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Mechanical Insulation

Saving Energy, Protecting the Environment, and Creating Jobs

Commercial and Industrial Market Segments

State Action Plan

Energy Efficiency – Conservation & Climate Change Initiatives

(The cost data included herein is being provided only as a guide - NIA or the International makes no representation as to the scope of the estimates)

Educate Users – Assess the Opportunity – Allocate Funding

Educate:

1. Awareness and Educational Program:

Provide awareness and educational forums and programs related to all aspects (design, product selection, installation, maintenance, benefits and value) of mechanical insulation and of employing different performance and financial modeling and higher standards related to the design, installation and maintenance of mechanical insulation systems.

Audiences

- a. Governmental agencies and private industry
- b. Mechanical engineering, architectural, energy and environmental academia
- c. Building trades and technical schools
- d. Middle and high school engineering, management, energy/environmental classes

This program would be joint program between industry and the respective State agencies over a two-three year period.

Potential cost - \$150,000 - \$250,000

2. Review Current State Specifications:

Examine state, and or local, governmental specifications—standards for

- a. Mechanical insulation for piping to provide thermal performance/energy efficiency that exceeds ASHRAE 90.1 2004 recommendations by a minimum of 25% energy efficiency across all ranges of applicable service temperatures.

- b. Heating, Ventilating, and Air Conditioning (HVAC) duct insulation thermal performance—energy efficiency to provide for a minimum “R Value” of 4.2 on all HVAC applications and 5.6 on applications in unconditioned spaces.
- c. Determine where mechanical insulation can contribute to United States Green Building Council “LEED” certification or similar type certification program.

In addition to the energy efficiency review, the specifications could and should be reviewed from a condensation and mold prevention, indoor air quality and life cycle cost perspective.

Industry would provide a listing of qualified companies or consultants that could accomplish this work.

Potential total cost - \$100,000 - \$200,000

3. Provide Ongoing Reference, Support and Resource Information:

Industry would work with the various State agencies to provide web based linkage and resource information for all aspects of mechanical insulation; system design, product selection, maintenance procedures, energy appraisers, contractors etc.

Potential total cost - \$50,000 - \$75,000

Summary: Educational and Awareness Program would span a 1 -2 year period. Program development and execution would be shared by industry and the various State agencies. Total campaign estimated cost, \$300,000 - \$525,000.

Assess – Quantify the Opportunity:

Conduct a series of mechanical insulation systems and energy assessments to qualify and quantify the opportunities available to the State. The assessments shall focus upon, but not necessarily be restricted to, energy efficiency – conservation, emission reduction – environmental footprint, condensation and mold prevention, safety and indoor air quality.

The assessments shall focus upon:

1. State government facilities (Office buildings, prisons, military facilities, etc)
2. School (K-12)
3. Colleges, universities and similar type facilities
4. Hospitals

Industry will work with the State in providing a listing of qualified candidates to perform the assessments and in the initial assessment scope development.

Potential cost for the assessments will vary depending upon the methodology employed in the assessment process. Such as studying representative facilities from which to develop a model and to draw a conclusion verses completing assessments on virtually all facilities. The later may not be cost effective or practical from a time perspective.

Potential cost range: \$250,000 to \$1,000,000

Allocate Resources:

1. Allocate resources to implement and execute the Educational – Awareness and Assessment Campaigns.

2. Based upon the results of the Assessment Campaign allocate resources to implement the repair, replacement, or upgrade of mechanical insulation in governmental facilities identified in the assessment process – Suggested allocation range: 2%–3% of Federal Stimulus Dollars
3. Develop a cost sharing incentive program, grants, or similar methods for private industry to implement the repair, replacement or upgrade of mechanical insulation in a similar manner as the State facilities – Suggested allocation range 4%–5% of Federal Stimulus Dollars

Federal stimulus monies have been made available to create “shovel ready” jobs to stimulate the economy and make our country energy independent and create climate change. Mechanical insulation is a proven technology that can be implemented in weeks versus years and addresses each of those objectives. Considering the “use it or lose it” provision of the stimulus package to identify and implement initiatives and that mechanical insulation typically provides a double digit return on investment, mechanical insulation is an opportunity that should be implemented sooner rather than later whether with the use of federal stimulus monies or other budgetary processes.

Contact the International Association of Heat and Frost Insulators and Allied Workers for more information and resources on the many energy efficiency – conservation, greenhouse gas emissions, and job creation opportunities in maintenance, retrofit and new construction with mechanical insulation in the commercial and industrial market segments.

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