GE Hitachi Nuclear Energy

Small Modular Nuclear Reactors:

The Future of Carbon-Free Energy

What is a Small Modular Reactor (SMR)?

The term SMR refers to the size, capacity and modular construction of a nuclear reactor that has a typical electrical power output of up to 300 megawatts.

A single SMR has the capability to power approximately 300,000 homes with a power plant footprint that's smaller than the size of a football field.

The BWRX-300 is GE Hitachi's innovative SMR design

- "BWR" stands for "Boiling Water Reactor." The reactor relies on nuclear fission to heat water, which turns into steam and drives a steam turbine to produce power and generate electricity.
- The "X" refers to the tenth generation of BWR designs - the most advanced, yet simplest design since GE started commercially developing nuclear reactors in the 1950s.
- "300" refers to the 300 megawatts of energy it produces.

RELIABLE Carbon-Free Energy Generation

Like renewable energy sources, such as solar and wind power, SMRs generate carbon-free energy. But the clear advantage is the reliability and availability of nuclear power generation. Unlike solar and wind, nuclear power generation is not weather-dependent.

SMRs provide consistent, baseload power to meet electricity demands, day and night, rain or shine.

SMALL + MODULAR = More Carbon-Free Energy Generation this Decade

SMR components can be manufactured in various locations and then assembled on site which significantly reduces construction time and offers greater supply chain flexibility, as compared to most large-scale nuclear plant construction projects. At around 10% of the size of a large nuclear project, the BWRX-300 can be built in just 24-36 months, so we can start benefiting from this new technology sooner.

SMRs also offer the highest energy density compared to other generation sources, so land use is minimal compared to other carbon-free energy sources, like wind and solar.

Reactor Technology: Innovation Grounded in SAFETY

Nuclear energy is one of the oldest carbon-free energy generation technologies in existence. It is also one of the safest and most highly regulated.

The BWRX-300 incorporates innovative safety features that are designed to cool itself without the need for external power or water supply. Built-in passive safety features enable the reactor to be safely shutdown without the need for human intervention.

Learn more at nuclear.gepower.com.

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