

Country Report of Japan

The Current Status of the Peaceful Utilization of Nuclear Energy in Japan

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Your Excellencies
Ladies and gentlemen

It is a great pleasure and honor for me to report you the current status of nuclear energy utilization in Japan.

Japan has been promoting the research, development and utilization of nuclear energy for the past fifty some years, limiting them to peaceful purposes, with a view to securing energy resources for the future, promoting science and industry, and thereby contributing to the improvement of the welfare of human society as well as the living standard of the people in Japan. As a result, radiations and radioisotopes are extensively used in the various fields of science, medicine and industry in Japan today. As for nuclear power generation, 54 commercial nuclear power plants of which combined capacity is 48 GWe were in operation and supplying about 26 % of electricity and 10 % of a primary energy in Japan last year. They had been significantly contributing to the enhancement of Japan's energy security and playing an important role as a measure to combat global warming.

The Great East-Japan Earthquake and the resulting tsunamis that struck the Fukushima Daiichi Nuclear Power Plant operated by the TEPCO on March 11th this year brought about serious consequences on the nuclear energy utilization in Japan. The tsunamis caused a serious nuclear accident that included severe core damages in three reactor units, hydrogen explosions of three reactor buildings, and large-scale releases of radioactive materials leaked from containment vessels degraded due to high temperature. The fact that this accident has raised concerns around the world about the safety of nuclear power generation is a matter we take with the utmost seriousness and remorse.

Japan has received support, advice and expressions of solidarity from various countries since then. I would like to take this opportunity to offer our deep thanks to you for the warm support and cooperation we have received since the event.

We determined to trace the causes of the accident thoroughly and provide the international community with all relevant information promptly and accurately. We have already sent to the IAEA two reports that explain the accident, emergency responses and activities to stabilize the plant and remediate the affected environment.

At present, we are making every effort to stabilize the situation in the plants and recover the life of people in Fukushima, where many people have been traumatized by the relocation, the breakdown in social contacts, fear and anxiety about what health effects might result from the exposure to radiation due to the contamination of their environment caused by the accident. We are also analyzing the root causes of the occurrence of the event and improving the nuclear safety management system in Japan based on the lessons learned through this process.

As for the stabilization of the situation at the site, we will soon complete the Step 2 activities towards the restoration from the accident, of which target is to put the release of radioactive materials under control and significantly hold down the radiation dose around the site. After the completion of this step, we will start cleanup activities at the damaged plants as a mid- and long-term program, of which noteworthy milestones are the initiation of defueling from spent fuel pools in three years and the initiation of removal of core debris in ten years.

As for the off-site management, the Government has been pursuing to limit the radiation exposure of a people by means of a) restriction of inhabiting in the area where expected annual additional dose is larger than 20 mSv, b) strict shipping control for agricultural products, animal products and marine products through comprehensive radiological surveys and c) step-by-step decontamination of the land.

The strategy for the decontamination of the environment is firstly to reduce the annual additional exposure to 1 mSv by steady decontamination activities in inhabitation area where it is currently below 20 mSv but above 1 mSv and secondly to reduce the area where estimated annual additional exposure is larger than 20 mSv and residents have been evacuated, through step by step decontamination activities.

As for the restoration of the public trust on the authority of nuclear safety regulation, we are promoting the preparation to create a Nuclear Safety and Security Agency (NSSA) by April 2012 with a view to assuring the comprehensive competency for the task and independence of nuclear regulatory authority.

We have also started a comprehensive review of energy and environmental policy, taking into consideration the recent accident, aiming at deciding on Japan's desirable medium- to long-term energy composition by around the summer of 2012.

Meanwhile, many countries around the world have seriously explored the use of nuclear energy as a measure to achieve energy security and to prevent global warming in the past few years. And Japan has provided various supports to such countries, including assistance to increase nuclear safety. As the promotion of safe use of nuclear energy will continue to be a global issue even after March 11th event, Japan intends to respond to the interest of countries

seeking use of nuclear energy, believing that it is Japan's duty to learn lessons thoroughly from the event, and to achieve the highest level of nuclear safety based on such lessons. Needless to say, any country that utilizes nuclear energy should pursue continuous improvement in all areas related to nuclear safety, security and nonproliferation, adhering to relevant international standards including the standards, recommendations and codes of conducts developed by the IAEA, and nurturing not only safety culture but also nuclear security culture and nonproliferation culture in the organizations that are in charge of nuclear activities.

Considering the importance of developing infrastructure that assure safe, reliable and peaceful use of nuclear energy in those countries planning to introduce nuclear power generation, Japan has expanded its assistance to those countries, supporting their effort of capacity building and establishment of a necessary legal framework, in particular. Japan Nuclear Human Resource Development Network established last year has started its activities to support foreign applicants who want to take nuclear training programs conducted in Japan.

A newly established Integrated Support Center for Nuclear Non-proliferation and Nuclear Security has also started its activity to share Japan's experience in peaceful and secure use of nuclear energy with countries that are preparing for the introduction of nuclear energy, by offering training courses on a) nuclear security, b) the IAEA safeguards and the state system of accounting for and control of nuclear material (SSAC) and c) international nuclear nonproliferation framework.

The promotion of the utilization of radiation plays important roles in both green innovation and life innovation in Japan, because radiation technology is used to produce materials important to green innovation, such as functional materials for high performance batteries, new plants that can absorb a larger amount of carbon dioxide than the existing ones, carbon neutral plastic and so on, on the one hand, and to make a diagnosis of diseases and cure cancers in the medical field, on the other. In order to explore wider and deeper application of radiation for supporting the pursuit of new economic growth in Japan, various radiation facilities for diverse users are being constructed and operated.

Japan has been firmly behind the FNCA activity since its inception. Japan would like to do so in coming years. Japan would like to support the FNCA to take up challenging topics in the various fields of research reactor utilization, radiation application for agriculture, medical care and industrial use, radioactive waste management etc. that is relevant to this region. We sincerely hope that the FNCA will continue to formulate various cooperative projects that will promote mutually beneficial cooperative activities among scientists and engineers who want to devote to the development of the welfare of the people in the region and build lasting links among organization and peoples responsible for the research and development of nuclear energy in the region.

In conclusion, Japan is continuing to pursue the peaceful use of nuclear energy for the benefit of people, pursuing innovation for a greener and healthier world. Japan will also continue to cooperate with countries in Asia for the advancement of nuclear science and technology and the effective utilization of such advancement including nuclear power generation for social and economic development in each country, in the spirit of prospering together, saving a green Asia and protecting human lives.

Lastly, I would like to offer my hearty thanks anew for the support in various areas that has come from countries around the world for resolving the nuclear plant accident. While great difficulties are expected in resolving the accident, I am confident that we will be able to overcome this by bringing together the wisdom of the world.

I thank you for your kind attention.