

gun. I guess, as I have said before with respect to Mr. Putin, once a KGB agent, always a KGB agent.

If Mr. Putin's goal was to deter Ukraine and other former Soviet satellite nations from turning to the West, he has failed miserably. Ukraine and its neighbors are now looking at this aggression and turning even more to the West for their orientation and their support. As they do, the United States and its allies must be there to stand with them against this naked aggression, a raw and reckless act by the Russian Government.

I urge my colleagues to support these two bills. Speak with one voice on behalf of the United States Congress, and send a decisive message to the aggressive Mr. Putin and his Russian Government.

Mr. ROYCE. Mr. Speaker, I reserve the balance of my time.

Mr. ENGEL. Mr. Speaker, I yield myself the balance of my time.

In closing, I would like to say that information is power, and we must not yield the media landscape to intentional efforts by the state-controlled and directed Russian media to mislead the people of Ukraine and the surrounding countries by providing false and deceptive information. These reports, as was mentioned, have been used as a pretext to the annexation of Crimea and possible incursions into eastern Ukraine and even Moldova and, I might say, even Georgia. That is why this bill is necessary to ensuring that there is access to objective news and information.

I again urge the Congress to pass this with an overwhelming, bipartisan majority.

Mr. Speaker, I yield back the balance of my time.

Mr. ROYCE. Mr. Speaker, it is a sad state of affairs. There was one television station left in Russia that had some measure of independence, that wasn't state-controlled. Russia, President Putin, went after that institution, and now it is no longer broadcasting.

Russia has been waging an intense, aggressive, and very blunt disinformation campaign. Not only is that campaign directed at disinformation to people in Ukraine, but they have also spun tales of sinister plotting by the West. This measure, S. 2183, responds by directing U.S. international broadcasters to advance access to uncensored sources of information, the truth, about what is happening on the ground in Ukraine, to use stringers and reporters and to operate as a surrogate radio broadcast source in order to get news and information to people that are otherwise subject to the Russian propaganda, state-run propaganda that is coming into the country. I think it is important that this be done because the Ukrainian stations themselves have now been jammed by the Russians, by the Russian Government.

The former head of Radio Free Europe once described the mission of his

broadcasts as one that "irritates authoritarian regimes, inspires democrats, and creates greater space for civil society." We need to create greater space for civil society in Eastern Europe today. We need to provide a platform to inspire those who want to see democratic governance, and that is exactly the type of response that is needed.

For years, this type of broadcasting has been pivotal in helping young democracies push back against media lies and distortions and get off of their feet. We know from listening to Vaclav Havel and Lech Walesa how important this broadcasting can be. It is the type of broadcasting needed now in Ukraine and the surrounding region more than ever.

So I urge the House to pass S. 2183 and ensure that Russian attempts to undermine democracy in Ukraine through an intense propaganda campaign do not go unanswered.

Mr. Speaker, I yield back the balance of my time.

The SPEAKER pro tempore. The question is on the motion offered by the gentleman from California (Mr. ROYCE) that the House suspend the rules and pass the bill, S. 2183.

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. ROYCE. 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.

#### WEATHER FORECASTING IMPROVEMENT ACT OF 2014

Mr. SMITH of Texas. Mr. Speaker, I move to suspend the rules and pass the bill (H.R. 2413) to prioritize and redirect NOAA resources to a focused program of investment on near-term, affordable, and attainable advances in observational, computing, and modeling capabilities to deliver substantial improvement in weather forecasting and prediction of high impact weather events, such as tornadoes and hurricanes, and for other purposes, as amended.

The Clerk read the title of the bill.

The text of the bill is as follows:

H.R. 2413

*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 "Weather Forecasting Improvement Act of 2014".

#### SEC. 2. PUBLIC SAFETY PRIORITY.

In accordance with NOAA's critical mission to provide science, service, and stewardship, the Under Secretary shall prioritize weather-related activities, including the provision of improved weather data, forecasts, and warnings for the protection of life and property and the enhancement of the national economy, in all relevant line offices.

#### SEC. 3. WEATHER RESEARCH AND FORECASTING INNOVATION.

(a) PROGRAM.—The Assistant Administrator for OAR shall conduct a program to develop improved understanding of and forecast capabilities for atmospheric events and their impacts, placing priority on developing more accurate, timely, and effective warnings and forecasts of high impact weather events that endanger life and property.

(b) PROGRAM ELEMENTS.—The program described in subsection (a) shall focus on the following activities:

(1) Improving the fundamental understanding of weather consistent with section 2, including the boundary layer and other atmospheric processes affecting high impact weather events.

(2) Improving the understanding of how the public receives, interprets, and responds to warnings and forecasts of high impact weather events that endanger life and property.

(3) Research and development, and transfer of knowledge, technologies, and applications to the NWS and other appropriate agencies and entities, including the American weather industry and academic partners, related to—

(A) advanced radar, radar networking technologies, and other ground-based technologies, including those emphasizing rapid, fine-scale sensing of the boundary layer and lower troposphere, and the use of innovative, dual-polarization, phased array technologies;

(B) aerial weather observing systems;

(C) high performance computing and information technology and wireless communication networks;

(D) advanced numerical weather prediction systems and forecasting tools and techniques that improve the forecasting of timing, track, intensity, and severity of high impact weather, including through—

(i) the development of more effective mesoscale models;

(ii) more effective use of existing, and the development of new, regional and national cloud-resolving models;

(iii) enhanced global weather models; and

(iv) integrated assessment models;

(E) quantitative assessment tools for measuring the impact and value of data and observing systems, including OSSEs (as described in section 8), OSEs, and AOAs;

(F) atmospheric chemistry and interactions essential to accurately characterizing atmospheric composition and predicting meteorological processes, including cloud microphysical, precipitation, and atmospheric electrification processes, to more effectively understand their role in severe weather; and

(G) additional sources of weather data and information, including commercial observing systems.

(4) A technology transfer initiative, carried out jointly and in coordination with the Assistant Administrator for NWS, and in cooperation with the American weather industry and academic partners, to ensure continuous development and transition of the latest scientific and technological advances into NWS operations and to establish a process to sunset outdated and expensive operational methods and tools to enable cost-effective transfer of new methods and tools into operations.

(c) EXTRAMURAL RESEARCH.—

(1) IN GENERAL.—In carrying out the program under this section, the Assistant Administrator for OAR shall collaborate with and support the non-Federal weather research community, which includes institutions of higher education, private entities, and nongovernmental organizations, by making funds available through competitive

grants, contracts, and cooperative agreements.

(2) SENSE OF CONGRESS.—It is the sense of Congress that not less than 30 percent of the funds authorized for research and development at OAR by this Act should be made available for this purpose.

(d) REPORT.—The Under Secretary shall transmit to Congress annually, concurrently with NOAA's budget request, a description of current and planned activities under this section.

#### SEC. 4. TORNADO WARNING IMPROVEMENT AND EXTENSION PROGRAM.

(a) IN GENERAL.—The Under Secretary, in collaboration with the American weather industry and academic partners, shall establish a tornado warning improvement and extension program.

(b) GOAL.—The goal of such program shall be to reduce the loss of life and economic losses from tornadoes through the development and extension of accurate, effective, and timely tornado forecasts, predictions, and warnings, including the prediction of tornadoes beyond one hour in advance.

(c) PROGRAM PLAN.—Not later than 6 months after the date of enactment of this Act, the Assistant Administrator for OAR, in consultation with the Assistant Administrator for NWS, shall develop a program plan that details the specific research, development, and technology transfer activities, as well as corresponding resources and timelines, necessary to achieve the program goal.

(d) BUDGET FOR PLAN.—Following completion of the plan, the Assistant Administrator for OAR, in consultation with the Assistant Administrator for NWS, shall transmit annually to Congress a proposed budget corresponding to the activities identified in the plan.

#### SEC. 5. HURRICANE WARNING IMPROVEMENT PROGRAM.

(a) IN GENERAL.—The Under Secretary, in collaboration with the American weather industry and academic partners, shall establish a hurricane warning improvement program.

(b) GOAL.—The goal of such program shall be to develop and extend accurate hurricane forecasts and warnings in order to reduce loss of life, injury, and damage to the economy.

(c) PROGRAM PLAN.—Not later than 6 months after the date of enactment of this Act, the Assistant Administrator for OAR, in consultation with the Assistant Administrator for NWS, shall develop a program plan that details the specific research, development, and technology transfer activities, as well as corresponding resources and timelines, necessary to achieve the program goal.

(d) BUDGET FOR PLAN.—Following completion of the plan, the Assistant Administrator for OAR, in consultation with the Assistant Administrator for NWS, shall transmit annually to Congress a proposed budget corresponding to the activities identified in the plan.

#### SEC. 6. WEATHER RESEARCH AND DEVELOPMENT PLANNING.

Not later than 6 months after the date of enactment of this Act, and annually thereafter, the Assistant Administrator for OAR, in coordination with the Assistant Administrators for NWS and NESDIS, shall issue a research and development plan to restore and maintain United States leadership in numerical weather prediction and forecasting that—

(1) describes the forecasting skill and technology goals, objectives, and progress of NOAA in carrying out the program conducted under section 3;

(2) identifies and prioritizes specific research and development activities, and performance metrics, weighted to meet the operational weather mission of NWS;

(3) describes how the program will collaborate with stakeholders, including the American weather industry and academic partners; and

(4) identifies, through consultation with the National Science Foundation, American weather industry, and academic partners, research necessary to enhance the integration of social science knowledge into weather forecast and warning processes, including to improve the communication of threat information necessary to enable improved severe weather planning and decisionmaking on the part of individuals and communities.

#### SEC. 7. OBSERVING SYSTEM PLANNING.

The Under Secretary shall—

(1) develop and maintain a prioritized list of observation data requirements necessary to ensure weather forecasting capabilities to protect life and property to the maximum extent practicable;

(2) undertake, using OSSEs, OSEs, AOAAs, and other appropriate assessment tools, ongoing systematic evaluations of the combination of observing systems, data, and information needed to meet the requirements listed under paragraph (1), assessing various options to maximize observational capabilities and their cost-effectiveness;

(3) identify current and potential future data gaps in observing capabilities related to the requirements listed under paragraph (1); and

(4) determine a range of options to address gaps identified under paragraph (3).

#### SEC. 8. OBSERVING SYSTEM SIMULATION EXPERIMENTS.

(a) IN GENERAL.—In support of the requirements of section 7, the Assistant Administrator for OAR shall undertake OSSEs to quantitatively assess the relative value and benefits of observing capabilities and systems. Technical and scientific OSSE evaluations—

(1) may include assessments of the impact of observing capabilities on—

(A) global weather prediction;

(B) hurricane track and intensity forecasting;

(C) tornado warning lead times and accuracy;

(D) prediction of mid-latitude severe local storm outbreaks; and

(E) prediction of storms that have the potential to cause extreme precipitation and flooding lasting from 6 hours to 1 week; and

(2) shall be conducted in cooperation with other appropriate entities within NOAA, other Federal agencies, the American weather industry, and academic partners to ensure the technical and scientific merit of OSSE results.

(b) REQUIREMENTS.—OSSEs shall quantitatively—

(1) determine the potential impact of proposed space-based, suborbital, and in situ observing systems on analyses and forecasts, including potential impacts on extreme weather events across all parts of the Nation;

(2) evaluate and compare observing system design options; and

(3) assess the relative capabilities and costs of various observing systems and combinations of observing systems in providing data necessary to protect life and property.

(c) IMPLEMENTATION.—OSSEs—

(1) shall be conducted prior to the acquisition of major Government-owned or Government-leased operational observing systems, including polar-orbiting and geostationary satellite systems, with a lifecycle cost of more than \$500,000,000; and

(2) shall be conducted prior to the purchase of any major new commercially provided data with a lifecycle cost of more than \$500,000,000.

(d) PRIORITY OSSES.—Not later than June 30, 2014, the Assistant Administrator for OAR shall complete OSSEs to assess the value of data from both Global Positioning System radio occultation and a geostationary hyperspectral sounder global constellation.

(e) RESULTS.—Upon completion of all OSSEs, results shall be publicly released and accompanied by an assessment of related private and public sector weather data sourcing options, including their availability, affordability, and cost effectiveness. Such assessments shall be developed in accordance with section 50503 of title 51, United States Code.

#### SEC. 9. COMPUTING RESOURCES PRIORITIZATION REPORT.

Not later than 12 months after the date of enactment of this Act, and annually thereafter, the NOAA Chief Information Officer, in coordination with the Assistant Administrator for OAR and the Assistant Administrator for NWS, shall produce and make publicly available a report that explains how NOAA intends to—

(1) aggressively pursue the newest, fastest, and most cost effective high performance computing technologies in support of its weather prediction mission;

(2) ensure a balance between the research requirements to develop the next generation of regional and global models and its highly reliable operational models;

(3) take advantage of advanced development concepts to, as appropriate, make its next generation weather prediction models available in beta-test mode to its operational forecasters, the American weather industry, and its partners in academic and government research;

(4) identify opportunities to reallocate existing advanced computing resources from lower priority uses to improve advanced research and operational weather prediction; and

(5) harness new computing power in OAR and NWS for immediate improvement in forecasting and experimentation.

#### SEC. 10. COMMERCIAL WEATHER DATA.

(a) AMENDMENT.—Section 60161 of title 51, United States Code, is amended by adding at the end the following: "This prohibition shall not extend to—

"(1) the purchase of weather data through contracts with commercial providers; or

"(2) the placement of weather satellite instruments on cohosted government or private payloads."

(b) STRATEGY.—

(1) IN GENERAL.—Not later than 6 months after the date of enactment of this Act, the Secretary of Commerce, in consultation with the Under Secretary, shall transmit to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a strategy to enable the procurement of quality commercial weather data. The strategy shall assess the range of commercial opportunities, including public-private partnerships, for obtaining both surface-based and space-based weather observations. The strategy shall include the expected cost effectiveness of these opportunities as well as provide a plan for procuring data, including an expected implementation timeline, from these nongovernmental sources, as appropriate.

(2) REQUIREMENTS.—The strategy shall include—

(A) an analysis of financial or other benefits to, and risks associated with, acquiring commercial weather data or services, including through multiyear acquisition approaches;

(B) an identification of methods to address planning, programming, budgeting, and execution challenges to such approaches, including—

(i) how standards will be set to ensure that data is reliable and effective;

(ii) how data may be acquired through commercial experimental or innovative techniques and then evaluated for integration into operational use;

(iii) how to guarantee public access to all forecast-critical data to ensure that the American weather industry and the public continue to have access to information critical to their work; and

(iv) in accordance with section 50503 of title 51, United States Code, methods to address potential termination liability or cancellation costs associated with weather data or service contracts; and

(C) an identification of any changes needed in the requirements development and approval processes of the Department of Commerce to facilitate effective and efficient implementation of such strategy.

#### **SEC. 11. WEATHER RESEARCH AND INNOVATION ADVISORY COMMITTEE.**

(a) **ESTABLISHMENT.**—The Under Secretary shall establish a Federal Advisory Committee 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;

(3) identify opportunities to improve communications between weather forecasters, emergency management personnel, and the public; and

(4) address such other matters as the Under Secretary or the Advisory Committee believes would improve innovation in weather forecasting.

(b) **COMPOSITION.**—

(1) **IN GENERAL.**—The Under Secretary shall appoint leading experts and innovators from all relevant fields of science and engineering that inform meteorology, including atmospheric chemistry, atmospheric physics, hydrology, social science, risk communications, electrical engineering, and computer modeling.

(2) **NUMBER.**—The Advisory Committee shall be composed of at least 12 members, with the chair of the Advisory Committee chosen by the Under Secretary from among the members.

(3) **RESTRICTION.**—The Under Secretary may not appoint a majority of members who are employees of NOAA-funded research centers.

(c) **ANNUAL REPORT.**—The Advisory Committee shall transmit annually to the Under Secretary a report on progress made by NOAA in adopting the Advisory Committee's recommendations. The Under Secretary shall transmit a copy of such report to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate.

(d) **DURATION.**—Section 14 of the Federal Advisory Committee Act (5 U.S.C. App.) shall not apply to the Advisory Committee until the date that is 5 years after the date of enactment of this Act.

#### **SEC. 12. INTERAGENCY WEATHER RESEARCH AND INNOVATION COORDINATION.**

(a) **ESTABLISHMENT.**—The Director of the Office of Science and Technology Policy shall establish an Inter-agency Committee for Advancing Weather Services to improve coordination of relevant weather research and forecast innovation activities across the

Federal Government. The Interagency Committee shall—

(1) include participation by the National Aeronautics and Space Administration, the Federal Aviation Administration, NOAA and its constituent elements, the National Science Foundation, and such other agencies involved in weather forecasting research as the President determines are appropriate;

(2) identify and prioritize top forecast needs and coordinate those needs against budget requests and program initiatives across participating offices and agencies; and

(3) share information regarding operational needs and forecasting improvements across relevant agencies.

(b) **CO-CHAIR.**—The Federal Coordinator for Meteorology shall serve as a co-chair of this panel.

(c) **FURTHER COORDINATION.**—The Director shall take such other steps as are necessary to coordinate the activities of the Federal Government with those of the American weather industry, State governments, emergency managers, and academic researchers.

#### **SEC. 13. OAR AND NWS EXCHANGE PROGRAM.**

(a) **IN GENERAL.**—The Assistant Administrator for OAR and the Assistant Administrator for NWS may establish a program to detail OAR personnel to the NWS and NWS personnel to OAR.

(b) **GOAL.**—The goal of this program is to enhance forecasting innovation through regular, direct interaction between OAR's world-class scientists and NWS's operational staff.

(c) **ELEMENTS.**—The program shall allow up to 10 OAR staff and NWS staff to spend up to 1 year on detail. Candidates shall be jointly selected by the Assistant Administrator for OAR and the Assistant Administrator for NWS.

(d) **REPORT.**—The Under Secretary shall report annually to the Committee on Science, Space, and Technology of the House of Representatives and to the Committee on Commerce, Science, and Transportation of the Senate on participation in such program and shall highlight any innovations that come from this interaction.

#### **SEC. 14. VISITING FELLOWS AT NWS.**

(a) **IN GENERAL.**—The Assistant Administrator for NWS may establish a program to host postdoctoral fellows and academic researchers at any of the National Centers for Environmental Prediction.

(b) **GOAL.**—This program shall be designed to provide direct interaction between forecasters and talented academic and private sector researchers in an effort to bring innovation to forecasting tools and techniques available to the NWS.

(c) **SELECTION AND APPOINTMENT.**—Such fellows shall be competitively selected and appointed for a term not to exceed 1 year.

#### **SEC. 15. DEFINITIONS.**

In this Act:

(1) **AOA.**—The term “AOA” means an Analysis of Alternatives.

(2) **NESDIS.**—The term “NESDIS” means the National Environmental Satellite, Data, and Information Service.

(3) **NOAA.**—The term “NOAA” means the National Oceanic and Atmospheric Administration.

(4) **NWS.**—The term “NWS” means the National Weather Service.

(5) **OAR.**—The term “OAR” means the Office of Oceanic and Atmospheric Research.

(6) **OSE.**—The term “OSE” means an Observing System Experiment.

(7) **OSSE.**—The term “OSSE” means an Observing System Simulation Experiment.

(8) **UNDER SECRETARY.**—The term “Under Secretary” means the Under Secretary of Commerce for Oceans and Atmosphere.

#### **SEC. 16. AUTHORIZATION OF APPROPRIATIONS.**

(a) **FISCAL YEAR 2014.**—There are authorized to be appropriated for fiscal year 2014—

(1) \$83,000,000 to OAR to carry out this Act, of which—

(A) \$65,000,000 is authorized for weather laboratories and cooperative institutes; and

(B) \$18,000,000 is authorized for weather and air chemistry research programs; and

(2) out of funds made available for research and development in NWS, an additional amount of \$14,000,000 for OAR to carry out the joint technology transfer initiative described in section 3(b)(4).

(b) **ALTERNATIVE FUNDING FOR FISCAL YEAR 2014.**—If the Budget Control Act of 2011 (Public Law 112-25) is repealed or replaced with an Act that increases allocations, subsection (a) shall not apply, and there are authorized to be appropriated for fiscal year 2014—

(1) \$96,500,000 to OAR to carry out this Act, of which—

(A) \$77,500,000 is authorized for weather laboratories and cooperative institutes; and

(B) \$19,000,000 is authorized for weather and air chemistry research programs; and

(2) out of funds made available for research and development in NWS, an additional amount of \$16,000,000 for OAR to carry out the joint technology transfer initiative described in section 3(b)(4).

(c) **FISCAL YEARS 2015 THROUGH 2017.**—For each of fiscal years 2015 through 2017, there are authorized to be appropriated—

(1) \$100,000,000 to OAR to carry out this Act, of which—

(A) \$80,000,000 is authorized for weather laboratories and cooperative institutes; and

(B) \$20,000,000 is authorized for weather and air chemistry research programs; and

(2) an additional amount of \$20,000,000 for the joint technology transfer initiative described in section 3(b)(4).

(d) **LIMITATION.**—No additional funds are authorized to carry out this Act, and the amendments made by this Act.

The SPEAKER pro tempore. Pursuant to the rule, the gentleman from Texas (Mr. SMITH) and the gentlewoman from Oregon (Ms. BONAMICI) each will control 20 minutes.

The Chair recognizes the gentleman from Texas.

#### **GENERAL LEAVE**

Mr. SMITH of Texas. Mr. Speaker, I ask unanimous consent that all Members may have 5 legislative days to revise and extend their remarks and include extraneous material on H.R. 2413, the bill now under consideration.

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

There was no objection.

Mr. SMITH of Texas. Mr. Speaker, I yield myself such time as I may consume.

Mr. Speaker, H.R. 2413, the Weather Forecasting Improvement Act of 2014, will greatly improve our severe weather forecasting capabilities. I thank the gentleman from Oklahoma (Mr. BRIDENSTINE) for his work on this bill.

Severe weather routinely affects large portions of the United States. This past year has been no different. The United States needs a world-class weather prediction system that helps protect American lives and property.

Our leadership has slipped in severe weather forecasting. European weather models routinely predict America's weather better than we can. We need to make up for lost ground. H.R. 2413 improves weather observation systems

and advances computing and next generation modeling capabilities. The enhanced prediction of major storms is of great importance to protecting the public from injury and loss of property.

This legislation is the result of multiple hearings, a subcommittee markup, and Member negotiations. Again, I thank the gentleman from Oklahoma for taking the lead on this issue. I also want to thank the former chairman of the Environment Subcommittee, the gentleman from Utah (Mr. STEWART), and the Environment Subcommittee ranking member, the gentlewoman from Oregon (Ms. BONAMICI), for their contributions to this bipartisan bill.

I urge my colleagues to support this bill.

Mr. Speaker, I reserve the balance of my time.

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

Mr. Speaker, I rise in support of H.R. 2413, the Weather Forecasting Improvement Act. This bill is a bipartisan agreement by members of the Science, Space, and Technology Committee.

I am pleased to join my colleagues on the other side of the aisle, the bill's sponsor, Mr. BRIDENSTINE, Subcommittee Chair SCHWEIKERT, former subcommittee chair, Mr. STEWART, and Chairman SMITH in support of this bill. I want to thank them, as well as Ranking Member JOHNSON, for their work on this important bill. Members on both sides of the aisle can be assured that this bill represents a truly bipartisan effort and is built on extensive discussions with and advice from the weather community.

After devastating tornadoes in his district, Mr. BRIDENSTINE introduced a well-intentioned bill that went a long way toward improving the tools available to NOAA for evaluating emerging forecast technologies. His emphasis on tornado research was appropriate and helpful. At the subcommittee markup, Mr. GRAYSON added a valuable amendment for a focused hurricane research program.

Representative STEWART, then the chairman of the Environment Subcommittee, worked with my staff and me on a manager's amendment to add to the tools and programs in the original bill. We drew on expert advice from the weather enterprise and from extensive reports from the National Academy of Sciences and the National Academy of Public Administration.

Experts told us that, to improve weather forecasting, the research at the Office of Oceans and Atmospheric Research, or OAR, and the forecasting at the National Weather Service had to be better coordinated. This legislation contains important provisions to improve that coordination. This bill encourages NOAA to integrate research and operations in a way that models the successful innovation structure used by the Department of Defense.

The bill we are considering today also creates numerous opportunities for the broader weather community to

provide input to NOAA, and their insights as well. At every opportunity, we charge the agency to consult with the American weather industry and researchers as they develop research plans and undertake new initiatives. We also press NOAA to get serious about exploring private sector solutions to their data needs.

The bill makes clear that we expect the historical support for extramural research to continue. The engine of weather forecasting innovation has not always been found within NOAA, but is often found in the external research community and labs that work with NOAA. That collaboration must continue and will continue under this legislation.

□ 1645

In addition, the bill includes an explicit focus on tapping the expertise of social scientists on how to best communicate risks and warnings to the public. Witnesses who came before the Science Committee emphasized the importance of this work. The best forecasting skill and technology in the world won't be as effective unless the messages to the public result in the right safety response.

The bill before us today is designed to improve public safety, enhance the American economy, and transform the innovation culture at NOAA. I am confident that its passage will improve weather forecasting and tangibly benefit our constituents.

I can assure Members on both sides of the aisle that weather research is strengthened in this bill but not at the expense of other important work at NOAA.

During the committee process, we heard from witness after witness who stressed that weather forecasting involves many different scientific disciplines. This integrated multidisciplinary approach reflects an understanding that we cannot choose to strengthen one area of research at OAR without endangering the progress in the other areas because they are all interconnected. Physical and chemical laws do not respect OAR's budgetary boundaries of climate, weather, and oceans, and this bill only addresses organizational issues in weather at NOAA.

Thank you, again, to Chairman SMITH and Ranking Member JOHNSON for giving us the support to work out a compromise. I want to reiterate my thanks to Mr. BRIDENSTINE for his willingness to work with us and accept changes to the original bill. I particularly want to thank Representative CHRIS STEWART, the former chair of the Environment Subcommittee, whose attitude throughout the process was collaborative and constructive, allowing us to arrive at the bipartisan bill we have before us today. Chairman SCHWEIKERT, who took on the chairmanship of the subcommittee when Mr. STEWART went to the Committee on Appropriations, has brought with him

that same collaborative spirit. Finally, I want to thank the very hardworking staff on both sides of the aisle.

Mr. Speaker, weather is not a partisan issue. The American public needs and deserves the best weather forecasting service we can provide. This bill has broad support in the weather community among research institutions, established businesses, and emerging companies. Supporters include the American Commercial Space Weather Association, University Consortium for Atmospheric Research, GeoOptics, PlanetiQ, and the Weather Coalition.

Mr. SMITH of Texas. Mr. Speaker, I yield 5 minutes to the gentleman from Oklahoma (Mr. BRIDENSTINE), who is a member of the Science Committee and is the author of this bill.

Mr. BRIDENSTINE. Mr. Speaker, on May 20 of last year, a massive tornado struck Moore, Oklahoma, with very little warning. The Moore tornado killed 24 Oklahomans, injured 377, and resulted in an estimated \$2 billion worth of damage. A warning was issued only 15 minutes before the tornado touched down, just 15 minutes. In fact, 15 minutes is the standard in America. Mr. Speaker, America can do better than 15 minutes.

The Weather Forecasting Improvement Act is the first step toward restoring America's leadership in weather and weather forecasting and prediction. I would like to thank Chairman LAMAR SMITH and the Science Committee staff for their very hard work.

H.R. 2413, the Weather Forecasting Improvement Act, is critical legislation that will save lives and protect property and critical infrastructure.

I would also like to thank the former Environment Subcommittee chairman, CHRIS STEWART, now a member of the Appropriations Committee, and my friend and colleague from Oregon, Representative SUZANNE BONAMICI, for making this truly a very bipartisan effort.

Mr. Speaker, this bill is about priorities. When America is over \$17 trillion in debt, the answer is not more spending, but to prioritize necessary spending toward its best uses. Saving lives and protecting property should be the National Oceanic and Atmospheric Administration's top priority. This bill codifies that priority.

H.R. 2413 directs NOAA to prioritize weather-related activities and rebalances NOAA's funding priorities to bring weather-related activities to a higher amount. The bill completes this reprioritization in a fiscally responsible manner. H.R. 2413 does not increase NOAA's overall authorization. I would like to repeat that. H.R. 2413 does not increase NOAA's overall authorization. It doesn't spend one more dime.

Mr. Speaker, this bill helps get weather research projects out of the lab and into the field, thereby speeding up the development and fielding of life-saving weather forecasting technology.

By requiring coordination and prioritization across the range of NOAA agencies, H.R. 2413 will help get weather prediction and forecasting technologies off the drawing board and into the field.

This bill authorizes dedicated tornado and hurricane warning programs to coordinate research and development activities. It directs the Office of Oceanic and Atmospheric Research to prioritize its research and development. And it codifies technology transfer between OAR—the researchers—and the National Weather Service—the operators—a vital link that ensures next-generation weather technologies are implemented.

Mr. Speaker, perhaps most importantly, H.R. 2413 enhances NOAA's collaboration with the private sector and with universities. Oklahoma is on the cutting edge of weather research, prediction, and forecasting with absolutely world-class institutions such as the National Weather Center and the National Severe Storms Laboratory at the University of Oklahoma.

And I would like to anchor here, just to brag for a second, about what is happening at the University of Oklahoma. As a Navy pilot, I have seen firsthand phased array radar technology being used to detect, track, and target enemy aircraft many, many miles away. What this technology is now being used for at the University of Oklahoma is to detect and track clouds and very small particles in clouds. Those particles can provide reflected radar energy that goes into a data assimilation system, into a numerical weather model, and we can now predict tornadoes over an hour in advance, which is a goal of this piece of legislation.

Saving lives and property requires us to be able to warn people based on the forecast of a tornado, not just based on the detection of a tornado, moving from 15 minutes to over an hour in advance to detect tornadoes. Not only is this possible, it has been done. And they are doing it currently at the University of Oklahoma.

Mr. Speaker, this bill also clarifies that NOAA can purchase weather data through contracts with commercial providers and place weather satellite instruments on private payloads. Leveraging the private sector will lead to lower costs for better weather data; again, saving lives and property.

Mr. Speaker, the imbalance of NOAA's resources is leaving America further behind our international competitors. The Science Committee received compelling testimony showing that the European Union has better capabilities in some areas of numerical weather prediction, forecasting, and risk communication, and other countries, such as Britain and Japan, are closing in fast.

Misallocating resources can have terrible consequences, as my constituents and the people of Oklahoma understand all too well every tornado season.

The Weather Forecasting Improvement Act is a first step toward rebal-

ancing NOAA's priorities, moving new technologies from the lab bench to the field, and leveraging formidable capabilities developed in the private sector and at universities. I urge my colleagues to support this bipartisan bill.

Ms. BONAMICI. Mr. Speaker, I will continue to reserve the balance of my time.

Mr. SMITH of Texas. Mr. Speaker, I yield 3 minutes to the gentleman from Arizona (Mr. SCHWEIKERT), who is also chairman of the Environment Subcommittee of the Science Committee.

Mr. SCHWEIKERT. I thank Chairman SMITH, Ranking Member BONAMICI, and the sponsor of our bill.

Mr. Speaker, this is actually one of those moments where you are going over a piece of legislation—and I am very proud of everyone who has worked on it, and maybe this language is a little too strong, but in many ways, it sort of removes, whether it be excuses or statutory straitjackets, away from NOAA, away from OAR. And the optionality of, how do you design data sets, how do you reach out to the cloud, to the world around you, and gather their technology, and how they are doing weather forecasting.

You have just heard Chairman BRIDENSTINE speak of big weather events, whether they be tornadoes that affect his district—but think of the Members who have had input into this piece of legislation. I am from the desert Southwest. We have someone from the wet and rainy Northwest. We have had people from around the country that represent very, very different types of climates in their districts, and that is, actually, something that is really special about this piece of legislation.

I have a level of enthusiasm. Last month was my birthday, and my wife bought me this weather station that sits on the side of the house, and it talks to the WiFi, which talks to the cloud. And their goal is to set up hundreds of thousands of data points that are collected by enthusiasts, like myself, across the country and put that data together.

Can you imagine a world where NOAA actually becomes the hub of so many data sets? Then it has the optionality of reaching out and finding what technology, what mechanics are out there to put it together and help us, from our little microclimates that I may have in my neighborhood to the terrible storm that may be threatening the Florida coast.

This is the future, and this bill actually moves us towards that future.

Ms. BONAMICI. Mr. Speaker, I want to thank my colleagues on the committee. I really appreciate working with them.

I want to make clear that when we worked on this—this is a reprioritization of how the Office of Oceanic and Atmosphere Research lays out its own weather research efforts. The key reprioritization is to put in place a clear process that ties the

needs of forecasters at the National Weather Service to the research initiatives at OAR.

I am glad that my colleagues have worked on this important bill. This legislation will make real and measurable improvements in weather research and weather forecasting, and I urge my colleagues to support this effort.

I yield back the balance of my time.

Mr. SMITH of Texas. Mr. Speaker, I would like to thank the gentleman from Oklahoma (Mr. BRIDENSTINE), Ms. BONAMICI, and DAVID SCHWEIKERT for their hard work on this bill. I appreciate all of the effort they have put into it. It is a wonderful product. It is going to save lives. It is going to save property, and it is going to benefit many, many Americans.

I yield back the balance of my time.

The SPEAKER pro tempore. The question is on the motion offered by the gentleman from Texas (Mr. SMITH) that the House suspend the rules and pass the bill, H.R. 2413, as amended.

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

The title of the bill was amended so as to read: "A bill to prioritize and redirect NOAA resources to a focused program of investment on affordable and attainable advances in observational, computing, and modeling capabilities to deliver substantial improvement in weather forecasting and prediction of high impact weather events, such as those associated with hurricanes, tornadoes, droughts, floods, storm surges, and wildfires, and for other purposes."

A motion to reconsider was laid on the table.

#### COAST GUARD AND MARITIME TRANSPORTATION ACT OF 2014

Mr. HUNTER. Mr. Speaker, I move to suspend the rules and pass the bill (H.R. 4005) to authorize appropriations for the Coast Guard for fiscal years 2015 and 2016, and for other purposes, as amended.

The Clerk read the title of the bill.

The text of the bill is as follows:

H.R. 4005

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

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

(a) SHORT TITLE.—This Act may be cited as the "Coast Guard and Maritime Transportation Act of 2014".

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

Sec. 1. Short title; table of contents.

#### TITLE I—AUTHORIZATION

Sec. 101. Authorization of appropriations.

Sec. 102. Authorized levels of military strength and training.

#### TITLE II—COAST GUARD

Sec. 201. Commissioned officers.

Sec. 202. Prevention and response workforces.

Sec. 203. Centers of expertise.

Sec. 204. Agreements.