BWRX-300
Small Modular Reactor

Rich history of nuclear innovation ready to support advanced reactor market

Proven success turning vision into commercial-scale reality, on time and on budget



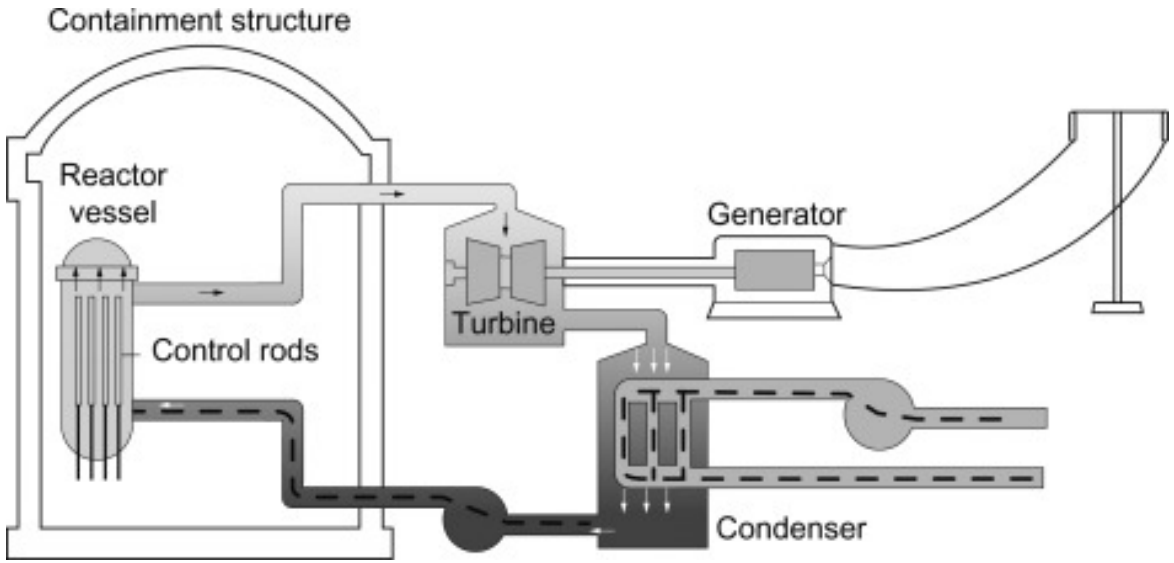



OVER 80 YEARS OF NUCLEAR EXPERIENCE AND INNOVATION

- **1939** — First GE involvement in nuclear physics
- **1955** — GE Atomic Division established
- **1957** — Vallecitos BWR AEC License #1
- **1962** — NPD achieves full power
- **1974** — 25th BWR Peach Bottom 3
- **1986** — 50th BWR River Bend
- **1996** — 1st ABWR built on time on budget
- **2014** — ESBWR NRC License
- **2017** — BWRX-300 launched

67 reactors licensed in 10 countries

Boiling Water Reactors (BWR) … the simplest way to make steam



INHERENTLY SIMPLE REACTOR DESIGNS

- Direct cycle design with no secondary steam generator and pressurizer
- Traditional balance of plant for electricity generation
- Low enriched (3-5% U-235) oxide fuel in metal cladding

- Water coolant that also serves as “moderator” to slow down fast neutrons
- Coolant circulated through core with natural circulation (forced circulation in legacy designs)

BWRX-300 small modular reactor

- 10th generation Boiling Water Reactor
- Scaled from U.S. NRC licensed ESBWR
- Design-to-cost approach
- Significant capital cost reduction per MW
- World class safety
- Capable of load following
- Ideal for electricity generation and industrial applications, including hydrogen production
- Constructability integrated into design
- Initiated licensing in the U.S. and Canada
- Operational by 2028

MOST
COMPETITIVE SMR

BWRX-300 Small Modular Reactor

300 MW Water Cooled SMR

Designed to Mitigate LOCA

Reduced Staff

$

Competitive LCOE

Breakthrough innovation – integral isolation valve

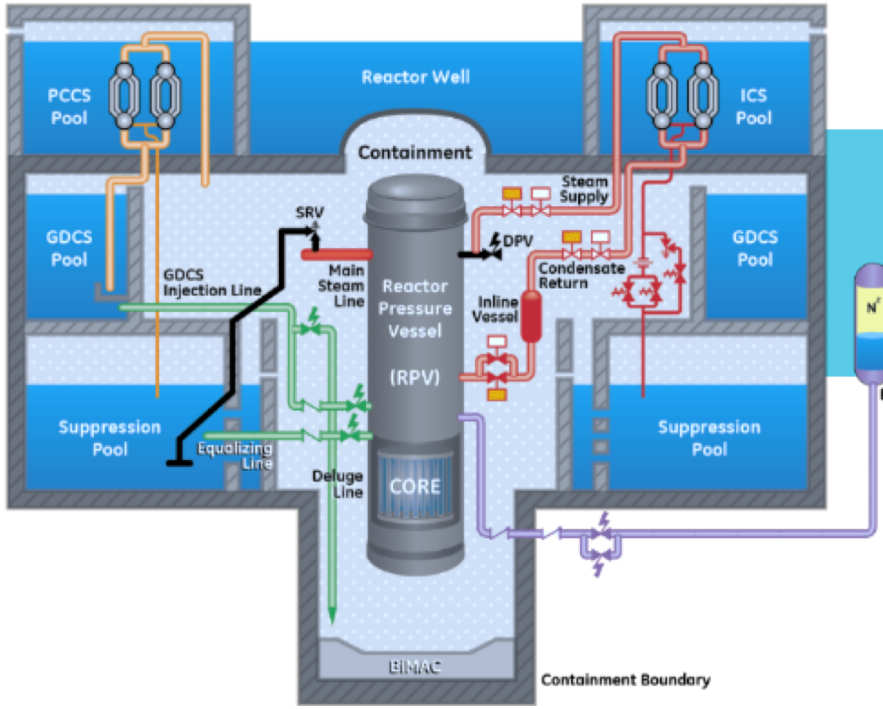
- Patented
- NRC approved
- Enables dramatic design simplification and elimination of unnecessary systems
- Leading to more than 50% reduction in construction materials per MW

BWRX300

GROUNDBREAKING BWRX-300 SMALL MODULAR REACTOR ACHIEVES LICENSING MILESTONE

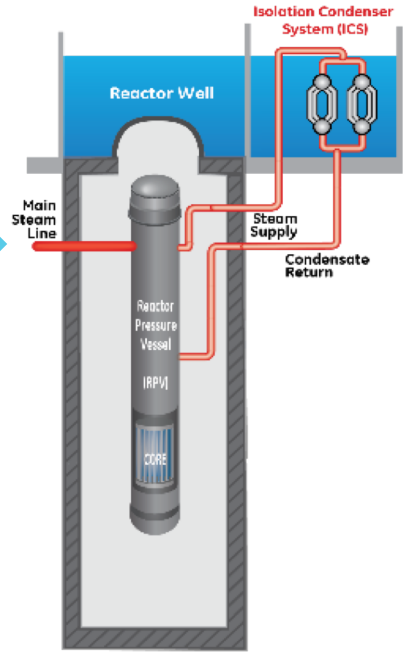
Simplicity drives cost reduction

ESBWR



90% volume reduction

BWRX300



Systems/components eliminated:

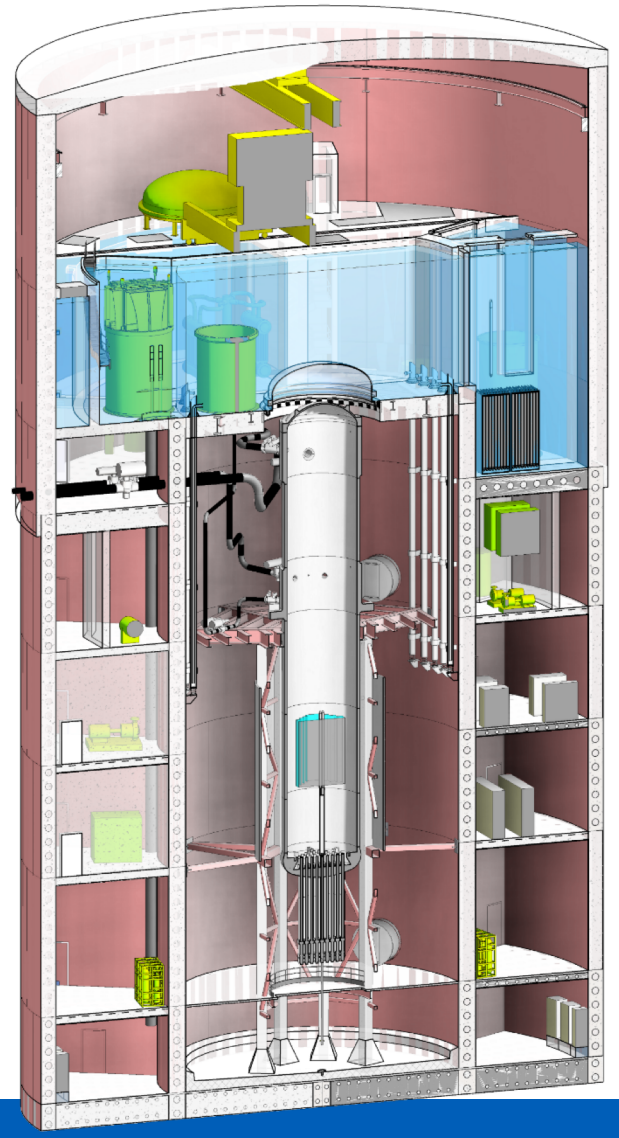
- Suppression Pool
- GDCS Pool
- Safety Relieve Valves & Spargers
- Depressurization Valves
- BiMac (core catcher)

Systems/components simplified:

- Passive Containment Cooling (PCCS)
- Containment (use of SC)
- Boron injection
- Security (built into design)
- Turbine
- Generator (air cooled)

>50% building volume reduction/MW
>50% less concrete/MW

Utilizing proven technology



Nuclear Island components

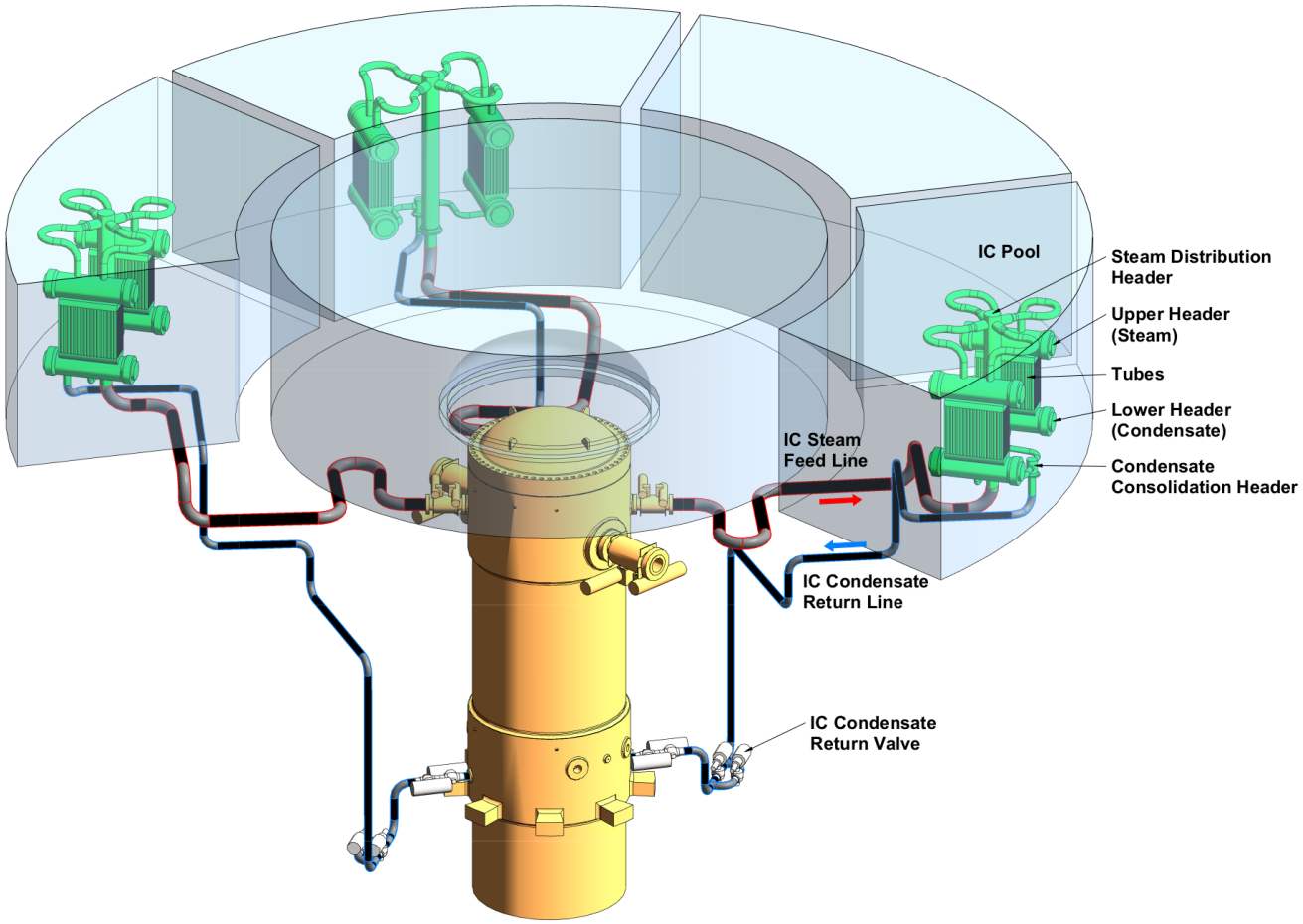
- RPV
- Reactor internals
- Fuel
- Fuel handling
- Spent fuel racks
- Control Rod Drives/Hydraulic Control Units
- Nuclear Instrumentation
- Airlocks/special tooling
- Main steam isolation valves
- Reactor water cleanup

Turbine Island based on existing steam turbine and generator in operation globally.

>90% of Nuclear Island components based on designs already in operation

Safety case results

- Mild transient response due to large RPV
- No need for safety relief valves
- Isolation Condenser System provides heat removal/pressure control
- Only 1 Isolation Condenser required
- Seven-day coping time for design basis accidents (station blackout, LOCA, etc.)
- Simple actions after seven days to increase time indefinitely



SEVEN DAYS COPING TIME IN ALL DESIGN BASIS ACCIDENTS

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