

111TH CONGRESS
1ST SESSION

H. R. 3598

IN THE SENATE OF THE UNITED STATES

DECEMBER 2, 2009

Received; read twice and referred to the Committee on Energy and Natural
Resources

AN ACT

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 water resources.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

1 **SECTION 1. SHORT TITLE.**

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

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

5 (a) IN GENERAL.—The Secretary of Energy shall as-
6 sess each of the energy research, development, and dem-
7 onstration programs and projects of the Department of
8 Energy and identify those programs and projects into
9 which it is appropriate to integrate water considerations.
10 In carrying out this section the Secretary shall, as appro-
11 priate—

12 (1) seek to advance energy and energy effi-
13 ciency technologies and practices that would—

14 (A) minimize freshwater withdrawal and
15 consumption;

16 (B) increase water use efficiency; and

17 (C) utilize nontraditional water sources
18 with efforts to improve the quality of that
19 water;

20 (2) consider the effects climate variability and
21 change may have on water supplies and quality for
22 energy generation and fuel production; and

23 (3) improve understanding of the energy re-
24 quired to provide water supplies and the water re-
25 quired to provide reliable energy supplies throughout
26 the United States.

1 (b) STRATEGIC PLAN.—

2 (1) IN GENERAL.—Not later than 6 months
3 after the date of enactment of this Act, the Sec-
4 retary of Energy shall develop a Strategic Plan (in
5 this section referred to as the “Strategic Plan”) out-
6 lining the research, development, and demonstration
7 needs for the programs and projects identified under
8 subsection (a), in accordance with subsections (a)
9 through (c) of this section, as appropriate.

10 (2) MILESTONES AND SPECIFIC CONSIDER-
11 ATIONS.—In carrying out the development and up-
12 dating of the Strategic Plan in accordance with this
13 subsection, the Secretary shall evaluate and, as ap-
14 propriate, establish technical milestones for—

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

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

21 (C) innovative water reuse, recovery, and
22 treatment in energy generation and fuel produc-
23 tion;

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 required to provide
8 water supplies and the water required to pro-
9 vide reliable energy supplies throughout the
10 United States;

11 (G) technologies to treat and utilize pro-
12 duced waters discharged from oil, natural gas,
13 coalbed methane, and mining activities;

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

17 (I) biomass production and utilization and
18 the impact on hydrologic systems;

19 (J) technologies that reduce impacts on
20 water from energy resource development;

21 (K) increases in energy efficiency of water
22 distribution and collection systems;

23 (L) technologies for energy generation
24 from water distribution and collection systems;
25 and

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

3 (3) INTERAGENCY COLLABORATION AND NON-
4 DUPLICATION.—In carrying out the development and
5 updating of the Strategic Plan in accordance with
6 this subsection, the Secretary shall, where appro-
7 priate, work collaboratively with other Federal agen-
8 cies operating related programs and avoid duplica-
9 tion.

10 (4) INTRA-AGENCY COORDINATION AND NON-
11 DUPLICATION.—In carrying out the development and
12 updating of the Strategic Plan in accordance with
13 this subsection, the Secretary shall coordinate and
14 avoid duplication of activities across programs and
15 projects of the Department of Energy, including
16 with those of the National laboratories.

17 (5) RELEVANT INFORMATION AND REC-
18 OMMENDATIONS.—In carrying out the development
19 and updating of the Strategic Plan in accordance
20 with this subsection, the Secretary shall consider
21 and incorporate, as appropriate, relevant information
22 and recommendations, including those of the Na-
23 tional Water Availability and Use Assessment Pro-
24 gram under section 9508(d) of the Omnibus Public

1 Land Management Act of 2009 (42 U.S.C.
2 10368(d)).

3 (6) NONGOVERNMENTAL PARTICIPATION.—In
4 carrying out the development and updating of the
5 Strategic Plan in accordance with this subsection,
6 the Secretary shall consult and coordinate with a di-
7 verse group of representatives from research and
8 academic institutions and industry who have exper-
9 tise in technologies and practices relating to the en-
10 ergy required to provide water supplies and the
11 water required to provide reliable energy supplies
12 throughout the United States.

13 (7) SUBMISSION TO CONGRESS.—Not later than
14 9 months after the date of enactment of this Act,
15 the Secretary shall submit to Congress the Strategic
16 Plan.

17 (8) UPDATING THE STRATEGIC PLAN.—Not
18 later than 3 years after the date of enactment of
19 this Act, the Secretary shall utilize relevant informa-
20 tion produced by Federal Government agencies, aca-
21 demia, and industry to update the Strategic Plan,
22 and submit a report to Congress describing the
23 changes from the initial Strategic Plan.

24 (c) IMPLEMENTATION.—

1 (1) IN GENERAL.—The Secretary of Energy
2 shall implement the Strategic Plan, as appropriate,
3 in carrying out energy research, development, and
4 demonstration programs of the Department of En-
5 ergy.

6 (2) APPLICATION TO PROJECTS.—Not later
7 than 3 months after the submission of the report to
8 Congress in subsection (b)(7)), the Secretary shall
9 as appropriate apply the Strategic Plan to
10 projects—

11 (A) identified as the most energy and
12 water intensive; and

13 (B) with the most potential to achieve the
14 purposes of this section.

15 (3) DELAY OR DISRUPTION.—In carrying out
16 this subsection, the Secretary shall ensure that no
17 program or project of the Department is unneces-
18 sarily delayed or disrupted.

19 (d) REPORTS.—Not later than 2 years after the date
20 of enactment of this Act, and at least once every 2 years
21 thereafter, the Secretary shall transmit to Congress a re-
22 port on its findings and activities under this section.

23 (e) ADDITIONAL ACTIVITIES.—The Secretary may
24 provide for such additional research, development, and
25 demonstration activities as may be appropriate to inte-

1 grate water considerations into the research, development,
2 and demonstration activities of the Department as de-
3 scribed in subsection (a).

4 (f) AUTHORIZATION OF APPROPRIATIONS.—There
5 are authorized to be appropriated to the Secretary of En-
6 ergy for carrying out this section \$60,000,000 for each
7 of the fiscal years 2011 through 2015.

8 **SEC. 3. ENERGY-WATER ARCHITECTURE COUNCIL.**

9 (a) IN GENERAL.—The Secretary of Energy, in co-
10 ordination with other relevant Federal agencies, shall es-
11 tablish an Energy-Water Architecture Council to promote
12 and enable improved energy and water resource data col-
13 lection, reporting, and technological innovation. The Coun-
14 cil shall consist of—

15 (1) representation from each Federal agency
16 that conducts research related to energy and water
17 resource data; and

18 (2) non-Federal members, including representa-
19 tives of research and academic institutions and in-
20 dustry, who have expertise in technologies and prac-
21 tices relating to the energy required to provide water
22 supplies and the water required to provide reliable
23 energy supplies throughout the United States.

24 (b) FUNCTIONS.—The Council shall—

1 (1) make recommendations on the development
2 of data collection and data communication standards
3 and protocols to agencies and entities currently en-
4 gaged in collecting the data for the energy required
5 to provide water supplies and the water required to
6 provide reliable energy supplies throughout the
7 United States;

8 (2) recommend ways to make improvements to
9 Federal water use data to increase understanding of
10 trends in energy generation and fuel production;

11 (3) recommend best practices for utilizing infor-
12 mation from existing monitoring networks to provide
13 nationally uniform water and energy use and infra-
14 structure data; and

15 (4) conduct annual technical workshops, includ-
16 ing at least one regional workshop annually, to fa-
17 cilitate information exchange among Federal, State,
18 and private sector experts on technologies that en-
19 courage the conservation and efficient use of water
20 and energy.

21 (c) REPORTS.—Not later than 1 year after the date
22 of enactment of this Act, and at least once every 2 years
23 thereafter, the Council, through the Secretary of Energy,
24 shall transmit to the Congress a report on its findings and
25 activities under this section.

1 (d) AUTHORIZATION OF APPROPRIATIONS.—There
2 are authorized to be appropriated to the Secretary of En-
3 ergy for carrying out this section \$5,000,000 for each of
4 the fiscal years 2011 through 2015.

5 **SEC. 4. LIMITATION ON FEDERAL REGULATIONS.**

6 Nothing in this Act shall be construed to allow the
7 establishment of regulations by the Federal Government
8 that would infringe or impair the use of water by State,
9 tribal, or local governments.

10 **SEC. 5. 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. 6. COORDINATION AND NONDUPLICATION.**

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

Passed the House of Representatives December 1,
2009.

Attest: LORRAINE C. MILLER,
Clerk.