

117TH CONGRESS
1ST SESSION

S. _____

To require the Secretary of Energy to establish a grant program to support hydrogen-fueled equipment at ports and to conduct a study with the Secretary of Transportation and the Secretary of Homeland Security on the feasibility and safety of using hydrogen-derived fuels, including ammonia, as a shipping fuel.

IN THE SENATE OF THE UNITED STATES

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

A BILL

To require the Secretary of Energy to establish a grant program to support hydrogen-fueled equipment at ports and to conduct a study with the Secretary of Transportation and the Secretary of Homeland Security on the feasibility and safety of using hydrogen-derived fuels, including ammonia, as a shipping fuel.

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 Ports
5 Act of 2021”.

1 **SEC. 2. MARITIME MODERNIZATION GRANT PROGRAM.**

2 (a) DEFINITIONS.—In this section:

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

5 (2) INDIAN TRIBE.—The term “Indian Tribe”
6 has the meaning given the term in section 4 of the
7 Indian Self-Determination and Education Assistance
8 Act (25 U.S.C. 5304).

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

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

20 (5) SECRETARY.—The term “Secretary” means
21 the Secretary of Energy.

22 (b) IN GENERAL.—Not later than 180 days after the
23 date of enactment of this Act, the Secretary shall establish
24 a program under which the Secretary shall provide grants,
25 on a competitive basis, to eligible entities for—

1 (1) the purchase, installation, construction, fa-
2 cilitation, maintenance, or operation of, as appro-
3 prium—

4 (A) hydrogen- or ammonia-fueled cargo-
5 handling equipment, including, at a minimum,
6 equipment used for drayage applications;

7 (B) hydrogen fuel cell or ammonia-fueled
8 trucks for use at ports;

9 (C) hydrogen fuel cell or ammonia-fueled
10 ferries, tugboats, dredging vessels, container
11 ships, bulk carriers, fuel tankers, and other ma-
12 rine vessels;

13 (D) hydrogen fuel cell-based shore power
14 for ships while docked at the port;

15 (E) hydrogen fuel cell or ammonia onsite
16 power plants; and

17 (F) port infrastructure for hydrogen or
18 ammonia import, export, storage, and fueling;
19 and

20 (2) the training of ship crew and shore per-
21 sonnel to handle hydrogen or ammonia.

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

23 (1) to demonstrate fuel cell, hydrogen, or am-
24 monia technologies in maritime and associated logis-
25 tics 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 installing, constructing, and using
11 hydrogen- or ammonia-fueled equipment and sup-
12 porting infrastructure at ports; and

13 (5) to reduce emissions and improve air quality
14 in areas in and around ports.

15 (d) ELIGIBLE ENTITIES.—

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

18 (A) a State;

19 (B) a political subdivision of a State;

20 (C) a local government;

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

23 (E) a special purpose district with a trans-
24 portation function;

1 (F) an Indian Tribe or a consortium of In-
2 dian Tribes;

3 (G) a multistate or multijurisdictional
4 group of entities described in any of subpara-
5 graphs (A) through (F); or

6 (H) subject to paragraph (2), a private en-
7 tity or group of private entities, including the
8 owners or operators of 1 or more facilities at a
9 port.

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

13 (A) the private entity or group of private
14 entities partners with an entity described in any
15 of subparagraphs (A) through (G) of paragraph
16 (1) for purposes of applying for, and carrying
17 out activities under, the grant; and

18 (B) the entity described in the applicable
19 subparagraph of that paragraph is the lead en-
20 tity with respect to the application and those
21 activities.

22 (e) APPLICATIONS.—

23 (1) IN GENERAL.—An eligible entity desiring a
24 grant under the program shall submit to the Sec-
25 retary an application at such time, in such manner,

1 and containing such information as the Secretary
2 may require.

3 (2) REQUIREMENT.—The application of an eli-
4 gible entity described in subparagraph (H) of sub-
5 section (d)(1) shall be submitted jointly with an en-
6 tity described in subparagraphs (A) through (G) of
7 that subsection.

8 (f) CONSIDERATIONS.—In providing grants under the
9 program, the Secretary, to the maximum extent prac-
10 ticable, shall—

11 (1) select projects that will generate the great-
12 est benefit to low-income or disadvantaged commu-
13 nities; and

14 (2) select projects that will—

15 (A) maximize the creation or retention of
16 jobs in the United States; and

17 (B) provide the highest job quality.

18 (g) PRIORITY.—In selecting eligible entities to receive
19 a grant under the program, the Secretary shall give pri-
20 ority to projects that will provide greater net impact in
21 avoiding or reducing emissions of greenhouse gases.

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

1 (1) a hydrogen leakage monitoring, reporting,
2 and verification (also known as “MRV”) program;
3 and

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

6 (i) AUTHORIZATION OF APPROPRIATIONS.—There is
7 authorized to be appropriated to the Secretary to carry
8 out this section \$100,000,000 for each of fiscal years 2022
9 through 2026.

10 **SEC. 3. STUDY.**

11 (a) IN GENERAL.—The Secretary of Energy, in con-
12 sultation with the Secretary of Transportation and the
13 Secretary of Homeland Security, shall conduct, and sub-
14 mit to Congress a report describing the results of, a
15 study—

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

19 (2) to identify, compare, and evaluate the feasi-
20 bility of, the safety, environmental, and health im-
21 pacts of, and best practices with respect to, the use
22 of hydrogen-derived fuels, including ammonia, as a
23 shipping fuel;

24 (3) to identify and evaluate considerations for
25 hydrogen and ammonia storage, including—

1 (A) at ports;

2 (B) on board vessels; and

3 (C) for subsea hydrogen storage; and

4 (4) to assess the cost and value of a hydrogen
5 or ammonia strategic reserve, either as a new facility
6 or as a modification to the Strategic Petroleum Re-
7 serve established under part B of title I of the En-
8 ergy Policy and Conservation Act (42 U.S.C. 6231
9 et seq.).

10 (b) REQUIREMENTS.—In carrying out subsection (a),
11 the Secretary of Energy, the Secretary of Transportation,
12 and the Secretary of Homeland Security shall—

13 (1) take into account lessons learned from dem-
14 onstration projects in other industries, including—

15 (A) projects carried out in the United
16 States;

17 (B) projects carried out in other countries;
18 and

19 (C) projects relating to the automotive in-
20 dustry, buses, petroleum refining, chemical pro-
21 duction, fertilizer production, and stationary
22 power; and

23 (2) evaluate the applicability of the lessons de-
24 scribed in paragraph (1) to the use of hydrogen in
25 maritime and associated logistics applications.