AES-2006 (VVER-1200)

- Separate passive systems to provide all fundamental safety functions
- Four trains of active safety systems
- Double containment
- In line with modern fuel cycle practice, period between refuellings is 12–18 months
- Enhanced fuel utilisation
- Main equipment service life is at least 60 years
- Maximum use of well-proven solutions and equipment (an evolution from the AES-91 design)

3 & 4 (Czech Republic) and Hanhikivi (Finland). II (pictured above), Kaliningrad (Baltic project) and Ostrovets (Belarus). It is also proposed for Temelin which in turn is a subsidiary of Rosatom (Russian state nuclear energy corporation).

Bird's eye view (typical plant)

Key features:
- Maximum use of self-proven solutions and equipment (an evolution from the AES-91 design)
- Main equipment service life is at least 60 years
- Optimised fuel cycle practice, period between refuellings is 12–18 months
- Double containment
- Four trains of active safety systems

Key:
- Safety building (passive)
- Steam generator heat removal system, via steam generator
- Passive heat removal system, via steam generator
- Core catcher
- Beyond design basis accident management

Main data:
- Rated thermal power of the reactor (MWt) 3200
- Thermal efficiency (%) ~37
- Primary circuit flow, with one loop operating 8400 m³/h
- Emergency core cooling Active
- Emergency injection Active
- Reactor trip Passive
- Safety systems
  - Passive heat removal from the containment: Yes
  - Passive heat removal from steam generator: Yes
- Number of control rods 121
- Number of fuel assemblies 163
- Steam pressure, steam generator per loop 4

Safety systems:
- Passive heat removal from the containment: Yes
- Passive heat removal from steam generator: Yes
- Core catcher: Yes
- Beyond design basis accident management: Yes

Installed capacity per unit (MWe, gross) 1190-1270
Rated thermal power of the reactor (MWt) 3200
Main data:
- Safety building (passive)
- Steam generator heat removal system, via steam generator
- Passive heat removal system, via steam generator
- Core catcher
- Beyond design basis accident management

Emergency core cooling Active
Emergency injection Active
Reactor trip Passive
Number of safety trains 4

Number of safety trains: 4
Passive
Active
Active
Active
Yes
No
No