I agree with Chairwoman JOHNSON that it is fitting that the House honor Dr. Rubin today on what would have been her 91st birthday. Dr. Rubin was a pioneer and lifelong advocate for women in science, serving as a mentor, supporter, and role model for many women astronomers.

The new Large Synoptic Survey Telescope under construction in Chile, funded by the National Science Foundation and the Department of Energy, will photograph the entire sky every few nights. One of the goals of the project is to study the nature of dark matter and dark energy.

I thank Chairwoman JOHNSON and Representative GONZÁLEZ-COLÓN for their leadership and for working with stakeholders to update this legislation.

Naming the observatory in honor of Dr. Rubin is a fitting tribute to her contributions to the field, and I hope it will inspire future generations of women in astronomy. This bill designates the new NSF and Department of Energy's LSST telescope facility the Vera C. Rubin Observatory. Given her remarkable contributions to the field of dark matter and advocacy for the equal treatment and representation of women in science, it is only appropriate that we honor Dr. Rubin this way.

I thank Chairwoman JOHNSON and Representative GONZÁLEZ-COLÓN for their leadership in introducing this bill. It is my hope that this will ensure that Dr. Rubin's legacy lives on and continues to inspire young women to pursue careers in STEM.

Mr. Speaker, I urge my colleagues to support this bill, and I yield back the balance of my time.

Ms. JOHNSON of Texas. Mr. Speaker, I yield myself the balance of my time to close.

Mr. Speaker, I also thank Miss GONZÁLEZ-COLÓN for cosponsoring this bill, and I thank the full committee for supporting it. I urge its passage, and I yield back the balance of my time.

Miss GONZÁLEZ-COLÓN of Puerto Rico. Mr. Speaker, today, I rise in strong support of H.R. 3196, the Vera C. Rubin Observatory Designation Act, of which I am the co-lead alongside Chairwoman JOHNSON.

Dr. Rubin exemplified perseverance and tenacity in science. As a woman scientist, she encountered many obstacles during her academic and professional career. As a student, her application to Princeton University was denied because, at the time, women were not allowed to enroll in the astrophysics graduate program of this institution. Similarly, years later, she had problems accessing the Palomar Observatory in California, one of the most iconic scientific facilities in the world, also because she was a woman. Experiences such as these would be enough to discourage a young student and scientist. Still, Dr. Rubin persevered, demonstrating exceptional intellectual capabilities and character.

Dr. Vera Rubin changed the way we understand the universe. Her groundbreaking work on dark matter and galaxy rotations remain at the forefront of STEM research in the field of astronomy. Her legacy will undoubtedly continue to influence future generations of scientists and will hopefully be memorialized in the new Large Synoptic Survey Telescope (LSST) Observatory under construction in Chile. I am very much looking forward to the great work this facility will produce by researchers, like Dr. Rubin.

I am immensely proud of this bill. Especially to be speaking about it today, July 23rd, on what would have been Dr. Rubin's 91st birthday.

I believe highlighting the sacrifices and contributions women have made to the sciences is one of the many ways we can continue to foster their participation in STEM fields. Like multiple minorities, women face their own subset of challenges that hinder their decision to pursue or remain in STEM careers. This has a negative impact on the development and advancement of women in general, and in our economy by not capitalizing from the remarkable talent of women in STEM.

I would like to thank Chairwoman JOHNSON and Ranking Member LUCAS for their leadership and for moving this bill through Committee. As someone with a STEM background, and as a representative of many young girls and women who are either pursuing or interested in pursuing a career in STEM—I look forward to working with my colleagues to get this bill signed into law. I urge my colleagues to vote in favor.

The SPEAKER pro tempore. The question is on the motion offered by the gentlewoman from Texas (Ms. JOHNSON) that the House suspend the rules and pass the bill, H.R. 3196, 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 designate the Large Synoptic Survey Telescope as the 'Vera C. Rubin Observatory'.''.

A motion to reconsider was laid on the table.

ENERGY AND WATER RESEARCH INTEGRATION ACT OF 2019

Ms. JOHNSON of Texas. Mr. Speaker, I move to suspend the rules and pass the bill (H.R. 34) to ensure consideration of water intensity in the Department of Energy's energy research, development, and demonstration programs to help guarantee efficient, reliable, and sustainable delivery of energy and clean water resources, as amended.

The Clerk read the title of the bill.

The text of the bill is as follows:

H.R. 34

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 ''Energy and Water Research Integration Act of 2019''.

SEC. 2. INTEGRATING ENERGY AND WATER RESEARCH.

(a) IN GENERAL.—The Secretary of Energy shall integrate water considerations into energy research, development, and demonstration programs and projects of the Department of Energy by—

(1) advancing energy and energy efficiency technologies and practices that meet the objectives of—

(A) minimizing freshwater withdrawal and consumption;

(B) increasing water use efficiency;

(C) utilizing nontraditional water sources with efforts to improve the quality of the water from those sources;

(D) minimizing deleterious impacts on water bodies, groundwater, and waterways; and

(E) minimizing seismic impacts;

(2) considering the effects climate variability may have on water supplies and quality for energy generation and fuel production; and

(3) improving understanding of the energy-water nexus.

(b) STRATEGIC PLAN.—

(1) IN GENERAL.—Not later than 12 months after the date of enactment of this Act, the Secretary shall develop a strategic plan identifying the research, development, and demonstration needs for Department programs and projects to carry out subsection (a). The strategic plan shall include technical milestones for achieving and assessing progress toward the objectives of subsection (a)(1).

(2) SPECIFIC CONSIDERATIONS.—In developing the strategic plan, the Secretary shall consider—

(A) new advanced cooling technologies for energy generation and fuel production technologies;

(B) performance improvement of existing cooling technologies and cost reductions associated with using those technologies;

(C) innovative water reuse, recovery, and treatment technologies in energy generation and fuel production, including renewable energy;

(D) technology development for carbon capture and storage systems that utilize efficient water use design strategies;

(E) technologies that are life-cycle cost effective;

(F) systems analysis and modeling of issues relating to the energy-water nexus;

(G) technologies to treat and utilize wastewater and produced waters discharged from oil, natural gas, coalbed methane, and any other substance to be used as an energy source;

(H) advanced materials for the use of nontraditional water sources for energy generation and fuel production;

(I) biomass production and utilization and the impact on hydrologic systems;

(J) technologies that reduce impacts on water from energy resource development;

(K) energy efficient technologies for water distribution, treatment, supply, and collection systems;

(L) technologies for energy generation from water distribution, treatment, supply, and collection systems;

(M) the flexible operation of water infrastructure to provide essential grid reliability services;

(N) modular or energy-water microgrid systems that can provide energy and water resources in remote or disaster recovery areas;

(O) recovering energy in the form of biofuels, bioproducts, and biopower from municipal and industrial wastewaters, and similar organic streams; and

(P) any other area of the energy-water nexus that the Secretary considers appropriate.

(3) COLLABORATION AND NONDUPLICATION.—In developing the strategic plan, the Secretary shall coordinate and avoid duplication—

(A) with other Federal agencies operating related programs, if appropriate; and

(B) across programs and projects of the Department, including with those of the National Laboratories.

(4) RELEVANT INFORMATION AND RECOMMENDATIONS.—In developing the strategic plan, the Secretary shall consider and incorporate, as appropriate, relevant information and recommendations, including those of the National Water Availability and Use Assessment Program under section 9508(d) of the Omnibus Public Land Management Act of 2009 (42 U.S.C. 10368(d)).

(5) ADDITIONAL PARTICIPATION.—In developing the strategic plan, the Secretary shall consult and coordinate with a diverse group of representatives from research and academic institutions, industry, public utility commissions, and State and local governments who have expertise in technologies and practices relating to the energy-water nexus.

(6) SUBMISSION TO CONGRESS.—Not later than 12 months after the date of enactment of this Act, 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 the strategic plan.

(7) UPDATING THE STRATEGIC PLAN.—Not later than 3 years after the date of enactment of this Act, and at least once every 5 years thereafter, the Secretary shall—

(A) utilize relevant information produced by Federal Government agencies, academia, State, local, and tribal governments and industry to update the strategic plan;

(B) include in the updated strategic plan a description of the changes from the previous strategic plan and the rationale for such changes;

(C) include a review of progress made towards the milestones outlined in the previous strategic plan; and

(D) submit the updated strategic 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.

(c) ADDITIONAL ACTIVITIES.—The Secretary may provide for such additional research, development, and demonstration activities as appropriate to integrate water considerations into the research, development, and demonstration activities of the Department as described in subsection (a).

SEC. 3. ENERGY-WATER OVERSIGHT AND COORDINATION.

(a) IN GENERAL.—In carrying out the research, development, and demonstration activities outlined in section 2, the Secretary, in coordination with other relevant Federal agencies, shall establish an Energy-Water Committee to promote and enable improved energy and water resource data collection, reporting, and technological innovation. The Committee shall consist of—

(1) representation from each program within the Department and each Federal agency that conducts research related to the energy-water nexus; and

(2) non-Federal members, including representatives of research and academic institutions, State, local, and tribal governments, public utility commissions, and industry, who have expertise in technologies, technological innovations, or practices relating to the energy-water nexus.

(b) FUNCTIONS.—The Committee shall, in carrying out section 2—

(1) make recommendations on the development and integration of data collection and data communication standards and protocols, including models and modeling results, to agencies and entities currently engaged in collecting the data for the energy-water nexus;

(2) recommend ways to make improvements to Federal water use data to increase understanding of trends in energy generation and fuel production, including non-cooling water uses;

(3) recommend best practices for utilizing information from existing monitoring networks to provide nationally uniform water and energy use and infrastructure data; and

(4) conduct annual technical workshops, including at least 1 regional workshop annually, to facilitate information exchange among Federal, regional, State, local, and tribal governments and private sector experts on technologies that encourage the conservation and efficient use of water and energy.

(c) REPORTS.—Not later than 1 year after the date of enactment of this Act, and at least once every 2 years thereafter, the Committee, through the Secretary, shall transmit to Congress a report on its findings and activities under this section.

(d) APPLICABILITY OF FEDERAL ADVISORY COMMITTEE ACT.—Except as otherwise provided in this section, the Federal Advisory Committee Act (5 U.S.C. App.) shall apply to the Committee.

SEC. 4. RULE OF CONSTRUCTION.

Notwithstanding any other provision of law, nothing in this Act shall be construed to require State, tribal, or local governments to provide additional data for Federal purposes, or to take any action that may result in an increased financial burden to such governments by restricting the use of water by such governments.

SEC. 5. COORDINATION AND NONDUPLICATION.

To the maximum extent practicable, the Secretary shall coordinate activities under this Act with other programs of the Department and other Federal research programs.

SEC. 6. DEFINITIONS.

In this Act:

(1) COMMITTEE.—The term ''Committee'' means the Energy-Water Committee established under section 3(a).

(2) DEPARTMENT.—The term ''Department'' means the Department of Energy.

(3) ENERGY-WATER NEXUS.—The term ''energy-water nexus'' means the energy required to provide reliable water supplies and the water required to provide reliable energy supplies throughout the United States.

(4) SECRETARY.—The term ''Secretary'' means the Secretary of Energy.

SEC. 7. DETERMINATION OF BUDGETARY EFFECTS.

The budgetary effects of this Act, for the purpose of complying with the Statutory Pay-As-You-Go Act of 2010, shall be determined by reference to the latest statement titled ''Budgetary Effects of PAYGO Legislation'' for this Act, submitted for printing in the Congressional Record by the Chairman of the House Budget Committee, provided that such statement has been submitted prior to the vote on passage.

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

The Chair recognizes the gentlewoman from Texas.

GENERAL LEAVE

Ms. JOHNSON of Texas. Mr. Speaker, I ask unanimous consent that all Members may have 5 legislative days to revise and extend their remarks and to include extraneous material on H.R. 34, the bill now under consideration.

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

There was no objection.

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

Mr. Speaker, I rise today in support of H.R. 34, the Energy and Water Research Integration Act of 2019.

I first thank my friend, Mr. LUCAS, who joined me in introducing this legislation, which calls attention to the critical link between energy and water and instructs the Department of Energy to ensure due consideration of water issues in its research, development, and demonstration programs.

As we all know, especially those of us who represent Texas, Oklahoma, and other southwestern and western States, we have limited water resources that must be distributed appropriately to our large energy industries, agricultural communities, and rapidly growing populations. We have experienced crippling droughts in recent years, so it is vital that we do as much as possible to use this commodity wisely.

However, not many people are aware of the importance of water to energy generation and, similarly, the crucial role that energy plays in delivery of safe, sanitary water to our constituents.

The Energy and Water Research Integration Act encourages research into energy technologies that would improve and minimize the use of water and energy production, and also establishes a mechanism for Federal agencies to work with State and local governments and other stakeholders to advance our understanding of what is known as the ''energy-water nexus.'' In addition, the bill requires a regularly updated strategic plan to guide these efforts. These are important, positive steps towards using our limited resources in the most efficient and effective way possible.

I am pleased that these issues have already received serious attention so far this Congress, with the committee hosting a hearing on this bill in March and two markups, one at the subcommittee level and one before the full committee. Our hearing witnesses and other crucial stakeholders, including the Department of Energy, were able to contribute and shape the legislation to the well-vetted proposal that we are finally considering today. I hope that we can demonstrate a strong, sustained commitment to research and development in this vital area.

Mr. Speaker, I urge support of this bipartisan bill, and I reserve the balance of my time.

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

Mr. Speaker, I am pleased to cosponsor H.R. 34, the Energy and Water Research Integration Act. This legislation is a product of bipartisan Science, Space, and Technology Committee efforts to improve our understanding of the critical relationship between the U.S. energy and water sectors.

The production of energy is dependent on reliable sources of water, and the distribution of clean water is dependent on the availability of energy. No matter what the future U.S. energy market looks like, integrating these

two systems is essential. But this is no simple task.

Both water and energy management are often impacted by many regional challenges and resources and require careful consideration of local factors. For example, back home in Oklahoma, agriculture is the single largest driver of water consumption in the State. But that same agricultural industry also creates a source of energy through biofuels.

Additionally, natural gas production, which is key to the development of a cleaner U.S. energy market, relies on horizontal drilling and hydraulic fracturing, processes which require large volumes of water. But these processes can also produce water, enabling reuse of this resource through fluid lifecycle management.

The Energy and Water Research Integration Act will help prioritize research and development on this critical relationship between energy and water systems and will help American researchers develop tools and technologies to improve our Nation's energy efficiency, environmental stability, and economic growth.

I am pleased to see the work that many Federal agencies, including the Department of Energy and the Environmental Protection Agency, are already doing to improve the efficiency of our energy water systems, and to see the administration's clear prioritization of this work, including the multiagency Water Security Grand Challenge and the recently announced DOE Energy-Water Desalination Hub. But we, in Congress, must also do our part.

Because of the complex relationship between energy and water systems, this will require a multidisciplinary approach. At every step of the R&D process there is a need to facilitate interactions between chemists, engineers, geologists, and legislators, and to encourage collaboration between the Federal Government, industry, universities, and local stakeholders.

I believe this legislation, introduced by Chairwoman JOHNSON and myself, can help to streamline and prioritize this work. The programs authorized in this legislation will leverage the world-leading, early-stage research programs and unparalleled facilities at our national labs and enable the development of next-generation technologies that will improve the efficiency and production in both the energy and water sectors.

I thank my colleagues on the Science, Space, and Technology Committee, particularly Chairwoman EDDIE BERNICE JOHNSON, for continuing to prioritize important research and development programs that will make America stronger, cleaner, and keep us globally competitive. I am grateful for the opportunity to continue to work with my fellow Science, Space, and Technology Committee colleagues to guide this important and bipartisan work.

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H.R. 34 prioritizes critical research to help improve the way we use energy and water.

I again want to thank Chairwoman JOHNSON for her leadership on this bill. I urge my colleagues to support this bipartisan legislation, and I yield back the balance of my time.

Ms. JOHNSON of Texas. Mr. Speaker, I rise to make sure that all members of this committee and staff are thanked for their efforts, and I urge support of this bill.

I yield back the balance of my time.

The SPEAKER pro tempore. The question is on the motion offered by the gentlewoman from Texas (Ms. JOHNSON) that the House suspend the rules and pass the bill, H.R. 34, 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.

DEPARTMENT OF ENERGY VETERANS' HEALTH INITIATIVE ACT

Ms. JOHNSON of Texas. Mr. Speaker, I move to suspend the rules and pass the bill (H.R. 617) to authorize the Department of Energy to conduct collaborative research with the Department of Veterans Affairs in order to improve healthcare services for veterans in the United States, and for other purposes, as amended.

The Clerk read the title of the bill.

The text of the bill is as follows:

H.R. 617

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 ''Department of Energy Veterans' Health Initiative Act''.

SEC. 2. DEFINITIONS.

In this Act:

(1) DEPARTMENT.—The term ''Department'' means the Department of Energy.

(2) NATIONAL LABORATORY.—The term ''National Laboratory'' has the meaning given that term in section 2 of the Energy Policy Act of 2005 (42 U.S.C. 15801).

(3) SECRETARY.—The term ''Secretary'' means the Secretary of Energy.

SEC. 3. PURPOSES.

The purposes of this Act are to advance Department of Energy expertise in artificial intelligence and high-performance computing in order to improve health outcomes for veteran populations by—

(1) supporting basic research through the application of artificial intelligence, high-performance computing, modeling and simulation, machine learning, and large-scale data analytics to identify and solve outcome-defined challenges in the health sciences;

(2) maximizing the impact of the Department of Veterans Affairs' health and genomics data housed at the National Laboratories, as well as data from other sources, on science, innovation, and health care outcomes through the use and advancement of artificial intelligence and high-performance computing capabilities of the Department of Energy;

(3) promoting collaborative research through the establishment of partnerships to improve data sharing between Federal agencies, National Laboratories, institutions of higher education, and nonprofit institutions;

(4) establishing multiple scientific computing user facilities to house and provision available data to foster transformational outcomes; and

(5) driving the development of technology to improve artificial intelligence, high-performance computing, and networking relevant to mission applications of the Department of Energy, including modeling, simulation, machine learning, and advanced data analytics.

SEC. 4. DEPARTMENT OF ENERGY VETERANS HEALTH RESEARCH AND DEVELOPMENT.

(a) IN GENERAL.—The Secretary shall establish and carry out a research program in artificial intelligence and high-performance computing, focused on the development of tools to solve big data challenges associated with veteran's healthcare, and to support the efforts of the Department of Veterans Affairs to identify potential health risks and challenges utilizing data on long-term healthcare, health risks, and genomic data collected from veteran populations. The Secretary shall carry out this program through a competitive, merit-reviewed process, and consider applications from National Laboratories, institutions of higher education, multi-institutional collaborations, and other appropriate entities.

(b) PROGRAM COMPONENTS.—In carrying out the program established under subsection (a), the Secretary may—

(1) conduct basic research in modeling and simulation, machine learning, large-scale data analytics, and predictive analysis in order to develop novel or optimized algorithms for prediction of disease treatment and recovery;

(2) develop methods to accommodate large data sets with variable quality and scale, and to provide insight and models for complex systems;

(3) develop new approaches and maximize the use of algorithms developed through artificial intelligence, machine learning, data analytics, natural language processing, modeling and simulation, and develop new algorithms suitable for high-performance computing systems and large biomedical data sets;

(4) advance existing and construct new data enclaves capable of securely storing data sets provided by the Department of Veterans Affairs, Department of Defense, and other sources; and

(5) promote collaboration and data sharing between National Laboratories, research entities, and user facilities of the Department by providing the necessary access and secure data transfer capabilities.

(c) COORDINATION.—In carrying out the program required under subsection (a), the Secretary is authorized to—

(1) enter into memoranda of understanding in order to carry out reimbursable agreements with the Department of Veterans Affairs and other entities in order to maximize the effectiveness of Department of Energy research and development to improve veterans' healthcare;

(2) consult with the Department of Veterans Affairs and other Federal agencies as appropriate; and

(3) ensure that data storage meets all privacy and security requirements established by the Department of Veterans Affairs, and that access to data is provided in accordance with relevant Department of Veterans Affairs data access policies, including informed consent.

(d) REPORT.—Not later than two years after the date of the enactment of this Act,