# IEEFA report: Advances in electricity storage suggest rapid disruption of U.S. electricity sector

June 14, 2019 (IEEFA) – Momentum is gaining around an industry shift toward utility-scale battery storage systems nationally, finds a report published today by the Institute for Energy Economics and Financial Analysis (IEEFA).

The report – Advances in Electricity Storage Suggest Rapid Disruption of U.S. Electricity Sector –details upstart storage and storage-expansion projects in Arizona, California, Hawaii, Florida, Massachusetts, New Hampshire, Nevada, Texas, and Vermont.

Dennis Wamsted, an IEEFA editor/analyst and lead author of the report, said recent evidence of utility-scale storage adoption is most likely the beginning of a trend that will take hold broadly across the industry, benefitting renewables at the expense of gas- and coal-fired plants.

“Bigger changes loom,” Wamsted said. “In the many examples we researched, each project, by and large was driven by one of several value streams—cutting transmission charges, providing grid resilience, offering peak power, allowing for early plant closures and the like—even if other benefits were accrued too.”

The report details dozens of examples of electric companies large and small finding an assortment of cost savings in electricity-storage technology and portability.

“Installation is still tiny in terms of absolute numbers, but power storage is now ubiquitous and energy storage is no longer a pie-in-the sky proposition,” Wamsted said. “These changes are taking place today.”

Excerpts from the report:

- Battery storage in combination with solar can be used to facilitate closure of coal and natural gas plants currently being used largely for peaking or seasonal needs, as shown by the NV Energy decision to close the North Valmy coal plant in Nevada, and by Florida Power and Light’s’s plan to shut two aging natural gas units in Florida.
- Battery storage can be used to meet system peak needs, as SCE is doing in California in replacing the two-unit Mandalay natural gas peaker plant.
- Battery storage can be used to provide firm renewable power, as both Arizona Public Service and Hawaiian Electric are demonstrating with projects they have named, respectively, “Solar after Sunset” and “Renewable Dispatchable Generation.”
- Battery storage offers utilities significant opportunities to boost system resilience and cut costs at the same time, as is being demonstrated in a number of other projects highlighted in the report.
- Battery storage can be used to enable more residential

solar systems to be installed on local distribution lines without requiring potentially costly and time-consuming system upgrades, as can be seen in an existing program in Vermont and in one being proposed in New Hampshire.
- Battery storage can be used to improve the economics of existing utility-scale solar generation, as can be seen in the discussion about Vistra's battery storage retrofit at a Texas PV plant.

Wamsted said economies of scale will help drive the expansion of utility-scale battery storage, as will a growing recognition by utility companies of the business case for embracing the shift: "It is likely that developers and utilities will be able to stack these benefits, making storage even more economically competitive."

Full report: Advances in Electricity Storage Suggest Rapid Disruption of U.S. Electricity Sector

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**About IEEFA**

The Institute for Energy Economics and Financial Analysis (IEEFA) conducts global research and analyses on financial and economic issues related to energy and the environment. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy.

# Large Exxon Shareholder Starts Divesting Over Climate Change

(Bloomberg) – One of Britain's biggest fund managers started selling shares in Exxon Mobil Corp., saying America's largest oil company isn't doing enough to address climate change.

Legal & General Investment Management, which oversees about $1.3 trillion and is one of Exxon's top 20 shareholders, said some of its funds have already divested from the company and will ask its clients if it can withdraw more money.

The global oil industry has become increasingly unfashionable for investors as the transition away from fossil fuels raises doubts about its long-term future. Energy stocks currently

make up 5% of the S&P 500 Index, down from 13% a decade ago.

The divestment affects a small portion of Exxon's equity — Legal & General owns about 0.6% of the company, and the divesting funds hold just a fraction of that — but it intensifies pressure on the Texas firm, once the world's largest public company. It will also be a fillip for campaigners who want investors to divest from the most polluting companies.

Divestment is a way to "hold Exxon accountable for something that's really material for their future," said Meryam Omi, head of sustainability at Legal & General Investment Management. "People in the street who have their own pension that's going to mature in 30 years time don't get a chance to talk to Exxon themselves."

Exxon is the only oil major Legal & General is divesting, as competitors including Chevron Corp. and Royal Dutch Shell Plc meet or exceed the insurer's basic standards on climate change action. It would also use its remaining shareholding in the company to vote next year against the reappointment of the chairman, a role currently held by Chief Executive Officer Darren Woods.

Exxon is the largest of 11 companies that Legal & General said it will exclude from its "Future World" funds because of climate change risk. Others include MetLife Inc., Subaru Corp., Hormel Foods Corp., Sysco Corp. and Rosneft PJSC. Two companies it withdrew capital from last year for the same reason, Occidental Petroleum Corp. and Dominion Energy Inc., will be added back to the funds because they addressed concerns raised by the insurer.

While standards differ by sector, Legal & General said it expects oil and gas companies to set targets to cut pollution in their own operations as a bare minimum. It also wants the company to disclose the volume of greenhouse gas emissions its

operations and customers are responsible for each year.

“We’re on track to meet greenhouse gas reduction measures we announced last year which are expected to help significantly to improve emissions performance,” Exxon spokesman Scott Silvestri said in an email. “They include a 15% decrease in methane emissions and a 25% reduction in flaring by 2020.”

Exxon already publishes an annual tally of emissions from its operations and is “providing solutions to consumers to help them reduce their emissions,” Silvestri wrote.

Legal & General declined to disclose the exact value of its divestment from the oil company. At the end of March, the stock made up 0.7% of one of the asset manager’s funds, according to its website. The overall value of that fund at the time was about 4.4 billion pounds ($5.5 billion), suggesting the Exxon stake was worth more than $350 million.

Several other companies are “on the cusp” of divestment when it comes to climate action, according to Sacha Sadan, the director of corporate governance at the insurer’s investment unit, without saying which ones. And even those that were named as particularly strong on sustainability compared to their peers, such as Equinor ASA and French bank BNP Paribas SA, will be expected to continuously move their businesses away from polluting activities or risk being divested.

“This engagement is not about picking up the laggards, it’s about pushing up the whole industry,” said Omi. “We need to keep the pressure on.”

Returns at Legal & General’s Future World funds will suffer very little as a result of the divestments, Omi said. The difference between what the funds would return without divesting and what they will return otherwise, which she called a “tracking error,” will be less than 0.3%.

The insurer is hoping to convince all clients to follow its

advice around companies lagging in climate action, partly by demonstrating it doesn’t sacrifice returns. That could lead to further capital outflows.

A campaigner at ShareAction, a London non-profit that helps investors engage with companies on climate change and other issues, said the move could also inspire other asset managers to reconsider their holdings.

“We expect this to signal to markets the huge risk of investment inaction on the climate emergency ahead of us,” Jeanne Martin, senior campaigns officer at ShareAction, said.

Veering away from companies that are performing well is a major departure from its peers and Legal & General’s own past. The insurer has held Exxon stock for about 20 years, and it’s the asset manager’s seventh-largest equity holding overall, worth about $2 billion at the end of March. Since the day it started its investment in Exxon, the shares have returned 200% in total, according to data compiled by Bloomberg.

(Updates with an estimate of divestment value in 11th paragraph.)

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# European Council conclusions on the MFF, climate change, disinformation and hybrid threats, external relations, enlargement and the European Semester, 20 June 2019

## II. Multiannual financial framework

2. The European Council welcomed the work done under the Romanian Presidency and took note of the various elements of the MFF package. It called on Finland’s Presidency to pursue the work and to develop the Negotiating Box. On that basis the European Council will hold an exchange of views in October 2019, aiming for an agreement before the end of the year.

# III. Climate change

3. The European Council emphasises the importance of the United Nations Secretary General's Climate Action Summit in September for stepping up global climate action so as to achieve the objective of the Paris Agreement, including by pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels. It welcomes the active involvement of Member States and the Commission in the preparations.

4. Following the sectoral discussions held over recent months, the European Council invites the Council and the Commission to advance work on the conditions, the incentives and the enabling framework to be put in place so as to ensure a transition to a climate-neutral EU in line with the Paris Agreement [1] that will preserve European competitiveness, be just and socially balanced, take account of Member States' national circumstances and respect their right to decide on their own energy mix, while building on the measures already agreed to achieve the 2030 reduction target. The European Council will finalise its guidance before the end of the year with a view to the adoption and submission of the EU's long-term strategy to the UNFCCC in early 2020. In this context, the European Council invites the European Investment Bank to step up its activities in support of climate action.

5. The EU and its Member States remain committed to scaling up the mobilisation of international climate finance from a wide variety of private and public sources and to working towards a timely, well-managed and successful replenishment process for the Green Climate Fund.

# IV. Disinformation and hybrid

## threats

6. Further to the Presidency report and the contributions from the Commission and the High Representative on lessons learnt with regard to disinformation and securing free and fair elections, the European Council calls for sustained efforts to raise awareness, increase preparedness and strengthen the resilience of our democracies to disinformation. It welcomes the Commission's intention to conduct an in-depth evaluation of the implementation of commitments undertaken by online platforms and other signatories under the Code of Practice. The evolving nature of the threats and the growing risk of malicious interference and online manipulation associated with the development of Artificial Intelligence and data-gathering techniques require continuous assessment and an appropriate response.

7. The EU must ensure a coordinated response to hybrid and cyber threats and strengthen its cooperation with relevant international actors. The European Council welcomes the adoption of a new framework for targeted restrictive measures, and the work on coordinated attribution at EU level in the context of the cyber diplomacy toolbox, to better deter and respond to cyber-attacks. It invites the EU institutions, together with the Member States, to work on measures to enhance the resilience and improve the security culture of the EU against cyber and hybrid threats from outside the EU, and to better protect the EU's information and communication networks, and its decision-making processes, from malicious activities of all kinds.

# V. External relations

8. On the occasion of the Eastern Partnership's 10th anniversary, the European Council reaffirms the importance of this strategic partnership and invites the Commission and the High Representative to evaluate existing instruments and

measures and, on the basis of appropriate consultations, to present by early 2020, with a view to the next Eastern Partnership Summit, a further set of long-term policy objectives.

9. The European Council welcomes the peaceful transfer of power in the Republic of Moldova and invites the European Commission and the High Representative to work on a set of concrete measures to support the Republic of Moldova, based on its sustained implementation of reforms under the Association Agreement / DCFTA.

10. The European Council underlines the crucial importance of the EU's strategic partnership with Africa. We are committed to developing it further with a shared ambition to face together common and global challenges.

11. The stability, security and prosperity of the countries on the southern shore of the Mediterranean are of crucial importance for the EU. In this context, peace and long-term stability in Libya are a common priority. The EU reiterates its support for the UN-led process for the cessation of hostilities and an inclusive political solution.

12. The European Council welcomes the renewed impetus in EU-Morocco relations and looks forward to the upcoming EU-Morocco Association Council.

13. The European Council reiterates its call on Russia to release the captured Ukrainian sailors unconditionally, return the seized vessels and ensure free passage of all ships through the Kerch Straits, in accordance with international law.

14. The European Council expresses its utmost concern about the Russian presidential decree of 24 April, enabling the simplified issuing of passports in certain areas of Ukraine's Donetsk and Luhansk regions, which runs counter to the spirit and the objectives of the Minsk agreements.

15. The European Council will continue to monitor the situation in eastern Ukraine and stands ready to consider further options, including non-recognition of Russian passports issued in contradiction to the Minsk agreements, in close coordination with its international partners. The European Council calls for an urgent resumption of negotiating efforts with a view to the implementation of the Minsk agreements and for measures aimed at rebuilding confidence among the parties.

16. 17 July will mark five years since the downing of flight MH17, which claimed 298 lives. The European Council reiterates its full support for all efforts to establish truth, justice and accountability for the victims and their next of kin, in accordance with UNSC Resolution 2166. In this context, it welcomes the announcement by the Joint Investigation Team on 19 June 2019 that criminal charges will be brought in the Netherlands against four individuals, calls on Russia to cooperate fully with the ongoing investigation, and expresses its full confidence in the independence and professionalism of the legal procedures that lie ahead.

17. The European Council recalls and reaffirms previous Council and European Council conclusions, including the European Council conclusions of 22 March 2018 strongly condemning Turkey’s continued illegal actions in the Eastern Mediterranean and the Aegean Sea. The European Council expresses serious concerns over Turkey’s current illegal drilling activities in the Eastern Mediterranean and deplores that Turkey has not yet responded to the EU’s repeated calls to cease such activities. The European Council underlines the serious immediate negative impact that such illegal actions have across the range of EU-Turkey relations. The European Council calls on Turkey to show restraint, respect the sovereign rights of Cyprus and refrain from any such actions. The European Council endorses the invitation to the Commission and the EEAS to submit options for appropriate measures

without delay, including targeted measures. The EU will continue to closely monitor developments and stands ready to respond appropriately and in full solidarity with Cyprus. The European Council will remain seized of the matter and will revert accordingly.

## VI. Other items

18. The European Council endorses the conclusions on enlargement and stabilisation and association process adopted by the Council on 18 June 2019.

19. In the context of the European Semester, the European Council held a discussion on the basis of a horizontal report on Country-Specific Recommendations.

[1] For a large majority of Member States, climate neutrality must be achieved by 2050.

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# Exxon’s $53 billion Iraq deal hit by contract snags, Iran tensions – sources

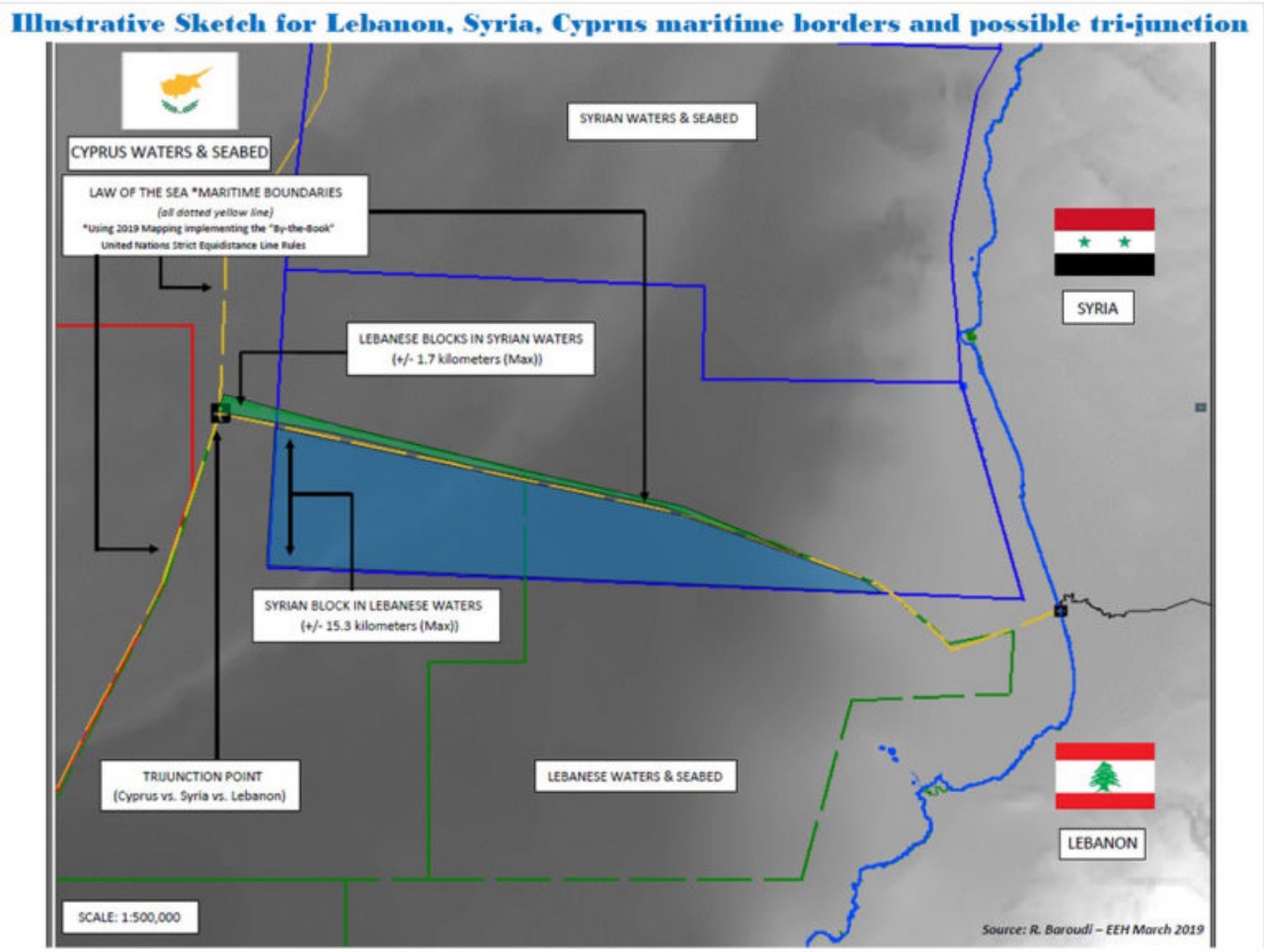
BASRA, Iraq/BAGHDAD (Reuters) – Just weeks ago, U.S. energy giant ExxonMobil looked poised to move ahead with a $53 billion project to boost Iraq’s oil output at its southern fields, a milestone in the company’s ambitions to expand in the country.

But now a combination of contractual wrangling and security concerns, heightened by escalating tensions between Iraq’s bigger neighbor Iran and the United States, has conspired to hold back a deal, according to Iraqi government officials.

The negotiations have been stymied by terms of the contract that Baghdad objects to, said four Iraqi officials involved in the discussions who spoke to Reuters on condition of anonymity due to the sensitivity of the matter.

# Oil hopes fire up Lebanon-Syria border issue

THE DAILY STAR
LEBANON




BEIRUT: All eyes have been fixed on south Lebanon as the country engages in U.S.-sponsored negotiations to demarcate its maritime border with Israel, ahead of Lebanon's first offshore hydrocarbon exploration planned for later this year.But Lebanese officials have recently suggested that another issue critical for the country's nascent oil and gas sector may soon be on the negotiating table: the demarcation of Lebanon's northern border with Syria, which has never been formally agreed upon.

Lebanon and Syria have set their sights on potential revenues

from oil and gas revenues as boons to their struggling economies.

At the same time, Beirut is hoping to capitalize on increasing international interest in the Eastern Mediterranean due to large hydrocarbon finds, including in Cyprus and Israel. Lebanon, though well behind its western and southern neighbors, hopes to join the club soon after its first exploratory well is drilled in December.

With the issue still in its early stages, experts told The Daily Star that demarcating Lebanon's northern border should be much simpler than delineating those with Israel, with whom Lebanon is still technically at war. Still, demarcating the northern border could have its own stumbling blocks, particularly considering political differences in Lebanon over the nature of the country's ties to Syria.

So what is under dispute?

The northern land border between Lebanon and Syria is de facto demarcated today by the Nahr al-Kabir River. This border is important, because the point at which it meets the sea is crucial for determining the maritime border.

Issam Khalife, a history professor at the Lebanese University who wrote a book about attempts to demarcate the northern border, said there were few points of difference over this border. He said the line would be set in the middle of the river, with the final point lying where it empties into the Mediterranean.

This contrasts starkly with the southern border demarcation issue, where 13 points are disputed.

Meanwhile, about 850 square kilometers of sea is disputed between Syria and Lebanon, Roudi Baroudi, an oil and gas consultant with some 40 years' experience, told The Daily Star.

This is nearly the same number as the roughly 860 square kilometers under dispute between Lebanon and Israel.

Khalife said that Beirut and Damascus had engaged in serious talks over demarcating the border since after both countries gained independence from France in the mid-1940s. But those talks fizzled out with the advent of the Lebanese Civil War (1975-90).

In 1976, Syria entered Lebanon as part of a peacekeeping force, and remained in the country until its 2005 ouster by the massive popular uprising that followed the assassination of former Prime Minister Rafik Hariri.

“Syria felt that it and Lebanon are one country, so why draw its borders with Lebanon?” Khalife said.

Lebanon in 2011 published a unilateral outline of its northern border, on which Syria has not formally commented.

However, maritime oil blocks that Syria published in March 2019 show a large overlap with those published by Lebanon – encroaching by some 15 kilometers at the furthest point.

Using the methods set out by the United Nations Convention on the Law of the Sea – ratified by 168 nations including Lebanon, but not Syria, which maintains observer status – Baroudi has mapped out a line that he said marked the correct maritime border between the two countries. According to this line, Lebanon has encroached on Syrian territory by about 1.7 kilometers, while Syria, according to its oil blocks, sees its border as lying 15 kilometers inside Lebanon’s territory.

“Both sides have overestimated, so this has to be rectified between two friendly states,” Baroudi said.

Defense Minister Elias Bou Saab and Foreign Minister Gebran Bassil could not be reached for comment despite multiple attempts.

Two Foreign Ministry sources declined to comment on whether Lebanon had received a formal request from Syria to demarcate the northern border, as was reported this week in pan-Arab newspaper Asharq al-Awsat.

After the issue lay dormant for years, Bou Saab last week said he had knowledge that Syria was looking to demarcate the northern land and maritime border.

He later added that Russia could play a “positive” role in the dispute due to its energy interests both in Syria and in Lebanon.

Russia has been a major supporter of Syrian President Bashar Assad in the 8-year-old conflict, and Syria’s Oil Minister Ali Ghanem last month said that a Russian company would be tasked with maritime oil and gas exploration.

The Daily Star could not reach the Syrian Embassy for comment despite multiple attempts.

Meanwhile in Lebanon, Russian company Novatek is part of a consortium that is set to drill the country’s first exploratory well in December. And Energy Minister Nada Boustani told AFP last week that Russian companies Novatek, Gazprom and Lukoil had expressed interest in the second exploration round launched in April that includes two blocks bordering Syria, named 1 and 2.

She said that Cabinet’s approval of those blocks “means that it knows a deal will be brokered” with Syria.

Baroudi said the massive wealth at stake would likely bring Lebanon, Syria and Israel to the negotiating table.

“All the major firms involved in this sector do not flirt with countries that have problems, especially with their maritime boundaries,” Baroudi said. “They want to have clear-cut agreements, otherwise they will not come.”

MP Yassine Jaber, the chair of Parliament’s Foreign Affairs and Expatriates Committee, agreed.

“Of course this is what’s pushing us, to be able to lure big companies,” he said.

If the statements about Syria’s intentions to demarcate the border are proven, the question becomes how Lebanon will be represented at the table.

Lebanon’s indirect negotiations with Israel were aided by a unified stance among the country’s top leaders, but talks with Syria could be hurt by internal differences.

Prime Minister Saad Hariri has ruled out any direct negotiations with Damascus on any issues until a political solution to the Syrian crisis is reached. However, both countries maintain diplomatic relations, with embassies in Damascus and Beirut respectively.

Jaber expressed belief that Russian mediation could help Lebanon sidestep the political quagmire that direct talks with Syria could present. But he said he was confident that local obstacles could be overcome even without such mediation, given that the country’s leaders had agreed to negotiate with Israel even though the two were still at war.

“We are talking with an enemy in the south, so it’s much easier to have a joint committee to look at the dispute in the north, with experts,” Jaber said, adding it was in the interest of all countries to find peaceful resolutions to their disputes. “It’s quite simple: Oil and fire do not mix.”

https://www.dailystar.com.lb/News/Lebanon-News/2019/Jun-20/485660-oil-hopes-fire-up-lebanon-syria-border-issue.ashx

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# Exclusive: Russia to boost LNG output fivefold to supply Asia

Utilizing the Arctic, Moscow eyes 20% global market share, energy minister says.

MOSCOW – Russia aims to increase its liquefied natural gas output about fivefold by 2035 to capture about 20% of the global market.

The country envisions up to 70% of its LNG exports by then going to the Asia-Pacific region, through the Arctic Ocean shipping route.

Energy Minister Alexander Novak told Nikkei in Moscow that Russia’s government intends to strengthen its cooperation with Japan in terms of funding and technology for the LNG and related sectors.

Japanese Prime Minister Shinzo Abe and Russian President Vladimir Putin are expected to discuss economic cooperation in areas including energy when they meet in Osaka on June 29 on the sidelines of the G-20 summit. The leaders will also discuss a peace treaty and other matters between the countries.

Novak could join Putin's delegation.

Russia's current LNG output is about 28 million tons a year. This combines output from the Sakhalin-2 project, in which Japanese general traders Mitsui & Co. and Mitsubishi Corp. participate, and the Yamal LNG project in Arctic Russia.

Russian Energy Minister Alexander Novak told Nikkei that Russia aims to increase its LNG output about fivefold by 2035. The plan is to raise the total, which now represents around 6% of global demand, to between 120 million tons and 140 tons by 2035, according to Novak.

Qatar and Australia each accounted for over 20% of the global LNG market in 2018. Russia's goal is to rival these producers as well as the United States in LNG output.

Novak said the Asia-Pacific region is home to some of the world's biggest LNG markets, and that Russia expects to boost exports to Japan, China, India, South Korea and Vietnam.

Russia also exports LNG to Europe but has hastened the introduction of a planned Arctic Ocean shipping route so that 60% to 70% of its exports will go to Asia-Pacific, Novak said.

Russia hopes to attract Japanese technology, loans and investments to its LNG sector, Novak said, adding that Moscow welcomes foreign partners, including Japan.

He also expressed hope that final-stage negotiations between Russia's Novatek and Japanese companies, including Mitsui, regarding investments in the Arctic LNG 2 project will soon

come to fruition.

Russia’s annexation of Crimea in 2014 triggered sanctions from the West. Novak said there is a possibility that the sanctions could apply to the LNG deals. He added that Russia will consider procuring funds in currencies other than the dollar as a way to maneuver around the sanctions.

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# RWE warns on European gas demand

## The German utility paints a sobering picture for the future of the fuel, even in a lower price environment.

Low carbon heating systems and a huge growth in renewables will continue to drive down northwest European (NWE) gas demand, which has been structurally decreasing since the

financial crisis, Andree Stracke, chief commercial officer at the supply and trading arm of German utility RWE, told the Flame gas conference in Amsterdam in May.

The RWE base case for NWE gas demand is 227bn $m^3$/yr in 2030, down from 267bn $m^3$/yr in 2018 and from 309bn $m^3$/yr in 2010. Its high case scenario is 275bn $m^3$/yr, but its low case is just 178bn $m^3$/yr.

Substitution in the retail sector will drive the highest demand decrease. Electric heat pumps are a “real killer”, says Stracke, along with wood pellets and better insulation.

Residential and commercial gas demand peaked as far back as 2003 and has trended slightly lower ever since. RWE predicts a 21pc decrease from 2018 levels by 2030—rising to 30pc in a high-efficiency, low-demand scenario—which is “really significant” as heating is the bulk of overall demand.

Recent UK and Dutch regulation to outlaw gas supply to new homes are “really huge milestones”, says Stracke, even though new houses make up, for example, only 2pc of the housing stock in Germany . The Netherlands is aiming for 200,000 houses ‘free of gas’ by 2030.

Limiting gas supply bans just to new houses would not be enough to ensure meeting the heating sector’s overall strict emission reduction targets, he notes. Regulation covering existing houses could push significant costs onto house owners and tenants, so governments are loath to legislate. RWE’s base case scenario sees heating sector regulation reducing gas demand, but only slowly.

But retrofitting, as is being promoted in UK and Dutch initiatives, once a community agrees to it, could go much further, Stacke warns, confessing that, “after 25 years in the gas industry, the new rules are a shocker to me”.

On a slightly more positive note, there could be some

switching from fuel oil to gas in the German heating market, says Stracke, but only if legislation mandates customers to switch away from oil.

## Gas to power

Gas demand for power has fallen by 16pc from a 2010 peak, mainly due to renewables, as well as high gas prices relative to coal. Germany has 100GW of installed conventional thermal capacity, but now has 110GW of renewable capacity, says Stracke.

RWE's base case sees relatively flat overall demand for gas power, as German and Dutch coal exits and a reduction of German, French and Belgian nuclear capacity are largely compensated by an increase in renewables.

Quicker nuclear and/or coal phaseouts could offer additional gas demand upside, as the resultant electricity supply gap could not be filled fully by renewable generation. Lower gas prices could also drive demand with a potential major impact in the power sector, although not in the retail sector.

On the other hand, politicians and voters want to reduce CO2 further, says Stracke.
"We have underestimated the will of the people to go into renewable energy," he says. "A renewables glut is coming, and we have to adapt."

One reality of this new paradigm is a significant increase in the need for gas-fired power capacity as a back-up for intermittent renewables. NWE, in RWE's base case, will see 39pc increase in peak gas demand by 2030, from c.300mn $m^3$/d to c.400mn $m^3$/d. Gas transmission capacity will therefore still be needed, but only on a short-term basis, says Stracke. And the current driver of gas storage usage, for summer/winter seasonality, will also change.

The challenge is that "no-one so far" is prepared to pay for

the increase in required peak gas-fired power capacity, particularly as baseload requirements decrease, says Stracke. “Who is investing, given the uncertainty? We have not seen it. We need sustained higher peak power prices into the future”.

Without a capacity market, as the UK and France have introduced, there is no incentive to invest, beyond small-scale open-cycle turbines, as these can pay back quickly over 3-4 years, he adds.

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# US sanctions debilitate Venezuelan oil output

## President Nicolas Maduro is standing firm, despite oil production falling to levels not seen since the infamous oil lockout

# of 16 years ago

Venezuela's oil sector continues its precipitous collapse, stricken by US sanctions and mismanagement, which have reduced crude production to its lowest level since 2003 – when several months of nationwide protests at Pdvsa, the state-owned oil company, wiped out almost a third of production.

US sanctions on Venezuela's energy sector are having a crippling effect. The US Energy Administration (EIA) has reported losses in overall Venezuelan production of around 400,000bl/d since the year began. In April, output averaged just 830,000bl/d according to the EIA, while Opec's *Monthly Oil Report* put the estimated production figure even lower at 768,000bl/d.

Output has recovered slightly from March, when power outages across the country devastated the sector. Information provider S&P Global Platts calculated roughly 40,000bl/d returning to production in April, but many facilities remain damaged and further losses are expected. Power failures paralysed exports at Venezuela's main oil terminal Jose, while the Puerto la Cruz refinery in Anzoategui, already barely operating, was put out of commission.

Until now, most of the production losses have been from Maracaibo and the Maturin sub-basin. But the power issues are now also starting to hit the Orinoco Belt oil fields. At the beginning of 2019, Orinoco constituted 40pc of total national output, according to the Center for Strategic and International Studies (CSIS) thinktank.

Three Orinoco upgraders were taken offline and are now in "recirculation" to prevent damage, but not outputting heavy crude. The Petropriar upgrader (jointly owned between Pdvsa and Chevron), Petromonagas upgrader (Russia's Rosneft/Pdvsa) and Petrocedeno upgrader (Total/Norway's Equinor/Pdvsa) were all affected and are still out of action due to lack of

storage space. The Petrolera Sinovensa upgrader (China's CNPC/Pdvsa) is partly running but only at 105,000bl/d. Combined, the four upgraders have a normal synthetic crude capacity of 600,000bl/d.

The Orinoco Belt is also struggling to cope with shortages of diluent, previously imported from the US, and available tankers. Last year, Venezuela imported almost 90,000bl/d of naphtha, mostly from the US, to help blend its heavy crude. Issues with sourcing alternative supply, as well as the scarcity of funds, is having a significant impact in the Orinoco. Platts reported combined production had dropped 77pc by mid-May to just 169,800bl/d, from 764,100bl/d at the beginning of April.

"Venezuela was able to obtain diluents from Russia and India after the OFAC [Office of Foreign Assets Control] action, but not in the volume needed for the Orinoco to run smoothly," says Patrick O'Connell, fixed income analyst at Alliance Bernstein, a global asset management firm. "Partially due to the lower availability of diluent, Venezuela is converting its large Orinoco upgraders into simple blending facilities, which will yield a less valuable type of crude oil but save on imported intermediate products."

## Clinging on

Damage to the country's oil industry may be a pyrrhic victory for the opposition-led National Assembly, increasing the pressure on incumbent president Nicolas Maduro, but so far there has been little sign of regime change.

On 30 April, head of the Venezuelan National Assembly and self-declared president Juan Guaido, alongside the recently freed opposition politician Leopoldo Lopez, called for national protests to unseat Maduro from power. He claimed Maduro no longer had the backing of the military; but the Venezuelan president, surrounded by key military personnel,

quickly denounced the appeal as an attempted coup.

Pressure on the current regime will only mount, though, as crude production continues its prolific collapse. Carlos de Sousa, lead economist at Oxford Economics, a global economics forecaster, expects “oil production to fall to 500,00bl/d by year-end – China and India will remain the main buyers”.

But the CSIS predicts that, if Maduro remains at the helm, then output will likely fall below 500,000bl/d as early as October. If he is still in power by November the institution expects production to be hovering around 400,000bl/d. Even if the opposition takes control it will be difficult to return national output to 1.3mn bl/d any time soon. Damage to oil assets, attracting foreign investment and changes in global oil markets in recent years all point to a tough recovery even if the opposition gain control.

## Cutting its losses

Meanwhile, Venezuela’s financial position could soon deteriorate even further. In May, the National Assembly voted to pay the $71mn interest on the Pdvsa bond 2020, the only bond the country has yet to default on, to avoid creditors seizing its US-based refining subsidiary Citgo. Bond holders control 50.1pc of shares in the company, while the remaining 49.9pc serves as collateral for a $1.5bn loan issued by Rosneft, who could equally enforce its security should Venezuela default on the payment.

“We believe the country will do what it can to keep current on these payments, as a default on this bond would lead to creditors attempting to seize control of Citgo – a valuable overseas asset which would likely prove crucial in an eventual debt restructuring,” says Thomas Nicol, product manager at Alliance Bernstein. “The National Assembly successfully paid the $71mn coupon within the 30-day grace period in May 2019, but making a payment of more than $900mn in October will prove

more challenging, particularly in the absence of regime change against a backdrop of US sanctions and plummeting domestic oil production.”

Daniel Pilarski, a partner at law firm Watson Farley & Williams, a global law firm, doubts the legality of a forced sale. “Even if Venezuela wished to sell (which they do not), it would violate existing sanctions for any parties (US or non-US) to purchase Citgo and pay the proceeds to Pdvsa. Also, given Pdvsa’s dire financial position, the transfer would be potentially subject to fraudulent conveyance and similar conditions, so it would be very hard for the purchaser to get clean title,” says Pilarski.

Citgo has so far escaped sanctions but has until 27 July to end all crude imports from Venezuela. Similarly, US oil services companies Baker Hughes, Chevron, Halliburton, Schlumberger and Weatherford International all have a three-month window to exit the country.

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# Progress made on southern maritime demarcation talks

Israel has agreed to a number of Lebanese conditions for negotiating the demarcation of their joint maritime border, marking a positive shift in years-long efforts to find a solution to the dispute.

According to a number of reports, including in local newspapers The Daily Star and Al-Akhbar, as well as Agence France Presse a new round of shuttle diplomacy by Acting U.S. Assistant Secretary of State for Near Eastern Affairs David Satterfield had been successful in setting some broad outlines for negotiations. These include a Lebanese demand to negotiate both the land and sea borders at the same time, and to hold negotiations under the auspices of the United Nations at Naqoura, Lebanon’s southernmost point, in the same manner that determined the Blue Line that marks Israel’s 2000 withdrawal from Lebanon.

Lebanese officials dispute more than a dozen points along the Blue Line, while a sliver of about 860 square kilometers of maritime area is disputed by Israel and Lebanon.

Lebanese officials have described the new round of talks as

“positive,” but have said outlying issues remain. This reportedly includes the duration of negotiations, which Lebanon has demanded be open ended, but Israel has called for limiting to a six month window.

In late April, Berri said Lebanon was ready to demarcate its southern maritime border with United Nations supervision, using the same mechanism adopted for the Blue Line. The U.S would act as a facilitator of the negotiations.

A small sliver of maritime Bloc 9, where exploratory drilling is slated to take place next year, sits in the disputed area. Blocs 8 and 10, both included in a second licensing round launched in January, also partially lie in this area.

While several rounds of negotiations have previously failed, Roudi Baroudi, an independent energy analyst with over 40 years experience in the field, said that large hydrocarbon finds in the region, and associated interest from leading companies, meant that all parties involved were keen to find a resolution.

“There are maybe trillions of dollars of hydrocarbons in this zone, and some of the biggest oil and gas players in the world are here,” Baroudi told LOGI. “They are not coming here to see us. They are coming here for our wealth, and big oil and gas companies don’t want to go exploring in an area where there is a problem.

For an explainer on the origins of southern dispute, click here.

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# Syria expects oil and gas production by 2023

Syrian Oil Minister Ali Ghanem announced that the country expects commercial production of offshore gas to begin by 2023, in a development that once again raises the issue of demarcating Lebanon’s northern maritime border with Syria.

Ghanem said that a Russian company already drilling onshore in Syria would go about the maritime exploration. The size of a single one of the five blocs Syria has delineated would hold reserves equivalent to its entire onshore reserves, he said, adding he expected some light oil to be found.

The announcement comes soon after Lebanon launched a second offshore licensing round which includes Blocs 1 and 2 – both of which lie in the north and border Syria’s maritime area. A

zone of roughly 830 square kilometers is under dispute, according to Roudi Baroudi, an independent energy consultant with more than 40 years experience in the sector.

But while Lebanon is currently involved in serious UN-sponsored mediation efforts to resolve its southern maritime border dispute with Israel, there has been no public announcement of preparations to negotiate with Syria. The issue is politically sensitive, given divisions among factions in the Lebanese government over the nature of the country's ties to Syria, effectively frozen since the Syrian crisis began.

The demarcation issue centers around the fact that Syria has never unilaterally published its maritime boundaries, while Lebanon did in 2011. When Lebanon's line is compared to the blocs that Syria published in March 2019, there is an overlap of about 832 square kilometers, Baroudi said.

Because maritime boundaries are based on terrestrial borders, Baroudi said that demarcating the maritime border could be as simple as pinpointing the final land point between Syria and Lebanon, which would be in the middle of the northern Nahr al-Kabir. "It has never been fixed because it's never been relevant, but it's no more than a technical issue" he said.

Baroudi noted that the northern demarcation issue would be aided by a resolution to the southern maritime border dispute with Israel, currently the subject of intensive U.S.-mediated negotiations. A resolution to that dispute would set a border point between Israel, Cyprus and Lebanon, known as a tri-junction point, which would aid in the drawing of the Syrian-Lebanese Cypriot tri-junction point.

Potentially complicating matters is the fact that Israel and Syria have not signed the UN Convention on the Law of the Sea, which in its article 74 sets out rules for delineating maritime borders between states with opposite or adjacent

coasts.