

Export-by-Design

Bego Aranguren

Peace Through Atomic Strength



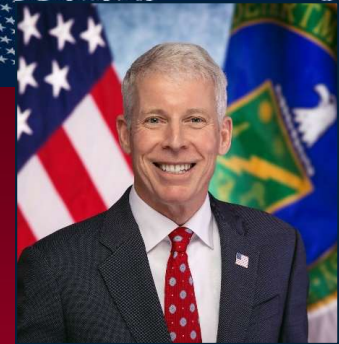
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Why are we Here Today?

To unleash U.S. nuclear energy dominance.

- ★ The Department Of Energy's National Nuclear Security Administration works with the U.S. civil nuclear industry to make U.S.-designed nuclear reactors and fuel cycle facilities more competitive in the international market.
- ★ We focus on making facilities easier to safeguard, more secure, and more resistant to nuclear proliferation.



“As global energy demand continues to grow, America must lead the commercialization of affordable and abundant nuclear energy. As such, the Department will work diligently and creatively to enable the rapid deployment and export of next-generation nuclear technology.”

– U.S. Secretary of Energy,
Chris Wright

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What do IAEA Safeguards Accomplish?

International safeguards are a set of:

- legal agreements,
- technical measures, and
- administrative procedures.



They allow the International Atomic Energy Agency to independently verify that nuclear materials and technologies are used only for peaceful purposes.

Detect diversion of declared nuclear material

Detect misuse: undeclared production or processing of nuclear material at declared facilities

Detect undeclared nuclear material or activities



International Security and Why it Matters

- **Reputation and Trust:** taking a proactive approach to nuclear security enhances reputation and trustworthiness.
- **Market Access and Competitiveness:** integrated security features represents a significant competitive advantage and cost saving to redesign.
- **Risk Mitigation:** preventing a nuclear security incident to protect investments and long-term viability.
- **Regulatory Compliance:** adhering to U.S. and international regulations, guidelines, and best practices.



165 States are party to the Convention on the Physical Protection of Nuclear Material (CPPNM) that establishes the legal obligations for physical protection of nuclear material during transport



138 States are party to the Amendment to the CPPNM that establishes the legal obligation for physical protection of nuclear facilities and nuclear material



10-12 embarking countries expected to have nuclear power by 2035

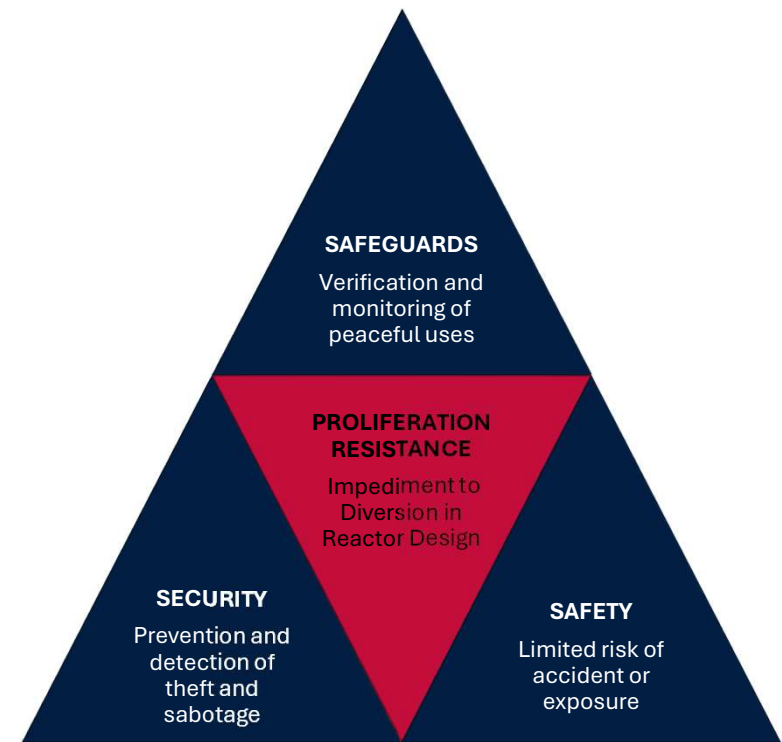


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What is Proliferation Resistance?

- Proliferation resistance is a technical attribute of a nuclear system that make it inherently difficult to use for proliferation
- Driver of proliferation resistance efforts is the reduction of “materials of weapons interest” in the facility
- Proliferation resistance provides an additional layer of security in a nuclear system by ensuring the device could not be used to proliferate without significant time or intensity



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The NNSA Approach

Prepare advanced nuclear technology stakeholders to meet the highest nonproliferation standards



Engage with Advanced Nuclear Industry



Build Nonproliferation Knowledge Base and Capacity for Advanced Nuclear



Prepare Stakeholders for New Technologies and Deployment Models

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Stakeholder Engagements are Key



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Thank You!



U.S. Department of Energy
National Nuclear Security Administration
Office of International Nuclear Safeguards

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<https://www.energy.gov/nnsa/nuclear-nexus>

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