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.

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

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 Representatives 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 Research Integration Act”.

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SEC. 2. INTEGRATING ENERGY AND WATER RESEARCH.

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

(1) seek to advance energy and energy efficiency technologies and practices that would—

(A) minimize freshwater withdrawal and consumption;

(B) increase water use efficiency; and

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

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

(3) improve understanding of the energy required to provide water supplies and the water required to provide reliable energy supplies throughout the United States.

(b) SPECIFIC CONSIDERATIONS.—In carrying out subsection (a), the Secretary shall incorporate, as appropriate—

(1) new advanced cooling technologies for energy generation and fuel production technologies;
(2) performance improvement of existing cooling technologies and cost reductions associated with using those technologies;

(3) innovative water reuse, recovery, and treatment in energy generation and fuel production;

(4) efficient water use design strategies and technology development for carbon capture and storage systems;

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

(6) systems analysis and modeling of issues relating to the energy required to provide water supplies and the water required to provide reliable energy supplies throughout the United States;

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

(8) advanced materials for the use of nontraditional water sources for energy generation and fuel production;

(9) biomass production and the impact on hydrologic flow; and

(10) reduction of water resource impacts of fossil fuel resource development.

(c) INTERAGENCY COLLABORATION.—In carrying out the energy research, development, and demonstration pro-
grams of the Department of Energy in accordance with
this section, the Secretary shall, where appropriate, work
collaboratively with other Federal agencies operating pro-
grams related and relevant to such programs.

(d) Authorization of Appropriations.—There
are authorized to be appropriated to the Secretary of En-
ergy for carrying out this section $60,000,000 for each
of the fiscal years 2011 through 2015.

SEC. 3. ENERGY-WATER ARCHITECTURE COUNCIL.

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

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

(2) non-Federal members, including representa-
tives of research and academic institutions and in-
dustry, who have expertise in research, development,
demonstration, and technology transfer relating to
the energy required to provide water supplies and
the water required to provide reliable energy supplies
throughout the United States.
(b) FUNCTIONS.—The Council shall—

(1) develop and adopt data collection and data communication standards and protocols for the energy required to provide water supplies and the water required to provide reliable energy supplies throughout the United States;

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

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

(4) conduct an annual technical workshop to facilitate information exchange among Federal, State, and private sector experts on technologies that encourage the conservation and efficient use of water and energy.

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

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