



An Independent Study on Iran's Supply/Demand Over the Next 20 Years

Background

Gas has become one of the most important clean fuels of the future and the global demand for this energy carrier is continually increasing. With Iran having the world's second largest gas reserves – the majority of which remains untapped – many European and Asian countries are looking towards Iran as a major source of gas. In addition, Iran has recognized the economic and political benefits of both utilizing its gas resources for domestic purposes and export of gas to international markets.

Some of the major factors that affect Iran's domestic gas requirements include: The expansion of domestic industry and power sectors, an increasing population, government plans to substitute oil products with gas in various consumer sectors and the country's requirement for gas injection into oil fields for increased oil recovery (IOR) and enhanced oil recovery (EOR) purposes. Considering that Iran's current gas production is limited, a balance needs to be achieved between Iran's domestic needs and gas exports.

Aims

The objective of ICG's Gas Supply and Demand (GSD) model and study is to assess Iran's gas balance until 2028 and determine the Islamic Republic's domestic gas requirements for various sectors of the economy, and the extent of the country's potential to export gas. The model and study have taken two years to complete and twenty five experts from different disciplines have been involved in the effort. The main aim of the scope was to implement a dynamic study in which government policies are considered in both long-term and short-term forecasts. The study can be utilized as a strategic tool by Iranian authorities as well as foreign companies looking to invest in Iran's economy – especially in the gas sector.

The data collected for developing the GSD model has been obtained from a vast array of official government sources, which include the Central Bank of Iran, the Ministry of Petroleum, the Ministry of Power, the Ministry of Industries and Mines and the Ministry of Economic Affairs and Finance to name a few.

Methods

The study has been divided into two main modules: Supply and Demand. These modules are further broken into sub-modules:

1. Supply (Includes non-associated and associated gas from flared gas, gas gathering projects, NGL plants together with imported gas)
2. Demand (Includes residential & commercial, industry, power, petrochemical, transportation, gas export, and gas injection)

With the involvement of a group of international experts and local university professors, each sector's behavioral study (determined by past data) and forecast results were assessed using two methodologies: (1) Time series and panel data models (2) Bottom-up methodology (reviewing existing and future planned projects). ICG gathered historical data on 100 variables, some of which were identified – by our group of economic experts – as ones, which had most impact on gas consumption. Among the list of variables studied for each sector, price of energy plays a major role. Hence price shocks announced by the government have been reflected in the models to forecast demand profiles based on announced government policies.

Results

ICG has conducted this study based on three scenarios: High, Medium, and Low, all three based on government policies of the 4th and 5th Five-Year Development plans (2005-2015) together with the 20-Year Outlook Plan (2005-2025). The medium case – which represents ICG's view of Iran's future gas balance – illustrates the fact that Iran has the potential to be a major gas exporter in the future, provided excessive consumption is curbed and sufficient and timely investments are made. In order to meet with the goals of the 20-Year Outlook Plan, ICG believes that not only must extensive studies of reserves be carried out but also exploration and development projects should be sped-up, the country's domestic execution capacity must be increased and renewable energies considered. Other important factors to take into consideration for the demand of natural gas is the need to control consumption via price increases, improved efficiency, optimize customer consumption behavior and also take seasonality considerations into account.