

# How cleaner ship fuel will raise costs, ease coughing



By Brian Wingfield/ London

Ship owners and refiners are facing the biggest change to their industries in a generation: strict environmental rules for vessel fuel that kick in on January 1, 2020. Technically, it's just a cap on sulphur content, but the repercussions are sweeping. Governments and companies across the globe have raced to prepare amid concerns about fuel shortages that could affect thousands of ships. Consumers, from cruise ships to truckers, will face higher prices. Some companies are already making a fortune. But the health benefits are expected to be substantial around the globe. If adopted widely – and enforcement is an open question – it may be the biggest single global change for air quality ever.

## 1. What are the new rules?

Fuel must have a maximum sulphur content of 0.5%, down from the current 3.5% limit in most cases. Known as IMO 2020, the regulation is set by the International Maritime Organization,

a UN agency with responsibility for the safety and security of shipping as well as marine pollution by ships. Sulphur emissions are linked to acid rain and medical conditions such as asthma and heart disease.

## 2. Why does shipping cause pollution?

Because ships use heavy fuel oil – the gunk that's left over in the refining process once more valuable, less sulphurous products such as gasoline, diesel and jet fuel have been squeezed out of crude oil. Although IMO rules have progressively tightened sulphur limits since 2005, there's a long way to go: A Finnish study in 2016 estimated that air pollution from ships under current guidelines would contribute to more than 570,000 premature deaths worldwide between 2020 and 2025.

## 3. How are refiners affected by shipping rules?

Even though the rules apply specifically to ships, those vessels have to get their fuel from somewhere. Simply put, if refiners can make more IMO-compliant fuel, they stand to make more money. Complex refiners, such as those on the US Gulf Coast, would benefit. So-called simple plants, which can't adjust as easily, could be at risk. Demand for so-called sweet (low sulphur) crude such as Brent is set to rise, at the expense of sour (high sulphur) crude produced mainly in the Middle East. Refiners' economics from making a range of fuels – from gasoline to jet fuel – are being upended.

## 4. Which fuel will shippers switch to?

As of now, they seem to be favouring a somewhat broad group of products called very-low sulphur ship fuel, or VLSFO. Another option is marine gasoil, a distillate-based fuel. For this reason, analysts expect distillate demand to increase when the rules take effect. However, no single, IMO-compliant benchmark fuel has emerged. The market is still evolving, and companies including Exxon Mobil Corp and Royal Dutch Shell Plc plan to offer a range of products. Shell has already made \$1bn from fuel oil trading this year.

5. Will there be enough compliant fuel?

It depends who you ask. In recent months, a flotilla of vessels storing compliant fuel has gathered near Singapore, the world's largest bunkering port. Shipping company Euronav NV has even filled a supertanker with oil to help it comply with the rules and sent it to the region – for a profit of \$52mn by one estimate. In other places, such as Gibraltar, there's been a back-up of vessels. Researcher EnSys Energy & Systems Inc – an early sceptic of fuel availability – thinks that even if there's enough compliant-fuel at the outset, stockpiles will wind down within months.

6. Do shippers have any other options?

Yes, they can install pollution-reducing scrubbers that can handle oil with a higher-sulphur content. But here's the thing: Fitting a scrubber can cost as much as \$6mn per ship. New orders for scrubbers have dwindled, and only 3,000 new orders are expected to be installed by the end of the year, according to BloombergNEF. That means the vast majority of ships will need to switch to using more expensive, low-pollutant fuel.

7. How will these changes be enforced?

The IMO says it expects strict enforcement of the rules, and it's up to ports to make sure that happens. Some, such as Greece, have pledged strict adherence and potential sanctions for violators. Others, like Fujairah, the Middle East's main bunkering hub, are taking a much softer approach. In places like Denmark and Norway, drone aircraft are being used to sniff out those who run afoul of the IMO's mandate. Still, it's going to be tricky – about half of the IMO's members didn't sign up for the switch.

8. Who will suffer?

Potentially anyone who buys petroleum products – including cruise ships, trucking companies and automobile drivers. That's because the extra demand for cleaner fuel from shippers

could mean refiners may produce lower quantities of products such as jet fuel and gasoline. Some shippers contend that the new rules have the potential to upend world trade, since the cost of compliance will be high for many.

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## **A major shipping fuel change is coming, and so are higher prices**



Bloomberg/ London

A defining moment in the history of the oil-refining and shipping industries is at hand.

In fewer than two weeks, thousands of ships the world over will be forced to use fuel containing less sulphur in order to comply with global rules set out by the International Maritime Organization. Those who don't could face penalties and even imprisonment. Ports are deploying drones to – literally –

sniff out wrongdoers. The regulations are having a profound effect on oil refineries and the cost of seaborne trade looks set to rise.

What's the big deal?

For decades, shipping has been the oil market's dumping ground for a pollutant blamed on aggravating human health conditions including asthma and causing acid rain. That's because refineries have struggled to eradicate it when turning crude into fuels. Even so, when the regulations were mandated back in October 2016, they came as a shock to many observers who had expected a later start date. While a panic about getting ready has subsided, there's clearly still work to do – as a slump in the price of non-compliant fuel demonstrates.

“IMO 2020 is the most fundamental and dramatic product specification change the oil industry has experienced, with an impact on both shipping and refining,” said Torbjorn Tornqvist, the chief executive officer of Gunvor Group, one of the world's largest oil and gas traders. “It has the potential to change every product and crude differential out there.”

The cost of shipping a twenty-foot box-load of goods from Latin America to Europe could rise by \$26, according to IHS Markit, a consultancy. A week-long ship cruise could go up by \$130 per cabin, the firm estimates. Add 5 cents onto a crate of bananas.

It's still too early to say exactly who the biggest winners and losers will be among refineries because there are thousands of variables that shape their profit – more than 600 grades of crude, and many ways of setting up the plants.

Safety concerns

The shipping industry has been consistent in flagging a safety concern about the rules. As yet, there's no single global standard. The new fuel must simply have certain properties – including sulphur and other important metrics – that don't exceed specified levels.

But the lack of a single global product means refineries can

make a compliant fuel in different ways. It's thought that some will essentially be low-sulphur crudes that are carefully mixed with other oils, for example. Another way of making the product is to mix the residues from crude that have gone through what's known as vacuum processing in a refinery with other material. These different approaches mean the ships' chief engineers will need to be vigilant so as to avoid mixing incompatible fuels.

Proof of the greater risks have emerged in northwest Europe, where supplies of the new fuel have been found to contain too much sediment. If such fuel found its way onto ships, it could potentially clog filters and lead to engine problems.

"We still have concerns over safety and availability of compliant fuels," said Guy Platten, secretary general of the International Chamber of Shipping, an umbrella group for maritime trade associations. "This is a pressing issue."

#### Trade impact

There are already signs that the changeover is having an impact on maritime logistics.

In Singapore, the world's biggest refuelling centre, vessels have had to wait longer than normal to collect bunker fuel. Likewise, the government of Gibraltar said that a lack of refuelling barges has emerged.

"When you consider that 90% of global trade is carried out by seas, it is very important," said Robert Hvide Macleod, the chief executive officer for the management unit of Frontline Ltd, one of the world's biggest supertanker owners. "It will surely be disruptive and create some supply chain bottlenecks in the early goings and logistics constraints when it comes to sourcing marine fuels."

In broad terms, fuel represents shipping's single biggest expense and the new types are trading at several hundred dollars per tonne more than the old variety. So the cost of seaborne trade could creep up if owners manage to pass on the higher prices.

"I think we will see its impact on global trade in terms of

waiting days and increased costs,” said Sadan Kaptanoglu, president of BIMCO, the world’s largest shipping association. “There could even be chaos in extreme situations, where fuel shortages could delay cargo deliveries and non-compliance by ships ending in port state punishments and court cases.”

### Compliance complications

It’s important to remember that oil refineries and shipping companies have spent billions getting ready.

Some ship owners installed scrubbers, units that can cost several million dollars each and allow carriers to remove sulphur from fuel as it’s burnt. This enables them to keep using today’s cheaper product. Likewise, refineries have invested in technology to convert sulphur-rich crude into higher-quality fuels.

For compliant companies, cheating by others is a problem. Yet there could be non-compliance, at least initially. Industry estimates are that something like 10%-15% of the fleet won’t comply with the rules at the start.

Not every country in the world signed up to the regulations, including some large coastal states with significant refining capacity. Even among those that did, not all look likely to start with strict enforcement. There’s also a disparity between what penalties will be imposed from one nation to the next.

South Africa, which sits on a shipping lane connecting eastern and western hemispheres, doesn’t yet have the domestic laws in place to punish non-compliant vessels.

### Bottom line

Nevertheless, these rules should work.

Full enforcement may happen more slowly than the IMO and some in the shipping and refining industries would like. There’s a big financial incentive to cheat, and an opportunity to do so on selected trades.

Barring any obvious safety concerns though, the overriding view of analysts is that there should nonetheless be

substantial compliance.

That means less airborne pollution and be a positive for those companies that invested in conforming.

“There’s almost certainly never been a simultaneous global specification change in the oil industry,” said Spencer Welch, oil markets and downstream director at IHS Markit. “For the whole world to change specification of a product on the same day is almost unheard of.”

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## **Bullish oil bets surge after Opec+ reaches deal on cuts**



LONDON, Dec 16 (Reuters) – Hedge fund managers piled back into petroleum last week after Saudi Arabia and its allies in the OPEC+ group of major oil exporters announced deeper-than-expected cuts to their production in the first quarter of 2020.

Hedge funds and other money managers bought futures and options equivalent to 154 million barrels in the six most



important contracts linked to petroleum prices in the week to Dec. 10.

Purchases were the largest in any one week for more than two years, according to position records published by ICE Futures Europe and the U.S. Commodity Futures Trading Commission on Friday.

In recent weeks, portfolio managers have struggled to form a consistent view about production and consumption next year, amid conflicting signals about the intentions of OPEC+ and prospects for a U.S.-China trade deal.

The result has been exceptional volatility and reversals in hedge fund positioning on a weekly basis. Last week's purchases reversed sales of 107 million barrels in the previous week, which in turn reversed purchases of 144 million in the week to Nov. 26, as managers were whipsawed by rumours in the run up to the OPEC+ meeting and conflicting signals on the likelihood of a phase one U.S.-China trade pact.

In the event, funds were buyers across the board last week, including NYMEX and ICE WTI (80 million barrels), ICE Brent (43 million), U.S. gasoline (12 million), U.S. heating oil (11 million) and European gasoil (8 million).

Buying in NYMEX and ICE WTI was the heaviest since the original OPEC+ output deal was announced in December 2016 (<https://tmsnrt.rs/2YPLHSM>).

The hedge fund community has now accumulated a net long position across the six main contracts equivalent to 775 million barrels, up from a recent low of 437 million in early October and the highest since late May.

Fund managers own 5.3 long positions for every short, up from 2.67 in the middle of October. From a positioning perspective, risks look roughly equal, with the long-short ratio sitting roughly in the middle of its range over the last three years.

The danger of long liquidation causing a setback in prices is matched by the potential for some further short covering and fresh buying pushing the market higher.

From a fundamental perspective, however, fund managers seem increasingly confident the global economy will avoid a recession and OPEC+ will cut output enough to avert a build up in inventories next year.

The result is that hedge funds are gradually loading up on petroleum derivatives, buying a total of 338 million barrels over the last nine weeks, in anticipation of a tighter market and higher prices in 2020.

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## **GECF highlights challenges posed by climate change at COP25**



Gas Exporting Countries Forum (GECF) secretary-general Dr Yury Sentyurin spoke at the UN Climate Change Conference (COP25) that concluded in Madrid recently.

Addressing the participants, the GECF official reaffirmed the crucial importance of challenges posed by climate change, alongside with the shared values and joint efforts undertaken

by the international community to deal with the environmental issues.

Speaking on behalf of the organisation's member countries – 19 major natural gas producers, Sentyurin emphasised that the natural gas industry looks seriously to technology options that can further promote decarbonisation potential of natural gas, including carbon capture, utilisation and sequestration options, and production of hydrogen from natural gas.

This adds to other progress in efficiency and digitalisation that enables a substantial reduction of greenhouse gases emissions along the entire supply chain.

Furthermore, the current expansion and technology progress of natural gas vehicles (NGVs) across the world offers a valuable opportunity to reduce emissions in the transportation sector.

GECF's strong belief in the role of constructive international co-operation as a driver for effective global responses to climate change and sustainable development was specifically highlighted by the speaker.

Meanwhile, the professional community's main concern is that in the era of energy transitions, introduction of discriminatory regulation against cleaner hydrocarbon fuels such as natural gas, disturbs overall gas markets design, undermines investment in critical gas transport infrastructure and new gas supply projects. Natural gas is a balanced solution that contributes substantially to reducing carbon intensity and pollution resulting from energy-related activities, supports access to modern energy, improves availability of supply, and provides affordable energy.

The "blue fuel" can also be a vector of increased co-operation and technology transfer between energy stakeholders. These credentials have been explicitly recognised in the G20 Ministerial Meeting on Energy Transitions and Global Environment for Sustainable Growth in Japan early this year.

The GECF engagement in the UNFCCC as an observer organisation marks the willingness to contribute to scale up the Member Countries' collective actions in order to reduce the environmental footprint of natural gas.

In this context, the GECF has initiated the Environmental Actions Framework that aims to create a supportive platform allowing Member Countries to share best practices dealing with the environmental challenges, building capabilities and establishing progressive research collaborations on various environment-related topics. This commitment is largely anchored in the GECF Heads of State Declarations including the recent one adopted in Malabo, Equatorial Guinea and the Organisation's Long-Term Strategy.

In line with this environmental ambition, the GECF has reinforced its co-operation with various organisations to strengthen its research activity, exchange expertise and develop studies related to the interactions between energy and our environment.

Study outcomes are to be translated into concrete recommendations on energy policy actions for the GECF Member Countries.

At the same time, the recently established GECF Gas Research Institute is set to become a pivotal project for the organisation with the aim to develop technical knowledge and innovative technologies that reduce GHGs emissions.

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هیل إلى بیروت... القدیم علی  
! قَدَمَه؟



منذ ولاية جورج دبليو بوش، إقترنت السياسة الاميركية بالنفط. تهتم أميركا أو لا بأسعار النفط الذي تستخدمه لبسط سيطرتها على الأسواق حاميةً بذلك اقتصادها الوطني، وفي الوقت عينه، تضغط من خلاله على قوى منافسة تعتمد بشكل أساسي عليه وعلى رأسها الصين. يتكئ الاقتصاد الأميركي إذاً على "التموين النفطي" الذي يؤمّن بدوره استقراراً في السوق، كما يؤمّن نوعاً من "التسيّد" يزخر به الدولار على حساب العملات الأخرى.

من هنا، يتخذ موضوع الغاز اللبناني - بكل ما يحمله من تفاصيل تقنية - منحى استراتيجياً بامتياز، علماً أن أبعاده السياسية في شقيها الداخلي والخارجي مرتبطة بشكل عضوي. فخارجياً يتخذ النفط اللبناني أهمية مضاعفة نظراً "للكميات الهائلة" التي بات من شبه المؤكد أنه يخترنها براً وبحراً. وان كانت هذه الكميات نظرياً لا تغيّر الميزان الاستراتيجي المتعلق بانتاج الطاقة في الشرق الاوسط والمطلوبة بغالبيتها للانتاج الصناعي، إلا أن الحقول اللبنانية متصلة جغرافياً بالحقول المصرية والاسرائيلية والسورية والأهم القبرصية. ذلك يعني انه وعدا عن الدور المباشر الذي يحظى به "غاز لبنان" فهو قد يبرز أيضاً لدى طرح إشكالية أساسية هي المتعلقة بأماكن انشاء محطات تسييل وتكرير الغاز بالإضافة الى المنشآت والبنى التحتية الضرورية لتسييله مع آليات نقله وتسويقه. وعليه، لا يمكن التنبؤ بهوية الدولة التي ستتحوّل بما قد يستجد من تحالفات إقليمية ودولية؛ هذا الامر سيحتم حداً أدنى من التعاون بين الدول المعنية، وهنا يكمن بيت القصيد، بما أن هذه البلدان في حالة عداوة أو في حالة تصادم ما بين المحاور السائدة في الاقليم والمرشّح للتفاقم بسبب التنافس الشرس على الثروة الجديدة في شرق المتوسط.

اما البعد الثالث الذي يكتسبه غاز لبنان فـ"مالي" بحت والمقصود هنا ليس مالية الدولة بل الميل الى الالتفاف حول القانون لاستفادة الفريق السياسي المهيمن، وذلك من خلال السمسات وعقود الخدمة للشركات والانشاءات المرتبطة بهذا القطاع فضلاً عن القدرة على توظيف "الازلام" تماماً كما جرى ولا يزال في شركتي الاتصالات وكازينو لبنان والكسارات والسدود وغيرها من المجالس التي قد تكون اكثر إغراء، خصوصاً اذا استغلت المراسيم كمنفذ مقونن للهيمنة على ما تبقى من موارد في البلاد، لا سيما وأن التعويل على العائدات النفطية "اليوم"، أي في ظلّ عدم وجود قانون واضح ينظم وجهة استخدام هذه الاموال من خلال الصندوق السيادي، يعني حُكماً أننا تخلينا عن ثروتنا هذه لخدمة الدين وتحويلها من أموال استثمارية "الى أموال" منهوبة.

من هذا المنطلق، لا يجوز الإفراط في التعويل على الثروة النفطية لانتشال لبنان من مأزقه النقدي، فالجدوى الاقتصادية، بحسب الخبراء، للنفط والغاز في المنطقة ككلّ لم تُثبّت بعد لا سيما وأن كلفة استخراج هذه المواد من قعر البحر تفوق بكثير الكلفة التي تتكبدها روسيا لاستخراج غازها. وبراى الخبراء، فإنّ امكان تصدير هذا الغاز الى أوروبا على سبيل المثال قد يكون صعباً بما أن الاسعار ستكون عاجزة عن منافسة الغاز الروسي من جهة، ومن جهة ثانية بسبب العوامل الجيو - سياسية في منطقة شرقي المتوسط. أما كلّ ما أثير عن احتمال إنشاء أنابيب لربط هذه الآبار بأوروبا مروراً باليونان فقد سقط عملياً بعد دخول اسرائيل الى طاولة المباحثات اضافة الى صعوبة تأمين الاموال الاستثمارية اللازمة له.

لا تعني كلّ هذه الفرضيات أن دولة من دول العالم الثالث كلبنان "عاجزة عن الاستفادة من ثرواتها النفطية بل يمكن استغلالها، وإن لم يكن للتصدير، فذلك في إصلاح الكهرباء وتحويل الانتاج ليرتكز على الغاز، وهكذا يتم تخفيض العجز وتالياً تقليص الخضوع لهيمنة صندوق النقد الدولي كلما وجدنا أنفسنا مضطرين الى الاقتراض بنسب وشروط تعجيزية"، بحسب الخبراء.

## الطروحات الاميركية

من جهة ثانية، تُضاف معضلة ترسيم الحدود التي لا تزال تتخذ حيزاً من المفاوضات والتي يوليها الجانب الاميركي أهمية كبيرة خصوصاً في ظلّ التواجد الصيني والروسي في المنطقة. ولا شكّ أن مساعد وزير الخارجية الأميركي للشؤون السياسية ديفيد هيل سيتطرّق الى هذا

.الملف خلال زيارته إلى بيروت في الايام القليلة المقبلة

طروحات ثلاثة، هي ما قدّمه الطرف الاميركي في ما خصّ مسألة ترسيم الحدود مع الكيان الإسرائيلي في المنطقة المتنازع عليها: الاول هو تقسيم رضائي بنسبة ثلث للكيان وثلثين للبنان. الثاني هو تصنيفها كمنطقة عدم أنشطة وبالتالي اعتبارها محظورة للطرفين؛ أما الطرح الثالث فيتمثّل باعتبارها منطقة أنشطة مشتركة، وهو ما يرفضه الجانب اللبناني حتى الساعة متسلّحاً بالقوانين التي ترعى حقوقه في المياه الاقليمية إضافة الى الطلب الذي كان تقدّم به الى الامم المتحدة لحلّ النزاع في هذه القضية" يقول الخبير في قوانين وسياسات الطاقة المحامي علي برّو

ويضيف برّو في اتصال مع "نداء الوطن" أن "قبرص تتحمّل مسؤولية مخالفة أحكام الاتفاقية مع لبنان سندا لاتفاقية 2007 حيث لم يكن ينبغي عليها ترسيم الحدود مع الكيان الاسرائيلي من دون موافقة الدولة اللبنانية. من جهتها، أودعت الدولة اللبنانية الامم المتحدة احداثيات منطقتها الاقتصادية الخالصة، إلا أنها قصرت في مطالبتها قبرص لخرقها احكام الاتفاقية معه. من الناحية القانونية، لبنان جاهز لعمليّة إعادة الترسيم وفقاً للوسائل العلمية التابعة لقانون البحار. ومن خلال لجوئنا الى القانون الدولي، سنتمكن من "استعادة حقوقنا السيادية في المياه البحرية

في الاطار عينه، يوضح الخبير النفطي رودي بارودي أنه "من المتوقع أن يأتي ديفيد هيل وفي جعبته ملف ترسيم الحدود البحرية. هذا الموضوع بحاجة الى حلّ جذريّ لا سيّما مع بدء لبنان بحفر أول بئر استكشافي مطلع العام المقبل. وبحسب قانون الامم المتحدة للبحار لا شكّ أن لبنان سيحظى بالحصة الاكبر من المنطقة (UNCLOS) الاقتصادية الخالصة المتنازع عليها، فصحيح أن الكيان الاسرائيلي ليس طرفاً في المعاهدة مع الامم المتحدة، الا أنه طبق قواعدهما من خلال تقيده بنود الاتفاقية بينه وبين قبرص. بالتالي أصبح من الممكن اللجوء الى إتفاقية تنمية مشتركة تماماً كما هي الحال بين الكويت والسعودية في ما يُعرف بالمنطقة المحايدة. بهذه الطريقة، تقوم شركة محايدة بعمليات الاستخراج وتوزّع لكلّ دولة حصّتها وفق "المعايير الدولية

كثيرة تصبح التأويلات عندما يتعلّق الأمر بغاز لبنان وليس هناك من حقيقة مطلقة عندما تكون المسألة جيو - سياسية. وحدها الايام المقبلة ستُظهر نوايا الولايات المتحدة تجاه لبنان إلا أن معيار

ترسيم الحدود البحرية يجب أن يبقى القانون الدولي منفرداً .  
ولعلّه من الافضل لهذه الثروة أن تبقى نائمة في قعر البحر لحين  
ايجاد حلول آنية تُعيد خلق اقتصاد منتج بدلاً من اقتصاد ريعي  
وترك هذا الملف يأخذ مساره الطبيعي لئلا تصبح عوائده... "أموالاً"  
منهوبة .

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## **Qatar to sequester 7mn tonnes of CO2 by 2027, says al-Kaabi**



Looking to advance efforts on sustainable development and the protection of the environment, Qatar is expected to increase its CO2 sequestration to 7mn tonnes by 2027, HE the Minister of State for Energy Affairs Saad bin Sherida al-Kaabi said yesterday.

Al-Kaabi, who is also the president and CEO of Qatar Petroleum (QP), made the statement during the panel session titled 'The Future of LNG in Meeting the World's Energy Demand' at the Doha Forum, which concludes today (December 15). Joining the minister during the panel discussion are ENI CEO Claudio Descalzi and Total chairman and CEO Patrick Pouyanné.

According to al-Kaabi, Qatar had started to sequester 2.5mn tonnes of CO2 this year, which is expected to reach 5mn tonnes by 2024. He stressed that many companies in the oil and gas sector "are trying to reduce" CO2 emissions and "looking at the environment more critically."

"In the oil and gas industry, we take responsibility in what



we do with carbon capture, storage, and looking at the environment in general. In Qatar, we've announced that we've started this year's 2.5mn tonnes of CO2 sequestration.

"In addition to that, with the expansion that we have announced earlier, by 2024 we will reach 5mn tonnes, and maybe for the first time, I can announce that we are going to reach about 7mn tonnes by 2027," al-Kaabi said.

"We have a responsibility to do more and I think most of the companies are being responsible, but for humanity, you need more energy and there are going to be developments that are required, otherwise, you can't have developments because renewables alone cannot keep up with the growth requirements," he continued.

Commenting on the future of LNG and its impact on the environment, al-Kaabi said Qatar looks at gas "as a destination fuel rather than a transition fuel."

"I definitely think that renewable energy is going to be part of the solution...there are a lot of countries that are moving away from coal in favour of natural gas, while some are abandoning nuclear energy for various reasons, so we see gas as the future," he pointed out.

The minister also said Qatar is looking at Asian countries, citing upcoming peak demand from countries, such as China and India, as well as the development of countries in Southeast Asia.

"We are increasing our production capacity; currently, we are producing 77mn tonnes per year (tpy). We already announced that we will reach 110mn tpy by 2024. Recently, we announced a further development, taking production capacity to 126mn tpy by 2027.

"We think there is a requirement for gas in the future; peak demand is coming from a lot of growing economies, such as China, India, which are the largest growth areas. Demand is also being driven by countries in Southeast Asia due to various infrastructure development projects," al-Kaabi said.

He added: "Asia is our focus area; considering its sheer population, it is the biggest growth area. As for developed

nations, mostly in Europe, we supply the entire continent, particularly those that use LNG. It is a big market and we don't see ourselves in competition with anybody, but rather we focus on what we control, which is our cost...we want to be efficient, safe, and reliable.”

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## PM attends signing of pact between QIA, Volkswagen



HE the Prime Minister and Interior Minister Sheikh Abdullah bin Nasser bin Khalifa al-Thani witnessed the signing between Qatar Investment Authority (QIA) and Volkswagen AG for the 'Project Qatar Mobility' initiative.

The agreement was signed by QIA CEO Mansoor al-Mahmoud and Volkswagen Group chairman Dr Herbert Diess. Joining the prime minister during the signing ceremony are HE the Deputy Prime Minister and Minister of Foreign Affairs Sheikh Mohamed bin Abdulrahman al-Thani and HE the Minister of Transport and

Communication Jassim Seif Ahmed al-Sulaiti.

'Project Qatar Mobility' underlines the mutual commitment to both smart technologies and green transport. QIA and Volkswagen will work together to develop the required physical and digital infrastructure to seamlessly integrate a fleet of self-driving vehicles into Doha's existing public transport network.

In a statement, the QIA said, "For the first time ever, a cutting-edge fleet of self-driving Level 4 electric shuttles will usher in a new era of urban mobility in a capital city in 2022." During the largest sporting event in the world, Qatar will thus be the venue for the world's first emission-free, electric and autonomous public transport system.

The goal is to develop a ground-breaking autonomous transport project and transform the future of urban mobility to a sustainable and commercial deployment of AD shuttles and bus services – even beyond 2022, QIA said.

Fostering cross-brand collaboration as blueprint for future AD (Autonomous Driving) solutions, Volkswagen Commercial Vehicles, Scania, MOIA and AID-Autonomous Intelligent Driving will play an important role in this project, it also said.

Autonomous, electric ID BUZZ AD from Volkswagen Commercial Vehicles will shuttle up to four passengers in West Bay area on semi-fixed routes, while high-tech Scania buses pick up larger groups.

Volkswagen Group's units AID and MOIA will provide the SDS knowledge and the app software to run the service. For the first time, four Volkswagen Group brands are working together on a project of urban mobility.

The landmark project will create a holistic ecosystem for autonomous driving, including the creation of an appropriate legal framework, smart city infrastructure and transfer of knowledge, which can be used as a blueprint to transform urban mobility, both in Qatar and beyond.

Closed testing of the shuttle vehicles and buses is expected to begin in 2020 and trials will start as early as 2021. The project will go live during 2022, providing a technical

showcase of future autonomous driving.

Diess said, "Project Qatar Mobility will play a very important role in our 'Strategy Together 2025+', addressing the economic growth, social development, and environmental management challenges identified as part of our vision, and underlines our commitment to investing in next generation mobility. We will be experiencing real-world learnings and use the project as a stepping stone for generations to come."

Within the Volkswagen Group, Volkswagen Commercial Vehicles (WVCV) is responsible for Autonomous Driving, Mobility as a Service (MaaS) and Transport as a Service (TaaS), due to the fact that first use cases are planned in the commercial sector. In future, WVCV will therefore be developing and producing corresponding Special Purpose Vehicles (SPV), such as robo-taxis and robo-vans.

Al-Mahmoud said, "For our cities to progress, we need a new wave of innovation. AI-enabled, emission-free transportation technologies will help advance urban mobility, while diminishing congestion and improving energy efficiency.

"We are proud that QIA has been able to partner with Volkswagen to ensure that Qatar is at the forefront of these new technologies. The development of a smart transport solution will help transform the future of urban mobility, both at home and around the world."

QIA is a long-term investor in the Volkswagen Group and has two highly-regarded representatives on its Supervisory Board of Directors. QIA continues to support the continued growth of the VW group, including its ongoing expansion and the leadership position it has taken in mass vehicle electrification.

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# Russian giant ready to join oil, gas exploration in Pakistan



ISLAMABAD: In a positive development, TatNeft – a Russian state owned oil and gas company that has so far drilled 50,000 wells all over the world is ready to join oil and gas exploration activities in Pakistan in a big way.

The top officials of the said Russian Company came up with their willingness in becoming part of the E&P activities in Pakistan in a meeting of Pakistan Russian Joint Working Group (JWG) on Energy that met here on Monday. It was the 7th meeting of JWG on Energy between the two countries, a senior official who was part of meeting told The News.

The meeting participants discussed oil and gas sector, gas pipelines, power projects and barrages and dams.

In the meeting, Russia was represented by Talyat Aliev, deputy head of department, Ministry of Energy of the Russian Federation whereas Joint Secretary Petroleum Division Syed

Tauqir Hussain represented Pakistan. This meeting was the part of Inter-Governmental Commission (IGC) between the two countries. A 64-member delegation headed by Minister for Trade and Industries for the Russian Federation Denis V Manturov is visiting Pakistan for four days from December 8 to 11 to attend an Inter-Governmental Commission. Both sides will find out more avenues in cooperation on trade, economic, scientific, and technical areas in IGC meetings. The Joint Working Groups of the countries on Trade and Industry will also meet today (Tuesday).

However, the official said that since its emergence, in toto 1100 oil and gas wells got drilled in Pakistan when it comes to comparing the total wells of 50,000 spud by TatNeft alone. More importantly Bank of New York owns 23 percent shares of TatNeft company, and the government owns 34 percent and over 40 percent shares doled out in Moscow Stock Exchange and London Stock Exchange.

In today's meeting, the official said, it is also mentioned that subsequent to signing of Inter-Governmental MoU on cooperation for implementation of Offshore Gas Pipeline Project on September 27, 2018, the nominated entities – Public Joint Stock Company Gazprom from Russian side and Inter State Gas System (Pvt) Limited from Pakistan side – signed Inter Corporate MOU on 6th February 2019.

In the meeting, both sides agreed that the nominated entities will expedite execution of the relevant documents and initiate the requisite studies in the near future.

In the oil and gas sector, it is agreed that since the signing of MoU in July 2017 between PJSC Gazprom and Oil & Gas Development Company Limited (OGDCL), there is a need to expedite progress on the mutually beneficial projects by both sides.

Both sides encouraged their respective nominated entities

Gazprom International and OGDCL to jointly work on the envisaged areas of cooperation. It was noted that Gazprom International is currently reviewing Rajian Field of OGDCL for possible Enhanced Oil Recovery (EOR) application whereas OGDCL is in the process of evaluating an opportunity in Algeria in which Gazprom is the Operator and OGDCL intends to be JV partner.

The official said, that the Russian side informed of the interest of PJSC NOVATEK to discuss LNG supplies to Pakistan from the portfolio of the company. The official said that Pakistan side appreciated the interest of PJSC NOVATEK and encouraged it to participate in LNG tenders as and when announced.

The Russian side informed about the interest of the Russian State Geological Holding ROSGEO to establish cooperation with the governmental bodies and organisations of Pakistan and expand cooperation in the field of geological exploration with Pakistani institution.

Both Sides appreciated the offer of cooperation of the Russian State Geological Holding ROSGEO for the Pakistani institutions in the creation of a scientific and computational center in Islamabad for the processing and interpretation of geological and geophysical data.

Pakistan side proposed Geological Survey of Pakistan (GSP), Oil and Gas Development Company Ltd (OGDCL) and Pakistan Petroleum Limited (PPL) as counterpart entities to further discuss the proposal in detail with Russian State Geological Holding ROSGEO. Both Sides expressed support for the training and professional development of the specialists in Pakistan in the field of oil and gas business on the basis of joint programmes of ROSGEO JSC and the Russian State Geological Exploration University named after Sergo Ordzhonikidze.

Pakistan side informed the Russian side about the forthcoming

divestment of government of Pakistan shares in OGDCL and PPL also encouraged Russian side to consider participating in the process to become a strategic partner by acquire the shares.

Pakistan side informed that Pakistan Refinery Limited, a subsidiary of Pakistan State Oil Limited needs revamping and upgradation, any Russian companies which may be interested in equity participation and EPC+F for revamping and upgradation of the refinery may approach.

Coming to Power Sector, the official said that the Russian side expressed its interest to continue work on the inter-governmental agreement on implementation of project of construction of 600MW combined cycle power plant in Jamshoro and expect that Pakistan side will take positive decision on the issue of feasibility of the project from the point of expanding generation of electricity.

Both the sides support the interest of Inter RAO-Engineering to consider the possibility to participate in engineering projects of construction of power generation and rehabilitation of existing power generating capacities in Pakistan.

The Russian side confirmed the interest of Power Machines PJSC in developing cooperation with Pakistani companies in the construction of new and modernisation of existing electrical energy facilities, including Muzaffargarh TPP.

Pakistan side has a the training centre at Muzaffargarh and invited Russian side to participate in the same. Russian side informed that Russian company IED has expressed interest in developing the training centre at Muzaffargarh TPP.

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# Sweden's energy deal collapses amid clash over nuclear power



\* Capacity tax to be phased out over 2 years from 2017

\* New reactors to be built to replace old ones (Adds Energy Minister comment, background)

STOCKHOLM, June 10 (Reuters) – Sweden said on Friday it would phase out some taxes on nuclear power and build new reactors to replace aging plants and secure energy supplies for decades to come.

Nuclear power providers in Sweden have said they would be forced to shut the country's loss-making nuclear reactors unless a tax on nuclear capacity is abolished, risking a spike in electricity prices and energy shortages for industry.

“The aim is ... to make sure we can always guarantee electricity at competitive prices, in a stable and sustainable way, both in the short and long term,” Energy Minister Ibrahim Baylan

told reporters.

The tax, which brought in about 4 billion Swedish crowns (\$488 million) in 2015, will be phased out over two years starting from 2017, but households will see their energy bills rise as Baylan said the government would increase taxes on energy users to make up for the nuclear tax. Heavy industry, however, would be excluded from the tax rise.

In a broad deal agreed with the main opposition parties, the government also said it would allow up to 10 new reactors to be built as the country closes its old plants, built in the 1970s and 80s.

The tax on capacity – which was increased last year – has hurt profitability at plants already under pressure from low market prices and the need for expensive upgrades to meet tougher safety standards since Japan's Fukushima nuclear disaster.

Swedish state-owned utility Vattenfall and Germany's E.ON have said they will shut four of Sweden's 10 nuclear reactors earlier than previously planned. One of them was shut last year.

In April, Vattenfall said all the remaining six reactors would have to close by 2020 if the capacity tax was not abolished.

Nuclear plants produced around 34 percent of Sweden's electricity in 2015.

The deal to end the tax is a blow for the Green Party, which wants nuclear power phased out as soon as possible and instigated the increase in the tax last year. (\$1 = 8.1964 Swedish crowns) (Reporting by Johan Sennero; Editing by Simon Johnson and Susan Fenton)

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# A new hope for US climate action



The United Nations Climate Change Conference (COP25) currently taking place in Madrid is supposed to prepare the ground for more ambitious national climate commitments. Nowhere is this more important than in the country where national leadership on climate change is least likely: the United States.

But a new report should give the world hope that it's not too late to keep the U.S. on a path in line with global aspirations to avoid the most catastrophic effects of climate change. This will require continued leadership from American states, cities and businesses that are already stepping up, combined with reinvigorated action from the federal government.

The U.S. is the world's second-largest emitter of greenhouse gases, and was the largest overall emitter for decades. Although China surpassed it in 2006, America's cumulative emissions remain unmatched. And yet, far from leading the way on climate action, the U.S. under President Donald Trump's

administration has rolled back many federal climate and environmental rules and formally indicated its intention to withdraw from the 2015 Paris climate agreement by late next year.

Fortunately, the rest of the U.S. is not following Trump's lead. Across the country, a massive coalition of states, cities, businesses, universities, and others have declared that "We Are Still In." Despite the federal government's official withdrawal from the Paris agreement, they will take the necessary steps to fulfill America's climate commitments.

This is no pie-in-the-sky declaration. The coalition's more than 3,800 participants (and counting) include states, cities, and counties that account for 65 percent of the U.S. population, nearly 70 percent of U.S. GDP equivalent to an economy larger than China's and over half of U.S. emissions. For example, 145 U.S. cities have committed to 100 percent clean electricity, and six have already achieved it.

But serious questions remain. How much progress can this coalition make to reduce emissions without the federal government's support? And how much better would the situation be if the U.S. administration and Congress recommit to climate action?

These are the questions that America's Pledge, a Bloomberg Philanthropies initiative, has been working to answer over the last year.

The conclusions are both reassuring and daunting. According to the initiative's just-released third report, "Accelerating America's Pledge" (produced in collaboration with the Rocky Mountain Institute, the University of Maryland and the World Resources Institute), stronger action by states, cities and businesses could reduce U.S. greenhouse-gas emissions by 37 percent (compared to 2005 levels) by 2030.

In other words, even without the federal government, the U.S.

can drastically reduce emissions, improve air quality and stimulate broad-based economic gains. Success would require an expanded coalition of non-federal actors to move quickly and ambitiously to transform energy and transportation systems, including by building on the innovative measures that U.S. states, cities and businesses are already taking.

The impact of such a movement promises to extend beyond U.S. borders, with bottom-up commitments in the country leveraged to increase climate ambition around the world. This is already starting to happen. For example, Alliances for Climate Action connects cities, states, the private sector, investors, universities and civil-society organizations in Argentina, Japan, Mexico, South Africa, the U.S. and Vietnam, so that they can work with one another and with their national governments to spur climate action.

But the role of the national government remains important. Despite the potential of bottom-up climate leadership, the fact remains that the results are much better when combined with top-down coordination and oversight. The America's Pledge report shows that aggressive U.S. federal re-engagement on climate action in the form of a comprehensive "all-in" strategy could reduce emissions by 49 percent by 2030, putting the country on track to reach net-zero emissions by mid-century.

So, despite three years of federal indifference, all hope for effective climate action in the U.S. is not lost. But we cannot afford to rest easy. The needed transformation will require broad citizen mobilization, increased energy productivity, disruptive innovation, updated market structures and forward-thinking investment. The U.S. Congress and executive branch must take aggressive, quick action, placing climate change and the associated economic transformation at the top of the policy agenda.

The rewards would be tremendous. Beyond environmental

benefits, the changes outlined in the America's Pledge report, if designed well and implemented efficiently, could boost prosperity, lower consumer costs and improve public health. By 2030, the economic transformation could deliver equal or better performance in electricity, vehicles, and buildings compared to fossil-fuel technologies and at a lower price.

For example, it is already cheaper to shut down coal-fired power plants and replace them with wind and solar than it is to keep the plants online. In addition, the transition will create new job opportunities and the careers of the future, including in renewable energy, electric vehicle manufacturing and sustainable forestry (among others). Recent analysis by the Global Commission on the Economy and Climate shows that smart climate action can create global economic gains of \$26 trillion by 2030, as well as generating 65 million jobs.

Non-federal U.S. actors have laid a strong foundation for climate action, and they continue to drive progress. But to achieve the necessary transformation as quickly as required, more elected U.S. officials and national leaders will need to step up.

Jules Kortenhorst is CEO of the Rocky Mountain Institute. Andrew Steer is president and CEO of the World Resources Institute. THE DAILY STAR publishes this commentary in collaboration with Project Syndicate © (www.project-syndicate.org)