

# Caspian Sea nations to sign landmark deal



The leaders of the five states bordering the Caspian Sea meet in Kazakhstan on Sunday to sign a landmark deal on the inland sea which boasts a wealth of oil and gas reserves and sturgeon.

Azerbaijan, Iran, Kazakhstan, Russia and Turkmenistan are expected to agree a long-awaited convention on the legal status of the sea, which has been disputed since the collapse of the Soviet Union rendered obsolete agreements between Tehran and Moscow.

Talks in the port city of Aktau should help ease tensions in a militarised region where the legal limbo has scuppered lucrative projects and strained relations among nations along the Caspian's 7,000-kilometre (4,350-mile) shoreline.

The Kremlin said the convention keeps most of the sea in shared use but divides up the seabed and underground resources.

It does not allow military bases from any other countries to be sited on the Caspian.

### **'Once a frontier oil province'**

Sunday's summit is the fifth of its kind since 2002 but there have been more than 50 lower-level meetings since the Soviet breakup spawned four new countries on the shores of the Caspian.

The deal will settle a long-lasting dispute on whether the Caspian is a sea or a lake—which means it falls under different international laws.

The draft agreement, briefly made public on a Russian government portal in June, refers to the Caspian as a sea but the provisions give it "a special legal status", Russian deputy foreign minister Grigory Karasin told Kommersant daily.

It is the Caspian's vast hydrocarbon reserves—estimated at around 50 billion barrels of oil and just under 300 trillion cubic feet (8.4 trillion cubic metres) of natural gas in proved and probable reserves—that have made a deal both vital and complex to achieve.

"Disputes arose when the Caspian was a frontier oil province," said John Roberts, a non-resident senior fellow at Atlantic Council's Eurasia Center, while it is "now well established, with major fields approaching peak... production."

### **'Expand cooperation'**

Any deal will "expand the field for multilateral cooperation" between the five states, said Ilham Shaban, who heads the Caspian Barrel thinktank.

But some are likely to view it as more of a breakthrough than others.

Energy-rich but isolated Turkmenistan is particularly excited

and President Gurganguly Berdymukahmedov has called for annual Caspian Sea Day celebrations from Sunday onwards.

Turkmenistan could benefit from a concession allowing the construction of underwater pipelines, which were previously blocked by the other states.

Nevertheless, analysts caution that Turkmenistan's long-held plan to send gas through a trans-Caspian pipeline to markets in Europe via Azerbaijan is not necessarily closer to becoming reality.

The plan was previously opposed by Russia and Iran, which could still attempt to block the pipeline—valued at up to \$5 billion—on environmental grounds.

“A deal in Aktau is not a legal prerequisite for the construction of the Trans-Caspian Pipeline,” said Kate Mallinson, Associate Fellow for the Russia and Eurasia Programme at Chatham House.

“Neither will a major transport corridor to export Turkmen gas to Europe emerge overnight.”

### **Kudos and caviar**

As previous exclusive arbiters of Caspian agreements, Russia and Iran could be seen as the new deal's biggest losers.

But while Moscow has ceded ground on underwater pipelines “it gains political kudos for breaking a log-jam,” enhancing its image as diplomatic dealmaker, said Roberts of the Eurasia Center.

Russia will welcome the clause barring third countries from having military bases on the Caspian, underscoring its military dominance there, said Shaban of Caspian Barrel.

Iran gets the smallest share of the Caspian spoils under the new deal, but could take advantage of new legal clarity to

engage in joint hydrocarbons ventures with Azerbaijan.

In the past Tehran has resorted to hostile naval manoeuvres to defend its claims to contested territory.

Beyond military and economic questions, the agreement also offers hope for the Caspian's ecological diversity.

Reportedly depleted stocks of the beluga sturgeon, whose eggs are prized globally as caviar, may now grow thanks to "a clear common regime for the waters of the Central Caspian," Roberts said.

The deal could result "not only in stricter quotas for sturgeon fishing, but in stricter enforcement of these quotas," he added.

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## **Gazprom escapes EU fine in competition probe**



The Russian gas giant has to revamp the way it sells gas to EU countries.

European Competition Commissioner Margrethe Vestager on Thursday stuck with her controversial decision not to fine Gazprom on charges that it abused its dominance to rip off consumers in Central and Eastern Europe.

Instead, the settlement announced Thursday will seek to change Gazprom's behavior through a set of legally-binding commitments.

"Our decision provides a tailor-made rulebook for Gazprom's future conduct," Vestager said. "It gives Gazprom customers in Central and Eastern Europe an effective tool to make sure the price they pay is competitive."

Under the deal, the Kremlin-backed firm agreed to make deep changes to the way it has historically done business in Central and Eastern Europe.

“I know some would have liked to see us fine Gazprom no matter the solution on the table,” Vestager said, adding that the settlement achieves goals that the Commission “could not have gotten otherwise.”

Gazprom agreed to change how it negotiates gas prices with countries in Central and Eastern Europe, in an effort to create a more competitive market. Customers will now have the right to ask for a price review if they believe they are paying Gazprom higher prices than on Western European gas hubs. If a deal isn’t struck within 120 days, an arbitrator overseen by the EU “will then impose a competitive gas price.”

Gazprom also agreed to drop clauses restricting customers’ ability to sell gas across borders and create opportunities for more gas to flow to the Baltic states and Bulgaria.

The commitments are valid for eight years.

“Gazprom has accepted that it has to play by our common rules – at least if it wants to sell its gas in Europe,” Vestager said.

Gazprom’s Deputy CEO Alexander Medvedev said that the company was “satisfied with the commitments decision.”

“We believe that today’s decision is the most reasonable outcome for the well-functioning of the entire European gas market,” he said.

The Commission can impose a fine of up to 10 percent of the company’s annual turnover in case Gazprom breaks its commitments “without having to prove an infringement of EU antitrust rules.” In Gazprom’s case this could be as much as €6.8 billion, according to its 2015 results. It will also set up a monitoring system to ensure Gazprom sticks to the deal.

Opponents of the settlement argued that Gazprom should have been fined. They fear any commitments will be too weak to

change Gazprom's behavior.

"We are disappointed that the years-long proceedings have ended with no fine for Gazprom, no compensation for affected companies, and with hardly any meaningful concessions on Gazprom's side," said a Polish diplomat. "This is particularly worrying in the context of the aggressive Russian policy against the EU and its member states. Today's decision sends a clear signal that the EU is coming to terms with years of Russian tactics of using Gazprom as an external policy tool against the [Central and Eastern European] region."

A leaked copy of the Commission's 2015 charges against Gazprom shows Brussels planned to hit the Russian company with significant fines for "intentionally" abusing a dominant position to harm governments and customers in Europe in what was an "obvious infringement" of EU rules.

But the Commission retreated from that hard stance.

Thursday's final announcement comes more than a year after Vestager first announced in March 2017 that she was considering settling the inquiry without a fine in return for Gazprom's commitment to improve how it does business in Central and Eastern Europe.

Lithuania, whose complaints kicked off the case in the first place, was generally pleased with the outcome, but the country's energy minister, Žygimantas Vaičiūnas pointed out that the settlement doesn't correct past wrongs.

"We cannot write off estimated losses of about €1.5 billion to our gas consumers, created by Gazprom abusing its dominant position on the market," he said in a statement. "We will continue to look for ways to make Gazprom to indemnify those losses."

The decision doesn't mean Gazprom won't face lawsuits. "It is for people who feel that they have suffered from Gazprom

behavior to go to national courts and to seek compensation as it has just been confirmed by the EU court,” Vestager said.

Commission investigators raided Gazprom’s offices in 2011, although held off on formally charging the company amid a dramatic deterioration in relations between the EU and Russia over the latter’s annexation of Crimea from Ukraine in 2014.

The Commission has not always followed up on threats to fine companies in the past, dropping cases against banks and cement-makers in recent years after they dispelled concerns set out in formal charges. When asked in 2017 to explain why she preferred settling, Vestager said: “We found it was most helpful for citizens to have Gazprom’s future behavior changed.”

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## **EU settles seven-year Gazprom dispute without imposing fine**





The EU has settled a seven-year dispute with Gazprom after the Russian state-controlled energy giant agreed to change its operations in central and eastern Europe.

The deal, announced on Thursday by the EU's competition commissioner, Margrethe Vestager, comes at a time of tensions between Russia and Europe over Ukraine, Syria and the poisoning of the Skripals in Salisbury, which has taken British-Russian relations to a new low. Meanwhile there is division within the EU over the construction of the Nord Stream 2 pipeline between Russia and Germany.

Vestager sought to isolate the case from the political turmoil. "This case is not about Russia, this case is about European consumers and European businesses and making the market serve them," she said. "This is about what rules to play by, no matter your flag, no matter your ownership."

Under the terms of the deal, Gazprom will be banned from imposing restrictions on how its customers in central and eastern Europe use gas. Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland and Slovakia will no longer

be banned from exporting gas to another country.

The deal aims to answer concerns that customers in five countries were being over-charged for their gas. From now on, customers in Bulgaria, Estonia, Latvia, Lithuania and Poland have the right to demand a price in line with those in Germany and the Netherlands.

If Gazprom fails to respond, these customers can take their complaint to an arbitration body in the EU, which is empowered to impose a lower price.

Some governments are unhappy about the commission's decision not to fine Gazprom for its past behaviour. Lithuania's prime minister, Saulius Skvernelis, described the proposed settlement as "strange", Reuters reported.

Acknowledging that some would have liked to have seen Gazprom fined, Vestager said that option was not in the best interests of European consumers.

"With today's decision, Gazprom has accepted that it has to play by our common European rules, at least if it wants to sell its gas in Europe. It has accepted to play by a rulebook that is tailor-made to ensure that European customers can benefit from the free flow of gas this very day."

She said failure to comply could lead to a fine of up to 10% of global turnover, a step that can be taken without another lengthy legal investigation.

"This is not empty theory," she said. "In 2013 we fined Microsoft over half a billion euros when the company broke its obligation. In other words, the case doesn't stop with today's decision. Rather, it is the enforcement of the Gazprom obligations that starts today."

Gazprom's deputy chief executive, Alexander Medvedev, said he was satisfied with the settlement, describing it as "the most

reasonable outcome for the well-functioning of the entire European gas market”.

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# Europe Awakens for LNG to Rival China as Own Gas Runs Out



Europe is starting to steal some of the limelight from China's booming liquefied natural gas demand as imports pick up after several lackluster years.

Europe and China will be comparable in significance as importing regions in the coming years, Cheniere Energy Inc. said, citing data from Wood Mackenzie Ltd. That follows

“absolutely phenomenal” growth in China last year, Andrew Walker, vice president for strategy at the company that pioneered the transformation of the U.S. shale boom into global exports, said in Amsterdam.

China’s LNG consumption leapt 42 percent last year to almost match European imports, which climbed 20 percent. Whereas the Asian nation needs the fuel mostly to replace dirtier coal, Europe needs it to offset rapidly declining domestic production.

The re-emergence of Europe as an LNG market has caught the eye of the coming wave of U.S. fuel producers. Venture Global LNG, Inc., which is developing export terminals in Louisiana, sees Europe as “one of the biggest surprises,” it said at the Flame conference in Amsterdam.

Europe’s location may give it an edge over generally higher-priced markets in Asia when it comes to attracting the increasing volumes produced in the Atlantic. North America and Russia were seen providing most of the new supply from 2025 to 2030, according to a poll at Flame.

Demand growth in China and South Korea, the second and third biggest LNG importers, will cool during the rest of this year after continued expansion through April, according to Cedigaz, a Paris-based industry research group. With less appetite also from Japan, the biggest buyer, northern Europe will step in to balance the markets, Cedigaz’s secretary general Geoffroy Hureau said at Flame.

U.K. supply this summer may be low but the Netherlands will see a pick up as it rushes to offset lower own production and higher demand for storage, Nick Boyes, a senior gas and LNG analyst at Axpo Trading AG, said by email. France will also need more for storage, he said.

The Netherlands is taking the lead also because of lack of storage demand in Britain after the closure of the Rough facility. The Dutch market is so hot that the country’s Title Transfer Facility hub will be the main reference for LNG trading in the next three to four months, Ruben Tomas, lead LNG trader at Germany’s Uniper SE’s commodity unit, said on a

panel.

“We see a well-supplied Atlantic Basin this summer” as Russia’s Yamal LNG and U.S. projects fill the market with cargoes, Axpo’s Boyes said. Trinidad & Tobago and Angola are also boosting supply, while demand in southern Europe and Egypt is declining, he said.

While the usage rate of LNG terminals in Europe was just 23 percent last year, things are looking up, according to Arturo Gallego Diaz, head of LNG trading and operations at Centrica Plc.

“There are more and more people looking at northwest Europe as an opportunity to deliver volumes that are produced in the Atlantic basin,” he said.

Declining production in the North Sea and the Dutch Groningen field as well as the closing of coal plants in Europe have a “big impact on LNG production” and are “a very big demand surprise,” Venture Global LNG Chief Commercial Officer Tom Earl said at Flame. The company recently signed a supply contract with Portugal’s Galp Energia SGPS SA.

## **‘Fairly Stable’**

Creditworthy counterparts, liquid hubs and physical demand help make Europe attractive for LNG, according to Gallego Diaz.

Uniper expects “fairly stable” demand for gas in Europe, while seeing growth in gas-to-power and potentially transport, said Gregor Pett, executive vice president for market analytics.

Russia, Europe’s biggest gas supplier, sees higher demand for its pipeline gas, undermining the region’s efforts at diversification, according to Sergei Komlev, head of the contract structuring and price formation directorate at Gazprom PJSC’s export unit.

While Russia will continue to pipe natural gas to Europe in competition with LNG, both can co-exist, the Centrica and Uniper executives said.

“I don’t think they exclude each other,” Uniper’s Pett said. “Everyone has a place.”

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## **EU Commission warns members it will get tough on pollution**



BRUSSELS (Reuters) – The European Commission said on Tuesday it would get tough on air quality and penalize members that breached EU rules on pollutants such as nitrogen oxide and

particulate matter.

The Commission estimates that 400,000 people die every year as the result of airborne pollution, and targets introduced for 2005 and 2010 are still being exceeded in 23 of 28 EU countries.

After a meeting with the environment ministers of nine countries which face legal action because of air quality problems, including the bloc's largest economies Germany and France, EU Environment Commissioner Karmenu Vella said his patience was running thin.

"The deadlines for meeting the legal obligations have long elapsed, and some say we have waited already too long, but we can delay no more, and I have made this very clear to ministers this morning," Vella told a news conference.

He added that while countries had made some suggestions during the meeting, air quality standards would still be breached well beyond 2020 unless new measures were taken.

"In our exchange, there were some positive suggestions, but I have to say that at first sight, these were not substantial enough to change the bigger picture," Vella said, adding members had until next week to improve on their proposals.

The EU Commission can take countries to Europe's top court if they breach EU law. Poland as well as Bulgaria have already faced legal action over air quality issues.

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## **A Trump Darling, Gas Exports,**



# Set to Gain as Iran Deal Dies



Another darling of the Trump administration is poised to gain from the Iran deal breakup as oil surges: Natural gas exports.

With the move to curb Iran's oil output encouraging more shale drilling, prices for natural gas produced alongside crude in West Texas could crater, falling to zero some days, according to Tudor Pickering Holt & Co. Already, the gas sold at West Texas' Waha hub is down 51 percent for the year.

That's bad for producers selling the fuel in the U.S., but good for companies that export it in tankers. As the market for liquefied natural gas grows in Asia, being able to source gas at its cheapest should give U.S. exports a leg up.

From Secretary of Commerce Wilbur Ross to the President himself, the White House has long sung the praises of increasing American LNG exports to help trim the trade deficit with Asian countries. Meanwhile, the Permian boom has filled pipelines to capacity, trapping gas in the region and making prices there the cheapest of any major U.S. shale play.

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# Rethink Gas for the Future EU



*The degree to which Europe increases its use of gas will depend on the regulations put in place, on the efficiency of the emissions trading system and on the ability to prove the benefits brought by its use*

This year Europe is facing a real winter, and many European households keep themselves warm with natural gas. Gas consumption in power generation is also growing and is a strong backup for the increasing levels of intermittent renewable energy. All told, more than a fifth of energy consumption in the EU comes from the use of gas. According to the Agency for the Cooperation of Energy Regulators (ACER) gas demand in 2016 rose by 7 percent compared to 2015, reaching 4962 TWh (terawatt hours). Gas is a cost-effective part of Europe's energy mix, as the global market is well supplied and prices remain competitive with other fuels. The International Energy Agency (IEA) in its "Global Gas Security Review 2017" notes that natural gas is the cleanest and least carbon intensive fossil fuel and that it is expected to play a key role in the transition to a cleaner and more flexible energy system. In its World Energy Outlook's central scenario, the

IEA anticipates that natural gas will be the only fossil fuel that will maintain its share in the energy mix in the coming decades. The EU is an integral part of an increasingly globally interconnected gas market, but its own production, while significant, in 2016 supplied only 27 percent of demand, with a resultant huge reliance on both pipeline and LNG importation.

### **An efficient and liberalized interconnection**

A clear asset of the European gas industry is its infrastructure network. Gas pipelines, distribution networks, LNG import terminals and underground storage provides necessary flexibility to the European energy system's variable seasonal demand. After 30 years of progressive liberalization an interconnected gas market has emerged and continues to develop in the EU. A good indicator of this is the fact that 75 percent of its gas is priced to within EUR1/MWh of the gas trading hub in the Netherlands. Also significant gas flow fluctuations are accommodated smoothly, and that results in market participants being flexible in their response to changing market fundamentals. Developments in the LNG market, such as new supply routes like the Southern Corridor, additional interconnections in the internal energy market and new focused legislation have fundamentally improved the EU's supply security. The fact that Russia has increased its market share to 34 percent doesn't create worries, because this increase is happening in the competitive environment created by the third energy market legislation package. New gas discoveries close to the EU's borders in the eastern part of Mediterranean and the final investment decisions made for the production from these sites provide an additional guarantee for a secure gas supply. Still the question is asked whether gas is a transition or destination fuel? Some voices are calling for an urgent phase-out of all fossil fuels, including natural gas.

On the positive side, while methane can leak if not properly

handled from well to wheel, natural gas is the fossil fuel that emits the least greenhouse gases—about half the CO<sub>2</sub> produced by burning coal if properly produced, transported and used. Gas is also well placed to supply back-up to intermittent renewable electricity because of its flexibility and short start-up times. Because of these qualities gas is sometimes referred to as a renewables best friend.

Nevertheless, on the negative side, natural gas is a fossil fuel that emits substantial amounts of greenhouse gases—with the risk that venting, flaring and leaking can more than offset gas advantages. According to Climate Action Tracker, full lifecycle emissions, including the fuel chain and also the manufacturing of energy conversion technology, implies emissions in the range of 410-650 g CO<sub>2</sub> eq/kWh for combined cycle plants as the most effective combustion plants.

How to look at this contradiction? From one side, the use of gas leads to good public acceptance, a vibrant internal market and extensive infrastructure, all of which could provide for Europe's future energy system. From the other side gas leads to greenhouse gas emissions that aren't consistent with the fight against climate change. Industry wants policymakers to avoid picking winners in the fuel mix and instead focus on setting frameworks for fuels to compete on the basis of the three objectives: sustainability, affordability and security of supply.

### **Renewables increasingly in focus**

Today the EU is clearly focused on the promotion of renewable energy. In 2015, renewable energy contributed 17 percent to total final energy consumption. There are indications that the stated objective of 20 percent of renewable energy in the EU's energy mix will be reached by 2020. The European Commission in the "Clean energy for all Europeans" legislative package proposes an objective of 27 percent of the renewable energy share in total final energy consumption by 2030. The International Renewable Energy Agency (IRENA) in February 2018

published a study “Renewable energy prospects for the European Union.” It concludes that the EU could double the share of the renewable energy in the energy mix from 17 percent in 2015 to 34 percent in 2030 with existing technologies if the right enabling framework is established. The study emphasizes that all EU countries have the cost-effective potential to use more renewables and that to achieve this goal a yearly investment of USD 73 billion would be required. But even using all this renewable potential a majority of the energy supply in 2030 will be provided by fossil fuels. IRENA’s model shows that gas will be the most used fossil fuel in 2030, but the presence of coal will still be strong.

The EU, which accounts for about 10 percent of global GHG emissions, is firmly committed to fighting climate change under an ambitious reading and implementation of the Paris Agreement. The target is to cut the EU’s emissions by 80-95 percent by 2050, and that change requires that the EU’s electricity, transport and heating and cooling sectors be carbon free by that time. Achieving such objectives while reusing part of the existing infrastructures and changing much, but not all, of the existing energy system suggests that the strategy has to mobilize all existing assets in the most efficient way possible.

### **Blue gold as the route to low carbon transition...**

Gas offers substantial potential to replace higher carbon emitting fuels to work in partnership with renewables to satisfy energy demand and flexibility needs. Increased electrification will drive some change in the role of gas in the energy mix and increased coordination between power and gas will be required to ensure the most efficient interaction to deliver baseload and peak energy demand.

For a successful future of gas use it is important that carbon pricing and trading are put on the right track. The revision of the EU Emission Trading System (ETS) for the period after 2020 anticipates that sectors covered by the ETS have to

reduce their emissions by 43 percent compared to 2005. To this end the overall number of emission allowances will decline at an annual rate of 2.2 percent from 2021 onwards. This is a considerable increase from the existing phase, where an annual decline rate is 1.74 percent. We could expect a considerable increase in carbon prices, accelerating departure of coal use in the EU. Also, for gas as a fossil fuel carbon capture, usage and storage will be important. Demonstrating that all of this could be economically implemented and supported by an appropriate regulatory framework and favorable public opinion is crucial for the long-term future of natural gas use.

An interesting and promising avenue for the future of gas is decarbonization by increased use of renewable (green) gas. Renewable gas—biomethane and hydrogen notably—can be transported in existing gas pipes, even if with some adaptations. This would be at a fraction of the cost to carry the same amount of energy in the form of electrons, a ratio as much as one to ten in favor of gas. There is also clear political support for renewable gas. A good example is the recent announcement by France's President Emmanuel Macron to support green gas production with a fund of 100 million euros. Macron has also promised to remove some administrative bottlenecks related to this project. Actually France's energy transition law has a very ambitious target to provide 30 TWh from renewable gas in final energy consumption by 2030. Some experts believe that with appropriate support, the ambition could be even greater.

The EU has some experience in producing and using biomethane and hydrogen, but it is fair to say that there is a long way to go before renewable gas becomes a significant part of the energy mix, as volumes of biogas and biomethane have been very modest. In 2015 EU member countries—most notably the northwestern countries—produced biogas equivalent to less than 20 bcm of natural gas, thereby covering a mere 4 percent of total EU demand for gas. Only in Germany, which accounts for

half of total EU production, can this be considered a significant resource at this stage. For reasons of cost and technical constraints, only a small part of the gas thereby produced has been injected into the natural gas grid, most of it being used to produce heat and power locally. To understand how ambitious objectives could be in the years to come, one must consider a variety of bottlenecks in the production, transport, storage and application of renewable gas.

### **... And the near future is in biogas**

To start with what already works, sufficient knowledge and techniques are presently available to produce biogas from landfills and sewage mostly using anaerobic digestion technology. CO<sub>2</sub> needs to be removed from produced biogas and other purification must be carried out to get biomethane that meets the necessary standards to be injected into the natural gas grid. Such upgrading is, of course, costlier if applied to the relatively small volumes available from given farm or landfill. The gasification of woody biomass could produce higher volumes and help scale up installations, but so far such technology is still used only in pilot projects.

A lot of expectations are put on producing renewable gas from renewable electricity. The surplus of intermittent solar and/or wind energy could be stored in the form of hydrogen by running at least part of such surplus through electrolyzers. Today, such a surplus translates into negative prices in the wholesale power market. Doing so on a large scale is being considered in connection with large North Sea offshore-wind projects. Breakthroughs are still needed, however, in power-to-gas technologies, as electrolyzers able to work intermittently are presently costlier to build and operate. The significant capital costs also need to be spread over enough hours and days of operation to make the per gas-unit cost acceptable.

Renewable gas could be transported by trucks, dedicated pipelines and the EU-wide natural gas grid. It would be

especially convenient to use the existing grid for transporting renewable gas. Hydrogen can be injected into the natural gas grid, but it influences combustion behavior and materials integrity, which sets limits. Also, a higher flow rate is required to meet demand, because hydrogen's volumetric energy density is substantially lower than natural gas. As for biomethane, its injection is less constrained than that of hydrogen, provided that gas quality checks have been carried out. Today each EU country has established its own limitations, and regulations related to injections of hydrogen can differ widely even between neighboring countries. Challenges also exist when one envisions the storage of significant volumes of renewable gas, notably hydrogen. Methanization can then appear as an attractive alternative, as hydrogen can also be turned into methane when combined with CO<sub>2</sub>, and this does away with technical constraints regarding transport and use. The challenge then arises as to which sources of CO<sub>2</sub> would be acceptable and/or preferable to produce biomethane.

Biomethane could substitute natural gas in almost every sector and application. In industry, renewable gas could serve both as an energy source and a feedstock. It could be used for residential sector heating. By contrast, hydrogen today is used mostly in industry. A hydrogen-driven economy will therefore require a more profound transformation. In mobility the potential use of renewable gas is substantial with the exception of air transport. While some countries have developed very significant fleets of gas-powered vehicles, in many others use of renewable gas in transport is hampered by the lack of refueling infrastructure. The interesting breakthrough for the use of renewable gas could come with decreasing costs for hydrogen fuel cells vehicles.

The decarbonization of the gas sector could develop step by step. In this respect certificates, whether Guarantee of Origin (GoOs) certificates for green gases or CO<sub>2</sub> certificates

used as offsets could play a role in facilitating acceptance and lowering costs. Altogether, it is correct to say that measures to promote renewable gas are relevant to all elements of the gas value chain.

### **A key role in Europe's energy economy**

Gas—both natural and renewable— clearly has a place in Europe's future energy economy. The part of it in the EU's energy mix will depend on political frameworks put in place, from the efficiency of an improved emission trading system and from the gas industry demonstrating the benefits of gas use in decarbonized energy system. It is difficult to speculate about the part of gas in the EU's energy mix by 2050. We could try to extrapolate the results of the aforementioned study by IRENA: "Renewable energy prospects in the European Union." At the level of 27 percent in the EU's energy mix by 2030, fossil fuels will have a share of 62 percent. The part of natural gas from this share is roughly 40 percent and that would mean 25 percent for natural gas in the energy mix. Renewable gas could grow in the period to 2030 to 8-12 percent from the current 4 percent level of natural gas consumption. With the growth of the renewable component of the energy mix, fossil fuels will decline, but the part of natural gas in the fossil fuels is increasing. All this could bring an increased share of gas in the EU's energy mix.

### ***Andris Piebalgs***

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**بارودي: التوصل الى اتفاق  
تفاوضي بشأن البلوك 9 قد يعني  
نصرا اكبر بكثير للبنان**





شدد الخبير النفطي الدولي رودي بارودي على "أن التوصل الى اتفاق تفاوضي جيد من خلال وساطة أو تحكيم طرف ثالث، قد يعني نصرا اكبر بكثير للبنان بدل إسرائيل في النزاع الحاصل حول النفط والغاز في البحر".

واكد بارودي الذي شارك في مؤتمرات دولية عدة آخرها في قبرص "أن هناك عوامل أخرى تبشر بالخير بالنسبة إلى الآفاق القانونية اللبنانية القصيرة والطويلة المدى، بما في ذلك حقيقة أن الجزء من البلوك 9 الذي تهتم به توتال وآني ونوفاتيك، يكمن بوضوح في المياه اللبنانية، وهذا يترك مجالا واسعا لحل وسط وقصير الاجل، على الأقل يسمح بالاستكشاف في المناطق غير الخاضعة للنزاع مع ترك أسئلة

اكثـر صـعوبة في وقت لاحق".

ولفت بارودي الى "أن نوعية المعلومات التي قدمها لبنان إلى الأمم المتحدة والأطراف الأخرى المهمة تعطي أهمية كبيرة لموقفه وبأكثر من طريقة".

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## ExxonMobil's Ocean Investigator sails for block 10 of EEZ



ExxonMobil's Ocean Investigator research vessel sailed on Tuesday night from Limassol port into block 10 of Cyprus' Exclusive Economic Zone (EEZ) to carry out hydrocarbon explorations for the US oil giant.

The Ocean Investigator had docked at the port of Limassol on March 14.

A second research vessel of ExxonMobil's, Med Surveyor also departed from Limassol on Tuesday and headed towards Piraeus, Greece, after having completed its environmental research in block 10.

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**Energy programme proceeding  
as planned, president tells  
oil and gas forum**



Cyprus is promoting three projects that were selected by the European Commission as projects of common interest, because of their benefits to the European energy market, President Nicos Anastasiades said on Tuesday.

The president was addressing the 9th Mediterranean Forum on Oil and Gas in Nicosia, telling delegates that recently, two of the projects had secured EU funding. Specifically, €101 million will be allocated to the CyprusGas2EU project, while



the EastMed Pipeline had been awarded €34.5m for technical studies.

The CyprusGas2EU” project aims at allowing the transport of gas from the Eastern Mediterranean to Europe. By 2020, Cyprus will construct a Floating Storage and Regasification Unit (FSRU) in order to import gas in the form of LNG from international markets, Anastasiades said. The EastMed Pipeline aims to transport gas from Cyprus and the Eastern Mediterranean to Europe via Crete and mainland Greece.

A third project, the EuroAsia Interconnector, is an electricity connection between Israel, Cyprus and Greece that is supported by all three governments.

“We intend to continue exercising Cyprus’ rights as an independent and fully integrated Member State of the European Union, proceeding with our exploration programme as planned,” said Anastasiades.

He said this was also part of a broader policy in that the discoveries of significant quantities of natural gas in the Eastern Mediterranean, as well as potential future discoveries, could be a driver for stabilization in the region.

“After all, together with the respect by all parties of international law and national sovereign rights, this is the kind of stable and predictable environment that we are obliged to jointly create, in order to bring in the multibillion investments needed for developing the East Med’s hydrocarbons wealth,” he said.

Anastasiades also addressed Turkey’s provocations in the island’s exclusive economic zone recently.

The president said Cyprus’ policy has traditionally been based on regional cooperation and the establishment of long-lasting relationships with all neighbouring countries.

“As we have always maintained, collaboration and synergies achieved in the hydrocarbons sector of the Eastern Mediterranean can feed into the political relations between countries, building the foundations for regional stability and peace,” he said.

Initiatives undertaken by Cyprus had been “highly successful” at the bilateral and multilateral levels, with countries such as Lebanon, Israel, Egypt, Jordan and Greece.

At the same time, he added, the recent deal struck between Israel and Egypt was concrete proof that collaborations between countries in the region were already taking place, “and Cyprus, I can assure you, will be an active participant in future developments”.

The developments were aligned with the EU’s recent Energy Union strategy, which has confirmed the Mediterranean as a strategic priority for reducing EU’s dependency on existing energy suppliers and routes, Anastasiades said.

“Our aim remains to support the EU in its diversification efforts, with Cyprus, as an EU member state, having a stable legal and political environment and constituting a reliable partner for both neighbouring countries and oil and gas companies.” It was also necessary to lift the island’s energy isolation, he said.

Next on the agenda would be the drilling activities of the ExxonMobil/Qatar Petroleum consortium in block 10, which included two back-to-back exploration wells during the second half of this year, Anastasiades said “Over the past few years we have, in fact, made some remarkable steps towards the realization of our exploration program, which we aspire will soon establish Cyprus as a natural gas producer and a transit country,” he added.

He referred to ongoing projects in the field. At present, the ministry of energy and the Aphrodite consortium were engaged in advanced discussions to establish, “the soonest possible”,

the development and production plan for Aphrodite.

Following the third licensing round and the decision to grant hydrocarbon exploration licences for blocks 6, 8 and 10, to ENI/Total, ENI and ExxonMobil/Qatar Petroleum respectively, “we anticipate with eagerness” the completion of the exploration programme of all licensed companies. The second wave of exploration in Cyprus’ EEZ was initiated by the Total/ENI consortium, he said.

After the renewal of its exploration license for block 11, in February 2016, the consortium went ahead with its exploration programme, drilling their first well between June and September 2017. The “Onesiphoros West 1” well resulted in a technical discovery that confirmed the existence of a petroleum system and the presence of a “Zohr”-like, reservoir, the president said.

“A mere two months ago, in January, we also had the completion of the first exploration well in Block 6 by the consortium of ENI and Total. The “Calypso” well encountered an extended gas column with excellent characteristics. This discovery also confirms the presence of the “Zohr”-like play in the Cypriot EEZ,” he added.