119TH CONGRESS
2D SESSION

S. _____

To accelerate the development, demonstration, and deployment of advanced technologies and innovative solutions that support the environmental cleanup missions of the Department of Energy, help prevent the future generation and accumulation of nuclear waste from both current and anticipated future nuclear activities, and for other purposes.

IN THE SENATE OF THE UNITED STATES

Mr. LUJÁN (for himself and Mr. SCOTT of South Carolina) introduced the following bill; which was read twice and referred to the Committee on _____

A BILL

To accelerate the development, demonstration, and deployment of advanced technologies and innovative solutions that support the environmental cleanup missions of the Department of Energy, help prevent the future generation and accumulation of nuclear waste from both current and anticipated future nuclear activities, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLES.

This Act may be cited as the ''Combining Laboratory Expertise to Accelerate Novel Solutions for Minimizing Accumulated Radioactive Toxins Act of 2026'' or the ''CLEAN SMART Act of 2026''.

SEC. 2. DEFINITIONS.

In this Act:

(1) APPROPRIATE CONGRESSIONAL COMMITTEES.—The term ''appropriate congressional committees'' means—

(A) the Committee on Commerce, Science, and Transportation of the Senate;

(B) the Committee on Energy and Natural Resources of the Senate;

(C) the Committee on Armed Services of the Senate;

(D) the Committee on Science, Space, and Technology of the House of Representatives;

(E) the Committee on Energy and Commerce of the House of Representatives; and

(F) the Committee on Armed Services of the House of Representatives.

(2) ASSISTANT SECRETARY.—The term ''Assistant Secretary'' means the Assistant Secretary of Energy for Environmental Management.

(3) CHAIR.—The term ''Chair'' means the Chair of the Nuclear Regulatory Commission.

(4) CORE NATIONAL LABORATORIES.—The term ''Core National Laboratories'' means the Idaho National Laboratory, the Los Alamos National Laboratory, the Oak Ridge National Laboratory, the Pacific Northwest National Laboratory, the Sandia National Laboratories, and the Corporate Lab.

(5) CORPORATE LAB.—The term ''Corporate Lab'' means the Savannah River National Laboratory.

(6) DEPARTMENT.—The term ''Department'' means the Department of Energy.

(7) DIRECTOR.—The term ''Director'' means Director of the Office of Legacy Management.

(8) FEDERAL SITE LIFE-CYCLE ESTIMATE.—The term ''Federal site life-cycle estimate'' means the scope, cost, and schedule profiles of work activities, including sunk costs and other relevant metrics, of work activities pertaining to the cleanup mission for an individual site of the Office of Environmental Management.

(9) FRAMEWORK.—The term ''Framework'' means the Technology Development and Deployment Framework developed pursuant to section 5.

(10) MEMORANDUM.—The term ''Memorandum'' means the memorandum of understanding entered into pursuant to section 4(c).

(11) NETWORK.—The term ''Network'' means the Network of National Laboratories for Environmental Management and Stewardship established pursuant to section 3.

(12) SECRETARY.—The term ''Secretary'' means the Secretary of Energy.

(13) SITE.—The term ''site'' means any outstanding defense- and non-defense-related nuclear waste site that is undergoing environmental remediation and facility decommissioning under the responsibility of the Office of Environmental Management, and any site that is undergoing long-term maintenance and surveillance under the responsibility of the Office of Legacy Management.

SEC. 3. ESTABLISHMENT OF THE NETWORK OF NATIONAL LABORATORIES FOR ENVIRONMENTAL MANAGEMENT AND STEWARDSHIP.

(a) ESTABLISHMENT.—The Secretary shall establish a steering committee to be known as the ''Network of National Laboratories for Environmental Management and Stewardship''.

(b) PURPOSE.—The Network shall advance the scientific and technical expertise of the National Laboratory system in support of the environmental cleanup mission of the Office of Environmental Management and the long-term surveillance and maintenance mission of the Office of Legacy Management through support for research, development, demonstration, and deployment of treatment technologies, disposal methods, and other capabilities—

(1) to minimize the impact of environmental contamination and risks to public health and the environment from radioactive and hazardous waste and materials from defense-related nuclear activities;

(2) to lower lifecycle cleanup costs for sites;

(3) to accelerate cleanup schedules or reduce the timeframe of site decommissioning; and

(4) to address high-priority technical challenges in cleanup operations, or otherwise improve the effectiveness and safety of cleanup methods.

(c) DUTIES.—At the direction of the Assistant Secretary and the Director, the Network and its participants shall—

(1) leverage National Laboratory partnerships to develop alternate treatment technologies, disposal methods, strategies, and other capabilities to assist in the cleanup and long-term management of sites,

in order to improve the cost, timeframe, effectiveness, and safety of cleanup methods;

(2) identify and coordinate technical support resources and capabilities to address emergent events associated with environmental cleanup and long-term monitoring of sites and facilitate the deployment of viable alternative treatment technologies, disposal methods, and other capabilities;

(3) conduct scalable performance testing, evaluation, verification, and validation of alternate treatment technologies, disposal methods, and other capabilities to demonstrate the potential cost, safety, and performance benefits of such capabilities in comparison to those currently deployed in support of the environmental cleanup mission of the Department;

(4) leverage relevant infrastructure at the Core National Laboratories, including the recently constructed Advanced Manufacturing Collaborative facility;

(5) conduct independent programmatic and technical reviews of plans or activities of the Department at the national or site level, including assessments of technology performance and alignment with respect to the programmatic priorities of the Office

of Environmental Management and the Office of Legacy Management;

(6) collaborate with the contractors and staff of the Department, other Federal agencies, academia, industry, and other relevant entities to ensure best practices are being exchanged and to identify opportunities for technology transfer;

(7) provide scientific and technical analysis to the Department and to stakeholders, as directed by the Department, regarding environmental cleanup, waste disposal, and long-term stewardship policy options and issues;

(8) provide an integrated science and technology perspective to support near- and long-term strategic planning for the Office of Environmental Management and the Office of Legacy Management at sites, including conducting analyses of alternative technologies and treatment methods and providing input on their insertion into the cleanup mission;

(9) coordinate and serve through the Corporate Lab as a liaison among the Department and contractors of the Department and the National Laboratories with capabilities relating to the Office of Environmental Management and the Office of Legacy Management that have been developed and sup-

ported across all of the program offices of the Department;

(10) provide technical expertise to inform contract decisions and language, research and development investments of the Department, and technical feasibility of contractor proposals consistent with all appropriate and applicable compliance requirements to mitigate potential conflicts of interest;

(11) assist the Department in developing and maintaining career pathway training opportunities in environmental remediation science, with a focus on engaging historically underserved or marginalized populations; and

(12) other duties as determined by the Assistant Secretary and the Director.

(d) MEMBERSHIP.—The Network shall be comprised of a representative from—

(1) each Core National Laboratory;

(2) each of the other National Laboratories with stewarded competencies for research activities associated with the Office of Environmental Management and the Office of Legacy Management, including the Argonne National Laboratory, the Fermi National Accelerator Laboratory, the Lawrence Berkeley National Laboratory, the Lawrence Liver-

more National Laboratory, the National Energy Technology Laboratory, and the SLAC National Accelerator Laboratory; and

(3) other National Laboratories or entities at the request of the Assistant Secretary or the Director.

(e) LEADERSHIP AND RESPONSIBILITIES.—

(1) COMPOSITION.—The leadership of the Network shall be composed of—

(A) a liaison from the Office of Environmental Management, designated by the Assistant Secretary, who shall be responsible for National Laboratory stewardship, coordination of resources, and guidance and oversight of the Network regarding the needs of the Office of Environmental Management;

(B) a liaison from the Office of Legacy Management, designated by the Director, who shall work directly with the Director and members of the Network to fulfill the needs of the Office of Legacy Management;

(C) an Executive Director, who shall—

(i) be affiliated with the Corporate Lab and appointed by the Network Chair and Network Co-Chair; and

(ii) work on behalf of all National Laboratories to coordinate the day-to-day needs of the Network;

(D) an official representative from each Core National Laboratory, who shall be designated by the respective Laboratory Director or Chief Research Officer, and who shall be responsible for coordinating and procuring the full complement of capabilities and resources from the relevant National Laboratory in order to fulfill its obligations with respect to the Network; and

(E) ad hoc representatives, who are Federal Government employees or employees of the management and operating contractors of the National Laboratories, and who may be—

(i) representatives of other National Laboratories, as needed based on the work undertaken by the Network; or

(ii) additional representatives from the Core National Laboratories, as needed and subject to the approval of the Network Chair and Network Co-Chair, with concurrence of the liaisons of the Office of Envi-

ronmental Management and the Office of Legacy Management.

(2) NETWORK CHAIR AND NETWORK CO-CHAIR.—

(A) NETWORK CHAIR.—The Laboratory Director for the Savannah River National Laboratory shall—

(i) serve as Network Chair;

(ii) report to the Assistant Secretary and the Director; and

(iii) ensure the overall effectiveness and coordination of the Network.

(B) NETWORK CO-CHAIR.—The Network Co-Chair shall work with the Network Chair to ensure the overall effectiveness of the Network and shall rotate annually among the Directors and Deputy Directors of the Core National Laboratories.

(f) PARTICIPATION OF NONMEMBERS.—

(1) ENGAGEMENT.—The Network may engage stakeholders, such as industry experts, educators, nonprofit stakeholders, and advisory groups, for the purpose of receiving mission-relevant information from such stakeholders.

(2) LIMITATIONS ON PARTICIPATION.—The Network shall prevent the regular and systematic participation of stakeholders at meetings of the Network, unless otherwise authorized by this Act.

(3) LIMITATIONS ON NONMEMBER INPUT.—The engagement of nonmembers shall be limited to the provision of individual advice and recommendations, unless otherwise authorized by this Act.

(g) REPORT.—Not later than 1 year after the date of the enactment of this Act, and annually thereafter, the Secretary, in coordination with the Assistant Secretary and the Director, shall submit to the appropriate congressional committees a report that includes a summary of—

(1) the major activities of the Network during the prior year;

(2) the major science and technology efforts of the Office of Environmental Management and the Office of Legacy Management during the prior year; and

(3) the state of technology adoption and alignment across the Office of Environmental Management and the Office of Legacy Management.

(h) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to the Secretary—

(1) $55,000,000 for fiscal year 2027 and each fiscal year thereafter to support the development and implementation of activities specified under subsection (c); and

(2) $3,000,000 for fiscal year 2027 and each fiscal year thereafter to support the operation and coordination of the Network.

(i) OTHER ENVIRONMENTAL CLEANUP CHALLENGES.—The Secretary, in consultation with the Assistant Secretary and the Director, may enter into an agreement with any Federal agency to utilize the capabilities of the Network to address radiological hazards and environmental contamination challenges at locations where the Office of Environmental Management and Office of Legacy Management do not have primary cleanup responsibilities, if and only if the agreement—

(1) is subject to the availability of the existing appropriations of the Department, except for those authorized in subsection (h), and to the extent possible leverages existing appropriations and resources from the Federal agency with which the agreement is made;

(2) does not utilize resources made available to support the cleanup missions of the Office of Envi-

ronmental Management and the Office of Legacy Management; and

(3) does not utilize the capabilities of the Network in a manner that would prevent or otherwise limit the Network from fulfilling responsibilities specified in subsection (c).

(j) INAPPLICABILITY OF FEDERAL ADVISORY COMMITTEE ACT.—Chapter 10 of title 5 (commonly referred to as the ''Federal Advisory Committee Act''), shall not apply with respect to the Network or the activities of the Network.

SEC. 4. COORDINATION WITH OTHER DEPARTMENT OF ENERGY OFFICES AND OTHER FEDERAL AGENCIES ON ENVIRONMENTAL MANAGEMENT RESEARCH.

(a) IN GENERAL.—The Secretary, in cooperation with the Network, shall improve coordination across the Department and the Federal government on science and technology efforts applicable to the environmental cleanup mission of the Office of Environmental Management as necessary to procure sufficient expertise and resources to address the full range of research challenges and needs identified by the Office.

(b) INTERAGENCY WORKING ADVISORY ON TECHNOLOGY EXCELLENCE IN ENVIRONMENTAL CLEANUP.—

(1) IN GENERAL.—The Secretary shall establish an advisory group to be known as the ''Interagency Advisory Group on Technology Excellence in Environmental Cleanup'', which shall—

(A) coordinate relevant technology transfer activities among the National Laboratories, the Technology Transfer Working Group of the Department, and other appropriate Federal agencies;

(B) facilitate the exchange of mission-relevant information and best practices, including information on technology transfer practices, developments in environmental remediation science and treatment methods, and alternative approaches to radioactive waste management;

(C) identify and recommend technologies developed within and outside of the jurisdiction of the Department with potential applications for the Office of Environmental Management;

(D) identify and recommend opportunities to utilize the services and expertise of the Network to assist in addressing cleanup challenges at locations where the Office of Environmental Management does not have cleanup responsibilities, as described in section 3(i); and

(E) develop and disseminate to the public and prospective technology partners information about opportunities and procedures for technology transfer with the Network.

(2) COMPOSITION.—

(A) MEMBERS.—The Advisory Group shall be comprised of representatives selected from—

(i) the Core National Laboratories;

(ii) the Office of Environmental Management;

(iii) the Office of Legacy Management;

(iv) the Office of Nuclear Energy;

(v) the Office of Science;

(vi) the National Nuclear Security Administration;

(vii) the Environmental Protection Agency;

(viii) the Nuclear Regulatory Commission;

(ix) the Bureau of Land Management;

(x) the National Park Service;

(xi) the Bureau of Indian Affairs;

(xii) the United States Forest Service;

(xiii) such other Federal agencies with relevant science and technology expertise, as the Secretary determines, including agencies within the Department involved in technology development relating to radioactive waste disposal or environmental remediation;

(xiv) State and Tribal governments;

(xv) academia; and

(xvi) the private sector.

(3) CHAIR.—The Assistant Secretary shall serve as the Chair of the Advisory Group.

(4) MEETINGS.—The Advisory Group shall meet not less frequently than once every 180 days.

(5) INAPPLICABILITY OF FEDERAL ADVISORY COMMITTEE ACT.—Chapter 10 of title 5, United States Code (commonly referred to as the ''Federal Advisory Committee Act''), shall not apply with respect to the Advisory Group or the activities of the Advisory Group.

(c) PARTNERSHIP WITH OFFICE OF SCIENCE.—

(1) MEMORANDUM OF UNDERSTANDING.—Not later than 1 year after the date of the enactment of this Act, the Assistant Secretary and the Director of the Office of Science of the Department shall enter

into a memorandum of understanding to facilitate improved coordination and cooperation between the Office of Environmental Management and the Office of Science on areas of basic research that are applicable to the environmental cleanup mission of the Office of Environmental Management.

(2) BASIC RESEARCH NEEDS WORKSHOPS.—Not later than 180 days after the Memorandum takes effect, and on a periodic basis thereafter, the Director of the Office of Science, in coordination with the Assistant Secretary and the Network, shall administer a workshop to solicit the input of relevant Federal agencies, academia, industry, the National Laboratories, and other relevant entities—

(A) to identify the major basic research needs of the Office of Environmental Management; and

(B) to develop strategic research plans to advance knowledge and technological capabilities to address the basic research needs identified in subparagraph (A).

(3) REPORTS.—

(A) INITIAL WORKSHOP REPORT.—Not later than 180 days after the date of the initial workshop described in paragraph (2), the As-

sistant Secretary and the Director of the Office of Science shall submit to the appropriate congressional committees a report summarizing the major findings of the workshop, including gaps in basic research knowledge relating to the environmental cleanup mission of the Office of Environmental Management.

(B) Not later than 1 year after the Memorandum takes effect, the Assistant Secretary and the Director of the Office of Science shall submit to the appropriate congressional committees a report summarizing the steps that the Office of Environmental Management and the Office of Science have taken to fulfill the obligations of the Memorandum.

SEC. 5. PROGRAM MANAGEMENT PROTOCOLS OF THE OFFICE OF ENVIRONMENTAL MANAGEMENT.

(a) IN GENERAL.—At the request and direction of the Assistant Secretary, the Network shall provide an integrated science and technology perspective to assist the Office of Environmental Management in implementing and enhancing established, technology-focused strategic plans, roadmaps, and program management protocols as necessary to incorporate leading program management prac-

tices and facilitate safe, timely, and cost-efficient cleanup of sites.

(b) TECHNOLOGY DEVELOPMENT AND DEPLOYMENT FRAMEWORK.—

(1) IN GENERAL.—The Secretary shall direct the Network, in coordination with the Assistant Secretary, to develop and update biennially a framework to be known as the ''Technology Development and Deployment Framework'' that outlines—

(A) the key science and technology objectives of the Office of Environmental Management; and

(B) an integrated strategy to assist the Office of Environmental Management in—

(i) selecting safe, effective, and cost-efficient approaches to resolve technically complex challenges or reduce the cost, time, and scope associated with the clean-up mission;

(ii) advancing the development, demonstration, and deployment of new innovations, such as alternate treatment technologies, disposal methods, and other capabilities; and

(iii) maximizing the benefits of existing research and technology investments.

(2) OBJECTIVES.—The Framework shall complement and support existing program management protocols, strategic plans, and roadmaps of the Office of Environmental Management and, at minimum, shall—

(A) emphasize support for a wide of range of research and technology development activities, including—

(i) applied technology research and technology development programs that seek to—

(I) improve existing technologies or mature early concept and emerging technologies as specified under section 4406A(a) of the Atomic Energy Defense Act (50 U.S.C. 2586a(a)); and

(II) pursue breakthrough innovations or improvements to the cleanup mission that substantially lower lifecycle cleanup costs and schedules or address technically complex cleanup challenges, as specified under section

4406A(b) of the Atomic Energy Defense Act (50 U.S.C. 2586a(b));

(ii) basic research;

(iii) scientific studies and technical issue resolution to support evaluation and selection of technologies for insertion into the cleanup mission; and

(iv) research that addresses both near-term, site-specific needs and long-term, program-wide needs;

(B) summarize the major focus areas and objectives of the science and technology efforts of the Office of Environment Management;

(C) detail plans to leverage relevant advances and expertise in other technology development programs across the Department, the National Laboratories, academia, private industry, and other technology providers; and

(D) support the development or maintenance of a workforce pipeline that leverages the capabilities of institutions of higher education, especially those serving minority or historically underserved populations.

(c) CORRECTIVE ACTION PLANS.—Section 4713 of the Atomic Energy Defense Act (50 U.S.C. 2753) is amended by inserting at the end the following:

''(e) CORRECTIVE ACTION PLANS FOR DEFENSE ENVIRONMENTAL CLEANUP PROJECTS.—If a root cause analysis for a defense environmental cleanup project is required under the project management protocols of the Department of Energy or under subsection (c)(3), then—

''(1) the site contracting entity, in consultation with the site manager and Assistant Secretary, shall develop a corrective action plan to address the underlying causes for the cost or schedule change identified in the analysis; and

''(2) the Secretary, at the conclusion of the corrective action plan, shall—

''(A) conduct an independent review that includes an assessment and validation of the efficacy of the corrective measures utilized;

''(B) submit to the appropriate congressional committees the outcome of the assessment described in subparagraph (A); and

''(C) certify to the appropriate congressional committees that program management measures are in place to manage the cost and

schedule of the project and mitigate against future cost overruns.''.