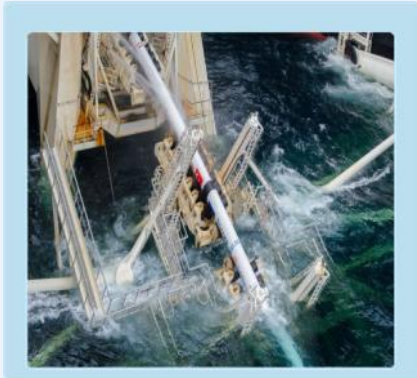


TurkStream enters Turkish Economic Exclusive Zone

Anadolu Agency, 04.11.2017



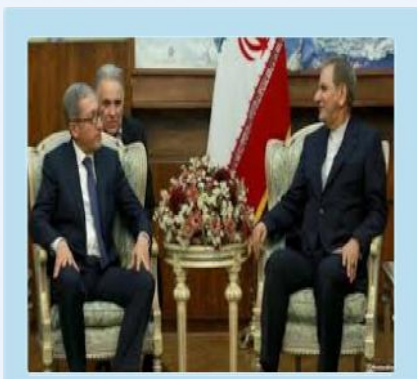
The first pipeline of the TurkStream Offshore Gas Pipeline entered the Turkish Exclusive Economic Zone (EEZ) on 4 November 2017, the Russian company announced.

Pioneering Spirit, world's largest pipe-layer vessel, marked the occasion by laying down on the seabed section of the pipeline with Russian and Turkish flags, symbolizing the crossing of the EEZ border between the two countries, company said in a press release. The vessel had crossed the Bosphorus and entered the Black Sea on May 31 and Vladimir Putin officially started pipelaying on June 23.

According to press release, the border crossing also marks the completion of construction of the two offshore lines within the Russian EEZ. "In total 448 kilometers of the pipeline were laid down, equally divided over the two lines. Construction of nearly 25 percent of the offshore pipeline section has been realized in less than 6 months." said in the press release. TurkStream will consist of two offshore pipelines, with a total capacity to transport up to 31.5 billion cubic meters of natural gas per year. Company proclaimed that Pioneering Spirit will now continue the pipelay activities with one pipeline all the way close to the Turkish landfall. The two TurkStream pipelines will come ashore in Turkey near the town of Kiyiköy, which is located approximately 100 kilometers west of Istanbul.

Iran rejects Turkmen proposal for gas shipments to turkey

Natural Gas World, 08.11.2017



Energy politics around the Caspian Sea breeds complications, as a recent example involving Turkmenistan, Iran, Turkey, Azerbaijan, and Armenia reminds us.

Turkmenistan is in a serious bind. The country has the fourth-largest natural gas reserves in the world but currently has only one customer -- China -- at a time when Turkmenistan's economy appears to be spiraling downward. Turkmenistan would likely sell gas to anyone at this point, considering its extreme revenue shortages, and needs to start selling to someone, soon.



So, according to reports from October 23-25, Turkmenistan is proposing a gas-swap deal with Iran to get Turkmen gas to Turkey, where it could be pumped into the Trans-Anatolian Natural Gas Pipeline (TANAP) that is currently under construction. Iranian National Gas Company (INGC) Director Hamid Reza Araki, who is also deputy oil minister, replied that Iran was not “positively disposed” to the idea.

That response is hardly surprising. Since the late 1990s, Turkmenistan has been shipping gas to northern Iran, an area that is poorly connected to Iran’s gas-rich south. At the end of 2016, Turkmenistan demanded Iran pay somewhere around \$2 billion (the figure is not entirely clear) for supplies of Turkmen gas to northern Iran during the winter of 2007-08.

Iran countered that the figure was too high and claimed that Turkmenistan had jacked up the gas price during that particularly bitter winter to \$360 per 1,000 cubic meters, about nine times the usual price at the time. Last-minute negotiations before the new year appeared to end in an agreement, but on January 1 Turkmenistan shut off the gas supplies -- and they have remained off. Iran says Turkmenistan illegally broke the contract and has periodically threatened to take Turkmenistan to international arbitration. With that as a backdrop, there is little wonder Araki indicated that Tehran has no enthusiasm for helping Turkmenistan.

But Araki mentioned another reason the Turkmen proposal was never likely to be met with sympathy in Tehran. “We are against the sale of a rival country’s gas to Turkey via swap operations,” Araki stated, an indication that even if the debt dispute between Turkmenistan and Iran is resolved, there is little hope Iran will ever cooperate in exporting Turkmen gas to Turkey. There is no pipeline running the length of northern Iran from the Turkmen to Turkish border, so Ashgabat wants a swap: Turkmenistan exports gas for use in northern Iran, and Iran pumps a like amount into a pipeline (or one day probably pipelines) leading to Turkey.

TANAP is the prize for both Turkmenistan and Iran. TANAP, a 1,840-kilometer pipeline to bring gas from Azerbaijan’s Shah Deniz-2 Caspian Sea field across Turkey to Europe, is currently under construction and is tentatively scheduled to be launched next year. In its initial stages, TANAP will carry only Azerbaijani gas. But as the pipeline expands capacity on its way to eventually reaching some 60 billion cubic meters (bcm), there will be space for gas from other countries.

Turkmenistan would like to be one of those countries, but Iran -- and potentially Iraq and northeastern Syria -- are better positioned to provide gas to TANAP. However, Turkmen gas is, and, according to INGC chief Araki, will continue moving to the west, at least as far as Azerbaijan. Araki said Iran had no objections to a gas swap with Turkmenistan as concerns gas for Azerbaijan. Azerbaijan is a gas producer, but it purchases Turkmen gas during the summer, when the price is low, to make “maximum use of the commercial potential of storage facilities” of the State Oil Company of Azerbaijan Republic (SOCAR).



Reports did not mention the amount of Turkmen gas Azerbaijan purchases, but it could not be very much. SOCAR buys Turkmen gas in the summer to “top off” its gas storage facilities, then resells the gas in winter at a profit. Armenia is hoping for a similar arrangement and has offered to mediate the Turkmen-Iranian debt dispute in an agreement that would see a Turkmen-Iranian gas swap supplying gas to Armenia. On October 20, Armenia’s minister of energy infrastructure and natural resources, Ashot Manukian, claimed that “we have proposed our involvement in settling debt-management issues between Turkmenistan and Iran, and they have accepted our proposal.”

Ashgabat certainly has not confirmed this, and it is difficult to see why Turkmenistan would agree to the Armenian proposal. Manukian’s solution would see Iran settle its debt by shipping gas to Armenia; Armenia would then pay off Tehran’s debt to Ashgabat, but by barter, not cash. Barter was exactly the deal Turkmenistan had with Iran before the dispute erupted. Ashgabat had agreed to accept goods and services as compensation for the first \$3 billion worth of gas exported to Iran, though Ashgabat was trying to renegotiate that agreement since Iranian gas imports rarely exceeded \$3 billion.

Turkmenistan’s government wants cash, not goods, so it is difficult to see how the Armenian deal would suit Ashgabat. Additionally, Turkmenistan did sell gas to Armenia in the 1990s via Russian pipelines and Armenia was regularly deep in debt for those supplies. And, in any case, Manukian indicated Turkmenistan would probably be competing even for the small Armenian gas market. Manukian said Armenia was ready to import more gas from Iran “if Iran offers lower prices.” Manukian noted that Armenia also purchases gas from Russia for \$150 per 1,000 cubic meters; meaning that if Iran, and presumably Turkmenistan, could sell their gas for less than that amount, Yerevan would be interested.

So it seems that Turkmenistan’s possibilities to export gas westward are, at best, limited. It is interesting that Turkmenistan made the swap offer to Iran. After all the acrimony this year in Turkmen-Iranian ties, Turkmen officials must have known the offer would probably get a cold reception in Tehran. But Ashgabat made the offer all the same, because there are so few options and so little time left for the Turkmen regime to turn the country’s economy around.

Algerian LNG vessel arrives in Turkey

Anadolu Agency, 05.11.2017



Algerian energy company Hyproc SC's LNG carrier Ramdane Abane is due to arrive in Turkey on November 10, according to ship tracking data.

With a capacity of 81,265 tons, the vessel, which was built in 1981, left Algeria on November 3 and is currently en route to its next destination, Aliaga LNG terminal in Turkey. Its expected arrival is at 10.00 local time on November 10. Turkey's Aliaga LNG terminal is located in the city of Izmir. Algerian energy company Hyproc Shipping's LNG carrier 'Lalla Fatma N'Soumer' reached Turkey on November 4, according to ship tracking data.

With a capacity of 118,363 tons, the vessel, which was built in 2004, left Algeria's port of Arzew on Oct. 18 and reached its final destination the Aliaga LNG terminal on Saturday morning at 08.21 local time.

Kurdish Regional Government ready to hand over oil for 17% of Iraqi budget

Oil & Price, 06.11.2017



The Kurdish Regional Government (KRG) is ready to hand over oil, airports, border points, and all revenues to Baghdad if Iraq's federal government gives the Kurdish region its 17-percent share of the budget, KRG's Prime Minister Nechirvan Barzani said.

"We're ready to handover oil, airports, border gates, and all revenues to Baghdad if the sends the salaries, the Kurdish Region's 17 percent constitutional budget share, and other financial dues," Kurdish24 news outlet quoted Barzani as saying at a press conference in Erbil.

In a press statement on Sunday, the KRG's council of ministers asked Iraq not to approve the 2018 federal budget bill "that was prepared by the Iraqi Ministry of Finance without the participation of the Kurdish Region." The KRG says that "reducing the budget share of the Kurdish Region, which occurs for the first time since 2005, from 17 percent to 12.6 percent," is breaching Iraq's constitution in the part that regions should be allocated a share of the national revenues, taking into consideration their population. Iraq and Kurdish have agreed that the Kurdish region makes up 17 percent of the total population of Iraq, KRG said yesterday.

Tensions have been high, and oil flows from north Iraq were disrupted after the semi-autonomous Kurdish region voted for independence at the end of September in a referendum not recognized by either Iraq or any international power. Since the Iraqi army took control of the fields in the oil-rich Kirkuk area in mid-October, reports of disruptions in oil flows have been a daily occurrence, and, according to an official at the Kirkuk provincial council, Iraq's oil ministry has ordered a stop to all oil exports from Kirkuk's oil fields to the Turkish Mediterranean port of Ceyhan.

At Monday's press conference, KRG's Prime Minister Barzani said that "The Kurdish Region's revenue has been decreased by over 50 percent following the [Oct. 16] conflict in Kirkuk", adding that, "It will definitely have its implications". Meanwhile, Iraq's Supreme Federal Court ruled today that no governorate or region can secede. In Kirkuk, two suicide bombers in a Shiite mosque killed at least five people on Sunday and wounded more than 20 in the first suicide attack since Iraq's federal forces retook the oil-rich Kirkuk from Kurdish forces.

Oil pierces two-year high as Saudi roundup rattles markets

Bloomberg, 06.11.2017



Oil prices have climbed by \$15 from their nadir this year to breach \$57 a barrel on Monday, spurred by a cascade of events that began with widespread arrests among Saudi Arabia's elite.

The arrests raise "the specter of instability in the kingdom," said John Kilduff, a partner at Again Capital LLC, a New York-based hedge fund, by telephone. "It's another round of jawboning here to get this nervous market higher." Futures rallied 3.1 percent in New York to levels last seen in June 2015.



Dozens of princes, government ministers and billionaires were arrested in a sweeping anti-corruption probe, including high-ranking officials involved with state oil producer Saudi Aramco. Though the shake-up involving the world's biggest crude exporter underpinned crude's rally, a promise by Nigeria's oil minister to cap production joined with the dollar's drop added upward momentum as the session progressed. "The geopolitical supply risk premium is starting to bear its head in the market right now because OPEC supply cuts have made it relevant," Michael Loewen, a commodities strategist at Scotiabank in Toronto, said by telephone. Now that OPEC "has capped supply and demand has continued to grow higher over time, we are near balanced and that means supply risk is more important."

Oil has climbed for four straight weeks in New York on signs a global glut is shrinking in response to output caps implemented by the Organization of Petroleum Exporting Countries and allied producers including Russia. At the Nov. 30 gathering, Saudi Arabia, Iraq and other major suppliers are expected to make the case for extending the limits beyond their March expiration. The low point for oil prices in New York this year was 42.05 a barrel in June. Monday's gain also kicked up company shares with the Standard & Poor's 500 Energy Index advancing as much as 2 percent, led by increases from driller Chesapeake Energy Corp. and the oilfield services company Baker Hughes.

West Texas Intermediate for December delivery jumped \$1.71 to settle at \$57.35 a barrel on the New York Mercantile Exchange. That's the biggest gain since Sept. 25 on a percentage basis. Total volume traded was about 27 percent above the 100-day average. Brent for January settlement surged \$2.20 to settle at \$64.27 on the London-based ICE Futures Europe exchange, the largest rise since July. The premium at which Brent traded to January WTI was \$6.70.

Security forces arrested 11 princes, four ministers and dozens of former ministers and prominent businessmen, according to Saudi media and a senior official who spoke on condition of anonymity. The Nigeria oil minister's comments that the producer is willing to limit output added to the bullish price momentum, according to Tariq Zahir, a New York-based commodity fund manager at Tyche Capital Advisors LLC. "That news basically was out there already, but it definitely helped." Zahir said in a telephone interview. Meanwhile, the Bloomberg Dollar Spot Index, a gauge of the dollar against 10 major peers, dropped as much as 0.3 percent. A weaker greenback boosts the appeal of commodities as an investment.

OPEC Eyes \$70 Oil

Oil & Price, 07.11.2017



Brent prices hit \$60 a barrel 10 days ago and have maintained that level ever since, sparking talk that this could be the new floor under oil prices and that \$70 oil in the short term is now not only in producers' wildest dreams, but a real possibility.

Although OPEC never officially admitted it, analysts have largely thought that pushing oil up to \$60 was one of the cartel's goals with the production cut deal. Three weeks before OPEC's November 30 summit in Vienna, some oil producers have already started thinking that \$70 is the 'fair price' for oil, fairer than \$60, Julian Lee writes.

But if the cartel wants to target a higher price (which it won't officially communicate to the market), it will likely trigger a new wave of U.S. shale production next year. More importantly, that higher oil price target may meet the resistance of Russia—the leader of the non-OPEC group of producers' pact—which is now generally viewed as steering the OPEC/non-OPEC oil production policy, together with OPEC kingpin Saudi Arabia. Both the Saudis and Russians have signaled that they're willing to extend the pact beyond March 2018, lending further support to oil prices over the past few weeks.

The higher the price of oil, the stronger the temptation for OPEC members to cash in on short-term gains and cheat (even more than they do now). Currently, Saudi Arabia is over-complying with its share of the production cuts, covering for rogue members—most prominently, OPEC's second-biggest producer, Iraq. Saudi Arabia needs oil prices at \$70 per barrel in 2018 for a budget breakeven, the International Monetary Fund (IMF) estimated last week, while Russia claims that it "can live forever" at \$40 oil. Although the November 30 meeting will discuss the production cut deal, OPEC and the Russia-led non-OPEC producers may not make or communicate a firm decision on extending the pact at that summit.

Last week, Russia's Energy Minister Alexander Novak said that the decision would likely come at a later stage—a delay that the market would surely be displeased with. "If we see that the market is not balancing then we'll do it. I can give you a more specific answer if you can find me any person now who can say what the market will look like in five months. If you find a person like this, I will shake his hand," Reuters quoted Novak as saying through a translator.

Maybe no one can correctly predict how the oil market will look like in March 2018, but the recent oil price rally made analysts and investors much more bullish than they were just a couple of months ago. "We think both fundamental data and an improvement in trader sentiment act as strong support for a continued test of the upside for oil prices," Paul Horsnell at Standard Chartered told the Financial Times.

Money managers had a near-record net long position in crude oil and refined products contracts as of end-October, with the net long position soaring nearly 720 million barrels since end-June to 1.022 billion barrels, just shy of the February record of 1.025 billion barrels, Reuters' John Kemp writes. The amassed long positions mean that hedge funds and other money managers expect oil prices to continue rising, but the amount of the net longs also raises the risk of a sharp correction if and when investors decide to take profits, Kemp says.

Part of the oil price movements in the next few weeks hinges on the OPEC-Russia production deal rhetoric leading up to the November 30 meeting. While it looks like Saudi Arabia continues to convey the "whatever it takes" message, its key partner in the pact—Russia—appears to be stalling, unwilling to give U.S. shale very solid reasons to boost production next year. "Russia appears to be trying to slow down the extension talk until there is more clarity on the outlook for balances and what they mean for prices in 2018," consultancy Energy Aspects told the FT. Some OPEC producers may be vying for a 'fair price' of above \$60, but \$70 oil could be a deal-breaker for Russia, a further incentive to cheat for OPEC, and an additional impetus for U.S. shale to defy skeptics.

France's Total buys Engie's LNG business for \$1.5b

Reuters, 08.11.2017



Total said on Wednesday it has acquired the upstream liquefied natural gas (LNG) interests of French power and gas utility Engie for around \$1.5 billion, in a deal which is set to make it the world's second largest player in the LNG market, with a 10 percent share.

Total said the portfolio includes liquefaction plants, notably Engie's interest in the Cameron LNG project in the United States, long-term LNG sales and purchase agreements, an LNG tanker fleet as well as access to regasification capacities in Europe.

Total's Chief Executive Patrick Pouyanne told reporters in a call that the acquisition would give it a share of the markets in Europe and Asia, where Engie had some long-term LNG contracts. "The acquisition of Engie's upstream LNG business enables Total to accelerate the implementation of its strategy to integrate along the full gas value chain, in an LNG market growing strongly at 5 percent to 6 percent per year," he said. The combination of the portfolios will allow Total to manage an overall volume of around 40 million tonnes of LNG per year by 2020, making it the second largest global player among oil majors with a worldwide market share of 10 percent, Pouyanne said, second behind rival Shell.

Total currently has a market share of about 6 percent. “With the equity stake in the Cameron LNG project, Total will also become an integrated player in the US LNG market, where the group is already a gas producer,” Pouyanne said. The \$1.5 billion value of the deal includes debts and liabilities which meant Total’s final cash payment could be lower once the transaction is completed by mid-2018, he said. Under the agreement Total could make additional payments of up to \$550 million if oil markets improve in the coming years. The companies confirmed in October that they were in talks over Engie’s LNG business. Engie, which is in a midst of a strategic restructuring that includes 15 billion euros (\$17.39 billion) of asset sales, said separately that the transaction completes its move to withdraw from oil and gas exploration and production.

Saipem, Snam sign MoU for gas infrastructure projects

CNBC, 08.11.2017



Italian energy companies Snam and Saipem signed a memorandum of understanding to evaluate cooperation opportunities in gas infrastructure projects.

The gas transport company Snam said the collaboration is aimed, amongst other things, at assessing projects, initiatives and clients of common interest in gas transportation, storage and LNG, with a specific focus in the areas of infrastructure design, engineering and construction. The two companies will also cooperate on promoting green technologies solutions and improving sustainability in the gas infrastructure sector.

“This will enable Snam and Saipem to integrate their best practices and knowledge, thus reinforcing their positioning as reference partners in the global gas market,” Snam said.

Influx of LNG seen benefiting European gas producers

Rigzone, 03.11.2017



Surging imports to Europe of liquefied natural gas (LNG) are driving down prices, but in the long run that is seen as a benefit to gas producers in the region. For years Europe has been considered the market of last resort for LNG shipments.

“The price of gas at European hubs continues to drive LNG price formation globally,” according to a global LNG analysis released at the end of October by S&P Global Platts. It noted further that competition is increasing between the two major trading hubs in Europe, the UK gas trading market, the National Balancing Point, and the Title Transfer Facility.

“Meanwhile, Europe’s LNG import infrastructure remains severely underused,” stated the S&P Global report, “bringing Europe’s traditional role as market of last resort into sharp focus. With no liquid onshore gas markets in the Asia Pacific region, the well-developed onshore gas hubs in Europe are expected to continue growing in importance as a global pricing floor and destination of last resort in an oversupplied LNG market.” In a classic economic model, high prices have stimulated supply, and the resulting low prices are expected to stimulate demand. In Europe, which is a mature industrial economy, that is primarily expected to be fuel switching for electrical power generation. And, indeed, the S&P report noted that, “European hubs have often laid the foundation above which other prices form, with market participants often citing shifts in European pricing as reasons to move bids or offers into Asia Pacific and elsewhere.”

Further, S&P found that, “the depth of the European gas market also allows it to absorb a loose cargo with little difficulty, particularly given the underutilized import infrastructure available throughout the continent. Given the challenges faced by numerous gas trading hub initiatives in Asia, this trend is set to continue, with European markets and their gas hub prices expected to remain integral to the formation of a more liquid, flexible and transparent global LNG market.”

While the influx of LNG that is underway is expected to drive down gas prices in Europe, that may be to the long-term benefit of gas producers in the region. Europe is often portrayed as an LNG destination of last resort, but importantly S&P noted, “European buyers are unlikely to go out of their way to purchase spot volumes. LNG infrastructure in Europe remains largely underutilized, with terminals across Western Europe, including Spain, seeing an average of less than one third utilization over the past few years. However, this is the result of ample pipeline gas supply from Russia and Norway in the north, as well as domestic European production – albeit falling – from the North Sea and the Netherlands.”

For power generators, security of fuel supply is paramount. And while gas imports of LNG and by pipeline from Russia tend to be the low cost options, they also come with some supply-chain risk. Domestic production is more expensive but more reliable. As independents continue their North Sea renaissance and move into on-shore unconventional development, gas from within Europe will contend with LNG and pipeline imports. It also bears mentioning that there is a ratchet effect in that power market: once coal-fired generating stations are taken out of service, they are often mothballed or dismantled, rather than merely idled. Thus switching back is limited. That has already been seen across Europe and the U.S.

Gas sector a huge spender in EU lobbying

Anadolu Agency, 04.11.2017



The natural gas industry and their allies spent over €100 million in lobbying activities in Brussels last year, according to a new report published by the Corporate Europe Observatory (CEO) this week.

The lobbyists of the gas sector contacted with over a thousand representatives and arranged hundreds of meetings with high-ranking EU decision makers, finds the Great Gas Lock-in report by Brussels based non governmental organization. A climate policy researcher with the CEO and one of the authors of the report said;

“We found that the gas industry lobby is a force to be reckoned with in Brussels that’s very successful in steering EU energy policy on its own interest,” As a result of this money flow, European Commission and member governments are embarking on a massive new gas infrastructure building program, which locks the fossil fuel use within the EU for the next 50 years, told Sabido.

He said that the lobby has been influential throughout the entire policymaking processes, as a result of very close relationships with high-ranking EU officials. Gas industry has multiple actors from different sectors, reminded Sabido and added that policy makers are meeting with all these actors who dictates the necessity of cheap gas and more pipelines through out European continent.

“You expect to get something back [after all the lobby spendings] and from the industry’s perspective they are definitely getting back.” said Sabido, reminding that EU has already spent € 1 billion on gas infrastructure projects and set apart €5 billion for various energy projects. What EU doing is committing the resources and extending the use of gas for 40-50 years to come by creating an energy model that has gas in its heart, he asserted. According to the report, the biggest gas industry spender is CEFIC, the European Chemical Industry Council with a budget of over €12m and 82 lobbyists, making it one of the most powerful voices in Brussels.

General Electric is the second in list by spending €6.5m. The US based firm provides services in the gas supply chain. Shell, ExxonMobil, BP, Statoil along with BusinessEurope, German Association for Energy and Water Management (BDEW), German Chamber of Commerce (DIHK) and ENEL are other large lobbying groups for gas industry. According to the European Commission, the EU imports 53% of all the energy it consumes, at a cost of more than €1 billion per day. Energy also makes up more than 20% of total EU imports. Specifically, the EU imports 90% of its crude oil, 66% of its natural gas, 42% of its coal and other solid fuels, and 40% of its uranium and other nuclear fuels.

EU to extend common gas rules to import pipelines

Anadolu Agency, 08.11.2017



The EU Commission proposed on Wednesday to amend the EU Gas Directive to improve the functioning of the EU internal energy market and enhance solidarity between member states.

“The aim of the amendment is to complete the existing Gas Directive and clarify that the core principles of EU energy legislation (third-party access, tariff regulation, ownership unbundling and transparency) will apply to all gas pipelines to and from third countries up to the border of the EU’s jurisdiction,” it said. The Commission said the amendment would ensure all pipelines entering the EU would comply.

It added that it would also contribute to meeting the goals of the EU gas market, which includes increasing competition between gas suppliers while providing a boost to energy security in the EU. “Ensuring that all major pipelines wholly or partly located in EU territory are operated efficiently under a regime of transparent regulatory oversight will diminish conflicts of interests between infrastructure operators and gas suppliers, and guarantee non-discriminatory tariff setting,” it said.

The Commission also proposed to allow member countries to be able to grant existing cross-border pipelines certain derogations from the application of the Directive on a “case-by-case basis.” Once the European Parliament and European Council adopt the amendment, it will become law, according to the statement. The EU’s dependency on imported natural gas has been growing, the statement read. “This trend is likely to continue due to falling domestic gas production while being only partly offset by falling gas demand due to energy efficiency and decarbonization policies.”

Six FLNG projects, four financing models

LNG World Shipping, 06.11.2017



If all things go to plan for the sponsors of the Fortuna project in Equatorial Guinea, by year-end a sixth floating liquefaction project should have completed its fundraising, writes Melanie Lovatt.

Fortuna LNG should be the second floating LNG (FLNG) venture to reach a final investment decision this year, following Eni's Mozambique FLNG project Coral South FLNG, approved in June. These projects, and the four that have so far completed their funding, reveal the diverse financing models supporting this nascent sector.

Malaysia's Petronas shipped the first cargo from 1.2 million tonnes a year PFLNG Satu in April, having financed its unit from its own resources. Shell took the same route, using its balance sheet to finance Prelude FLNG, the largest floating offshore structure ever built. Prelude, which weighs 600,000 tonnes with its tanks full, reached northwest Australia in July. Golar LNG attracted US\$960M worth of funding in July 2015 for the 126,200 m³ Hilli Episeyo from China's CSSC (Hong Kong) Shipping Co. CSSC provided the funds in a sale and leaseback structure. It cost some US\$1.2Bn to convert 42-year-old LNG carrier Hilli into an FLNG unit at Singapore's Keppel yard. Hilli Episeyo left Singapore, destination Cameroon, in October.

With Fortuna LNG, financing for the converted Golar LNG carrier Gandria will also come from a China-backed sale and leaseback structure. The project costs some US\$2.1Bn, with about US\$1.2Bn to be debt financed. The vessel is estimated to cost US\$1.5Bn, with the upstream costs making up the remainder. Gandria costs more than Hilli Episeyo, being equipped for harsher conditions, in a more open marine environment. Increasingly, LNG shipowners have turned to Chinese funding, securing sale and leaseback structures to finance LNG carriers, floating storage and regasification units and FLNG units.

Exmar's newbuild 500,000 tonnes a year Caribbean FLNG unit cost US\$300M. The Belgian company took the classic route, securing funds from banks and an export credit agency (ECA). It has received US\$200M from Bank of China, China's ECA Sinosure and Deutsche Bank. This vessel has yet to be fixed. Finally, the 3.4 mta Coral South project, valued at US\$8Bn, has taken a financing route common for large-scale projects. Using a project finance structure, it received debt funding in May of US\$4.7Bn from international banks and ECAs.

Project finance structures are common in liquefaction projects that cost billions of dollars. However, Coral South is the first FLNG project to use this structure. Financing for future FLNG projects will reflect the size of the project and the type of sponsor. Gas majors are likely to turn to classic project finance, like Eni, or to use their balance sheets, like Petronas and Shell. Everything depends on; the strength of a company's balance sheet and whether it has partners, the location of the project, company preference.

Projects using a vessel leased from a shipping company could continue to secure finance via sale and leaseback structures from Chinese providers, which often provide higher leverage than commercial banks and ECAs. The financing could apply to the vessel only, as with Hilli, or to the vessel and other parts of the project, as with Gandria, where part of the upstream is being financed. We will have to wait and see whether tried and tested patterns emerge, or whether the next generation of FLNG projects embraces new funding methods. And, of course, as with land-based projects, difficult market conditions have led to many FLNG projects delaying their final investment decisions.

Tanzania, Ugandan leaders to commission construction of oil pipeline

XinHua, 05.11.2017



Tanzanian President Joseph Magufuli is scheduled to travel to Uganda where he will together with his Ugandan counterpart Yoweri Museveni lay a foundation stone for the construction of an oil pipeline.

Magufuli will travel to Uganda's oil wells in Hoima on Nov. 11 to lay the stone for the construction of the pipeline that will be linked to the Tanzania seaport of Tanga. The two leaders in August this year laid a foundation stone on the Tanzanian side. The pipeline dubbed the East African Crude Oil Pipeline will be the longest heated pipeline in the world, scaling a distance of 1,445 km.

According to Uganda government figures, the construction will cost over 3.5 billion U.S. dollars and is expected to be completed in 2020. The pipeline works will be undertaken by France's Total, China National Offshore Oil Corporation and Britain's Tullow Oil. These three oil companies are already involved in oil exploration in Uganda.

The pipeline will on completion carry 216,000 barrels of crude oil for export per day. Uganda has so far discovered over 1.5 billion barrels of commercially viable oil. Some of the oil will be refined in the oil fields while the crude will be transported to the coast, according to Uganda government plans. Also while in Uganda, the Tanzanian leader will together with Museveni commission a One Stop Border Post at Mutukula, lay a cross-border mark-stone at Luzinga Village for the East African Crude Oil Pipeline.

Uganda National Oil Company takes over Jinja terminal

New Vision, 04.11.2017



The Jinja Storage Terminal has got a new lease of life following the Government handing it over to the new government entity called the Uganda National Oil Company (UNOC). The terminal which can hold 30 million litres of petroleum products including petrol, jet fuel, kerosene and gas has been underused for the last 20 years.

It was set up in the 1970s to curb fuel shortages. John Bosco Habumugisha said UNOC has the mandate to develop and operate storage terminals and other petroleum infrastructure in Uganda.

This was during a function held at the terminal site in Jinja over the weekend. Habumugisha said UNOC pursues commercial interest on behalf of government in the petroleum sector and holds state participating interests in oil exploration and production activities. He explained that at the end of May, One Petroleum Limited was selected as a strategic partner to form a joint venture with UNOC to operate the Jinja terminal on a five year basis. He said through the venture they have filled the tanks with 13 million litres which they will sell to local dealers. He further said the partnership played a role during the Kenyan elections, because 8 million litres of petroleum products which ensured stability in prices in Uganda despite prices rising in Kenya.

“To address the security of petroleum supply we continuously we need additional funding and holding strategic engagements with various stakeholders,” Habumugisha said. At the end of May, the energy ministry decided to hand over the facility to UNOC. UNOC then entered into a joint venture with Kenyan based company; One Petroleum Limited to operate the facility. Frank Nagimesi, acting chairperson of the board UNOC said it had been costly for the Government to run the facility.

“The Government was required to procure petroleum products to be held as a national reserve in these tanks. The cost of filling these tanks, and ensuring security of these facilities required significant budgets,” he said. “The facility has only been filled a few times in the past. Thereafter, the Government has been managing it with private players, amidst significant financing and operational challenges,” Nagimesi added.

South Sudan agrees to pay Sudan \$262M oil debt

Anadolu Agency, 07.11.2017



South Sudan's government has agreed to pay \$262 million it owes for the transfer of oil through Sudan, according to South Sudan media reports.

Most of South Sudan's oil revenues come from oil earnings. The civil war and falling global oil price have threatened to cripple the country, bringing civil service salaries and security to a standstill for seven months. "It was agreed that the government of South Sudan should pay off the outstanding arrears which were not paid," said Michael Makuei.

According to South Sudan's Finance Ministry, arrears owed to its northern neighbor are estimated at \$3.2 billion U.S. dollars, of which \$262 million will be provided through in-kind shipments. South Sudan is a landlocked country. It uses a Sudanese pipeline to transfer its oil to global markets in an agreement with the government of Sudan.

Under the terms of the 2012 deal, South Sudan was to pay \$9.10 per barrel to transport oil through two pipelines passing through Sudan alongside a \$3.2 billion dollar package to compensate for the loss of most oil reserves to the north. Meeting this week in Sudan's capital Khartoum, South Sudanese President Salva Kiir and his Sudanese counterpart Omar al-Bashir agreed to speed up implementation of a 2012 cooperation agreement dealing with issues of security, trade and oil.

China Energy Investment signs MOU for \$83.7B in West Virginia projects

Reuters, 09.11.2017



China Energy Investment Corp, the world's largest power company by asset value, has signed a memorandum of understanding (MOU) to invest \$83.7 billion in shale gas, power and chemical projects in West Virginia, the U.S state said.

The agreement was the biggest among a slew of deals signed during U.S. President Donald Trump's state visit to Beijing. The total value of the deals done during Trump's trip could be as much as \$250 billion. The gas and power agreement marks the first overseas investment for newly founded China Energy

It was formed from a merger of China Shenhua Group, the country's largest coal producer and China Guodian Corp, one of its top five utilities. Beijing is supporting and encouraging its power companies to expand globally, and the agreement underscores China Energy's ambition to diversify into natural gas and the refining sector. The touted investment would extend over a 20-year period, covering projects for power generation, chemical manufacturing and the underground storage of liquefied natural gas (LNG), West Virginia's Department of Commerce said in its announcement.

The deals will likely help create jobs in West Virginia and lift its economy. West Virginia's gross domestic product declined 0.9 percent in 2016, reversing growth seen in 2015, according to the Bureau of Economic Analysis at the U.S. Department of Commerce. "From driving growth and creating jobs to maximizing America's energy potential, the benefits for West Virginia and the country from this new investment will be significant," said U.S. Senator Shelley Moore Capito, West Virginia, according to the statement from the state's Department of Commerce. With an estimated 326,00 staff, China Energy has a workforce almost four times bigger than the entire U.S. coal-fired power industry for 2016. The Chinese energy conglomerate has an installed capacity that tops 225 gigawatts, eclipsing major international rivals EDF and Enel. China Shenhua Energy jumped 7.4 percent on the announcement to close at 22.05 yuan per share on Thursday.

U.S. Midwest oil refiners boost output, cut region's dependence on Gulf Coast

Reuters, 02.11.2017



U.S. refineries from Ohio to Minnesota are capitalizing on access to cheap crude from Western Canada and North Dakota oilfields, helping their region break a historic dependence on fuel from the Gulf Coast while redrawing oil trade maps.

Since the early 2000s, crude and fuel flows from the Gulf Coast into the U.S. heartland have been cut in half, as crude coming from Canada and North Dakota has pushed U.S. Midwest refining activity to record levels. In 2016, Midwest refining capacity rose to 3.9 million barrels per day (bpd) of crude, the highest annual volume on record.

Midwest refiners such as Marathon Petroleum Corp, Phillips 66, BP PLC and Husky Energy have invested billions of dollars on new units capable of turning sludgy crude from Canada into gasoline and diesel. Investments in the Dakota Access Pipeline and other avenues have helped bring in shale oil from North Dakota. "Ten years ago, we were 1 million barrels per day short on products, with the Gulf Coast supplying the product. Today, the midcontinent is flush with products," Marathon Petroleum Chief Executive Gary Heminger said in a recent Reuters interview at the company's Findlay, Ohio, headquarters.

Yet analysts warned that weakening U.S. gasoline demand will make it challenging for Midwest refiners to sell their growing output. The Midwest is land-locked, making it hard to get products to new markets, especially as rival refiners defend their turf. Philadelphia area refiners are currently fighting efforts to reverse a pipeline so Midwest companies can move fuel to western Pennsylvania. For years, Gulf refiners with access to cheaper crudes could underprice their Midwest rivals in Chicago, Indianapolis and other cities in the region. Traders made easy money sending gasoline north in the summer. Now, Midwest plants can compete more effectively thanks to booming production in western Canada and North Dakota of crude that routinely sells at a discount against the U.S. benchmark price.

"The Midwest is well positioned to supply its region and parts of southern Canada, and will even have excess supplies to send to the East Coast. It's in a good spot," said Mark Routt, chief economist at KBC Advanced Technologies. At the turn of the century, the Midwest received 3.4 million bpd of crude and refined products from the Gulf. In 2016, that figure was halved. Chicago gasoline peaked at a premium of 14 cents a gallon versus the future contract this summer, much less than the summer premiums of nearly 40 cents in 2014 and 2015.



“The trade was as slow as I’ve ever seen it,” said one scheduler who sends barrels along the line. Hurricane Harvey knocked out half of the Gulf’s capacity, while Midwest refiners processed a record 4.06 million barrels per day (bpd) of crude oil in late August and early September, 12 percent more than the 2016 average. The Rockies, which includes Bakken oil fields, sent 550,000 bpd to the Midwest last year. That is triple the volumes seen in 2010 before Dakota Access opened. Phillips 66 and Marathon Petroleum are minority partners in the line, which opened in 2017 and can pump as much as 525,000 bpd. Canada has sent an average of 2.1 million bpd of crude through June of this year, more than triple the rate from two decades ago, according to EIA data.

Midwest refiners invested billions of dollars to handle the heavier Canadian crude. For instance, Marathon and BP spent over \$6 billion to install new coking units to handle the heaviest parts of the Canadian oil. Marathon’s 144,000 bpd Detroit refinery nearly tripled its usage of Canadian crude last year, hitting a record high of 137,400 bpd, EIA data showed. BP’s 430,000 bpd Whiting, Indiana, refinery can now process up to 85 percent heavy crude, up from 20 percent before the upgrades.

But analysts predict that ebbing U.S. gasoline demand will eventually force Midwestern refiners to find other markets, including exports. To facilitate this, some pipelines that used to carry product to the Midwest have already been reversed. But Philadelphia-area refiners are pressuring state regulators to reject reversal of a pipeline that would bring Midwest fuel to the Pittsburgh area.

The owners of the 1.2 million bpd Capline Pipeline, the nation’s largest crude pipeline by volume, will soon gauge shipper interest in reversing that line, which currently runs from Louisiana to Illinois. The line is owned by Marathon, BP and Plains All American, and the group said reversal would not come until 2022. Shippers abandoned the line in recent years due to the waning financial incentive to move barrels north. But BP, which has an ownership interest in the pipeline, has slowed the reversal over concerns that it could erode the discount on Canadian oil enjoyed by its Whiting refinery. BP did not respond to questions about that pipeline.

Analysts expect regional market-share battles to intensify. The Midwest will go from being short roughly 500,000 bpd of gasoline this year to a surplus of roughly 200,000 bpd by 2030, according to Wood Mackenzie refinery analyst Andrew Shepard. A gasoline supply glut would pressure prices and weaken profit margins for refiners, Shepard said. Eventually, Midwest refiners will have to close plants if they cannot access new markets.

This could supercharge the U.S. oil exports boom

Oil & Price, 07.11.2017



All the oil headlines this week are rightly focused on prices spiking to the highest levels in more than two and a half years. But Brent moved up to nearly a \$7-per-barrel premium over WTI, a spread that is also at a multiyear high.

The wide differential could supercharge crude oil exports from the U.S., which have already recently broken all-time highs. Before the U.S. lifted the crude oil export ban at the end of 2015, WTI often traded at a significant discount to Brent. Much of that had to do with surplus supply trapped within the continent, as well as a shortage of pipeline capacity in certain areas of the U.S.

That spread just about disappeared over the course of 2015 and 2016, with the two benchmarks moving nearly in lock step. However, at the end of August 2017, Hurricane Harvey blew open the WTI-Brent spread once again, and the two benchmarks diverged. The renewed discount for WTI was the symptom of the massive refinery outages along the U.S. Gulf Coast, which led to a buildup in crude stocks as fewer refineries purchased oil for processing. The pricing differences are not expected to last forever, but for the time being, the spread between the two top oil benchmarks has remained open, even as most of the Gulf Coast refineries are back at full capacity. The result has been a surge in U.S. crude oil exports. Refiners from around the world – with China a particularly keen buyer – have scrambled to book shipments from the U.S. Gulf Coast. U.S. crude exports have spiked, jumping from around half a million barrels per day in 2016 and about 1 mb/d for much of 2017, to over 2 mb/d at the end of October, an all-time high.

The flood of crude from U.S. shores has drastically cut into the net import total. Although crude net imports fluctuate quite a bit from week to week, they have largely stayed within a range of 6.5-7.5 mb/d for years. But over the past few weeks that total has plunged, dipping to 5.4 mb/d in the last week of October. It is unclear if this situation will last. But if the WTI-Brent spread were to open up wide enough, it would start to alter trade flows even within the United States. Back when WTI traded as much as \$10 or \$20 per barrel less than Brent (prior to 2015), huge volumes of crude were put on the nation's railways, making their way around the country to different refineries. That was because refineries along the U.S. East Coast typically imported oil from abroad, but suddenly found crude from North Dakota, for example, cheaper than from West Africa (the result of the wide WTI-Brent spread).

Even after accounting for the significantly higher transport cost, crude-by-rail became a competing option to imports. East Coast refineries went from sourcing virtually none of their crude purchases from domestic sources, to buying about half from U.S. producers in 2014-2015. In January 2014, East Coast refineries bought the same amount of oil from domestic source as they did from foreign ones, the first time that has occurred. However, once the WTI-Brent spread disappeared (again, when the crude oil export ban was lifted), East Coast refineries could no longer justify buying crude from North Dakota. They went back to buying oil from abroad. As of July 2017, East Coast refineries bought just 101,000 bpd from domestic suppliers.

That begs the question: will the renewed discount for WTI relative to Brent spark a renaissance in crude-by-rail shipments? Will East Coast refineries eschew foreign oil and once again buy domestically? The EIA says probably not. "The recent price spread, which has averaged \$6/b in September and October, has not grown large enough—and is not expected to last long enough," the EIA wrote in a recent data release. Moreover, East Coast refiners now have to compete with the rest of the world in purchasing U.S. crude. They may be technically closer to the drill site, but much of the oil will be flowing from Texas shale fields to the Gulf Coast. Once it hits the open sea, the East Coast doesn't have much of an advantage over foreign buyers.

Moreover, East Coast refiners have to buy shipments that are compliant with the Jones Act (i.e., the oil must travel on American ships), which adds to their cost. In short, East Coast refiners will likely stick with importing oil from abroad – these days it is increasingly coming from Iraq, for example. While rising shale supply won't supplant oil imports for the East Coast, it will increasingly flow abroad as other countries buy discounted American crude. The longevity of this situation depends entirely upon the WTI discount relative to Brent, which, for now, is sticking around.

US oil rig count falls by eight this week

Anadolu Agency, 04.11.2017



Number of oil rigs in the U.S. decreased this week, according to Baker Hughes data on Friday. Eight oil rigs were taken offline in the American oil industry during the Oct. 30-Nov. 3 period, the oil field services company's data showed.

This brought down the total number of oil rigs in the country to 729. With that result, the oil rig count in the U.S. decreased seven times in the past nine weeks. Number of rigs in the country provides an indication of the oil sector's well-being in the country, and signals possible short-term production cuts and increases. Crude oil production in the U.S continued to increase last week, according to the U.S.' EIA.

Oil output rose by 46,000 barrels per day (bpd) to 9.55 million bpd for the week ending Oct. 27, the EIA data showed. The U.S.' crude oil exports also climbed to 2.13 million bpd during that period -- the highest level in the country's history.

Brent crude oil price over \$62 per barrel

Anadolu Agency, 06.10.2017



International benchmark Brent crude oil price increased by 0.50 percent reached \$62.38 per barrel at 07.01 GMT on Monday. American benchmark West Texas Intermediate traded at \$55.83 per barrel with a 0.34 percent increase at 07.01 GMT.

The sudden jump in crude prices came after a decline in the number of oil rigs in the U.S., which is an indication of the well-being of the country's oil industry. After corruption arrests of dozens of high-profile figures in Saudi Arabia over the weekend.

The oil price was helped to sustain at its highest level since July 2015. A total of eight oil rigs were taken offline last week in the U.S., oilfield Services Company Baker Hughes announced earlier. Oil prices are on the rise since last week as the production cut agreement between OPEC and non-OPEC countries remains in focus.

Oil price surge is temporary: Experts

Anadolu Agency, 04.11.2017



Although an extension of OPEC's production cut to the end of 2018 is expected, the recent oil price surge is not anticipated to last long, experts told Anadolu Agency on Saturday.

Oil prices hit their highest in more than two years on Wednesday with prices reaching as much as \$61.68 per barrel. This trend raised questions as to whether such price levels are here to stay in the upcoming months and in 2018. Alan Gelder, vice president of Refining, Chemicals & Oil Markets at Wood Mackenzie, told Anadolu Agency the reasons behind this upward trend.

"One of the key drivers was with OPEC cutting its production so the pace of oil supply has slowed. Global oil demand is also quite strong, so we think oil supply and demand is in good balance," Gelder said. The recent developments in Iraq, with the Kurdish Regional Government's (KRG) independence referendum, which heightened tensions between the semi-autonomous KRG and the central government in Baghdad and led to restricted oil supplies from the northern region, provided a boost to oil prices.



Gelder affirmed the oil price surge is not here to stay. “The oil market is typically highest at this time of the year, the final quarter. Then oil demand usually falls in the first quarter because in the northern hemisphere there are fewer people driving. We think the market is currently in balance.” Expanding on this, he said that surplus supplies would return in the first half of next year because demand typically falls. “We have strong supply growth from the U.S. and we expect prices to be a little bit lower in 2018 from 2017,” he said.

Gelder expects that OPEC’s production cut will be extended beyond the deadline of March 2018 until at least the end of next year, but argued that this extension will not lead to prices over \$60 per barrel. “We do not think that the market is going to go much higher. From the [OPEC] announcement in November, we expect the cuts to be extended. But we do not think that it will drive higher prices to be very much or very long. In 2018, we expect lots of supply to come from the U.S. so that will push prices lower,” he said.

In response to how the U.S. shale industry will impact the oil price surge, Gelder said the comeback would be very strong with the possibility of U.S. production to increase by a million barrels per day. Torbjorn Kjus, chief oil analyst at DNB Bank in Norway, contended that the oil price narrative has changed from the first half of 2017 to the second half of 2017.

He asserted that in the first half of the year, the narrative that was repeated by many commentators and analysts in the media was that OPEC cuts were not working because U.S. shale oil growth would merely offset the cuts and prevent oil inventories from drawing down. However, he said that “what people forgot was that demand growth is strong this year and the seasonality in demand always means that global oil stock draws were supposed to be visible in the second half of the year and not the first.” He explained that many financial players became impatient and sold paper oil, particularly in the second quarter as Brent fell to \$45 per barrel.

“The market is now realizing that OPEC actually meant what they said about bringing inventories down toward the five-year average levels as we have seen large global oil stock draws in the third quarter,” he said. Official statistics from the International Energy Agency, Energy Information Administration, and the Joint Organizations Data Initiative bear testament to this draw down, Kjus said. The other positive effect of lower inventories is with the market becoming more willing to price in a geopolitical risk premium, he added.

“The Kurdish/Iraq stand-off has hence been supportive for oil prices recently. Unplanned outages in the Kashagan field in Kazakhstan have also been helpful for the oil market,” he noted. He said in the short term, the Brent market is vulnerable to profit taking since the market is currently technically over bought. “At the same time financial players - hedge funds and paper traders - hold record net long positions in Brent contracts making it possible that profit taking could kick in if a relevant catalyst materializes,” he said, explaining that such a catalyst could be with OPEC not extending the oil cut deal at the upcoming meeting on Nov. 30. “Most of the market currently seems to expect an extension of the deal and OPEC now needs to manage that expectation,” he concluded.

Oil price range to be between \$40-60 per barrel. Denton Cinquegrana, chief oil analyst at Oil Price Information Service, an IHS Markit company, highlighted that tightening supplies act as a driver for higher oil prices. “In the U.S., for example, the surplus in total crude oil inventories compared to the five-year average is narrowing. OPEC has been compliant with its production cuts earlier in the year, while the group said it would continue to keep cuts through March 2018,” he said, adding that nevertheless, there is a growing belief that these cuts will be kept until the end of 2018. Cinquegrana argued that the oil price range will be on average between \$40 and \$60 per barrel in the upcoming period, but prices will be slightly higher on average for 2018. “In the first half of the year, we expect supply to exceed demand, and in the second half, demand to exceed supply,” he concluded.

Global natural gas demand to rise 3.6% by 2040

Anadolu Agency, 07.11.2017



Natural gas will contribute most to future energy demand growth, of which the share in the global energy mix will increase by 3.6 percent by 2040, according to OPEC’s World Oil Outlook 2040 published on Tuesday.

OPEC released its World Oil Outlook for 2040, which underlined that since the publication of the World Oil Outlook 2016 in November last year, the market has experienced “significant changes” that have had an impact on medium- and long-term estimates. The report foresaw that by 2040 the largest contribution to future energy demand is projected to come from natural gas on a global level.

“In absolute terms, demand for gas will increase by almost 34 million barrels of oil equivalent per day (mboe/d), reaching a level of 93 mboe/d by 2040,” the report said. OPEC underlined that strong population growth in most developing countries, combined with robust economic development, will lead to demand growth for gas in all the relevant sectors including power generation, industry, as well as the residential and commercial sectors. The increasing availability of gas on the global market due to the expansion of liquefied natural gas (LNG) production is also set to contribute to the high growth rates for this energy source, the report noted.

Global energy demand to rise 35% by 2040. The report also showed that global energy demand is set to increase by 35 percent over the period 2015–2040, driven by expansion in developing countries. The total primary energy demand is forecast to increase by 96 mboe/d between 2015 and 2040, rising from 276 mboe/d to 372 mboe/d. “In relative terms, this represents a 35 percent increase compared to the base year of 2015, with an average annual growth rate of 1.2 percent during the forecast period,” the report underlined.



The report stressed that this significant global energy demand growth would, however, be unequally distributed among major regions and country groupings. Energy demand in developing countries is expected to grow at an average rate of 1.9 percent per annum over the period 2015–2040. This is in sharp contrast to an average growth rate of 0.1 percent per annum projected for the OECD and 0.9 percent per annum for Eurasia.

India, China to lead energy demand. Within the grouping of developing countries, India and China are the two nations with the largest additional energy demand over the forecast period, both in the range of 22–23 mboe/d, the report said. Recent projections show that for the first time India will be the single largest contributor to future energy demand followed by China and other countries. OPEC explained that the change in the leading position is primarily the result of the downward revisions made for China rather than a more positive outlook for India.

Renewables to record fastest growth rate. The OPEC report also projected that renewables will record the fastest growth rate, but oil and gas are still expected to supply more than half of global energy needs by 2040, consisting mainly of wind, solar and geothermal energy. Renewable energy is estimated to have an average annual growth rate of 6.8 percent over the forecast period, OPEC noted, adding that its share is anticipated to increase by 4 percentage points by 2040. However, given that its current base in the global energy demand mix is rather low, at about 1.4 percent, the share of renewables is still forecast to be below 5.5 percent by 2040, despite its impressive growth, the report said.

The organization's report asserted oil and coal would grow at much lower rates of 0.6 percent and 0.4 percent per annum, respectively. Despite these relatively low rates, fossil fuels are to retain a dominant role in the global energy mix, although with a declining overall share. "Indeed, the share of fossil fuels in the global energy mix stood at 81 percent in 2015. This is set to decline to below 80 percent by 2020 and then drop further to under 78 percent by 2030. It is estimated to reach 74 percent by 2040. It should be noted, however, that oil and gas together are still expected to provide more than half of the world's energy needs over the forecast period, with their combined share relatively stable between 52–53 percent," the report argued.

Will the third great energy revolution end the oil & gas industry?

Oil & Price, 03.10.2017



The history of crude oil and natural gas is a history of technological innovation. Until recently the innovation supported crude oil and natural gas. Now, it challenges it, causing structural changes in the crude oil and natural gas markets.

Originally, crude oil was only used for lighting. This changed following the invention of the internal combustion engine, which outperformed steam engine in power, range and ease of operation and maintenance, and the invention of the conveyor belt, which made it possible to mass-produce the internal combustion engine.

Not much later, crude oil became the transportation fuel of choice. The horse drawn carriage was replaced by the car; the locomotive by the diesel train; the steamship by the motor vessel; and the zeppelin by the airplane. For a long time, natural gas was an unwanted by-product from crude oil production, and typically burned off (flared) at the production site. That was until, again, technological innovation made utilization of the benefits in natural gas possible. Improvements in pipeline technology made it possible to use natural gas as a feedstock for the chemicals industry, and as fuel for home heating, cooking and power generation. Later on, LNG technology improvements greatly expanded the market for natural gas and made it truly global.

Technological innovation was therefore not only behind the first great energy revolution—from wood to coal—during the Industrial Revolution of the 18th and 19th century, but also behind the second great energy revolution—from coal to crude oil and natural gas—during the first half of the 20th century. Now, in 2017, crude oil and natural gas, the great beneficiaries of earlier technological innovation, find themselves challenged because of continued technological innovation. Innovation in (battery) technology has made the electric drivetrain a serious competitor for the internal combustion engine, leaving crude oil challenged by electricity while at the same time that natural gas is being challenged by solar and wind in electricity generation.

This has led some to predict the imminent demise of the oil and gas industry. But is this the correct conclusion? We must remember that both crude oil and natural gas are not solely used for transportation (crude oil) and electricity generation (natural gas). And some of the drivers of crude oil demand, such as heavy duty hauling and aviation, will remain unaffected by the electrification of transportation trend. The same goes for natural gas, which will remain the main source of chemicals and energy for the heavy-duty industries such as steel, aluminum, cement and paper.



Even if the current expectations around technological innovation materialize, it will still take time before crude oil is comprehensively outperformed by electricity in transportation and natural gas by solar and wind in electricity generation. Along with battery innovation, the electrification of transport also requires the development of recharging infrastructure. In areas where most houses have garages this is less of an issue, as their electric cars could be charged overnight at home. And since overnight charging means charging during off-peak hours, this wouldn't be an immediate issue for most existing power grids. In areas with many homes without garages, however, a publically accessible charging network will need to be established. The most sensible solution for such areas is to equip public parking and office parking spaces with chargers (a fantastic business opportunity for utility companies!), but this requires collaboration between city planners, real estate developers and entrepreneurs, all of whom, barring a few exceptions, have only just begun thinking through the implications of electric transportation. Thus, it will most likely take years—possibly even decades—for many areas around the world to become truly supportive of the electric transportation trend.

The shift from coal- and gas-powered electricity generation to wind and solar faces similar practical hurdles in many parts of the world. In wealthier countries, funds will be available to finance a relatively fast transition, which will include early retirement of coal and gas plants. In countries where the grid is immature and investment is necessary, this investment can quite easily be directed toward solar and wind and away from coal and gas, leading such countries to skip the coal and gas age and move straight into the renewables era. Countries with existing coal- and/or gas-based electricity grids—whether poor or faced with competing priorities (growth or sustainability?)—will be more inclined to leverage the existing infrastructure as long as possible, however, ensuring continuation of at least part of current natural gas demand for electricity generation for a long time to come.

So even under the most optimistic forecasts for technological innovation, usage of—and thus, demand—for crude oil and natural gas will likely remain well into the future, but could soon reach a peak. That doesn't mean that the oil and gas industry will stay the same and has nothing to worry about. The mentioned technological trends will definitely create a completely different market dynamic. Managing profitability and growth in a flatlining or even shrinking market is completely different from managing them in a growing market, after all. Natural decline will demand continued investment in crude oil and natural gas resources to be able to continue to meet demand, under both kinds of market conditions. However, in a growing market natural decline is a much bigger challenge than in a flatlining or shrinking market, as in the former more than the natural decline will have to be added to production, while in the latter less will already suffice.

In a flatlining or shrinking market for crude oil and natural gas, oversupply will therefore be a continuous threat, making the kind of pressure on the price that the oil and gas industry has experienced over the last few years a permanent reality—think “lower forever” instead of “lower for longer”. In this environment, competitive advantage is in the lowest cost resources and operations. In the former, the NOCs have the edge over the IOCs; in the latter, however, most NOCs remain outperformed by their international counterparts.



Also, in a flatlining or shrinking market, growth can only be achieved through consolidation. Only the very best performing IOCs will be granted access to the resources of the not-so-well performing NOCs, while the IOCs with anything less than stellar performance will exit the market, as the low-price environment will push many NOCs to upgrade their own capabilities to ensure continued profitability. This exit from the market by the IOCs with less than stellar performance will either be through bankruptcy or diversification into a new market with continued growth potential. Thus, there can be no doubt that diversification is now an urgent must for all IOCs to ensure long term growth and hedge against the risk of eventual obsolescence.



Announcements & Reports

Completion Design Changes and the Impact on US Shale Well Productivity

Source : OIES

Weblink : <https://www.oxfordenergy.org/publications/completion-design-changes-impact-us-shale-well-productivity/>

Natural Gas Weekly Update

Source : EIA

Weblink : <http://www.eia.gov/naturalgas/weekly/>

This Week in Petroleum

Source : EIA

Weblink : <http://www.eia.gov/petroleum/weekly/>

Upcoming Events

7th Iraq Oil & Gas Conference

Date : 28 – 30 November 2017

Place : Basrah, Iraq

Website : <http://www.basraoilgas.com/Conference/>

International Conference on Energy Engineering & Oil Reserves

Date : 05 December 2017

Place : Hong Kong

Website : <https://www.waset.org/conference/2017/12/hong-kong/ICEEOR/home>

Iraq Oil & Gas Show

Date : 05 December 2017

Place : Basrah, Iraq

Website : <http://basraoilgas.com/>



European Gas Conference 2018

Date : 29 January 2018
Place : Vienna, Austria
Website : <https://www.europeangas-conference.com/>

Egypt Petroleum Show

Date : 12 February 2018
Place : Cairo, Egypt
Website : <http://www.egypt.com/>

North Africa Petroleum Exhibition & Conference

Date : 03 March 2018
Place : Oran, Algeria
Website : www.napec-dz.com/NewDefault.aspx?lg=en

Kuwait Oil & Gas Summit

Date : 16 April 2018
Place : Kuwait City
Website : www.cwckuwait.com/

International Conference on Petroleum & Petrochemical Economics

Date : 26 April 2018
Place : Istanbul, Turkey
Website : www.waset.org/conference/2018/04/istanbul/ICPPE