



Japanese “Strategic Energy Plan ”①

The Position of Nuclear Power and Direction of Policy

- ① Nuclear power’s energy output per amount of fuel is overwhelmingly large and it can continue producing power for several years only with domestic fuel stockpile. Nuclear power is an important base-load power source as a low carbon and quasi-domestic energy source, contributing to stability of energy supply-demand structure, on the major premise of ensuring of its safety, because of the perspectives; 1) superiority in stability of energy supply and efficiency, 2) low and stable operational cost and 3) free from GHG emissions during operation.
- ② On the premise that safety comes before everything else and that every possible effort is made to resolve the people’s concerns, judgment as to whether nuclear power plants meet the new regulatory requirements will be left to the Nuclear Regulation Authority (NRA) and in case that the NRA confirms the conformity of nuclear power plants with the new regulatory requirements, which are of the most stringent level in the world, GOJ will follow NRA’s judgment and will proceed with the restart of the nuclear power plants. In that case, GOJ will make best efforts to obtain the understanding and cooperation of the host municipalities and other relevant parties.
- ③ Dependency on nuclear power generation will be lowered to the extent possible by energy saving and introducing renewable energy as well as improving the efficiency of thermal power generation, etc. Under this policy, GOJ will carefully examine a volume of electricity to be secured by nuclear power generation, taking Japan’s energy constraints into consideration, from the viewpoint of stable energy supply, cost reduction, global warming and maintaining nuclear technologies and human resources.

Ref: “Strategic Energy Plan” (April 11, 2014) http://www.enecho.meti.go.jp/en/category/others/basic_plan/pdf/4th_strategic_energy_plan.pdf



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Drastic reinforcement of measures for achieving solutions and promotion concerning spent fuel management

[Promotion of the nuclear fuel cycle policy]

- ① Regarding the nuclear fuel cycle, It is important to solve the problems, including technical challenges that we face, one by one. GOJ will make efforts to reduce the volume and harmfulness of radioactive waste and create a nuclear fuel cycle that contributes to effective utilization of resources while adequately taking the past history into consideration and continuing to seek the understanding of relevant municipalities and the international community and will promote reprocessing and plutonium use in LWRs.
- ② Specifically, GOJ will promote plutonium use in LWRs, and proceed with such measures as completion of the Rokkasho reprocessing plant, construction of a MOX fuel processing plant, and completion of the Mutsu interim storage facility on the underlying premise of ensuring safety. GOJ remains committed to the policy of not possessing reserves of plutonium of which use is undetermined on the premise of peaceful use of plutonium. GOJ will conduct an appropriate management and utilization of plutonium. Also GOD will promote R&D of fast reactors, etc., through international cooperation with the U.S. and France etc.
- ③ GOJ will reform any aspects of Monju research thoroughly taking into account lessons learnt from previous efforts and aim to compile the research results expected in the Monju research plan. Also GOJ will position Monju as an international research center for technological development, such as reducing the amount and toxic level of radioactive waste and technologies related to nuclear nonproliferation. GOJ will take necessary measures for issues to be overcome, such as the re-establishment of systems to implement the above mentioned actions and response to the new regulatory requirements etc. on its own responsibility.
- ④ Since these activities are closely related to the estimation of the future operating volume of nuclear power plants, the amount of nuclear fuel, and quantity of spent fuels produced, the problems related to the nuclear fuel cycle will be solved while taking into consideration all of these factors and ensuring strategic flexibility in accordance with changes in the situation.



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[Expanding storage capacity of spent fuels]

- ① The process toward final disposal of high-level radioactive waste will take a long time. It is therefore necessary to expand the capacity for storing the spent fuels and is urgently important to broaden the range of choices for managing the spent fuels while ensuring safety.
- ② It will make flexibility of policies and response, and contribute to medium-term energy security.
- ③ Based on this concept, the storage capacity of spent fuels will be expanded. Specifically, while studying a wide range of locations as possible sites, regardless of whether they are inside or outside the premises of a power plant, GOJ (Government of Japan) will strengthen its effort for facilitating construction and utilization of new intermediate storage facilities and dry storage facilities.

[Promotion of technology development on volume reduction and mitigation of degree of harmfulness of radioactive waste]

- ① Regarding spent fuels, including those which have already been produced, appropriate measures must be taken with due consideration given to the following issues: 1) the fuels must be safely managed and appropriately processed and disposed of on a long-term basis; and 2) volume reduction and mitigation of degree of harmfulness of radioactive waste are important for lowering long-term risks.
- ② Promoting the development of technologies that can give solutions to these issues and enhance the safety, reliability and efficiency of the treasures has significance so that the technologies could secure a wide variety of options and may become one of the pillars of processing and disposing of spent fuels in the future.
- ③ Therefore, GOJ will promote technology development on volume reduction and mitigation of degree of harmfulness of radioactive waste. Specifically, development of technologies for decreasing the radiation dose remaining in radioactive waste over a long period of time and enhancing the safety of processing and disposal of radioactive waste, including nuclear transmutation technology using fast reactors and accelerators, will be promoted by utilizing global networks for cooperation. Also, it studies the feasibility of integrated implementation of the R&D for final disposal and reduction of volume, international research cooperation and a researcher resource development related to them.

Phased approach toward Zero-release

