Calendar No. 435

115TH CONGRESS 2D SESSION

S. 2602

To support carbon dioxide utilization and direct air capture research, to facilitate the permitting and development of carbon capture, utilization, and sequestration projects and carbon dioxide pipelines, and for other purposes.

IN THE SENATE OF THE UNITED STATES

March 22, 2018

Mr. Barrasso (for himself, Mr. Whitehouse, Mrs. Capito, Ms. Heitkamp, and Ms. Duckworth) introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

May 24, 2018

Reported by Mr. Barrasso, with an amendment

[Strike out all after the enacting clause and insert the part printed in italic]

A BILL

To support carbon dioxide utilization and direct air capture research, to facilitate the permitting and development of carbon capture, utilization, and sequestration projects and carbon dioxide pipelines, 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,

SECTION 1. SHORT TITLE.

2	This Act may be cited as the "Utilizing Significant
3	Emissions with Innovative Technologies Act" or the "USE
4	IT Act".
5	TITLE I—ENCOURAGING PROJ-
6	ECTS TO REDUCE EMISSIONS
7	SEC. 101. RESEARCH, INVESTIGATION, TRAINING, AND
8	OTHER ACTIVITIES.
9	Section 103 of the Clean Air Act (42 U.S.C. 7403)
10	is amended—
11	(1) in subsection $(e)(3)$, in the first sentence of
12	the matter preceding subparagraph (A), by striking
13	"percursors" and inserting "precursors"; and
14	(2) in subsection (g)—
15	(A) by redesignating paragraphs (1)
16	through (4) as subparagraphs (A) through (D),
17	respectively, and indenting appropriately;
18	(B) in the undesignated matter following
19	subparagraph (D) (as so redesignated)—
20	(i) in the second sentence, by striking
21	"The Administrator" and inserting the fol-
22	lowing:
23	"(5) COORDINATION AND AVOIDANCE OF DU-
24	PLICATION.—The Administrator"; and
25	(ii) in the first sentence, by striking
26	"Nothing" and inserting the following:

1	"(4) Effect of subsection.—Nothing";
2	(C) in the matter preceding subparagraph
3	(A) (as so redesignated)—
4	(i) in the third sentence, by striking
5	"Such program" and inserting the fol-
6	lowing:
7	"(3) Program inclusions.—The program
8	under this subsection";
9	(ii) in the second sentence—
10	(I) by inserting "States, institu-
11	tions of higher education," after "sei-
12	entists,"; and
13	(II) by striking "Such strategies
14	and technologies shall be developed"
15	and inserting the following:
16	"(2) PARTICIPATION REQUIREMENT.—Such
17	strategies and technologies described in paragraph
18	(1) shall be developed"; and
19	(iii) in the first sentence, by striking
20	"In carrying out" and inserting the fol-
21	lowing:
22	"(1) In General.—In carrying out"; and
23	(D) by adding at the end the following:
24	"(6) CERTAIN CARBON DIOXIDE ACTIVITIES.—

1	"(A) In General.—In carrying out para-
2	graph (3)(A) with respect to earbon dioxide, the
3	Administrator shall earry out the activities de-
4	scribed in each of subparagraphs (B) and (C).
5	"(B) DIRECT AIR CAPTURE RESEARCH.—
6	"(i) Definitions.—In this subpara-
7	graph:
8	"(I) BOARD.—The term 'Board'
9	means the Direct Air Capture Tech-
10	nology Advisory Board established by
11	elause (iii)(I).
12	"(H) DILUTE.—The term 'dilute'
13	means a concentration of less than 1
14	percent by volume.
15	"(III) DIRECT AIR CAPTURE.
16	"(aa) In GENERAL.—The
17	term 'direct air capture', with re-
18	spect to a facility, technology, or
19	system, means that the facility,
20	technology, or system uses car-
21	bon capture equipment to cap-
22	ture carbon dioxide directly from
23	the air.
24	"(bb) Exclusion.—The
25	term 'direct air capture' does not

1	include any facility, technology,
2	or system that captures carbon
3	dioxide
4	"(AA) that is delib-
5	erately released from a natu-
6	rally occurring subsurface
7	spring; or
8	"(BB) using natural
9	photosynthesis.
10	"(IV) INTELLECTUAL PROP-
1	ERTY.—The term 'intellectual prop-
12	erty' means—
13	"(aa) an invention that is
4	patentable under title 35, United
15	States Code; and
16	"(bb) any patent on an in-
17	vention described in item (aa).
18	"(ii) Technology Prizes.—
19	"(I) IN GENERAL.—Not later
20	than 1 year after the date of enact-
21	ment of the USE IT Act, the Admin-
22	istrator shall establish a program to
23	provide, and shall provide, financial
24	awards on a competitive basis for di-
25	rect air capture from media in which

1	the concentration of carbon dioxide is
2	dilute.
3	"(II) Duties.—In carrying out
4	this clause, the Administrator shall—
5	"(aa) subject to subclause
6	(III), develop specific require-
7	ments for—
8	"(AA) the competition
9	process; and
10	"(BB) monitoring and
11	verification procedures for
12	approved projects;
13	"(bb) offer financial awards
14	for a project designed—
15	"(AA) to capture more
16	than 10,000 tons of earbon
17	dioxide per year; and
18	"(BB) to be deployed
19	at a cost of less than \$200
20	per ton of carbon dioxide
21	captured; and
22	"(ee) to the maximum ex-
23	tent practicable, make financial
24	awards to geographically diverse
25	projects, including at least—

1	"(AA) 1 project in a
2	coastal State; and
3	"(BB) 1 project in a
4	rural State.
5	"(III) Public Participation.—
6	In carrying out subclause (II)(aa), the
7	Board shall—
8	"(aa) provide notice of and,
9	for a period of not less than 60
10	days, an opportunity for public
11	comment on, any draft or pro-
12	posed version of the requirements
13	described in subclause (H)(aa);
14	and
15	"(bb) take into account pub-
16	lie comments received in devel-
17	oping the final version of those
18	requirements.
19	"(IV) PEER REVIEW.—No finan-
20	cial awards may be provided under
21	this clause until the proposal for
22	which the award is sought has been
23	peer reviewed in accordance with such
24	standards for peer review as are es-
25	tablished by the Administrator.

1	"(iii) Direct air capture tech-
2	NOLOGY ADVISORY BOARD.—
3	"(I) ESTABLISHMENT.—There is
4	established an advisory board to be
5	known as the 'Direct Air Capture
6	Technology Advisory Board'.
7	"(II) Composition.—The Board
8	shall be composed of 9 members ap-
9	pointed by the Administrator, who
10	shall provide expertise in—
11	"(aa) climate science;
12	"(bb) physics;
13	"(ee) chemistry;
14	"(dd) biology;
15	"(ee) engineering;
16	"(ff) economics;
17	"(gg) business management;
18	and
19	"(hh) such other disciplines
20	as the Administrator determines
21	to be necessary to achieve the
22	purposes of this subparagraph.
23	"(III) TERM; VACANCIES.—

1	"(aa) TERM.—A member of
2	the Board shall serve for a term
3	of 6 years.
4	"(bb) VACANCIES.—A va-
5	eaney on the Board—
6	"(AA) shall not affect
7	the powers of the Board;
8	and
9	"(BB) shall be filled in
10	the same manner as the
11	original appointment was
12	made.
13	"(IV) INITIAL MEETING.—Not
14	later than 30 days after the date on
15	which all members of the Board have
16	been appointed, the Board shall hold
17	the initial meeting of the Board.
18	"(V) MEETINGS.—The Board
19	shall meet at the call of the Chair-
20	person.
21	"(VI) QUORUM. A majority of
22	the members of the Board shall con-
23	stitute a quorum, but a lesser number
24	of members may hold hearings.

1	"(VII) CHAIRPERSON AND VICE
2	CHARPERSON.—The Board shall se-
3	leet a Chairperson and Vice Chair-
4	person from among the members of
5	the Board.
6	"(VIII) COMPENSATION.—Each
7	member of the Board may be com-
8	pensated at not to exceed the daily
9	equivalent of the annual rate of basic
10	pay in effect for a position at level V
11	of the Executive Schedule under sec-
12	tion 5316 of title 5, United States
13	Code, for each day during which the
14	member is engaged in the actual per-
15	formance of the duties of the Board.
16	"(IX) Duties.—The Board shall
17	advise the Administrator on carrying
18	out the duties of the Administrator
19	under this subparagraph.
20	"(X) FACA.—The Federal Advi-
21	sory Committee Act (5 U.S.C. App.)
22	shall apply to the Board.
23	"(iv) Intellectual property.—
24	"(I) In General.—As a condi-
25	tion of receiving a financial award

1	under this subparagraph, an applicant
2	shall agree to vest the intellectual
3	property of the applicant derived from
4	the technology in 1 or more entities
5	that are incorporated in the United
6	States.
7	"(H) RESERVATION OF LI-
8	CENSE.—The United States—
9	"(aa) may reserve a non-
10	exclusive, nontransferable, irrev-
11	ocable, paid-up license, to have
12	practiced for or on behalf of the
13	United States, in connection with
14	any intellectual property de-
15	scribed in subclause (I); but
16	"(bb) shall not, in the exer-
17	eise of a license reserved under
18	item (aa), publicly disclose pro-
19	prietary information relating to
20	the license.
21	"(III) Transfer of title.
22	Title to any intellectual property de-
23	scribed in subclause (I) shall not be
24	transferred or passed, except to an
25	entity that is incorporated in the

1	United States, until the expiration of
2	the first patent obtained in connection
3	with the intellectual property.
4	"(v) AUTHORIZATION OF APPROPRIA-
5	TIONS.—There is authorized to be appro-
6	priated to carry out this subparagraph
7	\$25,000,000, to remain available until ex-
8	pended.
9	"(vi) Termination of Authority.—
10	The Board and all authority provided
11	under this subparagraph shall terminate
12	on December 31, 2028.
13	"(C) CARBON DIOXIDE UTILIZATION RE-
14	SEARCH.—
15	"(i) Definition of Carbon Dioxide
16	UTILIZATION.—In this subparagraph, the
17	term 'carbon dioxide utilization' refers to
18	technologies or approaches that lead to the
19	use of carbon dioxide—
20	"(I) through the fixation of ear-
21	bon dioxide through photosynthesis or
22	chemosynthesis, such as through the
23	growing of algae or bacteria;
24	"(II) through the chemical con-
25	version of earbon dioxide to a material

1	or chemical compound in which the
2	earbon dioxide is securely stored; or
3	"(III) through the use of earbon
4	dioxide for any other purpose for
5	which a commercial market exists, as
6	determined by the Administrator.
7	"(ii) Program.—The Administrator
8	shall carry out a research and development
9	program for carbon dioxide utilization to
10	promote technologies that transform car-
11	bon dioxide generated by industrial proc-
12	esses into a product of commercial value,
13	or as an input to products of commercial
14	value.
15	"(iii) Technical and financial as-
16	SISTANCE.—Not later than 2 years after
17	the date of enactment of the USE IT Act,
18	in earrying out this subsection, the Admin-
19	istrator shall support research and infra-
20	structure activities relating to earbon diox-
21	ide utilization by providing technical assist-
22	ance and financial assistance in accordance
23	with clause (iv).
24	"(iv) ELIGIBILITY.—To be eligible to
25	receive technical assistance and financial

1	assistance under clause (iii), a carbon diox-
2	ide utilization project shall—
3	"(I) have access to an emissions
4	stream generated by a stationary
5	source within the United States that
6	is capable of supplying not less than
7	250 metric tons per day of carbon di-
8	oxide for research;
9	"(II) have access to adequate
10	space for a laboratory and equipment
11	for testing small-scale carbon dioxide
12	utilization technologies, with onsite
13	access to larger test bays for scale-up;
14	and
15	"(III) have existing partnerships
16	with institutions of higher education,
17	private companies, States, or other
18	government entities.
19	"(v) Coordination.—In supporting
20	earbon dioxide utilization projects under
21	this paragraph, the Administrator shall
22	collaborate, as appropriate, with the head
23	of any relevant Federal agency, States, the
24	private sector, and institutions of higher
25	education to develop methods and tech-

1 nologies to account for	the carbon dioxide
2 emissions avoided by	the carbon dioxide
3 <u>utilization projects.</u>	
4 "(vi) AUTHORIZATI	ON OF APPROPRIA-
5 TIONS.—There is author	orized to be appro-
6 priated to earry out	this subparagraph
7 \$50,000,000, to remain	available until ex-
8 pended.	
9 "(D) REPORT ON CARI	BON DIOXIDE NON-
10 REGULATORY STRATEGIES	S AND TECH-
11 NOLOGIES.—	
12 <u>"(i)</u> In General	L.—Not less fre-
13 quently than once ever	y 2 years, the Ad-
14 ministrator shall submit	t to the Committee
on Environment and P	Tublic Works of the
Senate and the Commit	ttee on Energy and
17 Commerce of the House	e of Representatives
18 a report that describes—	_
19 <u>"(I)</u> the recip	oients of assistance
20 <u>under subparagra</u>	phs (B) and (C);
21 and	
22 "(H) a plan fo	or supporting addi-
tional nonregulate	ory strategies and
24 technologies that	could significantly
25 prevent carbon di	oxide emissions or

1	reduce earbon dioxide levels in the air
2	in conjunction with other Federal
3	agencies.
4	"(ii) INCLUSIONS.—The plan sub-
5	mitted under clause (i) shall include—
6	"(I) a methodology for evaluating
7	and ranking technologies based on the
8	ability of the technologies to cost ef-
9	fectively reduce carbon dioxide emis-
10	sions or carbon dioxide levels in the
11	air; and
12	"(II) a description of any nonair
13	related environmental or energy con-
14	siderations regarding the tech
15	nologies.".
16	TITLE II—IMPROVEMENT OF
17	PERMITTING PROCESS FOR
18	CARBON DIOXIDE CAPTURE
19	AND INFRASTRUCTURE PROJ.
20	ECTS
21	SEC. 201. INCLUSION OF CARBON CAPTURE INFRASTRUC
22	TURE PROJECTS.
23	Section 41001(6) of the FAST Act (42 U.S.C
24	4370m(6)) is amended—
25	(1) in subparagraph (A)—

1	(A) in the matter preceding clause (i), by
2	inserting "carbon capture," before "renewable
3	or conventional";
4	(B) in clause (i)(III), by striking "or" at
5	the end;
6	(C) by redesignating clause (ii) as clause
7	(iii); and
8	(D) by inserting after clause (i) the fol-
9	lowing:
10	"(ii) is covered by a programmatic
11	plan or environmental review developed for
12	the primary purpose of facilitating develop-
13	ment of earbon dioxide pipelines; or"; and
14	(2) by adding at the end the following:
15	"(C) Associated Definition.—For pur-
16	poses of subparagraph (A), the term 'construc-
17	tion of infrastructure for earbon capture' in-
18	cludes construction of any facility, technology,
19	or system that captures, utilizes, or sequesters
20	earbon dioxide emissions and earbon dioxide
21	pipelines.".

1	SEC. 202. DEVELOPMENT OF CARBON CAPTURE, UTILIZA-
2	TION, AND SEQUESTRATION PERMITTING
3	GUIDANCE AND REGIONAL PERMITTING
4	TASK FORCE.
5	(a) DEVELOPMENT OF GUIDANCE.—
6	(1) In GENERAL.—Not later than 1 year after
7	the date of enactment of this Act, the Chair of the
8	Council on Environmental Quality (referred to in
9	this section as the "Chair"), in consultation with the
10	Administrator of the Environmental Protection
11	Agency, the Secretary of Energy, the Secretary of
12	the Interior, and the head of any other relevant Fed-
13	eral agency (as determined by the President), shall
14	prepare guidance—
15	(A) to facilitate reviews associated with the
16	deployment of earbon capture, utilization, and
17	sequestration projects and carbon dioxide pipe-
18	lines; and
19	(B) that identifies current or emerging ac-
20	tivities that transform captured carbon dioxide
21	into a product of commercial value, or as an
22	input to products of commercial value.
23	(2) REQUIREMENTS.—The guidance under
24	paragraph (1) shall—
25	(A) address requirements under—

1	(i) the National Environmental Policy
2	Act of 1969 (42 U.S.C. 4321 et seq.);
3	(ii) the Federal Water Pollution Con-
4	trol Act (33 U.S.C. 1251 et seq.);
5	(iii) the Clean Air Act (42 U.S.C.
6	7401 et seq.);
7	(iv) the Safe Drinking Water Act (42
8	U.S.C. 300f et seq.);
9	(v) the Endangered Species Act of
10	1973 (16 U.S.C. 1531 et seq.);
11	(vi) division A of subtitle III of title
12	54, United States Code (formerly known
13	as the "National Historic Preservation
14	Aet");
15	(vii) the Migratory Bird Treaty Act
16	(16 U.S.C. 703 et seq.);
17	(viii) the Act of June 8, 1940 (16
18	U.S.C. 668 et seq.) (commonly known as
19	the "Bald and Golden Eagle Protection
20	Act''); and
21	(ix) any other Federal law that the
22	Chair determines to be appropriate; and
23	(B) include guidance to States for the de-
24	velopment of programmatic environmental re-
25	views under the National Environmental Policy

1	Act of 1969 (42 U.S.C. 4321 et seq.) for siting,
2	analyzing, and authorizing earbon dioxide pipe-
3	line networks.
4	(3) Submission; Publication.—The Chair
5	shall—
6	(A) submit the guidance under paragraph
7	(1) to the Committee on Environment and Pub-
8	lie Works of the Senate and the Committee on
9	Energy and Commerce of the House of Rep-
10	resentatives; and
11	(B) publish and make publicly available
12	the guidance under paragraph (1).
13	(b) Task Force.—
14	(1) ESTABLISHMENT.—Not later than 18
15	months after the date of enactment of this Act, the
16	Chair shall establish not less than 2 task forces,
17	which shall each cover a different geographical area
18	that faces differing demographic, land use, or geo-
19	logical issues, to identify permitting challenges that
20	permitting authorities and project developers and
21	operators face.
22	(2) Members and Selection.—
23	(A) In GENERAL.—The Chair shall—
24	(i) develop criteria for the selection of
25	members to each task force; and

1	(ii) select members for each task force
2	in accordance with clause (i) and subpara-
3	graph (B).
4	(B) Members.—Each task force—
5	(i) shall include not less than 1 rep-
6	resentative of each of—
7	(I) the Environmental Protection
8	Agency;
9	(II) the Department of Energy;
10	(III) the Department of the Inte-
11	rior;
12	(IV) any other Federal agency
13	the Chair determines to be appro-
14	priate;
15	(V) any State that requests par-
16	ticipation in the geographical area
17	covered by the task force;
18	(VI) industry; and
19	(VII) nongovernmental organiza-
20	tions; and
21	(ii) at the request of a Tribal or local
22	government, may include a representative
23	of

1	(I) not less than 1 local govern-
2	ment in the geographical area covered
3	by the task force; and
4	(II) not less than 1 Tribal gov-
5	ernment in the geographical area cov-
6	ered by the task force.
7	(3) MEETINGS.—
8	(A) IN GENERAL.—Each task force shall
9	meet not less than twice each year.
10	(B) Joint meeting.—To the maximum
11	extent practicable, the task forces shall meet
12	collectively not less than once each year.
13	(4) Duties.—Each task force shall—
14	(A) inventory existing or potential ap-
15	proaches to facilitate reviews associated with
16	the deployment of carbon capture, utilization
17	and sequestration projects and carbon dioxide
18	pipelines;
19	(B) develop common models for State-level
20	carbon dioxide pipeline regulation and oversight
21	guidelines that can be shared with States in the
22	geographical area covered by the task force;
23	(C) provide technical assistance to States
24	in the geographical area covered by the task
25	force in implementing regulatory requirements

1	and any models developed under subparagraph
2	(B); and
3	(D) develop guidance for relevant Federal
4	agencies on how to develop and research tech-
5	nologies that—
6	(i) ean eapture earbon dioxide; and
7	(ii) would be able to be deployed with-
8	in the region covered by the task force, in-
9	eluding any projects that have received
10	technical or financial assistance for re-
11	search under paragraph (6) of section
12	103(g) of the Clean Air Act (42 U.S.C.
13	7403(g)).
14	(5) Report.—Each year, each task force shall
15	prepare and submit to the Chair and to the other
16	task forces a report that includes—
17	(A) any recommendations for improve-
18	ments in the issuance or administration of Fed-
19	eral permits and other Federal authorizations
20	required under a law described in subsection
21	$\frac{(a)(2)(A)}{and}$
22	(B) any other nationally relevant informa-
23	tion that the task force has collected in carrying
24	out the duties under paragraph (4).

1	(6) EVALUATION AND REVISION.—The Chair
2	shall—
3	(A) evaluate the reports under paragraph
4	(5) and, as necessary, revise the guidance under
5	subsection (a); and
6	(B) submit to the Committee on Environ
7	ment and Public Works of the Senate, the Com
8	mittee on Energy and Commerce of the House
9	of Representatives, and relevant Federal agen
10	cies each year any revisions to the guidance
11	under subsection (a) and a report that describes
12	any recommendations for legislation, rules, or
13	revisions to rules that would address the issues
14	identified by the task forces under paragraph
15	(5).
16	SECTION 1. SHORT TITLE.
17	This Act may be cited as the "Utilizing Significan
18	Emissions with Innovative Technologies Act" or the "USE
19	$IT\ Act$ ".

1	TITLE	<i>I—ENCOURAGING</i>
2	PROJECT	TS TO REDUCE EMIS-
3	SIONS	
4	SEC. 101. RESEARC	H, INVESTIGATION, TRAINING, AND
5	OTHER	ACTIVITIES.
6	Section 103 of	the Clean Air Act (42 U.S.C. 7403) is
7	amended—	
8	(1) in sub-	section $(c)(3)$, in the first sentence of
9	the matter pred	ceding subparagraph (A), by striking
10	"percursors" an	d inserting "precursors"; and
11	(2) in subs	ection (g)—
12	(A)	by redesignating paragraphs (1)
13	through (4)) as subparagraphs (A) through (D),
14	respectivel y	y, and indenting appropriately;
15	(B) i	n the undesignated matter following
16	subparagra	ph (D) (as so redesignated)—
17	(i) in the second sentence, by striking
18	"The	Administrator" and inserting the fol-
19	lowing	<i>y</i> :
20	"(5) Coor	DINATION AND AVOIDANCE OF DUPLI-
21	CATION.—The A	dministrator''; and
22	(ii) in the first sentence, by striking
23	``Noth	ing" and inserting the following:
24	"(4) Effe	CT OF SUBSECTION.—Nothina":

1	(C) in the matter preceding subparagraph
2	(A) (as so redesignated)—
3	(i) in the third sentence, by striking
4	"Such program" and inserting the fol-
5	lowing:
6	"(3) Program inclusions.—The program
7	under this subsection";
8	(ii) in the second sentence—
9	(I) by inserting "States, institu-
10	tions of higher education," after "sci-
11	entists,"; and
12	(II) by striking "Such strategies
13	and technologies shall be developed"
14	and inserting the following:
15	"(2) Participation requirement.—Such
16	strategies and technologies described in paragraph (1)
17	shall be developed"; and
18	(iii) in the first sentence, by striking
19	"In carrying out" and inserting the fol-
20	lowing:
21	"(1) In general.—In carrying out"; and
22	(D) by adding at the end the following:
23	"(6) Certain carbon dioxide activities.—
24	"(A) In general.—In carrying out para-
25	graph (3)(A) with respect to carbon dioxide, the

1	Administrator shall carry out the activities de-
2	scribed in each of subparagraphs (B), (C), (D),
3	and (E) .
4	"(B) Direct air capture research.—
5	"(i) Definitions.—In this subpara-
6	graph:
7	"(I) Board.—The term 'Board'
8	means the Direct Air Capture Tech-
9	nology Advisory Board established by
10	$clause\ (iii)(I).$
11	"(II) DILUTE.—The term 'dilute'
12	means a concentration of less than 1
13	percent by volume.
14	"(III) Direct air capture.—
15	"(aa) In GENERAL.—The
16	term 'direct air capture', with re-
17	spect to a facility, technology, or
18	system, means that the facility,
19	technology, or system uses carbon
20	capture equipment to capture car-
21	bon dioxide directly from the air.
22	"(bb) Exclusion.—The term
23	'direct air capture' does not in-
24	clude any facility, technology, or

1	system that captures carbon diox-
2	ide—
3	"(AA) that is delib-
4	erately released from a natu-
5	rally occurring subsurface
6	spring; or
7	"(BB) using natural
8	photosynthesis.
9	"(IV) Intellectual prop-
10	ERTY.—The term 'intellectual property'
11	means—
12	"(aa) an invention that is
13	patentable under title 35, United
14	States Code; and
15	"(bb) any patent on an in-
16	vention described in item (aa).
17	"(ii) Technology prizes.—
18	"(I) In general.—Not later than
19	1 year after the date of enactment of
20	the USE IT Act, the Administrator, in
21	consultation with the Secretary of En-
22	ergy, shall establish a program to pro-
23	vide, and shall provide, financial
24	awards on a competitive basis for di-
25	rect air capture from media in which

1	the concentration of carbon dioxide is
2	dilute.
3	"(II) Duties.—In carrying out
4	this clause, the Administrator shall—
5	"(aa) subject to subclause
6	(III), develop specific require-
7	ments for—
8	"(AA) the competition
9	process; and
10	"(BB) monitoring and
11	verification procedures for
12	$approved\ projects;$
13	"(bb) offer financial awards
14	for a project designed—
15	"(AA) to capture more
16	than 10,000 tons of carbon
17	dioxide per year; and
18	"(BB) to be deployed at
19	a cost of less than \$200 per
20	ton of carbon dioxide cap-
21	tured; and
22	"(cc) to the maximum extent
23	practicable, make financial
24	awards to geographically diverse
25	projects, including at least—

1	"(AA) 1 project in a
2	coastal State; and
3	"(BB) 1 project in a
4	$rural\ State.$
5	"(III) Public participation.—
6	In carrying out subclause (II)(aa), the
7	$Administrator\ shall$ —
8	"(aa) provide notice of and,
9	for a period of not less than 60
10	days, an opportunity for public
11	comment on, any draft or pro-
12	posed version of the requirements
13	described in subclause (II)(aa);
14	and
15	"(bb) take into account pub-
16	lic comments received in devel-
17	oping the final version of those re-
18	quirements.
19	"(IV) PEER REVIEW.—No finan-
20	cial awards may be provided under
21	this clause until the proposal for which
22	the award is sought has been peer re-
23	viewed in accordance with such stand-
24	ards for peer review as are established
25	by the Administrator.

1	"(iii) Direct air capture tech-
2	NOLOGY ADVISORY BOARD.—
3	"(I) Establishment.—There is
4	established an advisory board to be
5	known as the 'Direct Air Capture
6	Technology Advisory Board'.
7	"(II) Composition.—The Board
8	shall be composed of 9 members ap-
9	pointed by the Administrator, who
10	shall provide expertise in—
11	"(aa) climate science;
12	"(bb) physics;
13	"(cc) chemistry;
14	$"(dd)\ biology;$
15	"(ee) engineering;
16	"(ff) economics;
17	"(gg) business management;
18	and
19	"(hh) such other disciplines
20	as the Administrator determines
21	to be necessary to achieve the pur-
22	poses of this subparagraph.
23	"(III) TERM; VACANCIES.—

1	"(aa) Term.—A member of
2	the Board shall serve for a term of
3	6 years.
4	"(bb) Vacancies.—A va-
5	cancy on the Board—
6	"(AA) shall not affect
7	the powers of the Board; and
8	"(BB) shall be filled in
9	the same manner as the
10	original appointment was
11	made.
12	"(IV) Initial meeting.—Not
13	later than 30 days after the date on
14	which all members of the Board have
15	been appointed, the Board shall hold
16	the initial meeting of the Board.
17	"(V) Meetings.—The Board
18	shall meet at the call of the Chair-
19	person.
20	"(VI) Quorum.—A majority of
21	the members of the Board shall con-
22	stitute a quorum, but a lesser number
23	of members may hold hearings.
24	"(VII) Chairperson and vice
25	CHAIRPERSON.—The Board shall select

1	a Chairperson and Vice Chairperson
2	from among the members of the Board.
3	"(VIII) Compensation.—Each
4	member of the Board may be com-
5	pensated at not to exceed the daily
6	equivalent of the annual rate of basic
7	pay in effect for a position at level V
8	of the Executive Schedule under section
9	5316 of title 5, United States Code, for
10	each day during which the member is
11	engaged in the actual performance of
12	the duties of the Board.
13	"(IX) Duties.—The Board shall
14	advise the Administrator on carrying
15	out the duties of the Administrator
16	under this subparagraph.
17	"(X) FACA.—The Federal Advi-
18	sory Committee Act (5 U.S.C. App.)
19	shall apply to the Board.
20	"(iv) Intellectual property.—
21	"(I) In general.—As a condi-
22	tion of receiving a financial award
23	under this subparagraph, an applicant
24	shall agree to vest the intellectual prop-
25	erty of the applicant derived from the

1	technology in 1 or more entities that
2	are incorporated in the United States.
3	"(II) RESERVATION OF LI-
4	CENSE.—The United States—
5	"(aa) may reserve a non-
6	exclusive, nontransferable, irrev-
7	ocable, paid-up license, to have
8	practiced for or on behalf of the
9	United States, in connection with
10	any intellectual property de-
11	scribed in subclause (I); but
12	"(bb) shall not, in the exer-
13	cise of a license reserved under
14	item (aa), publicly disclose pro-
15	prietary information relating to
16	$the\ license.$
17	"(III) Transfer of title.—
18	Title to any intellectual property de-
19	scribed in subclause (I) shall not be
20	transferred or passed, except to an en-
21	tity that is incorporated in the United
22	States, until the expiration of the first
23	patent obtained in connection with the
24	$intellectual\ property.$

1	"(v) Authorization of Appropria-
2	TIONS.—There is authorized to be appro-
3	priated to carry out this subparagraph
4	\$25,000,000, to remain available until ex-
5	pended.
6	"(vi) Termination of Authority.—
7	The Board and all authority provided
8	under this subparagraph shall terminate on
9	December 31, 2028.
10	"(C) Carbon dioxide utilization re-
11	SEARCH.—
12	"(i) Definition of carbon dioxide
13	UTILIZATION.—In this subparagraph, the
14	term 'carbon dioxide utilization' refers to
15	technologies or approaches that lead to the
16	use of carbon dioxide—
17	"(I) through the fixation of carbon
18	dioxide through photosynthesis or
19	chemosynthesis, such as through the
20	growing of algae or bacteria;
21	"(II) through the chemical conver-
22	sion of carbon dioxide to a material or
23	chemical compound in which the car-
24	bon dioxide is securely stored; or

1	"(III) through the use of carbon
2	dioxide for any other purpose for
3	which a commercial market exists, as
4	determined by the Administrator.
5	"(ii) Program.—The Administrator,
6	in consultation with the Secretary of En-
7	ergy, shall carry out a research and devel-
8	opment program for carbon dioxide utiliza-
9	tion to promote existing and new tech-
10	nologies that transform carbon dioxide gen-
11	erated by industrial processes into a prod-
12	uct of commercial value, or as an input to
13	products of commercial value.
14	"(iii) Technical and financial as-
15	SISTANCE.—Not later than 2 years after the
16	date of enactment of the USE IT Act, in
17	carrying out this subsection, the Adminis-
18	trator, in consultation with the Secretary of
19	Energy, shall support research and infra-
20	structure activities relating to carbon diox-
21	ide utilization by providing technical assist-
22	ance and financial assistance in accordance
23	with clause (iv).
24	"(iv) Eligibility.—To be eligible to
25	receive technical assistance and financial

1	assistance under clause (iii), a carbon diox-
2	ide utilization project shall—
3	"(I) have access to an emissions
4	stream generated by a stationary
5	source within the United States that is
6	capable of supplying not less than 250
7	metric tons per day of carbon dioxide
8	for research;
9	"(II) have access to adequate
10	space for a laboratory and equipment
11	for testing small-scale carbon dioxide
12	utilization technologies, with onsite ac-
13	cess to larger test bays for scale-up;
14	and
15	"(III) have existing partnerships
16	with institutions of higher education,
17	private companies, States, or other
18	government entities.
19	"(v) Coordination.—In supporting
20	carbon dioxide utilization projects under
21	this paragraph, the Administrator shall
22	consult with the Secretary of Energy, and,
23	as appropriate, with the head of any other
24	relevant Federal agency, States, the private
25	sector, and institutions of higher education

1	to develop methods and technologies to ac-
2	count for the carbon dioxide emissions
3	avoided by the carbon dioxide utilization
4	projects, including the consideration of
5	lifecycle analysis developed pursuant to sec-
6	tion $45Q(f)(5)(B)$ of the Internal Revenue
7	Code of 1986.
8	"(vi) Authorization of Appropria-
9	TIONS.—There is authorized to be appro-
10	priated to carry out this subparagraph
11	\$50,000,000, to remain available until ex-
12	pended.
13	"(D) DEEP SALINE FORMATION REPORT.—
14	"(i) Definition of deep saline for-
15	MATION.—
16	"(I) In General.—In this sub-
17	paragraph, the term 'deep saline for-
18	mation' means a formation of sub-
19	surface geographically extensive sedi-
20	mentary rock layers saturated with
21	waters or brines that have a high total
22	dissolved solids content and that are
23	below the depth where carbon dioxide
24	can exist in the formation as a super-
25	$critical\ fluid.$

1	"(II) Clarification.—In this
2	subparagraph, the term 'deep saline
3	formation' does not include oil and gas
4	reservoirs.
5	"(ii) Report.—In consultation with
6	the Secretary of Energy, and, as appro-
7	priate, with the head of any other relevant
8	Federal agency and relevant stakeholders,
9	not later than 1 year after the date of enact-
10	ment of the USE IT Act, the Administrator
11	shall prepare, submit to Congress, and make
12	publicly available a report that includes—
13	$``(I)\ a\ comprehensive\ identifica-$
14	tion of potential risks and benefits to
15	project developers associated with in-
16	creased storage of carbon dioxide cap-
17	tured from stationary sources in deep
18	saline formations, using existing re-
19	search;
20	"(II) recommendations for man-
21	aging the potential risks identified
22	under subclause (I), including poten-
23	tial risks unique to public land; and
24	"(III) recommendations for Fed-
25	eral legislation or other policy changes

1	to mitigate any potential risks identi-
2	fied under subclause (I).
3	"(E) REPORT ON CARBON DIOXIDE NON-
4	REGULATORY STRATEGIES AND TECH-
5	NOLOGIES.—
6	"(i) In general.—Not less frequently
7	than once every 2 years, the Administrator
8	shall submit to the Committee on Environ-
9	ment and Public Works of the Senate and
10	the Committee on Energy and Commerce of
11	the House of Representatives a report that
12	describes—
13	"(I) the recipients of assistance
14	under subparagraphs (B) and (C); and
15	"(II) a plan for supporting addi-
16	tional nonregulatory strategies and
17	technologies that could significantly
18	prevent carbon dioxide emissions or re-
19	duce carbon dioxide levels in the air,
20	in conjunction with other Federal
21	agencies.
22	"(ii) Inclusions.—The plan sub-
23	mitted under clause (i) shall include—
24	``(I) a methodology for evaluating
25	and ranking technologies based on the

1	ability of the technologies to cost effec-
2	tively reduce carbon dioxide emissions
3	or carbon dioxide levels in the air; and
4	"(II) a description of any nonair-
5	related environmental or energy con-
6	siderations regarding the tech-
7	nologies.".
8	TITLE II—IMPROVEMENT OF
9	PERMITTING PROCESS FOR
10	CARBON DIOXIDE CAPTURE
11	AND INFRASTRUCTURE
12	PROJECTS
13	SEC. 201. INCLUSION OF CARBON CAPTURE INFRASTRUC-
14	TURE PROJECTS.
15	Section 41001(6) of the FAST Act (42 U.S.C.
16	4370m(6)) is amended—
17	(1) in subparagraph (A)—
18	(A) in the matter preceding clause (i), by
19	inserting "carbon capture," before "renewable or
20	conventional";
21	(B) in clause (i)(III), by striking "or" at
22	$the\ end;$
23	(C) by redesignating clause (ii) as clause
24	(iii); and

1	(D) by inserting after clause (i) the fol-
2	lowing:
3	"(ii) is covered by a programmatic
4	plan or environmental review developed for
5	the primary purpose of facilitating develop-
6	ment of carbon dioxide pipelines; or"; and
7	(2) by adding at the end the following:
8	"(C) Associated definition.—For pur-
9	poses of subparagraph (A), the term 'construc-
10	tion of infrastructure for carbon capture' in-
11	cludes construction of any facility, technology, or
12	system that captures, utilizes, or sequesters car-
13	bon dioxide emissions and carbon dioxide pipe-
14	lines.".
15	SEC. 202. DEVELOPMENT OF CARBON CAPTURE, UTILIZA-
16	TION, AND SEQUESTRATION REPORT, PER-
17	MITTING GUIDANCE, AND REGIONAL PERMIT-
18	TING TASK FORCE.
19	(a) Definition of Efficient, Orderly, and Re-
20	Sponsible.—In this section, the term "efficient, orderly,
21	and responsible" means, with respect to development or the
22	permitting process for carbon capture, utilization, and se-
23	questration projects and carbon dioxide pipelines, a process
24	that is completed in an expeditious manner while main-
25	taining environmental, health, and safety protections.

I	(b) KEPORT.—
2	(1) In general.—Not later than 180 days after
3	the date of enactment of this Act, the Chair of the
4	Council on Environmental Quality (referred to in
5	this section as the "Chair"), in consultation with the
6	Administrator of the Environmental Protection Agen-
7	cy, the Secretary of Energy, the Secretary of the Inte-
8	rior, the Executive Director of the Federal Permitting
9	Improvement Council, and the head of any other rel-
10	evant Federal agency (as determined by the Presi-
11	dent), shall prepare a report that—
12	(A) compiles all existing relevant Federal
13	permitting and review information and resources
14	for project applicants, agencies, and other stake-
15	holders interested in the deployment of carbon
16	capture, utilization, and sequestration projects
17	and carbon dioxide pipelines, including—
18	(i) the appropriate points of inter-
19	action with Federal agencies;
20	(ii) clarification of the permitting re-
21	sponsibilities and authorities among Fed-
22	eral agencies; and
23	(iii) best practices and templates for
24	permitting;

1	(B) inventories current or emerging activi-
2	ties that transform captured carbon dioxide into
3	a product of commercial value, or as an input
4	to products of commercial value;
5	(C) identifies gaps in the current Federal
6	regulatory framework for the deployment of car-
7	bon capture, utilization, and sequestration
8	projects and carbon dioxide pipelines;
9	(D) identifies Federal financing mecha-
10	nisms available to project developers, including
11	tax credits under section 45Q of the Internal
12	Revenue Code of 1986; and
13	(E) identifies any lifecycle analysis devel-
14	oped pursuant to section $45Q(f)(5)(B)$ of the In-
15	ternal Revenue Code of 1986.
16	(2) Submission; publication.—The Chair
17	shall—
18	(A) submit the report under paragraph (1)
19	to the Committee on Environment and Public
20	Works of the Senate and the Committee on En-
21	ergy and Commerce of the House of Representa-
22	tives; and
23	(B) as soon as practicable, make the report
24	publicly available.
25	(c) Guidance.—

1	(1) In General.—After submission of the report
2	under subsection (b)(2), but not later than 1 year
3	after the date of enactment of this Act, the Chair shall
4	submit guidance consistent with that report to all rel-
5	evant Federal agencies that—
6	(A) facilitates reviews associated with the
7	deployment of carbon capture, utilization, and
8	sequestration projects and carbon dioxide pipe-
9	lines; and
10	(B) supports the efficient, orderly, and re-
11	sponsible development of carbon capture, utiliza-
12	tion, and sequestration projects and carbon diox-
13	ide pipelines.
14	(2) Requirements.—
15	(A) In General.—The guidance under
16	paragraph (1) shall address requirements
17	under—
18	(i) the National Environmental Policy
19	Act of 1969 (42 U.S.C. 4321 et seq.);
20	(ii) the Federal Water Pollution Con-
21	trol Act (33 U.S.C. 1251 et seq.);
22	(iii) the Clean Air Act (42 U.S.C. 7401
23	$et \ seq.);$
24	(iv) the Safe Drinking Water Act (42
25	$U.S.C.\ 300f\ et\ seq.);$

1	(v) the Endangered Species Act of 1973
2	(16 U.S.C. 1531 et seq.);
3	(vi) division A of subtitle III of title
4	54, United States Code (formerly known as
5	the "National Historic Preservation Act");
6	(vii) the Migratory Bird Treaty Act
7	(16 U.S.C. 703 et seq.);
8	(viii) the Act of June 8, 1940 (16
9	U.S.C. 668 et seq.) (commonly known as the
10	"Bald and Golden Eagle Protection Act");
11	and
12	(ix) any other Federal law that the
13	Chair determines to be appropriate.
14	(B) Environmental reviews.—The guid-
15	ance under paragraph (1) shall include direction
16	to States and other interested parties for the de-
17	velopment of programmatic environmental re-
18	views under the National Environmental Policy
19	Act of 1969 (42 U.S.C. 4321 et seq.) for carbon
20	capture, utilization, and sequestration projects
21	and carbon dioxide pipelines.
22	(C) Public involvement.—The guidance
23	under paragraph (1) shall be subject to the pub-
24	lic notice, comment, and solicitation of informa-
25	tion procedures under section 1506.6 of title 40,

1	Code of Federal Regulations (or a successor regu-
2	lation).
3	(3) Submission; publication.—The Chair
4	shall—
5	(A) submit the guidance under paragraph
6	(1) to the Committee on Environment and Pub-
7	lic Works of the Senate and the Committee on
8	Energy and Commerce of the House of Rep-
9	resentatives; and
10	(B) as soon as practicable, make the guid-
11	ance publicly available.
12	(4) Evaluation.—The Chair shall—
13	(A) periodically evaluate the reports of the
14	$task\ forces\ under\ subsection\ (d)(5)\ and,\ as\ nec-$
15	essary, revise the guidance under paragraph (1);
16	and
17	(B) each year, submit to the Committee on
18	Environment and Public Works of the Senate,
19	the Committee on Energy and Commerce of the
20	House of Representatives, and relevant Federal
21	agencies a report that describes any rec-
22	ommendations for legislation, rules, revisions to
23	rules, or other policies that would address the
24	issues identified by the task forces under sub-
25	section $(d)(5)$.

1	(d) Task Force.—
2	(1) Establishment.—Not later than 18 months
3	after the date of enactment of this Act, the Chair shall
4	establish not less than 2 task forces, which shall each
5	cover a different geographical area with differing de-
6	mographic, land use, or geological issues—
7	(A) to identify permitting and other chal-
8	lenges and successes that permitting authorities
9	and project developers and operators face; and
10	(B) to improve the performance of the per-
11	mitting process and regional coordination for the
12	purpose of promoting the efficient, orderly, and
13	responsible development of carbon capture, utili-
14	zation, and sequestration projects and carbon di-
15	oxide pipelines.
16	(2) Members and Selection.—
17	(A) In general.—The Chair shall—
18	(i) develop criteria for the selection of
19	members to each task force; and
20	(ii) select members for each task force
21	in accordance with clause (i) and subpara-
22	graph(B).
23	(B) Members.—Each task force—
24	(i) shall include not less than 1 rep-
25	resentative of each of—

1	(I) the Environmental Protection
2	Agency;
3	(II) the Department of Energy;
4	(III) the Department of the Inte-
5	rior;
6	(IV) any other Federal agency the
7	Chair determines to be appropriate;
8	(V) any State that requests par-
9	ticipation in the geographical area
10	covered by the task force;
11	(VI) developers or operators of
12	carbon capture, utilization, and seques-
13	tration projects or carbon dioxide pipe-
14	lines; and
15	(VII) nongovernmental member-
16	ship organizations, the primary mis-
17	sion of which concerns protection of the
18	environment; and
19	(ii) at the request of a Tribal or local
20	government, may include a representative
21	of—
22	(I) not less than 1 local govern-
23	ment in the geographical area covered
24	by the task force; and

1	(II) not less than 1 Tribal govern-			
2	ment in the geographical area covered			
3	by the task force.			
4	(3) Meetings.—			
5	(A) In general.—Each task force shall			
6	meet not less than twice each year.			
7	(B) Joint meeting.—To the maximum ex			
8	tent practicable, the task forces shall meet collec			
9	tively not less than once each year.			
10	(4) Duties.—Each task force shall—			
11	(A) inventory existing or potential Federal			
12	and State approaches to facilitate reviews associ-			
13	ated with the deployment of carbon capture, uti-			
14	lization, and sequestration projects and carbon			
15	dioxide pipelines, including best practices that—			
16	(i) avoid duplicative reviews;			
17	(ii) engage stakeholders early in the			
18	permitting process; and			
19	(iii) make the permitting process effi-			
20	cient, orderly, and responsible.			
21	(B) develop common models for State-level			
22	carbon dioxide pipeline regulation and oversight			
23	guidelines that can be shared with States in the			
24	geographical area covered by the task force;			

1	(C) provide technical assistance to States in				
2	the geographical area covered by the task force in				
3	implementing regulatory requirements and any				
4	models developed under subparagraph (B);				
5	(D) inventory current or emerging activities				
6	that transform captured carbon dioxide into a				
7	product of commercial value, or as an input to				
8	products of commercial value;				
9	(E) identify gaps in the current Federal				
10	and State regulatory framework and in existing				
11	data for the deployment of carbon capture, utili-				
12	zation, and sequestration projects and carbon di-				
13	oxide pipelines;				
14	(F) identify Federal and State financing				
15	mechanisms available to project developers, in-				
16	cluding tax credits under section 45Q of the In-				
17	ternal Revenue Code of 1986;				
18	(G) identify any lifecycle analysis developed				
19	pursuant to section $45Q(f)(5)(B)$ of the Internal				
20	Revenue Code of 1986; and				
21	(H) develop recommendations for relevant				
22	Federal agencies on how to develop and research				
23	technologies that—				
24	(i) can capture carbon dioxide; and				

1	(ii) would be able to be deployed with				
2	in the region covered by the task force, in				
3	cluding any projects that have received tea				
4	nical or financial assistance for resear				
5	under paragraph (6) of section 103(g) of the				
6	Clean Air Act (42 U.S.C. 7403(g)).				
7	(5) Report.—Each year, each task force sho				
8	prepare and submit to the Chair and to the other task				
9	forces a report that includes—				
10	(A) any recommendations for improvements				
11	in efficient, orderly, and responsible issuance o				
12	administration of Federal permits and other				
13	Federal authorizations required under a law de-				
14	scribed in subsection $(c)(2)(A)$; and				
15	(B) any other nationally relevant informa-				
16	tion that the task force has collected in carrying				
17	out the duties under paragraph (4).				
18	(6) Evaluation.—Not later than December 31,				
19	2023, the Chair shall—				
20	(A) reevaluate the need for the task forces;				
21	and				
22	(B) submit to Congress a recommendation				
23	as to whether the task forces should continue.				

Calendar No. 435

115TH CONGRESS **S. 2602** 2D SESSION

A BILL

To support carbon dioxide utilization and direct air capture research, to facilitate the permitting and development of carbon capture, utilization, and sequestration projects and carbon dioxide pipelines, and for other purposes.

 $\label{eq:may-24,2018} \text{Reported with an amendment}$