

Mechanical Insulation Maintenance and Upgrade:

Here's What You Need to Know

Based on data from more than 700 industrial energy assessments, the National Insulation Association estimates that implementing a comprehensive mechanical insulation maintenance and upgrade program in the commercial and industrial market segments would lead to:

Energy savings of **\$4.8 billion** per year

CO₂ reductions of **43 million** metric tons per year

Generation of **89,000** jobs

What do these numbers mean?

Energy savings of **\$4.8 billion** per year equates to:

- 45 billion kWh of electricity, enough to power 4.2 million households (4% of U.S. households) for a year and equivalent to annual output from 10,300 wind turbines
- 82 million barrels of oil, enough to fill about 41 supertankers
- 19 million tons of coal, enough to fill 190,000 railcars
- 480,000,000,000,000 Btus (0.48 quadrillion Btus) of primary energy—about 0.5% of total U.S. annual consumption or 1.83 days of energy consumption for the entire United States

43 million metric tons of CO₂ reduction per year equates to:

- Adding 1.9 billion mature trees (4.3 million acres of new forest, an area the size of Connecticut and Delaware combined)
- Removing 7.9 million cars from the roads, about 3% of 254 million cars registered in the United States
- Shutting down 11 coal-fired power plants, 1.6% of U.S. installed coal-fired capacity
- Installing 730 million compact fluorescent light bulbs, equivalent to 2.3 light bulbs for every man, woman, and child in the United States

Generation of over 89,000 jobs:

Mechanical insulation maintenance is an excellent example of “shovel-ready” green job opportunities for stimulus spending. It can put tens of thousands of people to work and retain existing jobs while contributing to the competitiveness of U.S. manufacturing, reducing our country’s dependence on foreign energy sources, improving our environment, and increasing profitability of private and public businesses and facilities. Equally important, the majority of insulation contractors who install and maintain mechanical insulation systems represent independent small businesses in every state. 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 now and ready to be deployed.

Just one worker for a single day can save:

- Insulating 45 linear feet of 8-in. high-pressure steam line equates to about **\$13,600** per year in energy savings, equivalent to removing 13 cars per year from the highways. Assuming the facility exists for 20 more years, the total energy savings from that one workday would be **\$272,000**.
- Insulating 70 linear feet of 3-in. low pressure steam line equates to over **\$4,000** per year in energy savings, reducing CO₂ emissions as much as removing 3.7 cars from the highways. Assuming the facility exists for 20 more years, the total energy savings from that one workday would be **\$80,000**.



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