



ANNUAL REVIEW 2019

Uponor

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Uponor's Annual Report for 2019 consists of an Annual Review and a Financial Review, which are published as separate PDF documents and can be found on our website at investors.uponor.com.

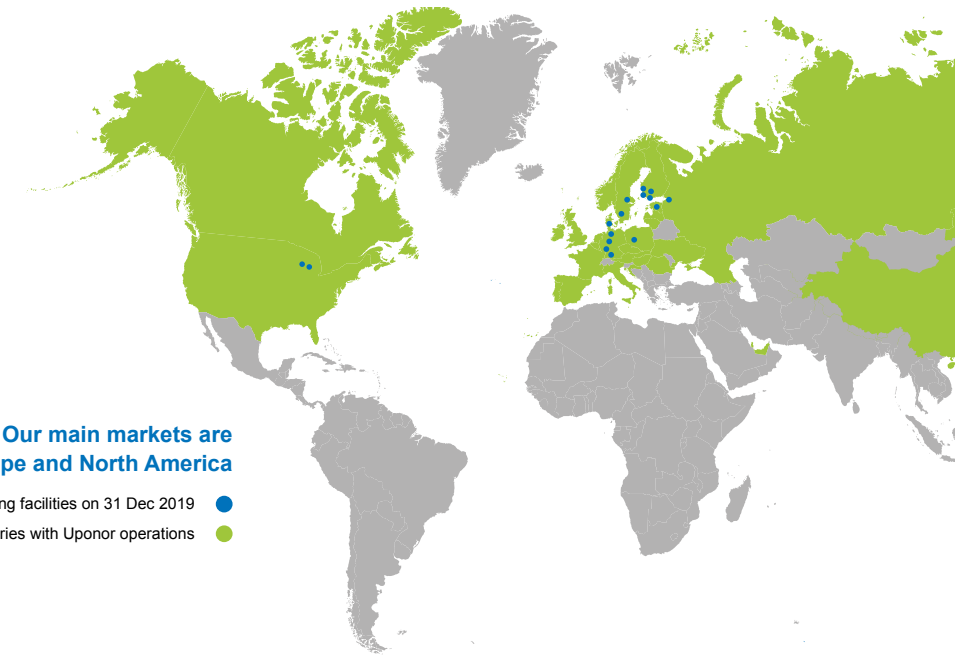
You are now reading the Annual Review 2019, which covers the key topics of Uponor's business and sustainability in 2019. The Financial Review consists of the Report by the Board of Directors, Financial Statements for 2019 and Auditor's report. Corporate Governance Statement and Remuneration Statement are published as separate PDF documents on our website.

Uponor in brief

We are rethinking water for future generations. Our offering, including safe drinking water delivery, energy-efficient radiant heating and cooling and reliable infrastructure, enables a more sustainable living environment.

Our main markets are Europe and North America

16 manufacturing facilities on 31 Dec 2019 ●
Countries with Uponor operations ●



Our key customer segments

Residential



Commercial



Municipalities and utilities



Industrial



3,800

employees on average in 2019

€1.1

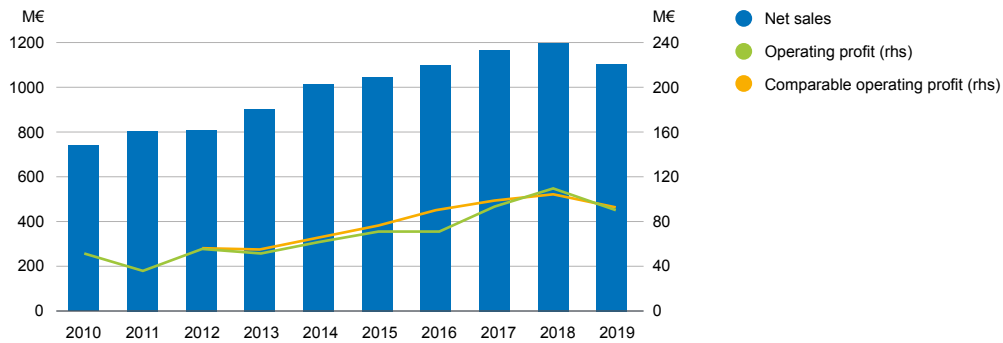
billion in net sales in 2019

85

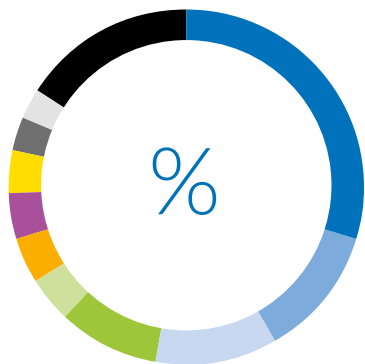
countries where our products are sold

Key figures 2019

NET SALES AND OPERATING PROFIT 2010–2019

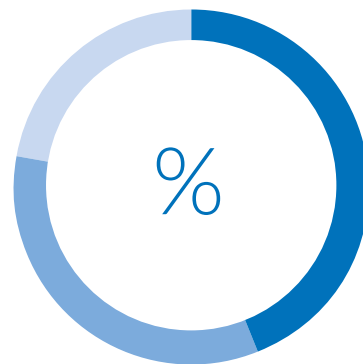


NET SALES BY COUNTRY



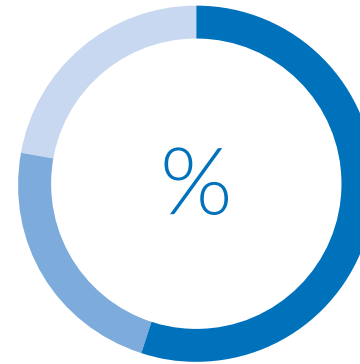
- USA 29.9%
- Germany 11.8%
- Finland 11.2%
- Sweden 9.1%
- Canada 4.2%
- Denmark 4.3%
- Netherlands 4.2%
- Spain 3.7%
- Norway 3.0%
- Poland 2.9%
- Others 15.7%

NET SALES BY SEGMENT



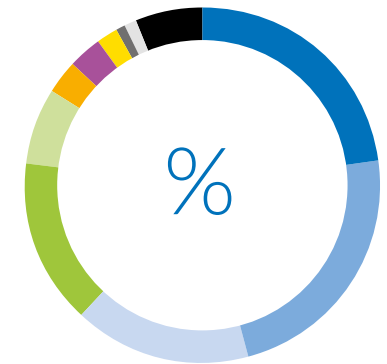
- Building Solutions - Europe 44%
- Building Solutions - North America 34%
- Uponor Infra 22%

NET SALES BY BUSINESS GROUP



- Plumbing solutions 55%
- Indoor climate solutions 23%
- Infrastructure solutions 22%

EMPLOYEES BY COUNTRY



- Germany 23%
- USA 23%
- Finland 16%
- Sweden 15%
- Poland 7%
- Spain 3%
- Denmark 3%
- Russia 2%
- Canada 1%
- France 1%
- Others 6%

We focus on profitable growth

Our new purpose statement – rethinking water for future generations – highlights that water is the heart of our operations. Our business evolves around water.

Our vision is to become a recognised leader in sustainable building and infrastructure solutions. We build on our strong market position in plumbing and indoor climate and we continue to expand further in the commercial segment in building solutions. On the infrastructure side, we continue to grow designed solutions sales especially to industrial customers.

Our strategy for profitable growth is based on four pillars: employees, customers, innovations and operational excellence.

- We continue to strengthen our employees' leadership capabilities and build a culture that supports continuous improvement and drive employee attraction and retention.
- We strive to continuously improve customer satisfaction by developing our digital services and enhancing delivery capabilities.
- We have a long history of industry-changing innovations and we continue to engage in diligent research and development to launch new products to help our customers work more efficiently.
- Operational excellence is the foundation of all our activities. We have launched a programme aiming to deliver annual cost improvements of around €20 million. We expect the full effects of the programme to be realised by the end of 2021.



PURPOSE	Rethinking water for future generations			
VISION	Recognised leader in sustainable building and infrastructure solutions			
STRATEGIC PILLARS	Our employees are empowered and engaged	Customer experience drives brand preference and loyalty	Innovative products and services add value and enable our customers to work more efficiently	Operational excellence is the foundation

CEO review

Dear reader,

Looking back at 2019, I am reminded of many highlights and lowlights – it was an eventful year during which we made progress on our journey and both revised and executed our strategy.

Rethinking water for future generations, Uponor's new purpose statement, was the result of a thorough process involving many Uponorians. I feel it expresses our DNA well. *Rethinking* refers to our desire for innovation and challenging old ways of doing things. *For future generations* reminds us about the longevity of our actions, as well as our offering, and the sustainability everyone rightly expects from us. *Water* in turn is at the heart of most of our solutions, whether underground, behind or on the wall, or under the floor.

Sustainability is also an attribute of our vision – *recognised leader in sustainable building and infrastructure solutions*. We aim to strengthen and further expand our strong market positions in selected areas by bringing our customers solutions that make their work easier and more efficient. We continue our successful research and development work with the aim of innovating solutions that are good for both our customers and the environment.

Besides our strategy work, we rolled our sleeves to execute our strategy and deliver on our promises to our customers and shareholders. The numbers speak for themselves. This was the sixth consecutive year during which we improved our comparable operating profits on a like-for-like basis excluding the effects

of the M&A, or here more relevantly, of the divestitures.

The beginning of 2019 did not indicate improvement for us. With a strong finish in 2018, January 2019 felt like the end of the world was approaching, or at least the end of the building solutions markets. End-market leading indicators would not have led us to expect the markets to be so quiet, but stocking patterns in the distribution chain made our winter and first quarter very “cold”. Fortunately, things normalised quite rapidly after the bleak January, and the subsequent quarters improved performance over prior year. The full-year improvement of our comparable operating profit margin on a like-for-like business portfolio basis from 7.5% to 8.4% can

be considered at least acceptable. It was real progress towards our long-term 10% operating profit margin goal.

Listing some of the highlights and lowlights of 2019, a clear highlight was the performance of our North American building solutions business. For some years, it had struggled with capacity constraints and consequent service and cost level challenges. The expansion of manufacturing in Minnesota to a second site in Hutchinson in 2018 has confirmed the organisation's ability to execute its strategy. The Group's capital expenditure has proven to be right and it has enabled our North American customers to enjoy the same service levels we have delivered in the past as part of their Uponor customer experience.

We continue our successful research and development work with the aim of innovating solutions that are good for both our customers and the environment.



The launch of the new press fitting generation S-Press PLUS involved both highs and lows. On the one hand, the product family has been well received by our customers, indicating that we have been able to listen to the needs of the market and create an appealing solution. On the other hand, we had challenges with the production in the beginning, and it took some time to normalise the process. Progress was also made in our manufacturing facility in Virsbo, Sweden on the yields of its PEX pipe production. That journey started in the second half of 2018 and is not over yet, but continuous improvement has been achieved.

One of the problems we faced in 2018, production yield at Uponor Infra's manufacturing facility in Nastola, Finland, was resolved

in 2019. In 2018, after we had transferred plastic pipe production in Finland from Vaasa to Nastola, we fell too far behind the learning curve in getting these transferred lines to generate the desired output. In 2019, their yield indicators returned into the green zone. Uponor Infra carried out a small structural refinement by divesting of Fintherm, its district heating pipe system unit in Prague, the Czech Republic. The segment's footprint is now back around the Baltic Sea, similar to the footprint Uponor had in its infrastructure business prior to its merger with KWH Pipe to form Uponor Infra back in 2013.

In the first half of 2020, we will focus on internally with looking for efficiencies and implementing initiatives under our

operational excellence programme, which we announced in October 2019. Operational excellence is one of our four strategic pillars. As technologies, channels and ways of working are evolving, we need to make sure we lead the way in using them, rather than fall behind. We must be set up in the best possible way to serve our customers and at the same time generate returns for our shareholders.

My sincere thanks to the thousands of Uponorians who in 2019 contributed to creating customer experiences for our valued customers who have been loyal to the Uponor brand. Thank you!

Jyri Luomakoski
President and CEO

How we create value

Inputs

Financial

- Total equity EUR 370.4 million
- Net interest-bearing debt EUR 139.1 million
- Cash and cash equivalents EUR 76.1 million

Natural

- Total energy consumption 218,000 MWh
 - Electricity purchased 169,700 MWh
 - Of which, certified green electricity 32,400 MWh
 - Self-generated electricity 100 MWh
 - Fossil fuels used 48,300 MWh
 - Heating 33,200 MWh, of which renewable 11.9%
 - Own fleet vehicles (including leasing) 15,000 MWh
- Raw materials used 146,200 tonnes
- Water consumption 154,100 m³

Infrastructure

- 26 operating countries
- 16 manufacturing facilities

Drivers

- Climate change and scarcity of resources
- Urbanisation
- Digitalisation

Human

- Number of employees 3,800 on average
 - 55% white collars and 43% blue collars
 - 25% female and 75% male
- Employee turnover 10%
- Investment in occupational health and safety as well as know-how

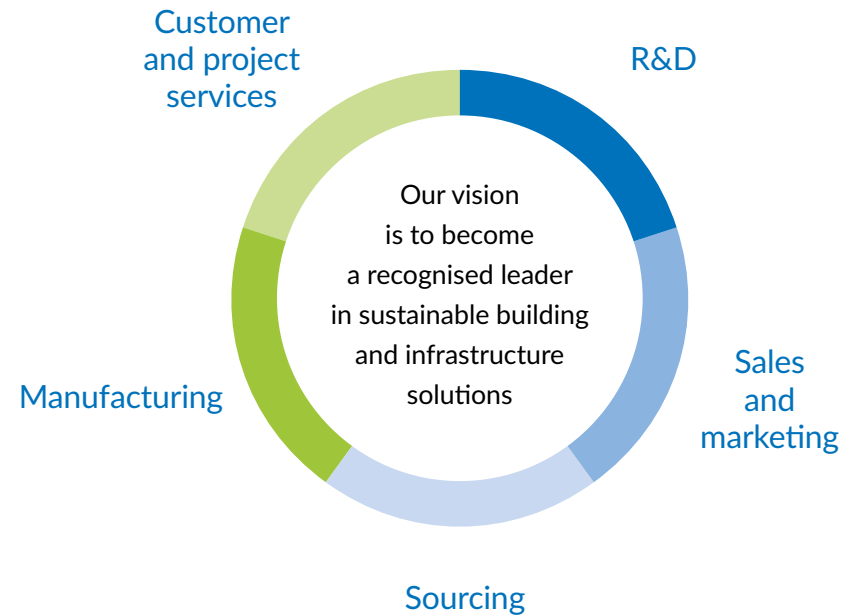
Social

- Customer relationships
- Co-operation with industry and trade organisations
- Co-operation with authorities
- Partner network

Intellectual

- Uponor brand
- Research & development, innovations and patents

Business model



Strategic pillars

- Empowered and engaged employees
- Customer experience
- Innovative products and services
- Operational excellence

Outputs

- Products and services that reduce the use of scarce resources and improve efficiency
 - Energy-efficient radiant heating and cooling
 - Safe drinking water delivery systems
 - Reliable infrastructure solutions
- Total waste 18,100 tonnes
 - Waste recycled 98.0%
 - Waste to landfills 2.0%
- Share of hazardous waste 1.0%
- Total greenhouse gas emissions (Scope 1) 8,400 tonnes
- Total greenhouse gas emissions (Scope 2) 27,000 tonnes
- 80 workforce accidents
- Incident rate (LTIF) 11.9 per million work hours

Impacts

Economic

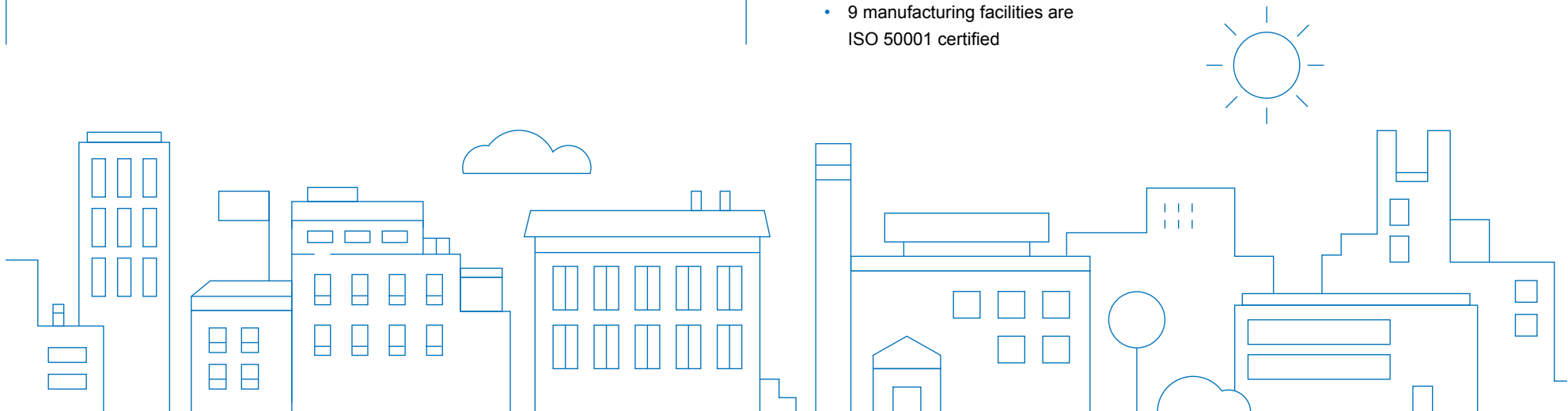
- Shareholders: dividends EUR 37.2 million
- Product and service suppliers: purchases EUR 751.2 million
- Society: taxes and social costs EUR 57.5 million
- Personnel: salaries and remunerations EUR 210.2 million

Environmental

- Products that save energy, improve health and increase comfort
- 14 manufacturing facilities are ISO 14001 certified
- 9 manufacturing facilities are ISO 50001 certified

Social

- Development projects together with different stakeholders
- Increased experience and knowhow of personnel and partners through training programmes
- Development of operating environment and regulations of the industry



Sustainable building and infrastructure solutions

We help our customers in residential and commercial construction, municipalities and utilities as well as in different industries to work faster and smarter, while end-users can enjoy ease and comfort.

Digital offering

Our digital offering includes modern room temperature control systems, such as Uponor Smatrix, which offers compatibility with various voice assistants. We also offer smart solutions that help conserve water and protect homes from leakage, for example water assistant Phyn Plus.

Plumbing & heat interface units

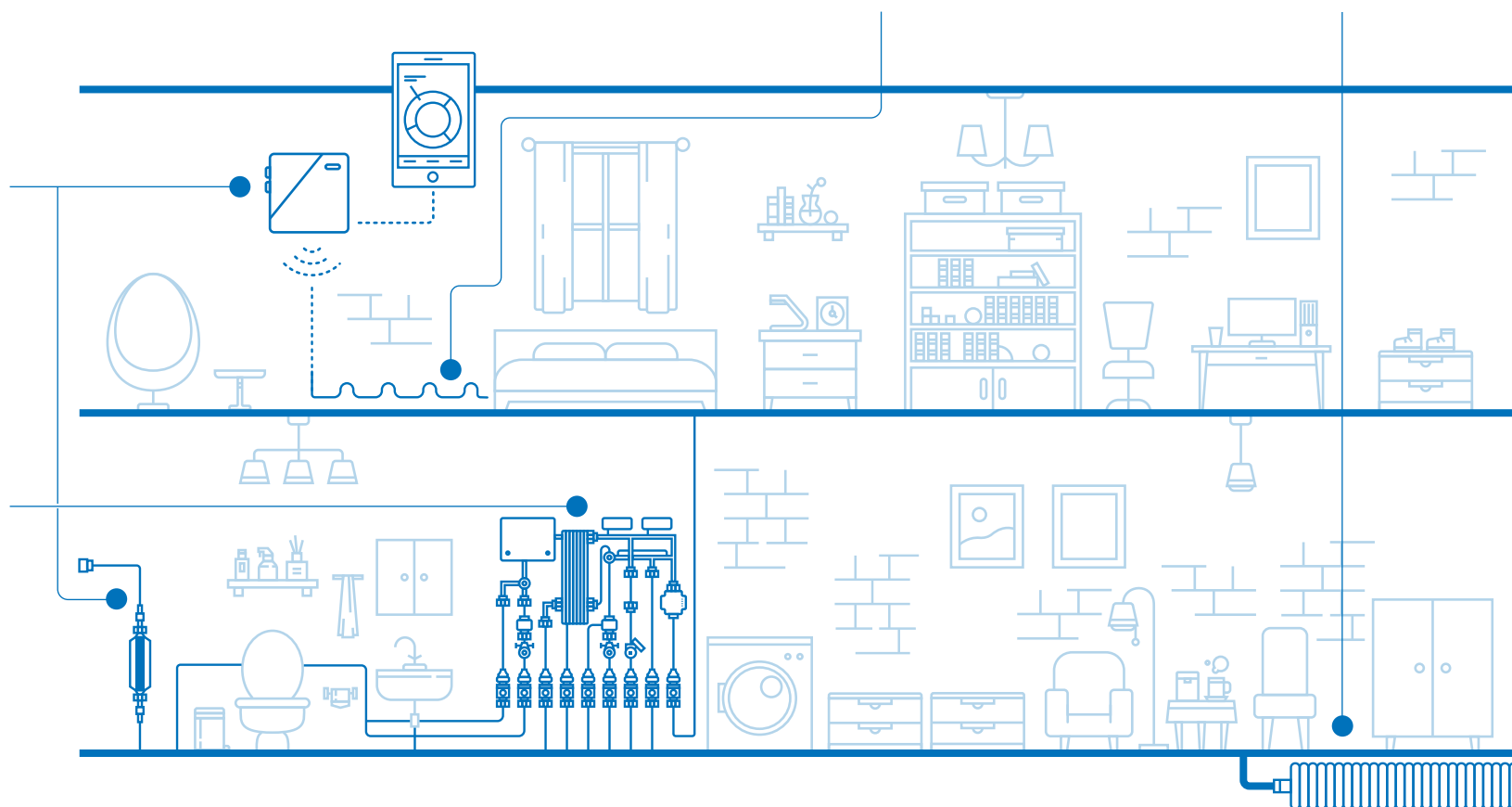
Our plumbing installations for residential and commercial spaces ensure, hygienic drinking water delivery, with plastic pipes and fittings that are quick and easy to install. We also offer prefabricated heat interface units that supply energy-efficient heating and cooling and hygienic hot water.

Energy transfer

Our energy-efficient heating and cooling systems for residential and commercial spaces distribute heat evenly, ensuring comfortable temperature all year round. In addition to interior comfort, our solutions can bring safety to exterior surfaces with our turf conditioning or snow and ice melting systems.

Local heat distribution

Our modern solutions for local heat distribution meet the strictest requirements with regard to safety, reliability, durability and efficiency. Our Ecoflex pre-insulated pipes can be used for residential house connections and district heating and cooling networks.



Water Monitoring Services

Our Water Monitoring Services safeguards municipal drinking water distribution networks from contamination and leakages as deterioration of water quality as well as leakages are notified to the network owner. This reduces the risk of spreading diseases and helps to minimise the loss of water.

Sewer & storm

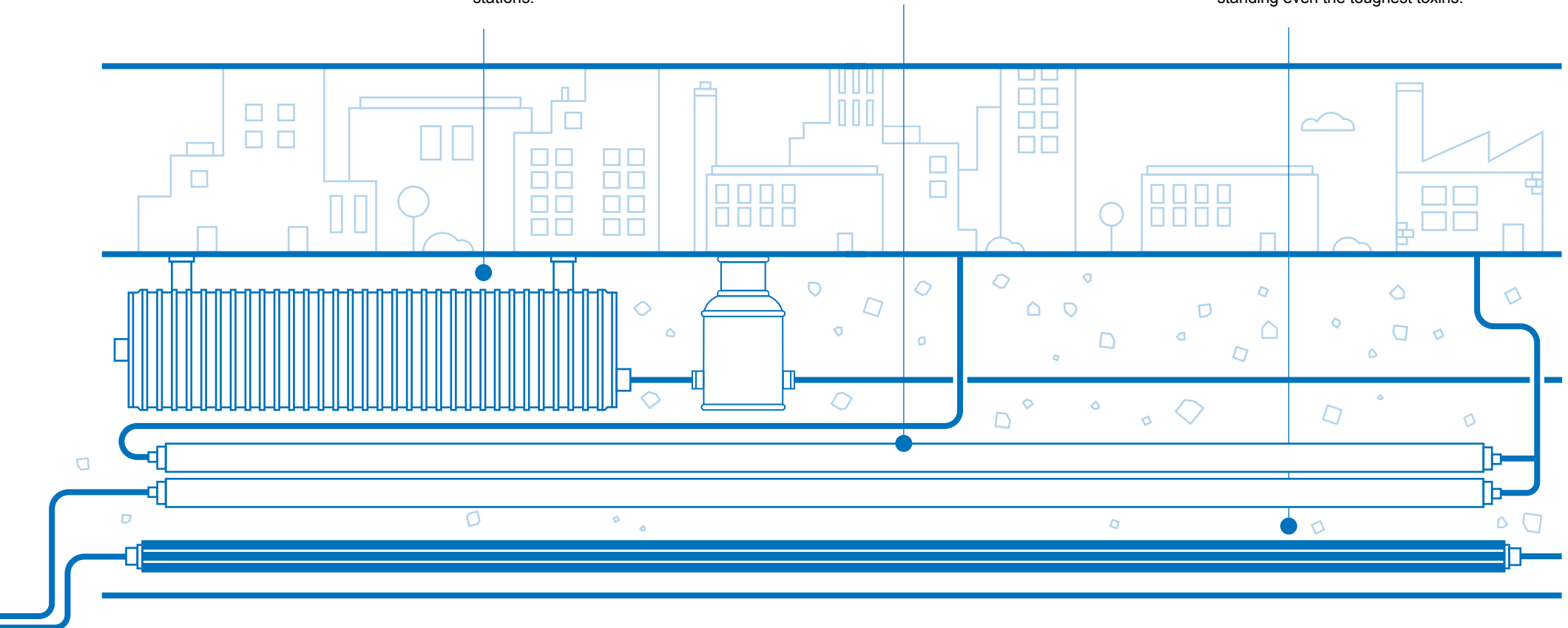
Our stormwater systems for municipal networks, residential and commercial construction, roads and agriculture provide a solution for managing stormwater and preventing flooding. We also offer a wide range of sewer network products including pipes, fittings, tanks, chambers and pumping stations.

District energy & project services

Our offering provides pre-insulated pipe systems for district heating and cooling. We also provide specially designed industrial piping. Project services provide designed solutions including turnkey deliveries with design, project management and installation services for infrastructure and industries.

Pressure pipe systems

Our pressure pipe systems for water, gas and wastewater transportation and distribution are made from flexible and durable polyethylene. Our offering also includes a barrier pipe for polluted soil specially made for the distribution of drinking water. Due to its polymer barrier protection layer, the pipe is capable of withstanding even the toughest toxins.



We offer a range of products and solutions for the residential market, which enable pleasant living conditions in homes. Our durable solutions help to increase efficiency in the building or renovation of single and multi-family homes.

Our products for safe and hygienic drinking water delivery and energy-efficient radiant heating and cooling are also an effective solution for the commercial market. Our solutions ensure a pleasant working environment in offices, and provide possibilities to lower installation, operation and maintenance costs for different public spaces. For hotels, we offer solutions that allow their customers to be in control of their comfort by adjusting the living conditions of their own rooms, while at hospitals our solutions meet the highest standards in hygiene, without compromising comfort and energy efficiency.

Our portfolio of prefabricated solutions for the commercial segment are designed to make the build and, later, maintenance processes more efficient. Our preassembled plumbing and underfloor heating manifolds and complete state-of-the-art prefabricated technical walls speed up any construction or renovation project, while at the same time making operation and maintenance faster and easier.

For municipalities and utilities, we offer solutions for the safe and effective distribution and management of water. Our underground infrastructure solutions can be used for the handling of stormwater, wastewater and sewage, as well as the distribution of drinking water and gas, and cable protection for electricity and telecommunications. We offer solutions for the management of stormwater, which enable surface runoffs to be directed into the stormwater network in a safe and managed way, helping to avoid flooding in urban areas. In addition to smaller wastewater and sewage systems, we offer sewer network products for municipal sewers to ensure effective sewer systems in fast-growing communities and cities.

Our designed solutions for industrial customers are designed to take into account the customer-specific needs, requirements, operating conditions and future developments. Using our Weholite technology, structures can benefit from our cost efficient and durable solutions for transporting and handling water and energy.



Frankfurt, Germany

Decentralised heating and cooling for the tallest residential building in Germany

In Frankfurt's Grand Tower, Germany's tallest residential complex, all 401 luxury apartments and penthouses are being fitted with compact heat interface units. Custom-made for the project, these units will enable optimum temperature control and convenience for all residents.

We supply the heat interface units as a complete package with ready-wired control technology to ensure fast and efficient installation. In addition, around 300,000 metres of Uponor comfort piping will be used for underfloor heating throughout the 47-floor high-rise. Together, this package of solutions will help to substantially reduce the energy consumption of the whole building, facilitate retrofitting tasks, and enable faults to be quickly identified and fixed.

The completion of the Grand Tower is planned for 2020.

Read more at [uponor.com](https://www.uponor.com) ↗



Texas, USA

Texas high schools switch to PEX plumbing system

The rapidly expanding 80,000-student Katy, Texas, Independent School District (ISD) is meeting its growing student population with new, state-of-the-art facilities. The district's Paetow High School was originally specified with copper and chlorinated polyvinyl chloride (CPVC), but plumbing contractor Letsos Company of Houston convinced engineers and building owners to include crosslinked polyethylene (PEX) in the specification after the successful use of the material in similar projects in Houston. PEX was preferred due to its speed of installation, cost-efficiency, flexibility, longevity, warranty and freeze protection.

After the successful installation at Paetow High School, our PEX plumbing system was selected for another new school in the district as well. Now, other Texas school districts are hearing about the benefits of PEX and already 13 new schools are in the process of switching to PEX plumbing.

Read more at [uponor.com](https://www.uponor.com) ↗



Stavanger, Norway

FishGLOBE revolutionises the future of plastic structures for marine conditions

About three years ago, Norwegian company FishGLOBE AS started designing a floating fish farming facility intended for full-scale production. It has 3,500m³ of space for fish, with a height of 18 metres and a diameter of 22 metres. The structure has to be strong enough to withstand the harsh conditions of the Norwegian Sea and to support its own massive size, as the whole FishGLOBE weighs 200,000 kilos. The perfect solution for this challenge was our extremely strong and durable Wehopanels and Weholite pipes, made from layered polyethylene (PE) profile.

In July 2019, this unique facility was lifted into the sea and towed to its final location in Lysefjord near Stavanger, Norway. The first fish – 250,000 young salmon – were transferred into the facility in November 2019.

Read more at [uponor.com](https://www.uponor.com) ↗

Sustainability embedded in our daily operations

We have a passion for innovation, engineering and technology as well as strive to safeguard water, a scarce resource, for future generations. Our durable products enable a more sustainable lifestyle.

For us sustainability is not a trend. Our sustainability strategy is built on the United Nations' Sustainable Development Goals (SDG). We support all the 17 SDGs, but have prioritised four of them: clean water and sanitation, decent work and economic growth, responsible consumption and production as well as climate action. We feel that these four SDGs enable us to truly contribute and make a difference.

The Executive Committee and the Board of Directors together oversee the sustainability strategy. The Executive Committee approves any updates to sustainability strategy and targets. The Group steers and coordinates sustainability work, while the segments are responsible for execution.

In our operations, we take climate and resource issues into consideration. Our product design aims to put more weight on incorporating environmentally friendly materials in product design. We produce products and services that use less energy, reduce resource demand, perform reliably for years and are safe for installers to install. We make efforts to enhance circular economy by reusing production waste where possible as well as to minimise waste from production. This includes investigating and developing new materials and methods that

reduce negative environmental impact. We have investigated the water footprint of our manufacturing facilities and are analysing the results for further action.

Voluntary commitments which include reporting of our actions represent one concrete way of managing and measuring our sustainability achievements. We participate in the Carbon Disclosure Project (CDP). In 2019, we reported our first Communication on Progress as United Nations Global Compact signatory. In addition, we are a member of several local and global trade organisations that have sustainability-related initiatives on their agendas. As the built environment has a big role to play in managing climate change, we are committed to the World Green Building Council's Net Zero Carbon Buildings Commitment. The programme is a call for coordinated action by the building and construction sector to work together to fully decarbonise buildings and infrastructure by 2050.



Our stakeholders

Through our business operations, we interact with different stakeholders. Our key stakeholders include current and potential customers and employees, suppliers and partners, shareholders and investors, media, trade organisations, authorities and local communities as well as the general public.

For us responsible business includes mapping and understanding stakeholders' perceptions and finding a balance between different stakeholder expectations. Continuous dialogue and feedback with different stakeholders are vital to assessing and answering expectations of different stakeholder groups.

STAKEHOLDER	STAKEHOLDER'S EXPECTATION	OUR ACTIONS
Customers, current and potential	<ul style="list-style-type: none"> • Safe and reliable products • Good customer service 	<ul style="list-style-type: none"> • In 2019, we launched new products, such as S-Press PLUS, Combi Port E and Decibel
Employees, current and potential	<ul style="list-style-type: none"> • Recognition of work contribution and equal treatment • Opportunities for professional development • Work well-being and safe working conditions • Job security 	<ul style="list-style-type: none"> • We support equality and respect the cultures and values of individuals and groups • We develop employee competence through job rotation and career advancement • We promote and develop work well-being and safety
Investors and shareholders	<ul style="list-style-type: none"> • Long-term value creation • Responsible operations • Risk management 	<ul style="list-style-type: none"> • We are committed to profitable growth • Our goal is to pay dividends at least 50% of annual earnings • We take economic, social and environmental responsibility into consideration in our business • We manage risks and operate in line with Uponor Code of Conduct
Suppliers and partners	<ul style="list-style-type: none"> • Ability to take care of the agreed obligations • Responsible operations • Long-term business relations 	<ul style="list-style-type: none"> • We comply with agreed regulations and business practices • We adhere to professional procurement processes that are consistent with good procurement practice • We evaluate suppliers actions and possible risks and conduct audits • We manage supplier relationships in a systematic manner
Authorities and decision makers	<ul style="list-style-type: none"> • Compliance with laws, regulations and permits • Paying taxes according to laws • Transparency and reliable reporting 	<ul style="list-style-type: none"> • We comply with laws, regulations and permits • We pay our taxes and dividends • We communicate proactively and openly
Trade organisations	<ul style="list-style-type: none"> • Advocating on behalf of shared interests • Maintaining dialogue 	<ul style="list-style-type: none"> • We advocate on behalf of shared and Uponor's interests • We participate actively in our industry's organisational activities • We communicate our views through different channels e.g. our website, stakeholder magazine, social media
Media	<ul style="list-style-type: none"> • Relevant, reliable and transparent communication 	<ul style="list-style-type: none"> • We communicate proactively and openly • We are easily accessible for media's enquiries
Local communities	<ul style="list-style-type: none"> • Dialogue and collaboration 	<ul style="list-style-type: none"> • We are a good employer and neighbour • We support local community activities • We take good care of the environment in which we operate
General public	<ul style="list-style-type: none"> • Safe and durable products • Activities for the good of society • Transparency 	<ul style="list-style-type: none"> • We develop new products and services that reduce the environmental impacts • We support non-profit activities benefiting society

Providing safe drinking water and technologies to conserve it

More water conserving technologies are needed to ensure water is not wasted. Our innovative solutions help to ensure safe water delivery and to conserve it.



Water is a precious natural resource that must not be wasted. The European Commission estimates that 20-40

per cent of Europe's available water is being wasted due to leakages and a lack of water saving technologies. Innovative solutions combined with smart technology help to conserve water and stop leakages.

Our answer is Phyn Plus, a smart water assistant that enables a homeowner to keep an eye on everything water-related in their house: water temperature, pressure and flow at each moment, total consumption and usage. It provides the homeowner with more detailed information than ever before about water usage in the house.

Safe water cannot always be taken for granted. Although incidents of waterborne infections resulting from indoor plumbing are rare, fresh tap water is teeming with harmless microbial life. Water that sits for a few days inside pipes can contain millions of bacteria.

Our closed loop installations and automatic flushing units keep water flowing and our heat interface units maintain the water temperature below 25°C, prevent cold water delivery pipes from warming up as well as generate hot drinking water on demand, thereby minimising the risk of legionella.

Municipalities have an important role to play in water supply and sewage. With our service concept, municipal drinking water distribution networks can be monitored in real-time. It keeps track of water flow, direction of flow and water quality. This enables the network owner to take immediate actions if an abnormality is detected.

Due to urbanisation and climate change, flooding waters are posing an increasing number of challenges, especially to cities. We have actively been working to solve these challenges for years. Our stormwater tanks, tunnels and cassettes offer a modern solution for attenuating and infiltrating stormwater runoff and meltwater close to the point of origin.



World record and durable pipes needed to avoid environmental disaster

Damaged wastewater pipelines under the riverbed of the Vistula River, caused a failure in the system transferring sewage to a treatment plant, located near Warsaw. This resulted in a 12-day discharge of sewage into the largest river in Poland, which runs through the whole country to the Baltic Sea, affecting areas north of Warsaw. Quick action was needed to prevent a large-scale environmental disaster.

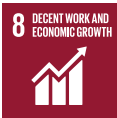
Our experienced infrastructure experts were urgently requested to participate in solving the crisis. Our solution was to build an emergency pipeline with a length of 2,200 metres. A part of the pipeline, approximately 250 metres, was laid on a pontoon bridge built by the military. This type of project usually takes months to complete – but in responding to this emergency, we produced, delivered and connected the pipes as well as laid them on the pontoon bridge in just eight days. This can be considered a world record.

We used PEHD polyethylene pipes, which are perfect for fixing problems in the most difficult operating conditions. They are resistant to abrasion, corrosion and exposure to chemicals in soil and water. On top of that, PEHD systems are relatively fast to install.

Read more at [uponor.com](https://www.uponor.com) ➔

A responsible employer offers equal opportunities

Good working place offers equal opportunities for everyone regardless of their gender, age or nationality. We want to provide a safe workplace and avenues for professional development.



The health and safety of our employees is our top priority and we are striving towards zero accidents by 2025. We expect our employees to contribute to our occupational safety and health goals by following our safety guidelines and providing near miss reports so that we can develop our processes. We have set ourselves the target of reducing the lost-time injury frequency (LTIF) yearly by 30%. In 2019, our LTIF was 11.9 (2018: 12.7) and there were no fatal injuries (2018: 0).

Uponor's Code of Conduct applies to all Uponorians and ensures that we do our job in a lawful and ethical manner. In 2019, we launched an easy to use Code of Conduct eLearning module with practical exercises to make the Code of Conduct more approachable and easier to understand. Our aim is that all personnel will complete the eLearning module every other year.

We support employees' continued development by providing each employee with a variety of opportunities to support their continued professional development through on-the-job learning, learning from others and more traditional methods, such as classroom-based studies and eLearning. Furthermore, as competent leaders are the key to the successful execution of our strategy, we strive to provide unique career paths and offer leadership development programmes.

We respect human rights and follow the guidelines of the United Nations' Universal Declaration of Human Rights. We do not allow child or forced labour or engage suppliers that do so. We aim that all our suppliers meet our ethical, social, environmental and quality standards, and comply with the applicable international and national laws and regulations. We evaluate and audit existing and new suppliers according to these principles.



Helping our employees to gain new insights

We recognise the impact good leadership has on our business and the job satisfaction of all employees. Thus, developing inspiring leaders is at the core of our People Strategy. Our training portfolio offers four targeted programmes to employees in different stages of their career, from young professionals to senior-level managers.

One of these programmes, Navigator, helps middle management gain new skills and build a stronger network within Uponor. Through business impact projects, the participants get to apply their learning to real business issues, practice their leadership and teamwork skills. In addition, they will conduct a team work, which results are presented to the Executive Committee. In 2019, teams searched for ways to improve how we harness customer feedback, expand our commercial solution portfolio, and align our values with our new purpose.

"The assignments were interactive, varied and helped us get to know each other, cooperate and practice our leadership skills. I gained a new perspective on my career and realised how I can practice my leadership skills, even though I don't have team members reporting to me yet," says one participant.

Read more at [uponor.com](https://www.uponor.com) ↗

Innovative and durable products enabling a more sustainable lifestyle

For us responsible consumption and production means durable and sustainable product and service offering. We use raw materials efficiently and we build ways to enhance the circular economy.



Sustainable production is about resource and energy efficiency for us. We continuously strive to create innovative solutions

that help to create comfortable, safe and energy-efficient built environments. Innovation is also the key in the important transition from a take-make-waste economy to a circular economy.

Our aim is to reduce the use of virgin raw materials and we are participating in different R&D initiatives that investigate alternatives to oil-based resins. In addition, we search for solutions to reduce the use of packaging materials and increase the use of recyclable packaging materials.

Plastics belong to the circular economy. Therefore, we want to increase and enhance the recycling of plastics. We produce plastic products with a long lifetime – they last in use and most of them can be recycled after use.

We want to improve people's understanding of the role of various plastics in society and how plastics can be part of circular economy.

The typical waste from our manufacturing facilities comprises of either plastic or metals. We aim to recycle all metal and plastic waste. Still, part of our plastic waste is non-recyclable, and we continuously work towards a sustainable solution in this matter.

We aim to reduce the amount of waste with the aim of zero waste to landfill. Our production generates only a small amount of hazardous waste. Based on information provided by suppliers, all Uponor products and systems comply with the requirements of the European REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) regulation. While North America does not have a REACH regulation of its own, we follow the EU regulation throughout the company when appropriate.



Committed to reducing plastic pellet loss to the environment

Operation Clean Sweep (OCS) is an international initiative from the plastics industry to reduce plastic pellet loss to the environment. The aim of the initiative is to ensure that the plastic pellets, flakes and powders that pass through manufacturing facilities are handled with care and do not end up in the environment. As a member of TEPPFA (The European Plastic Pipes and Fittings Association), we are committed to implementing OCS at our manufacturing facilities by the end of 2021.

Committing to OCS means that a number of Uponorians will be trained by TEPPFA during 2020. Our own internal work – gathering and exploring examples of best practices – has started. We have already been testing a strainer, developed by one of our employees, that gathers plastic flakes and powder from the manufacturing facility's floor before it ends up in the sewer.

Going forward, we want to do our part to protect the environment and encourage all companies in our sector to commit to OCS.

Reducing GHG emissions to combat climate change

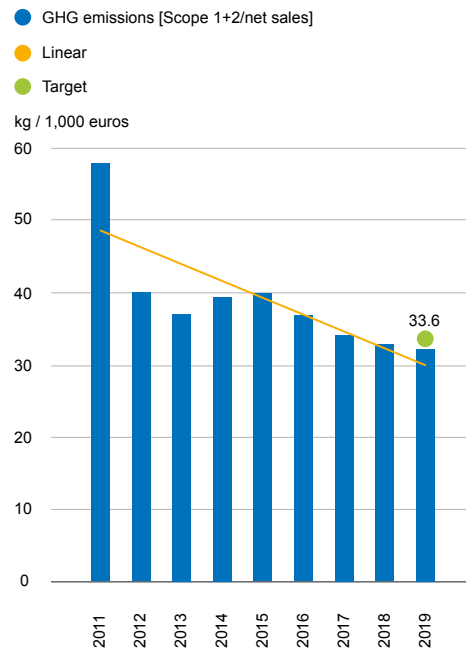
The effects of climate change are felt everywhere, and action needs to be taken. We continuously aim to reduce the overall impact of our business operations and increase energy efficiency.



We have 16 manufacturing facilities globally. Their key environmental impacts are greenhouse gas (GHG) emissions, waste and water usage. Our target is to reduce scope 1 and scope 2 GHG emissions of our production by 20% per net sales by 2020 from their 2015 levels. Purchasing certified green electricity is one way for us to lower our scope 2 GHG emissions. Updating the heating and illumination in our manufacturing facilities to more energy-efficient ones is not only a climate action but also reduces costs in the long run.

Environmental aspects are considered in our product offering. We are proud that our products enable smart and efficient use of energy in all places. We develop indoor climate products that need less energy to provide heating and cooling and thus enable more sustainable use of space.

GHG EMISSIONS RELATIVE TO TARGET



Solar panels are one mean to reduce emissions

Action is needed to combat climate change and its effects on the world. We want to do our part in this. As the world's greenhouse gas (GHG) emissions need to go down, we are investigating different options for how to reduce our GHG emissions. Solar panels represent one concrete action that we have investigated and taken into use at two of our manufacturing facilities to generate renewable and clean energy.

During 2019, we installed solar panels at our manufacturing facility in Nastola, Finland. The entire installation was working at the end of October. The system produces approximately 270,000 kWh electricity annually. The system has worked well, producing renewable energy for Nastola's manufacturing facilities.

Uponor is no stranger to solar panels. We also have solar panels at our manufacturing facility in Apple Valley, Minnesota, USA. Since their installation in summer 2016, the panels have generated 120,081 kWh of energy. We have saved an equivalent of 16.5 tons of unused coal since installation.



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