# Oil and Gas News Briefs
Compiled by Larry Persily
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## Anadarko gives go-ahead for Mozambique LNG

(Reuters; June 18) – Anadarko Petroleum and its partners on June 18 gave the go-ahead for a $20 billion gas field development and LNG export terminal in Mozambique. But Anadarko will not likely own a share of the project much longer. The company has agreed to a takeover by Occidental Petroleum. Once it goes through, expected in 2020, Occidental has agreed to sell Anadarko's Africa assets, including the Mozambique LNG project, to France's Total, the world's second-largest LNG trader among the majors.

The project has long-term sales contracts with utilities, LNG portfolio holders and state companies around the world for most of its initial capacity of 12.88 million tonnes a year. Start-up is expected around 2024. "Flexible commercial arrangements … have been instrumental in securing the project a roster of high-quality customers in a crowded LNG market," said Frank Harris, head of LNG consulting at Wood Mackenzie. "Today's final investment decision is the largest sanction ever in sub-Saharan Africa oil and gas," said Jon Lawrence, an analyst with Wood Mackenzie's sub-Saharan Africa upstream team.

Earlier this month, Anadarko said a joint venture led by Houston's McDermott International would handle construction, which is expected to be transformational for Mozambique, beset by economic crisis and conflict stemming from a civil war. The development includes producing gas from offshore reserves estimated at 75 trillion cubic feet and piping the gas to an onshore LNG plant. Anadarko's partners are Japanese company Mitsui, Mozambique's state energy company ENH, Thailand's PTT, and India's Oil & Natural Gas Corp., Bharat Petroleum Resources, and Oil India Ltd.

## Mozambique could reach 30 million tonnes annual LNG capacity

(S&P Global Platts; June 19) – The decision June 18 by Anadarko Petroleum and its partners to construct the Mozambique LNG project at 12.88 million tonnes annual capacity is the first of two large-scale, onshore liquefied natural gas developments the country hopes to land this year. The second could be the Rovuma LNG project, led by ExxonMobil and Eni, at 15.2 million tonnes annual capacity. The joint venture is expected to reach a final investment decision by the end of the year.

A third project in Mozambique is a smaller, floating gas processing and liquefaction facility, the Eni-led Coral South LNG project, at 3.4 million tonnes per year, which is under construction and scheduled for start-up in 2022. The three projects would give the country an export capacity of over 30 million tonnes per year, making it one of the world's biggest suppliers.  Mozambique has the potential to be one of the world's top five LNG producers by the mid-2020s, alongside Qatar, Australia, the U.S., and Russia.

Wood Mackenzie expects the two onshore Mozambique LNG projects to be the second and third most valuable oil and gas projects sanctioned this year, after the Arctic LNG-2 project in Russia, analyst Jon Lawrence said.  The Mozambique project is expected to start production around 2024, at a time when several new LNG projects are due to come online globally, potentially leading to a new cycle of glut in the global market if demand does not catch up.  The Anadarko-led Mozambique LNG project brings to 60 million tonnes the volume of new capacity worldwide sanctioned since last October.

## Indonesia set to approve plan for new $20 billion LNG project

(Reuters; June 19) - The Indonesian government is set to approve Japanese Inpex Corp.'s revised plan of development for the Masela gas block next week, the chairman of upstream oil and gas regulator SKK Migas said June 19.  The government expects Inpex to submit the plan for the $20 billion project this week, Dwi Soetjipto, the SKK Migas chairman told reporters in Jakarta.  Indonesia was the world's seventh-largest LNG exporter in 2018 with three operating large-scale LNG terminals.

Approval of the development plan would let Inpex, which controls 65 percent of the project, start planning for construction of the offshore gas production and onshore liquefied natural gas plant after years of delay.  Inpex had to scrap an earlier development plan after the government in 2016 ordered Inpex to move the project from an offshore LNG plant to onshore to have a larger impact on the local economy.

Over the past weekend, Inpex and the government signed a heads of agreement for the project, which covers estimated costs, targeted project period and fiscal conditions.  The development is planned at 9.5 million tonnes annual capacity.  The government has agreed to a 15 percent internal rate of return for Inpex's Masela investment, the SKK Migas chief said.  The government is targeting to have the plant up and running by 2027.

## Canadian Cabinet approves oil sands pipeline project

(Calgary Herald; June 18) – Expansion of the Trans Mountain pipeline should proceed, Canada's federal Cabinet ruled June 18, giving its stamp of approval to the oft-delayed and controversial project for moving more of Alberta's oil sands production to the West Coast for export.  "To those who want sustainable energy and a cleaner environment, know that I want that too," said Prime Minister Justin Trudeau.  "But in order to bridge the gap between where we are and where we're going, we need money to pay for it."

The decision comes almost 10 months after a federal court of appeals decision threw the C$7.4 billion project into chaos, finding that the federal government's previous stamp of approval was based on a flawed consultation with indigenous communities. The expansion will triple the pipeline's carrying capacity to 890,000 barrels per day from Edmonton to Burnaby, British Columbia. Construction could begin as early as this year. The divisive project has pitted Alberta against British Columbia and other opponents.

The federal government is now the pipeline's owner, having bought the existing line and expansion project for C$4.5 billion from its private operator last summer when Kinder Morgan threatened to walk away from the venture over constant delays. The company first proposed the expansion more than seven years ago. The Cabinet decision comes after consultations were launched with 117 indigenous communities. Even so, the approval is expected to face opposition from environmental and indigenous groups. The decision is also expected to be a key issue in the upcoming federal election in October.

## Canada's decision does not end fight over oil sands pipeline

(CBC News Canada; June 18) – British Columbia Premier John Horgan said he is disappointed by federal approval of the controversial Trans Mountain oil sands pipeline expansion, a sentiment echoed by environmentalists across the province. But Horgan acknowledged that Ottawa has the authority to give the green light. Still, Environment Minister George Heyman said June 18 that he continues to oppose the expansion. "We know that British Columbians continue to be deeply concerned about the consequences of a sevenfold increase in tanker traffic in the Salish Sea," Heyman told reporters.

The province's political opposition party has a different opinion." Today's decision will bring jobs and hundreds of millions of dollars to local communities along the pipeline route," B.C. Liberal Leader Andrew Wilkinson said. This is the second time the Cabinet has approved the project, but the last approval was nullified by the Federal Court of Appeal in 2018 — Coastal First Nations said June 18 they plan to appeal the Cabinet decision once again. In addition, Vancouver Mayor Kennedy Stewart said the city would do "everything in our power" to support local First Nations in their court battles.

The federal Cabinet decision to approve the multibillion-dollar pipeline expansion is separate from the legal battle where the B.C. Court of Appeal ruled last month against the provincial government's proposal for environmental legislation that would effectively stop the expansion. The proposed law would have allowed the province to limit the flow of "heavy oil" into B.C., but the court said that would conflict with federal jurisdiction over interprovincial pipelines. B.C. officials have said they are appealing that court decision.

## [More legal challenges could delay oil sands pipeline]

(Calgary Herald columnist; June 18) – Satisfied, but not celebrating. Relieved, but not enthusiastic. Canada's oil industry issued a sigh of relief June 18 after the federal government re-approved the embattled Trans Mountain pipeline expansion, almost 10 months after it was sidetracked by a court ruling and seven years after it was first proposed. The news was welcomed, but the reaction largely muted. The project still needs to be built. After false starts, a once-burned-twice-shy mentality looms large.

"I am not ready to do a victory celebration, especially on the back of a re-approval of a project that should have been built by now," said Rob Broen, CEO of Athabasca Oil, which has contracted to move oil on the pipeline. "This has been a long journey, it's been a tortuous journey, it's been a painful journey. It's always good to get to the end of that kind of journey," said Chris Bloomer, Canadian Energy Pipeline Association CEO.

Construction to expand the pipeline, which moves oil from Edmonton to a terminal near Vancouver, is expected to begin this summer. But opponents could launch more legal challenges. "We still have a long ways to go to get a pipeline built," said Hal Kvisle, former CEO of TransCanada and now chair of ARC Resources. "Does the federal government have the fortitude and willpower to drive policy? That's what it is in question now," said Whitecap Resources CEO Grant Fagerheim. Analysts have said late 2021 or 2022 is the best-case scenario to finish construction depending on legal challenges.

## [Opposing sides in B.C. gas pipeline case await judge's ruling]

(Global News; Canada; June 16) - A judge is set to rule soon on whether an interim injunction should continue against Indigenous opponents of a natural gas pipeline that's set to run through their land in northern British Columbia. Lawyers representing the Coastal GasLink pipeline and the Wet'suwet'en First Nation spent three days last week at B.C. Supreme Court in Prince George, B.C., arguing for and against the pipeline to the LNG Canada export terminal under construction in the coastal city of Kitimat.

Freda Huson, a chief-appointed spokesperson for the Unist'ot'en house group that has been part of the legal fight, said no date has been set for the judge to return with a decision. "This pipeline runs through our sacred lands," he said, "which we will continue to defend." The Unist'ot'en is part of one of the three Wet'suwet'en clans that set up camps on traditional lands the pipeline would travel through, blocking workers from some sites. The interim injunction bars the protestors from interfering with workers.

The Wet'suwet'en have argued that Coastal GasLink did not get permission from their hereditary chiefs to access the traditional lands. The company said it signed benefits agreements with all 20 elected First Nations councils along the 415-mile route, including the five Wet'suwet'en elected bands that have different authorities and oversights than the hereditary chiefs. Lawyers for Coastal GasLink argued in court at the start of proceedings June 12 that those agreements add up to $338 million over 25 years.

## Sempra starts FERC process to expand Texas LNG project

(LNG Global; June 18) – Sempra Energy doesn't plan to make a final investment decision on its liquefied natural gas export terminal in Port Arthur, Texas, until the first quarter of 2020, but already it has started the pre-filing process with the Federal Energy Regulatory Commission to double the plant's output capacity. If the company goes ahead with the expansion, it would boost the project to four liquefaction trains at 27 million tonnes annual capacity.

Sempra filed its request with FERC on June 14 to begin the long environmental review process. The company said it plans to file its formal application for the expansion project in January 2020, looking to achieve federal authorization in 2021 and a construction start in 2022. Saudi Aramco last month signed a 20-year agreement to buy LNG from the Port Arthur project and to take a 25 percent equity stake in the first phase of the development. The preliminary deal with Aramco is for 5 million tonnes per year.

Sempra said it plans to make a final investment decision on the first phase in the first quarter of 2020. FERC approved the project in April. Meanwhile, Sempra's first export venture, the $10 billion Cameron LNG project in Louisiana, is nearing start-up. At full production, it will have capacity to make about 12 million tonnes of LNG per year. It has shipped its first commissioning cargo, the project contractor reported June 2.

## Report says Oregon LNG project would be counties' largest taxpayer

(Mail Tribune; Medford, OR; June 16) - A proposed natural gas pipeline would generate more than $5.3 million a year in property taxes for Oregon's Jackson County, making it the county's biggest taxpayer. The economic analysis firm ECONorthwest prepared a report on the economic impacts of the pipeline and its accompanying liquefied natural gas export terminal at Coos Bay, Oregon. Calgary-based Pembina Pipeline is pursuing the $10 billion venture, which is opposed by environmentalists and some landowners.

The 229-mile, 36-inch-diameter underground pipeline would be buried across Klamath, Jackson, Douglas, and Coos counties in the southwest corner of the state to feed the LNG terminal. The development would become the largest property taxpayer in all the counties, said Pembina spokesman Paul Vogel. The cost of the project is more than the total construction cost for all the factories, warehouses, gas and communications projects, power plants, and labs built in Oregon from 2000 to 2016, the report said.

Peak pipeline construction employment would hit 4,131, and peak LNG terminal construction employment would be 1,996, according to the report. The project released the economic impact report as the Federal Energy Regulatory Commission prepares to hold public hearings across Southern Oregon later this month. FERC is preparing an environmental impact statement for the development. Large crowds of opponents and supporters are expected to converge at the sessions.

## Low prices leave little to no margin on U.S. LNG

(S&P Global Platts; June 17) – Spot-market prices for liquefied natural gas delivered to Asia are at a three-year low, selling at $4.26 per million Btu last week. At that price, according to Platts Analytics, the weighted-average netback value on a U.S. LNG export cargo shipped is averaging just 17 cents per million Btu this month. The netback or profit calculation includes the cost of feedstock gas and pipeline charges to the LNG plant, shipping and related fees, but excludes sunk costs associated with liquefaction.

Most U.S. LNG is under long-term contracts that require offtakers to pay for the liquefaction capacity regardless whether they can turn a profit on the gas. The margin on some cargoes from Cheniere's Sabine Pass, La., terminal to Asia, Europe or West India is currently hovering around minus 20 cents to minus 50 cents per million Btu. Prices are a little better looking ahead. August deliveries to Asia are trading in the high $4s, while September and October cargoes are $5 and $5.55, respectively, S&P Global Platts data shows. Prices are lower in Europe, which has the option of pipeline imports.

Sustained price weakness has prompted some analysts and market observers to predict a looming shut-in of LNG production capacity. BP's chief economist, Spencer Dale, has warned of a meaningful curtailment of LNG supply in the coming months. "Asian prices have fallen further in the first part of this year, toward the bottom of the price band defined by U.S. exporters' full-cycle and operating costs," he said.

While Asia remains a key market for U.S. exporters, Dale predicted that demand in the European market would determine the extent of any eventual shut-in, since the continent's ample import and storage capacity and trade liquidity have often provided a market of last resort for LNG supplies during periods of weak global demand.

## Japanese utility backs study of small-scale floating LNG production

(Reuters; June 17) - Japan's Kyushu Electric agreed to back a study to produce liquefied natural gas using floating production, liquefaction and storage vessels at small, remote fields that would otherwise remain untapped off Australia, the project partners said June 17. Planning is at an early stage, with the consortium, led by Perth-based

Transborders Energy, targeting first production not before mid-2026 with capital costs expected at about A$1.6 billion (US$1.1 billion), Managing Director Daein Cha said.

"Transborders' goal is to unlock stranded gas resources, develop a new LNG supply source and offer alternative LNG solutions," Transborders Chairman Jack Sato said in a statement. Transborders hopes to complete preliminary design work on small-scale floating LNG with U.K.-based TechnipFMC and Norway's Add Energy and talks with potential owners of stranded gas resources by the end of this year.

Lining up Kyushu as a partner was key, Cha said, as the Japanese utility could be a customer for the LNG and could help the project secure access to low-cost debt finance from the Japan Bank for International Cooperation. The group is looking to tap small gas fields with reserves of between 0.5 trillion and 2 trillion cubic feet, similar to a small-scale floating LNG project recently set up off Cameroon. The Cameroon project cost about $1.2 billion with production capacity of 2.4 million tonnes of LNG per year.

## South Korea moving away from coal toward renewables

(Reuters; June 18) - As renewable energy powers up in South Korea, coal-fired generation, long the bedrock of the country's electricity supply, is being tapped to give up market share. Facing choking smog in its major cities and under pressure to meet emission reduction targets, the world's fourth-biggest coal importer is expected to accelerate targets for green energy in an updated 15-year energy plan later this year. South Korea operates some 60 coal power plants, mainly owned by state-run utilities.

Long seen as a laggard in moving away from coal, the government now looks set to close some 20 aging coal-fired generators and broaden the operating limits at others, advisers and energy experts said. "We have a big challenge ahead to reduce carbon emissions. … We could do it by expanding renewable power but that won't be enough to cut emissions, so we need to think about reducing coal power and weigh the costs of that change," said Park Jong-bae, a Konkuk University electrical engineering professor.

South Korea began its transition to cleaner energy in a 2017 plan that aimed to boost the share of renewables from about 6 percent to 20 percent by 2030, while scaling back coal and unpopular nuclear. Amid public anger, the government in March designated pollution a "social disaster," and a month later pledged to boost renewable energy to up to 35 percent of total energy supplies by 2040. The 2019 plan is expected to reflect the push for even more renewables and more gas-fired power at the expense of coal.

## Report forecasts new records for U.S. oil and gas output in July

(Reuters; June 17) - Oil output from seven major shale formations is expected to increase by about 70,000 barrels per day in July to a record 8.52 million, the U.S. Energy Information Administration said in its monthly drilling productivity report June 17. The largest boost is forecast in the Permian of Texas and New Mexico, where output is expected to climb by 55,000 barrels to a peak at 4.23 million barrels per day in July.

Production in North Dakota and Montana's Bakken shale basin is expected to climb by 11,000 to a record 1.44 million, the data showed. A shale revolution and production increases particularly from the Permian basin and the Bakken have helped make the U.S. the biggest crude oil producer in the world, ahead of Saudi Arabia and Russia.

U.S. natural gas output was projected to increase to a record 81.4 billion cubic feet per day in July, the EIA said. That would be up 0.8 bcf per day over the June forecast and mark a record 18th consecutive monthly increase. A year ago in July, output was 69.5 bcf per day. Output in the Appalachia region in Pennsylvania, Ohio, and West Virginia, the nation's biggest shale gas play, is projected to rise over 0.3 bcf per day to a record 32.4 bcf in July. Production was 28 bcf per day in July a year ago.

## Korean shipyard sends 13th Arctic LNG carrier to sea trials

(Reuters; June 18) – The 13th ice-breaking liquefied natural gas carrier, the Nikolay Urvantsev, is undergoing sea trials, Refinitiv data shows, soon to join the fleet serving Novatek's Yamal LNG plant in the Russian Arctic. The vessel is owned by Mitsui OSK Lines and was built at the Daewoo Shipbuilding and Marine Engineering Okpo shipyard in South Korea. It is currently in the Korea Strait. That leaves two more ice-class LNG carriers still under construction of the 15 ordered for Yamal.

All but one of the ships are named after Russian Arctic explorers and scientists — and they are expensive, about $320 million each. Yamal is dependent on the ice-breaking carriers to move LNG out of Arctic waters. Novatek had asked Daewoo to speed up construction after production at the LNG plant ramped up faster than expected. The carriers are largely conducting ship-to-ship LNG transfers to conventional carriers partway to the final destination to reduce the use of the expensive ice-class vessels, though during the summer they can travel the entire Northern Sea Route to China.

## Norwegian Arctic drilling disappoints Equinor and partners

(Reuters; June 17) - Equinor's exploration well drilled near its Korpfjell gas find in the Norwegian Arctic has proved to be dry, Norway's Petroleum Directorate said June 17. The company had hoped the area near the Russian offshore border would be oil rich.

This is another disappointment for Norway, which hoped that the Barents Sea could become its new oil and gas province, helping to sustain its key industry, whose production is set to fall from mature fields in the North Sea.

The first shallow well drilled at Korpfjell found a non-commercial volume of natural gas. The second well was drilled to more than 13,000 feet deep. “Big expectations were released, in a negative sense, with the 2017 gas discovery. That was a decent gas discovery but given that it’s so far away from any infrastructure, it’s not economical to develop,” said Simon Sjoethun, an analyst at Oslo-based Rystad Energy. So far, only two Barents’ fields, Equinor’s Snoehvit and Eni’s Goliat, are in operation.

Because the Barents Sea lacks gas export infrastructure, such as pipelines, explorers are primarily interested in finding oil, which can be exported by tanker. Equinor (formerly Statoil) holds a 30 percent stake in the Korpfjell license. Privately owned Norwegian-based DNO has 20 percent, Norway’s state-owned Petoro has 20 percent, Sweden’s Lundin Petroleum has 15 percent, and ConocoPhillips holds 15 percent. Last year oil firms drilled a total of 53 exploration wells on the Norwegian continental shelf.

## Leading banks will consider emissions in ship financing

(Reuters; June 17) - A group of leading banks will for the first time include efforts to cut carbon dioxide emissions in their decision making when providing shipping company loans, executives said on June 18. International shipping accounts for 2.2 percent of global carbon dioxide emissions and the U.N.’s International Maritime Organization has a long-term goal to cut greenhouse gas emissions 50 percent from 2008 levels by 2050.

Working with nonprofit organizations Global Maritime Forum, Rocky Mountain Institute and London University’s UCL Energy Institute, 11 banks have established a framework to measure the carbon intensity of shipping finance portfolios. The banks involved in the “Poseidon Principles” initiative, which will set a common baseline to assess whether lending portfolios are in line or behind the adopted climate goals set by the IMO, represent about one-fifth ($100 billion) of the global shipping finance portfolio.

The results will be published annually in individual sustainability reports. “We are helping the shipping industry emerge into the 21st century,” Michael Parker, global head of shipping at Citigroup, told Reuters. Those involved so far are Citigroup, Societe Generale, DNB, ABN Amro, Amsterdam Trade Bank, Credit Agricole CIB, Danish Ship Finance, Danske Bank, DVB, ING, and Nordea. Banks will be more selective in the longer term about which ships they include in their lending portfolios, bankers said.