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## Latest Defense Energy Seminar Examines Little Used Technology in Nuclear Energy

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Naval Postgraduate School, Monterey California

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*U.S. Navy photo by MC2 Patrick Dionne*

## **Latest Defense Energy Seminar Examines Little Used Technology in Nuclear Energy**

*By MC2 Patrick Dionne*

John Kutsch, Executive Director for the Thorium Energy Alliance, offers the latest Defense Energy Seminar examining the use of Integral Molten Salt Reactor (IMSR) technology with hybrid nuclear, renewable energy systems in the Mechanical and Aerospace Engineering Auditorium, Jan. 26. Kutsch described IMSR tech as a clean energy alternative to fossil fuel combustion, and is also compact, efficient and cost-competitive with current mainstream energy options.

“This is a revolutionary technology that the United States developed over 50 years ago, and ran and proved over 23,000 hours of operations,” said Kutsch. “This isn’t something that only works on paper, it isn’t just theoretical. It is a proven, known design that is a real solution to decarbonizing our economy and greatly reducing our reliance on foreign powers as a source of energy, making the environment cleaner and us a lot safer in the process.”

IMSR provides a new deployable system for low-cost, carbon-free process heat energy, which can be used to produce a broad array of energy services including electric power, hydrogen as an input for industrial chemical production such as in steel or cement; and other primary materials or synthetic fuels for the transportation sector. All of this can be achieved cost-competitively with fossil fuels, and at the lowest life-cycle emissions rating of any power source.

“The reactor works by integrating small, modular high temperature molten salt reactors into our energy grid that give us the opportunity to not only create energy for electricity, but for doing

anything from creating hydrogen to ammonia for fertilizer,” said Kutsch. “This high-temperature reactor runs at 600 degrees Celsius, and instead of using water as a coolant, it uses melted salt, and that allows us to run the whole system at a higher temperature.”

Kutsch has spent 23 years developing materials, mechanisms and products for industry, energy and medical clients. He is noted for leading technical design of all variations of the IMSR. In 2006, he became a founding member of the Thorium Energy Alliance after spending years researching thorium applications.

“There is a new approach to a proven technology that will greatly affect our future and the United States needs to catch up,” said Kutsch. “One way or another this technology is going to affect you and I am honored that NPS asked me to give this talk because I know that these are the future decision-makers that will be listening to it. Any seed I can plant of what this technology could be, hopefully can bring change.”

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