



We see possible.

lyondellbasell
Advancing Possible

2019 SUSTAINABILITY
REPORT

Forward-looking information

Certain disclosures in this report may be considered forward-looking statements. These are made pursuant to safe harbor provisions of the Private Securities Litigation Reform Act of 1995. You should read the Cautionary Statement contained in our [2019 Annual Report](#) on Form 10-K in conjunction with such statements.

About the cover

Our sustainability strategy is aligned with our brand *Advancing Possible*, and speaks to our ability to offer solutions to complex challenges while carefully balancing environmental, social and economic impacts.

At the time of this report's publication, we find ourselves at a pivotal point in history. While many have long recognized the need to take action to address some of society's greatest challenges, the global pandemic, extreme weather events and issues of economic and racial divide have further emphasized that this is the time for action.

Three years ago, our company began a journey that significantly increased our focus and attention on sustainability issues across the enterprise. While there certainly is more to do, I am very proud to report that with focus and hard work, our dedicated team has made significant progress in a short period of time.

In the pages that follow, you will read how we have developed our sustainability strategy in the past year. We have an even deeper understanding of the business risks and opportunities of transitioning to a low-carbon, circular economy and have identified actions we will take to help

tackle three global challenges society faces during this decade of action:

- Eliminating **plastic waste**
- Addressing **climate change**
- Supporting a **thriving society**

Taking action

As part of our focus on longer-term priorities, LyondellBasell has been taking substantive action to advance our sustainability goals. For instance, to help address our three priority areas we have:

- Added mechanically recycled and renewable feedstock-based polymers to our product offerings;
- Invested in molecular recycling (also called chemical or advanced recycling) with the goal to bring this potentially game-changing technology to commercial scale;
- Played a leading role in establishing the Alliance to End Plastic Waste (AEPW), the first global, cross value chain organization to address this major issue;
- Developed a roadmap to reduce our carbon footprint; and
- Appointed the company's first Chief Talent & Diversity Officer and are working to further emphasize diversity and inclusion in our cultural and talent management programs.

CEO LETTER



A handwritten signature in black ink, appearing to read 'BV Patel', written over a light blue circular background.

Bhavesh V. (Bob) Patel
Chief Executive Officer

**BY 2030, OUR
AMBITION IS TO
PRODUCE AND
MARKET TWO MILLION
METRIC TONS OF
RECYCLED AND
RENEWABLE-BASED
POLYMERS ANNUALLY**

Advancing the circular economy

LyondellBasell aspires to be an industry leader in the production and marketing of recycled and renewable-based polymers. By 2030, our ambition is to produce and market two million metric tons of recycled and renewable-based polymers annually. This is a major commitment which will enable our customers and

value chain partners, in turn, to transform their businesses. Achieving this ambitious goal will require collaboration with our customers, suppliers, brand-owners, industry associations and governments to:

- Increase waste management systems and recycling infrastructure across the globe. Our mechanical and molecular recycling technologies depend on a sufficient stream of plastic waste to serve as feedstock.
- Develop uniform standards for recycling, including a mass balance approach in order to make molecular recycling work at scale. Once plastic waste is broken down into its component molecules for use as feedstock, traceability of recycled content is critical for packaging companies and brands to communicate the use of recycled content to customers, ultimately creating more demand for recycled plastics. This same approach is applied today to paper and renewable energy.
- Expand tax incentives to encourage the rapid growth of research and development in next generation recycling technologies, as well as the development of alternative feedstocks from renewable sources.

Our response to COVID-19

The COVID-19 pandemic reminds us how critical plastics are to nearly every sector of the economy, especially healthcare. For example, the polypropylene resins produced by LyondellBasell are used to produce melt-blown fibers that provide filtration in facemasks; masterbatch products are used in breathable films for protective suits; and, polypropylene, ethylene oxide and propylene oxide are used to make medical syringes, medical test kits, soaps, disinfectants and many other products.

As the impacts of the pandemic intensified, and given the critical nature of these materials to combatting this global crisis, I am proud of the way our team quickly adapted to a new way of working, ensuring operations at our manufacturing sites and other business functions continued in order to meet customer demand while adhering to COVID-19 health and safety protocols.

A renewed focus on diversity and inclusion

As a global company with a diverse workforce, we have always aspired to create a culture of inclusion where diverse ideas, experiences and perspectives are valued. The events

of 2020, however, caused all of us to stop and ask ourselves if we are doing enough to combat issues of race and discrimination.

In July 2020, we accelerated our efforts in the area of diversity and inclusion with the appointment of a Chief Talent & Diversity Officer and the establishment of an employee Diversity Council. We have asked this group, in addition to external experts, to help us evaluate our policies, talent practices and other programs to ensure every employee can achieve his or her full potential.

It is my expectation that diversity and inclusion will be a purposeful, measurable and sustainable part of LyondellBasell's culture, similar to how we view safety, where we strive to consistently be an industry leader.

These complex, global and systemic issues we are facing cannot be solved by one company or even one industry alone. As we enter our decade of action, I look forward to sharing progress on the ambitious goals we've set. We do not claim to have all the answers, and I invite you to join us as we form new partnerships and collaborations that will help us all reach the scale and impact needed to make a difference and *Advance* what is *Possible*.

HIGHLIGHTS



First parallel production of **PP** and **LDPE** from **renewable-based feedstock** at a commercial scale



Expanded the number of end-use applications for our **mechanically recycled product portfolio** through our QCP partnership



More than 1 million safe working hours achieved at 17 manufacturing sites



Lowest injury rate in our history achieved at manufacturing facilities in the United States



Reduced emissions to air of nitrogen oxides (NOx), sulfur oxides (SOx), volatile organic compounds (VOCs) and particulate matter (PM) compared with 2018



19,360 volunteer hours donated to the community during our annual Global Care Day

OUR GLOBAL PRESENCE

We manufacture and have joint ventures in 22 countries.
Our products are sold in more than 100 countries.

Legend

- ★ Regional Headquarters / Administrative Offices
- Manufacturing
- Technology/Technical Centers
- ▲ Joint Ventures

For information about employees, see GRI 102-8, [page 32](#).

North America

- USA
- Illinois ■
- Indiana ■
- Iowa ■
- Louisiana ■
- Michigan ■ ●
- New Jersey ■
- Ohio ■ ●
- Pennsylvania ■
- Tennessee ■
- Texas ■ ● ▲
- Houston* ★
- Virginia ■
- Mexico ■ ▲

Middle East

- Turkey ■
- Saudi Arabia ▲

South America

- Argentina ▲
- Brazil ■

Europe

- Belgium ■ ●
- France ■
- Germany ■ ●
- Italy ■ ●
- The Netherlands ■ ▲
- Rotterdam* ★
- Poland ■ ▲
- Spain ■
- Sweden ■
- UK ■
- London* ★

Asia Pacific

- Australia ■ ▲
- China ■ ▲
- Hong Kong* ★
- India ■
- Indonesia ▲ ●
- Malaysia ■ ▲
- South Korea ▲
- Thailand ■ ▲



OUR APPROACH TO SUSTAINABILITY

As one of the world's largest producers of plastics and chemicals, our products are used by millions of people around the world, every day.

We have the potential — and responsibility — to use this scale and reach to make a positive impact across our value chains.

That's why we are working to make meaningful progress to address some of the world's most pressing challenges such as reducing plastic waste in the environment, helping to mitigate climate change and contributing to a thriving society for our employees, the communities where we operate and the people who depend on our products.



PLASTIC WASTE

Plastics make modern society possible, and often have a lower environmental footprint than the alternatives.

Whether helping to reduce emissions through the light-weighting of vehicles, addressing food waste and hunger through packaging, ensuring the safety of water supplies through pipes, protecting the quality of critical healthcare products, or increasing the energy efficiency of buildings, plastics play a vital role in advancing a wide range of sustainability efforts.

Our goal is to keep these valuable resources in use for as long as possible to maximize their value, and to help eliminate plastic pollution. There is no single solution for this challenge, and a combination of actions will be needed to achieve a circular economy for plastics.

How we'll do it

- Reduce plastic waste in our operations and supply chain
- Work to expand waste management systems and infrastructure, and support policy that increases the use of recycled plastics

- Advance mechanical and molecular recycling to meet customers' and brand owners' environmental and circular goals

2030 Goals

- Produce and market 2 million metric tons of recycled and renewable-based polymers annually
- Help demonstrate successful plastic waste management in multiple cities and divert millions of tons of plastic waste through Alliance to End Plastic Waste projects
- Unlock at least five times our investment to increase the recovery and recycling of plastic and accelerate solutions to end plastic waste

Related stories in this report

- > [Mechanically recycled resins in attractive recycled packaging](#)
- > [Giving new life to hard-to-recycle plastics](#)
- > [Channeling the resources of the entire global value chain](#)
- > [Improving design to increase recycling rates](#)



CLIMATE CHANGE

Addressing a climate that is changing because of increasing greenhouse gas emissions is one of the greatest challenges the world is facing.

While we rely on energy to manufacture our products, we are working to do our part to reduce our carbon footprint and develop solutions that will advance a low-carbon economy.

How we'll do it

- Use fossil fuels more efficiently, and increase the use of feedstocks from renewable sources and from plastic waste
- Increase our use of renewable energy
- Grow our portfolio of low-carbon products

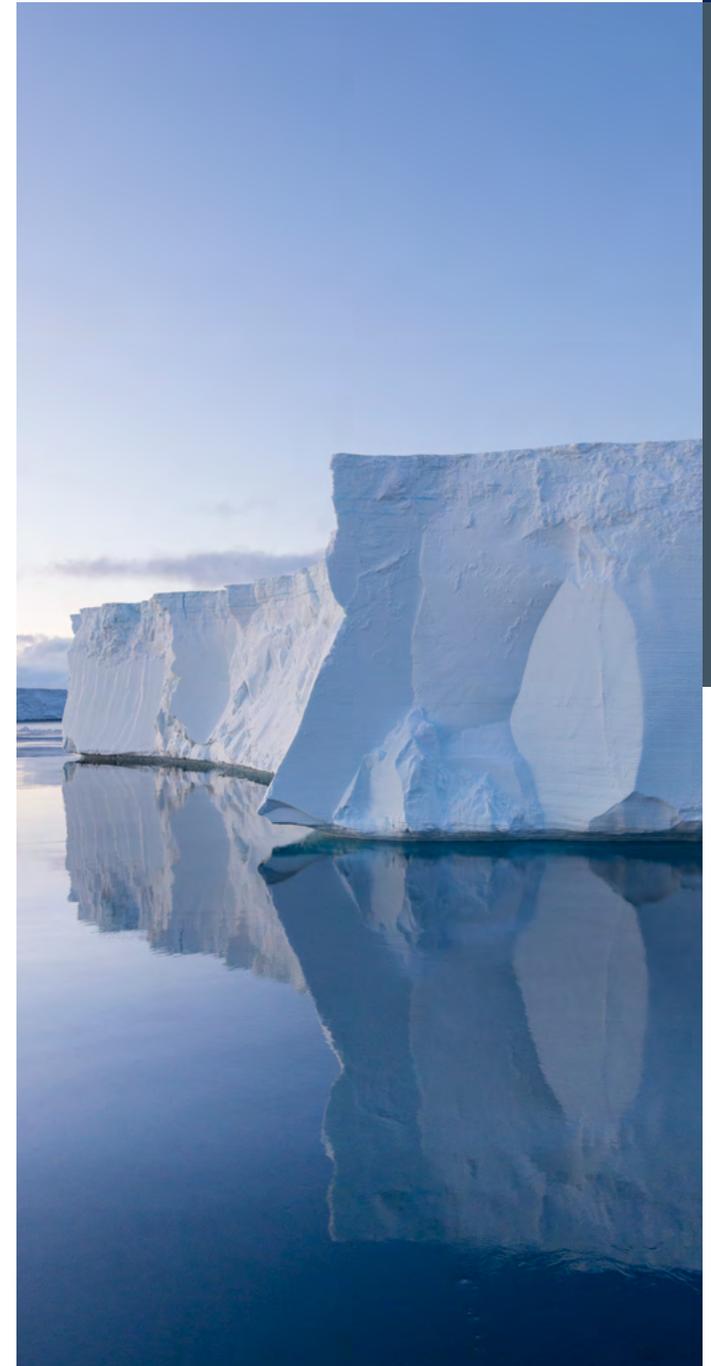
2030 Goal

Achieve a 15% reduction in CO₂* emissions per ton of product produced, compared with 2015

Related stories in this report

- [A food-safe packaging solution from renewables](#)
- [Targeting significant CO2 reductions](#)
- [Improving the environmental impact and performance of gasoline](#)
- [Reducing resource use through lighter products](#)

*CO₂ refers to CO₂ equivalent throughout report



THRIVING SOCIETY

We understand the impact our work has on society, and we place great value on the people side of our business.

From getting all of our workers home safely every day, to diversity and equity in the workplace, making products that improve quality of life, and aligning our suppliers' values with our own, we are committed to the betterment of society.

How we'll do it

- Keep our employees, contractors, customers and neighbors safe
- Build teams that reflect the communities where we operate
- Create and retain value in our surrounding neighborhoods
- Produce and market products that enable sustainable living

2030 Goal

Continue to operate safely and with zero incidents, zero injuries and zero accidents

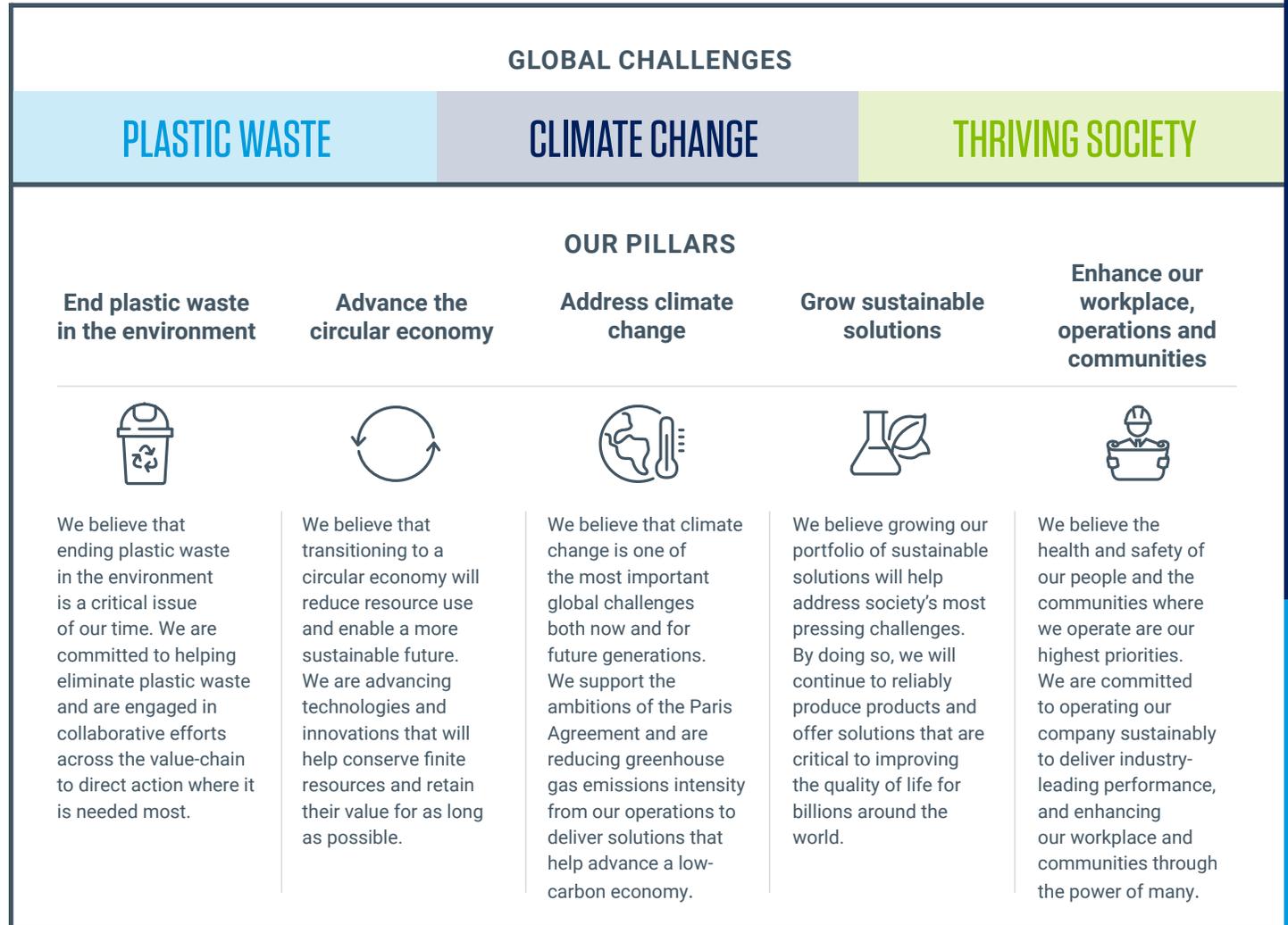
Related stories in this report

- > [A culture of safety](#)
- > [Empowering emerging leaders](#)



OUR FIVE PILLARS

To address these challenges, we have developed five pillars to frame our response.



STORIES OF PROGRESS

In 2019, we initiated and continued several programs to address plastic waste, climate change and a thriving society. The following stories demonstrate our progress around the world.



MECHANICALLY RECYCLED RESINS IN ATTRACTIVE RECYCLED PACKAGING

Our QCP business model and Henkel

Embracing new forms of collaboration can lead to exciting innovation. LyondellBasell and SUEZ are joint venture partners in an industry-leading mechanical recycling facility called Quality Circular Polymers (QCP).

Located in Sittard-Geleen, the Netherlands, QCP uses mechanical recycling to transform post-consumer plastic waste into high-quality polymers that can be used to make new products.

The joint business leverages the two partners' strengths: SUEZ provides expertise in the collection, separation and preparation of waste materials used as feedstock, while LyondellBasell applies its capabilities in innovative plastic production technology, product and application development, and knowledge of end markets such as consumer goods.



The QCP plant is capable of converting consumer waste into 35,000 tons of recycled polypropylene (r-PP) and recycled high-density polyethylene (r-HDPE) annually, with an objective of 50,000 tons by 2021.

In 2019, QCP expanded the grades and colors of r-PP and r-HDPE it offers to meet customer requirements for packaging performance and aesthetics and help major consumer brands reach their sustainability goals.

For example, when multinational consumer goods company Henkel set out to improve the packaging of their popular laundry detergent Persil 4 in1 DISCS, Greiner Packaging collaborated with QCP to develop a solution that used less conventional plastic and more recycled content, reducing CO₂ emissions and plastic waste.

The newly designed cardboard-plastic combination features a plastic container made with 50% r-PP from QCP and a cardboard sleeve made with 92% recycled content. Thanks to its innovative, patented tear-off system, the cardboard wrap and the plastic container can be easily separated and recycled.

QCP is the first-ever collaboration between a leading waste company and a major global plastics producer that has helped several consumer brands contribute to the circular economy. This represents an effective business model that we aim to replicate in other parts of the world.



By 2021, our objective is to convert plastic waste into 50,000 tons of r-PP and r-HDPE annually.

PLASTIC PACKAGING COMMITMENTS

Increasing the collection of plastic waste and overall reuse and recycling rates is an important step in developing a circular plastics economy. We support the voluntary commitments of PlasticsEurope, the Polyolefins Circular Economy Platform and the American Chemistry Council to achieve high rates of plastic reuse and recycling.

PlasticsEurope Goals

60%

reuse and recycling of plastic packaging by 2030

100%

reuse, recycling or recovery of plastic packaging by 2040

Polyolefins Circular Economy Platform Commitment

3M

Increase the use of recycled post-consumer polyolefin waste in new products to 3 million tons per year by 2025

American Chemistry Council Goals

100%

of plastics packaging is recyclable or recoverable by 2030

100%

reuse, recycling or recovery of plastic packaging by 2040



GIVING NEW LIFE TO HARD-TO-RECYCLE PLASTICS

Our *MoReTec* molecular recycling technology

A great deal of research goes into creating the plastic packaging that we use every day. Perishable products such as snacks and bakery items need specially designed packaging barriers to maintain freshness and to keep food from being wasted.

Vegetables that go from the freezer to the microwave require high-performance packaging that can withstand temperature extremes. Plastic bottles that contain household cleaning products must protect from leaks and harmful fumes, and must not be able to be opened by children.

But these complexities in plastics' design and function make recycling them a challenge, and not all recycling facilities can accept all types of plastics.

Even when plastics can be recycled using mechanical recycling techniques, their use has limitations. Mechanical recycling shreds, cleans, melts and pelletizes the waste without significantly changing the chemical structure. While the resulting

plastic resins can be safely used in numerous industrial, household and consumer product applications, they are often not suitable for food packaging and medical supplies.

Molecular recycling is an advanced recycling technique that uses a pyrolysis process to break down plastic waste into its component molecules, rather than cutting it into small pieces, for use as feedstock in the manufacturing process. The new plastic resins created can be used in all applications including food packaging and medical supplies, and have the potential to reduce the industry's dependence on fossil fuels as more and more plastics can be repurposed into new materials.

We are developing a proprietary molecular recycling technology, called *MoReTec*, that uses a catalyst in the pyrolysis process to improve the breakdown of plastic waste. We believe our *MoReTec* technology will have significant potential because of its lower energy use and more efficient

chemical conversion process, which will allow increased commercial scale. Our collaboration with Germany's Karlsruhe Institute of Technology (KIT) proved the efficiency of the *MoReTec* technology at laboratory scale.

During 2019, we screened potential catalyst systems and tested a variety of plastic waste streams. In July 2020, we commissioned a small-scale pilot plant at our site in Ferrara, Italy. We plan to develop optimum process conditions to make the *MoReTec* technology scalable to a semi-industrial proof-of-concept plant by 2021.



MoReTec is a proprietary technology that improves the breakdown of plastic waste.

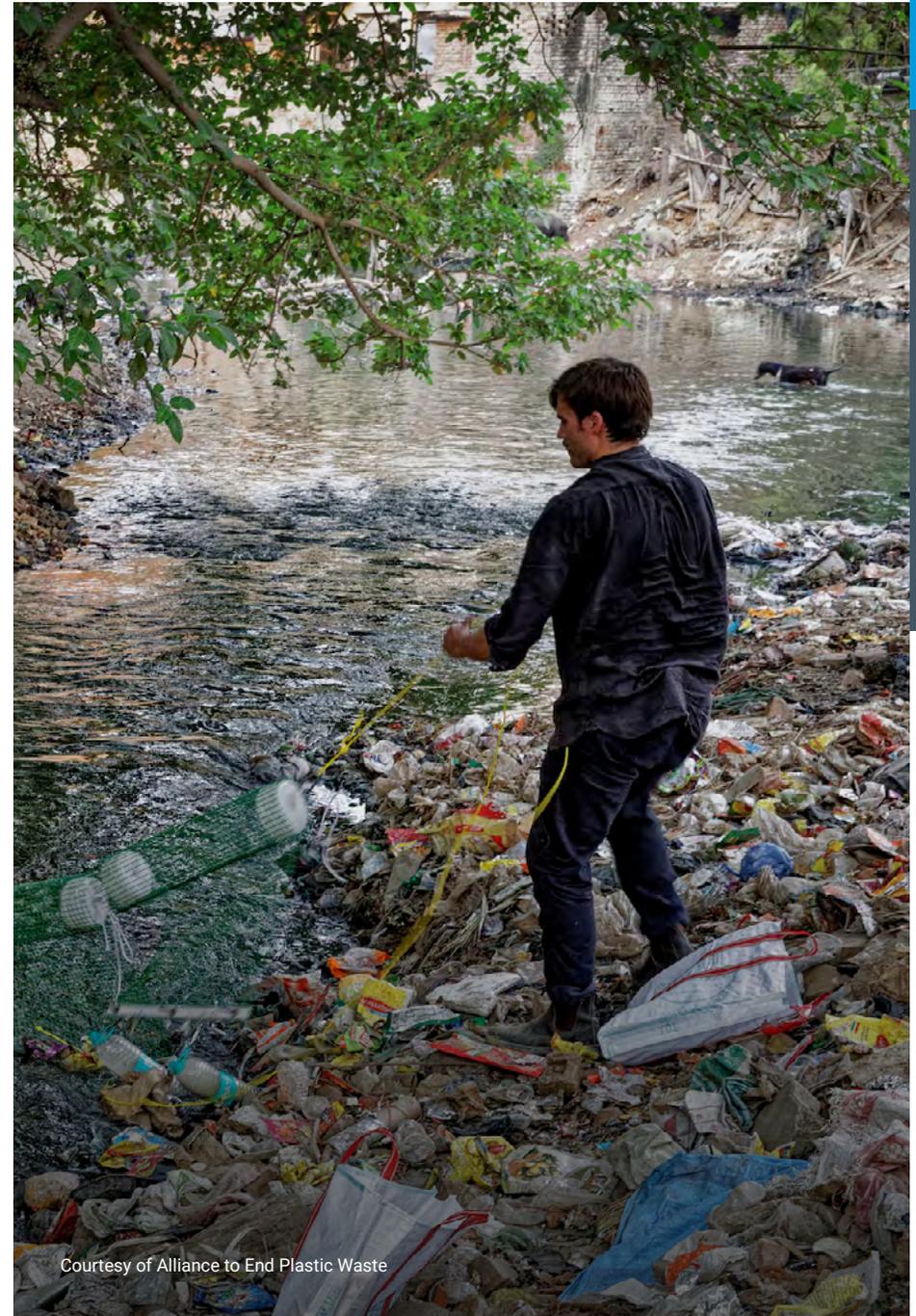


CHANNELING THE RESOURCES OF THE ENTIRE GLOBAL VALUE CHAIN

Alliance to End Plastic Waste

LyondellBasell is proud to be a founding member of the Alliance to End Plastic Waste (AEPW).

The AEPW is the first international coalition of chemical and plastics manufacturers, converters, consumer goods companies, retailers and waste management companies dedicated to partnering with the finance community, government, and environmental and economic development NGOs to find market-based solutions to ending plastic waste in the environment. Its ambition is to prevent millions of metric tons of plastic waste from leaking into the environment.



Courtesy of Alliance to End Plastic Waste



Courtesy of Alliance to End Plastic Waste

The 45+ companies in AEPW have committed \$1.5 billion through 2023 to develop, accelerate and deploy solutions, catalyze public and private investment, and engage communities to help end plastic waste in the environment.

There is a special focus on supporting waste management infrastructure development in Southeast Asian countries, which account for a significant percentage of the world’s ocean pollution. Two projects highlight these efforts.

Renew Ganga

The Ganges River, which flows through India and Bangladesh, accumulates 544,000 tons of plastic waste annually, all at risk of ending up in the ocean. The AEPW contributes funding, materials, logistics capabilities and technical expertise to the Renew Ganga initiative, which aims to clean up the Ganges in Varanasi, India, in partnership with technology company Renewlog, and create a circular local economy by collecting low-value plastic waste and converting it into fuel local businesses can use. In 2019, about 50 tons of plastic waste was collected and converted to diesel through the program. The goal for 2020 is 100 tons.

Project Stop, Jembrana

The Ijo Gading River in Jembrana province, Bali, is the island’s largest ocean plastic contributor, accounting for 12% of the province’s ocean plastics leakage. This is attributable to Jembrana’s lack of access to a proper waste management infrastructure. The AEPW is collaborating with Project Stop, which brings together the local Jembrana community and government to develop a sustainable waste system that will provide waste collection to households for the first time while creating new, permanent jobs. The new system will prevent 2,800 tons of plastic waste from leaking into the environment every year. Planning and testing are underway, and the full project is scheduled to launch by the end of 2020. Project Stop hopes to replicate the project across Indonesia and Asia.

For more information go to www.endplasticwaste.org.



IMPROVING DESIGN TO INCREASE RECYCLING RATES

Masterbatch NIR-detectable black

Black plastic is appealing to consumers and is widely used in food and personal care packaging. While this material can be recycled, it is often sent to landfill because automatic optical sorting systems used to separate post-consumer plastic waste cannot detect the color.

Automatic optical sorting systems utilize near-infrared (NIR) light which is absorbed by the black pigment, making the plastic invisible to the sorter. Many mechanical recycling facilities will not accept the material or it will be discarded as waste.

To solve this problem, LyondellBasell introduced an NIR-detectable black pigment to our range of masterbatch colors, making increased recycling of food containers, personal care bottles and other consumer packaging possible.

By making more plastics with NIR-detectable black pigment, LyondellBasell can better serve the needs of product designers and supply chain managers, while increasing recyclability.

A FOOD-SAFE PACKAGING SOLUTION FROM RENEWABLES

Circulen used in Toppits® and Albal® cling film

In addition to polymers made from recycled post-consumer plastic waste, LyondellBasell produces polypropylene (PP) and low-density polyethylene (LDPE) made from renewable raw materials as an alternative to fossil-derived resources.

In 2019, we collaborated with Nestle to achieve the first parallel production of PP and LDPE derived from renewable resources at a commercial scale. The project used Nestle's renewable hydrocarbons produced from vegetable oil and waste oils as feedstock and successfully produced several thousand tons of plastics.

LyondellBasell's *Circulen* grades of PP and LDPE made from Nestle's renewable raw materials offer the same high-quality properties as conventional plastics in terms of mechanical and product performance and they can be used in food packaging.





A life cycle assessment conducted by Neste in 2016 showed significantly lower greenhouse gas emissions for polymers produced from renewable feedstock when compared with their petroleum-based equivalents. The results were verified by an independent third party in accordance with ISO 14040-14044 and 14067 requirements.

Circulen is helping Cofresco, a company of the Melitta Group and Europe's leading supplier of branded household films, reduce its carbon footprint and increase the use of renewable content.

Cofresco chose *Circulen* LDPE for use in its Toppits® and Albal® cling film. It is an important step Cofresco is taking towards a more sustainable product portfolio and achieving their goal of becoming 100 % circular by 2025.

Circulen offers products with reduced greenhouse gas emissions over the

products' life cycle. *Circulen* products are sold using mass balance-based certificates, while *Circulen* Plus offers measurable bio-content which can be determined by carbon-14 analysis and stated as a parameter on the Certificate of Analysis.

In 2020, LyondellBasell and Neste are conducting a joint life cycle assessment study to measure the environmental performance of our *Circulen* products using Neste renewable feedstock. This study is being conducted in accordance with the requirements of ISO 14040-14044 and ISO 14067 and will be critically reviewed by an independent panel of experts.

Circulen

Polymers made from renewable feedstock have lower greenhouse gas emissions over their life cycle when compared with petroleum-based equivalents.

As part of our CO₂ emission reduction strategy, LyondellBasell, along with our joint venture partner Covestro, is investing in a major project at our shared site in Maasvlakte, the Netherlands.

The project is expected to reduce 140,000 metric tons of CO₂ emissions annually, save 0.9 petajoule of energy each year and reduce wastewater disposal, preventing 11 million kilograms of salt residue from entering surface water.

The Maasvlakte plant produces propylene oxide and styrene monomer, and wastewater is currently incinerated at a third-party location. Rather than incinerating it, the Circular Steam Project will use innovative technology to treat this water stream and convert it into energy at our Maasvlakte site.

The new process will generate steam from the plant's waste and convert it into energy for use in the on-site production processes. The water will be divided into two streams. The first stream will be biologically treated, generating biogas and allowing us to discharge the clean water in the Rotterdam estuary. The biogas generated will be reused in our site operations, thus avoiding the use of additional fuels being burned. The second waste stream, containing waste fuels and caustic waters, will enter a dry incineration process that will separate the salts and generate steam for use in the on-site production processes.

The project is scheduled to start up in the first quarter of 2021.

TARGETING SIGNIFICANT CO₂ REDUCTIONS

Circular Steam Project



IMPROVING THE ENVIRONMENTAL IMPACT AND PERFORMANCE OF GASOLINE

Biomass oxyfuels



Fuel ethers, also known as oxyfuels or oxygenates, are key components of clean-burning, high-octane gasoline. They improve fuel efficiency, engine performance and air quality by improving combustion efficiency which in turn reduces vehicle emissions including greenhouse gas emissions, volatile organic compounds, particulates and carbon monoxide.

Oxyfuels also allow vehicles to travel farther on one tank of gasoline, saving money on fuel costs, and the additive can be used in gasoline for both standard and hybrid cars.

LyondellBasell is the second largest producer of oxyfuels worldwide, producing both MTBE (methyl-tertiary-butyl-ether) and ETBE (ethyl-tertiary-butyl-ether). ETBE is produced using ethanol made from renewable raw materials. It has a lower greenhouse gas impact across its life cycle compared with petroleum-based fuel ethers. In 2019, use of LyondellBasell's ETBE gasoline

in Europe and Japan reduced global CO₂ emissions by more than 1.64 million metric tons – the equivalent of taking 350,000 cars off of the road.

We are continuously diversifying our renewable feedstocks portfolio, and in 2019, we began using United States corn ethanol in addition to Brazilian sugarcane ethanol in our United States ETBE production. Both are sustainably produced, in line with our certification from the International Sustainability and Carbon Certification (ISCC).

We are also evaluating and testing advanced bio-MTBE created from bio-methanol and produced in Europe. Advanced biofuels like these are manufactured from non-food biomass derived from agricultural waste, and have the potential to result in even lower greenhouse gas impact than bio-ethanol across their life cycle because they require no dedicated land and less energy for their production.

In pilot plant tests, our new *Hyperzone* polyethylene (PE) proprietary technology demonstrated the ability to manufacture lighter weight products without compromising strength, ultimately reducing the amount of raw material required to manufacture end-use products.

High density polyethylene (HDPE) is used to make water and industrial pipes, bulk containers, household bottles, toys, outdoor playground equipment, and sporting equipment such as canoes and kayaks. HDPE can also be recycled. The HDPE made at our pilot plant using the *Hyperzone* PE technology has proved to be stronger, tougher and more stress crack-resistant when exposed to extreme environmental conditions when compared with other types of HDPE.

That means customers can use less raw material in certain applications to achieve differential product performance. In addition, lighter weight products reduce the energy needed to transport them, which decreases the associated carbon emissions.

Another exciting aspect is the ability to incorporate high levels of post-consumer recycled materials into the *Hyperzone* HDPE, making end-use products even more sustainable.

In 2019, we completed construction of the first commercial, world-scale *Hyperzone* PE plant in La Porte, Texas, and production began in the first quarter of 2020.

The technology took years to advance to commercialization and was a product of our global research and development teams in Ferrara, Italy; Frankfurt, Germany; Cincinnati, Ohio; and Houston, Texas.

REDUCING RESOURCE USE THROUGH LIGHTER PRODUCTS

Hyperzone



A CULTURE OF SAFETY

Industry-leading health and safety record

A key tenet of how we conduct our business is to protect the health and safety of our employees, contractors and the communities where we operate.

Our GoalZERO approach means we are committed to operating safely with zero injuries, zero incidents and zero accidents. We are committed to our employees and their safety, and to ensuring that all of our colleagues get home safely every day.

Notably, our injury rate in 2019 of 0.21 was 66% lower than the industry average of 0.62. In the United States, our manufacturing facilities achieved the lowest injury rate in our history. Worldwide, 17 sites achieved more than 1 million safe working hours in 2019. However, no injury is acceptable and we strive to continuously improve our safety performance.

Embedding our GoalZERO safety culture at the A. Schulman sites we acquired in late 2018 continued to be a focus in 2019. Since the acquisition, the injury rate at these facilities has dropped by more than 50% compared with the previous year. This was due to a strong commitment by both our existing and





new employees, training, instilling our Health, Safety and Environmental Management Systems and Operational Excellence standards, and the leadership of LyondellBasell safety mentors.

Our health, safety and environmental policy states that we:

- Aim to achieve zero injuries and incidents
- Provide a safe, healthy and secure work environment for employees and contractors
- Maintain a risk-based management system that is designed to ensure compliance with applicable legal and other requirements and promote continual performance improvement
- Provide stewardship of our processes and products, practice pollution prevention and optimize resource use across all stages of the product life cycle
- Communicate openly with all stakeholders on relevant health, safety and environmental issues

In recognition of our innovative practices and leadership in the areas of health, safety, environmental and security in 2019, the American Chemistry Council named LyondellBasell the **2020 Responsible Care® Company of the Year.**

Additionally, we were recognized once again by the American Fuel & Petrochemical Manufacturers annual Safety Awards. In 2019, nine LyondellBasell facilities were recognized for their efforts in maintaining a superior level of safety in the petrochemical manufacturing and refining industries.

Distinguished Safety Award for exemplary level of safety performance:

Chocolate Bayou, Texas
Channelview, Texas
Clinton, Iowa

Elite Gold Award for exhibiting a superior level of safety performance and program innovation:

Houston Refinery, Texas
Matagorda, Texas

Elite Silver Award for exhibiting excellent safety performance and program innovation:

Corpus Christi, Texas
Victoria, Texas
Morris, Illinois
Lake Charles, Louisiana

For more information on our health and safety efforts, see GRI 403 on [pages 55–58](#)

Launched in 2018, the LyondellBasell Leadership Academy brings together enterprise-wide learning and development opportunities to help leaders prepare for roles beyond their current position.

Participants are nominated by their managers, and the programs are designed to equip our current and future leaders with the necessary tools and skills to lead in any business environment. They blend rigorous business and technical projects with a focus on personal mastery of relevant skills and career development, helping to retain top talent and ensuring ongoing effective leadership.

Yarelis Hernandez participated in the 2019 program and is applying what she learned as she contributes to our positive culture and business success.

During her 23 years at LyondellBasell, Yari has held various leadership roles in operations and corporate safety, and she recently became site manager at our manufacturing site in Clinton, Iowa. She is one of five female plant managers at LyondellBasell.

Participating in the Academy helped Yari gain insight into her leadership strengths. This includes her ability to channel her compassion, inclusiveness and family values into the leadership style that has made her successful in her previous roles and prepared her for the expansive responsibilities of her newest one.

Yari is responsible for the safety and livelihood of approximately 400 employees and contractors. She works hard to be a leader who inspires others by being credible, communicative, collaborative and constantly improving. She believes that leaders should bring out the best in people so that they can succeed.

EMPOWERING EMERGING LEADERS

LyondellBasell Leadership Academy profile



GLOBAL CARE DAY

Positive impact in the communities where we operate

In 2019, LyondellBasell marked two decades of service projects through our annual Global Care Day program.

Our efforts focused on helping to eliminate plastic waste in the environment, educating our communities about the importance of reuse and recycling, and environmental stewardship. Approximately 4,261 volunteers from 86 LyondellBasell sites volunteered more than 19,360 hours for Global Care Day.

Melbourne, Australia

Beach Patrol Australia's mission is to reduce the negative impacts of litter on the marine environment, engaging communities in reducing, reusing and recycling waste. With the help of our volunteers, approximately 40 bags of trash were collected from the streets and beaches of Port Melbourne.

Suzhou, China

Employees educated children in the Dong Shahu community about proper disposal and sorting of trash to reduce environmental pollution and increase recycling rates.

Pinda, Brazil

Employees and volunteers collected four trucks of unused furniture and electronic equipment from the Feital community for proper recycling. They also distributed 200 "Say No to Waste" books to educate community members about managing household waste.

Hong Kong, China

Soap Cycling is a charitable organization that collects, processes, recycles and distributes soap and other hotel amenities from across Asia to those who need it most. Employees collected and packaged 400 hygiene kits for the homeless in Sham Shui Po, and 500 bars of soap for redistribution in the Philippines, saving over 80kg of plastic from entering the landfill.

Berre, France

Approximately 120 employees and other volunteers worked with the non-profit Nosta Mar to preserve the Berre coastal shore and allow easy access for all people, especially those who lack mobility. The two kilometer coast was cleaned, flowers were planted, and signs were placed to inform visitors about the natural wildlife around them.

Frankfurt, Germany

Colleagues participated in a clean-up organized by Clean FFM, an initiative to maintain the cleanliness and beauty of Frankfurt. They collected eight bags of trash from Höchst City Park. Additionally, employees connected with fellow community members, showing and teaching them about LyondellBasell products and the advantages of plastics.





GRI/SASB INDICES

GENERAL DISCLOSURES

Organizational Profile

GRI 102-1
Organization name (Core)

GRI 102-2
Primary brands, products and services (Core)

LyondellBasell Industries N.V. (NYSE: LYB) is one of the largest plastics, chemicals and refining companies in the world.

We produce materials and products that are key to advancing solutions to modern challenges like enhancing food preservation and safety through lightweight and flexible packaging, protecting the purity of water supplies through stronger and more versatile pipes, improving the safety, comfort and fuel efficiency of many of the cars and trucks on the road, and ensuring the safe and effective functionality of electronics and appliances.

We sell products into more than 100 countries and are the world's largest producer of polypropylene compounds.

We participate globally across the petrochemical value chain and are an industry leader in many of our product lines. Our chemicals businesses consist primarily of large processing plants that convert liquid and gaseous hydrocarbon feedstocks into plastic resins and other chemicals.

Our customers use our plastics and chemicals to manufacture a wide range of products that people use in their everyday lives, including food packaging, home furnishings, automotive components, paints and coatings. Our refining business consists of our Houston refinery, which processes crude oil into refined products such as gasoline, diesel and jet fuel. We also develop and license chemical and polyolefin process technologies and manufacture and sell polyolefin catalysts.

For more information on our business, please see our [2019 Annual Report](#) on Form 10-K for the year ended December 31, 2019, pages 4–18.



GRI 102-3
Headquarters location (Core)

GRI 102-4
Location of operations (Core)

We maintain executive offices in London, the United Kingdom (U.K.); Rotterdam, The Netherlands; and Houston, Texas, in the United States (U.S.). We maintain research facilities in Lansing, Michigan; Channelview, Texas; Cincinnati, Ohio; Ferrara, Italy; and Frankfurt, Germany. Our Asia-Pacific headquarters are in Hong Kong. We also have technical support centers in Bayreuth, Germany; Geelong, Australia; and Tarragona, Spain. We manufacture and have joint ventures in 22 countries and our products are sold in more than 100 countries.

GRI 102-5
Ownership and legal form (Core)

LyondellBasell Industries N.V. is a global, independent chemical company incorporated as a public company with limited liability (*naamloze vennootschap*) under Dutch law.

GRI 102-6
Markets served (Core)

We manage our operations through six operating segments. Our reportable segments are:

Olefins and Polyolefins—Americas (O&P—Americas)

Our O&P—Americas segment produces and markets olefins and co-products, polyethylene and polypropylene.

Olefins and Polyolefins—Europe, Asia, International (O&P—EAI)

Our O&P—EAI segment produces and markets olefins and co-products, polyethylene and polypropylene.

Intermediates and Derivatives (I&D)

Our I&D segment produces and markets propylene oxide and its derivatives; oxyfuels and related products; and intermediate chemicals, such as styrene monomer, acetyls, ethylene oxide and ethylene glycol.

Advanced Polymer Solutions (APS)

Our APS segment produces and markets compounding and solutions, such as polypropylene compounds, engineered plastics, masterbatches, engineered composites, colors and powders, and advanced polymers, which includes *Catalloy* and polybutene-1.

Refining

Our Refining segment refines heavy, high-sulfur crude oil and other crude oils of varied types and sources available on the U.S. Gulf Coast into refined products, including gasoline and distillates.

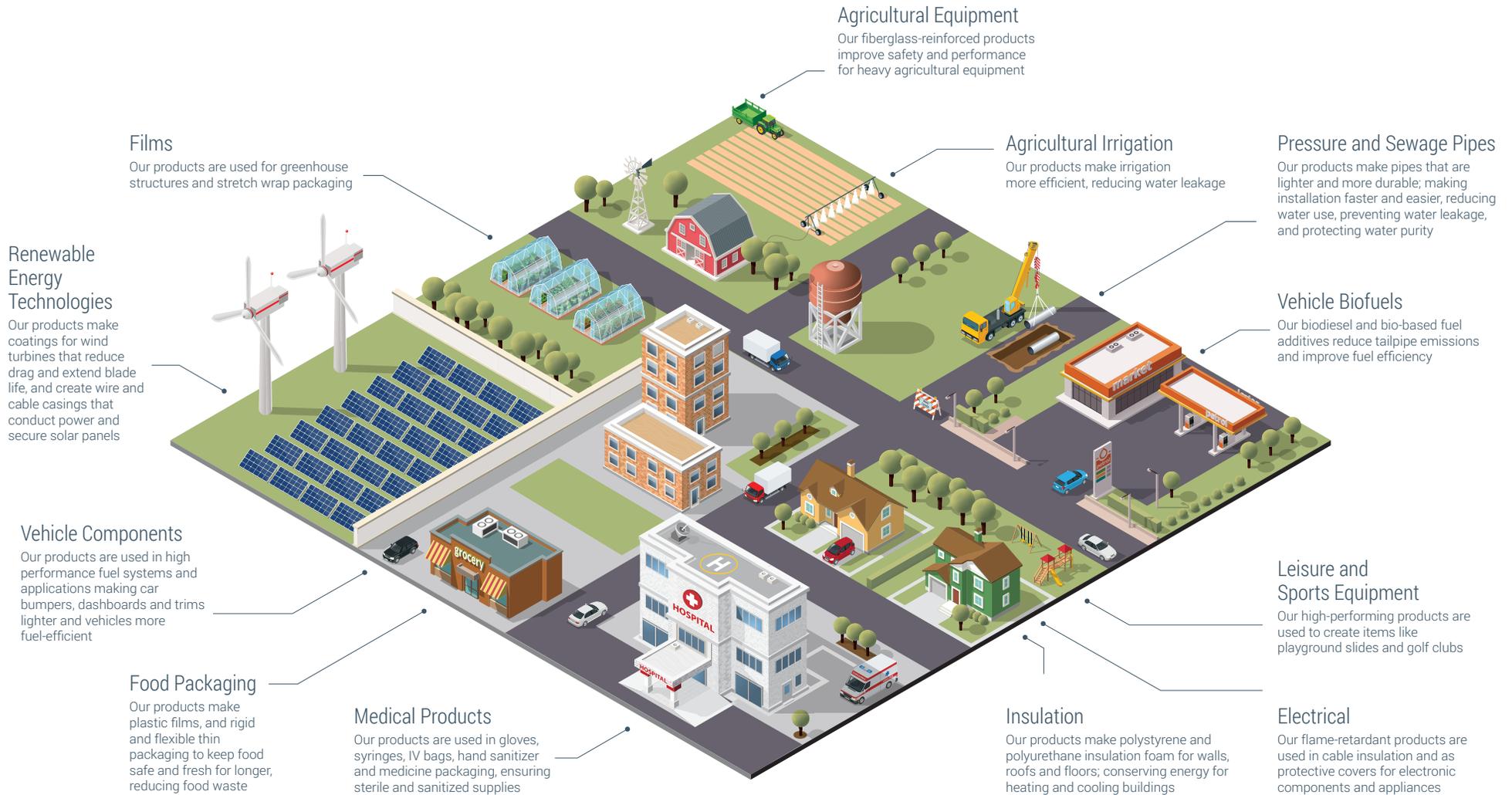
Technology

Our Technology segment develops and licenses chemical and polyolefin process technologies and manufactures and sells polyolefin catalysts.

 <p>CHEMICALS</p>	 <p>POLYMERS</p>	 <p>ADVANCED POLYMERS</p>	 <p>FUELS</p>	 <p>TECHNOLOGY</p>
<p>We produce the chemical building blocks for:</p> <ul style="list-style-type: none"> • automotive fluids • furniture/household goods • coatings/adhesive/cleaners • cosmetics/personal care products 	<p>Our versatile plastic resins are used to create a variety of products including:</p> <ul style="list-style-type: none"> • automotive parts • packaging • piping • textiles • renewable energy technologies • agricultural films/irrigation • healthcare • food supply products 	<p>Our diverse portfolio is used to create customizable products including:</p> <ul style="list-style-type: none"> • automotive parts • differentiated packaging • electronics/appliances • construction materials • roofing • flooring • geomembranes • specialty pipe 	<p>Our refinery in the U.S. produces:</p> <ul style="list-style-type: none"> • gasoline/fuel components • low-sulfur diesel • jet fuel • lubricants • oxyfuels that help improve air quality 	<p>We license our state-of-the-art manufacturing and process technologies:</p> <ul style="list-style-type: none"> • technologies that are used by chemical and plastics companies around the globe.

Our Products Advance Sustainable Living

Many of the chemicals and plastics we supply help create innovative products that meet the needs of modern society and contribute to sustainable development. Our products are found in nearly every sector of the economy.



GRI 102-7**Scale of the organization (Core)****SASB 000.A****Production by reportable segment**

Based on published capacity data and including our proportionate share of our joint ventures, we believe as of December 31, 2019, we were the:

- Largest global producer of polypropylene (PP) compounds
- Largest producer of PP in North America, with 1.9 million tons per year, including our share of our Mexican joint venture capacity and approximately 280 thousand tons of *Catalloy* capacity reported within our Advanced Polymer Solutions segment
- Largest producer of PP in Europe, with 2.7 million tons per year of capacity, including our share of our joint ventures in Poland and the Netherlands
- Largest producer of polyethylene (PE) in Europe with 2.2 million tons per year of capacity, including our share of our joint ventures in Poland and the Netherlands
- Second largest producer of propylene oxide (PO) worldwide
- Second largest producer of oxyfuels worldwide
- Third largest producer of ethylene in North America, with ethylene capacity of 5.4 million tons per year
- Fifth largest producer of ethylene in Europe with an ethylene capacity of 1.9 million tons per year

For more information on our business, please see our [2019 Form 10-K](#), pages 4–18. For a synopsis of our financials for 2019, please see GRI 201 on [page 42](#). For information on our significant shareholders, please see our [2020 Proxy Statement](#), page 27. For information on our employee figures, please see GRI 102-8 on [page 32](#).

GRI 102-8**Information on employees and other workers (Core)**

As of December 31, 2019, we employed approximately 19,065 full-time and part-time employees around the world. Of this total, 8,461 were located in the U.S. and Canada and another 8,187 were located in Europe. The remainder of our employees are in other global locations.

As of December 31, 2019, approximately 900 of our employees in the U.S. were represented by labor unions. The vast majority of our employees in Europe and Latin America are subject to staff council or works council coverage or collective bargaining agreements.

In addition to our own employees, we use the services of contractors primarily to assist with non-core business functions.

Employees

	2019		2019
Global	19,065	Latin America (including Mexico)	762
Full-time	18,686	Full-time	760
Men	15,378	Part-time	2
Women	3,306	Asia Pacific	1,630
Unallocated	2	Full-time	1,618
Part-time	379	Part-time	12
Men	134	Middle East & Africa	25
Women	245	Full-time	25
U.S./Canada	8,461	Part-time	0
Full-time	8,426		
Part-time	35		
Europe	8,187		
Full-time	7,857		
Part-time	330		

Note: Data as of December 31, 2019. Part-time is based on employment percentage (capacity utilization level). Anything less than 100% is perceived as part time.

GRI 102-9**Supply chain (Core)**

For information on our supply chain, please see GRI 102-2 on [page 29](#), as well as GRI 102-6 on [page 30](#).

GRI 102-10**Organizational changes during the reporting period (Core)**

In 2019, we developed opportunities to expand into new markets by leveraging our technologies to strengthen our position in Asia. In June, we announced new polypropylene capacity through our Thailand joint venture, HMC Polymers. In September, we signed a Memorandum of Understanding ("MoU") to build an integrated cracker and polyolefins project expanding our footprint in the rapidly growing Chinese market through a joint venture with Liaoning Bora Enterprise Group. In the U.S., we acquired certain syngas and methanol assets from Linde Gas North America, LLC in La Porte, Texas. We closed PP compounding sites located in Aurangabad, Maharashtra in India; Biatorbágy, Budapest in Hungary; Guelph, Ontario in Canada; and Worcester, Massachusetts in the U.S.

GRI 102-11**Precautionary principle (Core)**

Our Health, Safety and Environmental (HSE) Policy makes clear our commitment to conducting our business in a manner that protects the environment and provides for the safety and health of employees, contractors, customers and the public. We maintain a risk-based management system that is designed to ensure compliance with applicable legal and other requirements and promote continual performance improvement. Our process safety standards further require systematic identification of hazards and implementation of prevention and mitigation measures. Where uncertainty exists, conservative assumptions are applied.

We operate a worldwide product stewardship program that aims to make health, safety, and environmental protection an integral part of the development, manufacture, distribution, use, recycling and disposal of all our products. Our product stewardship team evaluates and prioritizes each product or product group according to the level of risk. This is determined using hazard and exposure ratings. For each risk category, specific risk management practices and requirements are identified and reviewed on a regular basis. We also work closely with our suppliers, carriers, distributors and customers to help them maintain high safety and environmental standards by providing technical assistance, training and logistic support as well as health, safety and environmental information.

We align our approach to protecting health, safety and the environment with industry best practices, participating in the chemical sector initiative Responsible Care® and the worldwide Global Product Strategy program, an initiative championed by the International Council of Chemical Associations, which aims to improve the safety of chemical products during their use and handling.

SASB 410b.1**(1) Percentage of products that contain Globally Harmonized System of Classification and Labeling of Chemicals (GHS) Category 1 and 2 Health and Environmental Hazardous Substances, (2) percentage of such products that have undergone a hazard assessment**

Our Operational Excellence Product Stewardship Standard incorporates the American Chemistry Council Responsible Care® Product Safety Code. We have clear chemical control procedures in place to comply with the Toxic Substances Control Act in the U.S. (TSCA), the European Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), the Act on the Registration and Evaluation of Chemicals in Korea (Korea REACH), and many more.

An important element in REACH is supply chain communication on the uses of chemical substances. REACH requires that Safety Data Sheets include relevant exposure scenarios for certain substances of concern as well as the implementation of the new Globally Harmonized System (GHS) of Classification and Labeling of Chemicals.

Less than 1% of the products we produce contain GHS Category 1 and 2 Health and Environmental Hazardous Substances, and 100% of these products have undergone a hazard assessment.

Our Product Stewardship Bulletins, Technical Data Sheets and Safety Data Sheets can be found at <https://productsafety.lyondellbasell.com/>.

SASB 410b.2**Discussion of strategy to (1) manage chemicals of concern and (2) develop alternatives with reduced human and/or environmental impact**

Each of our businesses conduct an annual management review to assess products and uses for risk to human health and the environment, and to drive continuous improvement and ensure that any critical gaps are closed by an action plan. Additionally, all business units and manufacturing sites are audited on a three- to five-year cycle.

We track product safety performance, review customer feedback and communicate product safety information both internally and externally.

We continuously monitor product end-use applications to anticipate any potential health and safety risks. Each year, we review the human health and environmental risks associated with existing and emerging applications in our polymer and chemicals business. Based on this assessment, we may replace raw materials used in production processes with safer alternatives or prohibit or place conditions on the sale of products for certain end-use applications. We communicate all end-uses that are prohibited or require further review on our external website to ensure complete transparency for customers who purchase our products.

We also partner closely with our research and development teams to assess the potential human health and environmental hazards and anticipated end-use clearances of new products in the development pipeline. This evaluation includes a review of raw materials used in the production process and any associated potential byproducts.

GRI 102-12**External initiatives (Core)**

We participate in initiatives across our industry and wider value chain that promote safe operations and address the reduction, recycling, reuse and repurposing of plastic waste. Coalition engagement includes activities in 2019 and early 2020.

Responsible Care®

We are a member of the voluntary chemical sector initiative Responsible Care®, which aims to improve the environmental, health, safety and security performance of our industry. We implement the principles of Responsible Care® across our operations every day through GoalZERO, our commitment to operating safely and with zero incidents, zero injuries and zero accidents. The American Chemistry Council named LyondellBasell the 2020 Responsible Care® Company of the Year in recognition of our innovative practices and leadership in the areas of environmental, health and safety and security in 2019.

Alliance to End Plastic Waste

We are a founding member of the [Alliance to End Plastic Waste](#) (AEPW), the first global, cross-value-chain initiative dedicated to eliminating plastic waste in the environment.

This CEO-led, cross-sector, not-for-profit coalition has a clear mission to develop, accelerate and deploy solutions; catalyze public and private investment; and engage communities to help end plastic waste in the environment.

The AEPW is the first international coalition of chemical and plastics manufacturers, converters, consumer goods companies, retailers and waste management companies dedicated to

partnering with the finance community, government, and environmental and economic development NGOs to find market-based solutions.

Circular Plastics Alliance

In Europe, we support the goals of the Circular Plastics Alliance, launched by the European Commission, through our engagement in the Polyolefins Circular Economy Platform (PCEP). This organization brings together brand owners, retailers, waste management organizations, recyclers, converters and producers to drive a circular polyolefins system by designing out waste, keeping products and materials in use for as long as possible, and then recycling them into high-quality new raw materials.

Sustainable Packaging Coalition

In the U.S., we are a member of the Sustainable Packaging Coalition, a collaborative that is the leading voice on sustainable packaging. The organization brings packaging sustainability stakeholders together to catalyze actionable improvements to packaging systems and lend an authoritative voice on issues related to packaging sustainability.

New End Markets Opportunities (NEMO) for Film

The majority of flexible packaging — such as films, wraps, bags and pouches — is made from polyethylene. This material is typically not picked up curbside and not widely recycled. Since 2017, participants in the Plastics Industry Association (PLASTICS) NEMO project have tested performance and quality of a variety of applications using recycled films. In 2020, we will use recycled films as asphalt modifier on the parking lot at our Cincinnati, Ohio, Technology Center in the U.S. The formulation has the potential to reduce the cost of polymer modified asphalt, reduce CO₂ emissions and improve the environmental impact and life span of asphalt.

Materials Recovery for the Future (MRFF)

We are working with Materials Recovery for the Future (MRFF) to improve flexible packaging recovery, recycling and end-use applications. Research sponsored by MRFF demonstrates that recycled flexible packaging can also be successfully used in building products such as roofing materials, railroad ties and plastic pallets.

The Recycling Partnership's Polypropylene Recycling Coalition

The Polypropylene Recycling Coalition works to improve polypropylene recycling (No. 5 plastic) in the U.S. by awarding grant dollars for purchasing polypropylene sorting equipment and supporting consumer education programs in communities. Through grants, research and consumer education programs, the Coalition aims to make it easier for people to recycle polypropylene in curbside recycling and ensure that more recyclers can effectively sort the material in their facilities.

The Recycling Partnership is a national nonprofit organization that leverages corporate partner funding to transform recycling for good in states, cities and communities nationwide. It is the only organization in the country that engages the full recycling supply chain from the corporations that manufacture products and packaging to local governments charged with recycling to industry end markets, haulers, material recovery facilities and converters. By the end of 2019, the organization

estimates it diverted 230 million pounds of new recyclables from landfills, saved 465 million gallons of water and avoided more than 250,000 metric tons of greenhouse gases.

Pacific Northwest Secondary Sorting Demonstration Project

Recycling infrastructure development is critical to achieving a circular economy. We invested in the Pacific Northwest Secondary Sorting Demonstration Project which showed how secondary sorting can be used to improve recycling infrastructure in the U.S., providing a blueprint for implementation of similar projects in other municipalities. Results of the 60-day project conducted in Portland, Oregon, suggest that installing a secondary sorting system in regional materials recovery facilities would increase material recovery or landfill diversion by more than 100 million pounds per year.

LyondellBasell is a member of approximately 150 trade associations that provide a venue for the chemical, plastic and refining industries to lend our voices to issues that impact our industry. As a trade association member, we seek to advance collaborative and constructive approaches to industry engagement with policymakers and other stakeholders to advance sound public policy. While we may not always agree with the positions taken by an association or its members, corporate memberships enable us to voice our concerns, perspectives and positions on proposed legislation and regulations.

We also participate in a variety of issue advocacy coalitions and alliances that seek to advance policy proposals focused on key priorities for the petrochemical and refining industries and the company. We review these memberships annually to assess their business value and alignment with our policies and priorities. The Director of Government Relations has oversight over memberships in U.S. trade associations.

Dues paid to U.S.-based trade associations to which we contribute \$50,000 or more annually are disclosed in our [U.S. Political Activity Report](#).

The following is a partial list of the industry associations in which we are engaged:

- American Chemistry Council
- American Fuel & Petrochemical Manufacturers
- Cefic (The European Chemistry Industry Council)
- China Petroleum and Chemical Industry Association (as of 2020)
- European Petrochemical Association
- International Council of Chemical Associations
- National Association of Manufacturers
- PlasticsEurope
- Plastics Industry Association (U.S.)
- World Plastics Council

Strategy

GRI 102-14 CEO letter (Core)

For the annual letter from our CEO regarding our sustainability strategy and approach, please see [page 2](#).

Ethics & Integrity

GRI 102-16 Values, principles, standards and norms of behavior (Core)

LyondellBasell upholds high ethical standards and is committed to complying with applicable laws and regulations. Our global compliance team monitors compliance and works with the business to drive our strong performance in this area. This team is overseen by the Chief Compliance Officer who has a reporting line to the Audit Committee of the Board. The Audit Committee has ultimate oversight of compliance issues.

Our [Code of Conduct](#) sets out our expectations on topics such as respecting fellow employees, anti-corruption, conflicts of interest, trade compliance, anti-trust and competition law, insider trading, sanctions, misconduct and political donations. It is available in 18 languages on our company website. New employees are trained on the Code and all employees complete annual refresher training.

We also have compliance policies to guide employees in specific areas such as due diligence for mergers and acquisitions, and conflict minerals.

More detailed requirements for the CEO, CFO and Chief Accounting Officer are set out in our [Financial Code of Ethics](#).

Through GoalZERO, we have a comprehensive program to protect the health and safety of our employees and contractors. We uphold all fair wage and hours laws wherever we work. We never use child, forced, bonded or involuntary labor and we do not knowingly work with subcontractors or suppliers who use child or forced labor or engage in human trafficking practices.

We publish an annual [Slavery and Human Trafficking Statement](#) in accordance with the U.K. Modern Slavery Act of 2015. We also comply with the [California Transparency in Supply Chains Act of 2010](#) in the U.S.

Minerals including tin, tantalum, tungsten and gold, known as conflict minerals, can be associated with human rights risks, if they are sourced from war-torn countries such as the Democratic Republic of Congo (DRC). We comply with conflict minerals laws and regulations and our Conflict Minerals Policy outlines our approach to sourcing responsibly. We outline the risks and report due diligence actions taken to manage risks with our suppliers in our annual [Conflict Minerals Report](#), filed with the U.S. Securities and Exchange Commission.

In 2019, we conducted a review of the products manufactured by our engineered composites business that included metal inserts; this review determined that none of the inserts contained a conflict mineral. We currently have two products manufactured by our polyolefins business that contain tin which could be a conflict mineral if sourced from the DRC or an adjoining country. During 2019, we sourced tin from two suppliers, one of which was potentially sourced from the DRC or an adjoining country and as such we will no longer source from that supplier.

Additionally, in 2020, we launched our [Supplier Code of Conduct](#), in which we outline our environmental, health, safety, social, governance and ethical expectations for those with whom we do business. Many of our standard contract templates and purchasing terms and conditions incorporate the Supplier Code.

We also implemented a [Human Rights Policy](#), which sets forth our commitment to respecting human rights throughout our global operations.

GRI 102-17 Mechanisms for advice and concerns about ethics

We encourage employees to speak up if they have concerns about violations of company policies or the law by reporting the issue to their supervisor or manager, human resources representative, or any member of the Legal or Compliance Department.

We also offer an independent whistleblower telephone helpline and website, which is available 24-hours a day and in multiple languages. It is operated by [EthicsPoint](#), a company providing third-party reporting for many global companies. The whistleblower telephone helpline is available to any stakeholder.

In 2019, we received a total of 133 reports through EthicsPoint, of which 77% were submitted anonymously and 27% were substantiated. Issues reported include discrimination (including harassment and retaliation), misconduct or inappropriate behavior, conflicts of interests and environmental protection, health or safety law.

LyondellBasell prohibits retaliation against people raising concerns.

Governance

GRI 102-18

Governance structure of the organization (Core)

GRI 102-19

Delegation of responsibility

GRI 102-20

High-level accountability for sustainability topics

Responsibility for sustainability ultimately lies with our CEO and the senior leadership team with oversight by the LyondellBasell Board of Directors and its Committees. During regularly scheduled Board and Committee meetings, our directors receive information on environmental, social, and governance matters and topics, as well as updates on the Company's sustainability strategy and progress.

The Health, Safety, Environmental and Operations (HSE&O) Committee of the Board regularly reviews and monitors the Company's health, safety and environmental performance statistics; provides oversight of the programs, initiatives and activities in the areas of technology and sustainability; reviews with management environment, health, safety, product stewardship and other sustainability issues that can have a material impact on the Company; and reviews the status of related policies, programs and practices. This Committee also receives updates on the progress of our sustainability activities at least biannually and reviews the Sustainability Report.

Other standing Committees of the Board oversee additional aspects of our sustainability and corporate governance profile. The Audit Committee reviews the integrity of the Company's financial statements, internal controls and compliance function, including related party matters, EthicsPoint helpline reports and other systems for monitoring compliance with the Company's Code of Conduct; the Compensation Committee reviews our executive compensation and talent management programs; and the Nominating and Governance Committee reviews the Company's corporate governance practices, guidelines and policies, including those related to director recruitment and nominations.

Each of the Board's Committees comprises solely independent directors and meets at least quarterly to, among other things, review and monitor the aspects of the Company's sustainability programs and performance within their respective areas of responsibility and expertise.

The Senior Vice President of Health, Safety and Environment, who reports directly to the CEO, is the primary management liaison to the HSE&O Committee with responsibility for presenting program information and indicators on health, safety and environmental performance to the Board. The Senior Vice President of R&D, Technology and Sustainability, who also reports directly to the CEO, functions as the Chief Sustainability Officer (CSO). This individual reports to the HSE&O Committee on sustainability initiatives and reporting, and also chairs the Leadership Team Sustainability Steering Committee. Our Executive Vice President and Chief Legal Officer and Senior Vice President, Human Resources, both also CEO direct reports, serve as the primary management liaisons to the Nominating and Governance and Compensation Committees,

respectively. They regularly report to those Committees on governance, compensation and talent management matters. The Chief Compliance Officer, who has a reporting line to the Audit Committee, regularly presents information to that Committee regarding the Company's compliance programs.

The Leadership Team Sustainability Steering Committee is comprised of various members of the company's Leadership Team, all of whom report directly to the CEO. This Steering Committee considers matters of policy, strategy and programs to advance sustainability within the company, and receives information on sustainability topics from various departments within the company for information, review or decision-making purposes.

The Associate Director of Global Sustainability reports to the CSO and is responsible for the day-to-day management of sustainability-related activities.

For information on our overall Board structure, please see our [2020 Proxy Statement](#), pages 19–21, as well as our governance structure around managing our greenhouse gas (GHG) emissions under GRI 305 on [pages 49–50](#).

GRI 102-21

Access to the board

Shareholders and other interested parties may communicate with the Board or any individual director. Communications should be addressed to our Corporate Secretary at corporatesecretary@lyb.com or by mail:

LyondellBasell Industries, 4th Floor, One Vine Street, London W1J 0AH, United Kingdom.

GRI 102-22

Composition of the board and its committees

For information on our overall Board structure, please see our [2020 Proxy Statement](#), pages 19–21.

GRI 102-23

Chair of the highest governance body

Our Board is led by an independent Chair whose responsibilities include, among other things, leading Board meetings and executive sessions, approving Board meeting agendas and facilitating information flow and communication among directors and with management. Our Board believes that the separation of the positions of Chair and Chief Executive Officer promotes strong Board governance, independence and oversight, allowing our Chair to focus on managing Board matters while our CEO focuses on managing our business.

For additional information on our Board leadership structure, please see our [2020 Proxy Statement](#), page 15.

GRI 102-24**Board nomination and selection processes****GRI 102-25****Board conflicts of interest****GRI 102-26****Board and executive roles****GRI 102-28****Board performance**

Discussion of our Board's nominating process, policies regarding conflicts of interest and transactions with related parties, as well as their roles and committee assignments and leadership positions, can be found in our [2020 Proxy Statement](#) on pages 7–14 and 22–24. Information on our Board's annual self-assessment process can be found on page 16.

GRI 102-29**Board identification of ESG impacts, risks and opportunities****GRI 102-30****Board ESG review of risk management processes**

Our Board of Directors has broad oversight of the Company's risk profile and risk management structure, including risks and opportunities related to environmental, social and governance matters.

The primary means by which our Board oversees the Company's risk management structure and policies is through regular communication with management. At each Board and Committee meeting, members of management are asked to report on matters affecting the Company's ESG risk profile. Board members also participate in dedicated workshops with the Company's enterprise risk management organization and outside consultants, in which Board members and management work together to identify and assess the Company's primary risks.

In September 2019, the Company's risk management workshop focused on two specific areas of risk, one of which was sustainability. Board members discussed, among other topics, risks and opportunities and the role of the Company and its business in accelerating the development and use of sustainable products and technologies.

In carrying out its oversight responsibility, the Board has delegated to individual Board Committees certain elements of its oversight function.

For information on our Board-level accountability for ESG topics, please see GRI 102-20 on [page 36](#).

GRI 102-31**Frequency of board review****GRI 102-32****Report review**

Our HSE&O Committee of the Board reviews and approves our Sustainability Report annually.

GRI 102-33**Board communication****GRI 102-34****Concerns communicated to the board**

Our Board welcomes investor and stakeholder input on environmental, social, governance, executive compensation, and other matters.

In 2019, shareholders communicated their concerns to the Board surrounding issues of climate change, corporate culture and diversity at the Board and senior management level. These, and other sustainability matters communicated to the Company throughout the year, were brought to the Board for discussion and part of its decision-making process.

For information on communicating to the Board, please see GRI 102-21 on [page 36](#).

GRI 102-35**Remuneration policies for the board and senior executives****GRI 102-36****Process for determining remuneration****GRI 102-37****Remuneration shareholder resolutions**

Information on director and executive compensation can be found in our [2020 Proxy Statement](#), pages 25–26 and 36–59.

GRI 102-38**CEO/employee pay ratio**

Information on the annual total compensation of the global median employee and compensation of our CEO, see page 59 of our [2020 Proxy Statement](#).

Stakeholder Engagement

GRI 102-40 Transport (Core)

GRI 102-41 Union representation (Core)

GRI 102-42 Stakeholder identification (Core)

GRI 102-43 Approach to stakeholder engagement (Core)

GRI 102-44 Key topics and concerns raised (Core)

We recognize that our success depends on building relationships with our stakeholders. We engage with internal and external stakeholders through formal and informal channels and we have long-standing memberships in industry associations. The table that follows provides an overview of how we engage with key stakeholders.

In 2019, we designed and implemented a stakeholder engagement process around sustainability to develop a high-level analysis of our business environment and strategic options for presentation to our senior leadership team. This included an evaluation of our strategic priorities, scenario planning and consultations with internal and external stakeholders.

Stakeholder groups consulted:

- Customers
- Brand owners
- Retailers
- Waste management companies
- Suppliers
- Industry associations
- NGOs
- Investors
- Community members

Stakeholder Group

	Method of Engagement	Top ESG Issues
Customers	We regularly speak with customers to improve our products and respond to their needs. Customer surveys help us identify ways to improve our products and customer service. Our sales representatives and technical experts work closely with customers to address concerns and provide product stewardship guidance. Customers regularly visit our manufacturing sites to review our operations and observe our compliance with international standards, such as ISO and International Automotive Task Force (IATF), and applicable laws and regulations.	<ul style="list-style-type: none"> • Circular economy, circular design and recycled content • Life cycle assessments, GHG footprint and externalities • Plastic waste • Healthy, safe and sustainable products • Convenience for shoppers • Renewable feedstocks • Sustainable packaging solutions • Shift from “best-looking” products to “most sustainable”
Employees	Employees have regular conversations with managers, and we gather employee feedback through a company-wide employee survey every two years. Employee-wide communications include a monthly e-newsletter and video news updates, quarterly newsletters at the major manufacturing sites, and social media updates. Senior leaders communicate with employees through various online and face-to-face channels, including town hall events and regular site visits. Employees can anonymously report concerns at any time through EthicsPoint, our third-party ethics helpline.	<ul style="list-style-type: none"> • Single-use plastic and plastic waste • Recycling • Energy consumption • Recruiting • Water use • Health and safety • State of the business • Project announcements
Investors and Shareholders	We directly communicate our ESG progress with investors on a regular basis. We also provide periodic updates on our progress through investor conferences and our website, quarterly earnings communications and biennial Investor Day.	<ul style="list-style-type: none"> • Plastic waste • Single-use plastics • Circular economy • GHG commitments and science-based targets • Energy efficiency • Renewable energy
NGOs	We regularly engage with non-governmental organizations. These engagements take place through one-on-one discussions with senior leaders, as well as through coalitions that bring together stakeholders on sustainability topics that we advance.	<ul style="list-style-type: none"> • Global threats to forests, marine plastics, freshwater ecosystems, wildlife and climate • Plastic waste • Circularity • GHG commitments and science-based targets • Public policy engagement • Human rights • Opportunities for underrepresented groups
Suppliers	We regularly engage with our suppliers to achieve our GoalZERO ambitions, with a particular focus on people, product and process safety. For example, we support contractors with comprehensive safety training at sites and hold annual contractor HSE forums where our CEO participates.	<ul style="list-style-type: none"> • Fossil fuel alternatives • Greening of the value chain • Water use • Effluents and waste • Biodiversity

Labor unions and works councils

In 2019, approximately 900 (10%) of our employees in the U.S. were represented by labor unions. The vast majority of employees in Europe and Latin America are subject to staff councils or works council coverage or collective bargaining agreements.

Local communities

We regularly meet with community members where we operate to share information about the company and listen to concerns. At some of our manufacturing sites we engage through formal Community Advisory Panels. We also hold site tours for community leaders, elected officials, educational institutions and the public. Through our philanthropic program and annual Global Care Day, the company and our employee volunteers have a positive impact on hundreds of communities across the world.

Community Advisory Panels (CAPs)

Our CAPs are comprised of local residents who represent a cross-section of the community, including those living in nearby neighborhoods, and industry peers, local academia, and healthcare, business and civic leaders. We organize our own CAPs to address stakeholder questions and concerns, as well as share information about our activities in the area. We also participate in community advisory groups with other companies. We currently engage with a total of 12 CAPs in the U.S. and Europe.

Below are key topics expressed by our CAPs in 2019:

Safety	<ul style="list-style-type: none"> • Rust and/or corrosion inspection procedures • How fire suppression systems work • Understanding when public notification systems are utilized
Emergency management	<ul style="list-style-type: none"> • Site safety • Hurricane preparedness • Freeze preparedness • Flood precautions and preparedness • Shelter-in-place procedures
Emissions and air quality	<ul style="list-style-type: none"> • How air emission exceedances are managed and reported • Fence-line monitoring • Controlling and mitigating fugitive air emissions • Controlling and mitigating flare emissions
Water quality	<ul style="list-style-type: none"> • Methods of fighting fires, and managing environmental impacts of firewater runoff • Groundwater quality, analysis and reporting
Hazardous materials and storage	<ul style="list-style-type: none"> • Storage tank design, inspection, and maintenance and fire prevention
Other	<ul style="list-style-type: none"> • Workforce development and apprenticeships • Managing post-consumer plastic waste and the Alliance to End Plastic Waste

Industry associations

We collaborate with industry and value chain partners to advance sustainable solutions. We belong to approximately 150 industry associations worldwide, most of which are in the U.S. and Europe. Senior executives and more than 230 employees participate in industry association boards, committees and working groups.

Government and regulators

We communicate with government, legislative and regulatory officials through issue-specific meetings, industry events and visits to our sites. We respond to public consultations to provide input and share expertise on future legislation or regulation.

Listening to our people

The voice of our employees informs many of the decisions made at LyondellBasell. We seek and receive input from our employees in many ways, including through the biennial employee engagement survey. Approximately 70% of employees responded to the 2018 survey, which was conducted prior to the acquisition of A. Schulman.

Our employees reported that they were satisfied with LyondellBasell as a place to work (82% of respondents), feel proud to work for LyondellBasell (80% of respondents), are excited about the company's future (79% of respondents) and would recommend LyondellBasell as a good place to work (79% of respondents).

Employees pointed to the need for more individual learning and development opportunities, and also felt the company's performance management system as a whole could be more meaningful.

As a result, we developed a more holistic approach to performance management in 2018, one that asks leaders and the employees they manage to engage in continuous performance conversations. In addition to equipping leaders with tools through the Leadership Academy (see story on [page 26](#)), we launched a series of webinars focusing on the shift to continuous performance conversations. This training, attended by 950 leaders worldwide, provided tips, tools and practice to make these conversations more meaningful.

The employee survey will be conducted again in 2020.

Reporting Practice

GRI 102-45

Entities included in financial statements (Core)

GRI 102-46

Defining report content and topic boundaries (Core)

In this report we describe our approach to sustainability, and how we are developing products and solutions for a more sustainable future, protecting and investing in our people, managing our environmental footprint and demonstrating our commitment to being a responsible, good neighbor in the communities where we operate.

The environmental, safety and employee data in this report relates to global operations at our majority owned or operated manufacturing sites, pipelines and large offices for 2019, unless stated otherwise. Financial data and narrative includes our joint ventures. We report on our sustainability performance on an annual basis. Our 2018 Sustainability Report can be found on our website at www.lyondellbasell.com/sustainability.

GRI 102-47

Material aspects included (Core)

Our materiality assessment identifies the sustainability issues of significance to our stakeholders, business and value chain.

We conducted our first materiality assessment in 2018. In this assessment, we evaluated input from leaders across the company and considered our impacts on the economy, society and the environment.

We identified 15 issues that are the most important to our stakeholders and business, with nine topics deemed most material.

In 2019, we tested our assessment with a variety of external stakeholders. The results of this engagement can be found in GRI 102-44, [page 38](#).

We will conduct our next materiality assessment in 2021.

Most material topics in order of priority:

- Sustainable and circular products
- Health and safety
- Plastic waste in the environment
- Socioeconomic value creation
- Climate change, clean air
- Water use
- Transparent and responsible business practices
- Employee engagement
- Community development

Definitions:

Clean Air: Working to reduce emissions of air pollutants from our operations.

Climate Change: Working to reduce GHG emissions and contributing to the mitigation of and adaptation to the negative effects of climate change. Working to use energy more efficiently and investing in renewable energy sources that lower the overall environmental footprint.

Community Development: Taking action to minimize and mitigate adverse community impacts and identifying opportunities to enhance positive impacts on the community, including local job creation, societal participation and philanthropic activities.

Employee Engagement: Building an engaged, talented workforce by developing skill sets, supporting diversity and ensuring fair employment and work practices.

Health and Safety: Ensuring the health and safety of our workers and safety of our operations.

Plastic Waste in the Environment: Working to prevent the release or escape of plastic waste to the environment.

Socioeconomic Value Creation: Creating economic value for LyondellBasell stakeholders including shareholders, employees, customers, suppliers, communities and society.

Sustainable and Circular Products: Delivering technologies and products that support the circular economy and enable sustainable living.

Transparent and Responsible Business Practices: Demonstrating integrity and adherence to responsible business practices expected by the marketplace, stakeholders and international standards.

Water Use: Working to reduce withdrawal and consumption of water.

GRI 102-50**Reporting period (Core)****GRI 102-51****Date of most recent report (Core)****GRI 102-52****Reporting cycle (Core)**

We report annually on our environmental, social and governance policies, progress and performance. While disclosures are based on the previous calendar year, narrative may include relevant activities that took place during the year in which the report is published. Our last report was released in September 2019.

GRI 102-53**Report contact (Core)**

More information can be found at www.lyondellbasell.com/sustainability or you may contact us by email at sustainability@lyb.com.

GRI 102-54**Claims of reporting in accordance with the GRI Standards (Core)****GRI 102-55****GRI content index (Core)**

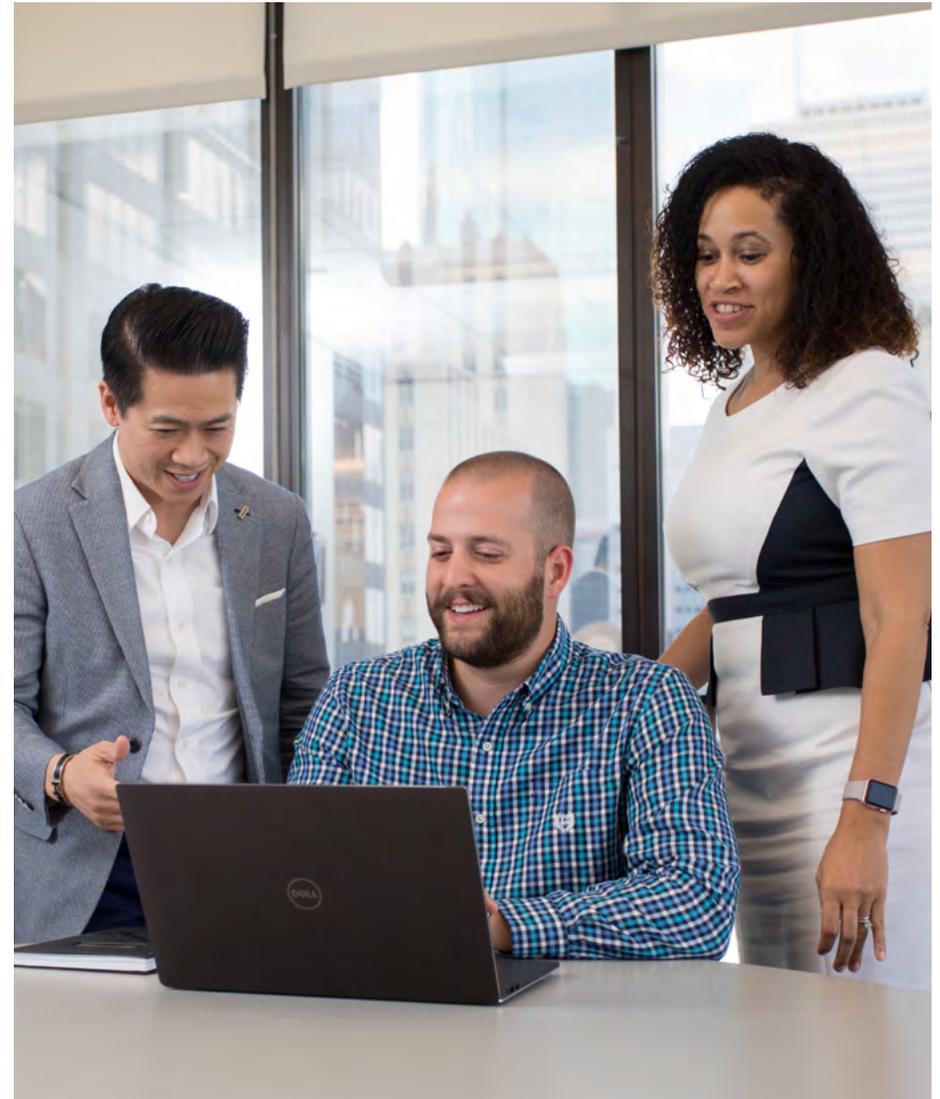
GRI Standards: All are based on the 2016 guidance, except for GRI 303 – Water & Effluents (2018), and GRI 403 – Occupational Health & Safety (2018).

SASB Standard: Resource Transformation – Chemicals

An index of where our GRI disclosure can be found throughout this report is located on [pages 65–68](#), and an index for our SASB disclosures can be found on [page 69](#).

GRI 102-56**External assurance (Core)**

Our Scope 1 GHG emissions for sites operating under the European Union Emissions Trading System (EU ETS) are externally assured. We currently do not externally assure our Sustainability Report.



ECONOMIC

Economic Performance

GRI 201-1

Direct economic value generated and distributed

Highlights of Consolidated Financial Statements

2019 Financials (\$ in millions)

	2017	2018	2019
Sales and other operating revenues	\$34,484	\$39,004	\$34,727
Operating income	\$5,460	\$5,231	\$4,116
Income from equity investments	\$321	\$289	\$225
Net income	\$4,877	\$4,690	\$3,397
Diluted weighted average share count (millions)	399	389	353
Diluted EPS (\$/share)	\$12.23	\$12.01	\$9.58
EBITDA	\$7,134	\$6,867	\$5,692
Cash flow from operating activities	\$5,206	\$5,471	\$4,961
Capital expenditures	\$1,547	\$2,105	\$2,694

2019 Sales by Region

U.S./Canada	49%
Europe	33%
Latin America (including Mexico)	6%
Rest of the World	12%

2019 EBITDA by Segment (\$ in millions)

O&P Americas	\$2,302
O&P EAI	\$1,062
I&D	\$1,557
APS	\$424
Refining	(\$65)
Technology	\$411
Other	\$1

For information about our financial performance, see our [2019 Form 10-K](#).

INFORMATION RELATED TO FINANCIAL MEASURES – This report makes reference to certain “non-GAAP” financial measures as defined in Regulation G of the U.S. Securities Exchange Act of 1934, as amended. EBITDA, as presented herein, may not be comparable to a similarly titled measure reported by other companies due to differences in the way the measure is calculated. We calculate EBITDA as income from continuing operations plus interest expense (net), provision for (benefit from) income taxes, and depreciation & amortization. EBITDA should not be considered an alternative to profit or operating profit for any period as an indicator of our performance, or as an alternative to operating cash flows as a measure of our liquidity.

Reconciliation of Net Income to EBITDA (\$ in millions)

	2017	2018	2019
Net income	\$4,877	\$4,690	\$3,397
Loss from discontinued operations, net of tax	\$18	\$8	\$7
Income from continuing operations	\$4,895	\$4,698	\$3,404
Provision for income taxes	\$598	\$613	\$648
Depreciation and amortization	\$1,174	\$1,241	\$1,312
Interest expense, net	\$467	\$315	\$328
EBITDA	\$7,134	\$6,867	\$5,692

GRI 201-2**Financial implications and other risks and opportunities due to climate change**

Our business faces climate-related risks, including potential increased costs to comply with climate change legislation and related regulatory initiatives in Europe and the U.S. Additionally, climate changes, such as drought conditions or increased frequency and severity of hurricanes and floods, could have an adverse effect on our assets and operations.

There has been a broad range of proposed or promulgated international, national and state laws focusing on GHG emissions reduction. These laws apply or could apply in countries where we have interests or may have interests in the future. Laws and regulations in this field continue to evolve and, while they are likely to be increasingly widespread and stringent, at this stage it is not possible to accurately estimate either a timetable for implementation or our future compliance costs relating to implementation.

Under the 2015 Paris Agreement, parties to the United Nations Framework Convention on Climate Change agreed to undertake ambitious efforts to reduce GHG emissions and strengthen adaptation to the effects of climate change. While the U.S. notified the United Nations in August 2017 that it will be withdrawing from the Agreement, other regions in which we operate, including in particular the European Union, are preparing national legislation and protection plans to implement their emission reduction commitments under the Agreement. Furthermore, the European Union is considering accelerating its own commitments to achieve carbon neutrality by 2050. These actions could result in increased costs of purchased energy and increased costs of compliance for impacted locations.

Additionally, we have a number of operations within the framework of the EU emissions trading scheme (ETS). We also have a number of operations in the U.S., which are subject to various Environmental Protection Agency (EPA) regulations for GHG reporting and permitting.

Changing weather patterns due to climate change have the potential to disrupt our supply chain and operations. For example, we have observed restrictions to shipping feedstock via depletion of the Rhine River in Europe waterways in times of unseasonal weather variation. There is also a growing concern over the reliability of water sources, including around the Texas Gulf Coast where several of our facilities are located. The decreased availability or less favorable pricing for water as a result of population growth, drought or regulation could negatively impact our operations, including by impacting our ability to produce or transport our products.

Assessing climate risk

The impacts of climate change can be both positive and negative on a local, regional or global basis and are difficult to predict with any accuracy.

We integrate climate-related risks and opportunities into our Enterprise Risk Management (ERM) approach. Climate-related risks and opportunities are identified at an enterprise level (i.e., with our Leadership Team), department level (manufacturing sites) and at a program/project level, where appropriate. The ERM approach utilizes a six-step risk management process that also includes monitoring and reviewing based on the International Standard ISO 31000. As we move forward, we will expand our climate-related assessment process.

Our initial assessments have highlighted the following risks and opportunities:

Risks

- Increased costs for compliance with changes in laws including emission trading schemes
- Physical risks due to altered weather patterns such as hurricanes, which could have adverse impact on our assets and operations
- Transformation risks due to changing demand for products by our customers

Opportunities

- We are developing technologies for the production of chemical products with a lower environmental footprint across their life cycle, including reduced CO₂ emissions.
- Our polyolefin products are used in a wide variety of applications and sectors including automotive, flexible and rigid packaging, housewares and construction pipes, all of which yield CO₂ savings across the overall product life cycle as compared with the use of other materials.
- Other products such as styrene and polyols are used to produce building insulation, an application which improves energy savings and reduces CO₂ emissions.
- We supply materials used in water management infrastructure and utilities, principally pipe grades.
- We produce a range of biofuels, notably ETBE, MTBE and biodiesel, which help to reduce automobile emissions and meet clean air standards.

For more information on our GHG emissions and climate-related risks and opportunities, see our CDP response. For information on our governance and accountability structure around climate change and energy use, see Energy section on [page 47](#) and Emissions section [pages 49–50](#). For more information on climate-related risk factors, see our [2019 Form 10-K](#), page 27.

GRI 201-3**Defined benefit plan obligations and other retirement plans**

We have defined benefit pension plans that cover employees in the U.S. and various non-U.S. countries. We also sponsor postretirement benefit plans other than pensions that provide medical benefits to certain of our U.S., Canadian and French employees. In addition, we provide other postemployment benefits such as early retirement and deferred compensation severance benefits to employees of certain non-U.S. countries.

At December 31, 2019, the projected benefit obligation for our pension plans exceeded the fair value of plan assets by \$1,287 million. Subject to future actuarial gains and losses, as well as future asset earnings, we, together with our consolidated subsidiaries, will be required to fund the discounted obligation of \$1,287 million in future years. We contributed \$97 million and \$100 million to our pension plans in 2019 and 2018, respectively. We pay other unfunded postretirement benefits as incurred.

We estimate a contribution of \$80 million to our pension plans in 2020.

For more information on our pension and other postretirement benefits see our [2019 Form 10-K](#), page 52 and pages 107–118, and our First Quarter 2020 Earnings Presentation which can be found on our website.

Anti-Corruption

Management Approach

As a global company with operations throughout the world, we are subject to a variety of anti-corruption laws and regulations, including the U.S. Foreign Corrupt Practices Act (FCPA), the Organization for Economic Cooperation and Development Convention on Combating Bribery of Foreign Officials in International Business Transactions, and the United Nations Convention Against Corruption.

In addition to, and/or as a part of, these significant international conventions, many countries have enacted their own anti-corruption laws. For example, several jurisdictions – including many in which the LyondellBasell group of companies operates (e.g., Netherlands, Germany, China, Spain, Turkey and the U.K.) – have adopted laws against the bribery of domestic and/or foreign government officials, commercial third parties and others as prescribed.

LyondellBasell places the highest value on integrity and ethical conduct. We view compliance with all applicable laws as the responsibility of all employees and business partners.

Our Anti-Corruption Policy makes clear our commitment to detecting and preventing corruption by our employees and those acting on our behalf:

- No one acting for or on behalf of LyondellBasell shall, directly or indirectly, pay, offer, promise, give or authorize the payment or giving of money or anything of value to a government official or an employee of a company or other business entity in which a governmental body has an ownership or controlling interest.
- Gifts, entertainment or travel may not be promised, offered or provided for the purpose of improperly influencing any decision in connection with LyondellBasell obtaining or retaining business or to gain an improper advantage.
- We require that books, records and accounts accurately and fairly reflect the transactions and dispositions of company assets. Our internal accounting controls provide reasonable assurances that transactions are executed in accordance with management's general or specific authorization and are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles or any other criteria applicable to such statements.
- Contributions, whether cash or in kind, to non-U.S. political parties, party officials or candidates are prohibited by the FCPA.
- Compliance with commercial bribery laws, and anti-money laundering and anti-terrorism laws and regulations is strictly enforced.
- Violations may result in disciplinary action up to and including termination from employment.

For information regarding political contributions, see GRI 415-1, [page 63](#)

GRI 205-1

Operations assessed for risks related to corruption

We utilize the Transparency International Corruption Perceptions Index, the Resource Guide to the Foreign Corrupt Practices Act published by the U.S. Department of Justice and the Securities and Exchange Commission, the U.K. Bribery Act Guidance, various guidance provided in the U.S. Department of Justice settlement documents, and Evaluation of Corporate Compliance Programs published by the U.S. Department of Justice Criminal Division to assess risks related to corruption

in the countries in which we operate. We periodically conduct internal and external audits of the books and records of every subsidiary, joint venture and affiliate to ensure compliance with the anti-corruption, anti-bribery and commercial bribery laws.

GRI 205-2

Communications and training on anti-corruption

New employees receive ethics and compliance training which includes the company's Code of Conduct, and Anti-Corruption and Antitrust/Competition Law policies and procedures, and all employees are required to complete annual refresher training. In 2019, 100% of LyondellBasell employees, including those acquired by A. Schulman, received training on the Code of Conduct. Additionally, some contractors receive Code of Conduct training based on their job function in the company.

Anti-Competitive Behavior

Management Approach

LyondellBasell must avoid any agreements with other companies that limit competition between them. Our Antitrust/Competition Law Policy is supported by guidelines that provide direction with respect to specific activities that may invoke antitrust issues. These guidelines outline the obligations of employees with respect to detecting and preventing unlawful anti-competitive activity in the context of particular activities or circumstances and address topics such as:

- Intellectual property
- Joint venture partners
- Participation in trade associations
- Pricing communications
- Relations with competitors
- Transactions, and agreement with distributors and resellers/traders

This policy applies to all persons and entities acting for or on behalf of LyondellBasell, including but not limited to our employees. Violations may result in disciplinary action up to and including termination from employment.

GRI 206-1

Anti-competitive behavior

In 2019, LyondellBasell had no legal actions pending or completed regarding anti-competitive behavior, violations of anti-trust, or monopoly legislation in which the company was identified as a participant.

ENVIRONMENTAL

Materials

Management Approach

LyondellBasell is one of the largest plastics, chemicals and refining companies in the world. We produce products that are the basic materials used to manufacture countless goods and products that people use every day. Our conventional products are made from fossil-based feedstocks and we also make products from recycled and renewable-based resources.

We provide stewardship of our processes and products, practice pollution prevention and optimize resource use across all stages of the product life cycle.

Because our business is dynamic and subject to change based on production volumes, feedstocks and other business factors, our environmental metrics are reported in absolute (total) and intensity (rate per ton of product) terms to more clearly reflect our performance.

Conventional materials

We produce ethylene and propylene at our olefins plants. The primary raw materials used in our Americas olefin facilities are natural gas liquids or NGLs (ethane, propane and butane) and heavy liquids. Heavy liquids include crude oil-based naphtha and other refined products, as well as condensate, a very light crude oil resulting from natural gas production. Historically, the primary raw material used in our European olefin facilities was naphtha; however, in recent years we increased our use of NGLs. For our Saudi Arabian joint venture facilities, locally sourced NGLs, including ethane, propane and butane are used.

We use ethylene and propylene to make a variety of chemical products and derivatives, including polymers such as polyethylene (PE) and polypropylene (PP), intermediates and derivatives such as propylene oxide (PO), and polypropylene compounds (PP compounds).

A co-product of our production of PO is tertiary butyl alcohol (TBA) which is used to manufacture methyl tertiary butyl ether (MTBE) and ethyl tertiary butyl ether (ETBE), also called oxyfuels. Our ETBE is partly made from renewable feedstocks and we are evaluating and testing additional renewable feedstocks for oxyfuel production. [See case study on [page 22.](#)] We consume a significant portion of our internally-produced PO in the production of PO derivatives.

The principal materials used in the production of our compounding and solutions products are PP, PE, polystyrene, nylon and titanium dioxide. The principal raw materials used in the production of our advanced polymers are ethylene, propylene and butene-1.

We operate one refinery, which is located in Houston, Texas. In 2019, we imported most of our heavy crude feedstock for the refinery from Latin America, Canada and other global producers.

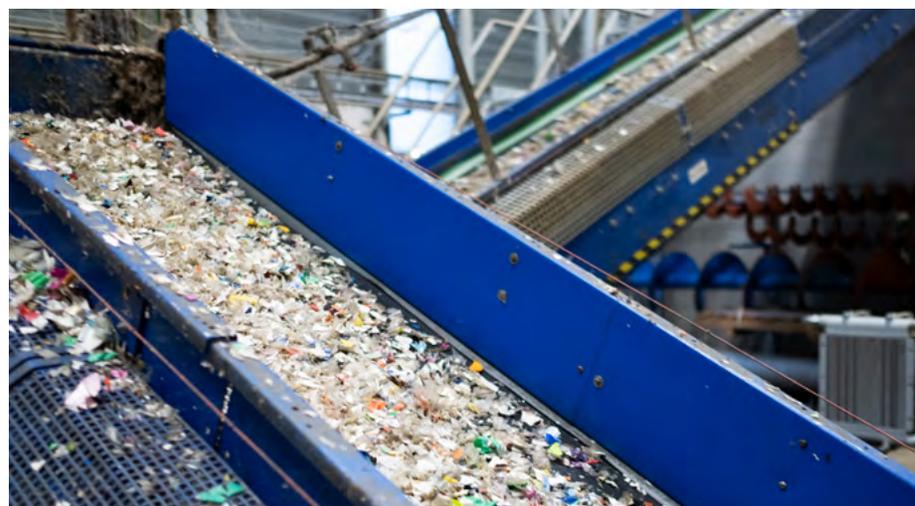
Recycled and renewable-based materials

Our goal is to produce and market 2 million metric tons of recycled and renewable-based polymers annually by 2030.

In 2018, we began developing feedstocks derived from renewable, non-fossil resources. In 2019, we successfully produced polymers from these feedstocks marketed under the *Circulen* and *Circulen Plus* brand names. These new feedstocks are made from renewable materials such as vegetable oil and waste oils and can be utilized in our existing crackers in Europe and the United States. [See case study on [page 19.](#)]

Feedstock for our mechanical recycling joint venture, Quality Circular Polymers (QCP), is post-consumer plastic waste supplied by SUEZ, a leader in the collection, separation and preparation of waste materials. The QCP plant converts plastic waste into recycled PP (r-PP) and recycled high-density polyethylene (r-HDPE). [See case study on [page 12.](#)]

Molecular recycling (also called advanced recycling) is an emerging technology that is complementary to mechanical recycling. In the molecular recycling process, plastic waste is broken down into its basic chemical building blocks through a pyrolysis process. We are developing a proprietary molecular recycling technology, called *MoReTec*, that uses a catalyst in the pyrolysis process to improve the breakdown of plastic waste. The resulting chemicals can be used to make new polymers for use in a wide variety of applications. [See case study on [page 14.](#)]



Preventing pellet loss in our operations

Goals:

- Zero pellet loss to the environment
- Meet the ACC's Operation Clean Sweep Blue requirements in the U.S. by 2020, and implement a similar approach at our European sites through PlasticsEurope
- Begin reporting pellet loss in our 2020 Sustainability Report; for purposes of reporting, "pellet loss" is defined as an unplanned release of polymeric solids from a site boundary greater than 0.5 kilograms in a 24-hour period
- Make value chain improvements by assessing transportation and customers, focusing on truck cleaning, rail car caps and bottom tubes, and measuring results via ISO 14001, SQAS audits in Europe and Operational Excellence audits in the U.S.

We sell polymer products in the form of pellets, flakes and powders. Loss of polymer product to the environment during manufacturing, storage or transportation is a concern across our industry. We are working to continuously improve our handling of these materials and are collaborating with our transportation partners to achieve our goal of zero pellet loss to the environment.

We are a member of Operation Clean Sweep® (OCS), the plastics industry initiative aimed at preventing pellet loss. In 2018, we committed to the American Chemistry Council's (ACC) OCS Blue program, which requires members to demonstrate an enhanced commitment to managing and reporting pellet loss.

We developed OCS best practice guidance and incorporated it into our Operational Excellence management system, requiring all sites across the globe to evaluate operations and reduce accidental releases and report discharge, spillage or escape of pellets from production or transportation equipment.

To date, we have focused on a number of initiatives at our sites across the world:

- Implementing programs to identify and eliminate pellet loss from equipment and prevent pellets from escaping into the environment or waterways
- Implementing a pellet loss incident reporting, investigation and corrective action program
- Identifying short and long-term opportunities for continual improvement in reducing pellet loss
- Conducting training programs with our employees
- Using posters to remind our employees and contractors how to prevent pellet loss, along with stickers on pipes, railcars and at vulnerable spill points
- Providing the right tools for cleanup activities at our plastic pellet cleaning stations
- Sharing best practices across our sites and our industry
- Educating and supporting our logistics providers and customers to prevent loss during handling and transportation

One example of a successful program is the inspection of railcars returned to our manufacturing sites from customers to identify discharge caps left open after unloading. This information is documented along with the details of the most recent trip record for that railcar, including customer information. Our sales and logistics team uses this data to communicate with internal and external customers to raise awareness and drive improvement.



Energy

Management Approach

We strive to optimize our energy use in our operations, both to limit our resource consumption and to manage resulting CO₂ emissions in line with our climate goal and in compliance with legal requirements.

Our sites in Germany, France and Spain are certified against the ISO standard 50001:2018, and our Operational Excellence management system, applied to all other sites globally, includes certifiable elements against this standard.

We also have a company-wide energy management standard which references international benchmarks and best practices and is used by our teams to identify potential energy gaps in our operations. All sites are required to develop five-year energy improvement plans to address these gaps through operational improvements, effective maintenance and the implementation of best available techniques and novel technologies.

Energy-saving activities underway at our manufacturing sites include:

- Assessing our fired equipment, including boilers, furnaces and heaters to increase operational efficiency and decrease overall fuel use. We are exploring opportunities to expand the assessment, in particular our energy-intensive sites in the U.S. and Europe.
- We are conducting an assessment of the flare systems at our major sites with the aim of optimizing our product recovery rates in flare gas recovery systems, minimizing steam, and optimizing supplemental gas from flare operations. We are also looking for opportunities to reduce flaring where streams can be rerouted for beneficial reuse. Through these activities, we anticipate achieving reductions in energy use and CO₂ emissions.
- Building capability and continuous learning which are fundamental to our success. Our Energy Excellence Program provides specialized learning and development opportunities for our people, and enhances the exchange of knowledge and best practices among our manufacturing sites.

In 2019, LyondellBasell sites implemented energy-saving projects that resulted in savings of 1.5% of our total energy use compared with 2018. However, our overall energy use increased in 2019 due to expansion at our La Porte, Texas, site with the commissioning of our new *Hyperzone* plant, and an increase in production at our Wesseling, Germany, site after completion of a planned turnaround in 2018.

For more information, also see GRI 102-20 on [page 36](#).

GRI 302-1

Energy consumption within the organization (Scopes 1 + 2)

GRI 302-3

Energy intensity

GRI 302-4

Energy reductions

SASB 130a.1

Total energy consumed, total self-generated energy, percentage grid electricity, percentage renewable

Energy Use (million gigajoules)

	2015	2016	2017	2018	2019 Total	2019 ASI*	2019 LYB
Energy use	411	382	408	414	441	1	440
Energy intensity (Scopes 1 & 2) Gigajoules per metric ton of product	10.19	9.99	10.19	10.02	10.56	1.29	10.74

*Refers to former A. Schulman sites acquired in 2018

This chart reflects a correction to energy intensity and energy consumption in 2018. Our energy data encompasses manufacturing facilities, pipelines and large regional offices.

Water

Management Approach

Water is an essential resource for our operations. We use water both in operations (primarily cooling towers and steam production) and as potable water for drinking and sanitary use at our sites and offices.

Our refining and manufacturing sites reuse water to reduce the amount of ground and freshwater withdrawn. For example, the majority of our large sites use recirculating water systems for cooling.

We manage water in accordance with permitted limits for discharge destination and water quality, and our Operational Excellence systems support ongoing compliance. Many of our larger sites operate their own wastewater treatment facilities, which allows for increased control over our water efficiency and quality of our discharges.

For more information, please see GRI 303-3 on [page 48](#).

GRI 303-1

Water as a shared resource

More than half of the water we use comes from surface water and the remainder is split between groundwater and potable water. The source of water we use in operations varies by region. We use a small amount of potable water and source a small amount of recycled water from some industrial providers located close to our manufacturing sites. Some of our sites use sea water for cooling, while others draw water from freshwater sources, such as rivers, aquifers or local water supplies.

We recycle our supply of water, when possible, to limit the amount we draw from regional supplies.

GRI 303-3

Water withdrawal

SASB 140a.1

(1) Total water withdrawn, percentage in regions with High or Extremely High Baseline Water Stress and (2) percentage recycled water usage

Water stress refers to the ability, or lack thereof, to meet the human and ecological demand for water while considering water availability, water quality and accessibility of water. We used the WRI Aqueduct Water Risk Atlas tool to conduct a baseline water stress assessment of our manufacturing sites. Sites were classified on a scale from low to extremely high water stressed based on several of the tool's indicators, including water quantity, quality and geographic location.

According to the WRI Aqueduct Water Risk Atlas tool, the majority of our sites are classified as low water stress. Our sites located in extremely high or high water stressed areas of the world are polypropylene compounding facilities. These sites use very little water relative to our olefin and propylene oxide/styrene monomer operations which require large amounts of water and are located in low or medium water-stressed areas.

We aim to develop a sustainable water management strategy which will consider a variety of factors including results from the tool, knowledge of our sites and specific watershed challenges, and how our water withdrawal and consumption impact the local watershed and community.

GRI 303-3

Water withdrawals

Water Withdrawals (million m³)

	2017	2018	2019 Total	2019 ASI*	2019 LYB
Total	232.0	243.8	253.4	14.0	239.4
Fresh surface water	98.8	107.7	104.6	0.1	104.5
Groundwater	26.4	26.4	26.9	0.1	26.8
Potable water	9.1	9.7	23.6	13.8	9.8
Seawater/brackish water	73.3	73.3	73.2	0	73.2
Other water	24.4	26.7	25.1	0	25.1

*Refers to former A. Schulman sites acquired in 2018

GRI 303-4

Water discharge

Water Discharge (million m³)

	2017	2018	2019 Total	2019 ASI*	2019 LYB
Total	134.7	150.3	155.8	0.5	155.3
Fresh Surface Water	35.4	53.5	52.2	0	52.2
Groundwater	0	0	0.2	0	0.2
Offsite treatment	5.0	6.3	10.6	0.5	10.1
Seawater/brackish water	75.9	73.8	77.5	0	77.5
Other sources	18.4	16.7	15.3	0	15.3

*Refers to former A. Schulman sites acquired in 2018

GRI 303-5

Water consumption

Water Consumption (million m³)

	2017	2018	2019	2019 ASI*	2019 LYB
Total	97.3	93.5	97.6	13.5	84.1
of which Evaporative Losses			72.8	2.9	69.9

*Refers to former A. Schulman sites acquired in 2018

Our water consumption figures differ from those reported in 2018, where we were following the American Chemistry Council Responsible Care guidance on water reporting. We revised our approach in 2019 to calculate water consumption in line with GRI definitions.

GRI 306-1**Water discharge quality****Water Discharge Quality (average mg/liter)**

	2019
Total Suspended Solids (TSS)	40.25
Biological Oxygen Demand (BOD)	24.92

Note: Change in measurement unit, from absolute value (t) in 2017 and 2018 to concentration (mg/l) in 2019.

For more information on our water discharge, see GRI 303-4 on [page 48](#).

Emissions

Management Approach

Climate change is one of the most important global challenges both now and for future generations. We support the ambitions of the Paris Agreement and are reducing the intensity of GHG emissions from our operations and delivering solutions that help advance a low-carbon economy. We are also working to meet customer demand for products with a lower carbon footprint.

We are dedicated to preventing pollution, complying with all laws and the terms of our permits, evaluating and adopting appropriate pollution controls, and closely monitoring and controlling our emissions.

CO₂ Reduction Program

Goal:

- Achieve a 15% reduction in CO₂ emissions per ton of product produced by 2030 compared with 2015 levels. We are committed to develop our climate ambition beyond our 2030 goal.

We organized a global CO₂ team comprised of experts from manufacturing, R&D, technology, procurement, risk management and sustainability. This team is responsible for identifying capital investments, research and development needs, and technology requirements to reduce carbon emissions.

Our CO₂ Reduction Program includes:

- Increasing our use of renewable energy, and recovering and reusing waste heat to produce electricity.
- Introducing lower carbon feedstocks made from renewable resources and plastic waste
- Improving operational energy efficiency and reducing energy consumption.
- Assessing low-carbon opportunities and transportation solutions across our supply chain.
- Offering products that reduce emissions such as materials that make vehicles lighter and more fuel efficient, biofuels that meet clean air standards, and building supplies that improve energy efficiency.
- Exploring break-through technologies that advance low-carbon production processes.

Our program initially focuses on studying and implementing carbon reduction initiatives at two of our six largest sites in Europe. We will evaluate extending this initiative to the U.S., and our other global operations in the future. A structured program has been put in place, including the allocation of significant capital funding.

In 2019, approximately 20% of our R&D budget was used to invest in the development of innovative lower-carbon products and technologies. This supports product innovations and the increasing demand for low-carbon products in our markets.

GRI 305-1**Direct GHG emissions (Scope 1)****GRI 305-2****Indirect GHG emissions (Scope 2)****GRI 305-4****GHG emissions intensity****SASB 110a.1****Gross global Scope 1 emissions, percentage covered under a regulatory program****SASB 110a.2****Description of long-term and short-term strategy or plan to manage Scope 1 emissions, emission-reduction targets and an analysis of performance against those targets****GHG Emissions (million metric tons of CO₂e)**

	2015	2016	2017	2018	2019 Total	2019 ASI*	2019 LYB
Scope 1 emissions	14.1	13.5	13.9	14.3	14.6	0.004	14.6
Scope 2 emissions	8.7	8.3	9.0	8.8	8.3	0.13	8.2
Total Emissions	22.8	21.8	22.9	23.1	22.9	0.13	22.8
GHG intensity (metric tons of CO₂e per metric ton of product)	0.564	0.571	0.573	0.558	0.548	0.168	0.556

Scope 1: Direct emissions from sites operated by LyondellBasell

Scope 2: Indirect emissions from external electricity and steam suppliers

*Refers to former A. Schulman sites acquired in 2018

To compile our GHG emissions, we use the following methodologies:

- The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
- American Petroleum Institute Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Natural Gas Industry, 2009
- IPIECA's Petroleum Industry Guidelines for reporting GHG emissions, 2nd edition, 2011

Our energy and CO₂ data currently encompasses manufacturing facilities, pipelines and large regional offices. Small offices are not included as they have been determined to be non-material (less than 0.5% of our emissions). LyondellBasell uses vehicles at some manufacturing sites

for internal site transportation. They are excluded from CO₂ reporting as the amount of fuel consumed is negligible in comparison to fuel consumed by fired equipment (e.g., steam boilers or furnaces) and represents less than 0.1% of total emissions.

In Europe, our operations participate in the European Union Emissions Trading System (ETS) and we purchase annual emission allowances to meet our obligations. The EU sites subject to ETS represent 30% of our total Scope 1 emissions.

GRI 305-6

Ozone-depleting substances (ODS)

GRI 305-7

NO_x, SO_x and other emissions

SASB 120a.1

Air emissions for the following pollutants: NO_x (excluding N₂O), SO_x, volatile organic compounds (VOCs), and hazardous air pollutants (HAPs)

Nitrogen Oxides (NO_x)

NO_x are by-products of combustion that are generated while burning fuels to produce heat, steam or electricity. Boilers and furnaces in our chemical and refining operations are the source of most of our NO_x emissions. In 2019, our NO_x emissions decreased by nearly 4% to 7,475 metric tons when compared with 2018. This was primarily due to boiler maintenance at our Channelview, Texas, site.

Sulfur Oxides (SO_x)

In our operations, SO_x emissions come from burning fuel that contain small amounts of sulfur, and from the process of removing sulfur from fuel products at our Houston, Texas, refinery. In 2019, our SO_x emissions totaled 1,338 metric tons, representing a small decrease from 2018. This was due to increased use of natural gas, instead of liquid fuel, at our Berre l'Étang facility in France.

Volatile Organic Compounds (VOCs)

VOCs are associated with the chemicals and fuels we handle and produce, and are released into the atmosphere during chemical and fuel production. VOCs can be released from point sources or through fugitive emissions from pump seals, valves and other equipment. We have extensive programs in place to identify and repair leaks, including using infrared camera technology. Our VOC emissions decreased by approximately 4% to 7,189 metric tons in 2019 due in part to the installation and operation of a regenerative thermal oxidizer at our Chocolate Bayou plant in Texas.

Carbon Monoxide (CO)

CO is produced when fuels are burned to produce heat, steam or electricity. The majority of our CO emissions come from burning natural gas at our chemical and refining operations. From 2018 to 2019, our CO emissions increased to 5,563 metric tons due in part to the acquisition of the Linde Syngas and Methanol assets in La Porte, Texas, in February 2019.

Particulate Matter (PM)

PM refers to small airborne particulates emitted during production, primarily from cooling towers and burning fuel. Since 2012, we have worked to reduce these emissions by improving heaters and

furnace operations. In 2019, our total PM emissions decreased by approximately 2% compared with 2018 to 1,173 metric tons primarily due to reduced production related to a planned turnaround.

Ozone Depleting Substances (ODS)

In 2019, we emitted 160 kg of ODS. We measure and report ODS as kg of CFC-11 equivalent and use emission factors as stipulated in the Montreal Protocol.

Air Emissions (metric tons)

	2017	2018	2019 Total	2019 ASI*	2019 LYB
NO_x	8,057	7,766	7,475	1	7,474
SO_x	1,589	1,348	1,338	0	1,338
VOCs	8,098	7,453	7,189	107	7,082
CO	5,301	5,231	5,563	1	5,562
PM	1,305	1,197	1,173	58	1,115
ODS** (kilograms of CFC-11 Equivalent)	59	74	160	1	159

*Refers to former A. Schulman sites acquired in 2018

**excluding ODS destroyed, recycled or reused

Air Emissions Intensity (metric tons per million metric tons of product)

	2017	2018	2019	2019 ASI*	2019 LYB
NO_x intensity	201	188	179	1	182
SO_x intensity	40	33	32	0	33
VOC intensity	202	180	172	139	173
CO intensity	132	127	133	1	136
PM intensity	33	29	28	75	27

*Refers to former A. Schulman sites acquired in 2018

Waste

Management Approach

We take every opportunity to avoid generating waste, reusing it in our operations wherever possible. Most of the waste we produce is dilute hazardous liquid waste from chemical plant operations. Our operations also produce non-hazardous solid waste including general plant trash and construction and demolition debris. All waste disposal is managed in accordance with applicable regulations. In 2019, 66% of waste was disposed to land, including landfill and permitted injection wells.

Reducing and reclaiming waste at our manufacturing sites

Dalian, China

With a commitment to improve recycling and reclamation, employees at our polypropylene (PP) compounding plant in Dalian set out to reduce non-hazardous waste generation.

Raw materials are delivered and stored at the site on wood and plastic pallets. After use, the plant was safely disposing of them.

Recognizing these materials had value beyond their initial use and should not be wasted, our employees reused 47 tons of pallets from raw material suppliers to transport the final product to clients. Another 29 tons of waste from the extruder was broken down by a third party and reused as raw material.

In total, our Dalian site has improved its recycling rate of non-hazardous waste by 2,000% from 2018 to 2019.

Channelview, Texas

The employees at our Channelview site established a model waste reduction program. Along with recycling office waste such as paper, cardboard, plastic and aluminum, the program recycles construction and demolition materials such as soils, refractory brick, and about 6,900 tons annually of concrete and asphalt construction debris. In addition, nearly 2,800 pounds of batteries are recycled annually.

The program reduces the amount of industrial wastewater sent offsite, as well. About 400,000 gallons of used oil is separated from wastewater and rerouted back into the manufacturing process annually. The remaining wastewater is further treated and then routed to the process water outfall for discharge as authorized by our wastewater permit.

The amount of waste sent offsite as air emissions is also reduced by recovering 265.2 million pounds of liquid fuel annually, by using gas recovery systems to route material either to fuel gas or to process, which reduces the amount of material flared and the amount of purchased natural gas.

Houston, Texas

In 2019, our Houston Refinery sought a sustainable solution to manage hazardous waste from tank cleaning.

Typically, the waste is disposed of in permitted disposal wells. The Houston Refinery piloted a project using the waste as an alternative fuel source for cement kilns. This process displaces coal used by the cement kilns, leaving no ash and thereby avoiding hazardous waste and CO₂ emissions associated with the use of coal.

The project resulted in 1.35 million gallons of waste derived fuel sent to cement kilns, more than 4,000 tons of landfill avoidance, and approximately 29,000 tons of CO₂ emissions avoided.

GRI 306-2

Waste by type and disposal method

SASB 150a.1

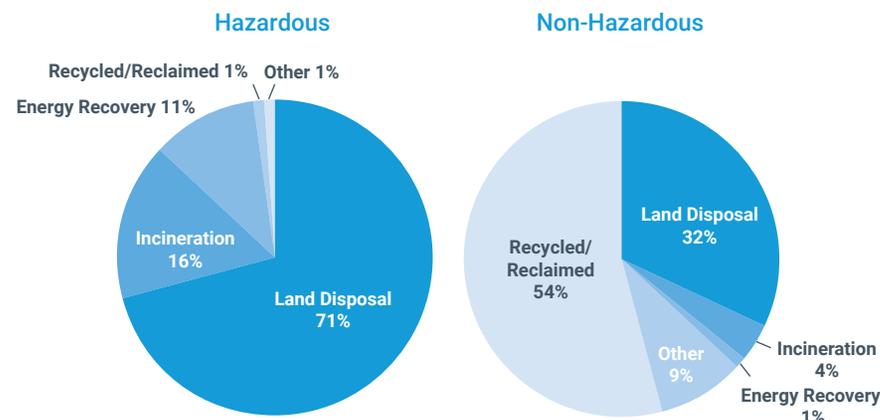
Amount of hazardous waste, percentage recycled

Waste by Type (thousand metric tons)

	2017	2018	2019 Total	2019 ASI*	2019 LYB
Total waste	1,402	1,473	1,346	27	1,319
Non-hazardous waste	135	205	179	25	154
Hazardous waste	1,267	1,268	1,167	2	1,165

*Refers to former A. Schulman sites acquired in 2018

Waste by Type (%)



Waste Intensity (metric tons per/ton of product)

	2017	2018	2019	2019 ASI*	2019 LYB
Total	0.035	0.036	0.032	0.035	0.032
Non-hazardous waste	0.003	0.005	0.004	0.032	0.004
Hazardous waste	0.032	0.031	0.028	0.003	0.028

*Refers to former A. Schulman sites acquired in 2018

Environmental Compliance

Management Approach

We carefully manage a range of environmental impacts including energy and GHG emissions, other emissions to air, water use and waste. We are granted our license to operate from multiple regulatory authorities that oversee our facilities and we seek to earn the trust of our communities by operating safely and responsibly.

Our environmental management system standard, part of our Operational Excellence system, provides a mechanism for compliance assurance and continuous improvement. This extends not only to our employees but also our contractors and suppliers.

We constantly monitor and manage environmental risk and are committed to complying with all regulations and permits. We aim to operate efficiently, which means using valuable resources responsibly, producing less waste and generating fewer emissions. Because our business is dynamic and subject to change based on production volumes, feedstocks and other business factors, our environmental metrics are reported in absolute (total) and intensity (rate per ton of product) terms to more clearly reflect our performance.

GRI 307-1

Non-compliance with environmental laws and regulations

Although we work hard to reduce our environmental impact, sometimes incidents can occur. We manage our environmental obligations and work diligently to investigate each incident and understand the cause. We then develop action items and share learnings throughout the organization to prevent future incidents.

We classify incidents on a scale from 0 to 5, with 5 having the highest impact. We report on environmental incidents that are Level 2+, indicating a failure to meet a policy, standard or applicable law due to an unplanned release or discharge into the environment. Information on fines and penalties paid to resolve environmental, health and safety enforcement actions is also provided below.

Environmental Incidents

	2015	2016	2017	2018	2019 Total	2019 ASI*	2019 LYB
Number of incidents	93	99	79	94	65	0	65

Environmental, Health and Safety Enforcement Actions

	2015	2016	2017	2018	2019 Total	2019 ASI*	2019 LYB
Fines and penalties paid (\$)	\$173,496	\$387,696	\$643,038	\$984,640	\$210,165	0	\$210,165

*Refers to former A. Schulman sites acquired in 2018

For more information on legal proceedings related to environmental matters, see our [2019 Form 10-K](#), page 30.

Management system certifications

The majority owned and operated legacy LyondellBasell sites* in Australia, China, Europe, Malaysia and Thailand are certified to the Environmental Management System ISO14001:2015, as is the Altamira site in Mexico. In the U.S., the legacy LyondellBasell sites with ISO 14001:2015 certification are Edison, New Jersey; Jackson, Tennessee; and Mansfield, Texas. The newly acquired A. Schulman sites with ISO 14001:2015 certification are Rio Claro, Brazil; Dongguan, China; Kerpen, Germany; Astorp, Sweden; and Crumlin, U.K. The remaining legacy LyondellBasell sites in the Americas comply with our Operational Excellence requirements and have management systems in place that are ISO14001:2015 certifiable. We aim to certify the remaining acquired A. Schulman sites in Europe, Asia and Australia by the end of 2021, and ensure the former A. Schulman sites in the Americas comply with our Operational Excellence requirements.

Additionally, the legacy LyondellBasell sites in Germany, France and Spain are certified to the Energy Management Standard ISO50001:2011.

*Legacy LyondellBasell sites refers to sites owned by the company prior to the August 2018 acquisition of A. Schulman.

SOCIAL

Employment

Management Approach

Our success as a company is tied to the passion, knowledge and talent of our global team. To achieve our vision of being the best operated and most valued company in the industry, we must attract top performers and equip them with the tools needed to continuously grow and leverage their potential. We believe in integrity, diversity and fairness, and we focus on creating a work environment that is safe, respectful and inspires employees to strive for excellence.

[Our mission, vision and values guide](#) our daily work activities and drive our business success. We recognize that individuals cannot succeed alone; we believe in the power of many and place a strong emphasis on teamwork.

As a minimum, we provide all workers with fair wages and equal remuneration for work of equal value and uphold all applicable fair wage laws, wherever we work. We pay wages that meet or exceed the legally required wage or local industry standard. We reward performance based on personal, team and company results.

We engage in open and ongoing dialogue with employees and their representatives to ensure a proper balance between the best interests of the company and its employees. In a number of our locations, we partner with employee representatives on initiatives such as health and safety.

We use the services of contractors, primarily to assist with non-core business functions, and we require that all contractors adhere to our Operational Excellence standards and GoalZERO commitment.

GRI 401-1 New employee hires and turnover

Total Employees

	2019
Men	15,512
Women	3,551
Unallocated	2
Total	19,065

Turnover & Hiring

	2019
New employee hires	
Global (#)	1,622
Rate	11%
Average headcount	14,771
U.S./Canada	962
Rate	13.7%
Europe (#)	542
Rate	8.3%
Latin America (#)	18
Rate	9.7%
Asia Pacific (#)	95
Rate	8.9%
Middle East & Africa (#)	5
Rate	24.2%
Age group	
<30 (#)	858
Rate	44.6%
Average headcount	1,923
30–50 (#)	639
Rate	8.3%
Average headcount	7,692
>50 (#)	125
Rate	2.4%
Average headcount	5,156
Gender	
Men (#)	1,161
Rate	9.6%
Average headcount	12,092
Women (#)	460
Rate	17.2%
Unallocated	1
Average headcount	2,678

	2019
Employee turnover	
Global (#)	1,314
Rate	8.9%
Average headcount	14,771
U.S./Canada (#)	796
Rate	11.4%
Europe (#)	403
Rate	6.2%
Latin America (including Mexico) (#)	15
Rate	8.1%
Asia Pacific (#)	99
Rate	9.3%
Middle East & Africa (#)	1
Rate	4.8%
Age group	
<30 (#)	473
Rate	24.6%
Average headcount	1,923
30–50 (#)	411
Rate	5.3%
Average headcount	7,692
>50 (#)	430
Rate	8.3%
Average headcount	5,156
Gender	
Men (#)	1,002
Rate	8.3%
Average headcount	12,092
Women (#)	312
Rate	11.7%
Average headcount	2,678

GRI 401-2**Benefits provided to full-time employees**

We want to attract the brightest and most qualified employees, and doing so requires competitive compensation and benefits packages. Full-time and part-time employees receive a wide variety of benefits based on geographic location, applicable local and national law, and labor, or works council agreements.

Full-time employees at our major offices and manufacturing sites receive competitive benefits which may include, depending on location, the following: basic health and welfare benefits, which include medical coverage; life and accident insurance; business travel accident insurance; disability protection; retirement, savings and pension plans; share programs; and paid vacation, holidays and personal leave. Counseling for personal and work-related concerns is available in many regions.

Employees whose job is suitable for telecommuting are eligible to work from home or an alternate work site up to two days per month. During the COVID-19 pandemic, the Company encouraged non-location critical employees continue to work from home even where not required by local law. As of the publication of this report, many employees to work from home for various pandemic-related reasons, including back-to-school and childcare challenges as well as personal or health-related reasons.

In the U.S., employees can purchase additional health benefits and insurance coverage at lower group rates. U.S. employees can contribute to a tax-free Health Care Flexible Spending Account for reimbursement of certain medical expenses as well as a Dependent Day Care Flexible Spending Account for child-care costs.

Reward and recognition

Exceptional performance, dedication to safety, attendance and years of service are recognized in many ways, including annual bonuses and special cash awards; share points that may be redeemed for merchandise; awards based on years of service; and our corporate Excellence Awards, which are the highest honor an employee can receive.

Global family-friendly programs

We are dedicated to family-friendly practices and recognize the need for work-life balance. Our Global Family-Friendly programs include the ability to work from home or an alternate worksite, paid parental leave, and an adoption reimbursement. In the U.S., non-represented employees receive five days of paid personal time off each year in addition to paid vacation and holidays.

GRI 401-3**Parental leave**

Employees across the world who bring a child into their family by birth, adoption or foster care are eligible for parental leave, as allowed by applicable local and national law. In the U.S., we introduced a new parental leave policy that offers paid leave for the birth of an employee's child, the placement for adoption of an employee's child, and foster care or adoption of a child. Eligible employees who are the primary caregiver can receive up to seven weeks of paid parental leave per 12-month period, in addition to short term disability benefits; and those who are the secondary caregiver receive up to one week. Employees who are the spouse or domestic partner receive up to one week per 12-month period. Primary and secondary caregiver and spouse/

domestic partner leave is available, regardless of gender. The benefit is paid at 100% of the employee's regular base pay (less withholdings) on the date leave begins, and excludes overtime, shift differential, premiums, bonuses, commissions or other allowances.

The Global Adoption Reimbursement Policy provides employees who have adopted a child or had a child placed with them for adoption with a financial reimbursement of up to \$10,000 or equivalent in the employee's local currency at the time of the reimbursement, less any applicable withholdings and deductions, per adopted child.

The U.S. Paid Parental Leave and the Global Adoption Reimbursement policies took effect January 1, 2020.

Occupational Health & Safety

Management Approach

We are committed to the safety of our people and our operations. Our safety standards apply to everyone involved in our business, including employees, contractors and suppliers.

GoalZERO is our commitment to operating safely and with zero incidents, zero injuries and zero accidents. This core company value is the guiding principle for our HSE function. We cultivate a GoalZERO mindset with clear standards, regular communication, training, and targeted campaigns and events, including our annual Global Safety Day. Health, safety and environmental indicators are monitored continuously using a performance dashboard. Every manufacturing site sets goals to improve process safety and the safety of our people, and reduce environmental incidents.

Goals:

- Zero injuries
- Zero process safety incidents
- Zero product safety incidents
- Zero environmental incidents
- Zero plastic pellet loss to the environment

Operational Excellence is the framework we use to deliver our GoalZERO objectives. It is our management system designed to deliver safety, environmental responsibility and reliability in everything we do. It sets out clear requirements for how we work and applies to our employees and contractors.

The Operational Excellence management system contains nine key elements that help identify and manage risks, and ensure our employees and contractors understand their roles and responsibilities. It is further supported by detailed standards and preferred practices that support our GoalZERO objectives.

LyondellBasell Operational Excellence Management System Framework

Leadership and personal accountability	We are committed to achieving excellence in every aspect of our performance. We set high expectations and hold each other accountable. We operate our businesses with the highest principles of integrity ethics and corporate responsibility.
Organizational competency	We acquire and maintain the highest possible levels of competency. We empower people to deliver superior performance. We create a culture where employees have the freedom to act with agility and urgency while balancing the need for appropriate process and governance. We embrace diversity and inclusion, and promote learning and development.
Compliance	We manage our businesses with the highest standards of corporate ethics and with strict corporate governance systems that support compliance with all laws, regulations and internal requirements.
Technology and knowledge management	We document our operating practices and continually keep them updated. Knowledge management allows for safe, reliable operations through the sharing and combined efforts of people, processes and technology.
Risk management	We identify, prioritize, mitigate and manage risks to provide for the safety and health of employees, contractors, customers and the public, and for the protection of the environment.
Operations	We strive for flawless execution in our operations.
Product stewardship	We operate a worldwide product stewardship program to make health, safety and environmental protection an integral part of the development, manufacture, distribution, use, recycle and disposal of our products.
Community and stakeholder relations	We maintain strong relationships with our communities, employees, customers, suppliers, shareholders and other key stakeholders
Assessment and improvement	We regularly review and take action regarding our systems, processes, metrics and stakeholder feedback to assure continuous improvement in our performance.

We conduct internal audits at our manufacturing sites to verify compliance with Operational Excellence standards and perform periodic reviews to drive continuous improvement.

GRI 403-1

Occupational health and safety management system

Our Operational Excellence program sets out the standards and management approach we use to achieve GoalZERO. This includes clear requirements for people, process and product safety.

We closely monitor safety risks, thoroughly investigate incidents and near misses, and take corrective action to prevent reoccurrence.

Recognizing and mitigating potential hazards in the workplace is a critical part of our approach to preventing incidents and injuries. Risk assessments are conducted for any potentially hazardous work. These range from completing safety checklists to a formal documented job hazard analysis process. Our approach includes five steps to mitigate risk outlined in our Risk Assessment Preferred Practice policy.

Our 5 steps to mitigate risk



Our people undergo specific training to develop the skills to recognize potential hazards and reduce safety risks. This includes analyzing risks before any tasks are completed using a pre-task analysis.

Sites undergo internal audits to verify compliance with Operational Excellence systems and procedures. Lessons learned and best practices are shared across the business. Onsite contractors, including logistics companies that handle and transport our products, are expected to comply with our HSE policies and support GoalZERO.

Our commitment to GoalZERO is championed at every level of the company. Excellent safety culture starts at the top with senior leaders, including the CEO.

Managers at each manufacturing site meet regularly to review safety performance and discuss issues relevant to their plant. HSE awareness teams evaluate injuries and find ways to prevent them in the future. Group meetings at offices and sites typically start with a safety message.

17 Sites that achieved more than one million safe working hours in 2019

71 Locations that reached at least one year without a recordable injury in 2019

GRI 403-2**Hazard identification, risk assessment and incident investigation**

Our process safety program establishes how we safely design, operate and maintain our manufacturing processes to prevent or mitigate the unplanned or uncontrolled release of process material.

This program aims to prevent serious incidents and protect local communities and the environment.

We have clear standards for identifying and managing process safety risks within our Operational Excellence framework. Regular turnarounds – during which we shut down plants and carry out essential maintenance, upgrades and safety checks – are a key part of our safety program.

In 2019, we introduced Barrier Failure Analysis, a new methodology for investigating incidents, developed and led by internal investigation leaders. A training program was developed for those who will be leading formal investigations into Level 2+ incidents. It provides knowledge and practical exercises in setting up a successful team, gathering evidence and interviewing, human behavior analysis, cause analysis, effective corrective actions and report writing.

We also introduced Human Reliability Task Analysis to evaluate how human factors may affect potential risks and identify aspects of work susceptible to human error. Sites can apply this analysis to:

- Assess critical tasks to identify potential human error, conditions that make the error more likely, and safeguards that reduce the likelihood or consequence of the human error.
- Increase operator awareness of hazards and control measures (understanding “why” and asking “why” more often).

We also focused on reducing risks associated with combustible dust at the acquired A. Schulman sites to reduce the risk of fire or explosion. LyondellBasell is applying our established Operational Excellence standards to evaluate and manage these risks.

GRI 403-3**Occupational health services**

We are committed to providing a safe workplace free from recognized hazards and we comply with all applicable health and safety laws and recognized standards. Information on occupational health services is provided globally throughout the new hire on-boarding process and offered in various languages dependent on the site location. Employees at our large sites have access to health services at an on-site clinic on paid worktime.

Medical surveillance is designed to detect potential workplace hazards before irreversible health effects can occur. We provide a comprehensive medical monitoring service to assess employees exposed, or potentially exposed, to occupational hazards. We focus on prevention by proactively detecting hazards before they affect our people. Regular health screenings assess individuals and confirm the effectiveness of exposure prevention strategies. Clinicians with expertise in occupational health, industrial exposures and respiratory protection screen workers with physical examinations and various screening tests performed at set intervals. The clinicians providing medical surveillance services include board-certified occupational and environmental medical physicians, mid-levels, nurses and spirometry technicians.

Employees also have access to knowledgeable health professionals so they can raise questions or concerns and gain information on healthy lifestyle habits at work and at home.

GRI 403-4**Worker participation, consultation and communication on occupational health and safety**

Health and safety committees at the facility and site level help drive our GoalZERO culture. They provide a representative forum to communicate, encourage and increase employee involvement in identifying and resolving health, safety and environmental concerns. Committees typically meet on a monthly or bimonthly basis and rotate members every two years. Members participate in identification of hazards, assessment of risks, investigation of incidents, implementation of corrective measures and audits.

GRI 403-5**Worker training on occupational health and safety**

LyondellBasell provides required health and safety training to workers. Training differs between locations according to the role and tasks of each worker. Best practices and safety moments are shared before each meeting to reinforce the value of safety.

Front-line supervisors play a critical role in identifying and managing safety risks at our plants. We have refreshed the front-line supervisor safety training program, and have introduced an advanced leadership development program. The program includes intensive face-to-face training over a 10-month period where “live” situations simulating safety scenarios test participants’ reactions and decision-making. The course teaches communication, leadership, process safety, conflict resolution and team development skills.

GRI 403-6**Promotion of worker health**

Our LifeBeats program promotes healthy lifestyle habits and well-being among employees. LifeBeats gives our people tools to improve both their physical and mental health and support the well-being of their families. Site champions across our operations promote health events and campaigns each year.

All of our sites offer wellness programs and off-the-job safety information related to a variety of health topics including weight loss, flu inoculations, smoking cessation, driving and travel safety, skin cancer, stress management and nutritional advice.

GRI 403-8**Workers covered by an occupational health and safety management system**

All employees and contractors whose work and or workplace is controlled by LyondellBasell are required to comply with all health and safety management system requirements.

Sites undergo internal audits to verify compliance with Operational Excellence systems and procedures. Lessons learned and best practices are shared across the business. Onsite contractors, including logistics companies that handle and transport our products, are expected to comply with our HSE policies and support GoalZERO.

GRI 403-9
Work-related injuries

SASB 320a.1

(1) Total recordable injury rate (TRIR) and (2) fatality rate for (a) direct employees and (b) contract employees

SASB 540a.1

Process Safety Incidents Count (PSIC), Process Safety Total Incident Rate (PSTIR) and Process Safety Incident Severity Rate (PSISR)

Process Safety Incident Rate

	2015	2016	2017	2018	2019
	0.022	0.032	0.030	0.018	0.019

Note: Represents number of Level 3 and above process safety incidents per 200,000 hours worked. We classify process safety incidents on scale of 0 to 5, with Level 5 having the highest impact.

Process Safety

	2019
Process Safety Incidents Count (PSIC)	7
Process Safety Total Incident Rate (PSTIR)	0.019
Process Safety Incident Severity Rate (PSISR)	0.017

Assessed using the definition and weighting of Tier 1 PSI per ANSI/API RP 754.

SASB 540a.2

Number of transport incidents

Our ability to transport and handle products safely is an essential component of who we are. Products are moved by railcar, tank trucks, pipeline, marine vessels and air freight. We own or lease railcars, tank trucks and pipelines. We utilize third-party service providers for all transportation modalities.

Transport incidents are defined in accordance with applicable laws, regulations and standards related to hazardous materials transportation and distribution which include, but are not limited to, those under the U.S. Occupational Safety and Health Administration, U.S. Department of Transportation, American Chemistry Council and the Europe Chemical Industry Council.

Since 2015, we have experienced one Level 2+ transportation incident, which occurred in 2018. The incident was related to the loss of product from a railcar.



Worker Safety

	2015	2016	2017	2018	2019
Employees:					
Fatalities as a result of work-related injuries (number and rate)	0 0	0 0	0 0	0 0	1 0.005
High-consequence work-related injuries (number and rate)	1 0.007	3 0.022	2 0.015	3 0.019	3 0.016
Recordable work-related injuries (number and rate)	30 0.22	29 0.21	33 0.24	36 0.22	39 0.20
Number of hours worked	26,800,000	27,600,000	27,200,000	32,300,000	38,100,000
Contractors:					
Fatalities as a result of work-related injuries (number and rate)	0 0	0 0	0 0	0 0	1 0.006
High-consequence work-related injuries (number and rate)	5 0.036	7 0.040	1 0.008	1 0.006	0 0
Recordable work-related injuries (number and rate)	30 0.22	38 0.22	24 0.18	23 0.14	38 0.22
Number of hours worked	27,700,000	35,000,000	26,000,000	33,100,000	34,050,000
Combined workforce:					
American Chemistry Council industry average	0.65	0.57	0.63	0.65	0.62
LyondellBasell total recordable injury rate	0.22	0.21	0.21	0.18	0.21

Note: Data includes A. Schulman sites as of August 21, 2018. Rates are calculated on the basis of 200,000 hours worked. High consequence injuries are LyondellBasell's Level 3 injuries (hospitalization required) and do not include fatalities. Recordable Injury counts and Recordable Injury rate include all injuries and fatalities

Over 30% of injuries in 2019 were from slips, trips and falls. A comprehensive campaign was launched to help mitigate risks associated with falls both from height and at ground level. Three focus areas include working at heights, staying a step ahead, and walking is working. This included training on identifying hazards, work planning and office design changes. Best practices are also submitted and shared among sites. For example, a best practice education program about the hazards of stairs at our Rotterdam office increased the number of people holding the handrail from 33% in 2017 to over 92% in 2019.

Training & Education

Management Approach

Employee growth and development are key elements supporting our vision of superior performance. We provide development opportunities for our employees through on-the-job experiences, learning from others and in-class and online learning.

In 2019, we offered more than 363,000 hours of training to our employees through both in-person classes and our online learning management system. Operators and frontline supervisors received more than 223,000 hours of training, while supervisors, managers and executives participated in more than 41,000 hours of training.

GRI 404-1

Average hours of employee training

Employee Training (avg hrs)

	2019
Average per person	19
Executive	23
Manager	26
Professional and technical	25
Administrative	7

Training needs are determined as part of individual employee assignment and development, on an equal employment opportunity basis.

GRI 404-2

Programs for upgrading employee skills and transition assistance programs

Upgrading skills

Our targeted leadership development programs are designed to equip our current and future leaders with the necessary tools and skills to lead in any business environment. Through a blend of rigorous business and technical projects and focus on personal mastery and career development, participants of these programs:

- Gain insight on leadership strengths, gaps and development needs through assessment and coaching.
- Build individual career and development plans.
- Participate in in-depth discussions with senior executives.
- Gain insights into strategic global leadership skills from internal and external experts.
- Work across the enterprise to create and implement solutions for identified business initiatives.

Education benefits

To encourage employee self-development, we offer a Global Educational Assistance Program that provides financial aid to those pursuing an associate, bachelor's or graduate degree. Any regular full-time, active employee with a minimum of one year of service and a current performance rating of "successful performance" or greater is eligible for educational assistance unless otherwise stipulated under a labor or works council agreement.

The Global Accelerated and Executive Graduate Degree Program offers additional financial assistance and modification in work schedule for those employees participating in an executive master's degree program, which typically requires an intense period of study over a shortened duration of time and carry substantially higher costs.

Transition assistance program

Employees whose positions are eliminated from the company receive transition assistance provided by a leading outplacement services company. The program includes career assessments, resume writing, LinkedIn profile updates, skills training, personal coaching and access to online research tools, job search platforms and networking events.

GRI 404-3

Percentage of employees receiving regular performance reviews

In our biennial employee engagement survey conducted in 2018, prior to the acquisition of A. Schulman, our employees scored the company very positively in most areas; however, they felt the company's performance management system as a whole could be more meaningful.

As a result, in 2019 we shifted from a traditional performance review process that required managers to discuss individual performance with their direct reports at two set times a year to a continuous performance management system throughout the year. This shift is intended to ensure that managers are equipped to provide continual, on-going and effective feedback to create a culture of ownership for our work and success, support a culture of recognition and accountability, and promote personal and professional growth for each employee.

Our performance management system is designed to:

- Align all employees across the organization with the company's business strategy and objectives.
- Enhance individual, team and corporate performance, creating a culture of continuous improvement.
- Motivate employees by including support for day-to-day performance as well as for medium- to long-term career growth.
- Establish strong "performance relationships" characterized by frequent feedback in real time and open, two-way communication.
- Strive to "keep it simple," wherever possible, reducing administration and re-investing management time into building meaningful performance discussions.

We also introduced a set of specific competencies, which represent the ways we expect employees to work with each other as well as with our customers and suppliers:

Instill Trust and Exemplify Integrity

Gain the confidence and trust of others through honesty, integrity, and authenticity.

Demonstrate Courage

Step up to address difficult issues, saying what needs to be said, acting with integrity, doing what is right.

Build Effective Teams

Build strong-identity teams that apply their diverse skills and perspectives to achieve common goals.

Ensure Accountability

Hold self and others accountable to meet commitments.

Drive Results

Consistently achieve results, even under tough circumstances.

Collaborate

Build strong customer relationships and deliver customer-centric solutions. Focus on internal and external customers.

Cultivate Innovation

Create new and better ways for the organization to be successful. Use lateral thinking. Question the status quo.

Customer Focus

Build partnerships and work collaboratively with others to meet shared objectives, within and across functions.

Performance Reviews

While all employees receive continuous feedback on their performance, the number of employees participating in our corporate performance appraisal program is determined by local country employment laws and collective bargaining agreements. Performance reviews of non-exempt and hourly employees are voluntary by site. No non-exempt or hourly employees acquired from A. Schulman participated in the performance review process in 2019, but participation will increase in 2020 as these sites fully integrate into our talent program. A total of 10,161 performance reviews were conducted in 2019, which represents 64% of eligible employees.

Diversity & Equal Opportunity

Management Approach

A talented and diverse workforce is a key competitive advantage. We believe employees of different genders and from many different cultural, linguistic and national backgrounds provide us with valuable perspectives and different ideas, which results in better decision-making and more creative solutions.

In mid-2020, we appointed a Chief Talent & Diversity Officer and engaged external experts to help us better assess our current workforce trends, collect feedback from our employees globally, and benchmark our employment practices and processes to gain an evidence-based understanding of improvement opportunities.

We also will create a platform for employees to discuss challenges and obstacles, and we will drive progress through a newly formed Diversity & Inclusion Leadership Council.

We are committed to:

- Valuing and respecting each other's backgrounds, experience and ideas
- Enabling everyone to be themselves and achieve their potential
- Creating an environment in which people of all backgrounds want to work
- Making people decisions on merit and without bias
- Driving measurable change in the diversity of our workforce at all levels, including leadership

GRI 405-1

Diversity of governance bodies and employees

We are proud many employees have been part of the LyondellBasell family for all or most of their careers. We also recognize in certain areas, such as our manufacturing plants, an aging employee population presents the potential loss of talent and knowledge within the organization. To ensure that we are properly staffed for the future, we employ a variety of approaches to identify and develop talent within the organization while simultaneously using targeted recruiting strategies to bring new employees into the company.

We also recognize the need to increase the number of women and people from minority groups in our engineering ranks. Our U.S. University Recruiting Program has helped the company do just that. In 2019, 31% of university recruits hired were women and 34% were from minority groups.

Additionally, our Board considers diversity a priority and seeks representation across a range of attributes, including expertise, experience, geographic location, gender and race. The Nominating and Governance Committee of the Board, as well as its outside consultants, require inclusion of women and minority candidates in each pool from which a director candidate is selected. For more information on Board nomination process, see our [2020 Proxy Statement](#), pages 7–8.

Employees/Board Diversity

	2019
Employees	
Men	81.4%
Women	18.6%
Age group (<30, 30-50, >50)	
<30	13.3%
30-50	53.1%
>50	33.6%
Ethnicity (U.S. only)	
Black	8.9% (752)
Hispanic	13.6% (1,150)
Asian/Pacific Islander	4.5% (379)
American Indian/Alaskan	0.4% (34)
Native Hawaiian/Other Pacific Islander	0.1% (8)
Two or more races	1.3% (114)
White	69.4% (5,868)
Non-U.S. employee	0.2% (15)
Unallocated	1.6% (133)
Board	
Men	75%
Women	25%
Executive	16
Men	87.5%
Women	12.5%
Management	266
Men	82.3%
Women	17.7%
Professional and Technical	4,386
Men	68.7%
Women	31.3%

Data as of December 31, 2019 and based on a total of 19,065 employees. Our U.S. EEO-1 data can be found in the performance charts on our website.

Human Rights Assessment

GRI 412-2

Employee training on human rights policies and procedures

We recognize we have a responsibility to respect and protect human rights. Our Human Rights Policy, which was implemented in 2020, and our Code of Conduct describe our commitment to upholding human rights in all operations and at all facilities.

New employees receive ethics and compliance training which includes the company's Code of Conduct, and all employees are required to complete annual refresher training. In 2019, 100% of LyondellBasell employees, including those acquired by A. Schulman, received training on the Code of Conduct. Additionally, some contractors receive Code of Conduct training based on their job function in the company.

Freedom of Association and Collective Bargaining

We respect the rights of workers to form and join trade unions of their own choosing, to bargain collectively, and to peacefully assemble as permitted under applicable law. We also respect the rights of workers to choose to refrain from such activities. We recognize the right of workers to share ideas and concerns with management, free of fear of reprisal, and we never tolerate reprisals or retribution against anyone who lodges a complaint or concern in good faith.

Child Labor

We prohibit child labor. For purposes of employment, we define "child" as anyone under sixteen years of age, unless national or local law stipulates a higher mandatory school leaving or minimum working age, in which case the higher age applies. We do not hire people under the applicable mandatory minimum.

Forced or Compulsory Labor

We forbid the use of forced, bonded (including debt bondage), indentured or involuntary labor, exploitative prison labor, slavery, or trafficking in our operations. We prohibit harsh or inhumane treatment of all workers, including actual or threatened corporal punishment. We will not retain passports or other original employee documents unless required by law, and will not restrict employee access to such documents. We do not permit charging any type of recruitment fee or deposit for employment.

Security Practices

We promote the security of our workers and premises and take affirmative steps to maintain a workplace that is free from violence, intimidation, or other disruptive conditions. We strive for a security response that is respectful of human rights, consistent with international standards and proportional to the threat identified.

For more information, please see GRI 102-16 on [page 35](#).

Local Communities

Management Approach

Being a responsible, good neighbor in the communities where we operate is embedded in our mission. We provide jobs that create economic value and we hire locally where possible. We also support economic growth and job creation throughout our supply chain by purchasing goods and services locally.

Additionally, we contribute to charities in cash or in-kind, and our employees volunteer thousands of hours to good causes each year. In the last three years, we donated more than \$16 million and 48,700 volunteer hours to charities around the world to improve education, promote good health, protect the environment and support first responders.

Combatting hunger and food insecurity during the COVID-19 pandemic

In April 2020, we announced a \$1.3 million donation to support the COVID-19 response efforts of the Global FoodBanking Network and United States local food banks. The donation supported food banks in 17 countries and communities where the company has major operations.

As the pandemic spread, foodbanks across the globe experienced an increase in demand and a decline in food donations. Job loss forced many to people to seek help from foodbanks who have never needed relief before. According to the Global FoodBanking Network, nearly 2 billion people around the world face food insecurity.

LyondellBasell has a long history of supporting foodbanks in the communities where we operate through monetary donations, food collection drives and employee volunteerism.

Preventing and responding to emergencies

We take seriously our responsibility to prevent incidents that could harm workers, the community or the environment. We continually evaluate risks and have detailed emergency plans in place. Our manufacturing sites maintain their own emergency response teams, including teams trained to respond to medical incidents, fires or releases of hazardous materials.

Site workers are trained on the proper procedures to follow in the event of an emergency and regular drills are conducted to test these procedures. We also coordinate preparation and planning with local government agencies and emergency responders. Our in-house emergency response teams not only keep our own people and facilities safe, they also support local fire departments.

Over the past three years, we have donated more than \$465,000 in support of first responders around the world, providing specialized training and equipment.

Supporting the United Way

Each year our U.S. employees participate in local campaigns to support the United Way's goal of building strong communities. This year, LyondellBasell held fundraising campaigns at 41 sites across the country and donated more than \$1.7 million to the United Way. We have been a top corporate donor to the United Way of Greater Houston for 30 years.

Addressing a pressing industry need: Workforce training

The LyondellBasell Center for Petrochemical, Energy & Technology

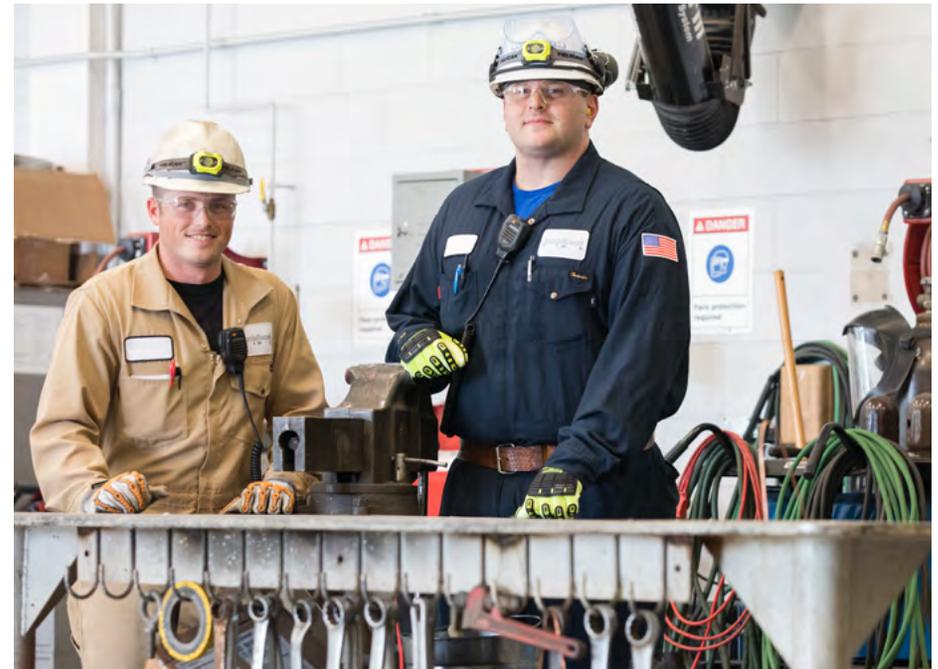
In 2019, San Jacinto College in Pasadena, Texas, marked the grand opening of the LyondellBasell Center for Petrochemical, Energy & Technology (CPET). The Center was named to honor our \$5 million donation and our support in helping to develop the facility's curriculum, which aligns with our strong commitment to workforce development.

As a top-10 community college in the nation and the country's second-largest producer of process operator graduates, San Jacinto College plays a vital role in helping the region maintain its status as the "Energy Capital of the World." The new technologically advanced CPET will enhance the college's ability to provide training in real-world labs that have been designed with current industry needs in mind.

Students will have access to hands-on training experiences as they work toward associate degrees and industry certifications in electrical technology, environmental health and safety technology, instrumentation technology, nondestructive testing, and process technology.

This level of training is increasingly important to an industry that's expanding at the same time that many of its workers, Baby Boomers, are beginning to retire. We are proud to be helping the college bridge this gap by developing and training the industry's next generation of workers in a technologically advanced environment, designed with industry input.

The LyondellBasell CPET will also provide an opportunity for industry, educators and the community to work collaboratively to host events and annual conferences in support of workforce development.



GRI 413-1
Operations with local community engagement, impact assessment and development programs

SASB 210a.1
Discussion of approach to managing risks and opportunities associated with community rights and interests

GRI 413-2
Operations with significant potential and actual negative impacts on local communities

For information on our engagement with local communities see GRI 102-43, 102-44 on [page 38](#).

Public Policy

GRI 415-1
Political contributions

SASB 530a.1
Discussion of positions on the regulatory and political environment related to environmental and social factors and description of efforts to manage risks and opportunities presented

We are committed to high standards of transparency in our advocacy, public policy work and political contributions. We report U.S. federal, state and local lobbying activities and political expenditures as required by law. Every year we disclose direct and indirect corporate political contributions in our [U.S. Political Activity Report](#). In Europe, we support the aims for transparency in the relations between the EU institutions and interest representatives. We joined the voluntary European Transparency Register and abide by its Code of Conduct. We do not make political contributions in any country other than the U.S.

Our advocacy work includes supporting public policy that seeks to:

- Advance waste management systems, infrastructure and recycling standards. We believe policy efforts should further develop and integrate global and local waste management systems and infrastructure. We support the harmonization of disparate local recycling standards, definitions, procedures and processes into simpler, more streamlined national and international recycling frameworks.
- Enhance the ability to reliably access high-quality post-consumer and post-industrial plastic waste, as well as renewable resources, that can be reprocessed into feedstock for new products.
- Acknowledge the important role plastics play in reducing GHG emissions across the global economy. We support efforts that encourage the uptake of products (i.e. packaging, automotive, building materials) that more effectively enable society to reduce net emissions over their life cycle.
- Support a market-based approach to reducing carbon emissions in an effective, administratively feasible manner while preserving the competitiveness of energy-intensive industries. To be most effective, we believe this approach can neither mandate a particular technology nor discriminate against a particular country, sector of the economy or industry.

- Support the expansion of targeted tax incentives designed to encourage the rapid growth of research and development in next generation mechanical and new advanced recycling technologies such as chemical recycling, as well as the development of alternative feedstocks from renewable sources. Once a technology is proven, we support policies that promote the availability and effective implementation at scale.
- Increase transparency and develop uniform standards for a mass balance approach for chemical recycling that includes adoption by the plastic value chains. This should include the tracing and attributing credits of chemically recycled plastics, transparent certification by an independent party at each step of the value chain, and development of standards which include clear and credible rules on feedstock qualification, mass balance calculation and the use of appropriate product claims.
- Support policies and programs that encourage and support the development of public-private partnerships designed to accelerate development of integrated waste management and recycling systems.

Political Contributions

	2016	2017	2018	2019
Monetary value of financial contributions	\$146,586	\$166,586	\$151,673	\$142,500

Contributions are disclosed in our filings with the Federal Election Commission (FEC), as required by law. No in-kind political contributions were made.

Customer Health & Safety

GRI 416-1
Assessment of the health and safety impacts of product and service categories

As part of our commitment to the Responsible Care® program, we worked closely with other American Chemistry Council members to develop a Responsible Care® Product Safety Code. This code is incorporated into our Operational Excellence Product Stewardship Standard. Our Product Stewardship Standard creates a management system that drives sustainable business practices through implementation of the standard’s elements to cover the full scope of the product life cycle, including raw material sourcing, product development, manufacture, distribution, use, recycling and disposal of all products we produce.

We conduct an annual management review in each business to assess products and uses for risk to human health and the environment to drive continuous improvement and ensure that any critical gaps are closed by an action plan. Additionally, all business units and manufacturing sites are audited on a three- to five-year cycle.

We track product safety performance, review customer feedback and communicate product safety information both internally and externally.

We also continuously monitor product end-use applications to anticipate any potential health and safety risks. Each year, we review the human health and environmental risks associated with existing and emerging applications in our polymer and chemicals business. Based on this assessment, we may replace raw materials used in production processes with safer alternatives or prohibit or place conditions on the sale of products into certain end-use applications. We communicate all end-uses that are prohibited or require further review on our external website to ensure complete transparency for customers who purchase our products.

We also partner closely with our research and development teams to assess the potential human health and environmental hazards and anticipated end-use clearances of new products in the development pipeline. This evaluation includes a review of raw materials used in the production process and any associated potential byproducts.

We have clear chemical control procedures in place to comply with applicable regulations and we continually monitor these requirements for changes. Relevant regulations include the Toxic Substances Control Act in the U.S. (TSCA), the European Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), the Act on the Registration and Evaluation of Chemicals in Korea (Korea REACH), and many more. We monitor the movement of materials and we block transactions for materials, uses or customers that do not meet our safety requirements.

Our global product safety team communicates information about our products to customers.

Public information we provide includes:

Safety Data Sheets: In 2019, we published more than 235,000 safety data sheets that include information on product hazards and precautions to ensure safe use.

Product Stewardship Bulletins: We issue declarations for customers on regulatory clearances for our products and their end uses. In 2019, we answered more than 73,000 requests from customers, distributors and other stakeholders for regulatory information about our products.

Global Product Strategy (GPS) Safety Summaries: As a member of the International Council of Chemical Associations (ICCA) we take part in the GPS voluntary program to improve the safety of chemical products during their use and handling. The GPS safety summaries provide information about safe uses and applications of our products including:

- Uses and applications
- Physical and chemical properties
- Human health and environmental effects
- Potential exposure routes
- Risk management measures
- Regulatory information
- Classification and labeling

These summaries can be found on our website under [Product Stewardship](#).

Product Stewardship Through The Life Cycle

Product portfolio safety assessment

Our product stewardship team is involved at the initial stage of researching and developing new products. We assess HSE and product safety risks before new products, raw materials or processes are approved for production. Product safety aspects are reviewed for each stage of the development process.

Raw materials sourcing

Every business function utilizes a global raw material evaluation and approval standard. Policies prohibit the use of some substances and restrict the use of others. If a safety issue is flagged, our procurement teams will not buy the raw materials in question. Changes to raw materials or their sources are also reviewed for product safety.

Manufacturing

Our product stewardship standards help ensure that substances are handled properly during manufacturing to prevent harm to our people and contractors. We conduct internal audits to confirm regulatory compliance and that risks are managed according to our standards when manufacturing, storing and loading our products.

Distribution and customer use

We promote safe transport and storage of our products by customers, and we work closely with our suppliers, carriers and distributors. We have standards for equipment used to transport and store products and our logistics compliance team visits customers' sites to help ensure our products are handled safely. We communicate safety information to customers through safety data sheets, safety bulletins and global product safety strategy summaries.

Consumer end-use and disposal

Certain end-uses for our products may require review and approval or may be prohibited. Compliance information about our products is available on our website and product end-of-life considerations are addressed on safety data sheets.

GRI 416-2

Incidents of non-compliance concerning the health and safety impacts of products and services

In 2019, we had no incidents of non-compliance with regulations and/or voluntary codes concerning the health and safety impacts of our products.

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