

118TH CONGRESS
1ST SESSION

S. 647

To require the Secretary of Transportation to establish a grant program to support the use of hydrogen- or ammonia-fueled equipment at ports and to require the Secretary of the department in which the Coast Guard is operating to conduct a study, together with the Secretary of Energy and the Secretary of Transportation, regarding the feasibility and safety of using hydrogen and ammonia as fuels in maritime applications.

IN THE SENATE OF THE UNITED STATES

MARCH 2, 2023

Mr. CORNYN (for himself, Mr. COONS, Mr. CASSIDY, Mr. HICKENLOOPER, Ms. MURKOWSKI, Mr. HEINRICH, 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 to establish a grant program to support the use of hydrogen- or ammonia-fueled equipment at ports and to require the Secretary of the department in which the Coast Guard is operating to conduct a study, together with the Secretary of Energy and the Secretary of Transportation, regarding the feasibility and safety of using hydrogen and ammonia as fuels in maritime applications.

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

1 **SECTION 1. SHORT TITLE.**

2 This Act may be cited as the “Hydrogen for Ports
3 Act of 2023”.

4 **SEC. 2. MARITIME FUEL MODERNIZATION GRANT PRO-**
5 **GRAM.**

6 (a) DEFINITIONS.—In this section:

7 (1) ELIGIBLE ENTITY.—The term “eligible enti-
8 ty” means an entity described in subsection (d).

9 (2) ELIGIBLE FUEL.—The term “eligible fuel”
10 means—

11 (A) hydrogen; or

12 (B) ammonia.

13 (3) LOW-INCOME OR DISADVANTAGED COMMU-
14 NITY.—The term “low-income or disadvantaged
15 community” means a community (including a city, a
16 town, a county, and any reasonably isolated and di-
17 visible segment of a larger municipality) with an an-
18 nual median household income that is less than 100
19 percent of the statewide annual median household
20 income for the State in which the community is lo-
21 cated, according to the most recent decennial census.

22 (4) PROGRAM.—The term “program” means
23 the program established under subsection (b).

24 (5) SECRETARY.—The term “Secretary” means
25 the Secretary of Transportation.

1 (6) TRIBAL GOVERNMENT.—The term “Tribal
2 government” means the recognized governing body
3 of any Indian or Alaska Native Tribe, band, nation,
4 pueblo, village, community, component band, or com-
5 ponent reservation, individually identified (including
6 parenthetically) on the list published most recently
7 as of the date of enactment of this Act pursuant to
8 section 104 of the Federally Recognized Indian
9 Tribe List Act of 1994 (25 U.S.C. 5131).

10 (b) ESTABLISHMENT OF PROGRAM.—Not later than
11 180 days after the date of enactment of this Act, the Sec-
12 retary, in coordination with the Secretary of Energy, shall
13 establish a program under which the Secretary shall pro-
14 vide grants, on a competitive basis, to eligible entities
15 for—

16 (1) the purchase, installation, planning, design,
17 or construction of, as appropriate—

18 (A) fuel cell cargo-handling equipment that
19 uses an eligible fuel;

20 (B) fuel cell drayage or long-haul trucks
21 that—

22 (i) use an eligible fuel; and

23 (ii) are for use at ports;

24 (C) fuel cell ferries, tugboats, dredging ves-
25 sels, container ships, bulk carriers, fuel tankers,

1 commercial fishing vessels, cruise ships, or
2 other marine vessels that use an eligible fuel;

3 (D) fuel cell locomotives that—

4 (i) use an eligible fuel; and

5 (ii) are for use at ports;

6 (E) fuel cell shore power systems that—

7 (i) use an eligible fuel; and

8 (ii) are used for ships while docked at
9 port;

10 (F) onsite fuel cell power plants that—

11 (i) use an eligible fuel; and

12 (ii) are located at port facilities; or

13 (G) port infrastructure for establishing or
14 expanding the supply of eligible fuel for import,
15 export, storage, bunkering, or fueling; and

16 (2) the training of ship crew and shore per-
17 sonnel—

18 (A) to safely handle eligible fuel; and

19 (B) to perform operation and maintenance
20 on equipment that uses an eligible fuel.

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

22 (1) to demonstrate hydrogen, ammonia, or fuel
23 cell technologies in maritime and associated logistics
24 applications;

1 (2) to assist in the development and validation
2 of technical targets for hydrogen, ammonia, and fuel
3 cell systems for maritime and associated logistics ap-
4 plications;

5 (3) to benchmark the conditions required for
6 broad commercialization of hydrogen, ammonia, and
7 fuel cell technologies in maritime and associated lo-
8 gistics applications;

9 (4) to assess the operational and technical con-
10 siderations for—

11 (A) installing, constructing, and using
12 hydrogen- or ammonia-fueled equipment; and

13 (B) supporting infrastructure at ports; and

14 (5) to reduce greenhouse gas emissions and im-
15 prove air quality in areas located in and around
16 ports.

17 (d) ELIGIBLE ENTITIES.—

18 (1) IN GENERAL.—An entity eligible to receive
19 a grant under the program is—

20 (A) a State;

21 (B) a political subdivision of a State;

22 (C) a local government;

23 (D) a public agency or publicly chartered
24 authority established by 1 or more States;

1 (E) a special purpose district with a trans-
2 portation function;

3 (F) a Tribal government or a consortium
4 of Tribal governments;

5 (G) a port authority for a port;

6 (H) an Alaska Native or Native Hawaiian
7 entity that has jurisdiction over a port author-
8 ity or a port;

9 (I) a multistate or multijurisdictional
10 group of entities described in any of subpara-
11 graphs (A) through (H); or

12 (J) subject to paragraph (2), a private en-
13 tity or group of private entities, including the
14 owners or operators of 1 or more facilities at a
15 port.

16 (2) JOINT ELIGIBILITY WITH PRIVATE ENTI-
17 TIES.—A private entity or group of private entities
18 is eligible for a grant under the program if—

19 (A) the private entity or group of private
20 entities partners with an entity described in any
21 of subparagraphs (A) through (I) of paragraph
22 (1) for purposes of applying for, and carrying
23 out activities under, the grant; and

24 (B) the entity described in the applicable
25 subparagraph of paragraph (1) is the lead enti-

1 ty with respect to the application and those ac-
2 tivities.

3 (e) APPLICATIONS.—

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

9 (2) REQUIREMENT.—The application of an eli-
10 gible entity described in subparagraph (J) of sub-
11 section (d)(1) shall be submitted jointly with an en-
12 tity described in subparagraphs (A) through (I) of
13 that subsection.

14 (f) CONSIDERATIONS.—In providing grants under the
15 program, the Secretary, to the maximum extent prac-
16 ticable, shall select projects that—

17 (1) will generate the greatest benefit to low-in-
18 come or disadvantaged communities;

19 (2) represent a combination of land-side and
20 vessel-side end-uses of eligible fuel;

21 (3) maximize the creation or retention of jobs
22 in the United States; and

23 (4) provide the highest job quality.

24 (g) PRIORITY.—In selecting eligible entities to receive
25 grants under the program, the Secretary shall give priority

1 to projects that will provide greater net impact in avoiding
2 or reducing emissions of greenhouse gases.

3 (h) LEAK DETECTION.—Each eligible entity that re-
4 ceives a grant under the program shall conduct—

5 (1) a hydrogen leakage monitoring, reporting,
6 and verification (also known as “MRV”) program
7 for all eligible fuel used by the eligible entity; and

8 (2) a hydrogen leak detection and repair (also
9 known as “LDAR”) program for all eligible fuel
10 used by the eligible entity.

11 (i) FUNDING.—

12 (1) AUTHORIZATION OF APPROPRIATIONS.—
13 There is authorized to be appropriated to the Sec-
14 retary to carry out the program \$100,000,000 for
15 each of fiscal years 2024 through 2028.

16 (2) HUMAN-OPERATED EQUIPMENT REQUIRE-
17 MENT.—In carrying out the program, the Secretary
18 shall ensure that funding is made available for each
19 fiscal year for cargo-handling equipment that uses
20 an eligible fuel and is human-operated.

21 **SEC. 3. STUDY ON FEASIBILITY AND SAFETY OF USING HY-**
22 **DROGEN AND AMMONIA AS FUELS IN MARI-**
23 **TIME APPLICATIONS.**

24 (a) IN GENERAL.—Not later than 270 days after the
25 date of enactment of this Act, the Secretary of the depart-

1 ment in which the Coast Guard is operating, in consulta-
2 tion with the Secretary of Energy, the Secretary of Trans-
3 portation, and the heads of other Federal departments and
4 agencies, as appropriate, shall conduct, and submit to the
5 Committee on Commerce, Science, and Transportation of
6 the Senate and the Committee on Transportation and In-
7 frastructure of the House of Representatives a report de-
8 scribing the results of, a study—

9 (1) to fully address the challenges to ensure the
10 safe use and handling of hydrogen, ammonia, and
11 other hydrogen-based fuels on vessels and in ports;

12 (2) to identify, compare, and evaluate the feasi-
13 bility of, the safety, environmental, and health im-
14 pacts of, and best practices with respect to, the use
15 of hydrogen-derived fuels, including ammonia, as a
16 shipping fuel;

17 (3) to identify and evaluate considerations for
18 hydrogen and ammonia storage, including—

19 (A) at ports;

20 (B) on board vessels; and

21 (C) for subsea hydrogen storage; and

22 (4) to assess the cost and value of a hydrogen
23 or ammonia strategic reserve, either as a new facility
24 or as a modification to the Strategic Petroleum Re-
25 serve established under part B of title I of the En-

1 energy Policy and Conservation Act (42 U.S.C. 6231
2 et seq.).

3 (b) REQUIREMENTS.—In carrying out subsection (a),
4 the Secretary of the department in which the Coast Guard
5 is operating shall—

6 (1) consult with entities in the private sector
7 with experience in the hydrogen or ammonia indus-
8 try;

9 (2) take into account lessons learned from dem-
10 onstration projects in other industries, including—

11 (A) projects carried out in the United
12 States;

13 (B) projects carried out in other countries;
14 and

15 (C) projects relating to the automotive in-
16 dustry, buses, petroleum refining, chemical pro-
17 duction, fertilizer production, and stationary
18 power; and

19 (3) evaluate the applicability of the lessons de-
20 scribed in paragraph (2) to the use of hydrogen in
21 maritime and associated logistics applications.

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