Press Release
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U.S. Department of Energy Further Advances Nuclear Energy Technology through Industry Awards of $19 Million

WASHINGTON, D.C. - The U.S. Department of Energy (DOE) today announced funding selectees for multiple domestic advanced nuclear technology projects. Four projects in two states will receive varying amounts for a total of approximately $19 million in funding. The projects are cost-shared and will allow industry-led teams, including participants from federal agencies, public and private laboratories, institutions of higher education, and other domestic entities, to advance the state of U.S. commercial nuclear capability.

The awards are through the Office of Nuclear Energy's (NE) funding opportunity announcement (FOA) U.S. Industry Opportunities for Advanced Nuclear Technology Development. This is the fourth round of funding through this FOA. The first group was announced on April 27, the second group was announced on July 10, and the third group was announced on November 13, 2018. The total of the four rounds of awards is approximately $117 million. Subsequent quarterly application review and selection processes will be conducted over the next four years.

"The Trump Administration is committed to reviving and revitalizing the U.S. nuclear industry, and these private-public partnerships are needed to help successfully develop innovative domestic nuclear technologies," said U.S. Secretary of Energy Rick Perry. "There are a lot of U.S. companies working on technologies to make the next generation of nuclear reactors safer and highly competitive, and partnerships will be key to accomplishing this goal."

The solicitation is broken into three funding pathways:

1.First-of-a-Kind (FOAK) Nuclear Demonstration Readiness Project pathway, intended to address major advanced reactor design development projects or complex technology advancements for existing plants which have significant technical and licensing risk and have the potential to be deployed by the mid-to-late 2020s.

2. Advanced Reactor Development Projects pathway, which allows a broad scope of proposed concepts and ideas that are best suited to improving the capabilities and commercialization potential of advanced reactor designs and technologies.

3. Regulatory Assistance Grants pathway, which provide direct support for resolving design regulatory issues, regulatory review of licensing topical reports or papers, and other efforts focused on obtaining certification and licensing approvals for advanced reactor designs and capabilities.

The following project was selected under the **FOAK Nuclear Demonstration Readiness Project** pathway:

- ***eVinci (TM) Micro Reactor Nuclear Demonstration Unit Readiness Project* – Westinghouse Electric Corp LLC (Cranberry Township, PA) is for Westinghouse and its team to prepare for the Nuclear Demonstration Unit (NDU) of the eVinci micro reactor through design, analysis, testing and licensing to manufacture, site and test the NDU by 2022**

DOE Funding: $1,624,729; Non-DOE: $1,624,729; Total Value: $3,249,458

The following four projects were selected under the **Advanced Reactor Development Projects** pathway:

- ***Development of Cable Aging Acceptance Criteria for Nuclear Facilities* – This work proposed by Analysis and Measurement Services Corporation (Knoxville, TN) aims to develop acceptance criteria for mechanical, electrical, thermal, and chemical condition monitoring tests that trend with age-related degradation of electrical cables.**
  DOE Funding: $12,879,797; Non-DOE: $15,675,350; Total Value: $28,555,147
- ***Modeling and Analysis of Exelon Boiling Water Reactors (BWRs) for Eigenvalue & Thermal Limits Predictability* – Under this proposal, Exelon Generation (Kennett Square, PA) will provide a deeper understanding of BWR core behavior (including Exelon's 15 BWRs) using the reactor modeling tool Virtual Environment for Reactor Applications (VERA). This will lead to improved core performance predictions for BWRs including reactivity and thermal margins, which has a direct, positive economic impact in terms of cycle energy production and fuel costs.**

  DOE Funding: $5,000,000; Non-DOE: $1,740,000; Total Value: $6,740,000

- ***Establishing Modular In-Chamber Electron Beam Welding* – The Electric Power Research Institute (Palo Alto, CA) will demonstrate the capability to produce large, thick-section components to support nuclear production in the United States via Modular In-Chamber Electron Beam Welding.**

  DOE Funding: $2,925,057; Non-DOE: $731,265; Total Value: $3,656,322

- ***Integrated Risk-Informed Condition Based Maintenance Capability and Automated Platform* – A team comprised of Public Services Enterprise & Group (PSE&G) Nuclear, LLC, Idaho National Laboratory, and Rolls-Royce North America (Moon Township, PA) will develop and perform pilot implementation of a fully integrated risk-informed condition based maintenance capability, on an automated platform. The key outcome of this project, when implemented, is significantly reduced O&M costs associated with time-based maintenance, across the U.S. nuclear fleet.**

  DOE Funding: $3,567,190; Non-DOE: $891,798; Total Value: $4,458,988

  The following project was selected under the **Regulatory Assistance Grant** pathway:

- ***TEUSA-USNRC Pre-Licensing Activities for the Integral Molten Salt Reactor (IMSR®)*** **Terrestrial Energy USA (New York, NY) will conduct pre-application interactions with the US NRC to advance the progress of licensing the IMSR®.**

DOE Funding: $499,232; Non-DOE: $124,808; Total Value: $624,040

DOE has selected five companies to receive technology development vouchers under the GAIN program. The companies selected are Westinghouse Electric Company (Cranberry Township, PA) in the amount of $420,000; Elysium Industries (Clifton Park, NY) in the amount of $500,000; NexDefense (Atlanta, GA) in the amount of $400,000; Exelon Generation (Kennett Square, PA) in the amount of $480,000; and Eastman Chemical Company (Kingsport, TN) in the amount of $350,000. Further detail and description of these awards can be found under the GAIN website. GAIN website.

More information on the Office of Nuclear Energy and its programs can be found here.

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