

117TH CONGRESS
1ST SESSION

S. _____

To require the Secretary of Energy to establish a hydrogen infrastructure finance and innovation pilot program, and for other purposes.

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 hydrogen infrastructure finance and innovation pilot program, 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 Infrastruc-
5 ture Finance and Innovation Act”.

6 **SEC. 2. STUDY.**

7 Not later than 1 year after the date of enactment
8 of this Act, the Secretary of Energy, in coordination with
9 the Administrator of the Environmental Protection Agen-

1 cy, the Council on Environmental Quality, the Adminis-
2 trator of the Energy Information Administration, and the
3 heads of other relevant Federal agencies, shall conduct a
4 study subject to notice and public comment—

5 (1) to fully assess and report the potential lay-
6 out of pipeline corridors that are robust against a
7 range of projected hydrogen demand futures;

8 (2) to synthesize the results from research, de-
9 velopment, and demonstration projects on materials
10 and metallurgy for transporting and storing hydro-
11 gen and hydrogen-rich fuels;

12 (3) to determine outstanding questions with re-
13 gard to research, development, and demonstration of
14 infrastructure for transporting and storing hydrogen
15 and hydrogen-rich fuels;

16 (4) to investigate the behavior and environ-
17 mental impact of hydrogen leakage in pipelines and
18 from geologic storage sites and nongeologic storage
19 equipment;

20 (5) to determine best practices for the construc-
21 tion and maintenance of hydrogen pipelines;

22 (6) to determine the percentage at which hydro-
23 gen must be blended into the natural gas network to
24 substantially reduce carbon intensity; and

1 (7) to establish a framework for the measure-
2 ment, reporting, and management of hydrogen leaks.

3 **SEC. 3. SUPPORTING HYDROGEN INFRASTRUCTURE AND**
4 **REGIONAL DEVELOPMENT OF HYDROGEN.**

5 (a) DEFINITIONS.—In this section:

6 (1) BOARD-REGULATED RATES.—The term
7 “Board-regulated rates” means rates regulated by
8 the Surface Transportation Board.

9 (2) COMMISSION-REGULATED RATES.—The
10 term “Commission-regulated rates” means rates reg-
11 ulated by the Federal Energy Regulatory Commis-
12 sion.

13 (3) COMMON CARRIER.—The term “common
14 carrier” means a transportation infrastructure oper-
15 ator or owner that—

16 (A) publishes a publicly available tariff
17 containing the just and reasonable rates, terms,
18 and conditions of nondiscriminatory service;
19 and

20 (B) holds itself out to provide transpor-
21 tation services to the public for a fee.

22 (4) ELIGIBLE ACTIVITY.—The term “eligible
23 activity” means an activity described in subsection
24 (g)(2) relating to, or carried out in connection with,
25 an eligible project.

(5) ELIGIBLE ENTITY.—The term “eligible entity” means a corporation, partnership, joint venture, trust, non-Federal governmental entity, agency, or instrumentality, or other entity.

5 (6) ELIGIBLE PROJECT.—

(A) IN GENERAL.—Subject to subparagraph (B), the term “eligible project” means an infrastructure project for hydrogen transportation, storage, or delivery, including pipeline, shipping, rail, refueling, or other infrastructure, or associated equipment, as the Secretary determines to be appropriate.

(B) INCLUSION OF PIPELINE PROJECTS.—
The term “eligible project” includes a pipeline
project only if the project is for—

(i) the construction of 1 or more new pipelines that are capable of handling pure hydrogen; or

19 (ii) the retrofitting of 1 or more exist-
20 ing natural gas pipelines—

21 (I) to transport a blend of hydro-
22 gen and natural gas; and

(II) in a manner that will significantly increase the capacity of the

1 pipelines to transport hydrogen, as de-
2 termined by the Secretary.

3 (7) ELIGIBLE PROJECT COST.—

4 (A) IN GENERAL.—The term “eligible
5 project costs” means—

6 (i) the costs of carrying out an eligible
7 activity; and

8 (ii) any costs described in subpara-
9 graph (B) relating to, or incurred in con-
10 nection with, an eligible project.

11 (B) COSTS DESCRIBED.—The costs re-
12 ferred to in subparagraph (A)(ii) are—

13 (i) the costs of capitalized interest
14 necessary to meet market requirements,
15 the costs of reasonably required reserve
16 funds, capital issuance expenses, and any
17 other carrying costs during construction of
18 the applicable infrastructure; and

19 (ii) transaction costs associated with
20 financing an eligible project, including the
21 cost of legal counsel and technical consult-
22 ants.

23 (8) HIFIA PILOT PROGRAM.—The term
24 “HIFIA pilot program” means the hydrogen infra-

1 structure finance and innovation pilot program es-
2 tablished under subsection (b)(1).

3 (9) LETTER OF INTEREST.—The term “letter
4 of interest” means a letter submitted by a potential
5 applicant prior to an application for a grant or a
6 loan under the HIFIA pilot program that—

7 (A) is in a format prescribed by the Sec-
8 retary on the website of the HIFIA pilot pro-
9 gram;

10 (B) describes the project and the location,
11 purpose, and cost of the project;

12 (C) outlines the proposed financial plan,
13 including—

14 (i) the requested grant or loan assist-
15 ance; and

16 (ii) the proposed obligor, if applicable;

17 (D) provides a status of environmental re-
18 view; and

19 (E) provides information regarding satis-
20 faction of other eligibility requirements of the
21 HIFIA pilot program.

22 (10) LOW-INCOME OR DISADVANTAGED COMMU-
23 NITY.—The term “low-income or disadvantaged
24 community” means a community (including a city, a
25 town, a county, and any reasonably isolated and di-

1 visible segment of a larger municipality) with an an-
2 nual median household income that is less than 100
3 percent of the statewide annual median household
4 income for the State in which the community is lo-
5 cated, according to the most recent decennial census.

6 (11) OBLIGOR.—The term “obligor” means an
7 eligible entity that is liable for payment of the prin-
8 cipal of, or interest on, a loan under the HIFLA pilot
9 program.

10 (12) SECRETARY.—The term “Secretary”
11 means the Secretary of Energy.

12 (b) ESTABLISHMENT.—

13 (1) IN GENERAL.—Not later than 1 year after
14 the date of enactment of this Act, the Secretary, in
15 consultation with the Federal Energy Regulatory
16 Commission, the Surface Transportation Board, and
17 the Administrator of the Pipeline and Hazardous
18 Materials Safety Administration, shall establish a
19 hydrogen infrastructure finance and innovation pilot
20 program under which the Secretary shall provide—

21 (A) financial assistance to eligible entities
22 for eligible projects through—

23 (i) grants; or

24 (ii) long-term, low-cost supplemental
25 loans; and

1 (B) technical assistance in accordance with
2 subsection (l).

3 (2) COORDINATION WITH HYDROGEN HUBS.—

4 To ensure that the HIFIA pilot program is compat-
5 ible with and complementary to any hydrogen hubs
6 developed under any other law, the Secretary, to the
7 maximum extent practicable, shall coordinate the es-
8 tablishment of the HIFIA pilot program with—

9 (A) the establishment of any program to
10 support the development of hydrogen hubs that
11 is required to be established under any other
12 law; and

13 (B) the development of those hubs.

14 (c) ELIGIBILITY.—

15 (1) IN GENERAL.—The Secretary may provide
16 financial assistance for an eligible project under the
17 HIFIA pilot program if—

18 (A) the eligible entity proposing to carry
19 out the project submits a letter of interest prior
20 to submission of an application under para-
21 graph (2) with respect to the project; and

22 (B) the eligible entity and the eligible
23 project meet all applicable requirements of this
24 section.

25 (2) APPLICATIONS.—

1 (A) IN GENERAL.—To be eligible for a
2 grant or a loan under the HIFIA pilot pro-
3 gram, an eligible entity shall submit to the Sec-
4 retary an application at such time, in such
5 manner, and containing such information as the
6 Secretary determines to be appropriate.

7 (B) ELECTION.—

8 (i) IN GENERAL.—An eligible entity
9 may elect to apply for a grant, a loan, or
10 both under the HIFIA pilot program.

11 (ii) DECISION.—The Secretary shall
12 have discretion to award any mix of grants
13 and loans under the HIFIA pilot program
14 as the Secretary determines to be appro-
15 priate, including with respect to each eligi-
16 ble entity that applies for both a grant and
17 a loan.

18 (C) APPLICATION PROCESSING PROCE-
19 DURES.—

20 (i) NOTICE OF COMPLETE APPLICA-
21 TION.—Not later than 30 days after the
22 date of receipt of an application under this
23 paragraph, the Secretary shall provide to
24 the applicant a written notice describing
25 whether—

1 (I) the application is complete; or

2 (II) additional information or
3 materials are needed to complete the
4 application.

5 (ii) APPROVAL OR DENIAL OF APPLI-
6 CATION.—Not later than 90 days after the
7 date of issuance of a written notice under
8 clause (i), the Secretary shall provide to
9 the applicant a written notice informing
10 the applicant whether the Secretary has
11 approved or disapproved the application.

12 (d) PRIORITY.—In selecting eligible projects to re-
13 ceive a grant or a loan under the HIFIA pilot program,
14 the Secretary shall give priority to eligible projects that—

15 (1) will provide greater net impact in avoiding
16 or reducing emissions of greenhouse gases; and

17 (2) are sited in a manner that minimizes envi-
18 ronmental disturbance and other siting concerns, in-
19 cluding by being sited within, or adjacent to, existing
20 pipeline or other linear infrastructure corridors.

21 (e) CONSIDERATIONS.—In selecting eligible projects
22 to receive a grant or a loan under the HIFIA pilot pro-
23 gram, the Secretary, to the maximum extent practicable,
24 shall select projects—

1 (1) that are large-capacity, common carrier in-
2 frastructure;

3 (2) that enable geographical diversity in associ-
4 ated projects and supply chains to produce, use, or
5 store hydrogen, with the goal of enabling projects in
6 all major regions of the United States with current
7 hydrogen demand and potential future hydrogen de-
8 mand;

9 (3) that will generate the greatest benefit to
10 low-income or disadvantaged communities; and

11 (4) that will—

12 (A) maximize creation or retention of jobs
13 in the United States; and

14 (B) provide the highest job quality.

15 (f) LOANS.—

16 (1) IN GENERAL.—In carrying out the HIFIA
17 pilot program, the Secretary shall make loans to eli-
18 gible entities, the proceeds of which shall be used to
19 finance eligible projects.

20 (2) INTEREST RATE.—The interest rate of a
21 loan under the HIFIA pilot program shall be not
22 less than the interest rate on United States Treas-
23 ury securities of a similar maturity to the maturity
24 of the loan on the date of closing on the loan.

1 (3) MATURITY DATE.—The final maturity date
2 of a loan provided under the HIFIA pilot program
3 shall be the date that is 30 years after the date of
4 substantial completion of the applicable eligible
5 project.

6 (4) REPAYMENT.—

7 (A) IN GENERAL.—The Secretary shall es-
8 tablish a repayment schedule for each loan pro-
9 vided under the HIFIA pilot program.

10 (B) COMMENCEMENT.—Repayment of a
11 loan provided under the HIFIA pilot program
12 shall commence on the date of substantial com-
13 pletion of the applicable eligible project for
14 which the loan was provided.

15 (C) DEFERRAL OF REPAYMENT.—If, at
16 any time during the 5-year period beginning on
17 the date of substantial completion of an eligible
18 project, the project is unable to generate suffi-
19 cient revenues in excess of reasonable and nec-
20 essary operating expenses to pay the scheduled
21 loan repayments of principal and interest on the
22 loan, the Secretary may allow the borrower to
23 defer repayment of the loan until the end of
24 that 5-year period.

25 (5) REQUIREMENTS.—

1 (A) CREDITWORTHINESS.—

2 (i) IN GENERAL.—Each obligor with
3 respect to a loan provided for an eligible
4 project under the HIFIA pilot program
5 shall be creditworthy, such that there ex-
6 ists a reasonable prospect of repayment of
7 the principal and interest on the loan, as
8 determined by the Secretary under clause
9 (ii).

10 (ii) REASONABLE PROSPECT OF RE-
11 PAYMENT.—The Secretary shall base a de-
12 termination of whether there is a reason-
13 able prospect of repayment under clause (i)
14 on a comprehensive evaluation of whether
15 the obligor has a reasonable prospect of re-
16 paying the loan for the eligible project, in-
17 cluding evaluation of—

18 (I) the forecast of noncontractual
19 cash flows supported by market pro-
20 jections from reputable sources, as de-
21 termined by the Secretary, and cash
22 sweeps or other structural enhance-
23 ments;

24 (II) the strength of the contrac-
25 tual terms of an eligible project (if

1 available for the applicable market
2 segment);

3 (III) the projected financial
4 strength of the obligor—

5 (aa) at the time of loan
6 close; and

7 (bb) throughout the loan
8 term, including after the project
9 is completed;

10 (IV) the financial strength of the
11 investors and strategic partners of the
12 obligor, if applicable; and

13 (V) other financial metrics and
14 analyses that are relied on by the pri-
15 vate lending community and nation-
16 ally recognized credit rating agencies,
17 as determined to be appropriate by
18 the Secretary.

19 (B) DEDICATED SOURCE OF REVENUE.—

20 An eligible project for which a loan is provided
21 under the HIFLA pilot program shall have a
22 dedicated source of revenue separate from any
23 financial assistance received under the HIFLA
24 pilot program.

25 (g) USE OF FINANCIAL ASSISTANCE.—

1 (1) IN GENERAL.—A grant or loan provided
2 under the HIFIA pilot program may be used for any
3 eligible project costs.

4 (2) ELIGIBLE ACTIVITIES.—A grant or loan
5 provided under the HIFIA pilot program may be
6 used to carry out any of the following activities with
7 respect to an eligible project:

8 (A) Development phase activities, includ-
9 ing—

- 10 (i) planning;
- 11 (ii) preliminary engineering;
- 12 (iii) design;
- 13 (iv) environmental review;
- 14 (v) revenue forecasting; and
- 15 (vi) other preconstruction activities.

16 (B) Construction, reconstruction, rehabili-
17 tation, and replacement activities, including the
18 training of construction personnel in handling
19 and safety.

20 (C) Acquisition of—

- 21 (i) real property or an interest in real
22 property; or
- 23 (ii) equipment.

24 (D) Environmental mitigation activities.

1 (E) Activities relating to construction con-
2 tingencies.

3 (h) FEDERAL REQUIREMENTS.—

4 (1) IN GENERAL.—Nothing in this section su-
5 persedes the applicability of any other requirement
6 under Federal law (including regulations).

7 (2) NEPA.—Federal assistance may only be
8 provided under the HIFIA pilot program for a
9 project that has received an environmental categor-
10 ical exclusion, a finding of no significant impact, or
11 a record of decision under the National Environ-
12 mental Policy Act of 1969 (42 U.S.C. 4321 et seq.).

13 (i) LEAK DETECTION.—Each eligible entity that re-
14 ceives a loan or grant under the HIFIA pilot program
15 shall conduct—

16 (1) a hydrogen leakage monitoring, reporting,
17 and verification (also known as “MRV”) program;
18 and

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

21 (j) MAXIMUM FEDERAL INVOLVEMENT.—The max-
22 imum Federal share of an eligible project for which a loan
23 is provided under the HIFIA pilot program shall not ex-
24 ceed 80 percent of the eligible costs of the project.

1 (k) AMENDMENT.—Section 1703(b)(3) of the Energy
2 Policy Act of 2005 (42 U.S.C. 16513(b)(3)) is amended
3 by striking “Hydrogen fuel” and inserting “Hydrogen
4 technologies applicable to 1 or more end-use sectors, such
5 as power generation, transportation, aviation, storage, in-
6 dustrial, and chemicals, including hydrogen fuel”.

7 (l) TECHNICAL ASSISTANCE.—

8 (1) IN GENERAL.—The Secretary and the Na-
9 tional Laboratories may provide technical assistance
10 under the HIFIA pilot program to assess the grad-
11 ing and readiness of existing infrastructure to trans-
12 port, store, or deliver hydrogen with respect to infor-
13 mal State and regional planning for investments in
14 that grading and readiness.

15 (2) PRIORITY.—In providing technical assist-
16 ance under paragraph (1), the Secretary and the
17 National Laboratories shall prioritize—

18 (A) preexisting infrastructure corridors;

19 (B) geologic storage potential for hydro-
20 gen; and

21 (C) industrial clusters.

22 (m) REGULATORY ASSESSMENT TO ENCOURAGE HY-
23 DROGEN TRANSPORTATION INFRASTRUCTURE DEPLOY-
24 MENT.—Not later than 270 days after the date of enact-
25 ment of this Act, each of the Federal Energy Regulatory

1 Commission, the Surface Transportation Board, and the
2 Administrator of the Pipeline and Hazardous Materials
3 Safety Administration, in coordination with the Secretary,
4 shall—

5 (1) assess jurisdiction over the siting, construc-
6 tion, safety, and regulation of hydrogen transpor-
7 tation infrastructure, including, at a minimum, the
8 blending of hydrogen in natural gas pipelines;

9 (2) if that assessment indicates that additional
10 authority is needed to support the deployment of hy-
11 drogen transportation infrastructure, submit to Con-
12 gress a report describing the needed authority; and

13 (3) identify the eligibility of, and process for,
14 hydrogen transportation infrastructure to receive
15 cost recovery under the HIFIA pilot program
16 through Commission-regulated rates, Board-regu-
17 lated rates, or other applicable regulated rates, as
18 appropriate, for the transportation of hydrogen in
19 interstate commerce.

20 (n) AUTHORIZATION OF APPROPRIATIONS.—There is
21 authorized to be appropriated to the Secretary to carry
22 out the HIFIA pilot program \$100,000,000 for each of
23 fiscal years 2022 through 2026.