To facilitate the availability, development, and environmentally responsible production of domestic resources to meet national material or critical mineral needs, and for other purposes.

IN THE SENATE OF THE UNITED STATES

MAY 2, 2019

Ms. Murkowski (for herself, Mr. Manchin, Mr. Sullivan, Ms. McSally, Mr. Cramer, Mr. Risch, Mr. Jones, Mr. Tillis, Mr. Barrasso, Mrs. Capito, Mr. Crapo, and Mr. Daines) introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources.

OCTOBER 22, 2019

Reported by Ms. Murkowski, with an amendment

[Strike out all after the enacting clause and insert the part printed in italics]

A BILL

To facilitate the availability, development, and environmentally responsible production of domestic resources to meet national material or critical mineral needs, and for other purposes.

1 Be it enacted by the Senate and House of Representa-
2 tives of the United States of America in Congress assembled,
SECTION 1. SHORT TITLE.

This Act may be cited as the "American Mineral Security Act".

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 by the Secretary under section 4.

(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) CRITICAL MINERAL MANUFACTURING.—The term "critical mineral manufacturing" means—

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

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

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

(3) INDIAN TRIBE.—The term “Indian tribe” has the meaning given the term in section 4 of the

(4) SECRETARY.—The term “Secretary” means the Secretary of the Interior.

(5) 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.

SEC. 3. POLICY.

(a) IN GENERAL.—Section 3 of the National Mate-
rials and Minerals Policy, Research and Development Act
of 1980 (30 U.S.C. 1602) is amended in the second sen-
tence—
(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; and

(3) by striking paragraph (7) and inserting the following:

"(7) facilitate the availability, development, and environmentally responsible production of domestic resources to meet national material or critical mineral needs;

"(8) 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 critical mineral manufacturing facilities in accordance with applicable environmental and land management laws;

"(9) strengthen—
“(A) educational and research capabilities at not lower than the secondary school level; and

“(B) workforce training for exploration and development of critical minerals and critical mineral manufacturing;

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

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

“(12) develop alternatives to critical minerals; and

“(13) 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, element, substance, or material designated as critical by the Secretary
under section 4 of the American Mineral Security Act.

"(2) MATERIALS.—The term"

SEC. 4. CRITICAL MINERAL DESIGNATIONS.

(a) DRAFT METHODOLOGY AND LIST.—The Secretary, acting through the Director of the United States Geological Survey (referred to in this section as the "Secretary"), shall publish in the Federal Register for public comment—

(1) a description of the draft methodology used to identify a draft list of critical minerals; and

(2) a draft list of minerals, elements, substances, and materials that qualify as critical minerals.

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

(c) FINAL METHODOLOGY AND LIST.—After reviewing public comments on the draft methodology and the draft list of critical minerals published under subsection (a) and updating the methodology and list as appropriate, not later than 45 days after the date on which the public comment period with respect to the draft methodology and
draft list closes, the Secretary shall publish in the Federal Register—

(1) a description of the final methodology for determining which minerals, elements, substances, and materials qualify as critical minerals; and

(2) the final list of critical minerals.

(d) DESIGNATIONS.—

(1) In general.—For purposes of carrying out this section, the Secretary shall maintain a list of minerals, elements, substances, and materials designated as critical, pursuant to the final methodology published under subsection (c), that the Secretary determines—

(A) are essential to the economic or national security of the United States;

(B) the supply chain of which is vulnerable to disruption (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

(C) serve an essential function in the manufacturing of a product (including energy technology-, defense-, currency-, agriculture-, consumer electronics-, and health care-related ap-
plications), the absence of which would have significant consequences for the economic or national security of the United States.

(2) INCLUSIONS.—Notwithstanding the criteria under subsection (c), the Secretary may designate and include on the list any mineral, element, substance, or material determined by another Federal agency to be strategic and critical to the defense or national security of the United States.

(3) REQUIRED CONSULTATION.—The Secretary shall consult with the Secretaries of Defense, Commerce, Agriculture, and Energy and the United States Trade Representative in designating minerals, elements, substances, and materials as critical under this subsection.

(e) SUBSEQUENT REVIEW.—

(1) IN GENERAL.—The Secretary, in consultation with the Secretaries of Defense, Commerce, Agriculture, and Energy and the United States Trade Representative, shall review the methodology and list under subsection (c) and the designations under subsection (d) at least every 3 years, or more frequently as the Secretary considers to be appropriate.

(2) REVISIONS.—Subject to subsection (d)(1), the Secretary may—
(A) revise the methodology described in this section;

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

(C) designate additional minerals, elements, substances, or materials as critical minerals.

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

SEC. 5. RESOURCE ASSESSMENT.

(a) In General.—Not later than 4 years after the date of enactment of this Act, in consultation with applicable State (including geological surveys), local, academic, industry, and other entities, the Secretary 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 Secretary may carry out surveys and field work (including drilling, remote sensing, geophysical surveys, topographical and geological mapping; and geochemical sampling and analysis) to supplement existing information and datasets available for determining the existence of critical minerals in the United States.

(c) Public Access.—Subject to applicable law, to the maximum extent practicable, the Secretary shall make all data and metadata collected from the comprehensive national assessment carried out under subsection (a) publicly and electronically accessible.

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

(e) Prioritization.—
(1) IN GENERAL.—The Secretary 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 4 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 Secretary 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 Secretary sequences the assessments; or

(B) describes the progress of the assessments if the Secretary does not sequence the assessments.

(f) UPDATES.—The Secretary 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 sur-
veys, academic institutions, trade associations, or other persons.

(g) ADDITIONAL SURVEYS.—The Secretary shall complete a resource assessment for each additional mineral or element subsequently designated as a critical mineral under section 4(e)(2) not later than 2 years after the designation of the mineral or element.

(h) REPORT.—Not later than 2 years after the date of enactment of this Act, the Secretary 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 2019”; but

(2) that is not designated as a critical mineral under section 4.

SEC. 6. PERMITTING.

(a) SENSE OF CONGRESS.—It is the sense of Congress that—

(1) critical minerals are fundamental to the economy, competitiveness, and security of the United States;
(2) to the maximum extent practicable, the criti-
cical mineral needs of the United States should be
satisfied by minerals responsibly produced and recy-
cled in the United States; and

(3) the Federal permitting process has been
identified as an impediment to mineral production
and the mineral security of the United States.

(b) PERFORMANCE IMPROVEMENTS.—To improve
the quality and timeliness of decisions, the Secretary (act-
ing through the Director of the Bureau of Land Manage-
ment) 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 prac-
ticable, with respect to critical mineral production on Fed-
eral land, complete Federal permitting and review proc-
esses 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 deci-
sions regarding, applications, operating plans, leases,
licenses, permits, and other use authorizations for
mineral-related activities on Federal land;

(2) establishing clear, quantifiable, and tem-
poral 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 concerns, and allow for concurrent, rather than sequential, reviews;

(6) providing demonstrable improvements in the performance of Federal permitting and review processes, including lower costs and more timely decisions;

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

(8) developing mechanisms to better communicate priorities and resolve disputes among agencies at the national, regional, State, and local levels; and
(9) developing other practices, such as preapplication procedures.

(c) 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 activities for the exploration and development of domestic critical minerals;

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

(3) quantifies the amount of time typically required (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 government 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 (d); and
(4) describes actions carried out pursuant to
subsection (b).
(d) PERFORMANCE METRIC.—Not later than 90 days
after the date of submission of the report under subsection
(e), the Secretaries, after providing public notice and an
opportunity to comment, shall develop and publish a per-
formance metric for evaluating the progress made by the
executive branch to expedite the permitting of activities
that will increase exploration for, and development of, do-
mestic critical minerals, while maintaining environmental
standards.
(e) 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 (d), and an-
ually thereafter, the Secretaries shall submit to Congress
a report that—
(1) summarizes the implementation of rec-
ommendations, measures, and options identified in
paragraphs (1) and (2) of subsection (e);
(2) using the performance metric under subsection (d), describes progress made by the executive branch; as compared to the baseline established pursuant to subsection (e)(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.

(f) INDIVIDUAL PROJECTS.—Using data from the Secretaries generated under subsection (e), the Director of the Office of Management and Budget shall prioritize inclusion of individual critical mineral projects on the website operated by the Office of Management and Budget in accordance with section 1122 of title 31, United States Code.

(g) 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 appli-
cable to the critical minerals industry; and

(2) performing an analysis of regulations appli-
cable to the critical minerals industry that may be
outmoded, inefficient, duplicative, or excessively bur-
densome.

(h) APPLICATION.—Section 41001(6)(A) of the
FAST Act (42 U.S.C. 4370m(6)(A)) is amended in the
matter preceding clause (i) by inserting ‘‘(including crit-
tical mineral manufacturing (as defined in section 2 of the
American Mineral Security Act))’’ after ‘‘manufacturing’’.

SEC. 7. FEDERAL REGISTER PROCESS.

(a) DEPARTMENTAL REVIEW.—Absent any extraor-
dinary circumstance, and except as otherwise required by
law, the Secretary and the Secretary of Agriculture shall
ensure that each Federal Register notice described in sub-
section (b) 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 Reg-
ister not later than 45 days after the date of initial
preparation of the notice.

(b) PREPARATION.—The preparation of Federal Reg-
ister 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.

(c) 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.

SEC. 8. RECYCLING, EFFICIENCY, AND ALTERNATIVES.

(a) ESTABLISHMENT.—The Secretary of Energy (referred to in this section as the "Secretary") 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 shall cooperate with appropriate—

(1) Federal agencies and National Laboratories;

(2) critical mineral producers;
critical mineral processors;
(4) critical mineral manufacturers;
(5) trade associations;
(6) academic institutions;
(7) small businesses; and
(8) other relevant entities or individuals.

(c) Activities.—Under the program, the Secretary 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 shall submit to Congress a report summarizing the activities, findings, and progress of the program.
SEC. 9. 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 Secretary, 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 Secretary 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 Secretary determines to be necessary to achieve the purposes of this section.

(b) PROPRIETARY INFORMATION.—In preparing a report described in subsection (a), the Secretary 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 Secretary determines that withholding is necessary to protect proprietary information, including any trade secrets or other confidential information.

SEC. 10. 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 Secretary, the Director of the National Science Foundation, institutions of higher education with substantial expertise in mining, institutions of higher education with significant expertise in minerals research, including fundamental research into alternatives, 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 Secretary 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, research, including fundamental research into alternatives, 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, research, including fundamental research into alternatives, and recycling;

(C) to develop guidelines for proposals from institutions of higher education with sub-
stantial 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 Secretary shall submit to Congress a description of the results of the study required under paragraph (1).

(c) PROGRAM.—

(1) ESTABLISHMENT.—The Secretary 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 work—
force development programs consistent with subsection (b);

(D) internships, scholarships, and fellowships for students enrolled in programs related to critical minerals;

(C) equipment necessary for integrated critical mineral innovation, training, and workforce 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).

SEC. 11. NATIONAL GEOLOGICAL AND GEOPHYSICAL DATA PRESERVATION PROGRAM.

Section 351(k) of the Energy Policy Act of 2005 (42 U.S.C. 15908(k)) is amended by striking "$30,000,000 for each of fiscal years 2006 through 2010" and inserting "$5,000,000 for each of fiscal years 2020 through 2029, to remain available until expended".
SEC. 12. ADMINISTRATION.

(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.),".

(c) SAVINGS CLAUSES.—

(1) IN GENERAL.—Nothing in this Act or an amendment made by this Act modifies any requirement or authority provided by—

(A) the matter under the heading "GEOLOGICAL SURVEY" of the first section of the Act of March 3, 1879 (43 U.S.C. 31(a)); or

(B) the first section of Public Law 87–626 (43 U.S.C. 31(b)).

(2) EFFECT ON DEPARTMENT OF DEFENSE.—Nothing in this Act or an amendment made by this Act affects the authority of the Secretary of Defense with respect to the work of the Department of Defense on critical material supplies in furtherance of the national defense mission of the Department of Defense.
This Act shall not apply to any mineral described in Secretarial Order No. 3224, issued by the Secretary of the Interior on December 3, 2012, in any area to which the order applies.

**SEC. 13. AUTHORIZATION OF APPROPRIATIONS.**

There is authorized to be appropriated to carry out this Act $50,000,000 for each of fiscal years 2020 through 2029.

**SECTION 1. SHORT TITLE; TABLE OF CONTENTS.**

(a) **Short Title.**—This Act may be cited as the “American Mineral Security Act”.

(b) **Table of Contents.**—The table of contents for this Act is as follows:

Sec. 1. Short title; table of contents.

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**TITLE I—AMERICAN MINERAL SECURITY**

Sec. 101. Definitions.
Sec. 102. Policy.
Sec. 103. Critical mineral designations.
Sec. 104. Resource assessment.
Sec. 105. Permitting.
Sec. 106. Federal Register process.
Sec. 107. Recycling, efficiency, and alternatives.
Sec. 108. Analysis and forecasting.
Sec. 109. Education and workforce.
Sec. 110. National geological and geophysical data preservation program.
Sec. 111. Administration.
Sec. 112. Authorization of appropriations.

**TITLE II—RARE EARTH ELEMENT ADVANCED COAL TECHNOLOGIES**

Sec. 201. Program for extraction and recovery of rare earth elements and minerals from coal and coal byproducts.

TITLE I—AMERICAN MINERAL SECURITY

SEC. 101. DEFINITIONS.

In this title:

(1) BYPRODUCT.—The term “byproduct” means a critical mineral—

(A) the recovery of which depends on the production of a host mineral that is not designated as a critical mineral; and

(B) that exists in sufficient quantities to be recovered during processing or refining.

(2) CRITICAL MINERAL.—

(A) IN GENERAL.—The term “critical mineral” means any mineral, element, substance, or material designated as critical by the Secretary under section 103.

(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.

(3) CRITICAL MINERAL MANUFACTURING.—The term “critical mineral manufacturing” means—

(A) the exploration, development, mining, production, processing, refining, alloying, sep-
ration, concentration, magnetic sintering, melting, or beneficiation of critical 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 critical minerals undertaken within the United States.

(4) 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. 5304).

(5) SECRETARY.—The term “Secretary” means the Secretary of the Interior.

(6) 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
SEC. 102. 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; and

(3) by striking paragraph (7) and inserting the following:

“(7) facilitate the availability, development, and environmentally responsible production of domestic resources to meet national material or critical mineral needs;

“(8) 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 critical mineral manufacturing facilities in accordance with applicable environmental and land management laws;

“(9) strengthen—

“(A) educational and research capabilities at not lower than the secondary school level; and

“(B) workforce training for exploration and development of critical minerals and critical mineral manufacturing;

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

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

“(12) develop alternatives to critical minerals; and

“(13) 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, element, substance, or material designated as critical by the Secretary under section 103 of the American Mineral Security Act.

“(2) MATERIALS.—The term’.

SEC. 103. CRITICAL MINERAL DESIGNATIONS.

(a) DRAFT METHODOLOGY AND LIST.—The Secretary, acting through the Director of the United States Geological Survey (referred to in this section as the “Secretary”), shall publish in the Federal Register for public comment—

(1) a description of the draft methodology used to identify a draft list of critical minerals;

(2) a draft list of minerals, elements, substances, and materials that qualify as critical minerals; and

(3) a draft list of critical minerals recovered as byproducts.

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

(c) FINAL METHODOLOGY AND LIST.—After reviewing public comments on the draft methodology and the draft list of critical minerals published under subsection (a) and updating the methodology and list as appropriate, not later
than 45 days after the date on which the public comment period with respect to the draft methodology and draft list closes, the Secretary shall publish in the Federal Register—

(1) a description of the final methodology for determining which minerals, elements, substances, and materials qualify as critical minerals; and

(2) the final list of critical minerals.

(d) DESIGNATIONS.—

(1) IN GENERAL.—For purposes of carrying out this section, the Secretary shall maintain a list of minerals, elements, substances, and materials designated as critical, pursuant to the final methodology published under subsection (c), that the Secretary determines—

(A) are essential to the economic or national security of the United States;

(B) the supply chain of which is vulnerable to disruption (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

(C) serve an essential function in the manufacturing of a product (including energy technology-, defense-, currency-, agriculture-, con-
sumer electronics-, and health care-related applications), the absence of which would have signifi-
cant consequences for the economic or national security of the United States.

(2) INCLUSIONS.—Notwithstanding the criteria under subsection (c), the Secretary may designate and include on the list any mineral, element, substance, or material determined by another Federal agency to be strategic and critical to the defense or national security of the United States.

(3) REQUIRED CONSULTATION.—The Secretary shall consult with the Secretaries of Defense, Commerce, Agriculture, and Energy and the United States Trade Representative in designating minerals, elements, substances, and materials as critical under this subsection.

(e) SUBSEQUENT REVIEW.—

(1) IN GENERAL.—The Secretary, in consultation with the Secretaries of Defense, Commerce, Agriculture, and Energy and the United States Trade Representative, shall review the methodology and list under subsection (c) and the designations under subsection (d) at least every 3 years, or more frequently as the Secretary considers to be appropriate.
(2) **Revisions.**—Subject to subsection (d)(1), the Secretary may—

(A) revise the methodology described in this section;

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

(C) designate additional minerals, elements, substances, or materials as critical minerals.

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

**SEC. 104. RESOURCE ASSESSMENT.**

(a) **In General.**—Not later than 4 years after the date of enactment of this Act, in consultation with applicable State (including geological surveys), local, academic, industry, and other entities, the Secretary 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 Secretary may carry out surveys and field work (including drilling, remote sensing, geophysical surveys, topographical and geological mapping, and geochemical sampling and analysis) to supplement existing information and datasets available for determining the existence of critical minerals in the United States.

c) Public Access.—Subject to applicable law, to the maximum extent practicable, the Secretary shall make all data and metadata collected from the comprehensive national assessment carried out under subsection (a) publicly and electronically accessible.

d) Technical Assistance.—At the request of the Governor of a State or the head of an Indian tribe, the Secretary may provide technical assistance to State governments and Indian tribes conducting critical mineral resource assessments on non-Federal land.

e) Prioritization.—
(1) **IN GENERAL.**—The Secretary 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 103 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 Secretary 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 Secretary sequences the assessments; or

(B) describes the progress of the assessments if the Secretary does not sequence the assessments.

(f) **UPDATES.**—The Secretary 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 persons.
(g) ADDITIONAL SURVEYS.—The Secretary shall complete a resource assessment for each additional mineral or element subsequently designated as a critical mineral under section 103(e)(2) not later than 2 years after the designation of the mineral or element.

(h) REPORT.—Not later than 2 years after the date of enactment of this Act, the Secretary 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 2019”; but

(2) that is not designated as a critical mineral under section 103.

SEC. 105. PERMITTING.

(a) SENSE OF CONGRESS.—It is the sense of Congress that—

(1) critical minerals are fundamental to the economy, competitiveness, and security of the United States;

(2) to the maximum extent practicable, the critical mineral needs of the United States should be sat-
isfied by minerals responsibly produced and recycled in the United States; and

(3) the Federal permitting process has been identified as an impediment to mineral production and the mineral security of the United States.

(b) PERFORMANCE IMPROVEMENTS.—To improve the quality and timeliness of decisions, the Secretary (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 decisions;

(7) expanding and institutionalizing permitting
and review process improvements that have proven ef-
fective;

(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.
(c) REVIEW AND REPORT.—Not later than 1 year after
the date of enactment of this Act, the Secretaries shall sub-
mit 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 domes-
tic 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 com-
plete each step (including those aspects outside the
control of the executive branch, such as judicial re-
view, applicant decisions, or State and local govern-
ment involvement) associated with the development
and processing of applications, operating plans,
leases, licenses, permits, and other use authorizations
for critical mineral-related activities on Federal land, which shall serve as a baseline for the performance metric under subsection (d); and

(4) describes actions carried out pursuant to subsection (b).

(d) PERFORMANCE METRIC.—Not later than 90 days after the date of submission of the report under subsection (c), 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.

(e) 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 (d), 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 (c);

(2) using the performance metric under subsection (d), describes progress made by the executive
branch, as compared to the baseline established pursuant to subsection (c)(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.

(f) INDIVIDUAL PROJECTS.—Using data from the Secretaries generated under subsection (e), the Director of the Office of Management and Budget shall prioritize inclusion of individual critical mineral projects on the website operated by the Office of Management and Budget in accordance with section 1122 of title 31, United States Code.

(g) 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.

(h) APPLICATION.—Section 41001(6)(A) of the FAST Act (42 U.S.C. 4370m(6)(A)) is amended in the matter preceding clause (i) by inserting “(including critical mineral manufacturing (as defined in section 101 of the American Mineral Security Act))” after “manufacturing”.

SEC. 106. FEDERAL REGISTER PROCESS.

(a) DEPARTMENTAL REVIEW.—Absent any extraordinary circumstance, and except as otherwise required by law, the Secretary and the Secretary of Agriculture shall ensure that each Federal Register notice described in subsection (b) 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.

(b) 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 re-
sponsible for issuing the critical mineral exploration or mine permit.

(c) 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.

SEC. 107. RECYCLING, EFFICIENCY, AND ALTERNATIVES.

(a) Establishment.—The Secretary of Energy (referred to in this section as the “Secretary”) 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 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.

(c) ACTIVITIES.—Under the program, the Secretary 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;

(C) technologies for separation and processing; and

(D) technologies for increasing the recovery rates of byproducts from host metal ores;

(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 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 Secretary, 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, eco-
nomic, industrial, technological, and other needs of the United States during the pre-
ceding 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 Secretary 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 Secretary determines to be necessary to achieve the purposes of this section.

(b) PROPRIETARY INFORMATION.—In preparing a report described in subsection (a), the Secretary 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 Secretary 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 Secretary, the Director of the National Science Foundation, institutions of higher education with substantial expertise in mining, institutions of higher education with significant expertise in minerals research, including fundamental research into alternatives, 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 Secretary 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, research, including fundamental research into alternatives, 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, research, including fundamental research into alternatives, 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 Secretary shall submit to Congress a description of the results of the study required under paragraph (1).

(c) PROGRAM.—

(1) ESTABLISHMENT.—The Secretary 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 workforce 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).

SEC. 110. NATIONAL GEOLOGICAL AND GEOPHYSICAL DATA PRESERVATION PROGRAM.

Section 351(k) of the Energy Policy Act of 2005 (42 U.S.C. 15908(k)) is amended by striking “$30,000,000 for each of fiscal years 2006 through 2010” and inserting “$5,000,000 for each of fiscal years 2020 through 2029, to remain available until expended”.

SEC. 111. ADMINISTRATION.

(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
(c) Savings Clauses.—

(1) In general.—Nothing in this title or an amendment made by this title modifies any requirement or authority provided by—

(A) the matter under the heading “Geological Survey” of the first section of the Act of March 3, 1879 (43 U.S.C. 31(a)); or

(B) the first section of Public Law 87–626 (43 U.S.C. 31(b)).

(2) Effect on Department of Defense.—Nothing in this title or an amendment made by this title affects the authority of the Secretary of Defense with respect to the work of the Department of Defense on critical material supplies in furtherance of the national defense mission of the Department of Defense.

(3) Secretarial Order not Affected.—This title shall not apply to any mineral described in Secretarial Order No. 3324, issued by the Secretary on December 3, 2012, in any area to which the order applies.

(d) Application of Certain Provisions.—

(1) In general.—Sections 105 and 106 shall apply to—
(A) an exploration project in which the presence of a byproduct is reasonably expected, based on known mineral companionality, geologic formation, mineralogy, or other factors; and

(B) a project that demonstrates that the byproduct is of sufficient grade that, when combined with the production of a host mineral, the byproduct is economic to recover, as determined by the applicable Secretary in accordance with paragraph (2).

(2) REQUIREMENT.—In making the determination under paragraph (1)(B), the applicable Secretary shall consider the cost effectiveness of the byproducts recovery.

SEC. 112. AUTHORIZATION OF APPROPRIATIONS.

There is authorized to be appropriated to carry out this title $50,000,000 for each of fiscal years 2020 through 2029.
TITLE II—RARE EARTH ELEMENT ADVANCED COAL TECHNOLOGIES

SEC. 201. PROGRAM FOR EXTRACTION AND RECOVERY OF RARE EARTH ELEMENTS AND MINERALS FROM COAL AND COAL BYPRODUCTS.

(a) In General.—The Secretary of Energy, acting through the Assistant Secretary for Fossil Energy (referred to in this title as the “Secretary”), shall carry out a program under which the Secretary shall develop advanced separation technologies for the extraction and recovery of rare earth elements and minerals from coal and coal byproducts.

(b) Authorization of Appropriations.—There is authorized to be appropriated to the Secretary to carry out the program described in subsection (a) $23,000,000 for each of fiscal years 2020 through 2027.

SEC. 202. REPORT.

Not later than 1 year after the date of enactment of this Act, the Secretary shall submit to the Committee on Energy and Natural Resources of the Senate and the Committee on Energy and Commerce of the House of Representatives a report evaluating the development of advanced separation technologies for the extraction and recovery of rare earth elements and minerals from coal and coal byproducts, including acid mine drainage from coal mines.
A BILL

REPORT NO. 116-131

S. 1317

116TH CONGRESS

TO FACILITATE THE AVAILABILITY, DEVELOPMENT, AND ENVIRONMENTALLY RESPONSIBLE PRODUCTION OF DOMESTIC RESOURCES TO MEET NATIONAL MATERIAL OR CRITICAL MINERAL NEEDS, AND FOR OTHER PURPOSES.

OCTOBER 22, 2019

REPORTED WITH AN AMENDMENT

Calendar No. 251