

A Study on Improvement Method of Technology Export Control through SMART PPE Project Export Control Implementation

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1. Introduction

The revision of the Foreign Trade Law of the Republic of Korea in 2014, which expanded the scope of technology transfer to intangible transfer, has obligated personnel who intends to conduct the intangible transfer of technology related to strategic items for export controls. [1] In the meanwhile, the Korea Atomic Energy Agency Research Institute (KAERI) and the King Abdullah City for Atomic and Renewable Energy (K.A.CARE) concluded an agreement on the SMART Pre-Project Engineering (PPE).

The SMART PPE project (hereinafter referred to as the "SMART project") is aimed at developing a Preliminary Safety Analysis Report (PSAR) for SMART and providing education service for human resources of Saudi Arabia. One of the unique features of the SMART Project is that tangible and intangible transfer of technology is carried out simultaneously.

Despite the fact that export controls of both transfers were supposed to be regulated, due to the initial phase of the implementation of the Law, there were not enough detailed specific implementation guidelines for processing export controls.

An export control guideline dedicated for the SMART project was set out in consultation with the regulators and exporters in August 2016. Based on the guideline, the Nuclear Safety and Security Commission (NSSC) issued an Export License on Technology of the Nuclear Power Plant (hereinafter referred to as "plant export license system") in September 2016, and appropriate export control measures have been implemented.

This paper is designed to come up with an effective export control implementation measures for technology transfer by analyzing the result of export control implementation of the SMART project for the period of the past 30 months.

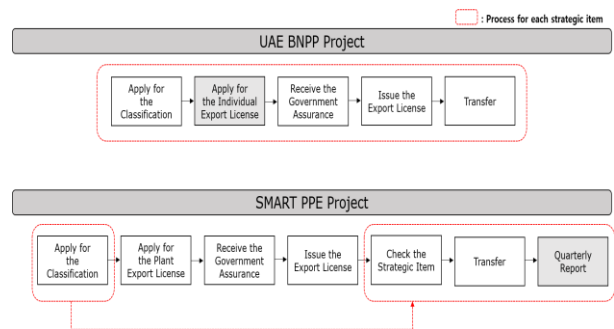
2. Export Control on the SMART Project

2.1 Differences from the UAE BNPP Project

When it comes to the nuclear power plant project, there was the UAE BNPP project (hereinafter referred to as the "BNPP project") prior to the SMART project. Since the BNPP project basically aims to build a nuclear power plant, goods and technologies are transferred simultaneously.

At the time of establishing the export control guideline for the BNPP project, the plant export license system did not exist, hence could not be applicable. However, even after the establishment of the plant export license system, it was also challenging to apply the plant export license system to the BNPP project owing to its nature of dealing with both goods and technologies. In case of the BNPP project, the exporter applies for the individual export license of the goods and technologies that are classified as strategic items.

Figure 1. Difference in Export Control Process between BNPP Project and SMART Project



2.2 Introduction to the SMART Project Export Control Guideline

The plant export license system granted to the SMART project only permits the export of technology relevant to the nuclear power plant export project for the whole period of the project. [2] As for the individual export license, all technologies that have been classified as strategic items require the export license.

The plant export license system, however, allows the exporter to export technologies after the Government classifies the technologies. Instead, the exporter is obligated to submit a quarterly report regarding the transfer status and related activities. Therefore, exporters can be benefited from reducing administrative burden and saving time given that the application process for the individual export license could be waived.

In case of the SMART project with a plant export license system, a specific and tailored export control guideline was designed and implemented considering its intrinsic traits of including the intangible transfer of technology between personnel (e.g. education for human resources of Saudi Arabia), unlike the general

technology transfer. The core aspects of the guideline are as follows.

First, an exporter who has been granted a plant export license has an obligation to make technologies to be transferred classified so that they can be categorized as strategic items, if necessary, before the transfer is made. [3] When it comes to the SMART project, the classification process has been conducted for all technical documents.

Second, in case that the transferred strategic technology is revised and transferred again, the revised contents and the transfer lists should be included when a quarterly report is submitted. [4] No issues had been brought up in carrying out classification and providing a quarterly report concerning tangible technical documents. However, it was unlikely to apply the same policy and procedure to the intangible transfer of technology associated with education and training programs for Saudi human resources. Hence, complementary measures were devised for the purpose of attaining a higher level of export control implementation. For instance, when exporters make a quarterly report, it is advised to report the list of relevant activities. In addition, exporters were provided with a guideline for the revision of technical documents. Documents initially classified as strategic items impose obligations for exporters to report the transfer activity list on a quarterly basis. On the other hand, when documents not classified as strategic items were revised, the revised documents were regarded as the initial documents. Therefore, the classification process has to be done again.

Table 1. The Number of Classification on SMART Project

Year	2016	2017	2018	2019	Total
Strategic Items	142	484	296	98	1,020
Non-Strategic Items	491	920	1,677	757	3,845

When an intangible transfer of technology is made through Saudi-related training and other activities, it is much more complicated to determine strategic technology in advance since the transfer occurs verbally. To address this challenge, a draft of education and training program with the contents and necessary documents are required to be handed in for the classification process. Table 1 indicates the number of classification with respect to the SMART Project since its inception in 2016.

3. Improvement Method of Technology Export Control

As mentioned above, in case of technical documents, the classification was conducted to confirm whether the

documents are strategic items before the transfer was made. As for documents identified non-strategic items by classification, the revised documents were required to apply for the classification.

The problem is that, however, most of the technical documents did not have a significant difference between the original draft and the revised one. Therefore, the classification result tends to be maintained. Also, at the end of the project, a large volume of technical documents was classified for a short period of time to produce the SMART project package. In this process, inefficient export controls were carried out while conducting classifications on large volumes of documents that were not meaningful for export control, such as simple form or cover changes.

In this case, it is not plausible to expect efficient export controls considering endeavors and administrative burdens that regulatory bodies and exporters are responsible for. Thus, it would be reasonable to simplify the export control procedures when it comes to technologies that have no changes in contents or make export control measures meaningless.

Furthermore, it is unlikely to apply export controls to every single intangible transfer of technology occurred as a part of a large-scale project. Therefore, while carrying out the project, there may be rooms for missing or bypassing export controls.

In order to prevent such case, it is necessary to establish a tailored guideline incorporating the major characteristics of the project in advance in concert with the exporters. In addition, strengthening the follow-on measures should be taken into account instead of adopting simplification of the export control process. To be specific, carrying out periodic on-site visits and holding a consultative meeting on a regular basis for the purpose of checking and managing the implementation status of export controls.

4. Conclusion

In this paper, the export control guideline and the results of its implementation of the SMART project were analyzed with discussing several issues and challenges. Furthermore, it demonstrates the best possible ways to meet the aim of export controls while minimizing administrative burdens by examining the aforementioned issues.

As a future work, a model guideline should be developed by considering the unique nature of the nuclear technology export project, which will ultimately facilitate to establish an optimized export control system that would minimize the administrative burden of the regulatory body and achieve the aim of the export control.

REFERENCES

- [1] MOTIE, Foreign Trade Act, 2014
- [2] MOTIE, Minister's Regulation on Export and Import of Strategic Items 2014-15, 2014
- [3] MOTIE, Minister's Regulation on Export and Import of Strategic Items 2014-15, 2014
- [4] MOTIE, Minister's Regulation on Export and Import of Strategic Items 2014-15, 2014