

CHAPTER 15.2
LABORATORY, PLANT, AND SITE DIRECTED RESEARCH AND DEVELOPMENT

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I. Introduction**I.A. Purpose**

This chapter provides Department of Energy (DOE or Department) financial implementation policy for Laboratory Directed Research and Development (LDRD), Plant Directed Research and Development (PDRD), and Site Directed Research and Development (SDRD) programs. Programmatic requirements for the LDRD program are contained in DOE Order 413.2C Chg 1, *Laboratory Directed Research and Development*, or successor order.

I.B. Applicability

This policy applies to DOE and National Nuclear Security Administration (NNSA) national laboratories conducting LDRD programs, NNSA covered nuclear weapons production plants conducting PDRD programs, and the Nevada National Security Site conducting the SDRD program. Key differences in the applicability of the requirements at the National Energy Technology Laboratory (NETL) are detailed in the table below:

<i>Chapter Section</i>	<i>Requirements Applicable to NETL</i>
Section II.D.1. Accumulation of Funding for LDRD	Funding for NETL's LDRD program is accumulated as specified in Section 969C(b) of Division Z of the Continuing Appropriation Act, 2021 (Public Law (P.L.) 116-260).

II. Program Requirements**II.A. General Program Requirements****II.A.1. Purpose and Authority**

The Department is authorized to establish research programs at its contractor-operated facilities and at NETL, which is a government-owned, government-operated national laboratory operating within the DOE complex. These programs include LDRD, PDRD and SDRD.

These research programs are key components of the DOE mission to promote scientific and technical innovation that advances the economic, energy, and national security of the nation. The research programs are conducted in accordance with Congressional requirements and DOE policy.

II.A.2. Allowability of Contract Costs

Costs related to LDRD, PDRD, and SDRD programs are allowable when incurred and allocated in accordance with Congressional direction, DOE policy, and the terms and conditions of the contracts.

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As a matter of policy, DOE applies Cost Accounting Standards (CAS), (codified at 48 CFR Part 9904) to the LDRD, PDRD, and SDRD programs with the modifications noted in this chapter to conform to specific Congressional cost accounting guidance. LDRD, PDRD, and SDRD are statutorily authorized programs. Congressional guidance dictates specific cost accounting practices for DOE's LDRD, PDRD and SDRD programs that deviate from normal CAS requirements. LDRD, PDRD, and SDRD programs are not subject to the requirements in CAS 420 (48 CFR 9904.420), *Accounting for Independent Research and Development Costs and Bid and Proposal Costs*. The programs are contractually required and thus do not meet the definition of Independent Research and Development as defined in CAS 420 (48 CFR Part 9904.420-30(6)).

II.C. Program Authorization and Funding Levels**II.C.1. LDRD**

Funding levels for LDRD for contractor-operated laboratories are specified in section 3115(a)(2) of the National Defense Authorization Act (NDAA), 2016 (P.L. 114-92) and Section 309 of the Consolidated Appropriations Act, 2014 (P.L. 113-76).

Section 969C(b)(2) of Division Z of the Continuing Appropriation Act, 2021 (P.L. 116-260) authorizes LDRD funding at NETL.

The funding level established for LDRD must be within the statutorily mandated limit based on the laboratory's total operating and capital equipment budget, including non-DOE funded work, less line-item construction and LDRD program funding.

LDRD authorizations and project requirements are specified in DOE Order 413.2C Chg 1.

II.C.2. PDRD

The PDRD program must “engage in research, development, and demonstration activities with respect to engineering and manufacturing capabilities” to maintain and enhance the capabilities at DOE/NNSA's covered nuclear weapons production plants (Section 310 of the Energy and Water Development Appropriations Bill, 2001, P.L. 106-377).

In accordance with Section 3156 of the NDAA, 2000 (P.L. 106-398), PDRD projects may include replacement of obsolete or aging design and manufacturing technologies, development of innovative agile manufacturing techniques and processes, and training, recruitment, or retention of essential personnel in critical engineering and manufacturing disciplines.

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Statutory requirements relating to funding levels are specified in section 308 (50 USC 2791a) of Division C of the Omnibus Appropriations Act, 2009 (P.L. 111-8). The funding level established must not exceed the statutorily mandated limit and is based on funding from budget categories specified in the Annual PDRD Program Guidance issued by NNSA for the corresponding fiscal year.ⁱ Plants may also include funding from other DOE and non-DOE customers for the base calculation.

II.C.3 SDRD

The SDRD program “engage(s) in research, development, and demonstration activities with respect to the development, test, and evaluation capabilities necessary for operations and readiness of the Nevada National Security Site.” The program was established by Section 310 of the Energy and Water Development Appropriations Act, 2002 (P.L. 107-66).

Statutory requirements relating to funding levels are specified in section 308 (50 USC 2791a) of Division C of the Omnibus Appropriations Act, 2009 (P.L. 111-8). The funding level established must not exceed the statutorily mandated limit and is based on funding categorized using Budget & Reporting codes identified by the contractor, including non-DOE funded work.ⁱⁱ

II.D. Accumulation of Funding**II.D.1. Accumulation of Funding for LDRD**

Funding for LDRD programs must be accumulated consistent with the requirements in Section 311 of Division D of the Consolidated and Further Continuing Appropriations Act, 2015 (P.L. 113-235), and DOE Order 413.2C Chg 1, Sections 4.D. and 4.E.

The statute requires that no individual program, project, or activity be charged more than the statutory maximum authorized for LDRD. To comply with this direction, the Order specifies that LDRD costs be allocated by applying a uniform rate to the same base used to calculate the LDRD budget.

DOE Order 413.2C Chg 1 specifies that the maximum funding level for LDRD is based on an authorized percentage of a contractor’s total operating and capital equipment budget for the year. The Order defines the total operating and capital equipment budget as including non-DOE funded work and minor construction but excluding line-item construction and the LDRD program funding.

II.D.2. Accumulation of Funding for PDRD

Funding is accumulated through an allocation to budget categories specified in the PDRD Program Guidance for the

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corresponding fiscal year. Plants may also include funding from other DOE and non-DOE customers for the allocation base.

II.D.3. Accumulation of Funding for SDRD

Funding is accumulated through an allocation to funding categorized using Budget & Reporting codes identified by the contractor, including non-DOE funded work.

II.D.4. Unallowable Costs Excluded

Unallowable contract costs are not included in the base that is used to accumulate funding for the LDRD, PDRD, or SDRD programs. LDRD, PDRD, and SDRD are allowable contract costs, and the effect of including unallowable contract costs in the allocation base would be to require the contractor to pay for a portion of the LDRD, PDRD, or SDRD program.

II.E. Program Administration Costs

Program administration costs for the LDRD, PDRD, or SDRD programs may be considered a General and Administrative (G&A) cost or may be considered a direct cost of the LDRD, PDRD, or SDRD program.

The treatment of program administration costs for the LDRD, PDRD, or SDRD programs must be consistent, and the chosen cost accounting practice must be described in the CAS disclosure statement.

II.F. Indirect Allocations to LDRD, PDRD, and SDRD Projects**II.F.1. General Principle**

Overhead costs should be charged to LDRD, PDRD, and SDRD projects similarly to costs charged to other final cost objectives in accordance with disclosed cost accounting practices.

II.F.2. General and Administrative Costs not Allocated to LDRD

Laboratories are legally prohibited from allocating G&A costs to the LDRD program. The prohibition is specified in section 104 of the Department of Energy Research and Innovation Act (P.L. 115-246) (for DOE Laboratories) and Section 3116 of the NDAA for Fiscal Year 2023 (P.L. 117-263) (for NNSA Laboratories). These legal prohibitions are also reflected in DOE policy (DOE Order 413.2C, Chg 1).

The exclusion applies only to the LDRD program; G&A costs must be allocated to the PDRD and SDRD programs.

II.G. Inter-Contractor Work (ICW)

Inter-contractor work or ICW represents work performed by one DOE integrated contractor for another DOE integrated contractor on a reimbursable basis.

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To ensure that LDRD, PDRD, or SDRD allocations are applied only once to the same contract costs, the applicable LDRD, PDRD, or SDRD rate is applied to ICW by the performing contractor. See section II.H. of Chapter 15 of the *Financial Management Handbook* Chapter 15.1, “DOE Application of Contractor Cost Accounting Standards.”

Inter-Contractor work is defined in section II.A.1 of Chapter 12 of the *Financial Management Handbook*, “DOE Internal Reimbursable Transactions.”

III. Required Reporting

Section 3136 of the NDAA for FY 1997 requires the Department to submit an annual report to Congress on DOE's LDRD, PDRD, and SDRD programs. (P.L. 104-201, 50 USC 2793).

The annual report also fulfills Congressional requests for:

- Financial accounting of LDRD expenditures by laboratory and weapons production plant (Conference Report accompanying the Department of Veterans Affairs and Housing and Urban Development, and Independent Agencies Appropriations Act, 2001).
- Affirmation by the Secretary of Energy in order to meet the requirements in Conference Report, H. Rept. 107-258, accompanying the Energy and Water Development Appropriations Act, 2002. The Secretary certifies that “LDRD activities derived from funds of other agencies are conducted in a manner that supports science and technology development that benefits the programs of the sponsoring agencies.”

IV. References

- Public Law 104-201, Section 3136 of the *National Defense Authorization Act for FY 1997*, establishes the Annual Report to Congress.
- Public Law 106-377, Section 310 of the *Energy and Water Development Appropriations Bill*, as enacted by the Department of Veterans Affairs and Housing and Urban Development, and Independent Agencies Appropriations Act, 2001, establishes that production plants engage in research, development, and demonstration activities with respect to engineering and manufacturing capabilities.
- Public Law 106-398, Section 3156 of the *National Defense Authorization Act for FY 2000*, which identifies acceptable engineering, manufacturing research, development, and demonstration by plant managers of certain nuclear weapons production plants.
- Public Law 107-66, Section 310 of the *Energy and Water Development Appropriations Act, 2002*, authorizes the Nevada Operations Office to engage in research, development, and demonstration activities with respect to development, test, and evaluation capabilities necessary for operations and readiness of the Nevada Test Site.

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- Public Law 107-296, 6 USC 189(f), Section 309(f) of the *Homeland Security Act of 2002*, which stipulates funds authorized for use in conjunction with DOE's LDRD programs must support activities related to the Department of Homeland Security's mission.
- Public Law 109-103, Section 311 of the *Energy and Water Development Appropriations Act, 2006*, establishes funding amounts not to exceed eight percent for LDRD, and three percent for PDRD and SDRD.
- Public Law 110-161, Section 309 of Division C of the *Consolidated Appropriations Act, 2008*, updated the funding limits for PDRD and SDRD not to exceed four percent. LDRD limit remained at not to exceed eight percent.
- Public Law 111-8, Section 308 (50 USC 2791a) of Division C of the *Omnibus Appropriations Act, 2009*, continued funding LDRD, PDRD and SDRD programs.
- Public Law 111-85, Section 307 of the *Energy and Water Development and Related Agencies Appropriations Act, 2010*, continued funding LDRD, PDRD and SDRD programs.
- Public Law 113-76, Section 309 of Division D of the *Consolidated Appropriations Act, 2014*, lowered LDRD funding threshold not to exceed six percent.
- Public Law 113-235, Section 311 of the *Consolidated and Further Continuing Appropriations Act*, clarifies that no individual program, project, or activity funded by this or any subsequent Act for any fiscal year may exceed six percent of the statutory maximum.
- Public Law 114-92, Section 3115 of the *National Defense Authorization Act for Fiscal Year 2016*, change the language for NNSA labs to read not less than five percent and not more than seven percent rather than not to exceed six percent. All required NNSA to brief Congress.
- Public Law 115-246, Section 104 of the *Department of Energy Research and Innovation Act*, specified that DOE laboratories do not allocate costs of G&A overhead to LDRD. The prohibition does not apply to certain national security laboratories.
- Public Law 116-260, *Continuing Appropriations Act of 2021, Division Z, Energy Act of 2020*, establishes that in FY 2021, NETL shall be eligible for LDRD funding.
- Public Law 116-260, Section 4006, 134 STAT 2545, which amends Subtitle F of title IX of the *Energy Policy Act of 2005* (42 USC 16291 et seq.) Sec 969C, establishes that beginning in fiscal year 2021, NETL shall be eligible for LDRD funding.
- Public Law 117-81, Section 3134 *Report on Plant-Directed Research and Development*, Section 4812A of the *Atomic Energy Act* (50 USC 2793) made amendments to the law, PDRD must now be disaggregated by nuclear weapons production facility broken out by percentage and explanation on how each facility plans to increase availability of funds.
- Public Law 117-263, Section 3116(a) of the *National Defense Authorization Act for Fiscal Year 2023*, In General Section 4812 of the Atomic Energy

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Defense Act (50 USC 2792) is amended by adding at the end the following new subsection:

“(c) LIMITATION ON USE OF FUNDS FOR OVERHEAD.—A national security laboratory may not use funds made available under section 4811(c) to cover the costs of general and administrative overhead for the laboratory.”

- Public Law 117-263, Section 3116(b) of the *National Defense Authorization Act for Fiscal Year 2023*, Repeal of Pilot Program. Section 3119 of the National Defense Authorization Act for Fiscal Year 2017 (Public Law 114-328; 50 USC 2791 note) is repealed.
- Public Law 119-60, Section 6335 of the *National Defense Authorization Act for FY 2026*, which identifies limitations on use of funds for laboratory directed research and development purposes.
- Senate Report 114-236, as adopted by the explanatory statement for the *Consolidated Appropriations Act of 2017*, which directs DOE to ensure that laboratory operating contractors do not allocate G&A onto LDRD.
- 48 CFR Chapter 99, *Cost Accounting Standards*
- OMB Circular A-11 *Preparation, Submission, and Execution of the Budget*, Section 84, defines research and experimental activities.
- DOE Order 413.2C Chg 1, *Laboratory Directed Research and Development*, that establishes DOE requirements for LDRD while providing the laboratory director broad flexibility for program implementation.

V. Acronyms

CAS	Cost Accounting Standards
CFR	Code of Federal Regulations
DOE	Department of Energy
G&A	General and Administrative
LDRD	Laboratory Directed Research and Development
NDAA	National Defense Authorization Act
NETL	National Energy Technology Laboratory
NNSA	National Nuclear Security Administration
OMB	Office of Management and Budget
PDRD	Plant Directed Research and Development
PL	Public Law
SDRD	Site Directed Research and Development
USC	United States Code

ⁱ The PDRD guidance document provides guidance and instructions for the implantation of National Nuclear Security Administration's (NNSA) Plant Directed Research, Development, and Demonstration (PDRD) Site Programs. The guidance is issued annually to reflect changes in legislative requirements, reporting, organizational changes and reporting requirements.

ⁱⁱ Budget and Reporting Code (B&R) is a nine-character expenditure code that indicates the project, type of expenses, and/or organization.

SUBJECT: MAY 2026 UPDATE TO CHAPTER 15.2, LABORATORY, PLANT, AND SITE DIRECTED RESEARCH AND DEVELOPMENT

1. EXPLANATION OF CHANGES: These changes add language on the application of LDRD, PDRD or SDRD rate under Inter-Contractor Work (ICW). Added a reference to Public Law 119-60 which identifies limitations on use of funds for laboratory directed research and development purposes.
2. LOCATIONS OF CHANGES: Added section II.G. Inter-Contractor Work for Transactions between Integrated Contractors and added Public Law 119-60 to IV. References section.

Page	Section	Section Title	Summary
15.2-6	II.G.	Inter-Contractor Work for Transactions between Integrated Contractors	Added language on the application of LDRD, PDRD, or SDRD rate under Inter-Contractor Work (ICW).
15.2-8	IV.	References	Added Public Law 119-60