AREVA NP to Load Advanced Fuel Assemblies in U.S. Commercial Reactor

CHARLOTTE, N.C., July 12, 2017 – AREVA NP today announced plans to load advanced fuel assemblies developed through the U.S. Department of Energy’s (DOE) Enhanced Accident Tolerant Fuel program in Unit 2 at Georgia’s Vogtle Electric Generating Plant. The loading is scheduled for spring 2019. This advanced fuel technology offers reactor operators more time to respond in emergency situations and other events.

“Our top priority is the safety and health of the public and our employees, and advanced technology fuel assemblies will make plants even safer, resulting in more flexibility in our operations,” said John Williams, nuclear fuel director for Southern Nuclear Operating Company, which operates Plant Vogtle on behalf of Georgia Power and the plant’s other co-owners. “This game-changing technology is not a small step, but a leap for our industry.”

The AREVA NP team will load four advanced lead test assemblies, which feature chromia additions to the fuel pellets and a chromium coating to the fuel rod cladding. The chromia-doped fuel pellets have a higher density and help reduce fission gas release in the event that the reactor loses cooling. The addition of a chromium coating to existing zirconium alloy cladding offers a number of advantages, including improved high temperature oxidation resistance, dramatic reduction of hydrogen generation, coolable geometry and mechanical properties preserved for higher coping time, and additional resistance to debris-fretting, among others. AREVA NP is adding these features to its existing GAIA fuel design for pressurized water reactors.

“The approach we’ve taken to incorporate advanced fuel characteristics into our proven GAIA fuel design enables us to get this advanced fuel into reactors more quickly,” said Robert Freeman, vice president, Commercial and Customer Center – North America for AREVA NP. “After more than a decade of research and testing on innovative technology led by AREVA NP fuel experts worldwide and our partners in France, Switzerland and the United States, we are proud to provide advanced technology like these fuel lead test assemblies in a commercial reactor.”

“With decades of experience researching and developing advanced fuel technologies, the AREVA NP team is an industry leader in innovating the fuel designs that will power the nuclear industry for years to come,” said Lionel Gaiffe, senior executive vice president of the Fuel Business Unit at AREVA NP. “Our latest fuel design, developed

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as part of the U.S. Department of Energy’s Enhanced Accident Tolerant Fuel program, supports the robustness and resilience of today’s and tomorrow’s nuclear energy facilities.”

AREVA NP will begin manufacturing the chromia-doped fuel pellets at its Richland, Wash., nuclear fuel manufacturing facility later this year.

As a next step, AREVA NP continues to develop an advanced fuel concept that includes silicon carbide.

AREVA NP, supported by additional partners including U.S. national labs, universities and utilities, is now deploying and further improving its technology as part of the U.S. DOE’s Fuel Cycle Technologies program. DOE awarded AREVA NP and its partners a $10 million, two-year grant, plus the continued use and support of its national laboratory facilities, to develop and deploy an advanced fuel concept for light water nuclear reactors.

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