

Attention-attracting EU Methane Strategy and Its Implications

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On February 9, the Institute of Energy Economics, Japan, held an “IEEJ Global Energy Webinar”, an online seminar featuring a presentation by a famed foreign energy expert. The presenter in the seventh IEEJ Global Energy Webinar was Prof. Jonathan Stern, chairman of the Natural Gas Research Program at the Oxford Institute for Energy Studies. His presentation titled “The Future of Natural Gas and LNG: are methane emissions a big problem?” discussed how the problems related to methane emissions in the natural gas and LNG supply chains would affect the future of natural gas and LNG that have grown important in the global energy mix, focusing on problems regarding the European Union’s methane strategy published in October 2020. Following his presentation, comments were made by Takeshi Soda, director of the Petroleum and Natural Gas Division, Natural Resources and Fuel Department, Agency for Natural Resources and Energy, and Jun Nishizawa, chief executive officer of the Natural Gas Group, Mitsubishi Corp. Later, Prof. Stern had a panel discussion with the two Japanese commentators and joined a question-and-answer session of the webinar. I served as moderator of the panel discussion and the question-and-answer session. I here would like to make my personal comments on the webinar where extremely important and interesting arguments were made on the methane emissions problem and the EU methane strategy.

First, the most impressive to me in the webinar was Prof. Stern’s argument that unless the methane emissions problem is adequately addressed, a natural gas and LNG phaseout could accelerate in the EU and later in Asia as well.

Natural gas and LNG are the cleanest fossil fuels and emit less CO₂ than other fossil fuels. In major countries and regions in the world, natural gas and LNG consumption and its share of primary energy consumption have continued to expand thanks to abundant resources and supply, although the share has varied by country or region. Particularly in Asia where energy demand is increasing, great hopes are placed on natural gas and LNG as clean energy. As calls for suppressing greenhouse gas emissions are growing amid increasing global interest in climate change, however, the world has increasingly become critical of not only CO₂ emissions but also methane emissions for which the global warming potential is 10-fold higher than for CO₂. Although methane is emitted through oil, gas, and coal production, the agricultural sector is known as a primary methane emitter. However, methane emission reduction in the energy sector suitable for cost-efficient emission cuts has become an important issue mainly in Europe. The just inaugurated U.S. Biden administration has indicated an attitude of enhancing methane emission reduction.

In October 2020, the EU announced its methane strategy. This strategy covers not only the energy sector but also others including agriculture. However, a methane emission reduction initiative in the energy sector including natural gas attracts attention. Natural gas is a key energy source accounting for 25% of EU primary energy demand in 2019. The EU seeks to achieve carbon neutral status by 2050 and plans to promote the decarbonization of natural gas. In this respect, it has

proposed the methane strategy focusing on natural gas imports. Behind the strategy is the EU's growing dependence on natural gas imports. As internal natural gas production declined rapidly, the EU depended on net imports for 79% of local natural gas consumption. The dependence on imports is expected to rise further. So, the EU has requested major gas exporters to the EU (including Russia, Algeria, Qatar, Nigeria, and the United States) to measure, report, and verify methane emissions in the upstream (development and production) sector and the mid-stream and transportation sectors for natural gas and LNG for the EU. However, the EU has indicated that if exporters are identified by the EU as failing to take sufficient measures in response to the request, it would consider taking tougher actions including the imposition of some economic burden on relevant imports.

In trying to enhance methane emission reduction initiatives, the EU has also paid attention to LNG as a more liquid trading good and indicated that it would offer to cooperate with major LNG importers such as Japan, China, and South Korea in tackling the methane emissions problem in the energy sector. While becoming more critical of the methane emissions problem, the EU as a major natural gas and LNG importer may be trying to prevent Asia from becoming a loophole.

As noted above, the EU methane strategy requests natural gas and LNG exporters to develop arrangements for methane emission measurement, reporting and verification (MRV), falling short of setting out any forcible measures. The strategy will have to be legislated before taking effect in each EU member country. Such legislation is expected to come in or after the middle of the 2020s. When major natural gas and LNG exporters develop the methane MRV arrangements, how to accurately measure methane emissions may become a major technical challenge. In the case of U.S. LNG, it may be difficult to identify the gas fields producing natural gas for liquefaction. As methane emissions differ by gas field, the methane emission measurement may be viewed as difficult. How to cooperate with major LNG importers outside Europe would be a future challenge for the EU as well.

As pointed out by Prof. Stern, the methane emissions problem has become important as far as EU policymakers have increasingly viewed responses to methane emissions as significant in line with growing interest in climate change. For this reason, as noted above, natural gas and LNG could be phased out with their share of the energy mix declining in the EU and even in Asia later if natural gas and LNG, even though seen as the cleanest among fossil fuels, are affected further by the methane emissions problem under the impact of carbon neutral initiatives.

As noted in the panel discussion, however, natural gas and LNG are expected to play a key role in initiatives to reduce environmental loads and promote low-carbonization and decarbonization in the world including the EU, and particularly in Asia. Key points would include how best to use natural gas and LNG to promote decarbonization cost-efficiently and suppress costs for transition to a carbon neutral society and how to use blue hydrogen and ammonia from natural gas over the long term. To allow natural gas and LNG to play the key role, natural gas and LNG stakeholders would have to sufficiently address the methane emissions problem.

Another point I felt through the webinar is that international rulemaking is critically important. As climate change countermeasures are enhanced, international rules are destined to become extremely important for institutional and technical fields and for the certification of technologies and their effects. The EU has been taking the initiative in such rulemaking. It will become important for Japan and for Asia to recognize the significance of international rulemaking and appropriately make rules reflecting Asian realities by engaging in such rulemaking proactively for international contributions.