

OPERATIONS

As well as managing the impacts of our production operations directly under our control, we accept that our environmental responsibility also extends to our wider supply chain.

In this section

- [Energy and Emissions](#)
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What Our People Say

“As we begin the construction of the new campus at our Dearborn headquarters, our sustainability group is in contact with the design and construction teams on the ground, to actively track progress against our goals and objectives. Although it’s still early, our hope is that these efforts will lead to significant improvements in the overall energy and environmental performance of the campus, exemplifying Ford’s commitment to sustainability.”

Kaitlin Sheehan

Environmental Engineer, Environmental Quality Office, Ford Motor Company

ENERGY AND EMISSIONS

At our manufacturing plants, rethinking the way we use energy is crucial to lowering our facility greenhouse gas (GHG) emissions and playing our part in addressing climate change.

HOW WE’RE DRIVING CHANGE

Reducing Emissions and Energy Use

Our efforts involve using less energy to make our vehicles and driving down the GHG emissions from our manufacturing processes. To help us, we invest in state-of-the-art facilities to ensure quality, safety and lean production techniques.

Driven by our Plant Energy Team, our comprehensive Energy Management Operating System focuses our efforts in three key areas:

- Assessing and improving how our facilities operate
- Collecting, storing and managing data and analytics
- Securing a reliable supply of energy for our manufacturing plants

We also participate in GHG emissions reporting and trading, supporting a range of mandatory and voluntary schemes globally, and adhere to a number of national carbon reduction schemes.

Lower GHG Emissions From Our Facilities

In 2010, we set an ambitious goal to reduce GHG emissions per vehicle produced by 30 percent, by 2025. We’re proud to say we reached that goal eight years early. In fact, we surpassed it. Between 2010 and 2017, we reduced our emissions by 32 percent to 0.67 tCO₂/vehicle. We aim to continue building on this success.

Reduced Average Energy Consumption

In 2017, we reduced facility energy consumption (on a per-vehicle basis) by 6.8 percent compared to 2014, and we continue to focus on driving efficiencies in energy use throughout our facilities around the world. In addition, our focus on energy conservation and efficiency brought significant energy and cost savings.

OUR PERFORMANCE

Less Energy, Lower Emissions

Operational efficiency helps lower GHG emissions and facility energy use, and we’re also exploring ways to use more renewable energy.

- **32% reduction** in GHG emissions per vehicle, 2010 to 2017
- **6.8% reduction** in facility energy consumption (per vehicle), compared to 2015
- Achieved our 2025 CO₂ emissions reduction target **eight years early**

EFFICIENCY, FACILITIES AND LAND

Our activities and facilities have the potential to affect land use, nature and biodiversity, both directly and indirectly. We strive to make our operations as efficient and sustainable as possible, and have taken steps to improve biodiversity and wildlife habitat on our land.

Committed to Green Buildings

As a member of the U.S. Green Building Council (USGBC) and supporter of its industry-standard LEED (Leadership in Energy and Environmental Design) rating system, we are committed to green buildings in our operations, following the basic principles of resource and process efficiency, life cycle assessments, health and safety, and environmental performance.

We strive to implement a range of best practices in our new facilities, from advanced water-treatment and waste-reduction systems to energy-saving technologies.

Related Page:

> [Waste Reduction](#)

Efficiency: Lean Production in Action

A new \$25 million investment for additional manufacturing enhancements brings Ford’s total investment at Kentucky Truck Plant in Louisville to \$925 million and allows the company to increase manufacturing line speed.

These investment and advanced manufacturing upgrades are examples of the company’s quest to improve its operational fitness. They include 400 new robots, a new 3D printer that enables workers to make parts and tools more quickly and cheaper as well as enhanced data analytics to keep the assembly line moving as efficiently as possible.

Case study

Seeing the Future: Make Way for Holograms

Ford designers and engineers have been using visualization software and “mixed reality” headsets to review 3D designs with colleagues around the world in real time. Piloting Microsoft HoloLens technology, we’re now able to explore shapes, sizes and textures in hours instead of the weeks and months needed to create clay models.

In our Dearborn studios, we have been trialing the technology, which allows our designers to see virtual design elements as if they were part of physical vehicles. It creates holograms in photo-quality backdrops, and can project design variations onto an actual car or clay model. This allows us to quickly evaluate the designs, make changes and determine styling options earlier in development.

> [Watch a short video of the system in action](#)

“HoloLens allows a whole team of people to collaborate, share and experience ideas together. Mixing virtual and physical models is exciting, because it helps our designers and engineers communicate effectively and ideate to see what the future looks like earlier in the process. This allows great freedom and efficiency in how prototypes are created or changed.”

Elizabeth Baron

Virtual Reality and Advanced Visualization Technical Specialist, Ford

Advanced Energy Infrastructure for Dearborn Campus

By 2020, our Research and Engineering Center on our Dearborn campus will be powered by a LEED-certified energy plant. Its highly efficient systems will consist of a gas-fired combined heat and power plant, advanced chiller technology, a thermal energy storage tank, and geothermal heating and cooling. In addition, a solar array could supply up to 4MW of electricity: enough to power more than 1,000 homes.

We currently operate 26 LEED-certified buildings around the world.

Related Pages:

> [Energy and Emissions](#)

> [Data: Operational Energy Use and CO₂ Emissions](#)

Case study

The Birds and the Bees: Biodiversity and Sustainable Land Use

Promoting sustainable land use and improving the wildlife and biodiversity on the land around our facilities helps us do more than reduce our environmental footprint: it connects us with local communities.

For the last six years, we've been working on the Nashville GreenField Restoration project. A collaboration with Golder Associates and the Tennessee Environmental Council (TEC), GreenField Restoration turns the area around our old Glass Plant into a vibrant natural environment just five miles from downtown Nashville.

The GreenField Restoration project goes far beyond traditional compliance. With help from a diverse range of community partners, it includes reforestation, grassland and prairie reestablishment, creating a solar-powered rainwater irrigation system, developing a tree nursery and certified arboretum trail with 30 native tree species, as well as extensive bird and pollinator habitats. The site's natural vibrancy also makes it an ideal outdoor classroom for local students.

Our community partners have included STEM (science, technology, engineering and math) students from Vanderbilt College, representatives from local companies, Eagle Scouts and members of community organizations. Together, we've already made a vibrant green space just outside the city, where increasing numbers of birds, bees and butterflies are coming to live.

Related Page:

> [Environmental Impact of Our Suppliers](#)

With thousands of suppliers, from component manufacturers to freight partners, we are committed to reducing the environmental footprint of our entire supply chain.

EMISSIONS FROM LOGISTICS OPERATIONS

From receiving parts and components from our suppliers to delivering finished vehicles to our dealerships, our logistics operations represent a significant opportunity to reduce our environmental impacts, particularly with regard to emissions.

Managing Our Networks

To minimize the impacts of our inbound and outbound freight, we examine every opportunity to reduce the number of miles we travel and explore more fuel-efficient and lower-carbon modes of transport.

Overseen by our Material Planning and Logistics organization, our environmental initiatives are coordinated at a regional level. They include:

- Updating our fleets to ensure we comply with the latest requirements of ISO 14001 and other regulatory standards
- Improving the efficiency of our network to reduce emissions
- Measuring and reporting our freight greenhouse gas (GHG) emissions
- [Optimizing the packaging](#) to protect components and finished vehicles in transit

How We're Reducing Freight Emissions

Freight emissions are dependent on a wide range of inter-related factors, including the type of transport used, the efficiency of the equipment and the design of the network. We seek to achieve emissions reductions by improving the efficiency of our processes, by adopting new technology and by using alternative modes of transport.



Network Efficiency

- Improved route planning
- Regional distribution centers to coordinate deliveries
- “Milk run” routes with several collection points



Drivers

- Training in fuel-efficient driving techniques



Vehicles

- Latest engine technologies
- Equipment modifications (e.g., deflectors, speed limiters)
- New packaging designs that carry extra loads
- Greater load density for fewer trips and lower fuel consumption



Other Transport Modes

- Using rail, sea and river transport to reduce emissions and road miles
- Multimodal solutions (e.g., “SWAP bodies”: road trailers that can also be used for rail)

Measuring and Reporting Freight Emissions

Quantifying and reporting our freight emissions helps us minimize our total life cycle carbon emissions and reduce our overall environmental footprint. We measure all GHG emissions, including nitrous oxide and methane, using the “CO₂ equivalent” (CO₂e) approach. Our logistics partners help us by collecting data from across our networks and collating it in a global scorecard.

Related Pages:

> [Reducing Vehicle CO₂ Emissions](#)

> [Addressing Non-CO₂ Emissions](#)

We also work with industry bodies and standards agencies to improve reporting methods, such as the [Scope 3 GHG Emissions Standard](#). This framework for reporting emissions throughout the value chain was developed by the [World Resources Institute \(WRI\)](#) and [World Business Council for Sustainable Development \(WBCSD\)](#). We now take account of “well-to-wheel” emissions that result from the production of the fuel and energy we use, and continue to adapt our methodology as necessary.

We are actively working with a team of students from the University of Michigan School for Environment and Sustainability (UM-SEAS) to evaluate our current CDP Scope 3 submission for accuracy, opportunities for improving its content and developing recommendations to incorporate into a future Scope 3 Reduction Strategy.

Through the Automotive Industry Action Group (AIAG) in North America, the U.K. Department for Transport and Odette International in Europe, we also encourage others in our industry to improve their measurement and reporting of GHG emissions.

Related Pages:

- > [Environmental Impact of Our Suppliers](#)
- > [Energy and Emissions](#)
- > [Data: Operational Energy Use and CO₂ Emissions](#)

WATER USE

Access to clean, affordable drinking water and adequate, accessible sanitation is a basic human right. Water resources are unevenly distributed across the planet and, with increased droughts, flooding and water stress caused by a combination of increased demand, poor management and climate change, water security is high on the global agenda.

HOW WE'RE DRIVING CHANGE

Every Drop Counts

Water is critical to our business, and parts of our operations, such as our paint shops, are particularly water-intensive. But by continually striving to use less water in our operations, and throughout our supply chain, we can protect the environment, reduce costs and ensure our future resilience.

We acknowledge our responsibility to use and manage water sources efficiently and sustainably, especially as we have operations in many water-stressed regions of the world such as India, South Africa, Mexico and Brazil.

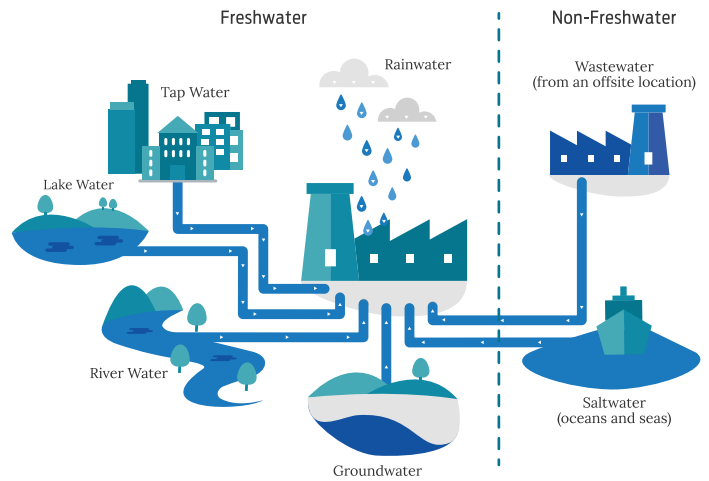
Our Water Strategy

Our long-term water strategy reflects the need to understand water challenges in their local context. Throughout the world, we rely on water from a variety of freshwater and non-freshwater sources.

We place particular emphasis on reducing our usage of freshwater (from rivers and lakes, rainwater, groundwater and municipal sources) because it is the main source of drinking water. We're doing this through a combination of reduced consumption, utilizing non-water-based technologies and tapping into alternative sources such as other companies' wastewater.

By reducing our reliance on freshwater, we will achieve our goal of restricting potable water sources for human use. Our 2020 target, to reduce water use per vehicle produced by 30 percent from 2015 to 2020, represents a significant challenge but it's a vital step forward if we are to manufacture vehicles without withdrawing any drinkable water.

Water Use at Our Facilities



What Is Freshwater?

Freshwater is the main source of drinking water around the world and is recognized as essential for human life and well-being in the Global Reporting Initiative's (GRI) Standard 303. Definitions of freshwater include:

- “surface and ground waters” – United Nations Economic Commission for Europe (UNECE)
- “all water other than oceans and other saline water, therefore freshwater is glaciers/ice caps, groundwater, and surface water” – United States Geological Survey (USGS)

The GRI defines freshwater as surface water, but our definition is broader, including both surface water and groundwater. Our goal is to minimize our use of freshwater while aiming for a goal of zero – or even positive – impact on freshwater sources in the future.

To achieve this, we're incentivizing the reduction of freshwater use in our facilities. These behaviors include using alternative water sources like industrial wastewater, and introducing technologies like MQL, Dry-Booth and alternative cooling that don't use water.

Salient Issue

Access to Water and Sanitation

During our first formal human rights saliency assessment, we identified access to water and sanitation as one of our nine most important issues – those at risk of the most severe negative impact through Ford's activities and business relationships.

Going forward, we're taking steps to develop action plans to manage and remediate these issues, and to expand our reporting on them.

- > [Find out more about our human rights saliency assessment](#)

Reducing Water Use in Our Facilities

Since 2000, we have reduced our operational water use by 62.5 percent, saving 10.4 billion gallons of water. In 2017, we continued our trend of ongoing improvement with a further overall reduction of 2 percent, while our South African facilities reduced their per-vehicle water use by 10 percent from the previous year.

To help us, we're introducing more water-efficient processes and technologies such as water alarm systems and a data monitoring center to better measure our water use. We are also using the Ceres Aqua Gauge assessment tool for managing our water risks at a corporate level, and [using water reuse to manage our impacts from Chennai to Chihuahua](#).

Leadership on Water

We recognize the human right to clean, affordable drinking water and adequate, accessible sanitation, and focus on responsible water stewardship in our operations.

We're proud to be a signatory to the UN CEO Water Mandate and one of only 74 publicly listed companies (out of 742 assessed) to appear in the CDP Water A List for three consecutive years. See the [CDP's 2017 Global Water Report](#) for more information about the Water A List and the business case for action on water security.

OUR PERFORMANCE

Responsible Water Stewardship

Access to clean water and adequate sanitation is a basic human right, so we're focused on avoiding any negative impacts on water resources.

- We saved **3.7 m³ of water** per vehicle in 2017, equal to our usage last year and down from 3.9 m³ in 2015
- Since 2000, we have saved enough water to fill **15,735 Olympic-sized swimming pools**
- **32% reduction** in water use (per vehicle), 2010 to 2017

COLLABORATING ON WATER

Since 2000, when we first set ourselves targets for water, we have broadened our efforts, working with supply chain and community partners to address water challenges. We're also working with business partners to find more cost-effective ways of reducing our water use.

Collective Efforts to Find Solutions

Ford is one of more than 140 companies worldwide that endorses the UN Global Compact CEO Water Mandate. Our water strategy aligns with the six core elements of the mandate, which focus on Direct Operations; Supply Chain and Watershed Management; Collective Action; Public Policy; Community Engagement; and Transparency.

Water Reductions in Our Direct Operations...

In 2018, we're starting to closely track the percentage of non-freshwater used in our operations and to find alternative sources like greywater and wastewater from other organizations.

Case Study

How We Reached 100 Percent Recycled Water for Operations at Chihuahua and Chennai

At our Chennai site in India and our Chihuahua Engine Plant in Mexico, we use only potable water for domestic use while using treated non-potable water sources in production.

At both facilities, we have developed partnerships with local authorities to invest in infrastructure to facilitate the recycling and reuse of treated municipal wastewater.

Over 10 years ago in Chihuahua, we began treating externally sourced treated wastewater to achieve 100 percent recycled water for operational uses with potable water for domestic use only. After treating and extracting the recycled water, any final discharge from our recovery system goes to an evaporation lagoon, eliminating any discharge from the site. In 2018, the site was expanded with a new three-pipe water distribution system. This new system uses not only high-quality treated wastewater in production and potable water for domestic use, but also quality treated gray wastewater for use in toilets, which reduces the plant's freshwater demand even further.

At Chennai, we utilize wastewater from our own site and treated wastewater from the local supplier park to feed our recycling system. The treated wastewater goes through a three-stage reverse osmosis system, followed by evaporation and crystallization. This maximizes the amount of recycled water we can extract and eliminates any liquid discharge from the facility.

At Ford manufacturing facilities worldwide, we are always looking for ways – both hi-tech and otherwise – to reduce net water usage. These include utilizing stormwater, installing minimum quantity lubricant (MQL) machining, and the installation of dry paint booths.

Internal and external treated wastewater recycling is a critical piece of Ford's "Go Further" water conservation mindset, and our successes in Chennai and Chihuahua create a framework for exploring alternative water sources at other facilities as we move forward.

...With Our Suppliers

We recognize that we can't tackle water issues by ourselves, and that our water impact doesn't stop at our factory walls – it includes the impacts of the suppliers who make parts and components for us. That's why we have a formal program to reduce our broader footprint: the Partnership for a Cleaner Environment (PACE) program. A truly collaborative effort, this voluntary program fosters partnerships to solve challenges and shares best practices with suppliers.

Ford suppliers participating in PACE are on track to save an estimated 782 million gallons of water over the next five years – enough to fill 1,192 Olympic-sized swimming pools – according to data collected in 2017.

- Five suppliers expect to save 244 million gallons by reusing process wastewater, rainwater and reclaimed condensate in other facility processes
- Other PACE participants report that their savings will be achieved by implementing closed-loop cooling, upgrading equipment, engaging and training employees, and developing a comprehensive water balance for each facility

Related Page:

> [Environmental Impact of Our Suppliers](#)

...and in Our Communities

Hundreds of employee volunteers are also engaged in our community-based efforts to conserve water and promote responsible water stewardship.

- In Thailand, Ford volunteers installed a water system for a nursery's agriculture project, as part of the renovation of the Special Education Center in Rayong, and helped build a solar-powered water system for Ban Bueng Ta Ta School through the Water Go Green project.
- Ford Argentina employees work with a local NGO, Movimiento Agua y Juventud, to give rural communities and schools access to safe water. In December 2017, a project to provide access to safe water supplies in two communities in Santiago del Estero Province was completed, with 270 beneficiaries.

Related Pages:

> [Water Use](#)

> [Data: Water](#)

WASTE REDUCTION

The automotive industry is a resource-intensive one, so we need to work hard to optimize our resource efficiency. This means generating less waste, and repurposing or recycling any waste we do generate. This not only keeps it out of landfill but provides us with an additional supply of valuable resources.

HOW WE'RE DRIVING CHANGE

Our Plan

Our aim is to minimize manufacturing and production waste, helping to reduce the overall environmental impact of our operations. Our global waste-reduction plan outlines how we will seek to avoid waste to landfill wherever practicable, through the efficient use of resources and by developing closed-loop recycling processes.

Going for Zero

When a facility acquires the zero waste to landfill (ZWTL) status, it means that absolutely no manufacturing waste from the facility goes to landfill sites. Our current major waste streams include wastewater sludge; recovered paint solids; packaging waste; and used oils and waste solvent.

To ensure that even more of our plants and facilities reach ZWTL status, we continue to implement a range of waste-reduction initiatives. These include:

- Investing in new technologies and programs that minimize waste
- Standardizing how we track and sort waste to aid recycling and reuse
- Identifying and focusing on the five main sources of waste to landfill at each facility
- Working with suppliers to increase their use of [eco-friendly packaging](#)

Meeting Our Waste Targets

To continue to reduce the amount of landfill waste associated with vehicle production, we set ourselves a challenging target: to reduce waste to landfill by 40 percent per vehicle between 2011 and 2016. We reduced waste to landfill on a per-vehicle basis by 18 percent last year, and by 61 percent over the last five years, significantly exceeding our target.

Around the world, our facilities sent 21,000 metric tons of waste to landfill – a decrease of 42 percent from 2013; production increased by 0.7 percent over the same period.

OUR PERFORMANCE

Aiming for Zero Waste to Landfill

Our global waste-reduction plan is helping us reduce the environmental impact of our operations.

- **Nine Ford sites achieved zero waste to landfill** status in 2017,¹ bringing our total to 85
- **38% reduction** in waste to landfill per vehicle, 2015 to 2017
- We save **3 million pounds** of landfill waste each year with our grinding swarf (metallic particles, abrasives and oils) recycling program
- **61% reduction** in waste-to-landfill per vehicle since 2013

¹ Taubaté foundry sand is sent to landfill due to lack of technically viable alternatives in the region.

TAKING ACTION TO CUT WASTE

We are using a variety of technologies and programs across our operations to ensure we generate less waste, turn waste streams into valuable resources and reduce the impact of packaging.

Our Waste-Reduction Efforts

In our global effort to reduce waste to landfill in line with [our target](#), we've undertaken a selection of waste-reduction initiatives across our global operations. These include:

- Reducing high volume waste streams such as wastewater treatment plant sludge and paint sludge
- Focusing on sustainable waste management, particularly increasing the amount of recyclables that are recovered from trash
- Focusing on reduction of single-use plastics

More Zero Waste to Landfill Sites

A total of 85 facilities around the world have now achieved Zero Waste to Landfill (ZWTL) status. These include:

- All our manufacturing facilities in Canada and Mexico
- All our European Blue Oval manufacturing facilities
- The historical Ford Rouge Center, our largest ZWTL site, which avoids sending 14 million pounds of waste to landfill each year
- Our North American World Headquarters in Dearborn (Michigan), Oakville (Ontario) and Santa Fe (Mexico), which divert 240,000 pounds of waste from landfill between them

Closing the Loop on Aluminum Recycling

To reduce waste and use resources more sustainably, we try to reuse materials where we can, a process known as “closed-loop recycling”

For example, aluminum can be reused many times without loss of quality, requiring 95 percent less energy than producing new aluminum. We have aluminum recycling systems at our Dearborn and Buffalo stamping plants, and our Kentucky truck plant. As vehicle parts are stamped, scrap material is shredded, separated into four different grades of alloy, and sent for reprocessing.

Related Page:

> [Using Sustainable Materials](#)

Reducing the Impact of Packaging

Packaging is a key part of the automotive supply chain and plays an important role in ensuring that components reach our facilities in the right condition. Our standard range of packaging not only protects its contents but also maximizes payload during transportation and reduces cost. We always review the packaging of components and parts before we launch any new product, to find opportunities for improvement.

We continually work to share best practice between regions and drive improvements in packaging. Ford's packaging guidelines require supplier-provided packaging to have a neutral or positive environmental footprint, achieved through zero waste to landfill and the use of 100 percent recycled, renewable or recyclable materials.

Using standardized containers makes packaging more transferable between suppliers and across programs. In many locations, we have contracts with packaging providers to collect and store the packaging for our suppliers. By forwarding it to where it is needed rather than needlessly returning it to the previous supplier, we have significantly reduced our overall transport impact.

Related Pages:

> [Environmental Impact of Our Suppliers](#)

> [Data: Waste](#)

ENVIRONMENTAL IMPACT OF OUR SUPPLIERS

We rely on thousands of suppliers to provide the materials, parts and services we need to make our products. By sharing best practice between us, we can help them to lower their costs, improve the quality of their products and services, and meet their own sustainability targets.

HOW WE'RE DRIVING CHANGE

A Complex Supply Chain

As well as directly managing the impacts of Ford-owned and operated facilities around the globe, we also have a responsibility to help our suppliers reduce their environmental footprint while ensuring social standards.

The automotive supply chain is complex, with many tiers of suppliers and sub-suppliers between the original source of the materials used in the manufacturing process and the likes of Ford. Our supply chain includes suppliers of parts and components for vehicle production, as well as indirect suppliers of facilities, equipment, materials and services.

We use the [Partnership for A Cleaner Environment \(PACE\)](#), our supply chain sustainability initiative, to reduce the overall environmental impact of Ford and our supply chain partners.

Our Supply Chain

Operations

- \$110+ billion global spend on goods and services
- 67 Ford manufacturing sites

Production Suppliers

- 1,200+ Tier 1 supplier companies
- 60+ countries
- 4,400+ supplier sites
- 100,000+ parts manufactured
- 500+ commodities sourced

Indirect Suppliers

- c.10,000 supplier companies
- 600+ commodities managed

Understanding Our Suppliers' Impact

To better understand our suppliers' greenhouse gas (GHG) emissions and water use, and address the risks and opportunities associated with them, we survey a selection of our supply base every year, using the CDP Supply Chain program's Climate Change and Water Security questionnaires.

The production suppliers and indirect suppliers of logistics and information technology services surveyed are selected based on the emissions or water intensity of their operations, their geographic footprint and the strategic nature of their relationship with us.

Together, these two surveys provide us with qualitative and quantitative information about how our suppliers manage environmental risks and impacts, helping us to identify "hotspots" for GHG emissions and water use.

OUR PERFORMANCE

A Lighter Supply Chain Footprint

We work with thousands of suppliers, sharing best practice and helping them reduce the environmental footprint of their operations.

- 264 suppliers surveyed using CDP Supply Chain questionnaire (81% response rate)
- 209 suppliers surveyed using CDP Water questionnaire (75% response rate)
- 81% of suppliers reported integrating climate change into their business strategy in 2017 (2016: 82%)
- 69% of suppliers reported having a water-related target or goal in 2017 (2016: 64%)
- 81% of suppliers reported having an emissions reduction target or goal in 2017 (2016: 64%)

REDUCING OUR COLLECTIVE FOOTPRINT

We liaise with our suppliers, and with wider industry partners, in an attempt to reduce the environmental impacts not just of our supply chain but of the automotive industry as a whole.

Building Supplier Capability Through PACE

Our supply chain sustainability initiative, the Partnership for A Cleaner Environment (PACE), was developed to reduce the overall environmental impact of Ford and our supply chain partners.

PACE enables us to share the best practice examples we've implemented with 50 suppliers, so that they can be replicated and we can minimize our overall environmental impact. We also encourage our Tier 1 suppliers to cascade the information down to their own suppliers to extend the reach of the program.

PACE at a Glance



Engaging With Key Suppliers

One of the ways we engage with our key strategic suppliers is through our Aligned Business Framework (ABF). This dialogue helps to drive quality and innovation, identify operational synergies and encourage collaboration in areas such as ethical business practices, working conditions and responsible sourcing.

For these ABF suppliers, we have established a three-stage process for managing sustainability issues:

- Ford verifies that the supplier has a code of conduct that aligns with our own [Policy Letter 24](#)
- The supplier provides internal training to ensure its employees understand and comply with the code of conduct, and Ford validates their processes to ensure ongoing alignment
- The supplier also verifies that its own suppliers are compliant with our shared standards and expectations

Strategy and
GovernanceCustomers
and Products

Operations

People and
SocietyPerformance
and Data

Our ABF Network

114 suppliers comprising:

- 84 production suppliers and 30 indirect suppliers
- 15 of these are minority-, veteran- and women-owned suppliers

Of our production suppliers:

- 100% have codes of conduct aligned with our [Policy Letter 24](#)
- 85% have governance systems covering their operations and supply chains

› [Download a list of our ABF Suppliers](#)

Recognizing Supplier Excellence

We honor our suppliers for their outstanding performance and achievements with our World Excellence Awards. At the 19th annual ceremony, held at The Henry Ford Museum in Dearborn in May 2017, Ford recognized 54 suppliers from across the globe with awards. In addition, four companies received Special Recognition awards. [See a full list of World Excellence Award Winners.](#)

Collaborating With Industry Partners

To maximize our efforts and encourage alignment throughout the automotive supply chain, we participate in several industry forums.

- As a founder of the [Automotive Industry Action Group's \(AIAG\)](#) Environmental Sustainability Advisory Group, and member of the Greenhouse Gas Work Group, we help integrate environmental sustainability, water benchmarking and GHG management across the sector. Along with other OEMs, we developed one-day supplier training programs for GHG emissions and water management, which provide guidance on calculations and sustainability strategy development.
- We have worked alongside other members of the Environmental Science Work Group at the [Responsible Business Alliance \(RBA\)](#) – formerly the Electronic Industry Citizenship Coalition (EICC) – to strengthen the standards for environmental responsibility in the RBA Code of Conduct in 2017. Third-party environmental audits are conducted at selected supplier sites to evaluate their environmental practices. Read more about the [RBA audit process.](#)
- Through our membership of the Suppliers Partnership for the Environment – a collaboration among automotive OEMs, their suppliers and the U.S. Environmental Protection Agency – we are working to advance responsible battery management at vehicle end-of-life, increase biodiversity and reduce waste.

Related Pages:

› [Our Value Chain and Impacts](#)

› [Environmental Impact of Our Suppliers](#)

› [Transparency Throughout The Supply Chain](#)