

Global gas demand prospective: Is the end of gas boom in sight...?

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ABSTRACT

According to the IEA 2009 will be the first year since the beginning of commercial gas use which reports a decreased worldwide gas demand compared to the year before. Even if this might be mainly driven by current economic crisis some indicators exist that the long term success story of natural gas could come to an end. We will discuss this in our paper which has two main sections:

First, we will analyse the historic development of gas demand forecasts. We will focus on such institutions that provide forecasts on a more regular basis to keep consistency over time. Mainly we will deal with IEA World Energy Outlook and EIA International Energy Outlook, but will also include some other studies and prognosis, e.g. from other international institutions (like European Commission) or energy companies (such as Shell and ExxonMobil).

The second part of our paper will provide our own view of the worldwide gas in the future (2030). We use a set of models which covers separate models for gas-to-power and for the other demand sectors. For the power market we use a fundamental model (“WhirlygigWorld”). This GAMS-model optimizes country specific gas demand on a monthly basis based on a detailed power plant database and around 350 economic and technical parameters for each country. For the other sectors (industry, residential, commercials) we use an approach mixing regression and fundamental analysis. Regressions based on historic were used to identify relevant drivers of gas demand for each country and sector. However, for the prognosis of the future gas demand pure regression results can’t be used for a number of countries (namely for both very young and mature gas economies. We therefore add a fundamental approach considering country specific parameters to estimate the countries individual gas demand potential.

We will present results on an aggregated worldwide basis as well as for selected countries which are based on the Frontier reference case settings. We will benchmark these results against IEA forecast and discuss major differences.

CURRICULUM VITAE

Dr. Jens Perner is Manager at Frontier's Cologne office. He is an expert on energy market regulation and market liberalisation. Among other things, Jens worked on behalf of a multitude of clients in Continental Europe on regulatory and market design topics, analyses of electricity and gas markets all along the value chain and on energy market modelling.

Jens joined Frontier in November 2006. Prior to that, he was head of the strategic market analysis team of the corporate development division of RWE in Essen, Germany. While at RWE, Jens worked extensively on the regulatory and institutional analysis of electricity, gas, fuel and green certificate markets. As part of this, he worked on the assessment of retail competition e.g. in the context of M&A projects.

Before 2002, Jens worked at the Institute for Energy Economics (Energiewirtschaftliches Institut, EWI) at the University of Cologne, where he worked on energy market liberalisation, regulation and market organisation as well as energy market modelling. Jens holds a PhD in Economics from Cologne University and a degree in Economics from Hanover University.

Dr. Andreas Seeliger started as Consultant at Frontier's Cologne office in November 2007. Andreas has 8 years of experience in the European gas sector. Recently he was involved in several energy market forecast related projects (oil, coal, gas, power) for German and European clients.

Andreas joined Frontier from Trianel European Energy Trading, a major German energy trading company. He worked on gas market analysis and was project manager of a long-term gas procurement project. Prior to this, Andreas was a consultant and researcher at the Institute of Energy Economics (EWI) at the University of Cologne. He has been responsible for EWI's gas modelling operations and has developed a worldwide gas market model including upstream sector and international gas transport. Andreas holds a PhD in Economics from Cologne University and a degree in Economics from Frankfurt University. He has a teaching position for economics of natural gas at University of Cologne.