

116TH CONGRESS
2D SESSION

S. 4228

To provide for the demonstration and deployment of water-energy technologies, and for other purposes.

IN THE SENATE OF THE UNITED STATES

JULY 20, 2020

Ms. MCSALLY introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

A BILL

To provide for the demonstration and deployment of water-energy technologies, 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 “Water-Energy Tech-
5 nology Demonstration and Deployment Act”.

6 **SEC. 2. DEFINITIONS.**

7 In this Act:

8 (1) CENTER.—The term “Center” means the
9 Western Water Resilience Center established under
10 section 4(a).

1 (2) ELIGIBLE DESALINATION PROJECT.—The
2 term “eligible desalination project” means a desali-
3 nation or salinity reduction facility or project—

4 (A) to which the Bureau of Reclamation
5 holds title;

6 (B) that is operated by the Bureau of Rec-
7 lamation; or

8 (C) with respect to which the Bureau of
9 Reclamation is providing financial assistance.

10 (3) ELIGIBLE ENERGY EFFICIENCY PROJECT.—
11 The term “eligible energy efficiency project” means
12 the design, study, construction, expansion, upgrade,
13 or capital repair of a water delivery system to reduce
14 energy consumption associated with water delivery.

15 (4) ELIGIBLE REUSE PROJECT.—The term “eli-
16 gible reuse project” means a non-Federal water
17 reuse and recycling facility or project that contrib-
18 utes water to a region served by 1 or more projects
19 of the Bureau of Reclamation.

20 (5) NATIONAL LABORATORY.—The term “Na-
21 tional Laboratory” has the meaning given the term
22 in section 2 of the Energy Policy Act of 2005 (42
23 U.S.C. 15801).

24 (6) PROGRAM.—The term “program” means
25 the pilot program established under section 3(a)(1).

1 (7) RECLAMATION STATE.—The term “Rec-
 2 lamation State” has the meaning given the term in
 3 section 4014 of the Water Infrastructure Improve-
 4 ments for the Nation Act (43 U.S.C. 390b note;
 5 Public Law 114–322).

6 (8) SECRETARY.—The term “Secretary” means
 7 the Secretary of the Interior.

8 (9) SELECTED PROJECT.—The term “selected
 9 project” means an eligible desalination project, eligi-
 10 ble reuse project, or eligible energy efficiency project
 11 selected for the program under section 3(b).

12 **SEC. 3. WATER-ENERGY TECHNOLOGY DEPLOYMENT PILOT**
 13 **PROGRAM.**

14 (a) ESTABLISHMENT.—

15 (1) IN GENERAL.—To advance Federal energy-
 16 water nexus research, technology development, pol-
 17 icy, and other goals by combining the resources of
 18 the Department of the Interior and Department of
 19 Energy, the Secretary, in consultation with the Sec-
 20 retary of Energy, shall establish within the Bureau
 21 of Reclamation a pilot program that provides for the
 22 participation of the Secretary of Energy in selected
 23 projects, in accordance with paragraph (2).

1 (2) PARTICIPATION OF SECRETARY OF ENERGY
2 IN SELECTED PROJECTS.—The Secretary of Energy
3 shall participate in a selected project by—

4 (A) identifying research and programs at
5 the Department of Energy (including the Na-
6 tional Laboratories) applicable to the selected
7 project;

8 (B) contributing funds to carry out the se-
9 lected project; or

10 (C) carrying out modeling, planning, de-
11 signing, or construction activities with respect
12 to the selected project.

13 (3) AGREEMENT.—The Secretary and the Sec-
14 retary of Energy shall enter into an agreement de-
15 scribing the responsibilities of the Secretary and the
16 Secretary of Energy, respectively, with respect to,
17 and the sources of funding for, each selected project.

18 (4) REQUIRED CONSULTATION.—The Secretary
19 shall consult with the Secretary of Energy with re-
20 spect to any activities carried out by the Secretary
21 of Energy under the program.

22 (b) SELECTION OF PROJECTS FOR PROGRAM.—

23 (1) ELIGIBLE DESALINATION PROJECTS.—

24 (A) IN GENERAL.—The Secretary shall se-
25 lect not fewer than 2, but not more than 5, eli-

1 gible desalination projects for the program that
2 the Secretary determines would—

3 (i) benefit from the participation of
4 the Secretary of Energy; and

5 (ii) advance the objectives of existing
6 research and development, technology com-
7 mercialization, or grant programs being
8 carried out by the Secretary of Energy (in-
9 cluding at the National Laboratories) by—

10 (I) lowering energy costs;

11 (II) increasing the amount or ef-
12 ficiency of salt removal;

13 (III) reducing salt discharge into
14 waterways;

15 (IV) improving water supply reli-
16 ability; or

17 (V) demonstrating a new tech-
18 nology or process.

19 (B) INCLUSIONS.—Of the eligible desalina-
20 tion projects selected under subparagraph
21 (A)—

22 (i) not less than 1 shall be an eligible
23 desalination project conducted in the upper
24 Colorado River Basin that—

(I) is authorized under the Colorado River Basin Salinity Control Act (43 U.S.C. 1571 et seq.); and

(II) uses zero liquid discharge technology to remove naturally occurring salinity from entering a Colorado River Tributary; and

(ii) not less than 1 shall be an eligible desalination project conducted in the lower Colorado River Basin that—

(I)(aa) is authorized under the Colorado River Basin Salinity Control Act (43 U.S.C. 1571 et seq.); and

(bb) processes water to remove salt and returns the water to the main-stem of the Colorado River; or

(II) would provide similar amounts of water to support Colorado River drought contingency operations, consistent with the Colorado River Drought Contingency Plan Authorization Act (Public Law 116–14; 133 Stat. 850), by improving efficiency in deliveries of Colorado River water, consistent with the treaty obligation

1 of the United States to Mexico under
 2 the Agreement approving Minute 242
 3 of the International Boundary and
 4 Water Commission setting forth a
 5 permanent and definitive solution to
 6 the international problem of the salin-
 7 ity of the Colorado River, entered into
 8 force August 30, 1973 (24 UST
 9 1968; TIAS 7708).

10 (2) ELIGIBLE ENERGY EFFICIENCY
 11 PROJECTS.—The Secretary shall select not more
 12 than 5 eligible energy efficiency projects for the pro-
 13 gram that the Secretary determines would—

14 (A) benefit from the participation of the
 15 Secretary of Energy; and

16 (B) advance the objectives of existing re-
 17 search and development, technology commer-
 18 cialization, or grant programs being carried out
 19 by the Secretary of Energy (including at the
 20 National Laboratories) by—

21 (i) improving the efficiency of existing
 22 surface or groundwater pumps;

23 (ii) developing or improving a surface
 24 water conveyance that reduces surface or
 25 groundwater pumping;

- 1 (iii) reducing energy use needed for
- 2 water treatment;
- 3 (iv) demonstrating a new technology
- 4 or process; or
- 5 (v) incorporating energy generation
- 6 into water conveyance systems.

7 (3) ELIGIBLE REUSE PROJECTS.—The Sec-
8 retary shall select not more than 5 eligible reuse
9 projects for the program that the Secretary deter-
10 mines would—

11 (A) benefit from the participation of the
12 Secretary of Energy; and

13 (B) advance the objectives of existing re-
14 search and development, technology commer-
15 cialization, or grant programs being carried out
16 by the Secretary of Energy (including at the
17 National Laboratories) by—

- 18 (i) lowering energy costs;
- 19 (ii) improving water supply reliability;

20 or

21 (iii) demonstrating—

22 (I) a new technology or process;

23 or

24 (II) a combination of new and ex-
25 isting technologies or processes.

1 (4) SUBMISSION OF LIST OF SELECTED
2 PROJECTS.—As soon as practicable after the date of
3 completion of the selection process under paragraphs
4 (1) through (3), the Secretary shall submit a list of
5 the selected projects to—

6 (A) the Secretary of Energy;

7 (B) the Committee on Natural Resources
8 of the House of Representatives;

9 (C) the Committee on Energy and Com-
10 merce of the House of Representatives; and

11 (D) the Committee on Energy and Natural
12 Resources of the Senate.

13 (c) FUNDING.—

14 (1) USE OF EXISTING FUNDS.—Out of any
15 amounts made available to the Secretary and the
16 Secretary of Energy that are not otherwise obli-
17 gated, the Secretary and the Secretary of Energy,
18 respectively, shall use such sums as are necessary to
19 carry out this section.

20 (2) TREATMENT OF FUNDS CONTRIBUTED BY
21 THE SECRETARY OF ENERGY.—Amounts contributed
22 by the Secretary of Energy to a selected project
23 under paragraph (1) shall be nonreimbursable.

24 (3) TREATMENT OF FUNDS CONTRIBUTED BY
25 SECRETARY.—Amounts contributed by the Secretary

1 to a selected project under paragraph (1) shall be
2 reimbursed in accordance with any applicable con-
3 tract or agreement.

4 (d) EFFECT.—Nothing in this section—

5 (1) creates, impairs, alters, or supersedes a
6 Federal or State water right or interstate compact;
7 or

8 (2) affects or modifies any authorized purpose
9 of a selected project.

10 **SEC. 4. WESTERN WATER RESILIENCE CENTER.**

11 (a) ESTABLISHMENT.—Not later than 180 days after
12 the date of enactment of this Act, the Secretary and the
13 Secretary of Energy shall enter into a partnership with
14 1 or more institutions of higher education to establish a
15 center to conduct research on the development, commer-
16 cialization, and deployment of innovations in water and
17 energy technologies, to be known as the “Western Water
18 Resilience Center”.

19 (b) AUTHORIZED ACTIVITIES.—The Center shall con-
20 duct research on—

21 (1) data collection, modeling, and advanced
22 data analytics of precipitation, runoff, and water re-
23 sources at the regional level;

1 (2) the development of technology and systems
2 that improve management and assist in the develop-
3 ment of water infrastructure;

4 (3) addressing—

5 (A) Tribal water supply and quality; and

6 (B) any other factors that affect the reli-
7 able access of Indian Tribes to water resources;
8 and

9 (4) the establishment of a, or a partnership
10 with an existing, water technology accelerator that—

11 (A) would bring water innovations to mar-
12 ket by addressing multiple phases of technology
13 development, including validation, development,
14 startup, and scaling; and

15 (B) has an emphasis on binational collabo-
16 ration between the United States and Middle
17 Eastern countries, such as Israel.

18 (c) PRIORITY.—In entering into a partnership under
19 subsection (a), the Secretary and the Secretary of Energy
20 shall give priority to a partnership with an institution of
21 higher education that—

22 (1) has experience conducting research on water
23 scarcity issues;

24 (2) is located in a Reclamation State;

- 1 (3) has an established background of coordi-
2 nating with Indian Tribes on water issues; and
3 (4) is located in a State that has an established
4 presence in Israel for the promotion of trade.

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