



Energy Stability or a False Sense of Security?

How Changes in Geopolitics, Political Economy, and Markets Alter the Energy Landscape

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A Brookings Doha Center - Energy Security & Climate Initiative Report

MESSAGE FROM THE FORUM CONVENERS

It is our pleasure to release the findings of the 4th annual Brookings Doha Energy Forum. We are proud of the rich partnership that exists between the Brookings Doha Center and the Energy Security and Climate Initiative, and the fruits of these efforts are readily apparent in this account of the proceedings as well as the various publications prepared in advance of the Forum.

This partnership has been strongly supported by the efforts of His Excellency Mohammed bin Saleh Al Sada, Qatar's Minister of Energy and Industry, and His Excellency Sheikh Mohammed bin Abdulrahman Al Thani, the Minister's Assistant for International Cooperation Affairs at the Ministry of Foreign Affairs. Their combined efforts in support of the Forum serve as a sound parallel to the Forum's combined analysis of economic and political affairs.

Opened by H.E. Mohammed Bin Abdullah Al Rumaihi of Qatar's Ministry of Foreign Affairs and Brookings Executive Vice President Martin Indyk, the conference examined the energy relationship between the Middle East, established markets such as Europe and the United States, and emerging Asian powers.

Experts and policymakers from around the globe met to discuss the key trends shaping the global energy landscape, from the technological innovations that have opened up vast reserves of shale oil and gas to the conflicts that have threatened key energy sources and transit routes in the Middle East and North Africa.

This partnership also brings a particular focus on the interplay of energy markets and geopolitics. The change of a single number—the price of a barrel of crude oil—can carry profound implications for government policies and company decisions around the globe, from efforts at subsidy reform to shale oil extraction.

After June of 2014, this price fell precipitously despite the rapid expansion of the Islamic State (IS) into Iraq, Libya's descent into full-on civil war, and an ongoing standoff between Russia and Europe over Ukraine. Only recently have prices begun to rally, as the Houthi advance in Yemen has sparked a regional military intervention led by the world's largest oil exporter.

Developments in both markets and politics give rise to numerous strategic questions, such as:

- In what ways will new sources of natural gas and new transit routes work to reshape the global LNG and natural gas landscape?
- Have key Asian consumers' growing dependence on Middle Eastern energy supplies prompted a greater interest in providing for the region's security?
- What has been the impact of falling energy prices on unconventional production and investment in renewable energy resources?
- How might a potential nuclear deal with Iran—and the accompanying lifting of sanctions—affect global energy supplies?

Throughout the event, industry experts and policymakers from the Middle East, Europe, Asia and the United States wrestled with these questions in private working groups and broader panel discussions. The findings of these many conversations are reflected in this report.

The Brookings Doha Energy Forum relies on the engagement and expertise of key stakeholders in the public and private sectors, both in the region and further afield. We look forward to working within Brookings and with our partners to ensure that this project continues to produce key insights into the world of energy.



Salman Shaikh
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The conveners are also greatly appreciative of the Forum Advisory Group's guidance and input.

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KEY TAKEAWAYS

CHANGING GEOPOLITICS

This year's conference was as much a security conference as it was an energy forum. Growing tensions and deepening conflicts in the Middle East, Asia, and Europe have important repercussions for energy markets. The weakening of borders as well as increased foreign interference in these conflicts will likely have a negative impact on foreign investment in the region, including in the oil and gas sector. While the drama of these conflicts has played out in regional and international media outlets, the sharp falls in oil and gas prices since the middle of last year have sparked equally intense discussions in energy circles.

It is uncontroversial to claim that energy markets are unpredictable—they always are—but political transformation, climate change, and the rise of unconventional hydrocarbons and renewables suggest qualitative changes in the operations of global energy markets, beyond the usual interplay of supply, demand, and price. Many observers therefore hold that seemingly unrelenting falls in oil and gas prices across energy markets have overly discounted the possible impact of the current highly volatile geopolitical environment.

In the Gulf states, many actors see profound risks in the potential for expansion by the Islamic State group (IS) or foreign interference by Iran. Perceptions can be enough to elicit a response. Though IS control of territory is limited and the organization lacks a major foothold in the Gulf, there is much concern over the risks posed by non-state actors. The specter of Tehran interfering in the Arabian Peninsula—and possibly threatening the stability of Saudi Arabia—has spurred a major mobilization across the Middle East and North Africa (MENA).

Likewise, there is much anxiety over the potential for a further breakdown in state capacity across the region. Once power devolves chaotically from the state level, centralized institutions often have a hard time regaining it, with non-state actors, such as tribes, unlikely to relinquish newly won influence. This in turn negatively affects the investment climate and prospects for economic growth in general. Such actors can seek to control resources, including oil and gas, to finance their operations, pay off local elites, or redress perceived inequities of wealth distribution. Somalia, South Sudan, Libya, Syria, and most recently Yemen are all examples of this dynamic. In a somewhat different setting, Iraqi Kurdistan's oil (both its own, and the share of federal oil revenues) has been crucial to its state-building project.

In addressing the Gulf region's security, the United States is unlikely to cede its leading role to China or other actors. A possible strategy of balancing from afar is emerging, though, in which U.S. influence and activity would remain strong, yet with a less direct and clear-cut presence than in past decades. Yet even this “right-sizing” initiative has fuelled the perception, valid or not, of a U.S. withdrawal in the longer term, a view that is further supported by increased U.S. confidence in its energy posture, fuelled by the surge in domestic oil and gas production. Discussions are underway in Asian capitals as to how these countries might contribute to maintaining security and stability in the MENA region in the future. It remains to be seen, of course, how the U.S. stance will be affected by a period of lower oil prices and more intense OPEC competition, in which the growth of North American shale and oil sands production may slow. Thus far, U.S. production has been fairly resilient in the face of falling prices, but some observers have

warned that the sector will face greater challenges if low prices continue for months and possibly years to come.

In an increasingly multipolar world, there is a clear need to transform existing institutions and establish new ones. To give one example, opinions vary about the influence of OPEC, given that non-OPEC producers have been gaining ground in world markets. Will OPEC be able to maintain its market share, or accommodate ambitions for greater production in Iran and Iraq? Further afield, the establishment of an Asian Infrastructure and Investment Bank (AIIB) and China's "One Belt One Road" strategy may be more significant as a milestone in shifting away from traditional Western-dominated institutions, such as the World Bank and the IMF, than in terms of immediate construction projects.

POLITICAL ECONOMY IN MENA AND ASIA

The decline in oil prices has resulted in a transfer of wealth from exporting countries to importing countries. For some importers, declining prices have been an incentive to reduce and restructure subsidies and carry out broader economic reforms. The current fall in crude oil prices has also shown that many producer countries have failed to improve their financial resilience. The relatively low price level has hurt those countries most dependent on a high oil price, namely Venezuela, Iran, Iraq, Algeria, Angola, Nigeria, and Russia.

The decline in prices has also highlighted a need for further refinement in the scholarly debate over energy subsidies. Distinctions can be made between oil-importing countries (where subsidies can be couched as a social safety net for the poor) and exporting countries, where subsidies represent a straightforward economic inefficiency and loss of revenue. At the same time, participants hoped that relatively low oil prices would provide an impetus for MENA economies to get their own houses in order, in terms of improving investment climates, enacting regulatory reforms, and making critical assessments of subsidy regimes. At a minimum, subsidies can be targeted to benefit the poor specifically, as the better-off are the main

beneficiaries of blanket subsidies. There are several examples where reforms have already been initiated, such as Morocco, Egypt, India, and Pakistan.

However, energy access for low-income populations—not to mention research on the issue—remains broadly inadequate, a factor that contributes to a vicious cycle of poverty and political instability. Access to water is a closely related issue—energy is required to access fresh water in many locations, while access to water is a key part of expanding energy production. Water shortages have played a role in both conflictual and cooperative relations in West Asia and North Africa, and are in some cases related to climate change.

Though falling prices have put pressure on the Iranian economy, oil policy alone is not believed to become a major source of tension between Saudi Arabia and Iran. Saudi Arabia aims to treat oil as a "market issue," and its predominant position within OPEC is unlikely to change. To be sure, if the P5+1 deal on Iran's nuclear program holds and the sanctions are eventually lifted, some participants held that Iran can bring 500,000-800,000 barrels per day (b/d) of crude oil into the market, in addition to releasing an estimated 30 million barrels of crude oil currently stored in the country. Yet while this might challenge current OPEC production levels, most participants did not expect that Iran would reach its full capacity any time soon. Similarly, few if any believed that Saudi Arabia would cut oil production unilaterally.

ENERGY MARKETS IN MOTION

Global energy markets have entered an era of high-cost abundance. With advances in the extraction of oil and gas from shale rock layers and oil sands, as well as the rapid expansion of renewables, there are certainly plenty of resources available. However, the full cycle costs of extracting, producing, and transporting energy from these resources can be relatively high. Current price developments and market movements will likely delay and or even rule out the development of the existing high-cost resources.

At some point, high-cost abundance may transition into low- (or at least moderate-) cost abundance,

as extraction technologies improve and the energy industry reduces its cost base under the pressure of competition and lower commodity prices. Price levels also depend on the strength of demand. Chinese demand has apparently slowed significantly, while European and Japanese demand remains weak. At the same time, Indian energy consumption is expected to accelerate.

In gas markets, the coming years will likely witness a build-up to a global glut, with significant new volumes of natural gas coming onstream, such as resources from Australia and later East Africa. Further gas trade, particularly in Asia, is incentivized by the desire to improve air quality in some major urban areas. Trade in liquefied natural gas (LNG) will likely continue to grow substantially over the coming years, while participants also expected significant new pipeline routes as Russia searches for new markets. When the expected future development of shale is also taken into consideration, all these developments make it difficult to predict what future demand for natural gas will look like, and what the centers of gravity will be.

Coal consumption is forecasted to increase further in Asia, as coal resources continue to be very price-competitive and domestic coal offers jobs and energy security. In terms of market share, coal is expected to rival oil and natural gas in the coming years. As a feedstock for electricity generation, though, the share of coal is expected to decline in North America and eventually in Europe. Expectations are different for non-OECD countries, as described below.

In terms of renewable energy, there is significant potential to further expand the share of hydropower and solar energy. The generation of hydro-electricity can be expanded in countries like Iraq, India, and China, though it is highly dependent on (often regional) political consensus; the lack of interstate dialogue complicates matters greatly. Solar energy also has to be taken seriously going forward, especially (but not exclusively) in the Middle East.

THE CHANGING GEOPOLITICS OF ENERGY: OIL PRICES AND IMPLICATIONS

CONTEXT

In the last decade, three major events have impacted the geopolitics of energy. First, the large-scale development of shale gas and tight oil has had major ramifications for international energy markets, and analysts are currently grappling with the long-term impacts. Second, the Arab Spring has led to the collapse of the existing order in the Middle East. Here, too, the consequences continue to unfold, with mayhem thriving in Libya, Syria, Iraq, and Yemen. The success—or failure—of a deal with Iran will give new dynamics to interstate relations and stability in the region. Third, the decline in energy demand, and subsequent fall in oil prices, may have major repercussions on energy producers and consumers.

KEY FINDINGS

The demand outlook for the short and medium term is sober. Future demand is increasingly complicated to predict.

The overall energy demand outlook is sober. In most of the OECD countries, this is reflected in largely flat demand outlooks for commodities like natural gas and oil. In China, demand growth has been more modest since the global financial crisis, a trend that is expected to continue. Reforms of energy subsidies, as initiated in countries like Morocco, Egypt, India, and Malaysia, are likely to further affect global energy demand. Stricter fuel efficiency standards and more ambitious air quality regulations will have similar effects.

Global inventories of crude oil are at record highs.

If these reserves are brought into the market, they are expected to have a significant downward effect on prices. In addition, there are currently an estimated 2.9 million b/d of oil off the market due to “unplanned outages”, a term that mostly refers to disruptions in countries like Libya, Syria, South Sudan, Iraq, Nigeria, and others, as well as sanctions on Iran.¹ Were these supplies to come to market, they would have a similar downward effect on prices, as long as global demand does not recover. Because of these circumstances, it is widely believed the current price dip has not yet bottomed out.

It is exceedingly difficult to predict future demand. A case par excellence is future LNG demand in Asia. Whereas many analysts assume very significant growth of LNG demand in major Asian markets, namely China and India, partly incentivized by stricter domestic air quality regulations, there will likely be a ceiling to Asian demand. Moreover, in the coming decade various significant new sources of LNG are expected to enter the market, from countries as diverse as Australia, Mozambique, Russia, Canada, and the United States.

It also is worth keeping in mind that LNG (especially when used for electricity generation) competes with other fuel sources such as nuclear energy or coal-fired power plants. Even without considering alternative fuels, in the case of China there will likely be fierce competition from pipeline gas (albeit from Central Asian countries or Russia). Finally, at some point Chinese NOCs may, together with their international partners, tap into the massive shale gas resources estimated to exist within

¹ Estimates taken from “Short-term Energy and Other Fuels Outlook: Global Petroleum and Other Liquids,” U.S. Energy Information Administration (EIA), accessed 26 April 2014, <http://www.eia.gov/forecasts/steo/report/global_oil.cfm>.

the country. Similarly, in due time countries like Algeria, South Africa, Argentina, and Russia might bring new unconventional resources to the market.

Both importing and exporting countries are navigating a low price environment, often in a volatile political context

Lower prices, in combination with sanctions, have impacted the development of new resources in Russia. It is difficult to predict what the long-term effects on Russia as a major hydrocarbon producer will be. There are increased uncertainties over recent agreements with China to sell natural gas through both an eastern and western route. It is increasingly likely that Russian ambitions to become a major exporter of LNG will be blunted, at least in the short term. New resources, such as early discoveries in the Kara Sea or the exploration of Russian shale oil potential, are also likely to be affected. The lifting of sanctions would probably improve the outlook for some of these projects, though challenges would remain.

Oil-importing countries like China, India, and Turkey, on the other hand, profit from falling oil prices in terms of a reduction of their import bills. Manufacturers profit from lower prices, as do well-positioned refineries. Countries like China and India have also stored crude oil on a major scale as part of building their strategic reserves in anticipation of higher prices going forward. However, at the same time, Chinese companies have seen their overseas investments in oil and gas development, some of which have been purchased at peak prices, lose value.

A forward-looking strategy that energy-importing countries often apply is to safeguard access to diverse sources of supply. As cliché as this emphasis on diversity may sound, around the world there are numerous examples where this has in fact not been achieved. It is a strategy that is actively pursued by countries like China and most EU members.

Market forces and new institutional arrangements drive Asian and Middle Eastern countries closer together.

So far the development of tight oil and shale gas in North America has proven far more resilient than previously thought. As the United States continues to produce record volumes of both oil and gas, its imports from the Middle East and West Africa continue to fall, even as Asian demand grows (albeit more moderately). Thus, market forces are driving Asian importing countries and Middle East producers closer together. At the epicenter of this dynamic lies the question of whether Asian countries can and will move beyond a purely transactional relationship of purchasing hydrocarbons without closer political and economic involvement in the region.

The AIIB has been presented as a groundbreaking investment tool and a generator for growth. At the same time, it is clear that China's "One Belt One Road" framework has implications for the direction of energy trade—not just for the pricing and trade mechanisms of oil, coal, and natural gas, but also with regard to deepening and reinforcing intra-Asian and East Asia-West Asia relationships. A certain level of dissatisfaction with existing institutions and governance frameworks is palpable among countries—especially Asian consumers—traditionally under-represented in these organizations. However, while it is obviously too early to make any definitive claims about the AIIB, there is also some suspicion that the bank may be used as a geopolitical tool, casting participation in terms of “either you join us, or you are against us.”

THE NEW ERA OF GAS

With climate and energy policies becoming increasingly entangled, natural gas has been important as a relatively clean fossil fuel. As a result of dramatic technological advancements and innovation, in particular related to shale development, there is also increased certainty that natural gas is abundantly available.

Natural gas is the fastest growing primary energy source at around two percent per annum. This growth has been shifting east as Asia becomes the center of future natural gas demand. As an illustration, in 2014 close to 75 percent of global LNG trade took place in Asia.

The price of natural gas in Asian markets is still mostly tied to the price of oil or related products, but it is a very different commodity. Natural gas moves primarily through pipelines, which makes it a regional commodity. A modest but rapidly increasing share is liquefied for transport and can be shipped around the world. The higher capital costs of LNG projects, though, mean that pipelines are still preferable over short to medium distances, and essential for land-based transport. High-cost infrastructure investments often require long-term contracts with prices high enough to make the construction of these projects economically justifiable. In the United States, new pricing formulas for LNG exports are emerging and contracts often have increased flexibility, making reloading more common than it has historically been. It is widely believed that this trend of increased global gas trade and flexibility will continue in the coming decades, contributing to the expectation that natural gas will be the fastest growing primary energy source. One major uncertainty is whether major global polluters will employ some form of carbon pricing in the future for climate change reasons, or simply turn to gas to improve air quality in major urban areas.

Many countries in the Middle East require reforms in the way that natural gas is used and viewed. This is needed because the amount of associated gas is rising slowly while domestic demand grows quickly, and there is an increased need for injection into oil fields to maintain production. In some countries, natural gas is increasingly used as a feedstock for electricity generation, mostly to replace oil. The domestic development of both conventional and unconventional gas is challenged by a lack of infrastructure and the right price signals. Therefore, many countries in the Middle East, even though they are rich in natural gas, are importing it from other countries, struggling to maintain exports, or consuming large quantities of oil domestically for power (Qatar being the exception).

One reform that could help to further develop the natural gas industry in the Middle East is addressing subsidies. These should be reduced and in due time eliminated to maintain export ambitions as well as to limit growing domestic consumption. Cross-border infrastructure development is hindered by political tensions in the Middle East. Several countries, such as Iraq, lack the full political and commercial framework to expand the share of natural gas. The absence of these basic conditions in turn prohibits effective trade and the convergence of gas prices in the region.

THE POLITICAL ECONOMY OF THE MIDDLE EAST AND ASIA

CONTEXT

Amidst instability in the Middle East, there are significant economic opportunities. Most countries rely on outdated energy policies. These may be reconsidered in light of the low price of oil and gas as these countries struggle to attract foreign direct investment. In addition, some countries must contend with economic sanctions, which may or may not be eased in the near future. Middle Eastern countries face a need for innovation in order to grow, but the prevalence of monopolies controlled by state-owned enterprises (SOEs) hinders such developments. However, along with economic reform comes the fear of increased social unrest. The key to successful economic reform is specific to each country. There are some common principles but no one-size-fits-all solution.

KEY FINDINGS

The most significant barriers to market development in the MENA region are political turmoil, a lack of competition, continued energy subsidies, and limited regional cooperation.

Instability both politically and economically has hindered growth and development in the Middle East. Innovation has been stifled due to a lack of industry competition and the poor evolution of government policies and regulations. The dominance of national oil companies (NOCs), for historical and governmental reasons, has contributed to this hindrance of technological and bureaucratic advancement. The examples of Petronas and Statoil show that, under the right conditions, national oil companies can be competitive and innovative. However, the Middle East is plagued with inefficient and outdated policies that do not encourage exploration and innovation. Developments in the

United States are generally attributed to the private sector, though the federal government certainly spurred the development of hydraulic fracturing by subsidizing innovation and providing generous tax breaks for early adopters in the market.

Energy-exporting countries have an opportunity to adopt policy changes given the low oil price environment. Russia, for example, is facing a three-fold challenge: impacts of low oil prices, economic sanctions, and a domestic economic slowdown. Even if the first two challenges subside, Russia must restructure its economy to avoid further pain. Internally, Russia struggles to balance the budget, as social spending and corruption remain high while domestic natural gas prices are capped at artificially low levels. After some reforms, the Russian domestic gas market now sees increased competition between domestic producers, though it arguably has a long road ahead. The country is making strategic shifts to diversify its customer base, as illustrated by the long-term contracts signed with China, though these are far from done deals.

Even without economic constraints such as sanctions, most countries in the MENA region have to consider structural economic reforms, however politically sensitive or complicated to implement. There are some examples of modest progress, though much work remains to be done.

In the Middle East, negotiations around Iran's nuclear program could have a direct impact beyond the Iranian economy. Iran has stored nearly 30 million barrels of oil which could come onto the market if the sanctions regime were lifted. While Iran and the P5+1 are still far from securing a final deal, if sanctions are lifted it is believed that the country could ramp up crude oil production relatively quickly (namely within 90-180 days)

to reach 500,000-800,000 b/d.² As with Russia, though, sanctions are not the only constraint to economic development. Iran has had to adjust its domestic spending based on the fluctuating oil price, at which it has been relatively successful.

Other countries throughout the MENA region have struggled with political turbulence since the Arab Spring, in turn negatively affecting their economic performance. Discrimination and unequal development spending foments social and sectarian divisions, which in turn offers an opening for foreign powers and non-state actors to create instability. Wealthier countries like Saudi Arabia have significantly increased their domestic spending in an attempt to prevent or contain possible unrest, yet these problems will not go away easily. Also in Saudi Arabia, structural changes are needed, such as subsidy reform and job creation programs for young people. Social change is coming, but may take two generations to work its way through.

Still, there are significant growth opportunities that lie ahead for the region. To give an example, Turkey sees vast potential for cooperation within the Middle East. Turkey, unlike many MENA countries, does not have significant oil or gas deposits, yet it has made significant efforts to privatize its energy sector. The country has been fairly successful with regards to the oil sector, though significant work remains to be done in its domestic electricity and gas markets.

The latter is increasingly seen as a market of geostrategic importance. Turkish authorities are keen to develop Turkey into an energy hub, profiting from diverse gas supplies in the region and trading with Europe. Developing trade would also address some observers' concerns regarding Russian dominance of Turkish gas imports. At the same time, though, Turkey is ready to discuss the "Turkish Stream" pipeline as an alternative way to deliver Russian gas to Europe, avoiding transit

through Ukraine. Greece is increasingly ready to play a role in that process as well.

Morocco demonstrates another example of efforts at energy sector reform and development in a resource-poor country. As the MENA region's largest energy importer, energy consumption increases of about 7 percent per year prompted a new National Energy Strategy in 2009. In addition to legal and institutional framework reforms (such as the 2011 "13.09" law for private investment in energy production), the Moroccan government made efforts to rationalize energy prices and develop new energy resources, with a particular focus on renewables.

As a result, significant gains have been made in the Moroccan renewables sector as part of an ambitious plan to have wind, solar, and hydropower make up a combined 42 percent of Morocco's installed electrical generation capacity by 2020. At the same time, Morocco has sought to diversify its conventional energy supplies by signing agreements with Spain, Portugal, and Algeria; encouraging more exploration for hydrocarbons within its territory, and moving to import substantial quantities of LNG.

² Participants suggested various numbers. The EIA believes that Iran has the ability to ramp up production by 700,000 b/d by the end of 2016. The International Energy Administration has predicted that Iran could boost output by 800,000 b/d within three months of sanctions ending. "Short-Term Energy and Summer Fuels Outlook," EIA, April 2015 <<http://www.eia.gov/forecasts/steo/>>. "Iran Has a Little Surprise for Oil Market," *Bloomberg Business*, 25 March 2015 <<http://www.bloomberg.com/news/articles/2015-03-25/iran-has-a-little-surprise-for-oil-market-that-s-ready-to-ship>>.

ENERGY MARKETS IN MOTION

CONTEXT

The global energy marketplace has already seen dramatic shifts as new technological advancements and climate-focused policies have impacted investments, consumption patterns, and trade. In the United States, the shale revolution has turned the country from being an energy importer to a potential net exporter. In most of the OECD, energy demand is projected to be largely flat, whereas virtually all forecasted growth is in non-OECD countries. Europe has enacted very ambitious yet costly renewables policies, and the lack of a meaningful carbon price has made coal the preferred feedstock for electricity generation. In addition, Europe is looking to diversify away from Russian gas amidst the Ukraine crisis while Russia has started to look to Asia to diversify its customer base. The future of energy markets—and particularly the global gas trade—may see new dramatic shifts as Japan determines what share of its nuclear fleet it wants to revitalize.

KEY FINDINGS

In the coming decades fossil fuel consumption will decline as a percentage but increase in absolute terms as energy demand, in particular in non-OECD countries, continues to grow. In OECD countries, policy incentives are expected to be increasingly important in steering the energy mix, whereas in non-OECD countries economic motives (broadly defined) may still determine the fuel mix.

Fossil fuels will lose market share, but only gradually. Policy preference is a driving force behind the choice to switch to cleaner fossil fuels in many countries, as seen in the EU and also

the United States. Natural gas may be a cleaner option than coal in terms of carbon emissions, yet the environmental community rarely evaluates it differently from other fossil fuels.

In North America, there is a vast supply of natural gas and much speculation about the potential for LNG exports. Yet current market conditions likely prohibit the development of most of these projects, other than those that are already well-advanced, in the next few years. Currently, gas demand outside of North America is lower than anticipated, as is energy demand in general. Moreover, gas has to compete with cheap alternatives, in particular coal.

In India, economics are expected to play a larger role in the future energy mix than policy. As the Indian population desires economic growth and access to electricity, policymakers are expected to prefer the cheapest feedstock. If natural gas is relatively expensive, it is unlikely to be purchased. Furthermore, natural gas is having a difficult time being sold in India, partly due to subsidies on natural gas consumption and low wellhead prices, giving little incentive for new investments.

Climate policy is beginning to have an impact on the energy mix and on policies. China recognizes that, in order to grow, the country needs to address its own environmental issues as well as those of its neighbors. MENA countries are only gradually becoming aware of the threat climate policy poses to their hydrocarbon-based economies, a huge future risk. Carbon capture and storage is a key technology for them, but it has received insufficient attention compared to that given to renewable energy. At the same time, climate change is a threat multiplier for geopolitical instability due to drought, desertification, competition over fresh

water, sea-level rise, and so on. As clean water supplies become scarcer, energy is required to deliver it to communities, yet the energy industry itself consumes water.

Alternative fuel sources are being developed in different parts of the world. The MENA region has significant potential for renewable energy and some countries are attempting to harness that potential. Other countries are trying to tap into their unconventional oil and gas potential, inspired by developments in the United States. These developments are all expected to take considerable time, though, due to structural barriers, high costs, and the unique geography and geology of each country.

Energy demand in the MENA region is growing rapidly due to population growth, economic development, and continued low prices. Therefore energy intensity is increasing in this region even as it decreases in the rest of the world. At the same time, there are significant opportunities to reduce demand, such as subsidy reform and increased energy efficiency. In addition, there is huge potential for renewable energy development. Dubai, to give an example, is working on demand-side management to reduce energy consumption. Building efficiency standards can also help to reduce energy demand, particularly in terms of insulation, shading, and innovative space-cooling technologies.

The costs of renewable energy in the MENA region, particularly solar, have dropped substantially over the last six to seven years. In comparison, natural gas is starting to become more expensive. Having said that, it is important to note that although solar is becoming cost competitive, it still cannot support a grid on its own.

A number of countries, such as Algeria, are attempting to develop their largely unexplored potential of shale gas. Though there may be a significant resource base, it is uncertain at this point whether this potential will be developed. Next to what seems to be promising geology, a number of above-ground factors are favorable as well, such as the availability of an onshore service industry, a long history of cooperation with international

companies, and an infrastructure network. At the same time, there have been local protests and concerns about the use of fresh water. Furthermore, the long-term stability of the country is uncertain, as the current president is frail and rarely makes public appearances.

Increased transparency and data sharing are crucial to better understand long term market developments and make sense of an increasingly complex energy landscape.

Energy markets have to be studied through a long-term lens. In order to work within a constantly changing environment, there is a need for better data collection, increased information sharing, and more transparency. Existing institutions are only equipped to deliver a part of that information, and significant improvements are urgently required.

AREAS FOR FURTHER RESEARCH

Based on the discussions at this year's energy forum, the Brookings Doha Center and the Energy Security and Climate Initiative have identified a number of areas for potential research over the coming year. These include:

- The Turkish energy sector—exploring its role as a corridor for Russian, Middle Eastern, and Caspian oil and gas, as well as a possible bridge to Europe.
- Energy resources and MENA conflicts—how resource wealth can fund conflict parties as well as reconstruction projects in the greater Middle East.
- Middle East-Asian energy relations—the role of private companies and government initiatives in developing these ties, and whether Asian countries' role in the MENA region will move beyond a purely transactional relationship.
- The politics and economics of low oil prices—how low market prices affect development of unconventional, renewable, and other energy technologies, and how they affect prospects for economic reform in the MENA region.
- The politics of climate change and environmentalism—challenges to fossil fuel use, changing policy priorities, and direct impacts on national environments.
- Renewable energy in the MENA region—the potential impact of diversified energy sources on MENA exports and development of petroleum resources.
- Energy investments in the MENA region—how new commercial and fiscal models can draw on past experiences to spur greater energy investments in the region, particularly as new investment opportunities open up in areas such as Iraq and Iran.

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The Brookings Doha Energy Forum 2015

AGENDA

Energy Stability or a False Sense of Security: How Changes in Geopolitics, Political Economy, and Markets Alter the Energy Landscape

March 25 - 26
Four Seasons Hotel – Doha

March 24

5:00 PM – 9:00 PM Pre-registration – **Hotel lobby**

7:30 PM – 9:00 PM Dinner – The Pier

March 25

7:30 AM – 10:00 AM **Registration – Mirqab pre-function room**
(Coffee and refreshments available)

10:00 AM – 10:15 AM **Introduction and Welcome – Mirqab Ballroom**
H.E. Mohammed Bin Abdullah Bin Mutib Al Rumaihi, Minister's Assistant for Foreign Affairs, State of Qatar
Martin Indyk, Executive Vice President, Director of Foreign Policy Program, Brookings
Salman Shaikh, Director, Brookings Doha Center

10:15 AM – 11:30 AM **High Level Session – Mirqab Ballroom**
H.E. Abdelkader Amara, Minister of Energy, Mines, Water and Environment, Kingdom of Morocco
Toshihiko Fujii, Deputy Commissioner for International Affairs, Agency for Natural Resources and Energy, Japan
Amos J. Hochstein, Special Envoy and Coordinator for International Energy, United States
Stephen Lovegrove, Permanent Secretary, Department for Energy and Climate Change, United Kingdom

11:45 AM – 1:15 PM **First Plenary: The Changing Geopolitics of Energy – Mirqab Ballroom**
- Oil Prices & Implications

Moderator:

Panelists:

Vikram Mehta, Executive Chairman, Brookings India
Adnan Al Janabi, Chairman, Oil & Energy Parliamentary Committee, Iraq
Charles Ebinger, Senior Fellow, Energy Security and Climate Initiative, Brookings
Victor Gao, Executive Director and Chairman, International Committee of Beijing Private Equity Association, Director, China National Association of International Studies
David Hobbs, Head of Research, KAPSARC
Andrey Konoplyanik, Honorary Fellow, Centre for Energy, Petroleum and Mineral Law and Policy, University of Dundee, Advisor to Director General, Gazprom Export LLC

The panel aims to address how developments in global energy markets impact the price of oil, and what impact lower oil prices have on the economies of importing and exporting countries. The panelists will discuss whether low oil prices have a positive effect on cutting domestic subsidies to seize the opportunity of economic reform. Speakers will explore the impact of surplus oil production and low oil prices on LNG markets and shale oil development, as well as investigate to what extent energy “black markets” fuel criminality and transnational insecurity. In addition, they comment on potential geopolitical shifts with regards to the United States as it becomes increasingly self-sufficient in energy.



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March 25 (CONTINUED)

1:30 PM – 3:30 PM

Lunch – The New Era of Gas – Mirqab III

Moderator:

Robin Mills, Nonresident Fellow for Energy, Brookings Doha Center, Head of Consulting, Manaar Energy Group

Speakers:

H.E. Dr. Seyed Mohammad Hossein Adeli, Secretary General, Gas Exporting Countries Forum
Sanaz Dadfar, Co-founder & Commercial Director, Tulip Petroleum

Speakers will address the new landscape of gas, spanning global market intergration, new technologies in unconventional gas and LNG, transformations in pricing and contractual models, and environmental controversies. They will discuss the role of gas in fuelling both cooperation and conflict, with a special focus on Russia and the East Mediterranean.

3:30 PM – 5:00 PM

Working Groups: Session 1 - The Changing Geopolitics of Energy - Oil Prices & Implications

Moderator:

Working Group 1 – Zubara meeting room

Bassam Fattouh, Director, Oxford Institute for Energy Studies

Moderator:

Working Group 2 – Jnan meeting room

Narendra Taneja, President, World Policy Energy Summit

Moderator:

Working Group 3 – Msameer meeting room

Gareth Stansfield, Al-Qasimi Chair of Arab Gulf Studies, College of Social Sciences and International Studies University of Exeter

5:00 PM – 5:15 PM

Coffee Break – Msameer pre-function room

8:00 PM – 9:30 PM

Forum Dinner – The View from Doha: A Changing Energy and Geopolitical Landscape Garden Terrace

Martin Indyk, Executive Vice President, Director of Foreign Policy Program, Brookings

In conversation with:

H.E. Abdullah Bin Hamad Al Attiyah, Former Deputy Prime Minister and Minister of Energy and Industry, the State of Qatar

March 26

08:30 AM – 10:00 AM

Second Plenary: The Political Economy in the Middle East and Asia - Al Daibel

Moderator:

Nader H. Sultan, Chairman, Ikarus Petroleum Industries

Panelists:

Olga Garanina, Associate Professor, Graduate School of Management, St. Petersburg State University

Michael Hudson, Director, Middle East Institute, National University of Singapore

Majid Jafar, Chief Executive Officer, Crescent Petroleum

Suzanne Maloney, Senior Fellow, Center for Middle East Policy, Brookings

Mehmet Ali Neyzi, Chief Executive Officer, STFA Holding A.S.

The Panel aims to address prevailing debates regarding energy resource production, consumption, and pricing in the Middle East and Asia. Panelists will discuss the effects of fuel subsidies on consumption patterns and competitiveness, and how subsidies can be reformed in a politically and socially feasible manner. They will also share their views on the region's potential for state building and the consequences of failed states, examine Russia's role in global energy markets, and address the growing influence of merging energy hubs.

10:00 AM – 10:15 AM

Coffee Break – Al Daibel pre-function room



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March 26 (CONTINUED)

10:15 AM – 11:45 AM	Working Groups: Session 2 - The Political Economy in the Middle East and Asia Working Group 1 – Zubara meeting room <i>Bassam Fattouh, Director, Oxford Institute for Energy Studies</i> Working Group 2 – Jnan meeting room <i>Narendra Taneja, President, World Policy Energy Summit</i> Working Group 3 – Msameer meeting room <i>Gareth Stansfield, Al-Qasimi Chair of Arab Gulf Studies, College of Social Sciences and International Studies University of Exeter</i>
12:00 PM – 1:00 PM	Lunch – Mirqab III
1:15 PM – 2:45 PM	Third Plenary: Energy Markets in Motion – Al Daibel Moderator: Herman Franssen, Executive Director, Energy Intelligence Group Panelists: Tim Boersma, Fellow, Acting Director, Energy Security and Climate Initiative, Brookings Roger Bounds, Vice President Global LNG, Shell Integrated Gas Fereidun Fesharaki, Chairman, Facts Global Energy Steven Griffiths, Executive Director, Institute Initiatives, Masdar Institute Aldo Flores Quiroga, Secretary General, International Energy Forum
<p>The panel aims to highlight the changing environment of energy markets. What technologies could radically impact the source and consumption of global energy? What social or political shifts might dramatically affect trends in energy use and production? Panelists will highlight key technological developments in unconventional resource extraction and address environmental challenges and policies. They will also discuss the future pricing of internationally traded gas and the consequences of a growing LNG market.</p>	
3:00 PM – 4:30 PM	Working Groups: Session 3 - Energy Markets in Motion Working Group 1 – Zubara meeting room <i>Bassam Fattouh, Director, Oxford Institute for Energy Studies</i> Working Group 2 – Jnan meeting room <i>Narendra Taneja, President, World Policy Energy Summit</i> Working Group 3 – Msameer meeting room <i>Gareth Stansfield, Al-Qasimi Chair of Arab Gulf Studies, College of Social Sciences and International Studies University of Exeter</i>
4:30 PM – 4:50 PM	Coffee Break – Al Daibel pre-function room
5:00 PM – 5:15 PM	Concluding Remarks -Al Daibel H.E. Dr. Mohammed Bin Saleh Al Sada, Minister of Energy and Industry of the State of Qatar
5:15 PM – 6:00 PM	Presentations of Findings and Plenary Discussion – Al Daibel
6:00 PM	End of Forum
6:00 PM – 7:00 PM	Farewell Cocktail Reception – Al Daibel pre-function room



Last Name	First Name	Title/Position	Organization/Institution	Nationality
Abdullah	Jamal	Researcher, Gulf Studies Unit	Aljazeera Centre for Studies	Qatar
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ANNEX II: PARTICIPANTS

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BROOKINGS DOHA ENERGY FORUM ADVISORY GROUP

The Brookings Doha Energy Forum Advisory Group is essential to the sustainability of the Forum. It is composed of representatives with diverse backgrounds and expertise, and works to shape the Forum, specifically by providing input on which topics to discuss and how to frame them. The members also recommend speakers and attendees to ensure that the Forum brings together the best, most representative group of leaders in energy and politics.

Its members include:

Bassam Fattouh, Director, Oxford Institute for Energy Studies
Herman Franssen, Executive Director, Energy Intelligence Group
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David Goldwyn, President, Goldwyn Global Strategies, LLC
Nasser Al Jaidah, CEO, Qatar Petroleum
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Ivan Sandrea, Senior Partner, Ernst & Young LLP
Charles Ebinger, Director, Energy Security Initiative, The Brookings Institution
Vikram Mehta, Chairman, Brookings India
Salman Shaikh, Director, Brookings Doha Center

ABOUT THE BROOKINGS DOHA CENTER

Established in 2008, the Brookings Doha Center (BDC) is an overseas center of the Brookings Institution in Washington, D.C. As a hub for Brookings scholarship in the region, the BDC advances high-quality, independent research and policy analysis on the Middle East and North Africa.

In pursuing its mission, the BDC undertakes field-orientated research and programming that addresses and informs regional and international policy discussions, engaging key elements of governments, businesses, civil society, the media, and academia on four key areas:

- (i) The international relations of the Middle East, emphasizing ties within the region as well as regional ties between the Middle East, the United States, and Asia.
- (ii) Conflict and post-conflict transitions, including security, peace processes and reconstruction.
- (iii) Economic and fiscal strategies of Middle Eastern states, including the geopolitics and economics of energy.
- (iv) Governance and institutional reform, including democratization and state-citizen relations.

Open to a broad range of views, the BDC encourages a rich exchange of ideas between the Middle East and the global community. Since its founding, the BDC has hosted a number of leading scholars from a dozen different countries; put on a variety of events, including high-level roundtables, timely policy discussions, and the annual Doha Energy Forum; and published a series of influential Policy Briefings and Analysis Papers.

ABOUT THE BROOKINGS ENERGY SECURITY & CLIMATE INITIATIVE

The Energy Security and Climate Initiative (ESCI) at Brookings is designed to encourage the development, discussion and dissemination of high-caliber energy research. ESCI is guided by the observation that energy policy choices of the past have shaped the current economic, environmental and strategic landscape in profound ways, and by the additional premise that the energy decisions we make today will have an equally profound impact on the economic, environmental and strategic landscape of the future. Achieving a more secure future will therefore require a more determined effort to understand the consequences of our present actions in each of these spheres and to transform them into effective policy prescriptions.

BROOKINGS DOHA CENTER PUBLICATIONS

2015

Brookings Doha Energy Forum 2015 Policy Paper

Brookings Doha Center - Brookings Energy Security Initiative Report

Embracing Interdependence: The Dynamics of China and the Middle East

Policy Briefing, Chaoling Feng

The Muslim Brotherhood in Jordan: Time to Reform

Policy Briefing, Neven Bondokji

Sultans of Swing? The Geopolitics of Falling Oil Prices

Policy Briefing, F. Gregory Gause

Turn a Light On: Electricity Sector Reform

Policy Briefing, Luay Al-Khatteeb and Harry Istepanian

Collusion to Crackdown: Islamist-Military Relations in Egypt

Analysis Paper, Omar Ashour

Fortress Jordan: Putting the Money to Work

Policy Briefing, Sultan Barakat and Andrew Leber

Back to Gaza: A New Approach to Reconstruction

Policy Briefing, Sultan Barakat and Omar Shaban

2014

Profiling the Islamic State

Analysis Paper, Charles Lister

Qatari Mediation: Between Ambition and Achievement

Analysis Paper, Sultan Barakat

Brookings Doha Energy Forum 2014 Policy Paper

Brookings Doha Center – Brookings Energy Security Initiative Report

Beyond Sectarianism: The New Middle East Cold War

Analysis Paper, Gregory Gause

Dynamic Stalemate: Surveying Syria's Military Landscape

Policy Briefing, Charles Lister

Personnel Change or Personal Change? Rethinking Libya's Political Isolation Law

Brookings Doha Center – Stanford Paper, Roman David and Houada Mzioudet

Convince, Coerce, or Compromise? Ennahda's Approach to Tunisia's Constitution

Analysis Paper, Monica L. Marks

BROOKINGS ENERGY SECURITY & CLIMATE INITIATIVE PUBLICATIONS

2015

Coal Markets in Motion

John P. Banks, Tim Boersma, Charles K. Ebinger, and Heather L. Greenley

Gaza Marine: Natural Gas Developments in Tumultuous Times?

Tim Boersma and Natan Sachs

The Energy Island: Israel Deals with its Natural Gas Discoveries

Natan Sachs and Tim Boersma

2014

Want, Waste, or War? The Global Resource Nexus and the Struggle for Land, Energy, Food, Water, and Minerals

Philip Andrews-Speed, Raimund Bleischwitz, Tim Boersma, Corey Johnson, Geoffrey Kemp, and Stacy D. VanDeveer

Business as Usual: European Gas Market Functioning in Times of Turmoil and Increasing Import Dependence

Tim Boersma, Tatiana Mitrova, Geert Greving, and Anna Galkina

The Greenland Gold Rush: Promise and Pitfalls of Greenland's Energy and Mineral Resources

Tim Boersma and Kevin Foley

Transforming the Electricity Portfolio: Lessons from Germany and Japan in Deploying Renewable Energy

John P. Banks, Charles K. Ebinger, and Alisa Schackmann

Changing Markets: Economic Opportunities from Lifting the U.S. Ban on Crude Oil Exports

Charles K. Ebinger and Heather L. Greenley

The 2014 Ukraine-Russia Crisis: Implications for Energy Markets and Scholarship

Andreas Goldthau and Tim Boersma

A Transatlantic Pivot to Asia: Competition for Resources and Consequences for the Environment

Tim Boersma and Jaime de Bourbon Parme

Where the U.S. and EU Stand on Energy Security

Corey Johnson and Tim Boersma

Offshore Oil and Gas Governance in the Arctic: A Leadership Role for the U.S.

Charles K. Ebinger, John P. Banks, and Alisa Schackmann

Prevailing Debates Related to Natural Gas Infrastructure: Investments and Emissions

Tim Boersma and Charles K. Ebinger