

111TH CONGRESS  
1ST SESSION

# H. R. 3598

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.

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## IN THE HOUSE OF REPRESENTATIVES

SEPTEMBER 17, 2009

Mr. GORDON of Tennessee introduced the following bill; which was referred to the Committee on Science and Technology

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## 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 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".

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

2 (a) IN GENERAL.—In carrying out each of the energy  
3 research, development, and demonstration programs of the  
4 Department of Energy, the Secretary of Energy shall—

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

7 (A) minimize freshwater withdrawal and  
8 consumption;

9 (B) increase water use efficiency; and

10 (C) utilize nontraditional water sources  
11 with efforts to improve the quality of that  
12 water;

13 (2) consider the effects climate change may  
14 have on water supplies and quality for energy gen-  
15 eration and fuel production; and

16 (3) improve understanding of the energy re-  
17 quired to provide water supplies and the water re-  
18 quired to provide reliable energy supplies throughout  
19 the United States.

20 (b) SPECIFIC CONSIDERATIONS.—In carrying out  
21 subsection (a), the Secretary shall incorporate, as appro-  
22 priate—

23 (1) new advanced cooling technologies for en-  
24 ergy generation and fuel production technologies;

1           (2) performance improvement of existing cool-  
2           ing technologies and cost reductions associated with  
3           using those technologies;

4           (3) innovative water reuse, recovery, and treat-  
5           ment in energy generation and fuel production;

6           (4) efficient water use design strategies and  
7           technology development for carbon capture and stor-  
8           age systems;

9           (5) technologies that are life-cycle cost effective;

10          (6) systems analysis and modeling of issues re-  
11          lating to the energy required to provide water sup-  
12          plies and the water required to provide reliable en-  
13          ergy supplies throughout the United States;

14          (7) technologies to treat and utilize produced  
15          waters discharged from oil, coalbed methane, and  
16          mining activities;

17          (8) advanced materials for the use of nonradi-  
18          tional water sources for energy generation and fuel  
19          production;

20          (9) biomass production and the impact on hy-  
21          drologic flow; and

22          (10) reduction of water resource impacts of fos-  
23          sil fuel resource development.

24          (c) INTERAGENCY COLLABORATION.—In carrying out  
25          the energy research, development, and demonstration pro-

1 grams of the Department of Energy in accordance with  
2 this section, the Secretary shall, where appropriate, work  
3 collaboratively with other Federal agencies operating pro-  
4 grams related and relevant to such programs.

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

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

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

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

19 (2) non-Federal members, including representa-  
20 tives of research and academic institutions and in-  
21 dustry, who have expertise in research, development,  
22 demonstration, and technology transfer relating to  
23 the energy required to provide water supplies and  
24 the water required to provide reliable energy supplies  
25 throughout the United States.

1 (b) FUNCTIONS.—The Council shall—

2 (1) develop and adopt data collection and data  
3 communication standards and protocols for the en-  
4 ergy required to provide water supplies and the  
5 water required to provide reliable energy supplies  
6 throughout the United States;

7 (2) make improvements to Federal water use  
8 data to increase understanding of trends in power  
9 plant water use;

10 (3) integrate existing monitoring networks to  
11 provide nationally uniform water and energy use and  
12 infrastructure data; and

13 (4) conduct an annual technical workshop to fa-  
14 cilitate information exchange among Federal, State,  
15 and private sector experts on technologies that en-  
16 courage the conservation and efficient use of water  
17 and energy.

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

23 (d) AUTHORIZATION OF APPROPRIATIONS.—There  
24 are authorized to be appropriated to the Secretary of En-

1 ergy for carrying out this section \$5,000,000 for each of  
2 the fiscal years 2011 through 2015.

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