

116TH CONGRESS  
1ST SESSION

# H. R. 34

To ensure consideration of water intensity in the Department of Energy’s energy research, development, and demonstration programs to help guarantee efficient, reliable, and sustainable delivery of energy and clean water resources.

---

## IN THE HOUSE OF REPRESENTATIVES

JANUARY 3, 2019

Ms. JOHNSON of Texas (for herself and Mr. LUCAS) introduced the following bill; which was referred to the Committee on Science, Space, and Technology

---

## A BILL

To ensure consideration of water intensity in the Department of Energy’s energy research, development, and demonstration programs to help guarantee efficient, reliable, and sustainable delivery of energy and clean water resources.

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 “Energy and Water Re-  
5 search Integration Act of 2019”.

1 **SEC. 2. INTEGRATING ENERGY AND WATER RESEARCH.**

2 (a) IN GENERAL.—The Secretary of Energy shall in-  
3 tegrate water considerations into energy research, develop-  
4 ment, and demonstration programs and projects of the  
5 Department of Energy by—

6 (1) advancing energy and energy efficiency  
7 technologies and practices that meet the objectives  
8 of—

9 (A) minimizing freshwater withdrawal and  
10 consumption;

11 (B) increasing water use efficiency; and

12 (C) utilizing nontraditional water sources  
13 with efforts to improve the quality of the water  
14 from those sources;

15 (2) considering the effects climate variability  
16 may have on water supplies and quality for energy  
17 generation and fuel production; and

18 (3) improving understanding of the energy-  
19 water nexus.

20 (b) STRATEGIC PLAN.—

21 (1) IN GENERAL.—Not later than 12 months  
22 after the date of enactment of this Act, the Sec-  
23 retary shall develop a strategic plan identifying the  
24 research, development, and demonstration needs for  
25 Department programs and projects to carry out sub-  
26 section (a). The strategic plan shall include technical

1 milestones for achieving and assessing progress to-  
2 ward the objectives of subsection (a)(1).

3 (2) SPECIFIC CONSIDERATIONS.—In developing  
4 the strategic plan, the Secretary shall consider—

5 (A) new advanced cooling technologies for  
6 energy generation and fuel production tech-  
7 nologies;

8 (B) performance improvement of existing  
9 cooling technologies and cost reductions associ-  
10 ated with using those technologies;

11 (C) innovative water reuse, recovery, and  
12 treatment technologies in energy generation and  
13 fuel production;

14 (D) technology development for carbon  
15 capture and storage systems that utilize effi-  
16 cient water use design strategies;

17 (E) technologies that are life-cycle cost ef-  
18 fective;

19 (F) systems analysis and modeling of  
20 issues relating to the energy-water nexus;

21 (G) technologies to treat and utilize waste-  
22 water and produced waters discharged from oil,  
23 natural gas, coalbed methane, and any other  
24 substance to be used as an energy source;

1 (H) advanced materials for the use of non-  
2 traditional water sources for energy generation  
3 and fuel production;

4 (I) biomass production and utilization and  
5 the impact on hydrologic systems;

6 (J) technologies that reduce impacts on  
7 water from energy resource development;

8 (K) energy efficient technologies for water  
9 distribution, treatment, and collection systems;

10 (L) technologies for energy generation  
11 from water distribution, treatment, and collec-  
12 tion systems; and

13 (M) any other area of the energy-water  
14 nexus that the Secretary considers appropriate.

15 (3) COLLABORATION AND NONDUPLICATION.—

16 In developing the strategic plan, the Secretary shall  
17 coordinate and avoid duplication—

18 (A) with other Federal agencies operating  
19 related programs, if appropriate; and

20 (B) across programs and projects of the  
21 Department, including with those of the Na-  
22 tional Laboratories.

23 (4) RELEVANT INFORMATION AND REC-  
24 OMMENDATIONS.—In developing the strategic plan,  
25 the Secretary shall consider and incorporate, as ap-

1 appropriate, relevant information and recommenda-  
2 tions, including those of the National Water Avail-  
3 ability and Use Assessment Program under section  
4 9508(d) of the Omnibus Public Land Management  
5 Act of 2009 (42 U.S.C. 10368(d)).

6 (5) ADDITIONAL PARTICIPATION.—In devel-  
7 oping the strategic plan, the Secretary shall consult  
8 and coordinate with a diverse group of representa-  
9 tives from research and academic institutions, indus-  
10 try, and State and local governments who have ex-  
11 pertise in technologies and practices relating to the  
12 energy-water nexus.

13 (6) SUBMISSION TO CONGRESS.—Not later than  
14 12 months after the date of enactment of this Act,  
15 the Secretary shall submit to the Committee on  
16 Science, Space, and Technology of the House of  
17 Representatives and the Committee on Energy and  
18 Natural Resources of the Senate the strategic plan.

19 (7) UPDATING THE STRATEGIC PLAN.—Not  
20 later than 3 years after the date of enactment of  
21 this Act, and at least once every 5 years thereafter,  
22 the Secretary shall—

23 (A) utilize relevant information produced  
24 by Federal Government agencies, academia,

1 States, and industry to update the strategic  
2 plan;

3 (B) include in the updated strategic plan a  
4 description of the changes from the previous  
5 strategic plan and the rationale for such  
6 changes;

7 (C) include a review of progress made to-  
8 wards the milestones outlined in the previous  
9 strategic plan; and

10 (D) submit the updated strategic plan to  
11 the Committee on Science, Space, and Tech-  
12 nology of the House of Representatives and the  
13 Committee on Energy and Natural Resources of  
14 the Senate.

15 (c) **ADDITIONAL ACTIVITIES.**—The Secretary may  
16 provide for such additional research, development, and  
17 demonstration activities as appropriate to integrate water  
18 considerations into the research, development, and dem-  
19 onstration activities of the Department as described in  
20 subsection (a).

21 **SEC. 3. ENERGY-WATER OVERSIGHT AND COORDINATION.**

22 (a) **IN GENERAL.**—The Secretary, in coordination  
23 with other relevant Federal agencies, shall establish an  
24 Energy-Water Subcommittee of the Energy Advisory  
25 Board to promote and enable improved energy and water

1 resource data collection, reporting, and technological inno-  
2 vation. The Subcommittee shall consist of—

3 (1) representation from each program within  
4 the Department and each Federal agency that con-  
5 ducts research related to the energy-water nexus;  
6 and

7 (2) non-Federal members, including representa-  
8 tives of research and academic institutions, States,  
9 and industry, who have expertise in technologies and  
10 practices relating to the energy-water nexus.

11 (b) FUNCTIONS.—The Subcommittee shall—

12 (1) make recommendations on the development  
13 and integration of data collection and data commu-  
14 nication standards and protocols to agencies and en-  
15 tities currently engaged in collecting the data for the  
16 energy-water nexus;

17 (2) recommend ways to make improvements to  
18 Federal water use data to increase understanding of  
19 trends in energy generation and fuel production;

20 (3) recommend best practices for utilizing infor-  
21 mation from existing monitoring networks to provide  
22 nationally uniform water and energy use and infra-  
23 structure data; and

24 (4) conduct annual technical workshops, includ-  
25 ing at least 1 regional workshop annually, to facili-

1       tate information exchange among Federal, regional,  
2       State, local, and tribal governments and private sec-  
3       tor experts on technologies that encourage the con-  
4       servation and efficient use of water and energy.

5       (c) REPORTS.—Not later than 1 year after the date  
6       of enactment of this Act, and at least once every 2 years  
7       thereafter, the Subcommittee, through the Secretary, shall  
8       transmit to Congress a report on its findings and activities  
9       under this section.

10 **SEC. 4. MANDATES.**

11       Nothing in this Act shall be construed to require  
12       State, tribal, or local governments to take any action that  
13       may result in an increased financial burden to such gov-  
14       ernments by restricting the use of water by such govern-  
15       ments.

16 **SEC. 5. COORDINATION AND NONDUPLICATION.**

17       To the maximum extent practicable, the Secretary  
18       shall coordinate activities under this Act with other pro-  
19       grams of the Department and other Federal research pro-  
20       grams.

21 **SEC. 6. DEFINITIONS.**

22       In this Act:

23               (1) DEPARTMENT.—The term “Department”  
24       means the Department of Energy.



1           (2) ENERGY-WATER NEXUS.—The term “en-  
2           ergy-water nexus” means the energy required to pro-  
3           vide reliable water supplies and the water required  
4           to provide reliable energy supplies throughout the  
5           United States.

6           (3) SECRETARY.—The term “Secretary” means  
7           the Secretary of Energy.

8           (4) SUBCOMMITTEE.—The term “Sub-  
9           committee” means the Energy-Water Subcommittee  
10          of the Energy Advisory Board established under sec-  
11          tion 3(a).

○