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Future Energy Disruptors

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Introduction

Around the world, energy objectives differ depending on a country's outlook on production, distribution, and consumption of energy. Although each country faces a unique set of challenges that define its energy objectives, the focus of energy policy across the world is beginning to align to address climate change imperatives. For example, two of the four pillars of India's energy future - efficiency and sustainability - are related to climate change. Similarly, the European Union's 20–20–20 climate and energy targets, which are binding for all member states, aim to increase the share of renewable energy to 20 percent, reduce greenhouse gases by 20%, and increase energy efficiency by 20%.

Looking beyond climate change, several other factors have affected - and will continue to affect - the energy industry. For example, energy security has long impacted global politics and economics and resulted in the creation of the global energy majors. Similarly, energy costs are expected to be especially important since much of the future energy growth is projected to come from developing nations; this will have a bearing on the technological disruptions required to drive down the costs of clean energy. Acceptance, especially for new technologies, will be crucial. Because economic misconceptions and a lack of awareness can impact the use of clean energy sources, consumer acceptance is thus an important objective.

[1] ATKearney (2019).Energy Transition: Transforming the Downstream Oil and Gas Industry.

Global Energy Landscape

[2] ATKearney (2019). Energy Transition: Transforming the Downstream Oil and Gas Industry.

Figure 1 | Energy Future Initiative's actions. Energy Future Initiative (n.d.). We harness the power of innovation to build a secure, affordable, low-carbon energy future.

Energy Initiatives

4 Methods of achieving energy objectives focus on energy production, distribution, and consumption. The following levers are applicable to achieve these objectives:

1. Improve energy efficiency by addressing all elements of the energy value chain.

2. Switch to sustainable non-fossil fuels such as biofuels and nuclear energy.

3. Take advantage of renewable technology that is cleaner and more sustainable.

4. Capture and store the carbon generated by energy consumption so less is released into the environment.

We harness the power of innovation to build a secure, affordable, low-carbon energy future.

Literature Review

The disruptive forces impacting the Energy Landscape, along with the necessary measures in order to avoid such disruption, can be outlined through the following key points, considering numerous published surveys in the global energy market.

Section 1 | Key Drivers affecting the Energy Landscape

DISRUPTION ON THE FAST TRACK

According to KPMG, the increasing adoption of electric vehicles will ultimately have a profound impact on oil refining, retail fuel, and demand for lubricants. The downstream industry is at risk of being overly complacent about fuels demand destruction. EVs, autonomous vehicles (AVs), shared economy business models and advanced technologies are combining with societal shifts; together, these technological and social changes represent rapidly developing trends and forces that could lead to the faster EV penetration.

DISRUPTIVE FORCES

Recent IHS studies have focused on short term and long term disruptive forces in the downstream industry. The survey has focused on three specific forces such as personal mobility, commercial transport and IMO bunker fuels specification.

Enhancing this point of view, another survey conducted by Mckinsey & Company refers to the autonomous trucks which will change the cost structure and utilization of trucking and thus, the cost of consumer goods.

FUTURE DOWNSTREAM DISRUPTORS

According to Deloitte, the key driver for the next decade is not only the disruptive forces, but mainly the interconnection among them as well their influence across the value chain.

Section 2 | Use Cases across the Value Chain

KPMG study suggests that successful downstream players will need to follow a consumer demand model in which companies must work back from customers and anticipate more differentiated needs in terms of disruptive trends. Deloitte's perspective compliments this objective, attempting to please customers through an easy, seamless, and satisfying digital experience. On the other hand, Accenture has pointed out an emergence of a post digital world, where companies need to adopt emerging technologies as part of their core foundation.

Section 1
Key Drivers affecting the Energy Landscape

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