

118TH CONGRESS
1ST SESSION

S. 648

To require the Secretary of Transportation, in consultation with the Secretary of Energy, to establish a grant program to demonstrate the performance and reliability of heavy-duty fuel cell vehicles that use hydrogen as a fuel source, and for other purposes.

IN THE SENATE OF THE UNITED STATES

MARCH 2, 2023

Mr. COONS (for himself, Mr. CORNYN, Mr. HICKENLOOPER, Mr. CASSIDY, and Mr. LUJÁN) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

A BILL

To require the Secretary of Transportation, in consultation with the Secretary of Energy, to establish a grant program to demonstrate the performance and reliability of heavy-duty fuel cell vehicles that use hydrogen as a fuel source, 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 “Hydrogen for Trucks
5 Act of 2023”.

1 **SEC. 2. HEAVY-DUTY FUEL CELL VEHICLE DEMONSTRATION PROGRAM.**
2

3 (a) DEFINITIONS.—In this section:

4 (1) ELIGIBLE ENTITY.—The term “eligible entity” means an entity described in subsection (b)(2).

5
6 (2) HEAVY-DUTY FUEL CELL VEHICLE.—

7 (A) IN GENERAL.—The term “heavy-duty fuel cell vehicle” means a vehicle that—

8 (i) has a manufacturer gross vehicle weight rating of more than 26,000 pounds, as determined by the Federal Highway Administration;

9 (ii) is not powered or charged by an internal combustion engine; and

10 (iii) is propelled solely by an electric motor that draws electricity from—

11 (I) a fuel cell; or

12 (II) a combination of a fuel cell and a battery.

13 (B) INCLUSION.—The term “heavy-duty fuel cell vehicle” includes any off-road vehicle, such as a yard truck, that meets the requirements of subparagraph (A).

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

1 (4) SECRETARY.—The term “Secretary” means
2 the Secretary of Transportation.

3 (b) ESTABLISHMENT.—

4 (1) IN GENERAL.—Not later than 180 days
5 after the date of enactment of this Act, the Sec-
6 retary, in consultation with the Secretary of Energy,
7 shall establish a grant program under which the Sec-
8 retary shall provide grants to eligible entities to as-
9 sist the eligible entities in funding capital projects to
10 purchase heavy-duty fuel cell vehicles and related
11 equipment, including hydrogen fueling stations.

12 (2) ELIGIBLE ENTITIES.—To be eligible to re-
13 ceive a grant under the program, an entity shall
14 be—

15 (A) a private heavy-duty truck fleet owner
16 with high duty cycle or long-haul operations;

17 (B) an operator with a “return to base”
18 mode that requires refueling primarily at a sin-
19 gle station, including an airport, a delivery
20 warehouse, and a shipping port;

21 (C) a leasing firm;

22 (D) an independent owner-operator;

23 (E) a public hydrogen fueling station de-
24 veloper or operator;

1 (F) a Federal, State, or local agency that
2 owns, operates, leases, or otherwise controls a
3 fleet of public vehicles; or

4 (G) a partnership of 1 or more entities de-
5 scribed in subparagraphs (A) through (E).

6 (3) APPLICATIONS.—

7 (A) IN GENERAL.—Subject to subpara-
8 graph (B), an eligible entity desiring a grant
9 under the program shall submit to the Sec-
10 retary an application at such time, in such
11 manner, and containing such information as the
12 Secretary, in consultation with the Secretary of
13 Energy, may require.

14 (B) REQUIREMENT.—If an eligible entity
15 desiring a grant under the program intends to
16 use the grant for only 1 of the uses described
17 in subparagraphs (A) and (B) of subsection
18 (d)(1), the eligible entity shall include in the
19 application under subparagraph (A) a descrip-
20 tion of—

21 (i) if the grant is to be used only for
22 the use described in subparagraph (A) of
23 subsection (d)(1), the availability of not
24 fewer than 1 hydrogen fueling station that

1 can be used by heavy-duty fuel cell vehi-
2 cles;

3 (ii) if the grant is to be used only for
4 the use described in subparagraph (B) of
5 subsection (d)(1), the availability of not
6 fewer than 7 heavy-duty fuel cell vehicles
7 that—

8 (I) use hydrogen as a fuel source;
9 and

10 (II) will use 1 or more hydrogen
11 fueling stations demonstrated using
12 the grant; and

13 (iii) the means by which the project of
14 the eligible entity will expand the demand
15 for and use of any existing infrastructure.

16 (4) CONSIDERATIONS.—In selecting eligible en-
17 tities to receive a grant under the program, the Sec-
18 retary, in consultation with the Secretary of Energy,
19 shall—

20 (A) take into account whether the eligible
21 entity has the potential to expand the use of hy-
22 drogen demonstrated by the eligible entity using
23 the grant to other applications within the region
24 in which the eligible entity operates; and

25 (B) to the maximum extent practicable—

1 (i) select eligible entities operating in
2 different regions of the United States—

3 (I) to demonstrate different types
4 of fleet operations, such as fleet oper-
5 ations with differing local hydrogen
6 supplies, climate conditions, route
7 lengths and geographies, and sizes of
8 vehicles; and

9 (II) to identify any differences in
10 performance demonstrated by the
11 heavy-duty fuel cell vehicles used by
12 the eligible entity that are due to re-
13 gional characteristics;

14 (ii) select eligible entities that intend
15 to use the grant for both of the uses de-
16 scribed in subparagraphs (A) and (B) of
17 subsection (d)(1); and

18 (iii) select projects that will generate
19 the greatest benefit to low-income or dis-
20 advantaged communities (including cities,
21 towns, counties, and reasonably isolated
22 and divisible segments of a larger munici-
23 pality) with an annual median household
24 income that is less than 100 percent of the
25 statewide annual median household income

1 for the State in which the community is lo-
2 cated, according to the most recent decen-
3 nial census.

4 (5) PRIORITY.—In selecting eligible entities to
5 receive a grant under the program, the Secretary, in
6 consultation with the Secretary of Energy, shall give
7 priority to projects that will provide greater net im-
8 pact in avoiding or reducing emissions of greenhouse
9 gases.

10 (6) SPECIAL CONSIDERATION.—In selecting eli-
11 gible entities to receive a grant under the program,
12 the Secretary, in consultation with the Secretary of
13 Energy, shall give special consideration to—

14 (A) if the grant is to be used for the use
15 described in subsection (d)(1)(B), projects in
16 which each applicable hydrogen fueling station
17 is open to the public; or

18 (B) eligible entities that provide greater
19 than 20 percent cost share.

20 (c) GOALS.—The goals of the program shall be—

21 (1) to demonstrate the performance and reli-
22 ability of heavy-duty fuel cell vehicles in different re-
23 gions of the United States;

24 (2) to provide a basis for relevant cost evalua-
25 tions and cost reductions; and

1 (3) to accelerate the market deployment of
2 heavy-duty fuel cell vehicles.

3 (d) USE OF GRANT FUNDS.—

4 (1) IN GENERAL.—An eligible entity that re-
5 ceives a grant under the program shall use the grant
6 to demonstrate the performance of—

7 (A) not fewer than 7 heavy-duty fuel cell
8 vehicles that use hydrogen as fuel source; or

9 (B) 1 or more hydrogen fueling stations
10 for use by heavy-duty fuel cell vehicles.

11 (2) ELIGIBLE COSTS.—An eligible entity that
12 receives a grant under the program may use the
13 grant for the following costs:

14 (A) The capital costs of—

15 (i) the heavy-duty fuel cell vehicles de-
16 scribed in paragraph (1)(A), subject to
17 paragraph (4); or

18 (ii) a station described in paragraph
19 (1)(B).

20 (B) The costs, such as costs associated
21 with labor, complying with maintenance re-
22 quirements, and grant administration, of oper-
23 ating—

24 (i) the heavy-duty fuel cell vehicles de-
25 scribed in paragraph (1)(A); or

1 (ii) a station described in paragraph
2 (1)(B).

3 (C) Overhead costs.

4 (D) The costs of training personnel to en-
5 sure safety and best practices during construc-
6 tion, fueling and refueling, maintenance, and
7 upkeep, as applicable, of—

8 (i) the heavy-duty fuel cell vehicles de-
9 scribed in paragraph (1)(A); or

10 (ii) a station described in paragraph
11 (1)(B).

12 (E) The costs of complying with—

13 (i) the requirements of subsection (g);
14 and

15 (ii) any reporting requirements under
16 subsection (h).

17 (3) OPERATION.—

18 (A) IN GENERAL.—Except as provided in
19 subparagraph (B), an eligible entity that re-
20 ceives a grant under the program for a use de-
21 scribed in subparagraph (A) or (B) of para-
22 graph (1) may determine whether each applica-
23 ble hydrogen fueling station shall—

24 (i) allow only private access; or

25 (ii) be open to the public.

1 (B) PUBLIC HYDROGEN FUELING STATION
2 DEVELOPERS AND OPERATORS.—An eligible en-
3 tity described in subsection (b)(2)(E) that re-
4 ceives a grant under the program to be used
5 only for the use described in paragraph (1)(B)
6 shall make each applicable hydrogen fueling
7 station described in that paragraph open to the
8 public.

9 (4) CAPITAL COSTS OF VEHICLES.—With re-
10 spect to the capital costs described in paragraph
11 (2)(A)(i), the amount of grant funds used for those
12 capital costs shall not exceed, with respect to each
13 heavy-duty fuel cell vehicle purchased by the eligible
14 entity and used for the applicable project, the lesser
15 of—

16 (A) an amount equal to the difference be-
17 tween—

18 (i) the cost of the heavy-duty fuel cell
19 vehicle; and

20 (ii) the product obtained by multi-
21 plying—

22 (I) the cost of a comparable
23 gasoline- or diesel-fueled vehicle; and

24 (II) 0.5; and

25 (B) \$500,000.

1 (e) AMOUNT OF A GRANT.—The amount of a grant
2 provided by the Secretary under the program shall be not
3 more than \$20,000,000.

4 (f) COST SHARING.—The non-Federal share of the
5 cost of a project carried out using a grant under the pro-
6 gram shall be not less than 20 percent.

7 (g) LEAK DETECTION.—Each eligible entity that re-
8 ceives a grant under the program shall conduct—

9 (1) a hydrogen leakage monitoring, reporting,
10 and verification (also known as “MRV”) program;
11 and

12 (2) a hydrogen leak detection and repair (also
13 known as “LDAR”) program.

14 (h) REPORTING.—

15 (1) IN GENERAL.—An eligible entity that re-
16 ceives a grant under the program shall submit to the
17 Secretary such operational data relating to eligible
18 costs described in subsection (d)(2) as the Secretary,
19 in consultation with the Secretary of Energy, may
20 require to accelerate market deployment of heavy-
21 duty fuel cell vehicles that use hydrogen as a fuel
22 source.

23 (2) REQUIREMENT.—The operational data re-
24 quired by the Secretary under paragraph (1) shall
25 include, at a minimum, data relating to—

1 (A) operational expenses;

2 (B) fuel use; and

3 (C) reliability.

4 (3) SYSTEM.—The Secretary, in consultation
5 with the Secretary of Energy, shall develop a system
6 for data reporting and data sharing that allows simi-
7 lar fleet and fueling station operators to evaluate the
8 performance of the program.

9 (i) AUTHORIZATION OF APPROPRIATIONS.—There is
10 authorized to be appropriated to the Secretary to carry
11 out the program \$200,000,000 for the period of fiscal
12 years 2024 through 2028.

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