

GE Hitachi Nuclear Energy's Advanced Recycling Center Recognized for Its Potential to Make Energy out of Used Nuclear Fuel

*Nuclear Fuel Recycling Technology Joins ecomagination Portfolio - GE's \$10 Billion
Commitment to Clean Energy Technology Innovation*

Wilmington, NC, October 14, 2010 - With a special commission evaluating options to help the U.S. Department of Energy develop a scientifically sound and economically viable strategy to deal with the growing stockpiles of used nuclear fuel from commercial reactors, GE Hitachi Nuclear Energy (GEH) announced its Advanced Recycling Center (ARC) technology has been approved as a part of GE's ecomagination™ portfolio. The ARC technology offers the industry just that – a new, cost-effective way of treating used nuclear fuel.



GE Hitachi's ARC
GE Hitachi's Proposed Advanced Recycling
Center for Used Nuclear Energy

The Obama administration convened the blue ribbon commission to help address potential public health and non-proliferation concerns associated with the now-scuttled plan to open a long-term storage facility at Yucca Mountain in Nevada as well as other used fuel-management practices.

GEH is urging the commission to recommend that the White House and Congress support the deployment of its next-generation recycling technology, citing its significant environmental and economic advantages over existing, less efficient reprocessing methods.

Currently, much of the potential energy in light water reactor fuel assemblies remains untapped when they are removed from a reactor's core and replaced with fresh fuel during regularly scheduled refueling outages. This used fuel can then be re-used in GEH's fast-burner reactor called the Power Reactor Innovative Small Modular (PRISM) to generate additional, low-carbon electricity.

Using the PRISM, the ARC can extract more than 100 times the energy from uranium compared to the "once-through" fuel cycle employed by current nuclear plants. As a result, there is a significant reduction in waste requiring long-term storage, and for a much shorter duration. The ARC also offers attractive non-proliferation advantages over existing reprocessing methods because it does not separate pure plutonium and, in fact, can consume unwanted weapons-grade plutonium as fuel.

One ARC featuring six PRISM reactors using "spent" fuel could produce more than 1,800 megawatts of electricity, which would be enough to power more than 1.3 million average U.S. homes. More than six million metric tons of coal would need to be used in a typical U.S. coal-fired power plant to generate an equivalent amount of power.

"Nuclear energy's proven ability to reliably and affordably produce large amounts of electricity without emitting greenhouse gases is a key reason policymakers consider it a vital clean energy technology," said Marvin Fertel, president and chief executive officer of the Nuclear Energy Institute, the U.S. nuclear

energy industry's policy organization. "Advanced recycling technologies that make used nuclear fuel even more proliferation-resistant and that reduce the volume of byproduct material requiring disposal will only add to nuclear energy's appeal and long-term value to our society."

The ARC is the latest GEH product to be included in GE's ecomagination portfolio, which previously added the nuclear alliance's Generation III advanced boiling water reactor (ABWR) and next-generation, economic simplified

boiling water reactor (ESBWR).

“GEH’s proposed ARC facility would help facilitate the generation of additional low-carbon electricity while helping the industry overcome its primary environmental policy concern,” said Kevin Walsh, GEH senior vice president-fuel cycle operations and president/CEO of Global Nuclear Fuel-Americas in Wilmington, N.C. “The ARC’s recognition as GE’s newest ecomagination product underscores how our technology helps offer utility customers and consumers important savings while reducing the environmental impacts of power generation.”

GE’s ecomagination initiative is the ongoing commitment to developing new technologies that achieve greater energy and cost efficiency over existing products in the marketplace. As part of the initiative, GE has reduced its own greenhouse gas emissions by an absolute 22 percent from the 2004 baseline and reduced water usage by 30 percent from the 2006 baseline. GEH has been actively involved in this program through the installation of an advanced water treatment facility at the GEH campus in Wilmington, NC, and the inclusion of ESBWR, ABWR and now ARC nuclear technologies.

In June 2010, GE announced plans to invest \$10 billion over the next five years in its ecomagination initiative that was launched in 2005. By the end of 2009, the company had already invested \$5 billion in the initiative.

About GE Hitachi Nuclear Energy

Based in Wilmington, N.C., GE Hitachi Nuclear Energy (GEH) is a world-leading provider of advanced reactors and nuclear services. Established in June 2007, GEH is a global nuclear alliance created by GE and Hitachi to serve the global nuclear industry. The nuclear alliance executes a single, strategic vision to create a broader portfolio of solutions, expanding its capabilities for new reactor and service opportunities. The alliance offers customers around the world the technological leadership required to effectively enhance reactor performance, power output and safety.

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