ELECTRIC POWER SECTOR COALITION

Response to NIST RFI

Ms. Diane Honeycutt
National Institute of Standards and Technology
100 Bureau Drive
Stop 8930
Gaithersburg, MD 20899

RE: Request for Information: Developing a Framework to Improve Critical Infrastructure Cybersecurity

Dear Ms. Honeycutt:

On behalf of the American Public Power Association (APPA), Canadian Electricity Association (CEA), Edison Electric Institute (EEI), Electric Power Supply Association (EPSA), GridWise Alliance (GWA), Large Public Power Council (LPPC), National Association of Regulatory Utility Commissioners (NARUC), National Rural Electric Cooperative Association (NRECA), Nuclear Energy Institute (NEI), Transmission Access Policy Study Group (TAPS), and Utilities Telecom Council (UTC), we are pleased to submit the attached comments responding to the Request for Information that the National Institute of Standards and Technology published in the Federal Register on Tuesday, February 26, 2013.

Please contact Scott Aaronson of the Edison Electric Institute (202-508-5481; saaronson@eei.org) or Laura Schepis of the National Rural Electric Cooperative Association (703-907-5829; laura.schepis@nreca.coop) if you have any follow-up questions about our comments.

ELECTRIC POWER SECTOR COALITION

Response to NIST RFI

Comments of APPA, CEA, EEI, EPSA, GWA, LPPC, NARUC, NRECA, NEI, TAPS, and UTC

On the NIST RFI:

Developing a Framework to Improve Critical Infrastructure Cybersecurity

The American Public Power Association (APPA) represents the interests of more than 2,000 publicly-owned electric utility systems across the country, serving approximately 47 million Americans. APPA member utilities include state public power agencies and municipal electric utilities that serve some of the nation's largest cities. However, the vast majority of these publicly-owned electric utilities serve small and medium-sized communities in 49 states, all but Hawaii.

The Canadian Electricity Association (CEA) is the national forum and voice of the evolving electricity business in Canada. The Association contributes to the regional, national and international success of its members through the delivery of quality value-added services. At the heart of CEA is a core of corporate utility member companies. In addition, major electrical manufacturers, corporate consulting companies and several hundred other company and individual members are grouped within CEA's broad structure. CEA members generate, transmit and distribute electrical energy to industrial, commercial, residential and institutional customers across Canada every day. From vertically-integrated electric utilities, to power marketers, to the manufacturers and suppliers of materials, technology and services that keep the industry running smoothly – all are represented by this national industry association.

The Edison Electric Institute (EEI) is the trade association of U.S. shareholder-owned electric companies. EEI's U.S. members serve more than 98% of the ultimate customers of electricity in the shareholder-owned segment of the industry and represent about 70% of the U.S. electric power industry.

The Electric Power Supply Association (EPSA) is the national trade association representing competitive power suppliers, including generators and marketers. Competitive suppliers, which, collectively, account for 40 percent of the installed generating capacity in the United States, provide reliable and competitively priced electricity from environmentally responsible facilities. EPSA seeks to bring the benefits of competition to all power customers.

The GridWise Alliance (GWA) is working to advance national and state grid modernization policies that will enhance grid reliability and resilience and transform the electric system to meet the needs of a twenty-first century grid. Founded in 2003, the GridWise Alliance (GWA) represents the broad and diverse stakeholders that design, build and operate the electric grid. Our members include: investor-owned, municipal and public power utilities; information technology, telecommunications and other service and equipment providers; Independent System Operators (ISOs) & Regional Transmission Organizations (RTOs); colleges and universities; and, energy consultants.

The Large Public Power Council (LPPC) represents 26 of the largest state and municipal-owned utilities in the nation. Together, LPPC's members represent 90 percent of the transmission investment owned by non-federal public power entities.

ELECTRIC POWER SECTOR COALITION

Response to NIST RFI

The National Association of Regulatory Utility Commissioners (NARUC) is a quasi-governmental, non-profit organization founded in 1889. NARUC's membership includes the public utility commissions serving all States and territories. NARUC's mission is to serve the public interest by improving the quality and effectiveness of public utility regulation. NARUC's members regulate the retail rates and services of electric, gas, water, and telephone utilities. NARUC's members are obligated under the laws of our respective States to assure the establishment and maintenance of such utility services as may be required by the public convenience and necessity, and to assure that such services are provided under rates and subject to terms and conditions of service that are just, reasonable, and non-discriminatory. This duty extends to ensuring the reliability and security of the facilities used to provide the services that NARUC's members regulate.

The National Rural Electric Cooperative Association (NRECA) is the national service organization dedicated to representing the national interests of cooperative electric utilities and the consumers they serve. NRECA is the national service organization for more than 900 not-for-profit rural electric utilities that provide electric energy to over 42 million people in 47 states or 12 percent of electric customers. Kilowatt-hour sales by rural electric cooperatives account for approximately 11 percent of all electric energy sold in the United States. NRECA members generate approximately 50 percent of the electric energy they sell and purchase the remaining 50 percent from non-NRECA members. The vast majority of NRECA members are not-for profit, consumer-owned cooperatives. NRECA's members also include approximately 67 generation and transmission ("G&T") cooperatives, which generate and transmit power to 668 of the 838 distribution cooperatives. The G&Ts are owned by the distribution cooperatives they serve. Remaining distribution cooperatives receive power directly from other generation sources within the electricity sub-sector. Both distribution and G&T cooperatives were formed to provide reliable electric service to their owner-members at the lowest reasonable cost.

The Nuclear Energy Institute (NEI) is the organization responsible for establishing unified industry policy on matters affecting the nuclear energy industry, including the regulatory aspects of generic operational and technical issues. NEI's members include all entities licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect/engineering firms, fuel cycle facilities, nuclear materials licensees, and other organizations and entities involved in the nuclear energy industry.

Transmission Access Policy Study Group (TAPS) is an association of transmission-dependent utilities (TDUs) in more than 35 states, promoting open and non-discriminatory transmission access. As TDUs, TAPS members are users of the BPS, highly reliant on the reliability of facilities owned and operated by others for the transmission service required to meet TAPS members' loads.

The Utilities Telecom Council (UTC) is a global trade association dedicated to creating a favorable business, regulatory, and technological environment for companies that own, manage, or provide critical telecommunications systems in support of their core business. Founded in 1948 to advocate for the allocation of additional radio spectrum for power utilities, UTC has evolved into a dynamic organization that represents electric, gas, and water utilities; natural gas pipelines; critical infrastructure companies; and other industry stakeholders.

All the above organizations are part of a broader coalition of electric power stakeholders focused on cybersecurity. This coalition represents the full range of electric generation, transmission and distribution companies in the United States, as well as regulators and Canadian utilities.

ELECTRIC POWER SECTOR COALITION

Response to NIST RFI

Protecting the North American electric grid and ensuring a reliable supply of power is the electric utility industry's top priority. Thus, our industry takes cybersecurity threats very seriously. The coalition shares the goals of the Executive Order to enhance the protection and resilience of the nation's critical infrastructure through government-industry partnerships. We welcome the opportunity to comment on the NIST Cybersecurity Framework.

The power grid is a complex infrastructure made up of networked generation, transmission, distribution, control, and communication technologies which can be damaged by natural events such as severe storms as well as malicious events such as a cyber attack. Cybersecurity is not new to the electricity sector—it has been a growing priority over the past decade. The sector employs threat mitigation actions focused on preparation, prevention, resiliency, response, and recovery in its operations. As threats to the grid continue to grow more sophisticated, the sector continues to strengthen its defenses.

Given that a diverse group of owners, users, and operators are responsible for maintaining this highly integrated system, the industry has found common cause to work together to secure and protect our shared infrastructure. In addition to close collaboration as an industry, we also are working directly with government partners to more thoroughly understand the threat environment and, thus, better protect our systems. These comments respond to the NIST RFI in this broader context.

We strongly support the Executive Order's directive that the Cybersecurity Framework "shall provide a prioritized, flexible, repeatable, and performance-based and cost- effective approach." Sec. 7(b). To that end, we believe that the framework must:

(1) Be high-level and flexible, to ensure that the Cybersecurity Framework can be adapted to the Nation's diverse critical infrastructure sectors, without unintended consequences,

(2) Build upon each sector's existing processes, standards and guidance, including the sector-specific regulatory standards which already exist in the electric and nuclear industries;[1]

(3) Avoid time-consuming and unnecessary duplication of efforts;[2]

(4) Preserve and build upon existing public-private partnerships;[3] and

(5) Be risk-based and cost-effective.

DOE and DHS, in partnership with the private sector, have undertaken the Electricity Subsector Cybersecurity Capabilities and Maturity Model ("ES-C2M2") to strengthen the industry's cyber readiness by enabling electric utilities and grid operators to assess their cybersecurity capabilities and prioritize their security investments. The ES-C2M2 is a flexible, risk-based and cost-effective framework. A number of the organizations represented by the coalition worked closely with DOE to develop the ES-C2M2 and are using the model to assess capabilities and make tangible resource allocation decisions. The ES-C2M2 could well serve as a sound starting point for the Cybersecurity Framework that NIST has been tasked to develop.

[1] This is consistent with Section 7 of the Executive Order, which directs that the Cybersecurity Framework incorporate existing consensus-based standards and industry best practices to the fullest extent possible.

[2] This is consistent with Sec. 10(c) of the Executive Order which requires agencies to report on duplicative, conflicting or excessively burdensome cybersecurity requirements.

[3] See generally Section 8 of the Executive Order.

As a result of passage of the Energy Policy Act of 2005, the electricity sub-sector in the United States has been subject to mandatory, enforceable, cybersecurity standards developed and enforced by the North American Electric Reliability Corporation (NERC), under the jurisdiction of the Federal Energy Regulatory Commission ("FERC"). Considerable resources and much time have been dedicated to the drafting and implementation of these cybersecurity standards. NERC standard development relies heavily on the technical expertise of industry experts to ensure that these mandatory cybersecurity standards are technically and operationally sound, fully responsive to FERC regulatory directives, and do not result in unintended consequences for the reliable operation of the bulk power system. Moreover, given that the North American grid is international, with US and Canadian utilities interconnected at more than 35 points along the border, NERC standards must be drafted in a manner that addresses the concerns and allows for their approval by relevant Canadian governmental authorities.

Owners and operators of nuclear energy facilities in the United States are also subject to extensive regulation by the Nuclear Regulatory Commission (NRC) to ensure cyber protection. The nuclear energy industry implemented a cybersecurity program in 2002 to protect critical digital assets. In 2009, the NRC built upon this program by establishing cybersecurity regulations for U.S. nuclear reactors and today critical systems used to control these facilities are not connected to the Internet. A NERC-NRC memorandum of understanding and policy statement by the NRC ensure that there is good coordination between NERC and the NRC, so that no gaps in protection exist for nuclear generators.

We emphasize at the outset that the ES-C2M2 is neither a substitute for, nor a competitor with the mandatory standards approved by independent regulatory agencies such as FERC and the NRC. These mandatory standards address public policy objectives that are unique to the electric and nuclear sectors. The Cybersecurity Framework is intended, in our view, to accomplish a much broader task, of leveraging the federal government's capabilities and expertise with that of the nation's private sector critical infrastructure owners and operators, to ensure cybersecurity protection and resiliency through rapid sharing and adoption of voluntary standards, guidelines and best practices and close cooperation with our federal government partners. Moreover, any framework must not undermine the existing NERC standards development process, which develops standard that can operate on the North American grid and helps to assure cybersecurity on an international basis.

Our organizations, our diverse memberships, and others in the electric industry also work with government partners in a variety of voluntary contexts to protect against cyber threats.

Through these efforts, we have learned that industry standards provide a foundation for a baseline level of security and encourage widespread adoption of good business practices. However, standards alone are not sufficient because the cybersecurity threat environment is constantly changing and threats by our nation's adversaries may emerge rapidly.

Imminent cyber threats require quick action and flexibility. Timely dissemination of threat information and analysis must play an important role in informing protective actions. We must have close collaboration with the government and emergency response protocols that are planned and practiced before a disaster strikes.

Therefore, we strongly support the provisions of the Executive Order furthering timely information sharing about cyber threats among the government and owners and operators of critical infrastructure. Close collaboration between government and industry is needed to truly mitigate cyber risk. Just as our industry does not have intelligence gathering capabilities, the government does not have the expertise to operate

an electric utility system. Both have roles to play and a close working relationship is needed in addition to information sharing. Our efforts will be vastly improved with better information sharing capability and clearer understanding of roles among various government agencies, which the Executive Order seeks to achieve.

Many of our members also work closely with DHS and the U.S. Secret Service to prepare for events of national significance; they also work with the National Security Agency (NSA) and Department of Defense (DOD) on addressing mission-critical electric power needs "on the ground" at the base level and from the national perspective.

Among the existing government-industry partnerships we believe NIST should be aware of as it seeks to craft a "framework" is the innovative and cooperative approach the electricity sub-sector and the federal government are now pursuing. With both sides committing their expertise and leadership to keep the electric grid as secure and resilient as possible, the industry is working to improve coordination with the government at the most senior levels.

Specifically, a group of CEOs from the investor-owned, public power and cooperative segments of the electricity sub-sector have engaged in what we hope will become an ongoing partnership with senior officials throughout the government, including the White House National Security Staff, Department of Energy (DOE) Deputy Secretary Daniel Poneman and Department of Homeland Security (DHS) Deputy Secretary Jane Holl Lute. This collaboration has resulted in classified briefings to make senior industry executives aware of the full scope of the threats facing the electric grid, as well as a commitment from government representatives to improve the flow of information between the government and industry. Other initiatives for this government-industry partnership include addressing legal, technical, and procedural hurdles associated with the deployment of proprietary government technology on utility networks to improve real-time situational awareness, and a directive to identify roles and responsibilities that will expedite response and recovery should a major power disruption occur.

To summarize, we believe the foundational elements are in place to develop a Cybersecurity Framework that will meet the requirements of the Executive Order in ways that are responsive to the specific needs and concerns of the electricity sub-sector. These foundational elements include the mandatory standards our industry must comply with, the voluntary ES-C2M2 framework that is already in use, the robust coordination among industry and government partners outlined above, and the technological advancements in detection and resilience that continue to improve the cyber preparedness of our shared critical infrastructure. We appreciate your efforts and focus on this national security imperative, and hope our positive experiences as an industry can serve as a model that informs the framework for all critical sectors.

ELECTRIC POWER SECTOR COALITION

Response to NIST RFI

AMERICAN PUBLIC POWER ASSOCIATION

By: /s/ Susan N. Kelly

Susan N. Kelly
Senior Vice President of Policy

American Public Power Association
Analysis and General Counsel
1875 Connecticut Ave. NW, Suite 1200
Washington, DC 20009
(202) 467-2900
skelly@publicpower.org

By:/s/ Allen Mosher

Allen Mosher
Vice President of Policy Analysis and Reliability Standards

American Public Power Association
1875 Connecticut Ave. NW, Suite 1200
Washington, DC 20009
(202) 467-2944
amosher@publicpower.org

CANADIAN ELECTRICITY ASSOCIATION

By: /s/ Patrick Brown

Patrick Brown
Director, U.S. Affairs

Canadian Electricity Association
350 Sparks Street, Suite 1100
Ottawa, Ontario
Canada K1R7S8
(613) 230-9263
brown@electricity.ca

EDISON ELECTRIC INSTITUTE

By: /s/ Scott Aaronson

Scott Aaronson
Director, Government Affairs
saaronson@eei.org

By: /s/ David Batz
Director, Cyber and Infrastructure Security
dbatz@eei.org

Edison Electric Institute
701 Pennsylvania Avenue, N.W.
Washington, DC 20004-2696
(202) 508-5000

ELECTRIC POWER SUPPLY ASSOCIATION

By:/s/ John Shelk

John Shelk
Chief Executive Officer
jshelk@epsa.org

By:/s/ William Burlew

William Burlew
Vice President
bburlew@epsa.org
(202) 349-0146 Ext. 106

Electric Power Supply Association
1401 New York Avenue, NW
Suite 1230
Washington, DC 20005-2110
(202) 628-8200

GRIDWISE ALLIANCE

By:/s/ Becky Harrison

Becky Harrison
Chief Executive Officer

GridWise Alliance
1155 15th Street, NW
Suite 500
Washington, DC 20005
(202) 530-9740

LARGE PUBLIC POWER COUNCIL

By:/s/ Jonathan D. Schneider
By:/s/ Jonathan P. Trotta

Jonathan D. Schneider
Jonathan P. Trotta

STINSON MORRISON HECKER LLP
1775 Pennsylvania Ave. NW, Suite 800
Washington, DC 20006-4605
(202) 728-3034
jschneider@stinson.com
jtrotta@stinson.com
Counsel for Large Public Power Council

NATIONAL ASSOCIATION OF REGULATORY UTILITY COMMISSIONERS

By:/s/ James Bradford Ramsay

James Bradford Ramsay
General Counsel

Holly Rachel Smith
Assistant General Counsel

National Association of Regulatory Utility Commissioners
1101 Vermont Avenue, N.W., Suite 200
Washington, D.C. 20005
(202) 898-2007
jramsay@naruc.org

NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION

By:/s/ Laura Marshall Schepis

Laura Marshall Schepis
Senior Director, Legislative Affairs
(703) 907-5829
laura.marshallschepis@nreca.coop

By:/s/Barry R. Lawson

Barry R. Lawson
Associate Director, Power Delivery & Reliability
(703) 907-5781
barry.lawson@nreca.coop

National Rural Electric Association
4301 Wilson Boulevard
Mailcode GR11-253
Arlington, VA 22203

NUCLEAR ENERGY INSTITUTE

By:/s/ Marvin S. Fertel

Marvin S. Fertel
President and Chief Executive Officer

Nuclear Energy Institute
1201 F. St., NW, Suite 1100
Washington, DC 20004-1218
(202) 739-8000

TRANSMISSION ACCESS POLICY STUDY GROUP

By: /s/ John Twitty

John Twitty
Executive Director

TAPS
4203 E. Woodland St.
Springfield, MO 65809
(417) 838-8576
835consulting@gmail.com

By:/s/ Cynthia S. Bogorad
By:/s/ Rebecca J. Baldwin

Cynthia S. Bogorad
Rebecca J. Baldwin
SPIEGEL & MCDIARMID LLP
1333 New Hampshire Ave., NW
Washington, DC 20036
(202) 879-4000
cynthia.bogorad@spiegelmcd.com
rebecca.baldwin@spiegelmcd.com

UTILITIES TELECOM COUNCIL

By: /s/ Brett W. Kilbourne

Brett W. Kilbourne
Vice President & Deputy General Counsel

Utilities Telecom Council
1129 20th Street, NW
Suite 350
Washington, DC 20036
Phone: 202.872.0030
Brett.kilbourne@utc.org