

# Chapter 5

## Policy Recommendations

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## CHAPTER 5

### Policy Recommendations

This study reconfirmed the supply–demand outlook of natural gas with the EAS region as a starting point because this will be the base for discussing the necessity of investments and the whole market concept later.

According to the analyses, China and India have been leading the increase in natural gas demand and their ratios in regional natural gas demand are expected to be 48 percent and 13 percent, respectively, as of 2015. On the supply side, in response to these increases, the production volume is expected to steadily increase in China, Australia, Indonesia, Malaysia, and others, but seemingly cannot catch up with the increasing rate of demand. As a result, it is very likely that dependence on import will increase across the regions, resulting in a higher import volume from outside the regions through pipelines, and in the form of liquid natural gas (LNG).

#### **5.1. Recommendation 1: Towards realising higher investments**

What matters here is investment for realising the required future supply. The targets include not only the development of natural gas resources, but also the development of transport facilities. According to the International Energy Agency (IEA), the required investment for natural gas-related infrastructure adds up to \$2.08 trillion for all of Asia. Of that amount, the upstream investment is \$1.42 trillion and the downstream is \$658 billion. What will be required for realising these enormous investments? The following points out four items:

- (i) Abolition of investment barriers
- (ii) Rationalisation of gas prices
- (iii) Financial support by the national government and other organisations
- (iv) Provision of investment signals

#### *A) Abolition of investment barriers*

It is ideal that the required investments are made by private corporations, based on the economic rationality of a project. From this viewpoint, what is required first is to prepare an environment allowing investments by the private sector.

Private corporations also include foreign capital. This does not deny the idea of regulating the participation of foreign capital to protect and support domestic industries, or for national security. If those investments are essential to the development and supply of natural gas, which cannot be fully provided by their own domestic corporations, it becomes practical to consider the utilisation of foreign capital.

#### *B) Rationalisation of the gas price*

In promoting investments from the private sector, the rationalisation of the gas price becomes important. In other words, the gas price has to be adjusted to the level that reflects the supply cost and allows adequate profit. If the gas price is lower than the supply cost, the business becomes economically inefficient and private corporations would not invest. Or, even if investments were made, the business piles up deficit every year, failing to be sustainable.

The energy price level may reflect not only the cost, but also the viewpoints of social security and industrial competitiveness. In such cases, it would be difficult to immediately raise the gas price to the level of the supply cost plus adequate profit. This is, however, an essential element in securing investments and must be reviewed in a step-by-step manner.

#### *C) Financial support by the national government and other organisations*

There could be several motivations for financial support from the public sector. First, even if an investment plan does not have economic rationality by itself, it can sometimes generate positive externality in the form of social and economic returns, such as activation of peripheral industries and creation of employment. Second, there may cases where it would be difficult to recoup investments within a given period, but sufficient profits may be possible by allowing for a longer period of operation or ownership. Third, in case the investment plan itself is very attractive, but risks may exceed the allowable limits of private corporations, the national government and other organisations can partly share the risks in such investments. For example, share holdings or partial financing by the government

and national-level organisations for the investment plan could be considered. Many countries already have such systems and are expected to continue supporting/sharing in the investment risks of the private sector.

#### *D) Provision of investment signals*

To attract investment from private corporations, it is important to provide investment signals. There are two types of investment signals—‘price’ and ‘prospect and planning’.

The price functions as an investment signal. In case the natural gas price rises sharply at a certain place due to a tight supply–demand balance, this price rise indicates that there is high demand for natural gas at that place, or there is a need to enhance the natural gas supply infrastructure. Investments are then made if no corporations are taking this as a profitable opportunity. As an investment signal, the ‘price’ features immediacy—reflecting current market condition. Looking at this alone, the price may seem inadequate as a signal for natural gas-related investments, which generally require a long investment-recouping period. But that is not true. For instance, the crude oil price maintained a historically high value for over three years since 2011. In such a case, the price fully functions as an investment signal. Also, if a futures market is developed, this can be used as a reference for foreseeing a future supply–demand balance. To make these price signals work, the role of governments are described later.

Since natural gas-related investments take a long time before investments are recouped, prospect and planning based on estimation are also significant investment signals. If the government has prepared a future supply–demand prospect, the investment needs can be presented widely or disseminated by the government to the public. To attract investments from the private sector, the government would need to provide a mixture of these long-term prospects and planning, with short-term price investment signals.

### **5.2. Recommendation 2: Towards sustainably developing the natural gas market**

Problems are still waiting to be resolved for the sustainable development of the Asian natural gas market. That is, flexibility and rationalisation of pricing in international natural gas trade (import and export) still require improvements. Trade flexibility is required because it leads to the expansion of profitable opportunities for exporting countries, in

addition to the need for a more flexible balancing tool of gas supply–demand on the part of the importing countries. Therefore, the rationalisation of pricing is an indispensable element in the functioning and in enhancing the efficiency of the market.

What will be required for realising these two elements—more flexible balancing tool and more rational pricing? The following points out three items:

- (i) Full understanding of the possible benefits brought about by the expansion of flexibility and rationalisation of pricing.
- (ii) Formation of intra-regional agreements on natural gas and LNG trade.
- (iii) Market monitoring based on the above agreements.

These three policy proposals may give a roundabout impression as a means to achieve the purpose of improving flexibility and rationalising the pricing. This is because the trade (import and export) entities of natural gas and LNG are corporations, not countries, and also because it is generally difficult and undesirable for the government to directly get involved in various trade requirements, including flexibility and formation of pricing, since they are based on mutual agreement between relevant business corporations. Accordingly, possible policies have no choice but to be indirect.

*A) Full understanding of the possible benefits brought about by the expansion of flexibility and rationalisation of pricing*

To promote flexibility and price-related change, it is necessary to begin with a full understanding of the resultant profits by the exporting and importing countries. Exporting countries are requested to deepen their understanding of the environmental impacts of the transactions on the importing countries, and vice versa—to know where the mutual needs are and what benefits will be mutually shared.

In this sense, continuing efforts are necessary, which include the exchange of opinions to discuss flexibility and pricing with relevant domestic corporations, bilateral consultations with a trade partner country, or multilateral consultations. Self-righteous claims may sound good to domestic corporations and to the people, but this would be inadvisable and ineffective in promoting a reform where the understanding and involvement of other countries are indispensable. The issue of flexibility and pricing of

natural gas and LNG trade would, in this context, require actions based on mutual understanding.

#### *B) Formation of intra-regional agreement on natural gas and LNG trade*

Once changes in the market environment were fully understood and shared among relevant governments, the next possible step is to form an agreement amongst the governments on intraregional natural gas and LNG import and export trade. The agreement shall include matters associated with flexibility and pricing.

There are several possible forms of agreement. The most stringent form would be to stipulate common trade rules. On the other hand, a possible loose form is to sign a statement describing the principles associated with trade.

In any form, if the governments in the region succeed in concluding a document that describes the intentions of an Asian gas/LNG market design, it is expected that the intention will be gradually reflected in the import and export contracts in the future. By documenting the common recognition and understanding among the governments, it is possible to obtain grounds for the government to influence the market to a certain extent.

#### *C) Market monitoring based on agreement*

Finally, the government is expected to monitor whether the market and business corporations function and behave based on the agreements stipulated in item B). The degree of governmental interference with the market as a result of monitoring differs, depending on the form of agreement. If the agreement can be organised in the form of common rules, the government can issue an order accompanied by a penalty. In case of an agreement that describes principles on the contrary, the government is only allowed to give unbinding advice or recommendation.

### **5.3. Conclusion**

Natural gas is expected to play a more important role in energy supply in the EAS region from now on. However, to gain maximum benefit from natural gas use, with its well-balanced feature of supply stability, economic efficiency, and environmental friendliness, some issues will need to be resolved. Specific issues include investments to secure the natural gas supply, flexibility, and pricing mechanisms in international trade. Unless these

issues are resolved, it may not be possible to fully utilise the advantages of natural gas. This will be a loss to the EAS region, which includes natural gas-producing countries such as Australia, Brunei Darussalam, China, Indonesia, Malaysia, Myanmar, Thailand, and Viet Nam. Hence, to fully benefit from the merits of natural gas, it is imperative that related infrastructure and the market be improved for their effective use. An increasing use of rationally priced natural gas may eventually contribute to the development of exporting countries, where they can gain more export revenue; and of importing countries, where they can enjoy a more balanced energy supply mix.