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The Association of Electrical and Medical  
Imaging Equipment Manufacturers  
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## **Summary of the Final Provisions in HR 1, the American Recovery and Reinvestment Act of 2009, of Interest to the Electrical and Medical Imaging Equipment Manufacturing Industries**

### **FUNDING AND INVESTMENT PROVISIONS**

#### **ENERGY**

**\$4.5 billion for smart-grid related activities.** The Smart Grid appropriation will fund the DOE's Office of Electricity Delivery and Energy Reliability (OE), which was authorized to create several new smart grid programs under the Energy Independence and Security Act of 2007.

The smart grid demonstration projects will test sensing, communication, analysis, and power flow control technologies. DOE can also fund research in demand response, energy storage, cyber security, and reliability, among other areas. Demonstration projects can receive a matching grant for up to 50 percent of eligible costs. In order to be eligible for demonstration funding, projects must use open protocols but are not required to use Internet-based protocols. As an example of the types of projects that could be funded, a collection of existing grant recipients is posted here:

<http://events.energetics.com/rdsi2008/rdsi2008-agenda.html>

\$10 million is specifically allocated to the National Institute of Standards and Technology (NIST) effort to evaluate Smart Grid interoperability standards. As a named participant in this process, NEMA will assist NIST in the development of standards that encompass all grid-connected devices, from generation control to appliance communication. Once the standards have reached a "sufficient consensus," the Federal Energy Regulatory Commission may issue a rulemaking to adopt these standards for regional and wholesale electricity markets.

Funding is also now available for a Smart Grid Investment Matching Fund, which will help manufacturers add smart grid functionality to their devices. Manufacturers of motors, meters, sensors, transmission and distribution equipment, plug in hybrid vehicles, and appliances will be eligible to receive up to fifty percent of costs related to enabling smart grid functionality on their products. The matching percentage was increased from the 20% originally specified in EISA 2007. A "smart grid function" is a defined term, and includes the ability to communicate and act on price or disruption information, sensing capability, and automation. Investments must comply with the NIST standards, once available, in order to be eligible for matching funds.

Finally, \$100 million would be available for worker training, and \$80 million would be available for a study of future demand resources and transmission needs.

Potential Impact: ~\$9b in projects and matching fund-eligible expenses, based on a 50% cost share for all projects.

**\$3.2 billion for Energy Efficiency and Conservation Block Grants.** These grants would be distributed to states, county, and city governments to perform energy efficiency retrofits. The governments could provide energy audits to homes and commercial buildings. Funds could be used to install small scale renewable generation, including solar, wind, fuel cells, and biomass, at government buildings. Entities may also retrofit traffic signals and street lighting with LEDs or another highly efficient technology.

**\$5 billion for the Weatherization Assistance Program.** The funding in the program enables low-income families to permanently reduce their energy bills by making their homes more energy efficient. Weatherization technologies include some energy-efficient appliance, lighting and many others.

**\$2.5 billion for energy efficiency and renewable energy research.** The purpose of this program is for applied research, development, demonstration, and deployment activities. Many activities within this program aim to increase the efficiency of information and communications technology and improve standards.

**\$3.1 billion for the State Energy Program.** This funding provides grants to state energy offices. The state energy programs were set up under ECPA 1975 to encourage energy savings through, among other criteria, lighting efficiency in public buildings, criteria for government procurement of efficient products, promotion of residential efficiency, worker training, and peak load reduction. The state plans must aim for at least a 25 percent efficiency improvement by 2012 based on a 1990 baseline.

**\$2 billion in grant funding for the manufacturing of advanced batteries systems.** These grants will be made available for the manufacturing of advanced batteries and components. The Secretary of Energy shall provide facility funding under to manufacturers of advanced battery systems and vehicle batteries that are produced in the United States, including advanced lithium ion batteries, hybrid electrical systems, component manufacturers, and software designers.

**\$6 billion for new loan guarantees.** This funding is for new loan guarantees aimed at renewable projects, such as wind or solar projects and for electricity transmission projects. Upgrades to transmission systems and reconductoring are eligible for these loans, and the DOE is instructed to take reliability and climate change objectives into account. Projects must commence construction no later than September 30, 2011.

Potential Impact: ~\$60b in total loans, based on a 10% Loan Subsidy Rate

As an example of how the DOE provides subsidized loans, a previous loan guarantee solicitation is provided here: <http://www.lgprogram.energy.gov/Solicitationfinal.pdf>

**\$300 million for the Energy Efficient Appliance Rebate program and the Energy Star Program.** Funding will be used on rebates for residential consumers for the purchase of residential Energy Star products to replace used appliances with more efficient models. Approximately, 15 states have appliance rebate programs currently operating to incentivize the purchase of energy efficient appliances. This program would add federal funds to increase the effectiveness of these programs and to encourage the remaining states to adopt similar programs.

**\$3.25 billion each for the Bonneville Power Authority and the Western Area Power Authority (WAPA) to upgrade their transmission systems.** The borrowing authority for both Federal Power Authorities has been increased to allow for a new round of transmission facilities investment. For WAPA, the connection of renewable sources is an explicit objective of the new funds. The WAPA funds would be repaid through rates charged for use of the new transmission facilities.

### **INFRASTRUCTURE: BUILDING UPGRADES**

**Federal Buildings.** \$4.5 billion for repair of federal buildings to increase energy efficiency. \$500 million for building upgrades at the National Institutes of Health. \$176 million for deferred maintenance at USDA facilities. \$884 million for construction and repair, including energy efficiency upgrades, of Interior Department facilities. \$420 million to Customs and Border Protection for alteration and construction of land ports of entry.

**Department of Defense.** \$4.2 billion to be used to invest in energy efficiency projects and to improve the repair and modernization of Army, Navy, Air Force, Marines, National Guard and other service facilities. \$2.3 billion for Department of Defense Facilities including quality of life and family-friendly military improvement projects such as family housing, hospitals, and child care centers.

**Public Housing.** \$4 billion to be provided to local public housing agencies to begin to address a \$32 billion backlog in capital needs, with emphasis on improving energy efficiency in aging buildings. \$250 million is included for energy retrofitting and green investments in HUD-assisted housing projects.

### **TRANSPORTATION**

**Highway Investments.** \$27.5 billion is included for highway investments, at least half of which must be obligated by states within 120 days; Funds will be apportioned to the states with emphasis on projects that can be started within 21 days and completed within 3 years. Traffic signal upgrades, traffic monitoring systems and dynamic message signs are eligible to be included as part of larger projects or as stand alone projects under this provision.

**Grants to State and Local Agencies.** \$1.5 billion for competitive grants to state and local governments by the Secretary of Transportation. Intelligent transportation systems (ITS) are eligible expenditures for state and local transportation agencies.

### **TAX INCENTIVE AND CREDIT PROVISIONS**

**Extension of Bonus Depreciation.** Businesses are allowed to recover the cost of capital expenditures over time according to a depreciation schedule. Last year, Congress temporarily allowed businesses to recover the costs of capital expenditures made in 2008 faster than the ordinary depreciation schedule would allow by permitting these businesses to immediately write-off fifty percent of the cost of depreciable property (e.g., equipment, tractors, wind turbines, solar panels, and computers) acquired in 2008 for use in the United States. The bill would extend this temporary benefit for capital expenditures incurred in 2009. *This proposal is estimated to cost \$5.074 billion over 10 years.*

**Advanced Energy Investment Credit.** The proposal establishes a new 30% investment tax credit for facilities engaged in the manufacture of advanced energy property. Credits are available only for projects certified by the Secretary of Treasury, in consultation with the Secretary of Energy, through a competitive bidding process. The Secretary of Treasury must establish a certification program no later than 180 days after date of enactment, and may allocate up to \$2.3 billion in credits. Advanced energy property includes technology for the production of renewable energy, energy storage, energy efficient lighting and smart grid technologies, efficient transmission and distribution of electricity, and carbon capture and sequestration. *This proposal is estimated to cost \$1.647 billion over 10 years.*

**Extension of Enhanced Small Business Expensing.** In order to help small businesses quickly recover the cost of certain capital expenses, small business taxpayers may elect to write-off the cost of these expenses in the year of acquisition in lieu of recovering these costs over time through depreciation. Until the end of 2010, small business taxpayers are allowed to write-off up to \$125,000 (indexed for inflation) of capital expenditures subject to a phase-out once capital expenditures exceed \$500,000 (indexed for inflation). Last year, Congress temporarily increased the amount that small businesses could write-off for capital expenditures incurred in 2008 to \$250,000 and increased the phase-out threshold for 2008 to \$800,000. The bill would extend these temporary increases for capital expenditures incurred in 2009. *This proposal is estimated to cost \$41 million over 10 years.*

**5-Year Carryback of Net Operating Losses for Small Businesses.** Under current law, net operating losses (“NOLs”) may be carried back to the two taxable years before the year that the loss arises (the “NOL carryback period”) and carried forward to each of the succeeding twenty taxable years after the year that the loss arises. For 2008, the bill would extend the maximum NOL carryback period from two years to five years for small businesses with gross receipts of \$15 million or less. *This proposal is estimated to cost \$947 million over 10 years.*

**Industrial Development Bonds (IDB).** Under current law, certain manufacturing facilities are eligible for tax exempt bond financing. Section 144(a)(12)(C) specifically limits the definition of a manufacturing facility for the purposes of such financing to facilities that are used in the manufacturing or production of tangible personal property. The proposal amends the definition of manufacturing facility to any facility used in the manufacturing, creation, or production of tangible or intangible property described in section 197(d)(1)(C)(iii). Intangible property is any patent, copyright, formula, process, design, pattern, knowhow, format, or other similar item. The proposal also clarifies which physical components of a manufacturing facility qualify as "ancillary" and therefore are subjected to a 25% limitation in the amount of bond issuance used to build or re-construct those components. *This proposal is estimated to cost \$203 million over ten years.*

**Long-term Extension and Modification of Renewable Energy Production Tax Credit.** The bill would extend the placed-in-service date for wind facilities for three years (through December 31, 2012). The bill would also extend the placed-in-service date for three years (through December 31, 2013) for certain other qualifying facilities: closed-loop biomass; open-loop biomass; geothermal; small irrigation; hydropower; landfill gas; waste-to-energy; and marine renewable facilities. *This proposal is estimated to cost \$13.143 billion over 10 years.*

**Temporary Election to Claim the Investment Tax Credit in Lieu of the Production Tax Credit.** Under current law, facilities that produce electricity from solar facilities are eligible to take a thirty percent (30%) investment tax credit in the year that the facility is placed in service. Facilities that produce electricity from wind, closed-loop biomass, open-loop biomass, geothermal, small irrigation, hydropower, landfill gas, waste-to-energy, and marine renewable facilities are eligible for a production tax credit. The production tax credit is payable over a ten-year period. Because of current market conditions, it is difficult for many renewable projects to find financing due to the uncertain future tax positions of potential investors in these projects. The bill would allow facilities to elect to claim the investment tax credit in lieu of the production tax credit. *This proposal is estimated to cost \$285 million over 10 years.*

**Removal of Dollar Limitations on Certain Energy Credits.** Under current law, businesses are allowed to claim a thirty percent (30%) tax credit for qualified small wind energy property (capped at \$4,000). Individuals are allowed to claim a thirty percent (30%) tax credit for qualified solar water heating property (capped at \$2,000), qualified small wind energy property (capped at \$500 per kilowatt of capacity, up to \$4,000), and qualified geothermal heat pumps (capped at \$2,000). The bill would repeal the individual dollar caps. As a result, each of these properties would be eligible for an uncapped thirty percent (30%) credit. *This proposal is estimated to cost \$872 million over 10 years.*

**Clean Renewable Energy Bonds ("CREBs").** The bill authorizes an additional \$1.6 billion of new clean renewable energy bonds to finance facilities that generate electricity from the following resources: wind; closed-loop biomass; open-loop biomass; geothermal; small irrigation; hydropower; landfill gas; marine renewable; and trash combustion facilities. This \$1.6 billion authorization will be subdivided into thirds: 1/3

will be available for qualifying projects of State/local/tribal governments; 1/3 for qualifying projects of public power providers; and 1/3 for qualifying projects of electric cooperatives. *This proposal is estimated to cost \$578 million over 10 years.*

**Qualified Energy Conservation Bonds.** The bill authorizes an addition \$2.4 billion of qualified energy conservation bonds to finance State, municipal and tribal government programs and initiatives designed to reduce greenhouse gas emissions. The bill would also clarify that qualified energy conservation bonds may be issued to make loans and grants for capital expenditures to implement green community programs. The bill also clarifies that qualified energy conservation bonds may be used for programs in which utilities provide ratepayers with energy-efficient property and recoup the costs of that property over an extended period of time. *This proposal is estimated to cost \$803 million over 10 years.*

**Tax Credits for Energy-Efficient Improvements to Existing Homes.** The bill would extend the tax credits for improvements to energy-efficient existing homes through 2010. Under current law, individuals are allowed a tax credit equal to ten percent (10%) of the amount paid or incurred by the taxpayer for qualified energy efficiency improvements installed during the taxable year. This tax credit is capped at \$50 for any advanced main air circulating fan, \$150 for any qualified natural gas, propane, oil furnace or hot water boiler, and \$300 for any item of energy-efficient building property. For 2009 and 2010, the bill would increase the amount of the tax credit to thirty percent (30%) of the amount paid or incurred by the taxpayer for qualified energy efficiency improvements during the taxable year. The bill would also eliminate the property-by-property dollar caps on this tax credit and provide an aggregate \$1,500 cap on all property qualifying for the credit. The bill would update the energy-efficiency standards of the property qualifying for the credit. *This proposal is estimated to cost \$2.034 billion over 10 years.*

## **TRADE**

**Expansion of Trade Adjustment Assistance (TAA) Programs:** The bill significantly expands current Trade Adjustment Assistance Programs. Among other things, it extends TAA to trade-affected services sector workers and workers affected by offshoring or outsourcing to all countries, including China or India. It increases training funds available to states by 160 percent to \$575 million per fiscal year, creates a new TAA program for trade-affected communities, allows for automatic TAA eligibility for workers suffering from import surges and unfair trade, makes training, healthcare and reemployment TAA benefits more accessible and flexible, and improves the TAA for Firms and TAA for Farmers programs. It reauthorizes all TAA programs (which expired December 31, 2007) through December 31, 2010. *This proposal is estimated to cost \$1.6 billion.*

**Buy American Requirements.** This provision specifies that none of the funds appropriated by the legislation may be used for an infrastructure improvement project unless all of the iron, steel and manufactured goods used in the project are produced in the U.S. Members should be aware that this does not mean that all of the content of a manufactured good must be of U.S. origin. A waiver provision is included that allows

federal agency heads to waive these Buy American requirements for a specific case or set of cases if it would be inconsistent with the public interest, sufficient quantities of the materials or goods in question are not available or it would raise the cost of the project by 25 percent. An explanatory statement accompanying the Conference Report clarifies that 1) the President still retains his authority under the Trade Agreements Act of 1979 to issue waivers to ensure that the United States complies with the World Trade Organization Government Procurement Agreement and other trade agreement obligations and 2) that the new requirements will not apply to least developed countries that are not party to those agreements.

Current Federal procurement regulations implement U.S. international trade commitments by making signatories to those agreements, which are primarily developed countries, eligible to supply products and materials for construction projects and supply contracts that have total costs that exceed certain value thresholds.

## **HEALTHCARE**

**Funding for Health Information Technology (IT) through Medicare and Medicaid Incentives.** This bill promotes the use of health information technology (health IT), such as electronic health records, by: requiring the government to take a leadership role to develop standards by 2010 that allow for the nationwide electronic exchange and use of health information to improve quality and coordination of care; investing \$19 billion in health information technology infrastructure and Medicare and Medicaid incentives to encourage doctors, hospitals, and other providers to use health IT to electronically exchange patients' health information; and strengthening Federal privacy and security law to protect identifiable health information from misuse as the health care sector increases use of health IT. If the bill is enacted, approximately 90% of doctors and 70% of hospitals would adopt and use certified electronic health records within the next decade, according to the Congressional Budget Office. In turn, that would save the government more than \$12 billion (through reduced spending on Medicare, Medicaid, and other programs) and generate additional savings throughout the health sector through improvements in quality of care, care coordination, and reductions in medical errors and duplicative care. *The estimated net cost of this provision is \$17.2 billion; in addition, \$2 billion for affiliated grants and loans is available through discretionary funding.*

## **HOMELAND SECURITY**

**Airport Security.** \$1 billion to the Transportation Security Administration (TSA) for procurement and installation of airport baggage and checkpoint security explosives detection systems. This provides additional support to TSA's current activity regarding checked baggage, in which NEMA is very involved through the writing of an interoperability and communications standard for checked baggage security screening and imaging equipment.