

**NAIMA**

NORTH AMERICAN INSULATION  
MANUFACTURERS ASSOCIATION



**Studies Show  
That Increasing  
Insulation in  
Your Home Lowers  
Air Pollution and  
Improves Public  
Health**

**H A R V A R D   S T U D Y   F I N D I N G S**

# Harvard Studies Link Decreased Energy Consumption to Improved Public Health

Two recent Harvard Studies showed that upgrading insulation levels in new and existing homes to the 2000 IECC\* will result in fewer deaths and reduced instances of respiratory ailments and other diseases associated with air pollution. These studies mark an important step in environmental health by definitively linking decreased energy consumption to reduced pollution and improved public health.

## EXISTING HOMES STUDY

Harvard found that nearly 65% of U.S. homes (45 million total) have insulation levels that are below the 2000 IECC levels, many of them significantly below. If these homes were insulated properly:

- **More than 800 trillion BTUs could be saved each year.**

The energy saved would significantly reduce pollution which is directly responsible for health problems and even death. Harvard found that:

- **More than 240 premature deaths associated with pollution could be prevented through better insulation levels.**
- **6,500 fewer asthma attacks would occur.**
- **The number of restricted activity days would be significantly reduced each year for people with respiratory ailments like allergies and asthma.**

# NEW HOMES STUDY

Each year, more than 1.2M new homes are built in the US. We have the power now to insulate these homes properly to protect our health. Harvard showed that by insulating these homes to even the modest 2000 IECC levels would, over ten years:

- **Save 300 billion BTUs.**

The reduction in pollution caused by even the newest homes on the market would, over ten years:

- **Save 60 lives.**
- **Protect people from 2,000 more asthma attacks.**

\* The 2000 IECC is a public/private sector consensus standard which outlines a minimum energy code for new homes. The U.S. Department of Energy (DOE) and others recommend even higher R-values for insulation. To find the DOE recommended R-values for a specific region, visit [www.SimpleInsulate.com](http://www.SimpleInsulate.com). While the studies used the 2000 IECC as a guide, a 2003 version of the IECC is in use, and this code may continue to increase overtime, generating additional benefits.

**Properly insulated homes would significantly reduce release of these pollutants into the atmosphere:**

**SULFUR OXIDE**

**NITROUS OXIDE**

**FINE PARTICULATE MATTER**



**Properly insulated new homes would  
save 300 billion BTUs each year.**

**This equals 28 supertankers  
of crude oil and 300 billion  
cubic feet of natural gas.**



# **Approximately 45 Million Homes in the U.S. Lack Proper Levels of Insulation**

In the U.S. there are an estimated 45 million homes that lack the proper levels of insulation according to today's energy standards. An additional 1.2M new single-family homes are built each year, but varying energy codes in each region mean that many of these will not be insulated to the internationally accepted minimum standard—the International Energy Conservation Code (IECC).

# How Insulation Improves Public Health

With every BTU of energy produced, harmful gases such as Nitrous Oxide ( $\text{NO}_x$ ) and Sulfur Oxide ( $\text{SO}_x$ ) are released into the air, causing pollution in our communities. A well-insulated home, particularly one that is insulated with fiber glass or rock and slag wool insulation, reduces the amount of energy required to maintain a comfortable living/working environment. Reducing energy consumption means power plants burn less fossil fuel to produce the energy and the result is a reduction in polluting gases emitted into our communities. Each BTU saved through energy efficiency technologies such as insulation means cleaner air for you and your family to breathe.



## Why Insulate Today

The projected benefits found in the Harvard studies show clearly why Americans should upgrade their insulation today. Each day that passes with under-insulated homes makes our air less clean. Every home that comes up to the current standard means less pollution and healthier lives. Everyone can make a difference in his or her community. With a payback of about six years, the cost is minimal and the benefits are significant. With these studies, it is clear that increased levels of insulation not only make your family more comfortable every day, it will make them healthier as well.

*“It is clear that improving energy efficiency not only helps us as a nation, but also has an immediate, positive impact on us, as individuals, and our families.”* — Dr. Jack Spengler, Akira Yamaguchi Professor of Environmental Health and Human Habitation, Department of Environmental Health, Harvard University School of Public Health.

For more information or copies of the studies published separately in *Risk Analysis* and *Environmental Health*, please contact NAIMA.

## About NAIMA

NAIMA is the association for North American manufacturers of fiber glass, rock wool and slag wool insulation products. Its role is to promote energy efficiency and environmental preservation through the use of fiber glass, rock wool and slag wool insulation and to encourage the safe production and use of these materials.

### NAIMA Members

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