



ADDENDUM TO AP1000 PLANT DESCRIPTION (August 2006)

10 AP1000 Licensing status

AP600 safety analysis and probabilistic risk assessment reports were submitted to the United States Nuclear Regulatory Commission on June 1992. The Commission documented its acceptance of the AP600 plant in the Final Design Approval (FDA) on September 3, 1998. In December 1999, the NRC issued the Design Certification for AP600 as Appendix C of 10CFR Part 52. This made the AP600 the only licensed passive safety system nuclear power plant in the world.

Licensing discussion on the AP1000 with the U.S. NRC began with a pre-certification review phase in September 2001 which successfully established the applicability of the AP600 test program and AP600 safety analysis codes to the AP1000 Design Certification. On March 28, 2002, Westinghouse submitted to US NRC an application for Final Design Approval and Design Certification of the AP1000 standard plant. The application included the AP1000 Design Control Document (Standard Safety Analysis Report and Inspections, Tests, Analysis and Acceptance Criteria (ITAAC) and Probabilistic Risk Assessment (References 1 and 2). Because of the few design changes from AP600, approximately 80 percent of the AP600 Standard Safety Analysis Report remains unchanged for AP1000.

The NRC reviewed the DCD and PRA documents and issued the draft safety evaluation report for the AP1000 in June 2003 with ~180 open items. These DSER open items were resolved and the NRC issued their FDA on September 13, 2004. The NRC subsequently approved Design Certification of the AP1000 on December 30, 2005.

11 AP1000 DEPLOYMENT

In 2002, the U.S. Department of Energy (DOE) launched a major initiative, called Nuclear Power 2010, to work with the nuclear industry on projects that would lead to the construction of new nuclear plants in the U.S. by 2010. During the first year, DOE awarded three contracts to U.S. utilities to cost-share in applications to the U.S. Nuclear Regulatory Commission (NRC) for Early Site Permits (ESPs). Under NRC's 10CFR52 regulation, these utilities will be able to pre-license plant sites in advance of deciding on the type of nuclear plant to be built or when it would be built. At the end of 2003, DOE issued a solicitation to cost-share with utilities and consortiums for projects that would (1) complete Design Certification of standardized nuclear plants under 10CFR52, (2) prepare and submit applications for Combined Construction and Operating Licenses (COLs) for specific nuclear plant projects under 10CFR52, (3) complete the detailed design of the standard plants, and (4) provide the utilities with the engineering and financial information on the designs necessary for them to make decisions on whether to actually proceed to construction of the plants.

Westinghouse joined with nine utilities and another reactor supplier in a consortium called NuStart Energy, to respond to DOE's solicitation. The nine utilities involved in the project are Exelon, Entergy, Constellation, Duke, Florida Power & Light, Progress, Southern, EDF of North America, and Tennessee Valley Authority. Westinghouse's AP1000 design and the other supplier's design were chosen by the utilities to be part of the NuStart project because they believed that the designs' simplified passive safety features are important to reducing the construction and operating costs of new nuclear plants – while assuring the highest levels of safety achievable with proven technologies.



Westinghouse AP1000

NuStart has selected the Bellefonte site for application of the AP1000. Duke, Southern, Progress and SCANA have each announced plans and selected the AP1000 design for their COL application. Interest is also being expressed by other U.S. power companies.

Westinghouse has begun preparing additional AP1000 design information to support these applications. In addition, Westinghouse will prepare information needed by these utilities to support making commercial decisions to proceed with these applications. NuStart's AP1000 COL application will be complete and ready for submittal to the NRC in 2007. It is expected that the NRC will be able to issue the COL in 2010.