National Electrical Manufacturers Association

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

Statement of

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National Electrical Manufacturers Association

Before the

Energy and Natural Resources Committee

United States Senate

On

S. 398 "Implementation of National Consensus Appliance Agreements Act of 2011"

and S. 395 the "Better Use of Light Bulbs Act"

March 10, 2011

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

On behalf of the National Electrical Manufacturers Association (NEMA), I am Kyle Pitsor, Vice President for Government Relations. NEMA is the trade association of choice for the electrical and medical imaging equipment manufacturing industry. Our approximately 430 member companies manufacture products used in the generation, transmission and distribution, control, and end-use of electricity, and represent about 350,000 jobs. These products are used in utility, medical imaging, industrial, commercial, institutional, and residential applications. Domestic production of electrical products sold worldwide exceeds $120 billion.

I am pleased to be here today to present NEMA's views on the importance and role of the national energy efficiency standards program and to offer our views on S. 398 and S. 395.

I would like to note that our member companies support advancing energy efficiency in the marketplace. NEMA members and their employees are at the very heart of our national effort to reduce energy use through the research, development, manufacturing, and deployment of energy-efficient products and technologies. Many energy efficient technologies exist, and what we all must strive for is wider recognition, deployment, and use of today's state-of-the-art products and technologies, as well as support for emerging technologies.

NEMA supports a robust national energy conservation standards program under the Energy Policy and Conservation Act (EPCA), as amended. We believe that a strong national program of standards, test procedures and labeling/information disclosure is critical to effectively maximize energy savings for the Nation and the consuming public. Products are manufactured and distributed on a national (and sometimes global) basis, and it is key that energy conservation regulation for products occur at the federal level.

Mr. Chairman, I would like to provide our comment on the legislation and have organized our testimony based on the bill's sections. We also offer comment on several other topics following our section-by-section comments which we hope will be considered as the legislation moves forward.

S. 398 "Implementation of National Consensus Appliance Agreements Act of 2011"

Section 6 -- Test Procedure Petition Process

The establishment of energy efficiency standards for federally-covered products and equipment is predicated on the use of recognized and established consensus test procedures. Without agreed upon test procedures, it would be impossible to compare efficiency claims among products. The current program is based on incorporation of relevant test procedures within the regulatory program under EPCA.

Once the Department of Energy (DOE), or in some cases Congress, establishes the test procedure for a regulated product, it is important that the test procedure be evaluated as time passes to ensure that it stays current with the energy efficiency levels mandated for the product. When DOE undertakes reviews of the efficiency standard for a product, it also undertakes a review of the applicability of the test procedure and whether it needs to be changed or not.

The proposed legislation would permit DOE to consider amending a test procedure as a result of petition, conduct a public rulemaking to determine if the test procedure should be amended or not, and set deadlines. It should be noted that the granting of the petition does not establish a presumption that the test procedure should be amended, only that DOE must undertake a rulemaking to make a decision on what changes to the procedure are warranted, if any, and to publish such a determination. In addition, for industrial equipment, the legislation would require DOE to conduct a test procedure rulemaking at a minimum of once every seven (7) years on a mandated basis.

NEMA supports the need to keep test procedures current based on the use of recognized and established consensus test procedures. Petitions under the proposed legislative changes need to include detailed information on why a current procedure should be amended, otherwise we fear that very general petitions could be filed that would tie up DOE resources unnecessarily and be counterproductive to the administration of the appliance standards program.

Section 17 -- Prohibited Acts

NEMA supports this section. We believe it is important that channel partners in the distribution and sale of federally-regulated products share responsibility in making certain that consumers and end-users receive the benefit from purchasing energy-efficient products and equipment that meet federal minimum efficiency standards. Today, federal law places that responsibility only on manufacturers and private labelers, which creates a loophole when it comes to compliance in the marketplace. The loophole unfairly denies manufacturers of compliant, efficient products of sales opportunities because there are not uniform incentives to comply with the law. The proposed section would ensure that all players in the manufacturing, sales, and distribution channels have a responsibility.

Section 18 -- Outdoor Lighting Efficiency Standards

Two years ago, the industry, environmental advocates, lighting designers, and other parties negotiated a consensus proposal for the establishment of federal minimum efficiency standards for pole-mounted outdoor lighting. Given changes in the standards and the market since that time, we are presently seeking to revise that consensus proposal and hope to have a package for your consideration to be added to this legislation.

The current Section 18 in S. 398 does contain a provision that would complete the transition to phase-out the use of mercury vapor outdoor lighting which was begun with provisions in the Energy Policy Act of 2005 that prohibit the manufacture or importation of mercury vapor ballasts. There are several more efficient technologies to replace mercury vapor that benefit consumers. NEMA supports these provisions.

Outdoor lighting consumes over 178 TWh according to Navigant Consulting (data from 2007), the equivalent output of about 17 nuclear plants (1200 MW) or 34 coal-burning plants. Stated another way, approximately 22 percent of all the electricity generated in the United States is used for lighting, and outdoor lighting represents about 20 percent of that total. So, new federal standards, together with exterior lighting controls, would result in lowering energy bills while providing users with good quality lighting.

Section 21-- Electric Motor-Driven Systems Assessment

Section 21 of this legislation is a requirement for the Department of Energy to conduct a motor market assessment and commercial awareness program. NEMA represents all of the major electric motor manufacturers. Electric motors convert 65-70% of the electrical energy used in commercial and industrial applications into mechanical energy used to drive pumps, fans, compressors, blowers, and material handling equipment. The Market Assessment objectives are to develop a detailed profile of the current stock of motor-driven equipment in U.S. and survey how the installed base of industrial horsepower motors is broken down. This updated assessment will support future

legislative, regulatory, and voluntary programs aimed at increased adoption rate of motor systems offering greater energy efficiency. Other items this study will accomplish are: characterize and estimate the magnitude of opportunities to improve the energy efficiency of industrial motor systems; survey how many systems use drives, servos and other higher technologies; how many systems use process control, by application category, pump, compressor, fan/blower, material handling. Furthermore, it will develop an updated profile of current motor system purchase and maintenance practices; how many companies have motor purchase and repair specifications, including company size, number of employees. And finally, it will develop methods to estimate the energy savings and market effects attributable to the DOE's Save Energy Now Program.

In addition to serving DOE's program planning and evaluation needs, the market assessment is designed to be of value to manufacturers, distributors, engineers, and others in the supply channels for motor systems. It would provide a detailed and highly differentiated portrait of their end-use markets. For factory managers, this study presents information they can use to identify motor system energy savings opportunities in their own facilities, and to benchmark their current motor system purchase and management procedures against concepts of best practice.

Section 22 -- Study of Compliance with Energy Standards for Appliances

NEMA strongly supports the need for a study of the appliance standards program and the level of compliance and enforcement of federal efficiency standards. Our industry has invested heavily in the federal program of efficiency standards, test procedures and product labeling, and are concerned about the levels of imported products that are not in compliance with federal requirements for certain federally-covered products. For instance, in the case of federally-regulated integral electric motors, the U.S. industry members has raised concerns about equipment with non-compliant embedded motors coming into the United States which makes U.S. original equipment manufacturers that build products here uncompetitive and costs jobs. The study will be valuable in making recommendations on how our enforcement regime should be structured in light of today's

global competitive environment, and how the DOE and the Customs and Border Protection bureau of the Department of Homeland Security coordinate enforcement on imported products that must meet federal efficiency requirements.

We also suggest that the General Accountability Office (GAO), in coordination with the Department of Energy, be involved in conducting the study of compliance, compliance options, and enforcement.

Section 23 -- Study of Direct Current Electricity Supply in Certain Buildings

The potential energy savings from the implementation of a DC electricity supply for individual buildings could be significant on the basis of elimination of the multitude of individual power supplies used for various information technology, audio-visual and other devices. Use of a centralized DC electricity supply would require major investment in new wiring devices (to prevent misconnection with existing systems), installers would need to establish new practices, and rules for safe use would need to be developed. The most practical use would be for new construction or major renovation, as separation of these circuits from the installed alternating current wiring must be maintained. A study would be highly beneficial to identify the key considerations and limitations for implementation of direct current electricity supply.

Section 24 -- Technical Corrections to EISA

Mr. Chairman, since the passage of the Energy Independence and Securities Act of 2007 (EISA 2007), several items have been identified that warrant "technical correction" to address implementation issues and obtain clarification. Since the passage of EISA, NEMA has been working closely with various stakeholders, several of which are testifying today, in obtaining a consensus agreement on a technical corrections bill. We have agreed on a package of non-controversial corrections and we urge consideration of inclusion of a technical corrections package as part of this legislation. Several of these corrections are critical in nature. For instance, the EISA 2007 electric motor provisions

came into force on December 10, 2010, yet the corrections needed to guide the Department of Energy and the industry on product coverage and requirements have not been enacted into law. We urge prompt action in this regard.

Certain Incandescent Reflector Lamps (Light bulbs)

NEMA manufacturers and environmental advocates have also come to a consensus agreement on updated language for the consideration of a Department of Energy rulemaking on certain reflector bulbs and consideration of a new metric for measuring energy efficiency of reflector bulbs. This is an updated agreement from what was in Section 18 of S. 3924 in the 111th Congress. We ask that the Committee include this consensus agreement into S. 398 at the next opportunity.

The consensus agreement language proposed would read as follows:

STANDARDS FOR CERTAIN REFLECTOR LAMPS.

Section 325(i) of the Energy Policy and Conservation Act (42 U.S.C. 6295(i)) is amended by adding at the end the following:

"(9) REFLECTOR LAMPS.—

(A) In conducting rulemakings for reflector lamps after January 1, 2014, the Secretary shall consider:

"(i) incandescent and non-incandescent technologies; and

"(ii) a new energy-related measure, other than lumens per watt, that is based on the photometric distribution of those lamps.

Federal Preemption

A fundamental tenet of the Energy Policy Conservation Act, as amended, is the significant and longstanding principle of express federal preemption respecting energy efficiency standards. The twin cornerstones of the "comprehensive national energy policy" enacted by Congress in 1975 to implement EPCA (S. Conf. Rep. No. 94-516 at 116 (1975)) are:

1. The establishment of national standards for energy efficiency, testing and information disclosure for "covered products," and
2. Express Federal preemption of State laws and regulations respecting energy efficiency standards, testing, and information disclosure for those covered products.

The exceptions to Federal preemption were intentionally narrow: (a) State petitions for waivers required that States show there were "unusual and compelling State and local interests" that were "substantially different in nature and magnitude from those of the Nation generally," so that achieving the waiver would be difficult; (b) State procurement standards would be permitted; (c) and a narrowly drawn exception for State and local building codes that must meet seven requirements. NEMA supports the current federal and state preemption provisions.

I mention these matters because as Congress considers improvements to the federal program, we need to ensure that resources are provided so that the agencies charged with administering the program are able to do so, and that the agencies use those resources effectively and efficiently. In the past, some have proposed weakening pre-emption because of missed deadlines, which ends up penalizing the manufacturers for government's lapse.

S. 395 the "Better Use of Light Bulbs Act"

Mr. Chairman, we are pleased to present our views on S. 395 which would repeal Subtitle B of the EISA 2007 law. This would include repeal of the federal energy efficiency standards for general service light bulbs, repeal of federal efficiency standards for certain spot and floodlights (incandescent reflector bulbs), repeal of certain federal efficiency standards for metal halide lighting fixtures (used in industrial, commercial, and outdoor applications), repeal use of energy efficient lighting and use of Energy Star products in federal buildings, and repeal energy labeling of TVs, personal computers, and other consumer electronics products.

The Lamp Section of NEMA represents 15 companies that sell over 95 percent of the light bulbs (lamps) used in the United States. NEMA members are engaged in all the various light bulb technologies – including incandescent (and halogen), fluorescent, and solid state lighting (light-emitting diodes, LEDs) -- and serve all lighting application markets.

Today, I would like to reaffirm our industry's support for public policies that encourage transitioning to more energy-efficient lighting, and specifically the energy-efficient light bulb provisions in EISA 2007. Lighting use in the U.S. consumes 20-22 percent of all electricity generated. Approximately 40 percent of the electrical energy consumed in an office building is from lighting use, and about 12 percent of residential electrical energy is for lighting.

First, let me emphasize a common misunderstanding with the EISA 2007 provisions. They do not "ban" incandescent light bulbs, nor do they mandate the use of the common spiral compact fluorescent lamp (CFL). The EISA 2007 provision focuses on "general service" light bulbs and raises the efficiency standards of those bulbs. The standards do not cover a variety of bulbs including chandelier bulbs, specialty and appliance bulbs, or 3-way bulbs.

Second, the EISA provisions reduce lighting energy consumption by reducing the connected load; that is "watts." The law does this by setting a maximum wattage that any bulb can consume for a given lumen range (amount of light from a bulb, i.e, its "brightness"). As a result of this approach, the lumen ranges in the law are consistent with consumer experience with today's standard general service light bulb categories of 100, 75, 60, and 40 watts.

For example, consumers will still be able to purchase incandescent light bulbs, but instead of using 100 watts for 1600 lumens (brightness), the new advanced incandescent/halogen bulb only uses 72 watts for the same amount and quality of light. This represents a 28 percent savings in the connected load to the consumer. Similar savings will be achieved for 75 watt, 60 watt, and 40 watt bulbs in the lumen ranges that consumers are used to for those products. These incandescent bulbs can be dimmed just like today's inefficient bulbs, will fit the same sockets, and have the same shape and feel, and quality of light.

The light appearance of these advanced incandescent/halogen bulbs does not differ from today's inefficient incandescent bulbs. Because features between newer incandescent/halogen technologies and old incandescent technologies are almost indistinguishable, there is no utility lost in replacing an inefficient incandescent bulb with a more effective incandescent.

If a consumer wants greater savings, they can opt for a compact fluorescent lamp that provides the 1600 lumens (brightness) but uses only 25-26 watts. This represents a 75 percent savings in terms of wattage per bulb to the consumer. Additional advanced lighting products are also entering the marketplace such as high brightness LED bulbs which represent over 75 percent connected-load savings and very long lives. These LED bulbs are already appearing in the market in the lower wattage replacement areas (40 and 60 watt equivalent lumen ranges) today, and with further advancements into the higher lumen ranges in the next few years.

My point is that the EISA 2007 provisions require manufacturers to reduce the electric power a light bulb uses in producing a certain output of light. The energy savings for the nation that EISA 2007's lighting provisions will generate are substantial, and the opportunity to conserve a substantial amount of energy should not be overlooked. There are and will be a wide variety of light bulb options for consumers, including incandescent/halogen, compact fluorescent, and new advanced technologies like high brightness LED bulbs. Maintaining and expanding consumer choice is a critical aspect of the EISA law.

The law provides the transition to more energy-efficient light bulbs take place over several years. The EISA requirements for lumen output and wattage maximums start January 1, 2012 for the 100 watt bulb (changes to 72 watts maximum), January 1, 2012 for the 75 watt bulb (changes to 53 watts maximum), and January 1, 2014 for the 60 and 40 watt bulbs (changes to 43 and 29 watts, respectively). EISA 2007 permitted California to adopt the federal standards one year earlier.

This multi-year transition was critical for manufacturers to have an orderly process to make the necessary capital investments, ensure suppliers of new raw materials, invest in new package designs, provide for safety testing and qualify the products. To repeal the EISA 2007 provisions would strand millions of dollars of investments that the industry has undertaken in the last 4 years, not only for general service bulbs, but also reflector bulbs and metal halide lights.

In addition, the multi-year transition provides time to undertake consumer education and outreach on the new lighting options by manufacturers, retailers, and other organizations. Further, manufacturers are including a new information label on light bulb packages to assist consumers in understanding and selecting the new lower wattage bulbs that provide the same quantity of light that consumer are used to. Industry has worked with the Federal Trade Commission to develop this new label and we are now moving forward with implementation. Industry has also developed educational information, such as the

"5 Ls of Lighting" brochure (attached to my testimony), websites like www.lightbulboptions.org, and point of sale information for retailers to use.

When NEMA testified before this Committee in 2007 on the pending EISA legislation, we noted that a federal regime was crucial in addressing the lighting market transformation. A host of state legislatures stretching from Connecticut and Rhode Island, to California and Nevada were considering widely varied state regulations. If states had set light bulb standards, manufacturers would have been faced with conflicting state requirement and a patchwork of rules would have resulted in different light bulbs for different states. This would have driven up consumer costs and created significant marketplace confusion. The EISA 2007 prevents that from happening and ensures a national market for lighting.

As an industry, the NEMA lighting manufacturers are committed to ensuring a smooth transition to more energy-efficient lighting that provides a continued choice of light bulb options for consumer selection. Our industry is investing heavily in research and development, innovation, and new products to meet consumers demand and interest for efficiency and light quality. More products are becoming available every day to fill the over 4 billion light bulb sockets in the United States.

Conclusion

In conclusion, NEMA supports the consensus provisions in S. 398 as outlined in my testimony, and we support the lighting efficient provisions in the Energy Independence and Security Act of 2007, and therefore oppose S. 395. NEMA members are committed to advancing the use and deployment of energy efficient technologies, and recommend the following:

1. Support a petition process to amend current test procedures, as needed (Section 6)
2. Support provision to enhance marketplace compliance of federal requirements (Section 17)

3. Support the study on compliance and enforcement of the appliance standard program, especially of concern with imported products (Section 22)

4. Support the Motor Assessment study and the study on benefits and costs of Direct Current supply in certain buildings (Sections 21 and 23)

5. Support prompt action to enact the "EISA 2007 Technical Corrections" package (Section 24)

6. Support adding a provision on certain incandescent reflector products

7. Support EISA 2007 Subtitle B "Lighting Efficiency" (Reject S. 395)

Mr. Chairman, Ranking Member Murkowski and Members of the Committee, thank you very much for the opportunity to provide these remarks and recommendations to the Committee today on behalf of our industry.

The 5 Ls of Lighting

NEMA

The Consumer's Guide to Choosing Energy-Efficient Lighting

Location

Where will I use this light bulb?

Dimmability	The package shows if the bulb is made for a dimmable fixture
Usage	The package shows if the bulb is for indoor or outdoor use

Lumens

How bright do I need this light bulb to shine?

More Lumens = Brighter
Lumens are shown on the package label
60 watt Incandescent ~ 800 Lumens | 100 watt Incandescent ~ 1600 Lumens

Light Bulbs

What are my light bulb options?

Incandescent	Halogen (Energy-efficient incandescent)	CFL	LED
			
Clear Frosted	Clear Frosted	Covered Open	
Energy/Cost Savings (Compared to incandescent)	~28%	~75%	~75%+

Label

How do I read the Lighting Facts label?

Brightness	The amount of light a bulb emits, expressed in lumens
Energy Cost	The average cost to run a bulb for one year
Life	The average life of a bulb, expressed in years
Light Appearance	How warm (yellowish white) or cool (bluish white) the light appears
Energy Used	The amount of electrical power the bulb uses, expressed in watts
CFL Label Only	
Mercury	The bulb contains a small amount of mercury. Recycling is recommended. *epa.gov/cfl*

Law

There are new energy-efficiency standards for lighting.

Which incandescent bulbs will no longer be made?

Current Wattage	Date (not made after)
100w	January 1, 2012
75w	January 1, 2013
60w & 40w	January 1, 2014

The law requires increased efficiency. It does not ban incandescents or mandate CFLs.