U.S. DEPARTMENT OF ENERGY

DOE Program and Functional Offices Evaluation/Evidence-Building Activities, FY 2022 Evaluation Plan, and Learning Agenda

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Office of the Chief Financial Officer (CF)

U.S. Department of Energy

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1. Introduction

This paper provides the Department's approach to evaluation and evidence-building to improve performance across the broad range of the Department's program and functional offices. This documents the Department's means for making available to the public the wide range of information concerning the Department's broad range of programs. The implementation of evaluation and evidence-building actions is imbedded as part of the planning and execution efforts of each of the program and functional offices. This paper also discusses the methodologies currently used across the Department for evaluation and evidence-building. These different methodologies reflect the broad diversity in programs' missions and functional office responsibilities.

Given the variety of DOE activities the Department relies on Program Managers to accomplish program management objectives and related evaluation requirements. Program Managers tailor program strategies and oversight, including documentation of program information, program phases, the timing and scope of decision reviews and decision levels, to fit the particular conditions of that program, consistent with applicable laws and regulations and the time sensitivity of the capability need.[1]

DOE Portfolios and Programs utilize a tailored management approach based on program complexity. This tailored approach to program management is based on risk and complexity of the program and, if needed, definition of different program categories to address risk and complexity. DOE programs cover a wide spectrum (ranging from nuclear security to research and development to building weatherization).

Based on this broad spectrum of programs, the broad range of players (DOE, other Federal agencies, national laboratories, universities, private sector, general public, international) and the myriad of interests, the Department invests significant emphasis and resources in making the Department's activities available through an extensive network of publically accessible websites, document archives, budget allocations, performance results, etc. The Department's functional offices (CFO, Procurement, Project Assessment, Enterprise Assessment, etc.) also have extensive websites which make their activities available to the general public.

DOE's goal is to establish Program Management guidance that addresses the following attributes:[2]

- Tailored and Flexible – Program management approaches are based on program complexity and the particular conditions related to that program
- Streamlined and Effective Management – Program responsibility should be decentralized when practicable and use a streamlined management structure during program execution, characterized by short, clearly defined lines of responsibility, authority, and

[1] NNSA Policy 413.2, Program Management Policy, page 1: https://directives.nnsa.doe.gov/nnsa-policy-documents/nap-0413-002/@@images/file
[2] NNSA Policy 413.2, Program Management Policy, Page 4: https://directives.nnsa.doe.gov/nnsa-policy-documents/nap-0413-002/@@images/file

accountability.

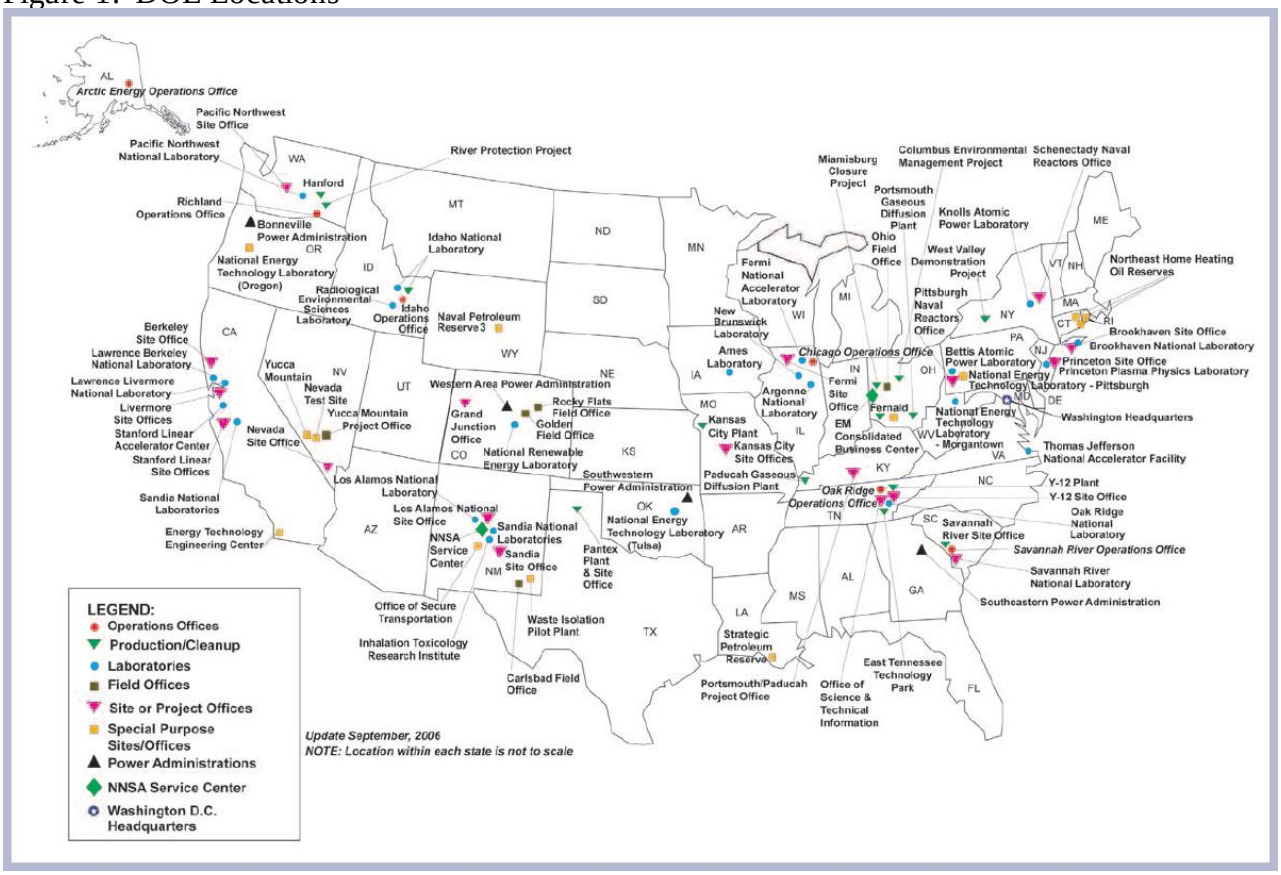
- Responsive and Cost-Effective – Programs should utilize an approach that aligns capability with available technology and resources to satisfy operational needs, while recognizing fiscal constraints.
- Cross-program coordination where appropriate – in support of agency-wide improvement efforts, cross-agency goals and standards will be established where beneficial.

This paper is based on open-source research using information available on Department of Energy (DOE) websites as well as open source platforms. Links to the websites of some of the key program and functional offices are provided.

Also provided in this paper is the Draft FY 2022 Evaluation Plan for several specific Learning Agenda efforts the Department plans to pursue. For information concerning the more detailed evaluation efforts by each of the program and functional offices for enhancement of their knowledge base and to inform decision makers, refer to website for each of the program offices and functional offices.

The following figure reflects the Department's headquarters and field offices, as well as the national laboratories.

Figure 1: DOE Locations



2. Strategic Plan

Each of the program and functional offices are engaged in supporting strategic goals. This year, DOE will prepare a new Strategic Plan intended to cover FY 2022 – FY 2026. This Plan will include Goals and Objectives for the Department; Offices will then develop specific milestones to meet these. The requirements for this Plan are set in the Government Performance and Results Act Modernization Act (GPRA-MA).

2.1 Learning Agenda Activities for FY 2022

The U.S. Department of Energy and its predecessor organizations have supported evidence-building for the purpose of improving outcomes for more than 50 years. This work includes rigorous implementation, outcome, and impact evaluations; grants to researchers for basic science, applied research, and evidence synthesis; and data collection in support of official statistics and performance improvement.

OMB Memorandum M-19-23[3] discusses the process of developing and implementing a multi-year learning agenda that coincides with the four-year timeframe defined for agency strategic plans.[4] An agency learning agenda addresses priority questions (i.e. questions relevant for programmatic, operational, regulatory, or policy decision-making) across the entire agency.[5]

For FY 22 DOE is focused on the following four areas:

- Optimizing Carry-Over Balances for DOE Program and Support Functions
- Development of a Statistical Methodology Improvement Plan (SMIP)
- Management of Procurement Systems to utilize DOE and NNSA Category Management
- Optimizing DOE Corporate Business Systems & Services for Cloud-Based Delivery

A detailed discussion of the learning agenda items is located at Appendix B: Draft DOE Learning Agenda.

[3] OMB Memorandum M-19-23, Phase 1 Implementation of the Foundations for Evidence-Based Policymaking Act of 2018: Learning Agendas, Personnel, and Planning Guidance: https://www.whitehouse.gov/wp-content/uploads/2019/07/M-19-23.pdf

[4] OMB Memorandum M-19-23, Phase 1 Implementation of the Foundations for Evidence-Based Policymaking Act of 2018: Learning Agendas, Personnel, and Planning Guidance: https://www.whitehouse.gov/wp-content/uploads/2019/07/M-19-23.pdf

[5] GSA Evidence Act Toolkit, A Guide to Developing Your Agency's Learning Agenda: https://oes.gsa.gov/assets/toolkits/A_Guide_to_Developing_Your_Agency's_Learning_Agenda_updated.pdf

3. Program Evaluation Methodologies

Successful programs are essential to the effective accomplishment of the Department of Energy's (DOE) strategic and operational goals. These programs are diverse and reflect the scope and breadth of the Department's missions. These include (but are not limited to):

- Research and Development (R&D), including Laboratory Directed Research and Development[6] (LDRD) Programs;
- Environmental Management Programs;
- Legacy Management Programs
- Nuclear Power Research and Development (including naval reactors);
- Nuclear Weapons Research, Development, Production, and Oversight; and,
- Capital Asset Programs[7].

Evaluation of programs is key for the DOE as it manages this myriad of dis-similar programs. Program evaluation is a systematic assessment using quantitative and/or qualitative data and analysis methods to answer specific questions about current or past programs, with the intent to assess their effectiveness and efficiency[8]. Often, the term "program evaluation" and "evaluation" are used synonymously. Evaluations include the following:

- A systematic method for collecting, analyzing, and using information to answer questions about projects, policies, and programs[9], particularly about their effectiveness and efficiency.
- Systematic outcome and impact studies to assess whether a program is achieving its goals, and why (or why not).
- Periodic assessments of a program's progress, including process implementation studies to determine where and how to make improvements, improve efficiencies, and ensure that the program is running as planned.

Evaluation means "an assessment using systematic data collection and analysis of one or more programs, policies, and organizations intended to assess their effectiveness and efficiency."[10] Evaluation standards (from OMB M-20-13)[11] include the following:

[6] DOE O 413.2C Laboratory Directed Research And Development: https://www.directives.doe.gov/directives-documents/0413.2-BOrder-c-chg1-minchg/@@images/file
[7] DOE O 413.3B, Program and Project Management for the Acquisition of Capital Assets: https://www.directives.doe.gov/directives-documents/400-series/0413.3-border-b-chg6-minchg
[8] EERE Program Evaluation: https://www.energy.gov/eere/analysis/eere-program-evaluation
[9] Administration for Children and Families (2010) The Program Manager's Guide to Evaluation. Chapter 2: What is program evaluation?
[10] Evidence Act§ 101(e)(4)(B) (citing 5 U.S.C. § 311(3)), Public law 115-435, January 14, 2019: https://www.congress.gov/115/plaws/publ435/PLAW-115publ435.pdf
[11] OMB Memorandum M-20-13, Phase 4 Implementation of the Foundations for Evidence-Based Policymaking Act of 2018: Program Evaluation Standards and Practices, page 4: https://www.whitehouse.gov/wp-content/uploads/2020/03/M-20-12.pdf

- **Relevance and Utility** - Evaluations must address questions of importance and serve the information needs of stakeholders in order to be useful resources.
- **Rigor** - Evaluations must produce findings that can be confidently relied upon, while providing clear explanations of limitations..
- **Independence and Objectivity** - Evaluations must be viewed as objective in order for stakeholders, experts, and the public to accept their findings.
- **Transparency** - Evaluations must be transparent in the planning, implementation, and reporting phases to enable accountability and help ensure that aspects of an evaluation are not tailored to generate specific findings.
- **Ethics** - Evaluations must be conducted to the highest ethical standards.

As a tool to support good management practice, evaluation helps inform key planning and budget decisions and enables managers to determine if adjustments are needed in program design to improve the rate or quality of achievement relative to the committed resources. Evaluations also help programs quantify achieved impacts. While program evaluation first focuses around this definition, important considerations[12] often include:

- Program costs;
- Potential program improvements;
- Determining whether it is worthwhile to continue with the program;
- Identifying better alternatives, if there are unintended outcomes; and,
- Verifying whether program goals are appropriate and useful.

Methodologies used at the Department to evaluate programs and program performance include examination of both objective and subjective information. These methodologies vary based on:

- Office Standards and Requirements;
- Organizational Mission/Requirements;
- Implementation methodology (including contract type, grant, etc.); and,
- Oversight requirements.

4. Strategic Review

All agencies are required to conduct frequent data-driven performance reviews and strategic reviews. All agencies must follow the public reporting guidelines defined for strategic plans,

[12] Social Science Research Network (SSRN), What is Program Evaluation?: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3060080

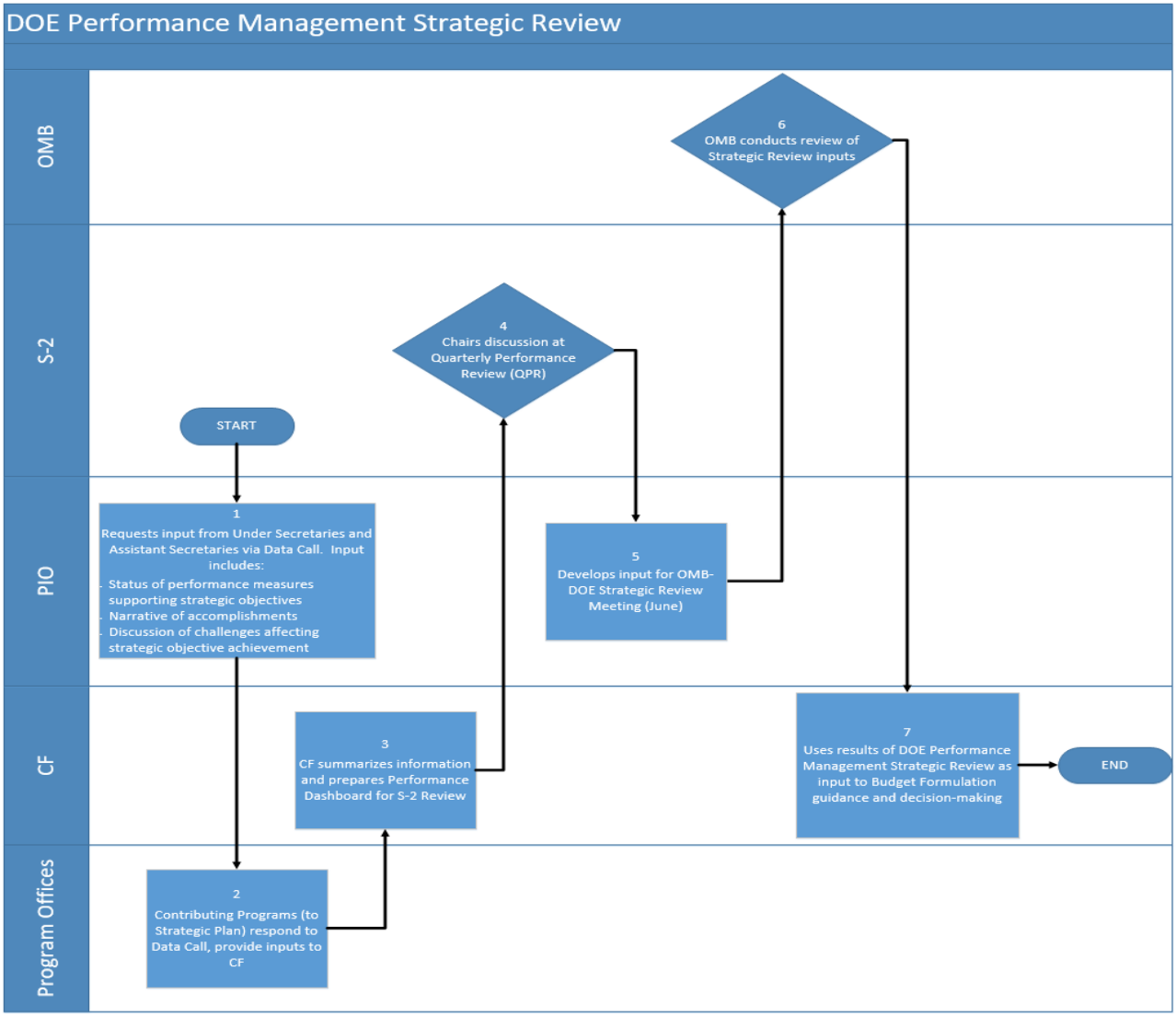
Annual Performance Plans and Annual Performance Reports which will include a progress update by strategic objective.[13]

The strategic review serves as the agency's internal management process or set of processes which provide for an annual assessment of progress being made to improve program outcomes, assess whether the agency is using the best measures to identify progress on program outcomes, and look at opportunities for productivity gains using a variety of analytical, research, and evaluation methods to support the assessment.
The results of these reviews should inform many of the decision-making processes at the agency, as well as decision-making by the agency's stakeholders.[14]

The strategic review process, facilitated by the Office of the CFO (CF) and overseen by the Department's Performance Improvement Officer (PIO), concludes with DOE leveraging the data collected (documented in the Strategic Planning Budget Formulation Performance Management (BFEM) system) and inputs provided by OMB to inform DOE's Budget Formulation.

[13] SECTION 270—Program and Project Management, OMB Circular No. A-11 (2020) Page 2 of Section 270: https://www.whitehouse.gov/wp-content/uploads/2018/06/s270.pdf
[14] SECTION 260—Performance and Strategic Reviews, OMB Circular No. A-11 (2020) Page 7 of Section 260: https://www.whitehouse.gov/wp-content/uploads/2018/06/s260.pdf

Figure 2: DOE Performance Management Strategic Review Process



5. Performance Evaluation Information

This paper presents the methodologies currently used across the Department. These different methodologies reflect the broad diversity in programs and missions. This paper is based on open-source research using information available on Department of Energy (DOE) websites as well as some open-source platforms.

6. Office of Science (SC)

The Office of Science (SC) supports scientific research for energy and the physical sciences both by directly supporting such research, for example, through grants to and cooperative agreements with universities, and by supporting the development, construction, and operation of scientific user facilities. The Office builds and maintain an array of large-scale scientific facilities at the DOE national laboratories.[15] This includes SC administering management and operating (M&O) contracts at 10 national laboratory sites:

Indicate their websites

- Ames Laboratory in Ames, Iowa (https://www.ameslab.gov/)
- Argonne National Laboratory in Argonne, Illinois (https://www.anl.gov/)
- Brookhaven National Laboratory in Upton, New York (https://www.bnl.gov/world/)
- Fermi National Accelerator Laboratory in Batavia, Illinois (https://www.fnal.gov/)
- Lawrence Berkeley National Laboratory in Berkeley, California (https://www.lbl.gov/)
- Oak Ridge National Laboratory, in Oak Ridge, Tennessee (https://www.ornl.gov/)
- Pacific Northwest National Laboratory in Richland, Washington (https://www.pnnl.gov/)
- Princeton Plasma Physics Laboratory in Princeton, New Jersey (https://www.pppl.gov/)
- SLAC National Accelerator Laboratory in Stanford, California (https://www6.slac.stanford.edu/)
- Thomas Jefferson National Accelerator Facility in Newport News, Virginia (https://www.jlab.org/)

The Office of Science is the nation's largest federal sponsor of basic research in the physical sciences and has been a major supporter of research in such key scientific fields as physics, materials science, and chemistry. The Office is also the lead federal agency supporting fundamental scientific research related to energy and sponsors research at hundreds of universities, national laboratories, and other institutions across the country.

Various methodologies are used by the Office of Science to evaluate programs. This includes (but not limited to):

- Office of Project Assessment
- Laboratory Appraisal Process
- Other SC Programs

6.1 Office of Project Assessment

The Office of Project Assessment provides independent advice to the Director of the Office of Science (SC) relating to those activities essential to constructing and operating major research

[15] Office of Science: https://www.energy.gov/science/mission

facilities. In addition, this office provides professional management and staff support regarding these functions to SC program offices.

The primary responsibilities of the Office of Project Assessment are:[16]

- Conducting technical, cost, schedule, and management peer reviews ("Lehman" reviews) of SC construction projects and large experimental equipment;
- Directing and supervising the development, initiation, and implementation of policies, plans, and procedures for design, fabrication, construction, commissioning, operation and decommissioning of research/conventional facilities and devices required to support the SC program offices; and,
- Representing the Director of Science in meetings with DOE, Office of Management and Budget (OMB), Congress, and other oversight or investigatory bodies on all matters involving the planning, design, construction, and operation of research facilities.

6.2 Laboratory Appraisal Process

SC stewards 10 of the 17 DOE National Laboratories, ranging from single-purpose laboratories like Fermi lab to broad, multi-program laboratories such as Argonne.[17]
The laboratories are managed and operated by Management and Operating (M&O) contracts, which are characterized by their special purpose.[18] The work performed under M&O contracts is intimately related to DOE's mission, is of a long-term and continuing nature, and, among other things, includes special requirements for work direction, safety, security, cost controls, and site management.

The Office of Laboratory Policy coordinates the laboratory appraisal process[19].on behalf of the Director of the Office of Science. The laboratory appraisal process uses a common structure and scoring system across all of its Laboratories. Structured around eight Performance Goals, it emphasizes the importance of delivering the science and technology necessary to meet the missions of DOE; of operating the Laboratories in a safe, secure, responsible and cost-effective way; and of recognizing the leadership, stewardship and value-added provided by contractor managing the Laboratory. The eight Performance Goals are[20]:

1. Mission Accomplishment (Delivery of S&T)
2. Design, Construction and Operation of Research Facilities

[16] Office of Science, Office of Project Management: https://www.energy.gov/science/mission/project-assessment-opa
[17] Office of Science, Laboratory Locations: https://www.energy.gov/science/science-innovation/office-science-national-laboratories
[18] M&O contracts are agreements 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 of the major programs of the contracting agency. See 48 C.F.R. § 17.601.
[19] Office of Science Lab Appraisal Process: https://www.energy.gov/science/office-science-lab-appraisal-process
[20] Office of Science Lab Appraisal Process: https://www.energy.gov/science/office-science-lab-appraisal-process

3. Science and Technology Project/Program Management
4. Leadership and Stewardship of the Laboratory
5. Integrated Environment, Safety and Health Protection
6. Business Systems
7. Facilities Maintenance and Infrastructure
8. Security and Emergency Management

Each Performance Goal is comprised of a small number of Objectives. Within each Objective, Science Programs and Site Offices can further identify a small number of "Notable Outcomes" that illustrate or amplify important features of the laboratory's performance for the coming year. The Performance Goals, Objectives, and Notable Outcomes are documented at the beginning of each year in a Performance Evaluation and Measurement Plan (PEMP) that is appended to the respective Laboratory contract. Information regarding an individual PEMP may be obtained by contacting the appropriate SC Site Office.

Each year, SC conducts an evaluation of the scientific, technological, managerial, and operational performance of the contractors who manage and operate its ten national laboratories. It was designed to improve the transparency of the process, raise the level of involvement by the SC leadership, increase consistency in the way the laboratories are evaluated, and more effectively incentivize contractor performance by tying performance to fee earned, contract length, and the public release of grades.

SC follows a Science and Energy Lab approach to evaluate its M&O contractors that uses broad, office-wide performance criteria that are mostly subjective. These evaluations provide the basis for determining annual performance fees and the possibility of winning additional years on the contract through an "Award Term" extension. They also serve to inform the decisions that DOE makes regarding whether to extend or to compete the management and operating contracts when they expire.

The current laboratory appraisal process used by the SC has been in place since Fiscal Year 2006. It was designed to improve the transparency of the process, raise the level of involvement of SC leadership, increase consistency as to how laboratories are evaluated, and more effectively incentivize contractor performance by tying performance to fee earned, contract length, and the public release of performance grades.[21]

At the conclusion of each Fiscal Year, the S&T (Goals 1-3) performance of the Laboratory is evaluated by the organizations that fund work at the Laboratory. In addition to the SC science programs, SC solicits input from all organizations that spend more than $1 million at the Laboratory. This S&T input is weighted according to the dollars spent at the Laboratory. Each Site Office evaluates the Laboratory's performance against the M&O Objectives (Goals 5-8). Site Offices and Science Programs provide input regarding the contractor's performance with respect to Goal 4 to the SC leadership who subsequently determine the Laboratory's score in this area. In determining these grades, the SC Science Programs and Site Offices consider the

[21] Office of Science Appraisal Process and Scoring System: https://science.osti.gov/lp/Laboratory-Appraisal-Process

laboratory's performance against the Notable Outcomes, defined in the PEMP, as well as other sources of performance information that becomes available to DOE throughout the year. These include independent scientific program and project reviews, external operational reviews conducted by the Government Accountability Office (GAO), DOE Inspector General (IG), and other parts of DOE, and the results of SC's own oversight activities. The evaluation process includes end-of-year normalization meetings for all the Goals, during which rating organizations report their proposed scores/grades and work to ensure a consistent and fair scoring/grading approach across all ten Laboratories.

The SC appraisal process uses a five-point (0-4.3) scoring system with corresponding grades for the Performance Goals and Objectives. A grade of "B+" is awarded for performance at the Objective level that meets SC's expectations for performance. SC intentionally set its expectations associated with a B+ very high, and does not equate performance below a B+ as necessarily unsatisfactory, but as offering opportunity for improvement. The grade for each of the Performance Goals is based on a weighted computation of the scores of the individual Performance Objectives identified for each Goal, and SC uses the resultant Performance Goal grades to create annual "Report Cards" for each Laboratory that are publicly available on the SC website. The scale SC uses for assigning scores and letter grades is provided in the table below.

Table 2: SC Score/Letter Grade Scale

Score/Letter Grade Scale											
Final Grade:	**A+**	**A**	**A-**	**B+***	**B**	**B-**	**C+**	**C**	**C-**	**D**	**F**
Score:	**4.3 - 4.1**	**4.0 - 3.8**	**3.7 - 3.5**	**3.4 - 3.1**	3.0 - 2.8	2.7 - 2.5	2.4 - 2.1	2.0 - 1.8	1.7 - 1.1	1.0 - 0.8	0.7 - 0

*SC defines a grade of "B+" as "Meets Expectations."

6.3 Other SC Programs[22]

SC also sponsors other programs, including basic research at over 300 institutions across the country, including universities, national laboratories, nonprofits, and private sector institutions. Funding is awarded on a competitive basis using peer review. Research efforts range from single-investigator grants to large team-based projects.

SC administers research through six major program offices, spanning a broad range of disciplines:

- Advanced Scientific Computing Research,
- Basic Energy Sciences,
- Biological and Environmental Research,
- Fusion Energy Sciences,
- High Energy Physics, and,

[22] Science Programs: https://www.energy.gov/science/mission/science-programs

- Nuclear Physics.

7. Office of Environmental Management (EM)

The DOE uses corporate performance measures to assess whether it is meeting its cleanup mission. The Office of Environmental Management (EM) assigns specific measures to each site that are tailored to the unique nature and scope of each area's contamination and cleanup work. Progress against these measures at a specific site is a confirmable indication of progress towards EM's cleanup goals and priorities Completion of all of the corporate performance measures result in completion of that site.[23]

EM, Congress and the public routinely monitor and evaluate cleanup progress using corporate performance measures throughout the year. These quantitative indicators focus on the effectiveness of risk-reducing actions that lead to completion of site cleanup. Each cleanup process must be consistent with each site's individual baseline and milestones. The corporate measures (i.e., those relating to the entire DOE-EM complex) are tracked in the context of the total measure (life-cycle) necessary to complete cleanup of each site, as well as the EM program as a whole. EM annual performance results can be found in the Department of Energy Annual Performance Reports.

EM manages cleanup contracts at the following sites:[24]

- Brookhaven National Laboratory (https://www.bnl.gov/world/)
- Energy Technology Engineering Center (https://www.etec.energy.gov/)
- Hanford Office of River Protection (https://hanford.gov/page.cfm/orp)
- Hanford Richland Operations Office (https://www.hanford.gov/page.cfm/RL)
- Idaho Operations Office (https://www.energy.gov/ne/nuclear-facility-operations/idaho-operations-office)
- Lawrence Livermore National Laboratory (https://www.llnl.gov/llnl_search/site/cleanup)
- Los Alamos Field Office (https://www.energy.gov/em-la/environmental-management-los-alamos-field-office)
- Moab UMTRA Project (https://www.gjem.energy.gov/)
- Nevada National Security Site (https://www.nnss.gov/pages/about.html)
- Oak Ridge (https://www.emcbc.doe.gov/seb/orrcc/)
- Paducah (https://www.energy.gov/pppo/paducah-site)
- Portsmouth (https://www.energy.gov/pppo/portsmouth-site0

[23] Office of Environmental Management, Budget and performance: https://www.energy.gov/em/services/program-management/budget-performance#:~:text=The%20Office%20of%20Environmental%20Management%2C%20Congress%20and%20the,actions%20that%20lead%20to%20completion%20of%20site%20cleanup.
[24] Cleanup Sites: https://www.energy.gov/em/mission/cleanup-sites

- Sandia National Laboratory (https://www.sandia.gov/)
- Savannah River Site (https://www.srs.gov/general/srs-home.html)
- Separations Process Research Unit (SPRU) (https://www.spru.energy.gov/)
- West Valley Demonstration Project (https://www.wv.doe.gov/)

EM manages cleanup at the following two sites through M&O Contracts:

- Savannah River Site (EM Operated in conjunction with NNSA)
- Waste Isolation Pilot Plant (WIPP)

EM also manages a national laboratory through an M&O Contract:

- Savannah River National Laboratory

Additionally, EM provides funding (including award fee for defined performance goals) for the Los Alamos National Laboratory (managed by NNSA).

The Savannah River National Laboratory (SRNL) is the DOE Office of Environmental Management (EM) national laboratory, and its resources are used to assist in the cleanup of the Cold War legacy waste for which EM is accountable. SRNL works collaboratively with other DOE laboratories to deploy technologies critical to environmental remediation and risk reduction; nuclear materials processing and disposition; nuclear detection, characterization and assessments; and gas processing, storage, and transfer systems.[25]

The Savannah River National Laboratory Policy Office (as known as the EM Laboratory Policy Office (EM LPO))[26] sponsors and coordinates the involvement of national laboratories in support of the EM mission activities, in accordance with the EM National Laboratory Governance Framework[27] for the Savannah River National Laboratory (SRNL), which includes the charter for the EM National Laboratory Network (EMNLN).[28] The EM LPO leads oversight and

[25] Memorandum, Office of Environmental Management, October 25, 2016, Subject: Savannah River National Laboratory, "EM's National Laboratory": https://www.energy.gov/sites/prod/files/2018/12/f58/EM-National-Laboratory-Governance-Framework.pdf
[26] EM National Laboratory Network: https://www.energy.gov/em/program-scope/em-national-laboratory-network#:~:text=The%20Savannah%20River%20National%20Laboratory%20Policy%20Office%20(as,charter%20for%20the%20EM%20National%20Laboratory%20Network%20(EMNLN).
[27] EM National Laboratory Governance Framework: https://www.energy.gov/sites/prod/files/2018/12/f58/EM-National-Laboratory-Governance-Framework.pdf
[28] EM National Laboratory Network Charter: https://www.energy.gov/sites/prod/files/2018/12/f58/EMNLN-Charter.pdf

management of SRNL in partnership with the National Nuclear Security Agency (NNSA) Office of Policy with support from the EM and NNSA Savannah River Site/Field Offices.[29]

The table below provides the evaluation approach for the award fee portion of the cleanup contracts. This is the same for all contracts and is out of the FAR.

Table 3: EM Award Fee Adjectival Ratings (based on FAR 16.401)[30]

Award Fee Adjectival Rating	Award-Fee Pool Available To Be Earned	Description
Excellent	91-100%	Contractor has exceeded almost all of the significant award-fee criteria and has met overall cost, schedule, and technical performance requirements of the contract in the aggregate as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.
Very Good	76-90%	Contractor has exceeded many of the significant award-fee criteria and has met overall cost, schedule, and technical performance requirements of the contract in the aggregate as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.
Good	51-75%	Contractor has exceeded some of the significant award-fee criteria and has met overall cost, schedule, and technical performance requirements of the contract in the aggregate as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.
Satisfactory	No Greater than 50%	Contractor has met overall cost, schedule, and technical performance requirements of the contract in the aggregate as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.
Unsatisfactory	0%	Contractor has failed to meet overall cost, schedule, and technical performance requirements of the contract in the aggregate as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.

8. Office of Energy Efficiency and Renewable Energy (EERE)

The Office of Energy Efficiency and Renewable Energy (EERE) conducts program evaluations to assess whether programs are meeting planned goals and achieving commercialization and market results. Evaluations identify opportunities for efficient and effective management of

[29] EM National Laboratory Governance Framework, page 3: https://www.energy.gov/sites/prod/files/2018/12/f58/EM-National-Laboratory-Governance-Framework.pdf
[30] Award Fee Adjectival Rating: https://www.acquisition.gov/far/16.401

public investments. Evaluations also identify opportunities to improve programs to more effectively and efficiently manage public investments.

Technology development programs in DOE extensively and successfully utilize peer review to evaluate research and development (R&D) activities at the project and program levels. In addition to peer review, R&D Program Managers are encouraged to use other evaluation methods in order to obtain information on program effectiveness and realized benefits that cannot be provided using the peer review method.[31]

The potential benefits of periodically doing systematic studies using other R&D evaluation methods are considerable. Programs could:

- Generate additional important information for use in continuous program improvement
- Document knowledge benefits that are often unaccounted for when communicating programs' value to stakeholders
- Document realized market benefits associated with past research successes
- Better answer questions about cost-effectiveness of the longer term research

EERE programs use a variety of evaluation methods to quantify impacts, assess progress, and promote improvement.[32] These methods include:

- Outcome Evaluations
- Impact Evaluations
- In-Progress Peer Reviews

As noted in the Strategic Evaluation Planning section, the type of evaluations performed depend on the evidence needed and questions that need to be answered. This includes a consideration of questions that if answered are expected to help provide the organization or program with evidence it can use to improve how it does business.

Performance measures are derived from various sources including the Office of Energy Efficiency and Renewable Energy's (EERE) Strategic Plans, Annual Operating Plans, etc., aligned with the elements of the SOW, and that directly support EERE's strategic goals and commitments.

Performance measures consist of critical outcomes, performance objectives, and performance indicators. Critical Outcomes - The M&O Contractor for the National Renewable Energy

[31] Overview of Evaluation Methods for R&D Programs: https://www.energy.gov/sites/prod/files/2015/05/f22/evaluation_methods_r_and_d.pdf
[32] EERE Types of Evaluations: https://www.energy.gov/eere/analysis/types-evaluations

Laboratory (NREL) is assessed against all elements of the SOW.[33] EERE provides a proposed grade and a score from the corresponding numerical range for each Goal (see Figure below) for Letter Grade Scale). Each evaluation will measure the degree of effectiveness and performance of the Contractor in meeting the corresponding Objectives.[34]

Table 4: EERE Scoring/Letter Grade Scale

Score/Letter Grade Scale											
Final Grade:	**A+**	**A**	**A-**	**B+***	**B**	**B-**	**C+**	**C**	**C-**	**D**	**F**
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9. National Nuclear Security Administration (NNSA)

Major missions of the National Nuclear Security Administration include[35]:

- Maintaining the Stockpile - NNSA ensures the United States maintains a safe, secure, and reliable nuclear stockpile through the application of unparalleled science, technology, engineering, and manufacturing.
- Nonproliferation - NNSA works to prevent nuclear weapon proliferation and reduce the threat of nuclear and radiological terrorism around the world. The agency endeavors to prevent the development of nuclear weapons and the spread of materials or knowledge needed to create them.
- Counter-terrorism and Counter-proliferation - NNSA plays a key role in preventing, countering, and responding to a terrorist or other adversary with a nuclear or radiological device.
- Powering the Nuclear Navy - NNSA provides militarily effective nuclear propulsion plants and ensures their safe, reliable and long-lived operation.

In support of these missions, the NNSA has established procedures to ensure that the planning, programming, budgeting, and evaluation (PPBE) activities of the NNSA comply with sound financial management principles, specifically to assess and determine whether progress has been made toward achieving identified performance measures at multiple levels within the NNSA.

[33] DE-AC36-08GO28308 Modification M1130: https://www.nrel.gov/extranet/primecontract/assets/pdfs/m1130_section_b.pdf

[34] Annual Performance Evaluation of the Alliance for Sustainable Energy at the National Renewable Energy Laboratory, FY 15, Part 2: https://www.energy.gov/sites/prod/files/2016/06/f32/GO-16-025%20Egger_Part2.pdf

[35] NNSA Missions: https://www.energy.gov/nnsa/missions

The Office of Cost Estimating and Program Evaluation (NA-1.3) provides the NNSA Administrator with independent, data-driven analysis on all aspects of the Nuclear Security Enterprise, leading to better mission planning and performance. Accurately estimating costs, assessing alternatives, and evaluating NNSA's program performance are vital to national security and the responsible expenditure of taxpayer dollars.[36]

The NNSA is responsible for eight (8) Government Owned, Contractor Operated (GOCO) facilities and laboratories, including three (3) FFRDC national laboratories; all supported by M&O Contracts:

- Kansas City National Security Complex (KCP)
- Lawrence Livermore National Laboratory (LLNL)(FFRDC)
- Los Alamos National Laboratory (LANL)(FFRDC)(also supported by the Office of Environmental Management)
- Savannah River Site (SRS)(FFRDC)(Operated in conjunction with the Office of Environmental Management (EM))
- Naval Nuclear Laboratory
- Nevada National Security Site (NNSS)
- NNSA Production Office (NPO) Pantex Plant and Y-12 National Security Complex
- Sandia National Laboratory (SNL)

Every fiscal year, the NNSA completes an assessment of their management and operating (M&O) partners' effectiveness in meeting the performance expectations as established by NNSA in NNSA NAP 540-3.[37] This assessment is based on an evaluation of the annual Performance Evaluation and Measurement Plans (PEMPs) linked to each NNSA site.[38] NNSA performance assessments are documented annually in a Performance Evaluation Report (PER), and award fee amounts are documented in a Fee Determination Memorandum.[39] This involves assessment against standardized strategic performance goals outlined in an annual PEMP for each M&O Contract. For the period including Fiscal Years 2015-2020, The NNSA uses 6 standardized performance evaluation goal areas as the basis for award fee determination, including the following performance goals for each site (for FY 2020)[40]:

[36] Office of Cost Estimating and program Evaluation: https://www.energy.gov/nnsa/nnsa-offices/supporting-nnsas-missions
[37] NNSA Policy Letter NAP 540.3, Corporate Performance Evaluation Process for Management and Operating Contractors: https://directives.nnsa.doe.gov/nnsa-policy-documents/nap-0540-003
[38] NNSA releases performance evaluation summaries for contractors that run its labs, plants, and sites, February 6, 2020: https://www.energy.gov/nnsa/articles/nnsa-releases-performance-evaluation-summaries-contractors-run-its-labs-plants-and
[39] NNSA releases Performance Evaluation Summary for Consolidated Nuclear Security, June 23, 2020: https://www.energy.gov/nnsa/articles/nnsa-releases-performance-evaluation-summary-consolidated-nuclear-security
[40] NNSA releases 2020 performance evaluation summaries for contractors that run its labs, plants, and sites, January 14, 2021: https://www.energy.gov/nnsa/articles/nnsa-releases-2020-performance-evaluation-summaries-contractors-run-its-labs-plants

1) Mission Execution: Nuclear Weapons
2) Mission Execution: Nuclear Security
3) DOE & Strategic Partnership Projects Mission Objectives
4) Science, Technology, & Engineering (STE)
5) Mission Enablement
6) Mission Leadership

These goals are refined annually in the PEMP for each location. Supplemental Award Fee Definitions for NNSA Performance Evaluation and Master Plans (PEMP) are contained in NAP 54.3, Appendix I as discussed in Table 3:

Table 5: Supplemental Definitions for FAR 16.401(e)(3) as used by NNSA[41]

		Supplemental Award Fee Rating Definitions For NNSA Performance Evaluation and Measurement Plan (PEMP)
Excellent	91-100%	Contractor has exceeded almost all of the objectives and key outcomes under the goals in the PEMP and has met overall cost, schedule, and technical performance requirements of the contract in the aggregate for the evaluation period. *This performance level is evidenced by at least one significant accomplishment, or a combination of accomplishments that significantly outweigh very minor issues, if any. No significant issues in performance exist.*
Very Good	76-90%	Contractor has exceeded many of the objectives and key outcomes under the goals in the PEMP and has met overall cost, schedule, and technical performance requirements of the contract in the aggregate for the evaluation period.. *This performance level is evidenced by accomplishments that greatly outweigh issues. No significant issues in performance exist.*
Good	51-75%	Contractor has exceeded some of the objectives and key outcomes under the goals in the PEMP and has met overall cost, schedule, and technical performance requirements of the contract in the aggregate for the evaluation period. *This performance level is evidenced by accomplishments that slightly outweigh issues. No significant issues in performance exist.*
Satisfactory	No Greater than 50%	Contractor has met overall cost, schedule, and technical performance requirements of the contract in the aggregate as defined and measured against the objectives and key outcomes under the goals in the PEMP for the evaluation period. *This performance level is evidenced by issues that slightly outweigh accomplishments.*
Unsatisfactory	0%	Contractor has failed to meet overall cost, schedule, and technical performance requirements of the contract in the aggregate as defined and measured against the objectives and key outcomes under the goals in the PEMP for the award-fee evaluation period. *This performance level is evidenced by issues that significantly outweigh accomplishments, if any.*

[41] NNSA Policy Letter NAP 540.3 Corporate Performance Evaluation Process for Management and Operating Contractors, Appendix I: https://directives.nnsa.doe.gov/nnsa-policy-documents/nap-0540-003/@@images/file

The NNSA provides summary documents that feature easy-to-read and transparent assessment scorecards for each lab and site assessment. The summaries include links to the corresponding contract and the Performance Evaluation and Measurement Plan (PEMP). Performance Evaluation Reports (PERs) provide a detailed summary report detailing the award fee (via a scorecard) and providing specific comments against each performance objective/goal. Fee determination memorandums including ratings earned in each of the Accomplishments and issues for the six performance evaluation goals, at-risk fees available for each, and the final fees awarded by goal are listed in each M&O summary.[42]

10. Office of Nuclear Energy (NE)

The Office of Nuclear Energy's (NE) primary mission is to advance nuclear power as a resource capable of making major contributions in meeting U.S. energy supply, environmental, and energy security needs.

NE manages the Idaho National Laboratory (INL) M&O Contract.[43] INL is the nation's leading center for nuclear energy research and development. INL works in each of the strategic goal areas of DOE: energy, national security, science and environment. NE follows a Science and Energy Lab approach to evaluate its M&O contractor that uses broad, office-wide performance criteria that are mostly subjective.[44]

This performance evaluation provides a standard by which to determine whether the M&O contractor is acting in a managerially and operationally responsible manner and is meeting the mission requirement and performance expectations/objectives of the Department as stipulated within their contract.

In partnership with the Contractor, the DOE Office of Nuclear Energy (NE) and DOE-Idaho Operations Office (DOE-ID) define the measurement basis that serves as the Contractor's performance-based evaluation. The Performance Goals, Performance Objectives and set of Notable Outcomes are developed in accordance with expectations set forth within the contract. The Notable Outcomes for meeting the Objectives set forth within this plan have been developed in coordination with NE program offices as appropriate.

This performance-based approach focuses the evaluation of performance against Performance Goals. Progress against these Goals is measured through the use of a set of Objectives. The success of each Objective will be measured based on demonstrated performance by the INL, and on a set of Notable Outcomes that focus Laboratory leadership on the specific items that are the most important initiatives and highest risk issues the Laboratory must address during the year. These Notable Outcomes should be objective, measurable, and results-oriented to allow for a

[42] Contracts, modifications, and performance evaluations for NNSA's sites: https://www.energy.gov/nnsa/leadership-and-offices/acquisition-and-project-management
[43] Idaho National Laboratory Management and Operation Contract: https://www.id.energy.gov/doeid/INLContract/INL-Contract.htm
[44] GAO 19-5, Appendix VII: Additional Information on the Office of Nuclear Energy's Performance Evaluations, page 99: https://www.gao.gov/assets/700/697103.pdf

definitive determination of whether or not the specific Outcome was achieved at the end of the year.[45]

The DOE policy for implementing performance-based management, as implemented at INL, are detailed in annual Performance Evaluation and Measurement Plans[46], and include the following guiding principles:

- Performance Objectives are established in partnership with affected organizations and are directly aligned to the DOE strategic goals;
- Resource decisions and budget requests are tied to results; and
- Results are used for management information, establishing accountability, and driving long-term improvements.

For FY 19 the following performance goals were established for the INL contract[47]:

Table 6: FY 19 Performance Goals for INL

Performance Goal	**Weight**
GOAL 1.0 Efficient and Effective Mission Accomplishment	70%
GOAL 2.0 Efficient and Effective Stewardship and Operation of Research Facilities	15%
GOAL 3.0 Sound and Competent Leadership and Stewardship of the Laboratory	15%
GOAL 4.0 Sustain Excellence and Enhance Effectiveness of Integrated Safety, Health and Environmental Protection	30%
GOAL 5.0 Deliver Efficient, Effective, and Responsive Business Systems and Resources that Enable the Successful Achievement of the Laboratory Mission(s)	25%
GOAL 6.0 Sustain Excellence in Operating, Maintaining, and Renewing the Facility and Infrastructure Portfolio to Meet Laboratory Needs	20%
GOAL 7.0 Sustain and Enhance the Effectiveness of Integrated Safeguards and Security Management (ISSM) and Emergency Management Systems	25%

Table 7: Award Fee Pool linked to Adjectival Ratings

Award-Fee Pool Available To Be Earned	**Adjectival Rating**
91%-100%	Excellent
76%-90%	Very Good
51-75%	Good
No Greater Than 50%	Satisfactory

[45] 2019 INL Performance and Measurement Plan, Contract No. DE-AC07-05ID14517: https://www.id.energy.gov/doeid/INLContract/SEC%20J/Mod425SectionJAttachmentK.pdf

[46] 2019 INL Performance and Measurement Plan, Contract No. DE-AC07-05ID14517: https://www.id.energy.gov/doeid/INLContract/SEC%20J/Mod425SectionJAttachmentK.pdf

[47] For the most part, these performance criteria have remained unchanged from fiscal year 2007, GAO-19-5 Management and Operating Contracts, p. 99: https://www.gao.gov/assets/700/697103.pdf

0%	Unsatisfactory

In a manner similar to the Laboratories managed by the Office of Science, NE provides a proposed grade and a score from the corresponding numerical range for each Objective (see Figure below) for Letter Grade Scale). Each evaluation will measure the degree of effectiveness and performance of the Contractor in meeting the corresponding Objectives.

Table 8; NE Scoring/Letter Grades

Score/Letter Grade Scale											
Final Grade:	**A+**	**A**	**A-**	**B+***	**B**	**B-**	**C+**	**C**	**C-**	**D**	**F**
Score:	**4.3 - 4.1**	**4.0 - 3.8**	**3.7 - 3.5**	**3.4 - 3.1**	3.0 - 2.8	2.7 - 2.5	2.4 - 2.1	2.0 - 1.8	1.7 - 1.1	1.0 - 0.8	0.7 - 0

11. Office of Fossil Energy (FE)

The Office of Fossil Energy (FE) manages the Strategic Petroleum Reserve Office (SPRO) M&O Contract. The Strategic Petroleum Reserve (SPR), the world's largest supply of emergency crude oil), consisting of salt caverns storing crude oil in Texas and Louisiana. This was established primarily to reduce the impact of disruptions in supplies of petroleum products and to carry out obligations of the United States under the international energy program. FE manages this support through the use of an M&O Contract.

FE follows a Site Specific approach to evaluate its M&O contractors that uses detailed performance criteria. Under this approach, most performance criteria are objective criteria, and a few are broader, subjective criteria. FE's objective performance criteria are defined based on quantifiable metrics and performance targets[48] performance goals are established in the overarching M&O contract for the Strategic Petroleum Reserve.[49] The Available Award Fee shall be established considering the level of complexity, difficulty, cost effectiveness, and risk associated with specific objectives/incentives defined in the Performance Evaluation and Measurement Plan (PEMP).[50] The Performance Evaluation and Measurement Plan(s) sets out the criteria upon which the Contractor will be evaluated relating to any technical, schedule, management, and/or cost objectives selected for evaluation. These criteria are generally objective, but may also include subjective criteria.[51]

[48] GAO-19-5 DEPARTMENT OF ENERGY - Performance Evaluations Could Better Assess Management and Operating Contractor Costs, page 84. https://www.gao.gov/assets/700/697103.pdf
[49] Contract DE-FE 0011020, M&O Contract for the Strategic Petroleum Reserve: https://www.spr.doe.gov/reports/FFPOContract/Contract%20No.%20DE-FE0011020.pdf
[50] Contract DE-FE0011020, Modification 0021, Page 3, Paragraph B.2.(b) Total Available Award Fee: https://www.spr.doe.gov/reports/FFPOContract/21/Attachment%20to%20Mod%200021.pdf
[51] Contract DE-FE0011020, Modification 0049, Performance Evaluation and Measurement Plan(s), Section I, Page I-19, paragraph I.109, (d): https://www.spr.doe.gov/reports/FFPOContract/49/Attachment%20to%20Mod%200049.pdf

12. Office of Legacy Management (LM)

The Office of Legacy Management (LM) was established to fulfill the Department's post-closure responsibilities and to ensure the protection of human health and the environment.[52] LM's responsibilities include long-term stewardship of 100 sites across the United States and Puerto Rico. This includes a variety of programs related to the country's nuclear defense and energy legacy, ranging from oversight of the administration and management of legacy contractor benefits to assessing the condition of 2,500 defense-related uranium mines on federal public land.[53]

LM publishes a quarterly Program Update to provide a status of activities. The Program Update documents and communicates the progress LM continues to make implementing the objectives and strategies for each of the six goals in the LM Strategic Plan.[54]

The LM quarterly Program Updates[55] highlight the key initiatives throughout the entire organization including the specific contributions and accomplishments of individuals responsible for LM's continued success. LM advances in each of the six goals are represented.

13. Office of Indian Energy Policy and Programs (IE)

The Office of Indian Energy Policy and Programs (IE) is authorized to fund and implement a variety of programmatic activities that assist American Indian Tribes and Alaska Native villages with energy development, capacity building, energy cost reduction, and electrification of Indian lands and homes. IE works with American Indian Tribes and Alaska Natives to maximize the value of their energy resources through:

- Facilitation of energy development
- Education and training
- Technical assistance
- Funding

IE also leverages public-private partnerships, inter- and intra-governmental coordination, and government-to-government partnerships to maximize the return on investments in the future of Native American communities,[56] and annual Program Review meetings to provide an opportunity for tribes and Alaska Native villages to share their successes and best practices.[57]

[52] Office of Legacy Management Mission: https://www.energy.gov/lm/mission
[53] Office of Legacy Management, Programs: https://www.energy.gov/lm/programs
[54] Office of Legacy Management, LM Program Update, October-December, 2020: https://www.energy.gov/sites/prod/files/2020/12/f82/2020_Q4_ONLINE_0.pdf
[55] Office of Legacy Management Program Updates: https://www.energy.gov/lm/listings/program-updates
[56] About Us, Office of Indian Energy Policy and Programs: https://www.energy.gov/indianenergy/about-us
[57] Office of Indian Energy Program Reviews: https://www.energy.gov/indianenergy/projects/program-review

14. Power Marketing Administrations

The federal government, through the Department of Energy, operates four regional Power Marketing Administrations (PMAs)[58] including - Bonneville Power Administration (BPA), Western Area Power Administration (WAPA), Southeastern Power Administration (SEPA), and Southwestern Power Administration (SWPA) – which operate electric systems and sell the electrical output of federally owned and operated hydroelectric dams in 34 states.[59] Organizationally, the Power Marketing Administrations are aligned with the Office of Electricity (OE).[60]

The PMAs are unique in that they primarily use power rates to pay annual expenditures, such as operating and maintenance costs, interest costs, and the cost of power purchased from other utilities for resale. Each PMA will prepare and publish annually a power repayment study for each power system. Each power repayment study consists of two parts, historical data and future data (forecasts). The development of future data requires the forecast of revenues, expenses and investment as detailed in DOE Order RA 6120-2.[61] Rates must also be sufficient to repay debt, including the appropriations that financed completed generation and transmission facilities.[62]

The PMAs determine the adequacy of rates by performing annual reviews of their projected costs and revenues, using processes and assumptions that are to identify and factor into rates, costs that are legally recoverable, while keeping rates as low as possible. Southwestern, Southeastern, and most Western projects make this determination through power repayment studies (PRS); Bonneville uses a revenue requirement study (RRS). These studies analyze historical data and project estimated future costs and revenues as a key part of rate setting. The primary goal of the review is to determine whether existing rates will generate sufficient revenue to recover identified costs over the period under review.[63]

14.1 Bonneville Power Administration (BPA)

BPA has created a Strategic Plan[64] centered on what BPA intends to do in the near term to deliver on their public responsibilities. This strategic plan with wide input from the region. This strategic plan is updated with a Strategic Progress Update.[65]

[58] The Power Marketing Administrations: Background and Current Issues, March 1, 2019, Congressional Research Service, R45548: https://fas.org/sgp/crs/misc/R45548.pdf
[59] Power Marketing Administrations: https://www.energy.gov/ea/power-marketing-administrations
[60] Office of Electricity: https://www.energy.gov/oe/office-electricity
[61] DOE O RA 6120.2, September 20, 1979: https://www.swpa.gov/pdfs/ra6120-2.pdf
[62] GAO/AIMD-00-114 Power Marketing Administrations, page 10: https://www.gao.gov/archive/2000/ai00114.pdf
[63] GAO/AIMD-00-114 Power Marketing Administrations, page 9: https://www.gao.gov/archive/2000/ai00114.pdf
[64] Bonneville Power Administration Strategic Plan, 2018-2022: https://www.bpa.gov/StrategicPlan/Pages/Strategic-Plan.aspx
[65] Bonneville Power Administration, 2020 Strategic Update: https://www.bpa.gov/StrategicPlan/StrategicPlan/2020-Strategic-Update.pdf

BPA also conducts an Integrated Program Review (IPR)[66], which plays a significant role in BPA's overall financial planning process. It provides the public an opportunity to review and comment on BPA's spending levels for its capital and expense programs before establishing them in rate cases. This 2018 Financial Plan includes targets for expense program spending levels, which are described in the financial health objectives.[67]

The IPR occurs every 2 years, before each rate case, giving interested parties an opportunity to review and comment on BPA's proposed spending levels. The IPR integrates both long-term capital forecasts and near-term program spending levels for the next rate period into one forum. The final spending levels will serve as a foundation for developing the power and transmission rates for the next rate period. BPA incorporates program plans in 4 areas:

- Power
- Transmission
- Energy Efficiency
- Environment, Fish & Wildlife

BPA incorporates the program plan framework into the IPR. Operating plans and program plans provide a 2-year comprehensive and integrated view of the business, workforce and financial performance of each program. [68]

14.2 Southeastern Power Administration (SEPA)

The Southeastern Power Administration (SEPA) constantly evaluates and works to improve execution of their program. This includes evaluation of the workforce, facilities and operating systems management that support their functions. This includes awareness of overhead expenses associated with program execution and management of those expenses and their impact on power rates.[69] Program reporting is via annual reports, which discusses program status and financial performance.

14.3 Southwestern Power Administration (SWPA)

The Southwestern Power Administration's (SWPA's) mission is to market and reliably deliver Federal hydroelectric power with preference to public bodies and cooperatives. As one of four Power Marketing Administrations in the United States, SWPA markets hydroelectric power in

[66] Bonneville Power Administration, Integrated Program Review, Initial Publication, June 2020: https://www.bpa.gov/Finance/FinancialPublicProcesses/IPR/2020IPR/20200612-BP-22-IPR-Initial-Detailed-Publication.pdf
[67] Bonneville Power Administration, Financial Plan 2018, page 6: https://www.bpa.gov/Finance/FinancialInformation/FinancialPlan/Documents/Financial-Plan-2018.pdf
[68] Bonneville Power Administration, BP-22 Integrated Program Review, Initial Publication, June 2020, page 1: https://www.bpa.gov/Finance/FinancialPublicProcesses/IPR/2020IPR/20200612-BP-22-IPR-Initial-Detailed-Publication.pdf
[69] Southeastern Power Administration, 2019 Annual Report: https://www.energy.gov/sites/prod/files/2020/09/f79/2019_SEPA_ANNUAL_REPORT.pdf

Arkansas, Kansas, Louisiana, Missouri, Oklahoma, and Texas from 24 U.S. Army Corps of Engineers multipurpose dams with a combined generating capacity of approximately 2,193 MW.[70]

The SWPA announced its new Strategic Plan in October 2020.[71] This Strategic Plan, focused on their vision for SWPA both the short and long-term providing a pathway to future workforce development, operations, partnerships, and evolving services. This plan is coupled with an annual SWPA Performance Plan – including a Goal Overview.[72] SWPA details performance in SWPA Annual Reports (with the 2018 Report cited here).

14.4 Western Area Power Administration (WAPA)

The Western Area Power Administration's (WAPA) mission to market and deliver clean, renewable, reliable, cost-based federal hydroelectric power and related services.[73] WAPA provides program status and reporting via annual reports. Status is based on objectives laid out in the WAPA Tactical Action Plan.[74] WAPA has a created a website (called The Source), which offers a one-stop shop for financial and operational information. With the latest expansion below, WAPA partnered with customers to determine data elements and information that would be most helpful to understand cost drivers and expenditures.[75] Results are also released by quarter, providing performance data based on established goals. An example report is linked here.[76]

[70] Southwestern Power Administration, 2018 Annual Report: https://swpa.gov/PDFs/ARs/SWPA_FY2018_annual_report.pdf
[71] Southwest Power Administration, Strategic Plan, October 2020: https://swpa.gov/StrategicPlan.aspx
[72] Southwestern Power Administration Performance Plan – goal Overview: https://swpa.gov/PDFs/swpa-perf-plan-current.pdf
[73] Western Area Power Administration, FY 2020 Annual Report: https://www.wapa.gov/newsroom/Publications/Documents/FY-2020-annual-report.pdf
[74] WAPA Tactical Action Plan (roadmap 24): https://www.wapa.gov/About/Documents/roadmap-2024-refresh-tactical-action-plan.pdf
[75] WAPA Financial Transparency: https://www.wapa.gov/About/the-source/Pages/financial-transparency.aspx
[76] WAPA Reports 4th Quarter Results: https://www.wapa.gov/newsroom/NewsFeatures/2020/Pages/fourth-quarter-performance.aspx

Appendix A. Program Evaluation Information Sources

Overall

- SECTION 260—Performance and Strategic Reviews, OMB Circular No. A-11 (2020) Page 7 of Section 260: https://www.whitehouse.gov/wp-content/uploads/2018/06/s260.pdf
- SECTION 270—Program and Project Management, OMB Circular No. A-11 (2020) Page 2 of Section 270: https://www.whitehouse.gov/wp-content/uploads/2018/06/s270.pdf
- DOE G 120.1-5, Guidelines for Performance Measurement: https://www.directives.doe.gov/directives-documents/100-series/0120.1-eguide-5
- DOE/NNSA Site Facility Management Contracts: https://www.energy.gov/sites/prod/files/2019/11/f68/DOE%20NNSA%20Site%20Facility%20Management%20Contracts%20-%20Nov%202019_0.pdf
- Methodology for reporting: GAO-19-5 Management and Operating Contracts, p. 18: https://www.gao.gov/assets/700/697103.pdf
- Energy Policy Act of 2005 (Public Law 109-58), 42 USC 15801, Section 2: https://www.congress.gov/109/plaws/publ58/PLAW-109publ58.pdf
- Department of Energy Acquisition Regulations, Part 970 – DOE Management and Operating Contracts: https://www.acquisition.gov/dears/part-970—doe-management-and-operating-contracts#P1270_216900
- DOE O 413.3B Chg 6 (MinChg), Program and Project Management for the Acquisition of Capital Assets: https://www.directives.doe.gov/directives-documents/400-series/0413.3-border-b-chg6-minchg
- DOE O 130.1A, Budget Planning, Formulation, Execution and Departmental Performance Management: https://www.directives.doe.gov/directives-documents/100-series/0130.1a-BOrder

National Nuclear Security Administration (NNSA)

- NNSA Policy NAP 413.2, Program Management Policy: https://directives.nnsa.doe.gov/nnsa-policy-documents/nap-0413-002/@@images/file
- NNSA Policy NAP 540.3, Corporate Performance Evaluation Process for Management and Operating Contractors: https://directives.nnsa.doe.gov/nnsa-policy-documents/nap-0540-003
- BOP 413.6, *Analysis of Alternatives*: https://directives.nnsa.doe.gov/bop/bop-0413-006
- BOP 413.9, *Cost Analysis Requirements Description*: https://directives.nnsa.doe.gov/bop/bop-0413-009
- NAP 130.1A, *Planning, Programming, Budgeting, and Evaluation (PPBE) Process*: https://directives.nnsa.doe.gov/nnsa-policy-documents/nap-0130-0001a
- NAP 413.1, *Data Collection for Cost Estimating*: https://directives.nnsa.doe.gov/nnsa-policy-documents/nap-0413-001
- NAP 413.3, *Responsibilities for Cost Estimating*: https://directives.nnsa.doe.gov/nnsa-policy-documents/nap-0413-003

- NAP 540.3, *Corporate Performance Evaluation Process for Management and Operating Contractors*: https://directives.nnsa.doe.gov/nnsa-policy-documents/nap-0540-003
- Contracts, modifications, and performance evaluations for NNSA's sites: https://www.energy.gov/nnsa/leadership-and-offices/acquisition-and-project-management
- Naval Nuclear Laboratory Contract: https://www.energy.gov/nnsa/naval-nuclear-laboratory-contract
- Naval Nuclear Laboratory Contract, Paragraph 2.c, page 29: https://www.energy.gov/sites/prod/files/2019/09/f67/Contract_89233018CNR000004.pdf

Office of Environmental Management (EM)

- Cleanup Sites: https://www.energy.gov/em/mission/cleanup-sites
- EM Contractor Fee Determinations: https://www.energy.gov/em/em-contractor-fee-determinations
- Environmental Management's National Laboratory Governance Framework: https://www.energy.gov/sites/prod/files/2018/12/f58/EM-National-Laboratory-Governance-Framework.pdf
- Memorandum, Office of Environmental Management, October 25, 2016, Subject: Savannah River National Laboratory, "EM's National Laboratory": https://www.energy.gov/sites/prod/files/2018/12/f58/EM-National-Laboratory-Governance-Framework.pdf
- EM National Laboratory Governance Framework: https://www.energy.gov/sites/prod/files/2018/12/f58/EM-National-Laboratory-Governance-Framework.pdf
- EM National Laboratory Network Charter: https://www.energy.gov/sites/prod/files/2018/12/f58/EMNLN-Charter.pdf

Office of Science (SC)

- Office of Science, Office of Project Management: https://www.energy.gov/science/mission/project-assessment-opa
- DOE O 413.2C Chg1 (MinChg), Laboratory Directed Research and Development: https://www.directives.doe.gov/directives-documents/0413.2-Border-c-chg1-minchg
- Management & Operating (M&O) Contracts: https://science.osti.gov/lp/Management-and-Operating-Contracts
- Laboratory Appraisal Process, Office of Science web page: https://science.osti.gov/lp/Laboratory-Appraisal-Process
- Office of Science Lab Appraisal Process (includes 2019 Report Cards): https://www.energy.gov/science/office-science-lab-appraisal-process
- 2006-2019 SC "Report Cards for each SC Lab): https://science.osti.gov/lp/Laboratory-Appraisal-Process/Archives

Office of Nuclear Energy (NE)

- Idaho National Laboratory Contract, Section J, Attachment K. Fiscal Year 2019 Performance Evaluation and Measurement Plan, Modification 425 to Contract No. DE-AC07-05ID14517: https://www.id.energy.gov/doeid/INLContract/SEC%20J/Mod425SectionJAttachmentK.pdf
- 2019 INL Performance and Measurement Plan, Contract No. DE-AC07-05ID14517: https://www.id.energy.gov/doeid/INLContract/SEC%20J/Mod425SectionJAttachmentK.pdf

Office of Energy Efficiency & Renewable Energy (EERE)

- EERE Program Evaluation: https://www.energy.gov/eere/analysis/eere-program-evaluation
- EERE Types of Evaluations: https://www.energy.gov/eere/analysis/types-evaluations
- Overview of Evaluation Methods for R&D Programs: https://www.energy.gov/sites/prod/files/2015/05/f22/evaluation_methods_r_and_d.pdf
- EERE Peer Review Guidance: https://www.energy.gov/sites/prod/files/2019/02/f59/EERE%20810%20-%20Peer%20Review%20Guidance.pdf
- Evaluation, Measurement, and Verification of Energy Data: https://www.energy.gov/eere/slsc/evaluation-measurement-and-verification-energy-data
- NREL Scorecards: https://www.energy.gov/eere/golden-reading-room-other-nrel-documents
- Annual Performance Evaluation of the Alliance for Sustainable Energy at the National Renewable Energy Laboratory, FY 15: https://www.energy.gov/sites/prod/files/2016/06/f32/GO-16-025%20Egger_Part2.pdf
- DE-AC36-08GO28308 Modification M1130: https://www.nrel.gov/extranet/primecontract/assets/pdfs/m1130_section_b.pdf
- Annual Performance Evaluation of the Alliance for Sustainable Energy at the National Renewable Energy Laboratory, FY 15, Part 2: https://www.energy.gov/sites/prod/files/2016/06/f32/GO-16-025%20Egger_Part2.pdf
- Annual Performance Evaluation of the Alliance for Sustainable Energy at the National Renewable Energy Laboratory, FY 15, Part 1: https://www.energy.gov/sites/prod/files/2016/06/f32/GO-16-025%20Egger_Part1.pdf
- NREL Scorecards: https://www.energy.gov/eere/golden-reading-room-other-nrel-documents
- DE-AC36-99GO10337 Modification M110, Section 970.5237-2 (c) Facilities Management: https://www.nrel.gov/extranet/primecontract/assets/pdfs/reporting_requirements.pdf
- DE-AC36-99GO10337 Modification M110, Section 970.5232-3 (e) Furnish such progress reports and schedules, financial Report, Accounts, Records, and cost reports, and other reports concerning the work as the Contracting Officer may require.

https://www.nrel.gov/extranet/primecontract/assets/pdfs/reporting_requirements.pdf

Office of Fossil Energy (FE)

- Strategic Petroleum Reserve Annual Report for Calendar Year 2018, Report to Congress, January 2020: https://www.energy.gov/sites/prod/files/2020/01/f70/2018%20SPR%20Report%20to%20Congress.pdf
- Contract DE-FE 0011020, M&O Contract for the Strategic Petroleum Reserve: https://www.spr.doe.gov/reports/FFPOContract/Contract%20No.%20DE-FE0011020.pdf
- Contract DE-FE0011020, Modification 0021, Page 3, Paragraph B.2.(b) Total Available Award Fee: https://www.spr.doe.gov/reports/FFPOContract/21/Attachment%20to%20Mod%200021.pdf
- Contract DE-FE0011020, Modification 0049, Performance Evaluation and Measurement Plan(s), Section I, Page I-19, paragraph I.109, (d): https://www.spr.doe.gov/reports/FFPOContract/49/Attachment%20to%20Mod%200049.pdf
- GAO-19-5 DEPARTMENT OF ENERGY – Performance Evaluations Could Better Assess Management and Operating Contractor Costs, page 84. https://www.gao.gov/assets/700/697103.pdf

Office of Legacy Management

- Office of Legacy Management, Programs: https://www.energy.gov/lm/programs
- Office of Legacy Management Program Updates: https://www.energy.gov/lm/listings/program-updates
- Office of Legacy Management, FY 2021 – FY 2025 High performing Organization Plan, DOE/LM-1489, September 2020: https://www.energy.gov/sites/prod/files/2020/10/f79/DOE%20LM%20FY%202021-2025%20HPO%20Plan%20FINAL.pdf
- Environmental Management Systems Programs Manual: https://www.lm.doe.gov/Office_of_Site_Operations/...

Office of Indian Energy Policy and Programs (IE)

- Program Reviews: https://www.energy.gov/indianenergy/projects/program-review

Power Marketing Administrations

- DOE O RA 6120.2, September 20, 1979: https://www.swpa.gov/pdfs/ra6120-2.pdf
- GAO/AIMD-00-114 Power Marketing Administrations, page 10: https://www.gao.gov/archive/2000/ai00114.pdf

Bonneville Power Administration (BPA)

- BPA 2018-2023 Strategic Plan: https://www.bpa.gov/StrategicPlan/Pages/Strategic-Plan.aspx
- Bonneville 2020 Strategic Plan Progress Update: https://www.bpa.gov/StrategicPlan/StrategicPlan/2020-Strategic-Update.pdf
- Bonneville Power Administration, Financial Plan 2018: https://www.bpa.gov/Finance/FinancialInformation/FinancialPlan/Documents/Financial-Plan-2018.pdf
- Bonneville Power Administration, Integrated Program Review, Initial Publication, June 2020: https://www.bpa.gov/Finance/FinancialPublicProcesses/IPR/2020IPR/20200612-BP-22-IPR-Initial-Detailed-Publication.pdf

Southeastern Power Administration (SEPA)

- Southeastern Power Administration, Annual Reports: https://www.energy.gov/sepa/listings/annual-reports
- Southeastern Power Administration, 2019 Annual Report: https://www.energy.gov/sites/prod/files/2020/09/f79/2019_SEPA_ANNUAL_REPORT.pdf

Southwestern Power Administration (SWPA)

- Southwestern Power Administration Performance Plan – Goal Overview: https://swpa.gov/PDFs/swpa-perf-plan-current.pdf
- Southwestern Power Administration, 2018 Annual Report: https://swpa.gov/PDFs/ARs/SWPA_FY2018_annual_report.pdf
- Southwest Power Administration, Strategic Plan, October 2020: https://swpa.gov/StrategicPlan.aspx

Western Area Power Administration (WAPA)

- The Source: https://www.wapa.gov/About/the-source/Pages/the-source.aspx
- Annual Reports: https://www.wapa.gov/About/the-source/Pages/annual-reports.aspx
- Western Area Power Administration, FY 2020 Annual Report: https://www.wapa.gov/newsroom/Publications/Documents/FY-2020-annual-report.pdf
- Tactical Action Plan (roadmap 24): https://www.wapa.gov/About/Documents/roadmap-2024-refresh-tactical-action-plan.pdf
- WAPA Reports 3rd Quarter Results: https://www.wapa.gov/newsroom/NewsFeatures/2019/Pages/third-quarter-performance.aspx
- WAPA Reports 4th Quarter Results: https://www.wapa.gov/newsroom/NewsFeatures/2020/Pages/fourth-quarter-performance.aspx
- WAPA Financial Transparency: https://www.wapa.gov/About/the-source/Pages/financial-transparency.aspx

Appendix B. Draft DOE Learning Agenda

The mission of the Energy Department is to ensure America's security and prosperity by addressing its energy, environmental and nuclear challenges through transformative science and technology solutions.77 By law, the Department of Energy (DOE) is responsible for formulating and implementing a coordinated national energy policy to address energy production and use; advancing the energy and nuclear security of the United States; conducting scientific research and technological innovation in support of that mission; conducting basic research in the physical sciences; and advancing national nuclear waste management, including environmental cleanup.

The Department of Energy (DOE) recognizes the importance of evidence and evaluation to understand and improve the efficiency and effectiveness of its programs and operations in pursuit of the Department's mission. To support evaluation planning, the DOE has established an Annual Evaluation Plan (AEP) in alignment with the *Foundations for Evidence-Based Policymaking Act.*[78] The AEP identifies the research and evaluation questions the Agency plans to complete through the next fiscal year.

Program evaluations are conducted through consultations with DOE program leadership, review and development by internal program evaluators. The evaluations are designed to meet DOE priorities, answer research questions in the Enterprise Learning Agenda, and build a suite of evidence to inform decision-making. Evaluations highlighted in this AEP reflect the most significant planned evaluations for FY 2022 in alignment with the DOE's mission as reflected in the Agency's *FY 2018-2022 Strategic Plan*, expected usefulness to support program improvement, and greatest impact on small businesses and other Agency stakeholders.

The energy, science, nuclear security, nuclear waste management, and cybersecurity goals in this evaluation plan are aligned with the DOE mission and goals from the strategic plan.

Energy – DOE is the lead agency for developing plans and programs to implement a coordinated national energy policy through analysis and cooperation with Federal, state, and local governments. DOE leads the Nation in cutting-edge research and development of an extensive range of technologies in support of an energy dominance strategy. DOE identifies, funds, and promotes technological advances to increase energy affordability, performance, and efficiency. DOE also leads national efforts to further research and develop technologies to modernize the electric grid and improve its reliability and resilience; enhance the security, reliability, and resilience of energy infrastructure; improve domestic fossil energy production and use; and expedite recovery from energy supply disruptions.

Science – DOE is the largest Federal sponsor of basic research in the physical sciences. DOE's world-leading research in the physical, chemical, biological, and computational sciences advances fundamental scientific discoveries and technological solutions that support American

[77] https://www.energy.gov/mission

[78] www.congress.gov/bill/115th-congress/house-bill/4174

pre-eminence in science and innovation. DOE also leads the national effort to maintain its global primacy in high-performance computing.

Nuclear Security – DOE enhances the security and safety of the Nation through its national security endeavors: maintaining a safe, secure, and effective nuclear weapons stockpile that will deter any adversary and guarantee the defense of the Nation and its allies; managing the research, development, and production activities and associated infrastructure needed to meet national nuclear security requirements; accelerating and expanding efforts to reduce the global threat posed by nuclear weapons, nuclear proliferation, and unsecured or excess nuclear and radiological materials; providing advance capabilities to respond to nuclear or radiological incidents and accidents worldwide; and providing safe and effective nuclear propulsion for the U.S. Navy.

Nuclear Waste Management – DOE leads the effort to address the Federal Government's nuclear waste management responsibility; continue the largest cleanup effort in the world to remediate the environmental legacy of six decades of nuclear weapons development; and produce and sponsor nuclear energy research.

Cybersecurity – DOE supports the Government's effort to assist energy infrastructure owners with cybersecurity and to ensure cyber/physical attacks do not have a catastrophic impact on the energy sector. DOE also ensures the cybersecurity and resilience of the DOE enterprise infrastructure.

DOE Enterprise Management and Oversight – As DOE carries out its mission through execution of its strategic goals, it will develop, manage, and support a talented and engaged workforce, provide a modern, secure physical and information technology infrastructure, and strengthen effective and cost-efficient management initiatives.

Achieving these goals requires sustained commitment to performance-based management. Program evaluations are tailored to the specific mission set and include a broad range of evaluation types. To ensure actionable results, the DOE's evaluations follow the principles of ethics, independence, rigor, relevance, and transparency reflected in OMB Memo M-20-12.[79]

[79] www.whitehouse.gov/wp-content/uploads/2020/03/M-20-12.pdf

Table 1. Summary of DOE Strategic Goals and Objectives.

Strategic Goal	Strategic Objective
Goal 1: Promote American Energy Dominance	Objective 1 – Develop Energy Technologies that Increase the Affordability of Domestic Energy Resources
	Objective 2 – Reduce Regulatory Burdens on Domestic Energy Resources
	Objective 3 – Revitalize U.S. Nuclear Energy Sector
	Objective 4 – Improve Electric Grid Reliability and Resilience
	Objective 5 – Increase Domestic and International Accessibility to American Energy Resources
	Objective 6 – Protect the U.S. Economy from Severe Petroleum Supply Disruptions
Goal 2: Advance Science Discovery and National Laboratory Innovation	Objective 7 - Conduct Discovery-Focused Research to Increase our Understanding of Matter, Materials, and their Properties)
	Objective 8 - Provide the Nation's Researchers with World-Class Scientific User Facilities that Enable Research and Advance Scientific Discovery
	Objective 9 - Advance High-Performance and Future Computing Technologies and the Potential of Artificial Intelligence Technologies to ensure American Primacy in Computing and to Meet National Research, Security, and Economic Objectives
	Objective 10 – Enable Commercialization of National Laboratory Innovation
Goal 3: Ensure America's Nuclear Security	Objective 11 – Maintain the Safety, Security, and Effectiveness of the Nation's Nuclear Deterrent
	Objective 12 – Strengthen Key Science, Technology, and Engineering Capabilities and Modernize the National Security Infrastructure
	Objective 13 – Reduce Global Nuclear and Radiological Security Threats and Strengthen the Nuclear Enterprise
	Objective 14 – Provide Safe and Effective Integrated Nuclear Propulsion Systems for the U.S. Navy
Goal 4: Advance National Nuclear Waste Management	Objective 15 – Develop and Implement a Robust Interim Storage Program
	Objective 16 – Continue Environmental Remediation of DOE Legacy and Active Nuclear Waste Sites
Goal 5: Enhance Cybersecurity across U.S. Energy Sector and DOE Infrastructure	Objective 17 – Enhance Energy Infrastructure Situational Awareness, Strengthen Cyber Incident Response Capabilities, and Leverage the National Laboratories to Drive Cybersecurity Innovation
	Objective 18 – Modernize DOE IT Infrastructure to Deliver Effective Services Supporting Smart, Efficient Cybersecurity,

Strategic Goal	Strategic Objective
	and Enhance DOE's Cybersecurity Risk Management Structure to Create Transparency across the Enterprise

1. Optimize Carry-Over Balances for DOE Program and Support Functions

Lead DOE Program/Support Office: Office of the Chief Financial Officer (OCFO)

Description: Most DOE programs and functions obligate appropriated budget authority in the current fiscal year and "carry-over" unused funds to the next fiscal year due to a variety of factors. There are circumstances that justify carrying over unused funds including maintaining reserves to manage risk and phased execution of long-term capital projects. At present, there is no Department-wide analysis to provide best practices to manage carry-over balances.

An evaluation will be conducted to determine appropriate tools and methods for managing carry-over balances, and whether certain best practices should be adopted on an agency-wide basis for program and functional activities.

Enterprise Learning Agenda (ELA). This evaluation supports the DOE's understanding of the following ELA question:

- What factors most influence the Department's ability to obligate appropriated budget authority in the current fiscal year and "carry-over" unused funds to the next fiscal year?

Evaluation Questions. The DOE seeks the answer the following evaluation questions and their sub-components in this study:

- How does the government review process serve as a tool to help agencies meet their goals obligated appropriated budget authority in the current fiscal year?
- How does the government review process serve as a tool to help agencies "carry-over" unused funds to the next fiscal year as appropriate?
- What are the appropriate tools and methods for managing carry-over balances?
- What best practices should be adopted on an agency-wide basis for program and functional activities?
    - What aspects of these tools and methods lead to improved outcomes?
    - What aspects of these processes could be made more effective or efficient?

Activities: The OCFO will conduct an evaluation that reviews appropriations and carry-over balances for select DOE program and function offices for the past 5 fiscal years. The study will:

- analyze appropriations and carry-over balances to determine if trends and outliers exist
- determine the nature of work conducted by program or support office and consider how this should affect carry over balances
- interview program managers for insight into how they manage carry-over balances
- review carry-over data for non-DOE programs and determine whether relevant comparisons to DOE can be made

- determine if best practices can be recommended to DOE programs and support functions for managing carry-over balances
- determine if corrective action for managing any DOE carry-over balances is advisable

Timeline: OCFO anticipates this study will take 6-9 months. Instituting recommendations produced by the study will take an additional 12-24 months.

Data: Data gathered for this evaluation may include:

- 5-years of appropriations and carry-over balances for select DOE programs & functions
- appropriations and carry-over balances of non-DOE programs
- interviews of DOE program and function managers
- interviews of non-DOE program and function managers

Evidence Use and Dissemination: DOE program staff would receive recommendations on activities that lead to greater goal achievement, as well as activities that could be adapted to improve the effectiveness and efficiency of surveillance reviews. Results will be presented to DOE program managers and senior leadership, published on the DOE website, and shared in the DOE's Evidence and Evaluation Community of Practice.

2. Statistical Methodology Improvement Plan (SMIP)

Lead DOE Program/Support Office: U.S. Energy Information Administration (EIA)

Description: As one of the 13 principal federal statistical agencies, EIA collects, analyzes, and disseminates large amounts of data to inform citizens, businesses, and lawmakers about energy production, transformation, and consumption. To perform this service, EIA adheres to both established professional statistical practices and complies with the Office of Management and Budget (OMB) statistical standards and oversight. EIA must receive approval from OMB every three years to conduct a particular survey. To receive this approval, EIA must show that it is actively monitoring, evaluating, and meeting data quality standards. To meet these requirements, EIA has developed a Statistical Methodology Improvement Plan (SMIP) that evaluates and improves the data quality of EIA surveys and products.

Impact: The SMIP's explicit goal is to improve EIA's statistical methodologies and data quality. To this end, the SMIP provides a structured five-year program that covers the processes to evaluate and improve surveys and products, an in-depth list of statistical methodologies with which to improve surveys and products, and the statistical roles and training that will improve current staff statistical capabilities and further the use of newer data science techniques.

Enterprise Learning Agenda. This evaluation supports the DOE's understanding of the following ELA question:

- What factors most influence the Department's ability to improve EIA's statistical methodologies and data quality?

Evaluation Questions. The DOE seeks the answer the following evaluation questions and their sub-components in this study:

- How does EIA's statistical methodologies serve to help EIA meet its goals to collect, analyze, and disseminate large amounts of data?
- How do EIA processes ensure its ability to actively monitor, evaluate, and meet data quality standards?
- How well does the SNIP support improvement EIA's statistical methodologies and data quality?
- What best practices should be adopted from the SNIP on an agency-wide basis for program and functional activities?
    - What aspects of these tools and methods lead to improved outcomes?
    - What aspects of these processes could be made more effective or efficient?

Data and Evaluation Method: The following describes the three SMIP plan processes for evaluating data products.

- **Evaluation Process.** A process that evaluates the statistical methodologies used to conduct, process, and publish a data product. This process outlines possible methodological improvements or alternative approaches for surveys and products. The process also provides data validation and quality monitoring.

- **Targeted Methodology Improvement Process.** A process that implements improvements that are most readily identifiable and achievable for the statistical methodologies used to conduct, process, and publish a data product.

- **Full Methodology Improvement Process.** A process that completely reviews and updates, as necessary, all statistical methodologies currently used to conduct, process, and publish a data product.

Evidence Use and Dissemination: The initial term of the SMIP, used to implement and achieve the SMIP's goal of improving EIA's statistical methodologies and data quality, is for five years, after which time EIA will review and update it as needed to respond to lessons learned in its implementation. DOE program staff would receive recommendations on activities that lead to greater goal achievement, as well as activities that could be adapted to improve the effectiveness and efficiency of surveillance reviews. Results will be presented to DOE program managers and senior leadership, published on the DOE website, and shared in the DOE's Evidence and Evaluation Community of Practice.

3. DOE Category Management

Lead DOE Program/Support Office: Office of Acquisition Management (OAM) and NNSA Acquisition and Project Management (NA-APM)

Description: The Office of Acquisition Management (OAM) coordinates with NNSA's Office of Acquisition and Project Management (NA-APM) to manage procurement systems and provide

procurement policy & oversight for DOE Procurement Offices (POs). With respect to procurement transactions the POs enter into, approve, administer, modify, closeout, terminate, and execute other actions as necessary.

The Office and Management and Budget (OMB) has mandated that agencies utilize Category Management (CM) to buy common goods and services. In order to accomplish this, OAM will issue policy, establish annual goals, and lead a CM Working Group (CMWG) to identify opportunities resulting from analyzing spend data found in the Federal Procurement Data System, Strategic Integrated Procurement Enterprise System, purchase card database, Management and Operating Subcontract Reporting Capability, General Service Administration's Data to Decisions, and PO forecasts.

Enterprise Learning Agenda. This evaluation supports the DOE's understanding of the following ELA question:

- What factors most influence the Department and NNSA's ability to manage procurement systems and provide procurement policy & oversight for DOE Procurement Offices (POs)?

Evaluation Questions. The DOE seeks the answer the following evaluation questions and their sub-components in this study:

- How does the Office of Acquisition Management (OAM) coordinate with NNSA's Office of Acquisition and Project Management (NA-APM) to manage procurement systems and provide procurement policy & oversight?
- How does OAM coordinate with NA-APM to manage processes with respect to procurement transactions the POs enter into, approve, administer, modify, closeout, terminate, and execute other actions as necessary.
- How does OAM issue policy, establish annual goals, and lead a CM Working Group (CMWG) to identify opportunities resulting from analyzing spend data?
- How does OAM work with NA-APM to collect, analyze, and disseminate large amounts of spend data?
- How do OAM and NA-APM processes ensure the ability to actively monitor, evaluate, and meet data quality standards?
- What best practices should be adopted from OAM and NA-APM on an agency-wide basis for program and functional activities?
    - What aspects of these tools and methods lead to improved outcomes?
    - What aspects of these processes could be made more effective or efficient?

Impact: The potential effects of CM are:

- Eliminating redundancies, increasing efficiency, and delivering more value and savings from DOE's acquisition program
- More effectively managed contract spending through a balance of Government-wide, agency-wide, and local contracts
- Continued achievement of small business goals and other socioeconomic requirements

Data & Evaluation Methods:

Step 1 – Each PO establishes an annual CM plan for the designated Fiscal Year(s).
Step 2 – POs identify a procurement strategy for each requirement in their plan.
Step 3 – POs establish their FY goals and submit to OAM.
Step 4 – OAM collects all plans, establishes Department plan with goals, and submits to OFPP.
Step 5 – POs work with the CMWG to identify opportunities to consolidate requirements across the department and/or across programs/offices.
Step 6 – Heads of Contracting Activity (HCA)/Procurement Directors provide status reports as needed to OAM. OAM tracks status and briefs OFPP as required.

Evidence Use and Dissemination. DOE program staff would receive recommendations on activities that lead to greater goal achievement, as well as activities that could be adapted to improve the effectiveness and efficiency of surveillance reviews. Results will be presented to DOE program managers and senior leadership, published on the DOE website, and shared in the DOE's Evidence and Evaluation Community of Practice.

- The CMWG leads DOE's CM implementation. Each HCA assigns dedicated staff to participate in the CMWG.
- The DOE Acquisition Council governs the CMWG.

4. Optimize DOE Corporate Business Systems & Services for Cloud-Based Delivery

Lead DOE Program/Support Office: Office of the Chief Financial Officer (OCFO)

Description: The Office of Chief Financial Officer manages over 30 IT systems and other tools that provide corporate business solutions to the Department of Energy (DOE). These systems support enterprise-level financial transactions, accounting, audit, budget, internal controls, business intelligence, procurement, human resources, travel, employee training and performance evaluations, and many other functions. Some of these systems are approaching end-of-life; others have support contracts that are either expiring or require exercising options to continue.

The Office and Management and Budget has mandated that agency-managed IT systems must be converted to cloud-based solutions by FY 2021. To meet this goal, OCFO will conduct an evaluation to determine the optimal mix of which DOE corporate business systems should be migrated to the cloud "as-is", which should be upgraded during migration, and which systems can be consolidated and/or retired.

Enterprise Learning Agenda. This evaluation supports the DOE's understanding of the following ELA question:

- What factors most influence the Department's ability support conversion of OCFO-managed IT systems to cloud-based solutions by FY 2021?

Evaluation Questions. The DOE seeks the answer the following evaluation questions and their sub-components in this study:

- How does the Office of the Chief Financial Officer (OCFO) coordinate to determine the optimal mix of which DOE corporate business systems should be migrated to the cloud:
  - "As-is",
  - Which should be upgraded during migration, and
  - Which systems can be consolidated and/or retired?
- How do OCFO processes ensure the ability to actively manage, monitor, evaluate, and meet IT support standards for both cloud applications and corporate business systems?
- How does OCFO the OCFO IT strategy ensure effective software and hardware solutions for corporate business services to current DOE capabilities?
- What best practices should be adopted from OCFO on an agency-wide basis for IT cloud migration program and functional activities?

Activities: The OCFO will engage a leading private sector provider of Federal IT services to conduct a comprehensive study of DOE's corporate business system portfolio and to recommend an optimal strategy for cloud-based migration of its systems. The study will compare current leading software and hardware solutions for corporate business services to current DOE capabilities. The study will further examine the structure and terms of existing DOE IT contracts and determine an optimal mix of strategy to continue as-is, renew, or enter into new contracts.

Timeline: OCFO anticipates 6-9 months will be required to issue a contract for the study, conduct strategic analysis, and to issue recommendations. Implementation of the study's recommendations is anticipated to occur in stages over the next 1-2 years as OCFO migrates some systems to the cloud, acquires new cloud-based solutions, and retires and/or consolidates other systems.

Data: Data gathered for this evaluation may include:

- reviewing DOE's current and anticipated corporate business process requirements
- comparing current DOE IT system capabilities to meet business process requirements vs. other available IT system solutions
- predicting total cost for migrating existing DOE systems to the cloud and associated operations & maintenance effort vs. acquiring new solutions
- reviewing DOE's existing contract terms with IT service providers to determine whether to upgrade DOE systems, consolidate and/or retire systems, or maintain current systems in a cloud-based environment

Evidence Use and Dissemination. DOE program staff would receive recommendations on activities that lead to greater goal achievement, as well as activities that could be adapted to improve the effectiveness and efficiency of surveillance reviews. Results will be presented to DOE program managers and senior leadership, published on the DOE website, and shared in the DOE's Evidence and Evaluation Community of Practice.