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110TH CONGRESS
2d Session

HOUSE OF REPRESENTATIVES

REPORT
110–801

PRODUCED WATER UTILIZATION ACT OF 2008

JULY 30, 2008.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

Mr. GORDON of Tennessee, from the Committee on Science and Technology, submitted the following

R E P O R T

[To accompany H.R. 2339]

[Including cost estimate of the Congressional Budget Office]

The Committee on Science and Technology, to whom was referred the bill (H.R. 2339) to encourage research, development, and demonstration of technologies to facilitate the utilization of water produced in connection with the development of domestic energy resources, and for other purposes, having considered the same, report favorably thereon with an amendment and recommend that the bill as amended do pass.

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69–006

I. AMENDMENT

The amendment is as follows:

Strike all after the enacting clause and insert the following:

SECTION 1. SHORT TITLE.

This Act may be cited as the "Produced Water Utilization Act of 2008".

SEC. 2. DEFINITIONS.

In this Act:

(1) PRODUCED WATER.—The term "produced water" means water from an underground source that is brought to the surface as part of the process of exploration for or development of coalbed methane, oil, natural gas, or any other substance to be used as an energy source.

(2) SECRETARY.—The term "Secretary" means the Secretary of Energy.

SEC. 3 PURPOSES.

(a) IN GENERAL.—The Secretary shall carry out under this Act a program of research, development, and demonstration of technologies for environmentally sustainable utilization of produced water for agricultural, irrigational, municipal, and industrial uses, or other environmentally sustainable purposes. The program shall be designed to maximize the utilization of produced water in the United States by increasing the quality of produced water and reducing the environmental impacts of produced water.

(b) PROGRAM ELEMENTS.—The program under this Act shall address the following areas, including improving safety and minimizing environmental impacts of activities within each area:

(1) Produced water recovery, including research for desalination and demineralization to reduce total dissolved solids in the produced water.

(2) Produced water utilization for agricultural, irrigational, municipal, and industrial uses, or other environmentally sustainable purposes.

(3) Re-injection of produced water into subsurface geological formations to increase energy production.

(c) PROGRAM ADMINISTRATION.—To carry out the purposes under this Act, the Secretary may enter into an agreement with a consortium whose members have collectively demonstrated capabilities and experience in planning and managing research, development, demonstration, and commercial application programs for unconventional natural gas and other petroleum production and produced water utilization.

(d) ACTIVITIES AT THE NATIONAL LABORATORIES.—The Secretary, through the appropriate National Laboratory, shall carry out a program of research, development, and demonstration activities complementary to and supportive of the research, development, and demonstration programs under subsection (b).

SEC. 4. CONSULTATION AND COORDINATION.

(a) CONSULTATION.—In carrying out this Act, the Secretary shall consult with the Secretary of the Interior and the Administrator of the Environmental Protection Agency.

(b) COORDINATION.—To the maximum extent practicable, the Secretary shall ensure that the activities under this Act are coordinated with, and do not duplicate the efforts of, programs at the Department of Energy and other government agencies.

SEC. 5. FUNDING.

(a) ALLOCATION.—Amounts appropriated for this Act for each fiscal year shall be allocated as follows:

(1) 75 percent shall be for activities under section 3(a), (b), and (c).

(2) 25 percent shall be for activities under section 3(d) and other activities under section 3, including administrative functions such as program direction, overall program oversight, and contract management.

(b) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to carry out this Act $20,000,000 for each of fiscal years 2009 through 2013.

II. PURPOSE

The purpose of the H.R. 2339 is to increase research, development, and demonstration of technologies for environmentally sustainable utilization of produced water for agricultural, municipal, and industrial uses.

III. BACKGROUND AND NEED FOR LEGISLATION

The population of the United States is increasing, and as the population increases, additional potable water supplies are required to sustain individuals, agricultural production, and industrial users, particularly in the Mountain West and desert Southwest, where water resources are scarce. During the development of domestic energy sources, including coal-bed methane, oil, and natural gas, water may be extracted from underground sources and brought to the surface, often increasing energy production from subsurface geological formations in the process. Produced water frequently contains increased levels of potentially harmful dissolved solids, rendering much of the water non-potable and unsuitable for agricultural or industrial uses, and encouraging re-injection of the water to subsurface geological formations to safely dispose of it. This may lead to reduced production of domestic energy resources and increased costs to producers.

The environmentally responsible surface utilization of produced water would increase water supply, reduce the amount of produced water returned to underground formations, and increase domestic energy production by reducing costs associated with re-injection of produced water to the subsurface. At a time when usable water supplies are more vital than ever to support our growing economy, safe and sustainable uses of produced water need to be researched and pursued, for human, agricultural and industrial uses. This legislation addresses environmental concerns, water use issues and energy production benefits.

IV. HEARING SUMMARY

The Energy and Environment Subcommittee held several hearings throughout the 110th Congress on water conservation and efficiency including a hearing on Tuesday, October 30, 2007 to hear testimony on H.R. 3957 (and also H.R. 2339, *The Produced Water Utilization Act*) from the following witnesses:

- Dr. Glen Daigger, Vice President at CH2MHill.
- Mr. Ed Clerico, CEO of Alliance Environmental and Designer at the Solaire Project in NYC.
- Ms. Val Little, Director of the Water Conservation Alliance of Southern Arizona and Principal Research Specialist at the University of Arizona's College of Architecture and Landscape Architecture.
- Mr. Ron Thompson, District Manager of the Washington County Water Conservancy District.
- Mr. John Veil, Senior Scientist at Argonne National Laboratory.

Mr. Veil suggested that the federal government support a significant research program to develop and improve technologies for treating produced water so that it can be reused. He stated the program should support development of technologies that can remove dissolved solids so that produced water can be reused for agriculture, irrigation, or human consumption.

V. COMMITTEE ACTIONS

On May 16, 2007, Rep. Ralph Hall introduced H.R. 2339, *The Produced Water Utilization Act of 2007* which was referred to the Committee on Science and Technology.

In the 110th Congress the Subcommittee on Energy and Environment met to consider H.R. 2339 on May 6, 2008.

The following amendment was offered to H.R. 2339:

On behalf of Mr. Hall an Amendment-in-the-Nature-of-a-Substitute. The amendment removes the "Findings" section, removes the definition for "Existing Program" and clarifies the intent of the legislation in terms of administering the program. Under the substitute language, the Secretary of DOE shall carry out the program but may enter into an agreement with a "consortium" to carry out certain aspects of the program.

The amendment was agreed to by voice vote.

Mr. Inglis moved that the Subcommittee favorably report the bill, H.R. 2339, to the Full Committee on Science and Technology. The motion was agreed to by a voice vote.

The Committee on Science and Technology met to consider H.R. 2339 on July 16, 2008. The legislation was agreed to by a voice vote.

Mr. Hall moved that the Committee favorably report the bill, H.R. 2339 to the House, as amended. The motion was agreed to by a voice vote.

VI. SUMMARY OF MAJOR PROVISIONS OF THE BILL

H.R. 2339 would direct the Secretary to establish a program of research, development, and demonstration of technologies for environmentally sustainable utilization of produced water for irrigational, municipal, and industrial uses, authorizing $20 million each year for fiscal years 2009 through 2013. The program would address produced water recovery, produced water utilization and reinjection of produced water. The program also establishes a complementary R&D program at the appropriate DOE National Laboratory.

VII. SECTION-BY-SECTION ANALYSIS OF THE BILL (BY SECTION)

Section 1. Short title

This section establishes the short title of the bill as the "Produced Water Utilization Act of 2008".

Sec. 2. Definitions

Defines terms used in the text of the bill.

Sec. 3. Purposes

The bill requires the Secretary to carry out a program of research, development, and demonstration of technologies for environmentally sustainable utilization of produced water for agricultural, irrigational, municipal, and industrial uses, or other environmentally sustainable purposes. The program will focus on three areas as well as improving safety and minimizing environmental impacts in areas that deal with produced water recovery. The three areas are (1) Produced water recovery, including research for desalination and demineralization to reduce total dissolved solids in

the produced water; (2) Produced water utilization for agricultural, irrigation, municipal, or industrial uses, or other environmentally sustainable purposes; and (3) Re-injection of produced water into subsurface geological formations to increase energy production.

The bill allows for the program to be administered by a consortium with relevant experience, and sets up a complementary program at the appropriate National Laboratory.

Sec. 4. Consultation and coordination

The bill also requires consultation with the Secretary of the Interior and the Administrator of the Environmental Protection Agency, and coordination with other programs at the Department of Energy and other government agencies to avoid any duplication of efforts.

Sec. 5. Funding

The bill specifies that 25% of the allocated funds shall be for activities at the National Lab and 75% shall be allocated for the other program purposes. There are authorized to be appropriated to carry out this Act $20,000,000 for each of fiscal years 2009 through 2013.

VIII. COMMITTEE VIEWS

The Committee finds that research and development into utilization of produced water has considerable potential to help meet the dual needs of increased supplies of energy and increased supplies of water by increasing the amount of water available for beneficial use. The utilization of produced water reduces the amount of water that needs to be reinjected into the ground at great expense to small energy producers and ultimately passed along to energy consumers. It is the intention of the Committee that the Department of Energy (DOE) expeditiously establishes the program set forth in this bill.

While the Committee does not wish to specify which, if any, organization should receive the funding for this research, in regards to Section 3(c), the Committee acknowledges the existence of a consortium with expertise to carry out the purposes under this Act. The Research Partnership to Secure Energy for America is a non-profit corporation of U.S. energy research universities, industry and independent research organizations from all areas of the country currently engaged in research, development and demonstration of technologies to bring additional supplies of oil and natural gas to the citizens of the United States.

IX. COST ESTIMATE

A cost estimate and comparison prepared by the Director of the Congressional Budget Office under section 402 of the *Congressional Budget Act of 1974* has been timely submitted to the Committee on Science and Technology prior to the filing of this report and is included in Section X of this report pursuant to House Rule XIII, clause 3(c)(3).

H.R. 2339 does not contain new budget authority, credit authority, or changes in revenues or tax expenditures. H.R. 2339 does authorize additional discretionary spending of $71 million, as de-

scribed in the Congressional Budget Office report on the bill, which is contained in Section X of this report.

X. CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

H.R. 2339—Produced Water Utilization Act of 2008

Summary: H.R. 2339 would direct the Secretary of Energy to establish a research program to promote the safe use of underground water that is brought to the surface through processes to develop certain mineral resources. (Because water produced from such processes typically contains high levels of contaminants, it usually must be treated before it can be safely used or discharged.) The bill would authorize appropriations totaling $100 million over the 2009–2013 period to research, develop, and demonstrate technologies to facilitate the use of such water for agriculture and irrigation as well as for municipal, industrial, and other purposes.

Based on information from the Department of Energy (DOE) and assuming appropriation of the authorized amounts, CBO estimates that implementing H.R. 2339 would cost $71 million over the 2009–2013 period, with additional spending occurring in later years. Enacting the bill would not affect direct spending or revenues.

H.R. 2339 contains no intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act (UMRA) and would not affect the budgets of state, local, or tribal governments.

Estimated cost to the Federal Government: For this estimate, CBO assumes that the authorized amounts will be provided near the start of each fiscal year and that outlays will follow historical spending patterns for existing research and demonstration programs administered by DOE. The estimated budgetary impact of H.R. 2339 is shown in the following table. The costs of this legislation fall within budget function 270 (energy).

	By fiscal year, in millions of dollars—					
	2009	2010	2011	2012	2013	2009–2013
CHANGES IN SPENDING SUBJECT TO APPROPRIATION						
Authorization Level	20	20	20	20	20	100
Estimated Outlays	7	13	15	17	19	71

Estimated impact on state, local, and tribal Governments: H.R. 2339 contains no intergovernmental or private-sector mandates as defined in UMRA and would not affect the budgets of state, local, or tribal governments.

Estimate prepared by: Federal Costs: Megan Carroll; Impact on State, Local, and Tribal Governments: Neil Hood; Impact on the Private Sector: Amy Petz.

Estimate approved by: Theresa Gullo, Deputy Assistant Director for Budget Analysis.

XI. COMPLIANCE WITH PUBLIC LAW 104—4

H.R. 2339 contains no unfunded mandates.

XII. COMMITTEE OVERSIGHT FINDINGS AND RECOMMENDATIONS

The oversight findings and recommendations of the Committee on Science and Technology are reflected in the body of this report.

XIII. STATEMENT ON GENERAL PERFORMANCE GOALS AND OBJECTIVES

Pursuant to clause 3(c) of House Rule XIII, the goals of H.R. 2339 are to provide for the beneficial re-use of produced water through research, development and demonstration of technologies.

XIV. CONSTITUTIONAL AUTHORITY STATEMENT

Article I, section 8 of the Constitution of the United States grants Congress the authority to enact H.R. 2339.

XV. FEDERAL ADVISORY COMMITTEE STATEMENT

H.R. 2339 does not establish or authorize a new advisory committee.

XVI. CONGRESSIONAL ACCOUNTABILITY ACT

The Committee finds that H.R. 2339 does not relate to the terms and conditions of employment or access to public services or accommodations within the meaning of section 102(b)(3) of the *Congressional Accountability Act* (Public Law 104–1).

XVII. EARMARK IDENTIFICATION

H.R. 2339 does not contain any congressional earmarks, limited tax benefits, or limited tariff benefits as defined in clause 9(d), 9(e), or 9(f) of rule XXI.

XVIII. STATEMENT ON PREEMPTION OF STATE, LOCAL, OR TRIBAL LAW

This bill is not intended to preempt any state, local, or tribal law.

XIX. COMMITTEE RECOMMENDATIONS

On July 16, 2008, the Committee on Science and Technology favorably reported the bill, H.R. 2339, the "Produced Water Utilization Act of 2008" by a voice vote, and recommended its passage by the House of Representatives.

XX. PROCEEDINGS OF THE MARKUP BY THE SUBCOMMITTEE ON ENERGY AND ENVIRONMENT ON H.R. 2339, THE PRODUCED WATER UTILIZATION ACT OF 2007

TUESDAY, MAY 6, 2008

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON ENERGY AND ENVIRONMENT,
COMMITTEE ON SCIENCE,
Washington, DC.

The Subcommittee met, pursuant to call, at 10:10 a.m., in Room 2318 of the Rayburn House Office Building, Hon. Nick Lampson [Chairman of the Subcommittee] presiding.

Chairman LAMPSON. Good morning. The Subcommittee on Energy and Environment will come to order.

Pursuant to notice, the Subcommittee on Energy and Environment meets to consider the following measures: H.R. 3957, the *Water Use Efficiency and Conservation Research Act,* and H.R. 2339, the *Produced Water Utilization Act of 2007.*

We will now proceed with the markup beginning with opening statements, and I will begin.

Today the Subcommittee will consider two bills aimed at increasing water supply through research and technology innovation. Water utilities across the country withdraw roughly 40 billion gallons of water per day for domestic consumption, industrial processing, energy production and fire protection. As population and energy use continue to grow, so will the demand for water. We need to find ways to preserve, reuse and augment our water supplies.

First, we will take up H.R. 3957, the *Water Use Efficiency and Conservation Research Act,* introduced by Representative Jim Matheson. H.R. 3957 establishes a research and development program within the Environmental Protection Agency's Office of Research and Development to promote water use efficiency and conservation.

Through this program, EPA will be able to develop and encourage the adoption of technologies and processes that will achieve greater water use efficiency, thus helping to address the water supply shortages. The program will help spur innovation in the collection, treatment and reuse of rainwater and greywater, the wastewater from sinks, baths and kitchen appliances.

Next, we will consider H.R. 2339, the *Produced Water Utilization Act,* introduced by my colleague from Texas and our Ranking Member, Mr. Hall. This bill creates a research, development and dem-

onstration program to promote the beneficial reuse of water produced in connection with oil and gas extraction. In the United States, up to 2.3 billion gallons per day of produced water is generated, and unfortunately, this water is not of sufficient quality to be used to meet many of our needs for water. This legislation will produce innovative treatment technologies that will enable the refuse of this water in an environmentally responsible way.

These two bills are important steps in ensuring adequate water supply across the United States. I ask my colleagues to support passage of both pieces of legislation by our subcommittee this morning.

[The prepared statement of Chairman Lampson follows:]

PREPARED STATEMENT OF CHAIRMAN NICK LAMPSON

Today the Subcommittee will consider two bills aimed at increasing water supply through research and technology innovation. Water utilities across the country withdraw roughly 40 billion gallons of water per day for domestic consumption, industrial processing, energy production, and fire protection. As population and energy use continues to grow, so will the demand for water. We need to find ways to preserve, reuse, and augment our water supplies.

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Through this program, EPA will be able to develop and encourage the adoption of technologies and processes that will achieve greater water-use efficiency thus helping to address the water supply shortages. The program will help spur innovation in the collection, treatment, and reuse of rainwater and greywater—the waste water from sinks, baths and kitchen appliances.

Next, we will consider H.R. 2339, the *Produced Water Utilization Act* introduced by my colleague from Texas and our Ranking Member, Mr. Hall. This bill creates a research, development, and demonstration program to promote the beneficial reuse of water produced in connection with oil and gas extraction. In the United States, up to 2.3 billion gallons per day of produced water is generated. Unfortunately, this water is not of sufficient quality to be used to meet our many needs for water. This legislation will provide innovative treatment technologies that will enable the reuse of this water in an environmentally responsible way.

These two bills are important steps in ensuring adequate water supply across the United States. I ask my colleagues to support passage of both pieces of legislation by our subcommittee this morning.

Chairman LAMPSON. I now recognize Mr. Inglis to present his opening remarks.

Mr. INGLIS. Thank you, Mr. Chairman, for holding this markup. I appreciate Ranking Member Hall's and Mr. Matheson's work to introduce the bills we will address today. H.R. 2339, the *Produced Water Utilization Act,* and H.R. 3957, the *Water Use Efficiency and Conservation Research Act,* both highlight the need to think more conservatively about invaluable water resources.

We don't have to look far to realize the devastating effects water shortages can have in our lives. Fires threatening and destroying California, droughts debilitating crops in South Carolina and a number of other southeastern states, and global citizens have to travel farther and farther to have access to fresh water. By supporting research, development and demonstration projects in water use efficiency, conservation, and the challenges raised by produced water, we can help improve our national and global response to water shortages.

Mr. Chairman, when we held a Subcommittee hearing on H.R. 3957 in October, the witnesses testified that there had been signifi-

cant amount of investment from the private sector in water technologies. Since EPA was not invited as a witness to that hearing, I asked the EPA for comments on the work they were already doing in this area. I am sad to say that they have not yet replied to my request, and I would ask the EPA to submit their suggestions before the Full Committee markup.

Mr. Chairman and Mr. Matheson, I hope we can work together to ensure that we do not jeopardize or duplicate the work already being done at EPA and in the private sector.

Thank you, Mr. Chairman, and I look forward to working with you to advance the legislation.

[The prepared statement of Mr. Inglis follows:]

PREPARED STATEMENT OF REPRESENTATIVE BOB INGLIS

Thank you for holding this markup, Mr. Chairman.

I appreciate Ranking Member Hall's and Mr. Matheson's work to introduce the bills we will address today. H.R. 2339, the *Produced Water Utilization Act,* and H.R. 3957, the *Water Use Efficiency and Conservation Research Act,* both highlight the need to think more conservatively about invaluable water resources.

We don't have to look far to realize the devastating effects water shortages can have in our lives—fires threaten and destroy California, droughts debilitate crops in South Carolina and a number of other southeastern states, and global citizens have to travel farther and farther to have access to fresh water. By supporting research, development, and demonstration projects in water use efficiency, conservation, and the challenges raised by produced water, we can help improve our national and global response to water shortages.

Mr. Chairman, when we held a Subcommittee hearing on H.R. 3957 back in October, the witnesses testified that there has been a significant amount of investment from the private sector in water technologies. Since EPA was not invited as a witness to that hearing, I asked for EPA's comments on what work they are already doing in this area. I'm disappointed that EPA has not yet replied to my request, and would ask that EPA submit their suggestions before the Full Committee markup. Mr. Chairman and Mr. Matheson, I hope we can work together to ensure that we do not jeopardize or duplicate the work already being done at EPA and in the private sector.

Thank you again, Mr. Chairman, and I look forward to working with you to advance this legislation.

Chairman LAMPSON. Thank you, Mr. Inglis.

Without objection, Members may place additional opening remarks in the record at this point.

We will now consider H.R. 2339, the *Produced Water Utilization Act of 2007.*

I yield to the Ranking Member of the Full Committee five minutes to describe this bill. Mr. Hall.

Mr. HALL. Mr. Chairman, I thank you for marking up H.R. 2339, the *Produced Water Utilization Act of 2007.* The United States has an enormous reserve of energy from oil and natural gas within our borders, both on land and in our offshore development areas. However, for every barrel of oil produced, extraction of these vital domestic resources produces 10 barrels of saline, brackish and generally unusable water. In fact, today we generate over five billion gallons of produced water every day. This water is to a large extent currently unusable and environmentally hazardous. To dispose of produced water, in many circumstances, producers have to re-inject it into geologic formations, a great expense to small producers throughout the country, and at a time when usable water supplies are more vital than ever to support our growing economy, safe and sustainable uses of produced water need to be researched and pur-

sued for human, agricultural and industrial uses. This legislation, Mr. Chairman, addresses environmental concerns, water use issues and energy production benefits.

I supported the Udall amendment that passed the House last year. More recently it was included as part of Senate 2739, the *Consolidated Natural Resources Act of 2008* that passed the House on April 29. My bill would build on the "More Water and More Energy Act" and provide additional federal funds to engage in research and development efforts to speed the utilization of produced water for agricultural and industrial purposes. Additionally, my bill does not constrain research projects to a certain geographic region of the country. I actually believe that both of our bills would add a lot of needed funding and a lot of needed attention to this issue.

I thank you, and I yield back my time.

[The prepared statement of Mr. Hall follows:]

PREPARED STATEMENT OF REPRESENTATIVE RALPH M. HALL

Mr. Chairman, thank you for marking up my bill today, H.R. 2339, the *Produced Water Utilization Act of 2007.* The United States still has an enormous reserve of energy from oil and natural gas within our borders—both on land and in our offshore development areas. However, for every barrel of oil produced, extraction of these vital domestic resources produces ten barrels of saline, brackish and generally unusable water. In fact, today we generate over five billion gallons of produced water every day. This water is, to a large extent, currently unusable and environmentally hazardous. To dispose of produced water in many circumstances, producers must re-inject it into geologic formations, a great expense to small producers throughout the country. At a time when usable water supplies are more vital than ever to support our growing economy, safe and sustainable uses of produced water need to be researched and pursued, for human, agricultural and industrial uses. This legislation addresses environmental concerns, water use issues and energy production benefits.

I supported Mr. Udall's bill that passed the House last year. More recently it was included as part of S. 2739, the *Consolidated Natural Resources Act of 2008* that passed the House on April 29th. My bill would build on the "More Water and More Energy Act" and provide additional federal funds to engage in research and development efforts to speed the utilization of produced water for agricultural and industrial purposes. Additionally, my bill does not constrain research projects to a certain geographic region of the country. I believe that both of our bills would add much needed funding and attention to this issue.

I yield back the balance of my time.

Chairman LAMPSON. Thank you, Mr. Hall. I would just like to reiterate my support for the gentleman's bill and I look forward to working with him as we move forward.

Does anyone else wish to be recognized? I ask unanimous consent that the bill is considered as read and open to amendment at any point and that Members proceed with the amendments in the order of the roster. Without objection, so ordered.

The first amendment on the roster is an amendment in the nature of a substitute offered by Mr. Hall. Mr. Hall, are you ready to proceed with your amendment?

Mr. HALL. I am, sir.

Chairman LAMPSON. The Clerk will report the amendment.

The CLERK. Amendment in the nature of a substitute to H.R. 2339 offered by Mr. Hall of Texas.

Chairman LAMPSON. I ask unanimous consent to dispense with the reading, and without objection, so ordered. I recognize Mr. Hall for five minutes to explain the amendment.

Mr. HALL. Mr. Chairman, the Hall substitute amendment makes minor changes to the underlying bill. It deletes the findings, deletes the definition of an existing program and deletes the specific mention of the National Energy Technology Laboratory in order to allow the Secretary more discretion in administering the program.

In addition, a coordination clause was added to ensure efforts in the area of produced water are not duplicated at the Department of Energy or other governmental agency. Technical changes were made adjusting the year and the title of the Act and the funding years were changed from 2008 to 2016—wait a minute—2008 through 2016 to 2009 through 2013.

I thank you for allowing me to explain my amendment and I urge my colleagues to support its passage without questions.

Chairman LAMPSON. You are very welcome.

Is there any further discussion on the amendment? Are there any amendments to Mr. Hall's amendment in the nature of a substitute? If not, the vote occurs on the amendment. All in favor say aye. Those opposed, no. The ayes have it. The amendment is agreed to.

Are there any other amendments? Hearing none, the vote is on the bill, H.R. 2339, the *Produced Water Utilization Act of 2007,* as amended. All those in favor will say aye. Those opposed, no. In the opinion of the Chair, the ayes have it.

I recognize Mr. Inglis to offer a motion.

Mr. INGLIS. Mr. Chairman, I move that the Subcommittee favorably report H.R. 2339 as amended to the Full Committee. Furthermore, I move that the staff be instructed to prepare the Subcommittee legislative report and make necessary technical and conforming changes to the bill as amended in accordance with the recommendations of the Subcommittee.

Chairman LAMPSON. The question is on the motion to report the bill favorably. Those in favor of the motion will signify by saying aye. Those opposed, no. The ayes have it and the bill is favorably reported.

Without objection the motion to reconsider is laid upon the table. Subcommittee Members may submit additional or Minority views on the measure.

I want to thank the Members for their attendance. This concludes our Subcommittee markup. Mr. Hall can go make his speech and the rest of us can have a good day. We are adjourned.

[Whereupon, at 10:22 a.m., the Subcommittee was adjourned.]

Appendix:

H.R. 2339, Section-by-Section Analysis, Amendment Roster

I

110TH CONGRESS
1ST SESSION

H. R. 2339

To encourage research, development, and demonstration of technologies to facilitate the utilization of water produced in connection with the development of domestic energy resources, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

MAY 16, 2007

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

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A BILL

To encourage research, development, and demonstration of technologies to facilitate the utilization of water produced in connection with the development of domestic energy resources, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Produced Water Utilization Act of 2007".

SEC. 2. FINDINGS.

The Congress finds as follows:

(1) The population of the United States is increasing, and as the population increases, additional potable water supplies are required to sustain individuals, agricultural production, and industrial users, particularly in the Mountain West and desert Southwest, where water resources are scarce.

(2) During the development of domestic energy sources, including coalbed methane, oil, and natural gas, water may be extracted from underground sources and brought to the surface, often increasing energy production from subsurface geological formations in the process.

(3) Produced water frequently contains increased levels of potentially harmful dissolved solids, rendering much of the water nonpotable and unsuitable for agricultural or industrial uses, and encouraging reinjection of the water to subsurface geological formations to safely dispose of it, which may lead to reduced production of domestic energy resources and increased costs to producers.

(4) Increasing environmentally responsible surface utilization of produced water would—

(A) increase water supplies available for agricultural and industrial use;

(B) reduce the amount of produced water returned to underground formations; and

(C) increase domestic energy production by reducing costs associated with reinjection of produced water to the subsurface.

SEC. 3. DEFINITIONS.

In this Act:

(1) EXISTING PROGRAM.—The term ''existing program'' means a program at the Department of Energy which is engaged in research, development, demonstration, and commercial application of technologies for unconventional domestic natural gas production and other domestic petroleum production as of the date of enactment of this Act.

(2) PRODUCED WATER.—The term ''produced water'' means water from an underground source that is brought to the surface as part of the process of exploration for or development of coalbed methane, oil, natural gas, or any other substance to be used as an energy source.

(3) SECRETARY.—The term ''Secretary'' means the Secretary of Energy.

SEC. 4. PURPOSES.

(a) IN GENERAL.—The Secretary shall carry out under this Act, in conjunction with an existing program,

a program of research, development, and demonstration of technologies for environmentally sustainable utilization of produced water for use for agriculture, irrigation, municipal, or industrial uses, or other environmentally sustainable purposes. The program shall be designed to maximize the utilization of produced water in the United States by increasing the quality of produced water and reducing the environmental impacts of produced water.

(b) PROGRAM ELEMENTS.—The program under this Act shall address the following areas, including improving safety and minimizing environmental impacts of activities within each area:

(1) Produced water recovery, including research for desalination and demineralization to reduce total dissolved solids in the produced water.

(2) Produced water utilization for agricultural, irrigation, municipal, or industrial uses, or other environmentally sustainable purposes.

(3) Reinjection of produced water into subsurface geological formations to increase energy production.

(c) PROGRAM ADMINISTRATION.—The program under this Act shall be administered by a consortium, administering an existing program, whose members have collectively demonstrated capabilities and experience in plan-

ning and managing research, development, demonstration, and commercial application programs for unconventional natural gas and other petroleum production and produced water utilization.

(d) ACTIVITIES AT THE NATIONAL ENERGY TECHNOLOGY LABORATORY.—The Secretary, through the National Energy Technology Laboratory, shall carry out a program of research, development, and demonstration activities complementary to and supportive of the research, development, and demonstration programs under subsection (b).

(e) CONSULTATION.—In carrying out this Act, the Secretary shall consult regularly with the Secretary of the Interior and the Administrator of the Environmental Protection Agency.

SEC. 5. SUNSET.

The authority provided by this Act shall terminate on September 30, 2016.

SEC. 6. FUNDING.

(a) ALLOCATION.—Amounts appropriated for this Act for each fiscal year shall be allocated as follows:

(1) 75 percent shall be for activities under section 4(a), (b), and (c).

(2) 25 percent shall be for activities under section 4(d) and other activities under section 4, includ-

1 ing administrative functions such as program direc-
2 tion, overall program oversight, and contract man-
3 agement.
4 (b) AUTHORIZATION OF APPROPRIATIONS.—There
5 are authorized to be appropriated to carry out this Act
6 $20,000,000 for each of fiscal years 2008 through 2016.

○

SECTION-BY-SECTION ANALYSIS OF H.R. 2339,
THE PRODUCED WATER UTILIZATION ACT OF 2007

Sec. 1. Short Title

"Produced Water Utilization Act of 2007"

Sec. 2. Findings

Describes the need for the legislation.

Sec. 3. Definitions

Defines terms used in the text of the bill.

Sec. 4. Purposes

The bill requires the Secretary to carry out a program, in conjunction with an existing program, of research, development, and demonstration of technologies for environmentally sustainable utilization of produced water for agricultural, irrigational, municipal, and industrial uses, or other environmentally sustainable purposes. The program will focus on three areas as well as improving safety and minimizing environmental impacts in areas that deal with produced water recovery. The three areas are (1) Produced water recovery, including research for desalination and demineralization to reduce total dissolved solids in the produced water; (2) Produced water utilization for agricultural, irrigation, municipal, or industrial uses, or other environmentally sustainable purposes; and (3) Re-injection of produced water into subsurface geological formations to increase energy production.

The bill requires that the program be administered by a consortium with relevant experience, and sets up a complementary program at the National Energy Technology Laboratory.

The bill also requires consultation with the Secretary of the Interior and the Administrator of the Environmental Protection Agency.

Sec. 5. Sunset

The authority provided by the Act terminates on September 30, 2016.

Sec. 6. Funding

The bill specifies that 25 percent of the allocated funds shall be for activities at the National Lab and 75 percent shall be allocated for the other program purposes. There are authorized to be appropriated to carry out this Act $20,000,000 for each of fiscal years 2008 through 2016.

COMMITTEE ON SCIENCE AND TECHNOLOGY
SUBCOMMITTEE ON ENERGY AND ENVIRONMENT
SUBCOMMITTEE MARKUP
May 6, 2008

H.R. 2339 – *the Produced Water Utilization Act of 2007*

AMENDMENT ROSTER

No.	Sponsor	Description	Results
1	Mr. Hall	Amendment in the Nature of a Substitute removes the Findings section, removes the definition for "Existing Program," clarifies that the Secretary may enter into an agreement with a "consortium" to carry out certain aspects of the program, makes technical changes to the bill.	Agreed to by voice vote.

AMENDMENT IN THE NATURE OF A SUBSTITUTE TO H.R. 2339 OFFERED BY MR. HALL OF TEXAS

Strike all after the enacting clause and insert the following:

1 **SECTION 1. SHORT TITLE.**

2 This Act may be cited as the "Produced Water Utili-
3 zation Act of 2008".

4 **SEC. 2. DEFINITIONS.**

5 In this Act:

6 (1) PRODUCED WATER.—The term "produced
7 water" means water from an underground source
8 that is brought to the surface as part of the process
9 of exploration for or development of coalbed meth-
10 ane, oil, natural gas, or any other substance to be
11 used as an energy source.

12 (2) SECRETARY.—The term "Secretary" means
13 the Secretary of Energy.

14 **SEC. 3 PURPOSES.**

15 (a) IN GENERAL.—The Secretary shall carry out
16 under this Act a program of research, development, and
17 demonstration of technologies for environmentally sustain-
18 able utilization of produced water for agricultural,

1 irrigational, municipal, and industrial uses, or other envi-
2 ronmentally sustainable purposes. The program shall be
3 designed to maximize the utilization of produced water in
4 the United States by increasing the quality of produced
5 water and reducing the environmental impacts of produced
6 water.

7 (b) PROGRAM ELEMENTS.—The program under this
8 Act shall address the following areas, including improving
9 safety and minimizing environmental impacts of activities
10 within each area:

11 (1) Produced water recovery, including research
12 for desalination and demineralization to reduce total
13 dissolved solids in the produced water.

14 (2) Produced water utilization for agricultural,
15 irrigational, municipal, and industrial uses, or other
16 environmentally sustainable purposes.

17 (3) Re-injection of produced water into sub-
18 surface geological formations to increase energy pro-
19 duction.

20 (c) PROGRAM ADMINISTRATION.—To carry out the
21 purposes under this Act the Secretary may enter into an
22 agreement with a consortium whose members have collec-
23 tively demonstrated capabilities and experience in plan-
24 ning and managing research, development, demonstration,
25 and commercial application programs for unconventional

natural gas and other petroleum production and produced water utilization.

(d) ACTIVITIES AT THE NATIONAL LABORATORIES.—The Secretary, through the appropriate National Laboratory, shall carry out a program of research, development, and demonstration activities complementary to and supportive of the research, development, and demonstration programs under subsection (b).

SEC. 4. CONSULTATION AND COORDINATION.

(a) CONSULTATION.—In carrying out this Act, the Secretary shall consult with the Secretary of the Interior and the Administrator of the Environmental Protection Agency.

(b) COORDINATION.—To the maximum extent practicable, the Secretary shall ensure that the activities under this Act are coordinated with, and do not duplicate the efforts of, programs at the Department of Energy and other government agencies.

SEC. 5. FUNDING.

(a) ALLOCATION.—Amounts appropriated for this Act for each fiscal year shall be allocated as follows:

(1) 75 percent shall be for activities under section 3(a), (b), and (c).

(2) 25 percent shall be for activities under section 3(d) and other activities under section 3, includ-

1 ing administrative functions such as program direc-
2 tion, overall program oversight, and contract man-
3 agement.
4 (b) AUTHORIZATION OF APPROPRIATIONS.—There
5 are authorized to be appropriated to carry out this Act
6 $20,000,000 for each of fiscal years 2009 through 2013.

XXI. PROCEEDINGS OF THE FULL COMMITTEE MARKUP ON H.R. 2339, THE PRODUCED WATER UTILIZATION ACT OF 2007

WEDNESDAY, JULY 16, 2008

HOUSE OF REPRESENTATIVES,
COMMITTEE ON SCIENCE,
Washington, DC.

The Committee met, pursuant to call, at 10:05 a.m., in Room 2318 of the Rayburn House Office Building, Hon. Bart Gordon [Chairman of the Committee] presiding.

Chairman GORDON. Good morning. The Committee will come to order.

Pursuant to notice, the Committee on Science and Technology meets to consider the following measures: H.R. 3957, the *Water Use Efficiency and Conservation Research Act;* H.R. 2339, the *Produced Water Utilization Act of 2007;* and H.R. 6323, *To establish a research, development, demonstration and commercial application program to promote research of appropriate technologies for heavy duty plug-in hybrid vehicles, and for other purposes.*

Before we start the markup, we have some Committee business to attend to. Yesterday, Ms. Donna Edwards of Maryland was appointed to serve on the Committee on Science and Technology. We currently have an open subcommittee slot on the Energy and Environmental Subcommittee, and I would like to ask unanimous consent that Ms. Edwards be elected to the Subcommittee. Without objection, so ordered.

Congratulations, Ms. Edwards. I know that a lot that we do here on this committee affects Maryland and we look forward to working with you to get your input on that and also for you to be a liaison as well as Mr. Bartlett.

Mr. Bartlett, do you want to welcome our new Member?

Mr. BARTLETT. Very happy to have you aboard. Our districts adjoin each other. When we have common interests, I will look forward to working with you. Thank you.

Ms. EDWARDS. Thank you, Mr. Chairman and Mr. Bartlett. Thank you.

Chairman GORDON. And when you don't have common interests, you will still work with her though, won't you?

Mr. BARTLETT. Absolutely, but all the more so when we have common interests.

Chairman GORDON. Thank you. We will now proceed with the markup.

Dwindling water supplies across the United States continue to percolate as the major disaster on our nation's horizon. Despite large spring rains in some states, the U.S. Drought Monitor shows that severe drought still grips the American Southeast, California across the Rocky Mountains, and Oklahoma and the Texas panhandle. In an effort to protect the country from an impending water scarcity crisis, the Committee has begun to search out ways for the Federal Government to spur new technology innovation in water research and development. Today the Committee will consider two bills aimed at preventing a future water supply catastrophe.

First, we will take up H.R. 3957, the *Water Use Efficiency and Conservation Research Act,* introduced by Representative Jim Matheson. H.R. 3957 establishes a research and development program within the Environmental Protection Agency's Office of Research and Development to promote water-use efficiency and conservation.

Through this program, EPA will be able to develop and encourage the adoption of technologies and processes that will achieve greater water-use efficiencies, thus helping to address the water supply shortages. In addition, H.R. 3957 directs EPA to disseminate information on current water-use efficiencies and conservation technologies. This information will include incentives and impediments to development and commercialization.

Next we will consider H.R. 2339, the *Produced Water Utilization Act,* introduced by our colleague from Texas and our Ranking Member, Mr. Hall. This bill creates a research, development and demonstration program to promote beneficial reuse of water produced in connection with oil and gas extraction. In the United States, up to 2.3 billion gallons per day of produced water is generated. Unfortunately, this water is not of sufficient quality to be used to meet our many needs for water. This legislation will provide innovative treatment technologies that will enable the reuse of this water in an environmentally responsible way.

Let me also say that Congressman Hall and I have been discussing the issues of water. We think there are a variety of other things. We started this effort this year. We are going to continue to look into it next year and we hope that we are going to have again probably a series of bipartisan bills that we might combine for a real, again a major effort in water conservation and technologies for this important problem that faces our nation.

Finally, we will consider H.R. 6323, the *Heavy Duty Hybrid Research, Development and Demonstration Act,* introduced by the Ranking Member of the Investigations and Oversight Subcommittee, Mr. Sensenbrenner. With skyrocketing full prices, energy concerns have been cemented at the forefront of public awareness. This committee has responded by pursuing an aggressive energy agenda in 2010 and we will continue this in the next Congress, and we provided a substantial portfolio of bills to the comprehensive energy package which became law last December. Mr. Sensenbrenner's bill represents another common sense approach to chipping away at our energy challenge.

The heavy duty sector accounts for a very large portion of the Nation's fuel use and transportation-based emissions and even

small improvements in their efficiency can have a substantial impact. Hybrid technologies hold the promise of greatly reducing the fuel consumption by the Nation's truck fleet. Mr. Sensenbrenner and his staff have worked closely with the Majority to ensure that grants under this program explore a wide range of hybrid technologies and applications and he has made further improvements with an amendment in the nature of a substitute.

These three bills are important steps in ensuring that we have adequate water and power supplies across the country, and in pushing innovation in the heavy truck sector. I want to thank Representative Matheson, Representative Sensenbrenner and Ranking Member Hall for their efforts in these two important areas, and I ask that Members of the Committee support all three bills and move for their passage out of the Committee.

I now recognize Mr. Hall to present his opening remarks.

[The prepared statement of Chairman Gordon follows:]

PREPARED STATEMENT OF CHAIRMAN BART GORDON

Good Morning. The Committee will come to order. Pursuant to notice, the Committee on Science and Technology meets to consider the following measures:

- H.R. 3957, the *Water Use Efficiency and Conservation Research Act;*
- H.R. 2339, the *Produced Water Utilization Act of 2007;* and,
- H.R. 6323, *To establish a research, development, demonstration, and commercial application program to promote research of appropriate technologies for heavy duty plug-in hybrid vehicles, and for other purposes.*

Before we get started with the markup, we have some Committee business to attend to. Yesterday Ms. Donna Edwards of Maryland was appointed to serve on the Committee on Science and Technology.

We currently have an open subcommittee slot on the Energy and Environment Subcommittee. I would ask unanimous consent that Ms. Edwards be elected to this subcommittee. Without objection, so ordered.

Congratulations, and welcome to the Committee, Ms. Edwards.

We will now proceed with the markup.

Dwindling water supplies across the United States continue to percolate as a major disaster on our nation's horizon. Despite tremendous spring rains in some States, the U.S. Drought Monitor shows that severe drought still grips the American Southeast, California across the Rocky Mountains, and Oklahoma and the Texas Panhandle. In an effort to protect the country from an impending water scarcity crisis, the Committee has begun to search out ways for the Federal Government to spur new technological innovations in water research and development. Today the Committee will consider two bills aimed at preventing a future water supply catastrophe.

First, we will take up H.R. 3957, the *Water Use Efficiency and Conservation Research Act* introduced by Representative Jim Matheson. H.R. 3957 establishes a research and development program within the Environmental Protection Agency's Office of Research and Development to promote water-use efficiency and conservation.

Through this program, EPA will be able to develop and encourage the adoption of technologies and processes that will achieve greater water-use efficiency, thus helping to address the water supply shortages. In addition, H.R. 3957 directs EPA to disseminate information on current water-use efficient and conservation technologies. This information will include incentives and impediments to development and commercialization.

Next, we will consider H.R. 2339, the *Produced Water Utilization Act* introduced by my colleague from Texas and our Ranking Member, Mr. Hall. This bill creates a research, development, and demonstration program to promote the beneficial reuse of water produced in connection with oil and gas extraction. In the United States, up to 2.3 billion gallons per day of produced water is generated. Unfortunately, this water is not of sufficient quality to be used to meet our many needs for water. This legislation will provide innovative treatment technologies that will enable the reuse of this water in an environmentally responsible way.

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tions and Oversight Subcommittee, Mr. Sensenbrenner. With skyrocketing fuel prices, energy concerns have been cemented at the forefront of public awareness.

This committee responded by pursuing an aggressive energy agenda in 110th Congress, and provided a substantial portfolio of bills to the comprehensive energy package which became law last December. Mr. Sensenbrenner's bill represents another common sense approach to chipping away at our energy challenge.

The heavy truck sector accounts for a very large portion of the Nation's fuel use and transportation-based emissions, and even small improvements in their efficiency can have a substantial impact. Hybrid technologies hold the promise of greatly reducing the fuel consumed by the Nation's truck fleet. Mr. Sensenbrenner and his staff have worked closely with the Majority to ensure that grants under this program explore a wide range of hybrid technologies and applications, and he has made further improvements with the Amendment in the Nature of a Substitute.

These three bills are important steps in ensuring that we have adequate water and power supplies across the country, and in pushing innovation in the heavy truck sector. I want to thank Representative Matheson, Representative Sensenbrenner, and Ranking Member Hall for their efforts in these two important areas. I ask that Members of the Committee support all three bills and move for their passage out of the Committee.

I now recognize Mr. Hall to present his opening remarks.

Mr. HALL. Mr. Chairman, I thank you for holding the markup today and for the three bills before us, and because you have so adequately explained these bills, I can make my remarks very brief.

I simply would put my entire statement into the record with unanimous consent and I support the three bills we are marking up today and hope our colleagues will as well, and I yield back the balance of my time.

[The prepared statement of Mr. Hall follows:]

PREPARED STATEMENT OF REPRESENTATIVE RALPH M. HALL

Mr. Chairman, thank you for holding this markup today to advance the three bills before us today. I will keep my opening remarks brief.

H.R. 3957, the *Water Use Efficiency and Conservation Research Act* introduced by Mr. Matheson would create a water technology research program at the EPA. Research and development of technologies that promote greater efficiencies in water use is one of the several responses we can make to the water shortages many of our constituents are experiencing.

The second bill, H.R. 2339, the *Produced Water Utilization Act of 2008* is one I introduced, and I feel strongly about its potential to benefit our dual needs of energy and water. This bill would provide important funding for research, development, demonstration, and commercial application of technologies to purify and use produced water from oil and natural gas extraction for human, agricultural, and industrial purposes.

H.R. 6323, Mr. Sensenbrenner's heavy duty hybrid vehicle bill, would establish a program at DOE to provide grants to carry out projects to advance research and development and to demonstrate advanced technologies for heavy duty plug-in hybrid vehicles. While heavy duty trucks make up a small portion of the market, the potential for fuel savings through hybrid technology is substantial.

Thank you, Mr. Chairman. I support the three bills we're marking up today and hope that our colleagues will as well. I yield back the balance of my time.

Chairman GORDON. That was a wonderful statement, Mr. Hall.

Without objection, Members may place statements in the record at this point.

[The prepared statement of Ms. Richardson follows:]

PREPARED STATEMENT OF REPRESENTATIVE LAURA RICHARDSON

Chairman Gordon, Ranking Member Hall, and fellow Members of the Science and Technology Committee, I rise in strong support of each piece of legislation that is slated for today's Full Committee markup.

H.R. 3957, the Water Use Efficiency and Conservation Research Act

First I would like to thank my colleague Rep. Matheson (D–UT) for introducing H.R. 3957, the *Water Use Efficiency and Conservation Research Act,* and for his leadership on this issue. My home State of California has dealt with its own series of water supply issues in the past. Likewise, State and local officials in California have pursued this issue in an aggressive manner. In my district we have a nationally recognized desalination project. The Long Beach City Council implemented strict water conservation regulations.

Fact of the matter is Americans consume approximately 26 billion gallons of water per day, and similar to our consumption of oil, we are all going to have to learn to conserve.

H.R. 3957 is a sound piece of legislation that designates the Environmental Protection Agency as the primary federal agency tasked with the responsibility of improving our nation's water use conservation technology. Given the EPA's track record on water quality issues, asking the agency to participate in this endeavor seems like a reasonable fit.

Thirty years ago President Carter advised the Nation that conservation was necessary to our quality of life. This legislation takes a major step in progressing from statements to attainable goals. I encourage my colleagues to support this bill.

H.R. 2339, the Produced Water Utilization Act of 2007

I want to commend the distinguished Ranking Member, Mr. Hall, for introducing H.R. 2339, the *Produced Water Utilization Act of 2007.*

We all agree that we must increase our domestic supply of energy. However this process results in a product called produced water, which is water that is contaminated by dissolved solids.

Consequently, this water supply is rendered useless for consumption or irrigation and must be pumped back into the ground to dispose of safely.

The legislation that Mr. Hall introduced will allow us to safely utilize produced water thereby creating an additional source of water for human consumption and irrigation.

This is a sound piece of legislation and I encourage my colleagues to support this bill.

H.R. 6323, Heavy Duty Plug-In Hybrid Vehicle R&D

I want to acknowledge my colleague Rep. Sensenbrenner (R–WI) for introducing H.R. 6323, a bill to promote heavy duty plug-in hybrid R&D.

While we have seen a concerted effort to bring this technology to passenger vehicles, commercial vehicles are far behind despite their heavy fuel consumption.

Indeed we heard testimony during the hearing on Mr. Sensenbrenner's bill that this technology will save each heavy duty truck 1,000 gallons of fuel per year. With the rising cost of energy and many local and State governments facing budget constraints, this legislation could impact their respective departments and reduce the cost of business.

In my home State of California, Pacific Gas & Electric, which serves northern and central California, has been a leader on this issue, utilizing this technology in their service trucks. We have to change the way we consume energy in this country, and the Federal Government has to take a leading role in this effort.

H.R. 6323 will take us in the right direction, and I encourage my colleagues to support this bill.

Mr. Chairman, I yield back my time.

[The prepared statement of Mr. Mitchell follows:]

PREPARED STATEMENT OF REPRESENTATIVE HARRY E. MITCHELL

Thank you, Mr. Chairman.

Today we will mark up H.R. 3957, the *Water Use Efficiency and Conservation and Research Act,* H.R. 2339, the *Produced Water Utilization Act,* and H.R. 6323, the *Heavy Hybrid Truck Research, Development, and Demonstration Act.*

Arizona is no stranger to the pressures of rising population and prolonged drought.

We are one of the fastest growing states, and despite some helpful precipitation this winter, many portions of our state are still well into a second decade of drought.

I believe that it is absolutely critical that we address the growing shortage of our nation's water supply and work to establish progressive and cost-effective water resource management policies.

H.R. 3957 would help us gain a better understanding of our water use and shortages by establishing a research and development program within EPA to promote water efficiency and conservation.

I urge my colleagues to support this important legislation.

I yield back.

Chairman GORDON. We now proceed to H.R. 2339, the *Produced Water Utilization Act of 2007*.

I now recognize Mr. Hall to present any remarks on his bill.

Mr. HALL. Mr. Chairman, I thank you, and as stated during the Subcommittee markup, the United States still has an enormous reserve of energy from oil and natural gas within our borders, both on land and in our offshore development areas. However, for every barrel of oil produced, extraction of these vital domestic resources produces 10 barrels of saline, brackish and generally unusable water. In fact, today we generate over five billion gallons of produced water every day. This water is to a large extent currently unusable and environmentally hazardous. To dispose of such produced water in many circumstances, producers have to re-inject it into the geologic formation, which creates a great expense to the small producers throughout this country. At a time when usable water supplies are more vital than ever to support our growing economy, safe and sustainable uses of produced water need to be researched and pursued for human, agricultural and industrial uses.

This legislation addresses environmental concerns, water use issues and energy production benefits. I urge my colleagues to vote for it and hope that Chairman Gordon and I can work together to see that it is expeditiously brought to the House Floor, and I yield back.

[The prepared statement of Mr. Hall follows:]

PREPARED STATEMENT OF REPRESENTATIVE RALPH M. HALL

As I stated during the Subcommittee markup, the United States still has an enormous reserve of energy from oil and natural gas within our borders—both on land and in our offshore development areas. However, for every barrel of oil produced, extraction of these vital domestic resources produces ten barrels of saline, brackish and generally unusable water. In fact, today we generate over five billion gallons of produced water every day. This water is, to a large extent, currently unusable and environmentally hazardous. To dispose of produced water in many circumstances, producers must re-inject it into geologic formations which creates a great expense to small producers throughout the country. At a time when usable water supplies are more vital than ever to support our growing economy, safe and sustainable uses of produced water need to be researched and pursued for human, agricultural and industrial uses. This legislation addresses environmental concerns, water use issues and energy production benefits. I urge my colleagues to vote for it and hope that Chairman Gordon and I can work together to see that it is expeditiously brought to the House Floor.

Chairman GORDON. Thank you, Mr. Hall. You can be well assured that we will work to bring all these bills and particularly your bill—and I think your bill really represents the benefit of what you might say diversity on the Committee. You know, I had no earthy idea—I am not from Texas, I am not around oil wells—that that much water was produced when you do that, and other folks have their own backgrounds whether it is geographical, cultural or whatever that can bring their own interests to us and again, this is a good example and this is a very good bill and I thank you for bringing it to us.

Does anyone else wish to be recognized? I ask unanimous consent that the bill is considered as read and open to amendment at any point and that the Members proceed with the amendments in order of the roster. Without objection, so ordered.

Are there any amendments? If not, the vote is on the bill, H.R. 2339. All in favor, say aye. All opposed, no. In the opinion of the Chair, the ayes have it. I recognize Mr. Hall to offer a motion.

Mr. HALL. Mr. Chairman, I move that the Committee favorably report H.R. 2339 to the House with the recommendation that the bill do pass. Furthermore, I move that staff be instructed to make necessary technical and conforming changes and that the Chairman take all necessary steps to bring the bill before the House for consideration. I yield back.

Chairman GORDON. The question is on the motion to report the bill favorably. Those in favor of the motion will signify by saying aye. Opposed, no. The ayes have it. The bill is favorably reported. Without objection, the motion to reconsider is laid up on the table. Members will have two subsequent calendar days in which to submit supplemental Minority or additional views on the measure ending Monday, July 21 at 9 a.m.

I move pursuant to clause 1 of rule 22 of the Rules of the House of Representatives that the Committee authorize the Chairman to offer such motions as may be necessary in the House to adopt and pass H.R. 2339, the *Produced Water Utilization Act of 2007.* Without objection, so ordered.

Before we adjourn, let me just say to everyone, this appears to be our last markup for this year and this session. Things, you know, went smoothly today, but the reason for that was that there was lots of collaboration. I thank all of you for your presence. It is important for you to be here. I hope that one thing that we can do as we go into maybe September when we are not going to be having any markups is have the opportunity for us to sit down as a committee informally and talk about what we want to do next year, and I think we had a good discussion today. We want to find out what is important to your districts, what is important to the country, and we will try to get an agenda that either we will pass off to Mr. Hall or we will keep it here, whichever way it might be, but one way or the other, we want to work together, and I very, very sincerely thank everyone for a very productive year. I hope that you will all go back to your press secretaries and talk at home about these three bills that you got out today. There are more good ones.

Thank you very much, and we are adjourned.

[Whereupon, at 10:59 a.m., the Committee was adjourned.]

Appendix:

H.R. 2339 as Reported From Subcommittee, Section-by-Section Analysis

H.R. 2339, AS REPORTED BY THE SUBCOMMITTEE ON ENERGY AND ENVIRONMENT

May 6, 2008

Strike all after the enacting clause and insert the following:

1 **SECTION 1. SHORT TITLE.**

2 This Act may be cited as the ''Produced Water Utili-
3 zation Act of 2008''.

4 **SEC. 2. DEFINITIONS.**

5 In this Act:

6 (1) PRODUCED WATER.—The term ''produced
7 water'' means water from an underground source
8 that is brought to the surface as part of the process
9 of exploration for or development of coalbed meth-
10 ane, oil, natural gas, or any other substance to be
11 used as an energy source.

12 (2) SECRETARY.—The term ''Secretary'' means
13 the Secretary of Energy.

14 **SEC. 3 PURPOSES.**

15 (a) IN GENERAL.—The Secretary shall carry out
16 under this Act a program of research, development, and
17 demonstration of technologies for environmentally sustain-
18 able utilization of produced water for agricultural,

1 irrigational, municipal, and industrial uses, or other envi-
2 ronmentally sustainable purposes. The program shall be
3 designed to maximize the utilization of produced water in
4 the United States by increasing the quality of produced
5 water and reducing the environmental impacts of produced
6 water.

7 (b) PROGRAM ELEMENTS.—The program under this
8 Act shall address the following areas, including improving
9 safety and minimizing environmental impacts of activities
10 within each area:

11 (1) Produced water recovery, including research
12 for desalination and demineralization to reduce total
13 dissolved solids in the produced water.

14 (2) Produced water utilization for agricultural,
15 irrigational, municipal, and industrial uses, or other
16 environmentally sustainable purposes.

17 (3) Re-injection of produced water into sub-
18 surface geological formations to increase energy pro-
19 duction.

20 (c) PROGRAM ADMINISTRATION.—To carry out the
21 purposes under this Act the Secretary may enter into an
22 agreement with a consortium whose members have collec-
23 tively demonstrated capabilities and experience in plan-
24 ning and managing research, development, demonstration,
25 and commercial application programs for unconventional

natural gas and other petroleum production and produced water utilization.

(d) ACTIVITIES AT THE NATIONAL LABORATORIES.—The Secretary, through the appropriate National Laboratory, shall carry out a program of research, development, and demonstration activities complementary to and supportive of the research, development, and demonstration programs under subsection (b).

SEC. 4. CONSULTATION AND COORDINATION.

(a) CONSULTATION.—In carrying out this Act, the Secretary shall consult with the Secretary of the Interior and the Administrator of the Environmental Protection Agency.

(b) COORDINATION.—To the maximum extent practicable, the Secretary shall ensure that the activities under this Act are coordinated with, and do not duplicate the efforts of, programs at the Department of Energy and other government agencies.

SEC. 5. FUNDING.

(a) ALLOCATION.—Amounts appropriated for this Act for each fiscal year shall be allocated as follows:

(1) 75 percent shall be for activities under section 3(a), (b), and (c).

(2) 25 percent shall be for activities under section 3(d) and other activities under section 3, includ-

1 ing administrative functions such as program direc-
2 tion, overall program oversight, and contract man-
3 agement.
4 (b) AUTHORIZATION OF APPROPRIATIONS.—There
5 are authorized to be appropriated to carry out this Act
6 $20,000,000 for each of fiscal years 2009 through 2013.

SECTION-BY-SECTION ANALYSIS OF H.R. 2339,
PRODUCED WATER UTILIZATION ACT OF 2007

Sec. 1. Short Title

"Produced Water Utilization Act of 2007"

Sec. 2. Findings

Describes the need for the legislation.

Sec. 3. Definitions

Defines terms used in the text of the bill.

Sec. 4. Purposes

The bill requires the Secretary to carry out a program, in conjunction with an existing program, of research, development, and demonstration of technologies for environmentally sustainable utilization of produced water for agricultural, irrigational, municipal, and industrial uses, or other environmentally sustainable purposes. The program will focus on three areas as well as improving safety and minimizing environmental impacts in areas that deal with produced water recovery. The three areas are (1) Produced water recovery, including research for desalination and demineralization to reduce total dissolved solids in the produced water; (2) Produced water utilization for agricultural, irrigation, municipal, or industrial uses, or other environmentally sustainable purposes; and (3) Re-injection of produced water into subsurface geological formations to increase energy production.

The bill requires that the program be administered by a consortium with relevant experience, and sets up a complementary program at the National Energy Technology Laboratory.

The bill also requires consultation with the Secretary of the Interior and the Administrator of the Environmental Protection Agency.

Sec. 5. Sunset

The authority provided by the Act terminates on September 30, 2016

Sec. 6. Funding

The bill specifies that 25 percent of the allocated funds shall be for activities at the National Lab and 75 percent shall be allocated for the other program purposes. There are authorized to be appropriated to carry out this Act $20,000,000 for each of fiscal years 2008 through 2016.

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