

Overview of Mechanical Insulation Installation Incentive Act of 2011 (H.R. 2866/S. 1526)

Background: Mechanical insulation is a proven energy efficiency and emission reduction technology that will improve personnel safety and reduce costs while also creating tens of thousands of green jobs. Unfortunately, the benefits of mechanical insulation are often overlooked by all pipeline stakeholders—mechanical engineers, facility owners and managers, financial officers, etc.—during new construction, retrofitting, and maintenance opportunities. The benefits of this technology are further reduced because minimum requirements in new construction or retrofit applications are seldom exceeded and maintenance is not accomplished in a timely and proper manner.

There are no existing tax incentives tailored for mechanical insulation. However, many tax incentives have been developed for envelope insulation (walls and roofing—the envelope of a building), lighting, residential weatherization, solar panels, and a host of other energy efficiency options.

Defining Mechanical Insulation: Mechanical insulation is defined to encompass all thermal, acoustical, and personnel safety requirements for mechanical piping and equipment and Heating, Ventilating & Air Conditioning (HVAC) applications. Mechanical insulation can be used in a variety of commercial buildings and industrial and manufacturing facilities, such as power plants, refineries, hospitals, schools, universities, government and office buildings, high-rise multi-family dwellings, hotels and motels, retail and wholesale establishments, and similar types of commercial and industrial facilities.

Objective: The Mechanical Insulation Installation Incentive Act (H.R. 2866/S. 1526) would create incentives that encourage commercial and industrial entities to go beyond current minimum requirements, as defined by the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE), in new construction or retrofit projects and execute timely maintenance of mechanical insulation systems. Tax incentives for the commercial and industrial sectors will create jobs, boost energy efficiency, reduce carbon emissions, reduce our country's dependence on foreign energy sources, protect our environment, and stimulate our economy. (Similar bills, H.R. 4296 and S. 3716, were introduced in the 111th Congress.)

Methodology:

New Construction and Retrofit Projects: Educate users about the minimum requirements established by ASHRAE 90.1–2007 and provide meaningful tax incentives to go beyond those minimums. The legislation would allow businesses to increase or accelerate the depreciation deduction for the incremental insulation cost based on the percentage of energy saved above the minimum ASHRAE requirements, up to a maximum of 30%. (Capital project costs are normally depreciated over a prescribed period. The depreciation is considered a deduction for operating and tax purposes. H.R. 2866/S. 1526 provides for an incremental portion of the increased cost for going beyond the minimums to be accelerated as a depreciation expense.)

Maintenance: Educate users about the benefits of timely and proper maintenance of mechanical insulation systems and provide meaningful financial incentives to implement and maintain a mechanical insulation maintenance program. The tax legislation would allow businesses to increase their maintenance deductible expense up to a maximum of 30% of the energy saved in comparison to the heat loss from the insulation system that was originally installed versus no insulation value. The tax incentive would apply to the installed insulation system cost. (The cost of repairing or replacing insulation in the normal course of business is considered a deduction for operating and tax purposes. H.R. 2866/S. 1526 provides an additional deduction for tax purposes.)

Energy Savings Determination and Verification: The respective energy savings will need to be verified under various guidelines as established by the applicable departments, e.g., IRS, DOE. Proven software programs, such as the 3E Plus® program approved by the DOE, are available to analyze and quantify the energy savings with mechanical insulation; Certified Insulation Energy Appraisers are available to verify the savings; third-party publications are available to provide cost guidance; and qualified labor is trained and ready to begin the work. This unique combination yields immediate opportunities in a diverse geographical area across multiple industries.

Savings Summary: Based upon implementation over a five-year period and coinciding with the score of a previous bill (H.R. 4296), H.R. 2866/S. 1526 would yield the following estimated benefits for new construction and retrofit applications in the commercial and industrial market segments and certain maintenance opportunities in the industrial and HVAC market segments.

Energy Savings: \$35 billion – Over 2 Quadrillion Btu
CO₂ Emission Reduction: 170 Million Metric Tons
Jobs Created or Preserved Annually: 25,000

This analysis does not represent the total energy savings potential in the industrial or commercial industry maintenance arenas or new construction or retrofit applications that would be available with increased focus on and enforcement of minimum requirements.

How H.R. 2866/S. 1526 Works:

H.R. 2866/S. 1526 provides a facility owner an incentive to increase the use of or maintenance of mechanical insulation by lowering his/her tax expense in the fiscal year in which the mechanical insulation was put in service or maintenance completed. The net result: facility owners are provided a tax incentive to immediately create jobs to stimulate the economy while reducing short- and long-term energy consumption and carbon emissions.

Mechanical insulation is a proven technology. It does not require research and development or engineering or design processes. Materials and skilled craft personnel are available and ready to be deployed. The cost of implementing H.R. 2866/S. 1526 to Federal Agencies, other than normal administrative tasks, is basically nil. Industry incurs the cost of construction or maintenance and is rewarded by a tax incentive after completing the work.

Other Benefits:

- It is estimated that this initiative could potentially over time support the development of 89,000-plus sustainable jobs for skilled craft personnel to install and maintain the mechanical insulation systems. Additional technical/engineering, manufacturing, sales, administrative, and supporting craft jobs would also be created.
- The incentive will motivate facility owners by increasing an already attractive return on investment.
- The energy savings and emission reductions realized over the initial five-year incentivized implementation period would continue to substantially increase over a 10- or 20-year period, yielding an even more impressive energy savings and return on investment.
- If the property owner is not subject to U.S. income tax, the tax deduction would transfer to the primary contractor for the property, thus providing an incentive for energy efficiency regardless of the property owner tax status.

Support:

This initiative is supported by the National Insulation Association (NIA) and International Association of Heat and Frost Insulators and Allied Workers (International). They created an unprecedented alliance in 2009 to work together to promote the benefits of mechanical insulation and educate industry leaders. NIA and the International are working in a public-private partnership with the DOE to implement a public education and awareness campaign and develop online tools to assist in quantifying the benefits of mechanical insulation as well as e-learning modules.

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