

SUMMARY

Global proved natural gas reserves remained stable in 2012 and were estimated at 199.9 trillion cubic meters (tcm) at 1 January 2013. Changes in reserves were quite small around the world both at country level and at regional level. Relatively modest reserves growths (the highest increase at country level was Malaysia with 161 bcm) were compensated by declines elsewhere in particular in the US where gas reserves were revised down due to weak wellhead prices. At regional level, the largest increase was recorded in the Middle East (+ 203 bcm) and the largest decrease in North America (- 314 bcm) in the wake of the US reserves' revision.

World gross production increased 1.8% in 2012 to 4186 billion cubic meters (bcm), of which 437.6 bcm was reinjected into oil fields, 131.8 bcm was flared and 266.6 bcm lost through shrinkage.

World marketed production increased significantly by 2.3% in 2012 to reach a new record level of 3350 bcm.

Overall patterns mask different regional situations. The fastest-growing markets were the Middle East (+ 26 bcm) and North America (+ 25 bcm), which were also the most dynamic in the previous year. Reversely, gas production fell significantly in the CIS (- 7.6 bcm), due to a dramatic decline in Russia (- 14 bcm). Good production results were also recorded in Africa (Libya, Nigeria) and Latin America (Brazil).

With an incremental volume of 33 bcm, the US was by far the largest contributor to global growth for the second consecutive year, as shale gas production continued to ramp up, although at a slower pace than in the previous years.

As a result of these developments, OECD kept a dominant share of around 35% of global production, the CIS fell slightly to 23.7% of the total, followed by OPEC, which gained 0.8% percentage point to 19.2%

The interest **for unconventional resources** is increasing worldwide with various development projects and exploration works. Buoyant shale gas activity is particularly observed in China, Argentina and Australia. Although shale gas development remains today in its infancy outside the US, it has recently been supported and boosted by official authorities in many countries (China, United Kingdom, Ukraine, Argentina, India...) via the implementation of partnership agreements and bidding rounds.

North America accounts for around 95% of global shale gas and CBM output and the totality of shale gas production. It also concentrates all the proven shale gas reserves. In the US, shale gas production already accounts for more than 40% of national gas output, according to CEDIGAZ, against 33% in 2011.

In 2012, the **international gas trade** reached 1026.3 bcm, a 0.6% decrease from 2011. This slowdown contrasted with the rapid expansion of the two previous years and the last ten-year steady growth of 4%/year. The global decrease was fully explained by the exceptional drop in global LNG supply, which resulted in market tightness.

The inter-regional trade¹ declined 3.4% to 422 bcm, affecting both LNG and pipeline gas flows, reflecting mostly the contraction of the European gas demand. Reversely, the intra-regional trade increased 1.2% to 600 bcm in 2012, mainly driven by intra-Asian-Oceanian pipeline flows. The intra-regional trade is for more than 80% made by pipeline.

World gas trade accounts for 31% of global marketed production, while the share of LNG in total natural gas supply declined from 9.9% in 2011 to 9.5% in 2012, illustrating the regional pattern of gas markets, which are a long way off the idea of a fully global market.

The CIS remained the leading exporting region, but the share of this latter in total gas flows decreased from 28% in 2011 to 25% in 2012, followed by Europe. In terms of imports, Europe is by far the leading trade zone but its share in total gas flows decreased to 43% in 2012 as imports were down. European imports from extra-regional sources reached 245 bcm in 2012. The European dependency on external gas supplies decreased to 46%, versus 50% in 2011.

In 2012, the **international LNG trade** dipped by 2.5% to 313.05 bcm, according to CEDIGAZ. LNG now represents 31% of world gas trade. This unusual decline was mainly caused by supply shortage as many exporters produced well below capacity. It was only the fourth time in the 48-year history of the international LNG trade that supply has fallen. The previous such events were a marginal fall in 2008 and dips in 1980 and 1981, in a context of pricing disagreements between Algeria and the US. Qatar confirmed its leadership in LNG supply, accounting for almost one third of international exports, followed (at a much lower level) by Malaysia (10%) and Australia (9%).

In 2012, the **international pipeline trade** was almost unchanged from 2011, standing at a volume of 708.8 bcm. Around 54% of international exports by pipeline are sourced from three countries: Russia (27%), Norway (15%) and Canada (12%).

According to CEDIGAZ, natural gas share in the world primary energy mix edged up to 21.5%, as **actual natural gas consumption**² grew at a faster pace (+ 2.5%) than total energy consumption, and particularly than oil consumption (+ 1%).

Similarly to the previous year, natural gas consumption was particularly dynamic in Asia-Oceania (Japan, China), North America (US) and the Middle East (Qatar, Saudi Arabia). Reversely, it continued to decline strongly in Europe (- 3%). Overall, OECD gas consumption increased by 1.9%, while the CIS registered a 2% decline. Non-OECD emerging countries continued to lead global natural gas growth, accounting for 85% of the incremental consumption. In consequence, the gap between OECD and non-OECD consumption continued to widen and the OECD share in the world total shrank to 47%.

The **price divergence** between the three main markets (United States, Europe, and Japan) widened further in 2012 and persisted in 2013. US gas prices are expected to be around 30% up in 2013, from 2012, but stay at moderate levels due to the absence of tensions on the US balance. In Japan and Europe, oil-indexed prices were maintained at high levels, but could edge down in the short-term in relation to oil prices. In Europe, the NBP is under upward pressure and has a growing influence on the average import price of long-term contracts.

¹ Only exchanges between the seven regional markets defined by CEDIGAZ are calculated.

² Apparent consumption = marketed production + imports – exports. Actual consumption is derived from apparent consumption by subtracting stock changes.