CAMBRIDGE, Mass. – January 30, 2017 – Leading advanced nuclear technology developer Transatomic Power Corporation (TAP) announced today that scientists at the Oak Ridge National Laboratory (ORNL) have verified the viability of reducing nuclear waste production with the company’s technology. The laboratory’s new Technical Memorandum, “Two-Dimensional Neutronic and Fuel Cycle Analysis of the Transatomic Power Molten Salt Reactor,” represents an important milestone for the nascent advanced nuclear industry and helps position advanced nuclear technology as a key player in the country’s future energy mix.

“This is an important step for the project, as not only have we independently evaluated the TAP results, but we now have a common basis from which we can continue to improve the overall fuel cycle performance of the design,” said Andrew Worrall, leader of the ORNL Fuel Cycle Research and Development (R&D) Program, and Principal Investigator on the TAP project. “We look forward to further work over the remainder of the project.”

Dr. Leslie Dewan, TAP’s CEO and co-founder, remarked that the outcome “serves as further validation of our cutting-edge technology, and lays the foundation for moving to our next technology development phase.”

The company has designed a nuclear reactor that uses a molten fluoride salt to carry its fuel, meaning it cannot melt down and possesses enhanced inherent safety features over current nuclear technology. Additionally, the lab’s results, obtained from analysis performed under a Cooperative Research and Development Agreement (CRADA) between TAP and ORNL, conclusively show that the Transatomic reactor can operate for decades using the commercially-available 5% low-enriched uranium supply chain.

The announcement comes just after the one-year anniversary of the Gateway for Accelerated Innovation in Nuclear (GAIN) initiative, which was announced in November 2015 as an effort to kick-start public-private partnerships between the national lab system and private technology firms. In June 2016, Transatomic Power was among the first awardees under a “voucher” pilot program, in which private companies are given $200,000 in work-in-kind funding from the Department of Energy to perform cooperative R&D work with national labs.
Dr. Doug Crawford, Deputy Director of the GAIN initiative, noted that the results point to GAIN’s importance for both spurring innovation in the private sector and encouraging public-private partnerships. “In addition to TAP, GAIN is supporting several other private firms through collaboration with national labs on ground-breaking research to develop advanced nuclear technologies,” he said. “Many R&D staff at national labs are accustomed to working on DOE projects that are led by laboratory initiative. It is a different matter to support a project initiated by someone outside a national lab, so it is important for us to learn and demonstrate how we can support private developers in a valuable way.”

Dr. Dewan agrees. “This is just the first step in what we hope will be a long, productive engagement with the national lab system,” she said. “The labs possess capabilities that are critical to helping small businesses develop state-of-the-art technologies, and GAIN is key to unlocking the potential that these technologies present.”

About Transatomic Power Corporation

Transatomic Power is a leading technology innovator in the field of liquid-fueled nuclear reactors. The company was founded in 2011 and is based in Cambridge, MA.

The company’s novel reactor architecture is based on inventions developed by Dr. Dewan and Mr. Mark Massie. The reactor’s use of liquid fuel makes it possible to generate power at atmospheric pressure, greatly reduce the creation of long-lived nuclear waste, and improve safety and cost. The basic approach was demonstrated in the 1960s, and now the company has developed key material and design improvements that could transform the nuclear industry. The company was also recently featured on PBS’s NOVA.

More information, including a technical overview, is available on the company’s website. Visit http://www.transatomicpower.com/.

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For information, contact:
Transatomic Power
1 (617) 520-4850
info@transatomicpower.com