Main Research Topics and Procedures of Research on Nuclear Power

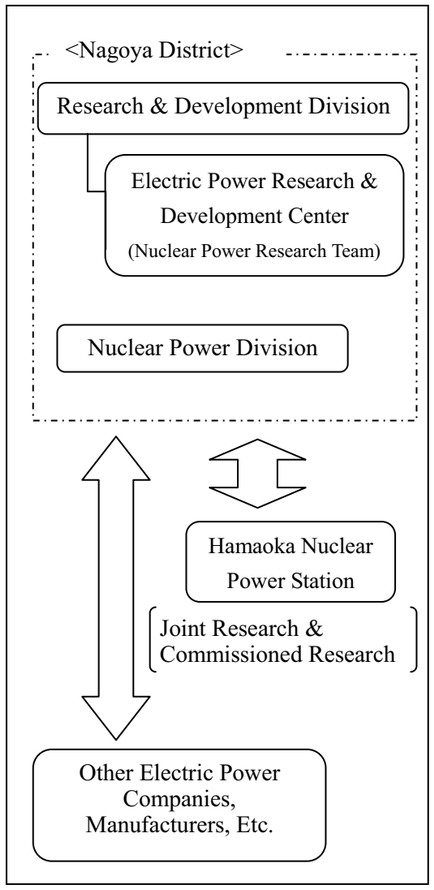
Attachment

1. Research Topics

Category		Main Research Topics to be Addressed at Present	Previous Initiatives (Joint Research, Etc.)
Research Contributing to Heightened Safety in Nuclear Power Stations	Prevention of Malfunctions in Equipment and Facilities	・Study deterioration from aging using equipment of Reactors No. 1 and 2 that are in process of decommissioning (Take study results on state of deterioration and safety tolerances and reflect in future design and maintenance)	・Research on methods for assessing the progress of deterioration from aging in equipment, etc.
	Apply earthquake and tsunami measurement and other information in power station operation	・Accumulate earthquake measurement data and demonstrate reliability of early detection (Apply to shutdown judgment, etc. at Hamaoka Nuclear Power Station) ・Study applicability of technology to detect tsunami water level rise and speed (Apply to evacuation procedures, etc. of Hamaoka Nuclear Power Station workers)	・Research on methods for assessing earthquake movement, tsunami, etc.
Research Contributing to Improvement of Operation (Decommissioning) of Reactors No. 1 and 2	Safe, smooth implementation of decommissioning	・Develop and verify engineering tools capable of optimal process management in terms of both radiation exposure and cost in preparation for future full-scale dismantlement	・Research surveys, etc. of latest dismantlement methods
Research Contributing to Improvement of Operation (Maintenance and Operability) of Reactors No. 3, 4, and 5	Improve maintenance and operability of equipment and facilities	・Develop technology and devices aimed at improving maintainability and operability in a radioactive environment	・Develop non-destructive testing devices, develop radiation exposure mitigation technology, etc.
Research Contributing to Future Technology	Develop technology relating to new-type reactor	・Examine concepts of new-type reactors to heighten reactor safety ・Research on diversification of energy sources (use of thorium, etc.)	・Research relating to development of next-generation light water reactor, fast breeder reactor cycle, etc.
	Technical research on next-generation nuclear fuel cycle	・Develop next-generation nuclear fuel cycle technology ・Develop next-generation technology for processing and disposal of radioactive waste	

2. Research Procedure

Procedure to Date



Future Procedure