

EXECUTIVE SUMMARY

2007: Demand and prices continue to rise

Over 2007 and into the first half of 2008, natural gas prices continued to rise in all IEA markets. Tight supplies, unprecedented oil prices, demand growth in established as well as new markets, and delayed investment were amongst the causes of this steady upward trend. While the weakening United States dollar cushioned these price increases somewhat in 2007, at least in euro and yen terms, continuing upward pressure in 2008 is translating into further significant price rises everywhere. Price levels, however, still vary between markets as a result of particular regional and national characteristics, despite the increasing mobility of LNG cargoes.

Rising prices have not curbed demand in consuming markets – in the United States, gas demand grew by 6.5% in 2007, with growth continuing into the first quarter of 2008 at around 4%, on the back of a cold winter. In Japan, growth in 2007 was 9%, continuing into 2008, as nuclear plant utilisation fell below 50%, and higher LNG imports helped fill the gap. In Europe, the pattern of previous warm winters continued, thus dampening growth in gas consumption. Despite this Turkey continued its strong growth, up 17% on 2006; gas use has doubled to 37 bcm since 2002. A return to more normal weather patterns in Europe in the early part of 2008 saw growth of over 8% in the first quarter of the year, most notably in Spain where demand increased 20% in the six months to April 2008.

Gas markets in a globalising context

Regional gas markets are on their way to globalisation. This trend seems irreversible, and impacts even the remotest and the most independent markets, at least marginally. More producing and consuming countries, growing dependence on external imports in OECD Europe, tighter balances, increasing volumes of spot and short-term LNG, and higher prices encourage global interactions. In the tight market context of 2007 and the beginning of 2008, spot and short-term LNG trade played a greater role in inter-regional market balancing, aligning prices for some regions at higher levels. In order to benefit from this globalising trend, more transparency on prices and flows, and more competitive internal markets are needed. Interregional competition will then improve global gas security in the long term.

Gas supply developments

On the OECD supply side, indigenous gas production in the United States appears to have responded significantly to higher prices, especially in late 2007 and 2008 while United Kingdom production continued its dramatic fall of nearly 10% per year.

Russia, OECD Europe's main source of gas imports, maintained production in 2007 at 2006 levels despite the continuing depletion of its traditional major producing fields. Independent producers also maintained production levels close to 2006 output. In June 2007, the Russian government passed an amendment to existing regulations intending to align domestic gas prices to net-back export prices by 2011. Coupled with a programme

to reduce gas flaring and increase efficiency in gas use, this set of reforms is intended to free up more gas volumes to meet rising domestic demand and export requirements. However, in the context of inflationary pressures, price reform could be postponed.

In other exporting countries, LNG production capacity is set to grow rapidly, although not as quickly as anticipated in the past. Commissioning and production problems are appearing in new LNG liquefaction plants, delaying commercial deliveries of cargoes and causing concerns among consumers.

There was positive news in LNG supply with Equatorial Guinea and Norway joining the ranks of LNG exporters. Despite this, there has been a distinct lack of final investment decisions (FIDs) over the period since the 2007 Natural Gas Market Review. Positive announcements have come only from Angola, Australia and Algeria.

Delays and cancellations were a frequent feature of upstream gas development in 2007 and 2008, due notably to escalating engineering, procurement and construction costs. Moreover, in some producing countries, growing state involvement in the control of energy resources and their development continues to influence decision making. Tensions concerning the allocation of resources between the domestic market and exports persist in Indonesia, Nigeria and in the Middle East and North Africa. Low domestic gas prices in many of these countries are leading to greater volumes of gas being consumed locally, often at greatly distorted prices, in

efforts to diversify and strengthen the economy, in industries such as petrochemicals, water desalination and power generation. Low domestic prices also discourage upstream investment.

Similarly, domestic politics and economic development policies in some producing states hinder the necessary investment and technical know-how to capitalise on their resources. Government intervention and state appropriation of privately owned assets, coupled with complex financial arrangements, ensure that much of the gas reserves remain in the ground.

Investment in import infrastructure

An unprecedented major expansion is underway globally in regasification capacities, well in excess of LNG production capacity. Consequently, regasification capacity is likely to be underutilised relative to liquefaction but this likely excess capacity could be a source of flexibility. “Global” exchange of LNG cargoes is accelerating, particularly from the Atlantic to the Pacific region, facilitated by the changing business models of the LNG industry.

Pipeline infrastructure development in 2007 was marked by delays and increased costs of major projects; both the Nabucco and Nord Stream projects saw cost estimates increase by at least 50%. In North America, the Alaska pipeline was delayed, although the Rex Pipeline project is on time. In marked contrast to North American pipeline investment, investment in internal interconnections and in new supply projects in Europe continues to lag.

In LNG similar trends can be seen, with a significant amount of capacity being planned but not all projects actually proceeding. Major delays afflict many projects with some cancellations such as the Baltic LNG project announcement from Gazprom. The dearth of FID in new LNG projects since mid-2005 means that any major post-2012 expansion of capacity is more likely to slip toward 2015. Notwithstanding the massive expansion in LNG that will occur in the decade 2002 to 2012, the lag in LNG investment beyond 2012 is a concern for all gas users in both IEA and non-IEA markets.

Gas to power

Despite rising gas prices, gas-fired power exerts a major influence on demand for gas in both OECD and non-OECD countries. There was little in the way of new coal plant built outside of the developing world in 2007 and less than a handful of announcements in relation to new nuclear plant. In OECD countries, especially in Europe, low capital costs, short lead-times, and relatively light environmental footprints still make CCGT the low risk default option for new investments in power generation in an environment characterised by considerable regulatory uncertainty. In a number of oil and gas producing countries, namely in the Middle East and North Africa region, gas is emerging as the fuel of choice to meet rising electricity demand. In the major emerging economies of China and India the share of gas in the generation mix remains relatively small, but the volumes consumed can be significant in terms of global gas use and trade.

Gas security

While much of 2007 was crisis-free relative to other years, events in the first half of 2008 have served to remind us of the fragility of gas markets. In June 2008, an explosion at a gas supply hub in Western Australia reduced local gas supplies by 30% with significant implications. Earlier in 2008, a minor dispute between Turkmenistan and Iran resulted in gas shortfalls in Iran, holder of the world's third largest gas reserves. This incident had repercussions as far away as Greece and Turkey.

Role of new technology

Advances in technology to access new gas resources and find new ways of bringing gas to markets are essential to ensure additional supplies for a growing demand. Delivering greater efficiency in upstream and downstream sectors is a key objective of research and development to ensure gas market sustainability over the long-term. In a globalising gas market – one with rising prices, tight supply prospects and increasing environmental constraints – frontier gas resources will probably see their contribution to global gas supply grow in the future.