



Agreements for Cooperation and Obligations

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Background

- Currently Agreements for Cooperation (123 Agreements) with more than 40 countries (Euratom Agreement includes all member states of the EU), IAEA and Taiwan
- Agreements must comply with Section 123 of the U.S. Atomic Energy Act of 1954 as amended, which authorizes Agreements for Cooperation in the Peaceful Uses of Nuclear Energy
- Provides framework for significant civil nuclear commerce
 - Nuclear material
 - Major components
 - Equipment
- Originally designed when United States was major exporter; United States now a major importer



Negotiation and Administration of 123 Agreements

- 123s negotiated by Department of State, with technical assistance from Department of Energy and concurrence of NRC
- Department of Energy negotiates and implements administrative arrangements to the agreements
- Office of International Regimes and Agreements administers the agreements for DOE.
- The Nuclear Regulatory Commission reviews and approves license requests for all exported nuclear material and equipment subject to the Agreement



Role of DOE

- Provide technical expertise to Agreement negotiations
- Negotiate and implement Administrative Arrangements
 - Formal Administrative Arrangements for countries with whom there are frequent need for consultations and significant transfers (Australia, Euratom, Canada, Switz) (Japan through diplomatic channels); others conducted on an as needed basis.
 - Annual inventory reports/exchange
- Execute subsequent Arrangements
 - Permit transactions on a case-by-case basis
 - Retransfers
 - Alterations in form or content
 - Reprocessing



Section 123 Requirements

- Section 123 legislation requires:
 - Safeguards guarantees for all non-nuclear weapons states on all transferred nuclear material and equipment
 - Full scope safeguards (non NWS only)
 - Peaceful uses assurances
 - Right of return in the event the other party detonates an explosive device or violates/terminates an IAEA agreement for safeguards
 - No alteration in form or content, including reprocessing and enrichment, or retransfer with out permission
 - Physical security guarantees
 - U.S. prior approval of storage facilities
 - SNT obligations



What Transfers Require a 123 Agreement

- A Section 123 Agreement is required in order for transfers of source material, special nuclear material, production or utilization facilities and sensitive nuclear technology to take place to another country.
 - Source material: natural uranium, depleted uranium, and thorium.
 - Special nuclear material: plutonium, uranium enriched in the isotope 233 or 235, and any other material which the Nuclear Regulatory Commission Commissioners may so designate.
 - Production facility: Any nuclear reactor or plant specially designed or used to produce special nuclear material through the irradiation of source material or special nuclear material, the chemical processing of irradiated source or special nuclear material, or the separation of isotopes, other than a uranium enrichment facility.



Transfers Requiring 123 cont.

- Utilization facility: Any nuclear reactor, other than one that is a production facility and any of the following major components of a nuclear reactor:
 - Reactor pressure vessel
 - Primary coolant pumps
 - “On-line” reactor fuel charging and discharging machine
 - Complete reactor control rod system.
 - Note: Does not include the steam turbine generator portion of the power plant.

- Sensitive nuclear technology: Any information (including information incorporated in a production or utilization facility or **important** component part thereof) which is not available to the public, which is **important** to the design, construction, fabrication, operation, or maintenance of a uranium enrichment or nuclear fuel reprocessing facility or a facility for the production of heavy water, but shall not include Restricted Data controlled pursuant to Chapter 12 of the Atomic Energy Act.

- Other nuclear related transfers can be made subject to the agreement if both parties agree.



Transfers NOT Requiring a 123 Agreement

- Less important/sensitive materials
 - Examples are zirconium and graphite
- Nuclear-related dual-use exports
 - Examples are computers, simulators, detectors
 - Other items licensed by the Dept of Commerce
- Usually less onerous
 - primarily for peaceful purposes
 - don't carry all the other obligations under 123



Reporting and Tracking Foreign Obligations

- Items subject to an Agreement for Cooperation are “obligated”
- Can be multiple obligations on material
- Peaceful Uses Assurances are sought and granted
 - Official Gov-to-Gov notice
 - Facilities are asked to verify material is for peaceful uses and will be made subject to the agreement
 - Assurances must be given prior to shipment
- Obligations require safeguards, consent rights, reporting
- Detailed transaction information
 - Submitted by facility (whether NRC or DOE) to NMMSS
 - Includes any information on foreign obligations
 - Is reconciled with information received by foreign partners
- Principles of fungibility, substitution and equivalence



Annual Inventories

- All Agreements require parties to produce inventories when requested
- Agreements with Australia, Canada, Euratom, Japan and Switzerland *require* annual exchange of inventories
- Each of the required inventories is scrutinized by both parties
- Discrepancies are investigated by DOE and NMMSS
- Both parties certify acceptance of each others' inventory
- NMMSS upgrades streamlining information exchange and improving quality of data