



## Framatome Inc. and Ultra Safe Nuclear Corporation execute an agreement to establish a joint venture to manufacture fourth-generation reactor fuel

November 28, 2023 - [Framatome Inc.](#) (Framatome) and [Ultra Safe Nuclear Corporation](#) (USNC) today signed an agreement to establish a joint venture (JV) at the World Nuclear Exhibition in Paris, France. This JV will provide nuclear fuel for the fourth generation [Micro-Modular™ Reactor](#) (MMR®) and other advanced reactor designs. The fuel supply will include commercial quantities of Tri-structural Isotropic (TRISO) particles and USNC's proprietary [Fully Ceramic Microencapsulated](#) (FCM®) fuel.

The JV will be managed by a board of directors composed of senior leadership from both USNC and Framatome. Framatome will leverage its expertise, proven infrastructure, and mature programs to ensure that USNC's processes are efficiently deployed and operating, while USNC will bring technical manufacturing capabilities and expertise. Working together, the JV will deliver finished TRISO-based fuel products, meeting the demands of USNC's fleet as well as others in the advanced reactors market.

"Ultra Safe Nuclear Corporation is at the forefront of the next generation of nuclear energy, and together, we are committed to developing new opportunities in the nuclear energy industry through this joint venture," said Bernard Fontana, CEO of Framatome. "Combining our unmatched manufacturing expertise and experience in regulatory compliance, and USNC's advanced reactor designs, we are ready to support rapid expansion of fourth-generation nuclear power to meet the projected growth and demand for safe, reliable, clean energy in the U.S. and global markets."

Framatome's manufacturing and regulatory licensing are being amended to incorporate USNC's proven and codified processes similar to USNC's operating [Pilot Fuel Manufacturing Facility \(PFM\)](#) in Oak Ridge, Tennessee - the only private sector capability in the Western Hemisphere at present manufacturing TRISO-based nuclear fuels. Framatome has notified the NRC of their intent to submit the amendment in summer 2024 and has conducted the pre-licensing briefing with NRC personnel in advance of the amendment submittal.

"Framatome's leadership in nuclear energy is built in part on a solid foundation of excellence, innovation, quality and delivery of increasingly high-performance, advanced fuels," said Francesco Venneri, CEO of Ultra Safe Nuclear. "This joint venture brings Framatome's high-quality capabilities and high-confidence capacity together with Ultra Safe Nuclear's breakthrough fuel technologies and intrinsically safe design to fuel the MMR."

The MMR Energy System is a fourth-generation nuclear energy system that can operate at various power levels from 10 to 45 MWt and delivers safe, clean, and cost-effective electricity and process heat to users anywhere. The MMR is being licensed in Canada and the U.S. and will be the first commercially available "nuclear battery." MMR deployments are moving forward, including the projects [at Chalk River](#), which is on target for first power in 2028, and the [University of Illinois Urbana-Champaign](#), targeted for first power the same year.

With this collaboration, both organizations are committed to bring the most competitive TRISO coated particle fuels to the market and secure fuel supply for USNC's commercial MMR pipeline while offering

a cost-effective fuel supply to the future operators of other advanced reactors. The joint venture plans to manufacture TRISO particles and FCM fuel starting in 2026. The creation of the JV is currently subject to regulatory approval in the U.S.

#### 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 18,000 employees work every day to help Framatome's customers supply ever cleaner, safer and more economical low-carbon energy.

Visit us at: [www.framatome.com](http://www.framatome.com) and follow us on [Twitter](#) and [LinkedIn](#).

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

#### About Ultra Safe Nuclear Corporation

Ultra Safe Nuclear Corporation (USNC), a U.S. company headquartered in Seattle, is a global leader and strong vertical integrator of nuclear technologies and services, on Earth and in Space. The company produces the Micro-Modular™ reactor (MMR®), TRISO-based Fully Ceramic Microencapsulated (FCM®) nuclear fuel and develops nuclear power and propulsion technologies for space exploration.

The company has active MMR deployment projects in Canada at the Canadian Nuclear Laboratories in Chalk River, and in the United States at the University of Illinois Urbana-Champaign. Additional units are in development in the United States, Canada, Europe, and Southeast Asia.

USNC is committed to opening new markets around the world for safe, commercially competitive power and heat from nuclear energy. Ultra Safe Nuclear Corporation is Reliable Zero-Carbon Energy. Anywhere.

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