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3 **TITLE I—GRID INFRASTRUC-**  
4 **TURE AND RESILIENCY**  
5 **Subtitle A—Grid Infrastructure**  
6 **Resilience and Reliability**

7 **SEC. 40101. PREVENTING OUTAGES AND ENHANCING THE**  
8 **RESILIENCE OF THE ELECTRIC GRID.**

9 (a) *DEFINITIONS.*—In this section:

10 (1) *DISRUPTIVE EVENT.*—The term “disruptive  
11 event” means an event in which operations of the elec-  
12 tric grid are disrupted, preventively shut off, or can-  
13 not operate safely due to extreme weather, wildfire, or  
14 a natural disaster.

15 (2) *ELIGIBLE ENTITY.*—The term “eligible enti-  
16 ty” means—

17 (A) an electric grid operator;

18 (B) an electricity storage operator;

19 (C) an electricity generator;

20 (D) a transmission owner or operator;

21 (E) a distribution provider;

22 (F) a fuel supplier; and

23 (G) any other relevant entity, as determined  
24 by the Secretary.

1           (3) *NATURAL DISASTER.*—*The term “natural*  
2 *disaster” has the meaning given the term in section*  
3 *602(a) of the Robert T. Stafford Disaster Relief and*  
4 *Emergency Assistance Act (42 U.S.C. 5195a(a)).*

5           (4) *POWER LINE.*—*The term “power line” in-*  
6 *cludes a transmission line or a distribution line, as*  
7 *applicable.*

8           (5) *PROGRAM.*—*The term “program” means the*  
9 *program established under subsection (b).*

10        (b) *ESTABLISHMENT OF PROGRAM.*—*Not later than*  
11 *180 days after the date of enactment of this Act, the Sec-*  
12 *retary shall establish a program under which the Secretary*  
13 *shall make grants to eligible entities, States, and Indian*  
14 *Tribes in accordance with this section.*

15        (c) *GRANTS TO ELIGIBLE ENTITIES.*—

16           (1) *IN GENERAL.*—*The Secretary may make a*  
17 *grant under the program to an eligible entity to carry*  
18 *out activities that—*

19                (A) *are supplemental to existing hardening*  
20 *efforts of the eligible entity planned for any*  
21 *given year; and*

22                (B)(i) *reduce the risk of any power lines*  
23 *owned or operated by the eligible entity causing*  
24 *a wildfire; or*

1           (ii) increase the ability of the eligible entity  
2 to reduce the likelihood and consequences of dis-  
3 ruptive events.

4           (2) APPLICATION.—

5           (A) IN GENERAL.—An eligible entity desir-  
6 ing a grant under the program shall submit to  
7 the Secretary an application at such time, in  
8 such manner, and containing such information  
9 as the Secretary may require.

10           (B) REQUIREMENT.—As a condition of re-  
11 ceiving a grant under the program, an eligible  
12 entity shall submit to the Secretary, as part of  
13 the application of the eligible entity submitted  
14 under subparagraph (A), a report detailing past,  
15 current, and future efforts by the eligible entity  
16 to reduce the likelihood and consequences of dis-  
17 ruptive events.

18           (3) LIMITATION.—The Secretary may not award  
19 a grant to an eligible entity in an amount that is  
20 greater than the total amount that the eligible entity  
21 has spent in the previous 3 years on efforts to reduce  
22 the likelihood and consequences of disruptive events.

23           (4) PRIORITY.—In making grants to eligible en-  
24 tities under the program, the Secretary shall give pri-  
25 ority to projects that, in the determination of the Sec-

1       retary, will generate the greatest community benefit  
2       (whether rural or urban) in reducing the likelihood  
3       and consequences of disruptive events.

4               (5) *SMALL UTILITIES SET ASIDE.*—The Secretary  
5       shall ensure that not less than 30 percent of the  
6       amounts made available to eligible entities under the  
7       program are made available to eligible entities that  
8       sell not more than 4,000,000 megawatt hours of elec-  
9       tricity per year.

10       (d) *GRANTS TO STATES AND INDIAN TRIBES.*—

11               (1) *IN GENERAL.*—The Secretary, in accordance  
12       with this subsection, may make grants under the pro-  
13       gram to States and Indian Tribes, which each State  
14       or Indian Tribe may use to award grants to eligible  
15       entities.

16               (2) *ANNUAL APPLICATION.*—

17               (A) *IN GENERAL.*—For each fiscal year, to  
18       be eligible to receive a grant under this sub-  
19       section, a State or Indian Tribe shall submit to  
20       the Secretary an application that includes a  
21       plan described in subparagraph (B).

22               (B) *PLAN REQUIRED.*—A plan prepared by  
23       a State or Indian Tribe for purposes of an ap-  
24       plication described in subparagraph (A) shall—

1           (i) describe the criteria and methods  
2 that will be used by the State or Indian  
3 Tribe to award grants to eligible entities;

4           (ii) be adopted after notice and a pub-  
5 lic hearing; and

6           (iii) describe the proposed funding dis-  
7 tributions and recipients of the grants to be  
8 provided by the State or Indian Tribe.

9       (3) DISTRIBUTION OF FUNDS.—

10           (A) IN GENERAL.—The Secretary shall pro-  
11 vide grants to States and Indian Tribes under  
12 this subsection based on a formula determined by  
13 the Secretary, in accordance with subparagraph  
14 (B).

15           (B) REQUIREMENT.—The formula referred  
16 to in subparagraph (A) shall be based on the fol-  
17 lowing factors:

18                   (i) The total population of the State or  
19 Indian Tribe.

20                   (ii)(I) The total area of the State or  
21 the land of the Indian Tribe; or

22                           (II) the areas in the State or on the  
23 land of the Indian Tribe with a low ratio  
24 of electricity customers per mileage of power  
25 lines.

1           (iii) *The probability of disruptive*  
2 *events in the State or on the land of the In-*  
3 *Indian Tribe during the previous 10 years, as*  
4 *determined based on the number of federally*  
5 *declared disasters or emergencies in the*  
6 *State or on the land of the Indian Tribe, as*  
7 *applicable, including—*

8                   (I) *disasters for which Fire Man-*  
9 *agement Assistance Grants are pro-*  
10 *vided under section 420 of the Robert*  
11 *T. Stafford Disaster Relief and Emer-*  
12 *gency Assistance Act (42 U.S.C. 5187);*

13                   (II) *major disasters declared by*  
14 *the President under section 401 of that*  
15 *Act (42 U.S.C. 5170);*

16                   (III) *emergencies declared by the*  
17 *President under section 501 of that Act*  
18 *(42 U.S.C. 5191); and*

19                   (IV) *any other federally declared*  
20 *disaster or emergency in the State or*  
21 *on the land of the Indian Tribe.*

22           (iv) *The number and severity, meas-*  
23 *ured by population and economic impacts,*  
24 *of disruptive events experienced by the State*

1            *or Indian Tribe on or after January 1,*  
2            *2011.*

3            *(v) The total amount, on a per capita*  
4            *basis, of public and private expenditures*  
5            *during the previous 10 years to carry out*  
6            *mitigation efforts to reduce the likelihood*  
7            *and consequences of disruptive events in the*  
8            *State or on the land of the Indian Tribe,*  
9            *with States or Indian Tribes with higher*  
10           *per capita expenditures receiving additional*  
11           *weight or consideration as compared to*  
12           *States or Indian Tribes with lower per cap-*  
13           *ita expenditures.*

14           *(C) ANNUAL UPDATE OF DATA USED IN DIS-*  
15           *TRIBUTION OF FUNDS.—Beginning 1 year after*  
16           *the date of enactment of this Act, the Secretary*  
17           *shall annually update—*

18                    *(i) all data relating to the factors de-*  
19                    *scribed in subparagraph (B); and*

20                    *(ii) all other data used in distributing*  
21                    *grants to States and Indian Tribes under*  
22                    *this subsection.*

23            *(4) OVERSIGHT.—The Secretary shall ensure*  
24            *that each grant provided to a State or Indian Tribe*  
25            *under the program is allocated, pursuant to the ap-*

1 *plicable plan of the State or Indian Tribe, to eligible*  
2 *entities for projects within the State or on the land*  
3 *of the Indian Tribe.*

4 (5) *PRIORITY.—In making grants to eligible en-*  
5 *tities using funds made available to the applicable*  
6 *State or Indian Tribe under the program, the State*  
7 *or Indian Tribe shall give priority to projects that, in*  
8 *the determination of the State or Indian Tribe, will*  
9 *generate the greatest community benefit (whether*  
10 *rural or urban) in reducing the likelihood and con-*  
11 *sequences of disruptive events.*

12 (6) *SMALL UTILITIES SET ASIDE.—A State or*  
13 *Indian Tribe receiving a grant under the program*  
14 *shall ensure that, of the amounts made available to el-*  
15 *igible entities from funds made available to the State*  
16 *or Indian Tribe under the program, the percentage*  
17 *made available to eligible entities that sell not more*  
18 *than 4,000,000 megawatt hours of electricity per year*  
19 *is not less than the percentage of all customers in the*  
20 *State or Indian Tribe that are served by those eligible*  
21 *entities.*

22 (7) *TECHNICAL ASSISTANCE AND ADMINISTRA-*  
23 *TIVE EXPENSES.—Of the amounts made available to*  
24 *a State or Indian Tribe under the program each fis-*



1 *cal year, the State or Indian Tribe may use not more*  
2 *than 5 percent for—*

3 *(A) providing technical assistance under*  
4 *subsection (g)(1)(A); and*

5 *(B) administrative expenses associated with*  
6 *the program.*

7 *(8) MATCHING REQUIREMENT.—Each State and*  
8 *Indian Tribe shall be required to match 15 percent of*  
9 *the amount of each grant provided to the State or In-*  
10 *dian Tribe under the program.*

11 *(e) USE OF GRANTS.—*

12 *(1) IN GENERAL.—A grant awarded to an eligi-*  
13 *ble entity under the program may be used for activi-*  
14 *ties, technologies, equipment, and hardening measures*  
15 *to reduce the likelihood and consequences of disruptive*  
16 *events, including—*

17 *(A) weatherization technologies and equip-*  
18 *ment;*

19 *(B) fire-resistant technologies and fire pre-*  
20 *vention systems;*

21 *(C) monitoring and control technologies;*

22 *(D) the undergrounding of electrical equip-*  
23 *ment;*

24 *(E) utility pole management;*

1           (F) the relocation of power lines or the  
2 reconductoring of power lines with low-sag, ad-  
3 vanced conductors;

4           (G) vegetation and fuel-load management;

5           (H) the use or construction of distributed  
6 energy resources for enhancing system adaptive  
7 capacity during disruptive events, including—

8           (i) microgrids; and

9           (ii) battery-storage subcomponents;

10          (I) adaptive protection technologies;

11          (J) advanced modeling technologies;

12          (K) hardening of power lines, facilities, sub-  
13 stations, of other systems; and

14          (L) the replacement of old overhead conduc-  
15 tors and underground cables.

16       (2) PROHIBITIONS AND LIMITATIONS.—

17           (A) IN GENERAL.—A grant awarded to an  
18 eligible entity under the program may not be  
19 used for—

20           (i) construction of a new—

21               (I) electric generating facility; or

22               (II) large-scale battery-storage fa-  
23 cility that is not used for enhancing  
24 system adaptive capacity during dis-  
25 ruptive events; or

1                   (ii) cybersecurity.

2                   (B) CERTAIN INVESTMENTS ELIGIBLE FOR  
3 RECOVERY.—

4                   (i) IN GENERAL.—An eligible entity  
5 may not seek cost recovery for the portion  
6 of the cost of any system, technology, or  
7 equipment that is funded through a grant  
8 awarded under the program.

9                   (ii) SAVINGS PROVISION.—Nothing in  
10 this subparagraph prohibits an eligible enti-  
11 ty from recovering through traditional or  
12 incentive-based ratemaking any portion of  
13 an investment in a system, technology, or  
14 equipment that is not funded by a grant  
15 awarded under the program.

16                   (C) APPLICATION LIMITATIONS.—An eligible  
17 entity may not submit an application for a  
18 grant provided by the Secretary under subsection  
19 (c) and a grant provided by a State or Indian  
20 Tribe pursuant to subsection (d) during the same  
21 application cycle.

22                   (f) DISTRIBUTION OF FUNDING.—Of the amounts  
23 made available to carry out the program for a fiscal year,  
24 the Secretary shall ensure that—

1           (1) 50 percent is used to award grants to eligible  
2 entities under subsection (c); and

3           (2) 50 percent is used to make grants to States  
4 and Indian Tribes under subsection (d).

5 *(g) TECHNICAL AND OTHER ASSISTANCE.—*

6           (1) *IN GENERAL.—The Secretary, States, and In-*  
7 *dian Tribes may—*

8                   (A) *provide technical assistance and facili-*  
9 *tate the distribution and sharing of information*  
10 *to reduce the likelihood and consequences of dis-*  
11 *ruptive events; and*

12                   (B) *promulgate consumer-facing informa-*  
13 *tion and resources to inform the public of best*  
14 *practices and resources relating to reducing the*  
15 *likelihood and consequences of disruptive events.*

16           (2) *USE OF FUNDS BY THE SECRETARY.—Of the*  
17 *amounts made available to the Secretary to carry out*  
18 *the program each fiscal year, the Secretary may use*  
19 *not more than 5 percent for—*

20                   (A) *providing technical assistance under*  
21 *paragraph (1)(A); and*

22                   (B) *administrative expenses associated with*  
23 *the program.*

24 *(h) MATCHING REQUIREMENT.—*

1           (1) *IN GENERAL.*—Except as provided in para-  
2           graph (2), an eligible entity that receives a grant  
3           under this section shall be required to match 100 per-  
4           cent of the amount of the grant.

5           (2) *EXCEPTION FOR SMALL UTILITIES.*—An eli-  
6           gible entity that sells not more than 4,000,000 mega-  
7           watt hours of electricity per year shall be required to  
8           match  $\frac{1}{3}$  of the amount of the grant.

9           (i) *BIENNIAL REPORT TO CONGRESS.*—

10           (1) *IN GENERAL.*—Not later than 2 years after  
11           the date of enactment of this Act, and every 2 years  
12           thereafter through 2026, the Secretary shall submit to  
13           the Committee on Energy and Natural Resources of  
14           the Senate and the Committee on Energy and Com-  
15           merce of the House of Representatives a report de-  
16           scribing the program.

17           (2) *REQUIREMENTS.*—The report under para-  
18           graph (1) shall include information and data on—

19                   (A) the costs of the projects for which grants  
20                   are awarded to eligible entities;

21                   (B) the types of activities, technologies,  
22                   equipment, and hardening measures funded by  
23                   those grants; and

1                   (C) *the extent to which the ability of the*  
2                   *power grid to withstand disruptive events has*  
3                   *increased.*

4           (j) *AUTHORIZATION OF APPROPRIATIONS.—There is*  
5           *authorized to be appropriated to the Secretary to carry out*  
6           *the program \$5,000,000,000 for the period of fiscal years*  
7           *2022 through 2026.*

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4 **SEC. 40103. ELECTRIC GRID RELIABILITY AND RESILIENCE**  
5 **RESEARCH, DEVELOPMENT, AND DEM-**  
6 **ONSTRATION.**

7 (a) *DEFINITION OF FEDERAL FINANCIAL ASSIST-*  
8 *ANCE.*—*In this section, the term “Federal financial assist-*  
9 *ance” has the meaning given the term in section 200.1 of*  
10 *title 2, Code of Federal Regulations.*

11 (b) *ENERGY INFRASTRUCTURE FEDERAL FINANCIAL*  
12 *ASSISTANCE PROGRAM.*—

13 (1) *DEFINITIONS.*—*In this subsection:*

14 (A) *ELIGIBLE ENTITY.*—*The term “eligible*  
15 *entity” means each of—*

16 (i) *a State;*

17 (ii) *a combination of 2 or more States;*

18 (iii) *an Indian Tribe;*

19 (iv) *a unit of local government; and*

20 (v) *a public utility commission.*

21 (B) *PROGRAM.*—*The term “program”*  
22 *means the competitive Federal financial assist-*  
23 *ance program established under paragraph (2).*

24 (2) *ESTABLISHMENT.*—*Not later than 180 days*  
25 *after the date of enactment of this Act, the Secretary*

1       *shall establish a program, to be known as the “Pro-*  
2       *gram Upgrading Our Electric Grid and Ensuring*  
3       *Reliability and Resiliency”, to provide, on a competi-*  
4       *tive basis, Federal financial assistance to eligible enti-*  
5       *ties to carry out the purpose described in paragraph*  
6       *(3).*

7               (3) *PURPOSE.—The purpose of the program is to*  
8       *coordinate and collaborate with electric sector owners*  
9       *and operators—*

10                   (A) *to demonstrate innovative approaches to*  
11                   *transmission, storage, and distribution infra-*  
12                   *structure to harden and enhance resilience and*  
13                   *reliability; and*

14                   (B) *to demonstrate new approaches to en-*  
15                   *hance regional grid resilience, implemented*  
16                   *through States by public and rural electric coop-*  
17                   *erative entities on a cost-shared basis.*

18               (4) *APPLICATIONS.—To be eligible to receive*  
19       *Federal financial assistance under the program, an*  
20       *eligible entity shall submit to the Secretary an appli-*  
21       *cation at such time, in such manner, and containing*  
22       *such information as the Secretary may require, in-*  
23       *cluding a description of—*

24                   (A) *how the Federal financial assistance*  
25                   *would be used;*



1                   (B) the expected beneficiaries, and

2                   (C) in the case of a proposal from an eligi-  
3                   ble entity described in paragraph (1)(A)(ii), how  
4                   the proposal would improve regional energy in-  
5                   frastructure.

6                   (5) *SELECTION.*—The Secretary shall select eligi-  
7                   ble entities to receive Federal financial assistance  
8                   under the program on a competitive basis.

9                   (6) *COST SHARE.*—Section 988 of the Energy  
10                  Policy Act of 2005 (42 U.S.C. 16352) shall apply to  
11                  Federal financial assistance provided under the pro-  
12                  gram.

13                  (7) *AUTHORIZATION OF APPROPRIATIONS.*—  
14                  There is authorized to be appropriated to the Sec-  
15                  retary to carry out this subsection, \$5,000,000,000 for  
16                  the period of fiscal years 2022 through 2026.

17                  (c) *ENERGY IMPROVEMENT IN RURAL OR REMOTE*  
18                  *AREAS.*—

19                   (1) *DEFINITION OF RURAL OR REMOTE AREA.*—  
20                   In this subsection, the term “rural or remote area”  
21                   means a city, town, or unincorporated area that has  
22                   a population of not more than 10,000 inhabitants.

23                   (2) *REQUIRED ACTIVITIES.*—The Secretary shall  
24                   carry out activities to improve in rural or remote  
25                   areas of the United States—

1           (A) the resilience, safety, reliability, and  
2           availability of energy; and

3           (B) environmental protection from adverse  
4           impacts of energy generation.

5           (3) *FEDERAL FINANCIAL ASSISTANCE.*—*The Sec-*  
6           *retary, in consultation with the Secretary of the Inte-*  
7           *rior, may provide Federal financial assistance to*  
8           *rural or remote areas for the purpose of—*

9                   (A) overall cost-effectiveness of energy gen-  
10                  eration, transmission, or distribution systems;

11                  (B) siting or upgrading transmission and  
12                  distribution lines;

13                  (C) reducing greenhouse gas emissions from  
14                  energy generation by rural or remote areas;

15                  (D) providing or modernizing electric gen-  
16                  eration facilities;

17                  (E) developing microgrids; and

18                  (F) increasing energy efficiency.

19           (4) *AUTHORIZATION OF APPROPRIATIONS.*—  
20           *There is authorized to be appropriated to the Sec-*  
21           *retary to carry out this subsection, \$1,000,000,000 for*  
22           *the period of fiscal years 2022 through 2026.*

23           (d) *ENERGY INFRASTRUCTURE RESILIENCE FRAME-*  
24           *WORK.*—

1           (1) *IN GENERAL.*—*The Secretary, in collabora-*  
2           *tion with the Secretary of Homeland Security, the*  
3           *Federal Energy Regulatory Commission, the North*  
4           *American Electric Reliability Corporation, and inter-*  
5           *ested energy infrastructure stakeholders, shall develop*  
6           *common analytical frameworks, tools, metrics, and*  
7           *data to assess the resilience, reliability, safety, and se-*  
8           *curity of energy infrastructure in the United States,*  
9           *including by developing and storing an inventory of*  
10          *easily transported high-voltage recovery transformers*  
11          *and other required equipment.*

12           (2) *ASSESSMENT AND REPORT.*—

13           (A) *ASSESSMENT.*—*The Secretary shall*  
14          *carry out an assessment of—*

15                   (i) *with respect to the inventory of*  
16                   *high-voltage recovery transformers, new*  
17                   *transformers, and other equipment proposed*  
18                   *to be developed and stored under paragraph*  
19                   (1)—

20                           (I) *the policies, technical speci-*  
21                           *fications, and logistical and program*  
22                           *structures necessary to mitigate the*  
23                           *risks associated with the loss of high-*  
24                           *voltage recovery transformers;*

1           (ii) the technical specifications  
2 for high-voltage recovery transformers;

3           (iii) where inventory of high-volt-  
4 age recovery transformers should be  
5 stored;

6           (iv) the quantity of high-voltage  
7 recovery transformers necessary for the  
8 inventory;

9           (v) how the stored inventory of  
10 high-voltage recovery transformers  
11 would be secured and maintained;

12           (vi) how the high-voltage recovery  
13 transformers may be transported;

14           (vii) opportunities for developing  
15 new flexible advanced transformer de-  
16 signs; and

17           (viii) whether new Federal regu-  
18 lations or cost-sharing requirements  
19 are necessary to carry out the storage  
20 of high-voltage recovery transformers;  
21 and

22           (ii) any efforts carried out by industry  
23 as of the date of the assessment—

24           (I) to share transformers and  
25 equipment;

1                    (II) to develop plans for next gen-  
2                    eration transformers; and

3                    (III) to plan for surge and long-  
4                    term manufacturing of, and long-term  
5                    standardization of, transformer de-  
6                    signs.

7                    (B) *PROTECTION OF INFORMATION.*—*Infor-*  
8                    *mation that is provided to, generated by, or col-*  
9                    *lected by the Secretary under subparagraph (A)*  
10                   *shall be considered to be critical electric infra-*  
11                   *structure information under section 215A of the*  
12                   *Federal Power Act (16 U.S.C. 824o-1).*

13                    (C) *REPORT.*—*Not later than 180 days*  
14                   *after the date of enactment of this Act, the Sec-*  
15                   *retary shall submit to Congress a report describ-*  
16                   *ing the results of the assessment carried out*  
17                   *under subparagraph (A).*

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7 **SEC. 40107. DEPLOYMENT OF TECHNOLOGIES TO ENHANCE**

8 **GRID FLEXIBILITY.**

9       (a) *IN GENERAL.*—Section 1306 of the Energy Inde-  
10 *pendence and Security Act of 2007 (42 U.S.C. 17386) is*  
11 *amended—*

12           (1) *in subsection (b)—*

13                   (A) *in the matter preceding paragraph (1),*  
14 *by striking “the date of enactment of this Act”*  
15 *and inserting “the date of enactment of the In-*  
16 *frastructure Investment and Jobs Act”;*

17                   (B) *by redesignating paragraph (9) as*  
18 *paragraph (14); and*

19                   (C) *by inserting after paragraph (8) the fol-*  
20 *lowing:*

21                           “(9) *In the case of data analytics that enable*  
22 *software to engage in Smart Grid functions, the docu-*  
23 *mented purchase costs of the data analytics.*

24                           “(10) *In the case of buildings, the documented*  
25 *expenses for devices and software, including for in-*

1        *stallation, that allow buildings to engage in demand*  
2        *flexibility or Smart Grid functions.*

3            *“(11) In the case of utility communications,*  
4        *operational fiber and wireless broadband communica-*  
5        *tions networks to enable data flow between distribu-*  
6        *tion system components.*

7            *“(12) In the case of advanced transmission tech-*  
8        *nologies such as dynamic line rating, flow control de-*  
9        *vices, advanced conductors, network topology optimi-*  
10       *zation, or other hardware, software, and associated*  
11       *protocols applied to existing transmission facilities*  
12       *that increase the operational transfer capacity of a*  
13       *transmission network, the documented expenditures to*  
14       *purchase and install those advanced transmission*  
15       *technologies.*

16           *“(13) In the case of extreme weather or natural*  
17        *disasters, the ability to redirect or shut off power to*  
18        *minimize blackouts and avoid further damage.”; and*

19           *(2) in subsection (d)—*

20                *(A) by redesignating paragraph (9) as*  
21                *paragraph (16); and*

22                *(B) by inserting after paragraph (8) the fol-*  
23                *lowing:*

24                *“(9) The ability to use data analytics and soft-*  
25                *ware-as-service to provide flexibility by improving the*

1 *visibility of the electrical system to grid operators*  
2 *that can help quickly rebalance the electrical system*  
3 *with autonomous controls.*

4 *“(10) The ability to facilitate the aggregation or*  
5 *integration of distributed energy resources to serve as*  
6 *assets for the grid.*

7 *“(11) The ability to provide energy storage to*  
8 *meet fluctuating electricity demand, provide voltage*  
9 *support, and integrate intermittent generation*  
10 *sources, including vehicle-to-grid technologies.*

11 *“(12) The ability of hardware, software, and as-*  
12 *sociated protocols applied to existing transmission fa-*  
13 *cilities to increase the operational transfer capacity of*  
14 *a transmission network.*

15 *“(13) The ability to anticipate and mitigate im-*  
16 *pacts of extreme weather or natural disasters on grid*  
17 *resiliency.*

18 *“(14) The ability to facilitate the integration of*  
19 *renewable energy resources, electric vehicle charging*  
20 *infrastructure, and vehicle-to-grid technologies.*

21 *“(15) The ability to reliably meet increased de-*  
22 *mand from electric vehicles and the electrification of*  
23 *appliances and other sectors.”.*

24 *(b) AUTHORIZATION OF APPROPRIATIONS.—There is*  
25 *authorized to be appropriated to the Secretary to carry out*



1 *the Smart Grid Investment Matching Grant Program estab-*  
2 *lished under section 1306(a) of the Energy Independence*  
3 *and Security Act of 2007 (42 U.S.C. 17386(a))*  
4 *\$3,000,000,000 for fiscal year 2022, to remain available*  
5 *through September 30, 2026.*