



## H.R. 874—American Super Computing Leadership Act (Rep. Hultgren, R-IL)

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**FLOOR SCHEDULE:** SCHEDULED FOR CONSIDERATION ON MAY 19, 2015, UNDER A SUSPENSION OF THE RULES WHICH REQUIRES TWO-THIRDS MAJORITY FOR PASSAGE.

**TOPLINE SUMMARY:** [H.R. 874](#) would amend the Department of Energy High-End Computing Revitalization Act of 2004 ([Title 15 United States Code, section 5541](#)) to promote the development of software and hardware for high-end computing systems through the Department of Energy High-End Computing Research and Development Program.

**CONSERVATIVE CONCERNS:** There are no major substantive concerns.

- **Expand the Size and Scope of the Federal Government?** No.
- **Encroach into State or Local Authority?** No.
- **Delegate Any Legislative Authority to the Executive Branch?** No.
- **Contain Earmarks/Limited Tax Benefits/Limited Tariff Benefits?** No.

**DETAILED SUMMARY AND ANALYSIS:** The Department of Energy is required to develop at least two National Laboratory-industry-university partnerships to conduct integrated research for exascale computers. The term “exascale” is defined as a computing system performance at or near 10 to the 18th power floating point operations per second. The Department of Energy is also required to coordinate with National Laboratories, universities, and industry to provide access to researchers to the high-end computing systems. The bill would clarify that the program will be coordinated across the Department of Energy. The legislation would require the Secretary of the Department of Energy to provide Congress with target dates for the production of exascale computing platforms. This bill would use existing funds within the Department of Energy.

**COST:** The Congressional Budget Office (CBO) [estimates](#) that implementing H.R. 874 would have no significant effect on the budget because the legislation would largely codify the Department of Energy’s current plans to develop advanced computer systems under its existing authorities. Enacting H.R. 874 would not affect direct spending or revenues and pay-as-you-go procedures do not apply.

An identical bill ([H.R. 2495](#)) was introduced in the 113<sup>th</sup> Congress and passed the House by voice vote on September 8, 2014. The RSC’s legislative bulletin for H.R. 2495 can be found [here](#).

**COMMITTEE ACTION:** This bill was introduced on February 11, 2015, and was referred to the House Committee on Science, Space, and Technology. On March 4, 2015, the committee ordered it reported by voice vote.

**ADMINISTRATION POSITION:** No statement of administration policy is available.

**CONSTITUTIONAL AUTHORITY:** Congress has the power to enact this legislation pursuant to the following: Article I, Section 8, Clause 1, to provide for the common defense and general welfare; Article I, Section 8, Clause 18, to make all laws which shall be necessary and proper.

## H.R. 1162—Science Prize Competitions Act, as amended (Rep. Beyer, D-VA)

**CONTACT:** NICHOLAS RODMAN, NICHOLAS.RODMAN@MAIL.HOUSE.GOV, 6-8576

**FLOOR SCHEDULE:** SCHEDULED FOR CONSIDERATION ON MAY 19, 2015, UNDER A SUSPENSION OF THE RULES WHICH REQUIRES TWO-THIRDS MAJORITY FOR PASSAGE.

**TOPLINE SUMMARY:** [H.R. 1162](#) would amend section 24 of the Stevenson-Wydler Technology Innovation Act of 1980 ([Title 15 United States Code, section 3719](#)) by defining prize competitions.

**CONSERVATIVE CONCERNS:** There are no major substantive concerns.

- **Expand the Size and Scope of the Federal Government?** No.
- **Encroach into State or Local Authority?** No.
- **Delegate Any Legislative Authority to the Executive Branch?** No.
- **Contain Earmarks/Limited Tax Benefits/Limited Tariff Benefits?** No.

**DETAILED SUMMARY AND ANALYSIS:** The bill would define prize competitions as (1) a point solution prize that rewards and spurs the development of solutions for a particular, well-defined problem; (2) an exposition prize that helps identify and promote a broad range of ideas and practices that may not otherwise attract attention, facilitating further development of the idea or practice by third parties; (3) participation prizes that create value during and after the competition by encouraging contestants to change their behavior or develop new skills that may have beneficial effects during and after the competition; and (4) such other types of prize competitions as each head of an agency considers appropriate to stimulate innovation that has the potential to advance the mission of the respective agency. The bill would also allow an agency to waive insurance requirements regarding prize competitions.

**COST:** The Congressional Budget Office (CBO) [estimates](#) that enacting the bill could affect direct spending and pay-as-you-go procedures apply. However, based on information from some agencies that conduct competitions, CBO anticipates that any such cases would be rare and that any effect on direct spending would be insignificant.

The bill would allow the head of an agency to accept funds from other federal agencies, private sector for-profit entities, and nonprofit entities, to support prize competitions. However, the bill would not allow the head of an agency to give any special consideration to any private sector for-profit or nonprofit entity in return for a donation. H.R. 1162 would also direct agency heads to publish notices of prize competitions on a publicly accessible government website such as [www.challenge.gov](http://www.challenge.gov), instead of in the Federal Register.

**COMMITTEE ACTION:** This bill was introduced on and referred to the House Committee on Science, Space, and Technology.

**ADMINISTRATION POSITION:** No statement of administration policy is available.

**CONSTITUTIONAL AUTHORITY:** Congress has the power to enact this legislation pursuant to the following: Article I, Section 8, Clause 3: the Congress shall have power to regulate commerce with foreign nations, and among the several states, and with Indian tribes. Article I, Section 8, Clause 18: the Congress shall have power to

make all Laws which shall be necessary and proper for carrying into Execution the foregoing Powers, and all other Powers vested by this Constitution in the Government of the United States, or in any Department of Officer thereof.

## H.R. 1119—Research and Development Efficiency Act (Rep. Comstock, R-VA)

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**FLOOR SCHEDULE:** SCHEDULED FOR CONSIDERATION ON MAY 19, 2015, UNDER A SUSPENSION OF THE RULES WHICH REQUIRES TWO-THIRDS MAJORITY FOR PASSAGE.

**TOPLINE SUMMARY:** [H.R. 1119 would](#) require the Director of the Office Science and Technology policy to establish a working group to review federal regulations and recommend ways to reduce the administrative burden on institutions of higher education conducting research with federal grant dollars.

**CONSERVATIVE CONCERNS:** There are no major substantive concerns.

- **Expand the Size and Scope of the Federal Government?** No.
- **Encroach into State or Local Authority?** No.
- **Delegate Any Legislative Authority to the Executive Branch?** No.
- **Contain Earmarks/Limited Tax Benefits/Limited Tariff Benefits?** No.

**DETAILED SUMMARY AND ANALYSIS:** H.R. 1119 would require the Director of the Office Science and Technology policy to establish a working group under the authority of the National Science and Technology Council to review federal regulations and to recommend ways to reduce the administrative burden on institutions of higher education conducting research with federal grant dollars..

**COST:** The Congressional Budget Office (CBO) [estimates](#) that implementing H.R. 1119 would have no significant cost because the activities specified in the bill are generally consistent with activities already carried out by the Office of Science and Technology Policy and other agencies that would probably participate in the proposed working group.

The bill would also express a sense of Congress that (1) high and increasing administrative burdens and costs in federal research administration, particularly in the higher education sector where most federally sponsored research is performed, are eroding funds available to carry out basic scientific research; (2) progress has been made over the last decade in streamlining the pre-award grant application process through Grants.gov, the federal government’s website portal; (3) post-award administrative costs have grown as federal research agencies have continued to impose agency-unique compliance and reporting requirements on researchers and research institutions; (4) facilities and administration costs at research universities can exceed 50 percent of the total value of federal research grants, and it is estimated that nearly 30 percent of the funds invested annually in federally funded research is consumed by paperwork and other administrative processes required by federal agencies; and (5) it is a matter of critical importance to American competitiveness that administrative costs of federally funded research be streamlined so that a higher proportion of taxpayer dollars flow into direct research activities.

An identical bill ([H.R. 5056](#)) was introduced in the 113th Congress and passed the House by voice vote on July 14, 2014. The RSC’s legislative bulleting for H.R. 5056 can be found [here](#).

**COMMITTEE ACTION:** This bill was introduced on February 26, 2015 and referred to the House Committee on Science, Space, and Technology.

**ADMINISTRATION POSITION:** No statement of administration policy is available.

**CONSTITUTIONAL AUTHORITY:** Congress has the power to enact this legislation pursuant to the following: Article I, Section 8, Clause 3: The Congress shall have power to regulate commerce with foreign nations, and among the several states, and with Indian tribes. Article I, Section 8, Clause 18: The Congress shall have power to make all Laws which shall be necessary and proper for carrying into Execution the foregoing Powers, and all other Powers vested by this Constitution in the Government of the United States, or in any Department of Officer thereof.

## H.R. 1156—International Science and Technology Cooperation Act of 2015, as amended (Rep. Lipinski, D-IL)

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**FLOOR SCHEDULE:** SCHEDULED FOR CONSIDERATION ON MAY 19, 2015, UNDER A SUSPENSION OF THE RULES WHICH REQUIRES TWO-THIRDS MAJORITY FOR PASSAGE.

**TOPLINE SUMMARY:** [H.R. 1156](#) requires the establishment of a body under the National Science and Technology Council to identify and coordinate international science and technology cooperation that can strengthen the United States science and technology enterprise, improve economic and national security, and support United States foreign policy goals.

**CONSERVATIVE CONCERNS:** There are no major substantive concerns.

- **Expand the Size and Scope of the Federal Government?** No.
- **Encroach into State or Local Authority?** No.
- **Delegate Any Legislative Authority to the Executive Branch?** No.
- **Contain Earmarks/Limited Tax Benefits/Limited Tariff Benefits?** No.

**DETAILED SUMMARY AND ANALYSIS:** The Director of the Office of Science and Technology Policy is mandated to transmit a report to Congress, to be updated every 2 years, containing the means by which stakeholder input was received, as well as summary views of stakeholder input, and the issues influencing the ability of United States scientists and engineers to collaborate with foreign counterparts.

**COST:** The Congressional Budget Office (CBO) [estimates](#) that implementing H.R. 1156 would cost about \$3 million annually, subject to the availability of appropriated funds. That amount includes the costs to coordinate federal agency activities, prepare reports, and hire staff for the new committee.

The bill would not affect direct spending or revenues and pay-as-you-go procedures do not apply.

The [National Science and Technology Council](#) was established by Executive Order on November 23, 1993. A similar bill ([H.R. 5029](#)) was introduced in the 113th Congress and passed the House by the yeas and nays: [346-41](#) on July 14, 2014. The RSC's legislative bulleting for H.R. 5029 can be found [here](#).

**COMMITTEE ACTION:** This bill was introduced on February 27, 2015 and referred to the House Committee on Science, Space, and Technology.

**ADMINISTRATION POSITION:** No statement of administration policy is available.

**CONSTITUTIONAL AUTHORITY:** Congress has the power to enact this legislation pursuant to the following: Article I, Section 8, Clause 3: The Congress shall have power to regulate commerce with foreign nations, and among the several states, and with the Indian tribes; and Article I, Section 8, Clause 18: The Congress shall have power to make all Laws which shall be necessary and proper for carrying into Execution the foregoing Powers, and all other Powers vested by this Constitution in the Government of the United States, or in any Department or Officer thereof.

## H.R. 1561—Weather Research and Forecasting Innovation Act of 2015, as amended (Rep. Lucas, R-OK)

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**FLOOR SCHEDULE:** SCHEDULED FOR CONSIDERATION ON MAY 19, 2015, UNDER A SUSPENSION OF THE RULES WHICH REQUIRES TWO-THIRDS MAJORITY FOR PASSAGE.

**TOPLINE SUMMARY:** [H.R. 1561](#) would direct Assistant Administrator of National Oceanic and Atmospheric Administration (NOAA) to conduct a program to develop improved understanding and forecast capabilities for atmospheric events and their impacts.

**CONSERVATIVE CONCERNS:** There are no major substantive concerns.

- **Expand the Size and Scope of the Federal Government?** No.
- **Encroach into State or Local Authority?** No.
- **Delegate Any Legislative Authority to the Executive Branch?** No.
- **Contain Earmarks/Limited Tax Benefits/Limited Tariff Benefits?** No.

**COST:** The Congressional Budget Office (CBO) [estimates](#) that implementing the legislation would cost \$240 million over the 2016-2020 period. Enacting H.R. 1561 would not affect direct spending or revenues, therefore, pay-as-you-go procedures do not apply.

**DETAILED SUMMARY AND ANALYSIS:** [H.R. 1561](#) would direct Assistant Administrator of National Oceanic and Atmospheric Administration (NOAA) for the Office of Oceanic and Atmospheric Research (OAR) to conduct a program to develop improved understanding and forecast capabilities for atmospheric events and their impacts. The OAR would prioritize the development of more accurate, timely, and effective warnings and forecasts of high impact weather events. The program would focus on: (1) improving the understanding of how the public receives, and responds to high-impact weather event warnings and forecasts that endanger life and property; and (2) a technology transfer initiative in coordination with the National Weather Service (NWS), the American weather industry, and academic partners related to weather forecasting technology, tools, and techniques. The technology transfer initiative would ensure continuous development and transition of the latest scientific and technological advances into NWS operations and establish a process to sunset outdated and expensive operational methods and tools to enable cost-effective transfer of new methods and tools into operations.

- Section 4 of the bill would direct NOAA to establish a tornado warning improvement and extension pilot program. The goal of the program is to reduce the loss of life and economic losses from tornadoes through the development and extension of accurate, effective, and timely tornado forecasts, including the prediction of tornadoes beyond one hour in advance.
- Section 5 would mandate that the NOAA, in collaboration with the American weather industry and academic partners, maintain the Hurricane Forecast Improvement Program (HFIP). Section 6 would also

direct the OAR to issue, within six months of enactment, and annually thereafter, a research and development plan to restore and maintain U.S. leadership in numerical weather prediction and forecasting that describes the identifies and prioritizes specific research and development activities, and performance metrics, weighted to meet the operational weather mission of NWS. The plan would also identify research necessary to enhance the integration of social science knowledge into weather forecast and warning processes.

- Section 9 would direct NOAA to produce a report that explains how NOAA intends to: (1) continually support upgrades to pursue the fastest, most powerful, and cost effective high-performance computing technologies in support of its weather prediction mission; (2) ensure a balance between the research to operations requirements to develop the next generation of regional and global models as well as highly reliable operational models; (3) take advantage of advanced development concepts to, as appropriate, make next generation weather prediction models available in beta-test mode to operational forecasters, the American weather industry, and partners in academic and government research; and (4) use existing computing resources to improve advanced research and operational weather prediction.
- Section 10 would make an exception that allows the purchase of weather data through contracts with commercial providers to occur. Additionally, the placement of weather satellite instruments on cohosted government or private payloads would be permitted. Current law prohibits the president and other government officials from making efforts to lease, sell, or transfer to the private sector, or commercialize, any portion of the weather satellite systems operated by the Department of Commerce or any successor agency.
- Section 11 would allow the NOAA Science Advisory Board to continue to maintain a standing working group, the Environmental Information Services Working Group to (1) provide advice for prioritizing weather research initiatives at NOAA to produce real improvement in weather forecasting; (2) provide advice on existing or emerging technologies or techniques that can be found in private industry or the research community that could be incorporated into forecasting at NWS to improve forecasting skill; (3) identify opportunities to improve communications between weather forecasters, federal, state, local, tribal, and other emergency management personnel, and the public; and to improve communications and partnerships among NOAA and the private and academic sectors; and (4) address such other matters as the Science Advisory Board requests of the Working Group.
- Section 12 would establish an Interagency Committee for Advancing Weather Services to improve coordination of relevant weather research and forecast innovation activities across the federal government. The committee would be tasked to identify and prioritize top forecast needs and coordinate those needs against budget requests. They would also be authorized to share information regarding operational needs and forecasting improvements across relevant agencies.
- Section 17 would authorize \$90.8 million to be appropriated for FY 2015. Of this amount, \$70 million is authorized for weather laboratories and cooperative institutes and \$20.8 million is authorized for weather and air chemistry research programs. Out of funds made available for research and development at NOAA, this bill would authorize \$16 million for the OAR joint technology transfer initiative. For FY 2016 through 2017, the legislation would authorize \$100 million, including \$80 million for weather laboratories and cooperative institutes and \$20 million for weather and air chemistry research programs. An additional amount of \$20,000,000 is authorized for the joint technology transfer initiative for both fiscal years.

A similar bill ([H.R. 2413](#)) was introduced in the 113th Congress and passed the House by voice vote on April 1, 2014. The RSC's legislative bulleting for H.R. 2413 can be found [here](#).

**COMMITTEE ACTION:** This bill was introduced on March 24, 2015 and referred to the House Committee on Science, Space, and Technology.

**ADMINISTRATION POSITION:** No statement of administration policy is available.

**CONSTITUTIONAL AUTHORITY:** Congress has the power to enact this legislation pursuant to the following: Article I, Section 8, Clause 3: the Congress shall have power to regulate commerce with foreign nations, and among the several states, and with Indian tribes and Article I, Section 8, Clause 18: The Congress shall have power to make all Laws which shall be necessary and proper for carrying into Execution the foregoing Powers, and all other Powers vested by this Constitution in the Government of the United States, or in any Department of Officer thereof.

## H.R. 1158— Department of Energy Laboratory Modernization and Technology Transfer Act of 2015, as amended (Rep. Hultgren, R-IL)

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**FLOOR SCHEDULE:** SCHEDULED FOR CONSIDERATION ON MAY 19, 2015, UNDER A SUSPENSION OF THE RULES WHICH REQUIRES TWO-THIRDS MAJORITY FOR PASSAGE.

**TOPLINE SUMMARY:** [H.R. 1158](#) would provide the Department of Energy's (DOE's) national laboratory complex more authority to partner with the private sector and would also promote public-private partnerships.

**CONSERVATIVE CONCERNS:** There are no major substantive concerns.

- **Expand the Size and Scope of the Federal Government?** No.
- **Encroach into State or Local Authority?** No.
- **Delegate Any Legislative Authority to the Executive Branch?** No.
- **Contain Earmarks/Limited Tax Benefits/Limited Tariff Benefits?** No.

**DETAILED SUMMARY AND ANALYSIS:** H.R. 1158 would require the Secretary of Energy to submit a report not later than one year after the bill's enactment, including: (1) an assessment of the Department of Energy's technology transfer goals as defined by section 1001 of the Energy Policy Act ([42 U.S.C. 16391](#)), and (2) recommended departmental policy changes and legislative changes to the Energy Policy Act to improve the transfer of new energy technologies to the private sector. The bill would express a sense of Congress that the Secretary of Energy should encourage the [National Laboratories](#) and federally funded research and development centers to inform small businesses of the opportunities and resources that exist. The bill would also require the Secretary of Energy to submit a report to Congress assessing the capabilities to authorize, host, and oversee privately funded fusion and non-light water reactor prototypes and related demonstration facilities at department-owned sites. The secretary would be required to consider the department's capabilities to facilitate privately funded prototypes up to 20 megawatts thermal output.

**COST:** The Congressional Budget Office (CBO) [estimates](#) that implementing the bill could increase discretionary spending. However, based on information about the size and probability of payments in the past, CBO estimates that any additional costs under the bill would be insignificant. Enacting H.R. 1158 would not affect direct spending or revenues; therefore, pay-as-you-go procedures do not apply.

Title II of the bill would direct the secretary to carry out the [Agreements for Commercialization Technology](#) pilot program as previously announced on December 8, 2011, and would extend it to October 31, 2017. The

secretary is required to delegate to the National Laboratories directors signature authority with respect to any agreement the total cost of which (including the National Laboratory contributions and project recipient cost share) is less than \$1 million, if such an agreement falls within the scope of a strategic plan for the National Laboratory that has been approved by DOE, or if the most recent Congressionally approved budget for Department activities to be carried out by the National Laboratory. The bill would also authorize the secretary to enter into an agreement with the Director of the National Science Foundation to enable researchers funded by the department to participate in the [National Science Foundation Innovation Corps](#) program.

Title III of the bill would require the Comptroller General of the United States to submit a report to Congress on partnerships initiated with respect to national priorities and other taxpayer-funded research. This bill would also require the report to detail whether the activities carried out under those projects result in fiscal savings, expansion of National Laboratory capabilities, increased efficiency of technology transfers or an increase in general efficiency of the National Laboratory system. The report would assess the scale, scope, efficacy, and impact of the DOE's efforts to promote technology transfer and private sector engagement at the National Laboratories, and make recommendations on how the department can improve these activities.

A similar bill ([H.R. 5120](#)) was introduced in the 113th Congress and passed the House by voice vote on July 22, 2014. The RSC's legislative bulleting for H.R. 5120 can be found [here](#).

**COMMITTEE ACTION:** This bill was introduced on February 27, 2015 and referred to the House Committee on Science, Space, and Technology.

**ADMINISTRATION POSITION:** No statement of administration policy is available.

**CONSTITUTIONAL AUTHORITY:** Congress has the power to enact this legislation pursuant to the following: Article I, Section 8, Clause 3: The Congress shall have power to regulate commerce with foreign nations, and among the several states, and with Indian tribes and Article I, Section 8, Clause 18: The Congress shall have power to make all Laws which shall be necessary and proper for carrying into Execution the foregoing Powers, and all other Powers vested by this Constitution in the Government of the United States, or in any Department of Officer thereof.

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