



## ENERGY SECURITY IN THE AGE OF CHANGE AND THE ROLE OF IEF

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**E**nergy Security is the assurance for the world's prosperity, welfare and economic growth. In a robust economic growth, the world will continue to demand more energy as globalisation and technological advancements drive productivity gains.

OPEC 2040 outlook highlights the world energy scene as follows; energy demand will grow by 33 per cent between 2015 and 2040. There will be abundant energy resources to meet demand growth. Fossil fuels will remain dominant in the energy mix at 75 per cent. Oil's leading role in the energy mix will continue at 28 per cent, although its share will decline marginally. Renewables will enjoy the largest annual average growth, although it starts from a low base. The cost competitiveness of gas and renewables have captured commercial interest. OPEC is investing in renewables. However, until renewable technologies reach the required stage of development to meet the growing demand, reliability and affordability, it is essential to find a transitional solution that uses the world's remaining fuel resources efficiently and cleanly. Therefore, all energy sources will be needed to meet demand.

IEA 2018 energy outlook estimates energy investments required to cater for demand to be \$2.2 trillion each year between 2018 and 2025 on average and \$2.8 trillion thereafter. Renewables represent over half of the investment

*Concerns over emissions and global warming are accelerating the development of renewables*



made in power plants since 2010 and continue to take the largest share of investment (IEA, 2018). Meeting demand adequately requires an integrated set of solutions that include energy efficiency, developing economic energy sources, new technologies and producing cleaner and safer fuels. Under investment or delays in investment lead to shortfalls in the incremental capacity to meet demand. Furthermore, prices need to support ongoing development of conventional and unconventional energy sources as well as encouraging a continued improvement in consumption efficiency.

There is consensus in the industry that technology is the driver for change. According to EIA, the rapid growth of oil and gas production from unconventional shale resources in the US has been a game changer in the industry, enabling the US to become the largest oil and gas producer. The energy future lies in hydrogen, fuel cells and batteries for electric mobility. Hydrogen fuel is a zero emission fuel when burned with oxygen (KPI, 2018). Moreover, the introduction of electric vehicles as a complement to the internal combustion engine is an important development for the energy market (IEA, 2019). The ongoing progress in information technology continues to influence both supply and demand towards higher efficiency, lower emissions and low costs (Sorrell, 2015). The concerns around global warming have also accelerated the development of energy paths towards lower emissions.

A new wave of protectionism and trade tensions risk denting global growth experienced in 2017 and 2018, stoking inflation and harming living standards. Global exports have risen since the 1960s, and more notably since around the establishment of the World Trade Organisation in 1995, and account for about 30 per cent of global GDP. Therefore, growing uncertainty in the global economic environment may lead to a decline in business and consumer confidence, potentially lowering investments and capital flows. It is generally perceived among economic agencies that escalating trade disputes will lower growth in 2019, with a consequential effect in subsequent years, according to the OPEC 2040 outlook (OPEC, 2018).

International co-ordination and collaborative dialogue between energy producers and consumers using the IEF platform can assist in reducing market volatility and improving global emergency readiness. IEF also allows for data sharing for better understanding of market price behavior and undertaking appropriate regulatory responses to reduce energy poverty in the developing world, and the challenge of mitigating climate change.



Photo: KPC

*Fossil fuels are predicted to remain dominant in the energy mix between 2015-2040*

Dialogue has successfully facilitated the interdependence between producers and consumers besides the need to transform into more strategic partnerships. This is true for Asia and the Middle East regions. According to UN statistics, the two regions represent a large portion of the world's population, at 60 per cent in 2019 (World Population Prospects 2019). BP annual statistical review estimates the two regions represent 51 per cent and 48 per cent of global oil and gas reserves respectively. Furthermore, demand in the two regions accounts for 50 per cent of global economic growth in 2018 (BP, 2018).

The State of Kuwait is an active IEF member, responsible producer in the world and is fully committed towards meeting future global energy growth needs. Hence, Kuwait is pursuing its plans to achieve sustainable oil and gas production capacity as well as producing environmentally friendly products, in accordance with its 2040 strategic directions. Furthermore, KPC is pursuing its expansion

plan encompassing both the upstream and the downstream, which include plans to upgrade Kuwait's production, export infrastructure and its tanker fleet, integrated downstream facilities, both domestically and abroad.

We believe that producer-consumer energy dialogue is essential to enhance the understanding of the energy markets, the linkages with financial markets and the uncertainties of global energy policy. ■

*Organization of the Petroleum Exporting Countries, OPEC Secretariat (2018) World oil outlook 2040 (OPEC), September 2018. ISBN 978-3-9503936-6-8*  
*International Energy Agency, World energy outlook (2018).*  
*United Nations, Department of Economic and Social Affairs, Population Division, World Population Prospects (2019), ST/ESA/SER.A/423. New York, 2019*  
*BP, Statistical Review of World Energy 2018, June 2018*  
*EIA, US department of energy, Advancing systems and Technologies to produce cleaner fuels (2015)*  
*Research and Technology Department (2019), KPI –KPR&T, Hydrogen: the Promising Future Energy, April 2019*  
*Sorrell S. (2015) Renewable and Sustainable Energy Reviews, Volume 47, July 2015, Pages 74-82.*