# WILL THERE STILL BE A GOLDEN AGE OF GAS?: CASE STUDIES ON GAS UTILIZATION IN APEC AND THE UK

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## Overview

In the early 2010s the International Energy Agency (IEA) forecast that the world could soon enter a 'Golden Age of Natural Gas'. Both supply and demand of natural gas were growing steadily, energy prices were rebalancing after the 2009 crash and gas was increasingly seen as a means to accelerate the transition away from more carbon-intensive fossil fuels. Although three specific factors were identified by the IEA – increased policy-driven gas penetration in China, a decline in nuclear ambitions following Fukushima and higher gas demand in transportation – the broader implications could be summarized as lower and more competitive natural gas prices relative to competing fuels.

The benefits of natural gas are clear; it emits less carbon dioxide than other fossil fuels, can be highly efficient with advanced power generation technologies and its resource base has expanded significantly because of the shale revolution. This study will explore the various reasons for which increased natural gas utilisation failed to materialize, from macroeconomic conditions to government policy and inter-fuel competition affected by global commodity markets. This paper examines these different challenges in the context of five case-study economies: China, Indonesia, Japan, the United Kingdom and Viet Nam.

## Methods

Analysis of case studies.

## Results

Five underlying causes have been identified as contributing to the failed emergence of a 'Golden Age of Gas' in the five economies. The first reason is that the global economy did not grow as much as initially anticipated, particularly in Europe and emerging economies such as China, which lead to lower growth in primary energy demand. Secondly, natural gas has not been able to secure relative economic price competitiveness over coal in the power sector. Thirdly, there is strong government support for renewable energy (many economies have policies promoting renewable energy as domestic zero-emission energy) without similar policy coherence and alignment for natural gas. The fourth reason has to do with business practices related to trading natural gas including expensive supply infrastructure and rigid contracts. Finally, a decline of domestic production or demand in a number of economies.

## Conclusions

Based on the findings of the case studies in this report, there are four policy areas to be addressed in order to promote the use of natural gas. Firstly, the government must clearly define its target energy mix for each type of energy. Based on the price competitiveness of each energy source, the stability of supply and compatibility with environmental policy goals, it is important for government to specifically indicate the role of natural gas in the desired energy supply balance.

Secondly, the role of government in infrastructure development and maintenance. While it is possible to ease or simplify regulations for infrastructure investment in order to clarify the expected role of natural gas, it is also necessary to internalize costs, reallocate risk or provide direct public financial support.

The third issue is the development of a flexible index to accurately price gas in the market and to implicitly or explicitly price carbon emissions. Both high oil prices and low coal prices are comparatively unreflective of the market and emissions benefits of natural gas relative to other fossil fuels.

Fourth and finally, is reinforcing supply capacity. To this end, facilitating policy action that reduces regulatory timeframes and increases the transparency of the decision-making process on upstream development, as well as promoting the dissemination of new technologies from overseas, reduces barriers to market entry for emerging producing regions.

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