Setting Standards for Excellence

Statement of the National Electrical Manufacturers Association

Before the

Senate Finance Subcommittee on Energy, Natural Resources, & Infrastructure

"Energy Efficiency: Can Tax Incentives Reduce Consumption?"

May 24, 2007

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Chairman Bingaman, Ranking Member Thomas, and Members of the Subcommittee:

On behalf of the National Electrical Manufacturers Association (NEMA), I am Stuart Thorn, President & CEO of Southwire Company and a member of the NEMA Board of Governors. NEMA is the leading trade association in the U.S. advancing the interests of 430 electrical manufacturers of a wide array of electroindustry products used in utility, industrial, commercial, institutional, medical imaging, and residential applications.

NEMA companies are actively engaged in the research, development, manufacturing and promotion of a wide range of energy efficient technologies and products, including lighting, electric motors, wire and cable, and utility distribution equipment. While a vast array of energy efficient technologies exists, their use in the marketplace is limited. What we strive for is wider recognition, deployment, and use of today's state-of-the-art products and technologies, and support for emerging technologies.

We appreciate this opportunity to testify on energy efficiency tax incentives that would complement S.1321, the Energy Savings Act of 2007, favorably reported out of the Senate Committee on Energy and Natural Resources recently. Since the early stages of development of

federal energy efficiency provisions that became part of the original Energy Policy and Conservation Act (EPCA) in the 1970's, and amendments promulgated as technologies advanced, NEMA has participated with congressional, agency, and nongovernmental organizations in the development of effective and workable energy efficiency standards for our members' products.

Under present law, there are certain tax credits to promote energy efficiency, including credits for individuals who make their existing homes more energy efficient by buying an energy efficient central air conditioner or heat pump, furnace or boiler, windows, or insulation and sealing materials. Other current energy efficiency incentives include a tax deduction for either retrofitting existing commercial buildings with highly efficient systems or constructing efficient commercial buildings from the ground up.

In the commercial sector, NEMA worked with Congress during the development of the Energy Policy Act of 2005 (EPAct 2005) to promote a number of energy efficiency provisions. The Commercial Building Tax Deduction (EPAct 2005 Section 1331) is the first tax code provision that provides incentives for energy efficient commercial buildings. For the reasons discussed in detail below, we are urging that Congress enact extensions to the commercial building tax deduction to provide a reasonable time horizon for potential builders and investors to avail themselves of the incentives. The process for planning, construction, and delivery of more energy efficient commercial buildings is a multiyear undertaking. NEMA believes that period available for this incentive must be extended to provide a meaningful window for developers to undertake more energy efficient construction in significant numbers of projects, so as to provide a meaningful contribution to improved commercial building energy efficiency on a national scale. We are also

proposing a complementary new tax incentive for more efficient outdoor lighting through the use of accelerated depreciation

In the industrial sector, NEMA worked with the American Council for an Energy Efficient Economy (ACEEE) over recent months to develop a new tax incentive proposal to accelerate adoption of premium efficient electric motors.

In the electrical utility sector, we are proposing to accelerate depreciation schedules for certain more efficient electric transmission, distribution, and metering equipment that would be placed in service by electric utilities so as to promote transformation of the Nation's electric grid into a more energy efficient one.

Extending the Commercial Building Tax Deduction

Each year, about two billion square feet of new commercial building construction, and two billion square feet of commercial building lighting retrofitting occur in the United States. Section 1331 of EPAct 2005 provided for a $1.80 per square foot whole building, or $0.60 per square foot system (heating, ventilating, or air-conditioning; building envelope; or interior lighting) tax deduction to promote energy efficiency.

NEMA has developed two websites, www.efficienctbuildings.org and www.lightingtaxdeduction.org, to help manufacturers, distributors, lighting designers, contractors, and building owners understand the provision. We have also made over 20 presentations to over 1500 participants on the provision, with a major emphasis on lighting. We have been asked for help by numerous stakeholders and continue to respond to requests daily. During this effort we have

received abundant feedback from people wanting to use the provision. Our experience leads us to make the following judgments.

This current incentive has been instrumental in increasing the energy efficiency of lighting retrofits in existing buildings. However, the provision, as currently interpreted by IRS, is unlikely to be used for retrofits other than lighting, for government-owned buildings, or to encourage on-site renewable electric generation, which were all intended by Congress in EPAct 2005. In order to be effective, the deduction amount should be restored to the originally proposed $2.25 per square foot, and the provision should be extended to 2014. Field experience has shown that $2.25 per foot is needed to fully incent energy efficiency investment. Moreover, the current expiration date makes the effective period of such short duration that it effectively precludes the use of the incentive for new buildings, due to multi-year planning, design, and construction timelines for new construction. A one-year extension of the provision through December 31, 2008 passed Congress in late 2006. While helpful in the interim, the duration of the provision should be extended to 2014 so investments, especially in new buildings, will occur. Additionally, the IRS has yet to issue guidance on government-owned buildings, or on on-site renewable electrical generation. Treasury's schedule for promulgating implementing regulations in these areas remains uncertain.

Consequently, provisions in addition to extending the expiration date and increasing the amount back to $2.25 are needed. These additional proposed changes are based on lessons that we and others in the energy efficiency business have learned. For example, by adding well-recognized national certifier qualifications, quality certification can be enhanced and designs for a nationwide market (for example, retail chains) can be facilitated. Congressional action can both reduce the chances of IRS misinterpretation, and speed up the implementation of the tax provisions already a

part of EPAct 2005. For whole buildings to meet the 50% energy reduction target, on-site generation will likely be needed in many cases.

One beneficial effect of the tax deduction is to increase awareness of the energy savings value of lighting retrofits (indeed, the major financial benefits are the energy cost savings, not the tax savings). Anecdotal feedback indicates that taxpayers are attempting to qualify millions of square feet of lighting retrofits for the commercial buildings tax deduction. Although this is impressive, this amount must be compared to the nominal two billion square feet a year of annual retrofits. In order to qualify for the deduction, the retrofit efficiency must be significantly higher than that of typical retrofits. The requirements are energy use below the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) 90.1-2001 standard and most retrofits are probably saving far more energy than the reduction from 90.1-2001 because the prior designs in the lion share of the cases have been to an earlier energy efficiency code, or no efficiency standard at all. Once a designer has determined how to achieve the tax deduction requirements this becomes a tool in the toolbox for future designs. Besides energy savings we have improved lighting, as well, as the incentive requires that the design meet lighting handbook requirements. These are true market transformation impacts, and fulfill the congressional intent of imbedding higher efficiency levels into normal practice.

Premium Energy Efficient Electric Motors

Electric motors consume 65-70% of the electrical energy used in commercial and industrial motor-driven systems, such as pumps, fans, and compressors. As a consequence, increases in motor efficiency translate to significant energy savings for industrial and manufacturing facilities.

NEMA has worked with ACEEE to develop a tax proposal to address this issue. We estimate the savings attributable to the NEMA-ACEEE joint recommendations to be 8 billion kilowatt hours by 2030, with a net energy savings to consumers of almost $500 million.

NEMA developed the first standard and levels for an "energy efficient" electric motor in 1987, which were included in the Energy Policy Act of 1992. In 2003, NEMA established new "premium efficiency" motor levels and has undertaken a significant marketing and promotion effort for NEMA Premium®. The Energy Savings Act of 2007 now includes an important expansion of electric motors that will be subject to federal efficiency requirements, including adoption of premium efficiency for the bulk of the 1-200 horsepower general-purpose motors.

The NEMA-ACEEE proposal provides for a tax credit for the purchase of qualified energy efficient motors that meet or exceed certain energy efficiency standards, subject to limitations. Purchasers of qualified energy efficient motors would be allowed a credit in an amount equal to $15 per horsepower of qualified energy efficient motors placed in service by the taxpayer during the taxable year. The tax credit would be part of the general business credit and is time-limited to 3 years after date of legislative enactment to coincide with the effective date of proposed new federal energy efficiency standards for these motors.

In addition, the aggregate amount of credit that a taxpayer may claim for any taxable year shall not exceed $1,250,000. For this purpose, taxpayers treated as a common employer under section 52(a) and (b) or section 414 (m) or (o) generally would be treated as one taxpayer.

The Secretary of the Treasury would be instructed to provide rules that would simplify the administration of the credit. These rules would require manufacturers comply with existing 10 CFR Part 431 motor test, labeling, and lab accreditation rules to certify that motors meet or exceed the

efficiency standards required for the credit and provide information necessary to determine the credit. Such information should include the manufacturer's name, address and compliance number, as well as the motor's serial number, horsepower, and date of purchase.

If enacted, an incentive electric motor replacement program is estimated to achieve substantial savings as early as 2010, as well as greatly expand the scope of motors covered by enhanced energy efficiency standards. The proposal would measurably decrease the demand for electricity, having the direct, measurable environmental benefit of reducing 80,000 metric tons of carbon over the life of each new NEMA premium efficiency motor. The tax incentive would make the purchase of the most highly efficient motors more cost-effective to industrial and commercial users and therefore more attractive than extending the useful life of a much less energy efficient motor with a "business-as-usual" repair of such older motor.

Accelerated Depreciation for Certain Utility Transmission, Distribution, and Metering Equipment

The EPAct 2005 tax incentives included a tax life reduction for transmission assets used at 69 kV or more from 20 to 15 years. We support broadening the same tax life reduction for lower voltage transmission, as well as distribution assets to increase system reliability, reduce congestion charges, and increase energy efficiency in the grid. Advanced metering is a technology that enables energy savings and peak load reduction. A consumer must be able to measure energy use along with the time of such energy use to tie energy production costs to energy prices. If customers pay on the basis of time-based costs to the energy supplier, they will use less energy when the grid is stretched and production costs are high. Since advanced metering is largely an 'information technology'

product, the tax life should be reduced from 20 to 5 years, which is more in line with the advanced metering technology life.

EPAct 2005 dealt with a number of issues intended to increase investment in high voltage transmission in order to deal with well-recognized reliability concerns and transmission congestion charges. For example, Congress reduced the depreciation period for electrical transmission equipment such as large power transformers. Over the six quarters since the depreciation period was cut from 20 to 15 years, investment in large power transformers has more than doubled, with much of the growth occurring in the last year. By comparison, over the one-year period prior to the change in the depreciation rate, investment in large power transformers increased by barely two percent.

However, lower voltage (less than 69 kV) transmission and distribution property were not addressed in EPAct 2005. From the perspective of the utility customer, most outages are related to distribution problems. Therefore, distribution needs to be addressed. As the states are responsible for regulating distribution, many of the remedies at the Federal Energy Regulatory Commission (FERC) provided by EPAct 2005 are unavailable for distribution. Tax incentives have proven to be an effective response. [An issue not widely known is that the cost of materials that go into electrical products, for example, aluminum, copper, and electrical steel has doubled or tripled in the past three or four years as international demand has grown. Therefore, the seemingly significant (50 percent) increase in transmission investment in dollars in the last year may still be well below the need in systems capacity expansion required, and distribution investments would be similarly impacted.]

Faster tax depreciation can help us move toward the ‘smart grid’. For example, automation of distribution substations is an important element in reducing costs and improving reliability.

Distributed generation is most often connected to the distribution system (or, in the case of large industrial facilities medium voltage transmission), so the new 15 year distribution (and less than 69 kV transmission) asset tax life would also help incent more distributed generation.

Many electric transmission and distribution system assets in the U.S. are at or near the end of their design lives. The 15-year tax life would help reduce the cost of component replacement with new more efficient products. For example, low voltage dry-type distribution transformers have national efficiency standards effective January 1, 2007 and medium voltage units are scheduled to have standards promulgated in September 2007; the shorter tax life would encourage replacement of old units with new efficient units rather than refurbishment to the original less efficient specifications.

Reducing the depreciation period provides additional capital resources for investment in modernizing and increasing the systems capacity. This also reduces electricity rates for customers.

A comparison of capital cost recovery for electrical distribution lines in the U.S. versus other trading partner nations shows that in five years the other nations have recovered far most of the initial cost (American Council for Capital Formation *International Comparison of Depreciation Rules and Tax Rates for Selected Energy Investments*, May 2007). Consequently, improved capital cost recovery can also have trade implications.

Tax Incentive for Efficient Outdoor Lighting

Many experts believe that it would be sound energy-efficiency policy to adopt a tax incentive for efficient outdoor lighting similar to the incentive that exists for indoor lighting pursuant to the commercial buildings tax deduction of Section 1331 of the EPAct 2005. The

ASHRAE 2001 standard referenced in the EPAct 2005 commercial buildings tax deduction does not include most outdoor lighting applications. However, ASHRAE's more recent 2004 standard adds these applications making an outdoor lighting tax provision practical and appropriate. Since retrofits for outdoor lighting would be very expensive, the measure would likely only be applied to new construction. As with the EPAct 2005 commercial buildings provision, this provision would reach significantly beyond the most recent codes and standards, maximizing energy savings and minimizing those who might be eligible for a tax deduction without installing higher efficiency equipment.

The approach NEMA favors is to decrease the depreciable life of the efficient outdoor equipment to three years. The affected equipment would be required to achieve efficiency 30 percent below ASHRAE 90.1-2004 lighting power densities, or achieve 90.1-2004 lighting power densities with additional controls, to save the same amount of energy. In addition, as in the EPAct 2005 indoor lighting provision, minimum requirements for calculated outdoor lighting levels as set forth in the Illuminating Engineering Society of North America Lighting Handbook, Performance and Application, Ninth Edition (2000) must be satisfied, assuring quality lighting performance.

Conclusions

NEMA believes that, if adopted, these tax incentives in the commercial, industrial, and utility sectors will materially enhance the Nation's productivity in the years to come. Specifically:

- Extend the effective date of the Energy-Efficient Commercial Building Tax Deduction and adopt clarifying provisions based on lessons learned since the enactment of EPAct 2005.
- Support new purchaser credits for premium efficient electric motors which complement proposed efficiency standards
- Support accelerated depreciation for electric utility distribution equipment and advanced metering
- Support a performance-based tax incentive for energy efficient outdoor lighting.

NEMA commends the Subcommittee for considering tax incentives and their critical role in accelerating the deployment and installation of energy efficient technologies.