Measures to be Taken for the Accident at the Fukushima Dai-ichi Nuclear Power Plant of Tokyo Electric Power Company (Statement)

May 10, 2011
Japan Atomic Energy Commission

The Atomic Energy Basic Act provides that the utilization of atomic energy in Japan shall aim at ensuring safety, and shall be carried out with the purpose to secure future energy resources and to contribute to the improvement of the welfare of human society and of the national living standard. The Japan Atomic Energy Commission (JAEC), whose mission is to plan, deliberate, and decide matters concerning the research, development, and utilization of nuclear energy, takes the accident at the Fukushima Dai-ichi Nuclear Power Plant of Tokyo Electric Power Company (TEPCO) seriously, since its effects run counter to the purpose of the Act. JAEC intends to decide matters concerning future policies based on the results of investigation of the accident.

At present, there is lower risk that the conditions at the NPP site will change dramatically in a short time as was the case immediately after the accident. Accordingly, the response measures taken at the site have changed to those that need to be taken on a continuous basis, such as system construction for stable core cooling. As for measures taken for the residents, it is now the time to focus more on measures for securing the infrastructure for emergency evacuees to live away from home until they are able to return home and on measures for reconstruction of the communities, while evaluating the radiation environment resulting from the accident. At the same time, safety confirmation work is being carried out at the existing nuclear facilities nationwide.

JAEC believes that, for the time being, consideration should be given to the following points in taking these measures that are decided by the government and that will be implemented in various related fields.

1. Measures for the restoration from the accident at the Fukushima Dai-ichi Nuclear Power Plant and thereafter

On April 17, TEPCO released a "Roadmap towards Restoration from the Accident at Fukushima Daiichi Nuclear Power Station." TEPCO, as well as the government, industry, research institutes, and other related organizations, should bring together knowledge and technology from in and outside Japan, and make the utmost efforts to appropriately promote

measures according to the roadmap, while confirming by risk assessment, etc. that such measures satisfy the requirements under law that they will not hinder prevention of disasters.

In order to decommission the NPP that caused the accident, it is necessary to process a large amount of radioactive material, process the contaminated buildings and soil within the site, manage and dispose of a large amount of low-level radioactive waste that will be generated, carry spent fuel out of the site, and take out damaged fuel. The government should request TEPCO to submit individual roadmaps for short-term, medium-term, and long-term issues toward taking such steps, and develop the legal framework necessary for achieving those roadmaps, as well as promptly promoting research and development of effective technology.

2. Measures for reconstruction of the communities

Concurrently with measures for the restoration from the accident, the monitoring of environmental radiation doses should be continued and dose assessments should be implemented for residents. Based on the results, measures including the following need to be implemented in accordance with the internationally established guidelines of radiation protection: healthcare for residents; lifting evacuation orders and advisories: ensuring appropriate use and reducing radiation dose of school facilities for education; treating and disposing of waste contaminated by radioactive materials; reconstruction of agricultural and livestock industries, including land improvement; measures on forests and wildlife; measures on marine products; and harmonization of regulations in and outside of Japan in order to prevent harmful rumors relating to industrial activities and physical distribution activities. The government should develop an organizational framework to promptly and effectively carry out such emergency measures, while obtaining the advice of the Nuclear Safety Commission on the technical matters involved, and if necessary, it should develop the legal framework required for each measure, and immediately start on such steps as implementing demonstration tests on effective technology.

3. Accident investigation

Japan needs to fundamentally modify its system for ensuring nuclear safety, based on the reflections on the occurrence of this accident, the failure to prevent the worsening of the accident’s effects, and on the lessons learned from this accident. To this end, the government should immediately set up an accident investigation committee to investigate the causes of this accident by scrutinizing even such detailed factors as the assumptions of earthquakes and tsunami, the plant design, and organizational factors, and to evaluate disaster response measures and identify the lessons to be learned.

It is also Japan's responsibility to share the accident investigation results and the lessons learned with the international community. As represented by the ministerial conference on nuclear safety to be held by the International Atomic Energy Agency (IAEA) from June 20, various activities have been started in the international community aimed at evaluating the current situation of the accident, identifying the lessons to be learned, and enabling each country to launch measures for strengthening its abilities to ensure safety and respond to emergencies. Thus, although the normal state has yet to be restored from the accident, the government should compile the facts of the accident that have been identified to date and the lessons learned from the accident at the earliest possible stage, and should effectively use such information in the safety confirmation work mentioned below and share the information with the international community.

4. Safety confirmation

JAEC has held the idea that the utilization of nuclear energy should be promoted on the premise that a nuclear facility will be designed, constructed, and operated in such a manner that will sufficiently mitigate the risk of a situation where the general public would suffer radiation exposure from the large amount of radioactive substances that exist within the nuclear facility. Based on this idea, JAEC has requested that the risk management activities of the government and the operators should be supported by a high level of safety culture and be promoted while the sufficiency of the activities are constantly reviewed in light of the experiences and new knowledge from in and outside of Japan. However, the people's confidence in the adequacy of the risk management activities has been lost due to the occurrence of this accident.

The nuclear regulatory authorities should reaffirm their determination, and should clarify the objectives of the risk management activities anew based on the analysis of the cause of this accident and the lessons learned, in accordance with laws and regulations. Then, they should confirm, while maintaining transparency, that measures necessary for achieving those objectives are strictly implemented in a manner that incorporates the latest knowledge and that preparations are made against any severe accidents in the operation of the existing nuclear facilities. If they judge that the measures are insufficient, they should take strict steps, including shutdown, in accordance with laws and regulations. In doing so, it is important to sufficiently take into account various international measures, such as the “stress tests” (evaluation of the ability to respond to natural disasters, loss of all power sources, etc.) implemented in foreign countries in light of the recent accident. Furthermore, they should explain the meaning of the safety confirmation results and measures to the people in detail.

5. Provision of information

At present, such information as plant information and environmental monitoring data are provided by the related ministries and agencies. In addition to this, it is important to enhance systems for providing explanations that meet the needs of the recipients, such as what the various data mean and how those data affect the lives of the recipients.

As mentioned above, JAEC recognizes that plenty of urgent technical issues exist in extensive fields, from restoration from the accident to the restoration of the disaster-stricken communities and environment, and decommissioning. Therefore, JAEC will request research and development institutions, etc. to give top priority to the research and development and technology demonstration concerning these issues. Also, while human resources are essential for promoting such measures, considerable efforts would be needed to secure young human resources who will aim to participate in the research, development, and utilization of nuclear energy, including such research and development under the current situation. Accordingly, JAEC will request the related organizations to devise ideas to develop and secure human resources.

Moreover, on the recognition that the social environment surrounding nuclear power generation has dramatically changed as a result of the accident at the Fukushima Dai-ichi Nuclear Power Plant, JAEC will start sorting out the important issues to be considered when making decisions on nuclear policy in the future, without waiting for the results of the investigation mentioned in the beginning. As part of this effort, JAEC will re-evaluate the characteristics (including the risks, cost, etc.) of nuclear power generation as an energy source, and the roles of nuclear power generation in view of today as well as the next 20 and 30 years based on such characteristics. For this purpose, JAEC will start to carry out public hearings with experts from various quarters at the regular meetings, etc.