Natural gas answer to energy crunch, transition, says GECF secretary-general

Gas Exporting Countries Forum (GECF) secretary-general Yury Sentyurin said the current energy crunch around the world and the intensifying climate change debate serve to highlight the serious need to embed natural gas as part of a long-term solution to energy market stability and transition.

He was addressing a session at the Russian Energy Week (REW) held in Moscow from October 13 to 15.

Joining the panel on 'International Energy Organisation Dialogue: Predicting the Development of Energy and Global Markets', Sentyurin stressed that "gas was, is, and will remain the most realistic option to attain the energy transition, spur economic growth and social progress."

He said, "The long-term solution provided by natural gas is available in the GECF's flagship publication of Global Gas Outlook (GGO) 2050, which foresees natural gas becoming the primary energy mix of the world by 2050 and increasing its present share from 24% to 27%."

The GGO, featuring multiple contexts on gas' growth and role in the energy mix, is now underpinned by very strong

analytical effort on new scenarios, such as the Energy Transition Scenario, and Hydrogen Scenario, to name a few. The latest findings will be launched in the 6th edition of the GECF Global Gas Outlook 2050 in February 2022.

“We are championing gas for post-Covid-19 recovery and achieving the UN Sustainable Development Goals. The gas industry is of course also looking at innovation to transform this natural resource into a sustainable fuel, using such methods as green LNG, carbon capture, hydrogen, ammonia, and methane emissions reduction.”

“One of the most sensible, economically-viable way to achieve sustained energy market stability, inclusive economic growth and Sustainable Development Goals is to consider natural gas as a destination fuel,” Sentyurin told the panel. “Natural gas remains one of the global enablers for reducing emissions quickly, cost-effectively and steadfastly by replacing carbon-intensive fuels as well as backing up intermittent renewables”

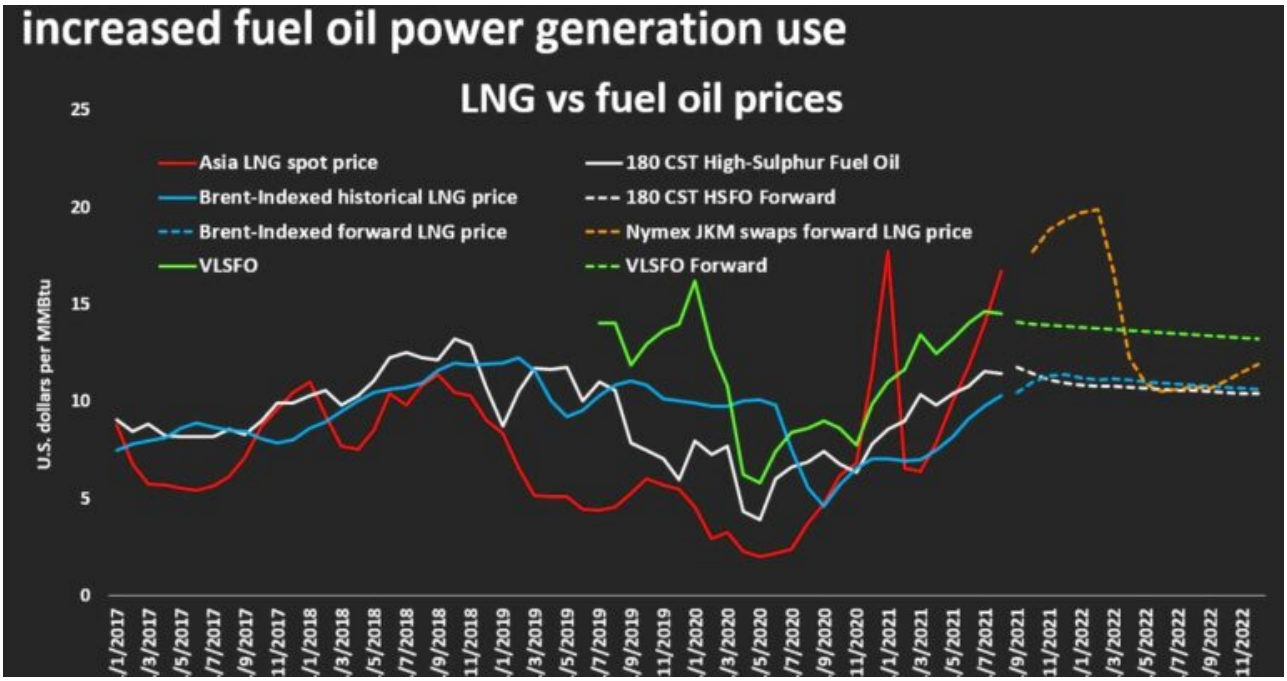
Addressing the panel, Mohamed Sanusi Barkindo, secretary-general, Opec, elaborated on Opec’s latest World Oil Outlook (WOO), whose 15th edition was unveiled two weeks ago.

“The projections show that nearly all sources of energy will grow over the next quarter of a century…Oil and gas together will provide nearly 53% of the world’s energy needs in 2045 – a little over 28% for oil and 24% for gas,” he said in his remarks.

“As an African, I know very well that we need to harness all the energy resources at our disposal, from the sun over our heads to the abundant fuels that lie beneath our feet, if we are to ease energy poverty and develop our continent’s economies.”

GLOBAL LNG-LNG prices continue to soar as buying

ahead of winter starts



* Bangladesh pays nearly $30/mmBtu for prompt cargo – sources

* China and Turkey seek cargoes for winter

* Cameron LNG says Louisiana plant unit to return online this week

SINGAPORE, Sept 24 (Reuters) – Asian liquefied natural gas (LNG) prices surged by about 10% this week as demand continues to rise in the region despite higher prices and amid a supply crunch.

The average LNG price for November delivery into Northeast Asia LNG-AS was estimated at about $26.50 to $27 per metric million British thermal units (mmBtu), up at least $2 from the previous week, industry sources said.

“The post-COVID recovery in some places has been fast, which is pushing up demand, while there are some supply issues in several places, which is causing a crunch,” a Singapore-based trader said, adding that prices are expected to rise even higher during winter when demand for heating peaks.

Bangladesh, for instance, bought a cargo for delivery in late September from Vitol at $29.89 per mmBtu, the highest the country has paid for the super-chilled fuel, three industry sources said.

It did not award a separate tender seeking a cargo for October delivery as the offer was at around $35, two other sources said. Instead, it will issue two tenders next week to buy two cargoes for delivery in October, a third source said.

Demand from China was also firm with Unipec Singapore, the trading arm of Sinopec, seeking 11 cargoes for delivery in winter while Beijing Gas and Guangzhou gas also sought a cargo each for delivery in October and November, traders said.

Turkish state energy company Botas is also seeking 20 cargoes for delivery in winter, while Thailand’s Egat was seeking two cargoes for delivery in October, they added.

Some spot cargoes were offered in the market from Angola, Australia, Russia and Indonesia from October to January, but lower shipments from Egypt and Malaysia were supporting prices, traders said.

Cameron LNG in the U.S. said on Wednesday the liquefaction train shut for maintenance at its Louisiana export plant was expected to return later this week, which could add some supply. (Reporting by Jessica Jaganathan. Editing by David Evans)

Qatar’s low-carbon LNG expansion to meet world’s growing demand for cleaner energy: PwC

Qatar’s low-carbon LNG expansion will meet world’s growing demand for cleaner energy, PwC has said in its ‘Qatar Economy Watch’ report.

Qatar’s gas production process is among the lowest carbon-intensity globally and will further decline as a result of Qatar Petroleum (QP) sustainability strategy, announced in January that includes cutting methane leaks, using solar power for operations and boosting carbon capture and storage, PwC noted.

As part of these efforts, Qatar was one of the five founding members in April 2021 of the Net Zero Producers’ Forum, alongside the US and Saudi Arabia. This commitment to reducing the intensity of production will further add to Qatar’s competitive edge against other LNG producers.

In a world-first in September 2020, QP signed a LNG contract

with Singapore that includes wellhead-to-delivery reporting of greenhouse emissions. This was a first step towards a future in which carbon taxes or other mechanisms could advantage lower-intensity producers like Qatar.

PwC said, “The combination of an improving demand outlook for LNG with delays to new supply because of the weakened balance sheets of private hydrocarbon companies, makes it an ideal moment for Qatar to press ahead with expansion. In February 2021, QP awarded the main contract to build the four new LNG terminals for the North Field East expansion. The new supply will come onstream in stages during 2025-2027 and QP intends to soon commission another two trains.

“QP may be considering further expansion in the future, which makes sense given that North Field’s reserves are sufficient for around three centuries of production at current levels, whereas the global economy is expected to have fully decarbonised by the end of this century.”

The report said, “Financing the project, expected to cost around $43bn for all six trains, will benefit from the low interest rate environment, enabling QP to finance much of the capex through low-cost bonds as well as equity contributions from joint-venture partners. Equity bids were received from six oil majors in May 2021, and discussions are also underway for customers, including in China, to take smaller stakes.”

The six new trains will boost Qatar’s LNG output by nearly two-thirds and also lift its production of valuable by-products including condensates, natural gas liquids, ethane and helium. This will enable ongoing government expenditure to boost the economy as well as QIA’s reserves. Work on the project will pick up rapidly over the next few years, providing a significant boost to the post-Covid-19 recovery, particularly for the construction sector and for companies supplying goods and services to the project. Energy prices have recovered to pre-Covid-19 levels and may show continued strength for several years, PwC noted. This is because there has been a sharp drop in capital expenditure by oil and gas companies which may result in supply constraints, depending on

how strongly demand recovers and how rapidly the Opec+ output cuts are tapered.

Speaking at the Qatar Economic Forum in June, the CEOs of ExxonMobil, Shell and Total Energies, along with Qatar's Minister of State for Energy Affairs, HE Saad bin Sherida al-Kaabi, warned that underinvestment could cause oil prices to spike towards $100. "Of particular relevance for Qatar is the fact that a raft of major LNG projects have been postponed or cancelled as a result of the lower capex budgets and worries about long term prices, reducing competition for the new capacity that will be generated from its own North Field expansion.

"At the same time, there has been a growing emphasis in global commitments to tackle climate change and address ESG (environmental, social and governance) concerns, such as China pledging to reach net-zero emissions in 2060. Sustainability advocates are finding traction in leveraging the willingness of governments to take decisive action against Covid-19 as a precedent for stronger action on climate change, including the Biden Administration's pledge to "Build Back Better". This shift in focus benefits Qatar because of the importance of gas as a lower-carbon transition fuel," PwC said.

NFE project to 'reposition' Qatar as world leader in LNG liquefaction capacity: IGU

The multi-billion dollar North Field East (NFE) project will "reposition Qatar as the world leader" in terms of liquefaction capacity, overtaking Australia, the International Gas Union (IGU) has said in a report.

Qatar Petroleum has taken the final investment decision for the NFE project, the world's largest LNG project, which will raise Qatar's LNG production capacity from 77mn tonnes per year (mtpy) to 110mtpy.

The project involves the construction of four new LNG mega-trains with a capacity of 8mtpy, the IGU said in its 'World LNG Report 2021'.

This year's global LNG trade increased to 356.1mn tonnes, a small increase of 1.4mn tonnes compared to 2019, but another year of consecutive growth in LNG trade despite Covid-19 related impacts on the supply and demand sides, noted Joe M Kang, president, IGU.

This was mostly supported by increased exports from the US and Australia, together adding 13.4mn tonnes of exports.

Asia Pacific again imported the most volumes in 2020, together accounting for more than 70% of global LNG imports. Asia also accounted for the largest growth in imports in 2020 – adding 9.5mn tonnes of net LNG imports compared to 2019.

Global LNG market pricing experienced a turbulent year. Spot

prices of cargoes trading in the Atlantic and Asia Pacific basins plummeted to record lows in the first six months, before reaching record highs at the start of 2021.

Pricing responded to Covid-19 impacts on demand, an initially well-supply market, and high storage levels in some markets, followed by a cold winter and shipping constraints.

While 20mn tonnes per year in liquefaction capacity was brought onstream in 2020, all in the US, start-up of several liquefaction trains in Russia, Indonesia, the US and Malaysia were delayed as a result of the pandemic.

The only project that was sanctioned in 2020 was the 3.25 mpta Energia Costa Azul facility in Mexico, and early 2021 Qatar took FID on four expansion trains totalling 32mn tonnes per year, the IGU said.

With additional new projects proposed, global pre-FID volumes stand at 892.4mn tonnes per year, most of which are in North America, the IGU noted. With some 35 new vessels added to the LNG shipping fleet in 2020, the total number of active vessels reached 572 at the end 2020, including 37 FSRUs and 4 FSUs.

Notably, with the exception of one, all new vessels are equipped with membrane containment systems, and 23 of them feature X-DF propulsion systems. Membrane containment systems capitalise on improved fuel efficiencies and lower emissions.

The number of LNG voyages, however, only increased by 1%, largely due to demand impact of Covid-19. Global regasification capacity increased by 19mn tonnes per year in 2020, bringing the total to 850.1mn tonnes per year as of February 2021.

Four new terminals and four expansion projects at existing terminals started importing cargoes – with the majority in the Asia Pacific region. There are now 39 markets that are equipped with LNG receiving capabilities.

As of February 2021, there was 147.3mn tonnes per year of regasification capacity under construction, of which 72.3mn tonnes per year have communicated start-up dates in 2021, some of which is in new importing markets such as Ghana, El Salvador, Vietnam and Nicaragua.

Offshore regasification capacity increased by 5.6mn tonnes per year, bringing the global floating and offshore regasification capacity to 115.5mn tonnes per year as of February 2021, the IGU said.

New Trends on the Global Market of LNG Carriers

The Covid-19 pandemic has brought new challenges for the global gas industry, with the LNG shipping market not being an exception. Because of the Covid-19 pandemic, the market witnessed a reduction in the global gas demand in 2020, which resulted in a slowdown of the global LNG trade and lower-than-expected demand for LNG carriers. These developments, coupled with the commissioning of a large number of new carriers, led to the oversupply of LNG carriers in the shipping market.

However, a recovery of LNG demand in early 2021 has raised a question: where is the LNG shipping market drifting, and whether in the short- and medium-term there will be enough LNG carriers on the market to transport liquefied natural gas.

The last three years witnessed the record commissioning of LNG carriers, with 134 LNG carriers coming on line. As a result, at the beginning of 2021, there were over 600 LNG carriers operating in the global market (Figure 1).

In the short- and medium-term, the global LNG shipping market is anticipated to be balanced due to the upcoming commissioning of new LNG carriers. At least 142 LNG carriers, ordered recently, are expected to come on line between 2021 and 2025. Out of the total number, 46 LNG carriers are to be commissioned in 2021 followed by 38 carriers in 2022. South Korean shipbuilders account for the majority of LNG carriers on the order book. Hyundai, Samsung and Daewoo are going to build 110 carriers, while the Russian firm Zvezda has orders for 15 carriers and China's Hudong for 11 carriers.

The ratio of global LNG exports to the number of LNG carriers gives an indication of the average volume of LNG transported by one LNG carrier throughout a specific year. A higher ratio indicates a tighter LNG shipping market. Over the last decade, the LNG shipping market has loosened, supported by the increasing availability of LNG carriers. From 2011 to 2020, the ratio fell from 0.73 to 0.59, which implies that in 2020 one LNG carrier transported on average 0.59 million tonnes per annum (mtpa) (Figure 2).

The global LNG carrier fleet is renewed on a regular basis, with old carriers being scrapped and new ones continuously being added. The construction of LNG carriers has always been associated with the commissioning of new LNG liquefaction capacity. The building of LNG carriers in the mid-2000s was largely driven by the completion of LNG plants in Qatar, while in the late 2010s it was driven by the completion of LNG

plants in Australia, U.S., and Russia. As a result, various groups of LNG carriers operate on the market depending on commissioning date. Currently, at least four (4) carriers in operation today were commissioned in the 1970s, 10 carriers in the 1980s, 54 carriers in the 1990s, 244 carriers in the 2000s, and 294 carriers commissioned in the 2010s.

The combined capacity of LNG carriers has also increased consistently. Over the last decade, capacity more than doubled – to 43 mtpa in 2020 – driven by the commissioning of a large number of LNG carriers and higher capacity of new LNG carriers (Figure 3).

There are different types of LNG carriers depending on their capacity. Various factors have an impact on the choice of shipping companies to build and charter LNG carriers with specific capacity. The liquefaction and regasification capacity of LNG plants and terminals, depth of berths, movement through Suez and Panama canals or through Northern Sea Route, all play an important role in the vessel design. The larger the capacity of the involved LNG carriers, the less LNG shipments and carriers are needed for specific trade routes.

In this context, the largest group of LNG carriers is the one with capacity ranging from 166,000 million cubic metres (cbm) to 182,000 cbm, which comprises 219 carriers. Besides, 191 LNG carriers have capacity from 125,000 to 150,000 cbm, while 125 LNG carriers have capacity of 150,000 cbm up to 165,000 cbm. It is worth highlighting that Qatar's gas transportation company Nakilat owns all 45 Q-Flex and Q-Max LNG carriers operating in the world – with capacity of 210,000-217,000 cbm and 263,000-266,000 cbm, respectively – individually or jointly with international shipping companies. The average capacity of LNG carriers reached 71.2 kilotons (158,200 cbm) in 2020 compared to 54.4 kilotons (120,900 cbm) in 2000. Thus, the rising capacity of new LNG carriers leads to lower demand for new LNG carriers.

Various types of LNG carriers exist depending on the propulsion systems. Steam turbine LNG carriers, which dominated the LNG shipping market for many decades, remain the most popular ones, with 239 carriers operating on the global market. However, their dominance has been broken over the last decade, driven by the emergence of alternative, more efficient propulsion systems. Suffice to note that only 15 LNG carriers of this type were commissioned in the 2010s. Because of these new trends, today many of steam turbine LNG carriers, especially the old ones, are being converted into FSU or FSRU (floating storage/ regasification unit). Since the mid-2000s, the global shipping industry developed alternative types of LNG carriers, driven by its aspiration to increase operational efficiency, decrease the consumption of bunker fuels, optimise the size of engine room, and expand cargo capacity. The first of them was a dual-fuel diesel electric (DFDE) propulsion system, which came on line in 2004. Later, the industry introduced other propulsion systems for LNG carriers, including tri-fuel diesel electric (TFDE), M-type, electronically controlled, gas injection (MEGI), diesel with re-liquefaction (DRL), in addition to some other types (Figure 4).

The anticipated increase in global liquefaction capacity, LNG trade and number of LNG shipments are key factors that will influence the LNG shipping market and incentivise market players to build new LNG carriers in the short- and medium-term. In this context, the GECF Member Countries will remain key players in the market. These countries have various policies towards the transportation of LNG. First, some of them do not own or operate LNG carriers. Second, others do not own but operate the fleet. Third, others own but do not operate LNG carriers. Finally, some of them both own and operate the fleet.
The planned expansion of LNG liquefaction capacity in some GECF Member Countries, mainly in Qatar and Russia, will have a huge impact on the LNG shipping market in the medium-term.

Today, the leader of the global LNG transport market is

undoubtedly Qatar's Nakilat. It owns 69 LNG carriers, individually or jointly with other international shipping companies, with a combined capacity exceeding four mt. Other companies, such as Maran Gas from Greece, GasLog from Monaco, and MISC from Malaysia, lag far behind the Qatari company. Qatar plans to expand its LNG liquefaction capacity by 49 mtpa to 126 mtpa by 2027. Such huge additions to the country's LNG liquefaction capacity will require new LNG carrier fleet to transport LNG to the global markets. In this context, in 2020, Qatar entered into agreements with global shipbuilders, mainly from South Korea, for over 100 new LNG carriers. These contracts will be worth nearly US$20 billion, which means that it will be the largest LNG-shipbuilding programme in the industry's history. As a result, Qatar secured around 60% of the global LNG ship construction capacity through 2027. That could lead to the tightening of the LNG shipbuilding market, which should be taken into account by other shipping companies planning to order new LNG carriers.

Russia also has plans to expand its LNG liquefaction capacity, which will require additional LNG carrier fleet. The Russian shipping company Sovcomflot has already ordered 15 icebreaking LNG carriers for the Arctic LNG 2 project from the Russian Zvezda Shipbuilding Complex, with the South Korean Samsung Heavy Industries being a technology partner of Zvezda in this project. These LNG carriers will be delivered between 2023 and 2025. Sovcomflot will own one vessel individually and 14 other carriers jointly with its partner Novatek. These carriers will enable the delivery of LNG to buyers in Asia in 15 days through the Northern Sea Route, which reduces transportation costs and transit time by half, compared to the traditional Suez Canal route. This instance will be the first time a Russian shipbuilding company will construct LNG carriers.

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New QFC member set to become global portfolio manager of spot LNG

A Qatar Financial Centre (QFC) newcomer will establish its position as a global portfolio manager of spot LNG, or liquefied natural gas trades that will have immediate local knock-on effects, after Doha expands its LNG production from the present 110mn tonnes per annum.

This outcome is one among the “unsung” economic benefits that will follow North Field Expansion (NFE), which is also set to enhance the prospects of asset management industry in the country, the QFC said in an article.

The NFE project will not only bring up natural gas from underground, but also other valuable hydrocarbons for export and domestic use, it said, pointing out that associated hydrocarbons destined for export include 260,000 barrels per day of condensate and 11,000t/d of liquefied petroleum gas,

valued at roughly $3.05bn annually (using posted 2020 average prices).

“The additional income earned through hydrocarbon exports will increasingly make Qatar a destination for asset managers and other financial institutions,” the QFC said. As imports of construction inputs and machinery wane with most infrastructure projects coming close to completion, Qatar’s trade surplus is likely to register bigger in the years ahead.

“Once NFE-related exports commence in late 2025, export earnings are destined to reach still higher. Whereas much of the immediate proceeds are destined to the Ministry of Finance and Qatar Investment Authority, there is a progressively stronger case for specialised asset managers to locate in Doha close to their future investors,” QFC said.

In tandem, it said, financial institutions in the country will increasingly be called upon to provide a variety of sophisticated products to Qatari firms with a growing international footprint.

As Qatar’s economy continues to grow at home in terms of complexity, and abroad with its varied connections, the financial sector is set to grow substantially.

As Qatar looks ahead, it is destined to leverage its natural gas-focused competitive cost advantages, global network, existing industrial base, innovative focus and high-profile investments to become an attractive and rewarding business destination.

The QFC plays a key part of the country’s development journey, which it looks forward to supporting with vigour and indirectly offering firms on its platform noteworthy prospects.

The first certain phase concerns the North Field East that comprises an approximate $28.75bn of investments – half of which has received a final investment decision as of February 2021.

Beyond that, Qatar Petroleum, or QP, is appraising different areas of the North Field to possibly award a subsequent expansion phase within the next three years.

The QP has made this NFE investment at an opportune time, which will allow it to capture more global LNG market share and gain footholds in new markets as many competitors pull back from major projects, according to the QFC article.

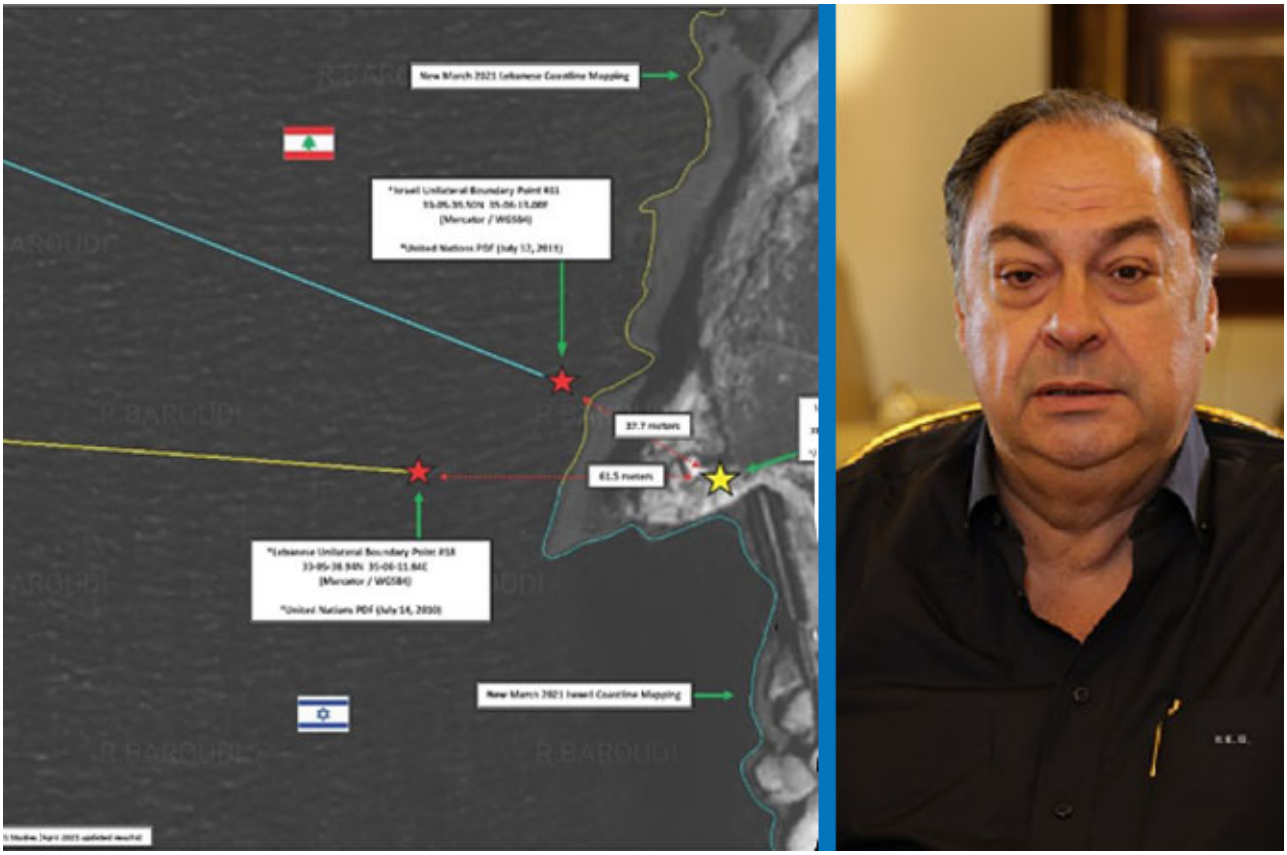
Another “unsung” benefit is the North field’s expansion would drive local manufacturing opportunities. Additionally, there will be 4,000t/y of ethane for use as feedstock in Qatar’s growing petrochemicals sector. This hike equates to nearly 50% of existing 2020 export capacity, or 36.4% of current domestic base quantities.

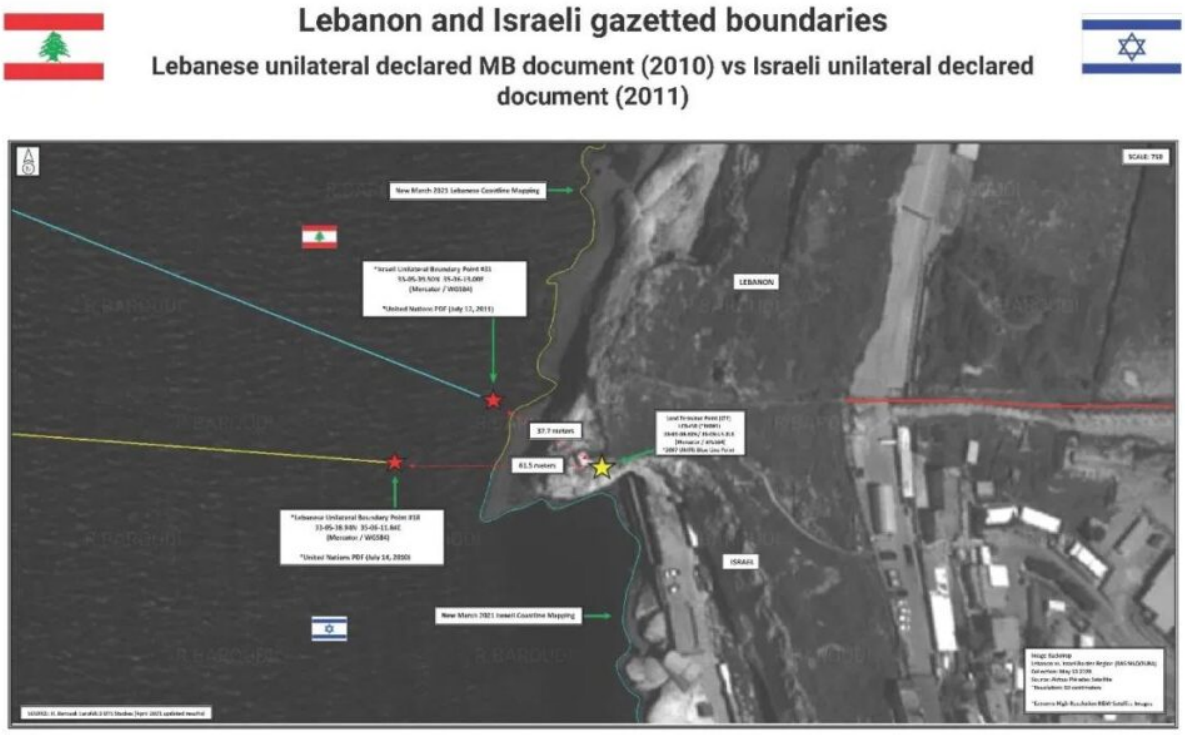
A combination of these NFE ethane volumes and those from Barzan enables Qatar to produce in future a greater variety as well as more complex petrochemicals, such as those that will originate from the joint venture with Chevron Phillips (70% owned by QP) using the Middle East’s largest 1.9mn t/y ethane cracker in Ras Laffan to start production in 2025.

This is critical to the local economy, according to Gulf Petrochemicals and Chemicals Association, which recently outlined that with oil at $65 a barrel, crude producers can earn $15 per barrel by refining their output and an extra $30 a barrel on top of that by converting it into petrochemicals.

“As Qatar continues its drive to diversify economically, local manufacturing will play a key role,” the QFC article said.

Lebanon vs. Israel both need to update Maritime Boundaries





Lebanon vs. Israel both need to update Maritime Boundaries – Lebanese political circles are in a tangle once again, this time over whether Lebanon should provide the United Nations with new coordinates defining the country's offshore Exclusive

Economic Zone (EEZ). In reality, two questions need answering:

1) Does Lebanon have the right to update its maritime claims to the UN?

2) If so, should Lebanon avail itself of that right in the present circumstances?

The issue is of critical importance, not only because it relates directly to Lebanon's (currently stalled) maritime boundary talks with Israel, but also because it stands to impact the speed with which it can begin to obtain tangible benefits from any undersea hydrocarbons within its EEZ.

Helpfully, the first question is the easiest. Lebanon's right to update its territorial submissions to the UN is not only enshrined in the UN Convention on the Law of the Sea (UNCLOS), but also protected by Customary International Law (CIL), and established by innumerable precedents as a standard practice of countries seeking to define and defend their maritime claims, not least because continual technological advance allows increasingly accurate mapping.

It is important to note, too, that Presidential Decree 6433 of 2010, under which Lebanon's claim was last expressed to the UN, expressly envisaged the possibility of future updates. Article 3 leaves no room for interpretation whatsoever, reading: "As needed, and in the light of negotiations with the relevant neighboring States, the borders of the exclusive economic zone may be refined and improved and, consequently, the list of its coordinates amended, if more precise data becomes available." Lest there be any doubt, and as we will see below, such data has become available.

What is more, when Lebanon's Permanent Mission to the UN submitted the claims authorized under Decree 6433, its accompanying letter included the following advisory: "There is

a need to conduct a detailed survey, using a global positioning system, of the shore contiguous to the southern limit, including all islands and spurs, with a view to updating the nautical charts and the baseline accordingly in the future." Again, to be perfectly clear: such survey work has been conducted.

Also, while Israeli officials have sought (not very convincingly) to question Lebanon's right to update its claim, their country's own October 2010 EEZ agreement (itself based on Israeli coordinates which we now know to be incorrect and which would therefore be rejected by any court or tribunal) with Cyprus also expressly recognizes the fact that under CIL, such coordinates are subject to change. Article 1 (e) of that agreement reads as follows: "Taking into consideration the principles of customary international law relating to the delimitation of the Exclusive Economic Zone between States, the geographical coordinates of points 1 or 12 could be reviewed and/or modified as necessary in light of a future agreement regarding the delimitation of the Exclusive Economic Zone by the three States concerned with respect to each of the said points."

In addition, in a subsequent unilateral submission to the UN, Israel's own mission to the world body not only referred to "the relevant provisions of Article 1 (e)", but also reproduced the language, virtually verbatim. The submission even repeated mention of "the three States concerned", which in context can only indicate Lebanon as the third state.

On Lebanon's right to submit new coordinates, then, the verdict is inescapable: it definitely has that right. Realistically, anyone who argues otherwise is either opposed to the best interests of Lebanon (which needs to develop this resource), the Lebanese (who deserve to reap the attendant economic rewards), and the Lebanese Armed Forces (which are heavily invested in a positive outcome); ignorant of the facts and the rules; or pursuing some other political, financial,

and/or other personal/partisan advantage.

Next question: should Lebanon exercise its right at this particular juncture?

On the surface, this answer is almost as clear. In 2011, just months after the Israel-Cyprus deal and Lebanon's last submission to the UN, the Lebanese government received expert analysis and advice regarding the United Kingdom Hydrographic Office charts – long considered the gold standard of maritime cartography – for the area. What the experts found is that both Lebanon and Israel had used erroneous coordinates as starting points for their maritime boundaries (please see attached map): where such points should be situated at the shoreline, both countries had placed them dozens of meters offshore. This may not sound like much, but by the time a line drawn out to sea from such a misplaced starting point reaches what should be the trijunction – where the EEZs of Cyprus, Israel, and Lebanon meet – the error could amount to several nautical miles.

Ipso facto, both Lebanon and Israel have based their previous maritime claims on faulty coordinates, which makes everything that flows from them obsolete, what the French would call "caduc" – meaning null and void. To both, this imparts not only a right to update their claims before the UN, but also an obligation to do so based on each side's own best interest. In addition, recent experience demonstrates that, especially with such evidence that their respective claims were fatally flawed, if the current talks failed and the two countries went to court or arbitration over the issue, the first thing asked of them would be to replace their faulty maps by carrying out detailed surveys and analyses in order to precisely determine any points of contention.

In the technical sense, then, yes, Lebanon should definitely move quickly to update the maritime claims it has previously submitted to the UN. But other considerations also need to be

weighed.

For instance, while Lebanon is a sovereign country, it cannot afford to entirely ignore the positions of outside actors. When these run contrary to its own wants and needs, it must weigh the pros and cons and decide accordingly. In this instance, Israeli officials have sought to discourage Lebanon from updating its claims or otherwise delaying the resumption of the aforementioned talks, raising the prospect that doing so could forestall progress, worsening tensions and forcing a longer wait for any offshore oil and gas development.

The latter point could be of particular significance because of what an energy boom could mean for the Lebanese population. Lebanon's economy has shrunk by an estimated 25% over the past year, following a debt default that led to the collapse of its currency and consumer price increases that qualify as hyperinflation. Worse, the political class has demonstrated little stomach for the kinds of reforms required to secure a bailout by the International Monetary Fund (IMF).

The current Cabinet, led by Prime Minister Hassan Diab, resigned seven months ago over an explosion at the Port of Beirut that damaged or destroyed tens of thousands of homes, so it operates in a caretaker capacity. His designated successor is also his predecessor, former Prime Minister Saad Hariri, who himself resigned in the face of popular protests that gripped the country in late 2019. While he enjoys considerable support in certain foreign capitals, Hariri's domestic position can only be described as weak, and the mere fact that he has been unable to form a Cabinet after more than half a year leaves little doubt that even if he succeeds, he largely will be incapable of decisive action on significant issues.

So we have another question: should Lebanon forego some of its rights in order to hasten an agreement that allows it to start earning some badly needed revenues from offshore resources?

The answer to that should be a resounding “no”. The border area contains some of Lebanon’s most promising offshore acreage, and in any event, there is no guarantee that giving it up would grease the wheels for a diplomatic breakthrough – and even if did, the outside investment required to get an energy industry up and running depends on a whole other set of prerequisites, not least the reforms that no one has been able to see through.

Also, in addition to the 2011 analysis, the Lebanese Armed Forces have carried out detailed studies of their own, which have significantly strengthened the Lebanese position. Senior LAF officers also have acquitted themselves with a high degree of professionalism in their US-mediated dialogue with the Israelis. In tandem with newly deposited coordinates, the quality of the LAF’s work might actually hasten the negotiating process by demonstrating that the Lebanese side will not bluster, but nor will it be bullied or bamboozled. No one expects that Washington will abandon its close relationship with Israel, but the LAF’s all-business approach, unsullied by the vagaries of Lebanese politics, encourages the Americans to be as even-handed as possible.

Again, the case for a timely and assertive amendment of Lebanon’s maritime submission seems airtight, but only if the issue can be inoculated against Lebanon’s dysfunctional politics.

Given the history of Lebanese politics, it is natural that even good-faith actors want to ensure they have sufficient political cover before making any important move. While this is certainly a step of consequence, however, its merits are so obvious that it should require only a bureaucratic and/or legal decision by the appropriate people at the Foreign Ministry. The fact that it requires higher authorization should not be an excuse for yet another chicken-and-egg standoff along the lines of those that have alienated, frustrated, impoverished, and quite literally killed hundreds

of thousands of Lebanese over the past half-century.

Rather, it should spur officials to get creative about how to make progress today without hanging people out to dry tomorrow. There are ways to compromise on procedure without sacrificing accountability, integrity, or transparency, and the stakes are so high that finding such a formula will be worth whatever effort it requires. And for once, the people of Lebanon might be able to believe their leaders are acting for purely national reasons, not personal ones.

Roudi Baroudi has more than 40 years of experience in the energy business and has helped design policy for major international oil companies, sovereign governments, and multilateral institutions. He currently serves as CEO of Energy and Environment Holding, an independent consultancy based in Doha, Qatar.

Qatar, Iran to drive Middle East gas production to 1,150bcm by 2050: GECF

Driven by Qatar and Iran, the Middle East gas production is expected to rise to 1,150bcm by 2050, Gas Exporting Countries Forum said Wednesday.

The two main contributors to natural gas production in the region are Iran and Qatar, with 50% and 30% respectively of total growth, GECF said while launching its Global Gas Outlook 2050's fifth edition.

Europe, on the other hand, has been seeing declining gas production in the last ten years. This downward trend is expected to continue over the Outlook period with production falling from over 200bcm in 2019 to around 70bcm in 2050.

Cyprus is the only European country to see a growth in production by over 10 bcm over the forecast period, it said.

In Asia-Pacific, only China, Australia and India are expected to significantly expand production. China is expected to account for more than 85% of the growth of gas production in the region, particularly on account of its potential to produce gas from unconventional resources. Total Chinese gas production is expected to reach 370bcm by 2050, of which 72%

will be unconventional gas.
Total Asia-Pacific production growth to 2050 is forecast to be 224bcm, of which only net growth of 20bcm is outside China. Australia is expected to grow production by 50bcm to reach almost 200bcm by 2050.
In North America, all three countries in the region (the US, Canada and Mexico) are expected to increase their production, with much of the growth being driven by new LNG export projects and new pipeline infrastructure.
Total production is expected to grow by 560bcm to reach 1,670bcm by 2050. Gas production in Eurasia is expected to increase by almost 40%, amounting to just under 1,300bcm by 2050.
Russia and Turkmenistan will source more than 78% and 17% of this expansion, respectively.
The impact of Covid-19 in 2020 is estimated to have led to around a 7% reduction in global energy-related CO2 emissions. This decline will be short-lived with a rebound in 2021 and 2022 as energy demand recovers.
In the reference case scenario (RCS), emissions grow moderately until 2030 before stabilising and plateauing at around 33.7GtCO2 over the 2030-2050 period.
Natural gas will contribute the least to emissions by 2050 (32%), despite its higher role in the hydrocarbons mix (39%), while coal will still account for a high share (33%) although its contribution to the hydrocarbons mix is much lower (23%). Further penetration of natural gas will lead to a greater potential for carbon mitigation.
The GECF has developed a Carbon Mitigation Scenario (CMS), assessing the future role of natural gas in reducing emissions. The CMS outlines the potential to mitigate emissions by 6.8GtCO2 in 2050 with an increasing penetration of gas and renewables.
These two fuels are set to increase their shares to 14% and 30%, respectively, by 2050, from 10% and 28% in the RCS. Although natural gas will play a role in reducing long-term emissions, with larger dissemination of proven and well-established technologies, there is a need to consider further decarbonization potential, including through blue hydrogen and CCUS options.

30-year total investment in gas to reach $10tn by 2050: GECF

Global natural gas production is forecast to grow by around 1,900bcm to reach more than 5,900bcm by 2050, Dohabased GECF said yesterday. Total investment in gas (including upstream and midstream activities) between 2020 and 2050 will reach a cumulative $10tn, the Gas Exporting Countries Forum said, unveiling its 2020 edition of the 'Global Gas Outlook 2050' yesterday. The GECF said in Asia-Pacifi c, only China, Australia and India are expected to signifi cantly expand production.

Total Asia-Pacifi c production growth to 2050 is forecast to be 224 bcm, it said. In North America, all three countries (the US, Canada and Mexico) are expected to increase their production. Total production is expected to grow by 560bcm to

reach 1,670bcm by 2050. Gas production in Eurasia is expected to increase by almost 40%, amounting to just under 1,300bcm by 2050. According to the GECF, the Middle East gas production is expected to rise to 1,150bcm by 2050.

Europe's downward trend is expected to continue with production falling from over 200bcm in 2019 to around 70bcm in 2050. Africa will grow from 250bcm (6.4% of global production) in 2019 to around 600bcm (just over 10% of global supply) by 2050. Natural gas production in Latin America is expected to increase by over 110bcm to reach 280bcm by 2050. The 'Global Gas Outlook 2050' revealed that energy transition is underway and natural gas together with renewables will gain in importance and will be the major contributors to incremental growth in global energy demand, together accounting for more than 90% of the additional 3,520mn tonnes oil equivalent (Mtoe) through to 2050.

The Forum said natural gas and renewables will make up 60% of the electricity supply, changing the global power generation mix by 2050. Natural gas, it said, will overtake coal in 2025 and become the largest global primary energy source by 2047, with oil plateauing around 2040 and then beginning its irreversible decline. According to the GECF, renewables' share in the global energy mix will rise from 2% in 2019 to 10% in 2050.

Natural gas demand will rise by 50%, reaching 5,920bcm in 2050, and will expand specifi – cally across the Asia Pacifi c, North America and Middle Eastern markets, which together will provide more than 75% of additional gas volumes through to 2050. The Asia Pacifi c region, given its enormous potential, will become the largest gas consumer, doubling its consumption to 1,660bcm by 2050. The share of traded LNG will increase to approximately 48% of all traded gas in 2030 and 56% in 2050, respectively, the GECF said. LNG regasifi cation from existing, under construction, potential, proposed, stalled and speculative projects is expected to be around

1,398mtpy.

It is projected that over the outlook period, 1,990bcm out of around 5,920bcm global natural gas demand will be imported, including 1,105bcm from the GECF member countries. In his overview of the latest fi ndings of the Outlook 2050, GECF secretary general Yury Sentyurin highlighted the vital role natural gas will play in the global energy mix by raising its share from currently 23% to 28% by 2050, thanks to its remarkable features of abundance, fl exibility, aff ordability, and environmental effi ciency. Sentyurin said, "The complexity of factors and the multiplicity of stakeholders within the energy sector results in myriad shifting strategies that are shaping the new architecture of the future.

Nevertheless, the mid- and longterm fundamental factors that favour natural gas remain unchanged. This plentiful, adaptable and, crucially, clean source of energy will expand across Asia Pacifi c, North American and Middle Eastern markets." The GECF Global Gas Outlook 2050 was launched at an online event attended by energy ministers and senior representatives from the Forum's member countries together with a bevy of dignitaries and gas industry stakeholders yesterday. Its detailed quantitative assessments account for national energy strategies, environmental and climate policies, and investments and business decisions. The forecast remains the fl agship publication of the association of 19 member countries, which together represent 70% of the world's proven gas reserves, 44% of its marketed production, 52% of pipeline, and 51% of LNG exports in the world.

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