

Australia, a Top Natural-Gas Exporter, Considers Imports to Stop Blackouts



By
Rhiannon Hoyle in Sydney and
Robb M. Stewart in Melbourne
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Australia is experiencing an energy crisis so severe that the country, one of the world's biggest exporters of liquefied natural gas, is considering imports to shore up supplies for manufacturers and avoid possible blackouts. The country's commitments to sell LNG overseas as well as the shuttering of aging coal-fired plants have made it a struggle for electricity producers at times of peak demand. Some of Australia's manufacturers have threatened to move production overseas to escape a costly and unreliable energy supply. Sydney, Melbourne and other cities on the country's eastern

coast have experienced occasional blackouts, hitting everything from health clinics to schools. Analysts predict a widening shortfall of LNG, raising concern manufacturers won't have enough power to run food-processing factories or chemical plants. While Australia is rich in natural gas, it lacks a nationwide network of pipelines to supply users at affordable rates. The fuel is super-chilled into LNG for shipment around the country and abroad. Australia is projected to export 80.73 million metric tons of LNG this year, compared with 70.23 million metric tons in 2018, according to the research firm Wood Mackenzie. The electricity blackouts occurred as Australians endured a scorching Southern Hemisphere summer, with heat waves across the country that were unprecedented in scale and duration. On a couple of days in January, the temperature in Sydney reached 108 degrees Fahrenheit. This year, the country recorded its warmest January-through-May period ever, according to the Bureau of Meteorology. Electricity use for cooling spikes with such temperatures, but it isn't only in summer that demand for LNG can outpace supply. In the southern city of Melbourne, gas supplies are at their tightest in the winter when demand for heating kicks in.



The Australian Industrial Energy consortium plans to lease this floating storage and re-gasification vessel to process natural gas imports. PHOTO: SQUADRON ENERGY

Climate change became a central issue in Australia's latest election campaign following a summer of wildfires, drought, floods and extreme temperatures. Voter support for policies targeting climate change was at its highest level since 2007, though it wasn't enough to save Australia's center-left party, which put the issue at the heart of its campaign. It was defeated by the incumbent conservative government in the May election on fears ambitious environmental targets would boost the cost of living and hurt the country's coal industry. Several state governments have restricted gas developments due to environmental concerns. Proposals to prevent energy shortages involve supplying regions in need with LNG from elsewhere in the country and even from overseas. Those looking to import LNG include a billionaire entrepreneur who made his fortune shipping iron ore to China, U.S. energy giant Exxon Mobil Corp. and Australia's biggest power retailer, AGL Energy Ltd. They are planning to use vessels to store LNG, before heating it to supply customers directly or through local gas-transmission networks. Their goal is to offer a stable supply of fuel that can help prevent blackouts. Andrew Forrest, the billionaire who in a decade built Fortescue Metals Group Ltd. from a tiny natural-resources explorer into the world's No. 4 iron-ore exporter, has said that a floating import terminal costs a fraction of what would be required to connect eastern Australia with offshore gas fields in the western part of the country via a pipeline.

World Beater Australia is set to become the world's top producer of liquefied natural gas after a decade-long \$200 billion investment spree. Global liquefied natural gas supply .million metric tons a year Australia Rest of world 2011'12'13'14'15'16'17'18 0100200300 Average natural gas price for industrial and commercial users in Australia* .Australian dollars a gigajoule 2016'17'18 6789\$10 LNG netback price in Australia † Sources: Wood Mackenzie (supply), Australian Competition and Consumer Commission (industrial price and netback price)* Under long term contracts

in Australia's eastern-coast market.†Netback is a benchmark export-parity price.Note: A\$1 = US\$0.70

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Australian Industrial Energy, a consortium of domestic and foreign companies that counts Mr. Forrest's Squadron Energy as its biggest investor, recently received government approval for an import terminal in Port Kembla, an industrial hub south of Sydney. The consortium, which includes several Japanese investors, has arranged to lease a storage vessel almost 1,000 feet in length. It plans to spend as much as 250 million Australian dollars (\$174 million) on infrastructure to berth the unit and connect it with a gas-transmission network on the eastern coast. The plan is one of five proposals for storage and re-gasification vessels across southeastern Australia.

Some local commentators mock the push for imports, given that Australia is on track to overtake Qatar as the world's top exporter of LNG by volume this year following a decadelong investment boom. One Sydney radio station "described me as bonkers" when outlining Squadron Energy's vision, said Stuart Johnston, Its CEO and a former Royal Dutch Shell senior manager.

Executives at Squadron Energy envisage using gas shipped from Australia's northwestern coast, about 3,000 miles from Sydney and Melbourne, reflecting the lack of cross-country pipelines and the huge cost to build them. Yet Mr. Forrest and AGL Energy also see an opportunity to source gas from farther afield, including the U.S. U.S. exports of LNG rose 68% in the first four months of 2019, compared with the same period a year earlier. Trade tensions between China and the U.S. may actually play in Australia's favor. Beijing has levied tariffs on U.S. LNG in response to Washington's raising tariffs on Chinese imports. U.S. LNG could be diverted to new markets such as Australia if the added cost puts off Chinese buyers.

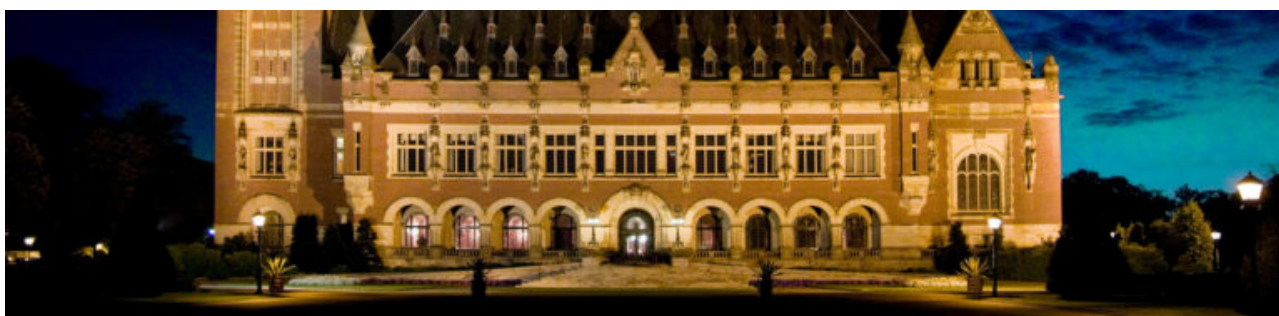
The trade conflict “probably makes people trying to sell gas to Australia even more attractive,” Mr. Forrest said. Australia’s eastern coast is abundant in gas, primarily at coal fields, but policy makers nearly a decade ago didn’t ensure enough supply would remain at home as they approved plans for a combined \$50 billion worth of processing plants to export fuel to such countries as China and Japan. Natural-gas costs have roughly tripled in eastern Australia in recent years, leading to warnings of factory closures and job losses. The Australian Energy Market Operator, the nation’s electricity overseer, forecast in March a potential gas shortfall in eastern states beginning in 2024. Others see the shortfall happening sooner. LNG imports are urgently needed in Sydney and Melbourne to reduce risks of a shortage, said Graeme Bethune, chief executive at Australian energy advisory firm EnergyQuest.

The five import terminals under study are proposed to start up between 2020 and 2022 near major cities. The Australian Industrial Energy consortium said its terminal would supply the equivalent of more than 70% of annual gas demand in New South Wales, the country’s most populous state. Exxon said it is considering an import terminal near Melbourne, although it prefers to supplement gas supply for the domestic market by finding new deposits or squeezing more from existing fields. Australia could learn from the U.S. and focus on several supply-and-demand hubs in a national network, according to Nigel Hearne, Chevron Corp. ’s president of Asia-Pacific exploration and production. “I would see one, two or three terminals on the east coast as just being other nodes in that network,” he said.

But some worry that the cost of importing gas is too high, and investors could be overestimating what consumers are prepared to pay. “After overbuilding LNG export capacity, eastern Australia is now at risk of overbuilding LNG import capacity,” said Saul Kavonic, a Credit Suisse analyst. “There isn’t sufficient domestic demand to justify all five LNG import

terminals being built.” Write to Rhiannon Hoyle at rhiannon.hoyle@wsj.com and Robb M. Stewart at robb.stewart@wsj.com <https://www.wsj.com/articles/australia-a-top-natural-gas-exporter-considers-imports-to-stop-blackouts-11559830044?redirect=amp#click=https://t.co/KuDmR4F8hR>

FAILING OR INCOMPLETE? GRADING THE SOUTH CHINA SEA ARBITRATION



On July 12, 2016, an arbitral tribunal at the Permanent Court of Arbitration in The Hague issued its ruling in Manila’s case against Beijing’s claims in the South China Sea. Convened under the compulsory dispute settlement provisions of the United Nations Convention on the Law of the Sea (UNCLOS), the tribunal’s five arbitrators ruled overwhelmingly in the Philippines’ favor. Beijing refused to participate in the arbitration and rejected the outcome. Meanwhile, the newly-inaugurated president of the Philippines, Rodrigo Duterte, downplayed the victory in the hopes of coaxing China toward a more conciliatory policy and, as a result, international pressure on China to comply with the award has evaporated. The ruling clarified important aspects of UNCLOS and customary

international law, but there was never much hope Beijing would accept its findings. Nonetheless, many observers hoped that over time China might find politically face-saving ways to bring its claims and behavior into line with the substance of the ruling, even while rejecting the process. In the three years since the arbitral award, and since Manila's adoption of a more accommodating policy toward Beijing, has China moved any closer to compliance? AMTI has compiled a list of actionable findings from the tribunal and assessed whether China's recent actions are in-line with them. Overall, China is in compliance with just 2 of 11 parts of the ruling, while on another its position is too unclear to assess. In one of the two most far-reaching decisions in the case, the arbitrators found that "the Convention [UNCLOS] defines the scope of maritime entitlements in the South China Sea, which may not extend beyond the limits imposed therein" (Judgement, para. 278). This means that "China's claims to historic rights, or other sovereign rights or jurisdiction, with respect to...the 'nine-dash line' are contrary to the Convention and without lawful effect" if they extend beyond the territorial sea, exclusive economic zone (EEZ), and continental shelf to which it is entitled by UNCLOS (para. 279). Nevertheless, the day after the arbitral award was issued, the Chinese Ministry of Foreign Affairs released a white paper which insisted, "In addition [to internal waters, territorial sea, contiguous zone, EEZ and continental shelf], China has historic rights in the South China Sea." In the last three years, Chinese officials have spoken less often about the nine-dash line as the basis of their claim over the South China Sea, but China continues to claim ill-defined historic rights to virtually all waters and seabed in the South China Sea. It is on this basis that Chinese fishers operate in the EEZs of Vietnam, the Philippines, and Indonesia, and on which Beijing objects to all oil and gas operations within the nine-dash line, regardless of how far they lie from Chinese-claimed land features.

Scarborough Shoal and high-tide features in the Spratlys generate territorial seas but not EEZs or continental shelves.

The second key finding in the case was that neither Scarborough Shoal nor any of the high-tide features in the Spratly Islands “are capable of sustaining human habitation or an economic life of their own” and “are therefore legally rocks for purposes of Article 121(3) and do not generate entitlements to an exclusive economic zone or continental shelf” (paras. 643 and 646). This means that the only EEZs and continental shelves in the South China Sea are those generated by the coastlines of the surrounding states and, possibly, some of the Paracel Islands. The Spratlys and Scarborough Shoal generate only a series of 12-nautical-mile territorial seas. Combined with the tribunal’s rejection of China’s claim to historic rights throughout the nine-dash line, this reduces the legally disputed areas around islands and reefs to the following: It is widely believed that China claims EEZs and continental shelves from Scarborough Shoal and many, if not all, of the Spratlys, but this has not been made explicit in Chinese law or public statements. Beijing’s 2016 white paper insists that “China has, based on the Nanhai Zhudao [islands of the South China Sea], internal waters, territorial sea, contiguous zone, exclusive economic zone and continental shelf.” But it could be argued that this only means that some of the islands, particularly the Paracels, generate these entitlements. Additionally, Chinese actions in its neighbors’ EEZs can be explained by its ongoing demand for historic rights and are therefore not proof of a claim to EEZs and continental shelves from the Spratlys or Scarborough. Future developments, for instance the declaration of straight baselines around Chinese-claimed features in the Spratlys, could make Chinese non-compliance with this piece of the arbitral award more explicit, but for now Beijing’s claims remain too ambiguous for a clear assessment.

Second Thomas Shoal and the waters around it are part of the EEZ and continental shelf of the Philippines.

The tribunal found that Second Thomas Shoal, which has been occupied since 1999 via the intentional grounding of the Philippine navy ship BRP *Sierra Madre*, is underwater at high-tide and generates no maritime entitlements of any kind. And because none of the Spratly Islands can generate EEZs or continental shelves, “There is, accordingly, no possible entitlement by China to any maritime zone in the area.” Second Thomas Shoal sits within 200 nautical miles of the Philippine coast and is therefore “part of the exclusive economic zone and continental shelf of the Philippines” (paras. 646 and 647). Nevertheless, China Coast Guard vessels continue to patrol near Second Thomas regularly and in May 2018 a People’s Liberation Army-Navy (PLAN) helicopter dangerously harassed a Philippine resupply mission to the *Sierra Madre*.

China illegally occupied Mischief Reef, which is part of the Philippine continental shelf.

Like Second Thomas Shoal, the arbitral tribunal ruled that Mischief Reef is a low-tide feature that constitutes part of the EEZ and continental shelf of the Philippines. Further, the arbitrators found that “China has, through its construction of installations and artificial islands at Mischief Reef without the authorisation of the Philippines, breached Articles 60 and 80 of the Convention...The Tribunal further finds that, as a low-tide elevation, Mischief Reef is not capable of appropriation” (para. 1043). This is probably the most difficult part of the ruling to imagine China ever complying with because it would require abandoning its naval and air base at Mischief or securing Philippine permission to continue its occupation. In the meantime, China not only occupies the reef but seemingly continues to claim maritime entitlement to it as evidenced by its objections to U.S. freedom of navigation operations within 12 nautical miles of the facility.

China illegally prevented the Philippines from exploiting the resources of its continental shelf.

The arbitral award concluded that Reed Bank, which is entirely

underwater and sits within 200 nautical miles of the Philippines, is part of that country's continental shelf. Referring to a specific incident in which Chinese law enforcement vessels prevented the operations of a Philippine survey ship, the tribunal found that "China has...breached Article 77 of the Convention with respect to the Philippines' sovereign rights over the non-living resources of its continental shelf in the area of Reed Bank" (para. 716). China continues to block the Philippines from exploring for oil and gas at Reed Bank despite the ruling. In November 2018, the two sides signed a memorandum of understanding that could pave the way for oil and gas development at Reed Bank. The details have not been hashed out yet and it is possible that the agreement could pave the way for China to come into technical compliance with the ruling. If Beijing agrees to have a Chinese company invest in a Philippine service contract (SC 72) at Reed Bank under Manila's supervision, the agreement will be consistent with the ruling. But if China insists on a joint development agreement outside of Philippine jurisdiction, it will cement its noncompliance.

China violated the Philippines' rights to fish within its EEZ.

The tribunal found that China violated the Philippines sovereign rights to the living resources of its EEZ, in particular "by promulgating its 2012 moratorium on fishing in the South China Sea, without exception for areas of the South China Sea falling within the exclusive economic zone of the Philippines and without limiting the moratorium to Chinese flagged vessels" (para 716). China nonetheless continues to declare a unilateral fishing ban from May to August each year covering all waters north of the 12th degree of latitude, including large sections of the EEZs of the Philippines and Vietnam. The most recent ban provoked an angry response from the office of the president of the Philippines.

China failed to prevent its fishers from operating illegally in the Philippine EEZ.

The arbitrators determined that China had “failed to exhibit due regard for the Philippines sovereign rights with respect to fisheries in its EEZ,” citing cases in which Chinese law enforcement vessels tolerated and failed to prevent Chinese-flagged vessels from operating at Mischief and Second Thomas Shoals in 2013 (para. 757). Hundreds of Chinese fishing vessels continue to operate under the supervision of the China Coast Guard at Mischief Reef and throughout the Spratlys on a daily basis, though most spend more time serving in the maritime militia than they do fishing. In June, a Chinese fishing vessel operating in the Philippine EEZ at Reed Bank sank a Filipino fishing boat, leading to an ongoing crisis in Sino-Philippine relations. Elsewhere in the South China Sea, fishing vessels from China continue to operate with the support of the coast guard and navy as far away as Indonesia’s EEZ.

China illegally blocked traditional Filipino fishing at Scarborough Shoal.

At Scarborough Shoal, which has a handful of rocks that break water at high-tide, the tribunal concluded that both Chinese and Filipino fishers have the right to engage in traditional fishing regardless of who ultimately has sovereignty over the shoal. But the arbitrators ruled that China had, “through the operation of its official vessels at Scarborough Shoal from May 2012 onwards, unlawfully prevented Filipino fishermen from engaging in traditional fishing” (para. 814). By late 2016, in an apparently gesture of goodwill to the Duterte government, China Coast Guard vessels stationed at Scarborough began to allow Filipino fishing vessels to operate along the exterior of the reef, though they were not permitted to fish inside the lagoon. That remains the case today, though the situation remains tense amid frequent reports of harassment and intimidation of Filipino fishers by the Chinese law enforcement personnel at the feature. Nonetheless, this is the one aspect of the arbitral award with which China is most clearly in compliance. And that fact is so politically

important to the Duterte government that the president recently claimed to have made a secret verbal agreement with President Xi Jinping in 2016 to turn a blind eye to Chinese fishing in the Philippine EEZ in exchange for Filipino fishing rights at Scarborough—in effect trading non-compliance with one part of the judgement for compliance with another.

China allowed its fishers to illegally engage in environmentally destructive harvesting of endangered species.

The award concluded that China had, “through its toleration and protection of, and failure to prevent Chinese fishing vessels engaging in harmful harvesting activities of endangered species at Scarborough Shoal, Second Thomas Shoal and other features in the Spratly Islands, breached Articles 192 and 194(5) of the Convention” (para. 992). This was largely, though not exclusively, in reference to the large-scale extraction of endangered giant clams which destroyed or severely damaged more than 25,000 acres of shallow coral reef from 2012 to 2016, often under the eye of Chinese law enforcement vessels. After a sharp drop-off in activity after 2016, Chinese clam harvesters have returned to their destructive activities at Scarborough Shoal and throughout the Paracels, often acting within clear view of the China Coast Guard.

China illegally destroyed the marine environment through its island-building campaign.

The tribunal found that from late 2013, China’s “island-building activities at Cuarteron Reef, Fiery Cross Reef, Gaven Reef (North), Johnson Reef, Hughes Reef, Subi Reef and Mischief Reef, breached Articles 192, 194(1), 194(5), 197, 123, and 206 of the Convention,” which mandate obligations to protect and preserve the marine environment. (para. 993) China completed its dredging and landfillwork in the Spratly Islands by late 2016, and its last documented island-building anywhere in the South China Sea was in the Paracels in mid-2017. It could be argued that some of China’s ongoing activities, for instance the installation of monitoring stations on reefs in

the Paracels, are still illegally damaging marine habitat without proper environmental impact assessments. But having run out of space for new landfill, China is now technically in compliance with the bulk of this section of the ruling. That could change, however, should China launch new dredging or landfill work at Scarborough Shoal or elsewhere.

Chinese law enforcement vessels violated COLREGS by creating a risk of collision and danger to Philippine vessels.

Finally, the arbitrators ruled that during the 2012 standoff following their seizure of Scarborough Shoal, Chinese law enforcement vessels “created serious risk of collision and danger to Philippine vessels and personnel” which meant China had “violated Rules 2, 6, 7, 8, 15, and 16 of the COLREGS [International Regulations for Preventing Collisions at Sea] and...Article 94 of the Convention.” While there has been no repeat of these incidents at Scarborough Shoal due to Philippine authorities keeping their distance, China Coast Guard, PLAN, and maritime militia vessels continue to regularly engage in the same violations of COLREGs to create the risk of collision for foreign vessels in the South China Sea. The harassment of a Philippine resupply vessel near Second Thomas Shoal in May 2018 was one example. The dangerous actions of a PLAN ship during the USS *Decatur*'s freedom of navigation operation through the Paracels in October 2018 was another. And then there are the frequent violations of COLREGs by Chinese fishing vessels and state-directed militia toward both fellow claimants and outside actors.

Leviathan natural gas platform starts voyage to Israel



JERUSALEM, July 14 (Reuters) – The gas platform for the Leviathan natural gas field is on its way to Israel from the Gulf of Mexico, the partners in the project said on Sunday.

The first of four barges transporting the production structure units has left Texas and the other three will set sail in the coming weeks. In September, all the units will be installed on the jacket of the platform already in place 10 kilometres from Israel's shore.

<https://www.reuters.com/article/israel-natgas-leviathan/leviathan-natural-gas-platform-starts-voyage-to-israel-idUSL8N24F058>

Nicosia to reject Turkish natural gas proposal



A proposal by Turkish Cypriot leader Mustafa Akinci for a committee that would jointly administer natural gas affairs is expected to be rejected by the government and party leaders when they meet on Tuesday. President Anastasiades received the proposal through the UN and shortly after Turkish Foreign Minister Mevlut Cavusoglu expressed the view that until Greek Cypriots adopt the proposals set out by Akinci, Turkey would continue its drilling “with determination and without change”. According to an official statement President Anastasiades received over the weekend in Limassol the head of the office of the Special Representative of the UN in Cyprus Sergiy Illarionov who presented to the President Akinci’s proposal. The President called a meeting of the National Council for July 16th to inform political leaders on the details of the proposal. Sources say the plan involves the establishment of a

committee under the coordination of the UN with an equal number of representatives from both sides and an independent observer. The proposal also includes details on the composition, establishment and operation of the hydrocarbons fund. News reports citing diplomatic sources said that the plan is similar to an earlier proposal submitted by former Turkish Cypriot leader Eroglu. The move comes as the EU is set to adopt a number of punitive measures against Turkey for its illegal activities off Cyprus. Cyprus had hoped for targeted EU sanctions against the Turkish Petroleum Company in order to dissuade Turkey from drilling in its EEZ. Analysts argue that the geography of the Eastern Mediterranean leaves Turkey with limited marine area while the status quo of divided Cyprus is seen as a leverage to gain a foothold in the potentially resource rich East Med basin. <https://knews.kathimerini.com.cy/en/news/nicosia-to-reject-turkish-natural-gas-proposal#.XSw4gLzv9HE.twitter>

Wind farms threaten to speed up North Sea decommissioning



Oil and gas operators planning to prolong fields' lifespan may find themselves increasingly in conflict with wind farm developers

The projected timeline for oil and gas decommissioning in the North Sea could be forced forward by spatial constraints created by offshore wind farm construction, according to the developers of a planned wind hub in the region.

A consortium of Dutch, German and Danish companies wrote in a concept paper on 9 July that the North Sea Wind Power Hub (NSWPH) they are developing would have an estimated capacity of 180GW by 2045, providing clean power to “hundreds of millions of Europeans” in those countries and the UK. “To meet the ambitious targets as set in the Paris Agreement, a large-scale roll-out of offshore wind is required. Increased spatial use by offshore wind energy and transmission infrastructure is then expected accordingly.” Because the turbine foundations deemed the most cost effective need a water depth of less than 55 metres—and as the targeted area is already used extensively for shipping, military exercises and fisheries—there is not currently enough available space for the required number of offshore wind farms (OWFs). “If we take an exclusionary approach, and only install farms in areas that are not currently being used, there simply is not enough room for a cost effective, large-scale build out of offshore wind power in the North Sea” says Peter Larsen, a development consultant at Danish grid firm Energinet. The firm is developing the project with the Dutch power grid operator Tennet, its gas equivalent Gasunie and the Port of Rotterdam.

Competing timeframes

The NSWPH's first phase would be connected to shore as early as the 2030s. But the British authorities expect decommissioning work to continue in the area until 2060. Larsen says the

eventual decision on whether projects such as the NSWPH should take precedence over the oil and gas sector in the North Sea is one that must be taken by governments. “Which will be the most cost-effective source of power from a social-economic perspective, as part of the green energy transition?” he asks. It is fair to say that it is a leading question. Currently only 3pc of the area the NSWPH would need is available, or only 14,000 km², according to the NSWPH researchers’ February feasibility study. The largest spatial risk created by the oil and gas sectors is not platforms themselves, but the helicopter landing safe zone of 2.5 nautical miles around these. In some cases, it may be possible to site an OWF’s turbines to accommodate these zones—but not all. “After drawing OWFs in the GIS mapping tool, it was discovered that there are attractive farm locations that have so much overlap between helicopter zones, that one can actually not adapt the wind farm, so the oil and gas function needs to adapt,” the study says. The authors also say confidentiality on which specific platforms will be gone by the year 2030 makes it harder to make spatial plans. While that information is commercially sensitive, oil producer lobby group OGUK found last November in a report on decommissioning that higher oil prices and a “relentless focus” on efficiency were pushing field retirements further into the future. Its report forecasts that decommissioning activity will remain relatively stable over the next decade.

Peaceful co-existence

OGUK’s view is that there is no need for conflict between the wind power and oil and gas in the North Sea—and that sharing the spatial resources could be beneficial. “Strong cooperation between different sectors is crucial as the UK invests in all forms of energy production to meet its future energy needs”, OGUK says. “The overlap phase when decommissioning takes place alongside the installation of new offshore wind structures could provide the opportunity for the different sectors to

align interests and collaborate on things like logistics costs and stakeholder engagement.” For its part, the NSWPH developers also accept that “co-utilisation” will be necessary in the future, adding that “the extent to which co-utilization will be needed highly depends on future developments such as the decommissioning of oil and gas platforms”. <https://www.petroleum-economist.com/articles/politics-economics/europe-eurasia/2019/wind-farms-threaten-to-speed-up-north-sea-decommissioning?hootPostID=271f29a013ef2922e07192d9cb92b6b3>

Lukoil makes inroads offshore



Russian-Kazakh waters in the Caspian Sea are central to the company's plans

Russian oil major Lukoil is pushing ahead with a raft of new projects in the Caspian Sea, as it looks to grow its offshore business and counter decline at its older fields in Western

Siberia. The private operator revealed in early June that it had struck a preliminary deal to explore an area off the shore of Kazakhstan. The I-P-2 block lies in waters 300-400 metres deep and 130km from the port of Aktau. Lukoil will now engage in talks with KazMunayGas (KMG), Kazakhstan's national oil company, to draw up an E&P contract and form a joint venture to develop the site. The Caspian Sea is integral to Lukoil's growth plans. The company aims to ramp up production in the area by more than a quarter next year to 180,000boe/d—equivalent to almost 10pc of its overall oil and gas output. Lukoil has come a long way since entering the region in the mid-1990s, when it embarked on a drilling campaign that led to the discovery of six major oil and gas deposits in Russia's offshore zone. The first of the fields, Korchagin, entered production in 2010 and was joined by the larger Filanovsky project six years later. Additional development is underway at both sites, and Lukoil plans to commission a third field known as Rakushechnoye in 2023. Lukoil's current Caspian production is confined to Russian waters, although the company is looking to build up its Kazakh operations as well. In addition to I-P-2, it has committed to spending \$270mn on exploring Kazakhstan's Zhenis block under an E&P contract it finalised with KMG earlier this year. Zhenis, situated 80km from the shore in water 75-100 metres deep, has been assessed by Kazakh authorities to contain 4.5bn boe in potential resources. Lukoil also operates the Tsentralnoye and Khvalynskoye fields that straddle the Russian-Kazakh maritime border, although development is in limbo because of their remoteness from land and an outstanding legal dispute. The Kazakh government has handed out dozens of contracts for offshore development over the past two decades, although many of these projects have disappointed. Lukoil's previous exploration venture at the Atash and Tyub-Karagan blocks ended in failure in 2011, when the company withdrew after drilling several dry wells.

Kazakh incentives

Lukoil's CEO Vagit Alekperov explained the company's renewed interest in offshore Kazakhstan early last year, citing a recent overhaul in the country's taxation system. Offshore operators can now opt to pay an income-based tax in lieu of mineral extraction tax (MET), oil export duty and other levies. Critically, this tax does not apply when oil prices dip below \$50/bl, offering operators some protection from market volatility. The Caspian's operational challenges, such as logistical issues, difficult climate conditions and reservoir complexity, can make tax relief essential for a project's success. Lukoil notably pays no export duty and a reduced rate of MET on its Russian fields in the area. Moscow-based ratings agency ACRA estimates the current breakeven cost of these projects, taking the tax incentives into account, at \$35/bl. "Tax breaks are necessary due to the high initial capital costs and the relatively high cost of production," an ACRA analyst told *Petroleum Economist*. "The IRR [internal rate of return] of Caspian projects is significantly higher than that of the mainland [Russian] projects, but this can be considered compensation for the higher risk." According to Ashley Sherman, a Caspian research analyst at Wood Mackenzie, changes to Kazakhstan's tax and subsoil legislation have "certainly revitalised international interest" in its offshore zone. Earlier this year Italy's Eni—a shareholder in Kazakhstan's flagship Karachaganak and Kashagan projects—also signed up to explore the offshore Abay block. While established players like Eni and Lukoil are keen to search new areas, Kazakhstan has struggled to bring new investors into the region. "These companies can look to other offshore exploration hot spots, elsewhere in the world, that offer lower costs, greater rig availability and a clearer path to quick development of any discovery," says Sherman. <https://www.petroleum-economist.com/articles/politics-economics/europe-eurasia/2019/lukoil-makes-inroads-offshore>

EU adopts measures against Turkey's illegal drilling in Cyprus' EEZ



The European Union decided on Monday to symbolically punish Turkey over illegal drilling for oil and gas off Cyprus and threatened harsher sanctions in the future unless Ankara changes tack. Foreign affairs ministers of the 28-nation bloc met in Brussels to endorse a decision to curb diplomatic contacts and funding for Ankara, retaliation for what it sees as interference with Cyprus' exclusive economic zone. Cyprus has pressed for a tough line threatening harsher sanctions in the future but others warned against antagonising a key ally on security and migration affairs. "The provocations of Turkey are unacceptable to all of us," German

Minister of State for Europe Michel Roth said on arriving at the talks. "We have now found a balanced language that keeps all our options open, including of course sanctions." "I can only hope that we do not now add another crisis to the many conflicts and crises. Turkey knows what's at stake and the European Union is united on the side of Cyprus." An EU diplomat told Reuters Ankara could lose some €150m of €400m the bloc had earmarked for 2020 for everything from political reforms to agriculture projects to help Turkey prepare for eventual EU membership. A decision endorsed by the EU ministers invited the bloc's executive and foreign policy arm to "continue work on options for targeted measures in the light of Turkey's continued drilling activities", according to the text seen by Reuters. That means any future sanctions would most likely focus narrowly on freezing assets and banning from the EU firms or people involved in the drilling, diplomats in Brussels said. "It is very clear that we stand behind Cyprus, this makes sense since we never recognised the Turkish occupation of northern Cyprus. It is normal for Cyprus to want to define their own natural resources," Austrian Foreign Minister Alexander Schallenberg said on Monday. According to the final text seen by CNA the 28 recall "the Council conclusions of 18 June 2019 and previous European Council conclusions, notably those of 20 June 2019", and "deplores that, despite the European Union's repeated calls to cease its illegal activities in the Eastern Mediterranean, Turkey continued its drilling operations west of Cyprus and launched a second drilling operation northeast of Cyprus within Cypriot territorial waters". The Council reiterates "the serious immediate negative impact that such illegal actions have across the range of EU-Turkey relations. The Council calls again on Turkey to refrain from such actions, act in a spirit of good neighbourliness and respect the sovereignty and sovereign rights of Cyprus in accordance with international law". Furthermore, "the Council, welcoming the invitation by the Government of Cyprus to negotiate with Turkey, notes that delimitation of exclusive economic zones

and continental shelf should be addressed through dialogue and negotiation in good faith, in full respect of international law and in accordance with the principle of good neighbourly relations". "The EU remains fully committed to supporting the UN-led efforts to work with the parties with a view to creating the conditions conducive to resuming negotiations on a comprehensive settlement of the Cyprus problem", the text reads. "In this regard, the Council recalls that it remains crucial that Turkey commits and contributes to such a settlement, including its external aspects, within the UN framework in accordance with relevant UNSC Resolutions and in line with the principles on which the EU is founded and the acquis", the EU 28 state in the same text. According to EU sources, the Council will publish the text around 11pm Cyprus time. High Representative Federica Mogherini, refrained from commenting on the decisions during the Council's press conference. (Reports from Reuters and CNA in Brussels)
https://cyprus-mail.com/2019/07/15/eu-adopts-measures-against-turkeys-illegal-drilling-in-cyprus-eez/amp/?__twitter_impession=true

Qatar Steps over the Blockade



PETROLEUM ECONOMIST

Gerald Butt, Petroleum Economist

Two years after the economic and political boycott on Qatar, the Gulf state is pressing on with LNG expansion plans. Qatar Petroleum (QP) in April asked three joint ventures to bid for the main engineering, procurement and construction (EPC) contract for four mega-LNG trains, each with 8.8mn t/yr capacity, and related facilities. A month later it asked firms to bid to carry out EPC work for LNG storage and loading facilities. QP announced in 2017, after the boycott was imposed, that it planned to increase LNG output capacity from 77mn t/yr to 100mn t/yr, by producing more gas from the vast offshore North field. The following year it unveiled an even more ambitious plan – to target capacity of 110mn t/yr. And despite the fact that there is no end to the political dispute that has destroyed the credibility of the Gulf Cooperation Council, Qatar is not looking back. The consortiums competing for the contracts to build the mega-trains are: Chiyoda and Technip; JGC Corporation and Hyundai Engineering and Construction; and Saipem, McDermott and CTCI Corporation. The announcement of the EPC contract is expected in January 2020, with work to be completed by 2024. Qatar believes that the new

development will come on stream just as demand for LNG will start to exceed supply. McDermott International has been given the EPC role for eight new offshore jackets in the North field. Onshore site preparation for the four LNG trains at Ras Laffan is being carried out by Consolidated Contractors Company and Teyseer Trading and Contracting Company. Chiyoda is completing the FEED work for the onshore facilities, and further contract awards related to the expansion project are



expected in the coming months.

Saad al-Kaabi Minister of Energy and Chairman of QP **New LNG carriers**

To cater for the North Field expansion and Qatar's offtake from the Golden Pass LNG export project in the US, QP in April issued an invitation to tender for the construction of LNG carriers. QP CEO Saad al-Kaabi says the initial order would be to "deliver 60 LNG carriers in support of the planned production expansion, with a potential to exceed 100 new carriers over the next decade". 110mn t/yr – Qatar's planned



LNG capacity

Roudi Baroudi Energy Economist

During 2018, Qatar maintained its position as the largest exporter of LNG, with 28pc of global market share, according to the International Gas Union. However, with other countries increasing capacity, Qatar's share has been falling. Australia has now overtaken Qatar as the biggest producer – but will be nudged out of that spot when the Ras Laffan expansion is complete. **Call for talks** In the meantime, Qatar continues to call for talks to end the political dispute with its neighbours, but they appear to have no interest in ending the boycott. “The countries besieging Qatar know it is ready to sit down at the negotiating table, whether under the aegis of the GCC or any other set-up,” says Roudi Baroudi, a Doha-based energy consultant. “Qatari officials remain hopeful that their counterparts will soon change course and join the search for sovereign, fair and workable solutions.” For now at least, Qatar is prepared to carry on regardless – without undue concern. The IMF said in late 2018 that “significant fiscal and external buffers have enabled Qatar to successfully absorb the adverse shocks from the 2014-16 decline in oil prices and the diplomatic rift. We anticipate overall real GDP growth of 3.1pc in 2019, with still robust non-hydrocarbon growth and recovery in oil and gas production.”



In Baroudi's view, "while Qataris continue to face illegal and discriminatory measures attached to the commercial blockade, their country has the wherewithal to sustain the current situation for as long as it takes".

Original article by Gerald Butt, Petroleum Economist

<https://www.petroleum-economist.com/articles/politics-economics/middle-east/2019/qatar-steps-over-the-blockade>

Exclusive: Russian output falls to three-year low as oil rivals clash



MOSCOW (Reuters) – Russian oil production fell close to a three-year low in early July, as output was undermined by a row between Russian oil pipeline monopoly Transneft (TRNF_p.MM) and the country's biggest producer Rosneft (ROSN.MM). Transneft curbed oil intake from Yuganskneftegaz, Rosneft's main upstream unit, the oil producer said, hurting production that has already been depressed by an oil contamination crisis. Rosneft confirmed intake limits first reported by Reuters. Transneft also confirmed to local media it had capped the amount of oil received from Yuganskneftegaz. Transneft said it put the restrictions in place after Rosneft sent oil to the pipeline network without clearly stating the destination for 3.5 million tonnes of crude as of July 1, local news agencies reported. It said it had limited intake from Yuganskneftegaz by 0.5 percent of its annual production, TASS reported. The unit produces more than 70 million tonnes of oil annually, or 1.4 million barrels per day. Industry sources said Russian oil output fell to 10.79 million barrels per day (bpd) in early July, lower than the level agreed under a deal on curbing supply reached with OPEC and other producers. Transneft and Rosneft have been at loggerheads over

efforts to resolve the problem of contaminated oil found in April in the Druzhba export pipeline to Europe. Supplies have only partially resumed since then, after weeks of disruption. Transneft criticized Rosneft on Monday over its handling of the tainted oil issue, saying the oil producer had dragged its feet over setting up quality controls for its oil and had made unsubstantiated claims from the pipeline firm. Rosneft said it had read Transneft's remarks with "regret". The heads of the two firms, Rosneft's Igor Sechin and Nikolai Tokarev at Transneft, have often rowed in the past. Despite formally denying any strife between their CEOs, the two companies have often clashed over issues such as oil transportation fees and Rosneft's rising oil exports to China. Sechin, 58, has been close to President Vladimir Putin for two decades, while Tokarev, 68, is also a long-time ally. Putin, Tokarev and Sechin all worked in the city administration for St Petersburg in the 1990s after the collapse of the Soviet Union. When asked to comment on the row, Kremlin spokesman Dmitry Peskov told reporters on a daily conference call that it was a "corporate matter". Transneft transports 83% of Russian oil via its network, while Rosneft accounts for over 40% of Russian output. An industry source said oil output at Yuganskneftegaz in West Siberia fell 30% during July 1-8 compared with the June average. Rosneft said its oil production had declined due to a decision by Transneft to reduce intake of oil due to the contaminated oil issue, adding Transneft had imposed a "significant" cap on oil intake from Yuganskneftegaz. "The enforced output reduction is related to Transneft's cuts of intake of oil into the system of trunk pipelines," a Rosneft spokesman said, adding that the pipelines were blocked by contaminated crude.

Reporting by Alla Afanasyeva, Olga Yagova and Dmitry Zhdannikov; additional reporting by Tom Balmforth; Editing by Edmund Blair, Louise Heavens and Kirsten Donovan

Emissions rules and electric shift to spur car engines M&A



Mergers and acquisitions have been stuck in a rut since Volkswagen (VOWG_p.DE) was caught cheating pollution tests in 2015, triggering a global tightening of emissions regulations that depressed the value of petrol and diesel technologies. But the market is beginning to separate companies capable of meeting new emissions standards from those struggling to do so, which could close the gap in price expectations between buyers and sellers over the next 12-24 months, industry experts say. The auto industry has all but stopped developing next-generation combustion engines as limited resources are directed towards building electric and self-driving cars. However, electric vehicles are still a niche product,

accounting for only 1.26 million – or 1.5 percent – of the 86 million cars sold worldwide last year, and analysts forecast it will be the middle of the next decade before a tipping point comes when electric cars overtake combustion-engined variants. That means there will still be demand for emissions-compliant combustion engines and so manufacturers and suppliers able to offer that are likely to see valuations recover, said Reinhard Kuehn, co-head of European Automotive at Deutsche Bank. “At the same time, suppliers that struggle with this will remain a hard sell,” Kuehn said. Meanwhile, as production capacity of petrol and diesel engines is cut back, the impetus for mergers among suppliers should increase, bankers believe. Germany’s Volkswagen, one of the largest manufacturers of petrol and diesel engines, has said it will develop its final generation of combustion engines by 2026, while U.S. rival Ford (F.N) last month said it would close two engine factories in Europe. “The profit pool of companies with combustion engine-related technology – once the envy of the industry – is shrinking with the rise of electric vehicles and the digitization of the industry,” Goldman Sachs managing director Axel Hoefler said. “You would expect someone to come in and consolidate to benefit from economies of scale.” Volkswagen is now warning its suppliers to prepare industry-wide solutions for winding down combustion-engine manufacturing as it ramps up mass production of electric vehicles. The company is retooling 16 factories to build electric vehicles and plans to start producing 33 different electric cars under the Skoda, Audi, VW and Seat brands by mid-2023, transforming the industry’s supply chain. “It makes no sense to have factories running at only 40% capacity,” Stefan Sommer, Volkswagen’s procurement head, told Reuters. “The auto industry is obliged to develop structures to consolidate combustion engine assets, to decide where to bundle certain activities.” “If we end up with uncontrolled insolvencies, it will be a problem for the industry,” he said.

MISMATCH

There are more than 120 plants making combustion engine components in Europe, according to consulting firm AlixPartners. German auto industry association VDA says 436,000 jobs are tied to building petrol and diesel engines in Germany alone. Demand for compliant combustion engine assets has already triggered consolidation among carmakers themselves – PSA Group's (PEUP.PA) takeover of General Motors' (GM.N) Opel business in 2017 was driven by that issue. "With emissions regulation getting more stringent, particularly in Europe, some manufacturers are getting left behind in terms of their ability to develop compliant engines," Franciscus van Meel, BMW's (BMWG.DE) head of vehicle development, told Reuters. Until recently, deals have still proved difficult to do because of lingering disagreements over valuations. U.S. group Dana (DAN.N) late in 2018 launched the sale of its European head gasket business, a key component for combustion engines, people close to the matter said. With the help of Bank of America it invited suitors to bid, but pulled the auction several weeks later due to muted interest. The sale of Germany's closely-held Ifa Group, a maker of shafts mainly used in combustion engine-powered cars, was announced a year ago, but never got over the finishing line. Among the few suitors was China's Wanxiang, but differences on pricing proved insurmountable, people close to the talks said. "The main problem is that buyers' and sellers' price expectations don't match," KPMG partner Juergen Schlangenotto said. "A seller typically says: I have a robust order book and good margins so I want a valuation of 6 times EBITDA (annual core earnings), while a buyer says there's no long-term growth so I am paying 4 times." A fresh test of interest in combustion engine assets will be the sale of engine parts and gear box parts maker Tekfor. Private equity owner KKR is in talks with a Chinese buyer, according to people close to the matter. James Kamsickas, CEO of U.S. drivetrain supplier Dana, believes internal combustion engine (ICE) demand could persist

for many years. "People are overbaking a little bit on how much the internal combustion engine is just going to go away," he told Reuters. "If anything, I'm a very strong advocate that it's going to be a world of hybridization for the next 15 years. Last time I checked, that still requires an ICE."

Editing by Georgina Prodhan and Mark Potter