



Framatome achieves critical NRC approval in development of advanced nuclear fuel technology

April 25, 2023 - Framatome received approval from the U.S. Nuclear Regulatory Commission to apply the company's suite of Advanced Codes and Methods to operating conditions with uranium-235 enrichments above the industry standard of 5 weight percent (wt%). This approval is a critical step toward the company's goal of reload readiness by 2027 for implementing nuclear fuel with higher uranium enrichments and burnups in the current light water reactor fleet.

The NRC decision is an important milestone for the company's advanced fuel development efforts targeting improved fuel utilization for nuclear plant operators and systematic improvements for safety and plant economics.

"This approval further demonstrates our expertise in the nuclear energy industry and our commitment to bring advanced solutions to our customers that improve plant economics," said Lionel Gaiffe, senior executive vice president, Fuel Business Unit at Framatome. "Our codes and methods provide added flexibility and allow nuclear plant operators to extend operating cycles and energy output."

Framatome's advanced codes and methods provide significant operational margin gains. These margins provide nuclear plant operators with the flexibility to extend their reactor performance when coupled with the company's nuclear fuel technology and its higher enrichment and burnup characteristics.

This regulatory approval also demonstrates that Framatome can effectively model reactor behavior in the evaluation of neutronic, thermal hydraulic, small- and large-break loss-of-coolant-accident (LOCA), non-LOCA safety analysis, and thermal-mechanical performance with fuel enriched above current limits.

The NRC approval builds on other recent regulatory milestones for Framatome in its pursuit to bring higher enriched fuel to the industry. The NRC recently approved a license amendment allowing Framatome's shipping containers to transport fresh nuclear fuel assemblies in the U.S. having U-235 enrichments up to 8 wt%. The NRC also approved the methodology used to demonstrate that Framatome's fuel fabrication facility will retain current safety margins when higher enriched material is received and processed into fuel. Based on this approval, major equipment orders have been placed to support the system upgrades needed to process higher enrichments.

These regulatory accomplishments and the drive to bring new fuel technology to the existing light water reactor fleet are part of Framatome's Advanced Fuel Management program. The advanced fuel technology is being developed at Framatome facilities worldwide and will be built at the Richland, Washington, nuclear fuel manufacturing facility, which received the first 40-year fuel fabrication operating license approval, extending its license to 2049.

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%).