

they are for carrying different types of energy sources or even delivering water to communities from places that are miles away. In fact, according to the Office of Pipeline Safety, there are more than 45,000 miles of pipeline in Colorado.

As one of the leading energy producers in the country, my district is home to miles of oil and hazardous liquid lines and natural gas transmission lines. However, we are also no stranger to experiencing accidents like a leak or break. We need to be doing what we can to ensure this important piece of our energy infrastructure remains safe and effective for years to come.

That is why I am proud to lead the Next Generation Pipeline Research and Development Act with Representative WEBER, which would invest in R&D for our aging pipeline infrastructure while also leveraging public-private partnerships to do so. This bipartisan effort will be a win for keeping our environment clean while maintaining one of the primary conduits for bringing energy to Coloradans.

One of the biggest issues in my district right now is that our pipelines are getting older, particularly those used to transport natural gas, and that makes them more prone to leak. The most prevalent leak we see is methane, which is a more potent greenhouse gas than carbon dioxide. Just one leak can be damaging to the environment, so we need to be making these investments now to secure our pipeline infrastructure. This will also be important as we begin to use pipelines not just for traditional energy sources like natural gas, but for newer sources like hydrogen. The future of our energy grid will rely on a mix of different fuels, and securing our pipeline infrastructure is vital to that future.

Before I close, I will highlight how this bill will help those of us living in the West. As drought continues to affect places like Colorado, water sources are becoming more important to access, especially to keep up with growth. There are plenty of cities in Colorado, including in my district, that rely on pipelines to bring water to consumers, and there is no sign of this stopping. We need to ensure these pipelines are maintained with up-to-date technology, and this bill will make certain of that.

I again thank Representative WEBER for working with me on this bill and for the leadership both Chairman LUCAS and Ranking Member LOFGREN have shown on the Science Committee. Mr. Speaker, I urge my colleagues to support this effort.

Mr. LUCAS. Mr. Speaker, I have no further requests for time, and I am prepared to close once the gentlewoman from California closes.

Ms. LOFGREN. Mr. Speaker, I urge that we support and enact this good bill, and I yield back the balance of my time.

Mr. LUCAS. Mr. Speaker, I yield myself such time as I may consume. I

thank my Science Committee colleagues, Mr. WEBER and Ms. CARAVEO, for leading this bipartisan effort. I urge all my colleagues to support this legislation, and I yield back the balance of my time, Mr. Speaker.

The SPEAKER pro tempore. The question is on the motion offered by the gentleman from Oklahoma (Mr. LUCAS) that the House suspend the rules and pass the bill, H.R. 7073, as amended.

The question was taken.

The SPEAKER pro tempore. In the opinion of the Chair, two-thirds being in the affirmative, the ayes have it.

Mr. LUCAS. Mr. Speaker, on that I demand the yeas and nays.

The yeas and nays were ordered.

The SPEAKER pro tempore. Pursuant to clause 8 of rule XX, further proceedings on this motion will be postponed.

INNOVATIVE MITIGATION PARTNERSHIPS FOR ASPHALT AND CONCRETE TECHNOLOGIES ACT

Mr. LUCAS. Mr. Speaker, I move to suspend the rules and pass the bill (H.R. 7685) to strengthen and enhance the competitiveness of American industry through the research and development of advanced technologies to improve the efficiency of cement, concrete, and asphalt production, and for other purposes, as amended.

The Clerk read the title of the bill.

The text of the bill is as follows:

H.R. 7685

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

SECTION 1. SHORT TITLE.

This Act may be cited as the “Innovative Mitigation Partnerships for Asphalt and Concrete Technologies Act” or the “IMPACT Act”.

SEC. 2. ADVANCED CEMENT, CONCRETE, AND ASPHALT PRODUCTION RESEARCH PROGRAM.

(a) PROGRAM.—Part I of subtitle C of title V of the Infrastructure Investment and Jobs Act (Public Law 117–58) is amended by inserting after section 40522 the following new section:

“SEC. 40523. ADVANCED CEMENT, CONCRETE, AND ASPHALT PRODUCTION RESEARCH PROGRAM.

“(a) DEFINITIONS.—In this section:

“(1) ADVANCED PRODUCTION.—The term ‘advanced production’ means production of cement, concrete, or asphalt with one or more of the following improvements with respect to the production of commercially available cement, concrete, or asphalt:

“(A) Improved cost-effectiveness.

“(B) Improved quality, durability, engineering performance, and resilience.

“(C) Improved efficiency of resource consumption and material demand.

“(2) ALTERNATIVE FUELS.—The term ‘alternative fuels’ means any solid, liquid, or gaseous materials, or a combination thereof, used to replace or supplement any portion of fuels used in combustion or pyrolysis for low-emissions cement, concrete, or asphalt.

“(3) COMMERCIALLY AVAILABLE.—The term ‘commercially available’, with respect to cement, concrete, and asphalt, means that the cement, concrete, or asphalt is—

“(A) readily and widely available for purchase in the United States; and

“(B) produced using a production method of cement, concrete, or asphalt products, as applicable, that is widely in use.

“(4) ELIGIBLE ENTITY.—The term ‘eligible entity’ means any of the following:

“(A) An institution of higher education.

“(B) An appropriate State or Federal entity, including a federally funded research and development center of the Department.

“(C) A nonprofit research institution.

“(D) A private entity.

“(E) Any other relevant entity the Secretary determines appropriate.

“(F) A partnership or consortium of two or more entities described in subparagraphs (A) through (E).

“(5) ENGINEERING PERFORMANCE-BASED STANDARD.—The term ‘engineering performance-based standard’ means an existing engineering standard with respect to which the requirements applicable to such standard are stated in terms of required results, with criteria for verifying compliance rather than specific composition, design, or procedure.

“(6) INSTITUTION OF HIGHER EDUCATION.—The term ‘institution of higher education’ has the meaning given such term in section 101 of the Higher Education Act of 1965 (20 U.S.C. 1001).

“(7) LOW-EMISSIONS CEMENT, CONCRETE, AND ASPHALT.—The term ‘low-emissions cement, concrete, and asphalt’ means cement, concrete, asphalt binder, or asphalt mixture that reduces, to the maximum extent practicable, greenhouse gas or directly-related copollutant emissions to levels below commercially available cement, concrete, or asphalt.

“(8) RURAL AREA.—The term ‘rural area’ has the meaning given such term in section 343(a) of the Consolidated Farm and Rural Development Act (7 U.S.C. 1991(a)).

“(b) ESTABLISHMENT.—Not later than 180 days after the date of the enactment of this section, the Secretary shall establish a program of research, development, demonstration, and commercial application of advanced tools, technologies, and methods for advanced production and use of low-emissions cement, concrete, and asphalt in order to—

“(1) increase the technological and economic competitiveness of industry and production in the United States;

“(2) expand and increase the stability of supply chains through enhanced domestic production, nearshoring, and cooperation with allies;

“(3) achieve measurable greenhouse gas or directly related copollutant emissions reductions in the production processes for cement, concrete, and asphalt products; and

“(4) create quality domestic jobs.

“(c) REQUIREMENTS.—In carrying out the program under subsection (b), the Secretary shall—

“(1) coordinate with the programs and activities authorized under title VI of division Z of the Consolidated Appropriations Act, 2021 (relating to industrial and manufacturing technologies) and the amendments made by such title;

“(2) coordinate across all relevant program offices of the Department, including the Office of Science, the Advanced Research Projects Agency-Energy, the Office of Clean Energy Demonstrations, the Office of Energy Efficiency and Renewable Energy, the Office of Fossil Energy, the Office of Industrial Efficiency and Decarbonization, the Office of Manufacturing and Energy Supply Chains, and the Office of Nuclear Energy;

“(3) leverage, to the extent practicable, the research infrastructure of the Department, including scientific computing user facilities, x-ray light sources, neutron scattering facilities, and nanoscale science research centers; and

“(4) conduct research, development, demonstration, and commercial application of the advanced production of low-emissions cement, concrete, and asphalt that have the potential to increase domestic production and employment in both advanced and commercially available processes.

“(d) STRATEGIC PLAN.—

“(1) IN GENERAL.—Not later than 180 days after the establishment of the program under subsection (b), the Secretary shall develop a 5-year strategic plan identifying research, development, demonstration, and commercial application goals for such program. The Secretary shall submit such plan to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate.

“(2) CONTENTS.—The strategic plan under paragraph (1) shall—

“(A) identify programs at the Department related to the advanced production of low-emissions cement, concrete, and asphalt that support the research, development, demonstration, and commercial application activities described in this section, and the demonstration projects under subsection (f);

“(B) establish technological and programmatic goals to achieve the requirements specified in subsection (c); and

“(C) include timelines for the accomplishment of such goals developed under the plan.

“(3) UPDATES TO PLAN.—Not less than once every two years, the Secretary shall submit to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate an updated version of the strategic plan under paragraph (1).

“(e) FOCUS AREAS.—In carrying out the program established in subsection (c), the Secretary shall focus on the following:

“(1) Carbon capture technologies for low-emissions cement, concrete, and asphalt production processes, which may include the following:

“(A) Oxycombustion and chemical looping technologies.

“(B) Precombustion technologies.

“(C) Post combustion technologies.

“(D) Direct carbon dioxide separation technologies.

“(2) Materials, technologies, inputs, and processes that—

“(A) produce fewer greenhouse gas or directly related copollutant emissions during production, use, and end use of cement, concrete, and asphalt; or

“(B) provide quality, durability, resilience, engineering, or other performance metrics equal to or greater than commercially available products.

“(3) Medium- and high-temperature heat-generation technologies used for the advanced production of low-emissions cement, concrete, and asphalt which may include the following:

“(A) Alternative fuels.

“(B) Renewable heat-generation and storage technology.

“(C) Electrification of heating processes.

“(D) Other clean heat-generation technologies and sources.

“(4) Technologies and practices that increase the efficiency of energy use, natural resource consumption, or material demand, which may include the following:

“(A) Designing products that encourage reuse, refurbishment, remanufacturing, and recycling.

“(B) Minimizing waste, including waste heat, from low-emissions cement, concrete, and asphalt production processes, including through the reuse of waste as a resource in other industrial processes for mutual benefit.

“(C) Increasing the overall energy efficiency of low-emissions cement, concrete, and asphalt production processes, including through life cycle assessments.

“(5) Technologies and approaches to reduce greenhouse gas or directly related copollutant emissions from the advanced production of cement, concrete, and asphalt.

“(6) High-performance computing to develop advanced materials and production processes that may contribute to the focus areas described in paragraphs (1) through (5), including the following:

“(A) Modeling, simulation, and optimization of the design of cost-effective and energy-efficient products and processes.

“(B) The use of digital prototyping and additive production to enhance product design.

“(7) Advanced sensor technologies and methods to monitor and quantify the performance of low-emissions cement, concrete, and asphalt materials at scale and under a variety of conditions.

“(8) Technologies that can be retrofitted at cement, concrete, and asphalt plants that represent the most common facility types in the United States and in other countries, with consideration for field validation of such retrofits.

“(9) Best practices for data standardization and data sharing tools and technologies, in coordination with relevant Federal agencies.

“(10) Fundamental research in chemistry and materials science to identify the following:

“(A) Novel materials and alternative domestic feedstocks and processing operations for the advanced production of low-emissions cement, concrete, and asphalt.

“(B) Improved understanding by eligible entities of the mechanisms that determine the performance and durability of low-emissions cement, concrete, and asphalt over time.

“(f) DEMONSTRATIONS.—

“(1) ESTABLISHMENT.—Not later than 180 days after the date of the enactment of this section, the Secretary, in carrying out the program established in subsection (b), and in collaboration with the Secretary of Transportation, the Administrator of General Services, industry partners, institutions of higher education, and National Laboratories, shall support demonstrations of advanced production of low-emissions cement, concrete, and asphalt that uses either—

“(A) a single technology or practice; or

“(B) a combination of multiple technologies or practices.

“(2) SELECTION REQUIREMENTS.—In carrying out the demonstrations under paragraph (1), the Secretary shall select eligible entities to carry out demonstration projects and to the maximum extent practicable—

“(A) encourage regional diversity among eligible entities, including participation by entities located in rural areas;

“(B) encourage technological diversity among eligible entities; and

“(C) ensure that specific projects selected—

“(i) expand on the existing technology demonstration programs of the Department;

“(ii) are based on the extent of greenhouse gas emissions reductions achieved; and

“(iii) prioritize leveraging matching funds from non-Federal sources.

“(3) REPORTS.—The Secretary shall submit to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate—

“(A) not less frequently than once every two years for the duration of the demonstrations under paragraph (1), a report describing the performance of such demonstration; and

“(B) if any such demonstration is terminated, an assessment of the success of, and

education provided by, the measures carried out by such demonstration.

“(4) TERMINATION.—The Secretary may terminate the demonstratives under paragraph (1) if the Secretary determines that sufficient low-emissions cement, concrete, and asphalt produced through advanced production are commercially available domestically at a price comparable to the price of cement, concrete, and asphalt produced through traditional methods of production.

“(g) TECHNICAL ASSISTANCE PROGRAM.—

“(1) IN GENERAL.—The Secretary, in consultation with the Secretary of Transportation, the Secretary of Commerce (acting through the Director of the National Institute of Standards and Technology), the Administrator of General Services, the Administrator of the Environmental Protection Agency, and appropriate representatives of relevant standards development organizations, shall provide technical assistance to eligible entities to carry out an activity described in paragraph (2) to promote the commercial application of technologies for the production and use of low-emissions cement, concrete, and asphalt.

“(2) ACTIVITIES DESCRIBED.—An activity referred to in paragraph (1) is any of the following:

“(A) Efforts related to collecting data that could be used in the updating of local codes, specifications, and standards to engineering performance-based standards.

“(B) A lifecycle assessment of the final product.

“(C) An environmental impact comparison between different cements, concretes, and asphalts.

“(D) A techno-economic assessment.

“(E) An environmental permitting or other regulatory process.

“(F) An evaluation or testing activity.

“(G) Any other activity that promotes the commercial application of technologies developed through the program under subsection (b).

“(3) APPLICATIONS.—The Secretary shall seek applications for technical assistance under this subsection—

“(A) on a competitive basis; and

“(B) on a periodic basis, but not less frequently than once every 12 months.

“(4) REGIONAL CENTERS.—The Secretary may designate or establish one or more regional centers to provide technical assistance to eligible entities to carry out the activity described in paragraph (2)(A).

“(h) ADDITIONAL COORDINATION.—

“(1) MANUFACTURING USA.—In carrying out this section the Secretary shall consider—

“(A) leveraging the resources of relevant existing Manufacturing USA Institutes described in section 34(d) of the National Institute of Standards and Technology Act (15 U.S.C. 278s(d));

“(B) integrating program activities into a relevant existing Manufacturing USA Institute; or

“(C) awarding financial assistance, consistent with section 34(e) of the National Institute of Standards and Technology Act (15 U.S.C. 278s(e)), to a person or group of persons to assist the person or group of persons in planning, establishing, or supporting a Manufacturing U.S.A. institute focused on advanced production of low-emissions cement, concrete, and asphalt.

“(2) OTHER FEDERAL AGENCIES.—In carrying out this section, the Secretary shall coordinate with other Federal agencies, including the Department of Defense, the Department of Transportation, and the National Institute of Standards and Technology, that are carrying out research and development initiatives to increase industrial competitiveness and achieve measurable greenhouse gas

or directly related copollutant emissions reductions through the advanced production of cement, concrete, and asphalt.

“(i) SUNSET.—This section shall terminate seven years after the date of the enactment of this section.

“(j) RESEARCH SECURITY.—The activities authorized under this section shall be applied in a manner consistent with subtitle D of title VI of the Research and Development, Competition, and Innovation Act (enacted as division B of Public Law 117–167 (42 U.S.C. 19231 et seq.)).

“(k) RULE OF CONSTRUCTION.—Nothing in this section may be construed to amend, alter, or affect the authorities of the Secretary to define, establish, or enforce new environmental industry standards for, or related to, cement, concrete, or asphalt.”.

(b) CLERICAL AMENDMENT.—The table of contents in section 1(b) of the Infrastructure Investment and Jobs Act is amended by inserting after the item relating to section 40522 the following new item:

“Sec. 40523. Advanced cement, concrete, and asphalt production research program.”.

The SPEAKER pro tempore. Pursuant to the rule, the gentleman from Oklahoma (Mr. LUCAS) and the gentlewoman from California (Ms. LOFGREN) each will control 20 minutes.

The Chair recognizes the gentleman from Oklahoma.

GENERAL LEAVE

Mr. LUCAS. Mr. Speaker, I ask unanimous consent that all Members may have 5 legislative days in which to revise and extend their remarks and include extraneous material on H.R. 7685, the bill now under consideration.

The SPEAKER pro tempore. Is there objection to the request of the gentleman from Oklahoma?

There was no objection.

Mr. LUCAS. Mr. Speaker, I yield myself such time as I may consume.

I rise in support of H.R. 7685, the Innovative Mitigation Partnerships for Asphalt and Concrete Technologies, or the IMPACT Act.

Today, much of the world is reliant on cement and concrete produced in China, which has the world's largest cement industry. It should go without saying that it is deeply troubling to be at the whims of the Chinese Communist Party when it comes to materials that are critical to our national defense and economic security.

Besides that, this dependence comes with severe negative environmental impacts. China's greenhouse gas emissions exceed all of the developed nations in the world combined. In fact, U.S. industrial manufacturing is nearly 28 percent cleaner than our competitors, including China.

If we want a cleaner, healthier environment on top of global security, U.S. leadership in this industry is an absolute must. The IMPACT Act ensures that leadership in the cement, concrete, and asphalt industry. It will increase the competitiveness of the United States while also achieving significant reductions in emissions from manufacturing processes.

Specifically, this bill supports the research and development of innovative

technologies, primarily at the Department of Energy. It builds off of the cross-cutting Industrial Emissions Reduction Technology Development Program established by the Energy Act of 2020 and provides specific direction for the development of advanced tools, technologies, and methods related to cement, concrete, and asphalt production.

Concrete is the second most widely used material in the world only behind water. The demand isn't going to decrease anytime soon, so it is essential we direct the best scientific resources of the Federal Government to help manufacturers meet our environmental goals without reducing the concrete supply that keeps our economy growing.

The IMPACT Act positions our country to rise to that challenge and become a resource for the entire globe.

I thank my Science Committee colleagues, Mr. MILLER and Mrs. FOUSHEE, for cosponsoring this bill and working in a bipartisan fashion. I urge all of my colleagues to support this bill, and I reserve the balance of my time, Mr. Speaker.

Ms. LOFGREN. Mr. Speaker, I yield myself such time as I may consume.

I rise in support of the Innovative Mitigation Partnerships for Asphalt and Concrete Technologies Act, otherwise known as the IMPACT Act.

Mr. Speaker, at the Science Committee, we look to address problems beyond the conventional approaches, and we take a broad, long-term perspective. For example, we look for greenhouse gas emissions beyond the smokestack and tailpipe in order to have a holistic image of the climate change challenge we face. The bill before us today seeks to address an often overlooked contributor to carbon dioxide emissions.

Globally, cement facilities account for 8 percent of anthropogenic carbon dioxide emissions, which is about the same amount as one-third of all power plant emissions, really a stunning source of this pollution. The projected demand for cement is expected to increase substantially. To address the challenge, there is a need for Federal investment in next-generation cement, concrete, and asphalt emission reduction technologies.

The IMPACT Act establishes a dedicated program and directs DOE to develop tools, technologies, and methods for the manufacture of low-emission cement, concrete, and asphalt, using both advanced and currently commercially available production processes.

It also authorizes DOE to provide technical assistance to eligible entities in order to increase the efficiency of current production processes, active engagement that will help the industry adapt and innovate.

Now, in order to carry out this ambitious mission, the Secretary is directed to focus on a range of key technology areas, including carbon capture, resource efficiency, and high-performance computing.

This is actually an exciting bill, and it has potential to strengthen and enhance the competitiveness of American manufacturing while at the same time reducing a major greenhouse gas contributor.

I thank Representative MILLER and Representative FOUSHEE on their impressive legislation. I hope that all of us will support this bill, and I reserve the balance of my time.

□ 2000

Mr. LUCAS. Mr. Speaker, I yield such time as he may consume to the gentleman from Ohio (Mr. MILLER) to speak on his bill.

Mr. MILLER of Ohio. Mr. Speaker, I rise in strong support of H.R. 7685, the Innovative Mitigation Partnerships for Asphalt and Concrete Technologies Act, or more simply, the IMPACT Act.

I introduced this bill with my Committee on Science, Space, and Technology colleague, Mrs. FOUSHEE, because we understand that the production of cement, concrete, and asphalt plays a fundamental role in supporting United States infrastructure, national defense, and economic security.

The cement and concrete industry contributes over \$100 billion to the United States economy and employs over 600,000 people. In Ohio alone, this industry accounts for 18,000 cement and concrete industry-related employees with a payroll over \$900 million.

It is no secret that the processes behind these products are extremely difficult to decarbonize and that American cement and concrete manufacturers must compete in a market that increasingly values lower-carbon products.

The leading companies and associations of this industry have committed to achieving net-zero carbon emissions by 2050, and have made impressive progress thus far, reducing its carbon footprint by 21 percent since 2014, but more progress can be made.

With projected demand for cement expected to increase 12 percent by 2050, utilizing the best scientific resources of the Federal Government will help manufacturers further reduce emissions of the products essential to our economy and civilization.

The IMPACT Act will support these resources while strengthening and enhancing the competitiveness of American manufacturing through advanced technologies that can be exported around the globe.

We all want to see cement, concrete, and asphalt production continue to rise and help grow our country. That is critical to our economic well-being. We all want to see this growth go hand in hand with environmental stewardship, leaving our air and water just as pristine for the next generation.

The IMPACT Act builds on previous industrial decarbonization efforts by focusing specifically on cement, concrete, and asphalt. It enables the industry and the Department of Energy to work collaboratively on fundamental

research that will enhance existing production methods and unlock new innovative techniques. This will ensure the world-class tools and technologies at DOE are being used by the very taxpayers who funded them.

It also enables DOE, in consultation with other Federal agencies, to offer technical assistance to entities seeking to promote the commercial application of low-emission cement, concrete, and asphalt. This ensures that industry can continue its cutting-edge research unencumbered, but if they do hit a roadblock, there are subject matter experts available to assist them.

This bill is the perfect example of how the Federal Government can advance tangible environmental goals for construction material production without sacrificing material performance or, more importantly, economic growth that benefits every citizen.

Mr. Speaker, I thank my colleague from North Carolina (Mrs. FOUSHEE) for cosponsoring this bill and working in a bipartisan fashion to get it here today, and I urge all of my colleagues to support this bill.

Ms. LOFGREN. Mr. Speaker, I yield myself such time as I may consume.

Mr. Speaker, we are fortunate that Representative FOUSHEE is a Member of this body and a member of the Committee on Science, Space, and Technology. She is a new Member to Congress, but she is an experienced legislator, and I think that background allows her to successfully craft complex but practical and important legislation.

Mr. Speaker, I yield such time as she may consume to the gentlewoman from North Carolina (Mrs. FOUSHEE).

Mrs. FOUSHEE. Mr. Speaker, I rise today in support of H.R. 7685, the bipartisan Innovative Mitigation Partnerships for Asphalt and Concrete Technologies Act, or the IMPACT Act, which will boost the competitiveness of American manufacturing through innovation and development of technologies to decarbonize and improve the efficiency of cement, concrete, and asphalt production.

The climate crisis is one of the most pressing issues of our lifetime, and it is critical that we continue to take significant strides to reduce harmful greenhouse gas emissions across all sectors.

Globally, we know that concrete accounts for 8 percent of all carbon emissions, but we can reduce pollution in the cement and concrete production process right now by creating new innovation and manufacturing opportunities here at home that can take the place of aging processes based on fossil fuels.

This bill marks a critical step forward to innovate and decarbonize America's concrete and asphalt sectors, and it will enable partnerships between industry, innovators, and the U.S. Government to enhance existing production methods, unlock new and innovative techniques, and offer tech-

nical assistance to entities seeking to promote the application of low-emissions cement, concrete, and asphalt.

The United States is leading the way into the 21st century, where we know that our Nation is poised to play a critical role in reducing industrial emissions through modernizing our manufacturing processes and implementing clean technology strategies.

This can be seen in my own district, North Carolina's Fourth, where local startup Biomason is helping lead the way in advancing low-carbon concrete and asphalt production.

Just earlier this year, I was proud to join the first-ever White House Concrete Innovation Summit, with innovators, researchers, startups, industry, and leaders from across the country, to further build consensus on our path forward for a more sustainable future.

As we consider the future of American R&D, we must prioritize investments and advancement in materials, science, and manufacturing by fostering and building out an innovation pipeline that creates good-paying, clean American jobs and enhances our competitiveness on the world stage, and this bill does just that.

This bill will also help to achieve measurable and meaningful greenhouse gas emissions reductions, improve public health, and modernize the current manufacturing processes of sustainable building materials that are essential for our Nation's infrastructure.

I am glad to join Representative MAX MILLER in sponsoring the IMPACT Act, which passed through the House Committee on Science, Space, and Technology unanimously. I encourage my colleagues to support this legislation, which will prioritize innovation in clean manufacturing and production to improve public health and protect our planet.

Ms. LOFGREN. Mr. Speaker, we have no further requests, so I am happy to urge all Members to vote for the bill, and I yield back the balance of my time.

Mr. LUCAS. Mr. Speaker, I have no further requests, and I simply note this is a good bill. Let's vote for it. I yield back the balance of my time.

The SPEAKER pro tempore (Mr. WEBER of Texas). The question is on the motion offered by the gentleman from Oklahoma (Mr. LUCAS) that the House suspend the rules and pass the bill, H.R. 7685, as amended.

The question was taken; and (two-thirds being in the affirmative) the rules were suspended and the bill, as amended, was passed.

A motion to reconsider was laid on the table.

MATHEMATICAL AND STATISTICAL MODELING EDUCATION ACT

Mr. LUCAS. Mr. Speaker, I move to suspend the rules and pass the bill (H.R. 1735) to coordinate Federal re-

search and development efforts focused on modernizing mathematics in STEM education through mathematical and statistical modeling, including data-driven and computational thinking, problem, project, and performance-based learning and assessment, interdisciplinary exploration, and career connections, and for other purposes, as amended.

The Clerk read the title of the bill.

The text of the bill is as follows:

H.R. 1735

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

SECTION 1. SHORT TITLE.

This Act may be cited as the "Mathematical and Statistical Modeling Education Act".

SEC. 2. MATHEMATICAL AND STATISTICAL MODELING EDUCATION.

(a) FINDINGS.—Congress finds the following:

(1) The mathematics taught in schools, including statistical problem solving and data science, is not keeping pace with the rapidly evolving needs of the public and private sector, resulting in a STEM skills shortage and employers needing to expend resources to train and upskill employees.

(2) According to the Bureau of Labor Statistics, the United States will need 1,000,000 additional STEM professionals than it is on track to produce in the coming decade.

(3) The field of data science, which is relevant in almost every workplace, relies on the ability to work in teams and use computational tools to do mathematical and statistical problem solving.

(4) Many STEM occupations offer higher wages, more opportunities for advancement, and a higher degree of job security than non-STEM jobs.

(5) The STEM workforce relies on computational and data-driven discovery, decision making, and predictions, from models that often must quantify uncertainty, as in weather predictions, spread of disease, or financial forecasting.

(6) Most fields, including analytics, science, economics, publishing, marketing, actuarial science, operations research, engineering, and medicine, require data savvy, including the ability to select reliable sources of data, identify and remove errors in data, recognize and quantify uncertainty in data, visualize and analyze data, and use data to develop understanding or make predictions.

(7) Rapidly emerging fields, such as artificial intelligence, machine learning, quantum computing and quantum information, all rely on mathematical and statistical concepts, which are critical to prove under what circumstances an algorithm or experiment will work and when it will fail.

(8) Military academies have a long tradition in teaching mathematical modeling and would benefit from the ability to recruit students with this expertise from their other school experiences.

(9) Mathematical modeling has been a strong educational priority globally, especially in China, where participation in United States mathematical modeling challenges in high school and higher education is orders of magnitude higher than in the United States, and Chinese teams are taking a majority of the prizes.

(10) Girls participate in mathematical modeling challenges at all levels at similar levels as boys, while in traditional mathematical competitions girls participate less and drop out at every stage. Students cite