



**THE STUDY ON
INSULATION'S POSITIVE IMPACT
ON ENERGY EFFICIENCY AND
EMISSION REDUCTIONS
(UNITED STATES & CANADA)**

NIA | National Insulation
Association[®]

THE VOICE OF THE INSULATION INDUSTRY™

The Study on Insulation's Positive Impact on Energy Efficiency and Emission Reductions

Never Available Before

Monumental

Impressive

Humongous

Tremendous

Magnificent

Tremendous

Imposing

Ultra Conservative

Substantial

Considerable

&

Industry Specific

Formidable

Massive Opportunity

The Study on Insulation's Positive Impact on Energy Efficiency and Emission Reductions

Purpose & Objective

Purpose:

The survey is sponsored by NIA's Foundation for Education, Training, and Industry Advancement and the National Insulation Association

For the first time in the history of the industry to determine the value and role mechanical insulation systems have in assisting the United States and Canada's industries achieve and maintain their respective decarbonization goals.

Those questions have been asked for years but the industry has never had adequate visibility to core information from which to calculate the answers.

The answers have always been considered unknown and unknowable, until now.

The Study on Insulation's Positive Impact on Energy Efficiency and Emission Reductions

Purpose & Objective

Objective

The study objective was to answer two questions from the perspective of the mechanical insulation industry:

1. How much energy is saved, and GHG emissions reduced, over time by the use of mechanical insulation systems in the higher operating service temperatures in the commercial/building and industrial market segments?
2. Conversely, how much is at risk or lost due to under-insulated areas in the higher temperature market segments?

The Study on Insulation's Positive Impact on Energy Efficiency and Emission Reductions

Scope of the Study

Generally, mechanical insulation manufacturers produce products in two forms. One being in a “ready to use” form and one requiring additional modification or fabrication before it is installed.

For purposes of this study “ready to use” refers to sectional pipe insulation and board products that can be taken from the manufacturers packaging and installed. 3E Plus[®] calculations were made in 50° increments for each of the service temperature ranges for insulation thicknesses 1”– 3” in ½” increments from which an average was determined for each size.

Table: Materials Included in Study

Material Group	Material Type	Location	Protective Covering
Fibrous (Mineral Fiber)	Fiberglass	Indoors	ASJ Type Jacket
Fibrous (Mineral Fiber)	Mineral Wool	Outdoors	Aluminum
Granular	Calcium Silicate	Outdoors	Aluminum
Granular	Expanded Perlite	Outdoors	Aluminum

The Study on Insulation's Positive Impact on Energy Efficiency and Emission Reductions

Scope of the Study

The exclusion of elastomeric and materials that are not “ready to use” such as aerogel, cellular glass, polyisocyanurate (polyiso), ceramic fiber, removable/reusable insulation covers, and other products makes the results of this study “extremely conservative.”

Inclusion of those products which would have been the preferred approach. We simply were not able to develop a feasible methodology—there was no other reason.

The findings are extremely conservative

The Study on Insulation's Positive Impact on Energy Efficiency and Emission Reductions

Scope of the Study

The study would not have been possible without the support of:

- **Johns Manville, a Berkshire Hathaway Company**
- **Knauf Insulation, Inc.**
- **Owens Corning**
- **Rockwool Technical Insulation**

The Study on Insulation's Positive Impact on Energy Efficiency and Emission Reductions

Scope of the Study

- **Only 2”–12” Iron Pipe Sizes (IPS) and 1”– 3” pipe and board single layer thicknesses were used in the study.**

The limited IPSs and thickness highlights the extremely conservative findings

- **Did not include operating temperatures below 150°F which excludes a significant portion of the commercial market and portions of the industrial market.**

Highlights again how extremely conservative the findings are

- **The study covers a time span of 11 years; 2017–2021 (the past), 2022 (present) and 2023–2027 (the future)**

The Study on Insulation's Positive Impact on Energy Efficiency and Emission Reductions

The Findings

Cumulative Results: “Intact” Mechanical Insulation Systems Without Inclusion of “Under-Insulated” Areas

The cumulative study results are focused on the savings determined based upon the “ready to use” insulation qualities for the base year (2022), and the savings for the past 5 years, and the next 5 years on a cumulative basis without any “under insulated” areas.

Cumulative for purposes of the study means successive inclusion from year to year. In summary, what exists in one year will exist in the next year, and every year thereafter, unless an event happens which changes the basis of the information.

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The Findings

For purposes of the report “under insulated mechanical insulation systems” is defined to include:

- Items left uninsulated that could have been insulated (unions, flanges, valves, etc.)
- Items that are not code compliant
- Items that are code compliant but do not follow the most current model energy or building codes
- Items that are not specification compliant
- Insulation removed for maintenance and/or other purposes and not replaced
- Insulation removal for maintenance and/or other purposes exposing the remaining insulation system to potential damage
- Improper and/or untimely maintenance
- Improper insulation system replacement
- Installation quality issues
- Items that are damaged by/as a result of:
 - Other crafts working on site
 - Weather-related events (wind, hail, flooding, etc.)
 - Moisture intrusion or intrusion of other contaminants (product, oil, grease, etc.)
 - Mechanical equipment (forklifts, scaffolding, ladders, etc.)
 - Maintenance and/or other facility personnel
 - Environmental elements (corrosive or contaminant environment)
 - Being used as a walking surface or work platform (pipe rack, for example)
 - System penetration performed for inspection purposes (destructive testing) and not properly/promptly repaired
 - Washdown or similar occurrence
 - Fire or similar events

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The Findings

Cumulative Results of Mechanical Insulation Systems with the inclusion of “Under Insulated” Areas

- A significant portion of study savings are due to “at risk areas” that are “under insulated.” While the specific portion of those areas can only be determined on a facility by facility, or project by project, basis, the study examines the impact at various levels.
- While this study results were based on upon four “ready to use” materials from two primary groups it does NOT mean those groups of materials are the only ones impacted by under-insulated areas.
- The industrial segment represents a larger percentage of under-insulated areas versus the commercial segment. Many of the insulated piping systems in the commercial segment are located in wall cavities or above ceilings and, accordingly, are not exposed to weather, potential mechanical abuse, or personnel damage on a regular basic.

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The Findings

Cumulative Findings			
Without the Inclusion of Under-Insulated Areas			
Study Results – Savings			
Past 5 Years	Base Year	Next 5 Years	Total 11-Year Window
2017–2021	2022	2023–2027	2017–2027
Savings – Kbtu			
35,013,651,544,356	9,673,266,495,847	62,335,972,385,680	85,940,850,362,833
35.0 Trillion	9.7 Trillion	62.3 Trillion	85.9 Trillion
Dollar (\$) Savings			
\$91,035,494,015	\$25,150,492,889	\$162,073,528,203	\$278,259,515,107
\$91.0 Billion	\$25.2 Billion	\$162.1 Billion	\$ 278.3 Billion
CO₂ Savings – lbs.			
5,441,121,449,993	1,503,225,613,455	9,687,010,108,735	16,631,357,172,182
5.4 Trillion	1.5 Trillion	9.7 Trillion	16.6 Trillion
CO₂ Savings – Metric Tons			
2,468,748,389	682,044,289	4,395,195,149	7,545,987,828
2.5 Billion	682.0 Million	4.4 Billion	7.5 Billion

The Study on Insulation's Positive Impact on Energy Efficiency and Emission Reductions

The Findings

Cumulative Findings Without the Inclusion of Under-Insulated Areas

Study Results – Savings

Past 5 Years	Base Year	Next 5 Years	Total 11-Year Window
2017–2021	2022	2023–2027	2017–2027
Dollar (\$) Savings			
\$91.0 Billion	\$25.2 Billion	\$162.1 Billion	\$ 278.3 Billion
CO₂ Savings – lbs.			
5.4 Trillion	1.5 Trillion	9.7 Trillion	16.6 Trillion
CO₂ Savings – Metric Tons			
2.5 Billion	682.0 Million	4.4 Billion	7.5 Billion

The Study on Insulation's Positive Impact on Energy Efficiency and Emission Reductions

The Findings

How do these results compare to other carbon reduction initiatives or GHG reduction equivalents?

Equivalencies	Savings			
	Past 5 Years 2017–2021	Base Year 2022	Next 5 Years 2023–2027	Total 11-Year Window 2017–2027
Greenhouse Gas (GHG) Emissions from:				
Gasoline-powered passenger vehicles driven for 1 year	549.4 Million	151.8 Million	978.1 Million	1.7 Billion
CO₂ Emissions from:				
Homes' energy use for 1 year	311.1 Million	86 Million	553.9 Million	951 Million
Barrels of oil consumed	5.7 Billion	1.6 Billion	10.2 Billion	17.4 Billion
Coal-fired power plants in 1 year	661	183.0	1,176	2,020
Natural gas-fired power plants in 1 year	6,204	1,714	11,044	18,962
GHG Emissions Avoided by:				
Wind turbines running for 1 year	686,474	189,653	1,222,153	2.1 Million
Incandescent lamps switched to LEDs	93.6 Billion	25.9 Billion	166.6 Billion	286.0 Billion
Carbons Sequestered by:				
Acres of U.S. forests in 1 year	2.9 Billion	813.3 Million	5.2 Billion	9.0 Billion

The Study on Insulation’s Positive Impact on Energy Efficiency and Emission Reductions

The Findings

Commercial Market Segment
Potential Loss: 2 – 10%
CO₂ Lost: 45 – 211 Million Metric Tons
(Avg. 127 Million Metric Tons)

Summary of Cumulative Findings vs. Potential Loss Due to Under-Insulated Areas — COMMERCIAL MARKET SEGMENT					
Study Results – Savings					
		Past 5 Years	Base Year	Next 5 Years	Total 11-Year Window
		2017–2021	2022	2023–2027	2017–2027
Dollar (\$) Savings					
		\$91.0 Billion	\$25.2 Billion	\$162.1 Billion	\$ 278.3 Billion
CO ₂ Savings – Metric Tons					
		2.5 Billion	682.0 Million	4.4 Billion	7.5 Billion
Potential Loss %	% Total Potential Savings	Dollar (\$) Savings Loss			
2.0%	0.60%	\$ 546,212,964	\$ 150,902,957	\$ 972,441,169	\$ 1,669,557,091
4.0%	1.10%	\$ 1,001,390,434	\$ 276,655,422	\$ 1,782,808,810	\$ 3,060,854,666
6.0%	1.70%	\$ 1,547,603,398	\$ 427,558,379	\$ 2,755,249,979	\$ 4,730,411,757
8.0%	2.20%	\$ 2,002,780,868	\$ 553,310,844	\$ 3,565,617,620	\$ 6,121,709,332
10.0%	2.80%	\$ 2,548,993,832	\$ 704,213,801	\$ 4,538,058,790	\$ 7,791,266,423
Average		\$ 1,529,396,299	\$ 422,528,281	\$ 2,722,835,274	\$ 4,674,759,854
		\$ 1.5 Billion	\$ 422.5 Million	\$ 2.7 Billion	\$ 4.7 Billion
Potential Loss %	% Total Potential Savings	CO ₂ Savings – Metric Tons Loss			
2.0%	0.60%	14,812,490	4,092,266	26,371,171	45,275,927
4.0%	1.10%	27,156,232	7,502,487	48,347,147	83,005,866
6.0%	1.70%	41,968,723	11,594,753	74,718,318	128,281,793
8.0%	2.20%	54,312,465	15,004,974	96,694,293	166,011,732
10.0%	2.80%	69,124,955	19,097,240	123,065,464	211,287,659
Average		41,474,973	11,458,344	73,839,279	126,772,596
		41.5 Million	11.5 Million	73.8 Million	126.8 Million

The Study on Insulation’s Positive Impact on Energy Efficiency and Emission Reductions

The Findings

Industrial Market Segment

Potential Loss: 5 – 30%
CO₂ Lost: 181 – 1,079 Million Metric Tons (Avg. 625 Million Metric Tons)

Summary of Cumulative Findings vs. Potential Loss Due to Under-Insulated Areas — INDUSTRIAL MARKET SEGMENT

Study Results – Savings					
		Past 5 Years 2017–2021	Base Year 2022	Next 5 Years 2023–2027	Total 11-Year Window 2017–2027
Dollar (\$) Savings					
		\$91.0 Billion	\$25.2 Billion	\$162.1 Billion	\$ 278.3 Billion
CO ₂ Savings – Metric Tons					
		2.5 Billion	682.0 Million	4.4 Billion	7.5 Billion
		Dollar (\$) Savings Loss			
Potential Loss %	% Total Potential Savings	\$ 2,184,851,856	\$ 603,611,829	\$ 3,889,764,677	\$ 6,678,228,363
5.0%	2.40%	\$ 4,278,668,219	\$ 1,182,073,166	\$ 7,617,455,826	\$ 13,078,197,210
10.0%	4.70%	\$ 6,463,520,075	\$ 1,785,684,995	\$ 11,507,220,502	\$ 19,756,425,573
15.0%	7.10%	\$ 8,557,336,437	\$ 2,364,146,332	\$ 15,234,911,651	\$ 26,156,394,420
20.0%	9.40%	\$ 10,742,188,294	\$ 2,967,758,161	\$ 19,124,676,328	\$ 32,834,622,783
25.0%	11.80%	\$ 13,018,075,644	\$ 3,596,520,483	\$ 23,176,514,533	\$ 39,791,110,660
30.0%	14.30%				
Average		\$ 7,540,773,421	\$ 2,083,299,161	\$ 13,425,090,586	\$ 23,049,163,168
		\$ 7.5 Billion	\$ 2.1 Billion	\$ 13.4 Billion	\$ 23.0 Billion
		CO ₂ Savings – Metric Tons Loss			
Potential Loss %	% Total Potential Savings	59,249,961	16,369,063	105,484,684	181,103,708
5.0%	2.40%	116,031,174	32,056,082	206,574,172	354,661,428
10.0%	4.70%	175,281,136	48,425,145	312,058,856	535,765,136
15.0%	7.10%	232,062,349	64,112,163	413,148,344	709,322,856
20.0%	9.40%	291,312,310	80,481,226	518,633,028	890,426,564
25.0%	11.80%	353,031,020	97,532,333	628,512,906	1,079,076,259
30.0%	14.30%				
Average		204,494,658	56,496,002	364,068,665	625,059,325
		204.5 Million	56.5 Million	364.1 Million	625.1 Million

The Study on Insulation’s Positive Impact on Energy Efficiency and Emission Reductions

The Findings

Industrial Market Segment

Potential Loss: 5 – 30%
CO₂ Lost: 181 – 1,079 Million Metric Tons (Avg. 625 Million Metric Tons)

Summary of Cumulative Findings vs. Potential Loss Due to Under-Insulated Areas — INDUSTRIAL MARKET SEGMENT					
Study Results – Savings					
		Past 5 Years	Base Year	Next 5 Years	Total 11-Year Window
		2017–2021	2022	2023–2027	2017–2027
Dollar (\$) Savings					
		\$91.0 Billion	\$25.2 Billion	\$162.1 Billion	\$ 278.3 Billion
CO ₂ Savings – Metric Tons					
		2.5 Billion	682.0 Million	4.4 Billion	7.5 Billion
Dollar (\$) Savings Loss					
Potential Loss %	% Total Potential Savings	\$ 2,184,851,856	\$ 603,611,829	\$ 3,889,764,677	\$ 6,678,228,363
5.0%	2.40%	\$ 4,278,668,219	\$ 1,182,073,166	\$ 7,617,455,826	\$ 13,078,197,210
10.0%	4.70%	\$ 6,463,520,075	\$ 1,785,684,995	\$ 11,507,220,502	\$ 19,756,425,573
15.0%	7.10%	\$ 8,557,336,437	\$ 2,364,146,332	\$ 15,234,911,651	\$ 26,156,394,420
20.0%	9.40%	\$ 10,742,188,294	\$ 2,967,758,161	\$ 19,124,676,328	\$ 32,834,622,783
25.0%	11.80%	\$ 13,018,075,644	\$ 3,596,520,483	\$ 23,176,514,533	\$ 39,791,110,660
30.0%	14.30%				
Average		\$ 7,540,773,421	\$ 2,083,299,161	\$ 13,425,090,586	\$ 23,049,163,168
		\$ 7.5 Billion	\$ 2.1 Billion	\$ 13.4 Billion	\$ 23.0 Billion
CO ₂ Savings – Metric Tons Loss					
Potential Loss %	% Total Potential Savings	59,249,961	16,369,063	105,484,684	181,103,708
5.0%	2.40%	116,031,174	32,056,082	206,574,172	354,661,428
10.0%	4.70%	175,281,136	48,425,145	312,058,856	535,765,136
15.0%	7.10%	232,062,349	64,112,163	413,148,344	709,322,856
20.0%	9.40%	291,312,310	80,481,226	518,633,028	890,426,564
25.0%	11.80%	353,031,020	97,532,333	628,512,906	1,079,076,259
30.0%	14.30%				
Average		204,494,658	56,496,002	364,068,665	625,059,325
		204.5 Million	56.5 Million	364.1 Million	625.1 Million

The Study on Insulation’s Positive Impact on Energy Efficiency and Emission Reductions

The Findings

Both Market Segment
Average Potential Loss
751 Million Metric Tons or 10%
\$27+ Billion

Summary of Cumulative Findings vs. Potential Loss Due to Under-Insulated Areas – Both Market Segments				
Study Results – Savings				
	Past 5 Years	Base Year	Next 5 Years	Total 11-Year Window
	2017–2021	2022	2023–2027	2017–2027
Dollar (\$) Savings				
	\$91,035,494,015	\$25,150,492,889	\$162,073,528,203	\$278,259,515,107
<u>Average Potential Loss</u>				
Commercial Market Segment	\$ (1,529,396,299)	\$ (422,528,281)	\$ (2,722,835,274)	\$ (4,674,759,854)
<i>Percent of Total Savings</i>	-1.7%	-1.7%	-1.7%	-1.7%
Industrial Market Segment	\$ (7,541,773,421)	\$ (2,083,299,161)	\$ (13,425,090,586)	\$ (23,049,163,168)
<i>Percent of Total Savings</i>	-8.3%	-8.3%	-8.3%	-8.3%
Combined Total	\$ (9,071,169,720)	\$ (2,505,827,442)	\$ (16,147,925,860)	\$ (27,723,923,022)
Percent of Total Savings	-10.0%	-10.0%	-10.0%	-10.0%
CO ₂ Savings – Metric Tons				
	2,468,748,389	682,044,289	4,395,195,149	7,545,987,828
<u>Average Potential Loss</u>				
Commercial Market Segment	(41,474,973)	(11,458,344)	(73,839,279)	(126,772,596)
<i>Percent of Total Savings</i>	-1.7%	-1.7%	-1.7%	-1.7%
Industrial Market Segment	(204,494,658)	(56,496,002)	(364,068,665)	(625,059,325)
<i>Percent of Total Savings</i>	-8.3%	-8.3%	-8.3%	-8.3%
Combined Total	(245,969,631)	(67,954,346)	(437,907,944)	(751,831,921)
Percent of Total Savings	-10.0%	-10.0%	-10.0%	-10.0%

The Study on Insulation’s Positive Impact on Energy Efficiency and Emission Reductions

The Findings

How do these results compare to other carbon reduction initiatives or greenhouse gas reduction equivalents

	Potential Average Lost – Under-Insulated Areas			
	Past 5 Years 2017–2021	Base Year 2022	Next 5 Years 2023–2027	Total 11-Year Window 2017–2027
Equivalencies				
Greenhouse Gas (GHG) Emissions from:				
Gasoline-powered passenger vehicles driven for 1 year	54.7 Million	15.1 Million	97.4 Million	167.3 Million
CO₂ Emissions from:				
Homes' energy use for 1 year	31.0 Million	8.6 Million	55.2 Million	94.8 Million
Barrels of oil consumed	568.9 Million	157.2 Million	1.00 Billion	1.7 Billion
Coal-fired power plants in 1 year	65	18	117	201
Natural gas-fired power plants in 1 year	618	171	1,100	1,889
GHG Emissions Avoided by:				
Wind turbines running for 1 year	68,396	18,896	121,767	209,059
Incandescent lamps switched to LEDs	9.3 Billion	2.6 Billion	16.6 Billion	28.5 Billion
Carbons Sequestered by:				
Acres of U.S. forests in 1 year	293.3 Million	81.0 Million	522.2 Million	896.6 Million

The Study on Insulation's Positive Impact on Energy Efficiency and Emission Reductions

The Findings

Conservatively, the study indicates a potential “average loss” of under-insulated areas in a combination of the market segments of **751 million metric tons of carbon over the 11-year span of the study. That equates to over **827,000,000 carbon offsets (1 ton = 1 carbon offset)**.**

- This simply should not be overlooked by companies, industries or governing agencies. The opportunity—the technology is real, proven, and verifiable.
- Never before has the mechanical insulation industry been in a position to collectively quantify its decarbonization potential.
- The decarbonization value of mechanical insulation dwarfs many of the GHG projects in the headlines. It needs to be re-examined and viewed differently by companies, regulatory bodies, carbon exchange firms and others.
- Mechanical insulation presents a massive and immediately-available GHG reduction opportunity.

Study Results: Savings from Mechanical Insulation

Total 11-Year Window (2017-2027)	Averaged Year
Dollar (\$) Savings	
\$ 278.3 Billion	\$25.3 Billion
Energy Savings in Kbtu	
85.9 Trillion	7.81 Trillion
CO ₂ Savings in lbs.	
16.6 Trillion	1.51 Trillion
CO ₂ Savings in Metric Tons	
7.5 Billion	682 Million
Cumulative Findings (Without the Additional Savings from Under-Insulated Areas)	

What Could Be Saved Over 11 Years?

1. DOLLARS SAVED: \$278.3 Billion 

The amount of savings is **more money than the entire GDP of the country of Portugal**, which in 2021 was \$254 billion!



2. ENERGY SAVINGS: 85.9 Trillion kBtu

Which is **equivalent to lighting New York City for 6,266 years!**



What Could Be Saved Over 11 Years?

3. CO₂ EMISSIONS REDUCTION: 7.5 Billion Metric Tons 

Which is equal to a person **not driving a car for 1.7 billion years!**

Insulation's carbon reduction is actually equal to the amount of carbon sequestered by 9.0 billion acres of forest, but the U.S. is only 2.43 billion acres. You need to plant a forest

3.7 times larger than America 

The Study on Insulation's Positive Impact on Energy Efficiency and Emission Reductions

Other Report Topics

- **Decarbonization vs Sustainability**
- **Embodied Carbon or Energy**
- **Energy Efficiency and Carbon Reduction Audits or Appraisals**

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Other Industry Reports

- **American Chemistry Council, “Contributions of Insulation to the U.S. Economy in 2022,”** August 2023
Industry employment and resulting economic impact on the economy
- **Insulation Industry Trade Associations Coalition, “Insulation Industry Opportunity Study,”** August 2022
Estimated the state- and national-level energy and emissions impacts and the economic benefits that could accrue over or from the installation of code-compliant insulation in the residential, commercial, and industrial building sectors. (20-year window)

The Study on Insulation's Positive Impact on Energy Efficiency and Emission Reductions

Conclusion and Next Steps

- **The study provides industry information that has never been available before.**
- **The study's ultimate purpose is to educate facility owners, engineering firms, government agencies, code officials and others as to the value of looking at mechanical insulation as a critical energy-saving and carbon-reduction technology, and not something taken for granted.**
- **For the first time, this study offers a view of the industry holistically rather than focusing singularly on individual parts. Each uninsulated or damaged area plays its own important role, but agencies and companies need to see the full potential impact of major change to view mechanical insulation systems as a solution.**

The Study on Insulation's Positive Impact on Energy Efficiency and Emission Reductions

Conclusion and Next Steps

While each business, company, agency, may have unique circumstances, structures, and procedures to consider, there are a few common “next steps” that should be considered when determining how, and to what level, mechanical insulation can help achieve their decarbonization goals.

The report contains a detailed listing of those next steps that should be considered.

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What Are Your Next Steps? How Can You Help?

How you can help varies on whether you are manufacturer, contractor, or distributor/fabricator, but there are a few common “next steps” that should be considered:

- **Study the report and share it within your company and customers**
- **Commit to investigating and developing, with facility owners and engineering firms, a better understanding of the benefits of mechanical insulation and the consequences of having out-of-date specifications, improper installation, and insufficient / improper maintenance. Inspections are important to verify they have what they expect.**
- **Put together webinars or similar events with your customers and regional or local associations.**

The Study on Insulation's Positive Impact on Energy Efficiency and Emission Reductions

What Are Your Next Steps? How Can You Help?

- **Develop and implement specific mechanical insulation energy efficiency and emission reduction appraisals/audits with inspectors and appraisers certified in those fields.**
- **Commit to continuing education for your company related to all aspects of mechanical insulation systems for the operating systems and environments specific to your company.**
- **Hold internal company and department meetings to educate all parties on the value of mechanical insulation to your company, the environment, the local community and the consequences of damaged insulation.**

The Study on Insulation's Positive Impact on Energy Efficiency and Emission Reductions

What Are Your Next Steps? How Can You Help?

- **Energy efficiency: dollars saved and return on investment (ROI)**
- **Emissions saved, internal and external relations, carbon credits**
- **Employee safety**
- **Process control**
- **Mitigating corrosion under insulation (CUI)**
- **Doing it right the first time and maintaining it is a lot less expensive than unplanned events. Maintenance is less costly than unexpected capital investment.**

“Tell the whole story”

The Study on Insulation's Positive Impact on Energy Efficiency and Emission Reductions

What Are Your Next Steps? How Can You Help?

The Bottom Line: The industry needs your and your company's help. NOW!

The decarbonization impact and other benefits of mechanical insulation are not limited by time.

Use the report as an educational and marketing/sales tool. Talk about it. Share it. The more often it shared, talked about, and used, the better odds of impacting real change.

If the knowledge of past successes, barriers and challenges, installation and or maintenance programs are not talked about now, mechanical insulation will continue to be sidelined, taken for granted, and the future will not change.

The Study on Insulation's Positive Impact on Energy Efficiency and Emission Reductions

Summary

Mechanical insulation will help businesses, states, and providences obtain their regulatory or voluntary carbon reduction goals now, tomorrow, and for years to come ONLY if it is recognized as a primary contributing technology and a solution.

The challenge for the business, finance, and policymakers is identifying how best to use the time and resources available now to make the changes needed to advance their progress towards goals.

The Study on Insulation's Positive Impact on Energy Efficiency and Emission Reductions

Summary

The study confirms the contribution from mechanical insulation industry to decarbonization efforts. It is available now and it impacts every state, county, providence, city, labor group, and all directly or indirectly-related businesses for this and future generations.

If only we convince others to think about mechanical insulation systems as a solution.

This is potentially the industry's greatest challenge. Hopefully, this study and report can be the nucleus of change.

We need your help—today, tomorrow, and the next day... and next day!!!

**THE STUDY ON
INSULATION'S POSITIVE IMPACT ON
ENERGY EFFICIENCY
AND EMISSION REDUCTIONS
(UNITED STATES & CANADA)**

Questions? Comments?

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Thank You !!!!

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