



2018
**ENVIRONMENTAL,
SOCIAL AND GOVERNANCE
PRIORITIES & APPROACH**



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SUSTAINABILITY **AT** CATERPILLAR

VISION

A world in which all people's basic needs – such as shelter, clean water, sanitation, food and reliable power – are fulfilled in a sustainable way and a company that improves the quality of the environment and the communities where we live and work.

MISSION

Enable economic growth through infrastructure and energy development and provide solutions that support communities and protect the planet.

SUSTAINABILITY PRINCIPLES

Prevent Waste

(Improve Safety, Efficiency and Productivity)

Improve Quality

(Team, Community, Environment and Operations)

Develop Better Systems

(Innovate)

STRATEGY

We provide work environments, products, services and solutions that make safe, productive and efficient use of resources as we strive to achieve our vision.

We apply innovation and technology to improve the sustainability performance of Caterpillar's products, services, solutions and operations.

We believe sustainable progress is made possible by developing better systems that maximize life cycle benefits, while also minimizing the economic, social and environmental costs of ownership, as reflected in our sustainability principles.

We are executing our strategy by working to meet our aspirational sustainability goals.



STAKEHOLDER ENGAGEMENT

A key element of Caterpillar's sustainability strategy is engagement with stakeholders. We engage across a range of topics and issues as well as within functional areas. The Caterpillar Sustainability Steering Committee provides guidance and support for our internal sustainability initiatives. This group is comprised of leaders from a number of business units particularly focused on responsibilities that cross multiple divisions.

Stakeholder engagement is also managed through our various business units. For example, sustainability is considered in interactions with our investors managed by our Investor Relations team, with suppliers through our Purchasing teams, and with customers through our Customer Services team. We communicate with and obtain feedback from stakeholders through a variety of means, including surveys, in-person interactions, trade organizations and others. These stakeholder communications and results are demonstrated throughout this report.

AFFILIATIONS & INVESTMENTS

Caterpillar Inc., our subsidiaries and the Caterpillar Foundation work with diverse organizations in order to advance economic, environmental and social issues and share best practices across industries. The company's affiliations include:

- Business Council for Sustainable Energy
- Business Roundtable
- Diesel Technology Forum
- Energy Technologies Institute
- Remanufacturing Industries Council
- Responsible Minerals Initiative
- U.S. Green Building Council
- World Coal Association
- World Resources Institute

The Caterpillar Foundation invests with many organizations, including those below, to support programs that are focused on lifting people out of poverty and placing them on the path to prosperity:

- American Red Cross
- charity: water
- Feeding America
- Global Citizen
- International Youth Foundation
- Local Initiative Support Corporation
- ONE
- Opportunity International
- The Nature Conservancy
- United Nations Foundation
- United Way
- Water.org

[Learn more about the Caterpillar Foundation.](#)





FOCUS AREAS

As part of our work in sustainable development, we have identified a set of focus areas that intersect with our business and that guide our thinking as we make day-to-day business decisions.

Many of these areas are associated with our aspirational 2020 operational and product stewardship goals, while others represent areas impacting our long-term business and those important to various stakeholders.

FOCUS AREA	TOPICS INCLUDED WITHIN THIS FOCUS AREA
Caterpillar People	Employee occupational health and safety
Operational Impact	Energy efficiency, greenhouse gas, water, waste management and dealer network
Product Stewardship	Innovation management, customer safety, energy efficiency and air emissions and life cycle product development
Governance and Policy	Business ethics and core values, business strategy, financial performance of the enterprise, energy and climate policy, and human rights

These focus areas were originally identified and validated as part of an assessment in 2014 and have been further refined, based on stakeholder input, in the years since. This assessment process included:

IDENTIFICATION

A total of 35 sustainability topics were identified and surveyed, covering environmental, social and governance considerations, based on our existing strategy and goals, peer reviews and criteria in external indices and frameworks, such as the Dow Jones Sustainability Index and the Global Reporting Initiative.

EVALUATION

Survey results were discussed in a workshop that included representatives of our external stakeholders, as well as several Caterpillar vice presidents, selected Caterpillar leaders with sustainability responsibilities, our Sustainable Development team and our chairman and CEO. Insights gained from the workshop were combined with the survey results to refine and prioritize topics that were deemed material from a sustainability perspective. These topics inform and direct future activities for strategic improvements.

PRIORITIZATION

Stakeholders universally agreed that all 35 topics identified were important but viewed several topics as among the most important to manage on a continuing basis.

ASSESSMENT

The engagement process included a survey of more than 100 customers, employees, shareholders, dealers, suppliers, nongovernmental organizations, trade organizations and representatives from academia to identify the sustainability topics most influential in their decisions about Caterpillar. Internally, we surveyed Caterpillar executive officers, vice presidents and other key personnel to obtain insight from our strategic leaders as to the sustainability topics most important to the success of our business.

HOW CATERPILLAR SUPPORTS THE U.N. SUSTAINABLE DEVELOPMENT GOALS

Caterpillar engages with customers, communities and policymakers to improve living standards and make sustainable development possible around the world. Our businesses, as well as the work of the Caterpillar Foundation and our advocacy on behalf of policies that enable sustainable development, support each of the United Nations Sustainable Development Goals (UNSDGs).



CONSTRUCTION INDUSTRIES

Enables customers to build infrastructure – schools, roads, homes, airports and more – to raise living standards and economic opportunity.

RESOURCE INDUSTRIES

Supports customers who mine and extract mineral resources.

ENERGY & TRANSPORTATION

Provides engine and alternative energy solutions to help extract the fuels to satisfy global energy demand.

CATERPILLAR FOUNDATION

Supports a variety of philanthropic efforts primarily related to protecting the environment, improving education and providing basic human needs.





CATERPILLAR PEOPLE

INVESTING IN OUR PEOPLE

There's more to work at Caterpillar than the work itself. We're a workforce made up of smart, diverse, committed people who work together to help build a better world, from supporting our customers through groundbreaking solutions to giving back in our local communities.

To continue to innovate and maintain our global leadership, we must attract, retain and develop the top talent. We do so by giving our people opportunities to explore different career paths within Caterpillar – using their skills and capabilities by moving between business units, locations and job functions. Employees can also learn through a variety of formal and informal programs. We cultivate a workplace where team members feel supported and that reflects the diverse base of customers we serve worldwide. Above all, we are dedicated to the safety of employees at Caterpillar, as well as our extended team of contractors, dealers, suppliers and customers.



2018 Awards and Recognition

- **America's Best Employers for Diversity**
Forbes
- **Best Employers for Women**
Forbes
- **Human Rights Campaign Corporate Equality Index**
- **Top 50 Employers**
CAREERS & the disABLED Magazine
- **Top 50 Employers**
Minority Engineer Magazine
- **Top 50 Employers**
Woman Engineer Magazine

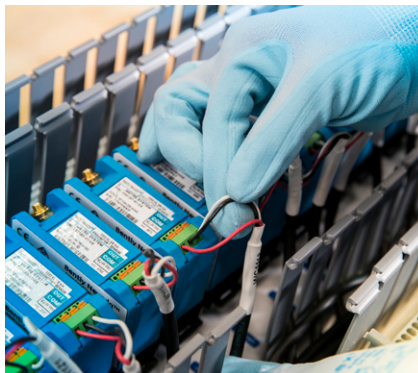
LEARN MORE IN OUR 2018 SUSTAINABILITY PROGRESS REPORT

Including Everyone in Women's Advancement



At Caterpillar, we believe diverse ideas and experiences lead to deeper understanding. Our Women's Initiative Network (WIN) employee resource group in Singapore demonstrated this in a big way. WIN surveyed female employees to learn how to improve Caterpillar's culture and create opportunities for growth. The top answer: get more men involved.

Solar Turbines Welcomes an Untapped Source of Talent



The National Foundation for Autism Research (NFAR) Tech program teaches software testing skills to young adults with autism to prepare them for jobs in the tech industry. When employees from the Solar Turbines team toured NFAR's facility, they quickly realized that the students could be an excellent fit for Solar.

Creating Pathways to Cat® Dealer Careers



We depend on talented people to run dealerships, repair our equipment and launch businesses that use Cat® machines. We know there are people across the world eager to take on these roles – they just need training and mentorship to help them get started. This training gap inspired us to create Technicians for the World, an online program that meets the growing need for skilled service technicians.

SAFETY

We are dedicated to the safety of everyone at Caterpillar, and we work with our extended team of contractors, dealers, suppliers and customers to encourage a focus on safety for their operations and employees. We are saddened to report that one employee and one contractor suffered fatal workplace injuries in our facilities in 2018. Our vision of every

employee returning home safely, every day has not wavered. Our commitment to safety begins with the engineering of our products and manufacturing processes, and extends to operator training, job site solutions and promoting a culture of safety that guides the way we work.

SAFETY GOAL

Reduce our recordable workplace injury rate to 0.6 and lost-time injury case rate to 0.15 by 2020.

1

2018
Employee
Fatality

1

2018
Contractor
Fatality

Recordable Injury Frequency (RIF)

Recordable injuries per 200,000 hours worked



91.5%

We have improved our Recordable Injury Frequency rate by 91.5 percent from our 2003 base year. However, our RIF increased by 8 percent from 2017 to 2018. Relentless focus on safety is important for our team members in all work areas. Our vision has always been, and continues to be, zero injuries. Our safety goals represent expected progress on our path to zero. While we acknowledge that our current RIF has surpassed our long-established goals, we will continue to strive for improvement until we reach our ultimate goal of zero. We strive for all team members to go home safe, every day.

94.6%

We have improved our Lost-Time Case Frequency Rate by 94.6 percent from our 2003 base year. We are encouraged that our LTCFR declined by approximately 6 percent from 2017 to 2018, even when our RIF increased modestly. We strive for all team members to go home safe, every day.

Lost-Time Case Frequency Rate (LTCFR)

Work-related injuries resulting in lost time per 200,000 hours worked





DIVERSITY & INCLUSION

We are committed to ensuring our workplace is diverse and representative of the many customers we serve around the globe. At Caterpillar, we respect the unique talents, experiences and

viewpoints of all our employees. Different perspectives help us perform to our fullest potential and enable our company to make positive changes in the communities where we live and work. And that matters to us.

We are a high-performing team living Our Values in Action. We strive for an employee experience that includes a winning culture, meaningful work, an empowered environment and personal growth opportunities. To achieve this, employees are encouraged to speak up and share ideas, resulting in more innovation, productivity and positive impact to the business.

We also recognize the need to celebrate diversity and the uniqueness of each individual, while ensuring inclusion of everyone's ideas and contributions. One way we accomplish this is through Caterpillar's 14 Employee Resource Groups (ERGs), which are open to all employees. Our ERGs are in the midst of an exciting evolution that reflects the changing needs of Caterpillar's business. They are broadening their scope beyond the support and development of their members and aligning their goals to business-focused activities. This important change amplifies the voices of our employees and the power of diverse thinking to better influence our business decisions.

One example of this has been through the work of Caterpillar's Africa Business Resource Group (ABRG). Members have drawn on their cultural ties to the emerging African market to connect with the Caterpillar dealer network to support and promote Caterpillar's Technicians for Africa program. Together, ABRG members and dealers have engaged with over 2,600 students in 13 technical schools to promote the program and build the future pipeline of technical talent in Africa.

Through this initiative, ABRG members are building business acumen, advancing leadership skills and gaining visibility to senior executives. They are redefining the value proposition of ERGs by fostering unique thinking and different points of view that translate into innovative solutions for our future talent needs.

2022 ASPIRATIONAL GOALS

29% Women
in Enterprise

25% Women
in Leadership

2018 RESULTS

20% Women
in Enterprise

19% Women
in Leadership

Much of our success relies upon having top talent with a global mindset to build high-performing teams. The increased complexity of our business challenges demands that we have the right talent in the right place at the right time. We are also committed to increasing the representation of women at Caterpillar. According to [Catalyst](#), research shows that companies that achieve greater gender balance, especially at leadership levels, yield more positive results. This issue matters to both men and women and is essential to the fulfillment of our company's values on a global scale. Our Women in Leadership initiative is an intentional, focused step on a continuous journey toward a globally diverse team.

14 ERGs

9,500 members

Nearly **1 in 10**
Caterpillar employees
participates

TALENT DEVELOPMENT

As a company with hundreds of global locations that serve diverse industries, such as transportation, construction, oil and gas, mining, marine and forestry, we are in a unique position to offer opportunities and valuable experiences for all our employees. This includes learning opportunities both inside and outside of Caterpillar, targeted leadership development and the opportunity to build technical capabilities.

We support a continual learning environment and recognize the importance of multifaceted experiences through a variety of formal and informal solutions for employees to grow skills, knowledge and capabilities.

Our leadership development programs include:

- A comprehensive, global program customized for each level of leadership that provides development for all leaders at key career transition stages and links business strategy and development to the ability to deliver business results.
- Technical and market leadership development programs engage specific leader groups for development to enhance leader capabilities and performance in functions or countries.
- Informal learning experiences for all employees through learning and technology-enabled systems for ease of access and enterprise collaboration. Coaching and feedback reinforce this experiential learning through our strategy and talent management practices.



COLLECTIVE BARGAINING

We respect the rights of our employees to form, join or not to join an employee association or trade union of their choice without fear of reprisal, interference, intimidation or harassment, and in a manner that is consistent with national laws and practices. Recognizing that exercising this right is an important decision that requires thoughtful consideration, we believe it is

critical that our employees exercise that right with the benefit of available information.

We value the direct relationship we share with our employees and are committed to a constructive social dialogue with them and their representatives in accordance with applicable employment legislation or local-level custom and practice. Where employees are represented by an employee association or trade union in accordance with applicable national laws, we commit to seeking a constructive dialogue or, where appropriate, to bargain collectively and in good faith. We expect the same of those employee associations or trade unions seeking dialogue with us.

40% Caterpillar
Employees Under
Collective Bargaining
Agreements in 2018

Over **115**
Labor Contracts

Over **70**
Different Unions

OPERATIONAL IMPACT





ENVIRONMENT, HEALTH & SAFETY MANAGEMENT

In our own operations, Caterpillar employees have found ways to implement innovative solutions that improve safety and lower our energy, water and waste costs, as well as reduce our environmental impacts.

Our Values in Action – Caterpillar’s Code of Conduct states that we protect the health and safety of ourselves and others and focus on environmental responsibility and preventing waste. In Caterpillar facilities, our Environment, Health & Safety (EHS) Assurance Manual: A Practical Global Framework establishes fundamental EHS requirements that apply globally. We have established high performance standards for EHS that require compliance with, and at times extend beyond, laws and regulations. Proactive implementation of these standards demonstrates our commitment to sustainability leadership in our industry. Our EHS Management System, captured in our EHS Assurance Manual, helps us comply with various EHS requirements around the world.

The EHS Assurance Manual sets out mandatory standards consistent across the enterprise and annually assessed at the facility level to improve management of enterprise EHS compliance. The Manual applies to all Caterpillar facilities worldwide, including majority-owned subsidiaries and

majority-owned joint ventures, and is designed to effectively implement an EHS enterprise wide management system.

In addition to these global expectations, our facilities implement innovative local initiatives to improve safety and reduce environmental impacts.





ENERGY CONSERVATION & GREENHOUSE GAS EMISSIONS REDUCTION

We have set energy efficiency targets in our operations since 1998 and greenhouse gas emission (GHG) reduction targets since 2003. We currently have operational targets for an increased reliance on alternative and renewable energy, and reductions in energy intensity and GHG intensity.

Our enterprise energy management team is instrumental in building awareness, encouraging action and developing solutions in the areas of energy efficiency and alternative/renewable power generation.

Examples of our increased reliance on renewable energy sources include facilities' purchase of renewable energy certificates and the installation of renewable energy sources such as photovoltaics (PV), including an advanced microgrid installation that combines PV and battery storage to supplement and offset diesel generation at an off-grid location. Our largest contribution to alternative energy consumption is the operation of combined heat and power (CHP) systems to power several manufacturing facilities. The energy management team is evaluating additional opportunities for replication of CHP, PV and microgrids at other locations.

As we work to achieve our 2020 energy-related goals, one important facet of our efforts is to continually assess and improve the efficiency of our existing operations. Systems and facilities that were state-of-the-art for energy efficiency and performance when first installed can be fairly quickly eclipsed by new technologies and best practices.



ENERGY CONSERVATION & GREENHOUSE GAS EMISSIONS REDUCTION (CONT'D)

ENERGY GOAL

Reduce energy intensity by 50 percent from 2006 to 2020.

33% Operational energy intensity decreased 33 percent from 2006 to 2018, and nearly 11 percent from 2017 to 2018. While absolute energy increased 8 percent from 2017 to 2018, it decreased 11 percent overall from 2006 to 2018. These results reflect our increased productivity and efficiency.

Energy Intensity¹

Absolute gigajoules energy use/
million dollars of revenue

2006	692
2015	525
2016	598
2017	521
2018	466
2020	346

Total Electricity Consumption

Sum of purchased and self-generated
electricity in million MWh

2014	2.72
2015	2.50
2016	2.37
2017	2.45
2018	2.55

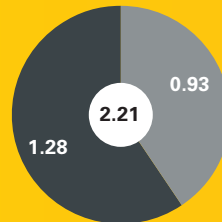
GHG EMISSIONS GOAL

Reduce greenhouse gas emissions intensity by 50 percent from 2006 to 2020.

44% Our GHG emissions intensity decreased 44 percent from 2006 to 2018 and 13 percent from 2017 to 2018. In addition, while our absolute GHG emissions increased by 4.7 percent from 2017 to 2018, our absolute GHG emissions decreased by 26 percent from 2006 to 2018. These results reflect our increased productivity and efficiency.

2018 Total Absolute GHG Emissions²

Million metric tons



- 0.93 million metric tons – Scope 1 (direct emissions)
- 1.28 million metric tons – Scope 2 market-based (indirect emissions from purchased electricity, heat or steam)

1.32 million metric tons – Scope 2 location-based³

GHG Emissions Intensity^{1,2}

Absolute metric tons of CO₂e/
million dollars of revenue

2006	72.1
2015	48.6
2016	54.2
2017	46.4
2018	40.3
2020	36.0

ALTERNATIVE/ RENEWABLE ENERGY GOAL

Use alternative/renewable sources to meet 20 percent of our energy needs by 2020.

Alternative/Renewable Energy^{4,5,6}

Sum of alternative and renewable electrical
energy use/total electrical use x 100

2014	17.6	9.8	27.4%
2015	17.2	9.9	27.1%
2016	17.8	10.1	27.9%
2017	16.9	14.3	31.2%
2018	17.4	15.1	32.5%

● Alternative ● Renewable

32.5% of our electrical energy was from renewable or alternative sources in 2018. In addition, our use of renewable energy increased from 2017 to 2018.

WATER MANAGEMENT

The scarcity of water resources is an issue that crosses cultures, geographies and industries. Today, water scarcity affects four out of every 10 people, and current trends indicate the problem will escalate, according to the World Health Organization and the United Nations. By 2025, 66 percent of the world’s population could be living in water-stressed regions. While our manufacturing operations are not as water-intensive as those of other industries, we nonetheless recognize the far-reaching economic, social and environmental implications that water scarcity may have in the future – and have taken steps to reduce our consumption.

We continue to implement conservation strategies to:

- Reduce water use in our operations
- Explore water-treatment technologies
- Introduce water-recycling processes
- Train employees about water resources to raise their awareness of the issue

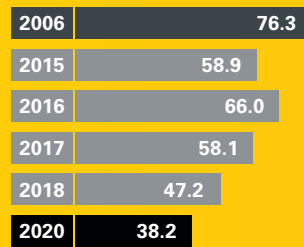
Around the world, Caterpillar facilities take water scarcity and water management seriously, with results that highlight the scale of positive impact that our operations can have.

WATER GOAL

Reduce water consumption intensity by 50 percent from 2006 to 2020.

Water Consumption Intensity^{1,7}

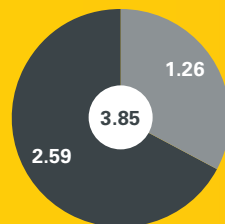
Absolute thousand gallons of water/million dollars of revenue



38% Through 2018, we have reduced water consumption intensity at our facilities by a total of 38 percent from 2006, and 19 percent from 2017 to 2018. In addition, our absolute water consumption decreased by 35 percent from 2006 to 2018 and decreased by 5 percent from 2017 to 2018. This demonstrates significant improvements in the way we are using water in our processes, increasing efficiency and also increasing productivity.

2018 Total Absolute Water Consumption

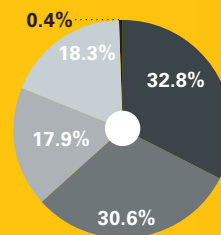
Billion gallons



- 1.26 billion gallons – noncontact cooling water
- 2.59 billion gallons – enterprise water consumption excluding noncontact cooling water

2018 Water Sources

Percent



- Noncontact cooling water
- Municipal water
- Groundwater
- Surface water
- Other water

WASTE MINIMIZATION

Minimizing waste in our processes not only reduces costs, but also reduces our use of materials, energy, water and land. We are focused on a goal to reduce by-product materials (i.e., waste) generated by our production processes.

on by-product material reduction strategies associated with improved efficiency and quality measures, as these offer the greatest opportunity to enhance cost competitiveness and reduce the potential for environmental impacts.

The use of the term “by-product materials” in our 2020 aspirational goal reflects our focus on minimizing our production waste and effectively managing the remaining waste through remanufacturing, rebuilding, reusing and recycling. We focus

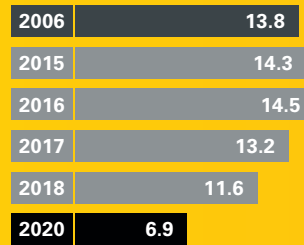
By taking a critical look at every phase of our operations, teams have uncovered unexpected and high-impact methods to reduce waste while maintaining or improving performance and customer satisfaction.

BY-PRODUCT MATERIALS GOAL

Reduce by-product materials intensity by 50 percent from 2006 to 2020.

By-Product Materials Intensity

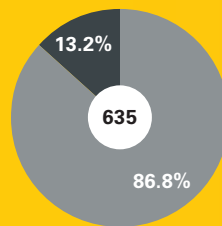
Absolute metric tons of by-product materials/million dollars of revenue



16% Our by-product materials intensity decreased 16 percent from 2006 to 2018, and decreased 12 percent from the previous year. Our generation of total absolute by-product materials increased 11 percent from 2006 to 2018 and increased 6 percent from 2017 to 2018.

2018 By-Product Materials

Thousand metric tons



- Recycled
- Disposed (sent to landfill or incinerated)

Total BPM = 635 thousand metric tons

VALUE CHAIN

Caterpillar is building capabilities to engineer our value chains just like we engineer our products. The result is a synchronized system that maximizes quality, efficiency, value and speed to the customer.



SUPPLIER NETWORK

Our suppliers are an essential link within our value chain and help us uphold our commitment to quality. We look for suppliers who demonstrate strong values and commit to the ethical principles outlined in our Supplier Code of Conduct. This Code includes provisions on human rights, innovation, diversity and inclusion, as well as environmental responsibility and sustainability. We expect suppliers to comply with the sound business practices we embrace, follow the law and conduct activities in a manner that respects human rights.

To ensure impacted suppliers understand our expectations, we request that they respond to our self-assessment questionnaire to evaluate alignment to the Supplier Code of Conduct. In recent years, we have increased and expanded our scope of suppliers across the enterprise included in this self-assessment process. When the process reveals issues of concern, Caterpillar senior management is apprised, we request suppliers with issues of concern to take corrective action, and we track whether such suppliers remediate any deficiencies. To date, over 9,500 suppliers have completed a self-assessment. By 2020, our goal is to have responses from 95 percent of our priority suppliers.

We continue to expand the Assurance of Supply Center (ASC) to support our enterprise strategy to manage a world-class supply network. The ASC provides visibility into our network which involves thousands of suppliers shipping more than a million parts and components every year. It allows us to see orders from production to delivery by facility, business unit and cost, enabling us to reduce waste caused by trial and error or delayed decision-making.

Caterpillar expects its supply network to comply with applicable laws and regulations. Caterpillar also requires its suppliers to provide information on the source of certain minerals, with a goal of maximizing the quantity of such minerals that are sourced from conflict-free sources. These efforts continue to be important in creating transparency in the supply network.

SUPPLIER DIVERSITY

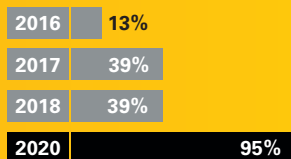
Caterpillar strives to provide sourcing opportunities to a wide range of diverse business types – minority-owned small businesses, veteran-owned small businesses, women-owned small businesses and many others – throughout our enterprise. Seamless integration of these businesses allows for synergies as we assist them in growth and development.

At Caterpillar, supplier diversity is a process of inclusion that enables us to leverage and connect with an historically underutilized supply base.

A MORE SUSTAINABLE LOGISTICS NETWORK

Sustainability has long been a focal point of how to design shipping networks, optimize transportation modes and configure products for optimal shipping. Our transportation team manages movement of production material and service parts around the world to support Caterpillar manufacturing and dealers. The group

Supplier Code of Conduct Assessment



Supplier Code of Conduct Self Assessments:
Percentage of Responses from Priority Suppliers (Cumulative)



seeks to identify optimal schedules to increase truckload utilization, which in turn reduces the number of trucks on the road. Transportation also works closely with packaging teams to determine the best way to stack material on a single truck or in an ocean container. Higher utilization of a single vehicle reduces the number of shipments overall.

Today we are leveraging the scale and expertise of Caterpillar's supply network to help our dealers and customers receive products more efficiently. We now often transport product from the production yard to the dealership. Dealers can collaborate with us on when and where they want a machine shipped, check the shipping status online and instantly get information on location and estimated time of arrival. By including the "last mile" as part of our overall value chain design, we are delivering products with higher dealer satisfaction, improved delivery performance and visibility, and lower cost.

DEALER NETWORK

Cat® branded products and services are primarily distributed and sold through a worldwide network of 168 Cat dealers. Our independent Cat dealers serve as a critical link between our company and our customers. We rely on them to build and

maintain long-standing customer relationships, as well as to work on projects related to e-commerce, digital solutions, services strategy, rental and used equipment strategy and parts logistics. Many of our dealers have their own policies and practices which support working sustainably.

The vast majority of our worldwide Cat dealers are independently owned and operated, and many of these businesses have been in families for multiple generations. The Cat dealer network brings value to customers through unmatched service, integrated solutions, after-sales support, fast and efficient parts fulfillment and world-class rebuild capabilities. We work with our Cat dealers to provide products, services and support solutions necessary to satisfy customer needs worldwide. Our distribution model, which has consistently delivered unmatched local support, is increasingly measured by global standards. Together, Caterpillar and our Cat dealers are focused on four objectives:

- Strengthening the Cat dealer model
- Enhancing customer focus through services
- Achieving superior economics for Caterpillar and the dealer
- Seizing opportunities while mitigating risks



PRODUCT STEWARDSHIP

Product stewardship covers the full lifespan of our equipment – from the supply chain to the customer’s job site to remanufacturing. This means taking steps to reduce potential environmental, health and safety impacts, as well as optimizing operational quality and efficiency throughout the life of the product.

We accomplish this by:

- Engineering products to reduce or eliminate hazardous substances if possible
- Utilizing more sustainable energy sources as they are available
- Extending a product’s life through the use of remanufactured parts or rebuilt machines
- Working with customers and distributors to encourage the proper disposal or recycling of end-of-life materials

INNOVATION MANAGEMENT

Our Enterprise Technology Strategy establishes the foundation for innovation in Caterpillar’s product development. It focuses on key technology areas that impact many facets of sustainability by:

- Providing foundational components for a wide range of digital solutions
- Reducing customers’ owning and operating costs
- Promoting safety and sustainability
- Increasing product reliability
- Providing customers with the tools they need to succeed anywhere they work
- Allowing Caterpillar to maintain a competitive advantage

The strategy is driven by customers’ needs, deep market research, regulatory requirements and global economic indicators to inform decision-making. Each of the technologies under development includes customer-focused goals that serve as targets against which progress is measured.

By the end of 2018, there were more than 125 active New Technology Introduction (NTI) and Component New Product Introduction (CNPI) projects being worked within the Enterprise Technology Strategy.

Our Enterprise Simulation Strategy lays the foundation for Caterpillar’s use of physics-based simulation in the product development process. This strategy is closely aligned with our Enterprise Technology Strategy and facilitates sustainability throughout the entire product development process. Caterpillar uses simulation in all stages of product development – from the conceptual phases of research and design through production.

Simulation allows Caterpillar engineers to explore the impact of new product and process designs without having to first build prototypes in iron, which uses significant resources. Using simulation in product development enables the exploration of multiple design concepts, drives research and development (R&D) efficiency, saves R&D dollars and decreases re-work, all of which allows for fast-paced innovation that benefits our customers and the company.

Our Technology and Simulation Strategies are governed through multitiered councils composed of leaders from all areas of the business, from our Executive Office to engineering and technical leaders. These councils create and execute the vision for future technologies and processes at Caterpillar, as well as ensuring consistent and sufficient funding for Caterpillar’s technology investments.

STANDARDS HARMONIZATION AND TECHNICAL EXPERTISE

Our global standards and regulations team works closely with organizations like the International Organization for Standardization (ISO) to harmonize machine safety standards worldwide. Caterpillar makes management and technical expertise available to regulatory bodies in advisory roles, offers technical assistance as new product standards are developed and provides input to help ensure the smooth introduction of new technologies. For example, industry consensus standards, including those for visibility, rollover protective structures, braking and sustainability, apply to earthmoving equipment. Because of our brand reputation, organizations often look to Caterpillar to lead the development of these standards. We are involved on an international level to develop and update global standards through the ISO and chair the technical committee for earth-moving machines.

Research and Development Expenses

U.S. dollars in millions

2016	\$1,853
2017	\$1,842
2018	\$1,850

Beyond ISO, we participate and hold leadership roles in industry associations as well as governmental and nongovernmental delegations to international bodies such as the International Maritime Organization, Office of the U.S. Trade Representative, European Union industry expertise panels and federal advisory committees chartered under the U.S. Environmental Protection Agency.

CUSTOMER SAFETY

Caterpillar’s safety culture extends beyond our internal operations to include promoting the safe operation of our products in the field, as well as the safety and health of all individuals who come into contact with Cat® products. This commitment encompasses:

- Product design and engineering
- Operator training and certification
- Solutions for the job site
- Tools and resources to improve workplace culture

The Zero-Incident Performance (ZIP™) process provides a formula for continuous improvement by enabling organizations to achieve the engagement and accountability needed for safety improvements.

- Engage Leadership
- Assess the Culture
- Build the Plan
- Develop the Processes
- Implement the Processes
- Check the Processes

CIRCULAR ECONOMY

Wherever possible, we keep resources in the Caterpillar value chain through a circular flow of materials, energy and water. Caterpillar strives to provide customers with quality equipment that delivers the best economic proposition for their business. Our remanufacturing (reman) and rebuild businesses provide customers with immediate cost savings, help extend life cycles and use materials more efficiently. Reman and rebuild programs increase the lifespan of equipment by providing customers with a restored product for less cost than buying new.

A complete Cat® Certified Rebuild includes more than 350 tests and inspections, automatic replacement of approximately 7,000 parts and a like-new machine warranty. In addition, trained dealer service professionals perform this work using genuine equipment and parts. Caterpillar provides information, data, training and service tools to help dealers make the most appropriate decisions on which parts to reuse in order to achieve expected longevity of rebuilt components. Reuse of components helps us use materials and energy more efficiently.

Remanufacturing is built on the concept of reusing raw materials to extend their value and reduce waste. The reman process starts when a component reaches the end of its serviceable life. Dealers return the used iron (core) to Caterpillar where it is cleaned, inspected, salvaged and remanufactured to original factory specifications. Cat Reman uses state-of-the-art salvage techniques, strict reuse guidelines, and advanced remanufacturing processes and quality controls to ensure reman products provide same-as-when-new performance, with a same-as-new warranty, at a lower cost to the customer than buying new. By repurposing the high-quality materials used to manufacture the original Cat component, and recycling the rest, we extend the value of the energy and finite natural resources used to manufacture the original component.



Remanufacturing and rebuild programs allow customers to maximize the built-in value of their equipment by:

- Driving improved cost-effective performance
- Increasing the customer’s return on their investment
- Providing the customer with a variety of repair options to meet their service needs
- Providing the lowest total owning and operating life cycle costs
- Preserving the majority of energy and materials required to make the original component or machine

INCREASING GLOBAL ACCESS TO REMANUFACTURED PRODUCTS

While global customers have driven demand for remanufactured products, not all customers can benefit from the significant cost and efficiency savings that Cat Reman products deliver, due to import and export challenges. Certain countries – mostly in developing regions – do not recognize the value of remanufactured goods for the environment and their national economies, and thus place trade barriers around remanufactured products.

There are typically two types of trade barriers:

- A tariff barrier might include excessive fees or taxes levied by a certain country that significantly increase the customer’s cost of choosing a viable remanufactured product.
- A nontariff barrier might include customs officials categorizing remanufactured goods as “used” goods, which cannot be imported under any circumstance or can only be imported after complying with special inspection, certification, licensing or other onerous requirements.

Similar barriers are often faced when customers seek to export their cores and return them to Caterpillar in exchange for a remanufactured engine or component. With the same durability, performance, quality and warranty as that of the corresponding new Cat® engines and components, Cat Reman products should not be treated as “used” goods by our trading partners or by other countries. Indeed, this has been acknowledged in a number of free trade agreements and other multinational statements, such as the Asia-Pacific Economic Cooperation (APEC) Pathfinder Initiative and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP). To ensure market access, we advocate that countries participating in the global economy treat remanufactured products the same way they treat new goods.

Caterpillar continues to work with policymakers around the globe to open markets and expand remanufactured options for our global customers, providing them with cost-effective, sustainable solutions for extending the life of their existing equipment. The company informs and engages with government regulators around the world on the sustainable benefits of Cat Reman products.

REMAN & REBUILD GOAL

Increase remanufactured and rebuild business sales by 20 percent from 2013 to 2020.

17% Rebuild business sales growth since 2013⁸

7% Reman business sales growth since 2013⁸

Reman End-of-Life “Take-Back” by Weight ^{8,9}

Millions of pounds of end-of-life material received

2014	166
2015	154
2016	125
2017	130
2018	155

Reman End-of-Life “Take-Back” by Percent ^{8,9}

Actual end-of-life returns/eligible returns x 100

2014	94%
2015	93%
2016	91%
2017	92%
2018	92%

CUSTOMER SUSTAINABILITY

Caterpillar helps customers build a better world, and customers increasingly want to build that world by using less fuel and generating fewer GHG emissions. These customer needs provide valuable business opportunities for Caterpillar.

We continue to invest in research and development aimed at products that generate fewer direct emissions. In addition, we're increasing our investment in high-efficiency energy conversion and electrification – working to increase power density, expand the use of alternative fuels, maximize efficiency of power systems, and introduce more electrification into our product lines while significantly decreasing owning and operating costs over time. In doing so, we help our customers improve their own operations, while also driving our competitors to improve.

Job site fuel efficiency, which contributes to reductions of GHG emissions, is strongly considered in our new product development efforts. By developing products, services and solutions that increase customer efficiency, we are reducing the emissions that would otherwise have been generated from the use of less efficient products or solutions. We also collaborate with dealers and customers to deliver customized solutions that help optimize

energy use and provide training for customer operators on how to use our equipment more efficiently.

A significant part of our business is committed to the supply of energy through efficient power-generation solutions. With distributed power generation solutions utilizing diesel and natural gas engines, as well as alternative fuels, we help get power where our customers need it.

19% reported sales and revenues in 2018 derived from products, services and solutions that demonstrate an improved sustainability benefit over prior offerings.¹⁰

PRODUCT, SERVICES & SOLUTIONS GOAL
Leverage technology and innovation to improve sustainability of our products, services and solutions for our customers.

Caterpillar has implemented distributed power generation systems all over the world, which contribute to improving energy access in the developing world while emitting fewer GHG emissions compared to traditional power grid systems. We provide combined heat and power systems and combined-cycle power systems that can double the efficiency of power generation when compared to the efficiency of conventional power grids. Additionally, our power systems utilize fuels from diverse sources, such as gas from landfills, livestock operations, wastewater treatment operations, mine methane, flare gas, syngas and biofuels. These systems provide energy diversity from plentiful (and in many cases, renewable) energy sources.

NATURAL INFRASTRUCTURE

Conventional (or grey) infrastructure – sanitary sewers, treatment plants, roads, bridges, dams and levees – is not the only infrastructure in need of rebuilding. Ecosystems that are essential to the health of our economy, communities and planet – forests, prairies, agricultural lands, estuaries, coastal landscapes and wetlands – are in critical need of restoration. Unfortunately, a significant portion of the earth's natural infrastructure has been lost or degraded. These ecosystems purify our water and air, sequester carbon, mitigate storm impacts, produce nourishment and supply other raw materials. Our products and solutions are well-equipped to be used for such critical restoration projects.

To increase awareness and understanding of natural infrastructure development and restoration, Caterpillar is leading a group of like-minded organizations through the Natural Infrastructure Initiative. The Initiative is focused on water-based natural infrastructure projects such as coastal resilience, flood and storm mitigation, inland waterways and dam removals. Its role is to add value by accelerating the frequency and pace of natural infrastructure projects in these areas and supporting increased funding for these types of projects. It also is focused on identifying and advocating for the removal or reduction of regulatory and commercial barriers to implementing projects.

JOB SITE EFFICIENCY

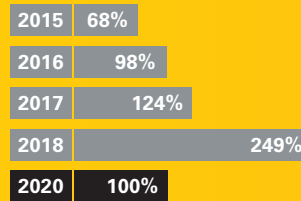
Caterpillar customers want to realize the full value of their assets on the job site. Our solutions business model is designed to meet that goal by going “beyond the iron” to increase asset utilization and optimize the return on customers’ site investments. Designed and delivered by our Job Site Solutions (JSS) team in partnership with Cat® dealers, these solutions help customers find innovative ways to improve their operations and be more competitive in the marketplace. JSS leverages Caterpillar’s financial, technological, application and management expertise to tailor solutions based on the customer’s own needs, typically in the areas of safety, sustainability, equipment, productivity and finance. As a result, every solution is different, scalable and can range from a short-term consulting engagement to a multiyear fleet management solution.

We consistently find that cost savings unlocked by our JSS team also deliver additional sustainability benefits. A more efficient operation should drive reductions in emissions, noise, energy use and waste. For instance, optimizing fleet efficiency not only reduces costs, but also it can improve the maintenance and component replacement cycles of individual machines. Better maintenance execution can extend the life of a machine, which in turn reduces fluid and maintenance parts consumption. JSS helps customers select components and equipment that meet production goals, often giving options to rebuild or remanufacture, thereby reducing waste and conserving natural resources. The integration of these services is showcasing the three dimensions of sustainability – economic growth, environmental stewardship and social responsibility – for our customers.

SYSTEMS OPTIMIZATION GOAL

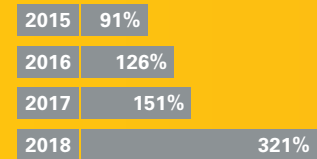
Increase managed fleet hours by 100 percent from 2013 to 2020.

Fleet Hours



249% Increase in fleet hours managed by Job Site Solutions (2013 to 2018)

Service Agreements



321% Increase in number of machines covered by service agreements with Job Site Solutions (2013 to 2018)

GOVERNANCE & POLICY



Caterpillar’s Code of Conduct – Our Values in Action – defines what Caterpillar stands for and what we believe in, documenting the high ethical standards for our company. The Code of Conduct helps Caterpillar employees every day by providing guidance on the behaviors that support Our Values in Action – Integrity, Excellence, Teamwork, Commitment and Sustainability.

CORPORATE GOVERNANCE

Our commitment to good corporate governance stems from our belief that a strong governance framework creates long-term value for our shareholders, strengthens board and management accountability and builds trust in the company and our brand. Learn more about our governance framework at the following:

- Corporate Governance initiatives and Board composition in Caterpillar’s [Proxy Statement](#)
- [Board Committees](#)
- [Caterpillar Code of Conduct](#)

The Public Policy and Governance Committee of our Board of Directors provides oversight over environmental, health and safety activities, including the company’s supply of products and services that support sustainable development of global resources.

WORLDWIDE CODE OF CONDUCT TRAINING

All Caterpillar employees are required to complete Code of Conduct training on an annual basis. This training includes a certification by each employee that they have read, understood and will comply with Caterpillar’s Code of Conduct.

RISK MANAGEMENT

Risk is an inherent part of conducting global business. Caterpillar regularly identifies and monitors business risks through a robust internal management system and engages in constructive regulation and public policy discussions that benefit employees, customers and shareholders. We manage operational, strategic, financial and compliance risk in several ways, including but not limited to: the Enterprise Risk Management (ERM) program and Caterpillar’s Compliance program.

Each year, we conduct a comprehensive enterprise risk assessment by reviewing risk information from multiple sources, including business units. To better inform our decision-making, Caterpillar evaluates risks using three dimensions (significance, likelihood and velocity) at the business unit and enterprise levels.

The results of this ERM risk assessment are incorporated into future action plans to mitigate the identified risks. Compliance risks are also reviewed as part of the ERM risk assessment process and are managed as part of Caterpillar’s Compliance program. These risks cover a broad range of issues, including legal and regulatory compliance.

The Compliance program establishes enterprise-level compliance expectations. Business managers implement controls and processes to meet those requirements with the support of compliance professionals, legal personnel and subject matter advisors with specific expertise. These efforts are enhanced by regular communications, training and annual assessment processes. Through these programs, Caterpillar can better manage risk and gauge the potential impact of various outcomes on our ability to achieve strategic goals.

PUBLIC POLICY

Government decisions regarding laws and regulations around the world can have a significant impact – both positive and negative – on Caterpillar, our employees, customers and stockholders. Learn more about [Caterpillar's political advocacy and contributions](#).

ENERGY & CLIMATE POLICY

As a global energy consumer and industrial manufacturer, as well as a major manufacturer of energy conversion and power-generation products, Caterpillar has a fundamental interest in, and understanding of, energy needs around the world. We provide products with leading integrated technology to various energy customers and leverage our technology and innovation to meet the world's growing energy needs.

Greenhouse gas (GHG) accumulation in the atmosphere is a major concern in both the public and private sectors because of the potential for these gases to affect climate patterns. As a result, many governmental and intergovernmental organizations are implementing mechanisms in an attempt to reduce GHG emissions.

Caterpillar supports integrated carbon and climate policies that effectively balance environmental and economic considerations. We understand that the most immediate and measurable benefits will occur through energy-efficiency improvements and corresponding GHG emissions reductions.

In response to the challenge of reducing GHG emissions, we are:

- Pursuing energy-efficiency and GHG-reduction goals for our operations.
- Investing in energy-efficiency and GHG-reduction technologies for our products that are important to our stakeholders and represent significant areas of opportunity for our business.
- Committing to the development and deployment of advanced technologies that capture and store GHG emissions.
- Supporting policies and mechanisms that harness the marketplace to drive innovation, mobilize investment and facilitate sharing these technologies.
- Encouraging the coordination of domestic and international programs that maximize the use of flexible, proven mechanisms to sequester carbon in soils, plants and ecosystems.

Additionally, we support the reduction of GHG accumulation through improved GHG management practices. We understand that some atmospheric scientists believe atmospheric GHG accumulation can occur as a result of inefficient or excessive fossil fuel combustion, poor waste management practices or poor land management practices. Caterpillar is a leader in the development and deployment of innovation and technologies that, through our products, assist in the mitigation of all three of these sources.

CARBON REGULATION

Despite divergent proposals under discussion worldwide, technology and innovation play a key role in any successful strategic approach to emissions reduction. Further, the private sector must take the lead in developing and deploying technology solutions to reduce GHG emissions. Ideally, regulatory structures should provide a technology-neutral and level playing field in which competitive solutions can be developed.

Businesses will struggle to find solutions if vastly differing approaches to GHG reduction are implemented around the world. That is why we continue to endorse a comprehensive, international approach that encompasses GHG-reduction commitments from all major economies. We encourage constructive dialogue and a proactive approach to providing energy safely, efficiently and affordably to the billions of people who inhabit our planet.

CARBON RESEARCH INVESTMENTS

Carbon can offer productive uses in a variety of applications. We are investing in research and advocating for policies that support these developments in diverse areas such as improved land management, restoration of degraded lands, and carbon capture and storage technologies.

For example, we are a founding member and co-funder of the Energy Technologies Institute (ETI), a collaboration between industry and the U.K. government to accelerate the development of technologies that address the challenges of climate change and provide affordable energy access.

Additionally, Caterpillar is a member of the project advisory group for the Midwest Geological Sequestration Consortium (MGSC), a national research partnership funded by the U.S. Department of Energy. With the objective to safely demonstrate the viability of long-term storage of CO₂, the MGSC developed a large-scale demonstration project designed to store 1 million metric tons (1.1 million U.S. ton) of CO₂ in Decatur, Illinois. Now in the ongoing monitoring phase of the demonstration project, MGSC also hosts knowledge-sharing events and shares research results with the project advisory group.

ENERGY ACCESS

One of the biggest differences between a developing nation and a developed nation is reliable access to energy. Lack of access to modern energy services hinders economic and social development, making it more difficult to provide water purification, sanitation and education. Today, technology and natural resources exist to rapidly expand energy access, but the challenge is accomplishing this in an effective and efficient manner.

To increase energy access, we believe:

- Access to affordable and dependable energy resources is critical for energy security, economic prosperity and growing economies. Caterpillar supports balanced and comprehensive energy policies for the responsible development and utilization of all energy resources, including traditional sources of energy and expanded use of alternative energy technologies.
- No single solution can provide abundant, reliable, secure and reasonably priced energy on a global basis. Market-based, cost-efficient energy solutions are the best way to help meet the world's growing energy demands.
- Political and industry leadership is required to forge consensus and a commitment to providing energy and related infrastructure that address economic development, stability and environmental impacts.
- When regulation is necessary, regulatory structures should provide a technology-neutral and level playing field that embraces competition and in which Caterpillar, our independent dealers and our customers can operate.
- We support the development and use of strategies and technologies to increase energy efficiency and reduce emissions.

Energy diversification – such as coal in combination with carbon capture and storage, new nuclear buildouts, new natural gas reserves, plus renewable energy sources like biogas, wind, photovoltaic or solar, tidal and others – will contribute to an energy portfolio that helps eliminate energy poverty, raises standards of living and propels economic growth with less impact on the environment. Eliminating energy poverty is a vision that can be achieved.

INFRASTRUCTURE POLICY

Governments have a responsibility to maintain appropriate levels of productive investment in infrastructure while providing a level playing field for suppliers. Leveraging private investment can bring additional sources of funding, provided that investment is supported by fair and predictable policies to maximize the certainty and timeliness of financial returns.

Growth-enhancing infrastructure investments, however, cannot be fully delegated to the private sector, and public financing should continue to comprise the bulk of infrastructure investment. Governments can influence the affordability of infrastructure through the facilitation of permitting, the reduction of administrative burden and the simplification of related requirements. The role of government in infrastructure financing should be based on national needs, including urbanization, commerce and trade policy, transportation, disaster prevention and mitigation, defense and global competitiveness.

TRADE POLICY

The best means of economic development and the efficient distribution of goods and services is the pursuit of business excellence in a climate of free enterprise, free trade and global competition. Further, such international exchange promotes better understanding across borders and cultures. These benefits have been demonstrated by the rise in post-World War II gross domestic product and living standards in countries participating in international commerce. By contrast, many isolated countries have not experienced such advantages.

Increased global engagement leads to economic gains that raise standards of living, improve the quality of life and promote sustainable development. More importantly, trade liberalization can promote peace and understanding and can be an important contributor to solving the global problems of poverty, hunger and disease. Economic growth through international trade is essential for poverty reduction, but also comes with challenges. Chief among them is the need to balance economic, environmental and social policies to achieve sustainable development. This provides a common framework for allowing environmental and trade policymakers to engage stakeholders, analyze issues and evaluate policy more efficiently.

Caterpillar has a long history of advocating for free trade. Our interest comes not from the perspective of any one country, but from our global perspective and with the foundational belief that companies compete best in a free trade environment. Free trade requires us to continually improve our global competitiveness and creates an environment that allows us to better respond to our customers' needs and to grow our business. It offers us the opportunity to source globally and thus compete effectively while providing maximum value to users. Our suppliers, in turn, also have an easier time satisfying our global sourcing requirements. Our employees around the world, and their respective communities, benefit from a higher standard of living, as they have access to more product choices at lower prices. Free trade also allows us to provide more and better job opportunities, because open markets lead to improved competitiveness.

Caterpillar will continue to support policies that enhance competition in the global marketplace and reduce – or better yet, eliminate – trade and investment barriers. We believe that developed countries should adopt policies that allow the benefits of the global economy to be extended to developing countries. To this end, Caterpillar also recognizes that humanitarian and developmental assistance is necessary to fight disease, improve living conditions and combat corruption – all of which can be barriers to free trade and economic growth in the world's poorest countries.



HUMAN RIGHTS

Our Human Rights Policy is informed by the international human rights principles described in the Universal Declaration of Human Rights (UDHR) and the International Labour Organization's (ILO) Declaration on Fundamental Principles and Rights at Work. Our Human Rights Program is aligned with the UN Guiding Principles on Business and Human Rights (UNGPs) and is governed by leadership with accountability across the enterprise, led by our Global Human Rights Manager, focused on awareness-raising, information sharing, external reporting, monitoring and mitigation of impacts on an ongoing basis. When the company receives an inquiry or grievance regarding human rights (which come in through various channels, including via the Office of Business Practices Helpline), our Global Human Rights Manager is responsible to engage and consult with relevant parties, both internal and external stakeholders, and experts in the human rights field. These teams review and work toward an appropriate resolution.

Caterpillar has conducted a human rights impact assessment (HRIA) to identify actual and potential human rights issues and impacts on vulnerable groups along our value chain. In addition to the HRIA, Caterpillar has introduced mechanisms to understand our human rights impacts across our value chain with our partners. Our Supplier Code of Conduct self-assessment process includes human rights questions focused on whether our suppliers have policies and procedures to manage the issues determined to be salient for Caterpillar's supply network. This assessment process helps Caterpillar understand and locate areas of risk in our supply base.

As we continue to advance our human rights program, we will look to engage with our suppliers on these topics, as well as consider the use of on-the-ground human rights impact assessments or audits in high-risk regions or facilities to improve understanding of human rights issues and impacts.

SALIENT ISSUES

In alignment with the UN Guiding Principles, Caterpillar has identified potential human rights impacts associated with our business activities and relationships. These salient human rights issues were determined as part of a comprehensive human rights impact assessment that considered feedback from shareholders, nongovernmental organizations, third-party consultants and internal stakeholders. We recognize that our salient issues may change as our business grows and evolves over time. We will regularly review our priority areas and are committed to engaging in constructive dialogue with others regarding these issues.

We are committed to engaging in dialogue with internal and external stakeholders to understand human rights-related issues and concerns. We also want to be transparent about Caterpillar's position on these issues.

Caterpillar's ongoing commitment with respect to each salient issue is described below:

- **Child labor:** We are committed to compliance with all applicable laws and regulations governing age requirements for employment, and we do not condone the use of child labor.
- **Wages and working hours:** We are committed to compliance with all applicable laws and regulations governing wages and hours.
- **Discrimination and harassment:** We are committed to a workplace free of harassment and unlawful discrimination without regard to race, religion, natural origin, color, gender, gender identity, sexual orientation, age or physical or mental disability. We also commit to support and obey laws that prohibit discrimination everywhere we do business.
- **Health and safety:** We are committed to putting safety first, with an aspirational goal to prevent all injuries, occupational illnesses and safety incidents. We actively promote the health and safety of everyone on our property with policies and practical programs that help individuals safeguard themselves and their co-workers.
- **Forced labor and human trafficking:** We do not condone the unlawful use of forced labor, bonded or indentured labor, involuntary prison labor, slavery or the trafficking of persons.
- **Impacts on local communities:** We establish and adhere to sound environmental, social, and economic policies and practices in product design engineering and manufacturing that have minimal impact on local communities.
- **Use of Cat® equipment:** Caterpillar products have many different applications and play an important role in advancing sustainable global economic development in communities where we operate. While we expect our products to be used safely and lawfully, we simply cannot control or monitor the use of every piece of Caterpillar equipment around the world.
- **Doing business in conflict-affected areas:** We will act responsibly and within the framework of applicable laws and regulations when conducting business in conflict-affected areas. We use reporting from Verisk Maplecroft to identify those countries that have experienced, are experiencing or are at risk of experiencing violent conflict.
- **Freedom of association and the right to collective bargaining:** We respect the rights of our employees to join, form or not to join an employee association or trade union of their choice without fear of reprisal, interference, intimidation or harassment, and in a manner consistent with national law and practice.

CONFLICT MATERIALS

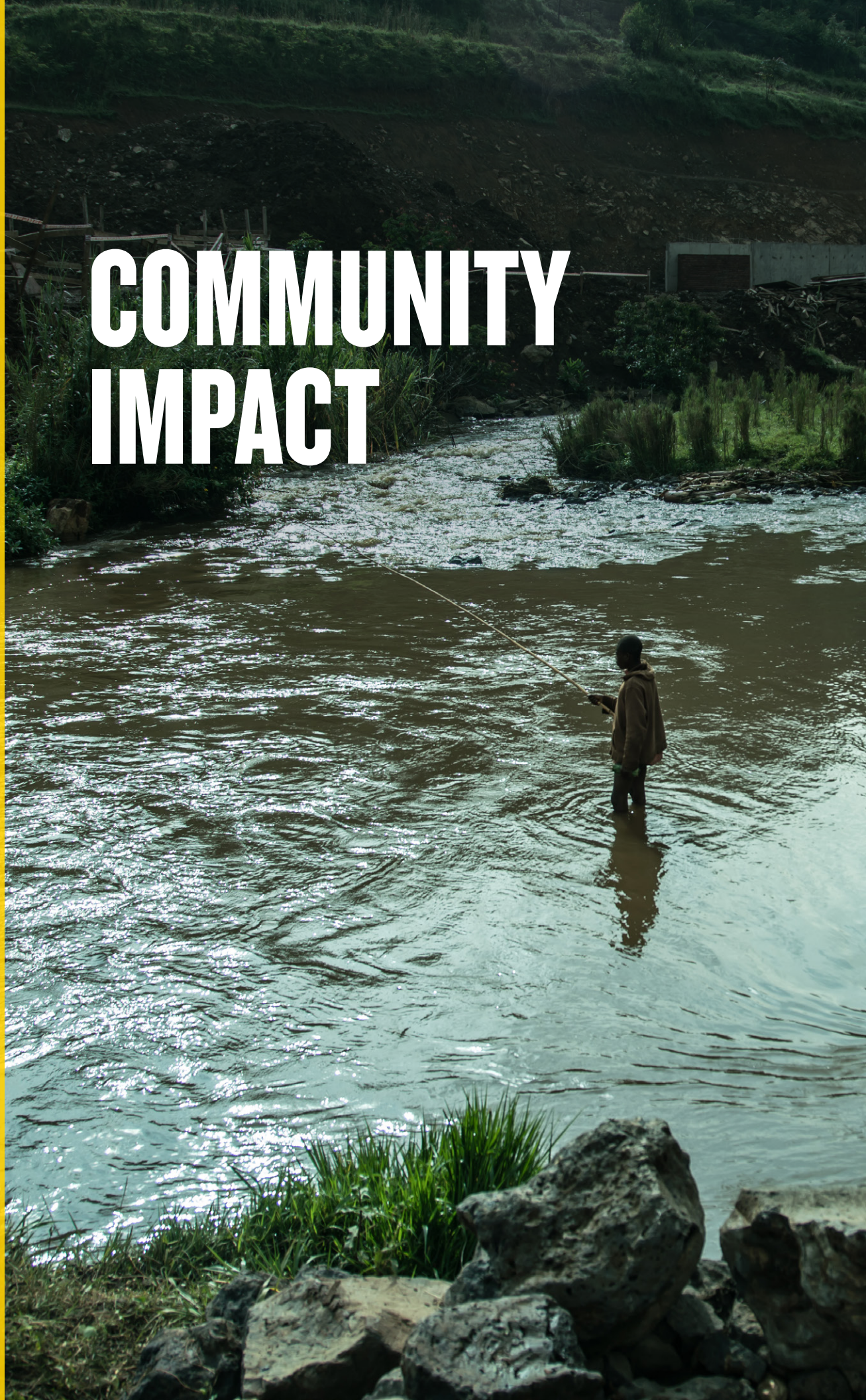
The extraction and trade of tin, tungsten, tantalum and gold, collectively known as conflict minerals, are associated with human rights violations in the Democratic Republic of the Congo and adjoining countries. Caterpillar is committed to the responsible sourcing of these minerals used in our products. We will not knowingly provide any direct or indirect support to non-state armed groups or security forces that illegally control or tax mine sites, transport routes or trade points, or any upstream actors in the supply chain. Caterpillar also has a policy that prohibits its employees from engaging in corruption and bribery and expects our suppliers to adopt similar policies with respect to their own supply chains.

Caterpillar supports the Responsible Minerals Initiative (RMI) to help influence smelters' engagement to support supply chain transparency and leverage industry collaboration toward greater business intelligence. Year over year, we strive for an increased supplier response rate with an additional emphasis on priority suppliers. We leverage industry standards for benchmarking and explore efficiencies and cost improvements on an ongoing basis.

For reporting year 2017, 255 of the 266 smelters identified by suppliers (approximately 96 percent) were validated as conformant under the Responsible Minerals Assurance Process (RMAP). This is an improvement of three percentage points over 2016.

Learn more about our commitment to the responsible sources of [conflict minerals](#) here.

COMMUNITY IMPACT



Our success contributes to the social stability of regions around the world. Caterpillar and our employees focus on contributing time and resources to promote the health and welfare of communities in which we live and work. We conduct our business in a manner that respects human rights individually.

We encourage employees to actively engage in activities that contribute to a better society by volunteering time and talent or investing money in worthwhile community projects and initiatives. In addition, Caterpillar supports the Caterpillar Foundation, which has been dedicated to transforming lives in communities around the world since 1952. The Foundation's mission is to help lift people out of poverty, and it champions programs that support education, environment and basic human needs.

ECONOMIC DEVELOPMENT

Caterpillar and our products support economic growth around the world, both in developed countries, where aging networks need improvement, and emerging regions, where new infrastructure is required. Our products help ensure that investments in transportation, energy, telecommunications, waste and water infrastructure produce maximum benefits. We support these investments as key enablers for sustainable development, economic growth, competitiveness and long-term job creation.

Our facilities in more than 50 countries provide quality jobs and opportunities for the people in those locations. At the end of 2018, Caterpillar had approximately 104,000 full-time employees, which accounts for only a fraction of the jobs directly associated with Caterpillar, typically represented by our flexible workforce, extended dealer network and supply chain. In addition to the direct economic contributions to the local economies associated with employee, dealer and supplier compensation and other operating expenditures, additional indirect and induced contributions occur as a result of spending by the employees, dealers, suppliers and customers who visit our facilities throughout the world.



PHILANTHROPY/ SOCIAL INNOVATION

As Caterpillar and our customers work to build traditional infrastructure, the Caterpillar Foundation is focused on building human infrastructure through strategic investments and collaboration focused on alleviating poverty and making sustainable, scalable progress possible for all. As a company, we collaborate across our value chain to develop programs that provide job training and increase workplace safety. Globally, our employees generously volunteer their time, skills and talents to achieve positive community impact where they live and work.

SHARING THE VALUE OF WATER

In 2018, the Caterpillar Foundation turned its focus toward examining the most pressing water challenges of our time, declaring 2018 the Year of Water and launching the Value of Water campaign. Through this campaign, we highlighted our work with grant partners such as charity: water, Ducks Unlimited, Global Citizen, Living Lands & Waters, Opportunity International, The Nature Conservancy and Water.org.

[Read more about the Value of Water in our 2018 Sustainability Progress Report.](#)

HOW WE MAKE A DIFFERENCE THE CATERPILLAR FOUNDATION

SINCE 1952
\$740M+
Contributions

ENVIRONMENT
Restoring natural infrastructure while improving the quality of life as it relates to poverty

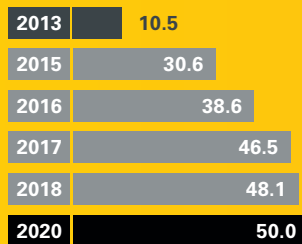
EDUCATION
Numeracy and literacy, improving academic outcomes, financial literacy and workforce readiness

BASIC HUMAN NEEDS
Food, water, shelter, energy and disaster relief

GOAL: Place 50 million people on the path to prosperity. The Caterpillar Foundation impacts people through our nonprofit partners' work on the ground to address the root causes of poverty. Since 2013, we have helped put more than 48.1 million people on the path to prosperity.

We believe no one individual or organization can do this work alone – collaboration among businesses, nonprofits, governments and citizens is key, and working together is the only way to create sustainable change.

People Impacted (Cumulative)
Number of people in millions



INVESTMENTS

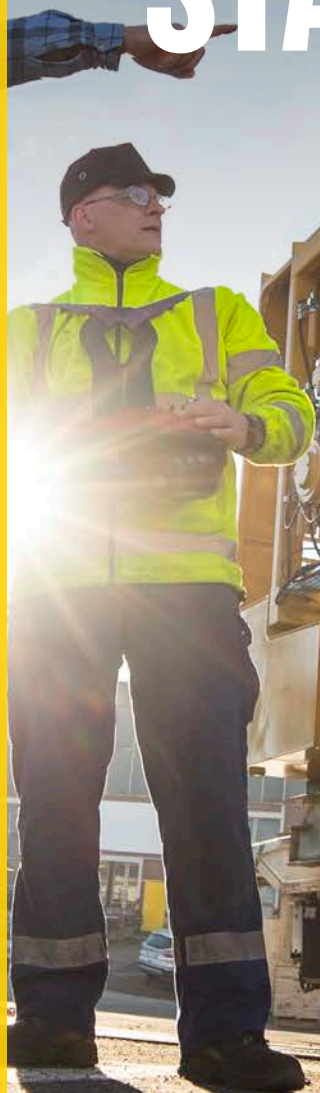
2018 COMMUNITY INVESTMENTS

\$27M
2018 Caterpillar Foundation community investments

\$4M
Caterpillar Foundation matching gifts program¹¹

\$11.8M
2018 United Way total donations¹²

INDEPENDENT ASSURANCE STATEMENT



Independent Assurance Statement to Caterpillar Inc.

ERM Certification and Verification Services (ERM CVS) was engaged by Caterpillar Inc. (Caterpillar) to provide limited assurance in relation to specified 2018 data in the Caterpillar 2018 Sustainability Progress Report and the Caterpillar 2018 Environmental, Social and Governance Priorities & Approach as set out below.

Engagement summary	
Scope of our engagement	<p>Whether the Caterpillar 2018 data for the following indicators are fairly presented, in all material respects, with the reporting criteria:</p> <p>Environmental data <u>Absolute and intensity:</u></p> <ul style="list-style-type: none"> • Scope 1 GHG emissions [million metric tons CO2e and million metric tons CO2e/million dollars of revenue]; • Scope 2 GHG emissions – market based methodology [million metric tons CO2e and million metric tons CO2e/million dollars of revenue]; • Total GHG emissions [million metric tons CO2e and million metric tons CO2e/million dollars of revenue]; • Energy intensity [GJ/million dollars of revenue] and total 2018 consumption in GJ used to calculate this; <p><u>Absolute only:</u></p> <ul style="list-style-type: none"> • Scope 2 GHG emissions – location based methodology [million metric tons CO2e] • Total electricity [MWh]; • Non-contact cooling water [billion gallons]; • Water sources (non-contact cooling water from foundry operations, municipal water, groundwater, surface water) [%]; • Global water consumption [billion gallons]; <p>Safety data</p> <ul style="list-style-type: none"> • Lost Time Case Frequency Rate (LTCIR); • Recordable Injury Frequency Rate (RIF) – per 200,000 hours worked.
Reporting criteria	The WBCSD/WRI GHG Protocol (2004, as revised January 2015) for the Scope 1 and 2 GHG emissions and Caterpillar internal reporting criteria and definitions for the other indicators.
Assurance standard	ERM CVS' assurance methodology, based on the International Standard on Assurance Engagements ISAE 3000 (Revised).
Assurance level	Limited assurance.
Respective responsibilities	<p>Caterpillar is responsible for preparing the data and for its correct presentation in reporting to third parties, including disclosure of the reporting criteria and boundary.</p> <p>ERM CVS's responsibility is to provide conclusions on the agreed scope based on the assurance activities performed and exercising our professional judgement.</p>

Our conclusions

Based on our activities, nothing has come to our attention to indicate that the Caterpillar 2018 data for the indicators listed above under 'Scope of our Engagement' are not fairly presented, in all material respects, with the reporting criteria.

Our assurance activities

Our objective was to assess whether the selected data are presented in accordance with the principles of completeness, comparability (across the organization) and accuracy (including calculations, use of appropriate conversion factors and consolidation). We planned and performed our work to obtain all the information and explanations that we believe were necessary to provide a basis for our assurance conclusions.

A multi-disciplinary team of EHS and assurance specialists performed the following activities:

- Interviews with relevant staff to understand and evaluate the data management systems and processes (including systems and internal review processes) used for collecting and reporting the selected data;
- A review of the internal indicator definitions and conversion factors;
- An analytical review of the data from all sites and a check on the completeness and accuracy of the corporate data consolidation;
- Virtual visits to two sites – Large Engine Center (Lafayette, IN, USA) and Building Construction Products BCP (Torreon, Mexico) to review local reporting processes and consistency of reported annual data with selected underlying source data for each indicator. We interviewed relevant staff, reviewed site data capture and reporting methods, checked calculations and assessed the local internal quality and assurance processes;
- Year-end assurance activities at corporate level including reviewing the results of internal control procedures, checking completeness of locations in the consolidation as well as the accuracy of the consolidation of the data for the selected indicators from the site data.

The limitations of our engagement

The reliability of the assured data is subject to inherent uncertainties, given the available methods for determining, calculating or estimating the underlying information. It is important to understand our assurance conclusions in this context.



Jennifer Iansen-Rogers
Head of Corporate Assurance Services
29 April 2019

ERM Certification and Verification Services, London
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ERM CVS is a member of the ERM Group. The work that ERM CVS conducts for clients is solely related to independent assurance activities and auditor training. Our processes are designed and implemented to ensure that the work we undertake with clients is free from bias and conflict of interest. ERM CVS staff that have undertaken this engagement have provided no consultancy related services to Caterpillar in any respect.

ABOUT THIS REPORT

Our sustainability practices focus on ways to maximize the life cycle benefits of our products while minimizing the economic, social and environmental costs of ownership for Caterpillar customers. Our most recent results are reflected here and build on the themes and results described in our 2017 report. The reporting period is the 2018 calendar year, which is also Caterpillar's fiscal year.

This report has been prepared in accordance with the Global Reporting Initiative (GRI) Standards: Core option. A GRI Index is available [here](#).

Report content represents 100 percent of the products and operations of Caterpillar Inc. and its subsidiaries where we have a controlling financial interest. Where noted, Caterpillar's independent dealer network and supplier network are also represented. Caterpillar and subsidiary brands are listed [here](#).

Caterpillar's environmental and safety metrics for operations are consolidated based on the Greenhouse Gas Protocol "operational control" approach. Caterpillar is headquartered in Deerfield, Illinois, USA. Contact us [here](#).

ERM Certification and Verification Services (ERM CVS) has conducted independent assurance of selected 2018 environmental and safety data. To understand the scope, activities and conclusions of the assurance process, please see the ERM CVS Assurance Statement [here](#).

Environmental data includes all manufacturing and office facilities with more than 500 employees. Safety data includes employees in all manufacturing and office facilities within Caterpillar's reporting boundary.

FORWARD-LOOKING STATEMENTS

Certain statements in this Environmental, Social and Governance Priorities & Approach document relate to future events and expectations and are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Words such as “believe,” “estimate,” “will be,” “will,” “would,” “expect,” “anticipate,” “plan,” “project,” “intend,” “could,” “should” or other similar words or expressions often identify forward-looking statements. All statements other than statements of historical fact are forward-looking statements, including, without limitation, statements regarding our outlook, projections, forecasts or trend descriptions. These statements do not guarantee future performance and speak only as of the date they are made, and we do not undertake to update our forward-looking statements.

Caterpillar’s actual results may differ materially from those described or implied in our forward-looking statements based on a number of factors, including, but not limited to: (i) global and regional economic conditions and economic conditions in the industries we serve; (ii) commodity price changes, material price increases, fluctuations in demand for our products or significant shortages of material; (iii) government monetary or fiscal policies; (iv) political and economic risks, commercial instability and events beyond our control in the countries in which we operate; (v) our ability to develop, produce and market quality products that meet our customers’ needs; (vi) the impact of the highly competitive environment in which we operate on our sales and pricing; (vii) information technology security threats and computer crime; (viii) additional restructuring costs or a failure to realize anticipated savings or benefits from past or future cost reduction actions; (ix) failure to realize all of the anticipated benefits from initiatives to increase our productivity, efficiency and cash flow and to reduce costs; (x) inventory management decisions and sourcing practices of our dealers and our OEM customers; (xi) a failure to realize, or a delay in realizing, all of the anticipated benefits of our acquisitions, joint ventures or divestitures; (xii) union disputes or other employee relations issues; (xiii) adverse effects of unexpected events including natural disasters; (xiv) disruptions or volatility in global financial markets limiting our sources of liquidity or the liquidity of our customers, dealers and suppliers; (xv) failure to maintain our credit ratings and potential resulting increases to our cost of borrowing and adverse effects on our cost of funds, liquidity, competitive position and access to capital markets; (xvi) our Financial Products segment’s risks associated with the financial services industry; (xvii) changes in interest rates or market liquidity conditions; (xviii) an increase in delinquencies, repossessions or net losses of Cat Financial’s customers; (xix) currency fluctuations; (xx) our or Cat Financial’s compliance with financial and other restrictive covenants in debt agreements; (xxi) increased pension plan funding obligations; (xxii) alleged or actual violations of trade or anti-corruption laws and regulations; (xxiii) international trade policies and their impact on demand for our products and our competitive position; (xxiv) additional tax expense or exposure including the impact of U.S. tax reform; (xxv) significant legal proceedings, claims, lawsuits or government investigations; (xxvi) new regulations or changes in financial services regulations; (xxvii) compliance with environmental laws and regulations; and (xxviii) other factors described in more detail in Caterpillar’s Forms 10-Q, 10-K and other filings with the Securities and Exchange Commission.

ENDNOTES

1. Data prior to 2018 has been revised to reflect the correction of immaterial errors.
2. GHG emissions intensity reduction goal is based on our combined Scope 1 (direct) and Scope 2 (indirect, market-based) GHG emissions using a 2006 baseline year. Likewise, total absolute GHG emissions are a sum of Scope 1 and Scope 2 (market-based) emissions.
3. Location-based Scope 2 GHG emissions are provided in accordance with the GHG Protocol Scope 2 guidance (2015). Our market-based Scope 2 emissions are calculated using the Scope 2 Quality Criteria. The following instruments were used in calculating our market-based Scope 2 emissions: Renewable Energy Guarantees of Origin, energy contracts, supplier-specific emission rates, Caterpillar-owned power generation facilities and, for the remainder of our facilities, grid average emission factors from USEPA's eGRID (2014) and the International Energy Agency's data (2014). For 2018 calculations, Caterpillar did not use residual mix factors.
4. Total includes purchased and on-site generated alternative and renewable energy, as well as calculating the percentage of renewable energy from grid-purchased electricity using data obtained from the International Energy Agency.
5. Renewable Energy: Caterpillar defines renewable energy as energy resources that are naturally replenishing over a short period of time and virtually inexhaustible. Power generation examples include wind, solar, hydro, geothermal, tidal, wave, biomass and biogas from anaerobic digestion.
6. Alternative Energy: Caterpillar defines alternative energy as any source of usable energy that offers substantial environmental benefits compared to the conventional sources of energy that it replaces. Power generation examples include landfill gas, coal mine and abandoned mine methane, combined heat and power (cogen, trigen and quadgen), coal with carbon sequestration and localized power generation.
7. Water consumption intensity does not include noncontact cooling water from foundry operations.
8. Data does not include Progress Rail or Solar Turbines.
9. Product returned for remanufacture (called "core") is not always returned within the same calendar year as sold.
10. This includes remanufacturing, component overhauls at Cat® dealers, power generation using alternative energy sources, customer job site optimization and innovative new products. The components are evaluated each year to adjust for acquisitions, divestitures, offerings that become standard and improvements to data accuracy.
11. This represents employee and retiree donations made in the calendar year 2017, and the Caterpillar Foundation's match made in the calendar year 2018.
12. This includes employee and retiree contributions, and the Foundation match, for campaigns in the United States, Canada, Mexico and Panama.



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