



Johns Manville
A Berkshire Hathaway Company

CREATING A BETTER TOMORROW

PEOPLE PASSION PERFORM PROTECT

2020 SUSTAINABILITY REPORT

TABLE OF CONTENTS

2	A Message from JM's Chief Executive Officer (CEO)	PASSION: THE SPARK OF JM	PROTECT: THE FOUNDATION OF JM
3	A Message from Berkshire Hathaway	21 Overview	29 Overview
4	The JM Experience	22 Passion for Our Industry	29 Environmental Compliance
4	2018 / 2019 Highlights	22 Passion for Our Communities	30 Reducing Waste to Landfill
5	JM Sustainability Goals	23 JM Women Help Lead National Roofing Association	30 Belgrade Environmental Excellence
7	Organizational Profile	23 Passion for Fresh Ideas	30 Innovative Practices
8	Operations Map	23 Passion for Our Employees	31 Protecting the Planet, Saving Money in Innisfail Facility
9	JM Supply Chain	24 Meeting Insulation Needs of an Evolving Industry	31 Innovative Examples of Protecting Our Environment
11	Valuing Our Stakeholders	18 Expanding Solutions in Industrial Insulation	32 Emissions
12	Understanding Our Impacts	24 Make Your Story Our Story	32 Scottsboro Recycling Program
	PEOPLE: THE HEART OF JM	PERFORM: INNOVATION AT JM	33 Energy Efficiency
13	Overview	25 Overview	33 Conserving Water
14	Health & Safety Improvements	26 Organosheets	34 Achievements & Recognition
15	5 Tips to a Safe Workplace	26 Innovation for Good	35 GRI G4 Content Index
16	Training for People	27 Insulation Products Enhance Energy Efficiency, Thermal Performance	37 About this Report
18	Diversity at JM	28 Novel Roofing Insulation Improves R-Value	38 Looking Ahead
18	Human Rights	28 Employee Performance	
19	*Centerfold Title*		

A MESSAGE FROM JM'S CHIEF EXECUTIVE OFFICER



Johns Manville (JM) has focused on well-balanced efforts in sustainability that benefit our stakeholders as well as our business. Our focus is a natural evolution of JM's four core values—*people, passion, perform* and *protect*—which drive the *JM Experience*. As we enter the 2020s, we continue our journey in sustainability with intention and a renewed pledge to create a better tomorrow.

Executing on such an aspirational pledge starts with our holistic view of sustainability that embraces the concepts of the triple bottom line: people, planet and profit. Our longevity also gives us unique perspective as we peer into a more sustainable future.

JM started as a small roofing shingles business 162 years ago. Since then, JM has transformed into a company that employs nearly 8,000 individuals through 43 manufacturing facilities in communities across North America, Europe and China. As we've grown, we've stayed focused on our employees, customers, suppliers and communities.

Today, more companies than ever like to talk about their commitment to sustainability; Many of these ventures end up going out of business. At JM, financial strength is crucial in empowering sustainability. We must grow profitably in order to continue delivering sustainable value. It is imperative that we produce products that people want and also help to solve global challenges. For example, our insulation, filtration, roofing, battery storage and lightweighting products have conservation baked in from the beginning, making them integral solutions for a more sustainable world. JM products save exponentially more energy throughout their usable life in comparison to the amount of energy required to manufacture them.

We develop innovative technologies that save energy in the manufacturing process. For example, our proprietary process by which we make our light density fiber glass batts and rolls features all electric melting and fiber attenuation with pressurized air instead of a natural gas fired flame attenuation. The California Air Resources Board recently confirmed that JM's technology performed better than all of our competitors in terms of direct carbon emissions.

We go even further by protecting environmental resources, preserving our water resources, seeking additional energy efficiency in our manufacturing process and innovating ways to eliminate waste and reduce our carbon footprint.

Social responsibility is just as essential. We strive to be an *Employer of Choice* through an emphasis on inclusivity and diversity, training and career development, along with health and wellness. We aim to promote resiliency in everything we do, support the communities where our employees live and work (with a particular focus on children and schools) and build on our excellent record of safety.

There is no doubt, the challenges are many and they are intense. Yet at JM, we are passionate about our ability to succeed in this endeavor. By doing good, we will do well. It's all part of the balance of sustainability that powers us in creating a better tomorrow.

Mary K. Rhinehart

Chairman, President & Chief Executive Officer



Warren E. Buffett

Chairman of the Board
Berkshire Hathaway, Inc.



Gregory E. Abel

Vice Chairman, Non-Insurance
Business Operations
Berkshire Hathaway, Inc.

Berkshire Hathaway is proud to have Johns Manville (JM) in our portfolio of companies. The year 2021 will mark our two decades together. During that time, we have built upon each other's strengths, one of which is our collective commitment to sustainability. JM is a model of a business that benefits people, the planet and the bottom line. For what is a sustainable business, if not a profitable one? By creating long term value, JM has the ability to focus on its employees, their families and the communities in which they live.

Innovation is key to everything that JM does. It drives the discovery of new products and the evolution of existing manufacturing processes. Innovation fuels the multitude of ways JM makes decisions that create social, environmental and economic benefits for all stakeholders. Whether JM is pioneering new safety practices, engineering products that save energy or renewing its commitment to diversity and employee health and wellness, it is following through in interesting, sometimes visionary and always ethical ways. You may read many of these examples in this report.

Though we can make educated guesses about what lies ahead, we can't predict the future. It is companies like JM, however, that give us confidence in the future. JM has set a high bar for itself in terms of its commitment to sustainability and strong business practices. The value of sustainability is compounding through a daily commitment to hundreds of practices across its manufacturing plants, and through its supply chain, that add up to an international corporation that continues to be worthy of investment. Quite simply, JM makes products that people need and trust. And because of its storied history, we anticipate another century and a half of profitability.

In short, sustainability is just another way that JM understands the long game inherent in success for employees, customers, communities and the environment. We like to think that just as JM's roofing, insulation and engineered products enable people to comfortably endure inclement conditions, their sustainable practices position the company to thrive in good times and to weather the bad.

THE JM EXPERIENCE

We are committed to delivering positive and powerful experiences, because we are successful only when our employees and customers thrive.



WE ARE PEOPLE CHAMPIONS

Our employees and customers are at the core of everything we do. We strive to see the world through their eyes.



OUR PASSION IS IN GOING THE EXTRA MILE

We pursue fresh ideas and embrace new approaches to elevate how we work and deliver value.



WE PERFORM AT A SUPERIOR LEVEL

We are committed to delivering profitable growth and a sustainable competitive advantage.



WE PROTECT TODAY TO ENSURE TOMORROW

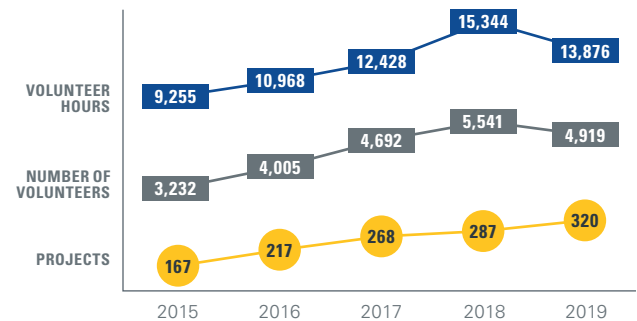
Protecting our customers, employees, families and the world around us is our responsibility.

2018 / 2019 HIGHLIGHTS

CAPITAL INVESTMENT

\$XX Billion Invested

VOLUNTEERISM OVERVIEW



GREENHOUSE GAS INTENSITY

Year over year 2018 / 2019



2018 GHG INTENSITY CHANGE*



2019 GHG INTENSITY CHANGE*

EMPLOYEE TRAINING

	2018	2019
Employee Development	195,935 Hours	173,001 Hours
Safety and Environmental	42,832 Hours	51,137 Hours
Total Training Hours	238,767 Hours	224,138 Hours

CHARITABLE CONTRIBUTIONS

\$XXXX IN 2015	\$XXXX IN 2017	\$XXXX IN 2019
\$XXXX IN 2016	\$XXXX IN 2018	

JOHNS MANVILLE SUSTAINABILITY GOALS

The JM Sustainability Goals will be complete at the end of 2020.

2020 COMMUNITY / VOLUNTEERISM GOAL



**INCREASE EMPLOYEE
VOLUNTEERISM**

Increase employee volunteerism at JM by 20% (based on a 2015 baseline).

PROGRESS: Achieved (as of 2016 / 2017 report data):

- Goal Achieved: 200 community service events annually by 2020.
- Goal Achieved: Volunteer total of 11,000 hours annually by 2020.
- Goal Achieved: 3,878 volunteers participate annually by 2020.

2019 UPDATE:

- 320 community service events in 2019
- 13,876 volunteer hours in 2019
- 4,919 volunteers participated in 2019

2020 EMPLOYEE DEVELOPMENT GOAL

Provide greater emphasis on employee development by delivering a 5% increase in average employee training hours over a 2015 baseline. Ensure that salaried employees who have been employed at JM for at least six months have documented development plans in place.

PROGRESS: JM continues to emphasize employee training at all levels and locations. Our new performance management philosophy supports these efforts company-wide by focusing on accountability, ongoing conversations and effective feedback. In addition, JM remains committed to ensuring that all salaried employees have documented development plans in place (as stated in 2016 / 2017 JM Sustainability Report).



2020 SAFETY GOAL



Percentage of JM Facilities with no Lost Time Injuries in 2018

37% of JM Facilities had no Recordable Injuries in 2018



Percentage of JM Facilities with no Lost Time Injuries in 2019

31% of JM Facilities had no Recordable Injuries in 2019

Continuously improve performance and realize our vision of zero injuries by:

- Reducing the three-year rolling average number of yearly injuries by 30%
- Decreasing the three-year rolling lost time injury rate (LTIR) by 30%

PROGRESS: JM is making positive progress toward our 2020 Sustainability goal. As of 2019, both measures of safety (TCIR and LTIR) are down from the 2015 baseline.

2020 EMPLOYEE HEALTH & WELLBEING GOAL

52%

Percentage of U.S. employees participating in on-site biometric screening events.

32

Locations with on-site biometric screening.

Support employee health and wellness in order to maintain or improve overall employee biometric results. Expand programs offered to address mental as well as physical wellbeing.

PROGRESS: JM continues to enhance health and wellbeing resources for employees and their families across the globe (as stated in 2016 / 2017 JM Sustainability Report).

2020 WASTE GOAL

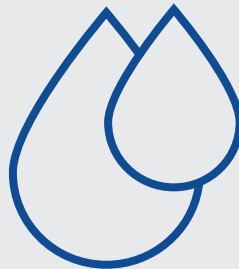
REDUCTION IN WASTE INTENSITY FROM 2018–2019

2%

Reduce solid waste intensity 10% by 2020.

PROGRESS: Quam verion prero es doluptati alit ipsapiet, quiamus verum quam quantia epudiae nient quia duciet estrumet quiatae stisto officii ut pa autaeu lloerc hilique eossum hit el et

2020 WATER GOAL



Complete local water vulnerability assessment of all plants.

PROGRESS: JM has conducted an extensive survey to understand water supply sources. Survey results will contribute to the assessment of water vulnerability at all plants (as stated in 2016 / 2017 JM Sustainability Report).

2020 ENERGY GOAL

REDUCTION IN ENERGY INTENSITY FROM 2018–2019

3%

Implement projects that result in a 5% improvement in energy efficiency by 2020, over a 2014 baseline.

PROGRESS: From 2018 to 2019, overall energy use decreased by 2.4% while energy intensity decreased by 4.8%. During this time, JM's production went up while energy use went down.

2020 ENVIRONMENTAL MANAGEMENT SYSTEM GOAL

36 + 6 = 42

NORTH AMERICA

EUROPE

TOTAL

Implement environmental management systems (EMS) in all North American and European plants.

PROGRESS: By the end of 2017, all 36 of JM's North American plants and all 6 of JM's European plants had and EMS conforming to ISO 14001.¹ This brought the total number of plants conforming to the standards to 42.²

¹ ISO 14001 is the international standard that specifies requirements for an effective environmental management system.

² Total JM Plants increased from 42 to 46 during [YEAR] due to IWC aquisition... Uga. Itas sintion sequia in parchiciur auditen ihiliquibus est que ommodi

ORGANIZATIONAL PROFILE

Johns Manville, a Berkshire Hathaway (NYSE: BRK.A; BRK.B) company, is a leading manufacturer and marketer of premium-quality building and specialty products, including building insulation, mechanical insulation, industrial insulation, commercial roofing, roof insulation and fibers and nonwovens for commercial, industrial and residential applications.

JM serves markets that include aerospace, automotive/ transportation, appliance, commercial/residential construction, HVAC, pipe and equipment, filtration, waterproofing, building, flooring, interiors and wind energy. JM has three strategic business units: Engineered Products, Insulation Systems and Roofing Systems.

Established in 1858, JM holds leadership positions in many of the key markets we serve. Our products are sold to customers in more than 84 different countries. JM employs 8,000 people and operates 46 manufacturing facilities located in the United States, Canada, Germany, Slovakia and China.

In 2019, the company achieved sales of approximately **\$XX** billion. That same year, aggregate worldwide employee wages and cost of employee benefits totaled nearly **\$XXX** million.

ACTIVITIES, BRANDS, PRODUCTS, SERVICES

Johns Manville, a Berkshire Hathaway (NYSE: BRK.A; BRK.B) company, is a leading manufacturer and marketer of premium-quality products for building insulation, mechanical insulation, industrial insulation, commercial roofing, roof insulation and fibers and nonwovens for commercial, industrial and residential applications.

LOCATION OF HEADQUARTERS

JM is headquartered in Denver, CO and operates 46 manufacturing facilities located in the United States, Canada, Germany, Slovakia and China.

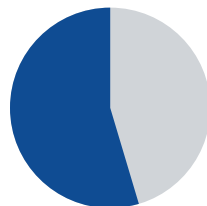
2019 JM OPERATIONS AT A GLANCE



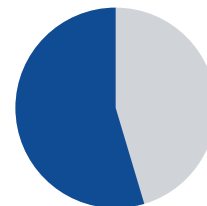
GLOBAL WORKFORCE

8,000

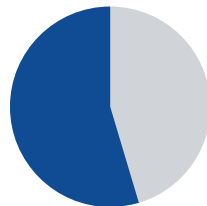
EMPLOYEES
WORLDWIDE



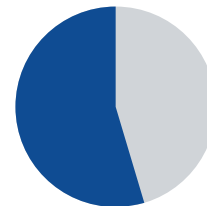
WORKFORCE BY
EMPLOYMENT TYPE



SALARIED
EMPLOYEES
BY GENDER



WORKFORCE BY
GEOGRAPHIC
LOCATION



HOURLY
EMPLOYEES
BY GENDER

OPERATIONS MAP

WORLD HEADQUARTERS

Denver, CO

TECHNICAL CENTERS

Littleton, CO

Bobingen, Germany

Trnava, Slovakia

Waterville, OH

Wertheim, Germany

ENGINEERED PRODUCTS

Tucson, AZ

China

Richland, MS

Berlin, Germany

Defiance, OH

Bobingen, Germany

Waterville, OH

Steinach, Germany

Spartanburg, SC

Wertheim, Germany

Etowah, TN

Trnava, Slovakia

Cleburne, TX

Luoyang, Henan,

INSULATION SYSTEMS

Phenix City, AL

Edison, NJ

Tucson, AZ

Penbryn, NJ

Willows, CA

Defiance, OH

Fruita, CO

Cleburne, TX

Brunswick, GA

Houston, TX

Winder, GA

La Porte, TX

Richmond, IN

Richmond, VA

McPherson, KS

Edmonton, AB Canada

Ruston, LA

Innisfail, AB Canada

Belgrade, MT

Mississauga, Ontario
Canada

ROOFING SYSTEMS

Scottsboro, AL

Fernley, NV

South Gate, CA

Plattsburgh, NY

Tracy, CA

Milan, OH

Jacksonville, FL

Oklahoma City, OK

Macon, GA

Hazle Township, PA

Rockdale, IL

Grand Prairie, TX

Bremen, IN

Cornwall, ON Canada

Lewiston, ME

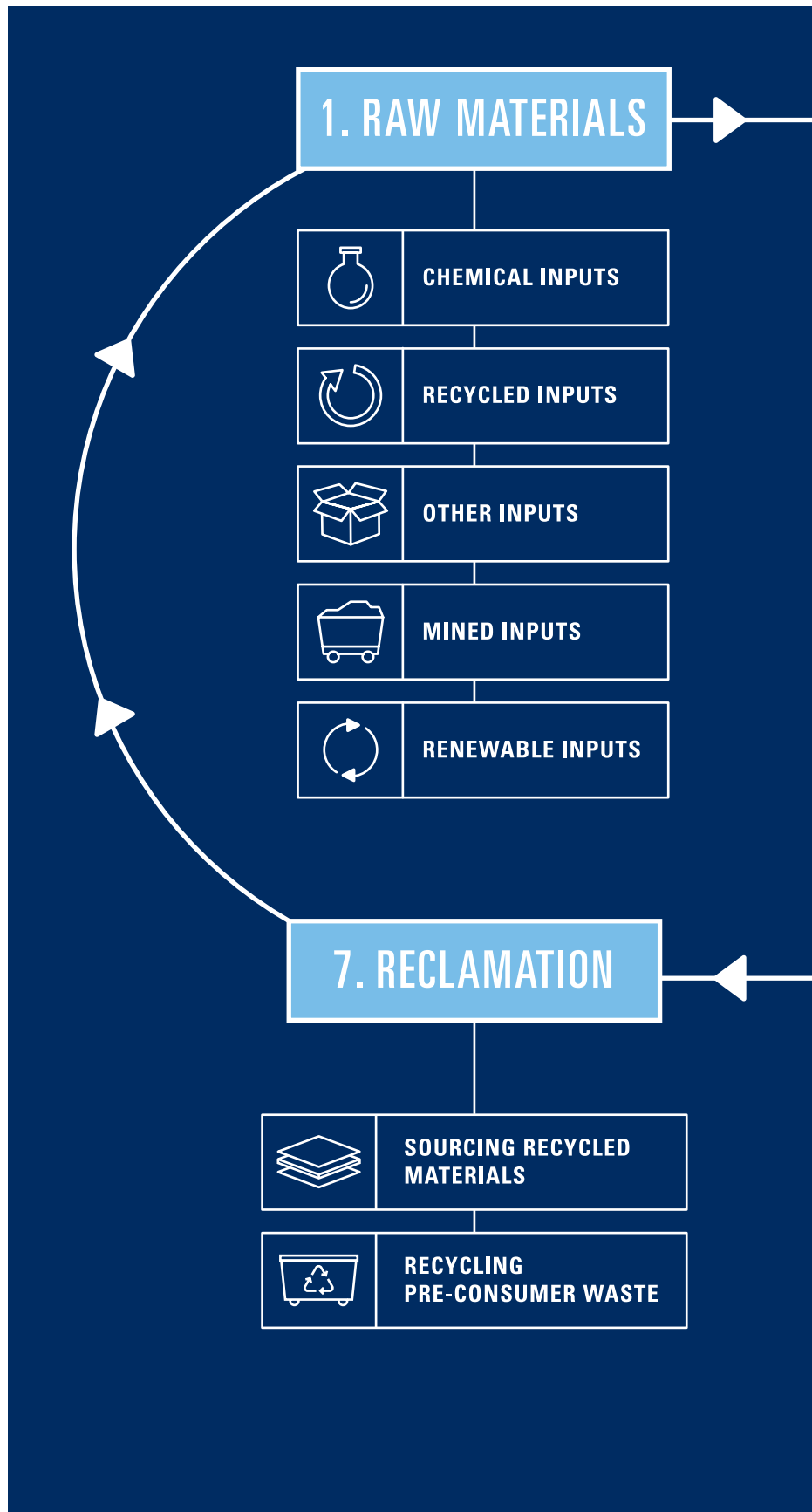


At JM, focusing on our supply chain is essential to sustainability and profitability. As the Supplier of Choice, we make it our goal to deliver the JM Experience every day through our procurement practices, ensuring that both customers and suppliers have exceptional interactions with us. Putting the spotlight on our supply chain helps us achieve cost savings while delivering high-quality, high-value products to our customers. The result is more accurate forecasting of product demand and better inventory management.

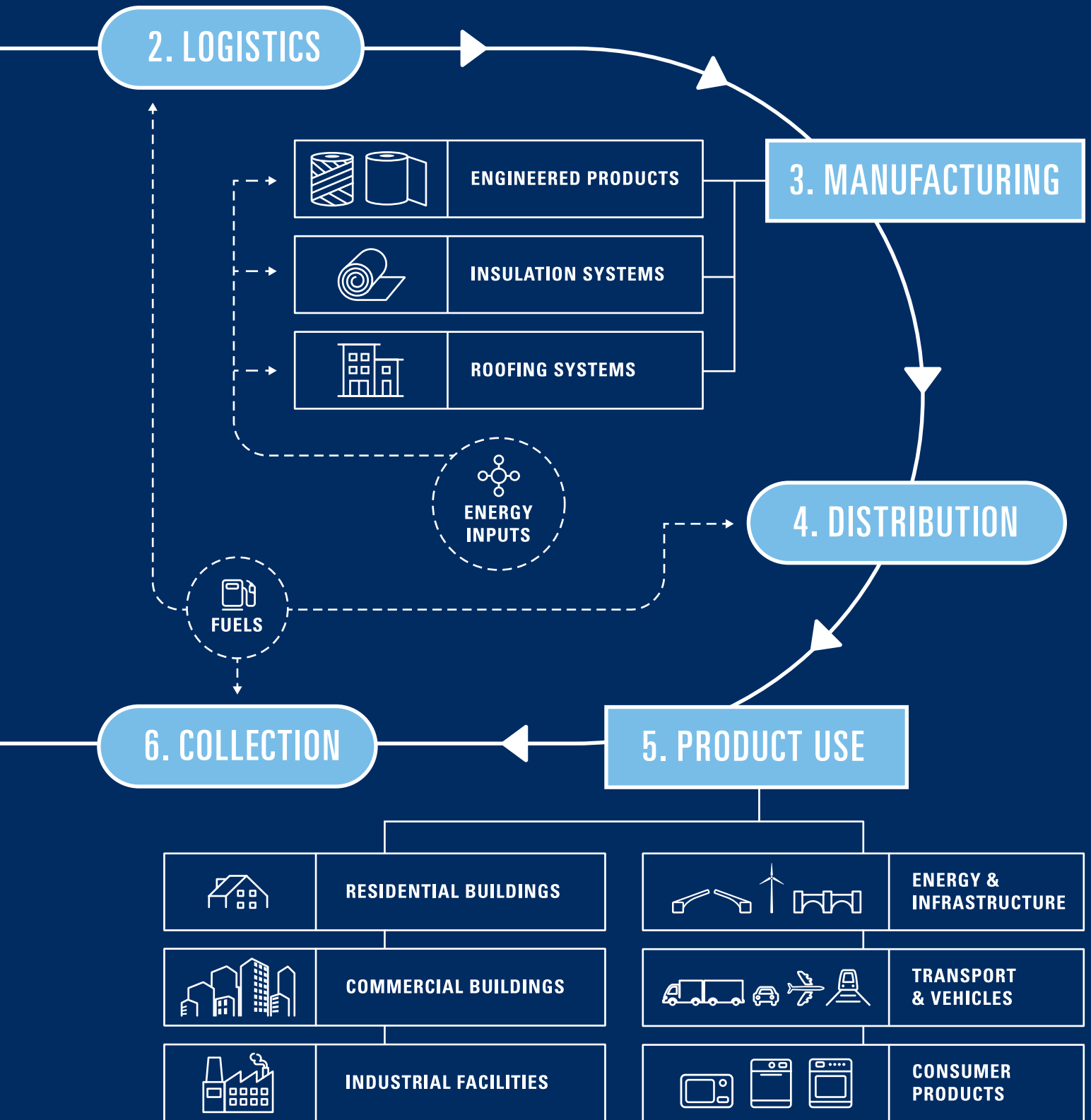
JM's supply chain is far-reaching. Management of it involves each one of our businesses and every one of our partners. We procure over **XX,XXX** materials and technical products from nearly **XX,XXX** suppliers worldwide and transport thousands of products to customers all over the globe. Each year, JM spends over \$1.8 billion purchasing materials, goods and services on 3 continents. These goods include sand, soda ash, borates, chemicals, recycled glass cullet and renewable carbohydrate-derived binders used to manufacture premium-quality building materials and specialty products.

Our supply chain team works to optimize, refine and minimize our carbon footprint. JM aims to reduce miles traveled whenever possible and takes advantage of advancements in intermodal transportation. We competitively bid local suppliers within a manufacturing plant's geographic area. In 2019, JM sourced approximately **XX** % of its global spend locally.¹ Going forward, JM will work to take the water content out of inbound raw materials to greatly reduce the number of pounds shipped, which will reduce energy and fuel consumption and lower costs. We also obtain numerous services from suppliers such as utility providers. JM partners with an energy management firm to achieve a stable, cost-effective operational energy program to power our plants.

At JM, we prioritize quality control and have high expectations of suppliers, which is backed up by our supplier audit program. We audit all major suppliers to ensure they're operating within legal limits and abide by agreed-upon contractual requirements. When auditing for compliance, we are especially vigilant when it comes to environmental, ethical and human rights issues. We also ensure that suppliers comply with JM's Code of Conduct. JM customers and stakeholders should have the peace of mind in knowing we manage operations and supply chain activities in a manner that supports economic growth, respects nature and positively contributes to social wellbeing.



¹ JM defines local as "in country" based on "order-from address of supplier."



GOVERNANCE

In 2001, JM became a privately held subsidiary of Berkshire Hathaway. We are proud to be part of the Berkshire Hathaway family of companies, which means we need to conduct business in the best way possible guided by our strong values — People, Passion, Perform and Protect. Our core values create the ethos of all we do, the JM Experience, which drives our commitment to creating powerful experiences for all of our stakeholders.

Building strength year after year while fortifying the JM reputation involves a dedicated team, effective leadership and a strong governance structure. JM is lead by Chairman, President & CEO Mary Rhinehart. As CEO, Mary Rhinehart leads the company and evaluates the performance of her direct reports. Her reports include the heads of JM business units and functional areas. Upholding economic, social and environmental policies and maintaining positive outcomes in these areas are criteria for success. JM's CEO reports to Greg Abel, Vice Chairman of Berkshire Hathaway.

JM's Chairman, President & CEO; Chief Financial Officer; and General Counsel make up JM's board of directors.

The board of directors regularly interact with their counterparts at Berkshire Hathaway. Two-thirds of the governing board are women and none are associated with any other protected class. The board directly oversees risk management, finance and accounting, operations, human resources and sustainability.

JM's talented executive team works to oversee JM's purpose, values, overarching business strategies and company policies. This includes economic, environmental and social priorities. JM's Sustainability Council oversees the company's sustainability practices, sets sustainability goals and monitors progress so that JM may achieve performance targets. The Sustainability Council is chaired by the Senior Vice President and Chief Technology Officer, Tim Swales. Joining him are the heads of JM's three businesses, along with key managers from different functional areas.

JM's Sustainability Report Committee meets throughout the year to ensure high-quality, transparent reporting. This cross-functional team is responsible for understanding progress towards JM goals and targets while overseeing all aspects of the reporting process, including the materiality assessment and implementation of GRI Standards to develop this JM Sustainability Report.

IDENTIFYING & SELECTING STAKEHOLDERS

It is important that we engage internal and external JM stakeholders and understand their unique perspectives. Engaging stakeholders provides substantial business benefits beyond just sustainability. Stakeholder insights help us to operate more effectively, forecast market conditions, deliver on customer needs and mitigate risk so that communities across the globe welcome our business and the jobs it creates.

JM's Sustainability Report Committee, a cross-functional team of JM employees, identifies stakeholders and prioritizes stakeholder-generated topics as part of the sustainability reporting process. In-depth discussions take place involving team members from diverse functions and job roles in order to fully assess various points of view. Findings from these discussions are reviewed by JM's executive team, board and Sustainability Council. JM actively monitors industry-specific information from peers, subject matter experts, as well as international organizations such as GRI, the Sustainability Accounting Standards Board and the United Nations. In an effort to inform sustainability strategy and bolster inclusivity, JM strives to refine engagement methods and broaden the conversation when and where possible.

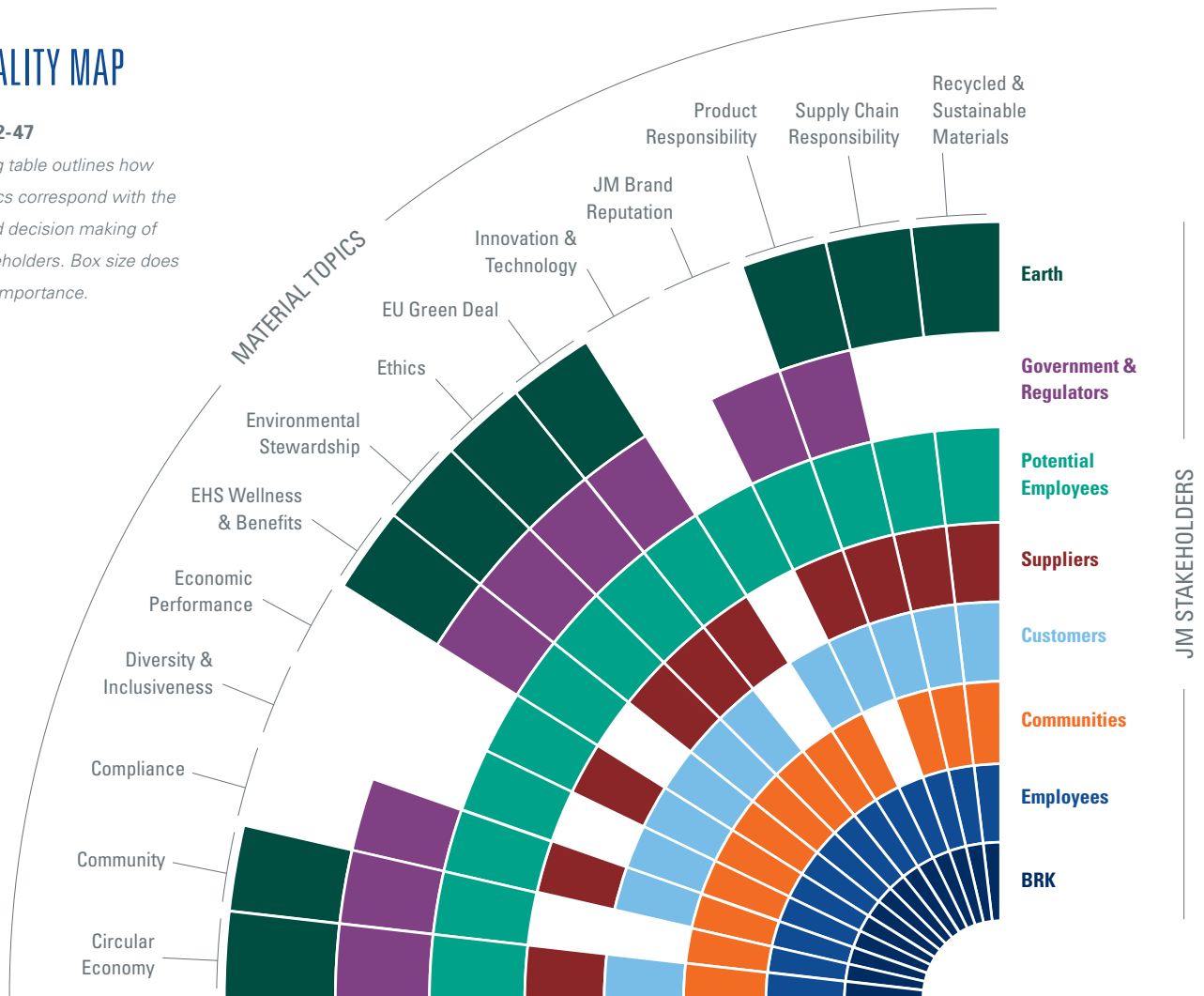
STAKEHOLDER ENGAGEMENT TYPES

- Berkshire Hathaway Ethics and Compliance Hotline
- ISO Certifications
- Conferences, events, industry trade associations
- JM's Code of Conduct
- Corporate sponsorships, volunteer projects, open house events and community update meetings
- JM Connection
- Design, manufacturing and distribution activities
- JM website
- Emails, telephone calls, mailings, newsletters
- JM Sustainability Report
- Employee and customer marketing communications materials
- Quarterly and annual meetings
- Regulatory inspections/compliance activities
- Social media
- Surveys, audits and inspections
- Training, education and development programs

MATERIALITY MAP

102-44, 102-47

The following table outlines how material topics correspond with the concerns and decision making of key JM stakeholders. Box size does not indicate importance.



To remain vibrant and agile, JM must adapt to an ever-changing world while also remaining steadfast to our values, commitments and responsibilities as a company. Our materiality assessment helps us determine our economic, environmental and social impacts as well as account for changes in both our business and its influence on stakeholder decision making. Through this process, we gain enhanced clarity which informs our strategy as well as our sustainability efforts. We also identify topics important to key groups and develop a pathway to address these topics now and into the future.

In 2019, our materiality assessment considered a range of topics derived from stakeholder input as well as source information. Sources of information included:

- Previous materiality exercises and findings;
- Insights from industry and Berkshire Hathaway company peers;
- In-depth discussion with cross-functional internal stakeholders;

- Insights from employees who regularly engage with external stakeholders;
- Sustainability reporting standards and guidance.

During the materiality assessment, quantitative and qualitative tools were used to rank and prioritize material topics. Finalizing the materiality assessment involved JM’s cross-functional Sustainability Report Committee, Sustainability Council and Senior Leadership Team. The teams reported material topics relating to specific GRI standards and corresponding topics to add perspective on sustainability impacts, corporate culture and our value system. The 2019 materiality assessment provided new perspectives and considerations from the previous year. However, no significant changes were made to the report’s scope as a result. 102-49 JM is dedicated to consistent improvement, therefore any restatements or data adjustments were made to enhance accuracy and are disclosed as footnotes throughout the report. 102-48



PEOPLE

THE HEART OF JM

At JM, our 8,000 employees are at the core of everything we do today, as well as tomorrow. Competition for top talent is fierce, and we have always sought to attract the best workers across all sectors of the company. Once they become part of the JM family, we champion our employees to ensure they have the tools, training and support they need to be successful. We also encourage collaboration, strong engagement in workplace practices and we fully support work/life balance. We focus on safety and protection to keep our employees healthy and happy. Our workers' unique skills help foster safe and inclusive work environments which has helped JM earn the title Employer of Choice. Ultimately, our employees ensure we can consistently deliver the JM Experience to our customers every day.



HEALTH AND SAFETY IMPROVEMENTS IN MILAN, OHIO

Our JM plant in Milan, Ohio is a leader in health and safety improvements. Over the past two years, they have met multiple health and safety goals while fully documenting them so other facilities may replicate their success. Their initiative involved the entire workforce: staff members, supervisors and hourly employees. Team members cooperated and shared in functions such as planning, organizing and developing strategies to manage change in several areas: noise reduction, respirable crystalline silica exposure and ergonomics.

WORKPLACE NOISE REDUCTION

The Milan facility implemented two noise reduction projects in 2018 that resulted in significant decibel decreases and a safer and more productive environment for workers. The first project involved the site's pellet vacuum system. Milan installed a mechanical framework to accommodate EPDM, as an initial project and then acoustical panels to reduce facility noise levels. The second project involved a wide dusting hydraulic unit pump: a mechanical framework was installed to accommodate acoustical panels. Noise emanating from equipment prior to the improvements ranged from 91 – 93 decibels; After the improvements, noise levels ranged from 76 – 81 decibels.

FOCUS ON ERGONOMICS: DRAMATIC REDUCTION IN RISK

In 2018 and 2019, the Milan facility embarked on 13 projects to increase worker safety, reduce stress and prevent injury through workplace ergonomic improvements. Two examples of ergonomic projects that resulted in dramatic decrease in risk for workers include the Tugger and Roll Pusher projects.

At Milan, workers pull EPDM sheets for processing. Sheets weigh between 1,580 and 1,855 pounds and were initially pulled by workers without mechanical assistance. When plant leaders added the first Tugger, it significantly reduced employee force and exertion when processing. The addition of the second Tugger virtually eliminated ergonomic strains associated with this task.

Before the Milan plant invested in a product called the Roll Pusher, workers literally kicked out enormous and very heavy sheets of EPDM. With the Roll Pusher, workers simply “walk behind” tugs that can be maneuvered even in tight, difficult spaces.

Potential risks were scored for workers before and after these innovative tools were introduced. The results were dramatic. The Tugger took the potential risk scoring from 17 to 7. The Roll Pusher took the potential risk scoring from 26 to 7!



PROTECTING WORKERS: CRYSTALLINE SILICA

When OSHA introduced the crystalline silica standard, the Milan facility worked diligently to reach the proposed permissible exposure limit (PEL) and action limit (AL) under the new standard. Staff members determined that mechanical updates, workplace controls and potential material substitution were the best paths to meet their goals.

- The site first engaged in housekeeping improvements; the next phase included “plugging” the holes. With the help of employees and their analysis of machines, Milan determined where process and equipment improvements could be made.
- Workers discovered that some processes created dust related issues. They found that changing different mechanisms, such as a door latch, could make the equipment more effective at dust collection. Hence, physical enclosures for the site's dust collector recycle area and the dusting agent supersack station were installed as controls.
- Lastly, the facility completed numerous trials, using several dusting agents in hopes of finding a substitute for their current 4-K MICA. Discovering a lower crystalline silica content alternative was the preferred method to eliminate potential workplace exposure. As a result of these trials, Milan found a viable alternative: 250L MICA which contains between 2-5% crystalline silica. It has proven effective in both production and controlling employee exposure to respirable crystalline silica.

FIVE TIPS FOR A SAFE WORKPLACE

Believe it or not, the JM plant in Etowah, Tennessee recorded more than one million hours worked without a recordable safety incident! Considering that every day in the U.S. there are more than 7,000 work injuries, Etowah's record is truly incredible. Their success can be summed up in Five Tips for a Safe Workplace from Plant Manager Karen T. Barrios.

- 1 Safety is our priority:** Make safety issues a top priority in your plant. Safety should be constantly at the forefront of everything you do.
- 2 Culture:** With daily safety meetings, employee involvement, communication and risk assessments, we create an environment that will ensure that not only our leaders, but also our employees are aware of security issues.
- 3 Involvement:** Listen to your employees for safety concerns and improvement ideas. Safety professionals will help in handling the suggestions. Don't accept "that's the way it's always been" as a solution. Ask all of your teams, "how can we make the plant safer? What tools do you need to perform your job safely?"
- 4 Celebrate:** If you have achieved progress in your plant's safety, celebrate! Let everyone know that you care about their safety, and that it's worth the effort.
- 5 Don't stop!** Concern for safety is ongoing. It never stops. We can improve every day. Even when we achieve milestones, another safety target lies ahead—ultimately zero incidents for much more than one million hours.

WILLOWS IMPROVES TRAINING, REDUCES ACCIDENTS

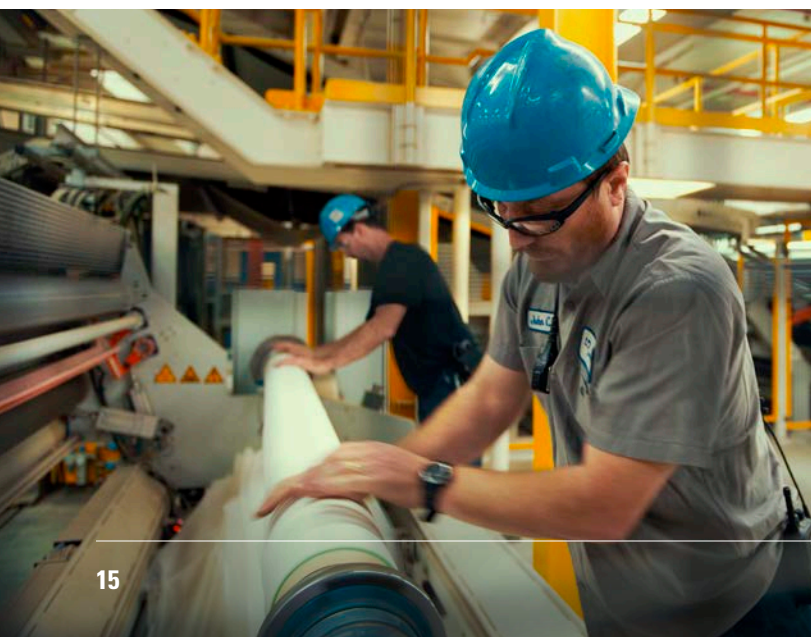
With mobile equipment incidents on the rise within the Willows, California plant, JM plant leadership decided to focus on training. Tawni Smith, warehouse chief backup, and the mobile equipment committee, developed a new training program using some of the training practices of other JM plants, most notably, the McPherson plant's program.

They expanded the training protocol from a brief one- to two-hour curriculum to a multi-day program that includes eight hours of classroom time and requires experience in a newly designed mobile equipment obstacle course. They also developed a training checklist (see below) and a requirement to log 40 hours of operating time in order to become a fully qualified operator. At the end of each training day, each trainee receives a written report outlining the trainee's progress along with a summary of the course content. As more workers complete the new training regimen, the Willows plant expects to see a significant reduction in mobile equipment incidents and injuries.

DRAMATIC SAFETY IMPROVEMENTS IN FERNLEY, NEVADA

Over the past few years, the roofing systems plant in Fernley, Nevada achieved a dramatic reduction in injuries. They took their Total Case Injury Rate (TCIR) and Days Away/Restricted or Transfer (DART) rate from a high of 5.97 in 2015 to zero in 2017! And in 2018, the plant celebrated 21 months of continuing to be injury free as a result of multiple initiatives, including:

- An enhanced a culture of safety,
- Peer-to-peer positive reinforcement,
- Improved instruction about the use of harnesses,
- New fall protection initiatives,
- Improved ergonomic practices via the use of a HumanTech system,
- New monitors and cameras to help improve safety in shipping and tarping,
- Workers serving as safety monitors to implement a new program using "Upset Condition Collaborative Safety Interaction" (CSI) cards.

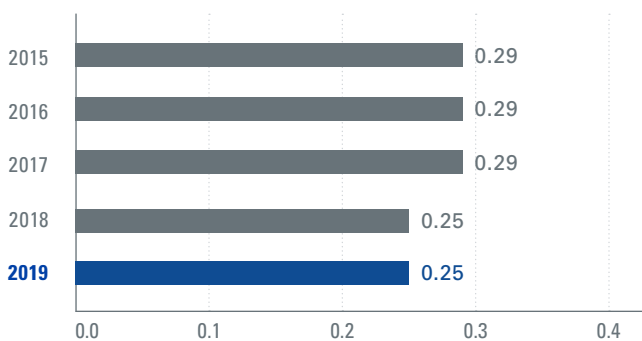




JM LOCATIONS WITH AT LEAST 1 MILLION HOURS WORKED WITHOUT A LOST TIME INCIDENT.¹

LOCATION	NUMBERS
JM Corporate Headquarters	9,861,142
JM Technology Center	3,444,570
Tucson	2,437,086
Bremen	2,356,762
Innisfail	2,120,032
Berlin	1,562,067
Etowah	1,495,843
Winder	1,343,464
Bobingen	1,229,975
Milan	1,184,632
Defiance 8	1,060,653

LOST TIME INCIDENT RATE¹



TRAINING FOR PEOPLE

THE SOURCE

In January of 2018, Johns Manville launched the Source, an innovative online resource designed to help professionals in the mechanical, HVAC and industrial insulation industries stay up-to-speed on the latest information. A resource built specifically to aid in professional development, the Source houses JM’s webinars, product specifications, blogs and more.

JM ACADEMY

2019 marked the 11th year that JM provided a two-day, in-person training opportunity and conference called the JM Academy, which attracted JM employees from around the world. The venue was in Paris, France and the topic was the Change Mindset. The conference featured keynote presentations from Cyriel Kortleven and Jamie Anderson on the topics of the change mindset and strategic innovation. In its 11 years of operation, the JM Academy has trained 8,000 employees and plans to continue this training in the years to come.

¹ Lost Time Rate: Number of incidents involving workdays beyond the day of injury or onset of illness that the employee was away from work because of an occupational injury or illness, per 200,000 work hours.)

JM SAFETY METRICS — 2019¹

Temp = Temporary Employee

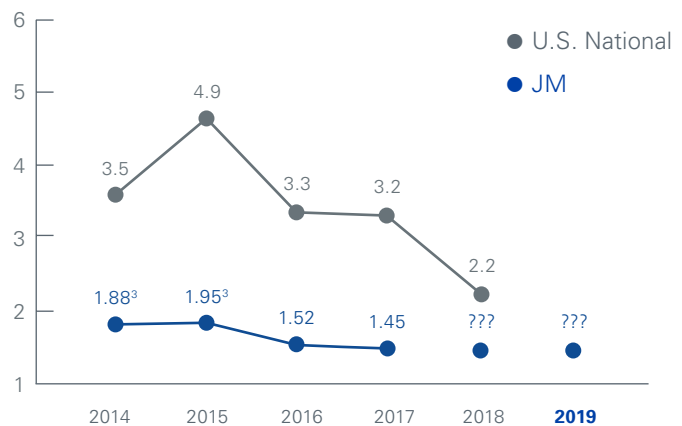
Note: Outliers with higher than average incident rates are a result of the JM population in those regions working significantly fewer hours than the other population groups. Most of these outliers are seen within our contingent workforce populations.

Country	Person Group	Gender	Total OSHA Recordable Rate ¹	OSHA Recordable Injuries Rates	OSHA Occupational Illness Case Rates	OSHA Lost Day Injuries Case Rates	Fatality Case Rates
Canada	Employee	M	4.00		0.00	0.00	0.00
Germany	Employee	M	8.00		0.00	2.00	0.00
Slovakia	Employee	F	2.00		0.00	0.00	0.00
		M	6.00		0.00	1.00	0.00
U.S.	Employee	F	8.00		0.00	2.00	0.00
		M	63.00		2.00	16.00	0.00
	Temp	F	1.00		0.00	0.00	0.00
		M	1.00		0.00	0.00	0.00
Total JM			?		?	?	?

With the certification of our Plattsburgh, NY plant, 12 JM North American facilities have now been certified through OSHA's Voluntary Protection Program (VPP) status. VPP status requires the implementation of safety and health management systems as well as maintaining injury and illness rates below national Bureau of Labor Statistics averages.

PLANT NAME	YEAR FIRST AWARDED
Tucson, AZ	2007
McPherson, KS	2007
Macon, GA	2007
Willows, CA	2008
Jacksonville, FL	2008
Richland, MS	2010
Fernley, NV	2010
Lewiston, ME	2012
Scottsboro, AL	2013
Richmond, VA	2015
Belgrade, MT	2016
Plattsburgh, NY	2019
Spartanburg, SC	Applied in 2017

JM TOTAL OSHA INCIDENT RATES¹ VS U.S. NATIONAL RATES^{2,3}



Note: Outliers with higher than average incident rates are a result of the JM population in those regions working significantly fewer hours than the other population groups. Most of these outliers are seen within our contingent workforce populations.

¹ Occupational Safety and Health Administration, a U.S. agency charged with the enforcement of safety and health legislation. Total Case Incident Rate (TCIR): Number of injuries and illnesses x 200,000/employee hours worked.

² Bureau of Labor Statistics (BLS) Rate using NAICS Code 32799. 2019 data not available.

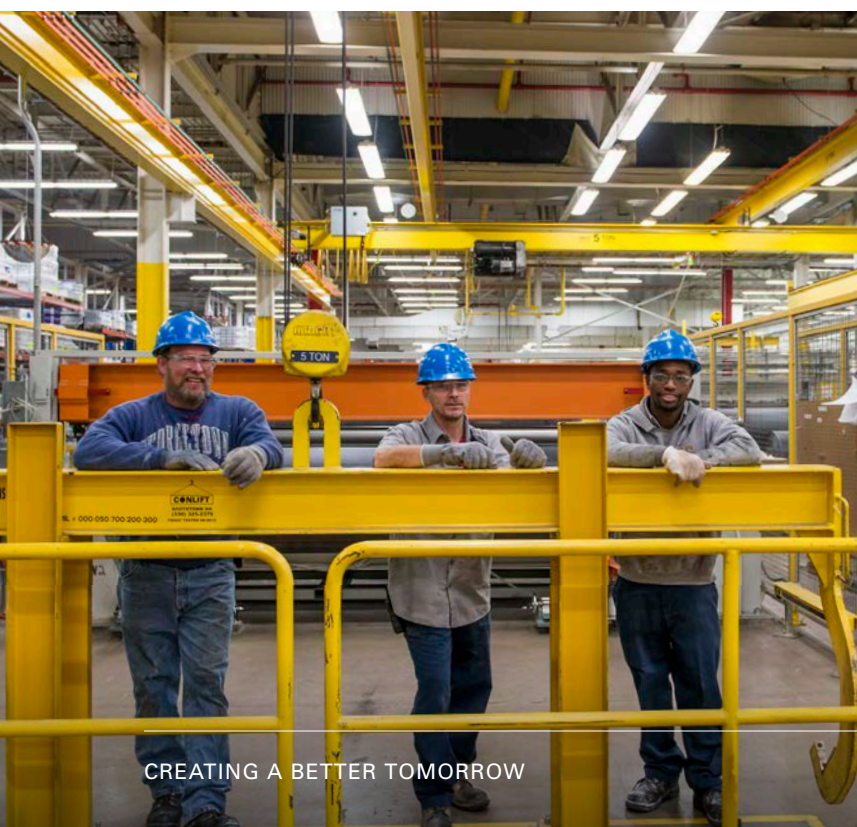
³ Years 2014–2015 include data from an acquired subsidiary with higher incident rates than JM's historical rates.

DIVERSITY AT JM

We believe an inclusive and diverse workforce strengthens us as a company. We welcome individuals from all demographics to be part of our team regardless of race, national origin, color, ethnicity, gender, religion, age, disability, sexual orientation, gender identity or veteran status. Ultimately, we aspire to have a workforce that is a representative snapshot of society overall, supported by our Equal Employment, Diversity in the Workplace, Anti-Retaliation Policy.

Building an inclusive, high-performing culture requires hiring the best talent for the job as well as training, mentoring and developing employees. We are always innovating and developing our employees through ongoing feedback channels as well as formal and informal mentoring networks. These practices have resulted in the promotion of more women to top business and manufacturing leadership roles. Going forward, we aim to increase the percentage of all manager positions filled by women and boost the rates of racial and ethnic diversity in our managerial positions.

The growth of the nation's urban population drives JM to focus on recruitment and retention in our many rural locations. Moreover, our aging workforce in Germany, Slovakia and the United States pose challenges we must address with the development of new workers, including welcoming the talent of immigrants into our labor pool.



HUMAN RIGHTS

JM supports the tenants and principles of the United Nations Global Compact regarding the protection of human rights, the environment, labor and corruption. Our human rights policy, noted under the California Transparency in Supply Chains Act of 2010, states that JM will not knowingly engage a supplier that directly, or indirectly through a third party, employs illegal child, forced or compulsory labor in any way. Once again in 2018-2019, there were (no or **XX**) incidents reported or legal actions taken regarding child or forced labor.

JM demonstrates its support for human rights in our daily operations by:

- Providing safe and healthy working conditions for employees and contractors;
- Ensuring non-discrimination in personnel practices;
- Providing decent work and producing quality products that improve lives;
- Adhering to the highest standards of ethical behavior in our business conduct, activities and relationships;
- Conforming to environmental, health and safety standards, as well as applicable labor laws;
- Implementing positive management practices that provide a workplace where employees feel they can work with leadership to find mutual solutions;
- Recognizing third parties' rights to represent our employees, where applicable, and dealing with elected representatives in a respectful and business-like manner. JM requests sourcing information from suppliers when purchasing raw materials containing 3TG metals. This helps JM disclose to stakeholders when and why we must use conflict minerals in our products. JM's Product Stewardship team also reviews all new products and significant changes to existing products to provide hazard communication, product labeling information and other guidance to customers.

In 2018 and 2019, 62% of our global workforce was represented under collective bargaining agreements. Between 2018-2019, none of JM's operations or suppliers were identified as prohibiting, violating or putting at significant risk the right to exercise freedom of association and collective bargaining.



REDUCING OUR EMISSIONS

Air emissions controls are utilized to reduce and control air emissions in the atmosphere.



IMAGINING A BETTER TOMORROW

JM is committed to innovation and R&D. JM has five technical centers around the globe dedicated to these efforts.



OPTIMIZING POINT A TO POINT B

Intermodal transportation, especially rail, is used to efficiently transport raw materials to manufacturing plants.



SAFETY FIRST. ALWAYS.

Working safely is an expectation at JM both on and off the job. JM has implemented projects and programs aimed at improving ergonomics, reducing noise, eliminating serious injuries.



REDUCING WASTE TO LANDFILL

JM plants recycled a number of different items including iron, used oil, brick, electronics, batteries and tire.



CLOSING THE LOOP WITH RECYCLED MATERIALS

Use of recycled glass continues to grow at JM. From 2018 to 2021, use of recycled glass is predicted to increase by nearly 30,000,000 pounds annually.



INTELLIGENT LIGHTING

To save energy, JM utilizes energy efficient lighting systems set to motion sensors.



MINIMIZING RUNOFF POLLUTION

Impervious surfaces, vegetation, site grading, covers and containment devices, as well as good housekeeping practices help ensure clean stormwater.

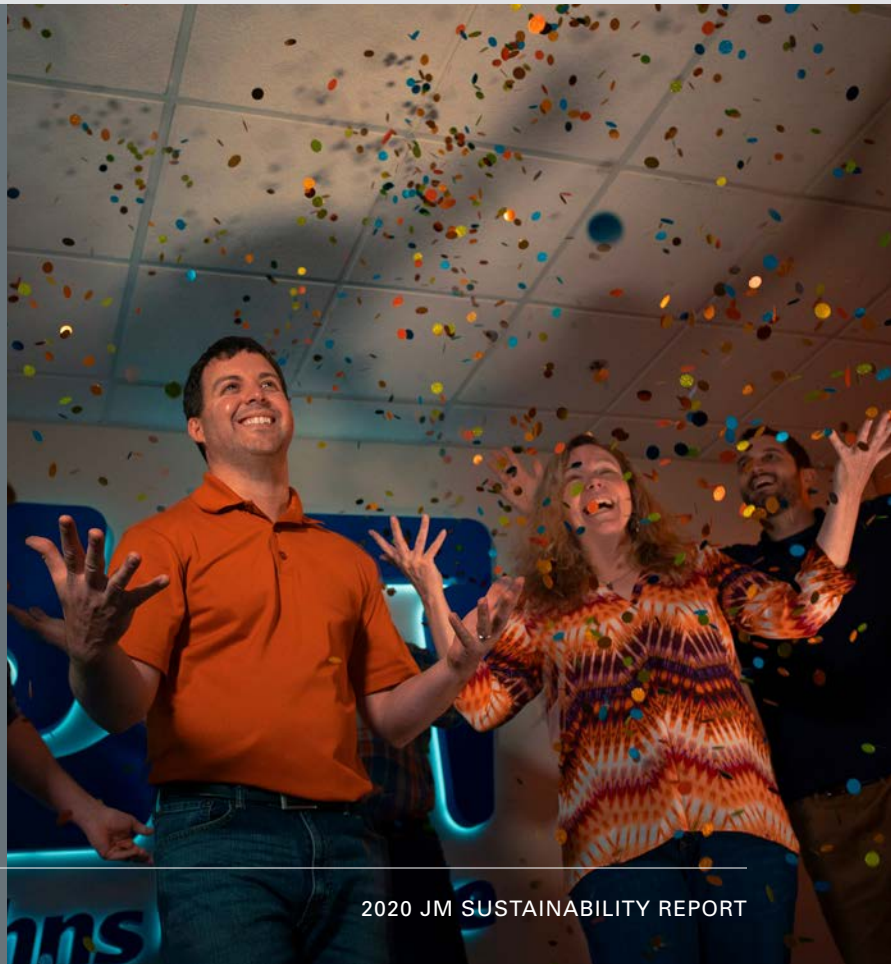
JM Johns Manville



PASSION

THE SPARK OF JM

At JM, we pursue fresh ideas and embrace new approaches to elevate how we work and deliver value. We serve customers in more than 80 countries, supplying innovative products to the construction, aerospace, automotive, filtration and energy industries. Whether we show our passion through volunteerism in the communities where we work and live; dedication to our industry and the professional organizations that advance our work; or commitment to our employee value proposition (which articulates the attributes and benefits that employees receive in exchange for their work), JM goes the extra mile.





PASSION FOR OUR INDUSTRY:

BOB WAMBOLDT SERVES AS PRESIDENT OF NAIMA

JM has long been a leader in the insulation industry. NAIMA, the North American Insulation Manufacturers Association, is the recognized voice of the insulation industry, bringing together North American manufacturers of fiberglass and mineral wool insulation products. Bob Wamboldt is JM's president of Insulation Systems and in 2019 was elected president of NAIMA. JM is proud to support NAIMA in its work of leveraging insulation expertise to educate and empower homeowners and professionals to make informed insulation choices. NAIMA's mission is to enable a more comfortable, energy efficient and sustainable future through insulation.

NAIMA and JM share a commitment to building for longevity while conserving the environment," says Wamboldt. "The use of existing energy-efficiency technologies, such as insulation, are fundamental to sustainable development. Manufacturers of fiberglass and rock and slag wool insulation are actively engaged in efforts to reduce emissions, demand for natural resources and energy use at the manufacturing plants. These reductions are realized through improvements in energy efficiency (maximized insulation usage), more efficient melting technologies, reductions in actual emissions through control technologies and greater reliance on recycled materials and renewable raw materials."

PASSION FOR OUR COMMUNITIES:

GLOBAL COMMUNITY DAY

Lots of companies like to tout their volunteerism. But at JM, a passion to volunteer weaves itself through the corporation, from bottom to top, throughout the communities where JM operates around the world. In the fall of 2018, JM employees launched Global Community Day as part of an employee-driven Corporate Social Responsibility program. In one day, nearly half of the company's 7,600 employees worldwide participated in more than 50 local events and activities. The following year, JM employees sponsored their second Global Community Day, again attracting thousands of individual volunteers, while earning the Communitas Award from the Association of Marketing and Communication Professionals.

Giving back to the communities in which they work and live is something JM employees do all year long and on an increasingly frequent basis. The company has seen a 69% increase in the number of volunteers and a 78% increase in the number of volunteer hours since 2014. In 2018 alone, JM logged over 15,000 volunteer hours by over 5,500 volunteers who helped with nearly 300 community outreach projects.

Though the first Global Community Day was a huge success, the next year's event saw significant growth. The number of projects grew from 49 to 77 (a 57% increase) and the number of hours each volunteer dedicated also grew by 31%.

In the Denver area, where Johns Manville is headquartered, employees observed Global Community Day by working at local homeless shelters; serving lunch at the Ronald McDonald House; volunteering at the Denver Botanical Gardens and the Seniors' Resource Center; sending care packages to the troops overseas; participating in a Habitat for Humanity build and volunteering with other organizations. Two of the largest activities were separate bike builds with Denver-based Wish for Wheels, a nonprofit organization that gives new bicycles and helmets to kids in low-income communities.

At plant locations around the world, employees hosted a charity kickball tournament; volunteered at animal shelters; adopted streets and picked up trash; conducted food and clothing drives; delivered Meals on Wheels; collected new and fun bed sheets for pediatric oncology patients; provided landscaping services and more.

"Our employees understand the value of getting involved in the areas where we live and work," said JM CEO Mary Rhinehart. "Our commitment to Corporate Social Responsibility — which includes volunteerism, financial support and in-kind donations — helps build stronger communities and creates a positive company culture. It is just one of the ways we deliver a positive JM Experience to those around us."

JM WOMEN HELP LEAD NATIONAL ROOFING ASSOCIATION



The National Women in Roofing (NWIR) is a volunteer-based organization that supports and advances the careers of women roofing professionals. In 2018, the NWIR elected its board of directors, which included JM's Director of Sales Jennifer Ford Smith as Secretary of the Board. JM's Product Manager Melissa Walker was elected Vice Chair of the Mentorship Committee. The board is made up of women leaders from all sectors of the roofing industry nationwide.

The NWIR provides networking, mentoring, education and recruitment opportunities from the rooftop to the boardroom, for the young professional at the start of her career to the seasoned manager in the executive suite. Its mission is to connect, train and empower women to develop leadership skills. By supporting and promoting the contributions of women in roofing, the NWIR will advance the roofing industry to a new level of excellence.

PASSION FOR FRESH IDEAS

ETOWAH PLANT

The Engineered Products Plant in Etowah, Tennessee took on a project to rebuild their 3304 furnace to make it more energy and cost efficient [WHAT WAS THE GOAL OF THE REBUILD??] The project demonstrated Etowah's diligence, attention to detail and cross-functional teamwork, which ultimately led to outstanding results. The 3304 furnace is essential in the creation of global products for reinforced thermoplastic composites used to create lightweight parts for the automotive industry.[FACT CHECK]

The team delivered a successful furnace rebuild in a safe environment. The project included more than 260,000 hours, came in under budget and minimized what could have been a 25-day schedule weather and soil condition delay to only 10 days. In addition, the team persevered through numerous challenges such as late steel deliveries and poor electrical subcontractor performance.

Etowah took the challenges in stride as it rebuilt the furnace, which now performs at a superior level. Etowah's furnace rebuild project demonstrates the team's passion to improve at all levels and exemplifies their drive to work toward creating innovative solutions in the future.



PASSION FOR OUR EMPLOYEES

At JM, we are always working to strengthen our position as an Employer of Choice. Our efforts to retain our valued workers and attract top talent are crucial given the competitive labor market. As a result, JM has created an Employee Value Proposition (EVP), which includes all the attributes and benefits that employees receive in exchange for their work. Our EVP message complements the JM Experience along with our core values, and it focuses on what employees value most about working at JM:

- Opportunity to Grow
- Supportive Environment
- Stability and Innovation
- Pride in Products

MEETING THE INSULATION NEEDS OF AN EVOLVING INDUSTRY

In 2018 and 2019, changing markets and evolving building codes inspired JM to add more production capacity to its insulation manufacturing facilities. According to research from the Freedonia Group:

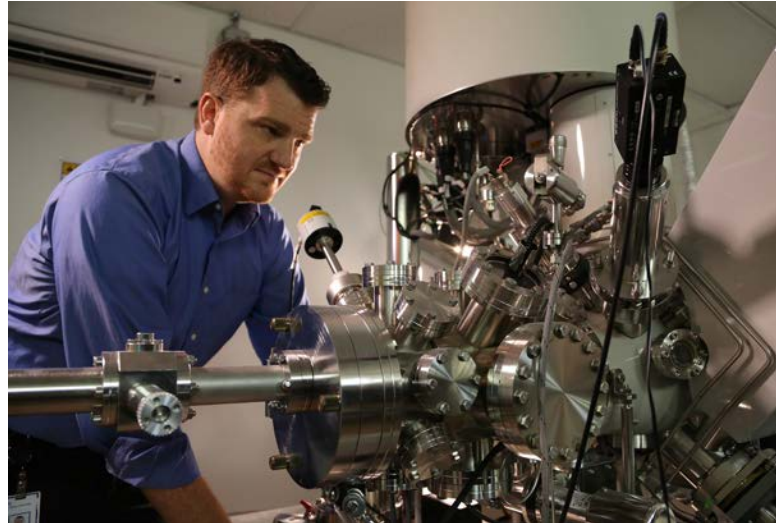
- Many states are adopting the more recent International Energy Conservation Code (IECC) mandates, which call for nearly 30% more insulation in new housing construction than before;
- Builders, along with the general public, want to increase the energy efficiency of existing structures, which will help grow JM insulation product segments;
- The continuing expansion of green building practices should support growth in the U.S. insulation market through 2021.

Therefore, JM decided to reopen a plant in Penbryn, New Jersey in 2019. The company expanded two lines of the plant in Defiance, Ohio in 2019 and in 2020 and are planning to expand the insulation systems plant in McPherson, Kansas in 2021. These expansions will create new jobs in regions eager for them, increase production in overall insulation pounds and add additional post-consumer recycled glass beyond the 2018-2019 amount of 170,000 tons, to meet the demands of the evolving market.

At the same time, the use of recycled glass continues to increase at JM, with new production lines implementing recycled glass as one of their glass making raw materials right from start-up. The annual increase in JM recycled glass use attributable to production line startups from 2018-2021 will increase JM's use of recycled glass by nearly 30,000,000 pounds annually.

MAKE YOUR STORY OUR STORY

As part of this project, JM created a new tagline: "Make your story our story". We want current and future employees to know that Johns Manville's rich and successful history exists because of the unique talents and stories that our JM team brings to the table. We believe that our employees' stories matter, and we plan on telling them.

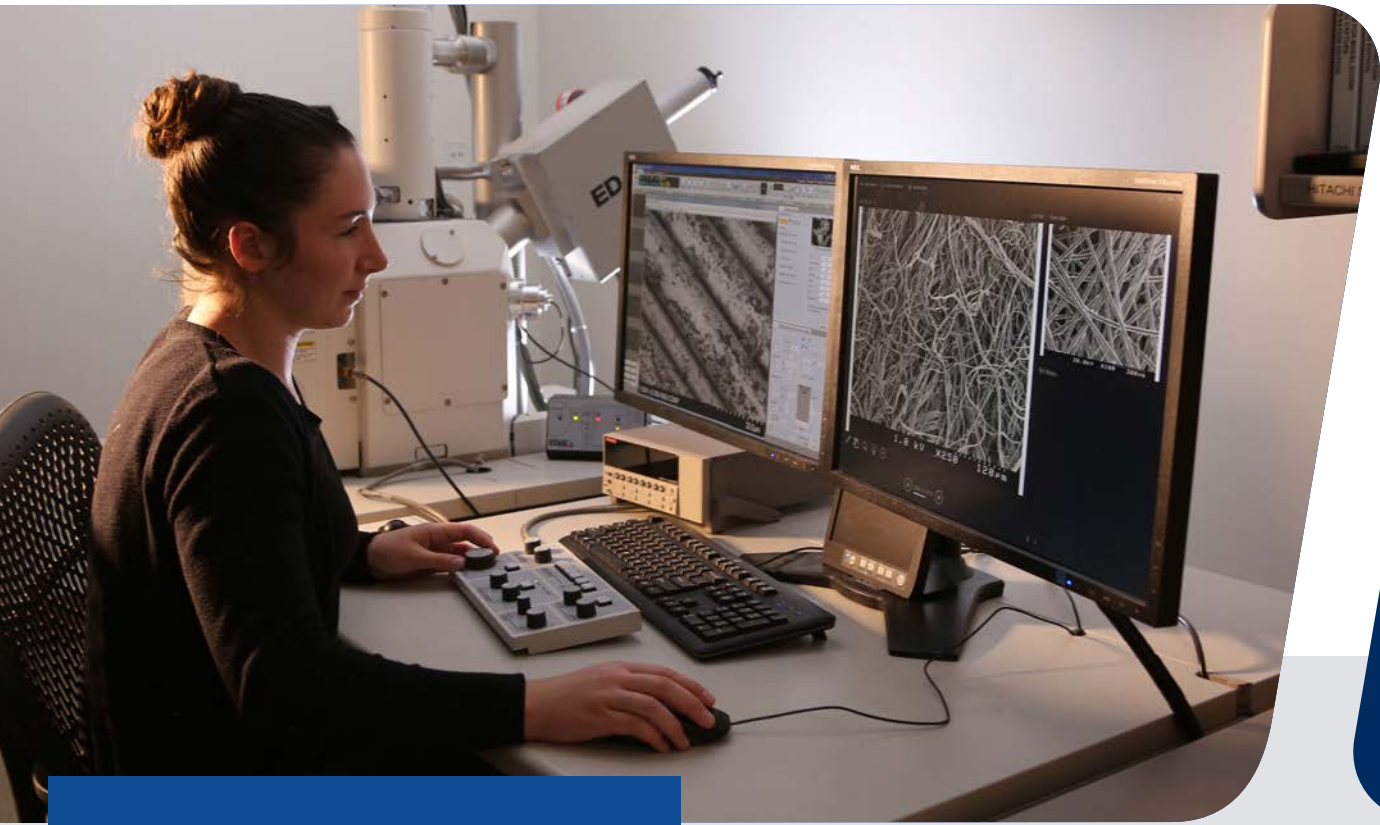


EXPANDING SOLUTIONS IN INDUSTRIAL INSULATION

In late 2019, JM acquired ITW Insulation Systems, a business owned by Illinois Tool Works, Inc., that is well known in the industrial industry for its premium, low-temperature polyisocyanurate foam insulations and metal jacketing solutions. The acquisition represents an important strategic opportunity to offer expanded insulation solutions to the industrial market, giving JM greater versatility and enabling our Insulation Systems business to continue to offer a robust and well-rounded portfolio of insulation solutions.

ITW Insulation Systems employs 100 workers at 4 manufacturing plants in the U.S. and Canada (Houston, Texas; La Porte, Texas; Edmonton, Alberta; and Mississauga, Ontario). The company's primary markets include: refining, petrochemical, power, LNG, food & beverage, oil sands and other energy applications.

"JM's Industrial Insulation business is a market leader, producing the broadest product portfolio of any manufacturer in the industrial insulation industry," said Dave Skelly, General Manager of Performance Materials at JM. "Historically, this has included high-temperature calcium silicate, expanded perlite, mineral wool, microporous blankets and silica aerogel, and now, with the addition of ITW Insulation Systems, our portfolio includes both low-temperature polyisocyanurate foams and metal jacketing. These additions make our industrial insulation portfolio incredibly robust and allow us to be a single source for our customers' insulation and jacketing needs."



PERFORM

INNOVATION AT JM

At JM, we solve problems for the construction industries that rely on building insulation and roofing systems. We engineer and develop new products and technologies for aerospace, automotive and transportation, filtration, commercial interiors, waterproofing and wind energy industries. Whether patenting exciting new innovations or developing tailor-made solutions, each new product begins with a keen understanding of the market's needs, concerns and challenges. Our commitment to sustainability drives innovation. It motivates us to seek new ways to optimize our portfolio of offerings, strengthen our building science leadership position and continuously improve our ability to manufacture specialty products. In other words, we aim to meet the unique needs of our customers while contributing to the health of our planet and our communities wherever possible.



ORGANOSHEETS: A GAME CHANGING APPLICATION FOR LIGHTWEIGHTING

In 2018, JM introduced a new proprietary technology at Fakuma, the international trade fair for plastics processing. The product is called organosheets and it is used to make super light-weight yet strong components in cars.

“We are proud of our new suite of technologies that enable us to produce these sheets of highly reinforced nylon to make structural components for cars, such as seats or brake pedals — ultimately creating greater energy efficiency, improved safety and enhanced performance,” said Senior Vice President and Chief Technology Officer Tim Swales.

The OS-6 series of nylon 6-based organosheets are an ideal structural reinforcement solution for lightweight parts. They are suitable for high throughput manufacturing processes, such as injection overmolding and compression molding. They meet short cycle-time requirements suitable for automotive applications.

This proprietary technology enables the control of fiber content in composites and offers design flexibility for specific applications by incorporating the desired fiber orientations into fabrics with various weaving architecture.

JM’s expertise in glass fiber manufacturing, an in-depth understanding of fiber-polymer interfaces, led to the development of this pioneering manufacturing technology which is covered by multiple U.S. and foreign patents.

The company is building a large pilot line in the U.S. to demonstrate its capacity to make organosheets in larger quantities worldwide. “This is just one example of JM focusing our efforts on a game-changing application that will benefit people, the planet and will ultimately enhance our profit,” Swales said.

INNOVATION FOR GOOD: LEAF SPRINGS

Car manufacturers constantly strive to design lighter weight vehicles by replacing heavy metal parts with new, innovative components. In partnership with German plastics manufacturing company Krauss Maffei, JM helped to innovate a new leaf springs suspension system for automobiles. These leaf springs are made of composites. JM’s StarRov(r) glass fibers are one of the primary building blocks of these composite leaf springs.

Composite leaf springs are 30% lighter than steel. They are thin and compact, cost efficient, durable and stress resistant. They are made in quick production cycles and, perhaps most importantly, they provide the vehicle with excellent driving performance. In addition, the strength of the leaf springs can be deliberately increased in sections where it is required. The corrosion resistance of the products offers further added value.

Originally, leaf springs were manufactured from steel or aluminum. However, steel is heavy and aluminum consumes a lot of energy during production. Fiber-reinforced plastics (composites) meet all mechanical requirements for leaf springs and are lightweight, weather resistant and rust-proof.

JM’s contribution to leaf springs is just one more example of the company’s commitment to sustainability-driven innovation and performance.



INSULATION PRODUCTS ENHANCE ENERGY EFFICIENCY, THERMAL PERFORMANCE

NEW R-VALUE CERTIFICATION FOR JM INSULATION PRODUCTS

In 2019, Johns Manville announced that its fiberglass batt and narrow roll insulation products received the NAIMA R-Value Certification, offering third-party verification of JM's thermal performance.

NAIMA developed this new program to demonstrate that fiberglass products perform at their labeled R-Value. Performance verification gives the fiberglass insulation market the credibility necessary to champion policies that advance energy efficiency.

All materials receiving the R-Value Certification from NAIMA have been tested by an independent, third-party laboratory and meet the thermal performance required by the FTC. As per the FTC requirements, materials are tested using a standardized test method designed by ASTM International, an organization that establishes internationally recognized test methods and standards. Using the ASTM test method allows the FTC to standardize how the materials are measured for performance.

JM's Product Manager for batts and rolls Mandy Schweitzer said the certification methodology ensures the materials that achieve certification are performing as required. "At JM, we strive to produce excellent products that meet customer specifications and performance requirements," Schweitzer said. "The new R-value Certification allows us to send that message to our customers and consumers through a well-organized certification program."

NEW JM PRODUCT ENHANCES FIRE PROTECTION

In 2019, Johns Manville CladStone™ Water & Fire Block was included in a new wall system specifically designed to meet requirements for achieving the National Fire Protection Association's NFPA 285, a commercial wall assembly fire test.

The new Fusion™ 285 wall system is the first of its kind nationwide to meet the NFPA requirement, which evaluates the flame propagation characteristics of an exterior, non-load-bearing wall assembly, or in other terms, will delay the spread of fire in a building.

The wall system is designed to meet goals in safety and fire protection and is approved for use in commercial construction projects, types I through IV for buildings higher than 59 feet.

JM CladStone was included due to its noncombustible and exceptional fire resistance properties. The product is a continuous insulation mineral wool product, specifically manufactured for superior performance in cavity wall and rainscreen applications. Made from basalt, a volcanic rock, this premium mineral wool product allows for the effective drainage of water from an exterior wall cavity system, while offering thermal efficiency and acoustical performance.



NOVEL ROOFING INSULATION PRODUCT IMPROVES R-VALUE

JM's line of polyiso insulation products have long addressed R-value requirements to meet the needs of builders. Recently, JM unveiled a new product, the Protector HD (high-density) cover board, which improves upon the performance of past roofing systems. Its grade-one compressive strength, closed-cell foam core (80 psi minimum, up to 110 psi) and inorganic coated glass facers provide excellent resistance against harsh rooftop conditions. Moreover, the Protector HD is extremely lightweight, resulting in easy handling with installation and transportation efficiencies, including lower freight costs and less energy and fuel usage. It has a higher R-value than wood fiber or gypsum. It is moisture and mold resistant, and its strength provides resistance to wind, uplift, hail, moisture or puncturing.



EMPLOYEE PERFORMANCE

JM is able to perform at a superior level because we continuously invest in the development of our employees. We set a 2020 Employee Development Goal to deliver a 5% increase in average employee training hours over a 2015 baseline. Part of this goal included ensuring that salaried employees of at least six months have documented development plans in place.

PROGRESS: JM continues to emphasize employee training at all levels and locations. Our performance management philosophy supports these efforts company-wide with a focus on accountability, ongoing conversations and effective feedback. In addition, JM remains committed to ensuring that all salaried employees have documented development plans in place.

As JM strives to be the Employer of Choice, we continually look for ways to enhance employee engagement. We do this by ensuring our people processes effectively serve their purpose. In the past, our performance management program emphasized

process rigor and accountability with scheduled performance reviews. However, we found that day-to-day interactions with forward-focused development discussions were much more successful. With this in mind, JM rolled out an updated program with comprehensive training modules that underscore the benefits of frequent employee-manager dialogue.

One example of an initiative that enables employees to excel is our Frontline Leadership Program. Now implemented within our plants in North America and Slovakia, the program offers training modules designed to expand the skill sets of facility managers and supervisors. Initiatives like these not only prepare employees for increasing levels of responsibility, they help improve morale by reinforcing best practices and fostering increased communication.



PROTECT

THE FOUNDATION OF JM

Fundamentally, JM products protect. Insulation and roofing systems shield us from the elements and keep us comfortable inside. And because insulation and roofing systems promote energy efficiency, we are able to reduce our overall carbon footprint. According to a study by Energy Conservation Management, Inc., a typical pound of insulation saves 12 times as much energy in its first year in place as the energy used to produce it. Over its lifetime, one pound of insulation saves hundreds of times the energy used to make it. JM also protects the environment through innovative engineered products. We engage in environmental protection through sustainable practices in our manufacturing processes, waste reduction and protection of our natural resources. Moreover, we are mindful about preventing pollution and minimizing the impact of our operations. With a focus on protection, we are creating a better tomorrow.

ENVIRONMENTAL COMPLIANCE

JM operates with a firm dedication to operating our business in compliance with all environmental regulations. We take a precautionary approach to help ensure that we comply with environmental laws and regulations while considering the environmental challenges today and in the future. From 2018 to 2019, JM did not have any significant monetary penalties for noncompliance with environmental regulations. The total sum of penalties paid over both years were well below JM's defined significance levels. JM did have four notices of violation per year in 2018 and 2019 respectively. When such instances occur we respond quickly to resolve issues and inform ongoing improvements in our environmental compliance efforts. Continuous improvement in our environmental management programs is an integral part of our business strategy.

REDUCING WASTE TO LANDFILL

Reducing waste is an essential way to protect our planet. Our Macon, GA roofing systems facility is leading the way to reduce the waste that goes into nearby landfills.

In 2017, the Macon plant sent an average of 188,912 pounds of waste to landfill each month, which totaled more than 2.2 million pounds of waste to landfill. However, In January of 2018, the Macon plant began recycling all waste sand and granules, and asphalt scrap. They already recycled metal, cardboard, cardboard cores, shrink wrap and large bulk bags. Recycling the additional waste streams helped the plant lower its waste-to-landfill amounts to less than 80,000 pounds per month!

In April of 2018, the facility began sending all waste, which was not already being recycled locally, to a waste-to-energy facility that combusts waste to produce electricity. In August of 2018, the Macon plant reached its waste reduction goal of sending zero pounds of waste to the landfill. Since August 2018, the plant only sent waste to a landfill during one month. The amount totaled 7,880 pounds.

BELGRADE ENVIRONMENTAL EXCELLENCE

At the insulation systems plant in Belgrade, Montana, a simple change to the flow of water in its closed cell heat exchanger resulted in an enormous reduction of water use.

Before plant managers made this change, cooling water would pass through the top of the exchanger and gravity would force the water to feed out the bottom, with little to no dwell time. Belgrade leaders proposed to reverse the water flow to enter the heat exchanger on the bottom of the unit in order to increase dwell time and reduce fresh water usage.

The results were dramatic. The change:

- Reduced water use by 1,150,000 gallons per year (equivalent to 68,604 showers at 8 minutes each). The water saved equaled the amount of water needed to fill Belgrade's water tower 2 times over;
- Increased heat exchanger efficiency 60%;
- Will save an estimated \$34,000 over 10 years from a one-time investment of \$1,300.



INNOVATIVE PRACTICES: RECYCLING GLASSFIBER MAT WASTE

The Engineered Products Group (EPG), one of JM's three strategic business units, produces glass fibers, glass fiber nonwoven, polyester spunbond, meltblown and glass fiber wall coverings. The EPG Wertheim, Germany plant recently found that disposing of glassfiber mat waste was getting more and more difficult, so they began exploring alternative outlets to recycle it.

The solution involved a partnership with a waste management company that provides the cement industry with the sand it needs as a raw material. The company takes Wertheim's waste streams and mixes, grinds and ships them to the cement industry where the streams are fed into ovens to produce cement. In the ovens, the binder serves as a fuel and provides heat for the process, the remaining glass serves as an alternative raw material for sand. As such, 100% of the glassfiber mat waste is recycled!

At first, the team faced a major hurdle: The partner company could not accept and handle the large mat rolls. So the plant tested several methods to slice the rolls down to an acceptable size. A conveyor then transports the sliced roles to a shredder. The shredded material is pneumatically transported to a bunker, where it is pressed into bales. JM made its first shipment in November 2018. Since then, Wertheim ships on a regular basis, approximately 50 tons per week, to the waste management company, which amounts to 80% of the material waste generated.

When waste was sent to landfill, it remained waste. In thermal recovery, the organic content (typically 20%) was burned and the glassfiber fraction (typically 80%) was left over as a waste. Today, Wertheim's new process results in zero waste!

PROTECTING THE PLANET, SAVING MONEY IN INNISFAIL FACILITY

At the insulation systems facility in Innisfail, Alberta in Canada, leaders have been experimenting with ways to improve performance while protecting workers and the environment. For several years, high waste and periodic downtime of machinery were problems the plant wanted to solve. In 2012 facility management addressed these issues by installing a Delorco Separator as well as a dust refeed system which took the waste from approximately 50 metric tons per year to about 2 metric tons per year. After installing the new separator, facility managers were satisfied that the dust collectors were operating as designed. However, in 2016 they started looking at maintenance costs on the equipment and wondered if they could improve.

Innisfail discovered a solution: A new type of pulse valve called the MAC. Each MAC valve uses an adapter plate. So, no piping changes were required to test the valves. The unique spool design of these valves offers reliability of up to 10 million cycles vs diaphragm valves at approximately one million cycles. The design also allows for a quicker and stronger 'high impact force' as well as a quicker seating of the valve. These result in a more efficient use of compressed air to clean the socks. This allows for significantly reduced cleaning cycles (valve pulses) substantially reducing compressed air usage while increasing sock life.

The compressed air savings and reduced maintenance costs, combined with the increased life expectancy of the socks makes the conversion to MAC valves very attractive. Perhaps most importantly the conversion decreased environmental risks associated with valve failure.

With the benefits seen in the Climate Pro Cold End Dust Collectors, plant managers are evaluating other potential areas where they could apply this technology.

INNOVATIVE EXAMPLES OF PROTECTING OUR ENVIRONMENT

The Trnava, Slovakia facility recently invested in a glass recycling unit to reduce landfill waste by the end of 2020. Facility leadership analyzed several recycling unit options. They decided to base the new recycling unit on a thermal and mechanical solution superior for its sustainability. The investment is in line with the EU's 7th Environmental Action Program and its aims to: reduce the amount of waste generated; maximize recycling and re-use; limit incineration to non-recyclable materials; and phase out landfilling for recyclable and recoverable waste. In addition, Trnava is proud to report that its CO2 emissions are 30% lower than the EU manufacturing average overall.

The Milan, Ohio roofing systems plant embarked on a project to reduce by 50% the amount of Zinc Oxide used in the manufacture of rubber pellets. Milan tracked its usage of zinc oxide during 2019 and has thus far reduced zinc oxide used in JM 14 formulation from 9.5 pounds per batch to 4.75 pounds per batch (50%), resulting in 168,881 lbs. less zinc oxide used.

The Lewison, Maine roofing systems plant changed its lighting systems to save energy and money. In April 2019, they spent \$2,487 to change 352 bulbs in 88 fixtures from T5 Fluorescent to T5 LED. From May through November, the reduction in electric consumption went from 93,480 KWH to 72,000 KWH — a 23% reduction. They have saved approximately \$3,200 since the install. Plant managers project an annualized savings of 35,984 KWH and \$6,026.

The Engineered Products plant in Waterville, Ohio is developing a cellulose-based alternative to standard packaging. Currently, their products are baled using polyethylene, which is then removed and disposed of at customer sites. The new paper packaging won't need to be removed separately: The entire JM product will be consumed within the customer process, providing time and labor benefits as well as employee safety. Best of all, the packaging will not generate waste. The product is in final stages of development and hopefully will be in use by the end of 2020!



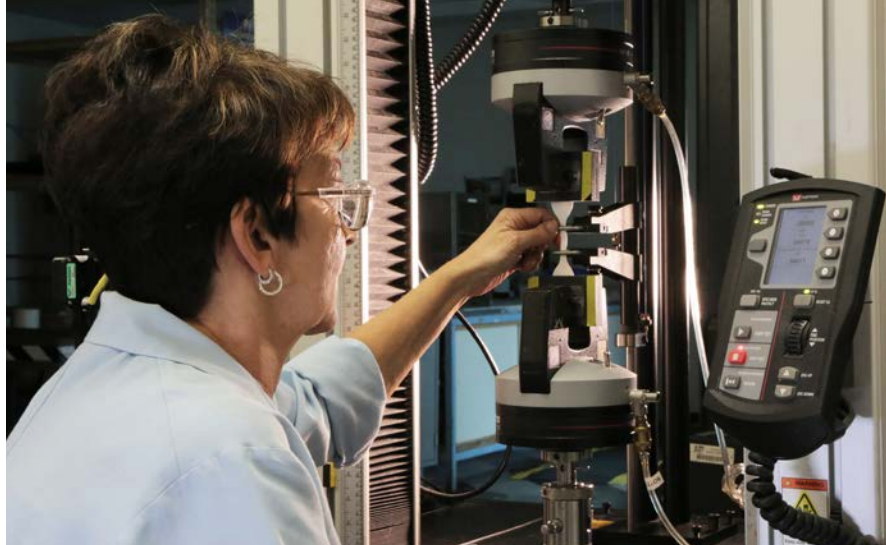
EMISSIONS

Emissions are a result of transforming raw materials into valuable products that improve people’s lives. Topics like climate change and minimizing environmental impacts are always a concern. While discussion around these topics is often complex, at JM we remain diligent in our efforts to explore new ways of tracking and managing emissions in order to do good as a business. JM has adopted ISO 14001 standards in our Environmental Management Systems (EMS) which consider a variety of topics including air pollution, climate change mitigation and efficient use of resources. This includes the use of control mechanisms designed to manage and reduce air emissions into the atmosphere. As of 2019, all JM North American and European plants have EMS embedded.

SCOTTSBORO RECYCLING PROGRAM

JM’s Roofing Systems plant in Scottsboro, Alabama holds certifications for its environmental record (ISO 14000) and health and safety history (VPP). (ISO 14000 is a family of standards related to environmental management. The VPP is an OSHA initiative that encourages private industry to prevent workplace injuries and illnesses.)

Recycling is essential at Scottsboro. In 2018, the plant produced 88.8 million pounds of finished goods and averaged 1.95 pounds of waste per ton of finished goods produced. In 2019, it produced 110 million pounds of finished goods and averaged 2.56 pound of waste per ton of finished goods produced. These numbers are a direct result of internally recycling edge trim in the form of flakes. It also recycles scrap TPO (single ply roofing membrane) in the form of flakes and pellets. Through the scrap TPO recycling process, in 2018-2019, Scottsboro sent 10.3 million pounds of TPO to be recycled and re-used, which resulted in over 10 million pounds of material being diverted from landfill. That same year, it sent more than 1.5 million pounds of recyclable materials to be re-used, which generated over \$25,000 for JM and prevented 1.5 million pounds of waste from entering landfills.



NON-GHG REGULATED AIR EMISSIONS BY POLLUTANT CATEGORY^{1,2,3,4}

Air Emissions in Kg

AIR EMISSIONS	2016	2017	2018
Carbon Monoxide	4,960,000	5,198,000	4,700,000
Nitrous Oxides	918,000	992,000	940,000
Lead	685	139	139
Particulate Matter	1,956,000	1,882,000	1,813,000
Sulfur Dioxides	399,000	442,000	398,000
Volatile Organic Compounds	886,000	993,000	1,051,000
Total Criteria Pollutant Emissions:	9,123,000	9,509,000	8,904,000
Total Hazardous Air Pollutants (HAP) Emissions:	244,000	293,000	306,000

TOTAL DIRECT AND INDIRECT GREENHOUSE GAS EMISSIONS⁵

Tonnes (metric) CO₂

SOURCE	2017	2018	2019
Direct	659,432	657,691	624,132
Indirect	1,081,014	835,762	854,498
Total	1,740,446	1,493,453	1,478,630

¹ 2018 Air Emissions and HAP data is the latest available. 2019, 2020 data will be reported in the 2022 JM Sustainability Report.

² Data provided in earlier reports may differ from this report due to the implementation of more accurate measurement methodology.

³ Air emissions include emissions reported to regulatory agencies and monitored as required by permit.

⁴ VOC data reported only for North American facilities.

⁵ Energy and emissions data collected by multiple internal sources. All data is approximate and based on available data at the time of publication. 2 GHG and direct and indirect energy (electric) calculations based on EPA’s Emissions & Generation Resource Integrated Database (eGRID) default emission factors. eGRID uses primary fuel mixtures by region. Emission calculations also based on The Climate Registry’s 2013 Default Emission Factors, Table 14.2 and the U.S. Department of Energy Information Administration Form EIA-1605 (2007) Foreign Electricity Emission Factors, 1999-2002.

ENERGY EFFICIENCY

Efficiency is key to operating a thriving manufacturing company. This includes efficient use of energy to power our facilities. At JM we approach energy efficiency with an eye on continual improvement. For example, we have invested in creating a new, more energy efficient nonwoven mat production line in our Waterville, OH plant. Not only will this contribute to a smaller energy footprint, but it also produces end-use products used in energy storage. We have also implemented energy management systems (EnMS) adhering to ISO 50001 in five manufacturing facilities across Germany, and continue to be an EPA ENERGY STAR® Partner.

CONSERVING WATER

Water is a precious resource to be valued and conserved. Compared to other industries, JM's manufacturing processes are not water-intensive. Yet water is still crucial to the operation of our production lines: We use water to cool equipment; Approximately 95% of non-potable water evaporates in the manufacturing process; 5% is recirculated throughout the system, minimizing discharge to wastewater treatment systems.

In working to fulfill our 2020 water sustainability goal, we conducted an extensive survey to understand water supply sources and determine if any might be vulnerable. Next, we determined what options exist to remedy the vulnerabilities. We found that over 90% of our water use comes from municipal water sources. The rest is supplied by underground wells. Though many of our plants are located in water-rich regions, supply and demand issues, weather and water quality are always a concern — not only from a business but also a community perspective. In the near future, we will evaluate our strategy and approach to water use as we develop our next-generation of sustainability goals.

2019 DIRECT VERSUS INDIRECT ENERGY

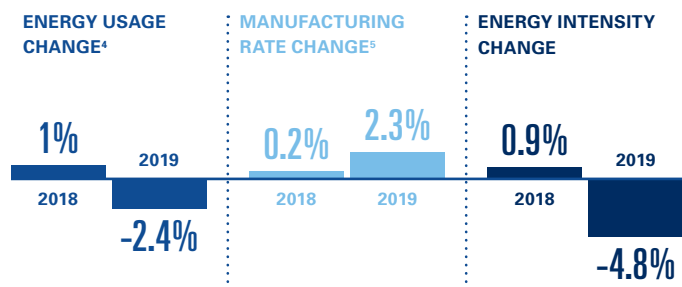


TOTAL DIRECT AND INDIRECT ENERGY CONSUMPTION^{1,2}

In gigajoules³

Direct	2017	2018	2019
Coke	147,035	172,849	160,640
LPG	189	10	29
Natural Gas	11,280,582	11,231,104	10,658,109
Total Direct	11,427,806	11,403,962	10,818,777
Indirect	2017	2018	2019
Electricity	6,188,004	6,406,618	6,572,808
Total Indirect	6,188,004	6,406,618	6,572,808
TOTAL	17,615,810	17,810,580	17,391,585

PRODUCTIVITY VERSUS ENERGY OVERVIEW



¹ Energy and emissions data collected by multiple internal sources. All data is approximate and based on available data at the time of publication.

² GHG and direct and indirect energy (electric) calculations based on EPA's Emissions & Generation Resource Integrated Database (eGRID) default emission factors. eGRID uses primary fuel mixtures by region. Emission calculations also based on The Climate Registry's 2013 Default Emission Factors, Table 14.2 and the U.S. Department of Energy Information Administration Form EIA-1605 (2007) Foreign Electricity Emission Factors, 1999-2002.

³ One gigajoule is equal to approximately 278 kilowatt hours of electricity or 26 cubic meters of natural gas.

⁴ Energy Usage Change: the annual change in total direct and indirect energy consumption.

⁵ Manufacturing Rate Change: the annual change in total manufacturing production volume.

ACHIEVEMENTS & RECOGNITION

AWARDS

"Best Conversion to AD Supplier HVAC" Award, Affiliated Distributors (AD)

Colorado Environmental Leadership Program, Gold Leader

Communitas Excellence in Community Service Award, JM Global Community Day 2018

German Stevie® Gold Award for Protection & Safety

Insulate America, Inc. Supplier of the Year

Kansas Department of Public Health and Environment Pollution Prevention Award, McPherson, Kansas plant.

ALLIANCES AND PARTNERSHIPS

Aachen Center for Integrative Lightweight Production (AZL)

Advanced Energy Economy

The Alliance to Save Energy

American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)

The American Composites Manufacturers Association (ACMA)

Asphalt Roofing Manufacturers Association (ARMA)

Association of the Nonwovens Fabrics Industry (INDA)

ASTM International

California Efficiency and Demand Management Council (CEDMC)

Center for Environmental Innovation in Roofing (CEIR)

Center for the Polyurethanes Industry, American Chemistry Council (CPI)

Conservation Colorado

Cool Roof Rating Council (CRRCC)

Construction Specifications Institute (CSI)

European Alliance for Thermoplastic Composites (EATC)

Electricity Consumers Resource Council (ELCON)

EPDM Roofing Association (ERA)

European Nonwovens Association (EDANA)

European Pultrusion Association (EPTA)

Federation of Reinforced Plastics (AVK) in Germany

Foam Sheathing Committee

Glass Alliance Europe, the European Alliance of Glass Industries

Occupational Safety & Health Administration Voluntary Protection Program STAR status — 11 JM U.S. manufacturing facilities

Partner of Choice, David Weekley Homes

Honorable Mention, PR Daily Corporate Social Responsibility Awards, JM Global Community Day 2018

Strategic Supplier Awards, Distribution International Plants

Theodore H. Brodie Distinguished Safety Award, National Insulation Association

2017 N.B. Handy Supplier of the Year Award

Glass Manufacturing Industry Council (GMIC)

GlassFibreEurope, the European Glass Fiber Producers Association

Heating, Air-conditioning & Refrigeration Distributors International

Housing Innovation Alliance

Industrial Energy Consumers of America (IECA)

Institute for Advanced Composites Manufacturing (IACMI)

National Insulation Association (NIA)

National Women in Roofing (NWIR)

North American Insulation Manufacturers Association (NAIMA)

Polyisocyanurate Insulation Manufacturers Association (PIMA)

Reliable Energy Codes Alliance

SMC/BMC Alliance in Europe

Single Ply Roofing Industry (SPRI)

Sheet Metal and Air Conditioning Contractors' National Association (SMACNA)

Southwest Energy Efficiency Project (SWEEP)

Spiral Duct Manufacturers Association (SPIDA)

TECH-FAB Europe

U.S. Department of Energy, Building America Program

U.S. Environmental Protection Agency (EPA) ENERGY STAR Partner

U.S. Environmental Protection Agency (EPA) SmartWay Transport Partner

U.S. Green Building Council (USGBC) Gold Member

APPROVALS

Dade County, Florida Product Approvals

Florida Building Code

FM Global (Factory Mutual)

International Code Council Evaluation Service (ICC-ES) approval for JM's entire line of foam sheathings products

UL (Underwriters Laboratories)

CERTIFICATIONS

CA-1350 VOC Emissions School, Office and Family Residence

Customs-Trade Partnership Against Terrorism (C-TPAT)

DNV GL Class Programme DNVGL-CP-0082 for StarRov 086

ECOLOGO Certification

EPA ENERGY STAR® Partner

ENERGY STAR® Certification for JM's APTM Foil-Faced Sheathing

EPA SmartWay® Certification for JM's carrier fleet in Hazle Township, Pennsylvania

Good Manufacturing Practice for Products for Food Contact Application

GREENGUARD Certifications for numerous fiberglass insulation products

GREENGUARD Gold Certification for JM's entire line of Formaldehyde-free™ fiberglass building insulation

GREENGUARD AND GREENGUARD GOLD JM Corbond III and JM Corbond MCS SPF

GREENGUARD JM Corbond ocx SPF

ISO 9001 Quality Management System

ISO 14001 Environmental Management System — 42 plants total

ISO 50001 Energy Management System — all (four) manufacturing facilities across Germany

SCS Certified Indoor Air Quality — Indoor Advantage Gold + Formaldehyde-free™

SCS Certified — Recycled content for fiberglass insulation products

SCS Certified — U.S. Environmental Protection Agency Region 9 and Alameda County, State of California Specifications for Environmentally Preferable Insulation

UL certification for DuraCore® 300 chopped strands used to reinforce wallboards in the building industry



ORGANIZATIONAL PROFILE

PAGE

102-1	Name of the organization	Cover
102-2	Activities, brands, products, and services	7
102-3	Location of headquarters	7
102-4	Location of operations	8
102-5	Ownership and legal form	7
102-6	Markets served	7
102-7	Scale of the organization	7
102-8	Information on employees and other workers	7
102-9	Supply chain	9–10
102-10	Significant changes to the organization and its supply chain	9–10
102-11	Precautionary Principle or approach	29
102-12	External initiatives	34
102-13	Membership of associations	34

STRATEGY

PAGE

102-14	Statement from senior decision-maker	2
--------	--------------------------------------	---

ETHICS AND INTEGRITY

PAGE

102-16	Values, principles, standards, and norms of behavior	4
--------	--	---

STAKEHOLDER ENGAGEMENT

PAGE

102-40	List of stakeholder groups	11–12
102-41	Collective bargaining agreements	18
102-42	Identifying and selecting stakeholders	11
102-43	Approach to stakeholder engagement	11
102-44	Key topics and concerns raised	12

GOVERNANCE

PAGE

102-18	Governance structure	11
--------	----------------------	----

REPORTING PRACTICE

PAGE

102-45	Entities included in the consolidated financial statements	37
102-46	Defining report content and topic boundaries	37
102-47	List of material topics	12
102-48	Restatements of information	12
102-49	Changes in reporting	12
102-50	Reporting period	37
102-51	Date of most recent report	1
102-52	Reporting cycle	37
102-53	Contact point for questions regarding the report	Back Cover
102-55	GRI content index	35–36
102-56	External assurance	37

MANAGEMENT APPROACH

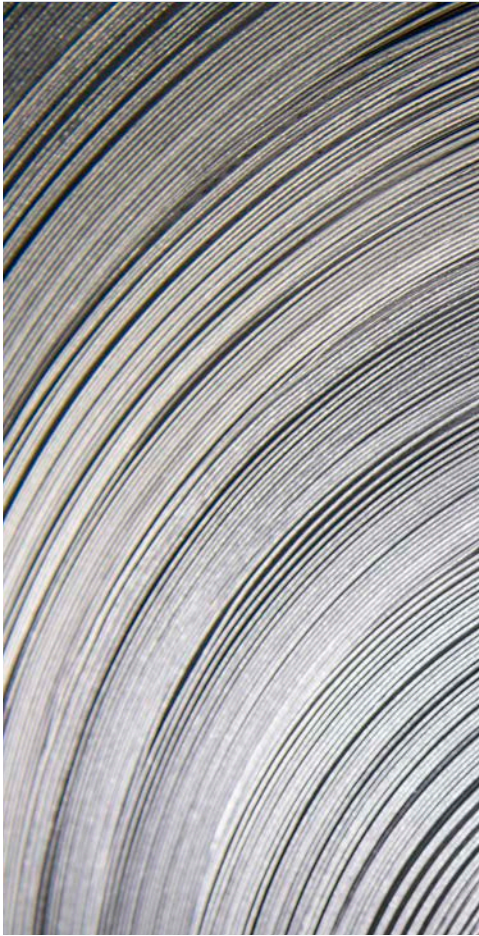
PAGE

103-1	Explanation of the material topic and its Boundary	jm.com/
103-2	The management approach and its components	jm.com/
103-3	Evaluation of the management approach	jm.com/

ECONOMIC TOPICS

PAGE

201-1	Direct economic value generated and distributed	7
202-2	Proportion of senior management hired from the local community	11
204-1	Proportion of spending on local suppliers	9
205-1	Operations assessed for risks related to corruption	18
205-2	Communication and training about anti-corruption policies and procedures	18



ENVIRONMENTAL TOPICS

PAGE

302-1	Energy consumption within the organization	33
302-3	Energy intensity	33
302-4	Reduction of energy consumption	36
305-1	Direct (Scope 1) GHG emissions	32
305-2	Energy indirect (Scope 2) GHG emissions	32
305-3	Other indirect (Scope 3) GHG emissions	33
305-4	GHG emissions intensity	4
305-6	Emissions of ozone-depleting substances (ODS)	32
305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	32
307-1	Non-compliance with environmental laws and regulations	32

SOCIAL TOPICS

PAGE

403-9	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	17
404-1	Average hours of training per year per employee	4
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	18
408-1	Operations and suppliers at significant risk for incidents of child labor	18
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	18
417-1	Requirements for product and service information and labeling	18
419-1	Non-compliance with laws and regulations in the social and economic area	18

ABOUT THIS REPORT

The 2018 / 2019 JM Sustainability Report: Creating a Better Tomorrow is the company's seventh official publication that provides enterprise-wide information on sustainability initiatives, including economic, environmental, community and social impacts.

At JM, we are proud of our record of sustainability and we view our report as a comprehensive resource for stakeholders, employees and the general public. We aim to provide a view into our global operations, corporate culture and key sustainability initiatives. Though our reporting schedule is biennial, we monitor our progress, engage our stakeholders as part of corporate and sustainability programs and track our activity on an ongoing basis each year.

Detailed information on JM's approach to stakeholder engagement and materiality from ongoing stakeholder dialogue is available on pages 11 and 12 of this report. JM's sustainability reports are available on our website at www.jm.com/en/sustainability/.

To ensure that insights from all areas of the business are represented in the report, a cross-functional team of employees oversees and contributes to the reporting process. Team responsibilities include identifying and prioritizing stakeholders; understanding material content for inclusion in the report; and providing economic, environmental and social data aligning to Global Reporting Initiative (GRI) guidelines and performance indicators. 102-46

The content of this publication reflects information and metrics gathered during the reporting period of Jan. 1, 2018 through Dec. 31, 2019. We have included additional company and product information to provide context regarding our business approach and long-standing sustainability efforts. Where JM oversees wholly owned operations and joint ventures, data from these organizations are included in this report. 102-45

This report has been prepared 'in accordance' with the GRI Standards Core option and has undergone review by GRI's Materiality Disclosures Service. GRI is a widely recognized reporting standard for organizations focused on measuring and managing the economic, environmental, social and governance implications of their business. Visit www.globalreporting.org for more information. JM does not currently seek external assurance services for the report and there is no formal internal policy in place requiring such assurance. External assurance options are evaluated and discussed as part of the reporting process.

For a full list of GRI General Standard Disclosures and material topics reported in 2018 and 2019, please refer to the GRI Index found on pages 35 and 36. Disclosures on Management Approach (DMAs) may be found at jm.com.



LOOKING AHEAD: A MESSAGE FROM JM'S CHIEF TECHNOLOGY OFFICER

At JM we understand that sustainability is a journey — one that serves people, planet and profit. It's also a journey that helps our company improve and grow. Throughout this report we feature examples of the many ways JM is working to create a better tomorrow using technological innovation, a commitment to protect our precious natural resources and our dedication to the communities around the world where our employees live and work.

Each of our three core businesses — roofing systems, insulation systems, and engineered products — offer some of the best examples of sustainability that is baked in to our mission. Roofing and insulation fundamentally work to save people money and energy, while reducing our carbon footprint. Engineered products push the envelope of innovation, contributing to industries ranging from healthcare and aerospace. We continue to work toward more sustainable ways of creating our products. For example, JM will use 300 million pounds of recycled glass to make our insulation products in one year alone. As part of our journey, we will continue to educate the public on the role JM has played to make our environments more comfortable, safe and efficient for over 160 years.

We feel gratified with what we've achieved, yet we plan to continue to progress. We are proud that our four values — people, passion, protect and perform — are understood, embraced and lived throughout JM. In the future, we aim to embed sustainability in the JM culture in a similar way. We will redefine our strategy while developing a common language for the company so that sustainability is well understood as a value driver by all employees.

Our Sustainability Leadership Team (SLT) members are already dedicated to this journey. We intend to make sure they are the best educated and most well informed on major sustainability trends and developments. In this way, the SLT will guide the company internally and also make it possible for JM to truly lead our industry in sustainability.

Looking ahead, we will examine the impacts and opportunities surrounding waste as we develop new sustainability goals for 2020 and beyond. Part of this initiative will involve creating and executing a technology road map to meet our goal of reduction in waste to landfill. The roadmap will include technology we use today along with that which has yet to be invented or operationalized throughout the business. Because we have a commitment to, and track record of, embracing new technological advances, we are optimistic about reaching our goals at the end of the roadmap.

At the same time, we will take a systemic perspective of waste throughout our company. How can we re-engineer and optimize



manufacturing systems and processes to produce less waste while accommodating more recycled raw materials? In this way, we will capture more value from our manufacturing processes. We will also embrace a circular economic approach wherever possible.

We will continue to reduce carbon outputs. We understand that our end-market value lies both in the fact that we help reduce energy use through our products but also that we are actively working to reduce direct, indirect and company-related emissions.

Finally, we will put an increased focus on protecting our water. JM already does an excellent job of minimizing water use through closed loop manufacturing processes and meeting or exceeding municipal environmental requirements for clean water. We want to do even better, however, because we assume that water scarcity will only increase. In 2020 and beyond, we will examine our systems to improve our practices in using less water, discharging less and making sure the water we do discharge is even is purer.

It's an exciting time to be leading sustainability efforts at JM. We are always looking for new ways to demonstrate that we are a great asset to our communities and a great asset to the industries we serve. As we renew our commitment to the triple bottom line, we look forward to continuing to make a difference today and for generations to come.

Tim Swales

Senior Vice President and Chief Technology Officer

JOHNS MANVILLE WORLD HEADQUARTERS

717 17th Street, Denver, CO, 80202, USA
+1 303.978.2000 | JM.com

CONTACT INFORMATION

Dr. Tim Swales

Senior Vice President and
Chief Technology Officer at Johns Manville

Holly Leiker

Corporate Communications, Johns Manville

E-mail: Sustainability@jm.com

Phone: + 1 303.978.2000

Printed on 100% post-consumer waste
recycled paper. Please recycle after reading.

© 2020 Johns Manville.
All rights reserved. May 2020.

FSC LOGO

