

## **Voluntary Code of Conduct for Nuclear Export Control by Private Sector**

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### **1. Introduction**

The nuclear renaissance offered a good opportunity to overcome energy crisis that we are bound to confront in the near future. At the opposite end, however, our world might be exposed to a new threat which could be resulted from the boost of nuclear power. The expansion of nuclear power plants worldwide inevitably makes the countries involve more transaction in nuclear items, which could lead to increase in nuclear proliferation risk. The international efforts to prevent proliferation attempts have been mainly being focused on limitation of nuclear sensitive technology and nuclear material. Considering the governments of major nuclear suppliers' key roles in the stage, it should be notable that a new initiative by private nuclear companies has been raised for the purpose of strengthening nuclear export control.

### **2. Background of Voluntary Code of Conduct**

In 2008, the Carnegie Endowment proposed some new voluntary code of conduct inviting private nuclear firms to participate in the effort on reducing nuclear proliferation risk on the verge of Nuclear Renaissance. The Carnegie Code of Conduct, which is so called, aims at supporting the countries to be prepared voluntarily for international nonproliferation regime before they introduce their own nuclear power plants with the help of major NPP providers. Although nonproliferation issues should be handled and discussed among governmental authorities representing each country, it could be desirable and timely action to address the risks accompanied by the export of nuclear power plant among the private nuclear companies.

### **3. Major Components of Carnegie Code of Conduct**

Carnegie Code of Conduct consists of a preamble describing the fundamental spirit of the code and six principles explaining actions which should be considered by the nuclear providers. The six principles present somewhat excessive requirements for private sector to follow as specified, which most likely belong to the governments' responsibilities.

#### *3.1 Safety, Health, and Radiological Protection*

This principle requires the Vendor to consider that the Customer is ready to install some legal framework

and adopt international convention for nuclear safety. Before entering into a contract to supply a nuclear power plant to a Customer, Vendors expect that the Customer State is a party to the Convention on Nuclear Safety, or has indicated its intention to become a party before operation of the plant begins. Vendors commit to export nuclear power plants that apply consistent high safety standards, reflecting the Vendors' safety goals and reflect the uncompromising application of recognized safety principles, including the IAEA Fundamental Safety Principles.

#### *3.2 Physical Security*

In designing nuclear power plants, Vendors will incorporate nuclear safety and emergency response requirements in design provisions made for security, cooperate with the Customer to incorporate the Customer State's Design Basis Threat, and incorporate within design provisions the potential for damage from security threats in accordance with the Customer State's Design Basis Threat. Before entering into a contract to supply a nuclear power plant to a Customer, Vendors will have made a reasonable judgment that the Customer State has or in a timely fashion will have provided information to the Vendor on the results of the Customer State's Design Basis Threat analysis. Vendors also consider the Customers will become a party to the relevant international conventions for nuclear security.

#### *3.3 Environmental Protection and the Handling of Spent Fuel and Nuclear Waste*

This principle requires that the Vendor will have made a reasonable judgment that the Customer State either has or will have in a timely manner enacted national nuclear laws or developed a regulatory framework for radioactive waste treatment and environmental protection. It also finds whether the Customers ratified, accepted, or otherwise apply the principles of the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management.

To the extent practical, Vendors will seek to design plants that enhance environmental benefits and minimize environmental impact in operations, including waste production, by applying relevant best practices.

#### *3.4 Compensation for Nuclear Damage*

To provide for adequate public protection and legal certainty and to facilitate claims handling, before entering into a contract to supply a nuclear power plant to a Customer, Vendors will have made a reasonable judgment that the Customer State has enacted a nuclear compensation and liability legal regime and entered into a treaty relationship with the Vendor State under either the IAEA's Vienna Convention on Civil Liability for Nuclear Damage.

### *3.5 Nonproliferation and Safeguards*

In this principle, the Vendors are committed to the peaceful use of nuclear energy. Each Vendor recognizes that its Vendor State is committed to a policy that nuclear power plants and related materials, equipment and technology shall be provided to and used by Customer States exclusively for peaceful purposes, consistent with the Treaty on the Non-Proliferation of Nuclear Weapons, and in conformity with Nuclear Suppliers Group Guidelines and pertinent United Nations Security Council Resolutions. Each Vendor further recognizes that its Vendor State has enacted export laws and/or regulations intended to implement that policy and declares that it is bound by and fully committed to implementing that policy and supports a strong nonproliferation regime. Accordingly, each Vendor exports nuclear power plants and related materials, equipment and technology solely in accordance with relevant national export laws and/or regulations, which implement the foregoing.

### *3.6 Ethics*

In this principle, Vendors are required to seek to comply with high ethical business standards in their interactions with Customers, and communicate with good faith, and in the spirit of transparency, about these principles. They should avoid significant harm to the environment and human health and take into account the principle of sustainable development, including the effects of projects on the environment and society.

## **4. Conclusion: Problems to Be Addressed**

Carnegie Code of Conduct has some implication that could not be neglected in the aspect of Nuclear Renaissance. It should be evaluated that it suggests some high level moral standards and encourages private nuclear providers to participate voluntarily. However, there are some concerns that the six principles are too excessive ones, so it is not possible for the private companies to observe all the requirements. It is required to intensively review each principle and suggest modification or lightening on some obligatory statements. Its basic spirit is voluntary participation, but it imposes some international conventions as necessary condition, which goes over the range of private sector.

In the view of nonproliferation, Carnegie Code of Conduct is a good example which will give some favorable condition for nuclear power plant expansion. But we need to think over the possibility that could lead some hindrance for nuclear business of private sector. To implement this initiative, a balanced approach will be highly required among private companies and relevant government authorities.

## **REFERENCES**

- [1] Convention on Nuclear Safety—"Convention on Nuclear Safety," IAEA INFCIRC/449, adopted June 17, 1994.
- [2] Convention on the Physical Protection of Nuclear Material (CPPNM)—Reproduced in IAEA INFCIRC/274/Rev.1, May 1980.
- [3] Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management—"Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management," Reproduced in IAEA INFCIRC/546, adopted December 1997.
- [4] Convention on Supplementary Compensation for Nuclear Damage (CSC)—"Convention on Supplementary Compensation for Nuclear Damage," IAEA INFCIRC/567, adopted September 12, 1997.
- [5] Vienna Convention on Civil Liability for Nuclear Damage, Reproduced in IAEA INFCIRC/566, as amended September 12, 1997.