

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

ORDER

DOE O 413.2D

Approved: 08-05-2026

SUBJECT: LABORATORY DIRECTED RESEARCH AND DEVELOPMENT

1. **PURPOSE.** To establish United States Department of Energy (DOE) requirements for laboratory directed research and development (LDRD) while providing the laboratory director broad flexibility for program implementation. The objectives of the LDRD program are to:
 - a. Maintain the scientific and technical vitality of the laboratories by advancing the frontiers of science, technology and engineering;
 - b. Enhance mission agility of the laboratories by enabling responses to national security, energy, and environmental challenges; and
 - c. Promote workforce development by attracting, retaining, and developing tomorrow's scientific and technical workforce.
2. **CANCELS/SUPERSEDES.** DOE O 413.2C, Chg. 1, *Laboratory Directed Research and Development*, dated August 2, 2018. Cancellation of an Order does not, by itself, modify or otherwise affect any contractual obligation to comply with the Order.
3. **APPLICABILITY.**
 - a. **DOE Elements.** The provisions of this Order apply to all DOE elements that have responsibility for laboratories with approved LDRD programs.

The Administrator of the National Nuclear Security Administration (NNSA) must assure that NNSA employees comply with their responsibilities under this directive. Nothing in this directive will be construed to interfere with the NNSA Administrator's authority under Section 3212(d) of Public Law (P.L.) 106-65, National Defense Authorization Act for Fiscal Year 2000, to establish Administration-specific policies, unless disapproved by the Secretary.

- b. DOE Contractors. The requirements of this Order shall be incorporated into applicable contracts, including Management and Operating contracts. The contractor is responsible for flowing down the requirements of this Contractor Requirements Document (CRD), if applicable. Contractors shall comply with the requirements of applicable federal, state, and local laws and regulations in carrying out the requirements of this Order unless relief has been granted in writing. Omission of any applicable law or regulation from the Order does not affect the obligation of the contractor to comply with such law or regulation. Contractors must comply with the requirements of this Order, except to the extent modified by the equivalencies or exemptions identified herein or issued to the contractor in writing by DOE utilizing the process outlined in DOE O 251.1E, *Departmental Directives Program*, including as amended or updated.
- c. Exclusions. None.

4. REQUIREMENTS.

- a. LDRD projects must be in the forefront areas of science and technology relevant to DOE/NNSA missions. Normally LDRD projects will be relatively small and limited to a period of performance of 36 months. LDRD projects will be basic research, applied research, or experimental development as defined by the Office of Management and Budget.
- b. The funding level established for LDRD must be within the congressionally mandated limits of a laboratory's total operating and capital equipment budget for the year. For the purposes of this policy, the operating and capital equipment budget includes non-DOE funded work but excludes line-item construction activities and LDRD.
- c. No individual program, project, or activity at the laboratory may be charged more than the statutory maximum limit authorized for LDRD. To ensure compliance with the congressionally mandated limit, DOE laboratories shall allocate LDRD costs by applying a uniform rate to the same base that is used to calculate the LDRD budget for the year (see Section 4.b above).
- d. LDRD expenditures are considered allowable costs in accordance with the terms and conditions of the laboratory operating contract and must be identified in the laboratory accounting system.
- e. General and administrative (G&A) costs must not be allocated to LDRD costs. LDRD costs are separate and distinct from site G&A costs. As such, there is no requirement to allocate LDRD costs in the same manner as G&A. However, other indirect charges should be allocated to LDRD in accordance with the contractor's approved cost accounting practices.

f. The LDRD program:

- (1) Must include all discretionary research and development activities other than those provided for in a DOE/NNSA program or by specific designation in a DOE/NNSA contract;
- (2) Must be consistent with all other applicable requirements for similar research and development activities at the laboratory; and
- (3) May be used for cooperative research and development agreements or other arrangements for technology transfer.

g. LDRD funds must not be used to:

- (1) Substitute for or increase funding for any tasks for which a specific limitation has been established by Congress or the Department or for any specific tasks that are funded by DOE/NNSA or other users of the laboratory;
- (2) Fund projects that will require the addition of non-LDRD funds to accomplish the technical goals of the LDRD project, except as provided by legislation or in conjunction with cooperative research and development agreements or other arrangements for technology transfer as provided in Section 4.f.3, above;
- (3) Fund construction design beyond the preliminary phase (e.g., conceptual design, Title I design work, or any similar or more advanced design effort) or fund line-item construction projects, in whole or in part; or
- (4) Fund general purpose capital expenditures except for the acquisition of general purpose equipment that is clearly required for the project and is not otherwise readily available from laboratory inventory.

5. RESPONSIBILITIES.

a. Director, Office of Science. In cooperation with cognizant Departmental elements:

- (1) Perform periodic reviews of this Order and its implementation and recommend revisions, as required;
- (2) Establish guidelines as required to implement the requirements of this Order; and
- (3) Develop a set of LDRD program performance measures that are consistent among DOE/NNSA laboratories in coordination with Cognizant Secretarial Officers (CSOs) or their representatives.

- b. Cognizant Secretarial Officers/Deputy Administrator, NNSA.
 - (1) Exercise general oversight of all activities related to LDRD at the laboratories for which they have cognizance; and
 - (2) Prepare reports to Congress as required.
- c. Site/Field Office Managers.
 - (1) Review and authorize the LDRD program for the laboratory. Site/field office concurrence for individual projects is not required. The laboratories will be held accountable for their performance according to their plans.
 - (2) Notify the responsible contracting officer that the CRD must be incorporated into the contract to manage and operate the laboratory.
 - (3) Contracting Officers. For all applicable contracts and upon notification that a site/facility management contract is affected by this Order, the contracting officer(s) shall incorporate the requirements into the affected contract(s) via the “Laws, Regulations, and DOE Directives” clause of the contract, or through negotiation and modification, as appropriate.
- 6. INVOKED STANDARDS. This Order does not invoke any DOE technical standards or industry standards as required methods. Note: DOE O 251.1, current version, provides a definition for “invoked technical standard.”
- 7. REFERENCES.
 - a. Title XXXII of P.L. 106-65 3212(d) Office of Management and Budget (OMB) Circular A-11, Section 84.2(c) 42 U.S.C. 5817a.
 - b. 10 U.S.C. 6331, *Current and Historical Provisions*; 10 U.S.C. 6332, *Conclusiveness of Transfers*; 10 U.S.C. 6333, *Computation of Retired and Retainer Pay*, or a superseding statutory LDRD funding cap.
 - c. 10 U.S.C. 6334, *Charges to Individual Program, Project, or Activity*.
 - d. 48 CFR Ch 9, I, 970, *DOE Management and Operating Contracts*, subsections 3102–518.
 - e. 10 U.S.C. 6335, *Limitations on Use of Funds for Laboratory Directed Research and Development*.
 - f. 42 U.S.C. 18612, *Restoration of Laboratory Directed Research and Development Program*.
 - g. H.R. 5006–102nd Congress (1991-1992); National Defense Authorization Act for Fiscal Year 1993.
 - h. Report on Use of Funds for Certain Development Purposes.

- i. 6 U.S.C. 189, Utilization of Department of Energy national laboratories and sites in support of homeland security activities.
 - j. 42 U.S.C. 16298c(b), Science and Technology in Support of Homeland Security.
8. CONTACT. Questions covering this Order should be addressed to the Office of Laboratory Policy, Office of Science, (202) 586-5447.

BY ORDER OF THE SECRETARY OF ENERGY:



JAMES P. DANLY
Deputy Secretary

ATTACHMENT 1
CONTRACTOR REQUIREMENTS DOCUMENT
DOE O 413.2D, *LABORATORY DIRECTED RESEARCH AND DEVELOPMENT*

Regardless of the performer of the work, the contractor is responsible for compliance with the requirements of this Contractor Requirements Document (CRD). The contractor is responsible for flowing down the requirements of this CRD to subcontractors at any tier to the extent necessary to ensure the contractor's compliance with the requirements and the safe performance of work.

As directed by the contracting officer, for any laboratory that has or will have a laboratory directed research and development (LDRD) program, the contractor must do the following.

- a. Establish a program that includes:
 - (1) A management system to ensure that the LDRD program meets the requirements in Section 4, above, including alignment with DOE mission focus;
 - (2) A review and selection process that emphasizes innovative scientific and technological excellence for selection of projects using internal peer and/or technical management review. A significant number of the projects selected should be independently proposed by individual researchers or small multidisciplinary teams; and
 - (3) Evaluation of the quality of the research and development performed.
- b. This program shall be reviewed by the contractor prior to program execution.
- c. Submit an LDRD program plan for approval to the responsible DOE/NNSA site/field office manager if there is a significant change to the review and selection process or at minimum every 5 years. The plan must provide:
 - (1) A general description and justification of the LDRD program for how this program will meet laboratory needs, support the laboratory's mission, and benefit DOE/NNSA (and to the extent required by law other federal agencies);
 - (2) A description of the management, review, and selection process; and
 - (3) A description of the funding areas (such as project types, proposal categories, groupings) including the alignment with laboratory strategic planning.
- d. On completion of each LDRD project, submit a report to the Office of Scientific and Technical Information for inclusion in its database as appropriate with respect to project classification. A composite report is acceptable as an alternative to individual reports.

- e. Collect and provide data on the LDRD program as negotiated with the CSO/Deputy Administrator, NNSA, including:
 - (1) Data necessary to complete the annual LDRD Report to Congress, including individual project information;
 - (2) The shared set of program performance measures developed by the CSOs and coordinated by the Director, Office of Science; and
 - (3) Data necessary to show compliance with requirements for use of LDRD funding provided by national security, homeland security, or defense environmental cleanup.