

**CLIMATE**

EUROPEAN  
COMMISSION'S  
FIRST FEMALE  
BOSS PLEDGES  
FOR A FAST-  
TRACK GREEN  
TRANSITION

**8****CLEAN ENERGY**

IEA HOSTS  
HIGH- LEVEL  
MEETING ON  
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## OPEC+ STRIVES TO KEEP ITS MARKET SHARE AS U.S. SHALE PRODUCTION AND GEOPOLITICAL RISKS SURGE AGAIN

A week after OPEC+ agreed to keep oil production restrained until March 2020, the group's first forecasts for 2020<sup>1</sup> showed it faces an even longer and tougher challenge. OPEC's research department estimated that OPEC's producing about 560,000 barrels per day (bpd) more than will be needed next year as the ongoing surge in U.S. shale threatens to deliver another surplus. Supplies from producers outside the cartel will grow by more than twice as much as global oil demand, it forecast.

With oil demand growth weakening due to the impact of the U.S.-China trade war and U.S. tight oil production set to grow strongly in the second half of this year and beyond, Saudi Arabia and OPEC face the prospect of extending their cuts into next year or even 2021, deepening the loss of market share still further. According to OPEC's latest outlook, global oil consumption will continue to grow in 2020 at the same pace as this year (1.1 million bpd, or 1.1%), the expansion will be powered by emerging economies like India and China but tempered by stagnant consumption in developed nations.

Supplies from outside OPEC, however, will soar by 2.4 million bpd, as new pipelines in the U.S. enable the country's shale oil explorers to press on with more drilling. The fresh tide of American oil will be supplemented by other countries such as Brazil and Norway. As new non-OPEC supplies swamp the growth in demand, the amount of

crude required from the cartel will slump sharply for a third consecutive year.

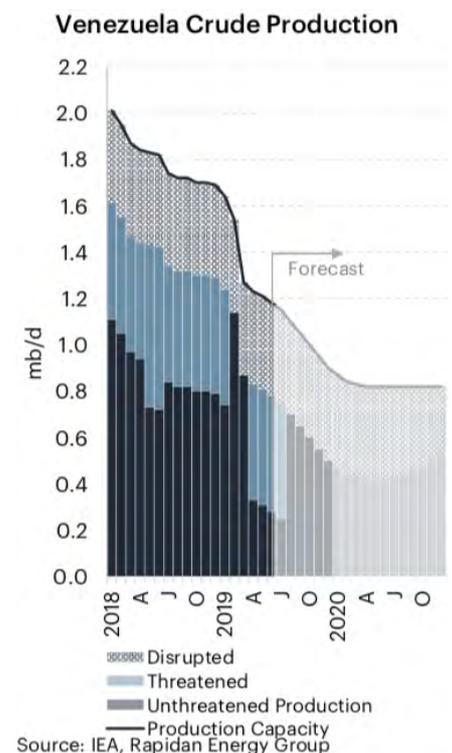
As Saudi Arabia pursues a policy of higher oil prices, it and the rest of the OPEC cartel are giving up market share to rivals, including U.S. shale producers. U.S. crude output reached new heights in April, highlighting OPEC's dilemma just days before the producer group meets amid growing geopolitical threats. U.S. production grew 2.1% in April to 12.16 million bpd which enabled U.S. oil output to overtake Saudi Arabia and Russia.

An average of 29.27 million barrels will be needed from OPEC in 2020, according to the report. That is significantly below the 29.83 million a day its 14 members produced last month, when their output fell again as the voluntary cutbacks were compounded by crises in Iran and Venezuela. Iran's exports plummeted to 0.3 million barrels per day in June from as much as 2.5 million bpd in April 2018 due to Washington's fresh sanctions. Sanctions are putting Iran under unprecedented pressure. Even in 2012, when the European Union joined U.S. sanctions on Tehran, the country's exports stood at around 1 million bpd.

OPEC nations are bearing the burden of the market share loss unevenly. Under U.S. sanctions, Tehran and Caracas have seen their production collapse, lightening the effort other members had to make to support high oil prices. Since December,

Iranian and Venezuelan output has fallen by almost 1 million bpd, hitting its lowest level in about 40 years.

As gasoline shortages loom in Venezuela, President Maduro has made preventing food and gasoline shortages a top priority in order to restrain any possible large-scale protests against the government. The regime can currently guarantee food supplies in the capital Caracas, but fuel shortages are putting pressure on food distribution programs.



**Graphic 1 – Venezuela crude production (2018-2020)**<sup>2</sup>

Other OPEC nations have avoided trouble by simply flouting the rules, virtually pumping at will. Iraq, for

<sup>1</sup> OPEC, (July 11, 2019) Monthly Oil Market Report July 2019.

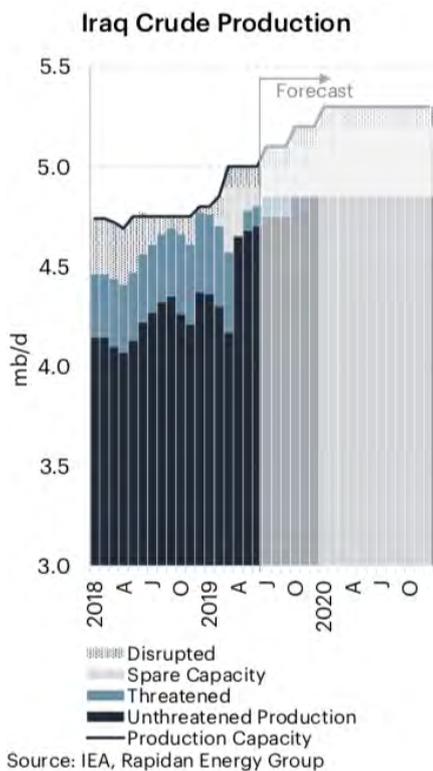
<sup>2</sup> Rapidan Energy Group, (June 28, 2019) Monthly Review & Insights – June 2019.

example, produced 4.7 million bpd in May, matching a record it set in December, while Baghdad still insists it remains in compliance with its 4.51 million bpd OPEC+ production quota. Output is likely to remain around 4.7 million bpd, as Baghdad increases crude burn to meet summer electricity demand. On the other hand, protests regarding power outages and possible impacts of rising U.S.-Iran tensions on Iran-aligned groups in Baghdad increase the internal political risks but are unlikely to disrupt the record-high oil production.

with its OPEC partners. That the organization’s production has fallen far more than intended this year, and may still prove to be too high, only illustrates the scale of its challenge. As of May, OPEC and its partners said they were cutting supply by about 700,000 bpd more than the 1.2 million bpd pledged at the start of the year as Saudi Arabia reduced supplies more than it pledged.

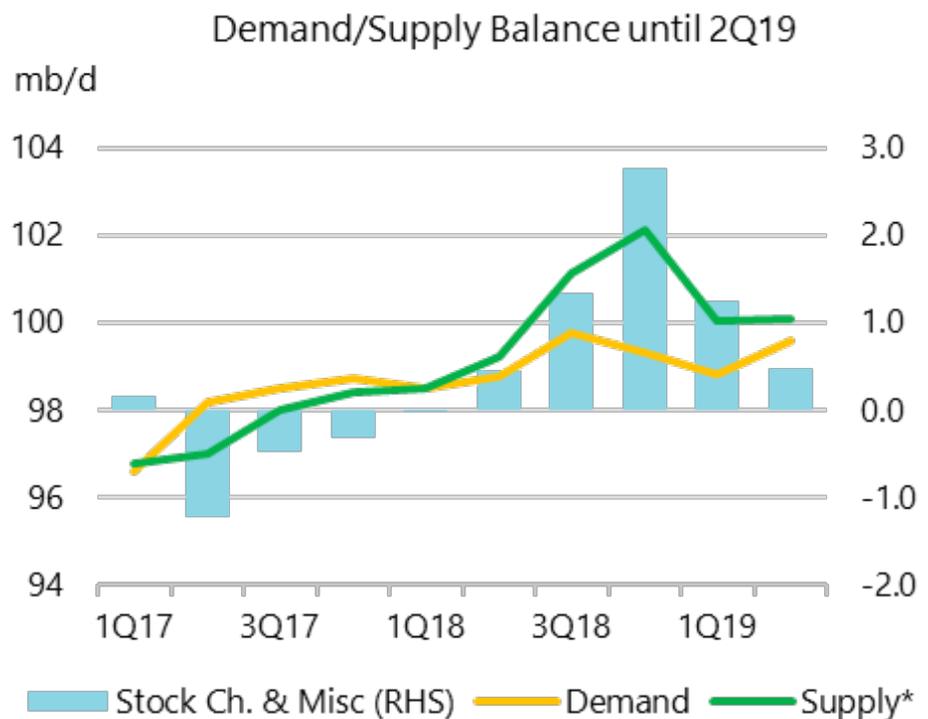
Indeed, OPEC’s latest report may vindicate warnings from Al-Falih’s predecessor, Ali Al-Naimi, that production cuts by OPEC would only back-fire by giving prices enough support to encourage greater investment in U.S. shale. For now, there’s no sign that the kingdom intends to reverse its current policy as it has the support of Russia, with President Vladimir Putin announcing that he has agreed with Saudi Crown Prince Mohammed Bin Salman to extend the OPEC+ agreement. Yet Moscow is starting to worry about the strategy. Since both countries came together in late 2016 to manage the oil market, they have privately disagreed about the ideal level for prices. “Look at the price per barrel of oil that is used to calculate,

With OPEC pumping in excess of levels needed next year, the organization and its partners would have to trim output further to keep markets in equilibrium. However, Saudi Arabian Energy Minister Khalid Al-Falih signaled on July 1 in Vienna he is reluctant to go down this path, saying that the kingdom has already cut “deep enough.”



**Graphic 2 – Iraq crude production (2018-2020)**<sup>3</sup>

But Saudi Arabia is having to make deeper cuts than initially planned, reducing output recently to 9.7 million bpd, well below the level of 10.3 million a day it agreed



**Graphic 3 – Oil demand/supply balance (1Q17-2Q19)**<sup>4</sup>

<sup>3</sup> Rapidan Energy Group, (June 28, 2019) Monthly Review & Insights – June 2019.

<sup>4</sup> International Energy Agency, (July 12, 2019) The IEA Oil Market Report.

say, the budget of Saudi Arabia. It is much higher than what we use. Ours is \$40 per barrel, and their price is higher. That is why, of course, they want to keep the price higher.” Putin said.<sup>5</sup>

In the meantime, the Paris-based International Energy Agency claimed that the latest OPEC+ oil production cut deal “does not change the fundamental outlook of an oversupplied market.” On its Oil Market Report revealed on July 12, the agency assumed constant OPEC output at the current level of around 30 million bpd.

IEA’s latest report highlighted that the global demand growth is set to accelerate from an exceptionally weak 310,000 bpd in 1Q19 and 800,000 bpd in 2Q19 to reach 1.8 million bpd in the second half of the year as economic activity improves and petrochemical plants ramp up. For 2020, the pace of growth will average 1.4 million bpd compared to 1.2 million bpd this year, the agency forecasts.



**Graphic 4 – 2019 Y/Y Non-OPEC Supply Growth**<sup>6</sup>

While the report stresses a potential oversupply next year, with a 2.1 million bpd expansion of non-OPEC supply, led by the U.S., versus 2 million bpd in 2019, it will lower the

requirement for OPEC crude, with the call on OPEC plunging to 28 million bpd in 1Q20. OPEC has not produced at such a low level since 3Q03.

## U.S. CONTEMPLATES MAJOR OIL RESERVE SELL OFF WHILE SHIPPING TENSIONS IN THE STRAIT OF HORMUZ REMAIN AT A HISTORIC HIGH

Despite oil oversupply, any sustained interruption of shipping in the Strait of Hormuz would like cause a sharp spike in oil prices and threaten world economies. While an interruption of oil traffic in the Strait is not expected, emergency oil reserves are held in anticipation of such unlikely events. These

reserves are especially important when these events become less unlikely. It is noteworthy, therefore, that the U.S. Congress is reported to be reaching a budget agreement that could sell even more oil from the Department of Energy’s Strategic Petroleum Reserve (SPR) than the 100 million barrels authorized in

last year’s budget deal.<sup>7</sup> Such sales, this year, would not affect the United States’ capability to meet IEA’s stock holding requirements. Nonetheless, it is unclear, over time, how much oil could be sold from the SPR before it was no longer regarded as a financial resource for balancing future U.S. Federal budgets.

<sup>5</sup> Bloomberg, (June 30, 2019) Shale fight makes OPEC accept lowest market share since 1991.

<sup>6</sup> Rapidan Energy Group, (July 12, 2019) Quick Take: IEA’s Monthly Oil Market Report.

<sup>7</sup> George Cahlink and Geof Koss, E&E News reporters Published: Monday, July 22, 2019.

## IEA CLOSELY MONITORING STRAIT OF HORMUZ SITUATION, STANDS READY TO REACT IF NEEDED

A major artery of the global oil market has caused an international upheaval and tension has remained high with the recent seizure of UK flagged oil tanker. Given that bypassing the Strait by using alternative routes is almost unlikely, particularly in the short-term, the right of free energy transition has become worrisome for the International Energy Agency.

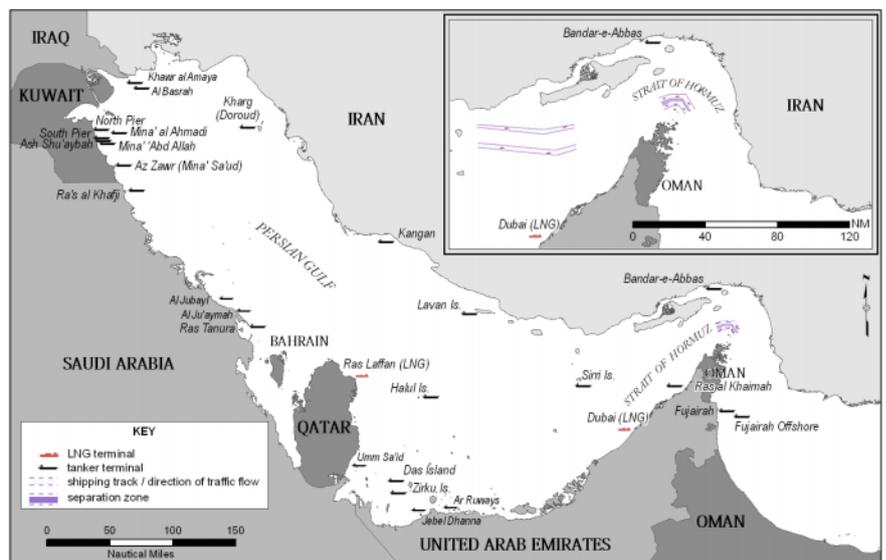
The IEA said that it is “ready to react quickly and decisively in the event of disruption to ensure that global markets remain adequately supplied”. As part of the reassurance of the world oil market, IEA stated that the member of the organization holds 1.55 billion barrels of public emergency oil stocks, which can be released if it is needed.

The IEA’s statement on the utilization of emergency stocks is very timely and important in the sense that it sends a positive signals to the world oil market, suggesting that in case of an unexpected event, even for an extended period of time, energy stocks held by the IEA countries would be able to cover the disruption. The IEA also reassured both consumers and the oil market by stating that oil market is well supplied with an exceeding demand in the first half of 2019. The IEA’s executive director, Dr. Fatih Birol is closely watching the

developments in the region and he is in close dialogue with ministerial counterparts and with other major consuming and producing countries.

The Strait of Hormuz is the most important strategic chokepoints of oil transition. With its narrow point, there are only two shipping lanes on in each direction each 2 miles wide, separated with 2 miles buffer. Persian Gulf oil exporters, including countries of Iraq, Kuwait, Saudi Arabia, UAE and Qatar, have been shipping approximately 20 million barrels of oil every day through this

strait. According to EIA’s figures, among seven chokepoints of major oil trade routes, the importance of Hormuz Strait has been increasing over the years. While in 2011 only 17 million barrels of oil passed through the Hormuz Strait, as of 2019, this volume increased to 20 million barrels per day. Considering that over 60% of the world’s petroleum and other liquids moved from maritime routes, in case of a blockage of a chokepoint, even temporarily, would threaten the world oil supply security and can lead to an exponential price increase.



Source: Jacqueline Nolan, Library of Congress, with data from Petroleum Economist, National Oceanic and Atmospheric Administration, and Central Intelligence

Source: U.S. Congress Research Service <sup>8</sup>

<sup>8</sup> <https://fas.org/sgp/crs/mideast/R45281.pdf> (page 4).

## SAUDI ARAMCO TO RESTART PREPARATIONS FOR MEGA IPO IN 2020-21

Saudi Arabia is working for a potential initial public offering (IPO) of the country's oil giant Saudi Aramco in 2020-21 as the company moves towards completing its merger with petrochemical firm Saudi Basic Industries Corp, Saudi Energy Minister Khalid al-Falih said following a meeting of the OPEC in Vienna on July 2.

Saudi Crown Prince Mohammed bin Salman is allegedly keen to list Aramco in New York, but advisers are wary of opening up the company to the risks of U.S. litigation. While Prince Mohammed has insisted that the IPO will still take place in 2020 or 2021, the company executives are reported to hold talks with a select group of investment banks to discuss potential roles on the offering.

Firstly, announced in 2016 as the cornerstone of the kingdom's Vision 2030 plan to modernize the country's economy, Aramco aimed to list the company in the second half of 2018 and to raise a record \$100 billion from selling a 5% stake which would make it the biggest IPO in history. After working with Evercore, Moelis&Co., HSBC, JPMorgan Chase and Morgan Stanley on the planned share sale for 2 years, Aramco last year declared officially that it puts the IPO plans on hold and instead decided to buy a \$69 billion stake in local chemical giant Saudi Basic Industries Corp. The company also sold \$12 billion in bonds in April, which was one of the most oversubscribed debt offerings in history and the energy giant's first major step onto the global financial

stage.

"The IPO was never fully suspended," though Aramco had been working on the Sabc acquisition and on raising capital, Al-Falih said. "Now that all these issues have been cleared -the Sabc transaction, the bond offering which was extremely successful- we believe we are ready to start planning for the IPO of Aramco." he added, declining to comment on the time frame beyond saying that the company is aiming for a listing in 2020 to 2021. The revived IPO plan still seems to face major challenges, including the ability of the kingdom to achieve the \$2 trillion valuation in the middle of an era of lower oil prices as well as growing concerns among top institutional funds about investing into fossil fuel companies.

## IEA UNVEILS GLOBAL HIGH-LEVEL COMMISSION FOR URGENT ACTION ON ENERGY EFFICIENCY

The International Energy Agency has established an independent high-level global commission to examine how progress on energy efficiency can be rapidly accelerated through new and stronger policy action.<sup>9</sup> According to IEA's statement, Prime Minister Leo Varadkar of Ireland will be the honorary chair of the IEA Commission for Urgent Action on Energy Efficiency, composed of government ministers,



*The commission will be chaired by Prime Minister Leo Varadkar of Ireland (top-left) and is composed of government ministers, top business executives and thought leaders from around the world.*

top business executives and thought leaders from around the world. The members include current and former ministers for energy and environment from below countries (in alphabetical order):

■ Denmark

■ Germany

■ Ireland

■ Japan

■ Luxembourg

■ Morocco

■ New Zealand

■ Spain

<sup>9</sup> IEA, (July 9, 2019) IEA unveils global high-level commission for urgent action on energy efficiency.

“Dr. Amani Abou-Zeid, the African Union Commissioner for Energy and Infrastructure, and Dr. Wan Gang, the previous Chinese Minister of Science and Technology, who is known as the father of new energy vehicles in China, have also agreed to take part.” says IEA. Business leaders taking part include Mr. Ben van Beurden, the CEO of Royal Dutch Shell; Ms. Lisa Davis, the Chief Executive of gas and power at Siemens; and Mr. Gil Quinones, the President of the New York Power Authority.

According to EIA, energy efficiency has a central role to play in meeting global sustainable energy goals, more than any single fuel. The IEA calculates that with the right policies, the global economy could double in size by 2040 while still maintaining broadly the same level of energy use

today.<sup>10</sup> Those policies alone would enable the world to achieve more than 40% of the emissions cuts needed to reach international climate goals using cost-effective technologies already available, according to IEA analysis. IEA calls attention to slowing policy implementations and weakening efficiency progresses. “Global energy-related CO2 emissions increased last year at their highest rate since 2013, and air pollution continues to be linked to millions of premature deaths each year.” says IEA.

“It is imperative that we get global energy efficiency progress back on track.” said Dr. Fatih Birol, the IEA’s Executive Director and IICEC’s Honorary Board Chairman. “I’m delighted that Prime Minister Varadkar and other eminent figures from around the world have agreed to

commit their energy and ideas to this vital project.”

According to IEA, if countries implement all the economically viable energy efficiency potential available today, consumers around the world could save more than half a trillion US dollars through lower energy bills by 2040, while greenhouse gas emissions, air pollution in cities and dependence on energy imports could all be reduced. But this will require firm and rapid action from governments.

“The IEA sees energy efficiency as critical for successful clean energy transitions,” Dr. Birol said. “It has huge potential to start making an immediate difference if governments act now and act decisively.” The focus of the new energy efficiency panel is expected to boost key policy actions that can be taken by countries across the globe.

## EUROPEAN COMMISSION'S FIRST FEMALE BOSS PLEDGES FOR A FAST-TRACK GREEN TRANSITION

Ursula von der Leyen, Germany’s Defense Minister, has been confirmed as the European Commission’s first female President and the first German in the job for more than 50 years. In a secret ballot, Members of the European Parliament voted narrowly to support her as a replacement for Jean-Claude Juncker when he steps down on October 31.

Von der Leyen, 60, publicly announced that she defined the climate protection as one of her top priorities in the Political Guideline<sup>11</sup> she submitted to the EU Parliament

ahead of her confirmation vote. Von der Leyen announced that she will focus on an ambitious climate agenda to make Europe “the first climate-neutral continent in the world” by 2050. While she pledged to increase EU goals for reducing carbon emissions, she also stressed that she would be prepared to impose a levy on imports from countries that keep polluting.

The current target to cut greenhouse gases by at least 40% from 1990 levels is not enough to put Europe in sync with the Paris Agreement remit



to cap global temperature increases to 2 or even 1.5 degrees Celsius, she told. “Our current goal of reducing our emissions by 40% by 2030 is not enough. We must go further. We must strive for more. A two-step approach is needed to reduce CO2 emissions by 2030 by 50, if not 55%. The EU will lead international negotiations to increase the level of ambition of other major economies by 2021. “To make this happen, I will put forward a Green

<sup>10</sup> IEA, (October 19, 2018) Energy efficiency is the cornerstone for building a secure and sustainable energy system.

<sup>11</sup> European Commission, (July 16, 2019) Political guidelines for the next Commission (2019-2024) - A Union that strives for more: My agenda for Europe.

Deal for Europe in my first 100 days in office. I will put forward the first ever European Climate Law which will set the 2050 target into law.” she said on her opening statement in the European Parliament plenary session on July 16.

Europe’s emissions are already about 25% lower than they were in 1990. Von der Leyen wants to accelerate the decline by extending the world’s biggest carbon market, the EU Emissions Trading System (ETS), to cover shipping emissions and aims to reduce the number of free allowances to pollute allocated to airlines. The ETS, which now

includes manufacturers and power plants, would also cover traffic and construction. Underlining that the public funds will not be enough for this faster transition, Von der Leyen pledged to propose a “Sustainable Europe Investment Plan” and “turn parts of the European Investment Bank into a Climate Bank” which will unlock €1 trillion of investment over the next decade.

While she supported a “Carbon Border Tax” to avoid carbon leakage, she also promised to propose a “Just Transition Fund” to support those most affected by the climate transition.

But, after scraping over the 374-seat threshold for confirmation by just nine votes, the new boss of the Commission may face a struggle to muster support for her most far-reaching proposals. A group of European countries led by France have been pushing for a Carbon Border Tax for more than a decade, but the idea has never won the unanimous backing from national governments that is needed for it to become law. Although the outgoing commission has proposed a change of rules on how member states vote on matters related to energy taxes, but national governments may be reluctant to hand more power to Brussels.

## IEA LAUNCHES NEW TOOL FOR TRACKING OIL AND GAS-RELATED METHANE EMISSIONS WORLDWIDE

The International Energy Agency (IEA) has launched a new online tool that tracks oil and gas-related sources of methane, a major and often overlooked greenhouse gas.<sup>12</sup> In addition to showing current emission levels, the tool also sets out the reductions that are possible using existing technology.<sup>13</sup> “The new methane tracker, available on IEA’s web site, offers the most comprehensive global picture of methane emissions, covering eight industry areas across more than seventy countries.” said IEA.

IEA’s new tool provides the agency’s

most up-to-date estimates of current oil and gas methane emissions, drawing on the best available data. It also sets out the reductions that are possible using existing technology and sheds light on this underexplored component of energy transitions. IEA analysis has highlighted that global methane emissions from the oil and gas sectors could be reduced by nearly half at no net cost.

IEA projections suggest that oil and, in particular, natural gas will play important roles in the energy system for years to come, even under strong decarbonization

scenarios aligned with international climate goals. Reinforcing efforts to minimize methane emissions along their supply chains is an essential complement to the reductions in CO<sub>2</sub> that are led by increased efficiency and deployment of clean energy technologies.

“The oil and gas sectors have an open goal in front of them. They can avoid close to 50% of their methane emissions without hurting the bottom line. Doing so would have the same long-term climate benefits as immediately eliminating emissions from more than half the cars on the



<sup>12</sup> IEA, (July 16, 2019) IEA launches new tool for tracking oil and gas-related methane emissions worldwide.

<sup>13</sup> Anadolu Agency, (July 17, 2019) IEA launches tool to track global methane emissions.

road worldwide.” said Dr. Fatih Birol, the IEA’s Executive Director.

Natural gas accounted for almost half the growth in global energy demand in 2018, and 70% of the increase

came in two countries -the United States and China- where the rise in gas came at the expense of coal. This switch to gas has been a factor in preventing a faster rise in global CO2 emissions in recent years.

Taking both CO2 and methane emissions into account, coal-to-gas switching is currently able to reduce emissions on average by 50% when producing electricity and by 33% when providing heat.

## IEA HOSTS HIGH-LEVEL MEETING ON TECHNOLOGIES FOR A CLEAN ENERGY FUTURE



The International Energy Agency (IEA) on 11 July hosted a discussion among leading global energy sector figures about technologies that can help to bring about a clean energy future, including hydrogen and nuclear power.<sup>14</sup> The main speakers at the event were Dan Brouillette, Deputy US Energy Secretary; Jean-Bernard Lévy, Chairman and CEO of EDF; Hiroshi Oe, Japanese Ambassador to the OECD and Chair of the IEA Governing Board; and Dominique Rostori, Director-General Energy at the European Commission.

The discussion at the IEA’s headquarters in Paris was informed by two recent major reports from the IEA: Nuclear Power in a Clean Energy System and The Future of Hydrogen:



Seizing Today’s Opportunities. “I’d like to thank our speakers for the robust and rewarding conversation.” said Dr. Fatih Birol, the IEA’s Executive Director IICEC’s Honorary Board Chairman, who hosted the event.

“There is no miracle technology that will solve the daunting environmental challenges the world faces. We need continued innovation across a range of technologies, including renewables, energy efficiency, batteries, carbon capture, and more. The IEA sees hydrogen and nuclear power as important parts of clean energy transitions in many countries, but they need help from governments to overcome significant obstacles.” said Dr. Birol. “Nuclear power is by far the largest source of low-carbon electricity in both Europe and North America, but many of their plants are aging. Without effective policies

to spur new investment, advanced economies could lose as much as two-thirds of their nuclear capacity in the next 20 years, threatening global climate goals and energy security.” IEA said.

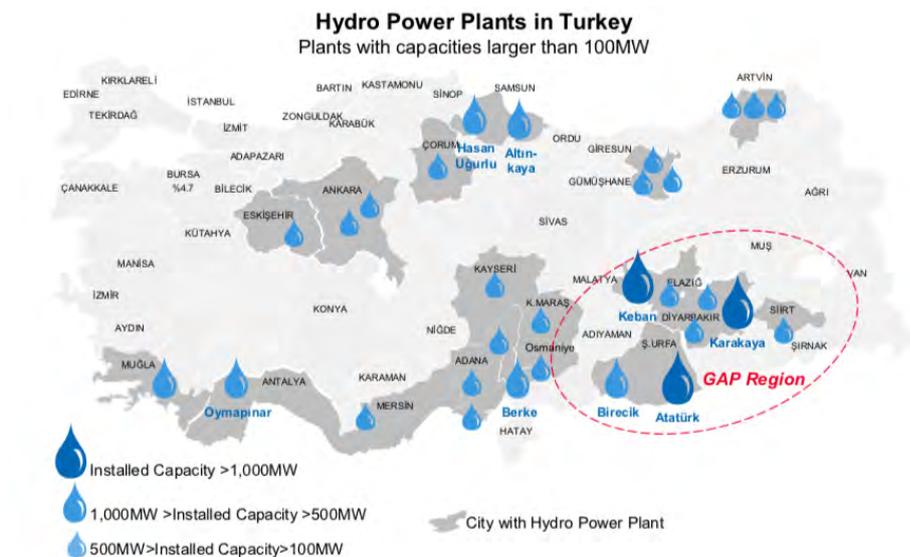
“Hydrogen, which is currently enjoying unprecedented momentum, can help tackle various critical energy challenges. It offers ways to decarbonize a range of sectors where it is proving difficult to meaningfully reduce emissions, including long-haul transport, chemicals, and iron and steel. Hydrogen’s ability to store and transport energy could enable renewables to make a greater contribution to the global energy system. But it has experienced false starts in the past and still faces big challenges to scale up infrastructure and bring down costs,” says EIA in its official statement of the meeting.

<sup>14</sup> IEA, (July 12, 2019) IEA hosts high-level meeting on technologies for a clean energy future.

## LOCAL RESOURCES INCLUDING RENEWABLES ACCOUNTS FOR 66.2% OF TURKEY'S ELECTRICITY GENERATION IN THE FIRST HALF OF 2019

Turkey aims to increase the share of renewables and local resources in primary energy supply and electricity generation. This is one of the most important pillars of national energy policy.

Turkey produced 141.64 TWh of electricity in the first half of this year, of which 93.77 TWh came from local and renewable energy resources. Statistics reveal that share of electricity generation from local sources, including coal and renewables increased to 66.2% in the first half of 2019 compared to 50.8% for the same period last year, according to



Source: Enerji IQ Market Information & Consultancy

data from the Ministry of Energy and Natural Resources.

The biggest contribution came from hydroelectric power plants which accounted for 35.8% of total generation in Turkey Breakdown of the remaining local resources contribution indicates that both local coal and other types of renewables had also provided significant generation. Generation from imported resources amounted to 33.8% share in Turkey's electricity production. The share of natural gas

fell to 16%. This figure was 29% in the first half of last year.

Monthly analysis show that the highest share of domestic resources used for electricity production was realized in May at 75%. Imported fuels had the largest monthly share in total production in February at 45%. Apart of demand seasonality effects and other market related factors, this demonstrates the increased significance of hydro generation during the year.<sup>15</sup>

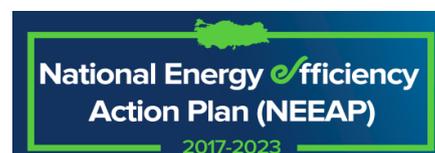
## TURKEY AIMS USD 30.2 BILLION IN ENERGY SAVINGS BY 2033

Turkey announced its National Energy Efficiency Action Plan (NEEAP) for the 2017-2023 period in January 2018. This Plan is a critical step towards utilizing energy efficiency potential of Turkey across different sectors. The Plan includes

55 actions in energy efficiency with substantial potential gains.

The government has taken planning that involves actions in all energy consuming sectors, including transport, buildings, industry,

agriculture, and other actions such as power generation efficiency and installing LED street lighting.<sup>16</sup> In the buildings sector, expanding the use of renewable energy and promoting use of central and district heating/cooling systems are among major



<sup>15</sup> Anadolu Agency, (July 10, 2019) Local, renewables share in Turkey increases to 66% in 1H19.

<sup>16</sup> RInternational Partnership For Energy Efficiency, (September 28, 2018) New National Energy Efficiency Plan will bring Turkey USD 30.2 billion in energy savings by 2033.

focus areas.

The government will help 1.7 million households to improve dwelling energy efficiency through thermal insulation. The plan aims to provide residents with an attractive financial mechanism to enable customers to pay the installments with the savings. This action will save customers 40% on their heating bills, bringing USD 1 billion savings by 2023 and USD 10 billion if the lifespan of thermal insulation materials is considered at 20 years.<sup>17</sup>

The focus in the transport sector will be on promoting energy-efficient vehicles and reducing traffic intensity in cities to shift to a more efficient transport mode. On the one hand, disincentives to limit cars in the city centers such as increased parking fees and installing automated parking alarm systems will be introduced; on the other hand, national and international financial support will be used to promote the use of vehicles sharing system, as well as public transportation.

The industry sector, which accounts for the biggest share of energy consumption at 32% after buildings, also has the potential to save USD 10 billion by energy efficiency improvement projects and encouraging the use of technologies such as combined heat and power. Additionally, the government is planning to replace 30% of the total 7.5 million streetlights with more energy efficient ones by 2023 to save more than USD 45 million by 2023 and USD 123 million by 2033.

## TURKEY'S NATURAL GAS PRODUCTION INCREASED BY 20.9% IN 2018

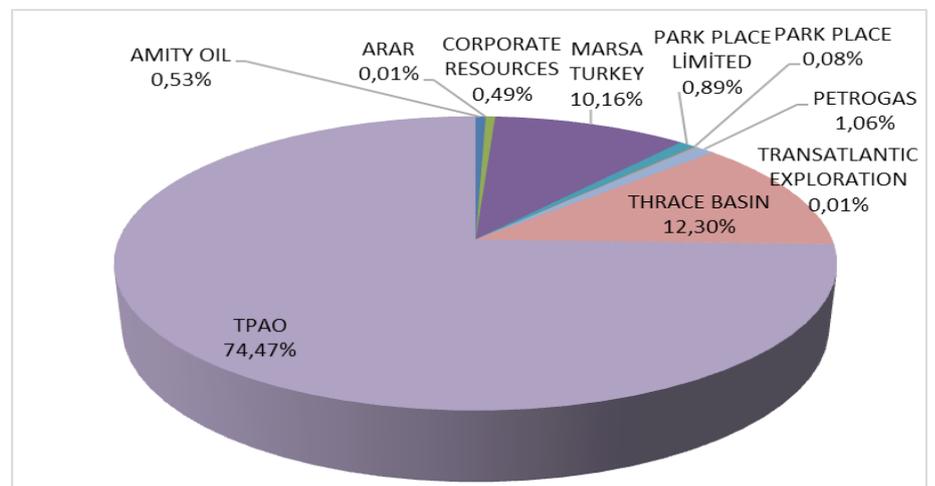
According to the Energy Market Regulatory Authority's Annual Gas Market Report, released in July 2019, Turkey's domestic natural gas production increased by 20.9% in 2018 on a year-on-year basis.<sup>18</sup>

According to EMRA's report, 10 production companies produced 428,17 million m<sup>3</sup> of natural gas. The amount of domestic production increased by 20.9% from 354.15 million m<sup>3</sup>, produced in 2017. Despite this significant growth in absolute terms, Turkey's domestic gas production met only 0.87% of its annual natural gas demand of 49.3 billion cubic meters. EMRA's report shows that major production came from regions around Tekirdağ, located on western Thrace, and Istanbul. Production in these two cities contributed to 78% of Turkey's total gas production in 2018.

State-owned Turkish Petroleum Corporation (TPAO) produced nearly 75% of Turkey's total natural

Provinces	Amount (mcm)
Tekirdag	176.39
Istanbul	156.6
Canakkale	43.51
Kirklareli	40.75
Duzce	8.45
Adana	1.76
Adiyaman	0.63
Edirne	0.05
Hatay	0.03
<b>TOTAL</b>	<b>428.17</b>

gas production, whereas Thrace Basin, the Joint Venture of Valeura Energy and Norway's Equinor, produced around 12% of total production. The report shows that producer companies sold 52% of their production to end-users by direct lines. According to EMRA's legislations, the produced natural gas can be sold to end-users by direct lines, which are not considered as a part of the national transmission grid.



<sup>17</sup> Ministry of Energy and Natural Resources, General Directorate of Energy Affairs, (January 31, 2018) NEEAP.

<sup>18</sup> EMRA, (July 2019) Turkish Natural Gas Market Report 2018.

## EUROPEAN NATURAL GAS TRADE HITS 1 TRILLION EUROS WITH 52.6 TWH

The value of Europe's natural gas market rose more than a third to 1.19 trillion euros (\$1.34 trillion) last year as prices soared and buying and selling of the fuel reached new highs.<sup>19</sup> According to London based consultancy firm Prospex Research Ltd.'s latest report, prices rose by almost a third over the year, driving the sharp increase in market value. The total volume of gas traded at European hubs rose by 5% to 52,604 TWh last year and was up about 10% in the first few months of this year, said the consultancy company.

Trading on the Dutch TTF market rose by 28% reaching at 27,219 TWh, in sharp contrast to Britain's

NBP, which has been the biggest market for decades. Overall, the activity contracted for the third consecutive year with a 19 % slump as of 2018. "In 2018, we estimate that the total volume of gas traded at European hubs was 52,604 TWh. This is a new annual trading volume record, beating the previous high of 51,145 TWh, set in 2016, by 3%. In 2017, trading activity had dipped by 2%, but between 2017 and 2018 it grew by 5%" said the company on the teaser of the report.

Other findings in the report:

- Other than the two dominant markets, overall trading volumes increased by 4%,

although the performance of the individual smaller trading hubs was mixed.

- The quantity of gas traded at European hubs last year was 10.2 times the amount used by consumers in the same period. This is a record level for the Europe-wide churn factor. However, it is still "far lower" than the churn factors seen in some other commodities, including oil.
- The volume of trading handled by exchanges fell by 6%, reversing the trend of the previous five years.

## TRANS ADRIATIC PIPELINE (TAP) LAUNCHES MARKET TEST

Trans Adriatic Pipeline AG (TAP), one of the important regional natural gas projects, launched a market test to allow natural gas shippers to express interest, and in a later phase, potentially secure access to new, long-term capacity in TAP.<sup>20</sup> The market test will be conducted in two main phases: A non-binding phase, starting on 1 July 2019, followed by a binding phase, which is expected to start earliest in the second quarter of 2020, according to the official statement by TAP.

"Starting in 2020, TAP plans to initially transport approximately 10 bcm of natural gas annually, bringing a new source of gas to Europe. Yet,

TAP is able to double its capacity to 20bcm/a, therefore, with the project now being more than 88% complete, we aim to ensure that the pipeline can expand in line with the future demand to transport gas into Europe. This is a great opportunity for additional gas resources to reach the European markets, supporting the transition to a cleaner energy mix." Luca Schieppati, TAP's Managing Director, said.

TAP will transport natural gas from the giant Shah Deniz II field in the Azerbaijani sector of the Caspian Sea to Europe. The 878 km long pipeline connects with the Trans Anatolian Pipeline (TANAP) at

the Turkish-Greek border in Kipoi, crosses Greece and Albania and the Adriatic Sea, before coming ashore in Southern Italy. First gas deliveries to Europe via TAP are expected to start in 2020.

TAP's routing can facilitate gas supply to several South Eastern European countries. TAP's landfall in Italy is expected to provide multiple opportunities for transport of Caspian gas to the wider European markets. TAP's shareholding is comprised of BP (20%), SOCAR (20%), Snam (20%), Fluxys (19%), Enagás (16%) and Axpo (5%).

<sup>19</sup> Bloomberg, (July 12, 2019) European natural gas trade tops 1 trillion Euros for first time.

<sup>20</sup> TAP AG, (July 1, 2019) Trans Adriatic Pipeline Launches Market Test.

## ENGIE PLACED IN TOTAL EUR 1.5 BILLION OF HYBRID BONDS IN 2019.

ENGIE issued perpetual subordinated bonds for an amount of EUR 500 million, on June 27, 2019. The perpetual subordinated bonds bear a coupon of 1.625% p.a, with a first call date after 6 years. On a press release, it was stated that these hybrid bonds are, “among the lowest ever for this type of financial instruments”.

Expecting a strong demand from investors, particularly from asset managers, ENGIE’s order book subscribed more than 2 times. Because of combination of hybrid and green futures that led to oversubscription, ENGIE has also managed to reduce its hybrid expenses with an anticipation of next hybrid call date. These bonds partly benefit from equity content from credit rating agencies.

On a press release issued on the 10th of July 2019 Executive Vice President and CFO of ENGIE, Judith Hartmann stated that, ““ENGIE successfully returned to the hybrid bond market for the second time in 2019 and perfectly timed the launch of this new hybrid transaction, taking advantage of the historically favorable market conditions and confirming the attractiveness of ENGIE”.

Since 2014, EUR 7.25 billion worth of green bonds issued but the first corporate hybrid green bonds issued only at the beginning of 2019, this suggest that ENGIE is keen to strengthen its position amongst the biggest issuer of green and hybrid bonds near in the future with a strong priority of developing sustainable finance.

## VALEURA BEGINS RESERVOIR STIMULATION TESTS IN TURKEY

Valeura Energy Inc., focused on appraising and developing an unconventional gas accumulation in the Thrace Basin of Turkey in partnership with Equinor, announced the start of reservoir stimulation and testing operations on the Inanli-1 appraisal well.

The Canada-based public company engaged in E&P of petroleum and natural gas in Turkey intends to test a minimum of four zones in the Inanli-1 well, according to the statement.<sup>21</sup> Valeura said that the stimulation program is designed to test well-defined discrete intervals and, in most cases, only a single stage high-pressure stimulation is planned for each zone.

Valeura owns a gas gathering and sales infrastructure in the region to support direct marketing of natural gas to end-users, and according to the statement, produced an average of 4.3 MMcf/d of natural gas from conventional gas accumulations in its shallower rights in 2018. As of Q1 2019, the company produced 4,488 Mcf/d natural gas and 20 bbl/d crude oil (total 768 boe/d). Valeura is positioned itself to develop an unconventional basin-centered gas accumulation play in the Thrace Basin.

<sup>21</sup> Valeura Energy Inc., (June 25, 2019) Valeura Begins Reservoir Stimulation Operations at Inanli-1.

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**IICEC SABANCI UNIVERSITY ISTANBUL INTERNATIONAL  
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