



NIA | National Insulation Association
THE VOICE OF THE INSULATION INDUSTRY™

Mechanical insulation reduces energy consumption and costs

Most of us know Tesla sells EVs. I recently read what may be new news to most readers: Tesla earned \$595 million from the sale of regulatory credits in the first quarter of 2025. Selling these credits has generated Tesla a substantial amount of revenue totaling over \$8.4 billion since the beginning of 2021. These credits are primarily used by other automakers that are unable to meet emissions standards in the U.S., Europe and China. They purchase these credits from Tesla, which is able to generate them due to exceeding emissions requirements.

What caught my eye was one of the remarkable facts Tesla stated for this past Earth Day 2025; in 2024, thanks to Tesla owners, Tesla avoided releasing over 30 million mt of CO₂ equivalent into Earth's atmosphere.

Our mechanical insulation industry has a similar sustainability goal — however, ours is much simpler: we encourage the use of less energy through conservation. A mt of CO₂ not generated because of properly insulated

mechanical equipment is a mt of CO₂ that is not in the sky, akin to how a penny saved is a penny earned. The mechanical insulation industry often refers to our product as the “forgotten technology.” Mechanical insulation is a simple, proven technology that works by trapping air, though it is often overlooked. It is a marvel when one considers the economics.

Recently, I read a Wall Street Journal article called, “How Can We Remove Carbon from the Air?” It was an excellent read on the pros and cons of various CO₂ reduction efforts. What the Wall Street Journal article did not cover was using insulation to reduce CO₂ emissions by reducing demand through energy conservation. Mechanical insulation reduces energy used and therefore prevents more CO₂ from entering the atmosphere.

As the world embraces new or reinvigorated energy sources, there is one form of energy that is the clear winner as the cheapest form of energy: the energy you don't use in the first place. Insulated items use less energy and

therefore have lower carbon emissions.

To aid in that messaging, our industry commissioned a study to determine the value and role of mechanical insulation systems in assisting industries in the U.S. and Canada to achieve and maintain their decarbonization goals. A secondary goal was to educate as to the value of mechanical insulation as an energy-saving and decarbonization technology that should be prioritized. This study's scope examined mechanical insulation used at “higher operating service temperature,” which was defined to be between 150°F and 800°F.

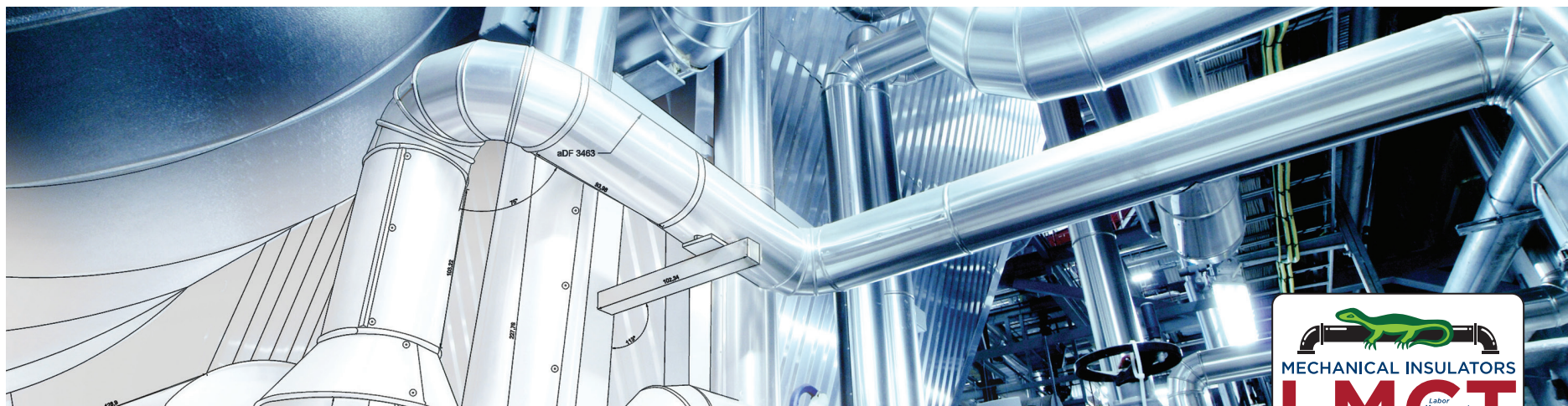
This study confirms the important role mechanical insulation systems can play in helping companies achieve and maintain their decarbonization goals. The study points out the obvious and impressive savings, but it more importantly highlights what could be saved if mechanical insulation systems were viewed as a decarbonization technology that is proven and available for use now. The study concluded that 68 million mt of CO₂ savings could be achieved

if no or under-insulated areas in the commercial and industrial markets in Canada and the U.S. were properly insulated.

Simply adding two inches of fiberglass insulation to an uninsulated four-inch diameter, 350°F pipe cuts both energy and emissions. The energy loss drops from 1,462 Btu per hour to 71 Btu per hour per lineal foot, translating into less energy needed. This also reduces CO₂ emissions by a mt for that linear foot in an entire year.

The industry study conservatively estimated that 68 million mt of CO₂ savings are achievable if under-insulated areas were properly insulated. Mechanical insulation already prevents CO₂ generation at its source. It's cost-effective, proven and saves energy costs — from the first day of installation and every day thereafter. If industry insulates just half of the opportunity, we can collectively avert 30 million mt of CO₂ from entering the atmosphere, just like Tesla.

For more information, visit insulation.org.



Reduce Energy Usage, Save Big Money

Is your Mechanical Insulation 100%?

- Reduce Energy Consumption
- Save Operating Costs
- Reduce Carbon Footprint
- CUI Programs
- Mechanical Insulation Energy Audits
- ROIs – 6 months to 2 years



Explore your Mechanical Insulation Solutions

- Most Proficient Insulator Workforce in the Country
- Professional Experienced Contractors
- Capital Projects
- Maintenance Programs
- Exceptional Safety and Health Records

It's time for you to rethink mechanical insulation!



www.mechanicalinsulatorsLMCT.com