COMMITTEE ON
ENERGY & COMMERCE
CHAIRMAN FRANK PALLONE, JR.

**MEMORANDUM**

**February 7, 2020**

**To: Subcommittee on Energy Members and Staff**

**Fr: Committee on Energy and Commerce Staff**

**Re: Hearing on "Saving Energy: Legislation to Improve Energy Efficiency and Storage"**

On **Wednesday, February 12, 2020, at 10:30 a.m. in room 2322 of the Rayburn House Office Building**, the Subcommittee on Energy will hold a legislative hearing entitled, "Saving Energy: Legislation to Improve Energy Efficiency and Storage." The hearing will focus on H.R. 1744, the "S.T.O.R.A.G.E. Act"; H.R. 2909, the "Promoting Grid Storage Act of 2019"; H.R. 3962, the "Energy Savings and Industrial Competitiveness Act of 2019"; H.R. 4447, the "Expanding Access to Sustainable Energy Act of 2019"; H.R. 5650, the "Federal Energy and Water Management Performance Act of 2020"; and H.R. 5758, the "Ceiling Fan Improvement Act of 2020."

## I. BACKGROUND

### A. Energy Storage

With more distributed resources and variable renewable energy added to the grid and increasing resiliency and reliability concerns owing to climate change, policymakers and managers increasingly view energy storage positively in ensuring a reliable electric supply. Energy storage comprises a diverse set of technologies used at various levels of the grid and can provide different services. Major existing energy storage technologies currently include hydropower pumped storage, compressed air energy storage, liquid air energy storage, flywheels, flow batteries, lead-acid batteries, lithium-ion batteries, and other chemical systems.[1]

Energy storage technologies decrease the need for generation at peak demand times and produce energy when variable generation does not meet demand. These technologies also provide power quality service by smoothing variations in voltage supply or frequency, and serve as backup generation when parts of the grid go down. Additionally, transmission and distribution use storage technologies to defer upgrades and alleviate transmission congestion by providing power locally.[2]

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[1] Congressional Research Service, *Electricity Storage: Applications, Issues, and Technologies* (Oct. 2019) (R45980).

[2] U.S. Energy Information Administration, *Batteries perform many different functions on the power grid* (www.eia.gov/todayinenergy/detail.php?id=34432) (accessed Feb. 4, 2020).

### B. Energy Efficiency

Energy efficiency measures are an inexpensive way to reduce greenhouse gas (GHG) emissions, conserve energy, create jobs, and encourage innovation. The Department of Energy (DOE) currently supports energy efficiency by establishing building codes and appliance standards, promoting weatherization efforts, providing production incentives, and supporting research and development.[3]

In 2018, electricity savings from energy efficiency programs totaled 27.1 million megawatt-hours (enough electricity to power 2.6 million homes for a year), and accounted for 2.3 million jobs.[4] By expanding energy efficiency programs through efforts such as improving industrial efficiency, retrofitting buildings, and improving appliance standards, energy efficiency has the potential to cut U.S. energy use and GHG emissions by 50 percent. It can also deliver energy savings worth more than $700 billion by 2050.[5] Energy efficiency measures can reduce CO2 emissions by 57 percent, and reduce emissions of other GHGs, such as methane, by 49 percent.[6]

Since coming to office, President Donald J. Trump has taken several actions to delay or roll back energy efficiency standards, which can lead to increased electricity consumption and significantly higher utility bills.[7] Please see the Committee's memo for the March 4, 2019 hearing, "Wasted Energy: DOE's Inaction on Efficiency Standards and Its Impact on Consumers and the Climate" for further information about DOE's efficiency standard setting and the Trump Administration's recent actions on efficiency standards.

## II. LEGISLATION

### A. H.R. 1744, THE "S.T.O.R.A.G.E. ACT"

Rep. Takano (D-CA) introduced H.R. 1744, the "S.T.O.R.A.G.E. Act," to establish a standard under the Public Utility Regulatory Policies Act of 1978 (PURPA) requiring states to consider investing in energy storage systems. The bill amends PURPA by adding energy storage systems to the list of strategies states should consider when developing energy plans. In

[3] Congressional Research Service, *Renewable Energy and Energy Efficiency Incentives: A Summary of Federal Programs* (Nov. 2019) (R40913).

[4] American Council for an Energy-Efficient Economy, *The 2019 State Energy Efficiency Scorecard* (2019).

[5] American Council for an Energy-Efficient Economy, *Halfway There: Energy Efficiency Can Cut Energy Use and Greenhouse Gas Emissions in Half by 2050* (2019).

[6] *Id*.

[7] *2020 Outlook: From light bulbs to dishwashers, court battles to continue on DOE's efficiency moves*, Utility Dive (Jan. 22, 2020) (www.utilitydive.com/news/2020-outlook-from-light-bulbs-to-dishwashers-court-battles-to-continue-on/569511/ ).

particular, states would have to consider requiring that, as part of a supply-side resource planning process, utilities demonstrate that they considered an investment in energy storage systems based on factors such as cost, reliability, security, and system performance and efficiency.

### B. H.R. 2909, THE "PROMOTING GRID STORAGE ACT OF 2019"

Rep. Casten (D-IL) introduced H.R. 2909, the "Promoting Grid Storage Act of 2019," to establish a DOE energy storage program, a technical assistance and grant program, and a competitive grant program for "pilot energy storage systems."

The Promoting Grid Storage Act of 2019 establishes a research program within DOE for energy storage systems, components, and materials. The program requires the Secretary to coordinate across all relevant DOE program offices and adopt long-term targets for energy storage system applications. The bill authorizes $175 million for the research program for each of fiscal years (FY) 2020 through 2024.

The bill also establishes a technical assistance and grant program. This program disseminates information, offers technical assistance, and provides grants to entities to identify, evaluate, plan, design, and develop processes to procure energy storage systems. It authorizes $100 million annually for the technical assistance and grant program for FY 2020 through 2024.

H.R. 2909 also directs DOE to conduct workshops where lessons learned from the research and technical and grant programs can be shared. The bill establishes a demonstration program to provide grants for the development of pilot energy storage systems. It authorizes $150 million for the demonstration program annually for FY 2020 through 2024.

### C. H.R. 3962, THE "ENERGY SAVINGS AND INDUSTRIAL COMPETITIVENESS ACT OF 2019"

Reps. Welch (D-VT) and McKinley (R-WV) introduced H.R. 3962, the "Energy Savings and Industrial Competitiveness Act of 2019," to promote energy savings and emissions reductions by supporting the use of energy efficiency technologies in the residential, commercial, and industrial sectors.

H.R. 3962 includes a suite of provisions to promote energy efficiency. The bill strengthens national building codes to make new homes and commercial buildings more energy efficient. It also provides retrofitting assistance for schools, and creates a program to account for energy-efficient features in the mortgage appraisal and underwriting process for federally backed mortgages.

In addition, H.R. 3962 encourages efficiency technology and processes for industrial applications, expands DOE's Industrial Assessment Centers, and incentivizes the use of more energy-efficient electric motors and transformers. The bill also requires the federal government to adopt energy savings techniques for computers, allows federal agencies to use existing funds to update plans to make new federal buildings more energy-efficient, and establishes long-term energy and water efficiency goals for the federal government.

Finally, H.R. 3962 repeals section 433 of the Energy Independence and Security Act. Section 433 established a requirement that new and renovated federal buildings be designed so that fossil fuel-generated energy consumption of the building is reduced to zero percent by 2030.

### D. H.R. 4447, THE "EXPANDING ACCESS TO SUSTAINABLE ENERGY ACT OF 2019"

Reps. O'Halleran (D-AZ) and Mullin (R-OK) introduced H.R. 4447, the "Expanding Access to Sustainable Energy Act of 2019," to establish an energy storage and microgrid grant and technical assistance program at DOE. The program will provide grants and technical assistance to a rural electric cooperative or non-profit entity, working with at least six rural electric cooperatives, to assist with designing and demonstrating energy storage and microgrid projects that utilize energy from renewable energy sources. The bill authorizes $5 million annually for the program from FY 2020 through 2025.

### E. H.R. 5650, THE "FEDERAL ENERGY AND WATER MANAGEMENT PERFORMANCE ACT OF 2020"

Reps. Welch (D-VT) and Kinzinger (R-IL) introduced H.R. 5650, the "Federal Energy and Water Management Performance Act of 2020," to improve federal energy and water performance requirements for federal buildings, and to establish a Federal Energy Management Program.

H.R. 5650 amends the National Energy Conservation Policy Act to direct the head of each federal agency to reduce each year (through 2030) average building energy intensity by 2.5 percent relative to their respective energy intensities in 2018. Additionally, each agency head must improve water use efficiency and management through a number of prescribed actions. These actions include reducing potable water consumption; lowering industrial, landscaping, and agricultural water consumption; and installing infrastructure features on federally-owned properties to improve stormwater and wastewater management.

The bill also establishes in law the Federal Energy Management Program to facilitate the implementation of cost-effective energy and water management and energy-related investment practices. The program, which would bear responsibility for monitoring and implementing federal efficiency standards, provides strategic planning and technical assistance, establishes best practices, maintains information resources and tools, and recognizes efficiency achievements. The program would also be responsible for providing accredited training as well as guidance with portfolio-wide planning and project integration. The bill authorizes $36 million annually from FY 2020 through 2024 for this program.

### F. H.R. 5758, THE "CEILING FAN IMPROVEMENT ACT OF 2020"

Reps. Guthrie (R-KY) and Schakowsky (D-IL) introduced H.R. 5758, the "Ceiling Fan Improvement Act of 2020," to amend the Energy Policy and Conservation Act to make technical corrections to the energy conservation standard for large-diameter ceiling fans. DOE issued a final rule in January 2017 setting energy efficiency standards for ceiling fans with a compliance

date of January 2020. The bill amends the final rule to adjust compliance requirements related to total airflow, and power consumption for large-diameter ceiling fans.

## III. WITNESSES

The following witnesses have been invited to testify:

Panel 1

**The Honorable Mark W. Menezes**
Under Secretary of Energy
U.S. Department of Energy

Panel 2

**Kelly Speakes-Backman**
Chief Executive Officer
Energy Storage Association

**Bryan Howard**
Legislative Director
U.S. Green Building Council

**Julie Hiromoto**
Principal
HKS, Inc.
*On behalf of* American Institute of Architects

**Lowell Ungar**
Senior Policy Advisor
American Council for an Energy-Efficient Economy

**Arn McIntyre**
President
McIntyre Builders Inc.
*On behalf of* National Association of Home Builders

**Jennifer Schafer**
Executive Director
Federal Performance Contracting Coalition