



**NIA** | National Insulation Association  
REDUCE EMISSIONS BY PRIORITIZING INSULATION™

# Mechanical Insulation: ROI while helping hit emissions goals

It's March 2023 and my New Year's resolutions are already being tested. How about yours?

A resolution for global energy and environmental stakeholders is to reduce carbon emissions. However, much like my New Year's resolutions, many of these commitments are built on promises. From the 1992 inaugural U.N. Conference on Environment and Development held in Rio de Janeiro to the November 2022 Conference of the Parties to the United Nations Framework Convention on Climate Change (COP27) held in Egypt, countries have been vowing to slash their emissions. As a new year gets underway, nations are facing increasing pressure to turn aspirations into action.

One point of consensus is that to stay below the goal of 1.5°C of global warming, emissions need to be cut by roughly 50% by 2030. How much progress toward achieving this goal is being made by the world and the U.S.? The good news is that U.S. emissions of planet-warming greenhouse gases (GHG) are projected to decline in the next several years. Such progress was bolstered

by federal legislation passed in 2022. The legislation aims to enable the country to achieve 80% of its stated Paris Agreement goal by 2030.

However, the bad news is that the world is not on track to reach the Paris Agreement goals. A Global Carbon Project report published before COP27 estimated that GHG emissions increased by 1% in 2022. A stepwise approach to curbing emissions is no longer an option. The international community is falling far short of the Paris goals as reflected by strong words from António Guterres, secretary general of COP27, "We are on a highway to climate hell with our foot on the accelerator."

One area that is seeing progress is the private sector. Corporations around the world are addressing emissions with action versus promises. Non-governmental organizations and industry coalitions are scrutinizing net-zero promises. The Science Based Targets initiative, one such group, says that with its endorsement, companies are reporting rapid drops in emissions. There is much capital now being directed toward the

climate arena. We in the mechanical insulation industry know that capital applied to using more insulation or repairing damaged insulation systems provides terrific returns immediately at a low cost.

IBM released an Institute for Business Value study in May 2022 that provides excellent insight into how 3,000 CEOs worldwide think about their sustainability efforts. According to the survey, more than half of the CEOs rank unclear ROI as one of the hurdles in achieving sustainability objectives. Let's see how insulation can help shed light on energy savings and ROI.

A key metric to evaluate when calculating the ROI of sustainability is the amount of money spent to remove a metric ton of CO<sub>2</sub>. An example of this comes from National Insulation Association member, Shannon Global Energy Solutions, based in New York. The company documented savings on a 350°F steam system with only 48 fittings. By adding only 1.5" of removable/reusable insulation covers to fittings, Shannon achieved a 10-month payback on a \$31,000 installed job. Better yet, the

addition of insulation to 48 areas helped save 400 metric tons of CO<sub>2</sub>. A simple calculation shows savings of \$78 per metric ton removed.

Technologies much more sophisticated than mechanical insulation have been developed to reduce CO<sub>2</sub> at the source. Even more advanced technologies can suck CO<sub>2</sub> out of the air. Many of these new technologies have costs well into the hundreds or thousands of dollars per metric ton of CO<sub>2</sub> removed. Mechanical insulation is not subject to technological or regulatory barriers and has been used for decades. Mechanical insulation can be used at any temperature range, but higher operating temperatures translate into increased savings of energy and reduced GHG emissions.

Tried and true mechanical insulation is not simply low hanging fruit — it is a bountiful opportunity for stakeholders around the globe to harvest savings and protect the environment, which is truly a way to turn aspirations into action in this new year.

For more information, visit [insulation.org](http://insulation.org) or email [president@insulation.org](mailto:president@insulation.org).

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