



# HITACHI

## GE Hitachi Nuclear Energy Signs MOU Agreement with National Nuclear Laboratory to Work on Tackling UK Plutonium Stockpile

WORKINGTON, U.K.—April 4, 2012—With the U.K. government looking at ways to address its growing stockpile of civil plutonium, [GE Hitachi Nuclear Energy \(GEH\)](#) today signed a memorandum of understanding (MOU) with [National Nuclear Laboratory Ltd. \(NNL\)](#). NNL will provide expert technical input to the potential U.K. deployment of GEH's innovative [PRISM](#) reactor, which would be specifically designed to disposition the U.K.'s plutonium while generating 600 megawatts of low-carbon electricity.

GEH also spent the day meeting with a number of skilled nuclear workers in West Cumbria to learn how they could work with GEH on PRISM's potential deployment.

The country is currently storing more than 87 metric tons (and growing) of plutonium at the Sellafield nuclear complex in West Cumbria, England. The U.K. government confirmed its intention to reuse this plutonium in December 2011, declaring that it "remains open to any alternative proposals for plutonium management that offer better value to the U.K. taxpayer." The Nuclear Decommissioning Authority (NDA) recently announced in February 2012 that it is seeking proposals for alternative approaches to manage the U.K.'s plutonium stockpile.

"We are excited for the potential opportunity to utilize the expertise of NNL and help the U.K. continue to take a leadership role in the reuse of plutonium," said Danny Roderick, senior vice president of new plant projects for GEH. "We believe that PRISM is the best way to manage the U.K.'s plutonium stockpile efficiently, securely and safely while generating low-carbon electricity at the same time."

"With our recognized technical capability and long experience in fuel cycle analysis, we are pleased that GE Hitachi Nuclear Energy has looked to NNL to provide independent and authoritative input to the potential U.K. application of a PRISM reactor," said Paul Howarth, managing director of NNL, which operates a number of research facilities in the U.K. including the flagship Central Laboratory on the Sellafield site. "We look forward to working with GEH as they develop their approach to helping the U.K. address its plutonium legacy."

Today, GEH, along with leading U.K. engineering firms Costain, Arup and Pöyry, (GEH's "CAP Alliance" partners), met face-to-face with the number of highly talented and experienced nuclear sector suppliers in West Cumbria at the ENERGUS centre in Lillyhall, Workington. GEH is committed, to the greatest extent possible, to utilizing U.K. companies and workers. Currently, General Electric Company, one of GEH's parents, has approximately 18,000 U.K. employees countrywide.

Should PRISM be approved for construction, in addition to creating about 900 permanent jobs and thousands of expected indirect jobs for the local community, this multibillion-pound investment would stand to create a range of opportunities for suppliers while continuing to develop the country's nuclear energy skills base and reaffirming Cumbria's position of nuclear excellence with "Britain's energy coast."

GEH is convinced that its PRISM technology provides an innovative solution to the objectives set forth by the NDA—the quickest disposal of plutonium at the best value—while providing substantial environmental and economic benefits. GEH is currently working closely with the U.K. government, including NDA, to detail why it believes PRISM technology is the best choice for the U.K. taxpayer.

### **About PRISM**

PRISM is based on technology that was demonstrated in a fast reactor in the U.S. called the EBR II (Experimental Breeder Reactor) that operated successfully for 30 years. Last year, GEH completed the commercialization of PRISM, which began in 1981. Calculations have shown that PRISM technology would use practically all the stored plutonium at Sellafield. This is very different from other competing proposals, including turning the plutonium into mixed oxide fuel. Mixed oxide fuel (also known as “MOX”) simply puts the plutonium into a complex form that is highly radioactive while not actually eliminating any plutonium. In contrast, the PRISM consumes much of the plutonium as a true fuel.

### **About NNL**

NNL provides the experts and technologies to ensure the U.K. nuclear industry operates safely and cost-effectively today and for the future. The company is owned by U.K. Government and managed by an appointed contractor (a consortium of Battelle, Serco and the University of Manchester). NNL is run as a commercial business and receives no funding directly from U.K. Government. It has an annual turnover of around £80M and employs around 750 people (mostly professional scientists and engineers) across six U.K. locations. NNL’s Central Laboratory includes state-of-the-art facilities which can handle plutonium and other highly radioactive nuclear materials, and these could play an important role in future fuel cycle work on PRISM or similar systems.

### **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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For more information, contact:

Michael Tetuan  
GE Hitachi Nuclear Energy  
+1 910 819 7055  
[michael.tetuan@ge.com](mailto:michael.tetuan@ge.com)

Chris Rumfitt  
Edelman  
+44 020 3047 2153  
[chris.rumfitt@edelman.com](mailto:chris.rumfitt@edelman.com)

Adrian Bull  
NNL  
+44 (0)7894 836553  
[adrian.j.bull@nnl.co.uk](mailto:adrian.j.bull@nnl.co.uk)