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ENERGY AND WATER INTEGRATION ACT

JULY 11, 2011.—Ordered to be printed

Mr. BINGAMAN, from the Committee on Energy and Natural Resources, submitted the following

R E P O R T

[To accompany S. 1343]

The Committee on Energy and Natural Resources, having considered the same, reports favorable thereon, an original bill (S. 1343) to provide for the conduct of an analysis of the impact of energy development and production on the water resources of the United States, and for other purposes, having considered the same, reports favorably thereon without amendment and recommends that the bill do pass.

PURPOSE

The purpose of S. 1343 is to provide for the conduct of an analysis of the impact of energy development and production on the water resources of the United States.

BACKGROUND AND NEED

Water supplies and energy supplies are interrelated. Water is used for energy production, either as a coolant for thermoelectric power plants or certain solar installations, or as a critical input for the production of energy. Thermal power generation accounts for approximately 40 percent of freshwater withdrawals in the country, second only to agriculture-related withdrawals. In many instances the water returned to the system after it has been used in connection with energy production is not the same temperature or quality as before it was used for energy generation. An insufficient or uncertain supply of water due to heat waves, droughts, or over-allocation can strain the energy-water relationship and be a constraint on both conventional and renewable energy production. For example, during the drought in the southeastern United States in early

2008, nuclear power plants threatened shutting down because of limited water supplies. In addition, in time of drought, lower water levels behind dams reduce output from their hydroelectric turbines.

In addition, just as energy production uses large amounts of water, the procurement, treatment, and delivery of water supplies consumes large amounts of energy. For many water suppliers, energy costs are the highest operation and maintenance expense. Evaluation of energy uses associated with water delivery and the collection and generation of better data will lead to improved decision-making by state, local, and federal water managers.

LEGISLATIVE HISTORY

During the 111th Congress, S. 531, the Energy-Water Integration Act of 2009 was introduced by Senator Bingaman for himself and Senator Murkowski on March 5, 2009. S. 531 was incorporated in S. 1462 as title I, subtitle D, as reported by the Committee on July 16, 2009.

During the 112th Congress the Committee on Energy and Natural Resources held a hearing on the text of title I, subtitle D, of S.1462 from the 111th Congress on March 31, 2011. The Committee considered and amended the text from the 111th Congress at its business meetings on April 12, 2011 and May 26, 2011, and ordered the legislation, as amended, favorably reported, as an original bill, at its business meeting on May 26, 2011.

COMMITTEE RECOMMENDATION

The Senate Committee on Energy and Natural Resources, in open business session on May 26, 2011, by voice vote of a quorum present, recommends that the Senate pass an original bill, as described herein. Senators Lee and Coats were recorded as opposing the measure.

SECTION-BY-SECTION ANALYSIS

Section 1 provides the short title of the bill and table of contents.

Section 2 defines the term "Secretary" to mean the Secretary of Energy.

Section 3 requires the Secretary, in consultation with others, to enter into an arrangement with the National Academy of Sciences to conduct a study to assess the impact of energy development and production on the water resources of the United States and to assess the amount of water used to produce transportation fuels, the amount of water used to produce electricity using various types of generation, and additional impacts on water from mining and transporting fuel sources. The National Academy of Sciences is directed to report the results of its study to the Secretary within 18 months of enactment of the Act and to make the results of its study available to the public.

Section 4 requires the Secretary, in consultation with others, to conduct a study to identify best available technologies and other strategies to maximize water and energy efficiency in generating electricity and to submit a report to Congress of the results of the study.

Section 5 requires the Secretary of the Interior, acting through the Commissioner of Reclamation, to conduct a study evaluating

the energy used in storing and delivering water from Bureau of Reclamation projects, and to identify ways to reduce such use through conservation, improved operations, and renewable energy integration, and to submit a report to Congress a report containing the results of the study.

Section 6 directs the Secretary of the Interior to operate, manage, and maintain facilities to carry out research, development, and demonstration activities to develop technologies and methods that promote brackish groundwater desalination as a viable method to increase water supply in a cost-effective manner. Section 6 also reauthorizes the Bureau of Reclamation's desalination research programs.

Section 7 amends the Department of Energy Organization Act to require the Secretary of Energy, acting through the Administrator of the Energy Information Administration, to continually report on the energy used in procuring, treating, and delivering water.

Section 8 directs the Secretary of Energy to develop an Energy-Water Research and Development Roadmap within 90 days of enactment and to submit a report to Congress.

Section 9 directs the Secretary of Energy to carry out a competitive grant program to demonstrate technologies that conserve significant amounts of water and energy commercial, residential, and mixed-use development projects, and requires a report from grant recipients on the energy and water savings achieved through the project.

Section 10 directs the Secretary of Energy to establish and carry out an energy and water efficiency technical assistance program for rural drinking water and wastewater utilities.

Section 11 requires the Secretary of Energy, in consultation with other Federal agencies and appropriate entities, to conduct an in-depth study of the inter-related nature of water and energy and to report to Congress regarding the results of the study.

COST AND BUDGETARY CONSIDERATIONS

The following estimate of costs of this measure has been provided by the Congressional Budget Office:

Energy and Water Integration Act of 2011

Summary: This legislation would authorize federal agencies to undertake a variety of activities aimed at analyzing the impacts of developing and producing energy on the nation's water resources. CBO estimates that fully funding the legislation would cost $136 million over the 2012–2016 period, assuming appropriation of necessary amounts. The legislation would not affect direct spending or revenues; therefore, pay-as-you-go procedures do not apply.

The legislation would impose an intergovernmental and private-sector mandate, as defined in the Unfunded Mandates Reform Act (UMRA), because it would require public and private entities to submit information to the Energy Information Administration (EIA) about the amount of energy used to procure, treat, or deliver water. Based on information from the EIA, CBO estimates that the cost of complying with the mandate would fall well below the annual thresholds established in UMRA ($71 million for intergovernmental mandates and $142 million for private-sector mandates, in 2011, adjusted annually for inflation).

Estimated cost to the Federal Government: The estimated budgetary impact of this legislation is shown in the following table. The costs of this legislation fall within budget functions 270 (energy) and 300 (natural resources and environment).

	By fiscal year, in millions of dollars—					
	2012	2013	2014	2015	2016	2012–2016
CHANGES IN SPENDING SUBJECT TO APPROPRIATION						
Estimated Authorization Level	37	34	33	33	33	170
Estimated Outlays	16	26	28	33	33	136

Basis of estimate: The legislation would authorize federal agencies to undertake a variety of activities aimed at analyzing and mitigating the impact of energy development and production on water resources as well as promoting water conservation. Under the legislation, those activities would be carried out primarily by the Department of Energy (DOE) and the Department of the Interior (DOI). Based on information from those departments about levels of spending for existing and similar activities, CBO estimates that fully funding the legislation would require appropriations totaling $170 million over the 2012–2016 period. That amount includes:

- $100 million for DOE to provide competitive grants to state, local, and tribal governments to support commercial, residential, and mixed-use development projects involving technologies to reduce consumption and conserve energy and water resources;
- $45 million for DOI to evaluate energy-saving opportunities at federal reclamation projects and perform a variety of activities related to water desalination;
- $15 million for DOE to provide grants and technical assistance to utilities that treat rural drinking water and wastewater to help them improve energy efficiency, conserve water, and develop alternative and renewable energy supplies; and
- $10 million for various other studies, reports, and analyses.

Assuming appropriation of amounts estimated to be necessary, CBO estimates that spending would total $16 million in 2012 and $136 million over the 2012–2016 period. For this estimate, CBO assumes that the legislation will be enacted by the end of fiscal year 2011 and that spending will occur at historical rates for similar activities.

Pay-As-You-Go considerations: None.

Intergovernmental and private-sector impact: The legislation would impose an intergovernmental and private-sector mandate, as defined in UMRA, because it would require public and private entities to submit information to the EIA about the amount of energy used to procure, treat, or deliver water. Based on information from the EIA, CBO estimates that the cost of complying with the mandate would fall well below the annual thresholds established in UMRA ($71 million for intergovernmental mandates and $142 million for private-sector mandates, in 2011, adjusted annually for inflation.)

Estimate prepared by: Federal Costs: Megan Carroll, Aurora Swanson, and Martin von Gnechten; Impact on State, Local, and

Tribal Governments: Ryan Miller; Impact on the Private Sector: Amy Petz.

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

REGULATORY IMPACT EVALUATION

In compliance with paragraph 11(b) of rule XXVI of the Standing Rules of the Senate, the Committee makes the following evaluation of the regulatory impact which would be incurred in carrying out the bill.

The bill is not a regulatory measure in the sense of imposing Government-established standards or significant economic responsibilities on private individuals and businesses.

No personal information would be collected in administering the program. Therefore, there would be no impact on personal privacy.

The bill requires grant recipients to report to the Secretary the results achieved by projects receiving grants, but little, if any, additional paperwork would result from the enactment of the bill.

CONGRESSIONALLY DIRECTED SPENDING

The bill, as reported, does not contain any congressionally directed spending items, limited tax benefits, or limited tariff benefits as defined in rule XLIV of the Standing Rules of the Senate.

EXECUTIVE COMMUNICATIONS

The testimony provided by the Bureau of Reclamation and Department of Energy at the March 31, 2011, Full Committee hearing on S. 1343 follows:

STATEMENT OF MICHAEL L. CONNOR, COMMISSIONER, BUREAU OF RECLAMATION, DEPARTMENT OF THE INTERIOR

Chairman Bingaman, Ranking Member Murkowski and Members of the Committee, I am Mike Connor, Commissioner of the Bureau of Reclamation (Reclamation). I am pleased to be here alongside the Department of Energy (DOE) and the Federal Energy Regulatory Commission (FERC) to provide the views of the Department of the Interior (Department) on the Reclamation-specific provisions in Subtitle D of the American Clean Energy Leadership Act of 2009, S. 1462 from the 111th Congress. This subtitle promotes the integration of energy and water policies to address the challenges that exist in making sustainable use of finite natural resources. Two sections of this bill call for specific deliverables from Reclamation: Section 143 and Section 144. Reclamation is continuing to explore ways to improve energy efficiencies within the scope of its projects.

SECTION 143: ENERGY USAGE STUDY

Section 143 directs Reclamation to conduct a study on the quantities of energy used in water storage and delivery operations in major Reclamation projects, with an emphasis on identifying opportunities to reduce water and energy consumption and costs. The energy usage study required

by Section 143 may provide a helpful data point for project managers and water customers. Facilitating sustainability of the Nation's natural resources is one of the Department's highest priorities. Through our WaterSMART program, the Department is committed to integrating energy and water policies to promote the sustainable use of all resources, including incorporating water conservation criteria and the water/energy nexus into the Department's planning efforts, including recommendations to reduce conflict in water management. Within existing operations and budget authority, Reclamation strives to operate its projects with the maximum amount of energy efficiency, and Reclamation is working to meet a Departmental Priority Goal for Water Conservation through implementation of the WaterSMART Program. This program was created by Secretarial Order 3297, issued on February 22, 2010 (available at http://elips.doi.gov/app_SO/act_getfiles.cfm?order_number=3297). WaterSMART specifically recognizes that water and energy are inextricably linked and that water conservation can yield significant energy conservation benefits too.

WaterSMART Grants and Title XVI Water Reclamation and Reuse projects funded in FY 2010 are expected to enable the conservation of an estimated 149,000 acre-feet of water each year once complete. Fiscal Year 2011 grants are awaiting completion of the appropriations process. With funds requested in FY 2012, we will seek to increase the 2010 total by an additional 140,000 acre-feet. The energy savings associated with this conservation will vary greatly from project to project, but a study focused across the Reclamation program is likely to provide valuable context for Reclamation's water conservation efforts generally and identify new opportunities for increasing efficiency.

Overall, Reclamation has already been actively integrating energy and water policies under its existing activities. Under the WaterSMART Program's Water and Energy Efficiency Grants, which fund projects that help to meet the Priority Goal for Water Conservation, Reclamation incentivizes the conservation of energy in the delivery of water. Proposals that not only address water conservation but also explore the use of renewable energy and other energy efficiency improvements receive additional consideration during the selection process. In Fiscal Year 2010, through its WaterSMART program, Reclamation awarded 37 water and energy efficiency grants for amounts as high as $1 million, including a number of funded proposals that explored the relationship between water efficiency improvements and energy savings. We aim to continue these WaterSMART projects in FY 2011. If the legislation before the Committee today were enacted, the study authorized by Section 143 would need to compete for resources within the existing Reclamation program.

SECTION 144: USES OF THE BRACKISH GROUNDWATER NATIONAL DESALINATION RESEARCH FACILITY

Section 144 calls for specific research objectives and authorizes operation, management, maintenance, and cost recovery at the Brackish Groundwater National Desalination Research Facility (Facility) in Otero County, New Mexico. The directives in Section 144 relative to the Facility in New Mexico would be consistent with ongoing activities at the Facility. Reclamation is partnered with New Mexico State University in a four-year research program with projects at or associated with the Facility focused on research, education, and outreach in water desalination. The bill language calls on Reclamation to operate and manage the Facility as a state-of-the-art desalination research center to develop new water and energy technologies with widespread applicability, and create new supplies of usable water for municipal, agricultural, industrial, or environmental purposes. The bill also authorizes Reclamation to collect charges to offset the costs of operating and maintaining the Facility.

As members of the Committee may know, one of the authorities to operate and maintain the Facility stems from Public Law 104–298, as amended, commonly known as the Water Desalination Act of 1996. The Desalination Act has been funding research at the lab scale leading to pilot and demonstration testing at the Facility. The Facility, as well as Reclamation's desalination program generally, provides a venue for the award of competitive, cost-shared cooperative agreements with universities and public and private sector organizations for the purpose of research on converting unusable waters into usable water supplies. The Facility represents an avenue to advance the real-world potential of water desalination. The Desalination Act's current authority expires at the end of the 2011 fiscal year, and its extension by the Congress for a term of five years could enable this important research to continue. Providing these authorities could help Reclamation develop water-related technologies and other water management practices and may also potentially enhance U.S. competitiveness in providing solutions to world-wide water issues in the 21st century. We look forward to working with the Congress on S. 1462 to avoid duplication of activities that are already being performed by the Bureau of Reclamation.

This concludes my written statement. I am pleased to answer any questions the Committee may have.

STATEMENT OF STEVEN G. CHALK, CHIEF OPERATING OFFICER & ACTING DEPUTY ASSISTANT SECRETARY FOR RENEWABLE ENERGY, OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY, DEPARTMENT OF ENERGY

Chairman Bingaman, Ranking Member Murkowski, Members of the Committee, thank you for the opportunity to discuss the three pieces of legislation before us today: S.

629, the Hydropower Improvement Act of 2011; S. 630, the Marine and Hydrokinetic Renewable Energy Promotion Act of 2011; and Title I, subtitle D of the American Clean Energy Leadership Act of 2009 (ACELA, S. 1462 from the 111th Congress).

In his State of the Union address in January, President Obama referred to America's need to transition to a clean energy economy as "our generation's Sputnik moment," a goal so important that we need to "reach a level of research and development we haven't seen since the height of the Space Race." [1] S. 629 and S. 630 would dramatically increase the federal government's investment in both conventional hydropower and marine and hydrokinetic (MHK) renewable energy technologies.

The provisions being considered from ACELA address the interdependence of our energy and water consumption. Water is an integral component of many traditional and alternative energy technologies used for transportation, fuels production and electricity generation. Energy-related water demands are beginning to compete with other demands from population growth, agriculture and sanitation. This competition could become fiercer if climate change increases the risk of drought, making our water supply more vulnerable. The Department of Energy (DOE) has initiated many activities over the last few years to address this energy-water nexus.[2]

Since fiscal year 2008, when DOE restarted its Water Power Program, it has made significant strides in advancing next-generation water power technologies, assessing existing resources, promoting deployment opportunities, and cooperating with other government agencies to accelerate water power development. About 45 percent of all hydropower in the United States is generated at Federally-owned facilities, providing clean, renewable power to the grid.[3] DOE's estimates indicate that there could be an additional 300 gigawatts of hydropower through efficiency and capacity upgrades at existing facilities, powering non-powered dams, new small hydro development and pumped storage hydropower.[4]

DOE works on both conventional hydropower and on marine and hydrokinetic (MHK) technologies. The combined FY 2012 Budget Request for conventional hydropower and MHK technologies is $38.5 million. Conventional hydropower—energy derived from water using dams, diversionary structures, or impoundments for electric power—generates more electricity than any other renewable energy source in the U.S. Conventional hydropower represented 65 percent of U.S. renewable electricity generation in 2010, and seven percent of total U.S. elec-

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[1] *http://www.whitehouse.gov/the-press-office/2011/01/25/remarks-president-state-union-address*

[2] See, for example, the activities undertaken by the National Energy Technology Laboratory, *http://www.neldoe.gov/technologies/coalpower/ewr/water/index.html.*

[3] *http://eia.doe.gov/cneaf/electricity/page/eia906_*920.html

[4] FY09 DOE Interim Conventional Hydro Resource Assessment, Oak Ridge National Lab

tricity generation that year.[5] Conventional hydropower principally serves as a baseload electricity supply, but can also function as a dispatchable resource to balance variable renewable energy technologies such as wind and solar.

MHK technologies include energy devices that can extract energy from moving water, including waves and currents in oceans, rivers, and tidal areas, and from ocean thermal and salinity gradients. These resources if also developed in an environmentally responsible manner hold potential for helping our nation meet its clean energy goals.

In a March 2007 report, the Electric Power Research Institute indicated that its conservative estimate was that MHK power (from wave and tidal sources alone) could provide an additional 13,000 megawatts (MW) of capacity by 2025.[6] MHK power and ocean thermal energy are resources that typically can have higher capacity factors than some other renewable energy sources. In addition, they may not present the same level of integration challenges that large-scale development of variable renewable energy sources such as wind and solar may create for electricity grid planners and operators.

Through its Power Marketing Administrations (PMAs), DOE promotes and creates opportunities for new conventional hydropower technologies and development. PMAs encourage the most widespread use of hydropower possible at the lowest rates consistent with sound business principles. Some PMAs have established an active hydropower modernization program, adding hundreds of megawatts of capacity at existing facilities by updating equipment, while others have faced challenges in arranging financing. Because some of the challenges are statutory in nature, the PMAs and their customers may consult with the Committee on measures that would actively encourage expansion of hydropower capacity through updates to existing facilities.

Last year, DOE, the Bureau of Reclamation, and the Army Corps of Engineers signed a memorandum of understanding (MOU) on hydropower that aims to build long-term working relationships between agencies by prioritizing similar goals and aligning ongoing and future renewable energy development efforts.[7] The objectives of the MOU include deploying new, environmentally sustainable hydropower capacity, including upgrading existing facilities; powering non-powered dams; and research, development and deployment (RD&D) into new hydropower technologies, among other objectives. The pursuit and ultimate achievement of these goals will serve to strengthen our economy, enhance our national security, and protect our environment.

Water is an integral aspect of energy consumption and generation for many energy technologies other than hydro-

[5] *http://www.eia.doe.gov/cneaf/electricity/epa/epa.pdf*
[6] *http://www.aaas.org/spp/cstc/docs/07 06 1ERPI report.pdf*
[7] *http://www.energy.gov/news/8793.htm*

power as well. Many types of energy production make use of water, particularly for cooling, and increasingly, water-efficient technologies are being developed to reduce these impacts and help America use less water to meet its energy demands and use less energy to meet its water demands. Still, power generation from thermal energy sources (which include coal, natural gas and nuclear energy) accounted for approximately 41% of U.S. freshwater withdrawals in 2005.[8] Although most of the water withdrawn for cooling thermal power plants is subsequently returned to the source, this still can have disruptive effects on water flows and temperatures, which in turn negatively affect aquatic organisms, namely fish populations such as salmon. DOE estimates that there are significant opportunities to reduce water consumption for both electricity and fuels production. For example, in the electricity sector, development of hybrid wet-dry cooling systems may reduce water consumption by 70–80 percent compared to recirculating cooling systems. Moving, pumping and treating water and wastewater is in itself quite energy-intensive, representing roughly four percent of U.S. electricity consumption.[9]

The Department, through its National Laboratories and collaboration with universities and the private sector, is pursuing three major objectives to address the energy-water challenge. First, to address the increasing limited supplies of freshwater, DOE is considering strategies to increase use of nontraditional water resources in the power sector. Second, DOE is working to reduce the consumption of fresh water when generating electricity, while considering the full life-cycle of various energy technologies to determine how much water they demand and what kind of water quality they need. Finally, DOE is researching water-efficient technologies for the production of alternative or unconventional fuels for transportation.

I am pleased to offer the Department's perspective on these pieces of legislation. I will discuss these bills in the order they appeared in my invitation to testify before this Committee.

S. 629: HYDROPOWER IMPROVEMENT ACT OF 2011

The Hydropower Improvement Act of 2011, S. 629, seeks to substantially increase hydroelectric capacity and generation and improve its environmental performance.

A recent report from the Federal Energy Regulatory Commission (FERC) demonstrates that little additional hydropower is in the pipelines.[10] Concerns include environmental issues and nontechnical barriers to reduce the expense and uncertainty of the regulatory process is needed.

The most significant provision of S. 629 is a proposed authorization to DOE of $50 million per year for competitive grants and $50 million per year for RD&D to increase

[8] *http://pubs.usgs.gov/circ/1344/pdf/c1344.pdf*
[9] *http://www.circleofblue.org/waternews/wp-content/uploads/2010/08/EPRI-Volume-4.pdf*
[10] *http://www.ferc.gov/legal/staff-reports/03-17-11-energy-infrastructure.pdf*

hydropower generation. This authorization level is significantly higher than the FY 2012 Budget Request for EERE's conventional hydropower program of $20 million, and would also represent a substantial increase to the FY 2010 Budget for conventional hydropower of $13 million. These additional resources, if appropriated would enable increases in renewable hydropower generation, and provide for the accelerated demonstration of innovative technologies that can improve environmental performance.

In FY 2010, DOE funded the Hydropower Advancement Project (HAP) for $3 million. The HAP is focused on the most cost-effective, least-controversial types of new hydropower development, and seeks to stimulate further hydropower development and generation without new dams. The project has already identified multiple opportunities for adding generation and/or improving environmental performance without sacrificing energy efficiency. Current funding allows for fifty initial facility assessments and three to five detailed engineering design studies. Additional resources would be used to support facility improvements that could result in increased hydropower generation at the most cost-effective sites.

DOE has invested in a three year program of research and development (R&D) to address issues related to the environmental performance and siting of hydropower technologies. These efforts focus on increasing fish passage, investigating adequate environmental flows and improving water quality and will help ensure that increases in conventional hydropower generation are coupled with concurrent improvements in the environmental sustainability of the industry, issues that DOE has been working on since the mid 1990s. If realized, the additional funding authorized by S. 629 would help scale-up the advanced turbines and optimize operational scenarios.

A quicker, two-year FERC licensing process, as proposed by S. 629 would help accelerate development of conventional hydropower resources. A streamlined licensing approach already has been implemented by FERC for small hydropower projects; expanding this quicker process would be welcomed by DOE and the hydropower industry. At the same time, we must be sure that this quicker licensing process does not sacrifice rigorous maintenance of environmental standards and ensures adequate opportunity to allow for public input. Providing a quicker regulatory process when all environmental and public concerns have been addressed is a valuable goal.

S. 629 would require FERC and the Bureau of Reclamation to conduct workshops on small hydropower projects and conduit hydropower.[11] These workshops would provide opportunities for the federal government, including natural resource agencies, industry, environmental organizations and other stakeholders to reach consensus on strategies to

[11] Conduits are defined as tunnels, canals, pipelines, aqueducts, flumes, ditches, or similar manmade water conveyance systems that distribute water for agricultural, municipal, or industrial consumption and not primarily for the generation of electricity.

overcome barriers to greater hydropower deployment, including conflicting definitions of eligible projects and complicated, poorly understood permitting and licensing processes.

S. 629 would define a "small hydroelectric power project" according to the definition found in Section 4.30 of title 18 in the Code of Federal Regulations. DOE finds this definition problematic in this context, since this definition specifies that a small hydroelectric power project cannot be "owned or operated by the United States or by an instrumentality of the Federal Government." A majority of the non-powered dams that are proposed to be powered through this legislation are federally-owned by the U.S. Army Corps of Engineers and the Bureau of Reclamation. In fact, initial analysis by DOE for a forthcoming report indicates that the ten largest non-powered dams in the U.S. with potential to produce more than one megawatt are all operated by the Army Corps of Engineers.[12] DOE accordingly recommends that the definition of small hydroelectric power project that appears in this legislation delete the requirement that the dam not be federally-owned or operated.

The Department appreciates that S. 629 recognizes the non-application of this legislation to the PMAs. In addition, the PMAs believe that they should have the approval right for efficiency power or capacity additions, improvements or replacements at Federal projects, made in association with this legislation, where the Army Corps of Engineers and the Bureau of Reclamation seek appropriations.

All other provisions of S. 629 would either build on or support current DOE activities and areas of interest.

S. 630: MARINE AND HYDROKINETIC RENEWABLE ENERGY PROMOTION ACT OF 2011

S. 630, the Marine and Hydrokinetic Renewable Energy Promotion Act of 2011, seeks to accelerate the growth of the MHK industry through additional federal aid, and expansion of the scope and scale of DOE's MHK activities. The additional funding authorized by this bill would represent a significant increase in DOE's program for MHK technologies and is significantly higher than either the FY 2012 Budget Request of $18 million or the FY 2010 Budget of $37 million.

DOE already has several MHK systems engineering efforts underway, but the additional systems engineering required by S. 630 would be used to accelerate these programs.

S. 630 would also require DOE to devote more R&D funding to develop open interface standards. This would ensure consistent design and development and allow unbiased comparison between competing technologies to achieve optimal energy generation in resulting systems. As

[12] The National Hydropower Asset Assessment Project, to be released in April 2011.

the U.S. market develops, it will be crucial to avoid the pitfalls seen in the development of MHK technologies in Europe, where, despite tremendous strides that have been made in device development and deployment, the interface standards with devices and data are still being developed.

The creation of a competitive grant program for MHK RD&D test facilities would mimic similar innovative activities already sponsored by DOE for other renewable energy technologies. DOE is currently investing in three MHK test facilities that focus on the demonstration of multiple MHK technologies. Investment in these National Marine Renewable Energy Centers (NMRECs) is critically important in order to help MHK technologies realize their full potential and to support their rapid commercialization if done in an environmentally responsible way. Each Center is currently developing plans for the development of open-water test facilities. Further investment in NMRECs, as called for by this legislation, would enable the open-water test berths to be established. Third-party testing and evaluation of device performance and reliability would enable private sector investment in these emerging technologies.

All three of DOE's existing NMRECs are unrestricted in terms of the device types they develop and support. Although none are geographically located for in-stream testing, tidal device research and development can substitute. It is unnecessary to distinguish between "marine" and "hydrokinetic" centers as the existing NMRECs could conduct research on any type of device.

On June 29, 2010, the Department of Energy and the Department of the Interior (DOI) signed an MOU for the coordinated deployment of renewable energy technologies on the OCS. The MOU's Action Plan includes a number of MHK-related activities, including coordination of studies and other activities to support future BOEMRE-issued MHK research leases, the development of environmental monitoring and mitigation protocols and collaboration on environmental study efforts, and development of a plan for MHK resource management and prediction. Additionally, on August 3, 2010, DOE announced the designation of Florida Atlantic University (FAU) as a national center for ocean energy research and development. With this designation, DOE awarded the new Southeast National Marine Renewable Energy Center $250,000 to undertake research and development of technologies capable of generating power from ocean currents and ocean thermal energy. FAU has applied for a five-year limited lease under BOEMRE's Interim Policy. If issued, this lease would allow for limited testing of ocean current devices on the OCS offshore Florida. DOE has also provided funding to the Northwest National Marine Renewable Energy Center to aid in the development of facilities to serve as an integrated, standardized test center for developers of wave and tidal energy, and the Hawaii National Marine Renewable Energy Center for the development of a site for the testing of wave energy conversion devices and ocean thermal en-

ergy conversion systems. DOE may seek to obtain research leases from DOI.

If funding is realized under S. 630, development of MHK technologies would be accelerated, speeding their transformation from promising but fledgling technologies to commercially viable, clean, renewable energy sources.

TITLE I, SUBTITLE D OF THE AMERICAN CLEAN ENERGY LEADERSHIP ACT OF 2009

Title I, Subtitle D of ACELA contains provisions that would create an energy-water clean technology grant program in DOE and would require several studies on the energy-water nexus.

The grant program created under ACELA could serve as a useful way to spur industry to devote time and resources to develop strategies to minimize water consumption in energy processes. These provisions would also require DOE and other agencies to collaborate on several studies on this subject. The study that would be run by the Natural Academy of Sciences regarding the effects of energy development and production on U.S. water resources would be a useful, in-depth analysis. However, in this legislation, the analysis appears limited to a current assessment. While this in itself would be useful, DOE recommends that any such study also consider the expected increase in water demand from projected growth in energy production, and the water implications of moving to a clean energy economy. This will be especially important since certain clean energy technologies (carbon capture and storage, bioenergy, concentrated solar power, etc.) may result in increased water demands. The effects of climate change on water availability should also be analyzed in order to better understand the potential vulnerability of the energy sector to water constraints.

One of the other studies included in ACELA would require the Department of the Interior (DOI) to evaluate the amount of energy used in water storage and delivery operations. This study would be useful, but DOE suggests that the proposed study would benefit from consultation with other agencies with expertise in the energy-water area, including DOE.

In general, interagency consultation must be an integral component of our national strategy to address the energy-water nexus. Along with energy production, agriculture uses more water than any other sector in the U.S., so engagement with the U.S. Department of Agriculture will be essential. The U.S. Army Corps of Engineers must also play a vital role in developing more efficient water usage strategies. DOE welcomes efforts to build on existing collaborations with these and other agencies, such as the MOU referenced above.

These provisions would also require DOE to develop an Energy-Water R&D Roadmap to define future RD&D and commercialization efforts necessary to address emerging water-related challenges to future clean energy generation

and production. DOE has already produced a report examining these issues, which it transmitted to Congress in January of 2007, and has developed a follow-up report, "Energy-Water Challenges and Research and Development Issues," that we expect will be finalized and transmitted to Congress shortly.

CONCLUSION

In conclusion, I would like to again thank this Committee for its leadership in supporting both conventional hydropower and MHK energy technologies and in confronting the challenges associated with the interrelation of our energy and water consumption.

As Secretary Chu stated last year, "While hydropower is the largest source of renewable electricity in the nation, hydropower capacity has not increaed significantly in decades. As the single largest owner of hydropower generation in the United States, it is important for the federal government to tap this valuable asset so it can continue to contribute to our clean energy portfolio and energy security."[13] S. 629 and S. 630 both contain provisions that would help realize this goal; however, both bills contain authorizations significantly in excess of the 2012 Budget request within EERE for Water Programs. The President's FY 2012 budget represents DOE's priorities for applied R&D in energy efficiency and renewable energy technologies.

Transitioning to a clean energy economy will be greatly enhanced if we also identify ways to minimize or eliminate water use associated with energy generation. The ACELA provisions could be the catalyst to finding these solutions.

I would be pleased to address any questions the Committee might have.

TESTIMONY OF JEFF C. WRIGHT, DIRECTOR, OFFICE OF ENERGY PROJECTS, FEDERAL ENERGY REGULATORY COMMISSION

Chairman Bingaman, Ranking Member Murkowski, and Members of the Committee:

My name is Jeff Wright and I am the Director of the Office of Energy Projects at the Federal Energy Regulatory Commission (Commission or FERC). I appreciate the opportunity to appear before you to discuss S. 629, S. 630, and S. 1462. As a member of the Commission's staff, the views I express in this testimony are my own, and not those of the Commission or of any individual Commissioner.

I. BACKGROUND

The Commission regulates over 1,600 hydropower projects at over 2,500 dams pursuant to Part I of the Federal Power Act (FPA). Together, these projects represent

[13] *http://www.energy.gov/news/893.htm.*

54 gigawatts of hydropower capacity, more than half of all the hydropower in the United States. Hydropower is an essential part of the Nation's energy mix and offers the benefits of an emission-free, renewable, domestic energy source with public and private capacity together totaling about nine percent of U.S. electric generation capacity.

Under the FPA, non-federal hydropower projects must be licensed by the Commission if they: (1) are located on a navigable waterway; (2) occupy federal lands; (3) use surplus water from a federal dam; or (4) are located on non-navigable waters over which Congress has jurisdiction under the Commerce Clause, involve post-1935 construction, and affect interstate or foreign commerce.

The FPA authorizes the Commission to issue either licenses or exemptions for projects within its jurisdiction. Licenses are generally issued for terms of between 30 and 50 years, are renewable, and carry with them the right to exercise federal eminent domain to obtain property necessary for the construction, operation, and maintenance of a project. Exemptions are perpetual, and thus do not need to be renewed, but do not permit the use of eminent domain. Congress has established two types of exemptions. First, section 30 of the FPA allows the Commission to issue exemptions for projects that utilize for generation only the hydroelectric potential of manmade conduits that are operated for the distribution of water for agricultural, municipal, or industrial consumption, and not primarily for the generation of electricity. Conduit projects must be located on nonfederal lands, and have a maximum capacity of 15 megawatts (40 megawatts if the exemptee is a state or local government entity). Second, in section 405(d) of the Public Utility Regulatory Policies Act, Congress authorized the Commission to grant exemptions for small hydroelectric power projects having an installed capacity of 5,000 kilowatts or less. To qualify for this type of exemption, a project must be located at an existing dam that does not require construction or the enlargement of an impoundment, or must use the hydropower potential of a natural water feature, such as a waterfall. Both types of exemptions are subject to mandatory fish and wildlife conditions provided by federal and state resource agencies.

The Commission has established three licensing processes, with the intent of allowing parties to select the process that is best suited to individual proceedings. The integrated licensing process (ILP) frontloads issue identification and environmental study to the period before an application is filed, and is thus well-suited to complex cases with substantial issues. The alternative licensing process (ALP) allows participants significant flexibility to tailor licensing procedures in a manner that may work well for unique cases. The traditional licensing process (TLP), in which environmental and other work can occur after the application is filed appears to work best for less controversial matters. The TLP may be the process that is best-suited for many simple cases involving exemptions or small,

low impact licenses. Commission staff has also developed a pilot licensing process for hydrokinetic projects in which, with the assistance of federal and state resource agencies, a project can be licensed in as little as six months.

It is extremely important to note that project developers and other stakeholders, not the Commission, in most instances play the leading role in determining project success and whether the regulatory process will be short or long, simple or complex. The first key issue is site selection and proposed project operation. For example, the processing of applications tends to be expedited when applicants propose projects that: (1) are located at an existing dam where hydropower facilities do not currently exist, (2) would result in little change to water flow and use, (3) are unlikely to affect threatened and endangered species and are unlikely to need fish passage facilities, and (4) involve lands and facilities that are already owned by the applicant. To the extent that a proposed project, even one of small size, raises concerns about water use and other environmental issues, it may be difficult for the Commission to quickly process an application. It is important to remember that the small capacity of a proposed project does not necessarily mean that the project has only minor environmental impacts.

Another, and related, factor is the extent to which project developers reach out to affected stakeholders. If a developer contacts concerned citizens, local, state, and federal agencies, Indian tribes, and environmental organizations, and works with them to develop consensus as to what information is needed to understand the impacts of a project and what environmental measures may be appropriate, and to develop support for the project, the application and review process is likely to be simpler and quicker. Where a project comes as a surprise to affected entities or where a developer does not respond to expressed concerns, the Commission's job becomes much more difficult, because the Commission must, and does, ensure that all expressed concerns are addressed.

A final, and again related, matter is the development of the full record that the Commission needs to act on an application. A potential applicant needs to work with Commission staff and with federal and state resource agencies and other stakeholders to determine what information is needed to support an application, and to provide the Commission with a complete application. Where Commission staff or other stakeholders must ask an applicant to provide information that is missing from an application, the regulatory process slows down.

The other entities with roles in the licensing and exemption process regarding small hydropower projects are also key to its success. The quickest, most efficient process can be achieved only where federal and state agencies, as well as other stakeholders, devote the resources early on to help project review move ahead, and where they display the flexibility to look at the merits of individual projects

and the willingness to shorten the process in appropriate cases. Commission staff is dedicated to making the regulatory process as short and cost-effective as possible. We can only do that where applicants, resource agencies, and other stakeholders serve as willing partners in the process.

II. COMMISSION EFFORTS REGARDING SMALL AND INNOVATIVE PROJECTS

The majority of the hydropower projects regulated by the Commission are small projects, with about 71 percent having an installed capacity of 5 megawatts (MW) or less. In recent years, the Commission has seen a greatly increased interest in small hydropower projects, in innovative hydrokinetic projects, and in pumped storage projects, particularly closed loop pumped storage, which does not involve regular water withdrawals from rivers or other water sources. The Commission has responded by implementing a number of measures to facilitate efficient review of project proposals. In 2007, in order to provide personalized, responsive service to entities seeking to develop small hydropower projects, Commission staff established a dedicated phone line and email address for inquiries on small hydropower, developed a brochure to provide guidance to potential developers of small, low impact hydropower projects, and put these resources and a list of frequently-asked questions on the Commission's website.

In light of the continued growing interest in such development, the Commission held a technical conference on December 2, 2009, at its Washington, D.C. headquarters to explore issues related to licensing, and exempting from licensing, small non-federal hydropower projects in the U. S. The December technical conference generated discussion on recommendations that could improve the process for authorizing small hydropower projects. In addition to insights received from the panelists and attendees at the December conference, written comments were solicited and over 40 comment letters were received from industry representatives; federal, state, and local agencies; private citizens; and non-governmental organizations. At the Commission's April 15, 2010 meeting, staff reported on the conference and the comments received, and presented an action plan to assist and expedite the review of small hydropower proposals. The action plan adopted the following immediate changes: (1) adding new web-based resources to the Commission's website (www.ferc.gov) to make it easier for applicants to understand and complete the licensing process; (2) updating or creating Memoranda of Understanding (MOUs) with other agencies to improve coordination; (3) continuing our small hydropower hotline and email address to answer applicant questions; and (4) educating potential small hydropower developers through a new education and outreach program.

The Commission has, under its small hydro initiative, held numerous outreach meetings with small hydropower developers and interested stakeholders, and implemented

web based tools, such as conduit application templates and application checklists, which potential applicants can use to prepare their applications. The small hydro website further contains guidance and sample letters that applicants can use to obtain waivers from fish and wildlife agencies for part of the prefiling consultation process. The Commission staff has also relaxed some of the standards, under Section 4.39 of its regulations, for exhibits and drawings for conduit applications. For those applicants that have filed complete and adequate applications, and for which the Commission has determined that impacts are minimal, the Commission has reduced the public notice period from 60 days to 30 days and the reply period from 45 days to 15 days. A number of conduit exemptions have been approved in as short as two months from the date that an application has been deemed complete.

Since the April 15, 2010 Commission meeting, we have signed an MOU with the State of Colorado to expedite the small hydro licensing process (August 2010); launched a small hydro program website (August 2010); participated in small hydro workshops in Oregon (September 2010), Massachusetts (October 2010), and New Hampshire (November 2010); conducted two webinars on our small hydro website (November/December 2010); and updated our small hydro brochure. Upcoming outreach efforts will include: participating in small hydro workshops in Washington, DC, Vancouver, BC, and California as well as conducting another webinar this summer. We have also completed an update on our MOU with the Army Corps of Engineers.

The MOU with the State of Colorado provides an excellent example of a Federal-State solution for developing a pilot process to find flexible and innovative ways to reduce barriers to small hydro and conduit project development. In order to facilitate the Commission approval of such projects, the MOU provides that Colorado will prescreen any proposals and ensure that the applications are complete and meet Commission regulations before they are filed.

With this background, I will turn to the draft legislation.

III. S. 629

S. 629, the Hydropower Improvement Act of 2011, has the laudable goal of increasing hydropower capacity and generation in United States. I strongly support that goal, and offer comments on specific sections of the bill.

A. Sections 5 and 6

Sections 5 and 6 of the bill would authorize the Secretary of Energy to issue grants to increase hydropower generation, and to support hydropower research, development, and demonstration projects. I support these sections, which would assist in the development of additional renewable energy.

B. Section 7

Section 7 would require the Commission to investigate the feasibility of implementing a two-year licensing process, in particular, with respect to hydropower development at existing, non-powered dams, and for closed-loop pumped storage projects.

I support the goal of an expedited licensing process. Indeed, as I have discussed, it is Commission staff's goal to act on all license applications as quickly as possible, and the Commission has established processes that allow for great flexibility and efficiency. I am thus not certain whether an additional licensing process is necessary. During the last few years, we have been able to issue some licenses in a matter of a few months, where the project proponent had selected a site wisely, stakeholders had agreed on information needs, and state and federal agencies performed their responsibilities quickly. Moreover, the Commission operates under significant constraints imposed by the FPA, and by other legislation affecting the licensing process—the Clean Water Act, Coastal Zone Management Act, Endangered Species Act, and National Historic Preservation Act among them. In the absence of the ability to waive sections of the FPA and other acts, or to set enforceable schedules in licensing proceedings, it is not clear that the Commission, under its existing authorities, can mandate a shortened process.

C. Section 8

Section 8 would establish various measures to promote conduit and small hydropower projects. Again, this goal is consistent with Commission policy and has been a major focus of Commission's staff's effort in the last few years.

Section 8(a)(1) would amend section 30 of the FPA to allow conduit projects to be located on federal lands. I support this provision, which would remove the current bar on siting conduit projects on federal lands. This section would also amend the FPA to provide conditioning authority to federal land management agencies. These agencies already have the ability to impose conditions on proposed projects through the requirement that developers obtain special use authorizations under the Federal Land Management and Policy Act, so this amendment may not alter the current regulatory regime. As a general matter, however, I do have some concern that authorizing additional mandatory conditioning authority may slow down the licensing process and result in increased potential bars to hydropower development.

Section 8(a)(3) would require the Commission and the Commissioner of Reclamation to conduct regional public workshops on reducing barriers to conduit hydropower projects and thereafter report any recommendations to Congress. We have worked successfully with the Bureau of Reclamation in the past and are prepared to join Reclamation in this effort.

Section 8(b) would require the Commission to conduct regional public workshops on reducing barriers to small hydropower projects, and to report the results of this effort to Congress. Noting the outreach efforts described above, we are prepared to undertake this additional effort should Congress deem it helpful.

D. Section 9

Section 9 would amend the FPA to authorize the Commission to extend the term of a preliminary permit issued under FPA section 5 once for up to two years. Preliminary permits grant the permittee a "first-to-file" preference with respect to license applications for projects being studied under a permit. Commission staff has heard anecdotally that developers are concerned that the need for environmental studies in some instances makes it difficult to complete a license application within the current maximum three-year term of a permit, with the result that a developer which has invested substantial time and money studying a project may face the possibility of losing its project based on competition from other entities—particular those with statutorily—granted municipal preference—if it needs to seek a subsequent permit. I therefore support the proposed FPA amendment, which could ameliorate this problem. It might be worth considering, as an alternative, authorizing the Commission to issue permits for terms of up to five years, which could avoid the need for developers to go through the process of seeking an extension.

E. Section 10

Section 10 would require the Commissioner of Reclamation, in consultation with the Commission, to study barriers to non-federal hydropower development at Bureau of Reclamation projects and to develop a memorandum of understanding to improve the coordination and timeliness of such development. We have already begun working with the Bureau of Reclamation on this matter, and we have no objection to Section 10.

IV. THE MARINE AND HYDROKINETIC RENEWABLE ENERGY PROMOTION ACT OF 2011

S. 630 would authorize the Secretary of Energy to take various steps to promote marine and hydrokinetic renewable energy technology. As a general matter, the bill is consistent with the Commission's initiatives to support the development of appropriate marine and hydrokinetic projects, which I have previously described. I have only two comments on the bill.

Section 3 of S. 630 would allow the Secretary of Energy to issue grants to support national testing facilities for marine and hydrokinetic technology research, development, and demonstration. Commission staff has informally discussed this concept with DOE staff over the last year or so, and I believe that testing centers could be extremely

helpful in the development of new renewable technologies. Section 3 provides that test centers may be nonprofit institutions, state or local governments, national laboratories, or National Marine Renewable Energy Research, Development, and Demonstration Centers established pursuant to section 634 of the Energy Independence and Security Act of 2007. The Federal Power Act contains no provisions allowing the Commission to authorize the testing of jurisdictional hydropower facilities; accordingly, with some limited exceptions, test centers operated by private entities or by state and local government may be required to be licensed by the Commission. Moreover, if a test center were to use a variety of technologies with differing environmental impact, the Commission might be required to issue separate authorizations for individual tests. This would not be the case for centers under the aegis of other federal entities, such as DOE, which do not fall within the Commission's jurisdiction. Therefore, to allow for the maximum flexibility and simplicity, it may be worth considering either placing any test centers under the authority of DOE or another federal agency or providing an exemption from the provisions of Part I of the FPA for such test centers.

Second, section 6 of the bill would authorize the Secretary of Energy to issue grants to advance the development of marine and hydrokinetic renewable energy; to help fund the costs of environmental analysis, the collection and dissemination of environmental data; and to support demonstration projects. The provision of grant funding to address the environmental information needs surrounding these new technologies directly addresses an issue of concern to federal agencies and other stakeholders. Environmental information is essential to the development and regulation of energy projects, yet, because marine and hydrokinetic technology is relatively new, and because these projects may be sited in areas, such as coastal zones, where the environment is not as well understood as onshore areas, much necessary information has yet to be developed. The cost of obtaining environmental information falls in large part on pioneering developers, and may thus discourage their efforts. The Commission and other federal agencies are partnering to reduce this burden by assembling and sharing environmental information. However, there are still issues which will require new studies, some of which are relevant to many developers. Federal funding to support gathering such information will help the regulatory process and advance the development of the technology as a whole.

V. THE AMERICAN CLEAN ENERGY LEADERSHIP ACT OF 2009

Title I, subtitle D of the American Clean Energy Leadership Act deals with the integration of energy and water resources. While this subtitle would not impose any direct requirements on the Commission, I note that the Commission recognizes the link between energy development and the use of our Nation's water resources. In siting natural

gas and hydropower projects, the Commission conducts thorough analyses of the impact of proposed projects on water resources, authorizes only those projects that appropriately balance energy development and environmental protection, and imposes mitigation measures to ensure that approved projects are developed in an environmentally responsible manner.

VIII. CONCLUSION

There is a great deal of potential for the development of additional hydropower projects throughout the country, including small projects and marine and hydrokinetic projects. Working within the authority given it by Congress, the Commission continues to adapt its existing, flexible procedures to facilitate the review and, where appropriate, the approval of such projects. Commission staff remains committed to exploring with project developers, its sister federal agencies, Indian tribes, the states, local government, and other stakeholders every avenue for the responsible development of our nation's hydropower potential. The legislation under consideration will, as I have testified, assist in realizing that potential.

This concludes my remarks. I would be pleased to answer any questions you may have.

CHANGES IN EXISTING LAW

In compliance with paragraph 12 of rule XXVI of the Standing Rules of the Senate, changes in existing law made by the bill, as ordered reported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new matter is printed in italic, existing law in which no change is proposed is shown in roman):

WATER DESALINATION ACT OF 1996

Public Law 104–298, as amended

To authorize the Secretary of the Interior to conduct studies regarding the desalination of water and water reuse, and for other purposes

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Sec. 8. Authorization of Appropriations.

(a) SECTION 3.—There are authorized to be appropriated to carry out section 3 of this Act $5,000,000 per year for fiscal years 1997 through [2011] *2016*. Of these amounts, up to $1,000,000 in each fiscal year may be awarded to institutions of higher education, including United States-Mexico binational research foundations and interuniversity research programs established by the two countries, for research grants without any cost-sharing requirement.

(b) SECTION 4.—There are authorized to be appropriated to carry out section 4 of this Act [$25,000,000 for fiscal years 1997 through 2011] *$2,000,000 for each of fiscal years 2012 through 2016.*

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DEPARTMENT OF ENERGY ORGANIZATION ACT

Public Law 95–91, as amended

AN ACT To establish a Department of Energy in the executive branch by the reorganization of energy functions within the Federal Government in order to secure effective management to assure a coordinated national energy policy, and for other purposes

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Department of Energy Organization Act".

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TITLE II—ESTABLISHMENT OF THE DEPARTMENT

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ENERGY INFORMATION ADMINISTRATION

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SEC. 205.

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(m) RENEWABLE FUELS SURVEY.—(1) In order to improve the ability to evaluate the effectiveness of the Nation's renewable fuels mandate, the Administrator shall conduct and publish the results of a survey of renewable fuels demand in the motor vehicle fuels market in the United States monthly, and in a manner designed to protect the confidentiality of individual responses. In conducting the survey, the Administrator shall collect information both on a national and regional basis, including each of the following:

(A) The quantity of renewable fuels produced.

* * * * * * *

(3) This subsection does not affect the authority of the Administrator to collect data under section 52 of the Federal Energy Administration Act of 1974 (15 U.S.C. 790a).

(n) WATER-RELATED ENERGY CONSUMPTION.—

(1) IN GENERAL.—Not less than once during each 3-year period, to aid in the understanding and reduction of the quantity of energy used in association with the use of water, the Administrator shall conduct an assessment under which the Administrator shall collect information on energy use in various sectors of the economy that are associated with the procurement, treatment, or delivery of water.

(2) REQUIRED SECTORS.—An assessment described in paragraph (1) shall contain an analysis of water-related energy use for all relevant sectors of the economy, including water used for—

(A) agricultural purposes;
(B) municipal purposes;
(C) industrial purposes; and
(D) domestic purposes.

(3) EFFECT.—Nothing in this subsection affects the authority of the Administrator to collect data under section 52 of the Federal Energy Administration Act of 1974 (15 U.S.C. 790a).

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