ENHANCING SAFETY DURING THE GLOBAL NUCLEAR RENAISSANCE

Economic and Simplified Boiling Water Reactor

Size:

• 1580 MWe

Features:

- Natural circulation
- Passive safety systems

Certification Status:

 Design Certification Application submitted August 2005

Evolutionary **Power Reactor**

Size:

• 1600 MWe

Features:

- Double-walled containment

Certification Status:



REACTOR DESIGNS PROPOSED IN THE U.S.

Based on Simplified BWR and Advanced BWR





Four 100% capacity engineered safety trains

Corium spreading area for severe accident mitigation

Design certification application submitted 12/11/07



AP-1000

Size:

• 1117 MWe

Features:

- Passive containment cooling system with steel containment vessel and natural circulation air flow
- Gravity drain core makeup tanks and refueling water storage tanks
- Natural circulation heat exchangers

Certification Status:

Certified December 2005

Advanced Boiling Water Reactor

Size:

• 1350 MWe

Features:

18 HPOPPurp 18 RDC Steen Tubre and Porp 20 Deex Generator 21 Specific Stonge Pos 22 Specific Stonge Pos 23 Return Plators

24 Shacilicota 25 Bare/Dive ant/Secentry 85 Hongs/Fox 28 Bings/Care 27 Man Steen Unes 28 Rectvary Unes

28 Met-Contril-Ros

- Vessel mounted internal recirculation pumps
- Fine motion control rod drives
- 3 full train emergency core cooling systems

Certification Status:

Certified May 1997



U.S. Advanced Pressurized Water Reactor

Size:

• 1700 MWe

Features:



OFFICE OF NEW REACTORS

4 train configuration

Redundant digital control systems

In-containment refueling water storage pit

Certification Status:

 Design Certification application submitted December 2007