

COMMITTEE PRINT OF H.R. 34

[As forwarded by the Subcommittee on Energy of the
Committee on Science, Space, Technology on March 27, 2019]

1 **SECTION 1. SHORT TITLE.**

2 This Act may be cited as the “Energy and Water Re-
3 search Integration Act of 2019”.

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

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

9 (1) advancing energy and energy efficiency
10 technologies and practices that meet the objectives
11 of—

12 (A) minimizing freshwater withdrawal and
13 consumption;

14 (B) increasing water use efficiency;

15 (C) utilizing nontraditional water sources
16 with efforts to improve the quality of the water
17 from those sources; and

18 (D) minimizing deleterious impacts on
19 water bodies, groundwater, and waterways;

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

4 (3) improving understanding of the energy-
5 water nexus.

6 (b) STRATEGIC PLAN.—

7 (1) IN GENERAL.—Not later than 12 months
8 after the date of enactment of this Act, the Sec-
9 retary shall develop a strategic plan identifying the
10 research, development, and demonstration needs for
11 Department programs and projects to carry out sub-
12 section (a). The strategic plan shall include technical
13 milestones for achieving and assessing progress to-
14 ward the objectives of subsection (a)(1).

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

17 (A) new advanced cooling technologies for
18 energy generation and fuel production tech-
19 nologies;

20 (B) performance improvement of existing
21 cooling technologies and cost reductions associ-
22 ated with using those technologies;

23 (C) innovative water reuse, recovery, and
24 treatment technologies in energy generation and
25 fuel production;

1 (D) technology development for carbon
2 capture and storage systems that utilize effi-
3 cient water use design strategies;

4 (E) technologies that are life-cycle cost ef-
5 fective;

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

8 (G) technologies to treat and utilize waste-
9 water and produced waters discharged from oil,
10 natural gas, coalbed methane, and any other
11 substance to be used as an energy source;

12 (H) advanced materials for the use of non-
13 traditional water sources for energy generation
14 and fuel production;

15 (I) biomass production and utilization and
16 the impact on hydrologic systems;

17 (J) technologies that reduce impacts on
18 water from energy resource development;

19 (K) energy efficient technologies for water
20 distribution, treatment, and collection systems;

21 (L) technologies for energy generation
22 from water distribution, treatment, and collec-
23 tion systems; and

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

1 (3) COLLABORATION AND NONDUPLICATION.—

2 In developing the strategic plan, the Secretary shall
3 coordinate and avoid duplication—

4 (A) with other Federal agencies operating
5 related programs, if appropriate; and

6 (B) across programs and projects of the
7 Department, including with those of the Na-
8 tional Laboratories.

9 (4) RELEVANT INFORMATION AND REC-
10 COMMENDATIONS.—In developing the strategic plan,
11 the Secretary shall consider and incorporate, as ap-
12 propriate, relevant information and recommenda-
13 tions, including those of the National Water Avail-
14 ability and Use Assessment Program under section
15 9508(d) of the Omnibus Public Land Management
16 Act of 2009 (42 U.S.C. 10368(d)).

17 (5) ADDITIONAL PARTICIPATION.—In devel-
18 oping the strategic plan, the Secretary shall consult
19 and coordinate with a diverse group of representa-
20 tives from research and academic institutions, indus-
21 try, public utility commissions, and State and local
22 governments who have expertise in technologies and
23 practices relating to the energy-water nexus.

24 (6) SUBMISSION TO CONGRESS.—Not later than
25 12 months after the date of enactment of this Act,

1 the Secretary shall submit to the Committee on
2 Science, Space, and Technology of the House of
3 Representatives and the Committee on Energy and
4 Natural Resources of the Senate the strategic plan.

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

9 (A) utilize relevant information produced
10 by Federal Government agencies, academia,
11 States, and industry to update the strategic
12 plan;

13 (B) include in the updated strategic plan a
14 description of the changes from the previous
15 strategic plan and the rationale for such
16 changes;

17 (C) include a review of progress made to-
18 wards the milestones outlined in the previous
19 strategic plan; and

20 (D) submit the updated strategic plan to
21 the Committee on Science, Space, and Tech-
22 nology of the House of Representatives and the
23 Committee on Energy and Natural Resources of
24 the Senate.

1 (c) ADDITIONAL ACTIVITIES.—The Secretary may
2 provide for such additional research, development, and
3 demonstration activities as appropriate to integrate water
4 considerations into the research, development, and dem-
5 onstration activities of the Department as described in
6 subsection (a).

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

8 (a) IN GENERAL.—The Secretary, in coordination
9 with other relevant Federal agencies, shall establish an
10 Energy-Water Subcommittee of the Energy Advisory
11 Board to promote and enable improved energy and water
12 resource data collection, reporting, and technological inno-
13 vation. The Subcommittee shall consist of—

14 (1) representation from each program within
15 the Department and each Federal agency that con-
16 ducts research related to the energy-water nexus;
17 and

18 (2) non-Federal members, including representa-
19 tives of research and academic institutions, States,
20 public utility commissions, and industry, who have
21 expertise in technologies and practices relating to
22 the energy-water nexus.

23 (b) FUNCTIONS.—The Subcommittee shall—

24 (1) make recommendations on the development
25 and integration of data collection and data commu-

1 nication standards and protocols to agencies and en-
2 tities currently engaged in collecting the data for the
3 energy-water nexus;

4 (2) recommend ways to make improvements to
5 Federal water use data to increase understanding of
6 trends in energy generation and fuel production;

7 (3) recommend best practices for utilizing infor-
8 mation from existing monitoring networks to provide
9 nationally uniform water and energy use and infra-
10 structure data; and

11 (4) conduct annual technical workshops, includ-
12 ing at least 1 regional workshop annually, to facili-
13 tate information exchange among Federal, regional,
14 State, local, and tribal governments and private sec-
15 tor experts on technologies that encourage the con-
16 servation and efficient use of water and energy.

17 (c) **REPORTS.**—Not later than 1 year after the date
18 of enactment of this Act, and at least once every 2 years
19 thereafter, the Subcommittee, through the Secretary, shall
20 transmit to Congress a report on its findings and activities
21 under this section.

22 **SEC. 4. MANDATES.**

23 Nothing in this Act shall be construed to require
24 State, tribal, or local governments to take any action that
25 may result in an increased financial burden to such gov-

1 ernments by restricting the use of water by such govern-
2 ments.

3 **SEC. 5. COORDINATION AND NONDUPLICATION.**

4 To the maximum extent practicable, the Secretary
5 shall coordinate activities under this Act with other pro-
6 grams of the Department and other Federal research pro-
7 grams.

8 **SEC. 6. DEFINITIONS.**

9 In this Act:

10 (1) DEPARTMENT.—The term “Department”
11 means the Department of Energy.

12 (2) ENERGY-WATER NEXUS.—The term “en-
13 ergy-water nexus” means the energy required to pro-
14 vide reliable water supplies and the water required
15 to provide reliable energy supplies throughout the
16 United States.

17 (3) SECRETARY.—The term “Secretary” means
18 the Secretary of Energy.

19 (4) SUBCOMMITTEE.—The term “Sub-
20 committee” means the Energy-Water Subcommittee
21 of the Energy Advisory Board established under sec-
22 tion 3(a).

