

GAIN
Gateway for Accelerated
Innovation in Nuclear

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INL Oak Ridge Argonne

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GAIN
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Things we'll talk about today

- What is GAIN?
- Activities To Date
- Recent Successes
- Versatile Test Reactor
- Future Activities

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What is the GAIN Initiative?
Gateway for Accelerated Innovation in Nuclear


What are the issues?	What do we need to do?	What is the DOE initiative?
<ul style="list-style-type: none"> Time to market is too long Facilities needed for RD&D are expensive Capabilities at government sites have not been easily accessible Technology readiness levels vary Some innovators require assistance with regulatory processes 	<ul style="list-style-type: none"> Provide nuclear innovators and investors with single point of access into Department of Energy (DOE) complex Provide focused research opportunities and dedicated industry engagement Expand upon DOE's work with Nuclear Regulatory Commission (NRC) 	<ul style="list-style-type: none"> Private-public partnership, dedicated to accelerating innovative nuclear energy technologies time to market <p>DOE recognizes the magnitude of the need, the associated sense of urgency and the benefits of a strong and agile private-public partnership in achieving the national goals.</p>




GAIN Vision

By 2030
The U.S. nuclear industry is equipped to lead the world in development of innovative nuclear technologies to supply urgently needed abundant clean energy both domestically and globally.

GAIN is
A private-public partnership framework aimed at rapid and cost-effective development of innovative nuclear energy technologies towards market readiness.


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GAIN Mission


Mission:
Provide the nuclear energy industry with access to technical, regulatory and financial support necessary to move innovative nuclear energy technologies toward *commercialization* in an accelerated and cost-effective fashion

GAIN is:
The organization principle for relevant, federally-funded nuclear energy Research, Development & Demonstration (RD&D) programs.



TRISO Fuel Particle

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Where is nuclear innovation needed?



Advanced Reactor Concepts (engineering, licensing, construction, advanced fuels/materials, modular designs, fuel cycle research, etc.)

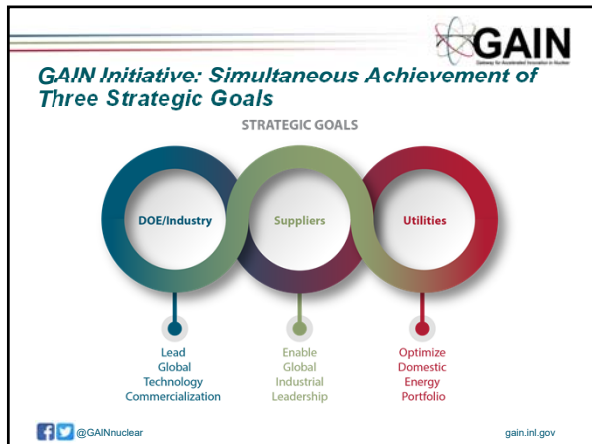
Components (cables, materials, etc.)

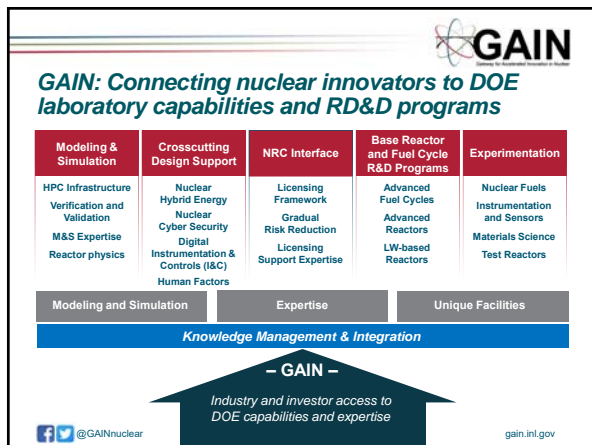
Advanced Methods & Processes

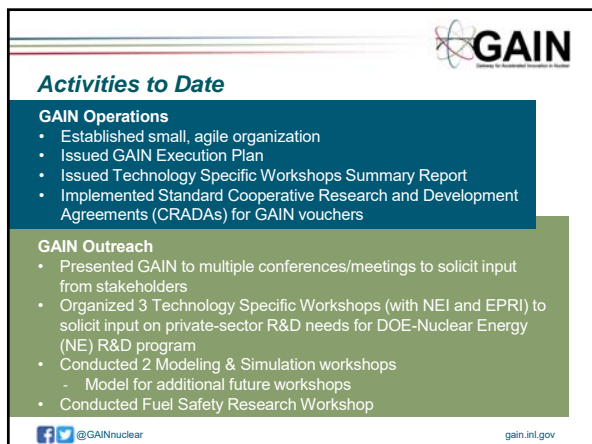
Collaboration (vision driven, trust, learning, etc.)

Safety / Security (Cyber, digitization, control room mods, inspection techniques, passive safety features, etc.)

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Clean Transit Hub Scenario






Remote Arctic Community Scenario





Catalyst for Clean Growth Scenario





Future Activities 2018

Workshops:

- Enabling Advanced Reactors for the Market: March 8-9, 2018
- Follow-on modeling and simulation workshops/demonstrations: Feb-March 2018
- Gap Analysis on Standards and Codes for Advanced Reactors: May 2, 2018
- Digital I&C: May 2018

Database/catalog:




- Develop a list of historical advanced-reactor documents to support knowledge transfer; facilitate access to key documents through OSTI
- Develop and initiate the process to appropriately remove AT designation on high priority documents requested by industry


Funding Opportunities:



- Industry-focused FOA and Vouchers awarded quarterly for 5 years

Streamline contracting mechanisms:

- Class patent waivers
- Extended IP protection


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