



# Together,

we create extraordinary flow control solutions  
to **make the world better** for everyone.

**2019**  
SUSTAINABILITY  
REPORT



# OUR PURPOSE

WHY WE ARE HERE

Together, we create extraordinary flow control solutions to make the world better for everyone.

# OUR VALUES

OUR GUIDING PRINCIPLES FOR HOW WE ACHIEVE OUR PURPOSE



## PEOPLE

Develop each other, embrace differences, respect one another and create a collaborative team culture. The collective energy of our people sets us apart from our competitors.



## INNOVATION

Take risks and learn from mistakes. Leverage and expand our knowledge to bring the best products and services to market. Achieve this through creativity, modernization and ingenuity.



## SAFETY

Embrace Flowserve's safety rules and hold each other accountable. We do this for ourselves, our customers, our partners and the communities we serve.



## OWNERSHIP

Take the initiative to own your work, and follow through on your commitments to achieve results that are beyond what is expected.



## INTEGRITY

Act ethically and transparently toward associates, customers and shareholders, in accordance with the Flowserve Code of Conduct. Be consistently open, honest and trustworthy.



## EXCELLENCE

Perform ambitiously with dedication and enthusiasm to deliver outstanding products, services and business results.

# OUR BEHAVIORS

THE ACTIONS WE TAKE TO LIVE BY OUR VALUES

Work together with an enterprise mindset

Deliver beyond our customer expectations

Take action and learn from mistakes

Trust and respect each other

Think safe, work safe, be safe

Embrace and drive change

Act with integrity, always

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## LEADERSHIP MESSAGE

Around the world, Flowserve associates are guided by our purpose to create extraordinary flow control solutions that make the world better for everyone. One of the ways we strive to make the world a better place is through our commitment to environmental, social and governance (ESG) issues, both in our own operations as well as in the operations of our customers who rely on our products to improve the world around us.

Since launching the Flowserve 2.0 Transformation program in 2018, we have continued to build on our momentum and have made lasting changes to the way Flowserve does business, particularly in the three pillars of our sustainability program: **Planet, People and Operational Excellence**. In 2019, we introduced several key initiatives that made a positive impact on our business, our customers and the communities we serve, including the:

- Continued commitment to safety and integrity through our annual Safety Week and Integrity Week
- Launch of our Zero Defect Program (ZDP), which enables us to take greater ownership and address, track and improve the quality of our products and services
- Launch of our new community impact program, Flowserve Cares
- Implementation of Lean Six Sigma manufacturing improvement practices
- Launch of a targeted development program to strengthen the operational capabilities and business acumen of our plant managers

## WE SET AN AMBITIOUS TARGET TO REDUCE CARBON EMISSION INTENSITY BY 40% BY THE YEAR 2030

We are committed to helping create a better world for everyone not only by the daily actions we take at Flowserve, but also by providing unparalleled products and services. Our products and services are used in applications throughout the world to address key environmental and social issues, such as:

- Flare gas recovery to reduce methane emissions and increase process energy efficiency
- Sea water desalination plants for cost-effective access to fresh water
- Carbon capture, utilization and storage to reduce industrial carbon intensity
- Process maintenance and services to maximize service life, reduce waste and employ local workers

Our progress in 2019 is the result of our unwavering commitment to our core values and our dedication to exceeding customer and stakeholder expectations.

In 2020 and beyond, we will continue to drive improvements on ESG matters, even against the backdrop of unexpected and unprecedented challenges, including the COVID-19 pandemic. Below are just a few highlights of the actions we are taking in 2020:

- We set an ambitious target to reduce carbon emission intensity by 40% by the year 2030
- We signed the WASH Pledge, in which we commit to implementing access to safe water sanitation and hygiene at our facilities, and encourage our supply chain and communities to do the same
- Through financial support and volunteerism efforts, we focused on social justice and change in the communities where our employees live and work; as well as continuing to foster an environment that values equality and inclusion for all associates
- Through Flowserve Cares, we partnered with local organizations to help communities impacted by COVID-19

While there is no doubt a lot of work remains to be done as we continue to address complex ESG issues facing Flowserve, we are excited about the future as we continue to build a culture of accountability, respect and trust as the foundation to drive sustainable improvements today and for generations to come.



**Scott Rowe**

President and Chief Executive Officer

# ABOUT FLOWSERVE AND THIS REPORT

## Our Company

Flowserve is a world-leading manufacturer and aftermarket service provider of comprehensive flow control solutions. Our product portfolio includes pumps, valves, seals and automation. We support global infrastructure industries, including oil and gas, chemicals, power generation, water management, carbon capture and general industry. Through our manufacturing facilities and global network of Quick Response Centers (QRCs), we offer a broad array of aftermarket equipment services, including installation, advanced diagnostics, repair and retrofitting.

Our operations are conducted through two business segments: Flowserve Pump Division (FPD) and Flow Control Division (FCD). Flowserve products and services are sold either directly or through designated channels to more than 10,000 customers, including world-leading engineering, procurement and construction (EPC) firms, original equipment manufacturers and distributors.



## 2019 Sustainability Report

In this report, we provide an overview of Flowserve's sustainable development program and the company's 2019 environmental and social metrics data. Our content is organized to be consistent with the Sustainability Accounting Standards Board (SASB) conceptual framework dimensions. Specific information requested by the SASB Industrial Machinery and Goods Sustainability Accounting Standard and the Task Force on Climate-related Financial Disclosures (TCFD) is included at the end of this report.



# Flowserve Presence

With more than 17,000 associates, Flowserve has a presence in 51 countries across our 236 facilities.



*All figures as of December 31, 2019*

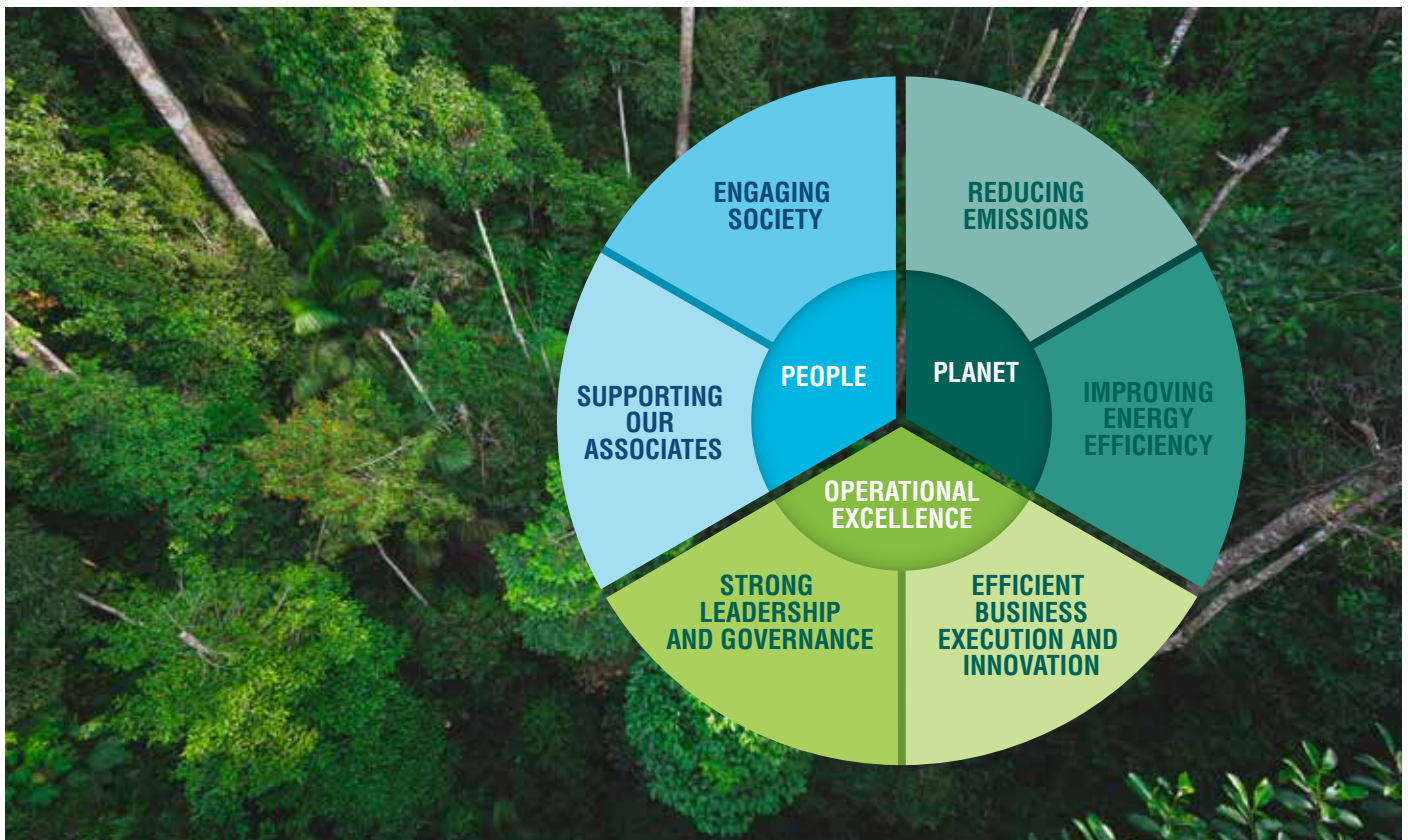
# OUR COMMITMENTS

Flowserve is committed to achieving business success in an ethical and socially responsible manner, while striving to minimize our environmental footprint. To fulfill this commitment, we work to continuously improve our operations by:

- Increasing energy efficiency, reducing carbon emissions, conserving water and reducing waste
- Fostering a work environment that supports employee health, safety, diversity and inclusion
- Engaging with customers, communities, governments and the public in an ethical and socially-responsible manner
- Partnering with suppliers who share the same commitment to ethics, human rights and environmental stewardship

- Providing superior products and services to advance environmental and societal improvement and progress
- Maintaining a strong governance structure to manage risks and capitalize on market opportunities
- Compiling social and environmental metrics to gauge our progress towards fulfilling this commitment
- Sharing sustainability metrics data with stakeholders as we seek to continually improve our performance

By working to meet these goals, our focus is to be a leader in the sustainable development of industrial machinery and services.





## Carbon Reduction Target

Using 2015 as the baseline year, Flowserve has established the corporate goal of reducing operating carbon intensity 40% by 2030. We target to reduce combined direct (Scope 1) and indirect (Scope 2) carbon emissions of 29.4 Tonne CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) per USD million dollars in sales revenue in 2015 to 17.4 or lower by 2030.

We will achieve this target through a combination of efficiency improvements, renewable energy project development, and other measures to offset our greenhouse gas emissions.

## United Nations Sustainable Development Goals

In 2015, the United Nations developed 17 Sustainable Development Goals (SDG) to end poverty, protect the planet and improve the lives and prospects of the global population. Flowserve's operating practices and flow control products directly contribute to achieving select SDGs, including (6) Clean Water and Sanitation, (7) Affordable and Clean Energy, (12) Responsible Consumption and Production, (13) Climate Action and (16) Peace, Justice and Strong Institutions. High-level descriptions of our contributions are outlined below.



## Clean Water and Sanitation

Flowserve is committed to increasing water-use efficiency in our operations. We use waste elimination methodologies such as Lean Six Sigma to reduce water use through more efficient manufacturing practices. As a result, many of our manufacturing facilities recycle process water in closed-loop distribution systems to minimize fresh water usage. Flowserve has pledged to support the World Business Council for Sustainable Development's initiative to provide safe water, sanitation and hygiene (WASH) at all of our facilities.

Flowserve flow control products are deployed around the world to meet society's need for fresh water. We have been a leader in seawater desalination since it was commercialized on a large scale. Flowserve equipment is installed in 90% of the world's desalination plants and two-thirds of mega seawater reverse osmosis (SWRO) projects operate with our pumps and energy recovery devices (ERDs).

## Affordable and Clean Energy

Among the many industrial applications our equipment and services support, we continue to advance technologies that will help meet the current and future demand for affordable and reliable energy. Our products support numerous power generation technologies, including conventional

steam, combined cycle, nuclear, geothermal, biomass and concentrated solar power. For processes that generate greenhouse gases, our products support carbon capture, utilization and storage (CCUS) technologies that control these emissions.

## Responsible Consumption and Production

Flowserve is committed to natural resource conservation and waste minimization throughout its global operations. Based on sales revenue, waste generation intensity has decreased 49% since 2013. We practice water recycling at many of our major pump test facilities to minimize fresh water usage.

Our aftermarket services help customers maximize the service life of their flow control equipment and reduce replacement frequency. When equipment replacement becomes necessary, customers can recycle old equipment into existing ferrous and non-ferrous metal markets.

## Climate Action

Flowserve products improve society's ability to adapt to climate-related hazards, including potential impacts associated with rising sea level, more frequent and/or severe weather events and drought. Flowserve engineers design and manufacture custom large-scale pumps and valves for seawater flood management projects around the world.

Whether it's the daily security of a major city or the ongoing reclamation of a nation's lowland, Flowserve's equipment and application expertise has helped tackle some of the world's toughest water management challenges.





## Peace, Justice and Strong Institutions

Flowserve business practices are governed by our Code of Conduct (Code), which requires ethical and socially-responsible behavior from all employees as well as our Board of Directors. There is zero tolerance for corruption and bribery in any form, and the Code provides guidelines to identify and address potential ethical issues in an expeditious manner.

We expect the same level of ethical and socially-responsible behavior from our supply chain, as detailed in the Supplier Code of Business Conduct (Supplier Code). Flowserve prohibits forced labor, child labor, and human rights abuses, and

contractually reserves the right to terminate any supply chain contract for violation of the Supplier Code. The company monitors supplier compliance through a comprehensive set of audit processes.

Flowserve is committed to working toward a conflict-free supply chain by aligning our worldwide suppliers with our Conflict Minerals policy. Our requirements are addressed in our Supplier Code, our terms and conditions with suppliers and our purchase order agreements.



# PROTECTING THE PLANET



Our approach to protecting the planet includes both a focus on reducing Flowserve's environmental footprint and delivering products and services to reduce customer emissions. Consistent with our sustainable development policy statement, our general environmental management goals are to increase energy efficiency, reduce carbon emissions, conserve water and eliminate waste in our operations, while providing superior products and services that advance environmental improvement.

### Absolute versus Intensity Metrics

Absolute values are actual reported emissions, while intensity, i.e. "normalized" metrics are absolute data divided by the emission year's sales revenue (in \$MM USD). Intensity metrics are useful in filtering out the effect of variable manufacturing rates.

## IMPROVING ENERGY EFFICIENCY

Flowserve is actively working to improve energy efficiency in our facilities to reduce energy demand, in our products to enhance customer process efficiency, and in our aftermarket technical support to maintain customer equipment reliability and performance.



### Engaging Regulators to Promote Efficiency

In 2013, Flowserve worked with the U.S. Department of Energy's (DOE) Office of Energy Efficiency and Renewable Energy and other industry representatives to develop standards for certain classes of industrial pumps. This effort resulted in promulgation of industrial pump efficiency rules related to: efficiency testing, product labeling, minimum performance, regulatory certification and enforcement. The rule became effective January 27, 2020 and pumps covered by the rule must be manufactured to comply with the new standard. The DOE estimates the efficiency standards will prevent the release of 24 million tonnes of CO<sub>2</sub>e related to electric power generation and upstream fuel production during the 2020 to 2049 period.<sup>1</sup> This reduction is equivalent to 256 times Flowserve's 2019 combined Scope 1 and Scope 2 emissions, or annual fossil fuel power plant emissions to provide electricity to 3.5 million homes. Flowserve proactively obtained certification of its products well before the standard's effective date.

1. Federal Register, Vol. 80, No. 63, Thursday, April 2, 2015 / p 17829.



## FlowsERVE Energy Sources

Energy sources used in FlowsERVE facilities include direct fuel consumption (e.g., combustible fuels) and indirect consumption (e.g. purchased electricity and heat) provided by third-parties.

Natural gas represents the main source of direct energy, with some facilities also reporting the use of other fuels including heating oil, fuel oil, kerosene, diesel, gasoline, propane and liquid petroleum gas (LPG).

Indirect energy is primarily purchased from the electrical grid. As governments continue to set

minimum renewable content standards, grid carbon intensity continues to decline. Highly efficient combined heat and power (CHP) plants provide both electricity and heat to some of our facilities.

FlowsERVE's progress in reducing indirect emissions includes a multi-year effort to improve energy efficiency. At the end of 2019, 35% of all facilities have been fully or partially retrofitted with light emitting diode (LED) lighting fixtures that significantly reduce lighting energy requirements and operating cost, while improving work area illumination and safety.

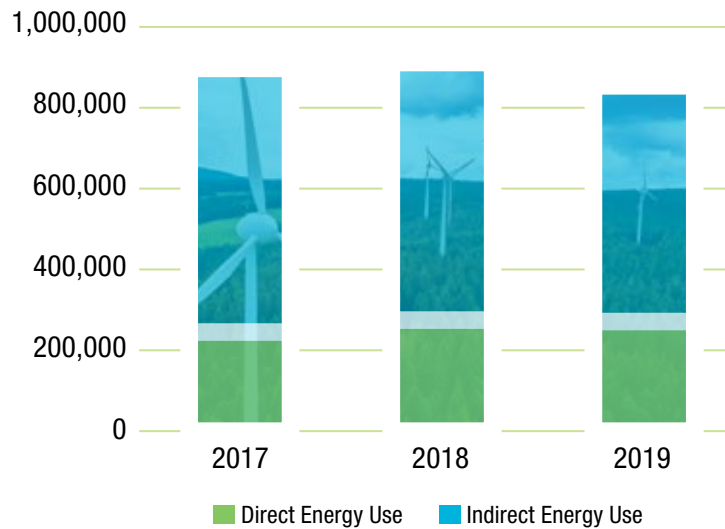
## Reducing Energy Use

From 2017 to 2019, total absolute energy use declined 4%, led by an 11% reduction in indirect energy use. The company's action to retrofit conventional lighting with more efficient LED lights at several facilities and our pursuit of renewable energy sources have contributed to lower energy purchases.

Energy intensity declined 11% during the same period. This improvement reflects a reduction in overall energy use due to efficiency gains at facilities despite an increase in sales and related manufacturing activity.

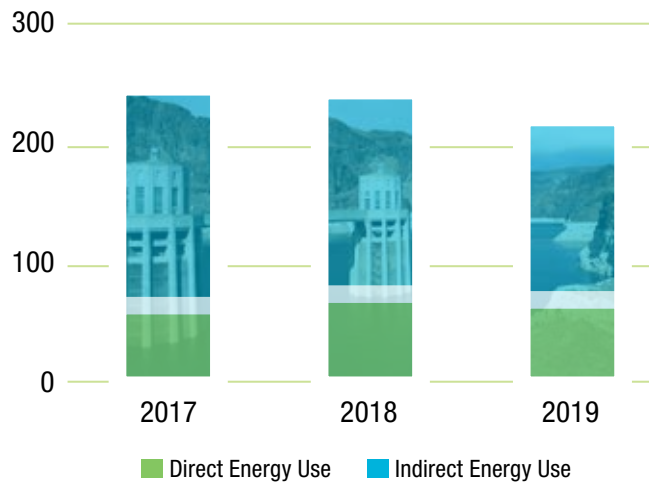
### Energy Use

(Gigajoules)



### Energy Use Intensity

(Gigajoules/\$MM USD)



## Driving Customer Energy Efficiency

Our product development and services are focused on improving customer operating efficiency.

### Improving Desalination Process Energy Efficiency

Global demand for clean water continues to accelerate and safe, reliable and cost-effective desalination solutions are increasingly important to many communities. Energy is generally the biggest cost driver in any seawater reverse osmosis (SWRO) desalination facility, making energy recovery equipment critical to the process. Flowserve is a world leader in the manufacture and supply of efficient energy recovery devices for the SWRO desalination process. Through its Calder brand, Flowserve offers two types of energy recovery technologies: isobaric devices and energy recovery turbines. **Annually, these technologies reduce customer power use by 750 Megawatts (MW) and carbon emission by 4.2 million Tonnes CO<sub>2</sub>e. This carbon savings is approximately 45 times greater than all of Flowserve's 2019 Scope 1 and Scope 2 emissions.**

### Maintaining Process Efficiency

To maintain process efficiency, our engineers can reduce downtime and improve safety at customer sites via targeted equipment evaluations, field performance tests and complex system assessments. We can enhance operator skills by providing certified trainers at customer sites or hosting teams at one of our world-class training facilities. We can also streamline inventory and equipment management to reduce customer operating costs.

Flowserve operates a global network of service centers which can ship a large selection of quality replacement parts in as little as 24 - 48 hours so maintenance teams can quickly get equipment back into operation. Our technicians troubleshoot and repair customer critical assets at their site or at our facilities, helping to minimize process interruptions.





Accurately predicting equipment performance alerts customers to potential process failures before they happen, increasing asset availability and uptime, and reducing maintenance costs. We help customers understand how their equipment is performing 24/7. Then we take equipment monitoring a step further, by combining wireless asset monitoring and predictive analytics algorithms that interpret data to determine when and why equipment will fail — and provide equipment and process solutions to prevent or minimize business interruption.



## Supporting Onshore and Offshore Customers



In 2019, Flowserve entered into a contract with a major oil and gas producer to provide general maintenance services for a floating liquefied natural gas (FLNG) facility operating offshore of western Australia.

Under the agreement, Flowserve will support the facility from its Quick Response Center (QRC) in Darwin, Northern Territory, Australia. We will repair and maintain a wide range of equipment including mechanical seals, centrifugal pumps, positive displacement pumps, heat exchangers, hydraulic power units and more. Most of the maintenance work will take place in the QRC, with periodic offshore deployment of field services staff to the facility as needed. The QRC will help customer prolong the life of critical equipment, while increasing efficiency by minimizing downtime.

Consistent with Flowserve's commitment to support communities where we operate, the contract will create employment and training opportunities for local and indigenous people.



# REDUCING EMISSIONS

Our facility air emissions mainly consist of combustion by-products, volatile organic compounds and particulates produced from fuel use and product painting operations. In general, facility emission rates are low. Where air emissions are deemed significant by regulatory authorities, we operate under government-issued permits.



## Greenhouse Gas Emissions

Flowserve's greenhouse gas emissions result from the company's facility and vehicle fossil fuel use, and indirectly from the portion of purchased energy generated from non-renewable sources. We do not use ozone-depleting substances, such as chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), halons or methyl bromide, in our manufacturing operations. Direct fuel use is classified as Scope 1 (direct

emissions, while purchased energy is classified as Scope 2 (indirect) emissions.

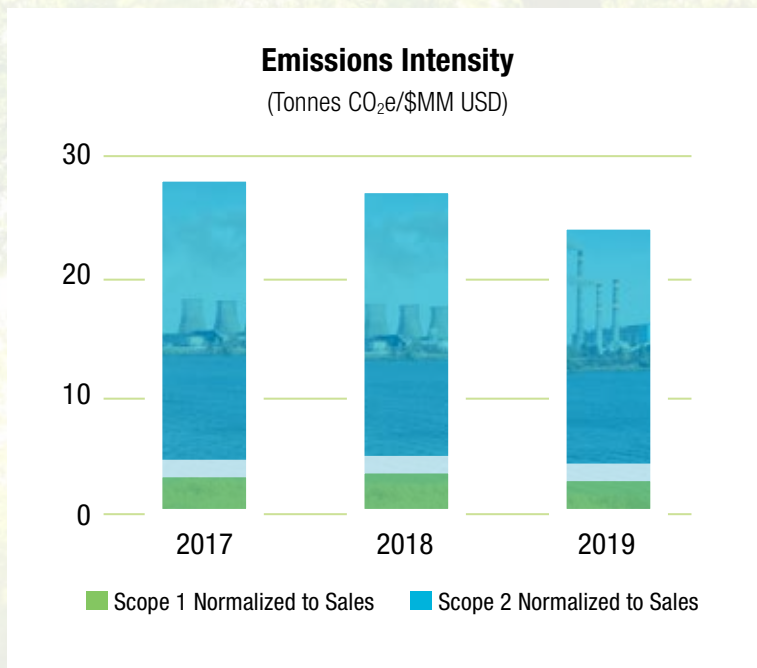
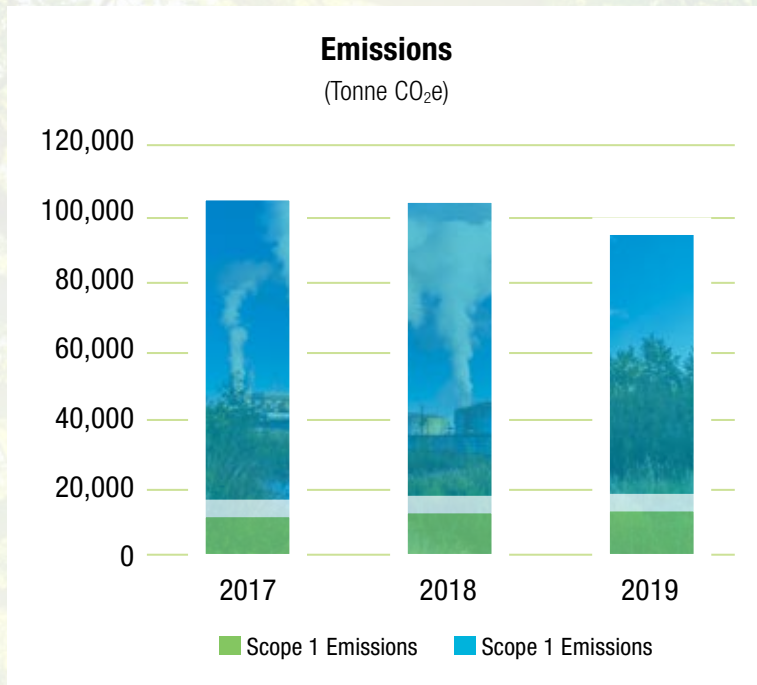
A few of our facilities operate their own renewable energy equipment. At the Flowserve Coimbatore, India facility, we operate our own solar power systems for lighting and water heating. Similarly, the Haywards Heath facility in the United Kingdom receives electricity from an onsite solar photovoltaic (PV) array.



## Reducing Carbon Emissions

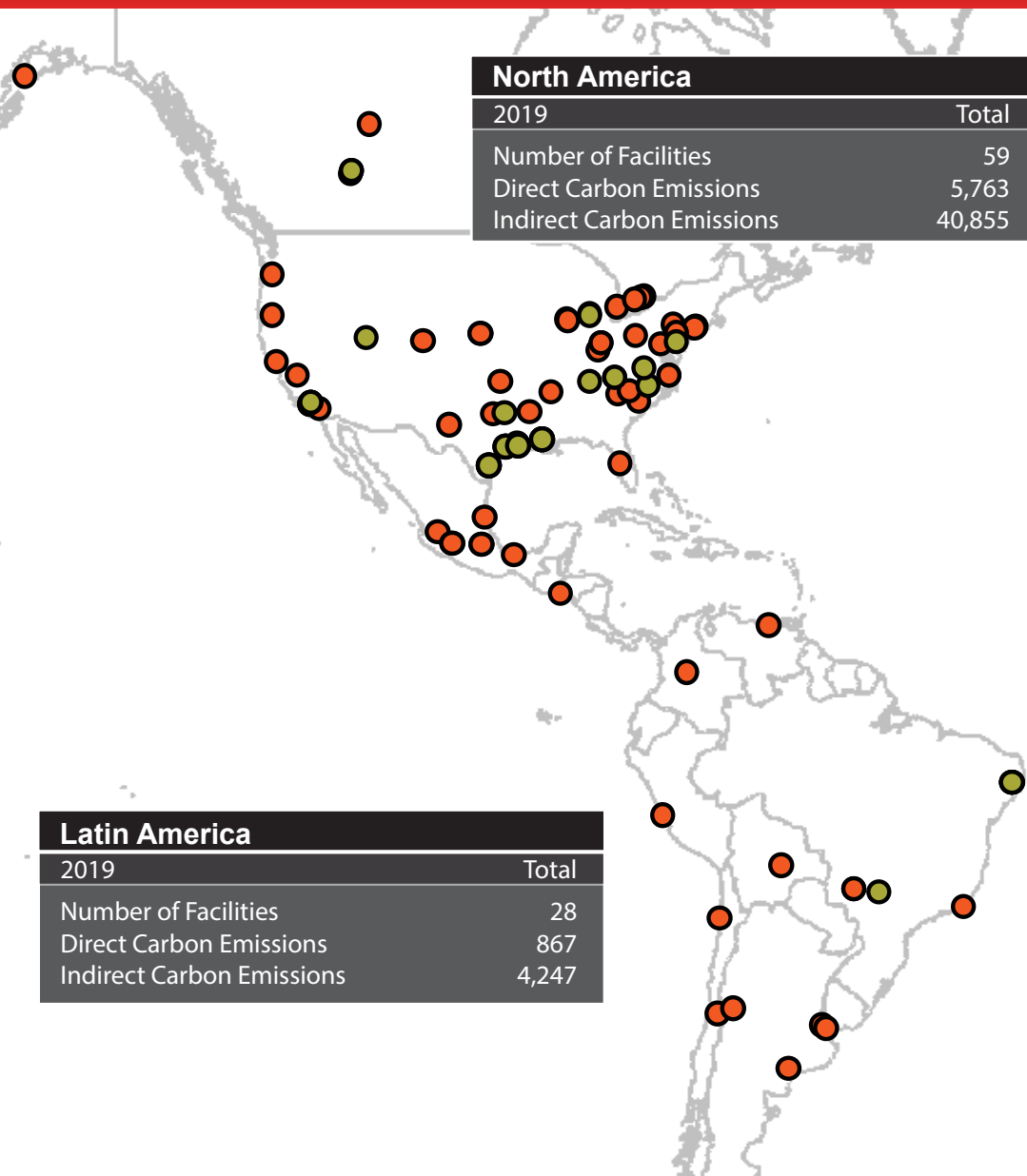
Our total (Scope 1 and 2) absolute carbon emissions have decreased 9% between 2017 and 2019, driven by a 12% decline in indirect (Scope 2) emissions. The Scope 2 emissions improvement is the result of lower energy purchases made possible by facility energy efficiency initiatives.

Total sales-normalized emissions declined 16% during the same two-year period. The improvement reflects overall emissions reductions due to efficiency gains at facilities despite an increase in sales and related manufacturing activity.

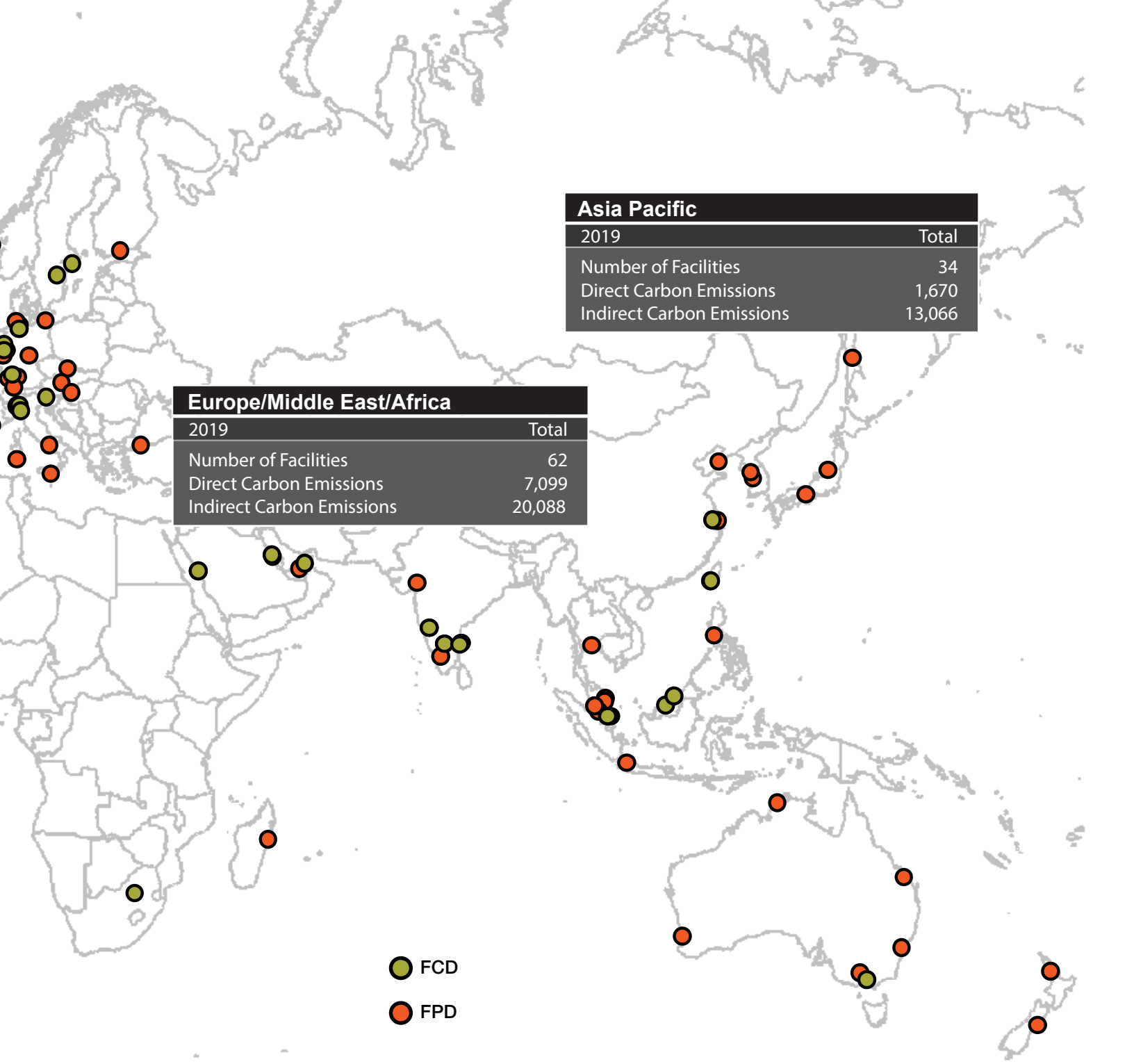


# 2019 Carbon Emissions

For the operating year ending December 31, 2019



Total Emissions (Tonnes CO <sub>2</sub> e)	Scope 1	Scope 2	Total
North America	5,763	40,855	46,618
Latin America	867	4,247	5,114
Europe / Middle East / Africa	7,099	20,088	27,187
Asia Pacific	1,670	13,066	14,736
	15,399	78,256	93,655



## Developing Clean Technology

Flowserve develops products and aftermarket services supporting several clean technologies, including concentrated solar power (CSP), biofuels processing, geothermal power, nuclear power and carbon capture, utilization and storage (CCUS).

### Advancing Large-Scale Concentrated Solar Power Capabilities

The U.S. DOE launched the SunShot Initiative in 2011 to reduce the total costs of utility-scale solar energy by 75%. Along with price targets, the program set heat energy storage targets to make CSP available day and night. With lower cost and power storage, these targets will improve CSP competitiveness against other dispatchable power sources and promote greater penetration of thermal solar electricity onto the grid.

To assist in achieving the 2030 SunShot targets, Flowserve is developing an innovative high-temperature chloride molten salt valve that can operate at temperatures up to 750°C. The valve will be engineered to reliably operate under varying flow rates and thermal cycling conditions, which are typical of commercial-scale operations.

### Carbon Capture, Utilization and Storage (CCUS)

With one of the largest installed bases of CO<sub>2</sub> solvent process pumps in the world, Flowserve has proven experience in developing products for challenging applications. From initial pump selection and design to aftermarket support, Flowserve is committed to meeting and exceeding CCUS customer design requirements.

### Nuclear, Geothermal and Biofuels Renewables

Flowserve also provides flow control products for other low- and no-carbon energy technologies.

We have more than 5,000 pumps and 15,000 valves installed in more than 200 nuclear reactors worldwide. We have played a critical role in the development of the nuclear power industry from its birth in the 1950s, where quality products are critical to long-term safety and uninterrupted service. Flowserve has achieved certified supplier status with several Generation III reactor design firms.





Flowserve products are engineered to withstand extreme process conditions (temperatures and pressures), and hostile fluid characteristics (corrosive and erosive), which can be present in many energy producing processes, including geothermal power and biofuel production. Beyond the manufacture of new equipment, we provide installation support, diagnostics and repair services to minimize operating cost and downtime over the full equipment lifecycle.

### Diagnostic Testing

Technology Advantage combines state-of-the-art data collection and analytical technologies with advanced equipment diagnostic solutions to identify and enable proactive maintenance, upgrades and system modifications that reduce equipment shutdowns and process flaring.



### China Luneng CSP project brought online

Luneng's 50 Megawatt (MW) tower Concentrated Solar Power (CSP) project connected to China's electricity grid on September 20, 2019. It is the fifth demonstration project, bringing the country's total CSP capacity to 300 MW.

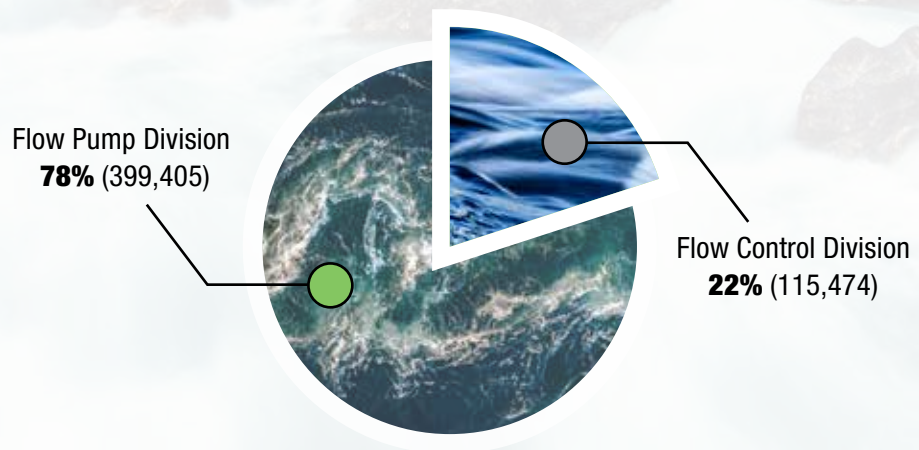
Flowserve provided the important molten salt pumps and valves for the project. Molten salt provides thermal energy storage allowing the facility to provide twelve hours of electricity to the grid at night. Energy storage is also important to make CSP cost competitive with other renewable sources.

## Water Consumption

Flowserve is committed to conserving fresh water resources throughout our operations. This commitment involves various water conservation strategies, including the recycle of water used to hydrotest products and ensuring water discharges meet point source and pretreatment effluent requirements. Closed-loop systems to recycle and reuse fresh water are in operation at many of our facilities worldwide.

Water use across Flowserve facilities during 2019 was 514,879 cubic meters, or 131 cubic meters per million dollars in sales. This usage is essentially flat with the previous two years of water consumption.

**Water Consumption (cubic meters)  
Flowserve Business Segments - 2019**





## Rio de Janeiro Facility Nears 100% Recycled Water Usage



In 2019, the Flowserve Pump Division facility in Rio De Janeiro, Brazil began executing a plan to recycle 100% of water used in operations.

Historically, the facility relied on public water supplies and collected rainwater to provide water for new pump performance testing and cleaning. The facility recognized an opportunity to conserve fresh water by integrating all of its process water operations into a closed-loop system where fresh water make-up from an external source is no longer needed on a routine basis.

**“The facility conserved fresh water by implementing a closed-loop system to minimize waste.”**

Phase 1 of the project recycles water used in the pump performance test area back to an existing reservoir storing rainwater. The facility periodically analyzes the combined recycled water and rainwater stream to ensure chemical and biological compatibility with downstream processes, including the cooling water system.

Phase 2 transfers water from the pump performance testing area to the pump wash area, where it can eventually recycle back to the water storage reservoir. In Phase 3, a new rainwater reservoir will supply water to the pump hydrostatic test area.

Phase 1 of this project was completed in 2019 and remaining work phases will be completed in 2020.

# Solid Waste Generation

Flowserve has been highly successful in reducing waste volumes and toxicity, and we continue to investigate opportunities to limit waste. In 2019, Flowserve generated 29,129 Tonnes waste globally, with less than 1% (270 Tonnes) being classified as hazardous waste using USEPA regulatory definitions.

**Solid Waste Generation (Tonne)  
Flowserve Business Segments - 2019**





While our customers generally control recycling activities related to decommissioned pumps, valves, actuators and similar equipment located at their facilities, Flowserve is committed to reducing waste and the carbon footprint of our products by making it economically attractive for our customers to repair their flow control equipment.

**“Flowserve is committed to reducing waste and the carbon footprint of our products...”**

Through our RSVP program, customers can return mechanical seals of any brand or condition to a QRC and Flowserve will restore that seal to the full quality and performance standards of a new seal at a fixed price to the customer. Seals can cycle through the program multiple times over decades of use. With predictable seal repair costs, customers gain the benefit of cost predictability in order to reduce the impact of non-budgeted repair costs. An additional benefit of the RSVP program is that the reuse of seal parts defers the use of energy and materials necessary to fabricate new parts.

From an equipment lifecycle perspective, Flowserve provides aftermarket services to repair and rehabilitate customer equipment so that service life can be maximized. Additionally, we provide analytical services to monitor equipment performance, to detect and correct wear issues before they significantly affect service life.



**VALUING OUR PEOPLE**

# SUPPORTING OUR ASSOCIATES

In 2018, we embarked on our journey to transform the way we think, act and operate as a company. We began by redefining our purpose and values, which are the foundation and guiding principles of Flowserve. As a next step in ensuring we bring our purpose and values to life, we developed our behaviors in 2019.

Through our purpose, values and behaviors, we create an inspired and engaged workforce that delivers extraordinary solutions – making the world better for everyone while also ensuring our collective success.

Our purpose, **Together, we create extraordinary flow control solutions to make the world better for everyone**, is the reason why we come to work. Flowserve's values, **People; Safety; Integrity; Innovation; Ownership; and Excellence**, are the guiding principles for how we achieve our purpose. Our behaviors shape the actions and decisions we make on an everyday basis to ensure we are always meeting our purpose and values.

## Diversity and Inclusion

With associates in more than 50 countries, Flowserve has a naturally diverse employee base. Our diversity of thought, perspectives and backgrounds are a great benefit to our organization when building long-term relationships with our increasingly diverse customer base.

Flowserve supports the diversity of our associates both at the organizational level, as well as at the local level. Within each region, we have inclusion councils designed primarily to identify and address diversity-related opportunities at the site level and the local environment, focusing specifically on age, gender, sexual orientation, country of origin, race and special needs.

Our behaviors drive many of the programs and initiatives at Flowserve, which celebrate and promote diversity, career development, outstanding performance and safety.

### Flowserve Behaviors

Work together with an enterprise mindset

Deliver beyond our customer expectations

Take action and learn from mistakes

Trust and respect each other

Think safe, work safe, be safe

Embrace and drive change

Act with integrity, always

Celebrating diversity, equity and inclusion as a foundational element of our values and culture enables us to leverage our differences to solve problems, introduce product innovation, and share knowledge.



## Career Development

Developing our people is an important aspect of the Flowserve journey, and we partner with our associates to build the skills needed to reach their short-term and long-term career goals. Through a process called continuous coaching, development is a regular part of our routine that helps associates see how their work contributes to Flowserve's success. We offer a number of opportunities like internships, rotational programs, professional memberships, language learning and leadership and management training.

### Learning

Flowserve offers a variety of internal company training options to increase organizational knowledge. E-learning curriculums, made available from several online providers, train Flowserve associates in the areas of business conduct, safety, management, global languages and industrial manufacturing skills.

Our training programs provide our associates with the opportunity to grow as leaders. Flowserve's Educational Assistance Benefit provides our people with opportunities to expand their knowledge and skills through degree-seeking programs that advance career opportunities.

### University Leaders Program

Now in its third year, the University Leaders Program currently includes more than 30 participants completing their first, second or third rotational assignments. After an extensive interview process, the program participants were selected post-graduation from more than a dozen colleges and universities. The participants are employed across seven of our U.S. locations and represent several engineering disciplines within Flowserve.

## Safety Culture

At Flowserve, we hold each other accountable for creating and maintaining safe workplaces and products for our associates, customers and communities.

Our commitment to the safety of our people can be traced back nearly 90 years when we joined the National Safety Council (NSC) and began participating in the NSC's safety awareness, training and improvement programs. This long-term commitment to decreasing workplace accident rates is reflected in almost 30 years of a declining injury rate and receipt of more than 2,400 NSC awards.

We create and maintain safe working environments, empower our employees to identify and report safety concerns, and act to correct hazards. Our Stop Work Authority procedure allows anyone the ability to stop work when they observe a potentially unsafe condition.

Our focus on safety and environmental protection has also led to reductions in solvent emissions, solid waste and hazardous waste generation at Flowserve facilities around the world.



## Spirit of Flowserve

The Spirit of Flowserve program supports our business strategy, our values and our vision to promote an innovative culture, customer-centric mindset, employee engagement and talent retention.

Spirit of Flowserve provides recognition for outstanding performance, including e-cards, varied levels of monetary awards, and in exceptional instances company stock. We also have targeted programs for Engineering, Sales and 5-year-tenure anniversaries.

Associates are encouraged to recognize each other for:

- Effort above typical duties & responsibilities
- Perseverance to overcome obstacles or barriers
- Scope of impact for achievement
- Achievements that embody our values and behaviors

## Flowserve's Rapid Response to the COVID-19 Pandemic



In early 2020, the rapid spread of COVID-19 across the globe led to a worldwide pandemic resulting in the infection of millions of people. Flowserve quickly recognized potential for near-term safety and business interruption concerns that the pandemic could present, and took immediate action to protect employees, contractors, customers and site visitors.

Flowserve created a comprehensive pandemic response plan that included safety precautions to prevent spread and contact tracing procedures to isolate affected personnel. Management continuously updates the plan to comply with a myriad of regulatory containment actions, which are also being frequently updated.

Aligned with our people and safety values, Flowserve implemented a work from home policy for all of our associates who are able to do so to promote the safety of all employees. As a manufacturer of parts supporting critical industries around the world, many of our manufacturing sites remained open or experienced only temporary periods of closure before reopening to support our critical infrastructure. The decision to reduce the number of onsite personnel to only those necessary to continue manufacturing operations allowed us to increase overall facility social distancing and reduce potential virus transmission from family members and co-workers in our facilities.

We continue to diligently monitor the local and global impacts of the virus and continue to keep our employees informed of critical updates and changes on an internal website dedicated to the COVID-19 pandemic. Additionally, we continue to make operating decisions that prioritize the safety of our people first.

# ENGAGING SOCIETY

## Flowserve Cares

Throughout our history and across the organization, Flowserve employees have donated their time, skills and efforts to charitable causes in their communities. Long before the creation of Flowserve's purpose, values and behaviors, our people demonstrated a natural desire to help those who are at-risk, less fortunate and victims of situations beyond their control. Flowserve supports our communities through monetary donations and also by providing our people with time off to volunteer for local organizations and causes that they care about.

Flowserve's global community impact program, Flowserve Cares, launched in 2019 and empowers associates to request company support for community programs and needs. Flowserve Cares incorporates monetary donations, in-kind contributions and volunteer opportunities to help make a meaningful impact in the communities where our associates and

customers live and work. The programs selected for grants reflect a wide range of needs that align with Flowserve's core support areas:



Flowserve Cares has contributed to organizations throughout our Asia Pacific, North America, Latin America, and Europe, Middle East and Africa regions.



**FLOWSERVE CARES**

### International Women's Day

Flowserve employees around the globe celebrated International Women's Day to honor the many female pioneers in our society and our lives who changed the way we work and have made our ecosystem more resilient. Numerous celebrations were office-wide events, and all employees were invited to join an international Webex hosted by the corporate women's employee resource group (ERG) in Irving, Texas.





## Student Career Guidance Project at Agaram Foundation

Chennai, India

Employees from our Global Technology and Engineering Center in Chennai helped students from low-opportunity backgrounds learn about career opportunities, including Science, Technology, Engineering and Mathematics (STEM) roles with Flowserve. The Flowserve Cares grant helped continue the work of this organization.

## Team Serpentine

Etten-Leur, Netherlands

Employees in Etten-Leur support an e-sports team at Eindhoven University of Technology, which focuses on developing tools and algorithms to compete in the growing e-sports industry. The Flowserve Cares grant supported community recruitment activities, learning and community events, website hosting, and administrative costs.



## Vernon City Elementary School

Vernon, California U.S.

Team members from our Vernon facility have been sponsoring a toy drive at this school since 2005, but they used the Flowserve Cares grant to expand collaboration with the school's robotics team, STEAM (Science, Technology, Engineering, Arts, Mathematics); providing essentials for students from low-income, foster and homeless families; and hosting a bike-build.

## Annual Dallas Cowboys Kickoff Luncheon Raises Funds and Builds Leaders

For the 14th consecutive year, Flowserve was the title sponsor of the Dallas Cowboys Kickoff Luncheon, an annual fundraiser that benefits children living in the Courage House at Happy Hill Farm. Founded in 1975, 'The Farm' is a residential school and leadership-development campus in Granbury, Texas, for children who have high educational potential but come from low-opportunity situations.

Flowserve provides annual scholarships that allow graduates of Happy Hill Farm's North Central Texas Academy (NCTA) to further their education at college. Flowserve also regularly partners with Happy Hill Farm on career initiatives, holiday funding and other support programs.

Happy Hill Farm has a 100% success rate in placing their graduates into college, vocational school or the military. As a result, these high-potential individuals are equipped to become successful adults who contribute to their communities.



## Maintaining Ethical Business Practices

# Flowserve Code of Conduct



Our Code of Conduct (Code) demonstrates our commitment to operating responsibly and with integrity. We comply with the laws, regulations and policies that promote personal respect and fair business practices. Our Code serves as a guide to help Flowserve associates make ethical decisions and resolve challenging issues. The Code is supported by the Integrity & Compliance (I&C) team that is always available to help guide specific business decisions.



Our Code and the standards it embodies apply to everyone who works for or represents Flowserve in any capacity, including:

- Associates at all levels, in any position, around the world
- Our Board members and corporate officers
- All external companies and individuals who work with or represent Flowserve, including suppliers, agents, sales representatives, distributors, joint venture partners and other business partners

We follow the highest ethical standards in conducting our global business. The table on the next page highlights some of the practices we uphold.

<p><b>Fair Competition</b></p>	<p>We expect our associates and stakeholders to comply with fair competition and antitrust laws and regulations everywhere we do business.</p> <ul style="list-style-type: none"> <li>• We do not disclose pricing or other contract terms to third parties or make agreements with competitors to allocate market segments or territories.</li> <li>• We do not manipulate bidding processes or seek or use confidential or proprietary competitor information.</li> </ul>
<p><b>Anti-Bribery and Anti-Corruption</b></p>	<p>We do not permit or engage in bribery or corruption of any kind, for any reason, in any country where we do business.</p> <ul style="list-style-type: none"> <li>• We prohibit improper payments and corruption of any kind in our business dealings, in every country in the world, whether dealing with governments or the private sector.</li> <li>• We comply with applicable anti-corruption laws, our Code and our policies.</li> <li>• We keep accurate books, records and accounts that reflect the true nature of all our transactions.</li> </ul>
<p><b>International Trade Law Compliance</b></p>	<p>We comply with all import and export controls, economic sanctions and customs laws that regulate the movement of our goods, services, information and technology around the world.</p> <ul style="list-style-type: none"> <li>• We comply with the trade laws of the countries where we do business.</li> <li>• We provide accurate classification data and documentation for the products, services, information and technology we sell.</li> <li>• We carefully evaluate business opportunities in countries subject to trade embargoes or economic sanctions to ensure we operate within the requirements of such regulations.</li> <li>• We do not participate in or promote boycotts that the U.S. does not support.</li> <li>• We screen transactions to ensure we do not conduct business with terrorists, those involved in illegal weapons proliferation or other prohibited parties.</li> </ul>
<p><b>Fair Dealing with Governments</b></p>	<ul style="list-style-type: none"> <li>• We comply with all contract terms and conditions, applicable laws, regulations and Flowserve policies when working with governments.</li> <li>• We maintain appropriate controls and procedures specific to our government business activities.</li> </ul>

# Protecting Human Rights



The United Nations defines human rights as rights inherent to all human beings, irrespective of nationality, place of residence, sex, national or ethnic origin, color, religion, language, or any other status. Flowserve promotes human rights through its efforts to prevent discrimination both in its workforce and throughout its supply chain.

Flowserve clearly communicates its commitment to prevent discrimination through its core values and Code. Our expectation that our supply chain will similarly protect against discrimination are communicated through the Supplier Code, our terms and conditions with suppliers, and our purchase order requirements.

## Human Trafficking and Modern Slavery

Flowserve prohibits slavery and human trafficking and is committed to taking steps to ensure that slavery and human trafficking are not occurring in any part of our

supply chain or business. Flowserve maintains a global compliance practice to address human trafficking and slavery risks. All suppliers must comply with the Supplier Code forbidding such human rights abuses.

## Transparency in Supply Chain

We comply with the disclosure requirements established by the California Transparency in Supply Chain Act of 2010.

## UK Modern Slavery Act

Flowserve also supports the UK Modern Slavery Act of 2015 requiring businesses to publish a slavery and human trafficking statement for each financial year that discloses efforts to ensure slavery and human trafficking are not occurring in their operations or supply chain.

## Conflict Minerals

We support global efforts to assist in the eradication of human rights abuses in the Democratic Republic of Congo (DRC) and adjoining countries, where the mining of certain minerals has partially financed the long-standing conflict in this region. Flowserve also supports the objectives and intent of the U.S. Securities and Exchange Commission (SEC) Conflict Minerals rules that call for periodic reporting on company efforts to manage conflict minerals risk.

Additionally, we are committed to working toward a conflict-free supply chain by implementing a management program integrated with our policies and processes to align our worldwide suppliers with this policy. If we discover supplied minerals originate from sources in covered countries not deemed conflict free, we will take actions to transition toward conflict-free sources. We have committed time and resources to meet this objective and will continue to be transparent in our progress.

Flowserve communicates its Conflict Minerals program expectations through the Supplier Code, our terms and conditions with suppliers, and our purchase order requirements, which include the following:

- Flowserve will not knowingly procure raw conflict minerals from covered countries that are not deemed conflict-free
- Flowserve will perform reasonable due diligence to document that conflict minerals used in the materials and components supplied to Flowserve are procured from outside the covered countries or if they originate from the covered countries that they are certified as conflict-free
- Flowserve is committed to educating our employees and our suppliers to ensure improved visibility in regard to the origin of the minerals and compliance



An aerial photograph of a dense, vibrant green forest. A dark blue river winds through the center of the forest, surrounded by lush vegetation. The image is framed by a thin white border.

**PROMOTING OPERATIONAL  
EXCELLENCE**

# STRONG LEADERSHIP AND GOVERNANCE

Achieving operational excellence begins with strong leadership and governance as well as efficient execution and innovation. Our executive leadership, together with our Board of Directors, creates the operating structure, establishes strategic direction and develops a roadmap, based on analysis of

risks and opportunities facing the company. With that foundation, the entire Flowserve team diligently implements the strategic plan, seizing opportunity to build value through efficiency and continuous improvement.

## Risk Management Approach

The Board of Directors is accountable for the overall implementation of Flowserve's risk management process, including climate change-related risks and opportunities. Board members have a responsibility to exercise oversight of the company's business by developing a broad understanding of the company's business, risk profile and strategy, understanding and respecting the roles of the Board and management, offering support and guidance to management, and engaging management effectively and constructively.

The Finance and Risk Committee of the Board assists with enterprise risk management oversight responsibilities through periodic review of management's enterprise risk assessment process, including current and emerging areas of risk relevant to the company. The committee reviews the process by which the Board and its committees oversee senior management's exercise of risk management responsibilities.

Current and emerging risks identified through our manufacturing and operations functions are periodically compiled and assessed through an enterprise risk management process led by the Enterprise Risk Management Committee.

Flowserve's risk assessment process includes intra-company surveys periodically distributed to leadership personnel familiar with potential corporate risks and opportunities. Survey results are compiled in materiality assessments, which are reviewed by executive leadership and used for corporate strategy development. The results of the materiality assessments and corporate strategy are reviewed and approved by the Board of Directors.



## Climate-Related Risks, Opportunities and Strategy

Many scientists, legislators and others attribute global warming to increased levels of heat-trapping greenhouse gases (GHG) in the atmosphere, including carbon dioxide. As a result, many countries are participating in the Paris Climate Agreement seeking to limit global temperature rise to well below 2 degrees Celsius above pre-industrial levels, while pursuing action to cap the increase at 1.5 degrees Celsius.

Consistent with the Paris Agreement, industries around the world are reducing their GHG emissions. Flowserve provides the flow control products and services that enabled individual companies to achieve their reduction goals. Our experience and success in adapting our products to new flow control applications positions us to capitalize on new and expanding markets related to GHG emission reduction and climate change resiliency. For instance, several customers around the world rely on Flowserve's products in concentrated solar power, bioenergy, geothermal, carbon capture, utilization and storage, desalination and flood control.

The International Energy Agency (IEA) uses three models to assess potential governmental action to reduce GHG concentrations in the atmosphere. The Current Policies Scenario assumes no change in regulations controlling GHG emission or promoting energy efficiency. The Stated Policies Scenario (STEPS) assumes the pace of industrial decarbonization is guided by existing policy

frameworks and stated policy plans. The Sustainable Development Scenario (SDS) is the only model that includes the actions necessary to achieve the Paris Agreement climate goals. Under all three scenarios, we believe that our customers will continue to rely on our products and services to improve flow control energy efficiency. We continue to research and develop equipment and diagnostic tools to promote increased energy efficiency and expand our product offerings to penetrate new and emerging markets to address climate change.

The IEA models are focused on change in the energy markets and do not consider industries that are responding to other climate-related risks, including rising sea level, more severe and more frequent weather events, subsidence and the need for reliable fresh water sources to support population growth and migration. Flowserve already supplies products and services to large-scale flood management projects, desalination plants and conventional water supply facilities, and is well-positioned to meet society's increased need for water management.

Internally, Flowserve has set a carbon intensity reduction target to drive facility energy efficiency improvements and renewable energy use. Using 2015 as its baseline, Flowserve has committed to reduce GHG emissions intensity from its operation by 40% by 2030.





## Supporting the World's Largest Sea Water Desalination Facility



As a leading provider of desalination technologies and support services, Flowserve continues to enable safe and cost-effective fresh water supplies to communities around the world.

In 2019, Flowserve signed agreements to provide the main pumps for two large seawater reverse osmosis (SWRO) desalination plants: Taweelah, near Abu Dhabi, United Arab Emirates (UAE), and Rabigh-3, in Rabigh, Kingdom of Saudi Arabia.

Once completed, the Taweelah plant will be the largest SWRO project in the world and have the capacity to process 909,200 cubic meters of water per day (m<sup>3</sup> per day). The new Rabigh-3 facility will serve the Jeddah and Mecca areas in the Kingdom of Saudi Arabia and will have an initial capacity of 600,000 m<sup>3</sup> per day. Target startup dates for Taweelah and Rabigh-3 are 2022 and 2021, respectively.

**“Flowserve continues to enable safe and cost-effective fresh water supplies to communities around the world.”**

Flowserve will provide products and services to the Rabigh-3 and Taweelah projects, including more than 135 pumps and energy recovery devices, associated motors, mechanical seals, supervision services and spare parts. Through close collaboration with the customer and other stakeholders, Flowserve will provide a pump solution that is well positioned to meet performance expectations throughout the equipment lifecycle.

# Supply Chain

We recognize that the relationships we have with our suppliers are instrumental in our ability to provide innovative solutions. That's why we partner with suppliers who deliver the best quality, value and service, while maintaining the same ethical and safety standards we practice.

## Supplier Code of Business Conduct

Flowserve has a zero-tolerance policy against unethical, unsafe and illegal conduct on the part of our supplier partners. The Supplier Code of Business Conduct communicates expectations for socially responsible operations in support of Flowserve's business and values.

## Compliance Monitoring

Our governance processes are highly focused on regulatory compliance. We operate under a large number of regulatory regimes from many countries that are often subdivided between federal, state and local jurisdictions covering many aspects of our business, including safety, environment, logistics, ethics and product specifications. Flowserve requires all associates and suppliers to comply with applicable laws and regulations and conducts regular compliance training so that associates maintain a current understanding of legal requirements.

## Supplier Risk Mitigation

As part of our Global Supplier Risk Assessment process, suppliers are subject to ongoing risk audits and updates to their risk portfolio. When the supplier's risk position substantially changes (ownership change, financial viability, regulatory findings, etc.), Flowserve reviews the impact of the change on enterprise risk and develops a plan to mitigate the incremental risk, as appropriate.

Significant planned changes to a supplier manufacturing process (change in physical address, outsourcing/

insourcing decisions, new capital equipment) is considered a substantial change to the supplier's risk position. Prior to these planned events, the supplier must notify Flowserve in writing of the planned change and allow Flowserve to review the supplier's risk mitigation plan for protecting continuity of production for Flowserve products.

## Supplier Performance Management

Flowserve evaluates supplier performance using a scorecard rating process, which evaluates product quality, delivery, compliance and other key sustainability factors. The data presented in the scorecards is a consolidation of individual site operations' reported performance. All data collected and utilized to generate supplier performance measures are coordinated and governed by our standardized approach to supplier compliance.



## Supplier Development

Flowserve is committed to building strong relationships with our suppliers. We recognize the need to foster and support supplier growth to meet the evolving market landscape. Flowserve works closely with suppliers to assist them in driving continuous improvement, including development of new technology and capability to promote mutual success.



## Supplier Diversity

Flowserve suppliers range from small family-run businesses to multi-billion dollar conglomerates. Partnering with small businesses supports our local communities while enhancing our product and service commitments to our customers. Flowserve awards subcontracts to small businesses for both federal and private projects.

## Supplier Expectations

We establish certain supplier expectations to enhance our goal to protect the planet, value people and promote operational excellence. We expect all Flowserve suppliers to share our commitment to sustainable development and operate within social and environmental regulations. As such, suppliers must demonstrate their compliance during the initial supplier assessment process and in future periodic compliance reviews, which may include both on-site inspections and supplier surveys.

In addition to regulatory compliance, we encourage our suppliers to improve their efforts to protect the environment and operate in a socially-responsible manner with the following actions:

- Pursue improvements in energy efficiency, carbon emission reductions and water conservation
- Promote and/or participate in community improvement
- Set operating emission reduction targets
- Compile social and environmental operating metrics to gauge progress
- Share sustainability metric data with stakeholders

Flowserve understands that the level of supplier engagement depends on a number of factors, including supplier segment, supplied products/services and company size.



## Stakeholder Engagement

As a manufacturer of industrial equipment and an aftermarket service provider, Flowserve manages expectations from several key stakeholder groups. We engage regularly with customers, distributors, suppliers, employees, communities, governments, and investors.

Our goal is to understand and respond to stakeholder groups and achieve mutually-beneficial outcomes. Effective engagement helps translate stakeholder expectations into organizational goals and strategies. The table below illustrates some of our key ongoing engagement practices.

Key Stakeholders	Stakeholder Engagement Approach
<b>Communities</b>	Sustainability Report Flowserve external website Flowserve Cares program
<b>Customers</b>	Customer/Product Manager communications Customer/Project Manager communications Flowserve Aftermarket Services and Solutions (AMSS) communications
<b>Employees</b>	Flowserve intranet Flowserve announcements, newsletters and events Sustainability Report Joint labor/management committees Union and Works Council representatives Spirit of Flowserve program
<b>Government</b>	Regulatory compliance reporting and engagement Joint Flowserve-government research on clean technology
<b>Investors</b>	Annual Shareholders meeting SEC filings, including 10-K, 10-Q and 8-K Proxy statement Annual Report Sustainability Report Industry conferences Communications on reporting and ratings Annual Shareholder Outreach program
<b>Suppliers</b>	Flowserve Supplier Evaluation/Qualification Process Supplier Diversity Program Procurement/Supplier meetings Supplier Code of Business Conduct Supplier Audit Program Supplier Improvement Program
<b>Distributors</b>	Distributor/Product Manager communications

# EFFICIENT BUSINESS EXECUTION AND INNOVATION

## TARGETZERO



### TargetZero Program

The TargetZero program unifies our goals and initiatives to further drive operational excellence and continuous improvement across Flowserve. It offers a comprehensive approach to increase the impact of our efforts to deliver unmatched value to our customers and supplier partners.

TargetZero focuses on increasing awareness and operational improvements in the areas of accidents, defects, delays, emissions and waste. By continuously striving for zero in these areas, we are continuously striving for excellence.

The program incorporates an enterprise mindset that builds on the momentum of our Global Operational Excellence organization, which includes Continuous Improvement; Health, Safety and Environment (HSE); Manufacturing; Materials Management; Project Management; Quality and Supply Chain.

#### Zero Accidents

Flowserve is dedicated to creating an incident and injury-free workplace that ensures the safety of everyone who works with us – from our associates to our customers. As such, we will embrace a safety culture mindset that targets zero accidents, so everyone can return to their home in the same shape in which they arrived.

#### Zero Defects

Our customers, partners and team members rely on us to be able to design, create and deliver, products and services that are reliable and free of defects. We have made a company-wide commitment to drive quality into everything we do – from designing, manufacturing and delivering our products to elevating the level of service we provide and expect from our internal and external business partners as well as our suppliers.

## External Quality Certifications

We are committed to providing quality products and services that meet or exceed the expectations of our customers and applicable regulatory requirements. Our commitment to quality is demonstrated by our leadership in the nuclear industry. Since the 1950s, our products have met the stringent quality standards for nuclear process use in several countries.

Flowserve maintains quality, safety and environmental management system certifications from the International Organization for Standardization (ISO) at various facilities, including:

- ISO 9001 Quality Management System
- ISO 14001 Environmental Management System
- ISO 45001 Occupational Health and Safety Management System

## Zero Delays

Timely delivery of our work, products and services, can make all the difference for those that count on us. As a company, we are focused on reducing lead times, enhancing our materials management and improving on-time delivery.

## Zero Emissions

By improving our operations and providing superior products and services to our customers, we strive to eliminate unnecessary air emissions, increase energy efficiency, conserve water and stop solid waste generation. We are also dedicated to developing and maintaining relationships with suppliers who share the same commitment to environmental stewardship.

## Zero Waste

For us, zero waste refers to eliminating waste in processes by utilizing methods such as Lean Six Sigma. Our focus on continuous improvement will enable us to drive efficiencies in our operations to better support our customers, partners and associates.



**TARGETZERO**  
ACCIDENTS DEFECTS DELAYS  
EMISSIONS WASTE





# REPORTING STANDARDS

## Sustainability Indices SASB and CDSB

This is the first year Flowserve presents certain information specified in the Sustainability Accounting Standards Board (SASB) and Climate Disclosure Standards Board (CDSB) reporting formats.

In this section, we present our metrics consistent with the SASB Industrial Machinery & Goods Sustainability Accounting Standard within the Resource Transformation Sector (Version 2018-10).

Additionally, we provide an index referencing our report's discussion of climate-related risks and opportunities, consistent with the CDSB's Task Force on Climate-related Financial Disclosures (TCFD) reporting principles and requirements.





# SASB Industrial Machinery and Goods Reporting Standard

Topic	Standard	Metric	Units	2017	2018	2019
Energy Management	RT-IG-130a.1	Total energy consumed <sup>1</sup>	Gigajoules	882,441	908,073	847,867
		Percentage grid electricity	%	72	70	67
		Percentage renewable <sup>2</sup>	%	3%	2%	2%
Employee Health & Safety	RT-IG-320a.1	-Total recordable incident rate (TRIR)	Incidents x 200,000 / Total hours worked	0.47	0.38	0.35
		- Near-miss frequency rate (NMFR) <sup>3</sup>	Near-misses x 200,000 / Total hours worked	37.2	87.8	237.1
Materials Sourcing	RT-IG-440a.1	Description of the management of risks associated with the use of critical materials	Description	See Governance and Supply Chain sections for discussion of supply chain risk management.		
Remanufacturing Design & Service	RT-IG-440b.1	Revenue from remanufactured products and remanufacturing services <sup>4</sup>	Millions USD	NR	NR	NR
Activity Metrics	RT-IG-000.A	Number of units produced by product category <sup>5</sup>	Millions USD	3,661	3,833	3,945
	RT-IG-000.B	Number of employees (including full-time equivalents)	Number as of 12/31	16,682	16,719	17,261

## Footnotes

- Total Energy Consumed is combined direct (fuel) and indirect (purchased electricity and heat) energy use.
- Percent renewable content is quantity of energy derived from renewable sources (i.e. solar, biomass and hydro) divided by indirect energy use.
- Our near-miss frequency rate includes first aid, near-miss and safety observations. We have substantially increased our observation rate to eliminate or mitigate safety incidents.
- Flow control equipment lifecycles can be extended in several ways: (1) pump, valve and seal repair, (2) real-time advanced diagnostics to identify and mitigate premature wear, and (3) customer personnel training to optimize operating and maintenance practices. We do not presently report the individual or combined revenue from these specific services. Therefore, we have answered "NR" – Not reported.
- Flowserve produces standard and engineered flow control products (e.g. pumps, valves and seals) which are generally categorized as "parts and components". Because equipment sizes and complexity vary greatly, Flowserve uses overall product sales as a proxy for business activity (versus number of units produced). Sales figures are used to assess environmental performance, including carbon emissions, water use and waste generation.

# TCFD Reporting Format

Governance	
Disclose the organization's governance around climate-related risks and opportunities.	
a) Describe the Board's oversight of climate-related risks and opportunities	Reference the Risk Management Approach section (Page 37)
b) Describe management's role in assessing and managing climate-related risks and opportunities.	
Strategy	
Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy and financial planning.	
a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	Reference the Climate-Related Risk, Opportunities and Strategy section (Page 38)
b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	
c) Describe the resilience of the organization's strategy, taking into consideration different climate related scenarios, including a 2°C or lower scenario.	
Risk Management	
Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities.	
a) Describe the organization's processes for identifying and assessing climate-related risks.	Reference the Carbon Reduction Target (Page 7) and Risk Management section (Page 37)
b) Describe the organization's processes for managing climate-related risks.	
c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	
Metrics and Targets	
Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities.	
a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process	Reference the Greenhouse Gas section (Page 16)
b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	Reference the Greenhouse Gas section (Page 16)
c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	Reference the Commitments section (Page 6)

## 2019 Metrics Summary

Indicator	Description	Units	2019
Activity	Sales Revenue	\$Millions USD	3,945
	Number of Employees (including full-time equivalents as of 12/31/19)		17,261
	Training	Hours per person	31.4
Safety	OSHA Total Recordable Rate		0.35
	OSHA Lost Day Rate		0.12
	OSHA Lost Time Severity Rate		1.8
Energy <sup>1</sup>	Direct Energy	Gigajoules	278,813
	Indirect Energy	Gigajoules	569,054
Greenhouse Gas Emissions <sup>1</sup>	Direct Emissions (Scope 1)	Tonne CO <sub>2</sub> e	15,399
	Indirect Emissions (Scope 2)	Tonne CO <sub>2</sub> e	78,256
Water <sup>1</sup>	Fresh Water Usage	Cubic meters	514,879
Waste <sup>1</sup>	Nonhazardous Waste	Tonne	29,129
	Hazardous Waste	Tonne	270

### Footnote

1. Environmental metrics include the environmental performance for 194 Flowserve manufacturing and service facilities. Joint ventures and non-manufacturing facilities (e.g. corporate and sales offices) with de minimis emissions are not reflected in the totals.



North America

Latin America

Europe

Middle East

Africa

Asia Pacific

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