Answers to the questions from the session “Fukushima Daiichi: One year after: On the way toward restoration” in the WiN-Global Congress in Sweden and supplemental Q&As. (As of December 5, 2012)

Q1: I have a question which relates to the communication with the people who are still living on site. What is TEPCO or the Japanese government doing in order to communicate? How are you involving the local stakeholders? One of the issues which really confuses people, is to get different information. And you have to be consistent with information which is provided to the public. How do you ensure that the same information is being spread. And how do you ensure that you reach the right people, who, in the end, have to live in contaminated areas?

A1: Ministry of the Environment and Fukushima prefecture established the Decontaminating Information Plaza in front of Fukushima station. The Decontaminating Information Plaza is supported by Japan Atomic Energy Agency and Atomic Energy Society of Japan. The Plaza is playing two roles. One is to deliver the information about decontaminating including the basic knowledge and the special support information. The other is dispatch of experts, to a movable exhibition, and a spot seminar.

Q2 Right now what is the main source of power to the plants? Reconnection to the grid somehow, or something local?

A2: Electricity in Japan is usually provided by the specific electric power company which is located in the area. Electricity for Fukushima prefecture is provided by Tohoku Electric Power Company. However, the Fukushima Daiichi nuclear power plants were TEPCO’s facilities. Now, Fukushima Daiichi has been reconnected to the grid of Tohoku Electric Power Company. So the plants can receive power to carry out the cooling of the damaged facilities.

Q3: How do you manage the difference between the theoretical evacuation “circle” and in fact, the contaminated area, that’s like a line?

A3: According to the Guidance for the Prevention of Nuclear Accidents by the Nuclear Safety Commission, evacuation from an accident in a nuclear facility is as below.
(1) When an effective dose due to the external radiation exposure is from 10 to 50mSv, people should stay indoors.
(2) When an effective dose due to the external radiation exposure is over 50mSv, people should evacuate to another place.

Following this guidance, the nuclear emergency response headquarters set a refuge policy just after the accident.
(1) People who live in the range of a radius of 20km from Fukushima Daiichi should evacuate to another place.
(2) People who live in a 20 to 30km radius from Fukushima Daiichi should stay indoors.
However when Fukushima Daiichi Unit 2 released radioactive materials on March 15, 2011, the wind blew from the south-southeast and carried the radioactive materials in a linear
pattern, not a circle. Then on April 22, the nuclear emergency response headquarters set evacuation zones with consideration of the climate conditions and the geographical condition. Now the headquarters has reset the evacuation zones as below, because more than one year has passed since the accident.

Q4: I know that in your country all of the nuclear power plants are stopped. Do you think there is any problem? I mean can you endure the summer season without any nuclear power plant operation?

A4: Each electric power company should make a supply-and-demand projection of electric power according to the Electric Utility Law. In the case of TEPCO, with the new power supply installations currently being carried out, the electricity supply was estimated to be 57.86 GW in July and 57.71 GW in August in 2012. The electricity demand was estimated to be 53.6 GW (assuming regular summer temperature) to 55.2 GW (assuming an extremely hot summer as in 2010), taking into account the effectiveness of electricity saving, for which TEPCO was asking their customers since last year. Based on this estimate, reserved electricity of 2.5 GW (4.5% of all electricity supply) would be secured even in an extremely hot summer, which would ensure stable electricity supply. TEPCO appreciated the continuing support in saving electricity within reasonable levels.

In the case of KEPCO, regarding the supply and demand projection of the summer in 2012, although people got into the habit of saving electricity, people had to save additional 15% of electricity from the second half of July to the end of August.

Q5: Is there anything you can tell us about any impacts on some of the medical treatments, or some of the other things that may use nuclear technologies and perhaps what WiN-Japan is doing in order to communicate on those continued positive.

A5: On the 14th of September, the Energy and Environment Council Government of Japan made “Innovative Strategy for Energy and the Environment,” which is to strive to reduce the dependence on nuclear energy as well as on fossil fuels, by maximizing green energy such as energy efficiency and renewable energy. The strategy upholds the following pillars, based on broad and diverse national discussions held throughout Japan.

Q6: Do you have numbers, how the nuclear disaster influenced your electricity prices?

A6: Almost all NPPs are still stopped, power companies had to operate thermal reactors. They have to import oil, coal, and liquid natural gas. It is said that the additional expenditure of the 9 power companies is forecasted to be 300 billion yen. TEPCO applied for the price increase of electric charges by 10.28%, but the Consumer Affairs Agency which handles consumers’ complains insisted on a reduction of the price increase. The price contains the depreciation expense of Fukushima Daiichi unit 5 and 6 which will probably not restart, the bonuses after this winter for TEPCO employees, and the business profit of TEPCO.

As a matter of fact, the prices of household electricity increased by 8.46%

Q7: While Fukushima Daiichi unit 1 to 4 suffered serious damage, unit 5 and 6 didn’t. What caused the differences? Is it because of the difference of design?

A7: Unit 1 to 5 lost all the backup power supplies, only 1 diesel generator of unit 6 could escape from being covered by the tsunami and the backup power board was also intact. The
electric power of unit 6 was also given to unit 5, and the important systems were able to operate. In addition, the site height of unit 1 to 4 was 10m, while that of unit 5 and 6 was 13m. Unit 5 and 6 are slightly separated from Unit 1 through 4 and are at higher elevation. The earthquake disabled the off-site power, and the tsunami caused the loss of both EDGs of Unit 5 and two of the three EDGs of Unit 6. However one EDG of Unit 6 was air cooled (not dependent on cooling water) and was located at a higher elevation, so it was able to supply emergency AC power to both Unit 5 and 6. The availability of AC power gave these units the ability to depressurize the reactors. So, it was possible to add water to the RPVs via the low pressure condensate transfer pumps. The residual heat removal pumps (RMR) were also not lost, so when a temporary sea water pump was installed to allow transfer of heat to the ocean, it was possible to reach cold shut down again in both Unit 5 and 6.

TEPCO provides “Mid-and-long-Term Roadmap towards the Decommissioning of Fukushima Daiichi Nuclear Power Units 1-4” at the web site.

Please see