

# European Strategies on Gas Supply Security♦

Koji Fujishima\*

## Summary

European countries employ different strategies on gas supply security depending on the time scale: while their short-term strategies focus on economic efficiency, long-term strategies also place more emphasis on ensuring energy security.

With regard to short-term natural gas procurement strategies, each country places priority on ensuring immediate economic benefits. Furthermore, these strategies are led by enterprises, and no explicit government intervention can be detected.

While its natural gas procurement focuses on economic efficiency in the short term, Europe has developed strategies that emphasize not only economic efficiency but also ensuring supply security with regard to medium- to long-term procurement. The EU, Britain, Germany and France differ in their strategies to ensure supply security, but what they have in common is that they all have a clear policy as to how to cope with their growing dependence on Russia. This is believed to be a result of European countries' engaging in very deep discussion and consideration over their supply security.

Japan, which is also an energy importing country like countries in Europe, can learn a lot from major European countries' gas supply security strategies in considering its own security policy. As Europe has done, Japan should also accelerate efforts toward ensuring future energy security from a medium- to long-term perspective, in addition to immediate short-term strategies.

## 1. Introduction

The environment surrounding the recent global energy situation is undergoing drastic change. A surge in international energy prices up to last year and the supply-demand imbalance due to growing demand mainly in emerging countries such as China and India have given rise to resource nationalism, and energy markets in various regions have been largely influenced by this trend.

Notably, the European gas market saw the foundation of energy security at risk when gas supplies from Russia were cut off for some two weeks in January 2009 due to the Russia-Ukraine gas dispute, resulting in one of the largest ever gas supply disruptions. Following this dispute, the importance of energy security policy, in particular gas supply security strategy, has drawn more attention than ever in European countries, where imports from Russia account for approximately 40% of total gas imports. This article offers an overview of the recent situation regarding natural gas supply security in Europe, while paying attention to short-term and medium- to long-term time

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♦ This paper is based on information by 21st August 2009.

\* Researcher, Oil & Gas Strategy Group, Strategy & Industry Research Unit, The Institute of Energy Economics, Japan

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## **2. European strategies on gas supply security and their trends**

### **2-1 Short-term strategies**

When gas supplies were halted due to the Russia-Ukraine gas dispute, Europe raised its intake of pipeline gas on long-term contracts and spot LNG cargoes as an emergency measure. Once supplies resumed, however, an interesting trend was observed with regard to major European countries' gas procurement practice.

For example, Germany, which buys pipeline gas from countries such as Russia, Norway and the Netherlands on long-term contracts, shifted its procurement so as to minimize pipeline gas imports from Russia on long-term contracts while raising spot pipeline gas imports to a maximum<sup>1</sup>. At first glance, this move seemed to be aimed solely at reducing Germany's dependence on Russia and improving supply security. In reality, however, it was a result of aiming to minimize procurement costs at enterprises by best utilizing lower LNG spot prices under the current weak global LNG market. Figure 1 shows changes in pipeline gas and LNG prices in Europe. Hit by a decline in gas demand<sup>2</sup> since February 2009 due to stagnant production activity in European automobile and steel industries, as well as by milder winter temperatures in February<sup>3</sup>, both pipeline natural gas prices and LNG prices have dropped sharply, with spot LNG prices said to have plummeted to around \$6-7/MMBtu<sup>4</sup>. At the time, Germany's pipeline gas imports from Russia stood at \$8.60/MMBtu at the German border, while spot prices came to around \$4/MMBtu (\$12/MMBtu in the previous year). Since spot prices were considerably lower, increasing spot transactions offered economic advantages and, as a result, dependence on Russia fell sharply.

Such a procurement strategy focusing on cost minimization for enterprises can also be seen in France's natural gas procurement activities. France purchases pipeline gas on long-term contracts from the Netherlands, Norway, Russia, Britain and Algeria, and buys LNG cargoes from Algeria, Nigeria, Egypt, Norway and Qatar. When domestic gas demand slumped in March 2009, France kept imports from Russia at the same level as the previous year, while reducing pipeline gas imports from the Netherlands by 18% and raising LNG imports by 3.5%<sup>5</sup>. The reason behind this action is assumed to be that, in the case of France, prices of pipeline gas imported from the Netherlands were higher than those of gas imported from Russia, while spot LNG prices were

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<sup>1</sup> World Gas Intelligence, "MARKET INSIGHT: Germany Adjusts," April 22, 2009.

<sup>2</sup> According to Eurostat's statistical data, gas demand in February 2009 rose 12.3% from a year before in Germany and 6.2% in France due to lower-than-usual temperatures. However, gas demand in March, when temperatures were within the normal range, fell 14.2% from a year before in Germany and 16.2% in France. Total gas demand in March for the 27 EU countries plunged 15.9% from February.

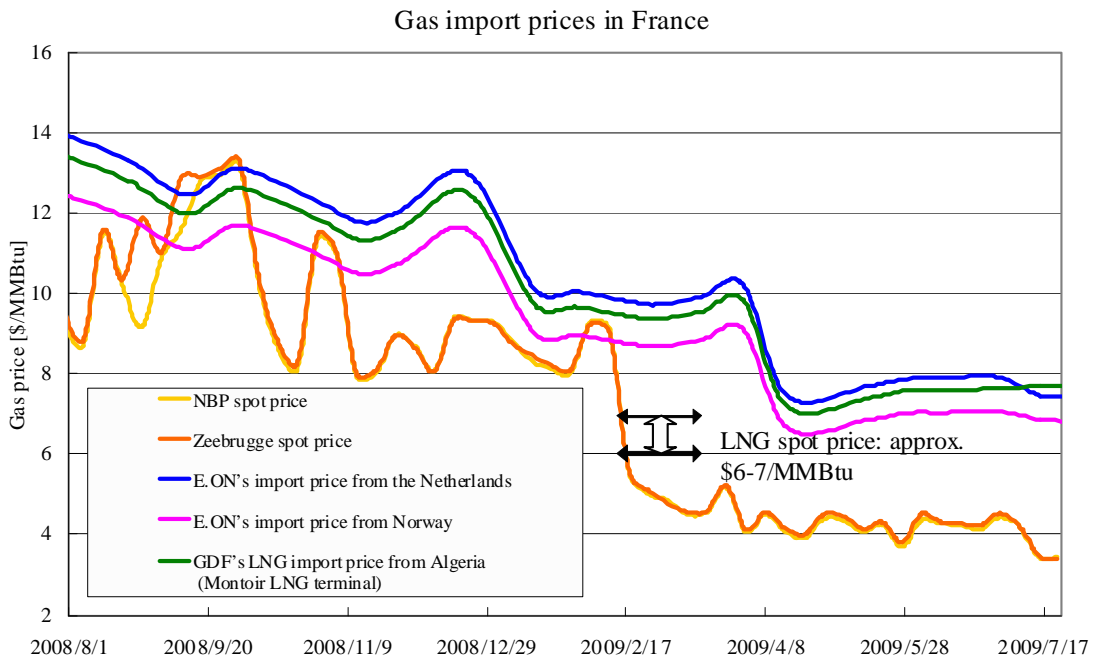
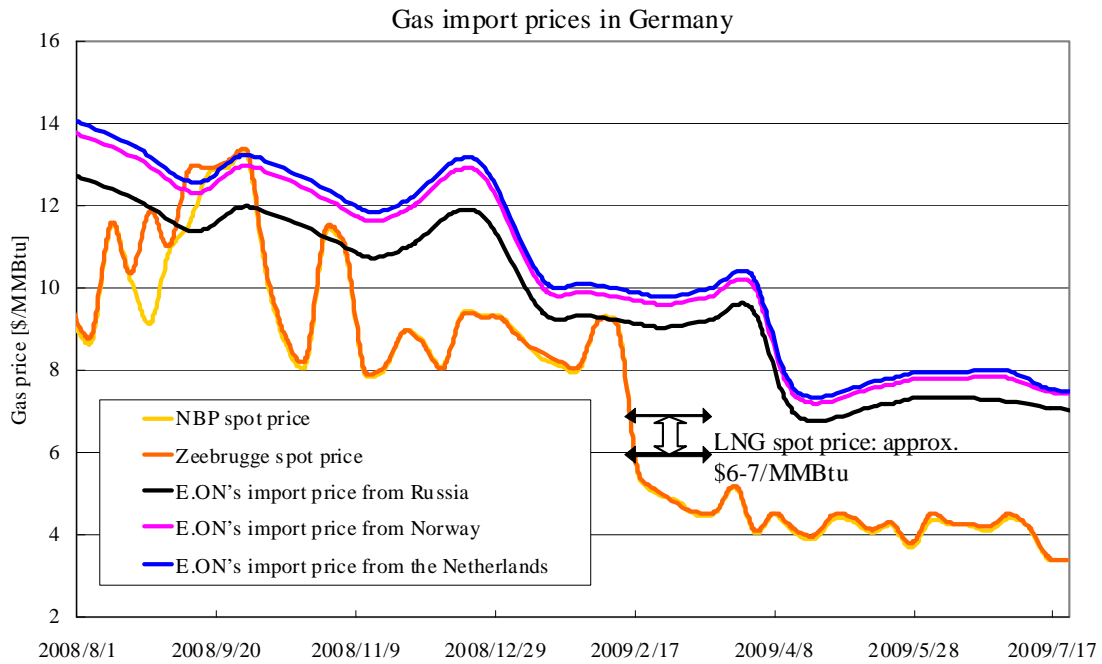
<sup>3</sup> The average temperature in Paris in February 2009 was 3.9°C, down 2.4°C from a year before and up 2.6°C from January. The average temperature in Hamburg in February 2009 was 1.8°C, down 3.0°C from a year before and up 1.3°C from January. Thus, the winter was harsher than usual, but temperatures turned milder in February 2009. In March, the average temperature rose 0.1°C from a year before in Paris and 0.5°C in Hamburg, moving at roughly the same level as usual.

<sup>4</sup> World Gas Intelligence, "LNG Market Hot – Outlook Mixed," February 18, 2009.

<sup>5</sup> World Gas Intelligence, "Test Point For French LNG Imports," June 10, 2009.

lower. Thus, in terms of short-term natural gas procurement strategies, countries place priority on ensuring immediate economic benefits. Furthermore, these strategies are led by enterprises, and no explicit government intervention can be detected.

**Fig. 2-1 Changes in gas prices in Germany and France**



Source: European Gas Market

However, the important point is the implications of these procurement strategies of enterprises. For Russia, sales of domestically-produced gas took a beating not only from a slump in gas demand across Europe but also from an increase in spot LNG procurement. This trend could affect Russia's strategy on gas sales to Europe and, therefore, has medium- to long-term implications.

## 2-2 Medium- to long-term strategies

As seen from the above, Europe's natural gas procurement focuses on economic efficiency in the short term. In terms of medium- to long-term natural gas procurement, however, Europe has developed strategies that emphasize not only economic efficiency but also ensuring supply security. Medium- to long-term strategies of the EU and major European countries are shown in Figure 2. Each country has adopted strategies that reflect its own energy situation. Notably, recent developments of interest are a proposal for a regulation to improve the EU's energy security<sup>6</sup>, announced by the European Commission (EC) in July 2009, and "Energy Security: A national challenge in a changing world,"<sup>7</sup> released by the British government in August 2009.

**Fig. 2-2 Medium- to long-term strategies of the EU and major European countries and recent developments**

	Basic policy	Recent developments
EU	<ul style="list-style-type: none"> <li>Diversification of supply sources mainly to reduce dependence on Russia</li> </ul>	<ul style="list-style-type: none"> <li>Stalled negotiations to renew the expired EU-Russia Partnership and Cooperation Agreement (1997-November 2007)</li> <li>Adopted 200-million-euro financial support to promote the construction of the Nabucco pipeline (May 2009)</li> <li>Held "Eastern Partnership" summit meeting with six former Soviet states (May 2009)</li> <li>Held "Southern Corridor" summit; EU, Turkey, Georgia, Azerbaijan and Egypt agreed on a declaration to cooperate toward the realization of the Southern Corridor. (May 2009)</li> </ul>
	<ul style="list-style-type: none"> <li>Collaboration with North African countries and other Mediterranean countries</li> </ul>	<ul style="list-style-type: none"> <li>"Energy Partnership" agreement (December 2007)</li> <li>Trans-Saharan Gas Pipeline project</li> </ul>
	<ul style="list-style-type: none"> <li>Building an intra-European gas supply network for mutual accommodation</li> </ul>	<ul style="list-style-type: none"> <li>New European Transmission System (NETS) project</li> <li>The European Commission announced a new proposal for a regulation to improve energy security. (July 2009)</li> </ul>
France	<ul style="list-style-type: none"> <li>Strengthening resource procurement capability through overseas resource development</li> </ul>	<ul style="list-style-type: none"> <li>GDF-Suez acquired 60% of development rights for Qatar's offshore gas block from U.S. Anadarko. (July 2009)</li> </ul>

<sup>6</sup> European Commission, "Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL concerning measures to safeguard security of gas supply and repealing Directive 2004/67/EC," July 16, 2009.

<sup>7</sup> British Department of Energy and Climate Change (DECC), "Energy Security: A national challenge in a changing world," August 5, 2009.

	<ul style="list-style-type: none"> <li>Strengthening relations with Russia</li> </ul>	<ul style="list-style-type: none"> <li>GDF-Suez launched negotiations with Gazprom over participating in the Nord Stream project. (April 2009)</li> <li>Total concluded an initial agreement with Novatek, an independent Russian gas company, on development of the Yamal Peninsula.</li> </ul>
Germany	<ul style="list-style-type: none"> <li>Building a stable relationship with Russia</li> </ul>	<ul style="list-style-type: none"> <li>Strong relationship between leaders</li> <li>Germany's E.ON acquired 25% of supply gas field rights in Nord Stream from Gazprom in a swap transaction. (June 2009)</li> </ul>
	<ul style="list-style-type: none"> <li>Improving transmission security</li> </ul>	<ul style="list-style-type: none"> <li>Promoting the Nord Stream pipeline</li> <li>Russian President Dmitry Medvedev confirmed German Chancellor Angela Merkel's support and construction approval for the Nord Stream pipeline. (July 2009)</li> </ul>
	<ul style="list-style-type: none"> <li>Expanding into the Middle East, North Africa and the Caspian Sea</li> </ul>	<ul style="list-style-type: none"> <li>Germany's RWE agreed with the Turkmenistan government on a contract to explore and develop a Caspian Sea gas block. (July 2009)</li> </ul>
Britain	<ul style="list-style-type: none"> <li>Improving liquidity of energy supply by reducing dependence on Russia and promoting liberalization</li> </ul>	<ul style="list-style-type: none"> <li>Securing southern supply sources and routes in case gas imports are needed in the future</li> <li>The British parliament agreed to a common EU energy strategy that included gas market liberalization and interlinking markets, and requested EU approval of the construction of the Nabucco pipeline. (February 2009)</li> <li>The British government released "Energy Security: A national challenge in a changing world," a document calling for the diversification of energy sources. (August 2009)</li> </ul>
	<ul style="list-style-type: none"> <li>Strengthening resource procurement capability through overseas resource development</li> </ul>	<ul style="list-style-type: none"> <li>Summit diplomacy with resource-rich countries by Prime Minister Gordon Brown</li> </ul>

Source: Created by the IEEJ based on various documents

The former is a regulation proposed by the European Commission following the suspension of gas supply in January 2009 due to the Russia-Ukraine gas dispute, and replaces the existing Directive 2004/67/EC of April 26, 2004 concerning measures to safeguard security of natural gas supply. The proposed regulation requires that the 27 EU member countries mutually provide gas in the event of an emergency where the EU's total gas imports from outside the EU fall by 10% or more, and that they secure gas storage to cover 60 severe winter days of supply by the end of March 2014. The upgrade from the previous "Directive" to "Regulation," as well as changes to enable direct control of EU member countries' actions, highlight the EU's high level of interest in supply security<sup>8</sup>.

With regard to the latter, compiled by Mr. Malcolm Wicks, British Prime Minister Gordon

<sup>8</sup> The difference between an EU Directive and EU Regulation lies in whether the actions of governments and enterprises of EU member nations are regulated directly. An EU Directive requires each member country to establish or revise domestic laws in accordance with the directive, while an EU Regulation acts to directly regulate the actions of EU member countries' governments and enterprises.

Brown's special representative on international energy, it is interesting that Russia's growing significance as a future energy supply source is mentioned by Britain, whose energy supply dependence on Russia is currently zero. The report notes the mutually dependent relationship between the EU and Russia over gas and the importance of relations with Russia to Europe's energy policy, and calls for the need to study "Russia's role in EU energy security and whether this poses any particular risks to the EU." It recommends that Britain should, in order to secure future natural gas supply security, utilize the EU organization more effectively and evaluate the importance of the Southern Corridor as a gas supply route that does not traverse Russian territory. It also notes the need for diversification of energy sources through the promotion of nuclear power and renewable energy development. It can be seen from recent developments, such as Prime Minister Gordon Brown's active summit diplomacy with resource-rich countries and the British parliament's request to the EU in February 2009 to approve the construction of the Nabucco pipeline as part of gas supply diversification, that Britain is seriously considering medium- to long-term gas supply security strategies in anticipation of a future increase in gas imports.

It should be noted, however, that long-term strategies involving alternative supply sources and routes require large-scale investment, and major issues such as the commitment of countries concerned and securing gas supply sources contain uncertain factors. Therefore, It is unclear whether the announcement of long-term strategies leads to immediate action.

Germany is working to ensure supply security by taking a different approach from the EU and Britain, which see their dependence on Russia as a cause for concern in terms of supply security. Based on the notion that strengthening the mutual dependence framework with Russia would in fact lead to increased supply security, Germany is striving to tighten energy relations with Russia, as seen in its active diplomacy with Russia. Typical cases include the construction of the Nord Stream pipeline from Russia to Germany that bypasses countries such as Belarus and Poland, and investment in Russian upstream operations by German companies such as BASF and E.ON. At the same time, Germany is also promoting the diversification of transit routes and supply sources by making a foray into upstream development projects in the Middle East, North Africa and the Caspian Sea.

France is also strengthening its relations with Russia, as seen in Total's participation in the Shtokman development project and GDF-Suez's launch of negotiations with Gazprom in April 2009 over taking part in the Nord Stream pipeline consortium. At the same time, France is striving to improve supply security by actively joining overseas upstream operations in countries other than Russia, such as GDF-Suez's acquisition of 60% of development rights for Qatar's offshore gas block in July 2009. France, however, is reluctant to allow investments to its domestic downstream sectors, thus distinguishing its strategy from the German-style supply security strategy of mutual dependence.

As seen from the above, medium- to long-term strategies to ensure supply security vary from country to country. However, what these countries have in common is that they all have a clear policy as to how to cope with their growing dependence on Russia. This is believed to be a result of European countries' engaging in very deep discussion and consideration over their supply security.

### **3. Conclusion**

As described above, in Europe, where interest in natural gas supply security is growing, different strategies are employed depending on the time scale: while short-term strategies focus on economic efficiency, long-term strategies also place emphasis on ensuring security. Japan, which is also an energy importing country, can learn a lot from major European countries' gas supply security strategies in considering its own security measures as the energy environment goes through major change. In the short term, the supply-demand balance is expected to loosen due to the current temporary drop in demand as a result of the financial crisis, as well as the planned launch of LNG exporting projects over the next few years in countries such as Qatar, Australia and Yemen. In the long term, however, many uncertain factors exist, both on the demand side and supply side: on the demand side, for example, the tendency for gas demand to grow in emerging countries such as China and India and a change in the positioning of natural gas following international negotiations to prevent global warming; on the supply side, risks to stable supply due to heightening resource nationalism in gas resource-rich countries. As Europe had done, Japan should also accelerate efforts toward ensuring future energy security from a medium- to long-term perspective, in addition to immediate short-term strategies.

Contact : [report@tky.ieej.or.jp](mailto:report@tky.ieej.or.jp)