

2013 World Energy Situation as Indicated by BP Statistical Review

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On June 16, the BP Statistical Review of World Energy 2014 was released at the venue for the 21st World Petroleum Congress in Moscow. As explained in two of my past reports (Nos. 94 and 135), the BP Statistical Review is one of the most representative annual statistics on international energy supply and demand, covering the latest data comprehensively. The following reaffirms the features of the 2013 international energy market based on the BP Statistical Review.

Firstly, primary energy consumption in the world continued firm growth in 2013. Primary world energy demand in the year increased by 2.3% from the previous year to 12.73 billion tons of oil equivalent. The demand expanded for the fourth straight year, after declining in 2009 due to a global recession under the impact of the Lehman Shock. Energy demand growth in 2013 came to 1.2% for the members of the Organization for Economic Cooperation and Development (OECD) and 3.1% for non-OECD countries, indicating that non-OECD countries drove the global growth. OECD countries accounted for 43.5% of global energy demand, against 56.5% for non-OECD countries in 2013. The center of global energy demand has shifted to non-OECD countries. Since the non-OECD share exceeded the OECD share in 2008 for the first time, the gap between them has continued expanding.

In an interesting phenomenon, however, OECD demand in 2013 turned upward after continuing to decrease for the previous two years. The OECD demand growth was led by a robust increase of 2.9% in the United States compared to the previous year. Energy demand continued falling in the European Union and Japan. The U.S. energy demand growth owed to an economic recovery and indicated economic effects of the shale revolution. Particularly, the United States scored the world's fastest demand growth for oil that accounted for the largest share (33%) of global energy demand. While oil demand in 2013 posted a steady increase of 1.4 million barrels per day from the previous year, the United States logged the fastest growth of 400,000 bpd, followed by 390,000 bpd for China and 170,000 bpd for Brazil. The United States thus outstripped China in oil demand growth. The presence of the United States in the global energy market has recovered due not only to the shale revolution in supply side but also to oil demand growth.

Meanwhile, non-OECD countries including Asian developing nations saw slightly slower energy demand growth in 2013 than in earlier years. Their energy demand growth in 2013, as given above, was slower than the average for the past decade and in the previous two years (2011 and 2012). This is because emerging countries such as China and India decelerated their economic

growth. While their energy demand growth was still higher than OECD demand growth, the growth gap between OECD and non-OECD countries narrowed substantially in 2013. This trend is common to all energy sources. Symbolically, natural gas demand growth in non-OECD countries was limited to 1.1%, slower than 1.8% for OECD countries. The OECD demand growth owed primarily to the robust growth of 2.4% in the United States. Attracting attention is whether the combination of the robust U.S. energy demand expansion and the slower non-OECD demand growth would continue or whether non-OECD countries would become a key driver of global energy demand growth again.

The United States expanded not only energy demand. Under the ongoing shale revolution, its gas and oil production increased steadily. Particularly, oil output in 2013 posted a sharp increase of 1.11 million bpd. The growth was the largest in the world, indicating that the United States drove global oil production growth. The oil output expansion was remarkable in the history of U.S. oil production, standing at the highest level since 1965, the year from which the data set of the BP Statistical Review starts. Oil production by Iran, Syria, Libya, Nigeria and other major oil producing countries in the Middle East and Africa in 2013 declined by a total of about 1 million bpd due to economic sanctions, security deterioration or conflicts. Crude oil prices remained high above \$100 per barrel in 2013. Nominally, the sharp U.S. oil expansion offset the impact of the above mentioned supply disruptions. If U.S. output growth were slower, the international oil supply-demand balance could have become tighter to put upward pressure on crude oil prices.

Among energy sources, renewable energy posted the largest consumption expansion in 2013 in terms of growth percentages, at 16%, followed by hydro and coal. In terms of volume, however, coal logged the largest consumption increase, accounting for 100 million tons of oil equivalent or more than 40% of the total primary energy consumption expansion at 247 Mtoe in 2013. China and India scored the largest coal consumption growth rates. Interestingly, the United States followed them in coal consumption growth. Under the robust increase in coal consumption, global carbon dioxide emissions in 2013 increased 2.1% from the previous year to 35.09 billion tons.

Natural gas consumption growth in 2013 stood at 1.4%, slipping below the total energy consumption growth. Natural gas consumption trends by country or region were mixed. China posted the largest expansion of 15.3 billion cubic meters or 10.8% from the previous year, followed by 14.2 bcm or 2.4% for the United States. In contrast, the EU logged a decrease of 6 bcm or 1.1%. EU gas demand thus declined for the fourth straight year, indicating that the EU was isolated from the “Golden Age of Gas.” In gas production in 2013, Russia recorded the largest increase of 12.4 bcm or 2.4% from the previous year as exports via pipeline to Europe recovered thanks to price adjustment to recover the competitiveness of Russian gas. Russia’s gas production volume totaled 604.8 bcm, the second largest in the world following 687.6 bcm for the United States. China recorded the second largest gas output growth of 9.9 bcm or 9.5%, followed by 6.3 bcm or 1.3% for the United States.

As gas consumption grew moderately, international gas trade in 2013 posted a moderate increase of 15.1 bcm from the previous year to 1,035 bcm. Pipeline gas trade accounted for 14 bcm of the increase against 1.1 bcm for liquefied natural gas (LNG) trade. LNG trade thus remained

almost unchanged. In pipeline gas trade, Russia scored a substantial increase of 17.1 bcm in exports to 211.3 bcm, enhancing its position as the largest gas exporter in the world. Asian LNG imports in 2013 expanded by 13.5 bcm to 238.1 bcm, while European imports dropped by 16.8 bcm to 51.5 bcm. Asia's share of LNG imports rose to 73% against Europe's 16%, indicating that the Asian share and importance in LNG trade increased further.

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