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Metatomic, Inc. Selected as GAIN Nuclear Energy Voucher Recipient

GREENVILLE, S.C. [October 5, 2023] – Greenville-based nuclear energy company, Metatomic, Inc., has been selected as a recipient of a Gateway for Accelerated Innovation in Nuclear (GAIN) Nuclear Energy Voucher to support the innovation of advanced nuclear technologies. The voucher process provides access to extensive nuclear research capabilities and expertise available across the U.S. Department of Energy (DOE) national laboratory complex. This voucher enables Metatomic to partner with the Savannah River National Laboratory (SRNL) in Aiken, SC, to provide bench scale demonstration of the Metatomic process technologies.

“We’re excited to take the next step forward in the Metatomic solution to spent commercial nuclear fuel and reduce the waste significantly,” reports Mike Stake, CEO of Metatomic, Inc. “It will further the goals of reducing spent fuel waste, in addition to providing fuel for molten salt reactors. If we are to meet our climate goals of 2030 and 2050, it’s important to aggressively pursue the innovation of the Metatomic solution in conjunction with the development of molten salt reactors.”

This support will aid Metatomic in its mission to use its patented technology to address the inventory of commercial light-water reactor (LWR) spent nuclear fuel (SNF) in the U.S. by effectively “mining” the uranium in the SNF to produce new fuel for molten salt reactors (MSRs). Such new fuel could potentially yield hundreds of years of electricity from energy potential that remains in used LWR nuclear fuel, even though such fuel is designated as “spent.”

SNF is not currently being processed in the U.S., but instead accumulates at nuclear power plants across the country and remains hazardous for decades. Metatomic’s architecture and compact facility design permit placement of its SNF processing facility together with an MSR on existing nuclear power plant sites, to allow onsite processing of the SNF (also stored onsite) into new fuel used by the MSR to produce carbon-free electricity. Ideally, collocating an MSR onsite with the Metatomic facility would eliminate the need to transfer the SNF offsite through towns and communities for permanent storage or other processing.

“We’re honored to receive this GAIN award from the Department of Energy and are excited about our technology for the zero-toxic waste conversion of spent nuclear fuel into new salt fuel for advanced molten salt reactors,” says Tom Epting, Metatomic Board member.

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Metatomic® thus plans to close the nuclear fuel cycle through its patented and patent-pending technology, transforming SNF into salt fuel suitable for “thermal” and “fast” MSR. By providing technology to supply salt fuel for these reactors, Metatomic will promote the production of potentially hundreds of years’ of electricity without carbon emissions, while also contributing to a safer environment in the United States.

GAIN has awarded nuclear energy vouchers for eight years totaling \$31.8M in funding since its start. This announcement was the fourth and final award for FY 2023.

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About Metatomic Energy

Metatomic® was established to address the large and constantly increasing inventory of commercial light-water power reactor spent nuclear fuel in the United States. The original intent of the nuclear power industry was to build nuclear power plants, use nuclear fuel, and then process the spent fuel. The Metatomic® facility and patented processes are designed to “Close the Nuclear Fuel Cycle” in a new and useful way, by processing the spent fuel currently stored in concrete casks at U.S. nuclear plants into fuel for use in advanced molten salt reactors. This enterprise would both generate electricity and substantially eliminate such spent nuclear fuel. The processes are designed to accept spent nuclear fuel currently stored in dry casks at nuclear plant locations and convert the spent fuel to fuel salt for use in molten salt reactor power plants.

For more information about Metatomic® visit:

<https://www.metatomicenergy.com/>

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