

2018 CORPORATE RESPONSIBILITY REPORT

Smart, Sustainable Water Solutions. **FOR LIFE.**



2018 Corporate Responsibility Report

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► About this Report

Dear Stakeholders,

Welcome to Pentair's 2018 Corporate Responsibility Report. We're excited to share highlights of our corporate and community citizenship from the 2018 fiscal year.

Since the April 30, 2018 separation and spin-off of our electrical business (as nVent plc), Pentair has established itself as a focused water company committed to solving some of the world's most pressing global water issues. We believe that the health of our world depends on reliable access to clean, safe water and as such, we offer a comprehensive range of smart, sustainable water solutions to home, businesses and industries around the world.



**Sustainability is not an initiative,
but instead is core to the products we
create and the customers we serve.**

Doing well by doing good has been a long-standing tradition at Pentair, and is reflected in our company's Win Right values that are foundational to our mission. We are dedicated to acting according to the highest ethical standards as we drive forward to deliver on our commitments.

Our purpose and mission energize our employees to make a difference within and beyond the workplace. They do so by delivering innovative technologies and sustainable solutions which help our customers achieve their sustainability goals. Additionally, they drive continuous improvement across our operations, support our teams and communities and contribute to our philanthropic work and corporate responsibility initiatives.

John L. Stauch
President and CEO
Pentair

Our goal is to demonstrate leadership as a responsible corporate citizen in every country and community where we conduct business.

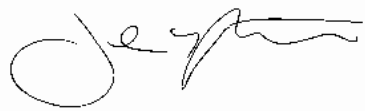
As a global company, we strive to minimize the environmental impact of our operations by proactively managing our greenhouse gas emissions (GHG), water use, electrical use and waste generation to make the world a healthier place. Our goal is to demonstrate leadership as a responsible corporate citizen in every country and community where we conduct business. This means, for example:

- ▶ Adopting a new, more ambitious Zero Waste model to measure waste reduction and materials use at our own facilities. We achieved a Zero Waste score of 75.6 percent for year-end 2018, diverting 31,284 U.S. tons of waste by reusing and recycling material (page 41).
- ▶ Achieving our fifth consecutive ENERGY STAR® Partner of the Year Award for our commitment to promoting wise and sustainable energy use with our industry-leading pool pumps (page 21).

- ▶ Advancing our Project Safewater philanthropic efforts to transform the way safer water is delivered to people in need. We're sharing our progress on the Pentair Foundation's most recent long-term initiative to deliver cleaner, safer drinking water and sanitation to 150,000 people in Western Honduras (page 53).

We will continue to focus on delivering smart, sustainable water solutions that empower our customers to make the most of life's essential resource. Whether it's moving, improving or enjoying water, we're focused on bringing water to life, for life.

Thank you.



John L. Stauch
President and CEO
Pentair

A Winning Company

1



Smart, Sustainable Water Solutions. **FOR LIFE.**

The need for water touches nearly everything we do. No matter who we are or where we live, we are all connected by our reliance on it.

Access to clean, safe water is essential for life; in fact, the health of our world depends on it.

Whether it's for fitness and fun, healthier homes, better flood control, safer sky rises, more sustainable ways to farm, or safe drinking water for those who need it most, we won't stop until the world's water is managed the best way possible.

► OUR PURPOSE

We believe the health of our world depends on reliable access to clean, safe water.

► OUR MISSION

Pentair delivers smart, sustainable solutions that empower our customers to make the most of life's essential resource.

► OUR VISION

To be the leading residential and commercial water treatment company built through empowered employees, delivering for customers and creating value for shareholders.

We Win Right through OUR VALUES

At Pentair, commercial success alone is not enough. Our **Win Right** values are the foundation of our company. We win by delivering on our values of customer first, innovation and adaptability, and accountability for performance. And we do it the right way through absolute integrity, respect and teamwork, and positive energy.

Our work is driven by our belief that the health of our world depends on reliable access to clean water. A deep-rooted culture energizes our employees to make a difference within and beyond the workplace. They do so by delivering innovative technologies and solutions to our customers, pursuing continuous improvement across our operations, supporting their teams and communities and contributing to our philanthropic work and corporate responsibility initiatives. Our Win Right values and guiding behaviors are the foundation of our company and shape how we do business and treat one another.

WIN

Customer First	We make it easy for customers to do business with Pentair and are tenacious about meeting customer commitments.
Innovation & Adaptability	We actively pursue continuous improvement, adapting to changing circumstances and applying new ideas.
Accountability for Performance	We commit to high standards of performance and demonstrate personal ownership for getting the job done.

RIGHT

Absolute Integrity	We are committed to honest and ethical business practices in our dealings with customers, business partners, investors, communities, and each other.
Respect & Teamwork	We treat others with respect and openness; we collaborate and align with others for team success.
Positive Energy	We display a positive outlook and take responsibility for our impact on others.

Delivering leading solutions through OUR COMPANY

Our industry leading and proven portfolio of solutions enables people, business and industry to access clean, safe water, reduce water consumption, and recover and reuse it. It starts with a legacy of solving real problems with smarter technology. Pentair delivers a comprehensive range of smart, sustainable water solutions to homes, business and industry around the world. Collaborating with industry partners, governments, non-governmental organizations (NGOs), and other companies, we serve a wide variety of customers in the residential and commercial, food and beverage, industrial, and infrastructure verticals.

In 2018, Pentair reported the performance of its business in three segments: Aquatic Systems, Filtration Solutions and Flow Technologies:



► Aquatic Systems

Manufactures and sells a complete line of energy-efficient residential and commercial pool equipment and accessories. Applications include pool maintenance, pool repair, renovation, service and construction and aquaculture solutions.



► Filtration Solutions

Manufactures and sells water and fluid treatment products and systems for global residential, industrial and commercial markets. Applications include fluid filtration, ion exchange, desalination, food and beverage, food service and separation technologies for the oil and gas industry.



► Flow Technologies

Manufactures and sells pumps used in applications including residential and municipal wells, water treatment, wastewater solids handling, pressure boosting, fluid delivery, circulation and transfer, fire suppression, flood control, agricultural irrigation and crop spray.

On April 30, 2018, Pentair completed the separation of its Electrical business from the rest of Pentair, which was effected by the transfer of the Electrical business from Pentair to nVent Electric plc. Pentair's 2018 Corporate Responsibility Report reflects initiatives and data only related to the Pentair Water business; which means that, to the extent feasible, data related to the former Electrical business for January 1 – April 30, 2018 is excluded from this report.

As of December 31, 2018

OVERVIEW OF BUSINESS



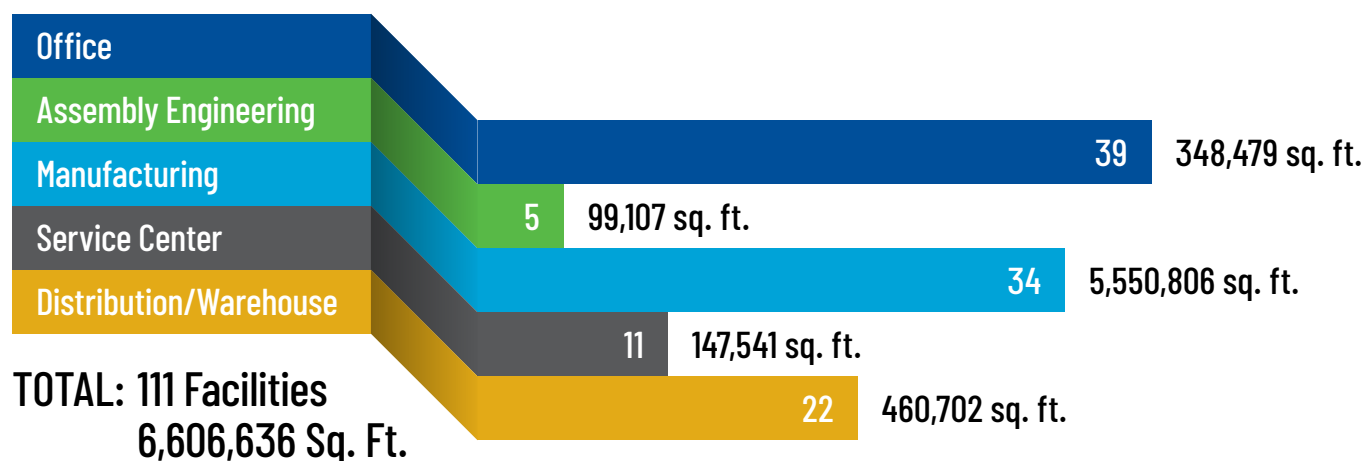
~ 10,000 Employees
IN
30 Countries
ON
6 Continents

- | | |
|---|--|
|  2 Corporate Offices |  34 Manufacturing Plants |
|  37 Sales Offices |  22 Distribution/Warehouses |
|  5 Engineering Centers |  11 Service Centers |

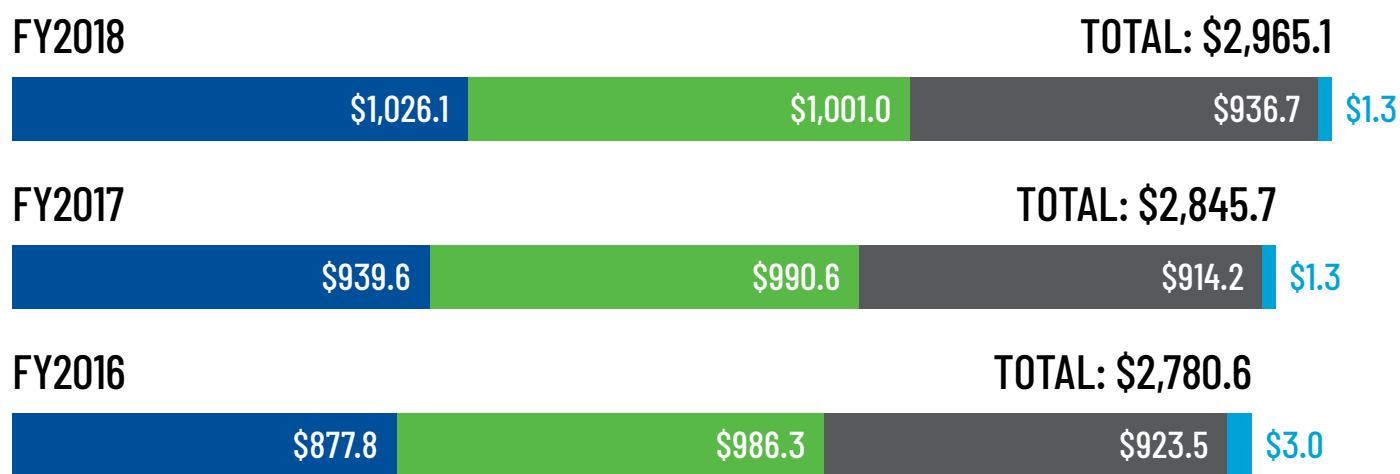
As of December 31, 2018

OUR FOOTPRINT

Facilities & Square Footage (FY2018)



Sales by Segment* (in Millions)



- Aquatic Systems
- Filtrations Solutions
- Flow Technologies
- Other

For detailed information on sales by business and region, see our [Annual Report](#).

*Effective May 1, 2018, we reorganized our business segments to reflect a new operating structure, resulting in a change to our reporting segments. All prior period amounts related to the segment change have been retrospectively reclassified to conform to the new presentation.

2018

INDUSTRY AWARDS



- ▶ **2018 ENERGY STAR® PARTNER OF THE YEAR**
Sustained Excellence Award
U.S. Environmental Protection Agency



- ▶ **BEST NEW PRODUCT**
IntelliConnect™ Control and Monitoring System
International Pool Spa and Patio Expo



- ▶ **"TOP 50 PRODUCT" AWARD**
IntelliConnect™ Control and Monitoring System
Pool & Spa News



- ▶ **SMART POOL CATEGORY WINNER**
Partners Incentive Program Scanner
Piscine Global Expo

Our approach to CORPORATE RESPONSIBILITY

Pentair is a global company with the people, resources, technology and values to make a positive impact on the health of the world through its smart, sustainable water solutions. Our Corporate Responsibility (CR) program focuses on building sustainability into our operations and products, and empowering our employees to become involved in our communities.

► Winning Solutions, Operations, Workplace, and Communities

WINNING SOLUTIONS: Our focus, every day, is on developing smart, sustainable solutions that help our customers make the most of life's essential resource. Our industry leading and proven portfolio of solutions enables our customers to access clean, safe water. With some of the world's largest companies among our customers, our product innovations can deliver wide-reaching CR impacts that further a sustainable world.

WINNING OPERATIONS: We apply the same sustainability-focused innovation of our products to our own operations, pursuing continuous improvement in our water use, energy use, waste production, and emissions. We manage our global operations with care for the health, safety, and well-being of our employees, customers, communities, and the environment.

WINNING WORKPLACE: Pentair's Win Right values guide how we conduct business every day. We cultivate a positive culture, embrace diversity and inclusion, and foster innovation and curiosity through employee learning and development opportunities.

WINNING COMMUNITIES: Through our charitable giving and employee volunteerism, we work to strengthen communities around the world by increasing access to quality education and by providing sustainable access to safe, clean water to people in need.

► Engaging with Stakeholders

Understanding the key concerns and priorities of our stakeholders enables Pentair to refine its strategy and focus resources on improving performance in key areas. In 2016, we conducted a materiality analysis and stakeholder engagement initiative with internal stakeholders, investors, customers, and partners. Our goal was to better understand critical areas of business opportunity and risk, the broader context within which our company operates, and the priority actions that we should take to further refine our strategy and communications. We plan to reassess our company priorities again as a pure play water company.

► Aligning with the Global Goals

Pentair believes we can do more together than we can alone. We view the United Nations Sustainable Development Goals (SDGs) as an important roadmap for addressing the world's toughest societal challenges. Through our business solutions and the innovation and commitment of our talented employees, we have an opportunity to make unique contributions to global efforts for greater sustainability, equality, and opportunity. Working with nonprofit partners, Pentair is working to measure and communicate the contribution our philanthropic corporate responsibility efforts make toward accomplishment of the SDGs.

Winning Solutions

2





Delivering solutions today for **OPPORTUNITIES TOMORROW**

Around the world, homes, businesses and industry are increasingly in need of reliable access to clean, safe water. In fact, global water demand is projected to increase by up to 30 percent by 2050, driven primarily from industrial, agriculture and domestic use.*

Combining Pentair's global perspective, deep expertise, and proven innovation processes, we deliver smart, sustainable water solutions that help our customers make the most of life's essential resource. By building sustainable lifecycle designs into our products and solutions, we help customers anticipate the changes to their business and industry that result from increased resource costs, evolving regulations, and stakeholder demands.

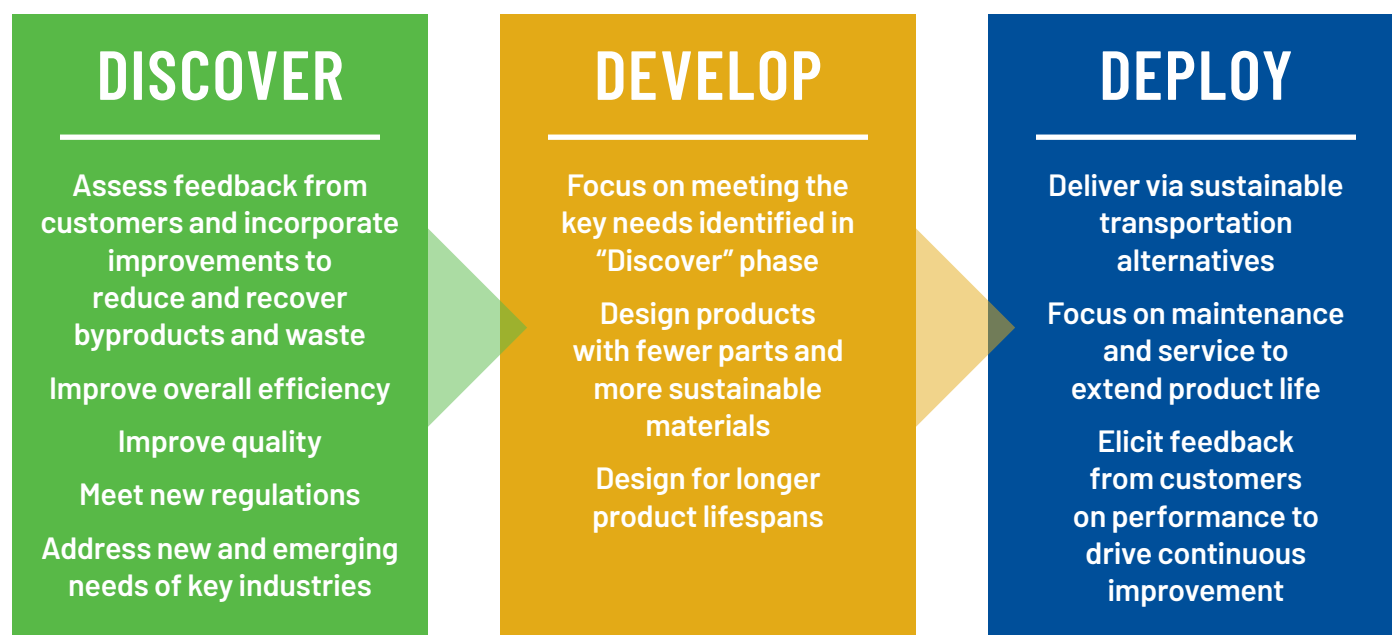
*SOURCE: Burek, P., Satoh, Y., Fischer, G., Kahil, M. T., Scherzer, A., Tramberend, S., Nava, L. F., Wada, Y., Eisner, S., Flörke, M., Hanasaki, N., Magnuszewski, P., Cosgrove, B., and Wiberg, D., 2016. *Water Futures and Solution: Fast Track Initiative (Final Report)*. IIASA Working Paper. Laxenburg, Austria, International Institute for Applied Systems Analysis (IIASA).

Our proven

THREE-STEP INNOVATION PROCESS

Pentair's proven "3D" Innovation Process is a key cornerstone of the Pentair Integrated Management System (PIMS); refer to page 30. With a focus on Customer First and Lean methodologies, its three phases — Discover, Develop, Deploy — deliver technologies and solutions that solve critical challenges for our diverse customers while prioritizing new product investment opportunities to help drive growth. In designing holistic solutions for each industry we serve, we focus on adaptability, creative problem solving, and continuous improvement. At each phase, our designers and engineers look for opportunities to reduce the environmental impact of our products and solutions.

Sustainability Check Points in Our Innovation Process



Research & Development As of December 31, 2018

PATENTS (FY2018)	PENDING	GRANTED
United States	105	332
Foreign	162	670
TOTAL	267	1,002

R&D INVESTMENTS	2016	2017	2018
TOTAL (Millions)	\$73.3	\$73.2	\$76.7
Personnel resources specifically dedicated to R&D:			
• 610 Engineers • 2 Technology Innovation Centers			

SPOTLIGHT

Innovating for the future
AQUATIC SYSTEMS

To advance our commitment to delivering smart, sustainable water solutions through innovation, Pentair opened a state-of-the-art innovation center in Apex, North Carolina in 2018.

The facility primarily serves as the technology hub for Pentair's Aquatic Systems business.

The 50,000 square-foot site incorporates advanced electronics and Internet of Things (IoT) laboratory facilities, as well as extensive environmental and physical testing capabilities. The center houses a training room capable of live demonstrations and hands-on training for our employees and dealer customers.



Additionally, the innovation center features flexible space that can be configured to develop and design manufacturing cells. It also facilitates rapid prototyping and makes extensive use of 3D printing capabilities. Collaborative workspaces and ergonomic workstations enable a dynamic team environment.

2018 Product Innovation SHOWCASE

► Pentair IntelliCenter™ Control Center

Pool and spa owners can stay connected with smart technology while conserving energy, maintenance time and water. The IntelliCenter™ easily and intuitively allows users to manage pool and spa features — including lighting, temperature, chemistry, and water features — from anywhere in the world.



◀ Pentair's UltraTemp ETi™ Hybrid Heater

Hybrid technology can now be found on the pool pad, which combines a pool heat pump and an ultra-high-efficiency gas-fired heater in the same unit. With four distinct operating modes, the innovative pool heater delivers superior energy efficiency.

► Pentair Everpure Conserv HE-3 Reverse Osmosis System

Pentair launched this high efficiency reverse osmosis system with smart technology to help maintain water quality across foodservice applications. Operators can now monitor water quality remotely and receive real-time performance feedback. Thanks to its effortless expandability, the Everpure Conserv HE-3 System can continue to grow with the businesses it serves.



◀ IoT Service Solution for Beer Membrane Filtration Systems

Pentair introduced this solution to help breweries achieve great-tasting, high quality beer while reducing energy and water consumption. Designed to help boost operational performance, this new solution allows brewers to continuously monitor critical process performance data during brewing to help maximize operational efficiencies and optimize beer quality.

► Pentair Hypro® Express™ Flush Valve

Created with efficiency and effectiveness in mind, this new flushing valve can be easily installed or retrofitted onto existing equipment. Designed for agricultural spray applications, it helps minimize the cumbersome task of cleanout — taking less than half the time than the standard Hypro Express End Cap.



Helping people around the world efficiently

MOVE, IMPROVE AND ENJOY THEIR WATER

throughout the day



The impact of our **WATER SOLUTIONS**

Population growth, urbanization and increased consumption of goods will all increase global pressure on water resources. Tackling these critical water challenges provides opportunities for Pentair to drive business results while delivering real value to society.

Pentair offers innovative solutions across the industry spectrum – from filtering drinking water to treating wastewater for reuse or safe return to the environment.

Our water filtration and reuse solutions support communities around the world that need access to potable water, as well as industries seeking technologies that improve water efficiency and reduce costs. As water resources become increasingly scarce, they will need to be transported longer distances from source to end-user. Our energy-efficient pumping solutions help reduce costs while improving the efficiency of transporting water from source to treatment facility, and ultimately to the end user.



Making Every Drop Count

65% of our solutions support water efficiency, helping to reduce, reuse or recover water, directly or indirectly.*

63% of our solutions help improve water quality, including products that deliver cleaner, safer water through solutions such as our residential lead removal filtration systems well as products that purify water for reuse in manufacturing and industrial applications, or its safe return to the environment.*

*Based on Pentair's top brands as a percentage of total revenue.

Our Water Solutions —



Reduce Demands on Freshwater Resources

High-Efficiency Reverse
Osmosis and Filtration
Systems for Commercial and
Residential Applications

High-Efficiency Pressure
Management Systems
for Commercial and
Residential Applications

High-Efficiency
Pool Filters

Hot Water Management
Solutions

Beer and Wine Membrane
Filtration to Reduce
Water Footprint



Reuse and Recover Water, Nutrients, Energy, and Other Valuable Byproducts

Nanofiltration and
Ultrafiltration Membranes
for Water Reuse

Anaerobic and Aerobic
Membrane Bioreactors for
Wastewater Reuse

CO₂ and Biogas
Recovery Systems



SPOTLIGHT

2018 ENERGY STAR®
PARTNER OF THE YEAR**Driving progress with pool pump technology, Pentair celebrates five years of energy-efficient recognition.**

In 2018, for the fifth consecutive year, the U.S. Environmental Protection Agency (EPA) named Pentair an ENERGY STAR® Partner of the Year and awarded Pentair the Sustained Excellence designation. This honor recognizes Pentair, an ENERGY STAR partner since 2013, for continued leadership in protecting the environment through superior energy efficiency achievements.

Specifically, Pentair was recognized for its leadership in manufacturing pool pumps that meet ENERGY STAR criteria, the government-backed symbol of energy efficiency. In order for pool pumps to earn the ENERGY STAR certification, the pumps must be at least 30–72 percent more energy efficient than typical pumps.

Pentair revolutionized the pool industry when it was the first to market with variable speed pump technology, which allows the pump to adjust flow throughout the cycle to minimize energy use. Since 2007, Pentair's pool pumps have helped U.S. consumers save \$1.9 billion in operating costs, which translates into 18 billion kilowatt hours of energy saved.* This translates to the prevention of approximately 14 million tons of carbon dioxide from being released, which is the equivalent of more than 31 billion car-driven miles.**

Our energy efficient pool pumps helped prevent the release of

14.0
million
tons of CO₂

which is the equivalent of

31.1
billion
car-driven
miles

*Savings are based on a weighted average annual kWh savings from the [Consortium for Energy Efficiency \(CEE\)](#) at \$0.11 / kWh. Individual Weighted Energy Factor (WEF) scores and savings may vary by model. For more information regarding the energy efficiency features of current Pentair pool pump offerings, including WEF scores, visit [Pentair.com/energystar](#).

**SOURCE: [EPA Greenhouse Gas Equivalencies Calculator](#)

Innovating to deliver

ENERGY EFFICIENT SOLUTIONS

As demand for energy increases, consumers, homeowners, industry and communities around the globe are striving to reduce energy consumption and waste.

Pentair helps reduce costs for customers through innovative technologies that require less energy to operate, or that recover energy to offset the electrical requirements for operation. Pentair applies a Lean Enterprise mentality to solution design, emphasizing continuous improvement in product energy efficiency. We work hard to design each new generation of solutions with reduced energy use demands.

THE IMPACT OF OUR SOLUTIONS

76%

of Pentair solutions support energy efficiency, by requiring less energy to operate, or by aiding broader systems to operate more efficiently.*

*Based on Pentair's top brands as a percentage of total revenue.



Energy Efficiency Solutions

Pentair has invested resources for research and innovation to make our products more efficient, helping to reduce the energy footprint of many of our residential, commercial, industrial, and municipal pumping technologies.

In 2018, Pentair dedicated itself to bring more than 50 models of in-line and end suction pumps, used

primarily for commercial HVAC and industrial applications, in compliance with new Department of Energy (DOE) standards that will go into effect in January 2020. Our newly redesigned DOE compliant pumps combine energy efficiency and performance excellence, along with an upgraded design.

Energy Recovery Solutions

Our solutions enable customers to get more value from the resources they use. We look for opportunities at every stage of the manufacturing process to extract greater value from waste. For example, in industries such as distilleries, dairies, and bio ethanol production, wastewater streams contain high levels of liquid and solid organic matter such as carbohydrates, alcohols, and bio solids.

Using our anaerobic membrane bioreactor technologies, customers can capture this organic matter to convert wastewater into three valuable resources: water that can be recycled for non-food contact applications within the manufacturing facility; methane that can be used as an energy source; and carbon dioxide that can be reused within the carbonation process.



CASE STUDY

Pentair's sustainable solutions help fuel a 5th GENERATION DAIRY FARM

Grassland Dairy, a Pentair customer, now operates one of the most advanced and innovative membrane treatment plants for dairy wastewater in the industry.

Approximately one-third of the butter sold in the United States comes from the 5 million pounds of milk Grassland Dairy receives daily at its facility in Greenwood, Wisconsin. With a goal for a more sustainable future, Grassland's environmental footprint grows smaller with every generation. Today, the company produces three times more butter than it did 15 years ago while using less energy, land and water, and releasing fewer emissions.



Facing challenges due to ever-growing production and stricter discharge limits, Grassland Dairy turned to Pentair to re-engineer the facility's wastewater plant. To address these issues and help the company achieve its sustainability goals, Pentair designed and installed state-of-the-art solutions utilizing its breakthrough tubular membrane with Helix technology to treat the facility's wastewater for water reuse and energy recovery with the following outcomes:

- **Increased wastewater treatment capacity.** Our Pentair aerobic membrane bioreactor (MBR) was installed to help treat the increased flow of water due to growing production of the manufacturing plant.
- **Adherence to state phosphorus discharge limits.** A Pentair Ultrafiltration membrane was installed to polish the effluent for phosphorus removal to meet Wisconsin's discharge limits, which were recently lowered. In addition, a reverse osmosis system was built to treat the final effluent to reuse water — up to 120,000 gallons per day — as feed to boilers and cooling towers.
- **Reduced energy consumption.** An anaerobic membrane bioreactor was installed to treat the high-strength wastewater stream for chemical oxygen demand reduction and energy recovery.

"As a result of these significant system updates, Grassland Dairy is leading the industry in our approach to responsibly handling dairy wastewater," said Jeremy Schiller, plant operator, Grassland Dairy. "Pentair's unique solutions have played a significant role in helping us meet challenging treatment requirements and achieve more sustainable operations."

Our sustainable

FOOD AND AGRICULTURE SOLUTIONS

Industry must work collaboratively with governments to take a lead in finding ways to deliver more food, using fewer resources, to meet demand. Innovative products and services from Pentair help to support sustainable food production by using less water and energy, reducing potentially harmful runoffs, and improving resource efficiency.



As the global population grows, food demand is expected to increase up to 56 percent by 2050.*

► PRECISE APPLICATION OF RESOURCES

According to the United Nations, approximately 70 percent of the fresh water used around the world each year is used for agriculture. Pentair's pumps, spray tips, controls and accessories support the precise application of water and agricultural chemicals to reduce waste and runoff and support productivity. Our centrifugal pumps, submersible motors and other irrigation products ensure that water resources are used only where they are needed. Our precision spray solutions including smart nozzles, precision nozzles, and smart pumps that help protect crops through accurate chemical applications, improving coverage and uniformity. Farmers reduce costs and reduce their environmental impact by using less chemical spray, thereby reducing potential runoff to nearby surface water.

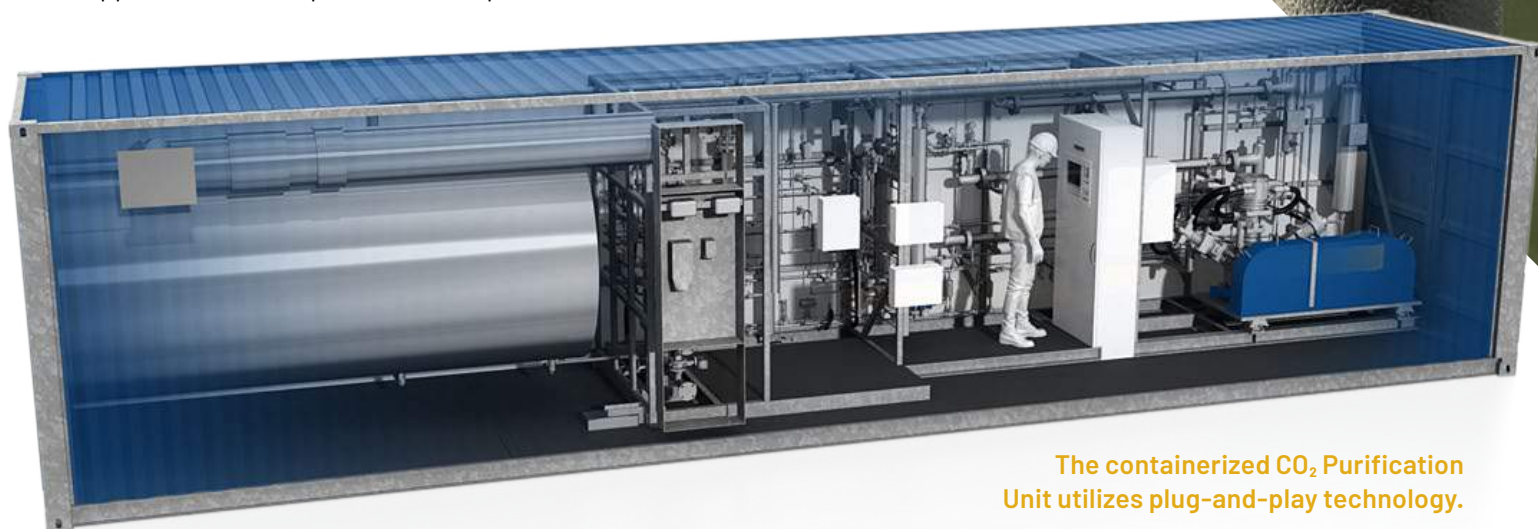
SOURCE: [World Resources Report – Creating a Sustainable Food Future](#)

CASE STUDY

Innovation is in the air with CO₂ TECHNOLOGY

**Pentair and Climeworks,
an innovative company that
removes carbon dioxide (CO₂)
from the air, collaborate to capture
and develop food grade CO₂.**

When you hear the refreshing “fizz” of a carbonated beverage, you might not think much of where the bubbles come from. The purified carbon dioxide (CO₂) utilized in most soft drinks or sparkling water is most often a byproduct from various conventional industrial processes. A collaboration between Pentair and Switzerland-based Climeworks is rethinking the source in a joint effort with new technology designed to pull and purify CO₂ directly from the air. The project is funded by Eurostars[™], a program under the European Union that supports innovative product developments, and is called CAPDrinks.



**The containerized CO₂ Purification
Unit utilizes plug-and-play technology.**

Leveraging Climeworks’ direct air capture technology coupled with Pentair’s expertise in high purity standards for CO₂, the solution is capable of generating food-grade quality CO₂ without adding any CO₂ footprint. Further, the process isn’t reliant on fossil fuels as it utilizes byproduct thermal energy and is also capable of running on renewable energy.

The world’s first water bottled with the CAPDrinks technology was released by Valser in spring 2019.

Our solutions for **RESILIENCE**

Extreme weather, flooding, and harsh conditions threaten the security of essential infrastructure management systems. Pentair's best-in-class pumping solutions combine industry-leading efficiency and superior quality, delivering confidence through rugged dependability in a variety of municipal water and wastewater transportation system environments.

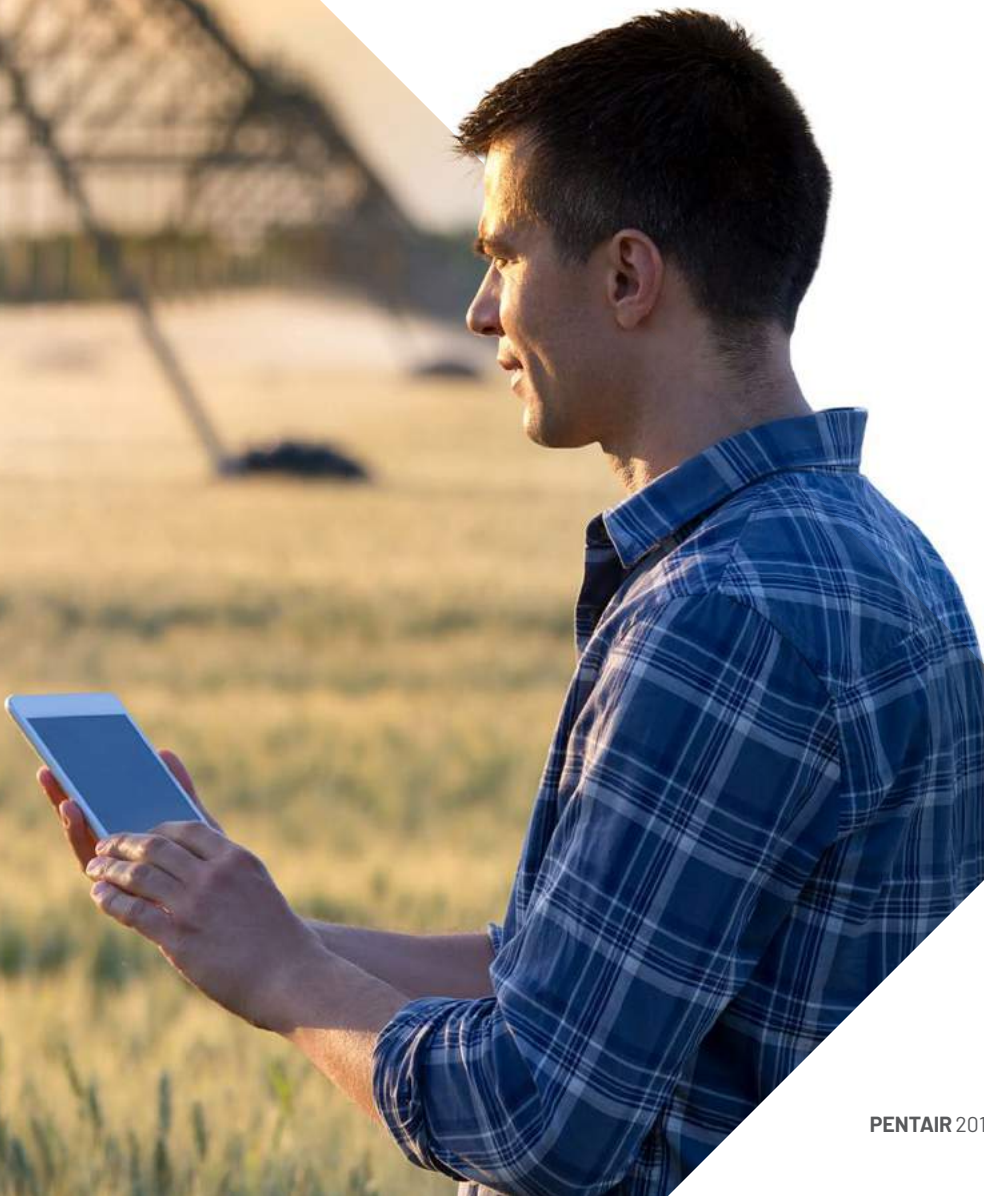
► FLOOD CONTROL SYSTEMS

Pentair manufactures highly engineered systems, including vertical turbine, axial, and mixed-flow propeller pumps capable of moving up to one million gallons of floodwater per minute and averting widespread damage. Our installations help keep urban spaces dry, from small municipalities to the world's largest pumping station in the city of New Orleans.



Winning Operations

3



Delivering customer solutions

RESPONSIBLY AND SUSTAINABLY

As a leading global water treatment company, Pentair takes seriously our commitment to delivering smart, sustainable water solutions.

This means that we also strive to implement responsible business practices and to eliminate harmful environmental impacts from our own operations by minimizing emissions, waste, and water usage.

Our focus on continuous improvement is driven by our Lean Enterprise management approach, promoting innovation and creative problem solving. This winning approach results in cost efficiencies for both our customers and our business while supporting the health of our communities and planet.

Our approach to DRIVING OPERATIONAL EFFICIENCIES

By applying the same innovation and teamwork that we bring to developing product solutions, we strive to implement operational efficiencies that help reduce our environmental impact. We learn from our successes and failures, looking to spot challenges early and deliver impactful solutions at the right opportunities. Our [Environmental Health & Safety \(EHS\) policy](#) outlines our commitment to developing, manufacturing, and delivering our products safely and sustainably.



The **Pentair Integrated Management System (PIMS)** is the primary mechanism by which we measure and manage our global operational impacts. PIMS methodology drives continuous progress towards reducing water and energy use and waste diversion from manufacturing facilities. In parallel, by practicing Lean Enterprise management, we uncover ways to produce more while using less energy and fewer resources.

Pentair conducts regular business reviews of our sustainability results to provide clarity and focus on achieving our goals. We continue to enhance our capabilities through the creation of sustainability committees that are implementing strong processes and deploying focused teams to assist plants in meeting their sustainability targets. These efforts include supporting identified efficiency projects, along with incorporating water and energy mapping strategies into our PIMS approach. The committees are also charged with evaluating and updating our annual Environmental Treasure Hunts, which are creative and interactive opportunities for our employees to find new solutions to reduce our natural resources consumption.

In order to assess progress and set targets for improvements, Pentair annually tracks and reports our global water, waste and energy consumption. We will continue to improve on our data collection process through continued system upgrades along with the use of operational scorecards. In 2019, we will further analyze these metrics as we look to establish longer term goals for our business to advance our initiatives and deliver for our shareholders and customers.

Further, we will report impacts due to material changes to our business, such as acquisitions or divestitures, and make adjustments to these goals as appropriate. In 2018, Pentair completed the separation of its Electrical business from the rest of Pentair. The operational data presented in the following section reflects that of the Pentair Water business which means that data related to the former Electrical business for January 1 – April 30, 2018 is excluded from this report.

CASE STUDY

Process innovation reduces emissions —

SAFER FOR EMPLOYEES AND THE ENVIRONMENT

Pentair's Herentals, Belgium product design team worked together to help reduce volatile organic compounds (VOCs) emissions created during the Triton Pool Sand Filter tank manufacturing process.

Through outstanding teamwork and utilization of our PIMS process, the team collaborated with a local manufacturer to create a new, very low VOC fiberglass resin that is now used for all filter tank production in Herentals.



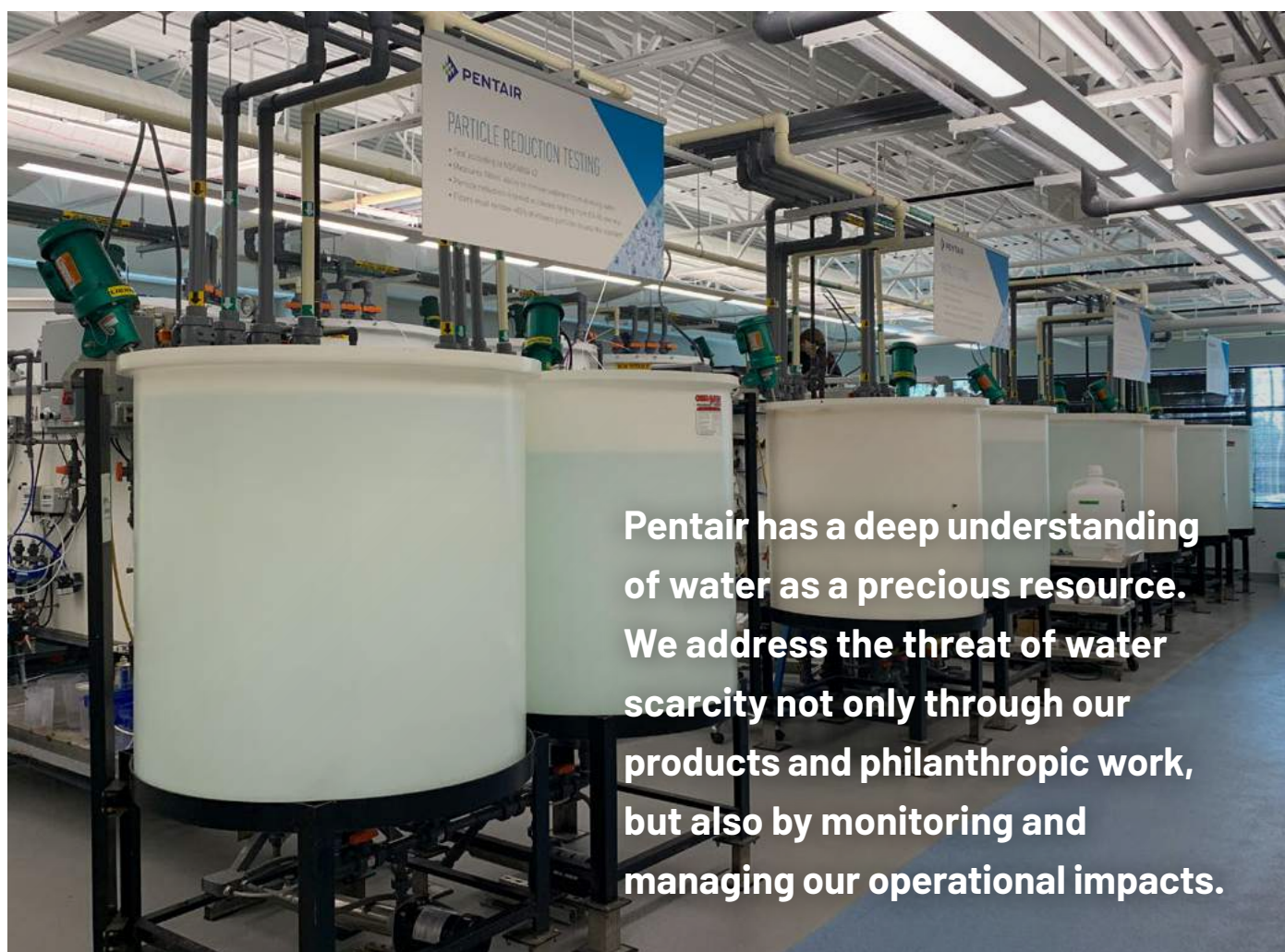
Our engineering design staff conducted many tests with the new resin to document viability of the design while maintaining product quality standards throughout the manufacturing process. The new resin is virtually odorless and requires less volume during the manufacturing process. The most important benefit, and one that we are most proud of, is that the new raw material is better for the environment. Teamwork and employee dedication in 2018 paid off with the plant eliminating approximately 20,000 pounds of VOC emissions from 2017 to 2018.

Managing our **WATER USE**

Water consumption is closely measured and managed across our facilities by extracting data from utility bills monthly and tracking overall consumption through EHS scorecards.

In many cases, we drill down our analysis to the manufacturing process level. For particularly water intensive processes, this allows us to closely track usage and drive targeted improvements. As a way to understand how efficiently we use resources, water intensity is calculated by U.S. Gallons/Earned Hour. We define Earned Hour as the number of products manufactured multiplied by the standard hours to manufacture.

Each Pentair site operations team is tasked with identifying, developing, and implementing water conservation measures, with assistance from the Enterprise-wide EHS department. In 2018, we realized improvement in overall global water consumption and intensity, with some slight increases regionally as outlined on the following pages.



Pentair has a deep understanding of water as a precious resource. We address the threat of water scarcity not only through our products and philanthropic work, but also by monitoring and managing our operational impacts.

Municipal Water Withdrawal PERFORMANCE

Working together with our site leaders, Pentair reduced municipal water withdrawals at our plants by 4,100,000 gallons, a three percent reduction in 2018 from 2017.

Water withdrawal intensity rates decreased as well, which is an indicator that our manufacturing sites are improving efficiency while reducing overall water usage. To put these conservation efforts into perspective, these improvements are the equivalent savings to the amount of water in nearly 33 million 16-ounce bottles of water.

Our Asia Pacific (APAC) and Europe, Middle East and Africa (EMEA) regional municipal water withdrawal rates were up slightly from 2017 to 2018. The main drivers were increasing evaporation rates from our exterior cooling towers and the need to discharge greater volumes of water when testing larger pumps. As part of our continuous improvement cycle, Pentair realizes these opportunities and will continue to focus on smart, sustainable solutions to reduce our environmental impact.

DRIVER **Water Reuse/Recycle During Pump Testing Process**

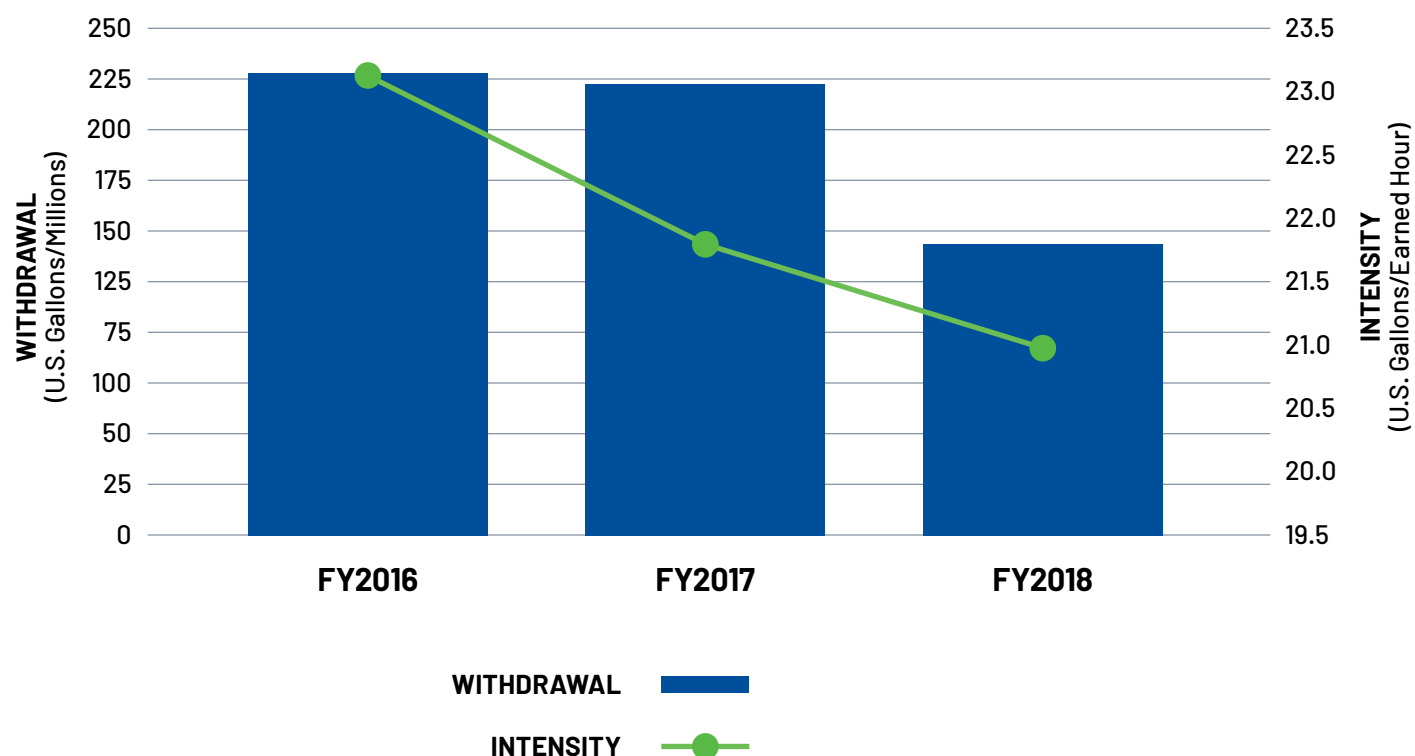
OUR APPROACH: The team at Pentair's Chardon, Ohio plant challenged itself to reduce overall water usage within our manufacturing process. The team responded by designing and installing a water filtration system to recycle the water that is used during the pump testing process that was previously discharged into the City's wastewater treatment system.

Utilizing the PIMS process and ingenuity of the engineering, EHS, operations and maintenance staff, Chardon reduced water usage by 600,000 gallons in 2018 vs. 2017. That is enough water savings to wash 30,000 loads of laundry using a front load washing machine.

Pentair used its own technology to achieve these results, and is excited to spread this project learning to the remainder of our sites and identify ways to help our customers with similar applications.



Municipal Water Withdrawal/Intensity by Region



MUNICIPAL WATER WITHDRAWAL/INTENSITY BY REGION* (U.S. Gallons)			
	FY2016	FY2017	FY2018
Americas	69,295,036	70,366,957	62,142,352
EMEA	51,269,614	51,875,790	53,018,608
APAC	20,808,263	18,725,248	21,714,717
TOTAL WITHDRAWAL (U.S. Gallons)	141,372,913	140,967,995	136,875,676
TOTAL INTENSITY (U.S. Gallons/Earned Hour)	23.1	21.8	21.0

*Water withdrawals from municipal water supplies or other water utilities.

CASE STUDY

Recycled water for
AGRICULTURAL REUSE

Pentair owns and operates (via a sub-contractor) two Wastewater Treatment Plant's (WWTP) located in the Australian state of Victoria.

Together the facilities reclaim wastewater discharged from nearby townships to produce non-potable water that is transferred to local farmers for irrigation, which reduces the overall water demand on local townships.

To accomplish this, both WWTP's utilize Pentair's membrane bioreactors to produce approximately 1.6 million gallons of water **daily** for local farmers to irrigate their crops. In 2018, both plants produced and provided approximately 370 million gallons of reclaimed water suitable for crop irrigation.



How Pentair is driving **ENERGY EFFICIENCY**

As the need for access to fresh water and nutritious food increases, so will demands on our energy resources. We understand these interdependencies and work to address them in our operations as well as our products and solutions.

Our approach combines renewable energy solutions like solar and wind power with smart conservation measures to drive a consistent, year-over-year reduction in our operational energy use per earned hour. Our facilities gather energy use data from utility invoices and track performance on EHS scorecards monthly. As a way to understand how efficiently we use resources, energy consumption is calculated by mWH/Earned Hour for natural gas and electricity and Metric Tonnes/Earned Hour for carbon dioxide (CO₂). We define Earned Hour as the number of products manufactured multiplied by the standard hours to manufacture.

With support from the enterprise EHS department, each site operations team is responsible for identifying, developing and implementing energy use reduction programs. We regularly communicate with site employees to improve awareness of, and support for, energy-saving initiatives and related process changes.

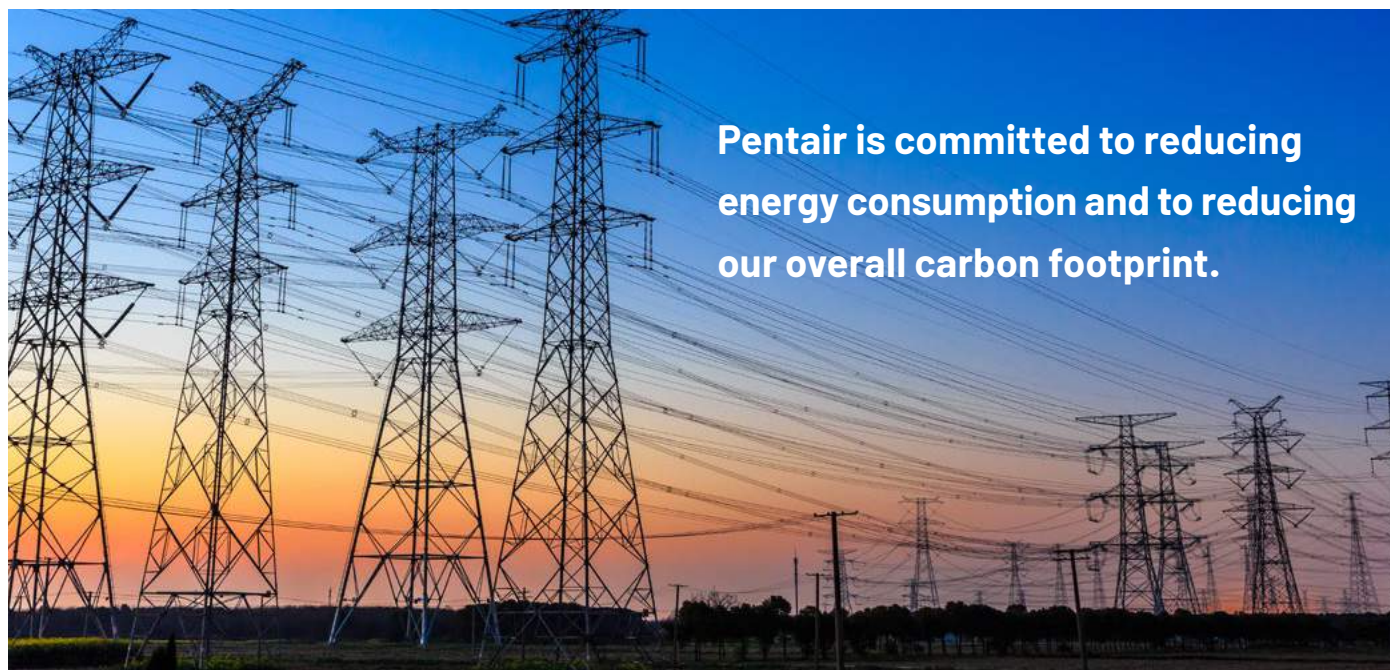


Energy Consumption and Emissions

PERFORMANCE

Pentair uses two metrics to measure our successes in energy reductions; energy consumption in megawatt hours (mWH) and energy intensity, which is calculated by dividing total consumption by manufacturing earned hours.

Electricity consumption decreased by 9.7 percent or 13,998 mWH (13,998,000 KWH) from 2016 through 2018 and electrical intensity decreased by .004 mWH/earned hour during that same period, which is a good general indicator that plant efficiency is improving. In 2018, natural gas consumption increased by 17,861 mWH. Consumption drivers were due to colder than normal temperatures at some of our plants located in Northern climates and increases in production at our foundries.



Pentair is committed to reducing energy consumption and to reducing our overall carbon footprint.

DRIVER

Manufacturing Process

OUR APPROACH: We strive to achieve energy reductions by continuously improving our lean processes. One way we achieve these results is by optimizing the continuous flow of materials through our production floors during the manufacturing and assembly processes. Overall, continuous flow improvements at our plants enhance employee health and safety, increase efficiency and reduce energy consumption.

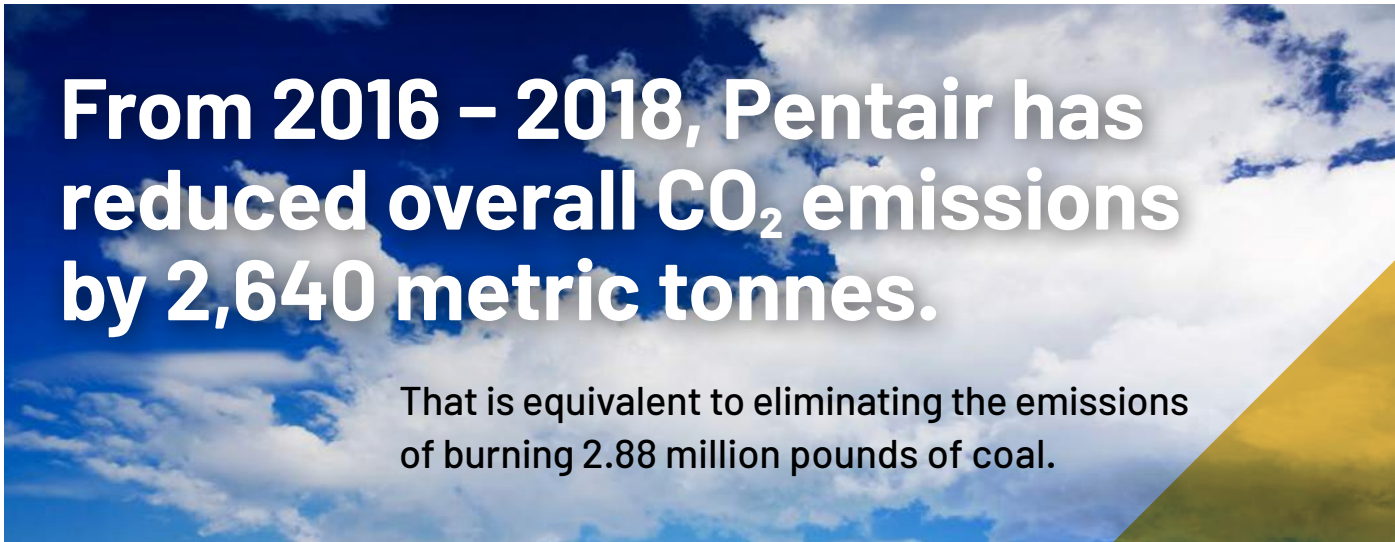
DRIVER

More Smart, Sustainable Plants

OUR APPROACH: Our plants are challenged with finding creative ways to reduce energy consumption. Highlights for 2018 include:

- Our Conroe, Texas plant installed programmable timers on industrial ovens and HVAC units in the plant to help reduce overall electrical consumption by two percent year-over-year. This equates to 35.3 mWH (35,300 KWH) of electricity reductions. Through a small investment in technology, and without modifying any processes, the plant conserved the energy equivalent of one year of electricity consumption for five average residential households.*
- Energy mapping efforts and the installation of automated frequency controllers for heating and cooling in the membrane production department at our Enschede, Netherlands facility resulted in a six percent year-over-year reduction in electricity consumption and an 11 percent year-over-year reduction in natural gas usage. This translates to 454 mWH (454,000 KWH) of electricity savings and 1,290.1 mWH (1,290,078 KWH) of natural gas usage savings — the equivalent of one year of electricity consumption for 44 households, and one year of natural gas consumption for 125 households.*

*SOURCE: [U.S. Energy Information Administration](#)



From 2016 – 2018, Pentair has reduced overall CO₂ emissions by 2,640 metric tonnes.

That is equivalent to eliminating the emissions of burning 2.88 million pounds of coal.

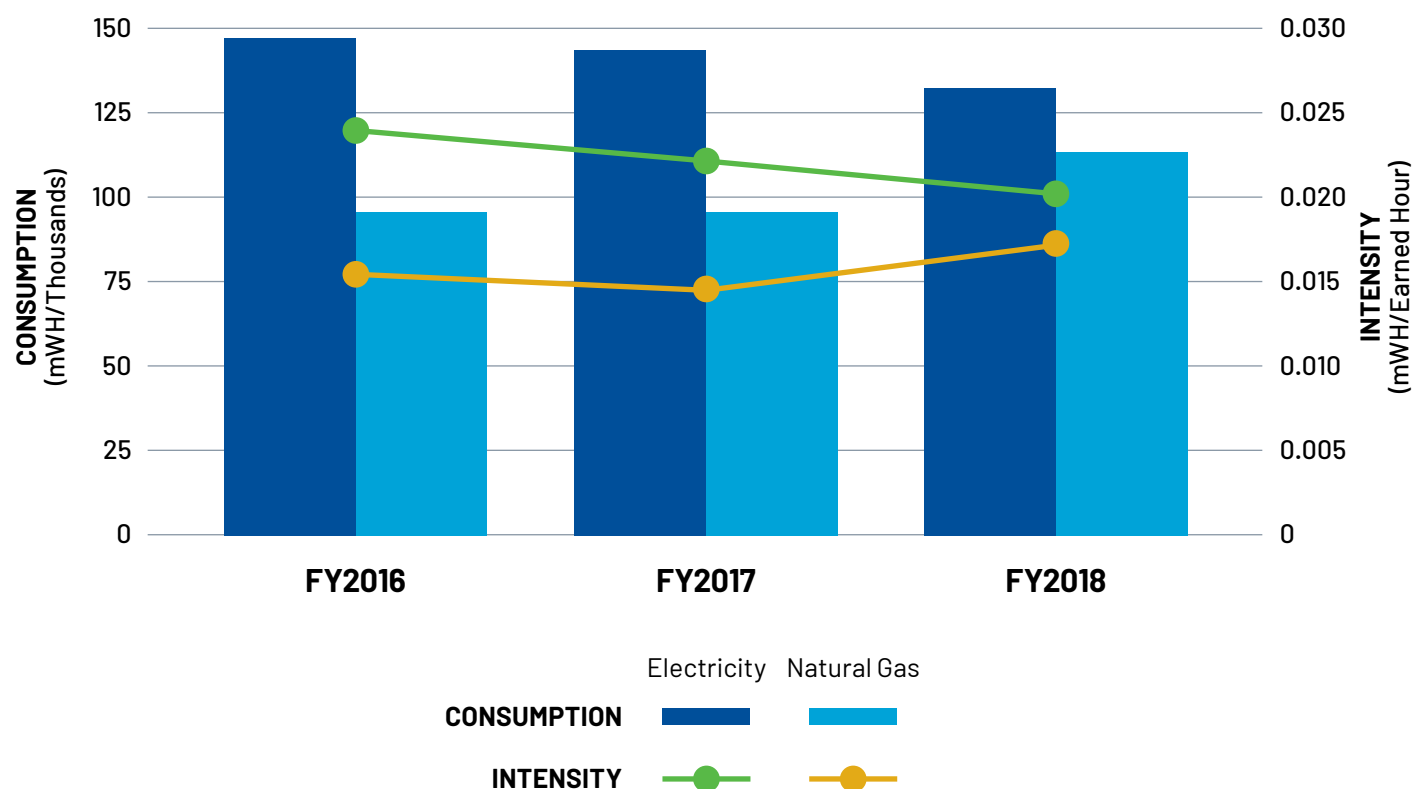
DRIVER

Plant Footprint Consolidations Increase Electricity Consumption Efficiencies

OUR APPROACH: Using our PIMS model, we continue to look for areas where greater efficiencies are achieved through consolidating our industrial, residential and commercial manufacturing processes. Maximizing plant square footage has contributed to reducing electricity consumption by 11,422 mWH (11,422,000 KWH) between 2017 and 2018. From 2016 through 2018, we have reduced overall CO₂ emissions by 2,640 Metric Tonnes. That is equivalent to eliminating the emissions of burning 2.88 million pounds of coal.

SOURCE: [U.S. Environmental Protection Agency, Greenhouse Gases Equivalencies Calculation References](#)

Electricity and Natural Gas Consumption/Intensity

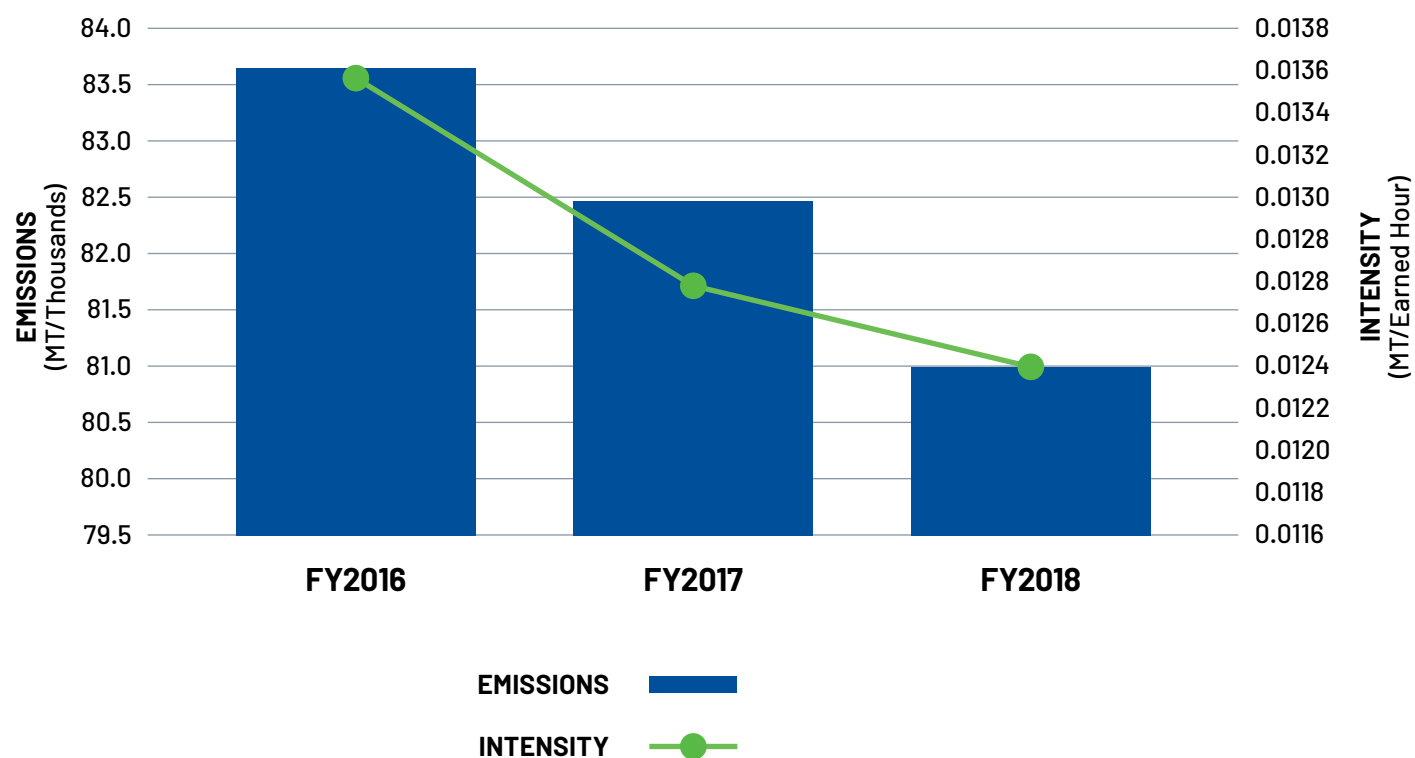


ELECTRICITY CONSUMPTION/INTENSITY	FY2016	FY2017	FY2018
CONSUMPTION (mWH)	145,731	143,155	131,733
INTENSITY (mWH/Earned Hour)	0.024	0.022	0.020

NATURAL GAS CONSUMPTION/INTENSITY	FY2016	FY2017	FY2018
CONSUMPTION (mWH)	94,590	94,633	112,494
INTENSITY (mWH/Earned Hour)	0.015	0.015	0.017

*Water withdrawals from municipal water supplies or other water utilities.

CO₂ Emissions/Intensity



CO ₂ EMISSIONS/INTENSITY	FY2016	FY2017	FY2018
EMISSIONS* (MT)	83,118	81,959	80,478
INTENSITY (MT/Earned Hour)	0.0136	0.0127	0.0123

*2016 through 2018 CO₂ emission totals are reduced from previous years' (2016 and 2017) CR Reports. Changes are the result of the incorporation of newly revised EPA Emission Factors (February 2018).

A new focus on **ZERO WASTE**

Historically Pentair's sustainability metrics have utilized 'Landfill Free' metrics as a tool to measure waste diversion successes within the company.

► **Waste Recycling and Reduction Efforts**

For 2018, in collaboration with EHS and operations leadership, a new Zero Waste metric was implemented to replace the Landfill Free metrics. This new metric improves our ability to track and report our reuse, recycling, and disposal activities globally. Furthermore, the Zero Waste model encourages sites to challenge traditional ways of thinking to achieve recycling and reuse targets.

We set an initial Zero Waste diversion goal in 2018 at 69 percent, and our plants rose to the challenge by achieving a 2018 year-end Zero Waste score of 76 percent. Achieving this new target is more challenging, since any generated waste that is landfilled or incinerated is not counted as "diverted material" in the Zero Waste calculation. The benefits of implementing a new Zero Waste system includes increasing material diversion activities through:

- Minimizing waste at the generation point.
- Looking for ways to reuse back into facility processes if creating waste is unavoidable.
- Recycling waste using third-party vendors.

WASTE FROM MANUFACTURING (Tons)	FY2018
Waste Generated	41,399
Waste Diverted	31,284
WASTE DIVERTED PERCENTAGE (Zero Waste)	76%

Over the course of a single year, the Zero Waste model helped Pentair divert **62,568,000 pounds** of waste in 2018. Pentair will continue to optimize processes to drive for increased diversion and reduced waste generation each year.

Winning Workplace

4



At Pentair, we believe that the health of our world depends on reliable access to clean, safe water. We are one global team, inspired by our role in the world, our customers, and each other. We strive to be the destination for top talent, and work hard to develop and retain high performers throughout their career.

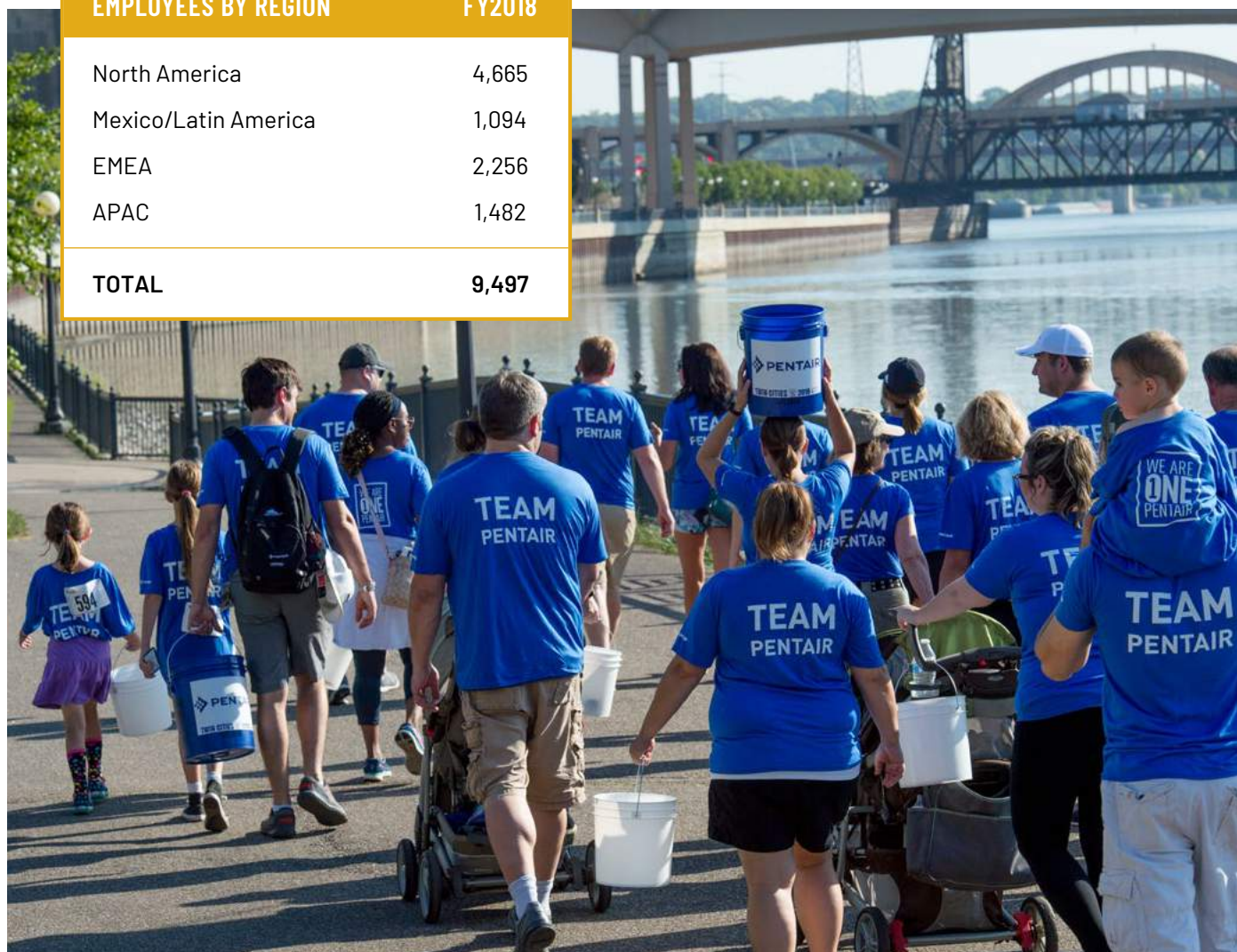
Working together in pursuit of a **COMMON GOAL**

When our employees come to work, we want them to bring their whole selves. Our Win Right values, positive culture, and commitment to diversity and inclusion foster innovation and curiosity, which, in turn, contribute to Pentair being an industry leader. Both at work and at home, we want our employees to be happy, healthy, and well cared for.

EMPLOYEES BY REGION

FY2018

North America	4,665
Mexico/Latin America	1,094
EMEA	2,256
APAC	1,482
TOTAL	9,497



Engaging our employees and developing their careers is important to Pentair's long-term success and ties directly to our Win Right culture and values.

Pentair's commitment to **EMPLOYEE ENGAGEMENT AND DEVELOPMENT**

We offer three key culture development programs — the **One Pentair Culture** sessions, our **Win Right Orientation** for new hires, and **Team Reinforcement** sessions. These programs strengthen the capability of individuals and teams to live the Pentair values. First launched in 2013, these sessions have been deployed across the organization to include management, professional employees, production employees, and new hires.

Pentair gathers feedback on the programs listed above, as well as other employee practices and policies through:

▶ **Town Hall Meetings**

Where Pentair leaders share strategies and perspectives.

▶ **Quarterly Leadership Webcasts**

To ensure our results and expectations are clearly communicated.

▶ **Annual Global Leadership Meeting**

Attended by approximately 100 of the company's top leaders to drive growth and productivity initiatives and share best practices.

▶ **Employee Survey**

To measure how Pentair's culture supports our growth journey; with emphasis on customer focus, innovation, and operationalizing the strategy.

▶ **Feedback Feature**

myPentair.com — on our employee intranet.

Investing in our future with

TRAINING AND DEVELOPMENT

When we invest in our people, we invest in our future. We encourage all employees to agree on a continuing development plan with their managers and to regularly review their progress and learning. Managers are encouraged to support employees' development through honest, candid feedback on their performance and potential. We expect managers to understand the interests and aspirations of everyone under their supervision. Our formal development programs include:

► Executive Development Program

This provides high-potential leaders at director and above levels with the strategic, global, and people leadership skills necessary to succeed in global leadership roles. Attendees also develop a network of peer-mentor leaders from across the company. Each class enrolls 25 leaders and focuses on four key areas: leadership, finance, high-performance growth, and global business. The program is a valuable way to engage and retain high-potential leadership talent and prepare them for greater responsibility.

► Leadership Essentials for Managers

This three-day course targets managers with one to five years of experience leading teams. The aim is to strengthen and improve management skills and provide grounding in Pentair's values and expectations for leaders. In 2018, 110 managers took part.

► Global Effectiveness Workshop

Targeted at managers and professionals, this program builds skills for working effectively with customers and colleagues across diverse cultures. Real world scenarios help participants understand and apply concepts related to the challenges of being a global business. In 2018, there were 97 participants.

Improving every day with **DIVERSITY AND INCLUSION**

We believe a diverse and inclusive workforce contributes different perspectives and creative ideas that enable us to improve every day. Race, gender, ethnicity, country of origin, age, personal style, sexual orientation, physical ability, religion, life experiences and many more factors contribute to this diversity.

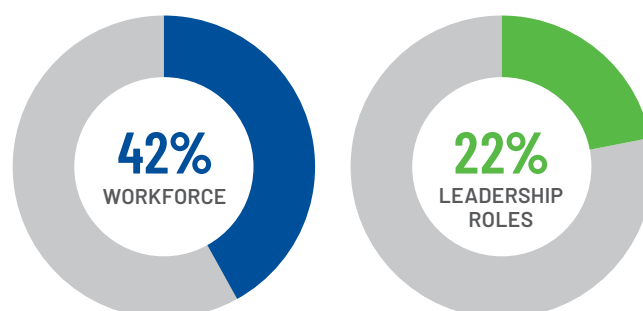
[Pentair's Code of Business Conduct and Ethics](#) spells out our commitment to equal opportunity and fair treatment for all. The company does not tolerate acts of harassment, including any conduct or statements made on the basis of protected status that are intimidating, hostile, or abusive.

We take an integrated approach to supporting and promoting workplace diversity and inclusion, based on the following three pillars:

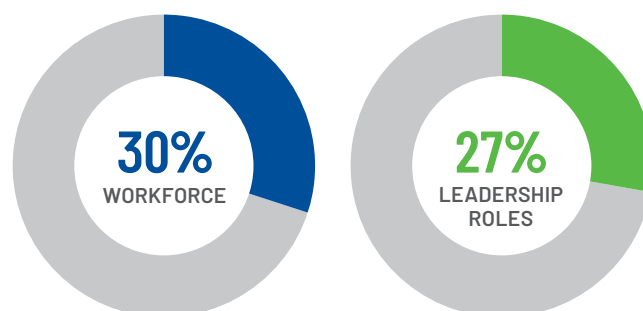
- 1. Talent Acquisition and Deployment:** We aim to grow our diverse talent pipeline and pursue this goal proactively in our hiring practices at every level.
- 2. Talent Development and Retention:** We aim to develop and retain diverse talent for leadership roles. Focus areas include expanding diverse participation in leadership development programs, prioritizing career development planning for key diverse talent, and leveraging our employee resource group networks to attract, retain, and develop people from diverse backgrounds.
- 3. Leadership of Diverse Teams:** We aim to cultivate an environment that values differences, fairness, and inclusion. Our Global Effectiveness training fosters insights about global differences and strengthens manager and employee capabilities in working across countries, cultures, and languages.

Pentair was named to the Twin Cities Business "2018 Minnesota Census of Women in Corporate Leadership" Honor Roll. The Honor Roll is an elite group of Minnesota companies that have 20 percent or more gender diversity in their executive ranks and on their Board of Directors.

Diversity and Inclusion Performance (FY2018)



Racial Minorities*



Women**

* Inclusive of the following racial minority groups: Black/African American, Hispanic/Latino, American Indian/Alaskan Native, Asian, Native Hawaiian/Other Pacific Islander. Data for U.S. employee population only.

**Global data.

Providing a SAFER WORKPLACE

We are committed to doing everything we can to prevent workplace injuries and maintain a positive, healthy work environment. All employees have a responsibility to put safety first, adopt a stop work mentality and speak up when observing unsafe practices or behaviors. We expect all employees watch out for each other's safety and to maintain a workplace free from illegal or controlled substances. All Pentair locations must meet or exceed all state and local Environmental, Health and Safety (EHS) requirements. Globally, we have a common standard that we follow based on the guidelines of the Occupational Safety and Health Administration (OSHA) in the United States.

Pentair monitors and tracks all EHS data, including injury incident rates and EHS Lean Scores across all its sites. In addition, a corporate-led team conducts audits annually to drive improvement in our EHS Lean Score and monitor the OSHA Incident Rate across operations.

Each manufacturing site has safety and EHS committees that meet monthly to review relevant data and progress against targets. Our Board of Directors reviews a yearly internal assessment of our EHS approach and companywide results.

EHS MANUFACTURING SITE CERTIFICATIONS (FY2018)	LOCATION COUNT	PERCENTAGE OF LOCATIONS
Unique locations with certifications	11	33%
ISO 14001	6	18%
ISO 50001	2	6%
OHSAS 18001	1	3%
OSHA-SHARP	1	3%
Safety Std. Certification*	2	6%
Clean Industry-PROFEPA	1	3%
Other certifications	3	9%

DATA SOURCE: Historical Intellex Information and Share-Point Data.

*Includes Only Pentair 2018 Water Data.

**Manufacturing locations only.

Engaging employees in proactively keeping our workplaces safe is a top priority for Pentair. We provide yearly EHS workshops in each geographic region, supplemented by more specific training as needed for targeted employees, depending upon risk assessments or manufacturing processes.

Our OSHA Incident Rate is calculated by multiplying the number of OSHA injuries by 200,000, and dividing by the number of hours worked across Pentair. The Total Case Incident Rate (TCIR) was 2.1 for 2018, up from 1.4 in 2017. This increase in TCIR is due in part to the reduction in hours year over year from the separation of nVent. Even with the overall hour reduction, the 2018 figure is down significantly from 2.9 in 2008. This overall performance is a direct result of the proactive and sustainable EHS leadership efforts that have been implemented as part of our Pentair Integrated Management System (to learn more, see page 30). Other site certifications are shown in the table above.

At Pentair, we have achieved a strong safety track record through proactive risk management. For example, our "EHS Lean Maturity Index" tracks behaviors, processes, and other leading/lagging safety indicators. For more information, see our [EHS Policy](#) and our [Code of Business Conduct and Ethics](#).

Compensation and Benefits

In the United States, all full-time employees are eligible to receive the following benefits:

- Disability and invalidity insurance
- Flexible and health saving accounts and wellness programs
- Health insurance (medical, pharmacy, dental)
- Legal services
- Retirement provision
- Stock ownership
- Tuition reimbursement
- Vacation, holidays, and sick time



Winning Communities

5



It is estimated that 2.1 billion people — more than a quarter of the world’s population — live without access to safe water at home.* At Pentair, we are putting our purpose into practice for people around the world today, as well as for future generations.

Taking steps to make A POSITIVE IMPACT

As a global water treatment company, we partner with leading nonprofit organizations to improve access to life’s most essential resource in communities where the needs are the greatest. By combining our proprietary technology, the expertise and passions of our employees, our corporate resources and a legacy financial commitment, we are taking steps to make a positive impact while creating shared value — for society and for our business.

Pentair and the Pentair Foundation Focus on three strategic initiatives:

► WATER: Delivering Sustainable, Clean Water

We collaborate with our partners, combining our technology, microenterprise business models and scientific research to provide sustainable access to safe water as well as to support water conservation and reuse efforts.

► EDUCATION: Increasing Opportunities

We partner with organizations that are working to create high-quality, diverse and interconnected educational opportunities for students around the world.

► COMMUNITY: Creating Engagement Opportunities

We work to strengthen the communities where we operate by offering grants or sponsorships and creating opportunities for service and volunteerism by Pentair employees.

Through Pentair and the Pentair Foundation, our philanthropic impact spans six continents. In 2018, our programs reached more than 8.5 million people worldwide.

COMMUNITY GIVING (\$) PERFORMANCE		FY2018
Amount donated in FY2018		\$3.1 million
Donations to date (since 1998)		\$66 million

*SOURCE: [WHO/UNICEF \(2017\), Progress on drinking water, sanitation and hygiene](#)

Our expertise in **DELIVERING CLEAN WATER**

We believe that the health of our world depends on reliable access to clean water. We also believe that safe water is a fundamental human right, and foundational to freedom and economic development. These tenets drive the innovation behind the products we manufacture and exist at the heart of our philanthropic investments.

Project Safewater

Through Project Safewater, the company's holistic approach to providing safe water solutions, Pentair is working to transform the way safe water is sustainably delivered to people in need. Pentair and the Pentair Foundation collaborate with a select group of strategic partners to deliver sustainable access to clean, safe water to more than three million people each day in the developing world. See our examples on page 52.

We consider funding strategic proposals that meet the following criteria:

- Present an opportunity to contribute Pentair technology and expertise, leveraging the long-term success of our process and protocol.
- Serve a population that lacks access to clean, safe water.
- Incorporate community level education on the importance of clean water, sanitation and hygiene.
- Operate as a microenterprise business model.
- Demonstrate a successful, sustainable and long-term operating model.

► Safe Water Network

Since 2010, Pentair and the Pentair Foundation have supported nonprofit partner, Safe Water Network, which launched the first station in India to offer clean, filtered water at a low cost. Locally branded in India as iJal (or “my water” in Hindi) the self-sufficient stations safely treat contaminated water to World Health Organization standards through reverse osmosis technology.



Photo: Suzanne Lee

Filtered water is then sold to the community at an affordable rate. Pentair components are used in more than 250 iJal operating stations and the filtration technology helps to reduce fluorosis and waterborne diseases caused by excess fluoride and other contaminants in the local groundwater. To date, Pentair and the Pentair Foundation have provided more than \$1.5 million to expand access to clean, affordable water every day to approximately 870,000 people in India.

► Shining Hope for Communities (SHOFCO)

In 2013, Pentair and the Pentair Foundation started working with Shining Hope for Communities (SHOFCO) to provide greater community access to safe, accessible water in Kibera, an impoverished settlement in Nairobi, Kenya. The multi-year collaboration focused on two objectives: to create a more sustainable, fairly priced supply of clean water in Kibera, and to help reduce the number of contracted waterborne illnesses. Working collaboratively with SHOFCO, Pentair engineers designed, built and installed a state-of-the-art water filtration system to treat water on site, doubling

the volume of water that the system delivered to the community. The aerial piping system, the first of its kind to be constructed in Kenya, distributes the clean water away from groundwater contamination while reducing the risk of tampering. **In 2018, SHOFCO was recognized as the Hilton Humanitarian Prize recipient** for its local approach to transforming lives by providing critical services that disrupt the survival model, including the sustainable delivery of clean water in Kibera.



SPOTLIGHT

Transforming lives throughout WESTERN HONDURAS

Project Safewater first launched in 2007 with a ground-breaking project in Colón, Honduras.

In collaboration with **Water Mission**, this initial 5-year endeavor enabled a community of 300,000 to sustainably operate more than 200 safe water stations, reducing the incidence of waterborne illness by 80 percent. Additionally, a clear protocol was established for the successful implementation of scalable, sustainable safe water and sanitation projects.

Pentair and the Pentair Foundation are now working with Water Mission to build upon the success of Colón to expand safe water access to two additional departments in the western region of Honduras – Lempira and Intibucá. These areas have some of the highest concentrations of people living in extreme poverty in Honduras. While access to water and sanitation is relatively high, it is generally not considered to be safely managed. Pentair, Water Mission and local Honduran government organizations are working to deliver improvements in water quality, sanitation infrastructure and WASH (Water and Sanitation for Health) behaviors. Further, we are not only tracking health-related impacts, but also the economic and educational improvements related to water and sanitation interventions.



“Together with Pentair, we have been able to provide thousands in Western Honduras with safe water, sanitation, and hygiene training. As a result, individuals and families have experienced significant improvements in their health, ultimately leading to more opportunities for education and work. No other company has done so much for so many of the rural communities here.”

– Hector Chacon, Country Director
Honduras, Water Mission

Two years into this five-year initiative, we are proud to report steady progress as we work toward a goal of delivering cleaner, safer drinking water and sanitation to 150,000 people. Nearly 20 percent of the planned safe water stations are complete, serving more than 16,000 people. Additionally, 752 homes are outfitted with healthy latrines and handwashing, providing access to proper sanitation for 4,300 people.

Increasing opportunity through **EDUCATION**

One of Pentair's and the Pentair Foundation's three philanthropic focus areas is education. Pentair and the Pentair Foundation believe all students in every community should have access to engaging, quality educational opportunities that enable them to build complex skills, and work collaboratively with adults and peers. Education is key to economic development and the improvement of living standards around the world.

► **Stem Education**

In communities where Pentair operates, we fund a variety of innovative and effective Science, Technology, Engineering, and Math (STEM) education programs for K-12 and graduate level students. Pentair and the Pentair Foundation partner with organizations — such as the Boys and Girls Club, FIRST Robotics, Junior Achievement, the Science Museum of Minnesota and several Universities — to offer programs such as:

- Fellowships for graduate students who are addressing social and environmental issues.
- After school programs for at-risk youth, focused on STEM principles and STEM career opportunities.
- Senior level, pre-college summer fellowships to help underserved students improve critical thinking and writing skills, gain confidence, and view college attendance as an attainable goal.
- Programs where students explore real world problems, involving environmental, water, food, and health challenges.
- International robotics development and competitions.
- Community-driven projects led by middle and high school students, incorporating principles of engineering, computing, and technology.
- Training and equipping teachers for STEM disciplines.
- Field trips to STEM museums, camps, and programs.



► **Increase Educational Access**

In India and other developing countries, Pentair and the Pentair Foundation partner with organizations — such as Pratham, one of India's largest NGOs, and Opportunity International — to help children, including those with disabilities, gain access to quality education. Examples of the types of initiatives in developing countries that we support include:

- Improving school infrastructure (e.g., by building a secondary school on a site where previously only a primary school existed).
- Establishing new schools.
- Covering school expenses for children in need.
- Funding microfinance loans for schools to make critical improvements, such as building new classrooms, installing running water, buying computers, and hiring additional teachers and staff.
- Providing alternative ways to access education for students who are forced to drop out of school, enabling them to complete required grades and pass national exams.

SPOTLIGHT

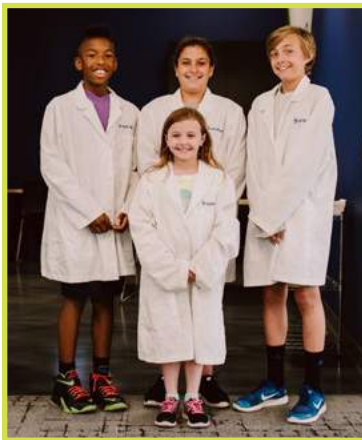
Helping train a new generation of WATER ENGINEERS

To help solve the world's water challenges in the years ahead, we are cultivating the next generation of talent. To help inspire young students to think about a career in water, Pentair supports Junior Achievement (JA) of the Upper Midwest – with a three-year commitment to fund the Pentair Water Shop at JA BizTown, a 12,000 sq. ft. simulated city located in a new state-of-the-art facility in St. Paul.

Through daily lessons, hands-on activities, and active participation in a simulated economy, students develop a strong understanding of the relationship between what they learn in school and how it can be applied in the “real world.”

At the Pentair Water Shop, students have the opportunity to learn about careers in water:

- **Water Quality Engineers** learn how water is treated to make it safe for drinking. They collect and test water for contaminants, analyze the results, and make treatment recommendations.
- **Research and Development Engineers** learn about the global water crisis and design and build a water filtration system.
- **Sales Managers** set product prices, set up a point-of-sale system, and educate their customers about water.



Creating engagement opportunities in OUR COMMUNITIES

A key aspect of our corporate responsibility approach and commitment is the “Team Pentair” philanthropic engagement program. Volunteerism is a powerful way to impact the communities where we live and work and to keep employees engaged. Through Team Pentair, our employees give their time and talent to support nonprofit organizations.

For example, our employees walk, run, and ride to raise awareness and dollars for great causes around the globe. They also collect food, clothing and essentials for hurricane relief victims and local food banks. From planting trees to building houses, to serving as mentors to young science students, Pentair employees share their time, talents and energy to make a lasting difference in communities from Mumbai to Mexico and many places in between.

► TEAM PENTAIR: Double the Impact

Team Pentair encourages and rewards employee-led involvement. To celebrate employees’ contributions as they work to strengthen their own communities, Pentair and the Pentair Foundation provide matching grants for team volunteerism and personal charitable giving to eligible organizations, matching over \$185,000 in 2018.

Pentair and the Pentair Foundation matches employee volunteerism and gifts in the following ways:

VOLUNTEERING

- Five or more employees collectively volunteering a total of 25 hours as a team can earn a grant of \$1,000 for an eligible organization of their choice.
- Employees who serve on the Board of Directors for an eligible nonprofit organization can earn a \$1,000 grant for the organization after volunteering 25 hours in a calendar year.

GIVING

- Personal monetary donations that employees make to accredited and approved nonprofit/nongovernmental organizations for charitable purposes up to \$1,000 per employee, per year.
- Personal monetary donations made to accredited and approved educational institutions up to \$5,000 per employee, per year.



SPOTLIGHT

A Decade of Dedication:
TEAM PENTAIR

Over the course of a decade, our employee cyclists have made us proud, pedaling thousands of miles and rallying to raise more than \$1 million to help fight multiple sclerosis (MS). Determined teams of volunteers from North Carolina, Texas, Minnesota, Ohio, and Wisconsin have kept pace, riding and supporting various Bike MS events hosted by the National MS Society. In doing so, they have made a positive impact in many U.S. communities and generated awareness for a chronic disease that affects more than 2.3 million people worldwide with no known cure.



The catalyst for MS support took hold in 2008 when a team of Minnesota volunteers suited up to tackle the iconic MS 150-mile trek from Duluth, Minnesota to the Twin Cities, near the Pentair U.S. main offices. Since then, teams have formed at several of our sites around the country, with more than 750 riders representing Pentair. While many employees devote their time and efforts to riding, others roll-up their sleeves to offer an assist with vital race-day tasks and logistics. This includes everything from staffing water stations and making sandwiches to transporting bikes and directing traffic. We salute our employees for their efforts and dedication to raise awareness and funds to help move toward a world free of MS.

Governance

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At Pentair, we work hard to “Improve Every Day” and “Win Right.” Those two phrases embody both our drive for success as well as our dedication to conducting business according to the highest ethical standards. We believe that honesty and integrity should define our relationships with customers, suppliers, investors, and each other. We have the same expectations of our suppliers.

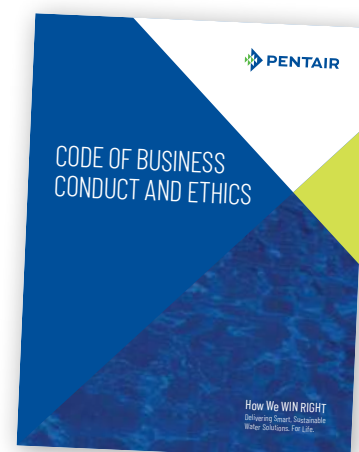
Governance

PRINCIPLES AND PRACTICES

Pentair has long believed that good governance sets the foundation for success. The governance principles we practice today are built on the [Pentair Code of Business Conduct and Ethics](#), established more than 30 years ago and annually affirmed by our Board of Directors and employees.

These principles, practices and policies include:

- A strategic Board made up of a majority of independent members.
- An independent Chairman of the Board, who serves as a direct liaison with management.
- Direct access by the Board to independent advisors and experts.
- Routine executive Board sessions without management present.
- Direct responsibility of the Audit & Finance Committee of the Board of Directors for the retention and supervision of external auditors.
- Governance Principles that outline how our Board of Directors will operate.
- An anonymous helpline available to all employees for reporting compliance or other concerns.
- A [Related-Person Transactions Approval Policy](#) to ensure independence and the absence of transactional conflicts.
- A [Political Contributions Policy](#) to ensure that corporate financial contributions are consistent with our core values while protecting and enhancing stakeholder value.



For more information on our responsible approach to business and the principles that apply to our Board of Directors' governance, read our [Corporate Governance principles](#).

Governance Structures

Pentair's Board of Directors has three standing committees:

- [Audit and Finance Committee](#)

Assists the Board with oversight of accounting and financial reporting processes and audits of financial statements.

- [Compensation Committee](#)

Sets and administers policies that govern executive compensation, including setting the Named Executive Officers' compensation.

- [Governance Committee](#)

Identifies individuals qualified to become Directors. Recommends nominees to the Board for election at annual meetings of shareholders. Oversees public policy matters and compliance with the Code of Conduct.

GOVERNANCE STRUCTURES	FY2018
Board Members	8
BOARD COMPOSITION	
Racial Minority Members	1
Female Members	2
Independent Members	7

For more information, visit our [Corporate Governance page](#).

Code of Conduct

Our [Code of Conduct](#) outlines our commitment to abiding by international laws, regulations, and global standards, as well as to following the local laws of each country where we do business. It also describes our commitment to, and policies for, doing business with integrity, including provisions on anti-corruption and anti-bribery. The Code applies to all full-time and part-time employees, contractors, and Pentair executives and Directors. We communicate our anti-corruption policies and procedures to employees on Pentair's intranet site as well as through annual and new-hire compliance trainings (online and in-person), with 100 percent of professional-level employees completing the training in 2018.

In addition, we maintain a proactive third-party risk management program designed to prevent corruption and promote ethical practices. Every employee is asked to sign a commitment statement indicating they have read and understood the Code and will act in full compliance.

“Speak Up” Resources

We encourage employees to speak up whenever they observe improper or unethical behavior or actions. Pentair does not tolerate retaliation in any form against employees for raising concerns or making good faith reports about possible breaches of law or policy, or ethical violations.

Pentair maintains several reporting options, including an Ethics HelpLine as a confidential means to report violations of our Code, internal policies, or the law. Available 24/7, in the languages of all countries where we operate, the HelpLine can be accessed on the web or by phone through toll-free numbers in 47 countries.

Employees may also report suspected violations directly to their human resources representative or supervisor. In addition to the HelpLine, employees can file a report using the web reporting form available at PentairEthics.com. Employees may also contact the Office of Business Conduct and Ethics directly by phone, e-mail, or letter.

For more information, contact the Office of Business Conduct & Ethics at Ethics@Pentair.com.

Supplier Relationships

Our commitment to responsible, sustainable business practices extends to our supplier partnerships. All suppliers must agree to abide by our [Supplier Code of Conduct](#), which requires our business partners to commit to ethical standards and business practices.

Our expectations of our business partners and suppliers include:

- Providing clean and safe working conditions.
- Delivering fair wages and benefits according to local laws and practices.
- Not tolerating human rights abuses including, but not limited to, child labor.

Through our procurement policies, we seek business partners, suppliers, and contractors who share Pentair’s commitment to socially responsible business practices. We evaluate strategic suppliers using scorecards that we review with them regularly. We identify key needs and gaps related to responsible business for these suppliers, and develop plans to address outstanding issues. In a few selected cases, we invest resources to develop specific skills sets for strategic suppliers.

For more information, please visit:

- [Partner and Supplier Resources](#)
- [Conflict Minerals Policy](#)
- [2018 Conflict Minerals Report](#)
- [Slavery and Human Trafficking Statement](#)

Privacy and Data Security

Pentair is committed to providing data privacy and security for our customers, employees, investors, vendors, and other stakeholders around the world. Pentair's global information security and data privacy policies govern how we collect, process, store, and transmit data lawfully as well as the safeguards we have in place to maintain and prevent the unauthorized use or disclosure. Pentair reinforces its commitment through global awareness training.

Pentair provides a reliable and secure environment to protect the customer and employee data provided to us.

Pentair has implemented physical and system security measures and invested significantly in industry leading technologies to provide the appropriate protections that our customers and employees deserve.

Pentair is committed to complying with all applicable privacy and data protection laws, wherever it does business. Any personal information Pentair collects, regarding employees or any third party, will be treated with care and protected, and used lawfully and properly.

Review our [Privacy Notice](#).

Political Contributions

In 2018, Pentair made no Political Contributions. As defined in [Pentair's Political Contributions Policy](#), such contributions generally include any corporate spending in the form of a gift, loan, advance or deposit of money to political candidates, political parties, organizations primarily engaged in political activities and ballot initiative organizations.

In addition, no U.S.-based trade association or other tax exempt organization to which Pentair made a payment of \$50,000 or more in 2018 reported to Pentair that any portion of that payment was used for political activity

purposes, with the exception of two organizations, the Water Quality Association and the National Electrical Manufacturers Association, which used a portion of their funds for lobbying activities.

The Water Quality Association is a not for profit international trade association representing the residential, commercial and industrial water treatment industry. The National Electrical Manufacturing Association (NEMA) is not for profit trade association representing electrical equipment and medical imaging manufacturers.

GRI Content Index

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GRI 102: General Disclosures 2016*

DISCLOSURES / DESCRIPTION	CROSS-REFERENCE / ANSWER
ORGANIZATIONAL PROFILE	
102-1: Name of the organization	Pentair plc
102-2: Activities, brands, products, and services	A Winning Company, Our Company (page 8)
102-3: Location of headquarters	London, United Kingdom
102-4: Location of operations	A Winning Company: Overview of Business (page 9) 2018 Annual Report and Form 10-K
102-5: Ownership and legal form	2018 Annual Report and Form 10-K
102-6: Markets served	A Winning Company, Our Company (page 8) 2018 Annual Report and Form 10-K
102-7: Scale of the organization	A Winning Company, Our Footprint (page 10) Winning Workplace (page 43) 2018 Annual Report and Form 10-K
102-8: Information on employees and other workers	Winning Workplace, Employee Data (page 43)
102-9: Supply chain	Governance, Supplier Relationships (page 61)
102-10: Significant changes to the organization and its supply chain	A Winning Company, Our Company (page 8) 2018 Annual Report and Form 10-K
102-11: Precautionary principle or approach	Audit and Finance Committee Charter
102-12: External initiatives	A Winning Company, Corporate Responsibility (page 12)
STRATEGY	
102-14: Statement from senior decision-maker	Letter to Our Stakeholders (page 3)
ETHICS AND INTEGRITY	
102-16: Values, principles, standards, and norms of behavior	A Winning Company, Our Values (page 7) Governance, Code of Conduct (page 60) Code of Business Conduct and Ethics
102-17: Mechanisms for advice and concerns about ethics	Governance, "Speak Up" Resources (page 61)
GOVERNANCE	
102-18: Governance structure	Governance, Governance Structures (page 60) Corporate Governance 2018 Annual Report and Form 10-K 2019 Proxy Statement

* Pentair's 2018 Corporate Responsibility Report applies the 2016 version of the GRI Standards (with the exception of GRI 303, which is a 2018 Standard); "2016" refers to the Standards issue date, not the date of information presented in this report.

GRI 102: General Disclosures 2016*

DISCLOSURES / DESCRIPTION	CROSS-REFERENCE / ANSWER
STAKEHOLDER ENGAGEMENT	
102-40: List of stakeholder groups	A Winning Company, Corporate Responsibility (page 12)
102-42: Identifying and selecting stakeholders	A Winning Company, Corporate Responsibility (page 12)
102-43: Approach to stakeholder engagement	A Winning Company, Corporate Responsibility (page 12)
102-44: Key topics and concerns raised	A Winning Company, Corporate Responsibility (page 12)
REPORTING PRACTICE	
102-45: Entities included in the consolidated financial statements	2018 Annual Report and Form 10-K
102-46: Defining report content and topic boundaries	A Winning Company, Corporate Responsibility (page 12)
102-48: Restatements of information	None
102-49: Changes in reporting	Effective May 1, 2018, we reorganized our business segments to reflect a new operating structure, resulting in a change to our reporting segments. All prior period amounts related to the segment change have been retrospectively reclassified to conform to the new presentation.
102-50: Reporting period	2018 Fiscal Year (January 1, 2018 - December 31, 2018)
102-51: Date of most recent report	2017 Corporate Responsibility Report
102-52: Reporting cycle	Annual
102-53: Contact point for questions regarding the report	About this Report (page 68)
102-54: Claims of reporting in accordance with the GRI Standards	This report references the GRI Standards.
102-55: GRI content index	GRI Content Index (page 64)

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GRI 200-400: Topic-Standard Disclosures 2016*

DISCLOSURES / DESCRIPTION		CROSS-REFERENCE / ANSWER
ECONOMIC		
GRI 201: Economic Performance 2016		
201-1: Direct economic value generated and distributed		Winning Communities (page 50) 2018 Annual Report and Form 10-K
201-2: Financial implications and other risks and opportunities due to climate change		Winning Solutions, Resilience (page 27) Winning Solutions, Food and Agriculture Solutions (page 25) 2018 Annual Report and Form 10-K
GRI 203: Indirect Economic Impacts		
203-1: Infrastructure investments and services supported		Winning Communities, Delivering Clean Water (page 51)
203-2: Significant indirect economic impacts		Winning Communities, Delivering Clean Water (page 51)
GRI 205: Anti-corruption 2016		
205-2: Communication and training about anti-corruption policies and procedures		Governance, Code of Conduct (page 60)
ENVIRONMENTAL		
GRI 302: Energy 2016		
302-1: Energy consumption within the organization		Winning Operations, Energy Efficiency (page 36)
302-3: Energy intensity		Winning Operations, Energy Efficiency (page 36)
302-4: Reduction of energy consumption		Winning Operations, Energy Efficiency (page 36) Winning Solutions, Energy Efficient Solutions (page 22)
GRI 303: Water and Effluents 2018		
303-1: Interactions with water as a shared resource		Winning Operations, Water Use (page 32) Winning Solutions, Water Solutions (page 19)
303-3: Water withdrawal		Winning Operations, Water Use (page 32)

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GRI 200-400: Topic-Standard Disclosures 2016*

DISCLOSURES / DESCRIPTION	CROSS-REFERENCE / ANSWER
ENVIRONMENTAL	
GRI 305: Emissions 2016	
305-1: Scope 1 GHG emissions	Winning Operations, Energy Efficiency (page 36)
305-2: Scope 2 GHG emissions	Winning Operations, Energy Efficiency (page 36)
305-4: GHG emissions intensity	Winning Operations, Energy Efficiency (page 36)
305-5: Reduction of GHG emissions	Winning Operations, Energy Efficiency (page 36)
GRI 306: Effluents and Waste 2016	
306-2: Waste by type and disposal method	Winning Operations (page 41)
SOCIAL	
GRI 401: Employment 2016	
401-2: Full-time benefits not provided to temporary/part-time employees	Winning Workplace, Compensation and Benefits (page 48)
GRI 403: Occupational Health and Safety 2016	
403-2: Types of injury and rates of injury	Winning Workplace, Safer Workplace (page 47)
GRI 405: Diversity and Equal Opportunity 2016	
405-1: Diversity of governance bodies and employees	Winning Workplace, Diversity and Inclusion (page 46) Governance, Governance Structures (page 60)
GRI 407: Freedom of Association and Collective Bargaining 2016	
407-1: Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	Governance, Supplier Relationships (page 61)
GRI 415: Public Policy 2016	
415-1: Political contributions	Governance, Political Contributions (page 62) 2018 Political Contributions
GRI 416: Customer Health and Safety 2016	
416-1: Assessment of the health and safety impacts of product and service categories	Winning Solutions, Food and Agriculture Solutions (page 25)
GRI 418: Customer Privacy 2016	
418-1: Substantiated complaints concerning breaches of customer privacy and losses of customer data	None. We consider 'significant' fines as those listed in our 10-K.

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ABOUT THIS REPORT

This report provides data and highlights covering Pentair's fiscal year 2018, which runs from January 1, 2018 to December 31, 2018, and references the GRI Standards. When we refer to 2018 in the text, we are referencing our fiscal year.

On April 30, 2018, Pentair completed the separation of its Electrical business from the rest of Pentair, which was effected by the transfer of the Electrical business from Pentair to [nVent Electric plc](#).

Throughout the report and as possible, the 2018 Corporate Responsibility Report reflects initiatives and data only related to the Pentair Water business; which means that, data related to the former Electrical business for January 1 – April 30, 2018 is generally excluded from this report.

We will pursue GRI Core status, and work to align with additional leading ratings and ranking to further bolster the strength of our approach and performance.

For more information, or to provide feedback, please contact PentairCSR@Pentair.com

