## 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 higherpriced 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."

# For Big Oil, reserve size matters less than ever



LONDON (Reuters) — A decade ago, the news that the world's top oil and gas companies had less than 12 years of production left in their reserves might have caused a panicked sell-off in their shares.

But as consumers try to move away from fossil fuels to cleaner and cheaper energy sources, investors and executives say reserve size is no longer the gold standard for measuring the value and health of a company.

The cost of developing existing reserves and the amount of

carbon those reserves produce has now become more important, they say. This is leading to a profound shift in company strategies.

"The quality of reserves and the commercial viability of reserves has eclipsed the quantity of reserves by far in recent years," said Adi Karev, Global Leader for Oil and Gas at EY.

The sector is emerging from one of its longest and deepest downturns after an oil price slump that started in 2014.

The largest publicly-traded oil companies — Exxon Mobil, Royal Dutch Shell, Chevron, ConocoPhillips, France's Total, BP, Equinor (formerly Statoil) and Italy's Eni — have adapted. They saved money by cutting jobs and increasing technology spending and now make more money with oil at \$60 a barrel than they did at \$100.

But they also cut spending on exploration for new resources and development of new fields. This led to a decline in reserves.

An analysis by Reuters and Guinness Asset Management of the annual reports of those eight companies shows that the size of their oil and gas reserves, when added together, fell to 91 billion barrels in 2017. That was the lowest since the same amount in 2005.

The reserves of Exxon Mobil, the largest company, shrank by 16 percent since the slump began in 2014. Shell's reserves fell 6.5 percent since then despite the \$54 billion acquisition of BG Group in 2016.

BP and Chevron's oil and gas reserves increased by a small 5 percent since 2014. Eni was the only one to significantly boost its reserves by over 20 percent thanks to the discovery of the giant Zohr gas field off the coast of Egypt.

The cumulative reserve life — the number of years a company

can sustain its current production levels with existing reserves — of the eight companies fell to 11.7 years in 2017. That was the lowest level in at least 20 years although that drop is also the result of a sharp increase in production. Reuters does have access to data going back beyond 1998.

Exxon's reserves life shrank from 17 years in 2014 to 15 in 2017. Eni's from 10.6 to 10.1 years despite its discoveries. Shell slipped from 12 to 9 years over the period.

"There is clear deterioration (in reserves) and this will be a problem in time," according to Jonathan Waghorn, manager of the energy fund at Guinness Asset Management.

But for now, "10-12 year's reserve life should be fine, so it is not a materially important component between the Majors."

#### "THE BEST BARRELS"

With electric vehicles on the ascent and a peak for fuel demand on the horizon, the focus on the reserves is shifting to the quality of the reserves rather than the quantity

"Some reserves are more efficient than others," Eldar Saetre, chief executive officer of Norwegian oil giant Equinor told Reuters.

"At some point we see a shrinking oil and gas industry, when that will be I do not know, but then it is really important that the best barrels come in and that will be increasingly a competitive factor."

Some companies are already changing strategies to adapt to the new focus.

Oil prices are not expected to rise sharply in the long-term and governments are seeking to reduce pollution and greenhouse gas emissions. This means firms are adjusting by setting ceilings for the cost of projects, often below \$35 a barrel. Oil reached a \$80 a barrel this month, the highest since late

Crude oil and natural gas have different grades and the cost of pumping them can vary hugely. Saudi Arabia's oil is easier and therefore cheaper to extract than Angola's complex deepwater wells.

Canada's oil sands have become less attractive due to their high cost of extraction and high carbon intensity. Exxon wrote down a large part of its Canadian oil reserves in 2017. Its largest rival, Shell, has sold most of its Canadian assets in recent years.

North American shale which has emerged over the past decade can be developed relatively quickly and at low cost, in contrast to multi-billion dollar deepwater projects that take years to develop.

The Permian basin in Texas, the heartland of the shale oil boom in recent years, saw production costs drop sharply to as low as \$30 a barrel.

Exxon and U.S. rival Chevron have both acquired large acreage in the Permian in recent years. Shell is also expanding in U.S. shale.

The Gulf of Mexico also has low extraction costs because it has large reservoirs of oil and some infrastructure is already located there such as services companies and onshore bases.

Statoil and Total have bought exploration acreage in the U.S. Gulf of Mexico in recent months.

Brazil's pre-salt reserves also have low costs as there are huge reservoirs and also some existing infrastructure. All eight companies are there and several have recently sharply increased their production in the basin.

"We are now getting to the point that the focus on efficiencies and producing reserves at a low level is what

# Higher oil prices offer 'temporary relief' to Mena exporters: IIF

Higher oil prices offer "temporary" relief to the oil exporters of the Middle East and North Africa (Mena) whose economic prospects are improving, according to the Institute of International Finance (IIF), the Washington-based economic think tank.

Oil prices rose rapidly in the past six months on unanticipated sharp output fall in Venezuela, the extension of the producers' pact on production cuts to the 2018- end, the escalation of tensions in the Mena, which enhanced risks of oil supply disruption; and higher global oil demand. We have revised upward our average Brent oil price assumption to \$72 per barrel for 2018 (33% increase form 2017)," IIF said.

With the projected \$18 increase in average oil prices in 2018 against last year, it expects the cumulative current account surplus for the nine Mena oil exporters (Saudi Arabia, the UAE, Kuwait, Qatar, Oman, Bahrain, Algeria, Iraq and Iran) to increase from \$56bn in 2017 to \$233bn (9.5% of gross domestic product) in 2018. "The fiscal situation for Mena oil exporters (except Bahrain and Oman) is now on firmer footing. The respective authorities in the region have implemented serious fiscal adjustment in recent years," it said.

Higher oil prices, combined with additional non-hydrocarbon revenue, should more than offset the 7% average increase in public spending, leading to narrower deficits (excluding investment income), according to the IIF. "We expect the consolidated fiscal deficit for the nine Mena oil exporters to decrease from 7.5% of GDP in 2017 to 3% in 2018," it said, adding when included investment incomes, which are very large in Kuwait, the UAE and Qatar, the cumulative deficit will be much smaller.

Highlighting that gross public foreign assets will resume its rise to \$2.9trn by end-2018; it said about 70% of these assets are in the form of sovereign wealth funds. With relatively little public external debt, the region's net public external assets position of \$2.6bn (108% of GDP) is substantial, the report added. Expecting non hydrocarbon growth to accelerate from 2.3% in 2017 to 2.8% in 2018 (still well below the average growth of 6.2% in 2001-2014); IIF said the growth pickup will be supported by the shift to fiscal expansion following three years of consolidation. A tighter monetary stance in the six GCC countries and Iraq, whose currencies are pegged to the US dollar, could offset some of the gains from expansionary fiscal stances. "We expect a cumulative increase of 100 bps in key policy rates, in line with the four Fed hikes of 25 bps each," it said.

# UK could face court action over air pollution after EU

# warning: 'We can delay no more'



Proposals made on Tuesday are 'not substantial enough to change the big picture'

Nine European countries including the UK could face legal action if they fail to make progress on reducing air pollution, the EU's top environment official has warned.

The intervention came as legal air pollution limits for the whole year were reached within a month in London.

Brixton Road, Lambeth, has seen levels of pollutant nitrogen dioxide exceed average hourly limits 18 times so far this year, the maximum allowed under European Union air quality rules.

Inaction by national governments over the issue prompted the European Commission's environment commissioner, Karmenu Vella, to warn of legal action after talks with ministers from nine EU countries including Britain, France, Germany, Spain and Italy — all of which regularly flout the bloc's air quality standards.

"Every year, an astonishing number of citizens' lives are cut short because of air pollution," Mr Vella said.

"We have known this for decades, and the air quality limit values have been in place for almost as long.

"And yet, still today, in 2018, 400 000 people are still dying prematurely every year because of a massive, widespread failure to address the problem."

He continued: "The deadlines for meeting the legal obligations have long elapsed... we can delay no more."

Poor air quality caused by vehicle emissions, industry, power plants and agriculture is known to cause or exacerbate asthma and other respiratory problems.

Air pollution also has significant economic impacts, increasing healthcare costs, reducing employees' productivity and damaging crops, soil, forests and rivers, according to the European Environment Agency's latest annual report.

It has taken the London longer to reach the air pollution limit this year than last year when legal levels were breached less than a week into the new year.

But while campaigners welcomed action by London Mayor Sadiq Khan to tackle pollution, they warned the relative delay in reaching the limit this year could be down to weather conditions dispersing the dirty air.

Environmental groups called for the Government to take urgent steps, including creating and funding clean air zones in pollution hotspots across the UK where 85% of areas still break air quality rules which should have been achieved in 2010.

Government estimates suggest compliance for levels of nitrogen dioxide, much of which comes from road transport, particularly diesel, will not be met until 2026.

The most recent data shows that around 7 per cent of the urban population within the EU was exposed to fine particulate levels higher than the EU-stipulated limit in 2015.

If the stricter World Health Organisation limits are applied, that rises sharply to 82 per cent.

The countries represented at Tuesday's summit have been given ten days to submit new proposals for meeting EU air quality standards regarding particle levels.

In Mr Vella's opinion, the proposals offered by the nine offending countries were "not substantial enough to change the big picture".

He insisted that the only way to avoid court action was to take "all possible measures without delay".

Reacting to the outcome of the summit, ClientEarth lawyer Ugo Taddei said: "Commissioner Vella was evidently unimpressed.

"The European Commission should now follow this blatant inaction through to its legal consequences and trigger court actions without further delay.

"The people of Europe have waited long enough to breathe clean air."

# 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.

## 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.

## 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 then 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 infrastructure network. Gas pipelines, distribution networks, 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 quarantee 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 CO2 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 CO2 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. gas-biomethane and hydrogen notably-can Renewable 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. CO2 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 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 coun-tries. 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 CO2, and this does away with technical constraints regarding transport and use. The challenge then arises as to which sources of CO2 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 pro-found 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 CO2 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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## How Does OPEC Affect the World?



Because of the role the Organization of Petroleum Exporting Countries (OPEC) plays in oil production levels and the influence it has over pricing, OPEC affects industries of all sorts throughout the world. OPEC has a strong role in the economy of the world, and because money is deeply entwined with power, OPEC also has influence in the arenas of politics and public policy.

#### Oil Production Levels

According to OPEC, one of its primary goals is to stabilize prices in international oil markets and eliminate harmful fluctuations. One of the tools at OPEC's disposal to assist in achieving that goal is to control of oil production levels within OPEC nations. To prevent wild fluctuations in oil prices, in theory, OPEC responds to increased and deceased world oil demand by adjusting production levels up or down. OPEC does this in order to avoid the rapid rise and fall of prices that can occur as changes in supply and demand affect the oil market.

#### Fuel Prices

While OPEC does not directly set fuel prices — nor has it directly set the price of crude oil since the middle of the

1980s — the organization still does influence fuel prices. That is because OPEC nations do work together to control oil production levels. If supply outstrips demand for oil, then the price of oil swings low. However, if demand outstrips supply, then the price will move upward, because people are willing to pay more to ensure that they have the oil they need.

#### Agriculture

Modern agriculture depends on oil to produce the food necessary to meet the nutritional needs of an ever-growing world population. Petroleum-based products used in agriculture range from the fuel necessary to run tractors and other farm equipment to the pesticides, fertilizers and other products for enhancing crop growth and production. Therefore, OPEC does affect global food production, indirectly influencing the costs associated with agriculture.

#### Cost of Goods

If it costs more to produce food, then that cost is going to be passed on to consumers in the form of higher prices. However, that is not the only way the price of oil affects the price of goods. Most goods must be moved from one place to another, and many goods are transported by means that rely on petroleum-based fuels. Higher oil prices lead to gas and diesel price increases — costs that will also be passed to the consumer when they purchase such goods. Because OPEC controls oil production levels, thus influencing the price of oil, OPEC also has an indirect effect on the pricing of goods throughout the world.

# A new economy for the Mena region

By Rabah Arezki And Hafez Ghanem/Washington, DC Countries in the Middle East and North Africa (Mena) possess

all of the ingredients they need to leapfrog into the digital future. They have large, well-educated youth populations that have already adopted new digital and mobile technologies on a wide scale. That combination has immense potential to drive future growth and job creation. But will it?

Public spending, the region's historical engine of development, has reached its limit. Because the public sector can no longer absorb the swelling ranks of university graduates, the Mena region now has one of the world's highest rates of youth unemployment.

The digital economy holds the promise of a new way forward, but it is still in its infancy, and young people face obstacles in putting technology to productive use. Although the Internet and hand-held devices are ubiquitous throughout the region, they are currently used for accessing social media, rather than for launching new enterprises.

But there are green shoots emerging. For example, the ridehailing app Careem has grown from a start-up to a billion-dollar company, creating thousands of jobs in more than 90 cities in the Mena region and in Pakistan and Turkey. And new digital platforms are already connecting job seekers and employers, providing vocational training, and hosting start-up incubators. The challenge now is to create the conditions for these green shoots to grow and multiply.

The first, essential step is for Mena countries to become "learning societies," a phrase coined by the Nobel laureate economist Joseph E Stiglitz to describe countries in which shared knowledge leads to increased innovation. This, in turn, fosters development; and in the case of Mena, it could lead to the creation of a vibrant digital service economy.

To get there, education systems will need to change. For the region's young people, the curriculum is more often a source of frustration than advancement. The concept of a "skills premium" — the difference in wages between skilled and unskilled workers — dictates that higher educational

attainment should lead to higher compensation and more secure employment. Yet in the Mena region, the opposite has happened: university graduates are far more likely to be unemployed than are workers with only a basic education.

Two factors work against the region's young people. First, schools are still geared toward channelling graduates into large public sectors, which means they place less emphasis on fields such as mathematics and science. Second, bloated public sectors are crowding out the private sector, which would otherwise be a larger provider of high-skill, high-wage jobs.

Because the future economy will need technologically capable workers, curricula should be reoriented toward STEM (science, technology, engineering, and mathematics) subjects and away from the social studies that were long prized by public-sector employers.

Moreover, education systems should focus on encouraging greater openness to innovation and risk-taking — a significant departure from the attitudes reproduced under a system of public-sector patronage. Specifically, moving toward an innovative "learning society" will require students to hone their critical-thinking and managerial skills within collaborative work arrangements.

In addition to skills, the digital economy will also need technical infrastructure. Connectivity is a prerequisite for the delivery of new mobile and digital services in e-commerce, vocational training, healthcare, and finance, all of which could substantially increase overall welfare. Countries in the region thus need to focus on expanding broadband Internet access.

Education and Internet infrastructure geared toward productive use would provide the foundation of a new economy. But ensuring sustained growth in the region will require improving its financial systems as well. A digital economy depends on payment systems that are not just easy to use and widely

available, but also trustworthy. Developing effective peer-to-peer payments that require no financial intermediary like a bank will be crucial for ensuring that digital platforms for ride sharing, on-demand tasks, and other services can thrive. Outside of the Gulf Co-operation Council countries, which have relatively advanced payment systems, the quality of financial services in the Mena region currently lags behind most of the rest of the world. Barring improvements to the financial system, and to the banking sector in particular, the potential of the region's vast human capital will not be realised.

Lastly, governments will need to develop an approach to regulation that encourages, rather than stifles, innovation. To be sure, ensuring confidence, especially in financial systems, is essential; but regulation must be balanced with policies to boost competition, so that start-ups can easily enter the market and test new ideas. There needs to be more space for more companies like Careem to emerge. Policymakers should look to Kenya's model of light but effective regulation, which has fostered the rapid growth of the peer-to-peer payment system M-Pesa.

Seizing the opportunities that the digital economy offers the Mena region will require a big push. Policymakers will need to work on multiple fronts, while making the best use of all available tools. The sooner they start, the greater the chance that today's young people can overcome economic exclusion and gain more opportunities to realise their — and their region's — full potential. — Project Syndicate

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## Qatar: prima chiesa maronita del Golfo benedetta dal patriarca Raï





Nella sua visita pastorale a Doha, il porporato è stato ricevuto dall'emiro e dai vertici istituzionali locali. La nuova chiesa di San Charbel sarà pronta entro 18 mesi, dice padre Charbel Mhanna, rappresentante del patriarca maronita in Oatar

#### Giada Aquilino - Città del Vaticano

È dedicato a San Charbel il primo luogo di culto per la comunità maronita in Qatar e in tutto il Golfo Arabico: la futura chiesa sorgerà a Doha su un terreno offerto dalle autorità dell'emirato e la prima pietra è stata posta venerdì scorso dal patriarca maronita, il cardinale Bechara Raï. Nella sua visita pastorale di quattro giorni a Doha, appena conclusa, il porporato è stato ricevuto dall'emiro del Qatar, Tamim ben Hamad al-Thani, e dai vertici istituzionali locali.

### Visita storica del patriarca Raï

Quella del porporato "è stata una visita storica", commenta padre Charbel Mhanna, rappresentante del patriarca maronita in Qatar e presidente del Comitato per la costruzione della chiesa di San Charbel, raggiunto telefonicamente a Doha, dove i libanesi residenti sono quasi 30 mila. La decisione di donare un "terreno di 10 mila metri quadri" su cui sorgerà l'edificio è un "gesto di apertura da parte dello Stato" — com'era successo anche per la chiesa cattolica di Nostra Signora del Rosario, già operativa da una decina d'anni — e anche "un segno di rispetto verso le Chiese orientali", osserva il sacerdote.

### Momento di apertura

Il Qatar vive un momento particolare, con nuove vie per il commercio e indici di crescita positivi secondo il Fondo monetario internazionale, nonostante le tensioni con Arabia Saudita, Egitto, Bahrain ed Emirati Arabi Uniti che nei mesi scorsi avevano accusato Doha di sostenere gruppi terroristi. "Il Qatar oggi sta andando avanti verso un'apertura e uno sviluppo notevoli, nonostante i Paesi dell'area si siano dichiarati contro" Doha: non si può parlare di "guerra", sottolinea il religioso non volendo entrare in questioni politiche, ma di una comune "posizione contro il Qatar".

## Entri 18 mesi pronto l'edificio di culto

Come auspicato dal patriarca Bechara Raï, "speriamo che San Charbel dia pace e tranquillità a tutti i Paesi arabi e in particolare al Qatar", conclude il sacerdote maronita, annunciando che "entro 18 mesi saranno pronti l'edificio della chiesa e l'oratorio, mentre a seguire saranno costruiti i saloni, gli uffici, la cappella, la scuola e la residenza per i sacerdoti".