

118TH CONGRESS  
1ST SESSION

# H. R. 3180

To require the Secretary of Energy to establish a program to encourage deployment of electric school buses and vehicle-to-grid technologies and applications, and for other purposes.

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## IN THE HOUSE OF REPRESENTATIVES

MAY 10, 2023

Mr. CROW (for himself and Ms. KUSTER) introduced the following bill; which was referred to the Committee on Energy and Commerce

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## A BILL

To require the Secretary of Energy to establish a program to encourage deployment of electric school buses and vehicle-to-grid technologies and applications, 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 “Bus Integration Dedi-  
5       cated to Improving Resilience, Eliminating Congestion,  
6       and Triggering Innovation Over Numerous Applications  
7       and Localities Act” or the “**BIDIRECTIONAL Act**”.

1 **SEC. 2. PROGRAM TO ENCOURAGE DEPLOYMENT OF ELEC-**  
2 **TRIC SCHOOL BUSES AND VEHICLE-TO-EV-**  
3 **ERYTHING TECHNOLOGIES AND APPLICA-**  
4 **TIONS.**

5 (a) DEFINITIONS.—In this section:

6 (1) ELECTRIC SCHOOL BUS.—The term “elec-  
7 tric school bus” means a school bus that is pro-  
8 pelled—

9 (A) to a significant extent, as determined  
10 by the Secretary, by an electric motor that—

11 (i) draws electricity from a battery;

12 and

13 (ii) is capable of being recharged from  
14 an external source of electricity; and

15 (B) by any necessary components or equip-  
16 ment required to facilitate electric-powered  
17 school bus operations.

18 (2) ELIGIBLE ENTITY.—The term “eligible enti-  
19 ty” means—

20 (A) any person (including any company or  
21 other entity) or State, local, or Tribal entity  
22 that sells electric energy, including—

23 (i) an electric utility, including—

24 (I) a local distribution company  
25 or utility; and

26 (II) an electric cooperative;

- 1 (ii) a municipality; and
- 2 (iii) a retail marketer of electricity;
- 3 (B) a State public utilities commission;
- 4 (C) a third-party energy efficiency program
- 5 administrator;
- 6 (D) a school bus manufacturer;
- 7 (E) a public or private school district;
- 8 (F) a supplier of charging infrastructure;
- 9 (G) a developer, provider, owner, or oper-
- 10 ator of solar, wind, or other renewable or dis-
- 11 tributed energy resources;
- 12 (H) a third-party school bus fleet or charg-
- 13 ing operator;
- 14 (I) any other entity, including a partner-
- 15 ship, that the Secretary determines to be appro-
- 16 priate; and
- 17 (J) any partnership or consortium of enti-
- 18 ties described in any of subparagraphs (A)
- 19 through (I).

20 (3) INDIAN TRIBE.—The term “Indian Tribe”

21 has the meaning given the term in section 4 of the

22 Indian Self-Determination and Education Assistance

23 Act (25 U.S.C. 5304).

24 (4) NATIONAL LABORATORY.—The term “Na-

25 tional Laboratory” has the meaning given the term

1 in section 2 of the Energy Policy Act of 2005 (42  
2 U.S.C. 15801).

3 (5) PROGRAM.—The term “Program” means  
4 the program established under subsection (b)(1).

5 (6) PROJECT PARTNER.—The term “project  
6 partner”, with respect to a project for which a grant  
7 is sought or provided under the Program, means an  
8 eligible entity that is a member of a partnership or  
9 consortium described in paragraph (2)(J) with re-  
10 spect to that project.

11 (7) REGIONAL TRANSMISSION ORGANIZATION.—  
12 The term “Regional Transmission Organization”  
13 has the meaning given the term in section 3 of the  
14 Federal Power Act (16 U.S.C. 796).

15 (8) SECRETARY.—The term “Secretary” means  
16 the Secretary of Energy.

17 (b) PROGRAM.—

18 (1) ESTABLISHMENT.—Not later than 1 year  
19 after the date of enactment of this Act, the Sec-  
20 retary shall establish a program to encourage the de-  
21 ployment of vehicle-to-grid and vehicle-to-everything  
22 technologies and applications, as described in para-  
23 graph (2), including, at a minimum, a vehicle capa-  
24 ble of discharging at least 10 kilowatts of power to  
25 bidirectional electric vehicle supply equipment that

1 provides alternating current power to an electrical  
2 circuit, by providing grants to eligible entities for  
3 projects that include the use of not fewer than 1  
4 electric school bus with bidirectional energy flow ca-  
5 pabilities for an application described in that para-  
6 graph.

7 (2) APPLICATION DESCRIBED.—An application  
8 referred to in paragraph (1) is—

9 (A) a vehicle-to-grid application, such as—

10 (i) provision of a distribution-level  
11 service or participation in a distribution-  
12 level program;

13 (ii) provision of wholesale market  
14 services, such as capacity, energy, and an-  
15 cillary services;

16 (iii) provision of microgrid services; or

17 (iv) aggregations of vehicle-to-grid ap-  
18 plications that provide distribution-level  
19 service, wholesale market services, or  
20 microgrid services;

21 (B) a vehicle-to-building application; or

22 (C) any other resilience or other applica-  
23 tion, as determined to be appropriate by the  
24 Secretary.

25 (3) PRIORITY AND DIVERSITY OF PROJECTS.—

1 (A) PRIORITY.—In providing grants under  
2 the Program, the Secretary shall give priority  
3 to projects that, in the determination of the  
4 Secretary, are likely to be economically self-sus-  
5 taining and replicable once established.

6 (B) REQUIREMENT.—The Secretary, to the  
7 maximum extent practicable in accordance with  
8 the priority required to be established under  
9 subparagraph (A), shall provide grants under  
10 the Program for projects across differing situa-  
11 tions, including in a region that is experiencing  
12 congestion, shortages, transmission system con-  
13 straints, or distribution system constraints that  
14 cause the cost of electricity to increase for con-  
15 sumers.

16 (4) APPLYING FOR ASSISTANCE.—

17 (A) IN GENERAL.—An eligible entity desir-  
18 ing a grant under the Program shall submit to  
19 the Secretary an application at such time, in  
20 such manner, and containing such information  
21 as the Secretary may require, subject to this  
22 paragraph.

23 (B) REQUIREMENTS.—

24 (i) IN GENERAL.—An application sub-  
25 mitted under subparagraph (A) shall dem-

1           onstrate how the assistance requested  
2           under the Program would help the 1 or  
3           more eligible entities submitting the appli-  
4           cation to participate in economically justifi-  
5           able opportunities that recognize  
6           bidirectional electric vehicle charging as a  
7           relevant technology, including existing elec-  
8           tric utility or Regional Transmission Orga-  
9           nization tariffs, programs, initiatives, poli-  
10          cies, arrangements, or other opportunities  
11          that recognize bidirectional electric vehicle  
12          charging as a relevant technology.

13                 (ii) INTERCONNECTION RULES.—An  
14                 application submitted under subparagraph  
15                 (A) shall include a certification that any  
16                 project described in the application and  
17                 proposed to be carried out using a grant  
18                 provided under the Program will comply  
19                 with all applicable interconnection rules.

20           (5) USE OF FUNDS.—

21                 (A) IN GENERAL.—Amounts provided to  
22                 an eligible entity pursuant to a grant under the  
23                 Program may be used for—

24                         (i)     acquiring     and     installing  
25                         bidirectional charging stations and inter-

1 connection upgrades necessary for  
2 bidirectional energy flow;

3 (ii) retrofitting buildings, parking fa-  
4 cilities, and school buses for bidirectional  
5 charging;

6 (iii) acquiring and installing any nec-  
7 essary metering and telemetry equipment  
8 or systems;

9 (iv) acquiring technical assistance  
10 from the Department of Energy, National  
11 Laboratories, or other parties with relevant  
12 expertise for any participating project  
13 partners; and

14 (v) any application directly related to  
15 establishing, sustaining, and optimizing  
16 bidirectional energy flow, as the Secretary  
17 determines to be appropriate.

18 (B) REQUIREMENT.—Amounts provided to  
19 an eligible entity pursuant to a grant under the  
20 Program shall be used in a manner that cor-  
21 responds specifically to the incremental addi-  
22 tional cost of implementing 1 or more applica-  
23 tions described in paragraph (2) as compared to  
24 the costs associated with the acquisition, dem-



1           onstration, or use of a typical electric school  
2           bus, as determined by the Secretary.

3           (C) COMMUNITY OUTREACH.—

4           (i) IN GENERAL.—Subject to clause  
5           (ii), an eligible entity receiving a grant  
6           under the Program shall use not less than  
7           1 percent of the amounts received for out-  
8           reach that is directed at the communities  
9           and bus users receiving or benefitting from  
10          those amounts, for the purpose of increas-  
11          ing awareness of the benefits of grid-inte-  
12          grated school buses and how grid-inte-  
13          grated school buses will be used.

14          (ii) WAIVER.—The Secretary may  
15          waive the requirement described in clause  
16          (i) if the Secretary determines that the  
17          outreach described in that clause is unnec-  
18          essary or would be of minimal benefit to  
19          the overall goal of sustained technological  
20          deployment.

21          (6) MATCHING REQUIREMENT.—An eligible en-  
22          tity receiving a grant under the Program shall en-  
23          sure that amounts derived from non-Federal sources  
24          are provided for the projects funded by the grant in

1 a total amount that is equal to, or greater than, the  
2 amount of the grant.

3 (7) OUTREACH TO POTENTIALLY INTERESTED  
4 ENTITIES.—Of the total amount appropriated to  
5 carry out the Program, the Secretary shall use not  
6 less than 1 percent for outreach to potentially inter-  
7 ested eligible entities, including eligible entities par-  
8 ticipating in, or with a demonstrated interest in, the  
9 clean school bus program established under section  
10 741 of the Energy Policy Act of 2005 (42 U.S.C.  
11 16091).

12 (8) SCHOOL DISTRICT COMPENSATION.—An eli-  
13 gible entity receiving a grant under the Program  
14 shall demonstrate to the Secretary that any school  
15 district participating in the applicable project is ap-  
16 propriately compensated for that participation in a  
17 manner approved by the Secretary, which may in-  
18 clude—

19 (A) the provision of direct financial com-  
20 pensation to the school district;

21 (B) the provision or acquisition of electric  
22 school buses for the school district; or

23 (C) savings resulting from the implementa-  
24 tion of an application described in paragraph  
25 (2).

1           (9) ANNUAL SUBMISSION OF DATA.—An eligible  
2           entity receiving a grant under the Program shall an-  
3           nually submit to the Secretary data from vehicles,  
4           chargers, and associated grid infrastructure nec-  
5           essary to determine operational and economic im-  
6           pacts, and additional data as determined to be nec-  
7           essary by the Secretary.

8           (10) COMPATIBILITY WITH EPA CLEAN SCHOOL  
9           BUS PROGRAM.—Notwithstanding any other provi-  
10          sion of law, the Secretary may provide a grant under  
11          the Program for applicable projects, programs, or  
12          activities for which amounts are provided under the  
13          clean school bus program established under section  
14          741 of the Energy Policy Act of 2005 (42 U.S.C.  
15          16091), and to eligible entities receiving amounts  
16          under that program, subject to all applicable re-  
17          quirements of this section.

18          (c) REPORT TO CONGRESS.—Not later than 1 year  
19          after the date of enactment of this Act, the Secretary shall  
20          submit to Congress a report summarizing any existing  
21          pilot programs, including State-funded and locally funded  
22          pilot programs, involving the use of school buses for the  
23          applications described in subsection (b)(2), including—

1           (1) any best practices, challenges, lessons  
2 learned, and promising future directions discernable  
3 from those pilot programs and applications;

4           (2) any challenges, opportunities, and strategies  
5 unique to the implementation of those applications  
6 in rural areas;

7           (3) any challenges to the commercial viability of  
8 those applications posed by State, Federal, or other  
9 regulatory barriers; and

10          (4)(A) any challenges to the economic viability  
11 of projects involving those applications; and

12          (B) any opportunities and strategies to make  
13 projects involving those applications economically  
14 viable.

15          (d) **AUTHORIZATION OF APPROPRIATIONS.**—There is  
16 authorized to be appropriated to the Secretary to carry  
17 out this section \$500,000,000 for the period of fiscal years  
18 2024 through 2028.

19 **SEC. 3. CONSIDERATION OF MEASURES TO PROMOTE VEHI-**  
20 **CLE-TO-GRID INTEGRATION.**

21          (a) **IN GENERAL.**—Section 111(d) of the Public Util-  
22 ity Regulatory Policies Act of 1978 (16 U.S.C. 2621(d))  
23 is amended by adding at the end the following:

24                 “(22) **VEHICLE-TO-GRID INTEGRATION.**—

1                   “(A) IN GENERAL.—Each State shall con-  
2                   sider—

3                   “(i) measures to promote vehicle-to-  
4                   grid integration, including—

5                   “(I) the establishment of rates,  
6                   tariffs, measures, and standards that  
7                   enable electric vehicles and electric ve-  
8                   hicle charging infrastructure—

9                   “(aa) to receive interconnec-  
10                  tion service as described in sub-  
11                  paragraph (B); and

12                  “(bb) to export power from  
13                  the vehicle battery to the dis-  
14                  tribution system or the bulk  
15                  power system;

16                  “(II) the establishment of rates,  
17                  tariffs, measures, and standards that  
18                  enable electric vehicle charging station  
19                  site hosts, charging station owners,  
20                  aggregators, owners of electric vehicle  
21                  fleets or individual fleet vehicles, or  
22                  drivers of private light-duty electric  
23                  vehicles to receive compensation for  
24                  electricity exported from the vehicle

1 battery to the distribution system or  
2 the bulk power system; and

3 “(III) the establishment of rates,  
4 tariffs, measures, and standards that  
5 enable aggregation of electric vehicles  
6 for the purpose of participating in ac-  
7 tive load management programs, in-  
8 cluding customer demand-response  
9 programs and customer energy stor-  
10 age programs, and providing ancillary  
11 services that recognize the value that  
12 flexible electric vehicle charging can  
13 provide to the distribution system or  
14 the bulk power system; and

15 “(ii) the impacts of the rates, tariffs,  
16 measures, and standards described in sub-  
17 clauses (I) through (III) of clause (i), or  
18 similar rates, tariffs, measures, and stand-  
19 ards, on all classes and types of vehicles,  
20 including, at a minimum, light-, medium-,  
21 and heavy-duty vehicles.

22 “(B) INTERCONNECTION SERVICE DE-  
23 SCRIBED.—The interconnection service referred  
24 to in subparagraph (A)(i)(I)(aa) is interconnec-  
25 tion service that is offered based on—

1 “(i) the standards described in para-  
2 graph (15) (or successor standards); or

3 “(ii) as necessary and reasonable,  
4 standards that—

5 “(I) are defined in electric vehi-  
6 cle-to-grid communications interfaces,  
7 protocols, or standards;

8 “(II) are widely adopted; and

9 “(III) to ensure the reliability  
10 and safety of the electric system,  
11 are—

12 “(aa) consistent (or adjusted  
13 to be consistent) with the stand-  
14 ards described in clause (i); and

15 “(bb) integrated, able to be  
16 integrated, or adjusted in a man-  
17 ner that facilitates integration  
18 with the standards described in  
19 that clause.”.

20 (b) COMPLIANCE.—

21 (1) TIME LIMITATION.—Section 112(b) of the  
22 Public Utility Regulatory Policies Act of 1978 (16  
23 U.S.C. 2622(b)) is amended by adding at the end  
24 the following:

1           “(9)(A) Not later than 1 year after the date of  
2           enactment of this paragraph, each State regulatory  
3           authority (with respect to each electric utility for  
4           which the State has ratemaking authority) and each  
5           nonregulated electric utility shall commence consid-  
6           eration under section 111, or set a hearing date for  
7           consideration, with respect to the standard estab-  
8           lished by paragraph (22) of section 111(d).

9           “(B) Not later than 2 years after the date of  
10          enactment of this paragraph, each State regulatory  
11          authority (with respect to each electric utility for  
12          which the State has ratemaking authority), and each  
13          nonregulated electric utility shall complete the con-  
14          sideration and make the determination under section  
15          111 with respect to the standard established by  
16          paragraph (22) of section 111(d).”.

17          (2) FAILURE TO COMPLY.—Section 112(c) of  
18          the Public Utility Regulatory Policies Act of 1978  
19          (16 U.S.C. 2622(c)) is amended by adding at the  
20          end the following: “In the case of the standard es-  
21          tablished by paragraph (22) of section 111(d), the  
22          reference contained in this subsection to the date of  
23          enactment of this Act shall be deemed to be a ref-  
24          erence to the date of enactment of that paragraph  
25          (22).”.



1 (3) PRIOR STATE ACTIONS.—

2 (A) IN GENERAL.—Section 112 of the  
3 Public Utility Regulatory Policies Act of 1978  
4 (16 U.S.C. 2622) is amended—

5 (i) in subsection (d)—

6 (I) by redesignating paragraphs  
7 (1) through (3) as subparagraphs (A)  
8 through (C), respectively, and indent-  
9 ing appropriately; and

10 (II) in the matter preceding sub-  
11 paragraph (A) (as so redesignated),  
12 by striking “Subsections” and insert-  
13 ing the following:

14 “(1) IN GENERAL.—Subsections”;

15 (ii) in subsection (e)—

16 (I) by redesignating paragraphs  
17 (1) through (3) as subparagraphs (A)  
18 through (C), respectively, and indent-  
19 ing appropriately; and

20 (II) by striking the subsection  
21 designation and heading and all that  
22 follows through “Subsections” in the  
23 matter preceding subparagraph (A)  
24 (as so redesignated) and inserting the  
25 following:

1           “(2) TIME-BASED METERING AND COMMUNICA-  
2           TIONS.—Subsections”;

3                   (iii) in subsection (f)—

4                           (I) by redesignating paragraphs  
5                           (1) through (3) as subparagraphs (A)  
6                           through (C), respectively, and indent-  
7                           ing appropriately; and

8                           (II) by striking the subsection  
9                           designation and heading and all that  
10                           follows through “Subsections” in the  
11                           matter preceding subparagraph (A)  
12                           (as so redesignated) and inserting the  
13                           following:

14           “(3) INTERCONNECTION.—Subsections”;

15                   (iv) in subsection (g)—

16                           (I) by redesignating paragraphs  
17                           (1) through (3) as subparagraphs (A)  
18                           through (C), respectively, and indent-  
19                           ing appropriately; and

20                           (II) by striking the subsection  
21                           designation and heading and all that  
22                           follows through “Subsections” in the  
23                           matter preceding subparagraph (A)  
24                           (as so redesignated) and inserting the  
25                           following:

1           “(4) DEMAND-RESPONSE PRACTICES.—Sub-  
2 sections”;

3                           (v) in subsection (h)—

4                                   (I) by redesignating paragraphs  
5 (1) through (3) as subparagraphs (A)  
6 through (C), respectively, and indent-  
7 ing appropriately; and

8                                   (II) by striking the subsection  
9 designation and heading and all that  
10 follows through “Subsections” in the  
11 matter preceding subparagraph (A)  
12 (as so redesignated) and inserting the  
13 following:

14           “(5) ELECTRIC VEHICLE CHARGING PRO-  
15 GRAMS.—Subsections”; and

16                           (vi) in subsection (d) (as so amended)  
17 by adding at the end the following:

18           “(6) VEHICLE-TO-GRID INTEGRATION.—Sub-  
19 sections (b) and (c) shall not apply to the standard  
20 established by paragraph (22) of section 111(d) in  
21 the case of any electric utility in a State if, before  
22 the date of enactment of this subsection—

23                           “(A) the State has implemented for the  
24 electric utility the standard (or a comparable  
25 standard);

1           “(B) the State regulatory authority for the  
2 State or the relevant nonregulated electric util-  
3 ity has conducted a proceeding to consider im-  
4 plementation of the standard (or a comparable  
5 standard) for the electric utility; or

6           “(C) the State legislature has voted on the  
7 implementation of the standard (or a com-  
8 parable standard) for the electric utility during  
9 the 3-year period ending on that date of enact-  
10 ment.”.

11           (B) CROSS-REFERENCE.—Section 124 of  
12 the Public Utility Regulatory Policies Act of  
13 1978 (16 U.S.C. 2634) is amended by adding  
14 at the end the following: “In the case of the  
15 standard established by paragraph (22) of sec-  
16 tion 111(d), the reference contained in this sec-  
17 tion to the date of enactment of this Act shall  
18 be deemed to be a reference to the date of en-  
19 actment of that paragraph (22).”.

○