

A Review of 2012 Japanese and Overseas Energy Situation

Ken Koyama, PhD
Chief Economist, Managing Director
The Institute of Energy Economics, Japan

Only four days are left before the year 2012 ends. The year saw various problems, key developments and new challenges emerging in the Japanese and overseas energy situation. In reviewing the year, I would like to highlight some points that I view as important.

First, crude oil prices have remained high. From the beginning of 2012 through December 27, the benchmark Brent futures price averaged \$111.7/barrel on a daily closing basis and the West Texas Intermediate futures \$94.2/barrel. Given that the benchmark WTI price has deviated far from the Brent price for its own unique reasons, we can conclude that crude oil prices on the international market have remained above \$100/barrel since 2011. While crude oil prices have remained high, global oil demand has decelerated with unconventional oil production accelerating. The Organization of Petroleum Exporting Countries, which has grown more willing to see higher crude oil prices, is now required to sensitively manage oil production. As some experts have compared the current situation with a high oil price period after the second oil crisis, we must closely watch international oil market developments.

Second, international imbalances or deviations in energy prices by region or by type of energy have expanded. As noted above, there is a gap of some \$20/barrel between the prices of the two benchmark crude oil prices that are similar to each other in physical quality. In the international gas/LNG market, Asian LNG prices linked to crude oil prices have recently ranged from \$16 to \$18 per million British thermal units (MMBTU) against around \$3/MMBTU for U.S. Henry Hub and imported gas prices depending on gas supply-demand conditions (gas-to-gas competition) and around \$10/MMBTU for Europe where oil-linked and hub gas prices co-exist. There are thus large gas price gaps between regions. The U.S. gas price of about \$3/MMBTU amounts to a calorie-based oil price of some \$20/barrel. Gas prices are thus extremely lower than oil prices. Furthermore, the U.S. gas price plunge has led coal to be substituted in the U.S. power generation sector and flow into the international market, bringing about a softening coal supply-demand balance. In Europe, as a result, coal has increased its competitiveness against gas, reversing the U.S. case. Coal consumption has thus been expanding in Europe at a cost of gas consumption. Relations between coal and gas prices thus differ from region to region. The year 2012 has thus featured expanded energy price imbalances between regions and by type of energy. Will the deviation narrow, remain unchanged or widen in the future? We must pay attention to relevant future developments.

Third, the year 2012 saw further progress in the “U.S. shale revolution” as a factor behind the abovementioned deviations between energy prices. The shale gas revolution, which has become a buzzword, and a subsequent shale oil (tight oil) production expansion have been dramatically changing U.S. and global energy supply/demand conditions. Some experts have noted that as the shale revolution has made progress, the United States has steadily increased its energy self-sufficiency rate and is going in the direction of its future “energy independence”. Amid such change, a U.S. energy cost drop symbolized by the gas price plunge and macroeconomic effects of declining oil imports payment which accounts for dominant part of the U.S. trade deficit are working to enhance U.S. economic power. The enhancement of U.S. economic power and international competitiveness will allow the United States to remain a superpower status longer than previously expected and will provide various implications for international politics, the global economy and the international energy situation. At the same time, the United States' transition to energy independence is a key development that can turn around the paradigm of the world energy security problem. This is because the traditional international energy security system has been based on a basic recognition that the United States will remain dependent on energy imports. What implications will future U.S. changes have on U.S. policies on the Middle East, Asia and China? How will relations between Asia and the Middle East change? Future U.S. developments are likely to trigger a wide range of deep geopolitical energy problems for global stakeholders.

Fourth, developments in the Middle East and Asia continued to attract attention in 2012. In the Middle East, the impact of the “Arab Spring” movements has remained strong. As represented by the confusion and extreme instability in Syria, the region has destabilized further after the wake of the “Arab Spring”. Meanwhile, Iran's crude oil exports have declined substantially as the United States and EU have toughened economic sanctions on the country. But the Iranian situation has not gone so far as to trigger any emergency as feared once. Nevertheless, the future course of the “Arab Spring” movements and the Iranian situation has grown more uncertain and unstable. We must continue to closely watch future developments. In the past year, China and other Asian emerging countries saw slower demand growth on a global economic slowdown after driving global economic and energy demand growth. Asia featured developments that heightened tensions over territorial disputes between major countries, attracting global attention from the geopolitical viewpoint. Following the birth of new governments in major countries including Japan, China and South Korea, the future Asian political and economic situation will grow more important for analyzing energy problems.

Fifth, renewable energy use made rapid progress under powerful policy support, though with various relevant problems emerging. Renewable energy, which emits no carbon dioxide and is a domestic energy source subject to high social acceptance, has diffused rapidly in major European countries and China as their governments have provided policy support including the feed-in-tariff system on expectations to benefits mentioned above as well as those related to industry promotion policies. At the same time, the rapid diffusion has led people to pay attention to cost hikes rising economic burdens for the FIT system and requirements for grid stabilization measures responding to the expansion of unstable electricity sources. In Germany that has attracted global attention as an advanced renewable energy promoting country, the rapid expansion of wind power generation has

caused the so-called “loop flow” problem in which unplanned current flows exert negative effects on stable grid management in neighboring countries. In addition, the renewable energy use expansion has discouraged Germany and neighboring countries from using natural gas thermal power plants from the viewpoint of the so-called “merit order” supply/demand adjustment, making it difficult to maintain such plants for stabilizing the electricity supply-demand relationship. The year 2012 thus saw new attention-attracting problems involving renewable energy.

Since the March 2011 Great East Japan Earthquake, Japan has tried to revise its energy policy in the face of new realities. Eventually, however, the government delayed its conclusion on the revision beyond the end of 2012. The new government led by the Liberal Democratic Party has taken over the energy policy revision efforts. Sharp changes in the international energy situation in 2012 indicated anew that Japan must continue efforts to work out its energy policy or strategy for its survival and development in line with underlining global trends.

Contact: report@tky.ieej.or.jp

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