

# Add An Inch – Cut the Nation’s Oil Dependence and Reduce Energy Costs

## PIMA Technical Bulletin #111

*Polyiso insulation presents many superior features that designers need when specifying insulation for use in roof systems:*

- *Quality Mark<sup>SM</sup> Certified LTRR-values*
- *Highest thermal performance available*
- *Excellent fire test performance*
- *Dimensional stability*
- *Superior compressive strength*
- *Moisture resistance*
- *Extensive building code approvals*
- *Zero ozone depletion potential*
- *Negligible global warming potential*
- *Cost effective*
- *Preferred insurance ratings*
- *Recycled content*
- *Compatible with most roofing system*

*PIMA and polyiso products have received many environmental awards. These include an honorable mention in the Sustainable Buildings Industry Council’s (SBIC) 2003 “Best Practice” Sustainability Awards Program and the U.S. EPA’s Climate Protection Award for the association’s leadership in promoting energy efficiency and climate protection. The EPA also awarded PIMA and its members the Stratospheric Ozone Protection Award for “leadership in CFC phase-out in polyiso insulation and in recognition of exceptional contributions to global environmental protection.”*



In today’s volatile energy market, polyiso insulation can help save hundreds of millions of barrels of oil and tens of billions of dollars in energy costs, and reduce emissions. A new study by the Energy Service Provider Group (ESPG) proves the point.

The study looked at the amount of polyiso insulation installed across the U.S. on low slope roofs between 1999 and 2003 – 22.8 billion board feet. That insulation alone **saved 217 million barrels of oil, and \$8.7 billion in energy costs.**

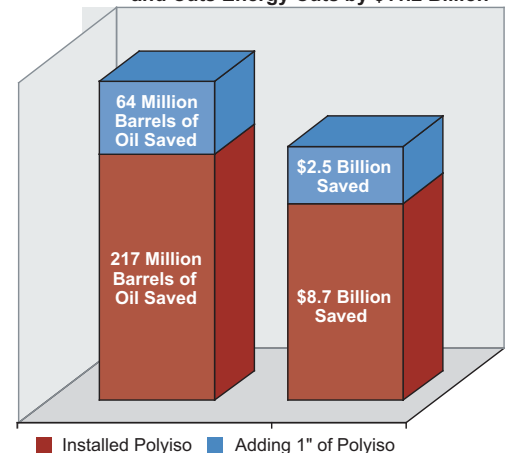
The study also looked at the impact that an extra inch of polyiso insulation would have had and found potential savings of:

- **64 million barrels of oil, and**
- **\$2.5 billion in energy costs.**

This brings total potential savings to:

- **281 millions barrels of oil, and**
- **\$11.2 billion in energy costs.**

**Polyiso Saves 281 Million Barrels of Oil and Cuts Energy Costs by \$11.2 Billion**



Buildings produce more than a third of the Nation’s emissions that contribute to global warming. Because polyiso reduces the amount of oil consumed, millions of tons of pollutants are not released into the environment. The extra inch of polyiso could prevent the emissions of:

- **141 million tons of carbon dioxide,**
- **325,000 tons of sulphur dioxide, and**
- **122,000 tons of nitrogen oxides.**

## The Study

ESPG studied low-slope buildings in nine U.S. cities and Puerto Rico to determine the energy savings. Calculations utilized a degree day methodology and were based on each Division’s local heating degree days (HDD65), cooling degree days (CDD50), 99.6 percent heating design temperature, and 1 percent cooling design temperature as published in ASHRAE Standard 90.1.

Heating systems were assumed to have a 70 percent seasonal efficiency and cooling systems were recorded with a 10 SEER. Electrical energy saved

**22.8 billion board feet saved 217 million barrels of oil, and \$8.7 billion in energy costs.**

was converted to the equivalent barrels of oil required for generation. The number of barrels of oil saved was calculated by using the yearly average price per barrel of oil.

### **PIMA**

*As an award-winning association, PIMA has been a leader of programs and supporter of legislation, playing an important role in a variety of public initiatives including:*

- *Education: PIMA publishes technical bulletins and other educational materials to increase the building industry's understanding of product benefits.*
- *Product Development: PIMA, in partnership with other organizations, has performed joint research and development of standards and product improvements.*
- *Recognized Leadership: PIMA is both a national and international advocate of energy efficiency programs. PIMA members and staff serve in leadership roles in key energy efficiency advocacy organizations, and PIMA staff have served in advisory roles to key governmental agencies on issues ranging from ozone depletion to climate change.*
- *Legislative Support: PIMA has been a tireless advocate for enhanced state energy codes and other government policies that motivate building owners and contractors to heighten building envelope performance and has strongly supported legislative policy to encourage federal tax incentives for energy efficient commercial buildings.*
- *Partnering for a sustainable future: PIMA works with representatives from all sectors of the building industry and a variety of trade organizations and environmental advocates to support policies that promote safe, cost-effective, sustainable, and energy-efficient construction.*

For more information visit [www.polyiso.org](http://www.polyiso.org) or [www.pima.org](http://www.pima.org).



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