

Calendar No. 356

116TH CONGRESS }
2d Session }

SENATE

{ REPORT
116-196 }

PROTECTING RESOURCES ON THE ELECTRIC GRID WITH CYBERSECURITY TECHNOLOGY ACT OF 2019

JANUARY 7, 2020.—Ordered to be printed

Ms. MURKOWSKI, from the Committee on Energy and Natural
Resources, submitted the following

R E P O R T

[To accompany S. 2556]

The Committee on Energy and Natural Resources, to which was referred the bill (S. 2556) to amend the Federal Power Act to provide energy cybersecurity investment incentives, to establish a grant and technical assistance program for cybersecurity investments, and for other purposes, having considered the same, reports favorably thereon with an amendment in the nature of a substitute and recommends that the bill, as amended, do pass.

AMENDMENT

The amendment is as follows:

Strike all after the enacting clause and insert the following:

SECTION 1. SHORT TITLE.

This Act may be cited as the “Protecting Resources On The Electric grid with Cybersecurity Technology Act of 2019” or the “PROTECT Act of 2019”.

SEC. 2. INCENTIVES FOR ADVANCED CYBERSECURITY TECHNOLOGY INVESTMENT.

Part II of the Federal Power Act is amended by inserting after section 219 (16 U.S.C. 824s) the following:

“SEC. 219A. INCENTIVES FOR CYBERSECURITY INVESTMENTS.

“(a) Definitions.—In this section:

“(1) **ADVANCED CYBERSECURITY TECHNOLOGY.**—The term ‘advanced cybersecurity technology’ means any technology, operational capability, or service, including computer hardware, software, or a related asset, that enhances the security posture of public utilities through improvements in the ability to protect against, detect, respond to, or recover from a cybersecurity threat (as defined in section 102 of the Cybersecurity Act of 2015 (6 U.S.C. 1501)).

“(2) **ADVANCED CYBERSECURITY TECHNOLOGY INFORMATION.**—The term ‘advanced cybersecurity technology information’ means information relating to ad-

vanced cybersecurity technology or proposed advanced cybersecurity technology that is generated by or provided to the Commission or another Federal agency.

“(b) Study.—Not later than 180 days after the date of enactment of this section, the Commission, in consultation with the Secretary of Energy, the North American Electric Reliability Corporation, the Electricity Subsector Coordinating Council, and the National Association of Regulatory Utility Commissioners, shall conduct a study to identify incentive-based, including performance-based, rate treatments for the transmission and sale of electric energy subject to the jurisdiction of the Commission that could be used to encourage—

“(1) investment by public utilities in advanced cybersecurity technology; and

“(2) participation by public utilities in cybersecurity threat information sharing programs.

“(c) Incentive-Based Rate Treatment.—Not later than 1 year after the completion of the study under subsection (b), the Commission shall establish, by rule, incentive-based, including performance-based, rate treatments for the transmission of electric energy in interstate commerce and the sale of electric energy at wholesale in interstate commerce by public utilities for the purpose of benefitting consumers by encouraging—

“(1) investments by public utilities in advanced cybersecurity technology; and

“(2) participation by public utilities in cybersecurity threat information sharing programs.

“(d) Factors for Consideration.—In issuing a rule pursuant to this section, the Commission may provide additional incentives beyond those identified in subsection (c) in any case in which the Commission determines that an investment in advanced cybersecurity technology or information sharing program costs will reduce cybersecurity risks to—

“(1) defense critical electric infrastructure (as defined in section 215A(a)) and other facilities subject to the jurisdiction of the Commission that are critical to public safety, national defense, or homeland security, as determined by the Commission in consultation with—

“(A) the Secretary of Energy; and

“(B) appropriate Federal agencies; and

“(2) facilities of small or medium-sized public utilities with limited cybersecurity resources, as determined by the Commission.

“(e) Ratepayer Protection.—

“(1) IN GENERAL.—Any rule approved under a rule issued pursuant to this section, including any revisions to that rule, shall be subject to the requirements of sections 205 and 206 that all rates, charges, terms, and conditions—

“(A) shall be just and reasonable; and

“(B) shall not be unduly discriminatory or preferential.

“(2) PROHIBITION OF DUPLICATE RECOVERY.—Any rule issued pursuant to this section shall preclude rate treatments that allow unjust and unreasonable double recovery for advanced cybersecurity technology.

“(f) SINGLE-ISSUE RATE FILINGS.—The Commission shall permit public utilities to apply for incentive-based rate treatment under a rule issued under this section on a single-issue basis by submitting to the Commission a tariff schedule under section 205 that permits recovery of costs and incentives over the depreciable life of the applicable assets, without regard to changes in receipts or other costs of the public utility.

“(g) PROTECTION OF INFORMATION.—Advanced cybersecurity technology information that is provided to, generated by, or collected by the Federal Government under subsection (b), (c), or (f) shall be considered to be critical electric infrastructure information under section 215A.”

SEC. 3. RURAL AND MUNICIPAL UTILITY ADVANCED CYBERSECURITY GRANT AND TECHNICAL ASSISTANCE PROGRAM.

(a) DEFINITIONS.—In this section:

(1) ADVANCED CYBERSECURITY TECHNOLOGY.—The term “advanced cybersecurity technology” means any technology, operational capability, or service, including computer hardware, software, or a related asset, that enhances the security posture of electric utilities through improvements in the ability to protect against, detect, respond to, or recover from a cybersecurity threat (as defined in section 102 of the Cybersecurity Act of 2015 (6 U.S.C. 1501)).

(2) ELIGIBLE ENTITY.—The term “eligible entity” means—

(A) a rural electric cooperative;

(B) a utility owned by a political subdivision of a State, such as a municipally owned electric utility;

(C) a utility owned by any agency, authority, corporation, or instrumentality of 1 or more political subdivisions of a State;

(D) a not-for-profit entity that is in a partnership with not fewer than 6 entities described in subparagraph (A), (B), or (C); and

(E) an investor-owned electric utility that sells less than 4,000,000 megawatt hours of electricity per year.

(3) PROGRAM.—The term “Program” means the Rural and Municipal Utility Advanced Cybersecurity Grant and Technical Assistance Program established under subsection (b).

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

(b) ESTABLISHMENT.—Not later than 180 days after the date of enactment of this Act, the Secretary, in consultation with the Federal Energy Regulatory Commission, the North American Electric Reliability Corporation, and the Electricity Subsector Coordinating Council, shall establish a program, to be known as the “Rural and Municipal Utility Advanced Cybersecurity Grant and Technical Assistance Program”, to provide grants and technical assistance to, and enter into cooperative agreements with, eligible entities to protect against, detect, respond to, and recover from cybersecurity threats.

(c) OBJECTIVES.—The objectives of the Program shall be—

(1) to deploy advanced cybersecurity technologies for electric utility systems; and

(2) to increase the participation of eligible entities in cybersecurity threat information sharing programs.

(d) AWARDS.—

(1) IN GENERAL.—The Secretary—

(A) shall award grants and provide technical assistance under the Program to eligible entities on a competitive basis;

(B) shall develop criteria and a formula for awarding grants and providing technical assistance under the Program;

(C) may enter into cooperative agreements with eligible entities that can facilitate the objectives described in subsection (c); and

(D) shall establish a process to ensure that all eligible entities are informed about and can become aware of opportunities to receive grants or technical assistance under the Program.

(2) PRIORITY FOR GRANTS AND TECHNICAL ASSISTANCE.—In awarding grants and providing technical assistance under the Program, the Secretary shall give priority to an eligible entity that, as determined by the Secretary—

(A) has limited cybersecurity resources;

(B) owns assets critical to the reliability of the bulk power system; or

(C) owns defense critical electric infrastructure (as defined in section 215A(a) of the Federal Power Act (16 U.S.C. 824o–1(a))).

(e) PROTECTION OF INFORMATION.—Information provided to, or collected by, the Federal Government under this section—

(1) shall be exempt from disclosure under section 552(b)(3) of title 5, United States Code; and

(2) shall not be made available by any Federal agency, State, political subdivision of a State, or Tribal authority under any applicable law requiring public disclosure of information or records.

(f) FUNDING.—There is authorized to be appropriated to carry out this section \$50,000,000 for each of fiscal years 2020 through 2024, to remain available until expended.

PURPOSE

The purpose of S. 2556 is to amend the Federal Power Act (FPA, 16 U.S.C. 791a et seq.) to provide energy cybersecurity investment incentives and to establish a grant and technical assistance program for cybersecurity investments by electric utilities.

BACKGROUND AND NEED

The United States electric grid is comprised of a vast network of transmission and distribution systems that deliver electricity from producers to consumer homes and businesses. Many sectors of our economy, including healthcare and manufacturing, simply cannot operate without a reliable supply of electricity. As advances in digital and information technology continue to electrify our daily lives,

our exposure to a potentially devastating cyber or physical attack on the grid increases.

A number of Federal agencies are responsible for protecting our electric grid from physical and cyber threats, including the Department of Energy (DOE) and the Federal Energy Regulatory Commission (FERC or Commission). DOE works closely with electric sector owners and operators to detect and mitigate risks to critical electric infrastructure, and to develop tools and other resources to assist the sector in evaluating and improving their security preparedness. Section 61003(c)(2) of the Fixing America's Surface Transportation Act (Public Law 114–94; 6 U.S.C. 121 note) in 2015, Congress codified DOE as the Sector-Specific Agency for cybersecurity for the energy sector.

With respect to FERC, section 1211 of the Energy Policy Act of 2005 (EPAc '05, Public Law 109–58) added section 215 to the Federal Power Act, which authorized the Commission to certify an Electric Reliability Organization to develop mandatory reliability standards for the electric transmission system, including physical and cybersecurity standards. The law tasked FERC with approving and enforcing these mandatory standards—violations of which can result in penalties of up to \$1 million per violation per day. FERC also approves rates for electric transmission services by investor-owned utilities. Part of the costs included in a utility's transmission rates are costs associated with investments to protect the grid from cybersecurity threats.

S. 2556 enhances electric grid security by strengthening the cybersecurity partnership between industry and government and facilitating the deployment of advanced cybersecurity technology. Specifically, the bill directs FERC to issue a rulemaking to incentivize investments in advanced cybersecurity technology that enhance the security posture of public utilities regulated by FERC. The rule will make these incentives available for advanced cybersecurity technology investments in facilities for the transmission and sale of electric energy subject to the jurisdiction of the Commission. With respect to electricity sales, the Commission will have the discretion to make such incentives available for cost-based sales, market-based sales, or both. The Commission will ensure these incentives do not permit duplicate recovery of investments.

The bill also establishes a grant and technical assistance program at DOE to deploy advanced cybersecurity technology on the electric systems of utilities that are not regulated by FERC, such as cooperatives and municipal utilities, as well as small investor-owned utilities that sell less than four million megawatt hours of electricity per year.

LEGISLATIVE HISTORY

S. 2556 was introduced by Senators Murkowski, Manchin, Risch, Cantwell, and King on September 26, 2019. The Subcommittee on Energy held a hearing on S. 2556 on November 6, 2019.

The Senate Committee on Energy and Natural Resources met in open business session on November 19, 2019, and ordered S. 2556 favorably reported, as amended.

COMMITTEE RECOMMENDATION

The Senate Committee on Energy and Natural Resources, in open business session on November 19, 2019, by a majority voice vote of a quorum present, recommends that the Senate pass S. 2556, if amended as described herein. Senator Lee asked to be recorded as voting no.

COMMITTEE AMENDMENT

During its consideration of S. 2556, the Committee adopted an amendment in the nature of a substitute.

The substitute amendment provides that incentives for investments in advanced cybersecurity technology will be made available by FERC to rates for both the transmission and sale of electric energy under its jurisdiction. As introduced, S. 2556, the PROTECT Act, limited such incentives to transmission rates. With respect to rates for electricity sales, the Commission will have the discretion to make such incentives available for cost-based sales, market-based sales, or both. The Commission will ensure these incentives do not permit duplicate recovery of investments.

The substitute amendment also expands the eligibility for the Rural and Municipal Utility Advanced Cybersecurity Grant and Technical Assistance Program under section 3 to investor-owned electric utilities that sell less than four million megawatt hours of electricity per year.

SECTION-BY-SECTION ANALYSIS

Section 1. Short title

Section 1 sets forth the short title of the bill.

Section 2. Incentives for Advanced Cybersecurity Technology Investment

Section 2 amends the FPA by adding a new section 219A, titled “Incentives For Cybersecurity Investments.”

The new section 219A(a) defines relevant terms.

The new section 219A(b) directs FERC, in consultation with the Secretary of Energy (Secretary), the North American Electric Reliability Corporation (NERC), the Electricity Subsector Coordinating Council (ESCC), and the National Association of Regulatory Utility Commissioners to conduct a study to identify incentive-based rate treatments that could be used to encourage investments in advanced cybersecurity technology or participation in cybersecurity threat information sharing programs.

The new section 219A(c) directs FERC to establish incentive-based rates to encourage investments in advanced cybersecurity technology and participation in cybersecurity threat information sharing programs.

The new section 219A(d) authorizes FERC to provide greater incentives for any investments in advanced cybersecurity technology that would reduce cybersecurity risks to defense critical electric infrastructure or facilities of small or medium-sized utilities with limited cybersecurity resources.

The new section 219A(e) provides that all rates established under section 219A shall be subject to the ratepayer protection require-

ments of sections 205 and 206 of the FPA. It also prohibits public utilities from receiving double recovery of investments in advanced cybersecurity technology.

The new section 219A(f) specifies that a public utility may apply for incentive-based rate treatment under this section on a single-issue basis rather than requiring a full examination of a utility's rates normally required by section 205 of the FPA.

The new section 219A(g) states that any information concerning advanced cybersecurity technology that is provided to, generated by, or collected by the Federal Government under this section will be considered critical electric infrastructure information under the FPA.

Section 3. Rural and Municipal Utility Advanced Cybersecurity Grant and Technical Assistance Program

Section 3(a) defines relevant terms.

Subsection (b) directs the Secretary, in consultation with FERC, NERC, and the ESCC to establish a program to provide grants and technical assistance to eligible entities to protect against, detect, respond to, and recover from cybersecurity threats.

Subsection (c) states that the program's objectives are to deploy advanced cybersecurity technology for electric utility systems and to increase the participation in cybersecurity threat information sharing programs.

Subsection (d) directs the Secretary to award grants and provide technical assistance on a competitive basis, develop criteria for grant and technical assistance applications, and ensure that all eligible entities are informed about opportunities to receive grants or technical assistance. The subsection also provides that priority for the grants and technical assistance will be given to eligible entities with limited cybersecurity resources and those that own defense critical electric infrastructure or other assets critical to grid reliability.

Subsection (e) provides that information provided to, or collected by, the Federal Government under the program shall be exempt from public disclosure.

Subsection (f) authorizes \$50 million for each of fiscal years 2020 through 2024 to carry out this section.

COST AND BUDGETARY CONSIDERATIONS

The Congressional Budget Office estimate of the costs of this measure has been requested but was not received at the time the report was filed. When the Congressional Budget Office completes its cost estimate, it will be posted on the internet at www.cbo.gov.

REGULATORY IMPACT EVALUATION

In compliance with paragraph 11(b) of rule XXVI of the Standing Rules of the Senate, the Committee makes the following evaluation of the regulatory impact which would be incurred in carrying out S. 2556. The bill is not a regulatory measure in the sense of imposing Government-established standards or significant economic responsibilities on private individuals and businesses.

No personal information would be collected in administering the program. Therefore, there would be no impact on personal privacy.

Little, if any, additional paperwork would result from the enactment of S. 2556, as ordered reported.

CONGRESSIONALLY DIRECTED SPENDING

S. 2556, as ordered reported, does not contain any congressionally directed spending items, limited tax benefits, or limited tariff benefits as defined in rule XLIV of the Standing Rules of the Senate.

EXECUTIVE COMMUNICATIONS

The testimony provided by the Department of Energy at the November 6, 2019, hearing on S. 2556 follows:

TESTIMONY OF ASSISTANT SECRETARY DANIEL SIMMONS OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY U.S. DEPARTMENT OF ENERGY BEFORE THE COMMITTEE ON ENERGY AND NATURAL RESOURCES SUBCOMMITTEE ON ENERGY UNITED STATES SENATE NOVEMBER 6, 2019

INTRODUCTION

Chairman Cassidy, Ranking Member Heinrich, and Members of the Energy Subcommittee of the Committee on Energy and Natural Resources, thank you for the opportunity to testify today on legislation pertinent to the Department of Energy now pending in the Senate. My name is Daniel Simmons, and I am the Assistant Secretary for the Office of Energy Efficiency and Renewable Energy (EERE).

As the Assistant Secretary, I am responsible for overseeing a broad portfolio of energy efficiency and renewable energy programs. The technologies in my portfolio advance America's economic growth and energy security while enhancing the reliability and resilience of the U.S. energy system. The Department of Energy supports improving the energy efficiency and reducing energy costs, while at the same time ensuring important performance standards are met or exceeded. For instance, we want to ensure schools and other buildings are sufficiently bright to ensure safety, and that water flow from faucets is strong enough to clean dirty hands. Today, I would like to share what relevant work my office has done and is doing in the areas that these bills address.

I have been asked to testify on eleven (11) bills today, addressing a range of important energy issues. The Administration continues to review all of these bills. I appreciate the ongoing bipartisan efforts to address our Nation's energy challenges and I look forward to working with the Committee.

BILLS

S. 2556—Protecting Resources On The Electric grid with Cybersecurity Technology (PROTECT) Act

S. 2556, or the PROTECT Act, amends the Federal Power Act to provide energy cybersecurity investment in-

centives, to establish a grant and technical assistance program for cybersecurity investments. The bill directs FERC to issue a rulemaking on rate incentives for advanced cybersecurity technology, which will enable and incentivize utilities to invest in new technologies that improve their cybersecurity defenses. It also establishes a DOE grant program for utilities that are not regulated by FERC to deploy advanced cybersecurity technology, such as electric co-operatives and municipal utilities.

The Department will continue to review the legislation and looks forward to working with Congress as the legislative process moves forward.

CONCLUSION

Thank you again for the opportunity to testify before the Subcommittee today. The Department appreciates the ongoing bipartisan efforts to address our Nation's energy challenges, and looks forward to working with the Committee on the legislation on today's agenda and any future legislation. I would be happy to answer your questions.

CHANGES IN EXISTING LAW

In compliance with paragraph 12 of rule XXVI of the Standing Rules of the Senate, the changes in existing law made by S. 2556, as reported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new matter is printed in *italic*, existing law in which no change is proposed is shown in roman):

FEDERAL POWER ACT

The Act of June 10, 1920, Chapter 285, as Amended

* * * * *

PART II—REGULATION OF ELECTRIC UTILITY COMPANIES ENGAGED IN INTERSTATE COMMERCE

* * * * *

SEC. 219. TRANSMISSION INFRASTRUCTURE INVESTMENT.

(a) RULEMAKING REQUIREMENT.—Not later than 1 year after the date of enactment of this section, the Commission shall establish, by rule, incentive-based (including performance-based) rate treatments for the transmission of electric energy in interstate commerce by public utilities for the purpose of benefitting consumers by ensuring reliability and reducing the cost of delivered power by reducing transmission congestion.

(b) CONTENTS.—The rule shall—

(1) promote reliable and economically efficient transmission and generation of electricity by promoting capital investment in the enlargement, improvement, maintenance, and operation of all facilities for the transmission of electric energy in interstate commerce, regardless of the ownership of the facilities;

(2) provide a return on equity that attracts new investment in transmission facilities (including related transmission technologies);

(3) encourage deployment of transmission technologies and other measures to increase the capacity and efficiency of existing transmission facilities and improve the operation of the facilities; and

(4) allow recovery of—

(A) all prudently incurred costs necessary to comply with mandatory reliability standards issued pursuant to section 215; and

(B) all prudently incurred costs related to transmission infrastructure development pursuant to section 216.

(c) **INCENTIVES.**—In the rule issued under this section, the Commission shall, to the extent within its jurisdiction, provide for incentives to each transmitting utility or electric utility that joins a Transmission Organization. The Commission shall ensure that any costs recoverable pursuant to this subsection may be recovered by such utility through the transmission rates charged by such utility or through the transmission rates charged by the Transmission Organization that provides transmission service to such utility.

(d) **JUST AND REASONABLE RATES.**—All rates approved under the rules adopted pursuant to this section, including any revisions to the rules, are subject to the requirements of sections 205 and 206 that all rates, charges, terms, and conditions be just and reasonable and not unduly discriminatory or preferential.

SEC. 219A. INCENTIVES FOR CYBERSECURITY INVESTMENTS.

(a) **DEFINITIONS.**—*In this section:*

(1) **ADVANCED CYBERSECURITY TECHNOLOGY.**—*The term ‘advanced cybersecurity technology’ means any technology, operational capability, or service, including computer hardware, software, or a related asset, that enhances the security posture of public utilities through improvements in the ability to protect against, detect, respond to, or recover from a cybersecurity threat (as defined in section 102 of the Cybersecurity Act of 2015 (6 U.S.C. 1501)).*

(2) **ADVANCED CYBERSECURITY TECHNOLOGY INFORMATION.**—*The term ‘advanced cybersecurity technology information’ means information relating to advanced cybersecurity technology or proposed advanced cybersecurity technology that is generated by or provided to the Commission or another Federal agency.*

(b) **STUDY.**—*Not later than 180 days after the date of enactment of this section, the Commission, in consultation with the Secretary of Energy, the North American Electric Reliability Corporation, the Electricity Subsector Coordinating Council, and the National Association of Regulatory Utility Commissioners, shall conduct a study to identify incentive-based, including performance-based, rate treatments for the transmission and sale of electric energy subject to the jurisdiction of the Commission that could be used to encourage—*

(1) *investment by public utilities in advanced cybersecurity technology; and*

(2) *participation by public utilities in cybersecurity threat information sharing programs.*

(c) **INCENTIVE BASED RATE TREATMENT.**—*Not later than 1 year after the completion of the study under subsection (b), the Commission shall establish, by rule, incentive-based, including performance-based, rate treatments for the transmission of electric energy in*

interstate commerce and the sale of electric energy at wholesale in interstate commerce by public utilities for the purpose of benefitting consumers by encouraging—

(1) investments by public utilities in advanced cybersecurity technology; and

(2) participation by public utilities in cybersecurity threat information sharing programs.

(d) FACTORS FOR CONSIDERATION.—In issuing a rule pursuant to this section, the Commission may provide additional incentives beyond those identified in subsection (c) in any case in which the Commission determines that an investment in advanced cybersecurity technology or information sharing program costs will reduce cybersecurity risks to—

(1) defense critical electric infrastructure (as defined in section 215A(a)) and other facilities subject to the jurisdiction of the Commission that are critical to public safety, national defense, or homeland security, as determined by the Commission in consultation with—

(A) the Secretary of Energy; and

(B) appropriate Federal agencies; and

(2) facilities of small or medium-sized public utilities with limited cybersecurity resources, as determined by the Commission.

(e) RATEPAYER PROTECTION.—

(1) IN GENERAL.—Any rate approved under a rule issued pursuant to this section, including any revisions to that rule, shall be subject to the requirements of sections 205 and 206 that all rates, charges, terms, and conditions—

(A) shall be just and reasonable; and

(B) shall not be unduly discriminatory or preferential.

(2) PROHIBITION OF DUPLICATE RECOVERY.—Any rule issued pursuant to this section shall preclude rate treatments that allow unjust and unreasonable double recovery for advanced cybersecurity technology.

(f) SINGLE-ISSUE RATE FILINGS.—The Commission shall permit public utilities to apply for incentive-based rate treatment under a rule issued under this section on a single-issue basis by submitting to the Commission a tariff schedule under section 205 that permits recovery of costs and incentives over the depreciable life of the applicable assets, without regard to changes in receipts or other costs of the public utility.

(g) PROTECTION OF INFORMATION.—Advanced cybersecurity technology information that is provided to, generated by, or collected by the Federal Government under subsection (b), (c), or (f) shall be considered to be critical electric infrastructure information under section 215A.

* * * * *