The Energy Dimension of Saudi Arabia's Reform programs
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I would like to thank Ambassador Marcelle Wahba and AGSIW for inviting me to this roundtable.

Saudi Arabia is undergoing unprecedented political, social, cultural and economic transformation, not witnessed since its unification in 1932. Such changes are shaping the society, the Kingdom's cultural discourse and the structure of its economy and by extension the role of oil in that economy. While the social, cultural and political changes are felt and appreciated by the wide Saudi society, especially the young, as well as the international community, the economic transformation, which is a cornerstone of the reform agenda, is relatively less understood, or appreciated by a segment of an important stakeholder, the private sector.

This might be due to the fact that the Kingdom and its private sector enjoyed prior to the recent recession a long boom period, fueled by high oil prices and revenues lasting more than a decade. Oil prices averaged some $82/bl and oil revenues some $200 bn contributed to an annual average real GDP growth of 6% and per capita income growth of 2.3%. The speed and comprehensive nature of the reforms, encompassing all aspects: fiscal status, labor market imbalances, incentive systems and structural rigidities, might have disrupted the business-as-usual framework of some stakeholders. Added to this the fact that the transformation is taking shape in the context of internal demographic challenges, regional geopolitical turmoil, and massive technological and structural changes in the oil market.

The economic transformation agenda rests on the premise that the decades long development model based on cheap energy, low wage expatriate workforce, over-dependence on government for growth and employment as well as skewed incentive systems are not sustainable. A change in the mindset for the government, the private sector and the citizenry is needed

to pursue a new development model that utilizes the Kingdoms potentials, reduce dependence on the state and address the mounting challenges.

My comments will concentrate more on the energy dimensions of the economic reform program. First, the Saudi Vision 2030 incorporates the critical role of the oil and gas sector in the economy through the fiscal, entrepreneurial and technological channels. However, it takes account of the overall energy sector, and its interaction with the rest of the economy. There is an acknowledgment that the diversification of the sources of fiscal revenues of the state and of GDP does not necessarily reduce the importance of a stable oil revenues, nor to the role of the oil industry exemplified by Aramco in the economic transformation program. For example, the increase of oil revenues last year by some 30% gave the fiscal authorities breathing space to carry out the other elements of the fiscal balance program and allowed the government to purse the other reform initiatives. This wouldn't have been possible hadn't it been for the Kingdom's engaging oil diplomacy which facilitated the OPEC/ Non-OPEC accord of November 2016 and the determination to institutionalize such cooperation for the longer term. The accord and the production profile and pronouncements from Saudi Arabia and other producers party to the accord, helped anchor long-term oil price expectations.

This market rebalancing is happening in the background of long-term oil outlooks that mostly project increasing the contribution of shale oil in global supply on the one hand and an impending "peak oil demand" on the other. While the former is already an established feature of the new oil market scene, the jury is still out on the factors contributing to peak oil demand, its timing and implications. In this context, I would like to draw the attention that an old oil peak, that is the "oil supply peak" theory dominated the oil business and policymaking in the consuming and producing countries for more than half a century and might have influenced the production and investment decisions in some producing countries.

While technology and economics on the supply side exemplified in increasing recovery rates, resource base and prices ultimately reduced the appeal of and adherents to peak oil supply, technology and economics on the demand side exemplified in disruptive technologies and declining costs in the transportation sector as well as the Paris climate change commitments seem to be working to enhance the appeal of the "peak oil demand" hypothesis. One thing needs to be emphasized in this renewed peak debate: had producers rushed to adopt peak oil supply conclusion that a barrel of oil in the ground worth more than a produced barrel, oil supply security and market stability would have been compromised. Alternatively, early adoption of the conclusion of "peak oil demand" notion that a barrel of oil produced now is worth more than that one left stranded in the ground would lead to accelerated depletion and might have as dire consequences on investments, excess capacity, market stability and off course on OPEC's market management role.

Fortunately, this notion has not been as publicly debated in the producing countries including Saudi Arabia. The reason is that economic and revenue diversification objectives, have been on the development agendas since oil was discovered. The public is more interested in what we make of oil today: transforming a depleting asset into more productive assets above ground if peak supply is to occur or preparing the economy for an anticipated decline in its future value if perceived peak oil demand occurs earlier.

While many uncertainties of the timing, process and implications of peak demand remain, policy makers should incorporate into their decision parameters a scenario of prolonged slowdown in demand due to technology, climate change commitments as well as efficiency measures in all sectors and economies. Both hasty decision-making as well as complacency might impact investment, market stability and economic sustainability. As it looks now, the major oil producers are determined to continue their residual supplier role at least for the next two decades regardless of whether or when oil demand peaks.

The second energy aspect of the reform program relates to the domestic energy demand pattern, its fuel composition and local energy price levels. Saudi Arabia's domestic primary energy and power consumption doubled during the ten years ending in 2014 averaging a growth of 6% and 6.7% annually, with energy intensity at 2.5 barrels of oil equivalent per $1000 GDP increasing by 1.5% annually compared with the global decline of some 1 %. Robust economic growth and low fuels prices and electricity tariffs, lead to inefficient energy use and an unsustainable growth of energy intensive sectors. This state of affairs impacted oil and gas investment outlays, oil export potentials as well as efficiency and equity considerations. The Kingdom has to move swiftly in two fronts: enacting aggressive energy efficiency program and adjusting domestic energy prices. On the one hand, the efficiency program encompassed all sectors: industrial, residential, and transport, and based on best international and business practices. In the residential sector, the program updated the building code and mandated standard specifications for thermal insulation materials, computers, air conditioners, appliances, lighting etc. In the transport sector, it developed fuel economy label for light duty vehicles, energy efficiency standard for tires and regulate energy efficiency of heavy-duty vehicles. In the industrial sector it set up energy intensity targets for existing and new plants. The program's dedicated and capable agency Saudi Energy Efficiency Center (SEEC) monitored the implementation of the standards, targets and codes and launched a national awareness campaign for energy conservation. The program thus far managed to save approximately 138,000 barrel oil equivalents per day (boe/d) and projected to save 1.5 million boe/d by 2030 mostly in the residential sector.

On the other hand, the two rounds of oil and gas price adjustments in 2016 and 2018, are by far the most ambitious undertaking. Natural gas prices to the utilities increased by 67% and to the and industry by 133%, gasoline and diesel prices to the transportation sector by 240% and 80% respectively, and liquid fuels to the utilities by 60%. These increases in gas and liquid prices necessitated an overhaul of the power sector to improve its fuel efficiency

and enhance the privatization process of the sector, they also necessitated major adjustment in electricity tariffs to the residential sector by around 260%. To ensure equity, a citizens account was set up to compensate the most vulnerable citizens as a result of the second round of price adjustment, supplemented later by a one-year wage increase. A private sector stimulus package was also set up to support adversely impacted industries. The new levels of oil and gas prices took into account inter-fuel substitution to incentivize switching accounting for productivity and environmental considerations. The efficiency program and the price adjustments contributed to a slowdown in oil demand growth and an increase in the share of net products in total oil exports. The ultimate aim of the reform program is to align prices of oil, refined products and natural gas to reference prices within the next five years.

The third aspect of energy reforms relates to the drive to increase the local content in the oil and gas as well as power industries. Besides Aramco's In-Kingdom Total Value Add (IKTVA) program to double the percentage of locally-produced energy-related goods and services to 70% by 2021; the aim is to export 30% of the total domestic energy goods and services in the Kingdom over the same time frame; and create direct and indirect jobs across growing industries over the long-term. A dedicated national agency was set up to identify and promote the local content in all sectors.

The fourth aspect in the energy dimension of the reform process is the diversification of energy use which until recently has been dominated by oil. While crude oil capacity at 12.5 mb/d still provide the kingdom with comfortable excess capacity for the foreseeable future, Aramco's plans to double natural gas processing capacity to 23 billion cubic feet per day (bcf/d) and its contribution to energy mix from 50 to 70 percent by 2030 as well as the Kingdom's objective to add 9.5 MW generation capacity from renewables by 2023 and an initial 2.8 GW nuclear power plants, are examples of this energy diversification drive.

The fifth aspect is to update and realign the industrial, energy and mining strategies with the overall reform agenda. To insure such realignment and effective implementation, different ministries and agencies (petroleum, mining, electricity, renewables, and industry) were merged into one super ministry aims at integrating and coordinating the functions of the different sectors.

The energy reform like the overall transformation program face many challenges related to implementation and communication. Winning government bureaucracy, the public and the private sector and managing expectations in time of change, will impact the degree of success of the reforms. For the energy dimension, transforming the economy and its sectors from a notion of cheap and abundant energy to a more productive and competitive one, will remain a challenge that policymakers and stakeholders have to work together to achieve the underlying objectives.

The Kingdom's standing in the global oil business, the fiscal channels of the state, as well as the dynamism, sophistication and technical capabilities of the oil sector could all be leveraged to develop the non-oil sector. In short, the oil sector will act as a bridge to a diversified and productive economy.

Thank You

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