The Arab Gulf States Institute in Washington

Building bridges of understanding

Petro Diplomacy 2020

Conference Report

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The Arab Gulf States Institute in Washington (AGSIW), launched in 2015, is an independent, nonprofit institution dedicated to providing expert research and analysis of the social, economic, and political dimensions of the Gulf Arab states and key neighboring countries and how they affect domestic and foreign policy. AGSIW focuses on issues ranging from politics and security to economics, trade, and business; from social dynamics to civil society and culture. Through programs, publications, and scholarly exchanges the institute seeks to encourage thoughtful debate and inform the U.S. foreign-policy, business, and academic communities regarding this critical geostrategic region.

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About This Report

The Arab Gulf States Institute in Washington held its sixth annual Petro Diplomacy conference, virtually, from October 20-22, 2020, on the impact of the coronavirus pandemic on the energy sector and the transition to a low carbon economy. The discussion opened with a conversation between Ambassador Douglas A. Silliman, AGSIW president, and Angela Wilkinson, secretary general and CEO of the World Energy Council. Two roundtable discussions on the prospects for oil producers and the future of gas in the transition were held under the Chatham House Rule, and the final session on the geopolitics of oil and gas and U.S.-Gulf Arab relations was a public forum. This report was compiled by Kate Dourian, non-resident fellow at AGSIW and regional manager for the Middle East and Gulf at the World Energy Council.

Videos of the conference's public sessions are available online at:

https://agsiw.org/programs/petro-diplomacy-2020/

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Foreword

Ambassador Douglas A. Silliman
President, AGSIW

On behalf of the Arab Gulf States Institute in Washington's board of directors and staff, it is my pleasure to share with you the report of our sixth annual energy conference, "Petro Diplomacy 2020."

This year, we convened the conference virtually, from October 20-22. As with previous years, it brought together oil industry executives, economists, foreign policy experts, scholars, and government officials. Over the course of the three days, they discussed key drivers of the oil price outlook, oil investment strategies, and economic and energy policy reforms in the Gulf Arab states as well as the impact of these dynamics on regional and international foreign policy agendas.

An overarching theme of the conference was the coronavirus pandemic, which has delivered unprecedented shocks to the global economy, energy industry, and public-health networks. The world economy shrank, pulling down energy demand, which fell to its lowest level in more than seven decades as businesses and industrial plants shut down, planes were grounded, and road transportation was curtailed.

While Gulf Arab oil producers boast some of the lowest production costs, allowing them to remain competitive in a weaker oil price environment, they will not emerge unscathed. There will be no quick fix or single pathway to emerge from this pandemic. How the Gulf Arab states respond will determine whether they can adapt and start planning for an energy transition as well as a more sustainable and resilient economic system that can withstand future shocks.

Our aim in convening this conference was to help advance the conversation on the future of the energy industry and assess the wider geopolitical, economic, trade, and investment climate. I am confident that the key findings from this report will better inform policymakers, industry leaders, and interested citizens as they consider the momentous challenges ahead for the Gulf Arab states, oil-producing countries, and the international energy market.

Ambassador Douglas A. Silliman
President, Arab Gulf States Institute in Washington

Executive Summary

The Arab Gulf States Institute in Washington held its sixth annual Petro Diplomacy conference via Zoom from October 20-22, 2020. The event focused on the impact of the coronavirus pandemic on the energy sector and the transition to a low carbon economy. The fact that this year's conference was held remotely reflected the dramatically different circumstances in which the world is conducting its business. Lockdowns and travel restrictions to contain the coronavirus, which has not yet run its course, have tipped the global economy into recession and energy demand has plummeted. The conference explored the impact of the pandemic on the oil and gas sectors and the geopolitical implications of these developments on OPEC's relationship with Russia and U.S. relations with Gulf Arab states.

The conference opened with a conversation between Ambassador Douglas A. Silliman, AGSIW president, and Angela Wilkinson, secretary general and CEO of the World Energy Council, who spoke about how more energy can be used in a way that meets humanity's needs while achieving climate neutrality. In roundtable discussions, speakers gave their views on the impact of the coronavirus pandemic on future supply and demand patterns, the future of oil and gas in the transition to a lower carbon economy, and the role of new technologies in delivering carbon-neutral solutions. The final session on the geopolitics of oil and gas and U.S.-Gulf Arab relations was a public forum that addressed the relationship between OPEC and Russia and the U.S. role as broker of the OPEC+ agreement as well as the U.S. presidential election and whether a change in policies by the new U.S. administration would impact the Gulf Arab producers and their relations with Washington.

Introduction

A structural change was underway in the energy system before the pandemic struck and pushed the market into uncharted waters, which makes it difficult to predict when and to what extent energy demand will pick up.

The disruption caused by the coronavirus pandemic has narrowed the space in which Gulf Arab oil producers can maneuver as a saturated oil market forced them to slash oil production. Deep output cuts lifted oil prices that sank to sub-zero levels for the U.S. benchmark crude West Texas Intermediate in April but shed some of their gains as the second and third waves of the pandemic struck. Revenue has shrunk just as Gulf oil producers are moving to diversify their economies away from excessive reliance on hydrocarbons.

The energy market was undergoing a structural change before the pandemic pushed it into uncharted waters, which makes it difficult to predict when and to what extent energy demand will pick up in the years ahead. The impact of the health crisis has also been uneven across energy sources with renewable energy likely to emerge relatively unscathed, while natural gas fared slightly better than oil.

This being an election year in the United States, the geopolitical ramifications of U.S. energy policy will be a crucial factor in the direction of the global energy transformation and the

climate agenda. The United States emerged as the world's leading producer of oil due to the surge in U.S. shale production over the last decade. The pandemic put additional strains on the industry, already suffering from poor fiscal returns and profitability. How energy policy develops postelection will affect the supply and demand balance globally and determine which countries emerge as the future leaders of the energy market.

The main issue is whether the pandemic will accelerate or delay the transition to a lower carbon economy that was already under way before the crisis. Signs point to the former with China recently announcing plans to attain carbon neutrality by 2060, a key development that may determine the direction of oil and gas demand growth. The European Union has made a green recovery a key plank of its pandemic recovery plans and is leading the way to reaching a net-zero economy by 2050. Japan has also joined the carbon neutrality bandwagon. All this is significant for the Gulf Arab producers who had been relying on the big Asian economies to drive demand growth for hydrocarbons in the decades ahead.

Energy transitions are disruptive and require a huge reallocation of funds as well as investment in infrastructure to accommodate new energy sources and technologies. The diminished valuations of the major international oil companies help to demonstrate the scale of the disruptive influence of digitalization so far on the energy industry. The Zoom video communications platform, which was relatively unknown before the pandemic, is now a more valuable business than ExxonMobil, once the biggest company in the world by market value. Gulf oil and gas producers will need to develop new and more sophisticated financial instruments if they are to transition faster to new technologies and decarbonization to meet demand in a carbon-constrained world.

Renewable energy has penetrated the power sector and is making inroads in other parts of the economy previously the preserve of hydrocarbons. The Gulf Arab producers were not early subscribers to the clean energy revolution, but they have now embraced the concept of the circular carbon economy with the aim of decarbonizing their oil and gas and securing a place in the transition to net-zero carbon emissions. Delay in taking action may result in stranded assets, loss of market share, and higher carbon taxes. All this comes at a price to producers and users of energy as the global energy system is transformed and digitalized. The answer is developing these new technologies to scale to make them affordable. Despite the demand slowdown, there is a need to maintain upstream investment in oil and gas to make up for natural declines and avoid a supply and demand imbalance.

Natural gas has held up relatively well during the pandemic, but growing concern over methane emissions is putting pressure on the Middle East's gas exporters to decarbonize. Qatar, the world's biggest exporter of liquefied natural gas, plans to start exporting carbon-neutral LNG cargoes in 2025 in response to consumer demand in Asia and Europe, where methane regulations are being tightened. Satellite imagery to detect methane emissions will be used more extensively, which will add pressure on gas exporters to move faster to decarbonize. The U.S. gas sector, in particular, has a problem with methane emissions and gas flaring, while the Gulf states have a better track record. A gas surplus that has been exacerbated by the pandemic will take time to be absorbed, but gas demand is set to return to growth and has suffered a far lower percentage decline than either oil or coal during the current crisis. It is the only fossil fuel that the International Energy Agency expects will witness demand

growth to 2040. What is unclear is how investment will be impacted by the current weak price environment and supply surplus. Some LNG projects have been delayed, and there have been no final investment decisions on gas projects in 2020. This might lead to a more balanced market in the decades ahead.

The challenge for Middle Eastern oil and gas exporters is how to ensure sustainability goals are met in a way that allows them to monetize their resources and meet budgetary requirements in a shrinking market. The pathways to the future should include decarbonization, digitalizing, and derisking of carbon assets.

Transition is a Process, Not a Destination

The manner in which energy is being used is changing the most, and that is changing how energy is produced and supplied.

In a conversation with Ambassador Douglas A. Silliman, president of the Arab Gulf States Institute in Washington, Angela Wilkinson, secretary general and CEO of the World Energy Council, shared her views on the theme of humanizing the energy transition and the role of the Middle East's oil and gas producers in a lower carbon energy system. There are four "D's" that are shaping oil, gas, nuclear energy, and renewables: decarbonization, decentralization, digitalization, and what is now called "disruption as usual."

It is known that energy use and production contribute the majority of greenhouse gas emissions and there is a need to decarbonize the most polluting fuel sources to avoid a climate crisis. The world now needs to figure out how to be able to use more energy and achieve climate neutrality at the same time.

In the digital sphere, there are new opportunities to manage energy activities with the internet and collecting data and signals from different parts of the energy system and power sector. At the same time, there has been a shift from big centralized power stations and production facilities to more renewable and distributed types of energy. This has been accompanied by a shift from supply-centric thinking to demand-driven disruption. It's how energy is being used that is changing the most, and that is changing how energy is produced and supplied.

This transition is a process, not a destination. It requires thinking about how to move to a post-pandemic world where there is more energy for everybody and climate neutrality at the same time, while grappling with the new context of affordability and social justice. It has to be managed in a way that is affordable and fair to societies that it impacts the most. It doesn't matter how much technology is deployed; the energy transition cannot be pushed onto society, it should be managed with a pull from society.

Within a lower carbon system, oil will still have a role. Even in the midst of the pandemic, 80 million barrels per day of oil were consumed globally. Peak oil demand means there will be no further growth in demand for oil, but demand itself will not fall off a cliff. It will be flatter and slower. The fall in oil demand came because economies were locked down, and, as they begin to reopen, demand will return. The amount of energy that is going to be needed by

the emerging economies is massive, and these countries will not wait for the scale up of the energy system to meet their needs. The World Energy Council's view is that all technologies and innovation will be needed, including oil, gas, renewables, and nuclear.

Phenomenal innovation is going on in the Middle East – not only on the technological front but in policy. The biggest green ammonia facility is being built in Saudi Arabia, which has embraced the concept of the circular carbon economy. The challenge for the region is whether it will couple technological innovation with its financial strength and start to think of itself as a technology exporter of solutions and invest in the innovation ecosystem that is needed.

The scale of the global energy system needs to be understood. At present 20% of the energy system is electrified. Some see this growing to 40% or 50% by the middle of the century, when demand for energy will have doubled. That is the scale of the decarbonization challenge.

The circular carbon economy, where carbon dioxide is reduced, recycled, reused, and removed, is a viable pathway to decarbonization. It requires oil and gas players to think about alternative ways to decarbonize and also produce economic value.

What is needed is less carbon in the atmosphere. For some people, net zero means no fossil fuels and for some it means no carbon. To others it means no carbon dioxide or greenhouse gas emissions beyond a threshold at which the planet cannot support life. The transition is not a war on carbon.

The World Energy Council's scenarios, which are aligned with those of the Intergovernmental Panel on Climate Change, show that it may be possible to get close to keeping global warming near 2 degrees Celsius if all solutions are adopted, including carbon capture utilization and storage, direct carbon removal, and clean hydrogen, along with continued electrification of the energy system. That will require a response from the industry on climate adaptation. If there is no investment in adaptation in parallel with carbon mitigation, the most vulnerable in society will suffer.

How Has the Coronavirus Pandemic Impacted Oil Producers and What Lies Ahead?

This is not cyclical change as in the past. There is deep structural change in the market both on the demand side and the supply side.

The IEA expects demand for oil to decline by 8% and investments to fall by 18% in 2020, according to the World Energy Outlook 2020 published in October.[1] That was before the second wave of the pandemic struck, which added yet more uncertainty to the timing of a global economic recovery and a return to growth for energy demand. Global lockdowns and an economy in recession led to the biggest ever demand drop for oil; demand is down by around 9 million barrels per day. Coupled with the collapse in oil prices, hard-hit oil producers responded with an unprecedented oil production reduction by means of a broad coalition. With the United States acting as broker, oil producers managed to balance markets and

1 International Energy Agency, *World Energy Outlook 2020* (Paris: IEA, 2020).

restore prices, which were trading at around $40 per barrel for benchmark Brent blend crude oil futures before the second wave of the pandemic pulled them down again.

The OPEC oil producers anticipate a recovery before the end of 2021 when they expect pent up energy demand will return as more economies reopen. For them, talk of peak demand is premature. Yet the IEA and OPEC have acknowledged in their respective long-term forecasts that oil demand growth will likely slow at some point in the next two decades, though they do not agree on the timing of when it will plateau.[2] The Gulf oil producers expect continued oil demand at least for the next two decades despite the transition to a lower carbon energy system by several of the world's leading economies, many of which are committed to attaining climate neutrality by 2050 or, in the case of China, 2060.

For the last decade, OPEC's effort to manage the oil market has been frustrated by the spectacular rise in U.S. shale oil production. The pandemic has halted growth in the United States as drilling activity declined and supply has been lost in other parts of the world, some of which may never return. One speaker estimated the total supply loss at 2-3 mb/d, a large amount of oil that will not be available when demand returns to pre-pandemic levels. The other side of the argument is that there are drilled but uncompleted shale oil wells that are accumulating and may return to the market if prices move up to $50 or $60/bbl. Advances in drilling technology have brought costs down so shale oil producers can survive at even lower price levels of around $40/bbl. There are huge shale reserves in Argentina and other countries that could be brought online at any time, thereby adding to supply-side pressures.

The prevailing argument was that demand would take time to recover, possibly until 2022, by which time the market would have lost three years of demand, and recovery, when it comes, will be slow. OPEC and its allies, led by Russia, are managing the markets, but they will have to contend with rising stock levels and it might take three to four years to return to a structurally balanced market. At the same time, capital constraints are emerging for the industry, and that will have an impact on supply, particularly on the U.S. shale industry. The more bullish view, however, is that the situation is manageable because demand growth in the next 10 years will be half what it was in the past 10 years, so the amount of oil that needs to be brought online is lower and will not need as much capital. The industry is also leaner and better managed since the 2008-09 financial crisis and the 2014-15 oil price crash. Costs were already falling before the pandemic and further cost declines mean that more production can be brought on with lower capital investment. There is also a large backlog of projects and "political barrels" that could come online from countries like Iran and Libya, where production has been shut in due to political upheaval or sanctions, which might lead to a supply surplus.

The world is becoming increasingly carbon constrained and this will have an impact on supply, demand, and capital. Some producers with fiscal buffers that are less concerned about price, like Russia, will be in a better position to weather the storm. As the transition to lower carbon systems progresses, countries or regions with both the resources and capital, namely the Gulf states, the United States, and Russia, will have more impact on market direction in the coming decade, though their strategies may not be aligned. Some may opt to get their resources out

2 International Energy Agency, *World Energy Outlook 2020* (Paris: IEA, 2020); OPEC, *2020 World Oil Outlook 2045* (Vienna: OPEC, October 2020).

faster, which might lead to an accumulation of supply. At best, oil prices may move back up to $60-$70/bbl in four or five years.

Much will depend on the global economic recovery. Global gross domestic product, which was running at 4% growth, went down to -4% earlier in the year and pulled down energy demand. Oil demand dropped from 100 mb/d to around 75-80 mb/d and is likely to start moving back toward 90 mb/d or above by 2022. It will take a while, but markets and traders will react to the trend rather than waiting for demand to reach that level. There will still be pitfalls along the way as the pressure on producers to decarbonize fossil fuels has been on the rise and has accelerated in response to the pandemic.

Oil and gas producers can ensure that hydrocarbons retain their fair share of the energy market in the years ahead by deploying all technology options available to develop a circular carbon economy. But not all oil producers are following the same pathways in managing the transition; the top three producers – Saudi Arabia, Russia, and the United States – have disparate interests in the market. Saudi Arabia is looking to boost prices by managing market share and is simultaneously moving toward a more decarbonized market. Russia, on the other hand, is less concerned about prices because it has a financial system that sets a marker of $40/bbl and any revenue above that goes back into the sovereign wealth fund. It has virtually no decarbonization policies, which will make for a difficult transition for Russia.

This raises the question of whether there is a need for a forum that can cater to these contrasting objectives as well as financial tools that will enable oil producers to manage the transition. Some of the Gulf producers are expanding their trading activities and privatizing their assets, as with the partial privatization of Saudi Aramco, and monetizing pipeline infrastructure, as in the UAE. At the same time, climate risk will have to be addressed on the production, demand, and, more importantly, financial side.

The financial industry, led by central banks and institutions like the International Monetary Fund and the World Bank, is stressing that climate risk has been underpriced. The oil producers now face an existential crisis because of the demand slowdown, shrinking revenue, and a risk-averse financial system steering clear of carbon-intensive project financing. This raises the risk of producers ending up with stranded assets when financial markets take into account that climate risk is being underpriced.

The energy industry is learning how to produce power without carbon from solar, wind, and other clean sources of energy. Other sectors are more difficult to decarbonize through electrification; oil and gas will remain the mainstays of much of the energy system for the petrochemical and heavy transportation sectors. Hydrocarbon producers will have to decide how fast they want to decarbonize and, more importantly, if they will invest in the technologies needed. The major international oil companies are ahead of the curve and plan to slowly withdraw from some of their hydrocarbon businesses, so it is up to the resource holders to step up their efforts. But who is willing to invest the billions or trillions of dollars to remove carbon from hydrocarbons? The national oil companies in the Gulf region are well positioned because of their access to low-carbon, low-cost oil and gas assets. Adapting to the emerging energy landscape requires a better understanding of the consumer base. The multinational oil companies are getting closer to consumers by moving into the utility sector, which places

them at an advantage. There is an urgent need to develop new and more sophisticated financial instruments to meet the demands of a restructured and decarbonized energy system that is more consumer and technology centric.

For the past few decades, the Gulf countries have been diversifying their economies to create jobs for their young populations and stimulate the non-oil sector. The coronavirus pandemic has hit the key sectors of tourism, transportation, and logistics, which the Gulf states saw as growth markets. The pandemic has strained these same sectors, particularly the airline industry. Saudi Arabia took steps to address the revenue shortfall from oil exports by tripling its value-added tax to 15%, but that will not be enough. Removing remaining energy subsidies and imposing carbon taxes would generate additional income that can be invested in renewable energy and clean technology, which will lead to the creation of new jobs and involve the private sector. Carbon capture storage and utilization is needed to decarbonize the fossil fuel industry, but it is still capital intensive and will not add new jobs.

Some of the Gulf countries are ahead of the game. Saudi Arabia is investing heavily in new technology and already has the world's largest green hydrogen facility, using renewable energy to produce zero-carbon hydrogen. Yet regardless of the net-zero ambitions and the scale up of renewable energy deployment around the world, there are millions of people who still lack access to electricity and may have to rely on hydrocarbons in the absence of other options. And there are no practical solutions to what are called the hard to abate sectors, like aviation, shipping, steel, cement, and petrochemicals. Oil producers could potentially deliver lower carbon oil and gas by investing in other carbon management technologies like direct air capture, whereby greenhouse gas emissions are sucked out of the air, but that is a costly technology that has not yet been developed to scale.

These measures might be enough to keep global warming from exceeding 2 degrees Celsius but not to achieve the Paris Climate Agreement goal of 1.5 degrees Celsius, which requires much faster decarbonization.

One way forward is to digitalize and transform to sustain the industry at leaner profit margins as the power sector has done. The longer the transformation is delayed, the harder it will be to get equity into the fossil fuel industry, and this will increase the risk of stranded assets because, while fossil fuels will not disappear for a long time to come, traditional business models no longer apply.

Climate pledges have been made dating back to the 1992 United Nations Conference on Environment and Development in Rio de Janeiro, but targets have repeatedly been missed only to be raised in subsequent climate agreements. It would be more useful to speak of renewable energy as supplementing other fuel sources rather than displacing them. The rise of the middle class as the global population expands will mean more demand for all types of energy. Also, the "sleeping giants" in sub-Saharan Africa, Latin America, and Asia will see economic growth and will buy more cars, refrigerators, and other basic goods to match the lifestyles of the developed countries. Consumers in the developed world now have more choice in driving energy demand – for example, electric vehicles are making inroads in the transportation sector. Yet the transition to full electrification of the global economy will take time and traditional energy sources will need to fill the gap as the transition progresses. There

are certain structural changes that have been brought about by the transition and exacerbated by the pandemic as work has shifted from office to home and air travel has been curtailed. One speaker noted that Zoom, the video conference platform that was virtually unknown a year ago, is now more valuable than ExxonMobil, once the largest company in the world by market capitalization. The health crisis has translated oil demand into bandwidth. Funds are shifting away from oil and gas, and there is a need to add capital to transition faster. But higher capital efficiency in the industry means that less is needed to produce more.

Transition is disruptive and costly and there was much discussion as to who bears the cost. Technological advances have helped and there have been more of these in the energy sector in the last 50 years than at any time previously. This has helped to bring down costs. Carbon taxation is another pathway where revenue from carbon taxes can be invested in clean technologies so the cost can be shared between energy producers and customers. Renewable energy costs have come down by 80% in the last six years as have electric vehicle and battery storage costs. As other technologies are developed on a larger scale, their costs will come down and make for a more equitable transition. Yet they offer higher returns than oil and gas at present, so the dilemma is how to attract capital into a fossil fuel industry that will yield returns of up to 7%, whereas technology offers a 205% return on capital.

The future is a more decarbonized energy system and renewables will be needed to reach lower carbon or net-zero carbon objectives. But renewables need backup, and that has to come from other energy sources. Oil and gas have a role to play, but producers need to move swiftly to decarbonize their assets and step up renewable and new technologies in a carbon- and capital-constrained environment. Some oil and gas producers are better positioned than others and have already embarked on a more sustainable pathway, but others are struggling, unable, or unwilling to embrace the changes.

What are the Prospects for Natural Gas in the Transition to a Lower Carbon World?

Natural gas has been somewhat resilient compared with other fossil fuels. But even here, the impact has been uneven with pipeline gas trade taking a bigger hit than LNG.

The narrative this year has focused on the negative impact of the coronavirus pandemic on fossil fuel demand globally. The latest IEA forecast had natural gas demand declining by 3%, an upward revision from its previous forecast but significantly less than the 8% decline it forecast for oil and coal. Natural gas has been somewhat resilient compared with other fossil fuels. But even in the gas space, the impact has been uneven as trade in LNG has risen, while pipeline gas trade has slumped in response to an oversupplied market and slow demand from industry as a result of the economic slowdown. LNG trade has been up by 3% in 2020 despite cargo cancellations from the United States and stoppages at projects globally.

In the Middle East, Egypt was one of the first countries to respond to the low price environment by suspending loading LNG cargoes in March. Regional pipeline trade, meanwhile, has declined by 15% this year. The LNG market benefits from flexibility, particularly in where cargoes can go, and floating storage can be used.

On the demand side, there are some bright spots on the horizon. Chinese demand is up by 4% this year and there has been further growth in demand in Africa, Asia, and the Middle East, plus some rebound in the United States and Europe. There is a possibility that demand will be revised up again though it will take time to absorb some of the excess supply that has accumulated this year. There has been much talk of a developing demand bubble, which some forecasts see as a possibility given the volume of new LNG and natural gas supply that is due to come to market in the next five years. But predictions that supply would overtake demand between 2014 and 2018 did not materialize as new markets emerged and some supply was slower to come to market than anticipated. This is being repeated now in places like Mozambique, where the country's sole LNG project is being impacted by the pandemic. The long-term impact on the gas market will be on LNG investment and the deferment of some investment decisions for new projects. There have been no final investment decisions made in 2020 for gas projects, and the trend could continue in 2021 if there is no sustained improvement in prices. This compares with 2019, when projects totaling 170 metric tons reached a final investment decision, the most ever in a single year. The current investment climate is particularly challenging for second wave projects in the United States with utilization at existing LNG plants down to 30%. The ongoing trade war between the United States and China is another challenge as Beijing was targeted as a main buyer for a number of these projects.

In the Middle East, Qatar is the world's biggest LNG exporter and is affected by developments in the global gas market as well as by the increased focus on the methane content of gas and leakage of the potent greenhouse gas into the atmosphere. The other Gulf oil producers have only recently started to monetize their gas reserves, though the region as a whole, outside of Qatar, suffers from a supply deficit that is met by imports of LNG and pipeline gas through the Dolphin pipeline from Qatar's North Field. The Middle East is expected to drive gas demand after China and India. In the Gulf region, gas demand has increased by 4% annually on average in the past 10 years. Domestic gas is difficult and costly to develop, though this has not prevented a drive by Saudi Arabia and the UAE to press ahead with plans to develop sour and unconventional gas reserves. For the UAE, the motivation is to attain self-sufficiency and reduce dependence on gas and LNG imports. Saudi Arabia, which has toyed with the idea of importing LNG, intends to invest $110 billion into developing its shale gas resources and needs more gas for power generation to free up crude oil for exportation. Although Saudi Arabia has managed in recent years to increase the share of nonassociated gas production, the deep output cuts it negotiated as part of the OPEC+ alliance has reduced the amount of associated gas it produces. The result has been a rise in the amount of crude oil used for power generation.

Given that gas is important for Gulf economic diversification plans, or in the case of Qatar, for expanding its share of the global gas market, these developments are likely to go ahead. Capital constraints on the industry may complicate the effort to secure funding for new projects, though Qatar, with its low LNG production costs and infrastructure advantage, is better placed to proceed with its expansion. Qatar is planning to add more production trains to its LNG facilities at Ras Laffan to increase its LNG capacity by 32 million metric tons and potentially by an additional 16 million metric tons beyond that. The gas will be entering a more competitive market, and Qatar may have to change its marketing strategies and lower

its price expectations. In total, LNG contracts for around 20 million metric tons are due to expire between 2020 and 2025, and this poses a huge marketing challenge for sellers.

While natural gas is the only fossil fuel that is expected to increase its share in the energy mix as the cleaner of the hydrocarbon family, it is facing headwinds as a more climate-focused policy is developing and methane emissions from the gas industry are coming under scrutiny. Europe is evaluating the methane intensity of its gas imports, and this might make it harder for the United States to compete in the European market given the high amount of methane emitted through flaring in U.S. natural gas production. Russia, the biggest supplier of natural gas to the European market, will also have to compete in a more carbon-constrained market. The use of satellites to detect and track methane emissions and leakage is picking up as the European Union and other key consuming regions strive to meet net-zero ambitions.

Qatar has announced plans to start selling carbon neutral LNG cargoes beginning in 2025, when it expects to have completed a carbon capture and storage project. The plan is to remove 5 million metric tons of carbon dioxide in response to demand from downstream users in Asia for carbon-neutral LNG.

Saudi Arabia is considering various options to boost its gas supply, including importing LNG. The likely suppliers would be East Africa or Egypt, where gas production has been on the rise with big onshore and offshore developments in recent years. One advantage of importing LNG for Saudi Arabia would be the ability to determine how it can price the natural gas it produces domestically.

The name of the game here is diversity. Gas will play a bigger role in the energy mix even with the increase of renewable energy; for example, gas is needed to manage intermittency of wind and solar. Gas also may have a role to play in the production of blue hydrogen, the emissions of which are curtailed through carbon capture and storage, but that would be decades away. It will take time to put hydrogen into the system, and it is not easily interchangeable with gas for some applications, since hydrogen per cubic feet has about one-third of the heat content of methane or natural gas.

Since blue hydrogen can be produced in conjunction with carbon capture and storage, Gulf countries that already have the infrastructure and resources can leverage their assets to future proof their oil and gas and eventually hydrogen.

At the same time, the oil and gas industry in the Gulf countries is exploring ways to raise capital, either through semi-privatization, as Saudi Aramco did with its initial public offering, or by bringing in outside capital, though this is less of an option today. In the UAE, the Abu Dhabi National Oil Company has brought strategic investors into different parts of its business, including its pipelines, while Oman seemingly has a list of assets that it may wish to privatize. This would allow the national oil companies to raise funds while retaining control of their assets.

The Geopolitics of Oil and Gas and U.S.-Gulf Relations

Were it not for the OPEC+ agreement, the market would have continued to build stock, oil prices would have been much lower today, and oil infrastructure would have been overwhelmed with excess supply.

A major feature of the current cycle has been a recognition from the world's three largest oil producers – the United States, Russia, and Saudi Arabia – of the need to cooperate to manage shocks to the market. As oil prices crashed in April, President Donald J. Trump intervened to secure a supply management agreement between Saudi Arabia, de facto leader of OPEC, and Russia, which heads the non-OPEC alliance of producers. Were it not for the OPEC+ agreement, the market would have continued to build stock, oil prices would have been much lower today, and oil infrastructure would have been overwhelmed with excess supply.

The growth of the U.S. oil and gas industry in the last 10 years meant that an oil price collapse would put U.S. energy businesses in jeopardy. It is unclear whether the United States will see benefit in continuing the alliance with Russia and Saudi Arabia as the United States, with its large and diverse economy, does not need to be part of the alliance and can better sustain lower oil prices. Where it does not rank favorably is on production costs. The U.S. industry would suffer more if prices were to weaken because access to capital may be constrained. In the past, Washington would have allowed oil prices to respond to market forces, but now the United States wants to defend its position as a net oil exporter as that provides it with foreign policy leverage.

U.S. oil production has been hit hard by the pandemic, falling from around 13 mb/d to just under 11 mb/d as drilling activity in the shale patch slowed and is currently too low to sustain higher production. Production may return to growth in the middle of 2021, but there is no risk at present of the United States taking market share away from other producers. This gives OPEC+ the freedom to taper production cuts and risk higher prices of around $60/bbl without fearing that the United States might bring on an extra 1 mb/d too quickly and upset market balance.

The OPEC+ agreement to remove around 10 mb/d from the market to steady prices in response to the demand destruction wrought by the pandemic was a hard-fought deal that followed a struggle between Russia and Saudi Arabia on timing, widely seen as a battle for market share. Whether the expanded oil alliance will hold has been a matter of speculation: Russia has given the impression that the trigger point for its exit would be in the $50-$55/bbl range whereas Saudi Arabia needs a higher oil price to balance its budget. The current agreement runs until March 2022, and a price recovery is likely to be gradual. While it may have a higher price threshold, Saudi Arabia has the advantage of volume and can increase production to partially compensate for any loss in revenue. Riyadh has adjusted to lower oil prices and has taken a number of steps to beef up its fiscal position, such as a tripling its value-added tax to 15% in the midst of the crisis. As two key players in the oil market, Russia and Saudi Arabia have shown they can cooperate on the downside and the upside, and there is nothing to suggest so far that they would be unable to agree on an orderly exit from the current agreement.

The biggest risk to oil producers is the accelerated energy transition, which might lead to a drop in demand for fossil fuels. This, coupled with a lower price environment, may result in some stranded assets in some of the smaller and weaker producing states, leaving the core OPEC producers in a stronger position because of their low-cost resources. Saudi Arabia and the UAE have positioned themselves for a lower carbon global economy and are taking a leadership role in developing carbon capture storage and utilization technologies to decarbonize. This puts them in a good position to survive in a world that is more carbon constrained.

The future of OPEC, which celebrated its 60th anniversary in 2020, depends on the market's direction. A big part of its mission will be to manage possibly shrinking demand but with OPEC retaining a bigger share of a smaller pie. It is in the interests of producers for prices not to rise too high so as not to accelerate the pace of transition and stifle demand in the process. But low oil prices increase the risk of disruption if countries cannot cope because they lack the financial resources to expand capacity.

The presidency of Joseph R. Biden Jr. might lead to reengagement with Iran to renegotiate the Joint Comprehensive Plan of Action, the 2015 nuclear deal with world powers that Trump withdrew the United States from in 2018. A thaw in U.S.-Iranian relations would upset the Gulf Arab states, which consider Tehran a threat to their security because of what they view as its meddling in their internal affairs and its involvement in regional conflicts via proxies. Should Iran be allowed to resume oil exports, it would introduce a new element of stress for OPEC and make it harder to reach consensus agreements. However, it is unlikely that Iranian oil will return to markets immediately. The more likely scenario is to give the Iranians a small reprieve and allow them to increase their exports slightly while the nuclear agreement is amended and negotiated in stages, which might take four to five months. With Libyan oil production on the rise, an additional 5 mb/d theoretically could come back to the market in a flood in early 2022. OPEC will then have to decide how to divide up any supply adjustments as the OPEC+ supply management deal expires.

The U.S.-China relationship and the trade dispute also has a knock-on effect on the Gulf producers. While a Biden administration is not expected to set aside disputes over technology issues and cybersecurity, there are a lot of common interests, including climate change. The 2015 Paris Climate Agreement would not have been possible without the cooperation of China and the United States.

China is one of the main destinations for Middle Eastern oil and gas but the relationship with the Gulf states is limited to economic and commercial ties and is likely to remain so. But the relationship is becoming more complex with China investing more heavily in refining and petrochemicals in direct competition with Gulf oil exporters. This will give China some influence but nothing that approaches the depth, complexity, and long history of U.S.-Gulf relations.

The recent diplomatic breakthrough that led to agreements to normalize relations between the UAE and Bahrain with Israel is a significant geopolitical development that is still playing out. While there may be some economic benefit from the rapprochement, partnerships with Israel have implications for the Arab region's relationships with Iran and it further cements the United States into the Middle East at a time when it has been looking for disengagement. No matter what divisions there might be between the United States and Saudi Arabia on human

rights issues or with respect to the war in Yemen, the relationship has withstood numerous challenges in the past.

Conclusion

The coronavirus pandemic has delivered a dual shock to the global economy and the world's energy systems. Energy demand as a whole has declined by 8% with oil demand taking a bigger hit than natural gas, which is still seen as a cleaner fossil fuel. The demand destruction forced OPEC and the Russia-led alliance of producers, with intervention from the United States, to make production cuts to steady markets and lift prices, which fell into negative territory in April.

The production curbs and lower oil prices hit the economies of the petrostates in the Gulf region hard and coincided with a global economic recession, a more climate-conscious consumer base, and capital constraints. It also came as oil and gas exporters were diversifying their economies to wean themselves off excessive reliance on oil and gas export revenue. These challenges require a shift from traditional business and investment models to new systems that incorporate decarbonization, digitalization, and cleaner energy solutions. There is no consensus yet on when energy demand will return to pre-pandemic levels, but a demand recovery is likely to be slow and uneven – demand growth over the next decade is likely to be half of what it has been in the last 10 years. The scale of the challenge is huge, and some oil producers have positioned themselves for the inevitable peak in energy demand, which may come in the next decade or two.

Yet there is no doubt that oil and gas will continue to play a significant role in the energy mix, and there is a need to invest in new capacity to avoid a future imbalance and price volatility. The pandemic has been disruptive, but it has also focused minds on the need to step up the decarbonization effort to avoid an unsustainable rise in global greenhouse gas emissions. New technologies to decarbonize oil and gas will have to be developed to scale to bring down costs and make them affordable to the consumer. At the same time, the oil and gas producers need to invest billions of dollars in new upstream capacity to make up for natural declines and find more sophisticated investment vehicles to maintain their oil and gas production levels, decarbonize, and develop new technologies to support a clean energy sector. Collaborative innovation is the way forward if geopolitical tensions can be set aside to allow for more regional integration and cross-border cooperation.

While natural gas was less impacted by the global economic slowdown, there is pressure on the gas industry to reduce methane emissions and flaring to meet stricter environmental regulations around the world. Qatar, as the world's largest exporter of LNG with big plans to expand its export capacity, is preparing to sell carbon-neutral cargoes beginning in 2025 by using carbon capture and storage technology.

U.S. oil production has taken a big hit and a return to growth may take time. With a new U.S. administration, the oil and gas sector is not likely to be impacted very significantly as most activity is not on federal land. On foreign policy, there may be a slight easing of sanctions on Iran and a renegotiation of the nuclear agreement over time, which concerns some of the Gulf Arab states. The diplomatic normalization with Israel can be seen in the context of the

tensions with Iran and may even cement the U.S. presence in the Middle East as it is looking for engagement on a more diplomatic rather than military level. Nevertheless, the Gulf Arab leaders who have forged close personal relations with Trump and his administration will be attentive to signals from the Biden presidency in the months to come and can be expected to make adjustments in their own policies as needed to avoid a rupture with the United States.

Agenda

October 20-22, 2020

Opening Session: A Conversation with Angela Wilkinson, Secretary General and CEO, World Energy Council

Angela Wilkinson, secretary general and CEO of the World Energy Council, discussed the ongoing energy transition and the impact of the coronavirus pandemic on energy producers. Additionally, she considered the consequences of a more rapid transition on the Middle East's oil and gas producers and discussed the World Energy Council's mission to humanize the energy transition.

Speaker:

Angela Wilkinson, Secretary General and CEO, World Energy Council

Moderator:

Ambassador Douglas A. Silliman, President, AGSIW

Session 1: How Has the Coronavirus Pandemic Impacted Oil Producers and What Lies Ahead?

The post-coronavirus recovery may be long and painful as governments around the world grapple with the aftershocks of the pandemic. With projections from the International Energy Agency pointing to demand for oil declining by 7.9 million barrels per day in 2020, Middle East oil producers have cut production and adjusted their budgets. Similarly, U.S. shale production declined sharply earlier in the year, with only subdued production growth expected in 2021 despite a rebound following the OPEC+ agreement.

How will Arab oil producers – and the rentier state economies they support – respond to this substantial loss of revenue? What are the options available to mitigate the impact of a sharp decline in earnings? Will the crisis delay or speed up the effort to diversify Gulf economies and prepare for the possibility of a lower carbon future? What policy frameworks are emerging as the pandemic is brought under control? What role will the national oil companies play in the recovery effort and will they emerge from the crisis weaker or stronger? What impact has the price volatility and demand destruction had on U.S. shale oil production?

Speakers:

Roger Diwan, Vice President, Financial Services, IHS Markit

Ibrahim Al-Muhanna, Member, Board of Directors, AGSIW; Founder, Saudi Energy Consultants

Nasser Saidi, Founder and President, Nasser Saidi & Associates; Former Chief Economist and Head of External Relations, DIFC Authority

Adam Sieminski, President, King Abdullah Petroleum Studies and Research Center

Emily Stromquist, Managing Partner, Governance House

Moderator:

Kate Dourian, Non-Resident Fellow, AGSIW; Regional Manager, Middle East and Gulf, World Energy Council; Fellow, Energy Institute

Session 2: What Are the Prospects for Natural Gas in the Transition to a Lower Carbon World?

The coronavirus pandemic has delivered an unprecedented shock to the global natural gas market. This has come at a time when the environmental credentials of natural gas are being questioned due to methane emissions, with the European Union leading a decarbonization drive, gradually reducing the share of gas in power generation and other sectors to attain carbon neutrality by 2050. Gulf oil producers have been investing heavily in new gas and petrochemical projects, mostly to meet demand in a region that has abundant resources but, with the exception of Qatar, suffers from a gas deficit, largely the result of the late monetization of existing reserves. The Arab Petroleum Investments Corporation sees planned investment in the gas value chain in the Middle East and North Africa approaching $28 billion from 2019-23, up by 13% over its previous 5-year forecast.

Given the most recent developments in the global gas market, is the stage set for the emergence of a demand bubble? If oil production remains subdued in the years ahead as a result of weaker demand and a faster global energy transition, will associated gas production also fall and exacerbate the existing supply-demand imbalance? Will capital expenditure cuts by the dominant Gulf producers skew supply-side fundamentals, or is there a risk of oversupply as projects already under construction come online, outpacing slower than expected demand growth?

Speakers:

Erin Blanton, Senior Research Scholar, Center on Global Energy Policy, Columbia University

Ben Cahill, Senior Fellow, Energy Security and Climate Change Program, Center for Strategic and International Studies

Kate Dourian, Non-Resident Fellow, AGSIW; Regional Manager, Middle East and Gulf, World Energy Council; Fellow, Energy Institute

Rami Shabaneh, Senior Research Associate, King Abdullah Petroleum Studies and Research Center

Moderator:

Robin Mills, Non-Resident Fellow, AGSIW; CEO, Qamar Energy

Session 3: The Geopolitics of Oil and Gas and U.S.-Gulf Arab Relations

The coronavirus pandemic has hit the economies of the Gulf Arab countries, including Saudi

Arabia just as it was in the process of diversifying its economy away from overdependence on oil revenue. Conversely, lower oil prices and production will result in less income with which to shift from a public sector-dominated economy to one with more robust non-oil sectors. Meanwhile, the region had not yet fully recovered from the 2014-15 oil price collapse when many governments took steps to ease subsidies and introduce taxes to make up for lost revenue while dipping into foreign reserve funds. They have less margin for maneuver this time around given the scale of the crisis and the fact that it has struck the key aviation and hospitality sectors previously seen as growth engines. U.S. President Donald J. Trump forged a special relationship with Saudi Arabia and his intervention was partly responsible for the wider OPEC+ agreement that was reached in April to slash production by close to 10 million barrels per day and shore up oil prices. The U.S. presidential election is being watched keenly by the Gulf Arab states who see in Trump a champion of the oil industry compared with the Democratic contender, Vice President Joseph R. Biden Jr., who is campaigning on a clean energy platform.

Which of the Gulf Arab countries are best positioned to emerge from this crisis on firm economic ground, and who are the likely winners and losers? How will higher debt and borrowing coupled with reduced foreign investment flows and domestic spending to manage the crisis affect Gulf Arab economies? Will Gulf Arab countries eschew fiscal discipline in order to prioritize economic growth or will there be a wave of new taxes and deep subsidy cuts? How do the Gulf Arab states see the postelection relationship with Washington? How will the recent Emirati and Bahraini agreements with Israel to normalize relations affect the region's geopolitical balance of power?

Speakers:

Bassam Fattouh, Director, Oxford Institute for Energy Studies; Professor, School of Oriental and African Studies, University of London

Joseph P. McMonigle, Secretary General, International Energy Forum

Robin Mills, Non-Resident Fellow, AGSIW; CEO, Qamar Energy

Ed Morse, Global Head of Commodities Research, Citigroup

Carole Nakhle, Founder and CEO, Crystol Energy

Moderator:

Sean Evers, Managing Partner, Gulf Intelligence

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