

U.S. Department of Energy
Washington, D.C.

ORDER

DOE O 482.1

Approved: 01-12-01
Sunset Review: 01-12-03
Expires: 01-12-05

SUBJECT: DOE FACILITIES TECHNOLOGY PARTNERING PROGRAMS

1. OBJECTIVES.

- a. To establish Department of Energy (DOE) policy, consistent with the terms of the facility contract or delegation of authority, to—
 - (1) facilitate the efficient and expeditious development, transfer, and exploitation of Federally owned or originated technology to non-DOE entities for the public benefit and to enhance the accomplishment of DOE missions;
 - (2) leverage DOE resources, through its programs and facilities, through partnering; and
 - (3) ensure fairness of opportunity, protect the national security, promote the economic interests of the United States, prevent inappropriate competition with the private sector, and provide a variety of means to respond to private-sector concerns and interests about facility technology partnering activities.

- b. To ensure that DOE and its facilities—
 - (1) recognize that technology transfer, through partnering in all its forms, is a mission of DOE and its facilities, consistent with the provisions of the National Competitiveness Technology Transfer Act; the Stevenson-Wydler Technology Innovation Act (Public Law 96-480), as amended by the Federal Technology Transfer Act (Public Law 99-502); and other relevant legislation, as directed by Congress;
 - (2) carry out technology partnering activities in accordance with their applicable laws and authorities;
 - (3) carry out policy and assign roles and responsibilities for the oversight, management, and administration of DOE facility technology partnering activities;
 - (4) ensure the consistent development and application of policy and procedures in planning and conducting technology partnering activities at DOE facilities; and

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Office of Policy

- (5) ensure the availability of timely and accurate technology partnering data and information to monitor, evaluate, and describe DOE technology partnering activities.

2. CANCELLATION. None.

3. APPLICABILITY.

- a. DOE Elements. The provisions of this Order apply to all DOE organizational elements.
- b. Contractors. The Contractor Requirements Document (CRD), Attachment 1, sets forth requirements for all DOE facility contractors. Contractor compliance with the CRD is required to the extent set forth in the contractor's contract.
- c. DOE Facility Operators and Contractors Performing Covered Technology Partnering Activities. The provisions of this Order apply to all operators of DOE facilities, including both DOE elements and contractors, that perform the following technology partnering activities:
 - (1) identifying and protecting intellectual property made, created, or acquired at or by a DOE facility;
 - (2) negotiating all aspects of and entering into Cooperative Research and Development Agreements (CRADAs) performed under the National Competitiveness Technology Transfer Act of 1989;
 - (3) negotiating and entering into license agreements and bailments that provide rights in intellectual property made, created, or acquired at or by a DOE facility, which is controlled or owned by the contractor for that facility;
 - (4) performing work for non-Federal sponsors under DOE O 481.1, WORK FOR OTHERS (NON-DEPARTMENT OF ENERGY FUNDED WORK);
 - (5) making available laboratory or weapon production user facilities;
 - (6) providing technical consulting and personnel exchanges.

4. REQUIREMENTS. For DOE facilities to enter into technology partnering activities, as identified in paragraph 3, Applicability, certain requirements apply and are set out elsewhere depending upon the nature of the activity and its respective authorities.

5. RESPONSIBILITIES. (See Attachment 2, DOE Facilities/Labs Listing, by Field Office.)
 - a. Secretary. Establishes and issues DOE policy and overall guidance for technology partnering and delegates authority for carrying out such policy and guidance.
 - b. Under Secretary for Energy, Science and Environment, in consultation with the Under Secretary for Nuclear Security.
 - (1) Subject to the Secretary's direction, recommends and coordinates policy and overall guidance for technology partnering, and recommends appropriate delegations of authority for carrying out such policy and guidance.
 - (2) Serves as the focal point and provides leadership for developing policies and procedures, resolving technology partnering issues, and ensuring effective implementation of existing policies.
 - (3) When designated by the Secretary, serves as the Chair of the R&D Council.
 - c. The Research and Development (R&D) Council, acting through the Chair of the R&D Council.
 - (1) Provides recommendations regarding policy and procedures for the conduct and coordination of technology partnering activities by DOE facilities.
 - (2) Provides an interagency coordination point for technology partnering activities at DOE facilities, as appropriate.
 - (3) Provides guidance to cognizant secretarial officers (CSOs) for the preparation and submission of reports, such as the annual DOE Report to Congress on technology partnering activities.
 - (4) Coordinates preparation of annual facility technology partnering activity reports.
 - d. Lead Program Secretarial Officers (LPSOs).
 - (1) Exercise primary oversight, management, and administrative responsibility for technology partnering activities at the field offices under their lead.
 - (2) Ensure that each field office manager completes an appraisal of the performance of the technology partnering activities at each of the facilities under LPSO cognizance.

e. Cognizant Secretarial Officers (CSOs).

- (1) Exercise primary oversight, management, and administrative responsibility for technology partnering activities at DOE facilities under their cognizance.
- (2) For DOE facilities under their cognizance, establish technology partnering as one of the priorities, consistent with ongoing mission activities, and provide general guidance and support in accordance with the terms of the facility contract or delegation of authority.
- (3) Ensure availability of timely and accurate technology partnering data and information from facilities under their cognizance to satisfy DOE reporting and information requirements.
- (4) Ensure that management and performance of technology partnering activities at facilities under their cognizance are appraised.

f. Program Secretarial Officers (PSOs).

- (1) Exercise primary programmatic responsibility for implementation of technology partnering activities for their programs.
- (2) Support the CSO in executing the CSO's responsibilities by providing programmatic, mission area, and technical expertise in resolving technology partnering issues.
- (3) Establish technology partnering as one of the priorities consistent with ongoing mission activities.

g. Director, Office of Policy.

- (1) Serves as the executive secretariat to the R&D Council.
- (2) Is responsible for policy coordination throughout DOE on matters related to technology partnering, in support of the R&D Council.
- (3) Is responsible for CRADA policy coordination in accordance with overall guidance from the Under Secretary for Energy, Science and Environment, in consultation with the Under Secretary for Nuclear Security and the R&D Council.

- h. Director, Office of Procurement and Assistance Management. Is responsible for Work for Others policy and implementation, as provided in DOE O 481.1, WORK FOR OTHERS (NON-DEPARTMENT OF ENERGY FUNDED WORK), and DOE M 481.1-1, REIMBURSABLE WORK FOR NON-FEDERAL SPONSORS PROCESS MANUAL, and in accordance with overall guidance from the Under Secretary.
- i. Assistant General Counsel for Technology Partnering and Intellectual Property.

 - (1) Obtains protection of intellectual property to be owned by the Government.
 - (2) Administers the intellectual property program, including licensing of intellectual property owned by the Government.
 - (3) Is responsible for addressing claims of patent infringement by third parties against DOE facilities for which the Government is liable.
 - (4) Establishes policy on intellectual property rights, advises and provides guidance on appropriate intellectual property provisions for technology partnering agreements and manuals, and approves waivers of patent rights and disposition of other intellectual property rights.
- j. Heads of Field Elements.

 - (1) Oversee technology partnering activities conducted in DOE facilities under their purview. In this capacity, heads of field elements are accountable to the CSO.
 - (2) Ensure that facilities under their purview carry out their technology partnering activities in accordance with applicable laws, regulations, policies, and delegations of authority.
 - (3) Develop and implement local procedures for the review, authorization, monitoring, and reporting of technology partnering activities consistent with legislation, DOE policies and procedures, and facility prime contracts.
 - (4) In coordination with the CSO and PSOs, conduct reviews and appraisals of technology partnering activities at facilities under their cognizance.
 - (5) Notify appropriate Headquarters elements in accordance with the notification criteria set forth in DOE O 481.1 (for Work for Others agreements) and in DOE M 483.1-1, DOE COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENTS (for CRADAs) and in accordance with guidance from the CSO.

- (6) Ensure DOE and/or contractor review of proposed technology partnering activities involving human and/or animal subjects for compliance with the established regulations for protection of these subjects, as appropriate.
 - (7) Ensure that technology partnering activities under their purview are conducted in accordance with applicable security, safeguards, and classification policies, as appropriate.
 - (8) Ensure DOE and contractors review technology partnering activities for compliance with DOE environmental, safety, and health requirements, including the National Environmental Protection Act (NEPA), as appropriate.
 - (9) Consistent with DOE policies and procedures regarding technology partnering, negotiate performance goals and measures to assess field performance and effectiveness of local technology partnering processes and impacts of subsequent improvements and/or additional requirements.
 - (10) Ensure that summary information is maintained sufficient to respond to reporting requirements and requests for information from DOE Headquarters or outside entities.
- k. Deputy Administrator for Naval Reactors. As appropriate, and consistent with policies and guidelines contained within this Order—
- (1) establishes procedures for technology partnering activities concerning Naval Reactors at DOE facilities; and
 - (2) approves all technology partnering activities for the Naval Reactors program.
- l. Office of Intelligence. Consistent with policies and guidelines contained within this Order—
- (1) establishes procedures for all technology partnering activities concerning intelligence and intelligence-related programs; and
 - (2) approves all technology partnering activities for the intelligence-related programs.
6. CONTACT. For information about this Order, contact the Office of Policy at 202-586-3900.

7. REFERENCES.

- a. Stevenson-Wydler Technology Innovation Act of 1980, Public Law 96-480 (15 U.S.C. 3701 et seq.), established Offices of Research and Technology Applications (ORTAs) at Federal laboratories.
- b. Bayh-Dole Act of 1980, Public Law 96-517 (35 U.S.C. 200 et seq.), gives small businesses and nonprofit contractors the right to elect title to inventions made under funding agreements with the Government retaining a license; provides for march-in rights and U.S. industry preference; and contains provisions relating to licensing of inventions.
- c. Section 152 of the Atomic Energy Act of 1954, Public Law 83-703 (42 U.S.C. 2182), addresses the disposition of title to inventions useful in the production or utilization of special nuclear material or atomic energy made under DOE contracts, etc., and the waiver of title to such inventions to contractors.
- d. Section 9 of the Federal Non-Nuclear Energy Research and Development Act of 1974, Public Law 93-577 (42 U.S.C. 5908), addresses the disposition of title to non-nuclear inventions made under DOE contracts, etc., and the waiver of title to such inventions to contractors.
- e. Executive Order 12591, dated April 10, 1997, titled "Facilitating Access to Science and Technology," requires that Executive departments and agencies, to the extent permitted by law, transfer Federally funded technology to the commercial sector, and specifically addresses Government-Owned, Government-Operated (GOGO) facilities entering into CRADAs and licensing, assigning, and waiving intellectual property developed under such CRADAs.
- f. Section 33 of the Atomic Energy Act of 1954, Public Law 83-703 (42 U.S.C. 2051), provides for the dissemination of scientific and technical information.
- g. Freedom of Information Act, Public Law 89-487 (5 U.S.C. 552 et seq.), provides for public access to Federal agency records, which would include records containing scientific and technical information created with Federal funding.
- h. Trademark Clarification Act of 1984, Public Law 98-620, extended the contractors' right to elect title to inventions provided by the Bayh-Dole Act to DOE's Government-Owned, Contractor-Operated (GOCO) contractors.
- i. Federal Technology Transfer Act of 1986, Public Law 99-502, authorizes CRADAs for GOGOs, establishes the Federal Laboratory Consortium for Technology

Partnering, and allows GOGO laboratories to negotiate licensing agreements for inventions made at their laboratories.

- j. National Competitiveness Technology Transfer Act of 1989, Public Law 101-189, establishes technology partnering as a laboratory mission and permits GOCOs to enter into CRADAs.
- k. National Technology Transfer and Advancement Act of 1995, Public Law 104-113, provides the CRADA collaborating party an option for reasonable compensation when appropriate to choose an exclusive license for a pre-negotiated field of use in any invention made in whole or in part by a laboratory employee under the CRADA.
- l. DOE O 481.1, WORK FOR OTHERS (NON-DEPARTMENT OF ENERGY FUNDED WORK), provides procedures and policies for the performance of work for non-DOE entities by DOE/contractor personnel and/or the use of DOE facilities for work that is not directly funded by DOE appropriations.
- m. DOE O 483.1, DOE COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENTS, provides requirements and responsibilities for the performance of collaborative work with a non-Federal partner in specified research or development efforts consistent with the missions of the facility.

8. DEFINITIONS.

- a. Cognizant Secretarial Officer. The Assistant Secretary/Director responsible for a bounded set of facilities or laboratories, as identified on Attachment 2.
- b. Cooperative Research and Development Agreement (CRADA). Any agreement between one or more Federal facilities and one or more non-Federal parties under which the Government, through its facilities, provides personnel, services, facilities, equipment, intellectual property, or other resources with or without reimbursement (but not funds to non-Federal parties) and the non-Federal parties provide funds, personnel, services, facilities, equipment, intellectual property, or other resources toward the conduct of specified research or development efforts that are consistent with the mission of the facility; except that such terms do not include a procurement contract or cooperative agreement.
- c. DOE Facility. Government-owned laboratory, production facility, or other facility operated under DOE program cognizance.

- d. Heads of Field Elements. Managers of operations/field offices and directors of GOGOs. Heads of field elements report directly to the LPSO and have line accountability for all site program/project execution and contract management.
- e. DOE Facility Contractor. Entity that operates and maintains a DOE facility under contract with and for the benefit of DOE and that has the responsibility to conduct technology partnering activities.
- f. Lead Program Secretarial Officer. An assistant secretary/director to whom assigned field offices directly report and who has overall ownership responsibility for the field offices, as identified in Attachment 2.
- g. Licensing. The transfer of less than ownership rights in intellectual property, such as a patent or a software copyright, to permit its use by the licensee.
- h. Operations/Field Office Manager. A manager who reports directly to the LPSO and has line accountability for all site program/project execution and contract management.
- i. Personnel Exchanges. A short-term agreement between a DOE facility and private entities to interchange information and technological know-how by the unilateral or bilateral exchange of personnel.
- j. Program Secretarial Officer. An assistant secretary/director who funds work at a particular site or laboratory via a “customer” relationship with the field element.
- k. Research and Development (R&D) Council. A senior-level, DOE-wide coordinating body that focuses on cross-cutting R&D and related science and technology (S&T) policy and management issues. When designated by the Secretary, the Under Secretary for Energy, Science, and Environment serves as the Chair of the R&D Council. The R&D Council, through its designated Chair, and in consultation with the Under Secretary of Nuclear Security, assists the Secretary and Deputy Secretary in addressing and resolving issues common to more than one DOE R&D organization; coordinating the implementation of DOE-wide R&D management activities, including R&D portfolio management and analysis and the development and coordination of technology partnering policy and procedure; and in facilitating liaison activities with organizations external to the DOE on R&D and S&T matters. Members of the R&D Council include the Chief Financial Officer, the Director of the Office of Policy, and the heads of DOE organizations responsible for R&D programs, including—
 - the Deputy Administrators for Defense Programs, Defense Nuclear Non-Proliferation, and Naval Reactors;

- the Assistant Secretaries for Energy Efficiency and Renewable Energy, Fossil Energy, and Environmental Management; and
 - the Directors of the Offices of Science; Nuclear Energy, Science, and Technology; Civilian Radioactive Waste Management; and Security and Emergency Operations.
- l. Technical Consulting. A short-term technical assistance effort in which a DOE facility uses its existing technology or expertise to solve technical problems of others.
- m. Technology Partnering. The transformation, through partnering mechanisms with non-Federal entities, of R&D into processes, products, and services.
- n. User Facility. Any DOE facility, including associated equipment and instruments, officially designated as either a national research facility or user facility.
- o. Work for Others. Work for non-DOE entities that is performed by DOE/contractor personnel and/or uses DOE facilities and is not funded by DOE appropriations. See DOE O 481.1, WORK FOR OTHERS (NONDEPARTMENT OF ENERGY FUNDED WORK).

BY ORDER OF THE SECRETARY OF ENERGY:



T.J. GLAUTHIER
Deputy Secretary

CONTRACTOR REQUIREMENTS DOCUMENT

DOE O 482.1, DOE FACILITIES TECHNOLOGY PARTNERING PROGRAMS

1. Establish and maintain a management system, including policy and procedures, that satisfies Department of Energy (DOE) technology partnering activities requirements of DOE O 482.1, DOE FACILITIES TECHNOLOGY PARTNERING PROGRAMS.
2. Assist heads of field elements in developing appropriate performance measures for technology partnering activities and participate in DOE's Performance-Based Business Management Process (DOE O 224.1, CONTRACTOR PERFORMANCE-BASED BUSINESS MANAGEMENT PROCESS) or other appraisals in accordance with the facility contract.
3. Submit to DOE, as appropriate, technology partnering agreements for review and approval, as required by the facility contract.
4. Review proposed work involving human and/or animal subjects for compliance with established regulations for protection of these subjects.
5. Review projects for compliance with DOE environmental, safety, and health requirements, including the National Environmental Protection Act.
6. Ensure projects are protected in accordance with applicable security, safeguards, and classification policies and procedures, including the site security plan or supplemental security plan specific to a project.
7. Request DOE approval for non-DOE-funded construction at a DOE site when that construction exceeds the general plant project threshold; approval by the cognizant secretarial officer and the Chief Financial Officer is required prior to initiation of work.
8. Submit annual Technology Partnering Report.
9. Establish an ombuds capability to assist industry with issue resolution. Responsibilities of this position are to—
 - (a) serve as a focal point to industry and the public to help resolve technology partnering complaints and disputes;
 - (b) promote the use of collaborative alternative dispute resolution techniques to facilitate resolution of complaints and disputes; and
 - (c) report to the Department annually on the number and nature of complaints and disputes raised and resolved, while protecting confidentiality.

**DOE FACILITIES AND LABORATORIES LPSO AND CSO ASSIGNMENTS
BY FIELD OFFICE**

May 31, 2000

Field Office	LPSO	Facility/Laboratory	CSO	PSOs Operating Programs
Albuquerque (AL) NNSA Field Manager	DP	Los Alamos National Laboratory (LANL) Sandia National Laboratory (SNL) Pantex Plant Kansas City Plant Grand Junction Project Office (GJPO) Waste Isolation Pilot Project (WIPP)	DP DP DP DP EM* EM*	DP/NN/SC/EM/EE/FE/NE/RW DP/NN/SC/EM/EE/FE/NE/RW DP/EM/NN DP/EM/NN DP/EM/SC EM
Chicago (CH) DOE Field Manager	SC	Argonne National Laboratory - East (ANL-E) Brookhaven National Laboratory (BNL) Ames Laboratory Princeton Plasma Physics Laboratory (PPPL) Fermi National Accelerator Laboratory New Brunswick Laboratory (NBL) Environmental Measurements Laboratory (EML)	SC SC SC SC SC SO* EM	SC/NE/EM/EE/DP/FE/NN/RW SC/NN/EM/EE/NE/DP/FE SC/EM/FE/EE/NN SC/EM SC SC/NE/NN SC/EM/NN
Idaho (ID) DOE Field Manager	EM	Idaho National Engineering and Environmental Laboratory (INEEL) Test Reactor Area Radiological and Environmental Laboratory (RESL) Argonne National Laboratory - West (ANL-W) ¹	EM NE* EM NE*	SC/EE/DP/NN/NE/EM/FE EM/NE/NR EM NE/NN/EM
Nevada (NV) NNSA Field Manager	DP	Nevada Test Site Yucca Mountain Site (YMSCO) ²	DP RW*	DP/RW/NN/EM RW
Oak Ridge (OR) DOE Field Manager NNSA Field Manager	SC	Oak Ridge National Laboratory (ORNL) Paducah/Portsmouth ETTP, K-25, Weldon Spring, etc. Thomas Jefferson National Accelerator Facility (TJNAF) Y-12	SC NE* EM* SC DP*	SC/NN/EM/EE/DP/FE/NE EM/NE SC/EM SC SC/DP/NN
Oakland (OAK) DOE Field Manager NNSA Field Manager	SC	Lawrence Berkeley National Laboratory (LBNL) Stanford Linear Accelerator Center (SLAC) Energy Technology Engineering Center (ETEC) Lawrence Livermore National Laboratory (LLNL)	SC SC EM DP*	SC/EM/EE/DP/RW/NN/FE SC/EM SC/EM DP/EM/RW/SC/NN/NE/EE/FE/ MA
Office of River Protection (ORP) ⁶⁺ DOE Field Manager	EM	Office of River Protection (ORP)	EM	EM

* Instances where the CSO is not the LPSO and a MOU is required

1 Reports through the Chicago Operations Office

2 Reports directly to the Office of Civilian Radioactive Waste Management

**DOE FACILITIES AND LABORATORIES LPSO AND CSO ASSIGNMENTS
BY FIELD OFFICE (continued)**

May 31, 2000

Field Office	LPSO	Facility/Laboratory	CSO	PSOs Operating Programs
Ohio DOE Field Manager	EM	Mound Environmental Management Project Space Power Systems (MEMP) Fernald Environmental Management Project (FEMP) West Valley Demonstration Project (WVDP) Ashtabula Environmental Management Project (AEMP) Columbus Environmental Management Project (CEMP)	EM NE* EM EM EM EM	EM EM/NE EM EM EM EM
Richland (RL) DOE Field Manager	EM	Hanford Site Pacific Northwest National Laboratory (PNNL) Fast Flux Test Facility	EM SC* NE*	EM/NN/NE SC/DP/EE/FE/EM/NN/NE EM/NE
Rocky Flats (RF) DOE Field Manager	EM	Rocky Flats Environmental Technology Site (RFETS)	EM	EM
Savannah River (SR) DOE Field Manager NNSA Field Manager	EM	Savannah River Site (SRS) Fissile Material Disposition Facilities Tritium Facilities	EM NN DP	EM/DP/NN EM EM/DP
National Energy Technology Laboratory (NETL) DOE Field Manager	FE	Morgantown Site Pittsburgh Site	FE FE	FE/EE/EM/NE/NN FE/EE/EM/NE/NN
Albany Research Center DOE Field Manager	FE	Albany Research Center	FE	FE/EE/EM/NE/NN
National Petroleum Technology Office (NPTO) DOE Field Manager	FE	National Petroleum Technology Office (NPTO)	FE	FE/EE/EM/NE/NN
Golden Field Office (GFO) DOE Field Manager	EE	National Renewable Energy Laboratory (NREL)	EE	EE/SC
Naval Petroleum Reserves (NPR) DOE Field Manager		FE Naval Petroleum Reserves (NPR) Naval Oil Shale Reserves (NOSR) Rocky Mountain Oil Field Testing Center (RMOTC)	FE FE FE	FE FE FE

* Instances where the CSO is not the LPSO and a MOU is required

3 Facility located on the Idaho Environmental Engineering Laboratory Site; MOA with Idaho Operations Office required.

**DOE FACILITIES AND LABORATORIES LPSO AND CSO ASSIGNMENTS
BY FIELD OFFICE (continued)**

May 31, 2000

Field Office	LPSO	Facility/Laboratory	CSO	PSOs Operating Programs
Pittsburgh Naval Reactors Office (PNRO) NNSA Field Manager	NR	Bettis Atomic Power Laboratory (BAPL) Naval Reactor Facility (NRF) ³	NR NR	NR NR*
Schenectady Naval Reactors Office NNSA Field Manager	NR	Knolls Atomic Power Laboratory (KAPL)	NR	NR
Strategic Petroleum Reserve Project Management Office (SPRO) DOE Project Manager	FE	Oil Supply Distribution Facilities Bryan Mound Bill Hill Bayou Choctaw Weeks Island West Hackberry	FE	FE

* Instances where the CSO is not the LPSO and a MOU is required