

LECTURER'S VITAE

IAEA-ARGONNE TRAINING COURSE

Name: James J. Sienicki

Present Position: Manager, Innovative Systems Development Section; Senior Nuclear Engineer

Affiliation: Argonne National Laboratory, Nuclear Engineering Division

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Scope of Present Duties:

Leading the development at ANL of an advanced power converter for advanced nuclear reactors consisting of a gas turbine Brayton cycle utilizing supercritical carbon dioxide as the working fluid that can improve the economics of advanced reactors relative to use of the traditional Rankine steam cycle.

Most Relevant Past Experience:

Since 1997, have been developing Lead-Cooled Fast Reactor (LFR) and Sodium-Cooled Fast Reactor (SFR) Small Modular Reactor (SMR) concepts suitable for deployment in developing nations that are better suited for growing economies and infrastructures, are right-sized for small or growing electrical power grids, have long core lifetimes providing energy security for nations not wanting the expense of an indigenous fuel cycle and waste repository infrastructure but willing to accept a guarantee of services from a regional fuel cycle center, embody proliferation resistance, are fissile self-sufficient, enable autonomous load following due to inherent reactivity feedbacks, and provide a high level of passive safety reducing the number of accident initiators and the need for safety systems.

Educational Background:

Ph.D. in Physics, University of Illinois at Chicago

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