114TH CONGRESS  
1ST SESSION  
S. 883

To facilitate the reestablishment of domestic, critical mineral designation, assessment, production, manufacturing, recycling, analysis, forecasting, workforce, education, and research capabilities in the United States, and for other purposes.

IN THE SENATE OF THE UNITED STATES  
MARCH 26, 2015

Ms. Murkowski introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

A BILL  
To facilitate the reestablishment of domestic, critical mineral designation, assessment, production, manufacturing, recycling, analysis, forecasting, workforce, education, and research capabilities in the United States, and for other purposes.

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

3 SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

(a) SHORT TITLE.—This Act may be cited as the “American Mineral Security Act of 2015”.

(b) TABLE OF CONTENTS.—The table of contents of this Act is as follows:

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Sec. 1. Short title; table of contents.
Sec. 2. Definitions.

TITLE I—DESIGNATIONS AND SUPPLY CHAIN

Sec. 101. Policy.
Sec. 102. Critical mineral designations.
Sec. 103. Resource assessment.
Sec. 104. Permitting.
Sec. 105. Application of Executive order.
Sec. 106. Federal Register process.
Sec. 107. Recycling, efficiency, and alternatives.
Sec. 108. Analysis and forecasting.
Sec. 109. Education and workforce.

TITLE II—ADMINISTRATION

Sec. 201. Repeal.

1 SEC. 2. DEFINITIONS.

In this Act:

(1) CRITICAL MINERAL.—

(A) IN GENERAL.—The term “critical mineral” means any mineral, element, substance, or material designated as critical pursuant to section 102.

(B) EXCLUSIONS.—The term “critical mineral” does not include—

(i) fuel minerals, including oil, natural gas, or any other fossil fuels; or

(ii) water, ice, or snow.

(2) INDIAN TRIBE.—The term “Indian tribe” has the meaning given the term in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450b).
(3) MINERAL MANUFACTURING.—The term “mineral manufacturing” means—

(A) the production, processing, refining, alloying, separation, concentration, magnetic sintering, melting, or beneficiation of minerals within the United States;

(B) the fabrication, assembly, or production, within the United States, of equipment, components, or other goods with energy technology-, defense-, agriculture-, consumer electronics-, or health care-related applications; or

(C) any other value-added, manufacturing-related use of minerals undertaken within the United States.

(4) STATE.—The term “State” means—

(A) a State;

(B) the District of Columbia;

(C) the Commonwealth of Puerto Rico;

(D) Guam;

(E) American Samoa;

(F) the Commonwealth of the Northern Mariana Islands; and

(G) the United States Virgin Islands.
TITLE I—DESIGNATIONS AND SUPPLY CHAIN

SEC. 101. POLICY.

(a) In general.—Section 3 of the National Materials and Minerals Policy, Research and Development Act of 1980 (30 U.S.C. 1602) is amended in the second sentence—

(1) by striking paragraph (3) and inserting the following:

“(3) establish an analytical and forecasting capability for identifying critical mineral demand, supply, and other factors to allow informed actions to be taken to avoid supply shortages, mitigate price volatility, and prepare for demand growth and other market shifts;”;

(2) in paragraph (6), by striking “and” after the semicolon at the end;

(3) in paragraph (7), by striking the period at the end and inserting a semicolon; and

(4) by adding at the end the following:

“(8) encourage Federal agencies to facilitate the availability, development, and environmentally responsible production of domestic resources to meet national critical material or mineral needs;
“(9) avoid duplication of effort, prevent unnecessary paperwork, and minimize delays in the administration of applicable laws (including regulations) and the issuance of permits and authorizations necessary to explore for, develop, and produce critical minerals and to construct mineral manufacturing facilities in accordance with applicable environmental and land management laws;

“(10) strengthen educational and research capabilities and workforce training;

“(11) bolster international cooperation through technology transfer, information sharing, and other means;

“(12) promote the efficient production, use, and recycling of critical minerals;

“(13) develop alternatives to critical minerals; and

“(14) establish contingencies for the production of, or access to, critical minerals for which viable sources do not exist within the United States.”.

(b) CONFORMING AMENDMENT.—Section 2(b) of the National Materials and Minerals Policy, Research and Development Act of 1980 (30 U.S.C. 1601(b)) is amended by striking ““(b) As used in this Act, the term” and inserting the following:
“(b) DEFINITIONS.—In this Act:

“(1) CRITICAL MINERAL.—The term ‘critical mineral’ means any mineral or element designated as a critical mineral pursuant to section 102 of the American Mineral Security Act of 2015.

“(2) MATERIALS.—The term”.

SEC. 102. CRITICAL MINERAL DESIGNATIONS.

(a) DRAFT METHODOLOGY.—Not later than 90 days after the date of enactment of this Act, the Director of the United States Geological Survey (referred to in this title as the “Director”), in consultation with relevant Federal agencies and entities, shall publish in the Federal Register for public comment a draft methodology for determining which minerals qualify as critical minerals based on an assessment of whether the minerals are—

(1) subject to potential supply restrictions (including restrictions associated with foreign political risk, abrupt demand growth, military conflict, violent unrest, anti-competitive or protectionist behaviors, and other risks throughout the supply chain); and

(2) important in use (including energy technology-, defense-, currency-, agriculture-, consumer electronics-, and health care-related applications).

(b) AVAILABILITY OF DATA.—If available data is insufficient to provide a quantitative basis for the method-
ology developed under this section, qualitative evidence may be used to the extent necessary.

(c) Final Methodology.—After reviewing public comments on the draft methodology under subsection (a) and updating the draft methodology as appropriate, not later than 270 days after the date of enactment of this Act, the Director shall publish in the Federal Register a description of the final methodology for determining which minerals qualify as critical minerals.

(d) Designations.—

(1) In general.—For purposes of carrying out this title, the Director shall maintain a list of minerals and elements designated as critical, pursuant to the methodology under subsection (c).

(2) Initial list.—Subject to paragraph (1), not later than 1 year after the date of enactment of this Act, the Director shall publish in the Federal Register an initial list of minerals designated as critical pursuant to the final methodology under subsection (c) for the purpose of carrying out this title.

(3) Inclusions.—Notwithstanding the criteria under subsection (a), any mineral or element determined by another Federal agency to be strategic and critical to the defense or national security of the United States may be—
(A) considered to be a critical mineral; and
(B) included on the list developed by the
Director under this subsection.

(e) Subsequent Review.—

(1) In general.—The Director shall review
the methodology and designations under subsections
(c) and (d) at least every 2 years, or more frequently
as the Director considers to be appropriate.

(2) Revisions.—Subject to subsection (d)(1),
the Director may—

(A) revise the methodology described in
this section;

(B) determine that minerals or elements
previously determined to be critical minerals are
no longer critical minerals; and

(C) designate additional minerals or ele-
ments as critical minerals.

(f) Notice.—On finalization of the methodology
under subsection (c), the list under subsection (d), or any
revision to the methodology or list under subsection (e),
the Director shall submit to Congress written notice of the
action.

SEC. 103. RESOURCE ASSESSMENT.

(a) In general.—Not later than 4 years after the
date of enactment of this Act, in consultation with applica-
ble State (including geological surveys), local, academic, industry, and other entities, the Director shall complete a comprehensive national assessment of each critical mineral that—

(1) identifies and quantifies known critical mineral resources, using all available public and private information and datasets, including exploration histories; and

(2) provides a quantitative and qualitative assessment of undiscovered critical mineral resources throughout the United States, including probability estimates of tonnage and grade, using all available public and private information and datasets, including exploration histories.

(b) SUPPLEMENTARY INFORMATION.—In carrying out this section, the Director may carry out surveys and field work (including drilling, remote sensing, geophysical surveys, geological mapping, and geochemical sampling and analysis) to supplement existing information and datasets available for determining the existence of critical minerals on—

(1) Federal land;

(2) Indian tribal land, at the request or with the consent of the Indian tribe; and
(3) State land, at the request or with the consent of the Governor of the State.

(c) TECHNICAL ASSISTANCE.—At the request of the Governor of a State or the head of an Indian tribe, the Director may provide technical assistance to State governments and Indian tribes conducting critical mineral resource assessments on non-Federal land.

(d) PRIORITIZATION.—

(1) IN GENERAL.—The Director may sequence the completion of resource assessments for each critical mineral such that critical minerals considered to be most critical under the methodology established under section 102 are completed first.

(2) REPORTING.—During the period beginning not later than 1 year after the date of enactment of this Act and ending on the date of completion of all of the assessments required under this section, the Director shall submit to Congress on an annual basis an interim report that—

(A) identifies the sequence and schedule for completion of the assessments if the Director sequences the assessments; or

(B) describes the progress of the assessments if the Director does not sequence the assessments.
(e) **Updates.**—The Director may periodically update the assessments conducted under this section based on—

1. the generation of new information or datasets by the Federal Government; or
2. the receipt of new information or datasets from critical mineral producers, State geological surveys, academic institutions, trade associations, or other entities or individuals.

(f) **Additional Surveys.**—The Director shall complete a resource assessment for each additional mineral or element subsequently designated as a critical mineral under section 102(e)(2) not later than 2 years after the designation of the mineral or element.

(g) **Report.**—Not later than 2 years after the date of enactment of this Act, the Director shall submit to Congress a report describing the status of geological surveying of Federal land for any mineral commodity—

1. for which the United States was dependent on a foreign country for more than 25 percent of the United States supply, as depicted in the report issued by the United States Geological Survey entitled “Mineral Commodity Summaries 2015”; but
2. that is not designated as a critical mineral under section 102.
SEC. 104. PERMITTING.

(a) PERFORMANCE IMPROVEMENTS.—To improve the quality and timeliness of decisions, the Secretary of the Interior (acting through the Director of the Bureau of Land Management) and the Secretary of Agriculture (acting through the Chief of the Forest Service) (referred to in this section as the “Secretaries”) shall, to the maximum extent practicable, with respect to critical mineral production on Federal land, complete Federal permitting and review processes with maximum efficiency and effectiveness, while supporting vital economic growth, by—

(1) establishing and adhering to timelines and schedules for the consideration of, and final decisions regarding, applications, operating plans, leases, licenses, permits, and other use authorizations for mineral-related activities on Federal land;

(2) establishing clear, quantifiable, and temporal permitting performance goals and tracking progress against those goals;

(3) engaging in early collaboration among agencies, project sponsors, and affected stakeholders—

(A) to incorporate and address the interests of those parties; and

(B) to minimize delays;

(4) ensuring transparency and accountability by using cost-effective information technology to collect
and disseminate information regarding individual
projects and agency performance;

(5) engaging in early and active consultation
with State, local, and Indian tribal governments to
avoid conflicts or duplication of effort, resolve con-
cerns, and allow for concurrent, rather than sequen-
tial, reviews;

(6) providing demonstrable improvements in the
performance of Federal permitting and review proc-
esses, including lower costs and more timely deci-
sions;

(7) expanding and institutionalizing permitting
and review process improvements that have proven
effective;

(8) developing mechanisms to better commu-
nicate priorities and resolve disputes among agencies
at the national, regional, State, and local levels; and

(9) developing other practices, such as
preapplication procedures.

(b) Review and Report.—Not later than 1 year
after the date of enactment of this Act, the Secretaries
shall submit to Congress a report that—

(1) identifies additional measures (including
regulatory and legislative proposals, as appropriate)
that would increase the timeliness of permitting ac-
tivities for the exploration and development of do-
mestic critical minerals;

(2) identifies options (including cost recovery
paid by permit applicants) for ensuring adequate
staffing and training of Federal entities and per-
sonnel responsible for the consideration of applica-
tions, operating plans, leases, licenses, permits, and
other use authorizations for critical mineral-related
activities on Federal land;

(3) quantifies the amount of time typically re-
quired (including range derived from minimum and
maximum durations, mean, median, variance, and
other statistical measures or representations) to
complete each step (including those aspects outside
the control of the executive branch, such as judicial
review, applicant decisions, or State and local gov-
ernment involvement) associated with the develop-
ment and processing of applications, operating
plans, leases, licenses, permits, and other use au-
thorizations for critical mineral-related activities on
Federal land, which shall serve as a baseline for the
performance metric under subsection (c); and

(4) describes actions carried out pursuant to
subsection (a).
(c) PERFORMANCE METRIC.—Not later than 90 days after the date of submission of the report under subsection (b), the Secretaries, after providing public notice and an opportunity to comment, shall develop and publish a performance metric for evaluating the progress made by the executive branch to expedite the permitting of activities that will increase exploration for, and development of, domestic critical minerals, while maintaining environmental standards.

(d) ANNUAL REPORTS.—Beginning with the first budget submission by the President under section 1105 of title 31, United States Code, after publication of the performance metric required under subsection (c), and annually thereafter, the Secretaries shall submit to Congress a report that—

(1) summarizes the implementation of recommendations, measures, and options identified in paragraphs (1) and (2) of subsection (b);

(2) using the performance metric under subsection (c), describes progress made by the executive branch, as compared to the baseline established pursuant to subsection (b)(3), on expediting the permitting of activities that will increase exploration for, and development of, domestic critical minerals; and
(3) compares the United States to other countries in terms of permitting efficiency and any other criteria relevant to the globally competitive critical minerals industry.

(e) INDIVIDUAL PROJECTS.—Using data from the Secretaries generated under subsection (d), the Director of the Office of Management and Budget shall prioritize inclusion of individual critical mineral projects in the permit performance dashboard.

(f) REPORT OF SMALL BUSINESS ADMINISTRATION.—Not later than 1 year and 300 days after the date of enactment of this Act, the Administrator of the Small Business Administration shall submit to the applicable committees of Congress a report that assesses the performance of Federal agencies with respect to—

(1) complying with chapter 6 of title 5, United States Code (commonly known as the “Regulatory Flexibility Act”), in promulgating regulations applicable to the critical minerals industry; and

(2) performing an analysis of regulations applicable to the critical minerals industry that may be outmoded, inefficient, duplicative, or excessively burdensome.
SEC. 105. APPLICATION OF EXECUTIVE ORDER.

Domestic mines that will produce critical minerals and critical mineral manufacturing projects shall be considered to be infrastructure projects, as described in Executive Order 13604 (5 U.S.C. 601 note; relating to improving performance of Federal permitting and review of infrastructure projects).

SEC. 106. FEDERAL REGISTER PROCESS.

(a) Preparation.—The preparation of Federal Register notices required by law associated with the issuance of a critical mineral exploration or mine permit shall be delegated to the organizational level within the agency responsible for issuing the critical mineral exploration or mine permit.

(b) Transmission.—All Federal Register notices regarding official document availability, announcements of meetings, or notices of intent to undertake an action shall be originated in, and transmitted to the Federal Register from, the office in which, as applicable—

(1) the documents or meetings are held; or

(2) the activity is initiated.

(c) Departmental Review.—Absent any extraordinary circumstance, and except as otherwise required by law, each Federal Register notice described in subsection (a) shall be—
(1) subject to any required reviews within the Department of the Interior or the Department of Agriculture; and

(2) published in final form in the Federal Register not later than 45 days after the date of initial preparation of the notice.

**SEC. 107. RECYCLING, EFFICIENCY, AND ALTERNATIVES.**

(a) **Establishment.**—The Secretary of Energy, in consultation with the Director, shall conduct a program of research and development—

(1) to promote the efficient production, use, and recycling of critical minerals throughout the supply chain; and

(2) to develop alternatives to critical minerals that do not occur in significant abundance in the United States.

(b) **Cooperation.**—In carrying out the program, the Secretary of Energy shall cooperate with appropriate—

(1) Federal agencies and National Laboratories;

(2) critical mineral producers;

(3) critical mineral processors;

(4) critical mineral manufacturers;

(5) trade associations;

(6) academic institutions;

(7) small businesses; and
(8) other relevant entities or individuals.

(e) Activities.—Under the program, the Secretary of Energy, in consultation with the Director, shall carry out activities that include the identification and development of—

(1) advanced critical mineral extraction, production, separation, alloying, or processing technologies that decrease the energy consumption, environmental impact, and costs of those activities, including—

(A) efficient water and wastewater management strategies;

(B) technologies and management strategies to control the environmental impacts of radionuclides in ore tailings; and

(C) technologies for separation and processing;

(2) technologies or process improvements that minimize the use, or lead to more efficient use, of critical minerals across the full supply chain;

(3) technologies, process improvements, or design optimizations that facilitate the recycling of critical minerals, and options for improving the rates of collection of products and scrap containing critical
minerals from post-consumer, industrial, or other waste streams;

(4) commercial markets, advanced storage methods, energy applications, and other beneficial uses of critical minerals processing byproducts;

(5) alternative minerals, metals, and materials, particularly those available in abundance within the United States and not subject to potential supply restrictions, that lessen the need for critical minerals; and

(6) alternative energy technologies or alternative designs of existing energy technologies, particularly those that use minerals that—

(A) occur in abundance in the United States; and

(B) are not subject to potential supply restrictions.

(d) REPORTS.—Not later than 2 years after the date of enactment of this Act, and annually thereafter, the Secretary of Energy shall submit to Congress a report summarizing the activities, findings, and progress of the program.

SEC. 108. ANALYSIS AND FORECASTING.

(a) CAPABILITIES.—In order to evaluate existing critical mineral policies and inform future actions that may
be taken to avoid supply shortages, mitigate price volatility, and prepare for demand growth and other market shifts, the Director, in consultation with the Energy Information Administration, academic institutions, and others in order to maximize the application of existing competencies related to developing and maintaining computer models and similar analytical tools, shall conduct and publish the results of an annual report that includes—

(1) as part of the annually published Mineral Commodity Summaries from the United States Geological Survey, a comprehensive review of critical mineral production, consumption, and recycling patterns, including—

(A) the quantity of each critical mineral domestically produced during the preceding year;

(B) the quantity of each critical mineral domestically consumed during the preceding year;

(C) market price data or other price data for each critical mineral;

(D) an assessment of—

(i) critical mineral requirements to meet the national security, energy, economic, industrial, technological, and other
needs of the United States during the preceding year;

(ii) the reliance of the United States on foreign sources to meet those needs during the preceding year; and

(iii) the implications of any supply shortages, restrictions, or disruptions during the preceding year;

(E) the quantity of each critical mineral domestically recycled during the preceding year;

(F) the market penetration during the preceding year of alternatives to each critical mineral;

(G) a discussion of international trends associated with the discovery, production, consumption, use, costs of production, prices, and recycling of each critical mineral as well as the development of alternatives to critical minerals; and

(H) such other data, analyses, and evaluations as the Director finds are necessary to achieve the purposes of this section; and

(2) a comprehensive forecast, entitled the “Annual Critical Minerals Outlook”, of projected critical
mineral production, consumption, and recycling patterns, including—

(A) the quantity of each critical mineral projected to be domestically produced over the subsequent 1-year, 5-year, and 10-year periods; 

(B) the quantity of each critical mineral projected to be domestically consumed over the subsequent 1-year, 5-year, and 10-year periods; 

(C) an assessment of—

(i) critical mineral requirements to meet projected national security, energy, economic, industrial, technological, and other needs of the United States; 

(ii) the projected reliance of the United States on foreign sources to meet those needs; and

(iii) the projected implications of potential supply shortages, restrictions, or disruptions; 

(D) the quantity of each critical mineral projected to be domestically recycled over the subsequent 1-year, 5-year, and 10-year periods; 

(E) the market penetration of alternatives to each critical mineral projected to take place
over the subsequent 1-year, 5-year, and 10-year periods;

(F) a discussion of reasonably foreseeable international trends associated with the discovery, production, consumption, use, costs of production, and recycling of each critical mineral as well as the development of alternatives to critical minerals; and

(G) such other projections relating to each critical mineral as the Director determines to be necessary to achieve the purposes of this section.

(b) PROPRIETARY INFORMATION.—In preparing a report described in subsection (a), the Director shall ensure, consistent with section 5(f) of the National Materials and Minerals Policy, Research and Development Act of 1980 (30 U.S.C. 1604(f)), that—

(1) no person uses the information and data collected for the report for a purpose other than the development of or reporting of aggregate data in a manner such that the identity of the person or firm who supplied the information is not discernible and is not material to the intended uses of the information;
(2) no person discloses any information or data collected for the report unless the information or data has been transformed into a statistical or aggregate form that does not allow the identification of the person or firm who supplied particular information; and

(3) procedures are established to require the withholding of any information or data collected for the report if the Director determines that withholding is necessary to protect proprietary information, including any trade secrets or other confidential information.

SEC. 109. EDUCATION AND WORKFORCE.

(a) WORKFORCE ASSESSMENT.—Not later than 1 year and 300 days after the date of enactment of this Act, the Secretary of Labor (in consultation with the Director, the Director of the National Science Foundation, institutions of higher education with substantial expertise in mining, and employers in the critical minerals sector) shall submit to Congress an assessment of the domestic availability of technically trained personnel necessary for critical mineral exploration, development, assessment, production, manufacturing, recycling, analysis, forecasting, education, and research, including an analysis of—
(1) skills that are in the shortest supply as of the date of the assessment;

(2) skills that are projected to be in short supply in the future;

(3) the demographics of the critical minerals industry and how the demographics will evolve under the influence of factors such as an aging workforce;

(4) the effectiveness of training and education programs in addressing skills shortages;

(5) opportunities to hire locally for new and existing critical mineral activities;

(6) the sufficiency of personnel within relevant areas of the Federal Government for achieving the policies described in section 3 of the National Materials and Minerals Policy, Research and Development Act of 1980 (30 U.S.C. 1602); and

(7) the potential need for new training programs to have a measurable effect on the supply of trained workers in the critical minerals industry.

(b) CURRICULUM STUDY.—

(1) IN GENERAL.—The Director and the Secretary of Labor shall jointly enter into an arrangement with the National Academy of Sciences and the National Academy of Engineering under which the
Academies shall coordinate with the National Science Foundation on conducting a study—

(A) to design an interdisciplinary program on critical minerals that will support the critical mineral supply chain and improve the ability of the United States to increase domestic, critical mineral exploration, development, production, manufacturing, and recycling;

(B) to address undergraduate and graduate education, especially to assist in the development of graduate level programs of research and instruction that lead to advanced degrees with an emphasis on the critical mineral supply chain or other positions that will increase domestic, critical mineral exploration, development, production, manufacturing, and recycling;

(C) to develop guidelines for proposals from institutions of higher education with substantial capabilities in the required disciplines for activities to improve the critical mineral supply chain and advance the capacity of the United States to increase domestic, critical mineral exploration, research, development, production, manufacturing, and recycling; and
(D) to outline criteria for evaluating performance and recommendations for the amount of funding that will be necessary to establish and carry out the program described in subsection (c).

(2) REPORT.—Not later than 2 years after the date of enactment of this Act, the Director shall submit to Congress a description of the results of the study required under paragraph (1).

(c) PROGRAM.—

(1) ESTABLISHMENT.—The Director and the Secretary of Labor shall jointly conduct a competitive grant program under which institutions of higher education may apply for and receive 4-year grants for—

(A) startup costs for newly designated faculty positions in integrated critical mineral education, research, innovation, training, and workforce development programs consistent with subsection (b);

(B) internships, scholarships, and fellowships for students enrolled in programs related to critical minerals;
(C) equipment necessary for integrated critical mineral innovation, training, and work-force development programs; and

(D) research of critical minerals and their applications, particularly concerning the manufacture of critical components vital to national security.

(2) RENEWAL.—A grant under this subsection shall be renewable for up to 2 additional 3-year terms based on performance criteria outlined under subsection (b)(1)(D).

TITLE II—ADMINISTRATION

SEC. 201. REPEAL.

(a) IN GENERAL.—The National Critical Materials Act of 1984 (30 U.S.C. 1801 et seq.) is repealed.

(b) CONFORMING AMENDMENT.—Section 3(d) of the National Superconductivity and Competitiveness Act of 1988 (15 U.S.C. 5202(d)) is amended in the first sentence by striking “, with the assistance of the National Critical Materials Council as specified in the National Critical Materials Act of 1984 (30 U.S.C. 1801 et seq.),”.

SEC. 202. SAVINGS CLAUSES.

(a) IN GENERAL.—Nothing in this Act or an amendment made by this Act modifies any requirement or authority provided by the matter under the heading “GEO-
1 LOGICAL SURVEY” of the first section of the Act of March 3, 1879 (43 U.S.C. 31(a)).

2 (b) POTASH.—Nothing in this Act affects any aspect of Secretarial Order 3324, issued by the Secretary of the Interior on December 3, 2012, with respect to potash and oil and gas operators.