

117TH CONGRESS  
1ST SESSION

# H. R. 4891

To require the Secretary of Energy to establish a net-negative carbon dioxide baseload power development and commercialization program, and for other purposes.

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## IN THE HOUSE OF REPRESENTATIVES

JULY 30, 2021

Mr. MCKINLEY introduced the following bill; which was referred to the Committee on Energy and Commerce, and in addition to the Committee on Science, Space, and Technology, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

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## A BILL

To require the Secretary of Energy to establish a net-negative carbon dioxide baseload power development and commercialization 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 “Net-Negative Carbon  
5       Dioxide Baseload Power Act”.

6       **SEC. 2. FINDINGS.**

7       Congress finds the following:

1           (1) Electricity, like air, food, and water, is one  
2 of life's necessities.

3           (2) The Department of Energy properly con-  
4 cluded in its January 2017 report to Congress, titled  
5 "Valuation of Energy Security for the United  
6 States", the following:

7           (A) "Electricity is essential for supporting  
8 and sustaining nearly every sector of the mod-  
9 ern economy ranging from industrial output  
10 and services to national security."

11           (B) "A secure, reliable electric power sec-  
12 tor is necessary for economic growth, public  
13 safety, societal well-being and proper func-  
14 tioning of critical infrastructure, national secu-  
15 rity defense, lifeline networks, transportation  
16 communications, water and sewer."

17           (C) "Without access to reliable electricity  
18 much of the economy and all electricity-enabled  
19 critical infrastructure are at risk."

20           (3) The service and reliability of the electric  
21 grid of the United States depends significantly on  
22 baseload coal-fueled power plants.

23           (4) Communities across the Nation are depend-  
24 ent upon, for electricity supply and their economic

1 well-being, coal-fueled power plants and a healthy  
2 coal supply chain industry.

3 (5) Power plants, co-fueled by coal and bio-  
4 mass, that incorporate carbon capture, utilization,  
5 and storage, have net-negative carbon dioxide emis-  
6 sions.

7 (6) Baseload power plants, co-fueled by coal  
8 and biomass, that incorporate carbon capture can  
9 provide a steady supply of carbon dioxide for the  
10 manufacture of carbon-based chemicals, carbon-  
11 based building materials, and other value-added  
12 products which can use carbon dioxide.

13 (7) The Federal Government is likely to adopt  
14 climate change policies that abruptly drive reduction  
15 in greenhouse gas emissions. As a result, the Fed-  
16 eral Government should also incentivize the commer-  
17 cialization of net-negative carbon dioxide power  
18 plant technology to achieve emissions reduction tar-  
19 gets, improve the reliability of the United States  
20 electricity grid, and protect coal communities from  
21 devastating economic loss.

22 (8) The United States should lead the world in  
23 developing 21st century net-negative baseload power  
24 technologies that will allow developing countries to  
25 continue to use their domestic energy resources,

1 meet climate goals, and provide a steady source of  
2 carbon dioxide for carbon-based products that con-  
3 tribute to economic growth and social development.

4 **SEC. 3. ESTABLISHMENT OF A NET-NEGATIVE CARBON DI-**  
5 **OXIDE BASELOAD DEVELOPMENT AND COM-**  
6 **MERCIALIZATION POWER PROGRAM.**

7 (a) IN GENERAL.—The Energy Policy Act of 2005  
8 (42 U.S.C. 16291 et seq.) is amended by adding at the  
9 end of subtitle F of title IX, the following:

10 **“SEC. 970. NET-NEGATIVE CARBON DIOXIDE BASELOAD**  
11 **POWER DEVELOPMENT AND COMMER-**  
12 **CIALIZATION PROGRAM.**

13 “(a) DEFINITIONS.—

14 “(1) CONSTRUCTION PHASE.—The term ‘con-  
15 struction phase’ means, with respect to an eligible  
16 project, the period between a project’s final invest-  
17 ment decision and commencement of commercial op-  
18 erations.

19 “(2) ELIGIBLE PROJECT.—The term ‘eligible  
20 project’ means a project to design, develop, con-  
21 struct, and operate a combustion- or gasification-  
22 based baseload electricity generating project, which  
23 meets the criteria published under subsection (c)  
24 and, when operating, has net-negative carbon dioxide  
25 emissions.

1           “(3) FINAL INVESTMENT DECISION.—The term  
2           ‘final investment decision’ means, with respect to an  
3           eligible project, the time in the project planning  
4           process when the decision to make major financial  
5           commitments is taken.

6           “(4) FUEL SUPPLY CHAIN.—The term ‘fuel  
7           supply chain’ means, with respect to an eligible  
8           project, the principal industrial activities associated  
9           with the production, processing, storage, and trans-  
10          portation of fuel to the eligible project.

11          “(5) NET-NEGATIVE CARBON DIOXIDE EMIS-  
12          SIONS.—The term ‘net-negative carbon dioxide emis-  
13          sions’ means that the annual amount of carbon diox-  
14          ide emitted by an eligible project, including the  
15          project’s fuel supply chain, conversion of fuel to elec-  
16          tricity and co-products, carbon capture and storage,  
17          and other directly associated onsite activities, less  
18          the amount of carbon dioxide permanently stored by  
19          the project including the project’s fuel supply chain,  
20          conversion of fuel to electricity and co-products, car-  
21          bon capture and storage, and other directly associ-  
22          ated onsite activities, is a negative amount.

23          “(6) NON-ROUTINE EVENT.—The term ‘non-  
24          routine event’ means, with respect to a coal-fueled  
25          power plant, an event, typically not planned, that

1 interrupts routine operation, including equipment  
2 failure, fuel supply chain disruption, and pipeline  
3 interruption.

4 “(7) OPERATIONS PHASE.—The term ‘oper-  
5 ations phase’ means, with respect to an eligible  
6 project, the period between commencement of com-  
7 mercial operations and permanent cessation of com-  
8 mercial operations.

9 “(8) PROJECT CONCEPT STUDY PHASE.—The  
10 term ‘project concept study phase’ means, with re-  
11 spect to an eligible project, a study conducted prior  
12 to the project development phase, to develop—

13 “(A) the basic project concept;

14 “(B) high-level project economics;

15 “(C) a description of the technology or  
16 technologies that will be used for the eligible  
17 project;

18 “(D) a compilation of the required permits  
19 and plan for securing them;

20 “(E) project partners; and

21 “(F) project plans, including schedules.

22 “(9) PROJECT DEVELOPMENT PHASE.—The  
23 term ‘project development phase’ means, with re-  
24 spect to an eligible project, the period between com-  
25 pletion of the project concept study and the final in-

1 vestment decision. The project development phase  
2 includes, with respect to an eligible project—

3 “(A) engineering design work;

4 “(B) legal work;

5 “(C) supplemental surface and subsurface  
6 rights acquisition;

7 “(D) site-specific geologic characterization  
8 work;

9 “(E) permitting;

10 “(F) stakeholder engagement; and

11 “(G) other activities necessary to support a  
12 successful final investment decision on the eligi-  
13 ble project.

14 “(10) ROUTINE OPERATION.—The term ‘rou-  
15 tine operation’ means, with respect to a coal-fueled  
16 power plant, typically expected operation of such  
17 coal-fueled power plant, including start-ups, regular  
18 operations, planned shutdowns, and maintenance.

19 “(b) ESTABLISHMENT.—

20 “(1) IN GENERAL.—The Secretary shall estab-  
21 lish a net-negative carbon dioxide baseload power de-  
22 velopment and commercialization program to—

23 “(A) facilitate the redevelopment of exist-  
24 ing coal-fueled power plant sites with tech-  
25 nology that enables baseload coal- and biomass-

1           fueled power generation that has net-negative  
2           carbon dioxide emissions; and

3                   “(B) lessen the negative economic impact  
4           from climate change policies on communities  
5           dependent upon coal-fueled power plants.

6           “(2) ELIGIBLE PROJECTS.—In carrying out the  
7           program established under paragraph (1), the Sec-  
8           retary shall establish a competitive, merit-reviewed  
9           process, with multiple closing dates for applications  
10          that are not more than quarterly and not less than  
11          semiannually, to provide financial assistance to  
12          projects that will redevelop existing coal-fueled  
13          power plant sites to supply net-negative baseload  
14          power.

15          “(c) CRITERIA.—The Secretary shall publish criteria  
16          in the Federal Register for eligible projects, including  
17          that—

18                   “(1) eligible projects shall—

19                           “(A) involve redevelopment of existing  
20                           coal-fueled power plants at the same general  
21                           site;

22                           “(B) incorporate carbon capture, utiliza-  
23                           tion, and storage technology;

24                           “(C) provide baseload power generation;



1           “(D) use at least 70 percent coal, based on  
2 energy content, as fuel during the operations  
3 phase; and

4           “(E) include meaningful participation by  
5 the owner of the existing coal-fueled power  
6 plant asset to be redeveloped at the initiation of  
7 the concept study phase;

8           “(2) eligible projects may—

9           “(A) on an annual basis, use up to 30 per-  
10 cent biomass or other non-coal fuels combined,  
11 based on energy content;

12           “(B) buy verifiable carbon dioxide offsets  
13 to offset carbon dioxide emissions from non-  
14 routine events;

15           “(C) permanently store carbon dioxide on-  
16 site or offsite;

17           “(D) transport captured carbon dioxide via  
18 an onsite or offsite dedicate pipeline, or shared  
19 pipeline, to permanent storage;

20           “(E) co-produce carbon-free fuel, including  
21 hydrogen or ammonia, that is used as fuel on-  
22 site or offsite; and

23           “(F) incorporate direct air capture tech-  
24 nology, provided that the captured carbon diox-

1           ide is combined with the primary stream of car-  
2           bon dioxide captured at the plant; and

3           “(3) eligible projects may not buy carbon diox-  
4           ide offsets for carbon dioxide emissions from routine  
5           operations, other than offsets directly gained  
6           through the project’s fuel supply chain.

7           “(d) PROGRAM IMPLEMENTATION.—In implementing  
8           the program established under subsection (b), the Sec-  
9           retary shall—

10           “(1) make grants for project concept studies;

11           “(2) provide an opportunity for persons who  
12           have successfully completed a project concept study  
13           using a grant provided pursuant to paragraph (1) to  
14           enter into cooperative agreements for continuing  
15           Federal financial assistance for the subsequent  
16           phases of an eligible project;

17           “(3) structure the program to allow grant re-  
18           cipients for eligible projects to move without time  
19           lags between the project concept study phase and  
20           project development phase;

21           “(4) recognize eligible projects as projects meet-  
22           ing the requirements of section 1703(a)(1);

23           “(5) during the project development phase,  
24           based on satisfactory progress towards a final in-  
25           vestment decision and financial need, make one or

1 more conditional commitments to one or more incen-  
2 tives that will increase the likelihood of commercial  
3 financing, construction, and successful operation of  
4 the eligible project, including—

5 “(A) construction cost-sharing, including  
6 acquisition of additional surface and subsurface  
7 rights;

8 “(B) start-up cost-sharing;

9 “(C) a financially backed completion guar-  
10 antee;

11 “(D) a financially backed performance  
12 guarantee;

13 “(E) financially backed operating contracts  
14 for differences;

15 “(F) a loan guarantee;

16 “(G) indemnification for third-party claims  
17 against the eligible project and its asset owners,  
18 which are associated with a carbon dioxide stor-  
19 age site that has been certified as safely closed  
20 by the State with jurisdiction over the associ-  
21 ated injection wells, as long as Federal indem-  
22 nification does not substitute for indemnifica-  
23 tion or insurance programs reasonably available  
24 from third-party insurers; and

1           “(H) financial reserves or fees to support  
2           eligible projects acquiring insurance;

3           “(6) ensure close coordination and substantial  
4           information sharing between the offices of the De-  
5           partment that are administering such program and  
6           title XVII of this Act;

7           “(7) assess the economics, performance, and  
8           risks associated with each eligible project to provide  
9           reasonable assurances that the sum of incentives  
10          provided by the Department—

11           “(A) are adequate to give eligible projects  
12          an opportunity to attract commercial financing;  
13          and

14           “(B) do not over incentivize the eligible  
15          project;

16          “(8) establish one or more trust funds to hold  
17          the Federal funds associated with the program; and

18          “(9) deposit amounts made available to carry  
19          out the program into the trust funds established  
20          pursuant to paragraph (8) into the program trust  
21          within 90 days of receipt.

22          “(e) EXPENDITURES.—Amounts in the trust funds  
23          established pursuant to subsection (d)(8) shall be avail-  
24          able, without further appropriation, to carry out the pro-  
25          gram established under subsection (b).

1 “(f) COST-SHARING.—

2 “(1) PROJECT CONCEPT STUDIES.—The Sec-  
3 retary may provide grants of up to \$5,000,000 for  
4 project concept studies per eligible project.

5 “(2) COST SHARING FOR PROJECT DEVELOP-  
6 MENT PHASE.—The Secretary shall require success-  
7 ful applicants of eligible projects to provide 10 per-  
8 cent non-Federal cost-share for costs incurred for  
9 activities during the project development phase.

10 “(3) COST SHARING FOR CONSTRUCTION  
11 PHASE.—The Secretary shall determine the non-  
12 Federal cost-sharing for the construction phase of  
13 each eligible project based on project need, and the  
14 amount of Federal construction-related incentives  
15 provided, under this program and any construction-  
16 related Department loan guarantees, shall not ex-  
17 ceed the amount specified in section 1702(c).

18 “(4) LOAN GUARANTEE PROGRAM FEES.—Fees  
19 paid pursuant to section 1702(h) are considered an  
20 allowable expense of funds made available for the  
21 program established under subsection (b).

22 “(5) TAX CREDITS.—Federal tax credits shall  
23 not count against the maximum non-Federal cost-  
24 sharing provisions of this section.

1       “(g) AUTHORIZATION OF APPROPRIATIONS.—There  
2 is authorized to be appropriated to the Secretary for  
3 grants for project concept studies, and for administrative  
4 expenses for the program established under subsection (b),  
5 \$300,000,000 to remain available until expended.”.

6       (b) TABLE OF CONTENTS.—The table of contents for  
7 the Energy Policy Act of 2005 is amended by adding after  
8 the item relating to section 969D the following:

“Sec. 970. Net-negative carbon dioxide baseload power development and commercialization program.”.

○