



The power of mechanical insulation with energy conservation

We all know these kinds of people: the quiet, unassuming ones who like to remain out of the spotlight, yet demonstrate dependability, effectiveness, know-how and success in all that they do. In fact, I bet many of us reading this fit that description. Now, let's take this analogy and apply it to the systems of the built environment. There is a system that often gets forgotten, yet is truly the star of the show. It's quiet, unassuming, efficient, dependable, reliable and smart. Also, if it's protected and properly maintained, this system can improve efficiency, save you money, provide safety and reduce your carbon footprint. In the following, I will discuss what is changing in America's energy sector and showcase the unique talents that mechanical insulation systems offer for helping countries, states and companies reduce their carbon footprints.

'To infinity and beyond'

The past few months have seen a dizzying amount of news surrounding climate change and carbon emissions, especially as the U.S. and other countries convened for an Earth Day Leaders' Summit on Climate. Because of this and as I try to make sense of all I've been reading, the famous line by Buzz Lightyear in the movie "Toy Story" came to mind: "To infinity and beyond."

At this summit, the U.S. and other countries announced ambitious new climate targets, ensuring that nations responsible for half of the world's economy are now committed to the global emission reductions needed to limit global warming to only 2.7 degrees Fahrenheit from preindustrial levels.

No matter what you call the climate change effort, nothing this big in the history of mankind has happened without intent. It's clear to me that sustainable energy and reducing carbon emissions have become a global focus. At the Earth Day Leaders' Summit, the U.S. submitted a new nationally determined contribution under the Paris Agreement, setting an economy-wide emissions greenhouse gas (GHG) target of a 50-52-percent reduction below 2005 levels by 2030.

Not only are countries outlining bold strategies to reduce GHG, many businesses are making carbon GHG emissions goals. At least one-fifth (21 percent) of the world's 2,000 largest public companies have committed to meet net-zero targets,

according to a new report by the Energy & Climate Intelligence Unit. Together, these companies represent sales of nearly \$14 trillion. It's clear to see corporate citizenship and environmental responsibility are converging.

With the goal of zero carbon emissions, this path starts with companies reducing emissions as much as possible through conservation and new technologies. If net zero isn't achieved at that point, companies are making up the remainder through carbon offsets such as carbon sequestration.

To me, 2050 seems like an "infinity" away from today, although it's only 30 years. But 30 years ago doesn't seem that far away. In 1991, Metallica released its fifth album, self-titled "Metallica," and the song "Enter Sandman" earned platinum certification. Today, the song is still popular, and you'll hear it at many sporting events. Virginia Tech plays "Enter Sandman" at the beginning of each football game as the team takes the field, and the crowd goes wild.

But progress is much faster these days. Look how quick things have changed: President Obama's administration set a goal to reduce carbon emissions up to 28 percent below 2005 levels by 2025. Now, President Biden has set a new target for the U.S. to achieve a 50-52-percent reduction from 2005 levels in economy-wide net GHG pollution by 2030.

Insulation can help

Back in 2007, Ron King, a past president of the National Insulation Association and consultant, wrote, "Insulation is the 'Rodney Dangerfield' of the construction industry. It receives very little respect and is taken for granted." Despite all the changes brought about by the pandemic and subsequent market shocks, our industry remains in the business of conserving energy, and our industry's products naturally achieve responsible energy use.

The cheapest form of energy is the energy you don't use in the first place. Whether we're talking about homes, commercial office buildings or industrial operations, insulation is all about the business of running more efficiently and reducing energy consumption. While alternative technologies focus on ways to generate energy more efficiently, the insulation sector remains focused on ways to save money and energy, protect people and equipment, and reduce corrosion and mold. Also, remember that insulation's many benefits come regardless of your motivation. If you want to save energy, insulation will do that. It will also provide acoustical benefits, protect pipes from freezing or dripping, and support fire/life safety.

To illustrate the power of insulation in enabling carbon reduction versus other



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technologies, let's look at this diagram. To offset the carbon of a new 2021 Ford F-150 2.7-liter pickup truck driven 20,000 miles in a year, one can plant 360 trees, change out 310 43-watt incandescent light bulbs with LED bulbs, or add 2 inches of insulation around approximately 8 linear feet of bare pipe running at 350 degrees Fahrenheit. A valuable statistic in our industry comes from the North American Insulation Manufacturers Association: A typical pound of insulation saves 12 times as much energy in its first year in place as the energy used to produce it. That means the energy consumed during manufacturing is saved during the first four to five weeks of product use.

Our industry has a good message to share. Many companies have established ambitious, quantifiable goals to reduce their environmental footprints. Companies are evaluating metrics like energy use, toxic air emissions, particulate matter and waste. The insulation industry can help meet those goals.

For more information, visit www.insulation.org or email president@insulation.org.

MECHANICAL INSULATION IS AN OBVIOUS CHOICE FOR OFFSETTING CO₂ EMISSIONS!

How can we offset the emissions from one pickup truck?



One full-size pickup truck that is driven 20,000 miles emits approximately 18,000 lbs of CO₂.

We can plant 360 trees



We can insulate 8 feet of bare 4-inch pipe operating at 350°F with 2 inches of insulation



We can replace 310 43-watt incandescent light bulbs with LED light bulbs

