Some of Japan's commercial light water reactors (LWRs) have been operating for more than 30 years. The more progress in aging, the more increasing concerns of the public will grow about such nuclear power plants.

In order to develop basic policies regarding countermeasures against aging on nuclear power plants, in 1996, the Ministry of International Trade and Industry (MITI) summarized a report entitled "Basic Policy on Aged Nuclear Power Plants". The MITI also indicated that following 30 years' commercial operation of these plants, the electric utility companies should conduct technical evaluations for the aging of all the components in the plants and to prepare detailed maintenance plans for the future.

The Nuclear Safety Commission (NSC) accepted the MITI's report as appropriate in November 1998. The Commission also recommended the addition of effective countermeasures against aging to the Periodical Safety Review and the evaluation of activities in response to aging in order to implement such activities regularly and systematically in the future.

The MITI reviewed the aging countermeasures conducted by the electric utility companies and issued the second report entitled "Evaluation of Countermeasures for Aging Conducted by Electric Utility Companies and Future Plans to cope with Aging". The evaluation was made for Tsuruga Power Station Unit 1, Mihama Power Station Unit 1, and Fukushima Dai-ichi Nuclear Power Station Unit 1. At the same time, the MITI determined to incorporate the technical evaluations of aging and the preparation of long-term maintenance plans into the periodical safety review in the future.

The Kansai Electric Power Co., Inc., and Tokyo Electric Power Co. conducted the technical evaluations in their periodical safety reviews concerning the aging phenomena of all their safety-related components/structures of Mihama Power Station Unit 2 and Fukushima Dai-ichi Nuclear Power Station Unit 2. Also, concerning aging, they extracted additional maintenance measures and incorporated them into their long-term maintenance plans, thereby reinforcing their current maintenance activities.

Considering the latest information including domestic and overseas operating experiences and knowledge of academics and experts consigned by the Minister of Economy, Trade and Industry (METI), the Nuclear and Industry Safety Agency (NISA) of the METI reviewed and studied the technical evaluation and long-term maintenance plans of these electric utility companies.

This paper describes the outlines of the NISA's report and related activities on current approaches to cope with the ageing of nuclear power plants in Japan.

(Note) In 2001, the MITI was reorganized to the Ministry of Economy, Trade and Industry (METI).