prices in the fall of 2018 were at around \$12/MMBtu.

The oil majors have made large bets on LNG in recent years. Royal Dutch Shell [spent](#) more than \$50 billion to buy BG Group in 2015. The move back then was made with an eye on surging demand for natural gas. “We will now be able to shape a simpler, leaner, more competitive company, focusing on our core expertise in deep water and LNG,” Shell’s CEO Ben van Beurden said after closing on the acquisition of BG Group more than four years ago.

The deal remade Shell into one of the largest traders of LNG on the planet. Several other oil majors – Total SA, ExxonMobil and Chevron, for instance – have also made massive bets on LNG.

LNG is now arguably getting hit just as hard as crude oil from the pandemic and the global slowdown. A series of high-profile investment delays or cancellations have occurred in the past month. ExxonMobil, for instance, [delayed](#) a final investment decision on a large LNG export project in Mozambique in early April.

However, the industry faced troubled economics even before the current crisis. “[C]ompanies pinned the delays on the novel coronavirus, while ignoring the fact that LNG prices were already deflating long before the worst impacts of the pandemic were being felt,” Clark Williams-Derry wrote in the IEEFA report. He wrote that what was striking was the fact that companies of varying sizes and corporate structures were cancelling decisions – speculative startups, but also state-owned giants and publicly-traded supermajors.

Delayed and cancelled cargoes could ripple back up to the upstream sector. The U.S. natural gas industry was also facing problems heading into 2020 because of oversupply. Exports may not provide the demand pull that it once did for gas drillers. Henry Hub prices are stuck at \$1.80/MMBtu.

Ironically, however, the share prices of gas drillers have rebounded in recent weeks. Pittsburgh-based EQT has seen its share price double since March, for example. There are a few reasons for this. The Federal Reserve has funneled trillions of dollars into the financial sector, which has re-inflated financial assets of all types. Investors also seem to be trying to “buy the dip.”

But industry analysts are also predicting that a huge shortfall in gas production in the Permian will boost prices by next year. Goldman Sachs says that gas will jump to \$3.25/MMBtu in 2021.

For now though, the economics for LNG are pretty dismal. “The LNG industry entered today’s crisis on shaky footing. And now that the economic slowdown is in full swing, all previous LNG supply and demand projections have been rendered moot, and all crystal balls remain cloudy,” Williams-Derry concluded. “In that context, delay is a smart decision.”

Source: <https://oilprice.com/Energy/Gas-Prices/The-LNG-Market-Is-Imploding.html>

1.6 USA

Electric Vehicles Set to Crash in 2020 Amid Coronavirus and Oil Price Shocks

By Karl-Erik Stromsta www.greentechmedia.com 8th April 2020

Global EV sales will plunge by more than 40 percent this year, Wood Mackenzie forecasts — and the coronavirus is not the only culprit.



Tesla idled production last month at its EV factory in Fremont, California.

Global electric vehicle sales look set to crash this year, and the coronavirus pandemic won’t be the only culprit. Total EV sales will plunge 43 percent in 2020, according to [new research](#) from Wood Mackenzie.

The 2020s are the decade in which EVs are expected to move from the margin of the global auto market to its fast lane, as battery pack prices tumble, driving ranges extend and charging infrastructure becomes more sophisticated and widespread. But the COVID-19 pandemic and its economic shockwaves have not made for a good start.

WoodMac now expects global EV sales of 1.3 million units in 2020, nose diving from a record 2.2 million units sold last year.

The coronavirus pandemic deserves much of the blame. In China, the world’s largest EV market, sales of all types of cars fell 21 percent in January compared to last year, and by an eye-watering 80 percent in February. Things were even worse for EVs, with February sales

“Most new EV buyers are still first-time owners of the technology,” Ram Chandrasekaran, principal analyst for transportation and mobility at Wood Mackenzie, said in a research note. “The uncertainty and fear created by the outbreak have made consumers less inclined to adopt a new technology.”

“Once the epidemic is contained in China, we suspect consumers will flock back to car dealers and reaffirm their confidence in EVs.”

The bounce-back could take longer in Europe and North America, where the COVID-19 outbreak is several months behind China's trajectory.

“The first lockdown in the U.S. did not start until March 20, but the effects have already begun to show in EV sales,” Chandrasekaran said. “General Motors is offering a discount of \$10,000 for its Chevrolet Bolt. Further such rebates are sure to follow to move inventory as demand drops [more].”

Other factors are contributing to skidding EV sales, including the collapse of oil prices and a relative lack of new EV models set for commercial release this year, Chandrasekaran said.

Tesla's ambitious 2020 goal looks questionable

Tesla, the world's highest-profile EV manufacturer and the dominant player in the U.S. market, is an exception to the lack of new models on the market, having last month started deliveries of its Model Y, a compact crossover utility vehicle built on the Model 3 sedan platform. Tesla CEO [Elon Musk has mused that Model Y](#) could outsell Model S, Model X and Model 3 combined.

Tesla roared into 2020, putting up unexpectedly strong EV delivery numbers in the first quarter after turning out the first vehicles at its new factory in Shanghai, known as Gigafactory 3. But its share price has fallen by 40 percent since achieving an all-time high in February, amid manufacturing disruptions and economic concerns related to the coronavirus outbreak. (The stock has still doubled over the past year.)

Tesla idled production at its Fremont, California EV factory last month, raising serious questions about the company's ambitious goal to hit 500,000 vehicle deliveries this year — concerns [Musk has not yet addressed](#). Most of the workforce has been sent home at Nevada's Gigafactory, where Tesla makes battery packs and other components with its partner Panasonic. Tesla has reportedly [slashed employee salaries](#) across the board, with deeper cuts of up to 30 percent for executives.

Beyond the Model Y, many anticipated EV models were not expected to hit the market until late 2020 or 2021 — and that was true before the novel coronavirus hit, WoodMac's Chandrasekaran said.

[General Motors brought hundreds](#) of analysts, investors, journalists and policymakers to an event near Detroit last month to highlight its big ambitions for EVs, but none of those models will be available until late 2021. Ford's Mustang Mach-E is not expected to be widely available until late 2021, and Volkswagen's long-touted ID.3 won't hit the market until later this year.

Beyond any impact from the coronavirus, those sluggish EV-model launch timelines could weigh on the market this year as consumers hold off on making purchases.

“Unfortunately for EV adoption, this is likely to lead to a plateauing of sales in the near term,” Chandrasekaran [wrote](#). “While the pent-up demand from the pandemic will help a bounce-back in sales later in the year, new demand growth will [not be apparent] until 2021.”

Source: <https://www.greentechmedia.com/articles/read/electric-vehicle-sales-set-to-crash-in-2020-as-coronavirus-bites-and-oil-stays-cheap>

1.7 Japan

Japan H2 Mobility aims to launch 24 more hydrogen stations in 2020-21

Author: Takeo Kumagai. Editor: Shashwat Pradhan. www.spglobal.com 24th April 2020

Tokyo — Japan H2 Mobility, or JHyM, intends to launch at least 24 more hydrogen stations in Japan in fiscal 2020-21 (April-March), following the recent participation of Konan Kogyo in the further development of the country's hydrogen station network, a JHyM official said Friday.

The latest participation of Konan Kogyo, which directly runs eight service stations in Aichi prefecture, central Japan, follows the recent approval by the Ministry of Economy, Trade and Industry of fiscal 2020-21 subsidies for building hydrogen stations.

In the latest development, Konan Kogyo, which has become the 24th company to participate in JHyM's hydrogen station project, aims to start operating a hydrogen station in Aichi prefecture in April 2021.

JHyM's aim to launch at least 24 more hydrogen stations is part of METI's target to install 160 hydrogen stations in fiscal 2020-21. As of Friday, Japan has a total of 127 hydrogen stations in the country.

Following the inception of JHyM as a joint venture in February 2018, a total of 24 companies, including 14 infrastructure companies, are participating in this project.

The 24 companies are: Toyota Motor, Nissan Motor, Honda Motor, JXTG Nippon Oil & Energy, Idemitsu Kosan, Iwatani Corporation, Tokyo Gas, Toho Gas, Air Liquide Japan, Nemoto-Tsusho, Seiryu Power Energy, Tama Koun, Toyama Hydrogen Energy Promotion Council, Nangoku Corporation, Fukuoka Oxygen, Marui Transport, Konan Kogyo, Toyota-Tsusho, Development Bank of Japan, JA Mitsui Lease, Sompo Japan Insurance, Mitsui Sumitomo Finance & Leasing, NEC Capital Solutions and Mirai Creation Fund.

Source: <https://www.spglobal.com/platts/en/market-insights/latest-news/natural-gas/042420-japan-h2-mobility-aims-to-launch-24-more-hydrogen-stations-in-2020-21>

1.8 India

NTPC to procure hydrogen fuel bus and cars for Leh and New Delhi

www.energyinfrapost.com 28th April 2020



NTPC Ltd on Sunday said it has invited global expression of interest (EoI) to provide Hydrogen Fuel Cell (FC) based electric buses and Hydrogen Fuel Cell based electric cars in Leh and Delhi.

The EoI for 10 such buses and cars has been issued by NTPC's wholly owned subsidiary, NTPC Vidyut Vyapar Nigam (NVVN) Limited, an official statement said.

The move to procure Hydrogen Fuel Cell based vehicles is first of its kind project in the country, wherein a complete solution from green energy to the fuel cell vehicle would be developed, it said.

The initiative, undertaken with support of Ministry of New and Renewable Energy, will harness renewable energy for generation of hydrogen and develop its storage and dispensation facilities as part of pilot projects at Leh and Delhi. The move to launch hydrogen powered vehicles aims at decarbonizing mobility segment, the statement said

<https://www.energyinfrapost.com/ntpc-to-procure-hydrogen-fuel-bus-and-cars-for-leh-and-new-delhi/>

2.0 ANGVA related / participated events

There are no ANGVA related and participated events at least till towards end of this year.

3.0 End

Any comments and suggestions on the topics and information covered and to be covered in future are most welcome. Please send your comments and suggestions to Lee Giok Seng at email: leegs@angva.org