The 2018-2019 East Penn Sustainability Report contains information from all East Penn Manufacturing Company, Inc. ("East Penn") locations under the company’s consolidated financial control. This includes locations in the U.S. as well as international locations including: East Penn Canada, East Penn International, Ecoul, and MK Battery. Where data or information differ in scope, the scope is clearly noted.

Due to the recent acquisition of Navitas Systems in August 2019, Navitas Systems information is not included in this report.

The reporting period for this report is January 1, 2018 to December 31, 2019. All data is presented on a calendar year basis, with the exception of financial data, which is reported on a fiscal year basis (June 1 to May 31).

This report is East Penn’s second sustainability report. Our first report was published in 2011. No restatements are being made in this report. Going forward, East Penn plans to issue a sustainability report every two years.

CONTACT:
East Penn Manufacturing Company, Inc., Deka Road, Lyon Station, PA 19536
Email: contactus@eastpenn-deka.com    www.eastpennmanufacturing.com/contact

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Our Family History

At East Penn, we power cars, trucks, boats, tractors and forklifts. We power hospitals, businesses, telecoms and military bases in emergencies.

We also power Lives. Careers. Dreams. Communities.

This is what makes our company special – the fusion of what we do and who we are.

East Penn began as a family dream. In 1946, my father, DeLight Breidegam Jr., fresh out of the Air Force, started a battery business with his father, DeLight Sr. They worked out of a small, one-room creamery, in the village of Bowers, Pennsylvania. Through hard work, ingenuity, continual reinvestment and talented people, the company thrived and grew. And continues to thrive and grow.

Over seven remarkable decades of change, our one-room operation evolved into what is now one of the world’s leading battery manufacturers with over 10,500 full-time employees, operations around the world, and hundreds of awards for industry excellence.

What hasn’t changed, though, is the foundation that made us successful from the very beginning: our family-driven values and culture, which embrace everyone’s contributions and encourage employees to achieve their highest potential.

Today, I serve as Chairman of the company. My late sister, Sally Miksiewicz – who served as CEO from 2009 to 2014, and I are the children of East Penn’s founder, DeLight Breidegam, Jr. Sally’s three sons – Dan, Tim and Matt Miksiewicz – are actively employed by the company and Sally’s daughter Katelyn remains involved with the company and family council.

Our beliefs and principles keep us focused on our employees, even in times of change. We have always used change to make us stronger. That says a great deal about the character, integrity, and strength of those who work at East Penn. We will continue to honor our company’s rich history, culture and the employees who made and continue to make us what we are today.

Dan Breidegam, Chairman
DEAR READER

Ever since East Penn began in 1946 rebuilding used batteries in a one-room creamery, we have had a “passion for power,” providing energy storage solutions that play a vital role in our economy and way of life.

Today we operate the largest, single-site lead battery manufacturing facility in the world. As our company experiences tremendous expansion and growth over the years, we never lose that original passion for providing power to our customers – responsibly and sustainably.

We are a family-owned company that offers a broad range of power solutions for transportation, motive power, reserve power, and wire and cable. We produce more than 515 battery types under our Deka brand as well as other well-known brands for cars, boats, motorcycles, forklifts, stationary backup systems and many other applications. Our annual sales exceed $2.8 billion.

Our products bring a layer of security to the Nation’s energy systems by providing reliable backup battery power. Uninterruptible power supply is crucial for areas such as medical, safety, emergency response, telecommunications, financial institutions, data centers, cable and broadband systems, and manufacturing operations.

As part of our commitment to sustainability, we continue to invest in new battery technology, improve our manufacturing processes, expand capacity and continuously improve our environmental capabilities. These investments have allowed us to create:

- Advanced batteries and integrated systems to help automakers improve fuel economy and reduce vehicle CO₂ emissions.
- Energy storage solutions for renewables such as solar and wind.
- Extensive recycling at our Lyon Station facility, including nearly 204 million pounds of lead, more than 10 million pounds of plastic, and more than 7.6 million pounds of acid annually.
- A family-owned company that employs more than 10,500 people worldwide

We live our values, including respect, integrity, quality, environmental stewardship and innovation. Being sustainable is in our heritage and “DNA.”

The formula for our continued success is exceptional products, made by empowered employees, using environmentally sound innovative processes that best service our customers. Together, we’re committed to a sustainable future . . . not just for East Penn, but for the world.

Bob Flicker
COO

Christopher E. Pruitt
President, CEO
SUSTAINABILITY AT A GLANCE

- **Net Sales in U.S. Dollars**: $2.8 Billion
- **Recycled Lead Per Year**: 204 Million Pounds
- **Total Number of Employees**: 10.5K
- **EHS Training Hours Per Year**: 58,088
Proud recipient for 18 years

East Penn has been recognized as one of the Best Places to Work in Pennsylvania 18 times since 2000. The awards process is managed by Best Companies Group, which conducts random surveys of employees and surveys employers to gather data on company policies, practices, benefits and demographics to gauge employee engagement and satisfaction.

East Penn was recognized in 2018 and 2019 by Forbes as one of America’s Best Large Employers. Forbes’ annual ranking of companies with more than 5,000 U.S. employees pinpoints those companies liked best by employees and most likely to be recommended as an employer.
At East Penn, the way we conduct our business is inseparably linked to our business success. East Penn’s culture helps guide our strategy when it comes to being a global leader in providing high quality, fully sustainable energy storage, transfer and power system solutions that enhance lives while promoting sustainable growth.

One of our key values is respect—respect for our people, for their diverse ideas and for their individual roles. East Penn believes that the respect and support we provide each other also supports our common purpose. We care for each other through camaraderie, teamwork, mentorship and mutual support and believe the personal growth, and development of our people will remain our legacy and heritage.

Many companies casually claim their employees are their biggest asset. East Penn backs up the assertion that it highly values its employees through its open-door policy, benefits programs, training and career advancement opportunities. The heart of the company will always be our people, and we believe that reaching our goal of meeting and exceeding customer expectations depends on encouraging employees at every level.

Objective measurements validate our efforts to foster a rewarding and safe workplace. For 18 years, we have earned recognition as one of Pennsylvania’s Best Places to Work, based on factors such as company policies and employee feedback on surveys. We have also been recognized by Forbes as one of America’s Best Largest Employers for two consecutive years. Employee enthusiasm is further reflected by an extremely low voluntary turnover rate and the multiple generations of family members who have made their career with East Penn.

East Penn is a privately-held, family-owned enterprise, and we strive to create a sense of familial caring, starting with rigorous policies aimed at protecting the health and safety of every employee. For example, our lead health standards are considerably more stringent than Federal regulations and we provide extensive lead safety training beginning on day one of employment.

Co-workers are empowered to bring their talent and creativity into the workplace and are equipped with the right tools, including the use of Six Sigma methodology to promote continuous improvement.

We also celebrate the invaluable contributions of employees with events like open houses, safety poster contests, special days for kids and retirees, and annual celebrations at many of our locations, including a picnic that attracts over 11,000 Pennsylvania-based employees and their family members.

Our key value of respect extends beyond our employees. We also have respect for customers, for suppliers, for industry competitors, for our partners, for the communities we serve and for the environment. Our commitment to building a secure future extends to society, starting with the communities where we operate. We take pride in the contributions that employees make, both monetarily and in volunteer time, to a host of causes such as United Way, the Muscular Dystrophy Association and other causes that promote thriving, resilient communities. And we require strict adherence to human rights standards in every part of our enterprise, including prohibition of child or forced labor.

Keeping up with a fast-changing energy storage landscape is a big challenge. During 70-plus years of operations, we have learned that people who are valued and respected will embrace change and play a major role in defining the future of sustainable energy storage. We remain fully committed to preserving a culture that makes East Penn special and positioned to help power people’s lives while constantly moving the company forward.
OUR CORE BELIEFS

PEOPLE
- The heart of the company will always be our people
- We support each other which supports our common purpose
- The personal growth, mentorship, and development of our people will remain our legacy and heritage
- Everyone’s contributions are valuable and they play a respected role in growing our organization

PLACES
- A safe, clean, and healthy workplace is imperative for all operations
- The company protects its environment and supports the community
- Reinvestment in equipment, capabilities, and expansion is key to our continued growth

PRINCIPLES
- Work should be rewarding, enjoyable, and gratifying
- Integrity is the basis for everything we do
- Quality, innovation, and continuous improvement are essential to our model of success

OUR CONTINUING MISSION
- To be a global leader in providing the highest quality, fully sustainable and fully supported energy storage, transfer, and power system solutions that enhance lives and promotes strategic growth.
- To be a forward-thinking and financially-secure, privately-held company that supports our family of employees, customers, suppliers, and all of our partners for future generations to come.
- To remain true to the core beliefs and cultural values that have successfully shaped our unique culture and that will continue to sustain our company.

OUR CULTURAL VALUES
Conserving natural resources and reducing waste are two of the biggest issues facing the world in the 21st century. According to The World Bank, global waste is expected to grow to 3.40 billion tons by 2050, which is more than double population growth over the same period. The generation of municipal solid waste is projected to almost double by 2025, and the lack of adequate waste disposal and recycling infrastructure in some parts of the world threatens both human health and ecosystems.

But these are not new priorities for East Penn — sustainability is simply who we are. The principles of conservation and waste reduction have gone together ever since our origins in 1946 as a one-room business dedicated to collecting and rebuilding used batteries.

Today, East Penn offers a diverse product line with hundreds of battery designs to serve a range of markets. And by applying the concept of a circular economy, we are helping to build a sustainable future by minimizing waste at every step, from design through production, distribution, use and eventual reuse of materials. Keeping resources in use for as long as possible reduces material costs while also lessening impact on the environment through the entire lifecycle of our products.

By co-operating our recycling and manufacturing plants at our campus in Lyon Station, Pennsylvania, we are able to most efficiently recycle and reuse all three major components of a lead battery—lead, plastic and acid—in the production of new products. And what we can’t recycle on campus, we send offsite for recycling. Across all our operations, we use significant amounts of recycled inputs: For example, 69 percent of the lead and 83 percent of the plastic used to manufacture new battery storage devices were derived from recycled sources last year.

We can recycle lead infinitely in the production of batteries, with no loss of performance. This is one of the reasons that lead batteries have a recycling rate of 99 percent, making them one of the most recycled consumer products in the U.S. and one of the most successful recycling stories of any product across any industry.

Our commitment to a circular economy doesn’t end with the battery. At our 520-acre campus in Lyon Station, we treat and recycle over 915,000 gallons of wastewater per week. In 2018, our state-of-the art zero discharge industrial wastewater treatment plant recycled nearly 47.6 million gallons of wastewater.

And finally, we close the loop with our distribution system as the trucks that deliver products return with used batteries for recycling.

As a privately-held, family-owned business, East Penn focuses on a long-term strategy that includes reinvesting earnings in R&D to advance circular economy objectives that reduce waste and emissions. Our goal for the future is to continue to be a green leader by following a circular economy approach based on robust sustainability principles.

LEAD BATTERY COLLECTION INFRASTRUCTURE
- RETAIL STORES
- MECHANICS
- DEALERSHIPS
- REPAIR SERVICES

LEAD BATTERY RECYCLING
- 30,000/DAY
- 122 MILLION/YEAR

RAW AND RECYCLED
MATERIALS

BATTERY MANUFACTURING
- 80% RECYCLED MATERIAL IN NEW BATTERY

ESSENTIAL USES
- Vehicles
- Hybrid
- Start-Stop
- Data Telecom
- Mass Transit
- Emergency Backup
- Logistics
- Military
- Solar & Wind Energy
- Marine
- Golf Cart
- Power Sport
- Military Logistics

99% of Lead Batteries are Recycled and Reused

SAFE, INFINITE RECYCLING THROUGH AN ESTABLISHED CIRCULAR NETWORK
East Penn Manufacturing Company (“East Penn”) began in 1946 when DeLight Breidegam Jr., a young Air Force veteran, and his father, DeLight Breidegam Sr., started a battery business in a small, one-room creamery in the village of Bowers, Pennsylvania.

Wartime made new battery materials scarce, intensifying the demand for rebuilt batteries. Despite having little money to start with, this father and son team had a vision and were determined to meet that need. The men spent their days and nights collecting used batteries and rebuilding them in the one-room creamery.

A year later, Karl Gasche, an engineering graduate of MIT and former work associate of DeLight Sr., joined the duo, bringing with him 21 patents pertaining to the battery industry. Shortly after teaming up, the three men incorporated the company and, soon thereafter, began discussing what to name the company’s first line of battery products. Together, they crafted the name “De-Ka” by combining their names of “DeLight” and “Karl” and thus, the Deka brand was born.

Over seven remarkable decades, East Penn grew from a few people in a one-room shop with a product line of five automotive batteries to one of the world’s leading battery manufacturers with over 10,500 employees in 34 U.S. states and five countries. We are the largest innovator, manufacturer, distributor and recycler of aftermarket batteries and a supplier to household names. We have received numerous awards from our customers, including Industry Excellence recognition as well as multiple Supplier Quality Excellence Awards.

East Penn’s core values are as strong today as they were in 1946, and we continue to embrace them as we prepare for the future. We remain committed to people and quality excellence, innovation and the environment. It is our continuing mission to be a global leader in providing the highest quality, fully sustainable and fully supported energy storage, transfer and power system solutions that enhance lives and promote strategic growth. We strive every day to remain a forward-thinking and financially secure, privately-held company that supports our family of employees, customers, suppliers and all of our partners for future generations to come.
PRODUCTION MILESTONE
East Penn produces more than a million batteries in a year for the first time.

MILLION

ACID RECLAMATION
Construction completed of first acid reclaim plant in industry.

CABLE & WIRE
Company adds facilities to produce cable and then wire.

AIR SCRUBBER UNITS
New system for scrubbing gasses. First of its kind in the Nation.

HEALTH & SAFETY CENTER
New, on-site employee health and safety center.

RESERVE POWER

EAST PENN TODAY
The company manufactures over 160K vehicle batteries a day. Recycles close to 204 million pounds of lead.

WASTEWATER
Wastewater treatment plant processing 100K gallons of wastewater a day. Zero-discharge system.

1974/1975
1976
1986
1992
1993
1993
1996
2020

1 MILLION
ABOUT EAST PENN

East Penn is a privately-held company headquartered in Lyon Station, Pennsylvania, where we operate the world’s largest and most modern, single-site lead battery manufacturing campus in the industry. The Lyon Station campus includes our corporate offices, plus a lead battery smelter and recycling facility, technical centers, injection molding, oxide mills and seven manufacturing plants.

Beyond Pennsylvania, East Penn’s national and global presence is stronger than ever. Expanding our reach allows us to better serve our customers in all corners of the world.

EAST PENN CANADA
- Is a major player in the automotive aftermarket for battery products and a growing force in motive power and stationary backup power battery applications. They service thousands of customer locations across Canada.

EAST PENN INTERNATIONAL
- Headquartered in Wujiang, China, serves the needs of our multinational customers throughout China and the entire Asia-Pacific market.

ECOULT
- Located in Australia, Ecoult is an energy storage solutions company acquired by East Penn in 2010. Using exclusive, advanced UltraBattery® lead-based technology, Ecoult solutions are the ideal energy choice for wind and solar farms, grid ancillary services, diesel optimization and remote microgrids.

MK BATTERY
- Acquired by East Penn in 1995, MK Battery provides Valve Regulated Lead Acid (VRLA) battery solutions for specialized, deep cycle and reserve power applications, including home medical equipment and mobility. With one of the most extensive distribution systems for VRLA batteries, MK Battery brands are proudly sold and distributed on all seven continents.

PRODUCT HIGHLIGHT

ULTRABATTERY® IN OTIS AIR NATIONAL GUARD BASE MICROGRID

East Penn is supplying energy storage technology to Raytheon Company for use by the United States Department of Defense at the Otis Air National Guard Base on Cape Cod, Massachusetts. The 1.6MW/1.2MWh energy storage system, which uses UltraBattery, will be connected to an existing 1.5MW wind turbine and a 1.6MW diesel generator.

The Otis Air National Guard Base system will support the military base with continuous microgrid backup power in the case of grid failure, through a combination of high penetration wind and energy storage and minimal use of diesel generators.

A revolutionary project, the Otis Microgrid represents a number of firsts:

- First wind-powered microgrid in the U.S. Department of Defense.
- First U.S. military facility cyber-secure connection to an independent system operator to provide ancillary services.
East Penn has technical joint venture agreements with Gonher de Mexico, Banner GmbH in Austria, Acumuladores Duncan in Venezuela, Acumuladores Moura S.A. in Brazil, and Exide Industries Limited in India.
About East Penn

East Penn’s extensive product line includes more than 515 battery types ranging in size from six pounds to over 50,000 pounds. Along with wire, cable and battery accessory products, we provide batteries to multiple categories in need of safe and reliable energy storage including cars, boats, trucks, farm equipment, motorcycles, forklifts, commercial trucks, locomotives, wheelchairs, ATVs, data centers, renewable energy, telecommunications and stationary backup systems. We design and manufacture durable products and have one of the lowest defect rates in the industry.

Transportation/SLI (Starting, Lighting, and Ignition):
East Penn designs and manufactures hundreds of energy storage devices that serve the automotive, commercial truck, marine, motorcycle, and lawn and garden industries. We are the second largest provider of Transportation/SLI batteries in the North American market. The majority of production is sold on a private label basis, including distribution through many of the major auto parts retailers in North America.

Reserve Power Batteries
Our Reserve Power division meets the needs of telecommunication, data centers, renewable energy and other industries where uninterrupted power is essential, providing back-up power supply to critical business applications. Under this division, we rank second in the valve-regulated lead-acid battery market in North America. Batteries in this segment are distributed primarily under the Deka Unigy, Deka Solar and Deka Fahrenheit brands.
MOTIVE POWER BATTERIES
This division is focused on larger energy storage units used primarily in forklift operation. This line also includes batteries for automated guided vehicles, airline ground support, mining and locomotives. East Penn ranks second in the North American market for the manufacture and sale of motive power batteries, sold primarily under the Deka brand name. We also offer Lithium powered solutions as part of our extensive Deka portfolio. We provide the broadest range of Motive Power battery solutions over any other battery manufacturer.

DIVERSIFIED PRODUCTS
This division includes a variety of wire and cable products and battery accessories. Products include booster cables, terminals, battery cables and bulk wire. East Penn is the largest provider of cable products in North America. We also largely support our battery manufacturing with accessories and parts made from this facility.

EXPANDING OUR LITHIUM-ION EXPERTISE
In August 2019, East Penn announced the acquisition of a majority interest in Navitas Systems, a global leader in larger-format lithium battery technology and systems for motive power as well as government/defense market segments.

The acquisition has accelerated East Penn’s expansion of its Motive Power battery offering, as well as its strategic integration into other market segments. This exciting new venture aligns with East Penn’s existing plans of providing the most robust array of optimized energy storage system solutions. This enhances the company’s efforts in completely meeting the ever-expanding demands of its customers well into the future.

Navitas products complement East Penn’s offerings, and its lithium Research and Development expertise adds to East Penn’s current lithium program.
ABOUT EAST PENN

FINANCIAL HIGHLIGHTS

Independent and privately-held, East Penn has a more than 70-year record of reinvesting earnings in growth, increased efficiency, and processes that reduce waste and emissions. Our focus on the long term drives an ongoing emphasis in expanded capacity, research and development, and emerging technologies that align with a changing energy storage landscape.

East Penn’s commitment to innovation, the environment, people and quality, along with responsiveness to customers has produced a compound annual revenue growth rate that is more than double the industry rate. Our sales were more than $2.8 billion in 2018 (on a fiscal year basis, June 1 to May 31) and have grown 75 percent in the last 10 years, making our economic impact significant.

Year after year, East Penn continues to reinvest in new manufacturing, processes, environmental sustainability and recycling technology. As a company our annual research and development (R&D) spend for 2018 was $24 million. Our R&D of new battery technology is known around the world for its role in developing new innovations in clean energy storage. Our role in advanced lead-based technology supports start-stop and other hybrid electric vehicles, smart electrical grid technology and renewable energy generation like wind and solar power. East Penn recently invested in a solely designated 42,000 square foot facility dedicated to R&D as well as Continuous Improvement. This facility, named the Breidegam/Miksiewicz Innovation Center focuses on the latest in advanced lead battery development, process automation and robotics, and the exploration of alternative battery technologies.

Our company has a diverse supply chain that provides goods and services to East Penn Manufacturing as well as our subsidiaries. Each subsidiary manages its own supply chain. In the subsections that follow, we focus on the supply chain for East Penn Manufacturing, the parent company.

Our supply chain for manufacturing facilities in Pennsylvania and Iowa consists of more than 300 suppliers who supply lead, separators, sulfuric acid, battery cases and covers, and other materials. Lead is our largest spend item. Recycled lead used in our U.S. manufacturing facilities is sourced from spent batteries collected from the U.S., Canada and Mexico. Virgin lead is purchased from suppliers located outside U.S.

We believe in accountability and take our corporate responsibility seriously. We work to ensure materials used in our products are sourced in an ethical manner, and we expect a similar commitment from our global supply chain partners. To that end, we issued Sustainability and Corporate Responsibility Guidelines to our suppliers in late 2018. East Penn Manufacturing follows fundamental guidelines of social and environmental responsibility that are compliant with local law and consistent with international expectations, and we expect our present and future suppliers to do the same. Additionally, we ask that our suppliers pass these guidelines along to their suppliers and observe the same guidelines.
TOPICS COVERED BY THE GUIDELINES INCLUDE:

- No tolerance for child or forced labor
- Competitive wages and benefits
- Working hours that comply with local laws
- Right to freedom of association
- Safe and healthy work environment
- No tolerance for harassment or discrimination
- Respect for all human rights
- Zero tolerance – all forms of bribery and corruption
- Honest and equitable operations
- Environmental standards for design, development, distribution, disposal and recycling

In 2018, 100 percent of suppliers to our U.S. manufacturing facilities signed off on these guidelines.

SUPPLIER DIVERSITY

East Penn recognizes the benefits of giving small businesses the opportunity to participate in the performance of sub-contracts. This practice extends to women- and minority-owned businesses. Providing these businesses the opportunity to demonstrate their ability to supply services or supplies at competitive prices advocates good business fellowship and brings new ideas and technology enhancements.

East Penn operates with a business strategy that’s vertically integrated; consequently, our procurement activity is constrained towards purchasing base materials from companies where intense capital investment is required. A substantial percent of our annual spending falls into these larger companies that can substantiate a larger capital investment. Therefore, recording supplier diversity spending as a percentage of annual spending would not be beneficial towards measuring the success of a supplier diversity program.

We strive to continually improve our U.S. supplier diversity program by increasing the number of match-making events we attend. During these events, women- and minority-owned small businesses can present their business services to many organizations concurrently. We attend customer-sponsored and locally organized match-making events in Pennsylvania to take advantage of these opportunities. We track the number of visits and seek to increase that number over time. In 2018, 45 suppliers visited our information booths at match-making events, an increase from 30 suppliers in 2017.

CONFLICT MINERALS

While East Penn is not a U.S. public company subject to the SEC Conflict Mineral disclosure rule, East Penn and its subsidiaries take serious their corporate responsibility to ensure materials used in their products are sourced in an ethical manner.

Conflict minerals, as defined by U.S. legislation, currently include the metals tantalum, tin, tungsten and gold. These minerals are sometimes extracted from the Democratic Republic of the Congo and adjoining countries (“Conflict Countries”) and may either directly or indirectly benefit armed groups in these countries. East Penn currently requires the use of tin for the functionality or production of some of our products.

Each year, we ask tin suppliers for both our smelter in Pennsylvania and our Wire and Cable Division to confirm they are not supplying tin from “Conflict Countries”. To the extent any tin supplier is unable to provide such assurance, East Penn would initiate appropriate action to transition to alternative suppliers that can provide such assurances.

SUPPLIER AUDITS

The selection of suppliers to audit is based on numerous factors, such as defect level, on-time delivery and previous audit scores. The audits are focused on quality and service.

We ask suppliers if they have passed on the Sustainability and Corporate Responsibility Guidelines to their suppliers. If they have not, it is noted as an audit finding.

For any non-conformance, suppliers are given 30 days to respond to a finding with a corrective action plan.
ABOUT EAST PENN

East Penn is a privately-held firm guided by a six-member Board of Directors. Three Board members are internal and three are external.

East Penn has a 41-member senior management team consisting of a Chairman, President/Chief Executive Officer, Chief Operating Officer, Chief Financial Officer, and several vice presidents and assistant vice presidents. In 2018, seven percent of the senior management team was female.

The executive team is responsible for setting the company’s overall business strategy as well as identifying and managing economic, environmental and social impacts. Most decisions are made at the executive level, but the Board is involved in very high-level decisions, such as construction of new facilities or acquisitions.

In early 2019, East Penn established a Sustainability Reporting Committee (SRC) comprised of representatives from various divisions including environment, health and safety; metals; quality; R&D; legal; finance; personnel; procurement; sales; and corporate communications. This group performed East Penn’s first materiality assessment (see Understanding Our Sustainability Impacts) and is responsible for developing this report as well as implementing a strategy to enhance internal and external communication of East Penn’s sustainability achievements and challenges. This report was reviewed and approved by the SRC as well as by the President/CEO, COO, CFO and Chairman of the Board.

ETHICS AND INTEGRITY

East Penn has a Business Ethics Policy to ensure ethical and impartial business practices and to inform employees about the standards of behavior expected in the workplace. Employees are prohibited from using their position at East Penn to secure special advantage in business or personal gain and must avoid any relationship or activity that might impair, or even appear to impair, our ability to make objective and fair decisions when performing our jobs.

East Penn’s Code-of-Conduct was established for the guidance and protection of all employees at East Penn and to create a positive workplace in which all employees treat each other with respect. The rules are fundamental in character and designed to give us a more efficient and successful operation. Willful, inexcusable violations of these rules are dealt with firmly under a uniform, code-of-conduct policy.

These policies are adjusted to conform with local laws. For example, the Code of Conduct at East Penn International has been adjusted to be consistent with Chinese law. All employees receive these policies when they are hired, and they are available electronically.

Employees can report information about unethical or illegal behavior anonymously to the company’s Employee Helpline for those employees in central PA or the WeTip hotline for those employees outside of central PA. WeTip, Inc., is an independent organization whose specialists answer calls and anonymously forward the information to East Penn.
NON-DISCRIMINATION

East Penn has been and will continue to be an equal opportunity employer. No employee or applicant for employment will be discriminated against because of race, color, religion, national origin, sex, handicap, age, veteran’s status or any other legally protected characteristic.

To carry out our policy, East Penn ensures that equal treatment will be afforded in the areas of recruiting, hiring, training and promoting applicants and employees; and in relation to compensation, benefits, transfers, company-sponsored training and education, tuition assistance, social and recreational programs, layoffs and return from layoffs. East Penn periodically analyzes its personnel actions to ensure compliance with this policy.

The company has in place multiple internal avenues for employees to present concerns formally, informally or confidentially, including an Open Door policy and Employee Helpline. Formal complaints that may be received through federal, state or local labor or employment commissions are addressed and resolved as expeditiously as possible. In 2018, there were seven formal complaints of discrimination filed with a federal or state commission. All incidents were reviewed and if required, remediation implemented. All incidents have corrective actions in place to prevent recurrence.
Understanding our sustainability impacts – both positive and negative – is a critical input of our sustainability reporting. Identifying key stakeholder groups and conducting our first materiality assessment informed the development of this report and decisions around which topics to include. As we continue our reporting journey, we will improve and expand our reporting of our key impacts.

**STAKEHOLDERS**

The first step to understanding our impacts was to identify our primary stakeholders. East Penn’s primary stakeholders are listed in the table to the right, along with their key interests. We engage with each of these stakeholder groups regularly, and with some daily, such as employees, customers and suppliers.

<table>
<thead>
<tr>
<th>STAKEHOLDER GROUP</th>
<th>DEFINITION</th>
<th>KEY INTERESTS/CONCERNS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employees</td>
<td>Full-time, part-time and temporary workers</td>
<td>Employment opportunities, benefits, job security, training, safety and health</td>
</tr>
<tr>
<td>Local Community Members and Groups</td>
<td>Includes the Chambers of Commerce, Economic Development Offices, healthcare providers, local schools, nonprofits and other neighbors of all of our facilities</td>
<td>Local jobs; air emissions; support of community initiatives, e.g., Moravian College scholarship program, United Way fundraising</td>
</tr>
<tr>
<td>Customers</td>
<td>Those who purchase our products, such as automotive aftermarket retailers; manufacturers of cars, trucks, buses and other vehicles; users of lift trucks; data centers; telecommunications; utilities; etc.</td>
<td>Environmental and safety performance, human rights practices, quality</td>
</tr>
<tr>
<td>Government Agencies</td>
<td>Includes local, state and federal regulatory agencies such as U.S. Environmental Protection Agency; Pennsylvania Department of Environmental Protection and Department of Energy as well as its research bodies, such as Argonne National Laboratory</td>
<td>Environmental, health and safety performance; economic impacts; battery efficiency; R&amp;D</td>
</tr>
<tr>
<td>Suppliers</td>
<td>Raw material suppliers of lead, plastics and other goods</td>
<td>Quality, procurement practices</td>
</tr>
<tr>
<td>Industry Associations</td>
<td>See sidebar</td>
<td>Economic impact, safety, environmental performance</td>
</tr>
<tr>
<td>Financial Institutions</td>
<td>Lending institutions, investment partners</td>
<td>Sales, business excellence</td>
</tr>
<tr>
<td>Academic Institutions</td>
<td>Leading universities such as Lehigh, Penn State, Moravian, and Kutztown Universities</td>
<td>R&amp;D, job/internship opportunities</td>
</tr>
</tbody>
</table>
New Research Opportunities Tap Into Lead Battery’s Full Potential

There are complex interactions inside a lead battery that still remain a mystery, even 159 years after the technology’s invention. Until now, lead battery manufacturers and researchers have not had access to the latest analytic tools to fully discover the untapped potential of lead battery technology.

The lead battery is headed for a high-tech makeover that will make this sustainable mainstay product even more appealing to the automotive industry, power grid, and countless other industries.

Under the terms of an agreement signed with the U.S. Department of Energy’s Argonne National Laboratory, East Penn, and 13 other members of the Consortium for Battery Innovation (CBI) have joined forces with Electric Applications to explore new ways to enhance the performance of lead and other materials in lead batteries. East Penn also has another cooperative research and development agreement (CRADA) partnership with RSR Technologies and Argonne National Laboratories to further promote progress research that will tap into more of lead battery’s potential.

Both teams are particularly interested in the lead sulfate crystal growth and dissolution process, and in learning how to control the latter in a more effective manner. The lead sulfation issue limits lead battery performance to much less than its potential. Tapping a significant portion of that unused potential would result in even better recyclable batteries for mobile and stationary market applications.

Once researchers better understand these processes, they will begin analyzing how the addition of various additives may improve lead battery performance.

“Achieving a high-tech makeover for lead batteries needs the grit and brilliance of many different stakeholders, and we’re confident our partnership with Argonne National Labs will help the industry innovate today’s lead battery performance and introduce faster, safer paths to lead batteries and beyond”

– Kevin Smith, Vice President of Technology

EAST PENN IS A MEMBER OF THE FOLLOWING INDUSTRY ASSOCIATIONS:

- Autocare Association
- The American Boat & Yacht Council
- American Industrial Hygiene Association
- The American Society of Mechanical Engineers
- Association of Battery Recyclers
- Automotive Aftermarket Suppliers Association
- American Society of Safety Engineers
- American Trucking Associations
- The Battery Council International
- California Automotive Wholesale Association
- California Energy Storage Association
- Consortium for Battery Innovation
- The Electrochemical Society
- Energy Storage Association
- 7x24 Exchange International
- Institute of Electrical and Electronics Engineers Power & Energy Society
- International Lead Association
- Industrial Truck Association
- Material Handling Equipment Dealers Association
- Material Handling Institute
- National Association of Manufacturers
- National Marine Manufacturers Association
- Outdoor Power Equipment Institute
- Rehabilitation Engineering and Assistive Technology Society of North America
- National RV Dealers Association
- Society of Automotive Engineers
- Technology & Maintenance Council
- The Wire Association International
East Penn’s Sustainability Report Committee conducted East Penn’s first sustainability materiality assessment in early 2019. We plan to review this assessment every two years.

MATERIALITY ASSESSMENT PROCESS & RESULTS
To conduct the sustainability materiality assessment, we developed a list of sustainability issues, considering issues we can control as well as those we influence, plus issues of concern to our key stakeholder groups. We referenced the following in creating the list, which included 44 topics:

- The Global Reporting Initiative (GRI) Sustainability Reporting Standards
- The Sustainability Accounting Standards Board (SASB) Industrial Batteries sector standard
- Issues frequently included in third-party surveys that we receive, such as those from customers
- Internal knowledge of global trends and issues facing society

We then gathered representatives from nine East Penn departments to identify and rank the 44 topics. We evaluated each issue based on the following criteria:

- Degree of importance to East Penn as a company, including importance to employees
- Importance to customers
- Importance to local communities
- Importance to SASB
- Likelihood that the issues does or will present a competitive advantage
- Whether the issue is a compliance or corporate requirement, or likely to become one in the future

The evaluation criteria helped us define the most significant topics, based on relevance to East Penn and our employees, and relevance to external stakeholders. Once all 44 topics were evaluated and scored, they were ranked from highest score to lowest.

The resulting 18 topics are those that ranked highest, are considered material and are included in this report. They are listed in the table to the right.
Global Reporting Initiative (GRI) definition of materiality:

“A topic that reflects a reporting organization’s significant economic, environmental and social impacts; or that substantively influences the assessments and decisions of stakeholders.”

– See GRI 101 Foundation, page 48
PEOPLE MAKE THE DIFFERENCE

East Penn is dedicated to supporting and empowering our people. Our corporate focus is on our co-workers because we truly are like a family at East Penn, striving for the highest quality in everything we do.

We provide employees with the ability to seek internal advancement, most without relocation. Our transfer policy allows employees to advance career paths and opportunities without sacrificing seniority and benefits.

We are committed to providing a safe and healthful environment for all employees and the surrounding community. As a condition of employment, each employee is responsible for performing his or her job safely and for minimizing the risk of injury to themselves and fellow employees, contractors, and visitors. All employees are expected to subscribe to proper environmental, safety and health practices.

We value and respect the basic human rights of all people, and our Human Trafficking Policy explicitly prohibits human trafficking and the use of illegal child labor or any form of forced labor at any time, in any part of the enterprise.

East Penn is committed to fair compensation in abidance with the laws of the nations in which we do business. We respect the principle of equal pay for work of equal value.
Supporting the Guard and Reserve

**EMPLOYER SUPPORT OF THE GUARD AND RESERVE (ESGR) STATE COMMITTEES**

<table>
<thead>
<tr>
<th>Award</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seven Seals Award</td>
<td>In 2019, East Penn received the Seven Seals Award in recognition of meritorious leadership and initiative in support of the men and women who serve America in the National Guard and Reserve.</td>
</tr>
<tr>
<td>Patriot Award</td>
<td>Mike Kozak, an East Penn plant superintendent in Lyon Station, Pennsylvania, received the Patriot Award after being nominated by Trista Rustin, an employee who is in the National Guard and Reserve. The Patriot Award reflects the efforts made to support citizen warriors through a wide range of measures including flexible schedules, time off prior to and after deployment, caring for families, and granting leaves of absence if needed.</td>
</tr>
</tbody>
</table>
We are a family-owned enterprise committed to cultivating an atmosphere that honors the contributions of everyone. The total number of full-time employees increased 14.3 percent between 2016 and 2018.

East Penn has experienced an extremely low turnover rate year after year. We want our employees to have long-term careers with us, and many do – more than 35 percent of our co-workers have over a decade of service. Close to 1,600 of these employees have over 20 years tenure and more than 100 employees have 40 or more years with East Penn. Of all employees surveyed, 92 percent would recommend working here to a friend.

East Penn has been recognized as one of the Best Places to Work in Pennsylvania 18 times since 2000. The awards process is managed by Best Companies Group, which conducts random surveys of employees and surveys employers to gather data on company policies, practices, benefits and demographics to gauge employee engagement and satisfaction.

East Penn was also recognized in 2018 and 2019 by Forbes as one of America’s Best Large Employers. Forbes’ annual ranking of companies with more than 5,000 U.S. employees pinpoints those companies liked best by employees and most likely to be recommended as an employer.
Pictured are East Penn employees being recognized as members of our Century Club for their combined years of service and age equaling 100 years or more.
East Penn is committed to a diverse workforce. In 2018, 78 percent of East Penn’s full-time U.S. workforce was male, and 22 percent was female. Between 2016 and 2018, the number of female full-time employees increased by 29 percent while the overall full-time workforce increased by 14.7 percent.
Empowering Women in the Workplace

East Penn is committed to developing and supporting employees who are interested in leadership roles within our organization. Our women’s leadership initiative seeks to increase opportunity for East Penn women to build their networks, increase their professional confidence and avail them to less traditional roles in engineering and production. We aim to provide opportunity for continuous learning and self-reflection. Through internships, seasonal experiences and a sales trainee program, we are focusing on recruiting, retaining and promoting women in our workplaces.

“As part of our culture of respect and inclusion at East Penn, we treat advancing women in the organization as a business priority because we know diversity at all levels results in improved problem solving, better customer relations and better financial performance.” — Christy Weeber, CFO

INTERNAL PROGRAMS INCLUDE:

- **Lean In Circles**, which provide an open environment to share professional goals with other women. The program is open to current managers and above.

- **Exploring Leadership Women’s Preview**, an internal workshop run by female supervisors that aims to open pathways to leadership opportunities, and teach others how to market their skillset beyond their current roles. The workshop is open to five or six women who have expressed interest in supervisory roles, endorsed by senior management.

- **Women’s Book Club**, available for current managers and above. East Penn maintains a library at our Lyon headquarters campus as well as access to free webinars. We also support Women2Women (W2W), a special program of the Greater Reading Chamber Alliance that encourages women to create connections, gain knowledge, and build strategic alliances. The goal is to develop more women leaders in Berks County, Pennsylvania, by providing a forum where women can learn, share ideas and mentor each other.

Each year, we sponsor more and more women to attend W2W events. In 2018 and 2019, we sponsored more than 30 women from our Lyon Station, Pennsylvania, campus to attend 10 W2W workshops – up from only seven women five years ago. Employees are eligible to attend if they are either endorsed by a manager, or nominate themselves and receive approval.

East Penn is a Platinum sponsor of W2W and two of our employees serve on the Board of Directors.
As a company, we believe that the people of East Penn are our most valuable asset. Therefore, it is the will of our company to provide a healthy and safe workplace for all our employees. We engage both our co-workers and outside consultants in the continual development of best-in-class health and safety practices.

All employees must understand and commit to upholding the ideals set forth by our health and safety programs. It’s the responsibility of each employee to practice safe work habits. This safety awareness must be maintained and communicated. With everyone committed to safety, we will achieve a highly efficient and productive work environment.

“No task is so important that it cannot be done safely” is the motto used to emphasize it is urgent that we devote the proper time and resources to all our tasks safely. East Penn is fully committed to the prevention of workplace illness and injury and continued improvement in occupational health and safety performance.

2018 SAFETY STATISTICS

4,776 DEDICATED TO SAFETY COMMITTEES
199 IN SAFETY COMMITTEES
1,147 IN PLANTS ANNUALLY

SAFETY & HEALTH MANAGEMENT SYSTEM

At the foundation of our safety-first culture, we established a global health and safety management system (HSMS) to prevent injury and reduce exposure to workplace hazards. In China, our health and safety management system is OHSAS 18001 certified.

The HSMS includes comprehensive procedures to prevent injury and reduce exposure to workplace hazards, along with extensive training, frequent safety audits and regular health monitoring programs. The system covers all employees, including temporary workers, at our global manufacturing locations.

Contractors are also asked to comply with all applicable regulatory requirements as well as East Penn’s safety practices and procedures while on-site.

Plant and corporate safety staff annually review the health and safety incident log, identify those jobs with the highest incidence and severity rates, and develop targeted strategies to reduce risks. We are always looking for continuous improvement opportunities to ensure the safety and health of our workforce.

Safety committees meet regularly to assess risks and recommend facility and process improvements. Each plant has its own safety committee, which meets at least once per month. Each committee makes every effort to include representatives from all operating shifts. Committees are chaired by an employee and include representation from management and corporate Environment, Health and Safety (EHS) for guidance and support. Minutes from each meeting are published and shared with the manager of the EHS department and with the President/CEO, COO, and Chairman of the Board.

SAFETY & HEALTH VIOLATIONS

SCOPE: EAST PENN SITES, U.S.

<table>
<thead>
<tr>
<th>2016</th>
<th>2017</th>
<th>2018</th>
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</thead>
<tbody>
<tr>
<td>VIOLATIONS</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>PENALTIES</td>
<td>$22,814</td>
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FATALITIES

SCOPE: EAST PENN PRODUCTION, U.S. AND CHINA MANUFACTURING PLANTS AND U.S. WAREHOUSES

<table>
<thead>
<tr>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>VIOLATIONS</td>
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<td>0</td>
</tr>
<tr>
<td>PENALTIES</td>
<td>$0</td>
<td>$0</td>
</tr>
</tbody>
</table>

RECORDABLE INCIDENTS

SCOPE: EAST PENN PRODUCTION, U.S. MANUFACTURING PLANTS AND U.S. WAREHOUSES

<table>
<thead>
<tr>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>INCIDENT RATE</td>
<td>5.4</td>
<td>5.8</td>
</tr>
<tr>
<td>DART RATE</td>
<td>2.6</td>
<td>2.6</td>
</tr>
</tbody>
</table>

Notes:
1. The safety data reported above represents several industry classifications, which include Battery Manufacturing, Secondary Lead Smelter, Injection Molding Operations, Warehouse/Distribution, Fleet Maintenance, Service Trades (Electricians, Plumbers, Sheet Metal Workers, Construction, and Lead Oxide Manufacturing).
2. East Penn has made a conscience effort to encourage employees to report injuries and illnesses at the early stages of development. The early reporting does have the potential to increase the number of recorded incidents due to the treatments that allows for employee treatment during their scheduled work hours. While this approach may increase the recordable incident rate, it does reduce the severity associated with these types of injuries and illnesses, and avoids surgical intervention as well as added stress on family life. East Penn has also developed an Ergonomics Program to reduce employee risk associated with soft tissue injuries and illnesses.
3. The Days Away, Restricted, or Transferred (DART) Rate is designed to track any OSHA recordable workplace injury or illness that results in time away from work, restricted job roles, or an employer's permanent transfer to a new position. The DART rate is calculated using the following formula: (Number of OSHA Recordable Injuries and Illnesses that resulted in Days Away; Restricted; Transferred X 200,000) / Employee hours worked = Days Away Restricted Transferred (DART) Rate.
TRAINING

East Penn’s long-term track record of reinvestment in employees is a powerful expression of management’s confidence in the people who make our success possible. One of the key areas of reinvestment is Environment, Health and Safety (EHS) training.

EHS training is conducted at the time of hiring; then annually for all production employees. Topics include emergency procedures, injury prevention, vehicle and pedestrian safety, hearing conservation, ergonomics, confined space awareness, hazardous materials transportation, and use of personal protective equipment, among others.

Arming co-workers with the knowledge they need to limit lead exposure begins the day their employment starts. New hires are provided extensive lead training on hygiene, safe handling procedures, and techniques to limit exposure. This safety curriculum is repeated for personnel on an annual basis.

2018 EHS TRAINING

7,000
EMPLOYEES
TRAINED

58,088
TRAINING
HOURS
PROVIDED

WELLNESS

East Penn’s on-site health and safety facility provides comprehensive screening and prevention to our co-workers. The facility provides wellness screenings such as blood pressure tests and flu shots.

East Penn provides employees with a variety of benefits, including health insurance that covers family members. Benefits are reviewed annually by a Benefits Committee to ensure we are providing a competitive package that protects our extended family – our employees and their families. In the U.S., 91 percent of our employees took advantage of East Penn’s health insurance package, which – when counting both employees and their dependents – covered more than 20,350 people.

HEALTH SCREENING AND EXPOSURE PREVENTION

East Penn’s on-site health and safety facility, staffed by four doctors and 12 registered nurses, performs 1,500 blood lead tests per month. Occupational physicals are conducted depending on employee exposures and can include chest X-rays and blood chemistries. Physical therapy is available on-site to treat any type of occupational injury or illness.

All employees in production roles receive annual hearing tests. East Penn invests in processes and equipment to maximize safety and minimize exposure to potentially harmful materials. Safety glasses and respirators are issued to employees assigned to areas with lead exposure. Company uniforms are laundered and supplied each day, as are fresh respirators for those working in high lead areas. On-site shower and separate work and street clothes lockers ensure that any remaining lead residues are removed before an employee leaves the manufacturing site.

East Penn’s internal lead health standards are significantly more stringent than requirements set by the U.S. Occupational Safety and Health Administration (OSHA), and exposure readings continue to fall well below both standards. In fact, we continue to rigorously monitor the health and safety of our co-workers. We provide individual consult services to employees to help manage their blood levels, and, through projects like Six Sigma, we look for new and innovative ways to protect human health and the environment.

2018 BLOOD LEAD LEVEL CHART

STATISTICS SHOWN IN MICROGRAMS PER DECILITER (µg/dl)

10.8
EAST PENN AVERAGE

25.0
VOLUNTARY STANDARD

50.0
OSHA STANDARD

2.0
2.1
2.2
2.3
2.4
2.5
2.6
2.7
2.8
50
40
30
20
10
0
From the factory floor to our distribution centers and our executive offices, East Penn people are deeply committed to reaching out to our neighbors and working to address important community needs. Each year, thousands of co-workers offer their time, talents and financial resources to support organizations and causes that build a stronger community. In years past and for many years to come, East Penn people can be counted on to provide a helping hand to those who need it most.

In 2018, East Penn was honored to receive two awards recognizing community service:

• Service and Dedication Award from the Fleetwood and Kutztown Rotary Clubs, which honored East Penn and our employees for the support we provide to the communities surrounding our main campus in Lyon Station, Pennsylvania.

• Local Leader Award from the Miller-Keystone Blood Center. In 2018, East Penn employees donated an incredible 879 units and hosted 27 blood drives.

<table>
<thead>
<tr>
<th>EAST PENN EMPLOYEES SERVE ON THE BOARDS OF DIRECTORS OF THE FOLLOWING ORGANIZATIONS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Automotive Aftermarket Suppliers Assoc. AASA</td>
</tr>
<tr>
<td>• Battery Council International (BCI)</td>
</tr>
<tr>
<td>• Ben Franklin Technology Partners Advisory Board</td>
</tr>
<tr>
<td>• Berks Business Education Coalition</td>
</tr>
<tr>
<td>• Berks County Community Foundation</td>
</tr>
<tr>
<td>• Berks ENCORE</td>
</tr>
<tr>
<td>• Friend, Inc. Community Services</td>
</tr>
<tr>
<td>• Girl Scouts</td>
</tr>
<tr>
<td>• John Paul II Center</td>
</tr>
<tr>
<td>• Penn State Advisory Council</td>
</tr>
<tr>
<td>• United Way of Berks County (Pennsylvania)</td>
</tr>
<tr>
<td>• University of the Aftermarket Foundation</td>
</tr>
<tr>
<td>• Women 2 Women Advisory Council</td>
</tr>
<tr>
<td>• Wyomissing Foundation</td>
</tr>
<tr>
<td>• YMCA of Reading &amp; Berks County</td>
</tr>
</tbody>
</table>

**CORPORATE GIVING (U.S.)**

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Way</td>
<td>$75,000</td>
<td>$75,000</td>
<td>$83,000</td>
</tr>
<tr>
<td>Breidegam Family Foundation</td>
<td>$216,500</td>
<td>$261,500</td>
<td>$283,720</td>
</tr>
<tr>
<td>Educational Improvement Organizations*</td>
<td>$200,000</td>
<td>$200,000</td>
<td>$200,000</td>
</tr>
<tr>
<td>In Kind Products</td>
<td>$11,682</td>
<td>$11,455</td>
<td>$33,808</td>
</tr>
<tr>
<td>All Other Donations</td>
<td>$876,780</td>
<td>$720,000</td>
<td>$710,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$1,379,962</td>
<td>$1,267,955</td>
<td>$1,310,528</td>
</tr>
</tbody>
</table>

Note: As part of the Educational Improvement Tax Credit (EITC) program, East Penn receives a state tax credit in Pennsylvania for making contributions to an Educational Improvement Organization.

**EMPLOYEE GIVING (U.S. EMPLOYEES ONLY)**

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Way</td>
<td>$735,970</td>
<td>$726,500</td>
<td>$801,379</td>
</tr>
<tr>
<td>Moravian College Scholarship</td>
<td>$16,145</td>
<td>$16,548</td>
<td>$18,907</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$752,115</td>
<td>$743,048</td>
<td>$820,286</td>
</tr>
</tbody>
</table>

Note: As part of the Educational Improvement Tax Credit (EITC) program, East Penn receives a state tax credit in Pennsylvania for making contributions to an Educational Improvement Organization.
UNITED WAY

East Penn has been a dedicated supporter of United Way since 2011. United Way of America is a nonprofit organization that works with almost 1,200 local United Way offices throughout the United States in a coalition of charitable organizations to pool efforts in fundraising and support. Each year, East Penn makes both a corporate and an employee financial contribution. In 2018, corporate and employee contributions totaled $884,379. We are one of the top 10 supporters of United Way in Berks County, Pennsylvania.

Each year, East Penn employees volunteer for the United Way Day of Caring, a community-wide volunteer event that takes place at various nonprofits and other locations throughout Berks County. It brings together large and small groups, along with individuals, to create lasting change in our community by helping others.

In September 2019, United Way of Berks County kicked off its annual 10-week fundraising campaign with the Day of Caring. More than 600 volunteers, including employees from East Penn, spent the day gardening, painting, reading books to children, playing bingo and serving food to seniors. Funds raised during the campaign support more than 50 programs, including two added this year: Family Promise’s U-Turn program for homeless teens and New Journey Community Outreach, which provides 150 meals per day to those in need.

U.S. POWER SOCCER ASSOCIATION

East Penn’s subsidiary, MK Battery, has the number one mobility battery brand, MK Powered, among all major wheelchair manufacturers and leading rehab equipment suppliers. As an extension of our mobility battery excellence, MK is a proud sponsor of the United States Power Soccer Association (USPSA) and TEAM USA National Power Soccer Team.

MK sponsors the annual MK Battery Conference Cup Championship Tournament, held every year in June, as well as a number of other national and international tournaments. In the most recent MK Battery Conference Cup Championship tournament, there were a record 39 teams gathered in Indiana, including the first ever all military veterans team. In their tournament program, the veterans team acknowledged MK’s support.

The USPSA is the governing body for power soccer in the United States. Power soccer is the first competitive team sport designed specifically for power wheelchair users. Athletes’ disabilities include quadriplegia, multiple sclerosis, muscular dystrophy, cerebral palsy and many others. The game is played in a gymnasium on a regulation basketball court. Two teams of four players attack, defend, and spin-kick a 13-inch soccer ball in a skilled and challenging game similar to traditional soccer. The USPSA continues to work diligently toward promoting the sport for those who depend on power mobility equipment.

“Thank you, MK Battery, for your continued support of Power Soccer. [The MK team goes] beyond supporting the efforts of USPSA financially. They are very much a part of the mission and more importantly, part of the family. Beyond the backing they provide, they are always present at each event and supporting every team.”

– The Veteran Warrior, 2019
MDA RIDE FOR LIFE
For more than 18 years, East Penn has been a proud supporter of Ride for Life, which supports the Muscular Dystrophy Association (MDA). MDA is leading the fight against muscular dystrophy, ALS and related neuromuscular diseases. The association supports research projects worldwide to accelerate treatments and cures, helps provide care for individuals from the first day of their diagnosis to make sure they’re getting the best treatment available, and empowers families across the country with services and support, like equipment assistance and summer camp programs, right in their hometown.

Over the years, Ride for Life has become the world’s largest Harley-Davidson fundraising event to benefit MDA. Each Ride for Life event brings riders and H.O.G. Chapter members together, partnering them with families and kids living with neuromuscular diseases. The weekend-long celebration is the culmination of a year of fundraising by Harley-Davidson dealerships; it’s a chance for families to spend an unforgettable, action-packed weekend with friends and supporters.

In 2019, East Penn was an “Ultra” Sponsor of the event, held May 2-5.

BREIDEGAM FAMILY SCHOLARSHIP FUND
In 1978, DeLight (founder of East Penn) and Helen Breidegam’s son, Timothy, passed away in an unfortunate accident. At the time of his death, Timothy was a student at Moravian College in Bethlehem, Pennsylvania. In June 2014, their daughter, Sally Miksiewicz, a graduate of Moravian College, who served as East Penn’s CEO from 2009 to 2014, tragically lost her life in an accident. And in September 2015, DeLight passed away after dedicating his life to building East Penn into what it is today.

So that other qualified young men and women might have the opportunity to attend college, DeLight and Helen established a scholarship fund at Moravian College in Timothy’s name in 1978 as well as a scholarship fund in Sally’s name in 2014. These funds have helped many students pay a portion of their tuition to the university. Many of the recipients have been the children and grandchildren of East Penn employees.

In 2018, East Penn contributed $40,000 to the scholarship fund, and East Penn employees contributed an additional $18,907.
As a team, East Penn has established a culture of stewardship that integrates the essential elements of environmental protection and innovative recycling into our business decision making processes. We strive to foster thinking and actions that promote the prevention of pollution and the enhancement of environmental performance.

We have an environmental management system (EMS) in place at all of our manufacturing locations. The EMS at our lead battery manufacturing plant in China as well as the EMS for our Pennsylvania facilities in Lyon Station, Kutztown and Topton, are third-party certified to ISO 14001. ISO 14001, the international standard for an effective environmental management system, provides a framework to help organizations minimize how their operations negatively impact the environment, comply with applicable laws and regulations, and continually improve performance over time.

We provide annual training to employees on various environmental topics that help them do their jobs effectively and safely. We also provide general awareness training of our ISO 14001 EMS as well as topic-specific training as needed, based on job functions. For example, if an employee must manage hazardous waste, we provide training on the requirements and appropriate procedures to ensure actions comply with applicable laws and regulations and that we protect both the environment and the safety of our workers.
Raw Materials
By-Products
& Waste
The centerpiece of East Penn’s commitment to the environment can be found in our product stewardship principles that include a continuous product lifecycle approach. Our lead battery production process is an example of circular economy in action. We use reclaimed and recycled input materials where possible, create byproduct streams that become other companies’ raw material, and recycle 90 percent of our waste.

**RAW MATERIAL INPUTS**

East Penn’s battery manufacturing uses a considerable amount of recycled input material. In 2018, 69 percent of the lead, 83 percent of the plastic and 3 percent of the sulfuric acid used by East Penn to manufacture new battery storage devices were derived from recycled sources. Across North America, more than 1.1 billion pounds of spent lead batteries were reprocessed for East Penn in 2018.

Our battery campus in Lyon Station, Pennsylvania, where 95 percent of our lead batteries are manufactured, each of the three major battery components (lead, sulfuric acid and plastic) are safely recycled and used in making new energy storage devices:

- In 2018, our lead smelter in Lyon Station recycled 203.9 million pounds of lead from spent lead acid batteries (SLABs) collected from customers as well as factory scrap material from on-site battery manufacturing plants, to make new battery storage devices. Our computer-controlled, closed-loop system, co-located with manufacturing facilities, recycles virtually 100 percent of the SLABs received for processing.

- East Penn researchers developed the patented process that reclaims sulfuric acid from spent batteries for use in new energy storage devices. At the acid reclamation facility in Lyon Station, impurities are removed, and the solution is converted into new electrolyte. East Penn’s process recycled and used approximately 7.6 million pounds of sulfuric acid in 2018, diverting this material from disposal.

- The third major component of spent batteries – polypropylene – is also recycled. Battery cases and covers are cleaned and extruded into polypropylene pellets. The material is then pneumatically conveyed to our on-site injection molding facility where it is molded into new cases and parts. East Penn’s smelter recycled and reclaimed more than 10.3 million pounds of plastic in 2018.

---

**2018 RAW MATERIAL INPUTS**

<table>
<thead>
<tr>
<th>Material</th>
<th>Primary</th>
<th>Secondary</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>390,704,459</td>
<td>856,695,919</td>
<td>1,247,400,378</td>
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<tr>
<td>Polypropylene (battery cases)</td>
<td>12,976,150</td>
<td>65,095,719</td>
<td>78,071,869</td>
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<tr>
<td>Sulfuric acid (as vitriol 93%)</td>
<td>231,261,216</td>
<td>7,661,537</td>
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<tr>
<td>Copper</td>
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<td>7,655,169</td>
</tr>
<tr>
<td>PVC</td>
<td>4,242,058</td>
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<td>4,242,058</td>
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</table>

1 Primary lead is from mined sources. Secondary lead includes lead recycled from previous usage, for example, at the Lyon Station smelter, plus lead recycled at other facilities and transported to Lyon Station. Secondary lead comes mainly from spent batteries collected from customers; a much smaller portion comes from factory scrap material from battery manufacturing that is recycled at smelters.

2 Lyon Station is the only East Penn site that manufactures plastic battery cases. This data does not include polypropylene in purchased cases and covers. Primary refers to virgin polypropylene, while secondary is the recycled polypropylene from battery cases.

3 In the U.S., East Penn purchases sulfuric acid for its two manufacturing sites in Iowa (primary sulfuric acid). In Lyon Station, it is recycled from spent batteries (secondary sulfuric acid).

4 Copper is purchased to manufacture wires and cables at Kutztown. All copper is virgin (primary) material.

5 PVC is purchased to manufacture wires and cables at Kutztown. All PVC is virgin (primary) material.
BYPRODUCTS
East Penn’s secondary lead smelter in Lyon Station is designed to maximize the use of byproducts. Sulfur oxides generated during the smelting process are captured and reprocessed into a liquid nitrogen sulfur solution. Over 24,100 short tons of this solution were sold in 2018 to agricultural fertilizer manufacturers for use as a raw material.

WASTE
Throughout our facilities, robust, employee-driven programs are in place to recycle a full range of scrap and excess material.

HAZARDOUS WASTE
SCOPE: BATTERY MANUFACTURING CAMPUS IN LYON STATION, PA.

Notes: Hazardous waste is only generated at the Lyon Station, Pennsylvania, manufacturing campus. Total hazardous waste increased by 2.1 percent, 2016 to 2018. During this time, the amount of hazardous waste landfilled decreased 15.9 percent while production (measured as pounds of lead oxide consumed) increased 18.0 percent.

1 Recycled hazardous waste consists of spent lead batteries collected from third parties and factory scrap material, which are recycled at the Lyon Station recycling facility to make new batteries. Factory scrap material is generated at the Lyon Station campus and includes batteries that do not pass quality checks, dross and lead wastes.
2 Hazardous waste landfilled includes slag, refractory waste, wastewater treatment plant sludge and remediation waste (such as concrete and blacktop). Disposal of hazardous wastes in landfills is done in accordance with all regulatory requirements.
3 Production increase is measured as pounds of oxide consumed.

NON-HAZARDOUS WASTE
SCOPE: LYON STATION CAMPUS/KUTZTOWN WIRE AND CABLE MFG. (PA)

Note: Total non-hazardous waste increased by 9 percent, 2016 to 2018, while production (measured as pounds of lead oxide consumed) increased 18.0 percent.

1 Recycled non-hazardous waste includes scrap metal, copper wire, wood pallets, cardboard, plastic wrap, universal waste (such as used oil and mercury-containing light bulbs), office paper and commingled waste (plastic and glass bottles, aluminum cans).
2 Landfilled non-hazardous waste includes municipal solid waste and wastewater treatment plant salt.
3 Production increase is measured as pounds of oxide consumed.
East Penn practices water stewardship in every aspect of our operations. We believe conserving water is important and we are doing our part to ensure we safeguard this valuable resource.

At the East Penn Lyon Station, PA location, water management plans are in place as part of our environmental management system to ensure we appropriately treat wastewater before discharge. We also do our best to manage water use.

### WATER DATA

**SCOPE: PLANTS AT LYON STATION, PENNSYLVANIA. STATISTICS SHOWN IN GALLONS**

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<td>49,005,239</td>
<td>47,619,520</td>
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<td><strong>Water Withdrawal</strong>²</td>
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<td>216,600,209</td>
<td>216,920,631</td>
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<td><strong>Water Consumption</strong>³</td>
<td>139,981,891</td>
<td>150,867,026</td>
<td>149,277,148</td>
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<td><strong>Water Discharge</strong>⁴</td>
<td>63,488,134</td>
<td>65,733,183</td>
<td>67,643,483</td>
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</table>

Notes: Between 2016 and 2018, water consumption increased by 6.6 percent, while production (measured as pounds of lead oxide consumed) increased 18.0 percent. Since water is in every battery we produce, water use increases as production increases.

1  The Water Recycled at Lyon Station is continuously treated and reused which allows for less volume to be withdrawn from the groundwater sources.
2  Water Withdrawn at the Lyon Station, Pennsylvania campus is from groundwater sources.
3  Water Consumed includes both evaporated water and water in the product.
4  The Lyon Station, Pennsylvania, manufacturing campus is zero discharge for process water and is only discharging sanitary wastewater. The pretreated process wastewater and sanitary wastewater are discharged to the municipal publicly owned treatment facilities.

In Lyon Station, Pennsylvania, East Penn operates the largest lead battery manufacturing campus in the continental U.S. The campus includes seven battery manufacturing plants, a lead smelter and oxide manufacturing facilities. Sanitary wastewater is treated to remove solids and potential lead contamination at our on-site sanitary treatment plant through advanced techniques like ultrafiltration. Control technologies, including best management practices, are also applied to prevent lead in stormwater on the East Penn campus.

East Penn treats and reuses wastewater from its manufacturing processes in an ultramodern wastewater distillation and treatment plant that is unique within the industry. The innovative closed-loop wastewater treatment and water reclamation facility for the Lyon Station campus recovers distilled water and a commercial anhydrous sodium sulfate byproduct from process wastewater. All lead-containing residues are separated from the treated water and recycled in the on-site secondary lead smelter. The recovered water is reused in manufacturing. The anhydrous sodium sulfate byproduct is sold to a national chemical distributor.
The treatment facility recycled over 915,000 gallons per week of process wastewater for reuse in manufacturing in 2018. The water treatment plant was subsequently expanded to introduce redundancy and double the capacity of the water recovery process and sodium sulfate generation. In 2018, 47.6 million gallons of wastewater were recycled, and 7 million pounds of sulfate salt were sold for use primarily in manufacturing glass products.

The environmental benefits resulting from the operation of the state-of-the-art “zero” discharge industrial wastewater treatment plant are significant and include:

- Minimizing the amount of groundwater withdrawn from the aquifer.
- Eliminating discharge of treated effluent to streams.
- Recovering pure anhydrous sodium sulfate for sale as a byproduct.
- Recovering / recycling metals and ultrapure water to use in the manufacture of lead batteries.

In April 2018, East Penn received the Business & Industry Award for the process wastewater treatment, recycling and recovery system by the Water Resources Association of the Delaware River Basin.

915,000+
GALLONS OF RECYCLED WASTEWATER PER WEEK IN 2018
We utilize several measures to monitor and manage air emissions. We employ the most advanced air pollution control equipment available. Our lead battery manufacturing facilities operate in controlled environments with elaborate networks of ventilation and negative air pressure systems to capture any lead particles that might otherwise escape to the outside environment. These particles are captured in fine particle air filters where they are collected and properly recycled.
LEAD EMISSIONS

As a lead battery manufacturer, reducing lead emissions is a key priority. At our largest battery manufacturing site in Lyon Station, Pennsylvania, we began deployment of High-Efficiency Particulate Air (HEPA) filters more than a quarter century ago to filter plant air before it is released to the environment. Today, the state-of-the-art secondary HEPA filtration units in use are 99.997 percent efficient at 0.3 microns. These systems produce air quality that is cleaner than that found in the surrounding atmosphere. Our permitted lead emissions for battery manufacturing in Lyon Station, PA and Corydon, IA are four times lower than allowable EPA and State environmental standards. At our East Penn International manufacturing facility in China, lead air emissions have been less than 0.001 short tons in each of the last three years.

At the Lyon Station campus, East Penn continuously monitors air quality from testing stations installed on-site and in the adjoining community. Even as battery production has increased over time, highly effective emission control technology has made possible reductions in ambient air lead concentration readings. These measures have consistently remained below government-mandated standards, including the U.S. EPA’s highly stringent 2008 National Ambient Air Quality Standard for lead of 0.15 micrograms per cubic meter.

Note: East Penn’s lead in air concentration decreased by 25 percent between 2016 and 2018, while production (measured as pounds of lead oxide consumed) increased by 18 percent over the same period.
GREENHOUSE GAS EMISSIONS
We calculate greenhouse gas (GHG) emissions from the use of natural gas (Scope 1) and electricity (Scope 2). Total GHG efficiency improved by 8 percent over this time period.

In 2019, East Penn initiated a continuous improvement effort and began collecting and tracking miles per gallon, fuel consumption and CO2 emissions data from mobile communication devices installed on sleeper trucks operating out of the Lyon Station campus in Pennsylvania. Tracking this data will help East Penn develop ways of improving fuel economy and reducing diesel consumption and CO2 emissions.

GHG EFFICIENCY
SCOPE: LYON STATION, PENNSYLVANIA, BATTERY PLANT AND SMELTER.

* GHG Efficiency = $\frac{\text{MT CO}_2\text{e from Scope 1 natural gas} + \text{Scope 2 electricity}}{\text{MT Lead Oxide Consumption}}$
Environmental regulatory self-assessment audits are conducted regularly by East Penn personnel. Frequent audits of our practices help ensure we maintain compliance with the various environmental regulations that our plants are required to meet.

East Penn’s lead batteries comply with the provisions of the below-referenced European Union (EU) Directives. Lead batteries produced by East Penn are exempt from the “RoHS 2 Directive (EU 2011/65/EU)”; however, they are regulated under several other EU Directives:

- Battery and Accumulators Directive (Directive 2006/66/EC)

With respect to REACH (Registration, Evaluation, Authorization and Restriction of Chemicals, Directive EC 1907/2006), our lead batteries contain lead metal, which is listed as a substance of very high concern. We comply with all applicable REACH requirements.

### Environmental Penalties

**Scope:** East Penn Manufacturing Plants in the U.S. and China.

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*Fine was due to improper paperwork completed, not due to environmental issue*
This report was prepared using the GRI Sustainability Reporting Standards as a reference. See the table below for a list of the specific disclosures referenced.

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