

118TH CONGRESS
2D SESSION

S. _____

To require the Assistant Secretary of Commerce for Communications and Information to carry out a grant and revolving loan program to provide funding for projects to increase the resiliency and energy efficiency of communications networks, and for other purposes.

IN THE SENATE OF THE UNITED STATES

Mr. MARKEY introduced the following bill; which was read twice and referred to the Committee on _____

A BILL

To require the Assistant Secretary of Commerce for Communications and Information to carry out a grant and revolving loan program to provide funding for projects to increase the resiliency and energy efficiency of communications networks, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Generating Resilient
5 and Energy Efficient Network Communications Act” or
6 the “GREEN Communications Act”.

1 **SEC. 2. DEFINITIONS.**

2 In this Act:

3 (1) ASSISTANT SECRETARY.—The term “Assist-
4 ant Secretary” means the Assistant Secretary of
5 Commerce for Communications and Information.

6 (2) COMMISSION.—The term “Commission”
7 means the Federal Communications Commission.

8 (3) COMMUNICATIONS INFRASTRUCTURE.—The
9 term “communications infrastructure” means any
10 equipment, tower, support structure, facility, prod-
11 uct, or technology that is essential to the operation
12 of a communications network.

13 (4) COMMUNICATIONS NETWORK.—The term
14 “communications network” means—

15 (A) a broadband network;

16 (B) a cellular network;

17 (C) a telephone network;

18 (D) a cable system;

19 (E) a network that is primarily used for
20 public safety or first responder communications;

21 or

22 (F) a network that provides any other
23 communications or telecommunications service.

24 (5) COMMUNICATIONS NETWORK OUTAGE.—The
25 term “communications network outage” means an
26 outage with respect to a communications network

1 that results in the disruption of services provided by
2 the communications network.

3 (6) COVERED EFFICIENCY PROJECT.—The term
4 “covered efficiency project” means, with respect to
5 action taken by an eligible entity—

6 (A) the purchase or upgrading of equip-
7 ment or technology, including an electrical or
8 thermal monitoring system, that is dem-
9 onstrated to increase the energy efficiency of
10 communications infrastructure;

11 (B) the installation or upgrading of perma-
12 nent solar panels, wind turbines, combined heat
13 and power technology, or other renewable en-
14 ergy generators that are used in communica-
15 tions infrastructure, or at a data center, pro-
16 vided, operated, or owned by the eligible entity;

17 (C) entering into a partnership with an en-
18 ergy utility company to purchase land for re-
19 newable energy infrastructure, or to construct
20 renewable energy infrastructure, that will be
21 used to power a data center, an internet ex-
22 change point, or communications infrastructure
23 provided, operated, or owned by the eligible en-
24 tity;

1 (D) the reduction of water consumption for
2 cooling a data center, or operating other com-
3 munications infrastructure, provided, operated,
4 or owned by the eligible entity, in an area that
5 is likely to experience drought;

6 (E) the study of ways to make a commu-
7 nications network provided, operated, or owned
8 by the eligible entity, or communications infra-
9 structure provided, operated, or owned by the
10 eligible entity, more energy and resource effi-
11 cient;

12 (F) the study, including through pilot
13 projects, of green technologies to make a com-
14 munications network provided, operated, or
15 owned by the eligible entity more energy and re-
16 source efficient; or

17 (G) any other type of project carried out
18 by the eligible entity that the Assistant Sec-
19 retary determines will promote the adoption of
20 energy efficient, renewable energy, and carbon-
21 neutral technologies and practices with respect
22 to communications networks, or communica-
23 tions infrastructure, provided, operated, or
24 owned by the eligible entity.

1 (7) COVERED RESILIENCY PROJECT.—The term
2 “covered resiliency project” means, with respect to
3 action taken by an eligible entity—

4 (A) the construction of communications in-
5 frastructure to be provided, operated, or owned
6 by the eligible entity in a location that is not
7 vulnerable to projected severe effects with re-
8 spect to extreme weather, natural disasters, or
9 climate change-related events, including sea-
10 level rise, flooding, and increased risk of wild-
11 fire;

12 (B) the relocation of communications in-
13 frastructure provided, operated, or owned by
14 the eligible entity to a location that is less vul-
15 nerable to projected severe effects with respect
16 to extreme weather, natural disasters, or cli-
17 mate change-related events, including sea-level
18 rise, flooding, and increased risk of wildfire;

19 (C) the reinforcement, hardening, or re-
20 placement of communications infrastructure
21 provided, operated, or owned by the eligible en-
22 tity in a location that is increasingly vulnerable
23 to projected severe effects with respect to ex-
24 treme weather, natural disasters, or climate

1 change-related events, including sea-level rise,
2 flooding, and increased risk of wildfire;

3 (D) the construction of a fortification, such
4 as a sea wall or embankment, or the develop-
5 ment of green infrastructure solutions, such as
6 wetlands or drainage ponds, to protect commu-
7 nications infrastructure provided, operated, or
8 owned by the eligible entity from projected se-
9 vere effects with respect to extreme weather,
10 natural disasters, or climate change-related
11 events, including sea-level rise, flooding, and in-
12 creased risk of wildfire;

13 (E) the undertaking of research with re-
14 spect to communications infrastructure pro-
15 vided, operated, or owned by the eligible entity
16 to identify vulnerabilities of that infrastructure
17 to climate change based on the best available
18 data, analysis, and projections regarding that
19 change, including sea-level rise projections, 100-
20 year floodplain maps, and heat and temperature
21 projections;

22 (F) the undertaking of research (using the
23 best available data, analysis and projections re-
24 garding tectonic science and structural engi-
25 neering) with respect to communications infra-

1 structure provided, operated, or owned by the
2 eligible entity to identify vulnerabilities, or the
3 susceptibility, of that communications infra-
4 structure to damage caused by natural disas-
5 ters;

6 (G) the purchase of renewable energy or
7 low-emission backup generators, fuel cells, or
8 batteries to maximize the likelihood that com-
9 munications infrastructure provided, operated,
10 or owned by the eligible entity can continue op-
11 erating in the event of an electrical system out-
12 age, without regard to whether the eligible enti-
13 ty is required to provide such backup power
14 with respect to that communications infrastruc-
15 ture;

16 (H) the purchase of cooling equipment or
17 insulation, or the development of green infra-
18 structure, to protect communications infrastruc-
19 ture provided, operated, or owned by the eligible
20 entity from extreme heat events;

21 (I) the piloting of technologies to make a
22 communications network provided, operated, or
23 owned by the eligible entity more resilient
24 through energy efficient and low carbon emis-
25 sion measures;

1 (J) in order to facilitate faster detection
2 of, or response to, a communications network
3 outage with respect to a communications net-
4 work provided, operated, or owned by the eligi-
5 ble entity—

6 (i) the training of employees of the el-
7 igible entity relating to such a detection or
8 response;

9 (ii) the conducting of communications
10 network outage tests or simulations;

11 (iii) the participation in communica-
12 tions network outage tests or simulations,
13 including those administered by local,
14 State, or Federal governmental entities; or

15 (iv) the purchase of equipment or
16 technology relating to such a detection or
17 response, including communications infra-
18 structure (including deployable commu-
19 nications infrastructure) that can expedite
20 the restoration of communications or tele-
21 communications services after such a com-
22 munications network outage;

23 (K) the undertaking of research to develop
24 technologies that can expedite the restoration of
25 communications or telecommunications services

1 after an outage with respect to communications
2 infrastructure provided, operated, or owned by
3 the eligible entity;

4 (L) the construction, purchase, relocation,
5 reinforcement, or replacement of communica-
6 tions infrastructure provided, operated, or
7 owned by the eligible entity in order to mini-
8 mize the risk of a communications network out-
9 age caused by an affirmative power shut-off by
10 a utility; or

11 (M) any other type of project carried out
12 by the eligible entity that the Assistant Sec-
13 retary determines will increase the resiliency of
14 a communications network or communications
15 infrastructure provided, operated, or owned by
16 the eligible entity with respect to—

17 (i) severe weather;

18 (ii) natural disasters; and

19 (iii) climate change-related events, in-
20 cluding extreme weather events, droughts,
21 coastal and inland flooding, sea level rise,
22 increased storm surge, wildfires, mudslides,
23 and extreme temperatures.

24 (8) DATA CENTER.—The term “data center”
25 means a centralized location at which computing and

1 networking equipment is concentrated for the pur-
2 pose of collecting, storing, processing, distributing,
3 or allowing access to large amounts of electronic
4 data.

5 (9) ELIGIBLE ENTITY.—The term “eligible enti-
6 ty” means any private or public entity, including a
7 State, local, or Tribal government, that provides, op-
8 erates, or owns a communications network or com-
9 munications infrastructure.

10 (10) NATURAL DISASTER.—The term “natural
11 disaster” includes a natural event that is not related
12 to climate change, including an earthquake, a tor-
13 nado, a hurricane, a volcanic eruption, a solar flare,
14 a geomagnetic disturbance, and an electromagnetic
15 pulse.

16 (11) NTIA.—The term “NTIA” means the Na-
17 tional Telecommunications and Information Admin-
18 istration.

19 **SEC. 3. FINANCIAL ASSISTANCE FOR COMMUNICATIONS**
20 **NETWORK RESILIENCY AND ENERGY EFFI-**
21 **CIENCY.**

22 (a) IN GENERAL.—

23 (1) ESTABLISHMENT.—Not later than 1 year
24 after the date of enactment of this Act, the Assist-
25 ant Secretary shall establish a program in the NTIA

1 (referred to in this section as the “Program”)
2 through which the Assistant Secretary, subject to
3 the other provisions of this section, shall competi-
4 tively award grants and revolving loans to eligible
5 entities to carry out covered efficiency projects and
6 covered resiliency projects.

7 (2) PRELIMINARY RULEMAKING.—Before ac-
8 cepting applications for a grant or a revolving loan
9 under the Program, the Assistant Secretary shall,
10 under section 553 of title 5, United States Code,
11 and after consultation with eligible entities and the
12 Secretary of Homeland Security, conduct a rule-
13 making to develop a process for—

14 (A) identifying proprietary and confidential
15 information contained in such an application;
16 and

17 (B) handling and protecting information
18 described in subparagraph (A).

19 (b) APPLICATION PROCESS.—

20 (1) IN GENERAL.—Subject to paragraph (2), an
21 eligible entity seeking a grant or a revolving loan
22 under the Program shall submit to the Assistant
23 Secretary an application at such time, in such man-
24 ner, and containing such information as the Assist-
25 ant Secretary may require.

1 (2) MINIMUM REQUIREMENTS.—An application
2 submitted by an eligible entity under paragraph (1)
3 shall contain, at a minimum, and to the extent appli-
4 cable—

5 (A) with respect to a covered efficiency
6 project—

7 (i) an overview of the energy sourcing
8 of the communications infrastructure or
9 other equipment that is the subject of the
10 project; and

11 (ii) a description of how the grant or
12 revolving loan sought by the eligible entity
13 will improve the energy or resource effi-
14 ciency of the communications infrastruc-
15 ture or other equipment that is the subject
16 of the project; and

17 (B) with respect to a covered resiliency
18 project—

19 (i) a description of the current, as of
20 the date on which the application is sub-
21 mitted, resiliency efforts of the eligible en-
22 tity with respect to the communications in-
23 frastructure or communications network
24 that is the subject of the project;

1 (ii) a description of the specific vul-
2 nerability of, or threat of disruption to, the
3 communications infrastructure or commu-
4 nications network that is the subject of the
5 project;

6 (iii) a description of how the grant or
7 revolving loan sought by the eligible entity
8 will improve the resiliency of the commu-
9 nications infrastructure or communications
10 network that is the subject of the project;

11 (iv) a statement that the project
12 meets all applicable local, State, Tribal,
13 and Federal zoning and environmental re-
14 quirements; and

15 (v) a description of how the project
16 will integrate with local or regional stra-
17 tegic planning efforts, if applicable.

18 (c) FUNDING PRIORITIZATION.—In selecting projects
19 for which funding will be provided under the Program, the
20 Assistant Secretary shall give priority to—

21 (1) covered efficiency projects that—

22 (A) will be carried out in, or primarily ben-
23 efit, areas in which—

1 (i) the median household income is
2 below 150 percent of the Federal poverty
3 level; or

4 (ii) a majority of the residents are
5 members of a racial or ethnic minority
6 group;

7 (B) have the greatest demonstrated impact
8 on energy efficiency; or

9 (C) demonstrate the greatest overall pro-
10 jected reductions in greenhouse gas emissions;
11 and

12 (2) covered resiliency projects that—

13 (A) will be carried out in, or primarily ben-
14 efit, areas—

15 (i) in which the median household in-
16 come is below 150 percent of the Federal
17 poverty level;

18 (ii) in which a majority of the resi-
19 dents are members of a racial or ethnic mi-
20 nority group;

21 (iii) in which rural features or sparse
22 populations limit other investments with
23 respect to the resiliency of communications
24 networks; or

1 (iv) that are highly vulnerable to
2 events relating to severe weather, natural
3 disasters, or climate change-related events,
4 as determined by the Assistant Secretary
5 after—

6 (I) consulting with the Adminis-
7 trators of the Federal Emergency
8 Management Agency, the National
9 Oceanic and Atmospheric Administra-
10 tion, and the Environmental Protec-
11 tion Agency, using the best data avail-
12 able to those officials; and

13 (II) obtaining input from opera-
14 tors of communications networks re-
15 garding the types of events that are
16 most or least impactful to those com-
17 munications networks; or

18 (B) utilize green infrastructure or renew-
19 able energy solutions, including by piloting new
20 green solutions that will affirmatively increase
21 the resiliency of communications infrastructure
22 or communications networks provided, operated,
23 or owned by the eligible entity.

24 (d) CONDITIONS ON FINANCIAL ASSISTANCE.—

1 (1) COVERED EFFICIENCY PROJECT.—An eligi-
2 ble entity to which funding is made available under
3 the Program with respect to a covered efficiency
4 project shall, to the extent applicable—

5 (A) not later than 1 year after the date on
6 which the eligible entity receives the funding,
7 and annually thereafter until the completion of
8 the covered efficiency project, submit to the As-
9 sistant Secretary a report that describes, for
10 the year covered by the report, the electrical
11 consumption, by source, of the communications
12 infrastructure or other property that is the sub-
13 ject of the project, which shall identify the per-
14 centage of that consumption that comes from
15 fossil fuels and from renewable energy sources;
16 and

17 (B) complete a clean energy review—

18 (i) the components of which shall be
19 established by the Secretary of Energy, in
20 consultation with the Administrator of the
21 Environmental Protection Agency—

22 (I) through rulemaking under
23 section 553 of title 5, United States
24 Code; and

1 (II) after developing a process, in
2 consultation with eligible entities,
3 for—

4 (aa) identifying proprietary
5 and confidential information con-
6 tained in such a review; and

7 (bb) handling and protecting
8 information described in item
9 (aa); and

10 (ii) which shall include—

11 (I) the energy consumption pat-
12 terns of the eligible entity; and

13 (II) the steps taken by the eligi-
14 ble entity, or the steps that the eligi-
15 ble entity will take, to achieve a goal
16 of net-zero carbon emissions with re-
17 spect to the communications infra-
18 structure, and communications net-
19 works, provided, operated, or owned
20 by the eligible entity.

21 (2) COVERED RESILIENCY PROJECT.—An eligi-
22 ble entity to which funding is made available under
23 the Program with respect to a covered resiliency
24 project shall, to the extent applicable—

1 (A) beginning not later than 60 days after
2 the date on which the eligible entity receives the
3 funding, participate in the Disaster Information
4 Reporting System operated by the Commission,
5 including by subsequently reporting, during
6 times of emergency, the operational status of
7 communications infrastructure operated by the
8 eligible entity;

9 (B) not later than 1 year after the date on
10 which the eligible entity receives the funding,
11 and annually thereafter until the completion of
12 the covered resiliency project, submit to the
13 Commission a report that, to the extent applica-
14 ble, contains, with respect to communications
15 infrastructure provided, operated, or owned by
16 the eligible entity—

17 (i) the number, duration, and fre-
18 quency of communications network outages
19 experienced as a result of an outage with
20 respect to, or other failure of, that infra-
21 structure within a certain time period, as
22 determined by the Commission;

23 (ii) the specific cause of each commu-
24 nications network outage described in
25 clause (i);

1 (iii) the number of consumers affected
2 by each communications network outage
3 described in clause (i);

4 (iv) the extent to which first respon-
5 ders were affected by each communications
6 network outage described in clause (i);

7 (v) the total number of communica-
8 tions network outages annually experienced
9 with respect to that infrastructure that are
10 attributable to severe weather, natural dis-
11 asters, and climate change-related events
12 and the number of consumers affected by
13 those outages;

14 (vi) the extent of any reduction of
15 communications network performance
16 caused by a communications network out-
17 age with respect to that infrastructure;

18 (vii) the amount of time between the
19 start of each communications network out-
20 age with respect to that infrastructure and
21 detection of the outage;

22 (viii) the amount of time between the
23 detection of each communications network
24 outage with respect to that infrastructure

1 and the initiation of any response to miti-
2 gate the effects of the outage;

3 (ix) the amount of time required to
4 fully restore services after a communica-
5 tions network outage with respect to that
6 infrastructure; and

7 (x) any other information that the
8 Commission determines is necessary to
9 achieve the objectives described in section
10 4(a)(2); and

11 (C) complete a communications resiliency
12 review—

13 (i) the components of which shall be
14 established by the Commission, in con-
15 sultation with the Assistant Secretary—

16 (I) through rulemaking under
17 section 553 of title 5, United States
18 Code; and

19 (II) after developing a process, in
20 consultation with eligible entities,
21 for—

22 (aa) identifying proprietary
23 and confidential information con-
24 tained in such a review; and

1 (bb) handling and protecting
2 information described in item
3 (aa); and

4 (ii) which shall include, to the extent
5 applicable—

6 (I) the analysis of the eligible en-
7 tity with respect to the vulnerabilities
8 of communications infrastructure pro-
9 vided, operated, or owned by the eligi-
10 ble entity with respect to severe
11 weather, natural disasters, and cli-
12 mate change-related events;

13 (II) a description of steps taken
14 by the eligible entity, or steps that the
15 eligible entity will take, to address the
16 vulnerabilities described in subclause
17 (I); and

18 (III) the number of projected po-
19 tential users of the communications
20 network or communications infra-
21 structure provided, operated, or owned
22 by the eligible entity that may be af-
23 fected by the vulnerabilities described
24 in subclause (I).

1 (e) CONSULTATION WITH RELEVANT AGENCIES.—In
2 establishing and carrying out the Program, the Assistant
3 Secretary may consult and coordinate, as needed, with the
4 Commission, the Secretary of Commerce, the Secretary of
5 Energy, the Administrator of the Environmental Protec-
6 tion Agency, the Administrator of the Federal Emergency
7 Management Agency, and the head of any other Federal
8 agency with relevant subject matter expertise.

9 (f) AUTHORIZATION OF APPROPRIATIONS; MINIMUM
10 EXPENDITURES.—

11 (1) IN GENERAL.—There are authorized to be
12 appropriated to the Assistant Secretary
13 \$5,000,000,000 to carry out the Program, which
14 shall remain available until expended.

15 (2) MINIMUM EXPENDITURES; ADMINISTRATIVE
16 COSTS.—Of the amounts made available to carry out
17 the Program, the Assistant Secretary shall—

18 (A) use not less than 25 percent to provide
19 assistance to eligible entities to carry out cov-
20 ered efficiency projects;

21 (B) use not less than 25 percent to provide
22 assistance to eligible entities to carry out cov-
23 ered resiliency projects; and

1 (C) set aside not more than 2 percent to
2 cover costs relating to administration, research,
3 training, and staff, including—

4 (i) the detailing of employees from
5 other Federal agencies; and

6 (ii) the appointment of experts in the
7 fields of infrastructure resiliency, climate
8 science, clean energy, and energy effi-
9 ciency.

10 **SEC. 4. REGULATORY FRAMEWORK.**

11 (a) COMMUNICATIONS NETWORK RESILIENCY
12 FRAMEWORK.—

13 (1) ESTABLISHMENT.—The Commission, in
14 consultation with the Assistant Secretary, the Ad-
15 ministrator of the Federal Emergency Management
16 Agency, and the Director of the National Institute
17 of Standards and Technology, shall issue rules under
18 section 553 of title 5, United States Code, to estab-
19 lish a communications network resiliency framework
20 to promote resiliency with respect to communications
21 networks and communications infrastructure.

22 (2) OBJECTIVES.—The objectives of the frame-
23 work established under paragraph (1) shall be the
24 following:

1 (A) To minimize the number of commu-
2 nications network outages.

3 (B) To minimize the length of communica-
4 tions network outages.

5 (C) To minimize the number of consumers
6 affected by communications network outages.

7 (D) To mitigate the reduction in commu-
8 nications network performance caused by com-
9 munications network outages.

10 (E) To encourage the adoption of equip-
11 ment, policies, and procedures to prepare for
12 communications network outages.

13 (F) To promote the detection of, and re-
14 sponse to, communications network outages in
15 a timely manner.

16 (G) To anticipate and prepare for long-
17 term disruptions to communications networks
18 that are caused by severe weather, natural dis-
19 asters, or climate change.

20 (H) To support and address the commu-
21 nications needs of first responders involved in
22 detecting, managing, and responding to—

23 (i) severe weather events, natural dis-
24 asters, and climate change-related events;
25 and

1 (ii) communications network outages
2 caused by the events described in clause
3 (i).

4 (3) COMMISSION DISCRETION.—In carrying out
5 this subsection, the Commission may, after providing
6 public notice and an opportunity to comment, estab-
7 lish minimum performance criteria or target goals
8 with respect to the resiliency of communications net-
9 works and communications infrastructure.

10 (b) AGENCY RESPONSIBILITIES.—

11 (1) FCC RESPONSIBILITIES.—

12 (A) RESILIENCY MAPPING FEASIBILITY RE-
13 PORT.—

14 (i) IN GENERAL.—The Commission
15 shall—

16 (I) in consultation with the As-
17 sistant Secretary and the Administra-
18 tors of the National Oceanic and At-
19 mospheric Administration, the Envi-
20 ronmental Protection Agency, and the
21 Federal Emergency Management
22 Agency, complete a study (and submit
23 to Congress a report regarding) the
24 feasibility of establishing and main-
25 taining a map that shows projected

1 risks to communications infrastruc-
2 ture as a result of events relating to
3 severe weather, natural disasters, and
4 climate change; and

5 (II) include in the report re-
6 quired under subclause (I) rec-
7 ommendations regarding—

8 (aa) which Federal agency,
9 or combination of Federal agen-
10 cies, is best equipped to conduct
11 the mapping described in that
12 subclause;

13 (bb) how the mapping de-
14 scribed in that subclause could—

15 (AA) incorporate the
16 information obtained from
17 eligible entities under the
18 program carried out under
19 section 3; and

20 (BB) be coordinated
21 with, and connected to,
22 other broadband mapping
23 efforts of the Commission;
24 and

1 (cc) how to protect and se-
2 cure any sensitive information re-
3 lating to, or stemming from, the
4 mapping described in that sub-
5 clause.

6 (ii) AUTHORIZATION OF APPROPRIA-
7 TIONS.—There are authorized to be appro-
8 priated to the Commission such sums as
9 may be necessary to carry out clause (i).

10 (B) TECHNICAL ASSISTANCE.—The Com-
11 mission, in consultation with the Assistant Sec-
12 retary, shall provide technical assistance and re-
13 sources to—

14 (i) any public or private domestic enti-
15 ty seeking to understand, with respect to a
16 communications network (or communica-
17 tions infrastructure) provided, operated, or
18 owned by that entity, the vulnerability or
19 susceptibility of the network or infrastruc-
20 ture with respect to severe weather, nat-
21 ural disasters, or climate change; and

22 (ii) any State or local government
23 seeking to understand the vulnerability or
24 susceptibility with respect to severe weath-

1 er, natural disasters, or climate change of
2 a communications network that—

3 (I) is located within the jurisdic-
4 tion of that government; and

5 (II) is not operated by that gov-
6 ernment.

7 (C) NORS.—After providing public notice
8 and an opportunity to comment, the Commis-
9 sion shall update the Network Outage Report-
10 ing System to include a broadband network out-
11 age as a required reporting incident.

12 (2) NTIA RESPONSIBILITIES.—

13 (A) ENERGY AND EFFICIENCY BEST PRAC-
14 TICES.—

15 (i) IN GENERAL.—The Assistant Sec-
16 retary, in consultation with other Federal
17 agencies (including the Commission, the
18 Department of Energy, the Environmental
19 Protection Agency, and the Federal En-
20 ergy Regulatory Commission), and after
21 obtaining input from communications serv-
22 ice providers and other interested members
23 of the public, shall make available on a
24 publicly available website a list of best
25 practices for public and private partners to

1 operate energy efficient and carbon-neutral
2 communications infrastructure.

3 (ii) CONTENTS.—The list of best
4 practices described in clause (i) may in-
5 clude—

6 (I) suggested technical standards
7 for improving energy efficiency with
8 respect to the use and transmission of
9 electronic data, including the imple-
10 mentation of more efficient compres-
11 sion and transmission algorithms and
12 signal types;

13 (II) renewable energy sourcing
14 guidelines; and

15 (III) guidelines for internet serv-
16 ice providers to report to consumers
17 the energy consumption of those con-
18 sumers alongside the data use of
19 those consumers.

20 (B) REPORTING.—Not later than 1 year
21 after the date of enactment of this Act, and an-
22 nually thereafter, the Assistant Secretary, in
23 consultation with the Commission, the Adminis-
24 trator of the Federal Emergency Management
25 Agency, and the Administrator of the Environ-

1 mental Protection Agency, and after providing
2 public notice and an opportunity to comment,
3 shall submit to Congress, and make available on
4 a publicly available website, a report that, at a
5 minimum—

6 (i) contains data demonstrating, for
7 the year covered by the report and the year
8 preceding the year covered by the report—

9 (I) the number of communica-
10 tions network outages that are attrib-
11 utable to severe weather, natural dis-
12 asters, and climate change-related
13 events (and the number of consumers
14 affected by those communications net-
15 work outages);

16 (II) any shifts in the energy con-
17 sumption patterns of communications
18 networks and communications infra-
19 structure; and

20 (III) any reduction in greenhouse
21 gas emissions from communications
22 networks and communications infra-
23 structure; and

24 (ii) provides the most up-to-date pro-
25 jected risks to communications infrastruc-

1 ture because of severe weather, natural
2 disasters, and climate change-related
3 events.

4 (3) DEPARTMENT OF ENERGY.—Not later than
5 1 year after the date of enactment of this Act, the
6 Secretary of Energy, in consultation with the Ad-
7 ministrator of the Energy Information Administra-
8 tion, the Administrator of the Environmental Pro-
9 tection Agency, and the Federal Energy Regulatory
10 Commission, shall submit to Congress a report
11 that—

12 (A) indicates the projected growth of elec-
13 trical consumption by data centers in the
14 United States; and

15 (B) includes recommendations for imple-
16 menting energy efficiency standards for data
17 centers that would—

18 (i) limit the growth described in sub-
19 paragraph (A) to the greatest extent prac-
20 ticable without—

21 (I) reducing the rate of
22 broadband adoption and usage in the
23 United States; or

- 1 (II) limiting the development of
2 new and improved technologies or
3 services; and
4 (ii) encourage the rapid adoption of
5 renewable energy sources.