

USNC, ENEC to explore MMR® Energy System development for the UAE and Three Seas Initiative

The companies will assess the MMR® for green hydrogen, decarbonization of energy intensive and hard-to-abate sectors, and broader regional developments.

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[EINPresswire.com/](https://www.einpresswire.com/) -- [Ultra Safe Nuclear Corporation \(USNC\)](https://www.ultrasafenuclear.com/), the U.S.-based global leader in the deployment of fourth-generation gas-cooled microreactors, and Emirates Nuclear Energy Corporation (ENEC), announced the signing of a memorandum of understanding (MOU) to jointly explore commercial development of USNC's [Micro-Modular™ Reactor \(MMR®\)](https://www.ultrasafenuclear.com/) Energy Systems. The signing took place during COP28 UAE in Dubai alongside multinational and industry pledges to more than triple global nuclear energy capacity by 2050.



The MOU was signed by Paolo Venneri, Executive Vice President of USNC and Ahmed al Mazrouei, Nuclear Research and Development Vice President of ENEC.

The agreement paves the way for potential commercialization of the MMR in the United Arab Emirates (UAE) to support green molecule generation including green hydrogen production and decarbonization of energy intensive and hard-to-abate sectors like steel and aluminum manufacturing, oil and gas processing, and petrochemicals, among others. Further areas of collaboration within the UAE include workforce and supply chain development and project delivery, along with a potential framework for ENEC to lead MMR deployments across the region in the Middle East and North Africa (MENA) and other areas covered by the Three Seas Initiative.

“We see great value in the deployment of advanced reactors, including microreactors, for decarbonizing the generation of clean electrons and molecules, with microreactors offering great flexibility for use in more remote locations. observed His Excellency Mohamed Al Hammadi,



The MMR's flexibility and scalability, co-located with industrial facilities, offers the kind of rapid decarbonization we have already set in motion for Emiratis and takes it beyond the power grid."

His Excellency Mohamed Al Hammadi, ENEC Managing Director and CEO

ENEC Managing Director and CEO. "We look forward to working with Ultra Safe Nuclear in exploring the advantages of high-temperature gas microreactors in delivering heat and power where it is needed."

"ENEC stands as a model to the world for project delivery and we are eager to collaborate on the deployment of the MMR Energy System," said Dr. Francesco Venneri, USNC Founder and CEO. "The MMR will play an important role for Emiratis as the nation continues towards deep decarbonization hand-in-hand with prosperity for Emiratis and other nations across the region."

The MMR Energy System features the high temperature

helium-cooled micro reactor, the MMR unit, that can safely and reliably provide up to 45 MWth of high-quality heat, delivered into a centralized heat storage unit. One or more MMR units combine their heat in the heat storage unit, from where electric power or superheated steam can be extracted through conventional means to meet a wide range of power needs, from tens to hundreds of MW. The heat storage unit combined with the operational flexibility of the MMR provides the means to readily meet and respond to hourly to seasonal demand profiles, providing an ideal solution to process heat applications, complement to intermittent renewables, and high-reliability microgrids.

USNC has developed and patented its TRISO-based, additively manufactured FCM[®] fuel used in the MMR to provide the safest possible nuclear power at the most fundamental safety level of the fuel elements. USNC is a commercial scale producer of TRISO and FCM fuel and through its Joint Venture with Framatome and its partnership with Urenco is able to meet the fuel demand for its MMR fleet as well as other systems utilizing TRISO-based fuel.

A leading innovator in advanced nuclear energy technologies, USNC is working with partners in the United States and around the world to develop secure and reliable carbon-free heat and power solutions where they are needed. The MMR enables new applications for the benefits of nuclear energy beyond traditional centralized electric power grids.

USNC is in pre-licensing engagement with the U.S. Nuclear Regulatory Commission (NRC), the Canadian Nuclear Safety Commission (CNSC) through Global First Power (GFP), USNC's joint venture with Ontario Power Generation, and with U.K. Office for Nuclear Regulation (ONR). The news follows recent USNC announcements including: the establishment of a joint venture with Framatome Inc. to manufacture commercial quantities of advanced nuclear fuels, including TRISO and its [Fully Ceramic Microencapsulated](#) (FCM) fuel forms; selecting a site in Alabama for its MMR Assembly Plant; the successful delivery of advanced TRISO fuel for NASA produced at its Pilot Fuel Manufacturing facility in Tennessee; and receiving initial funding from the U.S.

Department of Energy for the Pylon transportable reactor demonstration.

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About Ultra Safe Nuclear

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 systems and propulsion systems based on its technology.

The company has active micro reactor deployment projects in Canada at the Canadian Nuclear Laboratories in Chalk River, in the United States at the University of Illinois Urbana-Champaign. Additional units are in development in the U.K. through the Advanced Modular Reactor (AMR) program and in the United States, Canada, Europe, and Southeast Asia.

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

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