



Framatome's accident tolerant fuel technology one step closer to market readiness

July 25, 2023 – Framatome's [industry-first](#), 100% Enhanced Accident Tolerant Fuel (EATF) assembly successfully completed its first cycle of operation at a U.S. nuclear power plant. This milestone marks significant progress in the development of the accident tolerant fuel (ATF) technology and an important step toward market readiness. Following 24 months of operation, testing and inspections confirm the robust fuel characteristics safely withstood in-reactor conditions and performed as designed.

"The accelerated delivery and proven performance of our technology reflects the dedication and expertise of our people with the collaborative support from the industry. Collectively, we are one step closer in the qualification of our PROtect EATF technology for the nuclear industry," said Lionel Gaiffe, senior executive vice president of the Fuel Business Unit at Framatome. "With the adoption and implementation of our advanced technologies, our industry partners continue to demonstrate their commitment to enhance the safety and performance of their reliable, low-carbon, energy operations."

Developed with funding from the U.S. Department of Energy (DOE) under Framatome's PROtect program, this lead fuel assembly (LFA) containing 176 chromium-coated rods and chromia-enhanced pellets was initially inserted as part of the plant's 2021 spring refueling outage.



Framatome PROtect EATF assembly

The PROtect EATF LFA was removed and inspected during the 2023 spring refueling outage with the results confirming the integrity of the technology after two years in operation. It is now operating in its second two-year cycle of operation.

This EATF fuel assembly builds on previous work that included completing 18- and 12-month fuel cycle tests on lead fuel rods in the U.S. and Switzerland respectively. Framatome's PROtect EATF chromium-coated cladding and chromia-enhanced pellets are more tolerant to changes in reactor core temperatures, increasing coping time while reducing corrosion and the production of hydrogen under high-temperature conditions.

The LFA was fabricated at Framatome's manufacturing facility in Richland, Washington, as part of a [2019 contract](#) that marked the fourth different reactor type to implement PROtect EATF technologies.

**About Framatome**

Framatome is an international leader in nuclear energy recognized for its innovative, digital and value added solutions for the global nuclear fleet. With worldwide expertise and a proven track record for reliability and performance, the company designs, services and installs components, fuel, and instrumentation and control systems for nuclear power plants. Its more than 16,000 employees work every day to help Framatome's customers supply ever cleaner, safer and more economical low-carbon energy.

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Framatome is owned by the EDF Group (75.5%), Mitsubishi Heavy Industries (MHI – 19.5%) and Assystem (5%).