



National Electrical Manufacturers Association

Representing Electrical and Medical
Imaging Equipment Manufacturers
www.nema.org

Statement of

Mr. Jeff Drees

U.S. President, Schneider Electric

on behalf of

National Electrical Manufacturers Association (NEMA)

Before the

Subcommittee on Energy and Power

and Subcommittee on Oversight and Investigations

of the House Committee on Energy and Commerce

On

The American Energy Initiative: Discussion Draft of the *Smart Energy Act*

July 12, 2012

Jeff Drees, Schneider Electric
Statement Summary

- 1) The importance of energy efficiency as a first fuel and a job creator
 - Energy efficiency is the most effective way to minimize uncertainty in energy costs, improve availability, shrink dependence on foreign sources of energy, and protect our environment.
 - Investment in energy efficiency drives jobs and growth for industry.
 - Finding the right market levers and instilling the continued motivation are keys to success.

- 2) The importance of our Federal Government taking a leadership position in the implementation of energy efficiency, including the Energy Saving Performance Contract (ESPC) opportunity.
 - “Walking the talk” is one of the most effective ways for government to establish energy efficiency as a national priority and drive the innovation that leads to cleaner and lower cost infrastructure.
 - Through the use of ESPCs, the Federal Government can reduce its energy use and energy expenditures at no cost to the taxpayer.
 - To date, the pace and size of awards has not leveraged the full extent of the current federal opportunity for leveraging ESPCs for energy efficiency.

- 3) The continued opportunity in Industrial Energy Efficiency and its impact on industrial competitiveness.
 - We are a strong proponent of the need to improve industrial energy efficiency.
 - While we support a promotion of combined heat and power (CHP), there is an additional significant opportunity for industrial energy efficiency through the implementation of control and automation in the industrial sector.
 - Many non energy-intensive industries have yet to implement comprehensive energy efficiency programs, providing a significant opportunity.
 - Recommendations for addressing this opportunity include better understanding, ISO 50001, training and education, and deployment programs.

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Chairmen Whitfield and Stearns, Ranking Members Rush and DeGette, and Members of the
Subcommittees:

Thank you for inviting me to testify today on behalf of the National Electrical Manufacturers Association (NEMA). I am Jeff Drees and I currently serve as the U.S. Country President for Schneider Electric. I have responsibility for growth and profitability of the Power, Buildings and Energy businesses in the United States, along with driving energy efficiency and solutions initiatives across the North American territory.

I joined Schneider Electric in 2001 and have held executive roles in sales, energy solutions, and international business. Prior to joining Schneider Electric, I held management and engineering positions at Caterpillar Inc., Honeywell Inc. and served in the U.S. Air Force. I also hold board positions on the Alliance to Save Energy and National Association of Manufacturers.

As a global specialist in energy management, Schneider Electric offers integrated solutions across multiple market segments, including leadership positions in utilities, infrastructure, industry, buildings, and data centers. In the U.S. we have 18,000 employees working in more

than 240 locations across the U.S. including 40 manufacturing facilities, 6 distribution centers, and 6 R&D centers. Our business is energy efficiency. Our teams are actively committed to helping individuals and organizations make energy safe, reliable, efficient, productive and green.

Schneider Electric is a member of NEMA, the Industrial Energy Efficiency Coalition (IEEC) administered by NEMA, and the Federal Performance Contracting Collation (FPCC).

- NEMA is the association of electrical equipment medical imaging manufacturers. Its member companies manufacture a diverse set of products including power transmission and distribution equipment, lighting systems, factory automation and control systems, and medical diagnostic imaging systems. Worldwide annual sales of NEMA-scope products exceed \$120 billion.
- FPCC is a group of Energy Service Companies (ESCOs) promoting increased federal use of Energy Savings Performance Contracts (ESPCs.) The FPCC represents more than 90% of Federal ESPCs.

We would like to commend Congressmen Bass and Matheson for authoring the *Smart Energy Act* draft bill, legislation which would take critical first steps on the path to prioritizing energy efficiency when it comes to a national energy policy.

In my written testimony I focus on three key issues relating to the “*Smart Energy Act*”

- First, I emphasize the importance of energy efficiency as a first fuel and a job creator.

- Second, I stress the importance of our Federal Government taking a leadership position in the implementation of energy efficiency including the ESPC opportunity.
- And finally, I emphasize the continued opportunity in Industrial Energy Efficiency and its impact on industrial competitiveness.

Energy Efficiency as a First Fuel and a Job Creator

We believe that energy efficiency is the fastest, most economical, and most effective way for governments, businesses and individuals to minimize uncertainty in energy costs, improve availability, shrink dependence on foreign sources of energy, and protect our environment.

We also believe that a strong investment in energy efficiency will create jobs and make our nation more competitive. Being the most efficient user of energy in the world will save money, drive new technologies and services, contribute to a healthy environment, and make energy costs predictable and manageable for our commercial and industrial sectors. America's energy efficiency policy can serve as a catalyst for job creation and continued economic prosperity.

Schneider Electric is one of the first companies to have taken a strong position in support of energy efficiency through the development of efficient and competitive offers for all large market segments. In 2011, we saw the growth rate for energy efficiency activities exceed our company's revenue growth by over 14 points.

There are strong challenges to a continued focus on energy management to achieve sustained and persistent efficiency. Barriers range from simple awareness to embedded or regulated market

structures. Sustained, engaged savings will only be achieved where the market and the consumer realize value. Finding the right market levers and instilling the continued motivation will be the keys to success.

Energy efficiency is about an efficient, productive nation that has the ability to leverage its natural resources better than its peers. It is about innovation that enables us to improve both our lifestyle and our competitiveness through improved energy intensity. It's about a path towards grid reliability, continued quality of life, and industrial competitiveness.

Government and industry must work together to generate the right conditions that will create clear, predictable, long-term economic motivations that empower businesses to undertake the investment programs required for a cleaner and more efficient energy future.

Federal Leadership Role in Energy Efficiency

Today the Federal Government is facing significant fiscal challenges in terms of debt and deficits. We need to look for and leverage all opportunities to reduce spending and manage costs. We need to find ways to help industry grow and put people back to work.

The Federal Government is America's largest energy consumer, paying more than \$7 billion annually on energy. This bill places the Federal Government in leadership positions in ESPCs, Demand Response (DR), phantom load reduction, data center efficiency, and advance metering

implementation. “Walking the talk” is one of the most effective ways for government to establish energy efficiency as a national priority and drive the innovation that leads to cleaner and lower cost infrastructure.

We are especially encouraged by language that would ensure federal agencies use private sector financing mechanisms, including ESPCs, to meet their energy efficiency mandates, which currently stand at 30 percent energy use reduction by 2015, from a 2005 baseline. In our opinion, the Federal Government should first consider the availability of private sector capital and expertise to finance energy efficiency and renewable energy projects, thereby saving appropriated dollars for mission-related expenditures.

Smart Energy Act, Title I: Federal Energy Use and Generation

In Title I we see several areas of significant savings and leadership opportunities for the Federal Government.

Energy Savings Performance Contracts

The largest opportunities for energy efficiency and cost reductions are in the increased use of ESPCs. Under an ESPC, the private sector installs new energy efficient equipment in federal facilities at no upfront cost to the government. Federal agencies pay this investment over time with funds saved on utility costs – and private sector contractors guarantee these savings. By law, and on a negotiated basis, the government never pays more than it would have paid for utilities if it had not entered into the ESPC. In addition to generating energy and dollar savings, years of

deferred maintenance at federal facilities are successfully addressed by ESPC retrofits. ESPCs have proven to be a highly successful tool to encourage energy efficiency in federal buildings, without imposing associated costs on the taxpayer.

There are significant benefits to the acceleration and expansion of ESPCs in the federal space:

- The Federal Government can meet its energy and environmental goals using private sector financing while reducing Federal Government expenditures.
- Private sector financing mechanisms such as ESPCs produce more than 11,000 American jobs per \$1 billion of private sector investment.
- Using private sector financing mechanisms will lead to reduced Federal energy budget on an ongoing annual basis. \$1.4 billion has been saved to date through ESPCs alone.

Schneider Electric is a Super ESPC contract holder serving the Federal Government, and a member of FPCC, an organization that represents 12 of the 16 Super ESCO". We also have a significant ESPC business focused on the non-federal institutional and public sector marketplace. Our experience indicates that ESPCs are still under-utilized in the Federal Government. In our opinion, this is due to several factors including the lack of awareness, lack of resources to develop and manage the contracts, and the availability of appropriated funds as a first resource.

We believe that Federal policy, as put forth in *Smart Energy Act*, should express a strong preference that agencies use private financing and expertise such as ESPCs to ensure peak energy and cost efficiency in the federal building stock. The Department of Energy (DOE) has estimated that \$1.4 billion in annual federal energy efficiency investments will be required to

meet existing sustainability requirements by 2015. To date, the pace and size of awards has not leveraged the full extent of the current federal DOE Super ESPC contract. Simply, to achieve \$1 billion per year in private sector investment via ESPCs there would have to be 57 projects awarded each year.

- The current federal indefinite delivery/indefinite quantity (IDIQ) contract authorizes private sector ESPC investment of \$80 billion. An Oak Ridge National Laboratory report from 2011 showed that only 1.2 percent of the contract was utilized at that time. It also showed that if the entire contract authorization were utilized, the Federal Government could achieve \$21 billion in net energy savings and create over 517,000 job-years of employment. Remember, these benefits accrue to the government without upfront capital and with a guarantee from the private sector that energy, and therefore cost savings, will indeed materialize.
- According to DOE, there have been 47 projects awarded since 2010 for a total of \$833 million of investment with an average project size of \$17.7 million.¹

Private sector financing for energy performance contracts is an established business model used for many years by the Federal Government. It has been authorized for two decades and there are published federal guidelines. There are guaranteed savings by the private sector. The contracts facilitate infrastructure upgrades without using taxpayer dollars.

¹ According to DOE's Federal Energy Management Program website, in 2010 there were 37 projects for \$528 million investment making the average size around \$14 million. In 2011, there were 7 projects for \$252 million of investment making the average size project around \$36 million. In 2012 there have been only 3 projects for \$53 million so average size declined to \$17 million. Overall, the average project size over the last three years has been around \$17.7 million.

As an example of what an ESPC can achieve I would like to present you a case study for the U.S. Coast Guard (USCG) in Puerto Rico awarded to Schneider Electric in 2010. The ongoing results of this project include:

- Over 53% total energy savings, guaranteed by Schneider Electric (*if savings are less than the guaranteed amount, Schneider Electric writes a check for the difference*)
- “Near NetZero” (80%+) energy savings at Air Station Borinquen
- 3MW solar installed on “cool roofs” and carports (*cost of electricity in Puerto Rico is over \$0.24/kWH, more than twice the national average. Renewable energy is a great investment for taxpayers in this example. It also reduces the dependence on fuel which has to be shipped to Puerto Rico*)
- Improved living conditions for USCG personnel and their families at lower cost to the taxpayers
- Over 270 jobs were created as a result of this project

Electric Vehicles

Expanding the use of ESPCs to include electric vehicles and their charging infrastructure will facilitate the growth of another new industry using private sector financing. We support inclusion of this provision as drafted in the *Smart Energy Act*.

Data Center Consolidation

The expansion of data centers implies a significant increase in electricity requirements for operation and cooling, and the cost of energy needed to cool server rooms should shortly exceed that for the servers. The Federal Data Center Consolidation Initiative (FDCCI) is focused on

consolidating at least 800 data centers by 2015 to save energy, reduce costs, and improve security.

We would like to stress the viability of utilizing ESPCs for FDCCI and urge this to be another consideration in the *Smart Energy Act*. Today, this program appears to be under funded due to Department of Homeland Security 2012 budget limitations. Using ESPCs for data center consolidation is yet another opportunity to leverage private sector dollars to fund this federal program and achieve savings in both energy and costs while improving mission.

Demand Response

DR programs are an increasingly important tool in the management of grid reliability and stability. Through DR programs a utility provides financial incentives to a consumer – industrial, commercial or residential – to shed or eliminate non-critical loads based upon a call or demand from the utility. This allows utilities and power providers to stabilize grid load, manage consumption, and provide improved reliability to all consumers. In addition, pervasive use of DR programs will reduce peak load consumption and avoid the need to build new power plants.

In addition, DR programs offer users more visibility on energy usage and they provide economic justification for facility and infrastructure upgrades. DR gives utilities and customers a way to battle high prices by reducing demand during peak times. This extends the economic life of major energy assets, stabilizes margins and attracts investment.

The *Smart Energy Act*'s objective of asking all agencies to engage in DR programs will bring more visibility to federal energy usage and will place the government in a key role in grid reliability and availability.

Advanced Metering and Federal Energy Management Data Collection

The availability of good energy usage data is critical to maximizing energy management savings. Sophisticated data collection and analysis has been institutionalized in the industrial sector for management of quality, production, people, and finance. Energy efficiency has not achieved the same stature.

We strongly support the *Smart Energy Act*'s intent to accelerate full implementation of advanced metering and energy management reporting within the Federal Government. Without full implementation it will be extremely challenging to meet the energy efficiency mandates for federal facilities, which include a 30% energy use reduction by 2015, from a 2005 baseline.²

Smart Energy Act, Title II: Deploying Industrial Energy Efficiency

Our industry is a strong proponent of the need to improve industrial energy efficiency. We are a founding member of the IEEC administered by NEMA.³ Since 2004 Schneider has managed our own corporate energy reduction plan saving over \$24 million in energy costs in the U.S. alone.

² *Energy Independence and Security Act of 2007*

³ IEEC is a global consortium of companies seeking to improve energy efficiency in industrial systems and processes and in business ecosystems. Membership includes ABB, Eaton Corporation, GE, Rockwell Automation, Siemens and Schneider Electric.

In addition, as a Better Buildings Better Plants Challenge Partner, Schneider Electric has committed to reducing the energy use of 9 million square feet of building space, covering 40 different plants, by 25 percent over 10 years.⁴

Energy efficiency is at the heart of the challenges facing industry, which are to reduce production costs, comply with new regulations, and reduce the environmental impact of industrial activity. Furthermore, energy management will be a key component of our industrial competitiveness in the U.S.

The industrial sector consumes more energy than any other sector in the U.S. Although great strides have been made in industrial energy efficiency over the past decades there are still tremendous opportunities for savings. Our experience indicates that up to 30 percent energy savings can still be achieved in the many facilities that have not initiated comprehensive energy savings programs. Investing in energy efficiency would increase shareholder value, improve competitiveness, reduce costs, and create healthier environments for employees.

We support the strong focus on CHP provided by the *Smart Energy Act*. CHP offers a significant opportunity for industry to generate electricity and thermal energy concurrently, yielding higher efficiencies than standard energy generation. CHP also faces significant deployment barriers that

⁴ As a Better Buildings Better Plants Challenge Partner, Schneider Electric has committed to reducing the energy use of 9 million square feet of building space, covering 40 different plants, by 25%. The company's showcase project includes pursuing Superior Energy Performance certification at a Smyrna, TN manufacturing plant site that includes a recently installed 1,000 kilowatt dual voltage solar farm. This solar farm is the first dual voltage solar farm in the U.S. with the ability to operate at both 1000VDC and 600VDC, providing an opportunity for more efficient solar farm operation and giving us a real-time learning lab to research and test our renewable energy solutions.

are economic, financial, political and regulatory. The *Smart Energy Act* will help to understand and address some of these issues.

However, there is also a significant opportunity for industrial energy efficiency through the systemic implementation of control and automation in the industrial sector. Many programs focus on an end device such as a motor or transformer for energy savings. But industry requires a more comprehensive view of the entire process and its management to optimize energy use, quality and production. The dynamic nature of manufacturing also requires a consistent lifecycle approach.

Today our experience shows that many energy intensive companies are very focused on energy efficiency. More can be done but the focus is there.

However, this is not as common with factories that have low energy intensity. In these cases the priority for energy efficiency is low and the hurdle costs for the initial investment are high relative to other priorities. We would estimate that of the approximately 200,000 factories in the U.S, the top 20,000 facilities in energy use have focused energy management programs, while the next 180,000 do not. There is a tremendous opportunity here to understand how to incentivize energy efficiency investment with the next tier of facilities.

Current policies and investments do not adequately address energy savings opportunities.

Therefore, comprehensive approaches to identify, generate, and promote industry energy

efficiency and savings are needed. We see several areas of opportunity for improving the investment in industrial energy efficiency:

Industry Study

The discussion draft contains a directive to the Department of Energy to conduct a study coordinated with industry to understand and identify the economic, behavioral, legal, and regulatory barriers to the deployment of industrial energy efficiency. Much of the study described in the legislation is focused on efficiency achieved through CHP. Our industry seeks the answers to many of the same questions, but as they relate to industries of low energy intensity. We believe broadening the study proposed in the *Smart Energy Act*, or conducting a separate one alongside it, would increase the understanding of economic, behavioral, legal and regulatory barriers facing this portion of the industrial sector.

DOE Deployment Programs

Deployment programs at DOE have been impactful. We believe these programs, such as the Advanced Manufacturing Office, should be encouraged to place a greater focus on education, tools, and deployment to promote adoption of existing energy-saving technologies here and now.

ISO 50001

The International Organization for Standardization's (ISO) new standard, ISO 50001, provides a framework for industrial facilities seeking to manage their energy use, drawing on the success of established environmental and quality management standards. It is important to establish strong

Federal Government support for the deployment of ISO 50001. The Federal Government should consider the use and adoption ISO 50001 in their federal programs.

Workforce Development

Currently there is a shortage of adequately trained energy management engineers and technical personnel. We recommend leveraging industry energy efficiency solution providers to partner with the current DOE Industrial Assessment Center educational program and create intensive field internships for the development of energy managers. This could be partially funded by the DOE to incentivize participation.

Conclusion

On behalf of the National Electrical Manufacturers Association, I appreciate this opportunity to testify before the Subcommittees and I look forward to answering any questions you may have about this testimony or the opportunities we have to address our energy challenges. NEMA, FPCC, and their members stand ready to assist in advancing this important legislation.