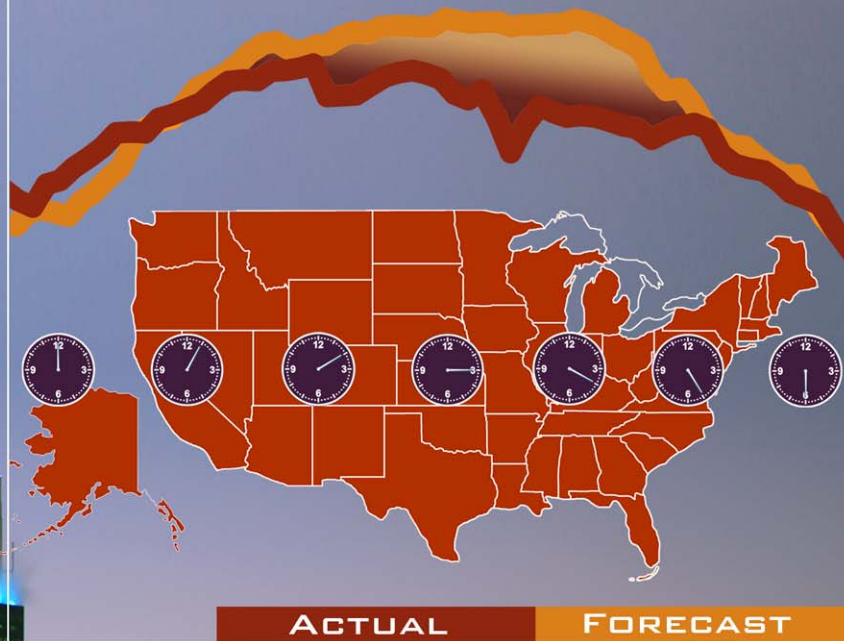


IMPLEMENTATION PROPOSAL FOR The National Action Plan on Demand Response

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REPORT TO CONGRESS PREPARED BY STAFF OF
THE FEDERAL ENERGY REGULATORY COMMISSION
AND THE U.S. DEPARTMENT OF ENERGY



Implementation Proposal for The National Action Plan on Demand Response

Report to Congress

Prepared by staff of the Federal Energy Regulatory Commission
and the U.S. Department of Energy

The opinions and views expressed in this staff report do not necessarily represent those of the Federal Energy Regulatory Commission, its Chairman, or individual Commissioners, and are not binding on the Commission.

TABLE OF CONTENTS

Executive Summary	iii
I. Introduction	1
A. Legislative Mandate	1
B. Approach to Developing the National Action Plan and Implementation Proposal.....	2
II. Implementation Proposal.....	5
A. Coalition	5
B. Technical Assistance to States	5
1. Establish a National Forum	5
2. Conduct Informational and Educational Sessions for Policymakers and Regulators.....	5
3. Sponsor Technical Papers.....	6
4. Technical Assistance to States for Demand Response	8
5. Build a Panel of Demand Response Experts	8
6. Establish a Demand Response Grant Program.....	9
C. National Communications Program	10
1. Develop a Communications Umbrella	10
a. Program Development.....	11
b. Message Framework Development.....	11
2. Local Implementation.....	12
3. Direct Outreach to States, Policymakers and Partners	12
D. Tools and Materials for Use by Customers, States and Demand Response Providers	13
1. Develop a Web-Based Clearinghouse of Demand Response Materials	13
a. Case Studies of State Laws, Regulations, and Tariffs	13
b. Database of Pilots, Programs and Markets	13
c. Quantitative and Qualitative Summaries.....	14
d. Measuring Program Results with Criteria and Metrics	14
e. Information for Program Implementation.....	14
f. Online Message Board Capability.....	14
g. Information About the Development of Standards and Protocols.....	15
2. Develop or Enhance Demand Response Estimation Tools and Methods.....	15
a. System Impact Estimation and Prediction Tools.....	15
b. Cost-Effectiveness Tools.....	16
c. Decision Tools and Educational Materials.....	17
d. Cost Recovery Tools and Methods for Enabling Technology.....	17
e. Tools and Methods for Incorporating Demand Response in Dispatch, Ancillary Services, and Transmission and Resource Planning.....	18
f. Transparency of Price Information	19
Appendix A: Research Topics.....	21
Appendix B: Letter from National Action Plan Coalition.....	23

EXECUTIVE SUMMARY

The staff of the Federal Energy Regulatory Commission (FERC) and the U.S. Department of Energy (DOE) developed this implementation proposal as required by section 529 of the Energy Independence and Security Act of 2007 (EISA).¹ In particular, this proposal complies with EISA's mandate "to submit to Congress a proposal to implement the [National] Action Plan [on Demand Response], including specific proposed assignments of responsibility, proposed budget amounts, and any agreements secured for participation from State and other participants."²

The objective of the proposal is to implement the National Action Plan to achieve the nation's demand response potential. FERC staff and DOE believe that every element of the National Action Plan serves an important part in achieving this potential. This proposal recognizes, however, that it will take public and private actors to effectuate the Plan and, as a result, not every element of that plan may be implemented. As such, this implementation proposal identifies areas where FERC staff and DOE can leverage existing initiatives related to demand response to implement the National Action Plan. At the same time, it recognizes and encourages non-federal government entities to become involved in implementing the National Action Plan through participation in a coalition, or any private or non-federal governmental organizations.³ FERC staff's primary role with a coalition, or any private or non-federal governmental organizations, will be to monitor, consult with, and provide recommendations regarding the implementation of the National Action Plan. A coalition, or any private or non-federal governmental organizations, should consider the viewpoints of a broad range of demand response stakeholders and private sector organizations. Action under this proposal will not require any new federal appropriations.

The following chart summarizes the appropriate actor identified for each activity, as well as any actions that can be leveraged to support the accomplishment of each activity. As explained above, the activities discussed in this proposal were introduced and recommended in the National Action Plan to achieve the objectives laid out in EISA. As such, the activity headings track the headings from the National Action Plan.

¹ Energy Independence and Security Act of 2007, Pub. L. No. 110-140, § 529, 121 Stat. 1492, 1664 (2007) (to be codified at National Conservation Policy Act, 42 U.S.C. §§ 8241, 8279).

² *Id.*

³ As discussed *infra*, FERC and DOE are not endorsing in this Implementation Proposal a particular coalition, and note that entities may form, or have been formed, to pursue activities that may involve aspects relating to the National Action Plan.

Activity	Appropriate Main Actor	Supporting Actions
TECHNICAL ASSISTANCE TO STATES		
Establish a National Forum	DOE, FERC and a coalition, or any private or non-federal governmental organizations	
Conduct Informational and Educational Sessions for Policymakers and Regulators	DOE	<ul style="list-style-type: none"> • DOE support through the Mid-Atlantic Distributed Resource Initiative, the Midwest Demand Response Initiative, and the Pacific Northwest Demand Response Project (PNDRP). • DOE grants to National Association of Regulatory Utility Commissioners (NARUC), the National Conference of State Legislatures, the National Governors Association, and the National Association of State Energy Officials. • FERC and DOE support through the FERC-NARUC Smart Response Collaborative. • A coalition, or any private or non-federal governmental organizations, may sponsor additional educational sessions.
Sponsor Technical Papers	A coalition, or any private or non-federal governmental organizations	<ul style="list-style-type: none"> • DOE commitments to fund technical studies of: 1) customer response to and acceptance of dynamic pricing funded through the Smart Grid Investment Grant (SGIG) program, 2) customer behavior in response to energy use feedback and information funded through the SGIG program, and 3) the role of demand response in transmission system planning, and other topics as needed.
Technical Assistance to States for Demand Response	DOE	<ul style="list-style-type: none"> • DOE provision of technical assistance to states that wish to support the development of demand response.
Build a Panel of Demand Response Experts	A coalition, or any private or non-federal governmental organizations	
Establish a Demand Response Grant Program	A coalition, or any private or non-federal governmental organizations	<ul style="list-style-type: none"> • DOE commitment of \$4 billion of Recovery Act funds to 131 entities through the SGIG and Smart Grid Demonstration programs.

Activity	Appropriate Main Actor	Supporting Actions
NATIONAL COMMUNICATIONS PROGRAM		
Develop a Communications Umbrella	A coalition, or any private or non-federal governmental organizations	<ul style="list-style-type: none"> • DOE will compile customer education efforts funded through the SGIG program. • DOE will compile results from consumer behavior studies focused on price-responsive demand funded through the SGIG program. • DOE and the Environmental Protection Agency (EPA) share information developed through the State Energy Efficiency Action Network's "Customer Information and Behavior Working Group."
Local Implementation	A coalition, or any private or non-federal governmental organizations/demand response providers/load-serving entities	
Direct Outreach to States, Policymakers, and Partners	A coalition, or any private or non-federal governmental organizations	
TOOLS AND MATERIALS		
Develop a Web-Based Clearinghouse of Demand Response Materials	DOE	<ul style="list-style-type: none"> • DOE will examine the feasibility of integrating a web-based demand response clearinghouse with the DOE-sponsored Smart Grid Information Clearinghouse.
Develop or Enhance Demand Response Estimation Tools and Methods	A coalition, or any private or non-federal governmental organizations	<ul style="list-style-type: none"> • DOE is assisting the development of a research and data analysis plan for SGIG project data. • DOE has established guidance on the identification of SGIG program metrics and impacts. • Entities funded by DOE through the Recovery Act to conduct interconnection-wide transmission planning are examining demand-side assumptions and impacts as part of their analysis and planning efforts. • Entities funded by DOE through the Recovery Act to conduct interconnection-wide transmission planning will also develop tools and methods as needed to better incorporate demand side measures into their transmission plans. • DOE is funding development of a cost-effectiveness screening tool for PND RP. • DOE will work with the state regulatory community to assess the extent to which federally-sponsored research on cost-effectiveness guidelines for demand response resources would be useful to state PUCs in various regions. • The National Institute of Standards and Technology (NIST) and the North American Energy Standards Board (NAESB) are developing standards for the provision of energy price information. • DOE's ARPA-e program is funding consumer behavior and energy use research.

I. INTRODUCTION

A. Legislative Mandate

As set forth in section 529 of EISA, Congress required FERC to study and develop a process to achieve the Nation's demand response potential. The statute required three reports. First, it required FERC to prepare a National Assessment of Demand Response Potential (National Assessment).⁴ The National Assessment not only evaluated the nationwide potential for demand response over five- and ten-year horizons, it made policy recommendations to achieve the Nation's estimated potential. The National Assessment also identified barriers that have limited the deployment of demand response and recommended policies to overcome these barriers. FERC staff submitted the National Assessment to Congress on June 17, 2009.⁵

Second, EISA required the FERC to develop a National Action Plan.⁶ This report needed to meet three objectives:

1. Identification of the requirements for technical assistance to States to allow them to maximize the amount of demand response resources that can be developed and deployed.
2. Design and identification of requirements for implementation of a national communications program that includes broad-based customer education and support.
3. Development or identification of analytical tools, information, model regulatory provisions, model contracts, and other support materials for use by customers, States, utilities and demand response providers.⁷

FERC staff publicly released the National Action Plan on June 17, 2010.⁸

Finally, EISA requires the FERC, together with the Secretary of Energy, to submit to Congress a proposal to implement the National Action Plan. This implementation proposal must include "specific proposed assignments of responsibility, proposed budget amounts, and any agreements secured for participation from state and other participants."⁹

⁴ *A National Assessment of Demand Response Potential* (June 2009), available at <http://www.ferc.gov/legal/staff-reports/06-09-demand-response.pdf> (National Assessment).

⁵ *Id.*

⁶ *National Action Plan on Demand Response* (June 2010), available at <http://www.ferc.gov/legal/staff-reports/06-17-10-demand-response.pdf> (National Action Plan).

⁷ EISA section 529(a).

⁸ National Action Plan, *supra* note 5.

⁹ EISA section 529(c).

B. Approach to Developing the National Action Plan and Implementation Proposal

Per Congress' direction, the National Action Plan identifies means for the states to maximize the amount of cost-effective demand response achieved in the nation; design requirements for a communications program and materials to support demand response; and analytical tools for demand response design, evaluation, and analysis. The Plan was developed with input and participation from a broad range of stakeholders, including local, state, and federal government officials; customer representatives; industry representatives; and nongovernmental groups. As such, it recognizes the important role that these stakeholders have in the successful development of demand response and the implementation of the National Action Plan, particularly state and local governments.

This implementation proposal builds on the National Action Plan by identifying actions that can be taken by federal, state, and private sector organizations to implement the Plan.¹⁰

However, a primary focus of this implementation proposal is the activities that are appropriately undertaken by FERC staff and DOE to implement the National Action Plan, including interaction and coordination with private sector and fellow government partners to advance demand response activities through a coalition, or any private or non-federal governmental organizations. This implementation proposal also provides the views of FERC staff and DOE on some of the National Action Plan activities that are appropriate for private sector and state action, and offers some suggestions for how non-federal entities might choose to implement these activities. The states and private sector entities will decide whether and how to pursue these recommendations and other activities relevant to demand response, depending on their particular circumstance.

As required by EISA, FERC staff and DOE propose assignments of responsibility for implementing the National Action Plan. The responsibility for implementing many of the activities has been assigned to the private sector, ideally through a broad coalition of demand response stakeholders, or any private or non-federal governmental organizations that coordinate and cooperate to implement the Action Plan. However, the implementation proposal also recognizes that there are ongoing demand response programs and efforts, some of which are being funded by federal government agencies. Since passage of EISA in December 2007, there is a renewed awareness of demand response and the different roles it can play. Congress passed the American Recovery and Reinvestment Act of 2009 (Recovery Act) under which DOE has awarded \$4 billion to stimulate development of the smart grid, including a substantial number of projects deploying some type of demand response. Given this and other activities, FERC staff and DOE believe that existing federal resources and programs can be harnessed to achieve many of the elements of the Plan. Accordingly, this implementation proposal relies as much as possible on existing public programs, and encourages new private involvement through a coalition, or any private or non-federal governmental organizations, to implement the activities outlined in the National Action Plan and, in turn, achieve the objectives of EISA.

¹⁰ Note that the headers used in this Implementation Proposal are primarily taken from and are consistent with the National Action Plan.

This implementation proposal contemplates that, to the extent permitted by federal law and regulations, FERC staff and DOE may support certain activities included in the National Action Plan to the degree that those activities entail research, tool development, and information-sharing among the community of demand response stakeholders, and provide resources and technical assistance that help others implement these objectives.

DOE, and in some cases FERC, can meet with any coalition, or any private or non-federal governmental organizations, and share information and coordinate activities with any of these entities, as allowed to under Federal law. DOE, and in some cases FERC, can also develop reports and resources individually, in concert with, or on behalf of the National Action Plan, and consider policy and action recommendations from a coalition, or any private or non-federal governmental organizations. However, it would not be appropriate for DOE and FERC to join a coalition, provide general operational funds for a coalition, take direction from a coalition, or any private or non-federal governmental organizations, or give direction to others such as states through a coalition, or any private or non-federal governmental organizations.

II. IMPLEMENTATION PROPOSAL

A. Coalition

As explained in the National Action Plan, a broad range of stakeholders must be involved in the Plan's implementation in order for it to succeed. Therefore, the National Action Plan calls for a broad, inclusive coalition to ensure that the National Action Plan reflects regional differences and taps into the expertise of stakeholders. To be effective, a coalition, or any private or non-federal governmental organizations, should consider the efforts and viewpoints of state/local government officials, utilities/load-serving entities, demand response providers, regional transmission organizations/independent system operators, consumer advocates, commercial/industrial customers, the federal government, existing coalitions, and other stakeholders.¹¹

B. Technical Assistance to States

1. Establish a National Forum

The National Action Plan calls for a national forum on demand response to be held for state public utility commissions, state energy offices, gubernatorial offices, state legislators, state consumer counsels, utilities, demand response providers, other key stakeholders, interested consumers, and federal agencies. Such a stand-alone, one-day session will provide a useful opportunity to publicly present the overall vision of the National Action Plan, and to share ideas, examine barriers, and explore solutions. Given current financial and time burdens upon governments and businesses alike, this national forum event should be offered with both in-person and webcast access, to maximize participation by a diverse community of stakeholders at minimal cost.

FERC staff and DOE can and should sponsor this forum in 2011, as they did in 2002 with their first national forum on demand response. Non-federal members of the demand response community could use the forum as an opportunity to convene stakeholders to discuss the organizational structure and leadership of a coalition, or any private or non-federal governmental organizations used to forward the work of the National Action Plan.

2. Conduct Informational and Educational Sessions for Policymakers and Regulators

DOE and FERC engage in a number of activities that provide informational and educational support that advance demand response. At the request of regional organizations, DOE has provided facilitation support to conversations by state electricity regulators and others through

¹¹ As an example of the type of agreement that EISA section 529(c) directed for inclusion, Appendix B contains a letter from several entities stating that they have formed a Coalition to implement the National Action Plan. This implementation proposal does not endorse a particular coalition, and notes that other entities also may form, or have been formed, to pursue activities that may involve aspects relating to the National Action Plan.

the New England Demand Response Initiative (2001-2006), the Mid-Atlantic Distributed Resources Initiative (2004-present), the Midwest Demand Response Initiative (2007-present), and the Pacific Northwest Demand Response Project (2007-present). Every one of these regional fora has been providing informational and educational sessions on demand response to the state utility commissions that sponsor them. Similarly, FERC, in collaboration with state public utility commissioners, and with support from DOE on specific activities, has been sponsoring informational and educational sessions on demand response for policymakers and regulators through the thrice-yearly FERC-National Association of Regulatory Utility Commissioners (NARUC) Demand Response Collaborative (that began in 2007 and has recently joined with the FERC-NARUC Smart Grid Collaborative to become the FERC-NARUC Smart Response Collaborative). DOE has funded additional education and information sessions for regulators and state officials through past and current grants to NARUC, the National Conference of State Legislatures, the National Governors Association, the National Association of State Energy Officials, and the Western Governors' Association, supporting both training costs and travel costs for state attendees.

Over the past 10 years, DOE has funded and provided technical assistance on demand response and smart grid issues to approximately 30 states. This assistance is provided upon request and is not intended to influence decision making by state and local officials. These presentations and consultations entailed both direct education and training on general demand response issues and targeted consultation and technical assistance on selected issues, including conveying the results of DOE-funded technical research and dissemination of technical papers by DOE and others.

Going forward, DOE plans to continue offering technical assistance to state regulators on demand response. In recent years, requests for technical assistance on demand response issues have often been in the form of requests for technical assistance on smart grid implementation issues. Thus, DOE now offers technical assistance to state public utility commissions on demand response and smart grid, either when those requests arise from a specific demand response regulatory proceeding/workshop/issue or as part of a broader set of implementation issues that confront policymakers and regulators on smart grid.

At the request of NARUC, DOE plans to help NARUC develop additional emphasis on demand response educational and informational sessions at regional meetings of state regulators; for example, NARUC, using DOE funds, organized a "smart grid school" for the June 2010 annual meeting of the Mid-Atlantic Conference of Regulatory Utility Commissioners.

3. Sponsor Technical Papers

The National Action Plan recommends development of numerous technical papers to generate new knowledge and synthesize existing knowledge to inform state officials about demand response program design, products, technologies, existing state incentives, markets, and existing state legislation. A coalition, or any private or non-federal governmental organizations, could oversee development of these papers, which would be targeted to state officials.

In addition, DOE is committed to sponsoring research projects and studies that will lead to technical reports on selected, high-priority demand response topics. For example, DOE has made specific commitments to fund technical studies in the following areas:

Customer Response to and Acceptance of Dynamic Pricing

- Several of the Recovery Act-funded smart grid grants will implement consumer behavior studies to examine the influence of information technology, dynamic prices, and education on consumer behavior. DOE is working closely with each of these funded recipients for them to design and implement their own two- to three-year studies. These studies will result in reports, including a meta-analysis by DOE, as well as interval meter data annotated at an appropriate privacy level with demographic information.

Customer Behavior in Response to Energy Use Feedback and Information

- DOE's Advanced Research Projects Agency-Energy (ARPA-E) energy research and development innovations program has issued a \$5 million grant to Stanford University's Precourt Institute to study customer behavior with respect to energy efficiency that will have implications for demand response.
- DOE and the Environmental Protection Agency (EPA) support the State Energy Efficiency Action Network's "Customer Information and Behavior Working Group," which is studying consumer behavior with respect to energy efficiency and could generate pertinent information.

Role of Demand Response in Transmission System Planning

- At the request of the five entities performing Recovery Act-funded interconnection-wide transmission planning and analysis work, DOE is funding work by two national laboratories (Lawrence Berkeley National Laboratory and Oak Ridge National Laboratory) to provide technical assistance to the interconnection-wide transmission planning and analysis organizations¹² on demand-side resource assessment, methods to incorporate some dynamic pricing into long-term load and resource scenarios, and data development and tools needed to better include the demand side in transmission planning. In addition, the five interconnection-wide entities are including various demand-side scenarios that include demand response in their transmission planning analyses.

The current, ongoing research efforts, as well as past research and studies, represent a significant investment by DOE in improving knowledge of key demand response impact and use issues that are appropriate for federal action because of their national reach.

Going forward, FERC staff and DOE will continue to talk with the demand response community and monitor Smart Grid Investment Grant (SGIG) project developments to identify those

¹² The Lawrence Berkeley National Laboratory is supporting the two interconnection-wide entities in the west (Western Electricity Coordinating Council and the Western Governors' Association), while Oak Ridge National Laboratory is supporting the two interconnection-wide entities in the east (Eastern Interconnection Planning Collaborative and the Eastern Interconnection States' Planning Council). The fifth entity, the Electric Reliability Council of Texas, was also awarded Recovery Act funds for interconnection-wide planning and analysis and will also be considering demand-side scenarios.

opportunities where there is little private or non-federal action *and* where federal expertise, quickly applied, can add value and insight.

The National Action Plan also identified a number of topics that deserve additional research. While FERC staff and DOE believe that it is appropriate for the federal government to conduct research on some of those topics, Appendix A of this document includes a list of other research studies that, in some cases, may be more appropriately performed by individual technology vendors, demand response providers, and utilities that will directly benefit from the research.

4. Technical Assistance to States for Demand Response

The National Action Plan recommends providing technical assistance for states, including direct assistance to states to implement demand response activities, supporting the existing FERC-NARUC Smart Response Collaborative, and providing access to federal demand response experts.

As stated above, DOE has a long history of, and currently provides, technical assistance to states on demand response. DOE intends to continue doing so, together with necessary research to better inform and support such assistance.¹³ The scope of this work has addressed the development of demand response programs, technologies, services infrastructure, and dynamic pricing tariffs.

Through its annual advanced metering and demand response reports, FERC staff provides up-to-date information to states and other interested parties on the penetration of advanced meters, demand response programs, and trends in demand response policy. FERC staff's National Assessment provided state-by-state estimates of demand response potential and an analysis tool that states can use to develop their potential estimates.

In this implementation proposal, FERC staff and DOE believe that it is appropriate to link informational and educational sessions for policymakers and regulators (see section II.B.) as part of the overall technical assistance activity for demand response which often involves direct support to state, regional, and national organizations on selected demand response policy, program design, and/or technology issues.

5. Build a Panel of Demand Response Experts

The National Action Plan recommended creating a panel of demand response experts to:

1) inform various stakeholders about demand response programs, products, technologies, and incentives and their benefits; 2) serve as a resource, upon request, for state and local government

¹³ DOE's technical assistance is defined to be largely on policies and programs for states, regions, independent system operators, and sometimes utilities that wish to begin or improve on their demand response activities. DOE's technical assistance on demand response increasingly is integrated with its increasing technical assistance to states on smart grid, particularly as the subjects of demand response and smart grid are closely related. It is noted that DOE's technical assistance on demand response (and smart grid) is part of a larger commitment by the DOE Office of Electricity Delivery and Energy Reliability to provide technical assistance on any electricity policy requested by state and regional officials. As such, DOE's assistance for demand response issues may at times compete for available resources devoted to technical assistance to states with non-demand response electricity policy subjects.

officials as they consider demand response programs and policies; and 3) serve as speakers at events.

This past decade has seen a proliferation of privately- and publicly-sponsored conferences, meetings, seminars, classes and webinars on demand response. The hundreds of individuals from diverse backgrounds and institutions who have participated on those agendas, as well as the number of published papers, blog entries, and press releases on demand response, make it clear that there is neither lack of expertise nor a lack of those willing to share their views on demand response.

Moreover, both DOE and FERC have hired various researchers and consultants to conduct or assist with formal demand response analytical and training efforts. For example, FERC has brought in such expert assistance for its annual Demand Response and Advanced Metering reports, Demand Response Potential Assessment, and the National Action Plan. DOE has funded a suite of activities through technical assistance to states and research published by the Lawrence Berkeley National Laboratory, DOE Office of Electricity Delivery and Energy Reliability's Load as a Resource research and development program, the Regulatory Assistance Project, NARUC, the National Governors Association, the National Conference of State Legislatures, and other entities.

As a result, there are many established experts, and FERC staff and DOE do not believe it is necessary or appropriate for federal agencies to identify or pre-qualify private sector experts. Private or non-federal governmental organizations, or a coalition, may choose to maintain rosters of demand response experts, develop procedures to identify "experts," and may choose to finance their activities on behalf of their members and constituents.

6. Establish a Demand Response Grant Program

The National Action Plan recommends creation of a grant program to fund demand response activities. Under the Recovery Act, DOE has committed \$4 billion of federal funds in the Smart Grid Investment Grant and Smart Grid Demonstration programs to 131 organizations for smart grid projects. Many of these projects directly support the goals of the National Action Plan (i.e., to accelerate the understanding and achievement of demand response across the nation) and involve deployment of enabling technologies and customer information/feedback systems to facilitate demand response. Smart grid investment grants and demonstration projects will help fund the installation of 15.5 million new smart meters, 6500 distribution circuits with automated equipment, and 800 networked phasor measurement units at 131 utilities and other grantee locations.

Many of the smart meter installations will include both information and control technologies such as in-home displays and programmable, communicating thermostats with corresponding demand response programs. A number of consumer behavior studies will be performed on those using the installed equipment in order to examine factors that influence the participation of consumers in dynamic pricing programs, as well as the influence of these programs and enabling technologies on customer response.

Given this unprecedented infusion of federal funds to support smart grid and demand response, FERC staff and DOE believe that additional federal funding is not required for a demand response grant program to support further pilot and/or demonstration projects. However, non-federal entities acting through a coalition, or any private or non-federal governmental organizations, may determine that additional non-federal sector funding for particular pilot and/or demonstration projects, or assessment of demand response technologies would be helpful and may award such funds, whether independently or in conjunction with a coalition, or any private or non-federal governmental organizations.

C. National Communications Program

FERC staff and DOE propose that a coalition, or any private or non-federal governmental organizations, execute the communications program recommended in the National Action Plan. Given the experience, expertise, and interest of the private sector in the area of demand response customer communications, the private sector should assume the responsibility of creating, organizing, and administering the national communications program.

However, FERC staff and DOE propose that the federal government provide limited support to the communications program in specific research areas, which are listed here, and as well discussed further below:

- DOE will compile customer education efforts funded through its Smart Grid Investment Grant program.
- DOE will compile results from consumer behavior studies focused on price-responsive demand funded through the SGIG program.
- DOE and the EPA will share information developed through the State Energy Efficiency Action Network's "Customer Information and Behavior Working Group."

Though non-federal organizations will be responsible for implementation of the majority of national communication program activities, the activities outlined in the National Action Plan provide a helpful roadmap of how to achieve the EISA's requirements.

1. Develop a Communications Umbrella

The Communications Umbrella would create and provide a consistent, yet flexible, research-based message framework to provide communications tools, support, and advice that is adaptable for use by interested local demand response implementers. Because large commercial and industrial customers tend to be more sophisticated about energy issues, the Communications Umbrella would also develop specific communications support materials for these customers.

While the vast majority of the Communications Umbrella will need to be funded by private sources, the Federal government can provide limited support for the Communications Umbrella through focused technical research that is in the public interest. For example, several of the Recovery Act-funded smart grid grants will implement consumer behavior studies to examine the influence of information technology, dynamic pricing and education on consumer behavior. DOE is working closely with each of these funded recipients as they design and implement their

own two- to three-year studies. These studies will result in reports, including a meta-analysis by DOE. DOE will also report on other Recovery Act-funded smart grid grants that include consumer education, including any lessons learned these grantees may offer on their experiences.

The information and insights gained from these studies should assist coalition or any private or non-federal governmental organization efforts, particularly in the areas of customer response to dynamic pricing and enabling technologies. However, most of the information and analysis from these Smart Grid Investment Grants will not be available until 2012-2013. A coalition, or any private or non-federal governmental organizations, in partnership with utilities and other service providers, should build on DOE's work to further refine and understand the effectiveness of various messages and communications strategies.

a. Program Development

During development of the communications program, a coalition, or any private or non-federal governmental organizations may wish to study how local entities have communicated about demand response implementation across the country and internationally, including messages, focus group feedback, advertisements, and other components. Steps include compiling case studies, identifying demonstration program sites, and conducting program evaluation. Compiling and studying demand response implementation information would support local demand response implementers in their individual efforts and inform the foundational customer research performed during message framework development. Program development could include the selection of demonstration program sites from among those states, local load-serving entities, utilities, and other demand response providers that have requested support and offered to share information about their program's communications and marketing. DOE and EPA could assist by sharing information about work done on customer behavior and interest in demand-side messages (e.g., ENERGY STAR®). Where appropriate, the compilation of this information could be posted on the web-based demand response clearinghouse recommended in FERC's Action Plan.

As part of program development, the National Action Plan recommends the compilation of data. This activity involves collecting data on demand response program implementation pertaining to, among other items, message testing and customer behavior. DOE proposes to post demand response communications case studies in the Smart Grid Information Clearinghouse. DOE encourages a coalition, or any private or non-federal governmental organizations, and SGIG project managers to coordinate their case study templates so that demand response messages and materials impacts are integrated into broader project evaluations.

b. Message Framework Development

The National Action Plan emphasizes the importance of message framework development, creating a broad message framework and outreach strategies that can be customized by local stakeholders. Steps include conducting foundational market research, developing adaptable consumer-friendly messages, positioning demand response as a part of smart energy use, and developing communications materials, tactics, toolkits, and support materials tailored to large commercial and industrial customers. By doing so, the national communications program would build upon the lessons learned from other related communications efforts. The Communications

Umbrella message framework should yield more effective communications about demand response to customers.

Work being sponsored on customer behavior by DOE and EPA could also provide input to coalition, or other private or non-federal governmental organizations, communications efforts. A work group of the State Energy Efficiency Action Network effort, sponsored by DOE and EPA, is examining how information impacts customer behavior with respect to energy efficiency. Insights from this work may be useful and supportive of focused coalition or other non-federal governmental or private research on demand response message research.

The Communications Umbrella would involve reframing the concept of demand response with more customer-friendly terminology to better explain the concepts of energy use reduction, load shifting, and managing energy usage in response to price or non-price signals. Under the Communications Umbrella, the coalition, or other private or non-federal governmental organizations, should develop a message framework with persuasive, adaptable messages aimed at various audience segments, all of which could be tailored by interested local stakeholders.

The Communications Umbrella calls for developing and providing communications materials based on the previously described research that local demand response providers can use to create or support local program communications. Additional materials would be tailored to large commercial and industrial customers and would inform these customers of opportunities to provide demand response and the possible benefits of participation.

2. Local Implementation

To meet EISA's requirement for broad-based customer education and support, the National Action Plan calls for a way to advise and support states and localities— governments, utilities, and demand response providers—on communications best practices as they adapt the Communications Umbrella to increase local users' demand response participation in demonstration programs. This element includes the provision of logistical support and coordination for communications and local demand response implementation.

The National Action Plan lists elements of support including provision of the initial Communications Umbrella materials and messages and use of diverse public relations, advertising, viral and grass roots marketing, all linked to a national communications program. Support materials should be designed to be “plug and play” so that local entities can either use all available messages and materials or choose which elements to use.

3. Direct Outreach to States, Policymakers and Partners

The National Action Plan-recommended activities include communications assistance to states and policymakers using meetings, workshops, message guides, and potentially national spokespersons and public educational efforts on demand response. This effort could include assisting and informing state and local governing officials and policymakers about demand response in areas where demand response programs, products, technologies, and initiatives are not yet available. A coalition, or any private or non-federal governmental organizations, may provide assistance when requested, and through regional workshops.

The National Action Plan also calls for the development of partnerships among a coalition, or any private or non-federal governmental organizations, and corporations and organizations that represent various customer classes, trade associations, and other groups. Partnerships would be formed based upon whether organizations can reach key audience segments, are relevant to advancing the issue, and have the ability to commit resources to support the communications effort. Effective partnerships provide another avenue for effective demand response communications.

D. Tools and Materials for Use by Customers, States and Demand Response Providers

1. Develop a Web-Based Clearinghouse of Demand Response Materials

Currently, much of the available information on demand response is being collected by several different entities with little coordination. The National Action Plan calls for the development of a web-based clearinghouse that will facilitate the collection and delivery of up-to-date information and analyses on demand response. Given the overlap between demand response and smart grid, DOE will examine the feasibility of integrating the Action Plan's web-based demand response clearinghouse with the DOE-sponsored Smart Grid Information Clearinghouse.¹⁴ In addition to DOE's efforts, a coalition or other private or non-federal governmental organizations are welcome to develop and maintain more specialized web-based clearinghouses or databases to meet their specific needs.

a. Case Studies of State Laws, Regulations, and Tariffs

The National Action Plan recommends the development of case studies that provide detailed information about demand response laws, regulations, and tariffs. These case studies could include information on program design, communications/marketing strategies, customer response, and lessons learned. In addition, detailed information on existing state laws, regulations, and tariffs related to demand response programs and dynamic pricing could be added. Additional contextual information about a demand response program also would assist stakeholders in adapting state laws, regulations, and tariff language to their circumstances. A coalition, or any private or non-federal governmental organizations, could prepare these case studies and DOE will facilitate the inclusion of the material in the Smart Grid Information Clearinghouse.

b. Database of Pilots, Programs and Markets

The National Action Plan emphasizes the importance of developing a database of both pilot and fully implemented demand response programs to include in a web-based clearinghouse, or to be a stand-alone web-based database. When available, the database should include case studies about lessons learned, as well as the impacts, benefits, and drawbacks of the pilots or programs.

¹⁴ The Smart Grid Information Clearinghouse includes information about demonstration projects, research and development, best practices, standards, legislation, and regulation. DOE awarded the Virginia Polytechnic Institute and State University a five-year \$1.25 million grant to develop and maintain the Clearinghouse. See Barbara L. Micale, *\$1.25 Million Grant To Take Lead on Smart Grid Information Clearinghouse Web Portal Awarded to Virginia Tech*, Virginia Tech News, October 27, 2009, available at <http://www.vtnews.vt.edu/story.php?relyear=2009&itemno=801>.

A coalition, or any private or non-federal governmental organizations, could be responsible for collecting the information and for developing any analysis included in the database. DOE will facilitate the inclusion of the material in the Smart Grid Information Clearinghouse, while noting in the Clearinghouse that inclusion of non-Federal material does not convey any endorsement or vetting by DOE of the voluntarily-supplied material.

c. *Quantitative and Qualitative Summaries*

The National Action Plan stresses the value of making detailed quantitative and qualitative information about demand response programs available through the Action Plan's web-based demand response clearinghouse. DOE will be collecting a significant amount of qualitative and quantitative information as part of the demand response projects funded through the Smart Grid Investment Grants, and DOE currently plans to make much of this information publicly available.¹⁵ DOE could assure quality control over any summaries that a coalition, or other private or non-federal governmental organizations, could prepare, and make these summaries widely available through the Smart Grid Information Clearinghouse. In addition, FERC staff will facilitate the inclusion of such information in its own surveys on demand response penetration into the Smart Grid Information Clearinghouse.

d. *Measuring Program Results with Criteria and Metrics*

The National Action Plan recognizes that there are few criteria or metrics that stakeholders can use to evaluate or compare demand response programs, and thus calls for the development of a standard set of metrics. DOE has developed guidance on how to estimate the benefits of its Recovery Act-funded Smart Grid Investment Grants. In some cases, this guidance could be adapted to support efforts to evaluate the impact of appropriate demand response programs as well. In addition, the National American Energy Standards Board (NAESB), working with stakeholders, has begun to develop widely accepted demand response measurement and verification methods that will help accomplish this activity. A coalition, or other private or non-federal governmental organizations, could coordinate to develop a broader set of metrics that DOE can include in the Information Clearinghouse.

e. *Information for Program Implementation*

The National Action Plan highlights the need for up-to-date information about designing and implementing demand response. To date, the impact of demand response programs has not been well understood. While industry trade associations and consultants have provided rate design and program catalogue information, the lack of long-term demand response programs has hindered efforts to analyze their long-term impact. A coalition, or other private or non-federal governmental organizations, could support and facilitate the efforts to provide results from ongoing pilots and programs conducted by industry trade associations and consultants, as more information is available.

f. *Online Message Board Capability*

The National Action Plan recommends creation of an online message board for qualifying state agencies, regulatory commissions, state energy offices and consumer advocacy groups to

¹⁵ Information regarding customer electricity usage will be masked to ensure customer privacy.

exchange information and request assistance on demand response issues, and communicate directly with experts on these matters. This online message board can be included as part of the Information Clearinghouse.

g. Information About the Development of Standards and Protocols

The National Action Plan recommends creation of a centralized online location that stakeholders can visit for information about the development of standards and protocols relevant to demand response and the smart grid. These standards and protocols are crucial to efficiently expand the deployment of demand response; however, different organizations are responsible for the development of the various standards and protocols, making it difficult for stakeholders to follow their progress. A central location that stakeholders could visit would make it easier for them to follow the different processes and, if appropriate, to participate in those processes as well.

Information regarding these standards and protocols is presently housed on the National Institute of Standards and Technology (NIST) website, and the web-based clearinghouse will link to NIST's website and other standards development organizations' websites. FERC staff will commit to work through NIST and the relevant standards development organizations (such as NAESB) to maintain an up-to-date roster of adopted standards with links to on-going standards development processes. A coalition, or other private or non-federal governmental organizations, could assist in the provision of information about the development of standards and protocols.

2. Develop or Enhance Demand Response Estimation Tools and Methods

The National Action Plan calls for the development or enhancement of analytical tools and methods that will: 1) help in the expansion of existing demand response programs and in the creation of new programs by evaluating each program's benefits and costs; 2) advance the use of demand response to support reliable and efficient operations of wholesale transmission, energy, capacity, and ancillary services markets; and 3) better enable end-use consumers to optimize savings, possibly through set-and-forget types of automation not requiring human intervention, while enrolled in a demand response program.

a. System Impact Estimation and Prediction Tools

The National Action Plan highlights the need for the development of tools and methods for conducting system impact estimation and prediction. The information gained from these tools and methods will be used to facilitate a deeper understanding of how demand-side programs can be accurately integrated into modeling frameworks. System impact estimation and prediction tools will allow stakeholders and policymakers to estimate the effects of demand response programs, products, technologies, and incentives on system resource requirements, wholesale prices, and emissions of carbon dioxide and other air pollutants before spending money on pilots and/or full implementation.

FERC staff has developed and made publicly available a tool for estimating the state-level potential for demand response, as well as a quantitative estimation tool that yields information on plant dispatch and energy margins, reserve margins, and unused supply.¹⁶

¹⁶ The tool for estimating state-level potential is available at <http://www.ferc.gov/industries/electric/indus-act/demand-response/dr-potential.asp>.

All of the Smart Grid Investment Grants, including those awarded for demand response-related projects, include Recovery Act reporting requirements for the grant recipient to collect detailed data. DOE has worked with the smart grid grant recipients to ensure each has a detailed data analysis plan for their SGIG project data, which will be collected and reported to DOE between 2011 and 2013 and made publicly available. Using all the reported data, DOE will then conduct a meta-analysis of all of the individual Recovery Act project results to examine how smart grid technology impacts grid performance, whether positive or negative. It is quite likely that such a large collection and analysis of smart grid project data will be very useful for the development of tools and methods for conducting system impact estimation and prediction.

In addition, demand-side assumptions and impacts are being examined as part of the transmission planning efforts that DOE is funding with Recovery Act funds in each of the three electric interconnections. For example, in the Western Interconnection, the Western Governors' Association's State-Provincial Steering Committee is examining the methodology behind the creation of load forecasts used to support the Western Electricity Coordinating Council's Transmission Expansion Planning Policy Committee production cost modeling. A particular focus is on how these load forecasts account for state and provincial energy efficiency and demand-side management programs and goals. In addition, the State-Provincial Steering Committee is developing a High Demand-Side Management Scenario for possible use in the West's interconnection-wide transmission analyses and planning. As a side benefit, any lessons learned or methods/tools developed in these processes can inform future demand response program as well as resource and transmission planning performed in other fora.

Beyond these federally-sponsored efforts, a coalition, or other private or non-federal governmental organizations, could develop tools and methods for conducting system impact estimation and prediction as well as promote the sharing and posting of tools developed by its members or others.

b. Cost-Effectiveness Tools

The National Action Plan recognizes the importance of cost-effectiveness tools that help stakeholders determine the most efficient mix of demand response programs for a given service territory or region. Demand response program cost-effectiveness can be difficult to evaluate because most current demand response proposals are deeply integrated with broader smart grid initiatives such as advanced metering, meter data management, and complex rate designs. Thus, it is difficult to identify which costs and benefits can and should be specifically attributable to the demand response program, including the separation of those costs and benefits from the rest of the smart grid initiative's costs. Another challenge is the long-standing issue of projecting long-term impact and benefit streams (such as avoided resource costs) from a demand response program.

DOE has funded the development of a cost-effectiveness screening tool for the Pacific Northwest Demand Response Project (PNDRP) that other organizations and regions could use. DOE also has established guidance on the identification of smart grid program metrics and impacts.¹⁷ Instructive materials developed by the Electric Power Research Institute (EPRI) and several

¹⁷ Guidance is located at http://www.smartgrid.gov/files/teams/metrics_guidebook.pdf.

private consulting firms are available for proprietary use. However, since cost-effectiveness testing requires a better understanding of the impacts of demand response programs, more data and analysis are required (as discussed above) before better cost-effectiveness tools can be run using well-founded impact and benefit estimates.

Cost-effectiveness tools and rules must meet the needs and requirements of state regulators, reflect the structure of retail and wholesale markets for a region, and meet the needs of utilities that request demand response program recovery in ratemaking proceedings. DOE commits to work with the state regulatory community to determine whether this community is willing to consider and use federally-sponsored research into demand response cost-effectiveness guidelines and tools.

In addition, a coalition, or other private or non-federal governmental organizations, could consider the development of new methods or tailor existing methods for analyzing the effectiveness of different demand response programs and rates.

c. Decision Tools and Educational Materials

The National Action Plan calls for the development of decision tools for end-use customers, including customers with special circumstances, such as customers that manage multiple facilities. In addition, there is a definite need for educational materials to support customer understanding. The National Action Plan identifies these tools as crucial to help end-use customers understand how to change their consumption patterns to achieve bill savings and provide system benefits while enrolled in a demand response program.

Customer evaluations about the value of demand response offerings depend on several factors, such as the type of demand response program or rate, the cost of participation (hardware, software, and internal operations and staffing costs or opportunity costs), and the potential benefits or payments accruing from participation. Furthermore, demand response options are becoming more diverse every year, with a variety of technology and operational requirements, offerors, curtailment or management strategies, and financial and reputational benefits.

While large, multi-site companies may have developed their own tools and materials to assist in evaluating and participating in demand response programs, purchasing products, and employing technologies, smaller customers may need help understanding their electricity usage profile, available options to control their use, and means to assess cost-effectiveness.

A coalition, or other private or non-federal governmental organizations, could identify new tools and plans that each customer class and industry needs, as well as support private efforts to develop the tools that are identified. In identification of new tools, a coalition, or any private or non-federal governmental organizations, can leverage tools developed by DOE. One example is the benchmarking tools for buildings sponsored by DOE and EPA as part of the ENERGYSTAR® program.

d. Cost Recovery Tools and Methods for Enabling Technology

Many types of demand response programs require the adoption of enabling technologies such as advanced metering, meter data management, and—to maximize demand response impact—

customer in-premise automation and analysis tools. The National Action Plan assumes that utilities offering demand response programs that require enabling technologies will seek to recover the costs of the enabling technologies in their rates. The National Action Plan therefore emphasizes the need for tools and methods that utilities and state and local governing officials can use to develop a business case and examine options for recovering costs of installing approved, cost-effective new technologies that enable demand response. Such tools will help utilities and state and local governing officials estimate the financial implications of demand response options and investments.

For the past five years, utilities have been designing and submitting business cases for a suite of smart grid investments, with varying degrees of success. To assist utilities in developing business cases, an industry of consultants has emerged and a library of reports and regulatory filings are now available. At present, most of the utilities winning Smart Grid Investment Grants have submitted their business cases and cost recovery proposals to regulators. DOE has developed guidance for grant recipient reporting on metrics and benefits.

e. Tools and Methods for Incorporating Demand Response in Dispatch, Ancillary Services, and Transmission and Resource Planning

The National Action Plan calls for the development of new tools and methods that can directly incorporate demand response into dispatch algorithms and resource planning models. The National Action Plan also highlights the need for better methods to forecast and model the capability of demand resources to adjust consumption in near real-time and for hardware and software tools that allow customer appliances or vehicles to autonomously provide reliability services, such as frequency response service. These tools and methods will allow users to better capture the capability of demand response to serve as an alternative to building new generation and transmission and to act as a resource to alleviate transmission congestion.

In parallel with assessing the amount of demand response available, the nation's grid operators have been studying alternative ways to incorporate demand response into system dispatch and planning. However, their ability to forecast and incorporate demand response for near-term operations varies as a function of the type of demand response. Specifically, reliability- or event-driven, dispatchable or externally-controlled programs are more easily forecasted than demand response offerings that are price- or rate-driven and subject to customer decision and action rather than fully automated.

Experience gained with the Smart Grid Investment Grant-associated demand response and variable rate projects should offer insight into how customers react to different types of demand response offerings and how different offerings affect energy use levels. Thus, in several years there should be enough data to create accurate algorithms and methods for forecasting demand response impacts on loads, and for incorporating different types of demand response resources into grid operations. DOE intends to work with FERC staff, grid operators, demand response providers, and other interested organizations to help create such tools when sufficient underlying data become available.

In addition, the entities being funded by DOE through the Recovery Act to conduct interconnection-wide transmission planning will need to develop tools and methods to

incorporate demand-side measures into their plans, to meet their own requirement to better include the demand side. Such efforts are currently underway.

A coalition, or any private or non-federal governmental organizations, also should assess the need for a coordinated and joint project to develop a means of incorporating demand resources in wholesale electricity markets and in resource planning processes.

f. Transparency of Price Information

The National Action Plan recognizes that for the United States to realize its full demand response potential, electricity customers must have access to, and a better understanding of, information about real-time or near-real-time energy prices. Depending on the type of customer and demand response program or provider, the customer also may need information about ancillary service prices, capacity payments, and congestion costs. Better price information delivered more clearly will help potential demand response providers design market offerings, assist utilities in designing demand response-encouraging rates, and help potential demand response customers evaluate whether to participate in a demand response program.

While the National Action Plan recommends development of tools that provide access to transparent price information, FERC staff and DOE believe that an important first step toward developing better tools is to first provide better price information. NIST and NAESB are currently examining and developing standards for the provision of energy price information.

In addition, roughly two-thirds of the Smart Grid Investment Grants that include some form of demand response will explore a variety of means to communicate information about the value of electricity to customers, and when and how customers should change their energy use behavior. DOE's ARPA-e program also has awarded approximately \$5 million to the Precourt Institute for Energy Efficiency at Stanford University for the creation of a system that combines behavioral techniques with human-centered design and technology to achieve large-scale energy reductions. At the same time, commercial demand response providers and the smart grid technology community are developing a wide variety of new tools and technologies to help customers respond. A coalition, or any private or non-federal governmental organizations, could oversee private efforts to assess the need for a coordinated and joint project on transparency. If a joint project is considered beneficial, a coalition, or any private or non-federal governmental organizations, could coordinate the development of guidelines on transparency.

APPENDIX A: RESEARCH TOPICS

Appendix A of the National Action Plan included a list of areas that may benefit from further research. While FERC staff and DOE believe that it is appropriate for the federal government to conduct research on some of those topics, the list below includes other research studies that, in some cases, may be more appropriately performed by individual technology vendors, demand response providers, and utilities that will directly benefit from the research.

Social Science Research Issues

- Exploration of issues related to rate design, metering costs, and an analysis of customer response to time-varying prices in successful programs.
- Understanding the interest of elected officials, regulatory agencies, utilities and load-serving entities, RTOs/ISOs, other demand response providers, and third-party vendors in making demand response a priority, or not.
- Sponsoring the development of a comprehensive database of information on demand response programs. This database would be designed to allow the analysis of the following issues:
 - How the participation rate and demand impacts vary depending on whether the demand response rate design is required by law or regulation (e.g., as the default rate) or if customers voluntarily sign up for it.
 - Investigation of typical demand response participation rates and how these rates vary based on program design parameters, marketing strategy, customer type (residential, commercial, and industrial; gender and income level), and customer profile (e.g., age, geographic location). Included in this investigation should be an examination of the non-price response incentives that motivate customers to participate in demand response programs and products.
 - Exploration of the effectiveness of demand response when critical days are sustained for multiple days in a row, and the persistence of demand response behavior when programs and products are implemented over a long-term time horizon.
 - Understanding how consumers shift demand to off-peak hours of the day and if consumers take conservation measures to lower peak demand over all hours of the day, not just during peak hours.
 - Impacts of customers participating in multiple demand response programs.

Technical Research Issues

- Relative benefits and costs of various types of demand response programs, products, technologies, and incentives, covering such topics as the various types of benefits, potential costs, and payback horizons associated with each.

- An analysis of the positive and negative environmental effects of demand response, including but not limited to an estimate of emissions mitigation when considering load reduction versus load shifting.
- An assessment of the potential for demand response to assist in the integration of variable resources such as some forms of renewable energy. Included in this assessment would be: a study of how demand response resources can be dispatched to support and balance variable generation from some forms of renewable energy; and a calculation of environmental benefits stemming from the reduced need to build new generation capacity and transmission systems.
- A study of how long demand response resources can be expected to provide resource adequacy and reliability benefits compared with other resources, such as generation, transmission, and storage.
- A study of how plug-in hybrid electric vehicles (PHEVs) interact with demand response programs, examining whether demand response rate design provides a price signal that encourages PHEVs to charge during off-peak hours, as well as how different demand response pricing mechanisms interact with PHEVs and their net impacts on how demand for electricity might change.
- Research into the appropriate codes and standards (e.g., building codes, consistent definitions, performance standards) for demand response, considering whether they are mandated at the federal or state level; whether they are mandatory or voluntary requirements; how they will be complied with and enforced; and how the costs involved in their development, compliance, and enforcement will be paid for. Integration of the many utility and third-party programs, devices, and software applications needs to be taken into consideration.
- Implementation of demand response programs and products at campuses owned by municipal, county, state, and the federal government, covering topics such as the types of demand response suitable for government customer applications, barriers and lessons learned from existing programs, percentages of the state electricity portfolio under municipal, county, state, and federal control, and the potential impact of incorporating government loads into demand response programs and products.
- Best strategies to coordinate state and local-regulated retail demand response programs with RTO/ISO demand response programs for organized power markets.
- Curtailable load programs aimed at industrial customers, covering topics such as potential benefits to all customers, cost recovery, rate design, and program marketing.
- The impact of distributed generation as a resource that can be integrated more effectively in conjunction with demand response.

APPENDIX B: LETTER FROM NATIONAL ACTION PLAN COALITION



The Honorable Steven Chu
Secretary, U.S. Department of Energy
1000 Independence Ave., SW
Washington, DC 20585

The Honorable John Wellinghoff
Chairman, Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

Dear Mr. Secretary and Mr. Chairman:

I am writing on behalf of a number of non-profit organizations who are stakeholders in the area of demand response and smart grid. I am writing relative to the National Action Plan on Demand Response (NAP), which the Department and the Commission are charged by Congress with implementing.

When your agencies issued the NAP in June of 2010, one of the Plan's recommendations was that a "Coalition of Coalitions" be formed to implement it. That Coalition has indeed been formed and is ready to work with you to begin this implementation.

The NAP Coalition was formed immediately upon the release of the Plan and has been meeting biweekly since that time. The Coalition has developed a work plan and already begun several work efforts, including developing case studies, conducting webinars and developing content and activities related to the communications/education component of the Plan.

The NAP Coalition continues to add members. At present, the organizations working together are:

- Alliance to Save Energy (ASE)
- American Council for an Energy-Efficient Economy (ACEEE)
- American Public Power Association (APPA)
- Demand Response Coordinating Committee (DRCC)
- Demand Response and Smart Grid Coalition (DRSG)
- Edison Electric Institute (EEI)
- Environmental Defense Fund (EDF)
- GridWise Alliance
- National Association of Regulatory Utility Commissioners (NARUC)
- National Association of State Energy Officials (NASEO)
- National Association of State Utility Consumer Advocates (NASUCA)
- National Rural Electric Cooperative Association (NRECA)

The NAP Coalition stands ready to expand and accelerate its efforts related to the implementation of the Plan. One member of the Coalition, DRCC, has contributed initial "seed" funds to support the current work effort. Beyond that, Coalition members are prepared to combine their expertise and financial resources - in-kind and monetary - with those of DOE and FERC. Members are prepared to enter into an agreement for a public-private partnership that will rapidly accomplish the goals of the National Action Plan and support achievement of the Administration's goal to modernize the nation's electricity system and capture the benefits that can be realized from such.

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**NATIONAL
ACTION PLAN
COALITION**

I would be pleased to provide additional information or answer any questions you may have about the National Action Plan Coalition. Thank you for your support and consideration.

Best regards,



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