

Replacement of the Conventional Oil and Gas by Unconventional Oil and Gas: SWOT Analysis

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Abstract

The world's energy demand has increased drastically over the last few decades due to an increasing population, rapid urbanization, industrialization, and growing economies. Electricity generation, transportation, industry, residential, and community activities consume a significant amount of energy in the world, while developing countries consume the majority of it. Conventional oil and gas, along with renewable energy, were recorded as the highest contributors to the final energy consumption. Nevertheless, with the decline of conventional oil and gas, the development of unconventional oil and gas has taken place in the world as a supplement. Since unconventional oil and gas have been restricted to a limited number of countries such as the United States, Canada, China and Argentina, it is critical to explore more about them to disclose the concept to the entire world. The present study is intended to identify strengths, weaknesses, opportunities, and threats associated with the development of unconventional resources focusing on the United, Canada, China and Argentina. The SWOT analysis method was used for the analysis of the strengths, weaknesses, opportunities, and threats of unconventional oil and gas development. The information came from a variety of sources, including literature reviews, statistical reports, and government regulations and policies. The strengths were discovered to be abundant resource reserves, development potential, high environmental benefits, and long-term exploitation, while the weaknesses were discovered to be potential market, lack of funds and technologies, environmental risk, water treatment problems, and contaminants. Policy support, huge investment and financing, foreign development experience and international cooperation were identified as opportunities. Imperfect policies, unsound management systems, deficient investment, poor infrastructure, and current crude oil prices are found to be threats. Finally, these components will be intended to maximize both strengths and opportunities, as they will positively and minimize the external threats, while transforming the identified weaknesses into strengths and taking advantage of opportunities while minimizing both internal and external threats.

Keywords: conventional; gas; oil; SWOT analysis; unconventional

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