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Post-Fukushima Enhancements of Korean NPPs

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Abstract

After the Fukushima accident, public concern about the safety of domestic nuclear power plants increased. KHNP and Korean government executed a special safety review of domestic nuclear power plant facilities. From the safety review, it was verified that Korean NPPs are safe against an expected maximum potential earthquake and coastal flooding based on investigations and research to date. To secure safety for natural hazards beyond the design basis, such as occurred during the Fukushima accident in Japan, 50 improvements against earthquake, tsunami, and severe accidents were derived from the safety review. KHNP will implement 46 of the 50 improvements and other institutions will implement the 4 other improvements. In addition to these 46 improvements, KHNP derived 10 additional improvements from reviewing overseas improvements and self analysis. KHNP will complete all the action items by 2015 investing about 1 billion US dollars.

The major improvements against natural disasters

- Making the coastal barrier higher at Kori site
- Preparing a vehicle with a portable EDG
- Installing watertight doors at safety facilities buildings
- Securing water-proofing of sump pumps
- Installing passive H₂ removal systems which operate without electricity
- Installing containment filtered venting system.