

Executive Summary

Many emerging countries in the East Asia Summit (EAS) region are likely to increase dependence on imported fossil fuel supply in the future. This trend means that the energy security of these countries will become more vulnerable. Thus, it will be vital for them to do the following:

- (i) understand the influence and impact of unexpected import disruptions,
- (ii) understand how a country can react, and
- (iii) implement necessary policy actions to enhance energy security.

Among various fossil fuels, liquefied natural gas (LNG) is considered an increasingly important energy supply source in the coming decades. This study looks at disruption of LNG imports to investigate possible countermeasures and contingency plans.

The study compares the energy status in emerging EAS countries introducing LNG, such as Myanmar, the Philippines, Thailand, and Viet Nam. Among these countries, Thailand is chosen as the most suitable candidate for a case study for a number of reasons, such as its reasonably diversified natural gas supply sources, including indigenous natural gas resources and import of natural gas from Myanmar via pipelines. Furthermore, Thailand plays a leading role in LNG imports in the region.

The risk assessment process for analysing LNG import disruptions is discussed. This study applies the 'N-1 formula', which has been widely used to assess gas supply security in the European Union. Having identified risk sources of LNG disruption and their amounts and durations, the study has compiled a set of LNG import disruption scenarios. These include import disruption of the largest long-term contract and total failure of the largest LNG receiving terminal as the two most serious disruption possibilities. They also cover unprecedented worst-case scenarios that necessitate action from the government as a matter of national energy security.

The study investigates in-depth possible countermeasures for LNG import disruptions. For Thailand, comprehensive results demonstrate that in the short term the country is reasonably resilient against LNG import disruptions, although consideration should be given to long-term energy security, especially as Thailand is expected to rely on more LNG imports in the future.

The report concludes with some policy recommendations. The risk assessment process of LNG import disruptions and countermeasures are generalised and summarised for countries to potentially incorporate into national energy supply plans. In addition, recommendations for energy policy, LNG import and natural gas policy, and regional cooperation are discussed. It is stressed that countries need to set up long-term energy supply plans, which should be considered along with building resilience against LNG import disruptions..