

# DOE Technology Transfer and IP Policy: Government-Owned, Contractor-Operated Model



# U.S. DEPARTMENT OF ENERGY



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- Introduce DOE mission and organizational structure
- Understand Federally-funded R&D Center (FFRDC) and Management & Operating Contractor (M&O) status of DOE GOCO Laboratories
- Identify technology transfer authorities and associated legal mechanisms used by DOE GOCOs
- Identify similarities and examine differences in technology transfer function and requirements at DOE GOCOs relative to GOGOs
- Discuss how GOGOs and GOCOs can adopt and adapt each others' innovations in technology transfer

**The mission of the Department of Energy is to ensure America's security and prosperity by addressing its energy, environmental, and nuclear challenges through transformative science and technology solutions.**

## **Goal 1:**

Catalyze the timely, material, and efficient transformation of the nation's energy system and secure U.S. leadership in clean energy technologies.

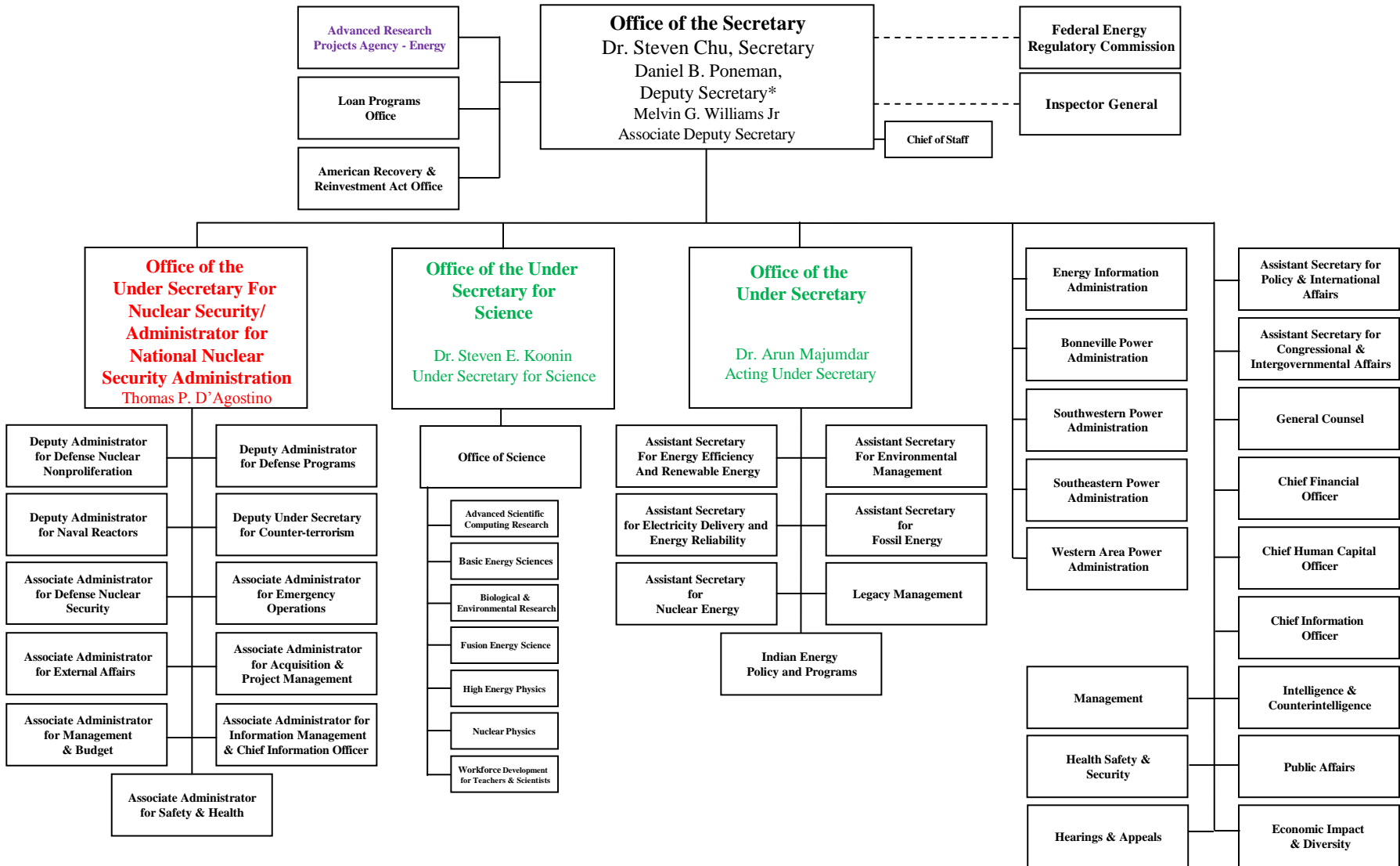
## **Goal 2:**

Investing in scientific discovery and innovation to find solutions to pressing energy challenges and maintain American economic competitiveness.

## **Goal 3:**

Enhance nuclear security through defense, nonproliferation, and environmental efforts.

# DEPARTMENT OF ENERGY



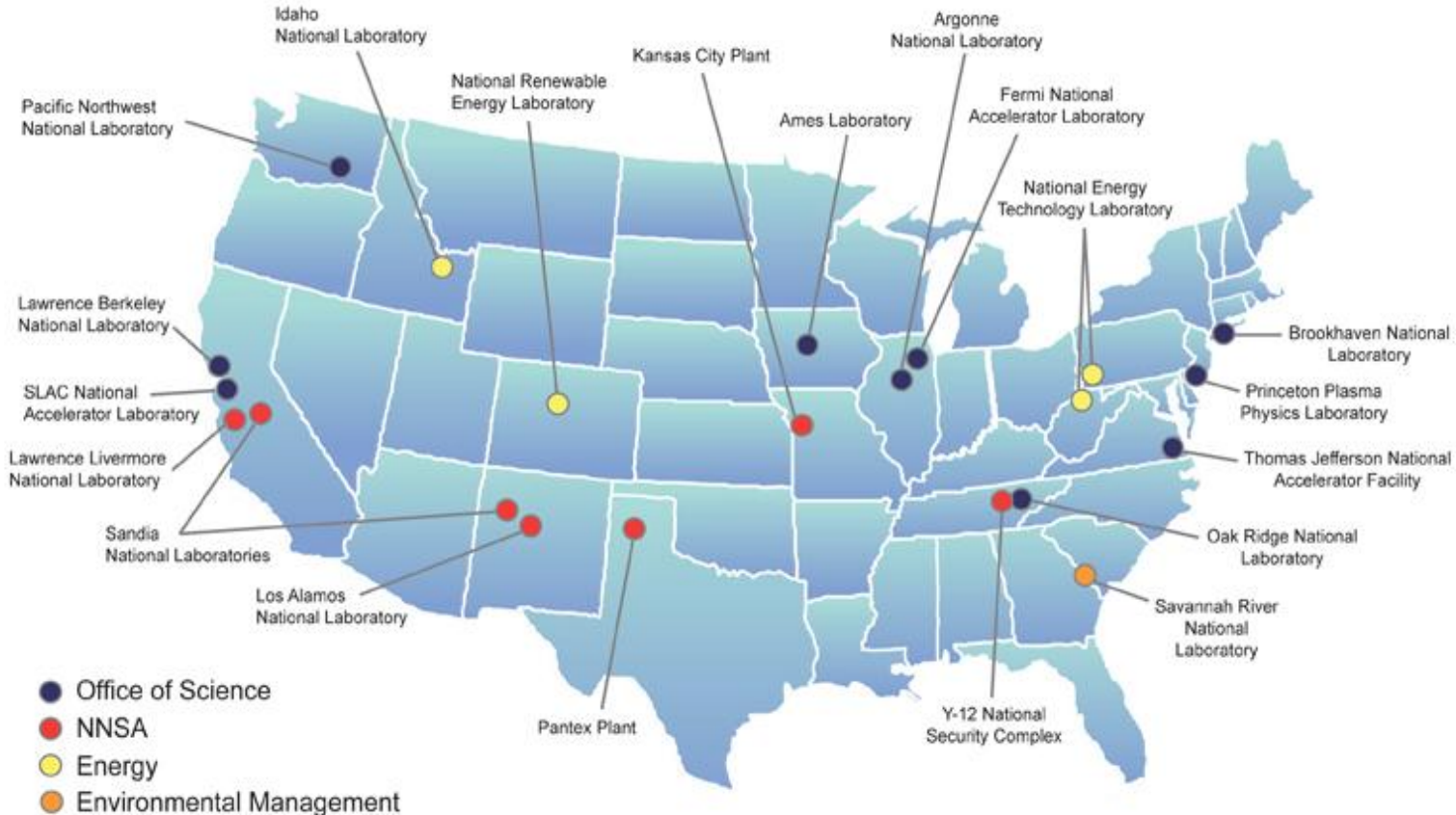
\* The Deputy Secretary also serves as the Chief Operating Officer

The U.S. Department of Energy (DOE) is a diverse and dynamic federal agency. DOE has approximately **14,000** federal employees, **93,000** contracted employees and more than **80** sites and facilities, including **17** national laboratories, four power marketing administrations and one Energy Information Administration, along with seven international offices. DOE has a budget of **\$28 billion** and is managing an additional **\$36.7 billion** in investments received through the American Recovery and Reinvestment Act. DOE is also the largest funder physical science research in the U.S.

## Technology Transfer Program

The **17** national laboratories and **5** of the facilities are authorized to engage in technology transfer activities. Each of the laboratories have technology transfer as part of its mission.

## Laboratories and facilities across the U.S.



Sixteen of 17 National Labs are **Government-owned Contractor-operated (GOCO)**. They are **Federally-funded R&D Centers (FFRDC)** each operating under a **Management & Operating contract (M&O)**.

DOE's national laboratories are GOCO Federally-funded R&D Centers (FFRDCs), managed under a unique legal relationship by a Management and Operating (M&O) contractor.

M&O/GOCO model - “arm’s-length” relationship creates greater flexibility in managing scientific institutions that must be able to attract world-class scientific talent and adapt quickly to changing national research priorities and advances in science and technology.

M&O/GOCO model allows the contractors to bring the best private sector personnel and research management practices to the national laboratories, and provides the laboratories with the flexibility necessary to broadly engage academia and the private sector.

# Federally-funded R&D Centers (FFRDCs)



An FFRDC meets some special long-term research or development need which cannot be met as effectively by existing in-house or contractor resources. FFRDC's enable agencies to use private sector resources to accomplish tasks that are integral to the mission and operation of the sponsoring agency.

An FFRDC, in order to discharge its responsibilities to the sponsoring agency, has access, beyond that which is common to the normal contractual relationship, to Government and supplier data, including sensitive and proprietary data, and to employees and facilities.

The FFRDC is required to conduct its business in a manner befitting its special relationship with the Government, to operate in the public interest with objectivity and independence, to be free from organizational conflicts of interest, and to have full disclosure of its affairs to the sponsoring agency.

It is not the Government's intent that an FFRDC use its privileged information or access to facilities to compete with the private sector.

However, an FFRDC may perform work for other than the sponsoring agency under the Economy Act, or other applicable legislation, when the work is not otherwise available from the private sector.

# Management & Operating Contract (M&O)



"Management and operating contract" means an agreement under which the Government contracts for the operation, maintenance, or support, on its behalf, of a Government-owned or -controlled research, development, special production, or testing establishment wholly or principally devoted to one or more major programs of the contracting Federal agency.

**A management and operating contract is characterized both by its purpose (see above) and by the special relationship it creates between Government and contractor. The following criteria can generally be applied in identifying management and operating contracts:**

**Government-owned or -controlled facilities must be utilized; for instance-**  
**In the interest of national defense or mobilization readiness;**  
**To perform the agency's mission adequately; or**  
**Because private enterprise is unable or unwilling to use its own facilities for the work.**

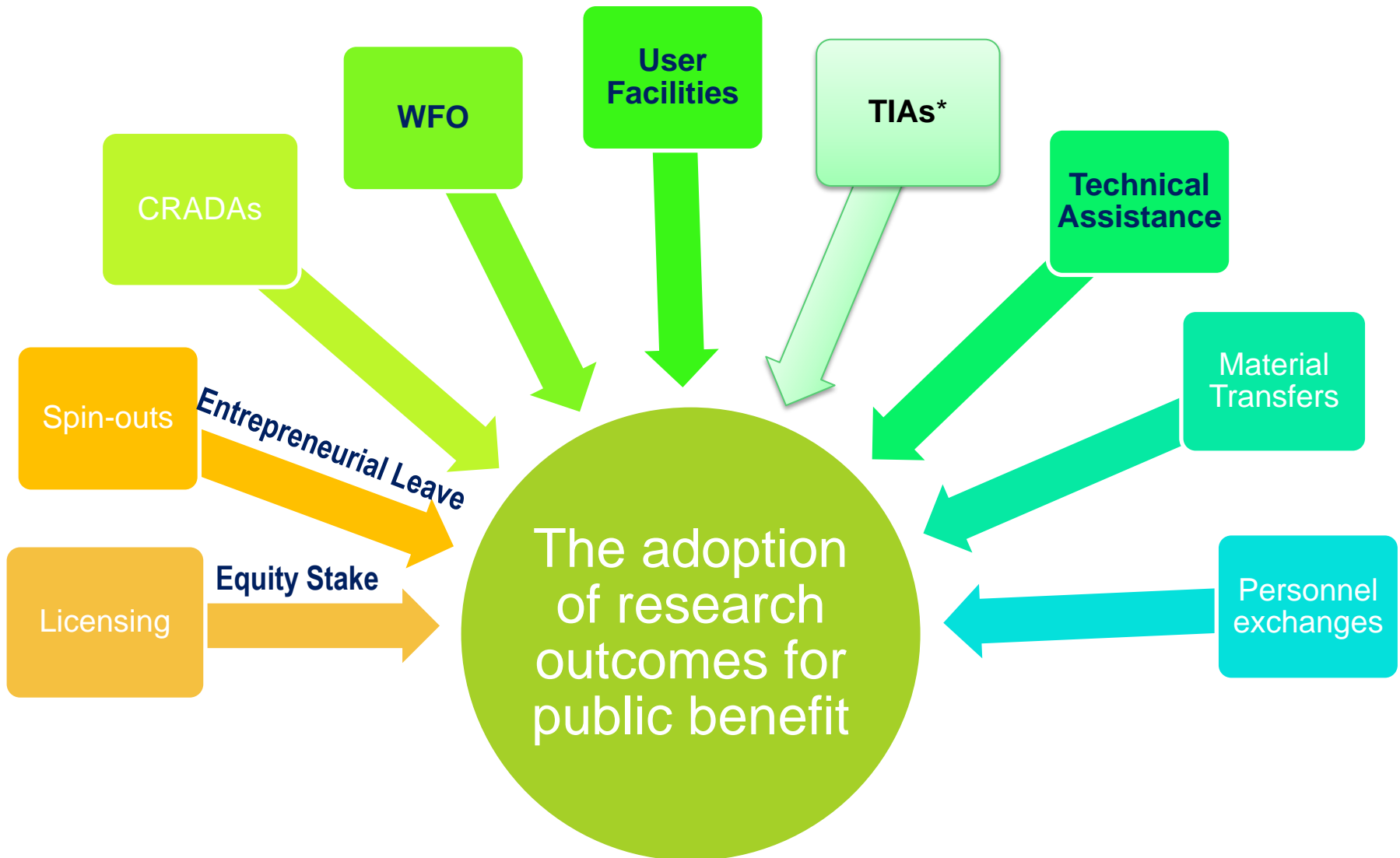
**Because of the nature of the work, or because it is to be performed in Government facilities, the Government must maintain a special, close relationship with the contractor and the contractor's personnel in various important areas (e.g., safety, security, cost control, site conditions).**

**The conduct of the work is wholly or at least substantially separate from the contractor's other business, if any.**

**The work is closely related to the agency's mission and is of a long-term or continuing nature, and there is a need-**

**To ensure its continuity; and**  
**For special protection covering the orderly transition of personnel and work in the event of a change in contractors.**

# Transactions – So what CAN we do?



\*This Agreement is with the DOE (not with the Labs).

- New inventions disclosed: **1,616**
- Patent applications filed: **1051**
- Patents issued: **651**
  
- Active CRADAs: **711**
- Active Licenses: **6,224**
  - Includes invention licenses (1,285) and other IP (copyright, material transfer)
- Licenses that are income-bearing: **3,489**
- Total Licensing and Earned Royalty Income **~\$65.9M**
  
- Active Work-for-Others Agreements: **2,222**
- Active User Facility Agreements: **4,391**

**Bayh-Dole**, 35 USC 201 et seq:

- IP developed under grants and contracts

**DEAR** (DOE Acquisition Regulations) and FAR:

- IP developed under M&O contracts (by DOE Labs)

**Atomic Energy Commission Act**, 42 USC 2182 and **Federal Nonnuclear Energy Act**, 42 USC 5908: Covers R&D not subject to Bayh-Dole

- IP Developed under “Work for Others” and “User Facilities” Agreements
- Title to government unless waived
  - Patent Class Waivers
- Subject to Government Use License, US Preference and US Competitiveness

**Other Transactions (TIAs)**: No statutory IP requirements  
allows greater flexibility in negotiation

Cooperative Research and Development Agreements (CRADAs) 15 U.S.C. § 3710a, provide a vehicle for collaborative research with Federal laboratories, including the DOE GOCO National Labs. Both parties may provide personnel, services, facilities, or equipment for the conduct of specified research and development

Typically to develop, advance, or commercialize a lab-developed technology

Costs may be shared or may be 100% funds-in, where participant covers cost of lab's work. Labs are prohibited from providing funds to participant.

model CRADA available

## ***Intellectual Property***

Lab and Participant may elect title in its own inventions

Participant has right to negotiate exclusive license in Lab technology developed under CRADA

**Government Rights:** Participant's subject inventions are subject to a Government use license and march-in rights; all subject inventions are subject to U.S. Competitiveness

## ***Data Rights***

Background data must be identified as such and shall not be disclosed to others w/o written approval

Generated information may be protected for a period of up to 5 years ("Protected CRADA Information")

Partners generally may assert copyright in generated information, subject to a Government use license.

**Government Rights:** Government has unlimited rights in generated information not copyrighted, proprietary, or is designated as Protected CRADA Information

# Some Difference: CopyRights

Under M&O contracts, Labs may assert copyright with agency permission, but Government reserves a paid-up non-exclusive license to reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly by or on behalf of the Government (no distribution for software).  
(Universities under contracts for basic research do not need permission.)

Under contracts and grants, may assert copyright without agency permission, and Government reserves same rights, but no exception for software distribution.

***U.S. Preference*** – for exclusive licenses to use or sell any subject invention in the United States, licensee must agree that any products embodying the subject invention or produced through the use of the subject invention will be manufactured substantially in the United States.

***U.S. Competitiveness*** - Substantial manufacture also applies to contractor/awardee and non-exclusive licensees, and may apply for sale worldwide (e.g. large businesses)

*May be waived or modified under certain circumstances, but expect to agree to provide some benefit to U.S. economy*

Difference:

## Work for Others (with non-Federal entities)



DOE makes its unique facilities and scientific expertise available to the public on a cost reimbursable basis. The DOE Labs perform private R&D work for sponsors.

The work must be consistent with agency missions and the work must not place the facility in competition with the private sector.

IP rights in the Lab-generated work product typically belong to the private sponsor

## ***Patent Rights***

sponsor may elect title to its own *as well as* Lab inventions, subject to Government license, and U.S. Preference (lab inventions only)

## ***Data Rights***

sponsor gets to keep generated data as proprietary  
sponsor may assert copyright in its own data and get assignment of copyright in Lab data, subject to Government license.

## Exceptions

- Federal funds

- Foreign sponsor

DOE makes available certain large, complex, and sophisticated facilities and associated equipment and instruments for advancing research efforts of profit and nonprofit organizations.

Arrangements permitting private parties to conduct research and development at a laboratory.

Provides access to facility only (not to personnel)

Differing requirements for Proprietary or Non-Proprietary User Agreements

DOE provides streamlined User Facility agreements for proprietary and nonproprietary users at its “Designated User Facilities” (list publicly available at the DOE website). If facility is not on list, CRADA or WFO will be used.

## ***Intellectual Property***

Intellectual property rights usually belong to the user.

***Government rights:*** Government retains Government Use Rights and U.S. Preference in Non-Proprietary User Agreements but no rights in inventions in Proprietary User Agreements

## ***Data Rights***

Generated data may be kept as proprietary in Proprietary User Agreements

***Government rights:*** Government retains unlimited rights in data in Non-Proprietary User Agreements but no rights in data in Proprietary User Agreements

## Proprietary User Facility

- full cost recovery
- use of equipment only
- user owns its own inventions
- generated data may be kept as proprietary
- Government retains no rights in inventions or data

## Non-Proprietary User Facility

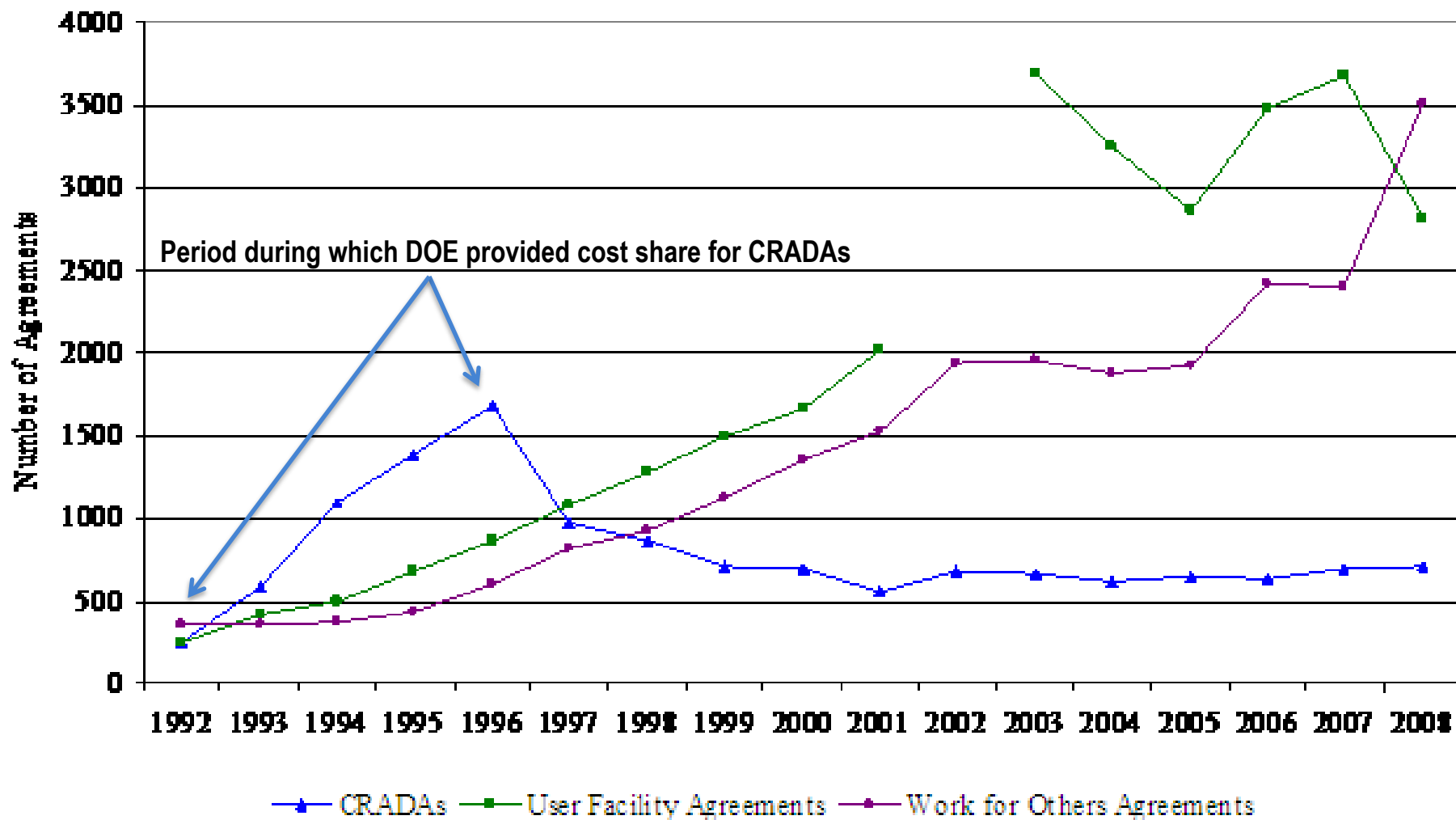
- costs are shared
- use of equipment and/or collaboration for pre-competitive research
- user and lab own their own inventions, subject to Government license, march-in rights, and U.S. preference
- data is publicly available
- users may assert copyright subject to Government license.

# Comparison of Key Features of Select Transactions



<b>LAB TRANSACTION</b>	<b>USE</b>	<b>OWNERSHIP OF SUBJECT INVENTIONS</b>	<b>DATA</b>	<b>COSTS</b>	<b>US MANUFACTURE</b>
<b>CRADA</b>	Collaborative research between labs and private sector	Lab and Participant may elect title in its own inventions; Participant has right to negotiate exclusive license in Lab technology	Data may be protected from publication and dissemination for up to 5 years	Lab and Participant share costs (Also: 100% funds in)	Participant agrees that products embodying IP resulting from CRADA shall be manufactured substantially in the US for net benefit to the US
<b>WORK FOR OTHERS</b>	Access to highly specialized or unique facilities, services or technical expertise	Sponsor may elect title to its own and to Lab subject inventions	Sponsor may mark first-produced data as proprietary with limited exception	Sponsor pays full costs	Sponsor agrees not to grant any party exclusive right to use or sell subject inventions in the US unless products are manufactured substantially in the US for net benefit to the US
<b>PROPRIETARY USER FACILITY AGREEMENT</b>	Specialized Lab equipment only	User may elect title to subject inventions	User may mark first-produced data as proprietary with limited exception	User pays costs	No requirement
<b>NON-PROPRIETARY USER FACILITY AGREEMENT</b>	Specialized Lab equipment only	User may elect title to subject inventions	Data is made publicly available	Each party bears own costs	Sponsor agrees not to grant any party exclusive right to use or sell subject inventions in the US unless products are manufactured substantially in the US for net benefit to the US

# Historical Data



Difference:

# DOE “Other Transactions” Authority and TIAs



## DOE’s “Other Transactions” Authority, 10 CFR 603

May deviate from certain standard terms and conditions (e.g. cost accounting and IP terms). Interest more often is on IP terms.

Cost share 50% or more

Where IP clauses are to be negotiated, start with standard patent provisions, not a clean slate

Quid pro quo philosophy

Generally, definition of “subject invention”, scope of march-in and Government license are negotiable

U.S. Competitiveness must be addressed

No more than 5-year data protection

Difference:

## DOE “Other Transactions” Authority and TIAs



### Examples of TIAs

Buy back option – recipient may elect to buy back march-in rights and Government license in subject inventions for cost of award plus interest

Narrow definition of “subject invention” in exchange for more aggressive march-in rights

Narrow application of certain reserved Government rights to a field of use

# Difference: Technical Assistance

Business requests assistance

Lab provides several days of technology assistance at no charge  
(availability and eligibility based on fiscal year)

Lab provides support that is otherwise unattainable

**\*\*\*SBIR/STTR Alerting Service\*\*\***

Pacific Northwest National Laboratory

Automatic free alerts sent every other week, includes  
solicitations, training, conferences, tips, and contact information with web  
addresses

Covers all 11 agencies, not just DOE



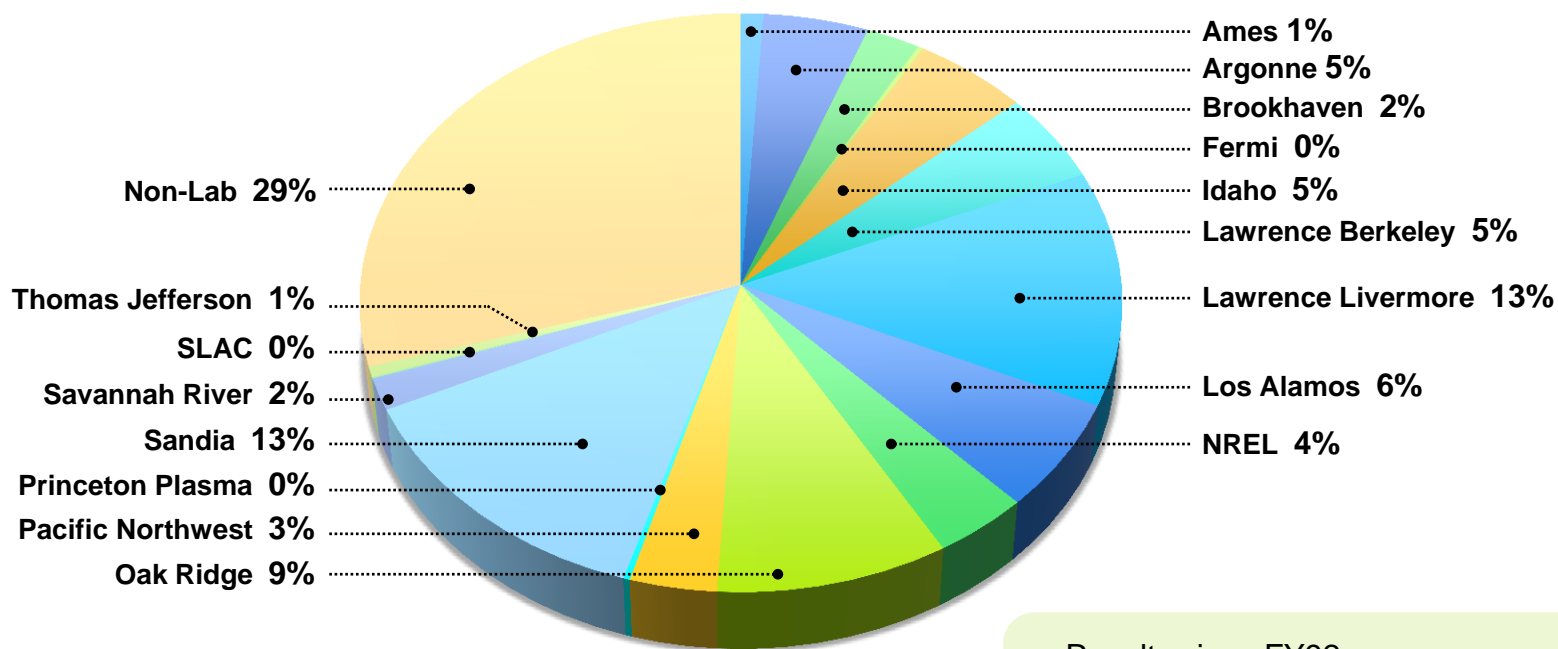
Pacific Northwest  
NATIONAL LABORATORY

*Proudly Operated by **Battelle** Since 1965*



## R&D funding of patented inventions at the National Laboratories

### Patent Production by DOE Laboratory Since 1992



- Results since FY92:
  - U.S. Patents Issued from DOE Funding: **11,677**
  - U.S Patent Applications from DOE Funding: **3,523**

**What can we learn from each other?**



**THANK YOU!**

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