



National Institute of  
BUILDING SCIENCES

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The Honorable Nancy Pelosi  
United States House of Representatives  
Washington DC 20515

Dear Madame Speaker:

The National Institute of Building Sciences (Institute) encourages Congress to include in any stimulus packages funded efforts to reduce energy usage by existing buildings. The Energy Information Administration (EIA 2007) reports that U.S. buildings consume 40% of the total energy used in the Nation and that building heating and cooling accounts for 32% of this amount. Existing buildings comprise the largest segment of the built environment; therefore, addressing the current problem will not only result in the immediate employment of thousands of workers across America but also will significantly reduce the Nation's peak demand for energy and provide building and home owners with sustained reductions in energy costs.

As new stimulus packages are considered, the Institute's Building Enclosure Technology and Environmental Council (BETEC) believes it to be in the National interest that you to consider the following proposal addressing all three crises facing the global community -- climate change, energy usage, and the financial downturn. Building science research and comparison of real energy bills with calculated potential performance data show that our existing building stock of residential and commercial buildings includes a huge number of highly inefficient buildings that consume enormous amounts of energy. A stimulus package that encourages home owners and commercial building owners to improve the thermal envelope of the existing building stock will:

- Increase manufacturing sector jobs resulting from an increased demand for products and materials designed to improve thermal resistance and the efficiency of heating and cooling systems.
- Provide building owners with reduced energy bills for the life of the building and increase worker productivity.
- Generate increased employment opportunities for local builders, contractors, architects, engineers, plumbers, window installers, HVAC contractors, electrical contractors, and the whole range of industries serving the building community.
- Reduce energy consumption and, consequently, building operating costs and permitting owners to redirect those savings into such things as increased manufacturing operations, retooling, and expanded product lines.
- Reduce the forecasted need for the construction of new power generating plants for increased demands during peak energy periods.

The current global financial situation provides the Nation with both the stimulus and the opportunity to address energy consumption in a way that will move us toward an energy independent future. The Institute and BETEC urge the public, members of Congress, and the incoming Administration to enact and implement legislation that will provide existing owners with the incentive to employ proven energy-saving technologies (such as additional insulation, air infiltration control, energy-efficient windows and door, improved HVAC systems). Through the conservation of energy we can provide upwards of 30% energy reduction.

BETEC August 31, 2008 report, *ENERGY EFFICIENCY AND DURABILITY OF BUILDINGS AT THE CROSSROADS*, outlines the findings from the first Building Enclosure Science and Technology (BEST 1) conference hosted by the Building Enclosure Council and AIA Minnesota in June 2008. This report notes:

Society needs to build on the strength of existing knowledge. Building enclosures – their energy efficiency, durability and the indoor environment – are today at a crossroads. On one hand, a large amount of knowledge and expertise is available; on the other hand, old approaches are not as valid as they once were. It is time to create a new vision because the stakes are high. We need this new vision to improve our energy efficiency, maintain energy security, and sustain the economy. Savings can be put back to more productive uses even though it will take time to realize full return on investment. Yet, this vision cannot be achieved without a mobilization and education of our society. Unless major public/private initiatives are developed, the strategy based on retrofitting existing buildings will not work.

BETEC and the National Institute of Building Sciences believe the lessons learned from the post-embargo programs of the 1970s are ample evidence that if we employ current knowledge on a massive scale as part of our Nation's overall plan for energy security and energy independence, we can become more energy independent and assist in economic recovery. The wealth of building energy knowledge in our National Laboratories combined with our strong building science community can make these premises a reality. We strongly encourage you to plug the energy leaks in our existing buildings as a necessary first step in any economic stimulus package being considered. The impact will be immediate and permanent. The Institute stands ready to assist Congress in any way it can in this effort.

Sincerely,

Henry Green, Hon. AIA  
President