

Testimony on Energy Tax Incentives and the Green Job Economy

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The Polyisocyanurate Insulation Manufacturers Association (PIMA) is pleased to submit these comments on the topic of energy tax incentives and employment within the “green economy.”

PIMA is the trade association for manufacturers of rigid polyiso foam insulation, a product that is used in over 60 percent of new commercial roof construction, in 30 percent of new residential construction that uses insulated sheathing, and in most re-insulation of existing commercial building roofs. PIMA members have a nationwide presence with 25 polyiso manufacturing facilities in 16 states. PIMA and its members are strong supporters of federal programs and policies that promote cost-effective improvements in the energy efficiency of buildings, both residential and commercial.

Commercial buildings may provide Congress with the best opportunity to implement policies that address both energy efficiency and job growth. Commercial buildings are large energy users — representing about 18% of the total energy used in this country — but there are significant opportunities for reducing this energy use with policies that encourage building energy-efficiency retrofits. In addition, unemployment in the construction industry now exceeds 27% (not seasonally adjusted) and many observers believe economic activity in this sector will decline even further, particularly for commercial building construction and renovations. As a result, policies that encourage energy efficiency retrofits in commercial buildings would impact job growth in a sector of our economy that has been hardest hit by the current recession.

The significant energy waste caused by under-insulated roofs on older buildings is an area that is largely ignored by current federal energy incentives, which have focused primarily on new building construction. However, in the case of roofs, the greatest potential for rapid improvement in energy efficiency is through retrofits, not new construction. For every low-slope roof that is placed on a new

building there are three old, low-slope roofs where the waterproof membrane is being replaced and where it would be economical to increase the insulation levels at the same time. Most existing roofs were built either before building energy codes were in place or were built under requirements of an outdated standard for roof insulation that had been in place for almost 20 years (*i.e.*, ASHRAE 90.1-1989). Currently, when a building owner is required to replace the membrane that is covering and protecting the roof's insulation and building from the weather, the owner typically does not increase the insulation or adds only a small amount when the new membrane is installed.

In addition to the lack of federal incentives, the current tax code actually discourages timely roof replacement by requiring commercial roofs to be depreciated over 39 years, instead of a time period that better reflects the actual average life span of roofs (*i.e.*, 17 years). Because of this depreciation schedule, building owners routinely try to extend the life of their roofs for as long as possible through patching and temporary repairs (which are deductible business expenses) until those repairs become too expensive compared to the cost of a full roof replacement. This situation has been compounded by the current economic downturn.

The simple and cost-effective measure of increasing roof insulation when roof membranes are replaced on low-slope roofs would, on average, reduce building energy use by 6.5% in one story buildings (excluding warehouses) and one and two story school buildings. One and two story buildings represent 65% of the commercial floor space in this country. Within this building category, replacing about 5% of the roof space each year (*i.e.*, 1.5 billion ft²) with high energy-efficient roof systems insulated at levels that are more stringent than current building code requirements would result in an amount of CO₂ savings after 10 years that is equivalent to the annual emissions of roughly 27 coal fired power plants or 105 million metric tons of CO₂. Over ten years, the energy savings would be 648 trillion Btu (0.65 quads) for site energy or 1,464 trillion Btu (1.46 quads) for source energy and the energy cost savings would be \$12.2 billion. ^{1/}

PIMA has been a strong supporter of two proposed tax incentives that would improve the energy efficiency of our commercial buildings and put people back to work:

- **H.R. 426, the Green Roofing Energy Efficiency Tax Act**, introduced by Congressmen Bill Pascrell and Wally Herger. This legislation would shorten the depreciation period for commercial roofs from 39 years to 20 years to

^{1/} Energy and Environmental Impact Reduction Opportunities for Existing Buildings with Low-Slope Roofs, Bayer MaterialScience (Jerry Phelan, George Pavlovich, & Eric Ma), April 2009, pg 59.

better reflect the average life span of a commercial, low-slope roof, which is 17 years.

- **H.R. 2615, the Energy-Efficient Commercial Roofs Act of 2009**, introduced by Congressmen John Larson and Dean Heller. This legislation would provide a 30% tax credit for installation of energy efficient roofs on commercial buildings.

One or both bills have the support of the following organizations: the American Rental Association (ARA); American Chemistry Council (ACC); the Alliance to Save Energy (ASE); the Asphalt Roofing Manufacturers Association (ARMA); American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE); the Building Owners and Managers Association International (BOMA); the Center for Environmental Innovation in Roofing (CEIR); the International Council of Shopping Centers (ICSC); the Joint Roofing Industry Labor and Management Committee, the National Association of Convenience Stores (NACS); the National Roofing Contractors Association (NRCA); the Polyisocyanurate Insulation Manufacturers Association (PIMA); the Spray Polyurethane Foam Alliance; and the United Union of Roofers, Waterproofers and Allied Workers

Joint H.R. 426/H.R 2615 Proposal

It is PIMA’s understanding that the sponsors of these two bills are working together to take the best features of both bills and develop a new proposal that would apply the shorter depreciation period (20 years) to commercial roofs retrofitted to meet the stringent energy efficiency standard required under H.R. 2615. The result of this collaboration will be a focused incentive that retains most of the energy and job benefits of H.R. 426 and H.R. 2615, but will have a much smaller effect on Treasury revenues.

The new proposal would provide a 20 year depreciation period (instead of 39 years) for commercial roofs that meet prescriptive R-value (thermal resistance) standards that are significantly more stringent than what is currently required under most state and local building energy codes. Most state and local building codes currently require low-slope roofs to have R-15. Under this proposal, the required R-values would range from R-20 in the far south to R-35 in the far north. Buildings in Baltimore (climate zone 4), for instance, would be required to have R-25.

Energy-Efficient Commercial Roof Retrofit R-Values for Insulation Installed Entirely Above Deck (continues insulation)

Climate Zones ASHRAE or IECC climate zones	1	2	3	4	5	6	7	8
R-Values	20	25	25	25	25	30	35	35

This incentive would apply to low-slope roofs where the insulation is installed entirely above deck, a category that covers approximately 62% of the existing commercial building floor space. For purposes of a jobs bill, these are the types of roofs that are most able to increase their insulation levels and respond quickly to this type of incentive. Also, the bill would only apply to roof upgrades made during 2010 and 2011.

By accelerating demand for energy-efficient roof systems, this legislation will in one year:

- Create 40,000 new “green” jobs among roofing manufacturers and contractors; [2/](#)
- Add \$1 billion of taxable annual revenue from the roofing industry; [3/](#)
- Reduce U.S. energy consumption by 11.4 trillion Btu and save small businesses and consumers \$86 million in energy costs; [4/](#)
- Reduce U.S. carbon emissions by approximately 800,000 million metric tons (equal to emissions from 153,000 cars). [5/](#)

We hope the committee will support this important proposal, which would significantly enhance incentives for building owners to retrofit old commercial roofs with energy efficient roofing systems.

We appreciate the opportunity to submit this testimony for the record.

[2/](#) Comprehensive Nonresidential Building Analysis to Estimate the Current Reality of Roofing Longevity. Ducker Worldwide, September 2003, pg. 3.

[3/](#) Ducker Worldwide, pg. 3.

[4/](#) Bayer MaterialScience, pg. 59.

[5/](#) Bayer MaterialScience, pg. 59.