

RENEWABLE

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ELECTRICITY IS
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IEA'S NEW REPORT
PROVIDES GLOBAL
TRENDS AND
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FOR RENEWABLE
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ELECTRICITY, HEAT
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GLOBAL LNG
TRADE TO SET
A NEW RECORD
OVER 350 MT

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Why Peak Oil Demand May be Delayed

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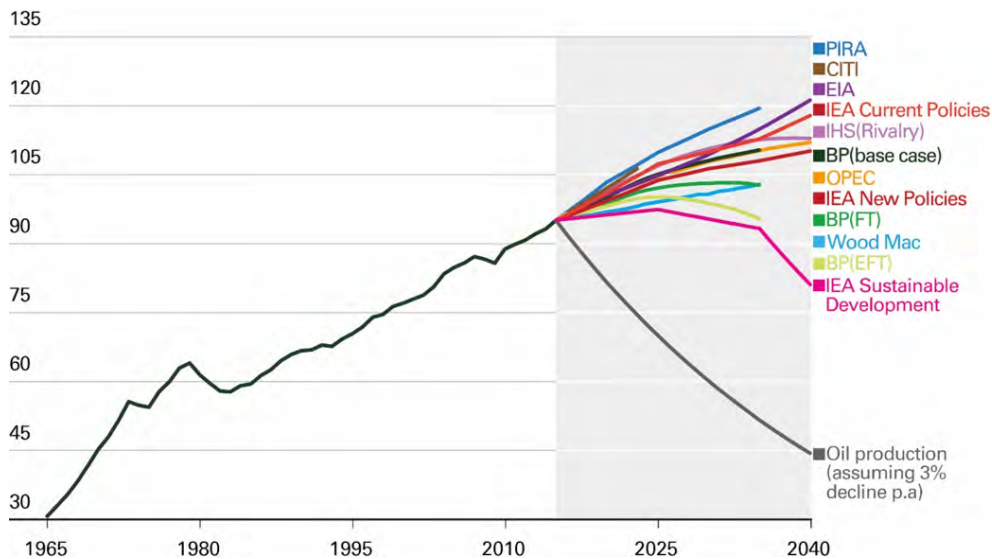


Prof. Carmine DiFiglio

WHY PEAK OIL DEMAND MAY BE DELAYED

The now discredited “peak oil” worries has been replaced with expectations of peak oil demand. Peak oil supply anticipated that global oil production would, before 2000, peak and then decline because there would be insufficient new production to offset the declines from mature fields. While widely accepted in the 1970s due to available data about “proven reserves”, the theory was questioned by many economists and industry experts that noted that there was no need to spend money to prove reserves far into the future. Of course, with advanced technology to drill deep wells, the tight oil revolution in the United States and other innovations,

these concerns have been long abandoned. Instead, peak oil demand expectations anticipate that oil demand for automobiles will decline because of improved fuel efficiency, stagnating auto demand in developed countries, increased use of on-demand auto services, the uptake of electric vehicles and, in general, global policies to reduce greenhouse gas emissions. While oil demand growth would still be driven by the freight, aviation and petrochemical sectors, the decline in light-duty vehicle fuel needs would, depending on various estimates, cause an oil demand peak sometime within the next 5 years to well beyond 20 years.



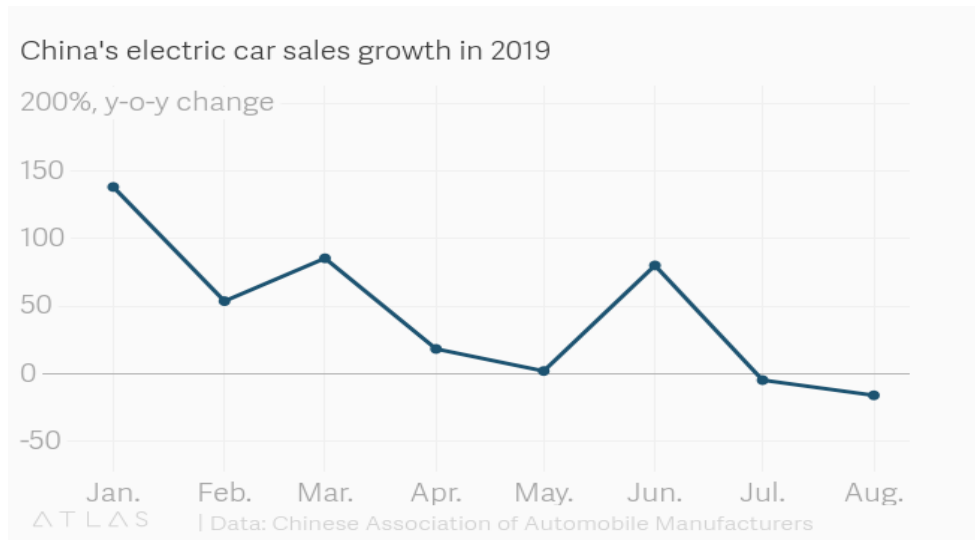
Oil Demand projections (million barrels per day) showing different expectations of “peak demand” from major multinational sources (source: BP)

With historically low interest rates (for example, long-term bonds with negative yields), concerns about peak demand, even if occurring over one or two decades from now, can significantly affect oil companies’ valuations (for example, see the Saudi Aramco IPO story below). It also motivates oil companies to diversify their businesses away from reliance on upstream production revenues.

Consequently, it is worthwhile to note that, while peak oil demand may still be on the horizon, two recent trends show that it may occur later rather than sooner. Chinese EV sales declined in three consecutive months (down 34% in September alone) and, worldwide SUV sales are increasing. According to Laura Cozi of the IEA, “...consumers are buying ever larger and less fuel-efficient cars, known as Sport

Utility Vehicles (SUVs). This dramatic shift towards bigger and heavier cars has led to a doubling of the share of SUVs over the last decade. As a result, there are now over 200 million SUVs around the world, up from about 35 million in 2010, accounting for 60% of the increase in the global car fleet since 2010. Around 40% of annual car sales today are SUVs, compared

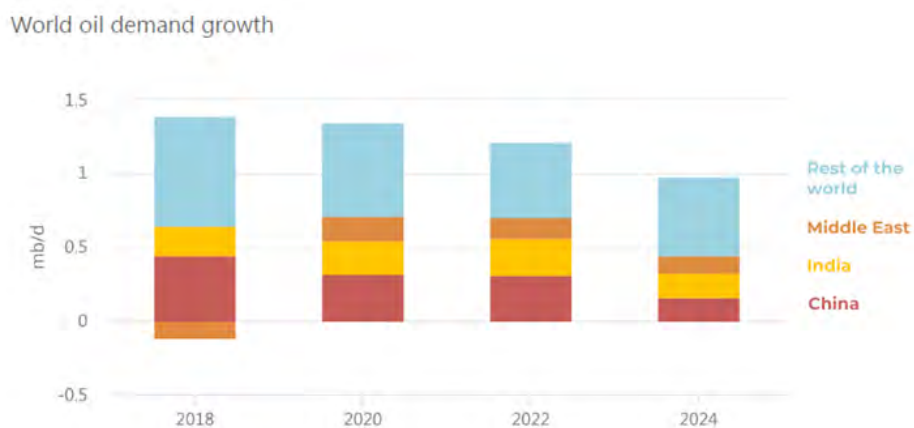
with less than 20% a decade ago.”¹ While recent data shows that the rate of growth of SUV sales is slowing, SUV growth is nonetheless continuing and, with the prospects of low oil prices continuing for the indefinite future, even less SUV growth can offset much of the expected fuel efficiency and EV sales impacts on reducing oil consumption.



China's declining EV sales (source: Quartz, Echo Huang September 11, 2019)

It seems clear that, at least for the next 5 years and perhaps beyond, peak oil demand is not in sight. According to IEA's "Oil 2019" analyses that tracks demand drivers in detail, the two largest drivers for continued growth in oil consumption are China and

India as both countries ease their shift to environmental policies. Despite flat demand growth in the United States and slowing demand growth in some other developed countries, world oil demand growth is projected to be close to 1 million barrels per day by 2024.



¹ https://www.iea.org/newsroom/news/2019/october/growing-preference-for-suvs-challenges-emissions-reductions-in-passenger-car-mark.html?utm_content=buffer360fd&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer

IEA'S NEW REPORT ASSESSES IMPRESSIVE GROWTH IN OFFSHORE WIND

The environmental and social constraints put pressure on the expansion of onshore wind farms, despite the fact that wind farms are a proven source of clean and affordable energy sources. However, wind energy is still considered to have a key role with solar PV in achieving renewable energy targets.

The future wind energy potential heavily depends on political choices, environmental and social concerns, and government policies. Key regulations, such as the minimum distance to the shore and density of

wind turbines on land and offshore, including 'no-go' areas designated for the protection of wildlife, have a significant impact on the future of wind farms. These constraints in some regions on the onshore wind farms, favor the conditions for the offshore wind potential.

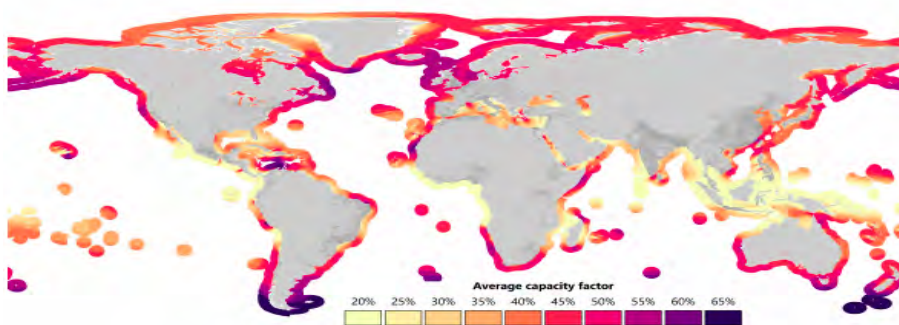
The most comprehensive analysis on the offshore wind potential, published by the International Energy Agency (IEA) shows that the global offshore wind capacity may increase 15-fold and attract around \$1 trillion of cumulative investment by 2040.²



would jump to around 180 GW by 2040 and become the region's largest single source of electricity." said the report. Offshore wind resources in the EU are concentrated in northern Europe and are not equally distributed across the continent. New grid investments will be needed to transmit this remotely located power to where consumers are typically concentrated.

The IEA finds that China is also set to play a major role in offshore wind's long-term growth, driven by efforts to reduce air pollution. China's offshore wind capacity is set to rise from 4 GW today to 110 GW by 2040.

"In the past decade, two major areas of technological innovation have been game-changers in the energy system by substantially driving down costs: the shale revolution and the rise of solar PV," said Dr. Fatih Birol, in IEA's press release. "And offshore wind has the potential to join their ranks in terms of steep cost reduction." he added.



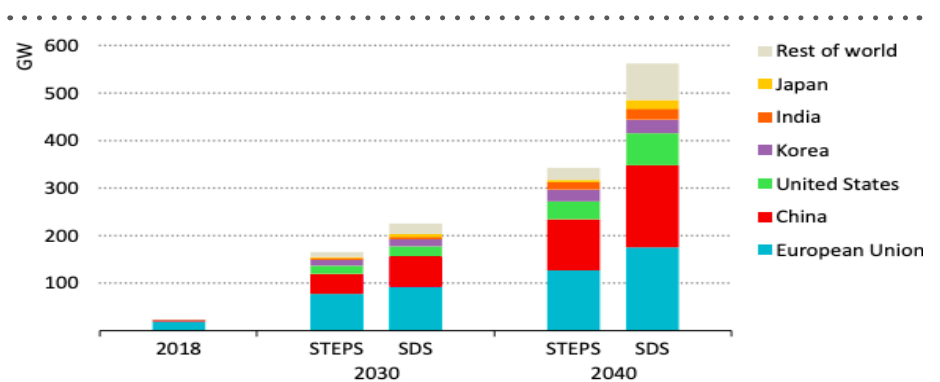
Average capacity factors reflect the quality of the wind resources available offshore around the world

This impressive growth in offshore wind is driven by falling costs, supportive government policies, and some remarkable technological progress, such as larger turbines and floating foundations, according to IEA's Offshore Wind Outlook 2019.

IEA's Executive Director and IICEC's Honorary Chairman Dr. Fatih Birol launched the Offshore Wind Outlook 2019 in Copenhagen, Denmark – the birthplace of offshore wind – alongside the Danish Minister for Climate, Energy, and Utilities, Dan Jørgensen.

The report shows that the offshore wind capacity in the European Union (EU) that stands at almost 20 GW

is set to rise to nearly 130 GW by 2040 under current policy settings. "However, if the EU reaches its carbon-neutrality aims, offshore wind capacity



European Union and China account for 70% of the global offshore wind market to 2040, but a number of countries enter the market and increase their capacity

² IEA, (October 25, 2019) Offshore wind to become a \$1 trillion industry

RENEWABLE'S SHARE IN ELECTRICITY IS INCREASING IN TURKEY

During his speech at the 8th Turkish Wind Energy Congress Turkey's Energy and Natural Resources Minister Donmez said that Turkey produced 46% of its electricity from renewable resources during the first 10 months of 2019, and this ratio represents a steady monthly increase.

Turkey currently ranks the 6th in Europe and 12th in the world in wind installed capacity. At present, Turkey produces 8% of its electricity from wind energy and aims to raise this share up to 10% in the short term. "Our electricity production from wind energy rose by 14.6% in October, compared to the same month last year, and have increased approximately by 70% in the last five years," Donmez emphasized.

Donmez hailed the progress that has been made since 2008 when wind energy only had an installed capacity of 19 MW in 2002. He pointed out that capacity rose to 364 MW in 2008, then climbed to the current 7,500 MW, marking approximately 400-fold increase Since 2002.

In the future, further additions will be made through mini renewable energy resource zones (YEKA) in Turkey and "the winning consortium of our first wind YEKA tender is about to complete a factory that will have 400 MW per annum capacity and will use domestically produced or supplied components. It will shortly start manufacturing wind turbines, in which at least 65% of components will be domestic", Donmez said.



The minister stated that Turkey has moved towards a 'full integration model' by which wind energy technology is produced domestically. Donmez specified that the wind energy sector currently employs around 17,000 people and employment is expected to grow as much as 85 % in the next five years. Turkey has focused on increasing the share of local energy resources, such as coal, wind, solar, hydro and geothermal in its power generation portfolio applying sustainable and environmentally friendly production processes.



IICEC

SABANCI UNIVERSITY
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IICEC 10th Annual Energy Conference featuring the **World Energy Outlook 2019 Turkey Launch** "Global Energy and Climate Developments & Implications for Turkey"

Presentation by **Dr. Fatih Birol, IEA Executive Director**,
followed by "Turkey Energy Business Leaders" Panel.

Minister of Energy and Natural Resources,
His Excellency **Fatih Dönmez** is expected to attend.



Save The Date
20 DECEMBER 2019

09:00 - 10:00 Registration
10:00 - 13:00 Program
(Followed by a Networking Lunch)

Place: Conrad Bosphorus Istanbul Hotel **RSVP:** iicec@sabanciuniv.edu | 0531 930 81 58

IEA'S NEW REPORT PROVIDES GLOBAL TRENDS AND DEVELOPMENTS FOR RENEWABLE ENERGY IN THE ELECTRICITY, HEAT AND TRANSPORT SECTORS.

IEA's Renewables 2019 market report forecasts that the world's total renewable-based power capacity will grow at least by 50% from 2019 to 2024. The increase driven mainly by cost reductions and government policy efforts will be equal to 1,200 gigawatts. The report also predicted for Solar PV to increase by 60%.

The share of renewables in global power generation is set to rise from 26% today to 30% in 2024. "Renewables



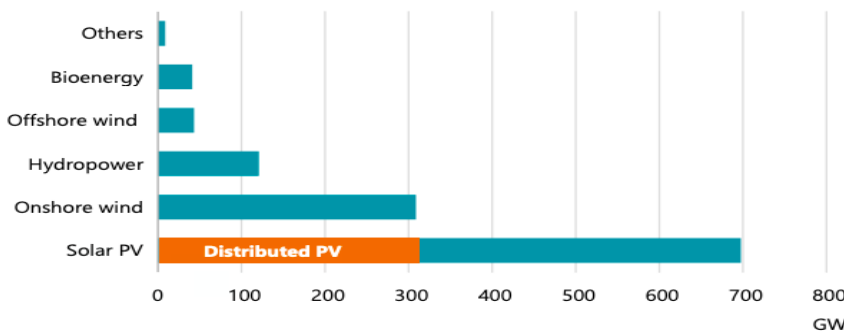
are already the world's second largest source of electricity, but their deployment still needs to accelerate if we are to achieve long-term climate, air quality and energy access goals," said Dr Fatih Birol, the IEA's Executive Director.

The report stated that the number of solar rooftop systems in residential area is set to double, reaching at 100 million by 2024. "As costs continue to fall, we have a growing incentive to ramp up the deployment of solar PV," said Dr Birol. While the cost of generating electricity from distributed solar PV systems is below retail electricity prices in many countries, the report expects that a further decline by 2024 which would inevitably make the technology more attractive. The report warns, however, that important policy and tariff reforms are needed to avoid disruption of electricity markets by raising system costs.

Biofuels currently represent some 90% of renewable energy in transport. Increase dominated mainly by China with air pollution and energy security concerns. In 2024 despite the rapid expansion of electric vehicles forecasted in the report, renewable electricity only accounts for 10% of renewable energy consumption. The share of renewables in total transport fuel demand would still be below 5% as of 2024.

Driven mainly by China, the European Union, India and the United States, renewable heat is set to grow by approximately 20% from 2019 to 2024. The heat and power sectors become more linked as renewable electricity used for heat increases by more than 40%. However the report states that, renewable heat potential remains underexplored. The share of renewables in total heat demand is calculation to remain under 12% in 2024, calling for ambitious targets and stronger policy support.

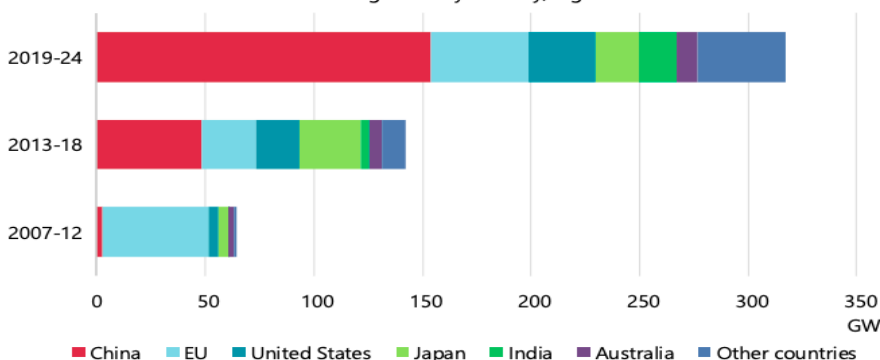
Renewable capacity growth between 2019 and 2024 by technology



The policy and regulatory uncertainty, high investment risks and system integration of wind and solar PV are three main challenges highlighted in the report that need to be overcome to speed up the deployment of renewables. The renewed expansion remains well under what is needed to meet global sustainable energy

targets. Distributed PV make up approximately 50% of the growth in solar PV market through 2024. Because of economies of scale combined with better alignment of PV supply and electricity demand, commercial and industrial applications rather than residential uses dominate distributed PV growth.

Distributed PV growth by country/region



SAUDI ARAMCO FINALLY ANNOUNCED ITS LONG-AWAITED IPO

Saudi Arabian Oil Co, or Aramco, officially announced on November 3 its intention to float right after the country's Capital Market Authority made a statement that it approved the company's application for the registration and offering of a proportion of its shares. According to the company's statement, roadshows will begin on November 18 and final pricing for the initial public offering (IPO) is scheduled for December 5, while the Saudi government allegedly plans to sell 2% stake on the Tadawul, the kingdom's stock exchange, on December 11.

The IPO process was launched in January 2016 when (Deputy-then) Crown Prince Mohammed bin Salman declared that he favors an IPO for Aramco. Soon afterward, the company announced that it was "considering options including the stock market listing of an appropriate percentage of the company's shares." In April 2016, bin Salman firstly spoke out that he expects an IPO for 5% shares which will value the company about \$2 trillion.

After one year of preparations, in March 2017 Aramco CEO Amin Nasser said the company will be listed locally and abroad in the second half of 2018, but this plan was later delayed due to an M&A process to buying a majority stake in chemical giant Saudi Basic Industries Corp (SABIC). After another year of negotiations for this acquisition, Saudi Aramco announced on March 27, 2019 that it agreed to buy 70% stake from the kingdom's sovereign wealth fund, Public Investment Fund (PIF), for \$69.1 billion.

Following the closure of the biggest ever Middle East deal, Aramco hired 9 leading international banks³ as the 'joint global coordinators', five

Saudi banks as 'domestic book runners', eleven banks as 'foreign book runners', and three institutions as 'special advisers' in order to revive the IPO process. On September 2, the Saudi government named Yasir al-Rumayyan, the Governor of the PIF, as the Chairman of Aramco, replacing Energy Minister Khalid al-Falih.

Drone attacks on September 14 to Aramco's major facilities in Abqaiq and Khurais resulted by a 5.7 million bpd decline, more than 6% of global oil supply, but it was fully restored by September 25, much faster than expected. Right after the quick recovery period, the kingdom was downgraded by Fitch Ratings, for a third time since 2016, from A+ to A with stable outlook. "Saudi Arabia is vulnerable to escalating geopolitical tensions. Although oil production was restored fully by end-September, we believe that there is a risk of further attacks on Saudi Arabia, which could result in economic damage," Fitch said in its report.

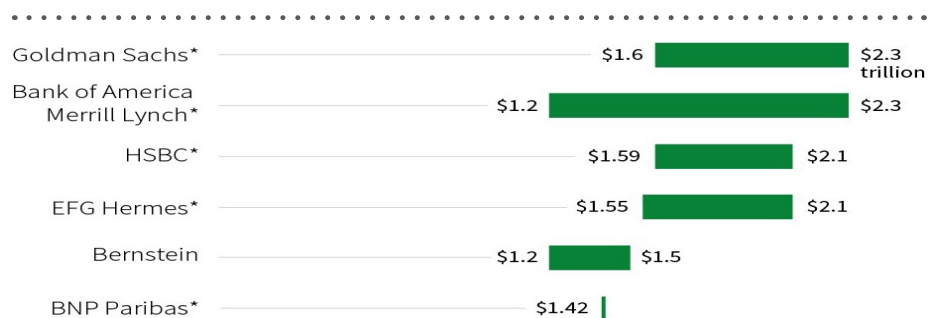
On October 18, just three days before its planned official launch of the share sale, Aramco announced that it once again delays the IPO in hopes that pending third-quarter results will bolster investor confidence. But just two weeks later, Saudi Arabia's Capital



Market Authority surprised the global markets with its approval for the IPO.

Analysts from banks working on the listing are still struggling to meet the \$2 trillion valuation the Crown Prince aggressively aspires to attain, and their valuations vary by around \$1 trillion. Such an extreme spread is mainly caused by differing oil price forecasts.

Aramco's 226.8 billion barrels proved reserves are larger than the combined reserves of five supermajors (ExxonMobil, Chevron, Royal Dutch Shell, BP, and Total). The company produced 10.3 million barrels per day of crude oil (with the lowest production cost in the world, \$2.80 a barrel) and 8.9 billion cubic feet (approximately 0.25 billion cubic meters) per day of natural gas in 2018. Aramco is the world's most profitable company as well, with \$46.9 billion net profit in the first half of this year, over a third bigger than the combined net income of the five supermajors.



*Denotes working on the IPO

Estimated Valuation Ranges by Bank Analysts⁴

³ Bank of America, Citigroup, Credit Suisse, Goldman Sachs, HSBC, JPMorgan, Morgan Stanley, NCB Capital, Samba

⁴ Reuters (November 4, 2019) Give or take a trillion: Investors still in the dark on Saudi Aramco value

ECUADOR TO LEAVE OPEC IN SEARCH OF MORE OIL REVENUE FOR CASH-STRAPPED GOVERNMENT

Ecuador officially announced that it will quit its membership to the Organization of the Petroleum Exporting Countries (OPEC) by January 1, 2020 due to fiscal problems.

Joined the organization in 1973, withdrew in 1992 citing the group's refusal to raise the country's production quota, then rejoined in 2007, the small South American country decided once again to leave "based on the issues and internal challenges that the country must take on related to fiscal sustainability," the country's Ministry of Energy and Non-Renewable Natural Resources said in a statement on October 1.

The government recently said OPEC's quota limitation was economically damaging for the country and has been attempting to increase crude

production to raise more income and has, on multiple occasions, broken its output quota fixed by OPEC. OPEC, along with Russia have since January 1 implemented a deal to cut output by 1.2 million bpd, and they renewed the pact in July until March 2020.

Ecuador produces about 545,000 barrels per day of crude but is struggling with tight liquidity because of a wide fiscal deficit and foreign debt. In February, the government reached a \$4.2 billion deal with the International Monetary Fund (IMF). Right after the ministry's statement on OPEC membership, President Lenin Moreno announced the government will end fuel subsidies in accordance with the IMF agreement.

The removal of fuel subsidies immediately provoked countrywide

protests. On October 7, Ecuadoran state-run oil company Petroamazonas declared that it had to suspend operations at three oil fields in the Amazon region due to massive unrest. On October 9, Petroecuador announced that it halted operations of its Trans-Ecuadoran Pipeline System after anti-austerity protests caused to stop supply from major oil fields. Energy Minister Carlos Perez said that the protests had cost the country 232,000 bpd of production.

For OPEC, Ecuador's exit matters more in symbolism than barrels. Indonesia suspended its membership in 2016 as it sought to increase oil exports. Additionally, Qatar announced last year that it's departing, saying it wanted to focus on natural gas output.

RUSSIA CONSIDERS DELAYING ADOPTING IMO 2020 RULES IN LOCAL MARKET

Although the new International Maritime Organization (IMO) rules, known as IMO 2020, stipulates that commercial vessels to use cleaner fuels by January 1, 2020, Russia officially announced that it considers postponing its implementation to 2024 within Eurasian Economic Union members countries, namely Russia, Armenia, Belarus, Kazakhstan, and Kyrgyzstan.

According to the IMO 2020, all commercial vessels worldwide should switch to using fuel oil with a sulfur content of no more than 0.5%. But Bloomberg reported that Russian

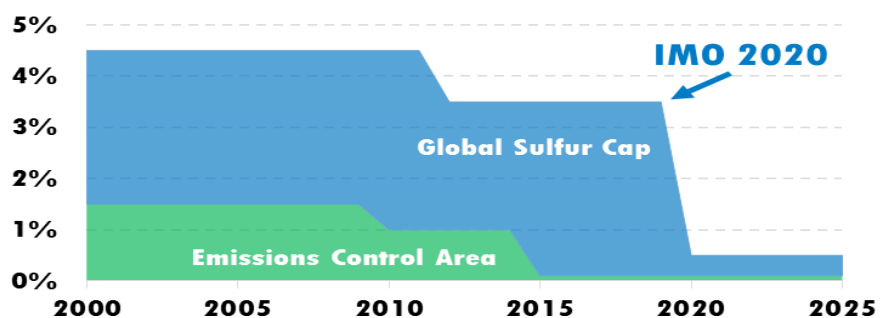
Energy Minister Alexander Novak said that the new standards "will lead to a sharp hike in the price of fuel for the river fleet and river-sea vessels, which operate mainly in Russia's territorial waters," but also confirmed that Russia will fully comply in international waters.⁵

Major refineries in Russia are reportedly not able to meet the low-sulfur criteria, and the bulk of fuel oil produced in the country in 2018 had

a sulfur content of 2.5% to 3.5%, well above the 0.5% limit of the IMO 2020 standards, according to the official figures.

While Russia's largest oil producer Rosneft plans full adoption of IMO 2020 standards in the next several years, second-largest producer Lukoil launched to produce IMO-compliant fuel very recently, and Gazprom Neft targets full conversion to low-sulfur products by 2024.

IMO Sulfur Limits



⁵ Bloomberg, (October 27, 2019) Russia may delay adopting rules for cleaner ship fuel

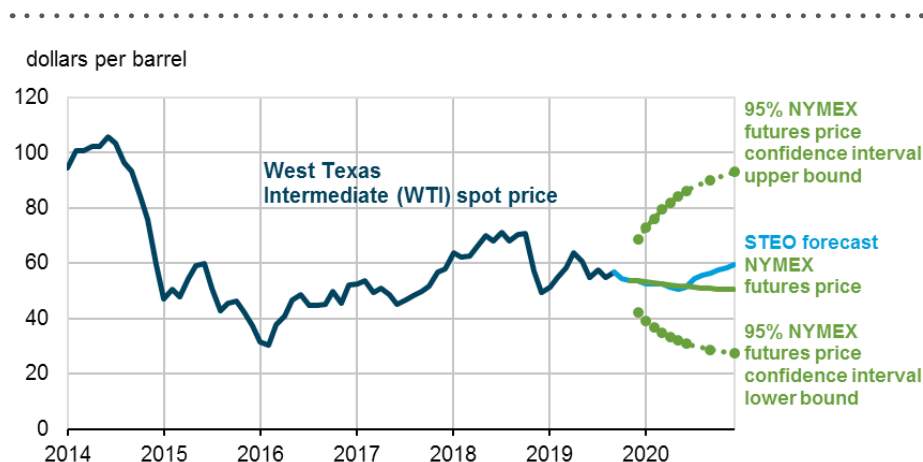
U.S. OIL AND NATURAL GAS PRICES LIKELY TO STAY LOW

The U.S. Energy Information Administration (EIA) revised its official oil price forecasts for 2020 based on market expectations on the increase in global oil inventories and uncertainty in the global economy.

EIA on its latest monthly report Short-Term Energy Outlook, which was published on October 8, lowered its estimate for Brent crude oil price for 2020 to \$60 per barrel and its estimate for West Texas Intermediate (WTI) crude oil price to \$54.50, down from \$60 and \$56.50 respectively in previous month's report.

While the report stated that Brent spot price began September at \$61 and increased to \$68 after attacks on major Saudi Arabian oil infrastructure disrupted the country's crude oil production, it stressed that the prices subsequently fell thanks to the rapid restoration in damaged facilities and global concerns on oil demand due to ongoing trade wars. Although EIA "recognizes a higher level of oil supply disruption risk than previously assumed," it lowered its oil price forecast due to "increasing uncertainty about economic and oil demand growth" in the coming quarters.

While EIA estimates that crude oil production from the Organization of the Petroleum Exporting Countries (OPEC) averaged 28.2 million barrels per day (bpd) in September, the lowest level since November 2003 as a result of falling production in Iran and Venezuela as well as the recent disruption in Saudi Arabia, the Administration expects that it will average around 29.6 million bpd in 2020 primarily because of the



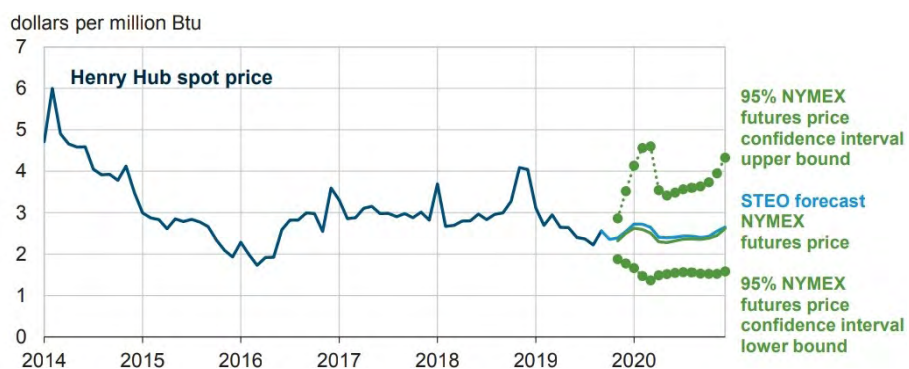
Graphic 1: West Texas Intermediate (WTI) Crude Oil Price & NYMEX Confidence Intervals⁶

recovery in Saudi production.

U.S. crude oil production averaged 11.8 million bpd in July and remained relatively flat during the first seven months of 2019 because of disruptions to Gulf of Mexico platforms and slowing growth in tight oil production, according to the report. EIA also expects U.S. crude oil production will average 12.3 million bpd in 2019, up 1.3 million from the 2018 level, and will rise by 0.9 million bpd in 2020 to an annual average of 13.2 million bpd.

As for the natural gas prices, EIA forecasts Henry Hub natural gas spot

price to average \$2.43 per million British thermal units (MMBtu) in the fourth quarter of 2019, a decrease of more than \$1/MMBtu from the fourth quarter of 2018 due to strong supply growth, subsequently increasing to an average of \$2.52/MMBtu in 2020. EIA forecasts that average annual U.S. dry natural gas production will average 91.6 billion cubic feet per day (Bcf/d) in 2019, up 10% from the 2018 average, but expects much less increase in 2020 and average 93.5 Bcf/d because the delayed effect of low prices in the second half of 2019 will reduce natural gas-directed drilling in 2020.



Graphic 2: Henry Hub Natural Gas Price & NYMEX Confidence Intervals⁷

⁶ U.S. Energy Information Administration (EIA), (October 8, 2019) Short-Term Energy Outlook

⁷ U.S. Energy Information Administration (EIA), (October 8, 2019) Short-Term Energy Outlook

GLOBAL LNG TRADE TO SET A NEW RECORD OVER 350 MT

Global LNG trade surpassed 300 million tons (MT) level last year, keeps growing with the increasing regasification and the liquefaction investments. The LNG trade volume increased 9.8% year-on-year in 2018 and reached 316.5 MT. The LNG output from liquefaction plants ramping-up and coming are expected to increase the global LNG trade by 35 MT, and total trade volume is forecasted to set a new record over 350 MT.

The U.S. and Australia led LNG exporters with the incremental growth of their export capacities. Australia added +12.2 MT to its export capacity by the new Wheatstone LNG and Ichthys LNG projects. The 8.2 MT LNG supply growth of the U.S, highlighted the country as the second-largest driver of LNG supply growth in 2018. The growth in the U.S. came with the new operating trains of the Sabine Pass and the Cove Point LNG.

Qatar continued to be the largest LNG exporter in 2018 by exporting 78.7 MT of LNG. However, Qatar's global market share continued to fall to 25% from 31% in 2014. As Qatar's liquefaction volumes remain mostly stable, the growing demand is met by other suppliers.

On the demand side, Asia remained the main driver of demand growth, with China's additional 15.8 MT LNG imports in 2018. China's demand growth is triggered by the enforcement of environmental policies that promote coal-to-gas switching, despite the slowing



MOL Challenger FSRU at Turkey's Dortyol shore

economy of the country.

After China, South Korea, India, and Pakistan, which imported combined 12.8 MT of LNG, were the key markets of Asian demand growth. The Pacific Basin continues to be the key driver of LNG trade growth, with the record high 134.2 MT LNG trade.

LNG imports of Europe kept its growing pattern and reached 50.0 MT with a 7.3% year-on-year increase. The declines in domestic production, mainly in Norway, the Netherlands, and the United Kingdom, had impacts on the growing LNG imports. Coal-to-gas switching in Northern Europe had also played a key role in the natural gas demand growth.

The most substantial increase in the LNG imports in Northwest Europe came from Belgium (+1.4 MT), the Netherlands (+1.3 MT), and France (+0.9 MT) during 2018.

LNG and pipe gas currently represent around a quarter of the EU's overall energy consumption. EU consumes 26% of its natural gas consumption in the power generation sector, including in combined heat and power plants.

The EU's gas demand is around 480 bcm and, based on current policies,

is projected to remain relatively stable in the coming years. Europe's gas demand is expected to increase in the southeast European countries and the other states that promote coal-to-gas and nuclear-to gas switch. Domestic gas production in Europe is expected to decline, which is likely to have an impact on gas imports.

Last year, Turkey was the only European market to implement a new regasification terminal with the Dortyol FSRU, after also adding the Etki FSRU in 2017. With the significant increase in Turkey's LNG gasification capacity, the country imported 12 bcm of LNG in 2018, which accounts for 23% of the total natural gas imports.

In the first half of 2019, Turkey imported 7.1 bcm of LNG with a 14% increase in year-on-year basis, while pipe gas imports dropped 18% to 16.1 bcm in the same period. The share of LNG in Turkey's total gas imports reached 30.1% in the first half of 2019, according to EMRA's monthly market reports.

Turkey also aims to keep most of its natural gas-fired power plants as a cold reserve with their total installed capacity over 26 GW as of September 2019.

Turkey's state-owned BOTAS is currently working on Saros FSRU project to connect the country's third FSRU to the grid from the North Aegean coast. Further down the road, Croatia is set to become an LNG importer after taking FID on its Krk LNG terminal in 2020.

The European Commission has found Croatian plans to support the construction and operation of an LNG terminal at Krk island to be in line with EU State aid rules, according to EC's press release on July 31, 2019.

Greece and Bulgaria are also aiming

to install an FSRU at Alexandroupolis coast of Greece for diversifying their gas supplies. However, the project is still pending due to future gas supplies from TANAP.

Importers such as Turkey, Italy, Portugal, and Poland use LNG to diversify their import mix and to maintain access to gas in the case of inadequate pipeline flows. Many markets such as Kuwait and Argentina use seasonal LNG imports to meet summer or winter demand peaks for cooling and heating. Markets such as Malta use LNG only for producing electricity.

Markets with high renewables penetration in their power generation mixes are also considering gas, often delivered as LNG, as a source of reliable backup power generation to complement renewables.

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Entry points of the LNG terminals and their capacity, mcm/day



Source: BOTAS.

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THE IICEC TURKEY ENERGY OUTLOOK TO BE PUBLISHED IN THE FIRST QUARTER OF 2020

On October 4th, 2019, the “Turkey Energy Outlook Stakeholders Meeting” was held with the participation of industry and sector leaders, country chairs and high level management from various leading companies, representatives of sectoral NGOs and several energy experts at Sakıp Sabancı Museum, the Seed. The Turkey Energy Outlook (TEO) was requested by Dr. Fatih Birol, the Executive Director of International Energy Agency and the Honorary Chairman of IICEC's Board of Directors. With IICEC's holistic model of the Turkish energy economy to produce long term energy scenarios, the TEO will share many features with the International Energy



Shown are session chairmen Kivanç Zaimler, Energy Group President, Sabancı Holding and Yağız Eyüboğlu, Energy Group President, Koç Holding (center) with Mehmet Acarla, General Manager Borusan EnBW (far left) and Ahmet Erdem, Country President Shell Turkey (right). Also shown are Bora Şekip Güray and Carmine Difiglio transcribing the insights being provided by the assembled Turkish energy leaders.

Agency's *World Energy Outlook*. As the TEO study has reached an important stage, IICEC convened a stakeholders meeting with the top leaders of Turkey's energy industry to gain their insights as to the priorities the TEO should give to various topics. During the meeting, significant topics of Turkey's energy sector, future perspectives and priority areas in terms of sustainable development of the energy sector were widely discussed.

The TEO will enumerate the goals and strategies that will empower Turkey's energy economy to be more secure,

competitive, and efficient. With a strong focus on technology and global trends, the TEO will provide insights, opportunities and policies to achieve multiple national objectives including economic progress, less reliance of imports of foreign energy and technology and a sustainable environment. The TEO is an in-house project by IICEC built on an analytical modeling framework developed by IICEC staff. It will be published in the first quarter of 2020 as a reference document for all energy stakeholders, including policy makers, investors, market players, finance community, and energy consumers.

IICEC, THE SABANCI UNIVERSITY CORPORATE GOVERNANCE FORUM AND HELLO TOMORROW TURKEY ASSEMBLE WORLDWIDE WOMEN LEADERS IN TURKEY ON 22 OCTOBER



“Women Leaders in Clean Energy, Science, and Technology” international conference, organized by Sabancı University Istanbul International Energy and Climate Center (IICEC), Sabancı University Corporate Governance Forum (CGFT) and Hello Tomorrow Turkey brought together the leading names in Turkey and the world. The conference featured keynote addresses by Sabancı University Founding Chairman of the Board of

Trustees Güler Sabancı, Executive Director of the International Energy Agency (IEA) and the Honorary Chairman of IICEC Dr. Fatih Birol, and Energy Futures Initiative Principal and Former Chief Advisor of the U.S. Secretary of Energy Melanie Kenderdine (Dr. Fatih Birol addressed the participants with a video message). The conference featured four comprehensive panels where women leaders shared inspiring stories. The first

panel titled “Problems, Barriers & Opportunities for Women’s Contribution” is followed by the “Best Practices, Policies & Solutions” and “Research and Technology Startups” panels. The Conference hosted over 400 participants with a diverse background in energy, academics, science and technology. The conference was concluded with a wrap-up session titled “Concluding for the Future”.

Please click [here](#) to visit IICEC’s web site for further information, photos, and the conference program.

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