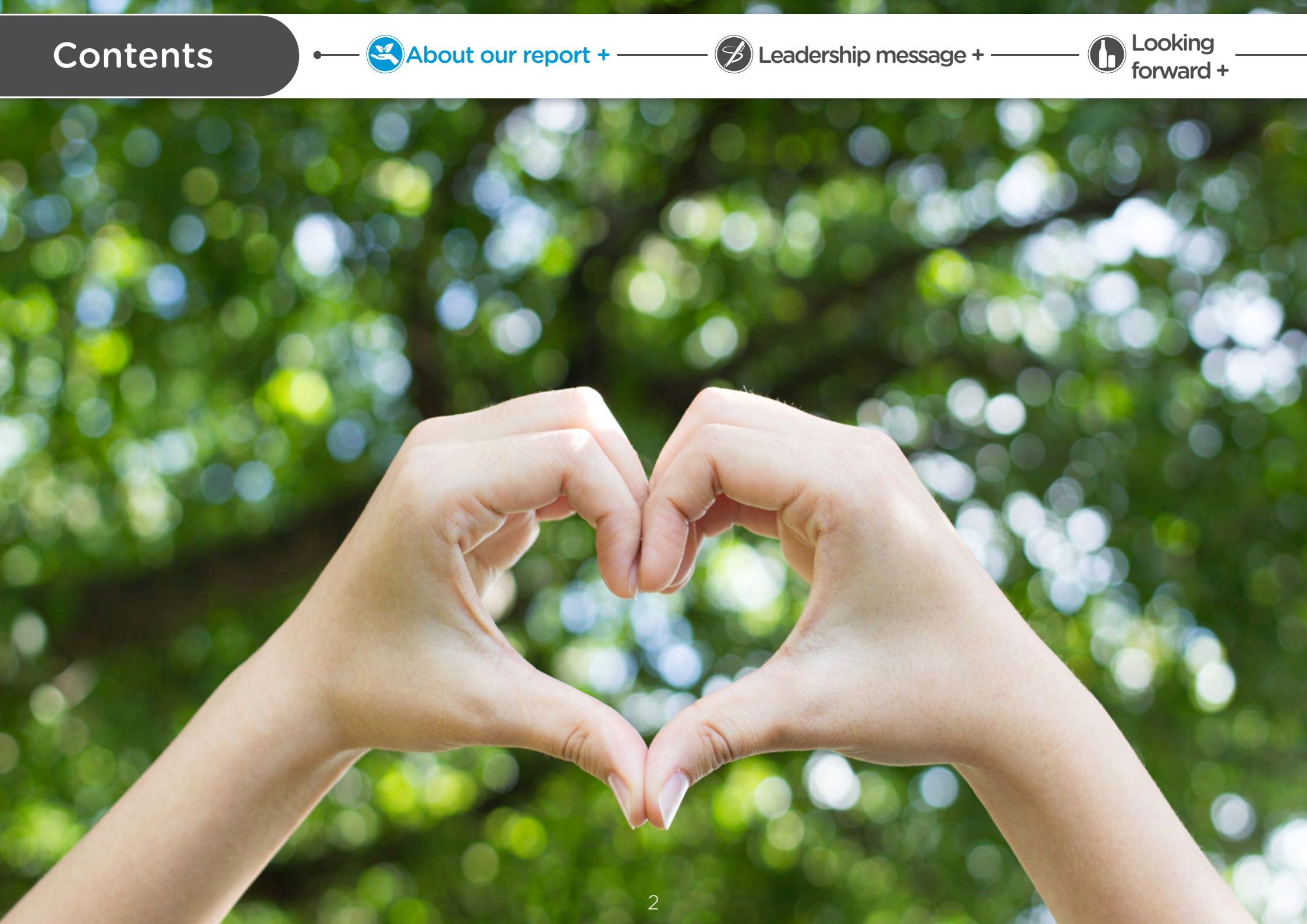
ArdaghGroup

Ardagh Group
Sustainability report
2021



About our report

Welcome to our 2021 sustainability report covering our Metal and Glass businesses for the reporting years 2019 and 2020. Our Metal business, Ardagh Metal Packaging, is referenced as AMP. Our Glass business, Ardagh Glass Packaging, is referenced as AGP.

Throughout our report, you will find quick navigation links to bring you directly to certain sections in our report. We have also included + signs for readers to click on for additional information found on our website. This report is based on the latest set of Global Reporting Initiative (GRI) standards and was completed in accordance with the 'core' reporting approach. A detailed GRI content index is available on our website - GRI Content Index +.

For this reporting period, we have included external feedback on our materiality assessment for a more robust review.

External assessments

Our sustainability performance is continuously measured and recognised by external experts.

Your questions and comments are always welcome. Please email us:
sustainability@ardaghgroup.com

+ Previous reports are available on our website

Leadership message

Sustainability is at the core of what we do every day.

We are a leader in sustainable, value-added, infinitely recyclable metal and glass packaging solutions. Our materials play a key role in the **circular economy**.

Doing business across Europe and the Americas brings responsibilities beyond delivering value to shareholders. Being **environmentally**, **ecologically** and **socially** sustainable are some of those responsibilities. Achieving positive change in sustainability is only possible through the collective efforts of our entire team and our customers, supply chain partners and local communities. We take pride in aiming to reduce our environmental and ecological impact while remaining socially responsible and economically sustainable.

Strategy

As a leading supplier of infinitely recyclable metal and glass packaging, our sustainability actions are founded on the three pillars of our environmental and social sustainability strategy:

1. Minimise our greenhouse gas (GHG) **emissions**
2. Reduce our **ecological** impact
3. Support our **people** and our **communities**.

This is underpinned by a firm belief that sustainability will drive profitable growth. In 2019, to underline our commitment to sustainability, we established a Board Sustainability Committee to better coordinate our global sustainability work and accelerate our sustainability programmes.

We are committed to only using **renewable** electricity to operate our facilities. As part of our sustainability strategy, we have launched Ardagh's Renewable Energy Programme. This aims to source 100% of our annual electricity demand from renewable sources as part of our **Science Based Targets initiative (SBTi)** commitment for greenhouse gas emissions reductions.

In line with the **Ecology** pillar of our strategy, we work, both as a company and together with our associations, on increasing recycling of aluminium and glass. Recycling of these materials not only contributes to reductions in GHG emissions but also to increase circularity by minimising the extraction of raw materials.

In addition, in 2020 we committed to put much greater emphasis on our approach to Community Involvement Projects to support our **objectives** in the **Social** pillar of our strategy. We actively promoted a robust approach to increase participation in these projects across our facilities, as well as increasing awareness of their importance.

We were also very proud to announce, in 2021, our major multi-year grant to Project Lead The Way (PLTW) to deliver science, technology, engineering and mathematics **(STEM)** education to students from pre-kindergarten through to high school (PreK-12) in 24 communities in which we operate across the U.S. It is expected that over the next 10 years, Ardagh-sponsored education programmes will benefit more than 500,000 PreK-12 students as well as deliver best-in-class teacher training to more than 5,000 teachers across 2,000 schools in Ardagh's U.S. communities. This programme has been very well received by our teams and our local communities.

Formal commitments

In 2019 Ardagh became a signatory to the United Nations (UN) Global Compact which is focused on positive advancements in human rights, labour, the environment and anti-corruption. We are dedicated to engaging in collaborative projects which advance the broader development goals of the UN, particularly the **Sustainable Development Goals (SDGs)**. The SDGs are a set of goals to end poverty, protect the planet and ensure prosperity for all. They cover a broad range of social and economic development issues such as hunger,

education, climate change, water, energy and the environment.

We track, monitor and measure our sustainability progress to ensure we deliver on our commitments. Ardagh has committed to set science-based targets through SBTi, a project that aims to encourage corporate climate action for a low-carbon economy.

We have an enduring and firm commitment to reducing our carbon **emissions** and accelerating the implementation of future-oriented technology. One such technology is the 'Furnace for the Future' (F4F) - a fundamental milestone in the glass packaging industry's decarbonisation journey towards climate-neutral glass packaging. It will be the first large-scale oxy-fuel furnace in the world to run with a fuel balance of up to 80% renewable electricity and 20% fossil fuel. It will replace current fossil-fuel energy sources and cut CO_2 emissions by up to 60%[1].

To bring the concept to life, the glass packaging industry adopted a collaborative approach whereby 19 glass container producers mobilised resources to work on and fund this pilot project. Ardagh volunteered to build the furnace in Germany, and with this new technology, we are embarking on the journey towards climate-neutral glass packaging while ensuring the long-term sustainability of glass manufacturing.

The Financial Times (FT) published its inaugural listing of European companies that have made big strides in reducing their GHG emission intensity between 2014 and 2019. Ardagh was proud to be listed amongst 300 companies in FT's "Europe's Climate Leaders 2021".

Stewardship

In 2020, the Carbon Disclosure Project (CDP) awarded Ardagh its Leadership Class ratings for sustainability performance: scoring A- for climate change, A- for water management and A for supplier engagement. Ardagh's consistently strong CDP climate change rating, along with our increased rating for water management, place us among the highest-rated companies in all industries by CDP. EcoVadis, another independent sustainability rating platform, awarded its gold certification for sustainability performance to Ardagh for the fifth year in 2020.

Ardagh was proud to be welcomed as an associate member of the Aluminium Stewardship Initiative (ASI) in 2020. The ASI is a multi-stakeholder initiative that promotes measurable and continual improvements in the key environmental, social and governance impacts of aluminium production, use and recycling. We are taking the next steps in our membership journey and initiating the process for facility level ASI certification.

Our reporting is prepared in accordance with the standards issued by the Global Reporting Initiative (GRI), the most widely accepted global standard for sustainability reporting.

Responsibility

Many of our employees volunteer in their communities and donate to local charities. We were inspired by our people and we created a multimillion annual fund to support people in need in the communities in which we operate. During 2020, the fund supported those most affected by the Covid-19 pandemic.

In 2020, we committed our support to the Design Museum in London to begin an Ardagh Young Creatives Design programme. The aim of the programme is to introduce younger people from under-represented backgrounds to industrial design. The programme commenced in 2021. We aim to conduct similar programmes in other countries over the coming years.

We uphold a work environment that seeks to attract the best talent, values diversity of life experiences and perspectives and encourages innovation. In doing so, we strive to embody our Core Values of Trust, Teamwork and Excellence in all we say and do. Diversity, Equity and Inclusion (DE&I) resonates strongly with our Core Values. We actively listen to our people and to the communities in which we operate. We are enhancing our capabilities to ensure we are positioned to lead and deliver measurable progress in this key area.

Metal and glass packaging are both infinitely recyclable and are widely recycled, which helps to address our customers' requirements for environmental and ecological sustainability. We would like to thank our colleagues, customers, suppliers, and partners who have contributed to Ardagh's sustainability achievements to date, and we look forward to continued collaboration with these stakeholders to advance our sustainability strategy.

We look forward to continued sustainability success which will help ensure a better future for everyone.

- Paul Coulson
Chairman & CEO
Ardagh Group

- Shaun Murphy
COO
Ardagh Group

- John Sadlier
Chief Sustainability Officer
Ardagh Group

[1]Subject to EU Innovation Fund Grant.

Looking forward

The future we are creating for our teams is underpinned by our commitment to our Core Values of Trust, Teamwork and Excellence. Sustainability underpins everything we do and strengthens not only our competitive advantage but our long-term growth prospects.

Demand is strong for infinitely recyclable packaging across all food and beverage categories, and we have been increasing our manufacturing capacity to ensure we can meet our customers demands.

In December 2020, we announced the purchase of a facility in Huron, Ohio, U.S., which is at an advanced stage of converting to a production facility for infinitely recyclable beverage cans and ends. The new facility will begin production in late 2021 and will consist of multiple can production lines, together with ends capacity. Huron will produce beverage cans in multiple sizes for a variety of categories, including sparkling water, soft drinks, teas and alcoholic beverages. Our new Huron facility is part of a $2 billion+ business growth investment programme undertaken to meet fast-growing demand as brand owners and consumers increasingly recognise the sustainability advantages and convenience of beverage cans.

In January 2021, we were delighted to announce an agreement to acquire the Longhorn Glass manufacturing facility, located in Houston, Texas, U.S. from Anheuser-Busch InBev ("AB InBev"). We officially welcomed the new facility, now known as Ardagh Houston, in March 2021 which sees us operate 14 AGP facilities in North America and 34 facilities worldwide.

In October 2021, we announced our intention to build new beverage can production facilities in the UK and the southwestern U.S., with planned production starting in 2023 and 2024 respectively.

Houston, Texas, U.S.

Huron, Ohio, U.S.

+ Learn more about Ardagh Group

World Earth Day

In celebration of **World Earth Day,** for the last few years we have invited our employees' children to get creative and share their artwork celebrating our planet with us, for publishing on our intranet and social media channels. Here is a selection of some of the wonderful creations we received which encourages us to protect the environment around us for future generations to come.

AMP

23 production facilities
5,000+ employees

AGP

34 production facilities
11,600+ employees

Group

57 production facilities
16,000+ employees

+ Learn more about AMP

+ Learn more about AGP

Revenue of $7 billion

Facilities across 12 countries

UN Sustainable Development Goals

The UN SDGs are an ambitious blueprint for how the world will tackle challenges such as environment, peace and prosperity for a healthier planet by 2030.

They are a set of international goals to which many companies and NGOs around the world are aligning their sustainability objectives to, with the aim of making a powerful impact for our planet.

In this report, we are aligned to seven of the 17 SDGs and we discuss how our business, packaging solutions and sustainability strategy contribute to these goals.

We are aligned to **seven** of the 17 SDGs.

1. Our people

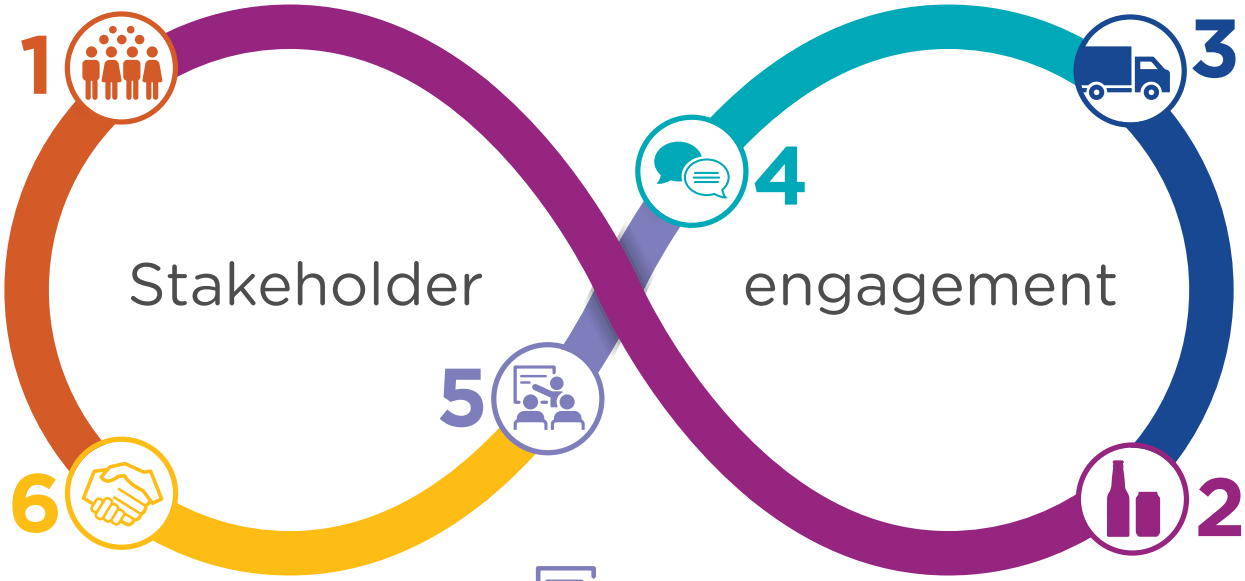
Continuous engagement with our employees both individually and collectively via works councils at facility level, personal development reviews and our Compliance Hotline.

2. Our customers

Constant collaboration with our customers focused on sustainability actions over the coming years to align with the UN SDGs.

3. Our suppliers

We work in partnership with our suppliers to move the sustainability agenda forward regarding **responsible sourcing**. Our suppliers verify their adherence to our Responsible Procurement Policy [+].[1]



4. Our communities

We are proud to engage proactively with our local communities through grassroots giving back initiatives [+].

5. Our investors

We conduct ongoing dialogue with our investors through regular reporting, conferences and speaking engagements, as well as one-to-one engagement. Learn more on the investor section of our website [+].

6. Industry associations

We cannot tackle sustainability challenges in isolation. Therefore, we work very closely with industry associations such as FEVE [+], Can Manufacturing Institute [+]; government bodies and local regulatory authorities to find solutions to these challenges we all face and can mitigate against – together.

[1]We regularly assess ESG risks and sustainability performance of all suppliers.

+ We collaborate with a range of sustainability associations. See the full list here.

We engage continuously with stakeholders to understand their expectations and discover opportunities and challenges in the locations where we operate. We collaborate with our people, customers, suppliers, investors, trade associations, governmental groups and authorities.

Our sustainability strategy

In 2020, we launched our new Sustainability Strategy to reinforce our commitment to the circular economy. As part of our strategy, we have mapped out ambitious commitments and targets for the next decade. We have made progress to date, and we continue to remain focused on key environmental areas; however, we recognise we have a way to go on our journey. Our 2030 targets continue to focus on CO_2 reduction and maximising the use of recycled materials. We are supplementing these efforts in the areas of biodiversity, reducing water consumption and equipping our employees to drive the transition to a circular economy.

Our sustainability strategy

Our sustainability levers

Emissions & Ecology

Minimise our GHG emissions

- Achieve 100% renewable electricity
- Implement energy efficiency projects
- Increase recycled content
- Innovate in product design
- Partner on low carbon transport
- Source sustainably
- Minimise VOC emissions
- Aligning with Science-Based Targets

Minimise our ecological impact

- Achieve excellence in water management
- Promote zero waste to landfill across all plants
- Support increased recycling and use of recycled content
- Promote circularity narratives on use of infinitely recyclable metal

Social

Our people and communities

- Our people
- Our communities.

Our direct link with UN's sustainable development goals +

Our sustainability filter

Sustainability only has a sustainable impact if it is economically viable both long and short-term

Raising the bar

Ardagh has a clear goal of alignment with the UN and Paris Climate Agreement of 2015 in achieving net zero emissions by 2050. To get there, we will need the collective focus of our teams collaborating and delivering on key sustainability targets. There are three pillars that comprise our sustainability objectives: **Emissions**, **Ecology** and **Social** +. Under these pillars we have set specific goals to reduce our environmental impacts, including emission reductions, renewable electricity sourcing and zero waste to landfill[1] across our production facilities, to name a few initiatives.

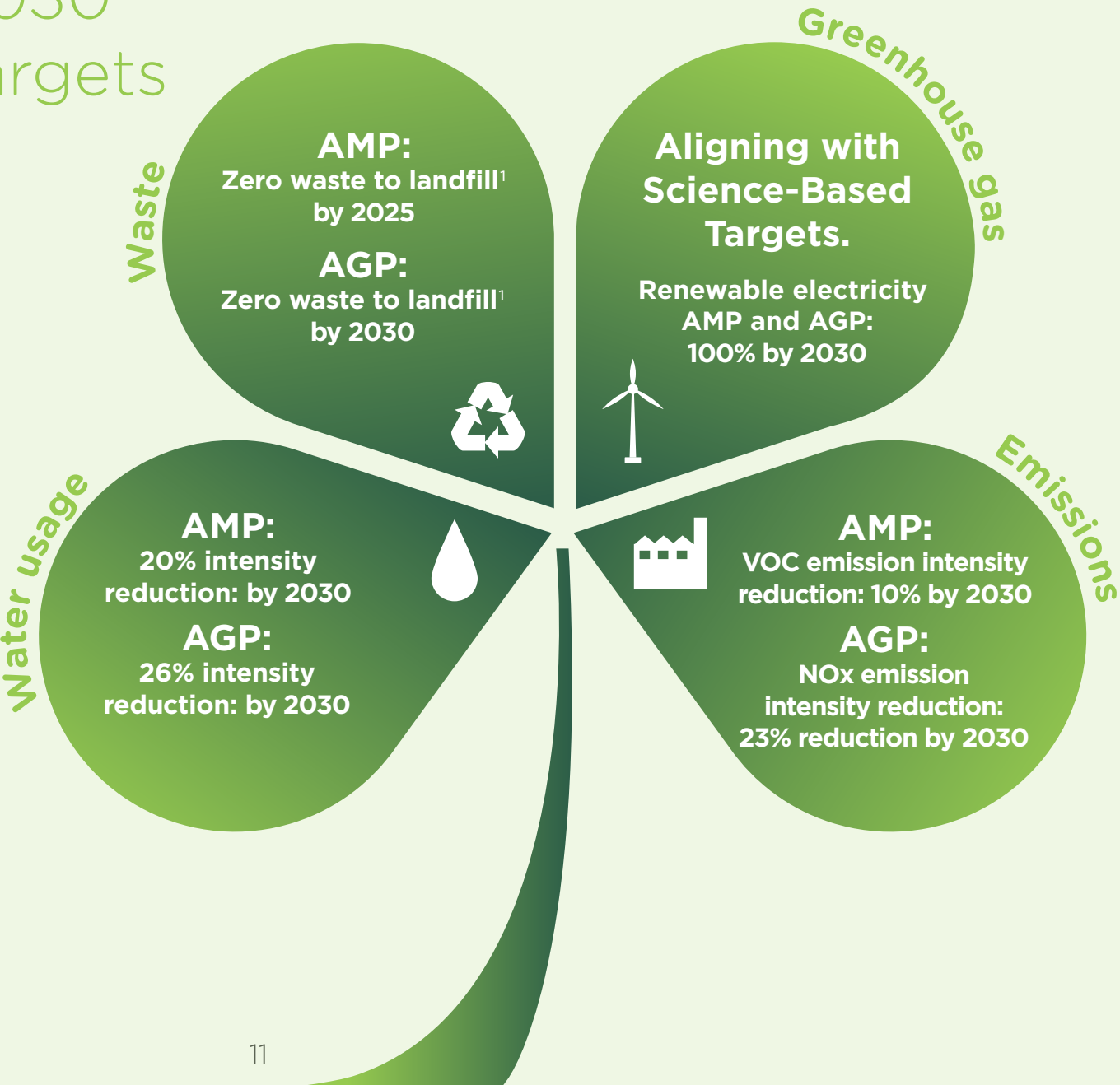
2021 will be the last year we report on our 2025 targets as we accelerate our targets to 2030 with more ambitious commitments set across our business.

Our new 2030 targets are more ambitious with new action plans in place as set out in the infographic to the right.

+ To learn more about our environmental data click here

[1]Zero waste to landfill for operational waste streams where allowable by regulation

2030 targets



Environmental risks

As a leading global supplier of infinitely recyclable, sustainable metal and glass packaging, we have a responsibility to respond to the many challenges facing our environment. Climate change and water scarcity have the potential to impact our business. Extreme weather events pose a risk to our production facilities, employees and our customers. In preparation for such risks, we have emergency response mechanisms in place and a robust risk management approach enabling us to analyse and mitigate risks. We operate an Enterprise Risk Management (ERM) system, guided by an ERM management committee, to ensure that strategic risks, such as environmental, operational, financial and market risks are identified, assessed and managed appropriately.

Our long-term environmental targets help us to stay focused and ensure that we closely monitor our emissions, water, VOC, NOx and energy consumption. To date, we have significantly reduced our water consumption [+], reducing our dependency on water and thus reducing the impact of potential water shortages in the future. We operate with a precautionary mindset through the adoption of structured and certified environmental management systems and control standards. The internal structure this provides is further strengthened through our participation in initiatives such as EcoVadis and CDP, which maintain an external and objective eye on our sustainability activities.

We have a responsibility to respond to the many challenges facing our environment.

Ends production, Manaus, Brazil

Bridgeton facility, New Jersey, U.S.

Regulatory and legal requirements and biodiversity

We are in material compliance with environmental laws and regulations in the countries in which we operate. Our active participation in industry associations around the world enables us to be aware of, and prepare for, any upcoming regulatory and legislative requirements. We understand that manufacturing processes can have a negative impact on the environment, particularly through emissions and thermal radiation.

Protecting and promoting biodiversity and natural habitats is an important part of environmental management. Most of our facilities are located in industrial or mixed-use areas; only a handful are adjacent to protected areas. As part of an environmental risk assessment, we maintain a list of facilities that are located within a 100-metre radius of protected areas such as Natura 2000 and nationally designated sites. Only two of our AMP and one of our AGP facilities are near Natura 2000 areas. In the U.S., we have no facilities close to areas which are covered under the U.S. Geological Survey. Facilities outside the U.S. and Europe have been matched against the Protected Planet database. We are confident that our AMP and AGP production facilities do not have a direct negative impact on biodiversity.

Nonetheless, we constantly monitor our activities and progressively work to improve our environmental performance. An example of such an improvement includes the development work on our Environmental Control Standards.

Our packaging solutions are made from permanent materials: aluminium, steel and glass. These materials are not classified as scarce resources. As we move towards more sustainable production and consumption of our packaging, we are participating in multiple initiatives aimed at both our own operations and raising consumer awareness of closing the loop.

Sustainability in action

Group

Giving back

Many of our employees have a passion for helping others in their local communities. We are inspired by our team's community spirit through a variety of acts such as volunteering and charitable donations to support people in need in the communities in which we operate.

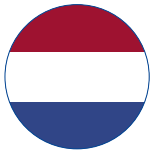
We were inspired by our people and in 2020 created a multimillion dollar annual fund to support people in need in our local communities. The fund was allocated to charities, nominated by our people, providing emergency relief in the communities close to our facilities.

Recipient organisations of the fund included The Red Cross, UNICEF, The Samaritans, healthcare facilities, food banks, homeless shelters, hospices and community centres.

For many of our people, Covid-19 inspired and re-shaped the way we support and get involved in our local communities. At Ardagh, we intend to continue these community-led initiatives to help our communities thrive.

Examples of local led initiatives:

Germany: Donations of much needed PPE to local healthcare providers



The Netherlands: Support for food banks, homeless shelters and a home for children and young adults with mental and multiple disabilities

UK: Our 3D printers switched to making safety visors for local hospital staff

Brazil: Support for local families in need with donations of PPE, essential baby care items and food

Spain: Food parcels were handed out to those in need

U.S.: Our Feed a Family programme resulted in the value of thousands of family meal donations to local community organisations.

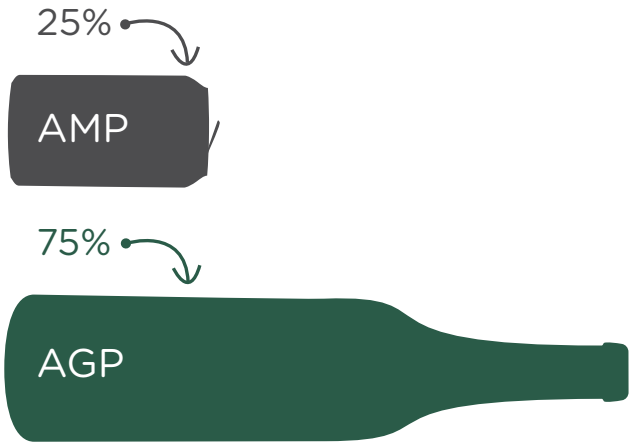
The three key pillars of our **sustainability strategy**

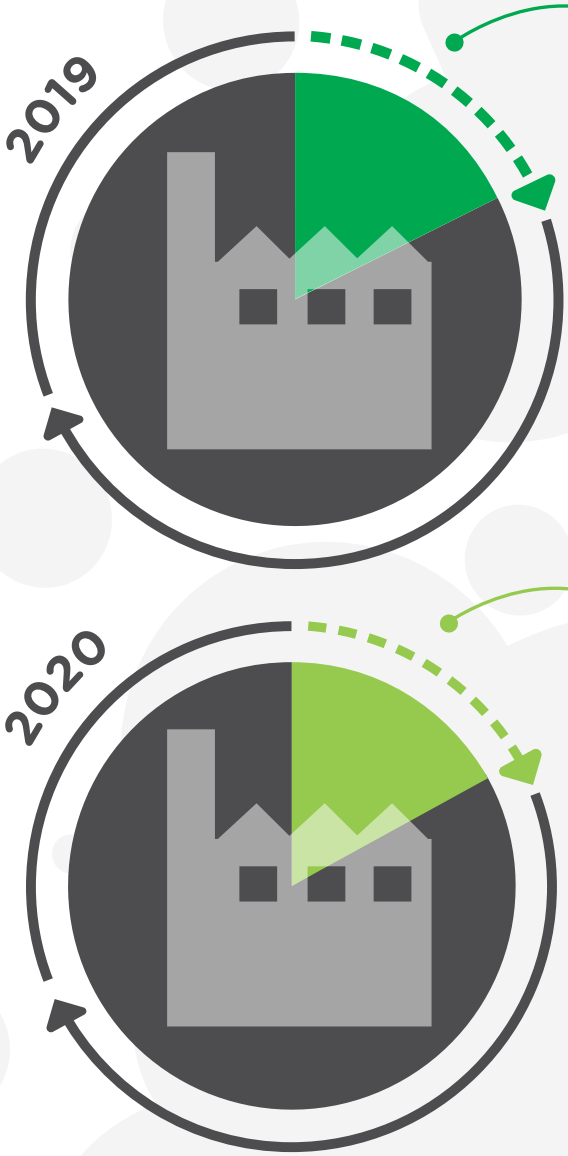
Emissions

In 2020, we launched Ardagh's Renewable Energy Programme as part of our **Emissions** pillar. Our aim is to source 100% of our annual electricity requirements from renewable sources by the end of 2030. Our transition to **renewable electricity** is at the heart of our sustainability strategy and will contribute a significant reduction to our 2030 reduced emissions target.

AMP accounts for approximately 25% of our electricity footprint.

AGP accounts for approximately 75%.





17%
of our production facilities had **switched** to using renewable electricity by Y/E 2019

18%
of our production facilities had **switched** to using renewable electricity by Y/E 2020

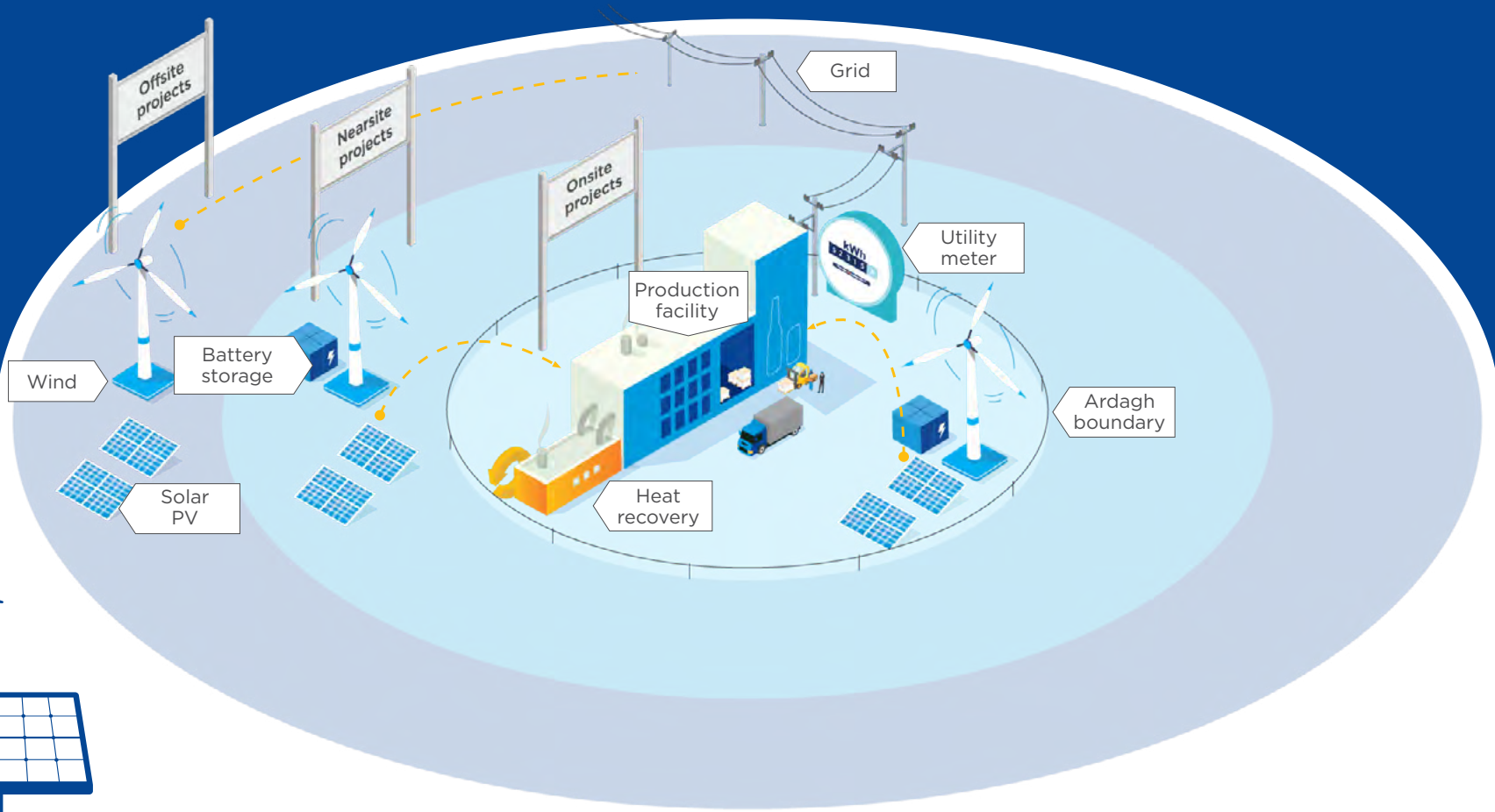
Renewable electricity

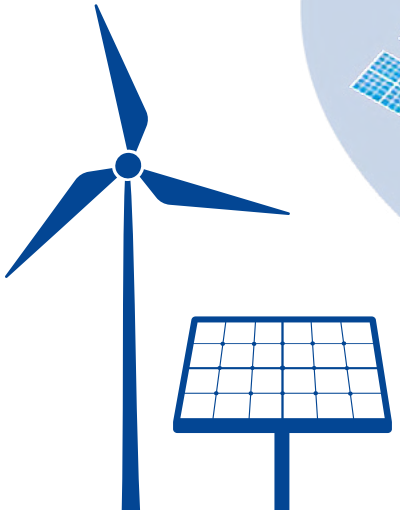
The use of clean, renewable electricity is a key part of our strategic goal to reduce carbon emissions. We know that renewable electricity sources play a fundamental role in reducing CO_2 emissions into the atmosphere. That is why we have made significant progress to prepare our journey forward so that we can achieve 100% renewable electricity supplied to our facilities by 2030. Through the transition to renewable electricity, we aim to reduce our Scope 2 CO_2 emissions to zero by 2030 with a combination of on-site, near-site and off-site renewable electricity projects across our European and Americas facilities footprint. In 2020, we strengthened our sustainability team and established a renewable energy programme to oversee such activities across the Group.

Our renewable electricity will be generated through a combination of sources including solar, wind and waste heat recovery.

We are also investigating renewable thermal solutions to reduce our Scope 1 CO_2 emissions through electrification of thermal loads [F4F +] and fuel switching to low or no carbon fuels. These exciting milestones drive us to continue establishing a sustainable, better future not just for our people but for the local communities and environments in which we operate.

Onsite and nearsite projects are most visible, offsite projects deliver scale





13 CLIMATE ACTION

In 2021, the Financial Times (FT) published its inaugural listing of European companies that have made big strides in reducing their GHG emission intensity between 2014 and 2019.

Ardagh was proud to be listed amongst 300 companies in FT's "Europe's Climate Leaders 2021".

+ To review the FT report, click here

Facilities using renewable electricity in 2020:

- Enzesfeld, Austria
- Alagoinhas, Brazil
- Valdemorillo, Spain
- Deeside, UK
- Rugby, UK
- Wrexham, UK
- Limmared, Sweden
- Barnsley, UK
- Doncaster, UK
- Irvine, UK
- Knottingley, UK
- Bridgeton, U.S.
- Burlington, U.S.
- Madera, U.S.

AMP AGP

Sustainability in action

AGP - North America

Glass site transport goes electric

In 2019, our Logistics and Operational teams in AGP - North America set about replacing propane forklift vehicles with electric vehicles. They began with replacing the propane powered vehicles at our Dunkirk, Indiana warehouse with Automatically Guided Vehicles and electric forklift trucks. By converting to electric, our Dunkirk warehouse is paving the way for decarbonising its forklift trucks, while also reducing its fire and safety hazards associated with fuel tanks and saving 3,280 gallons of liquid propane on an annual basis. Thanks to the successes demonstrated at Dunkirk, our team are on track to convert propane vehicles across **80%** of our other AGP - North America facilities by 2030.

In line with our target to replace **80%** of our 432-unit forklift propane vehicles by 2030, we are currently at **39%** with progress targets of **45%** by year end 2021 and **55%** in 2022.

Sustainability in action

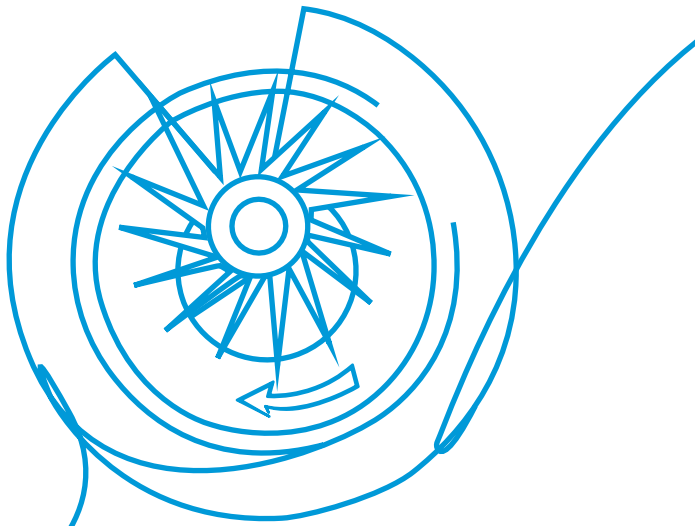
AGP - Europe

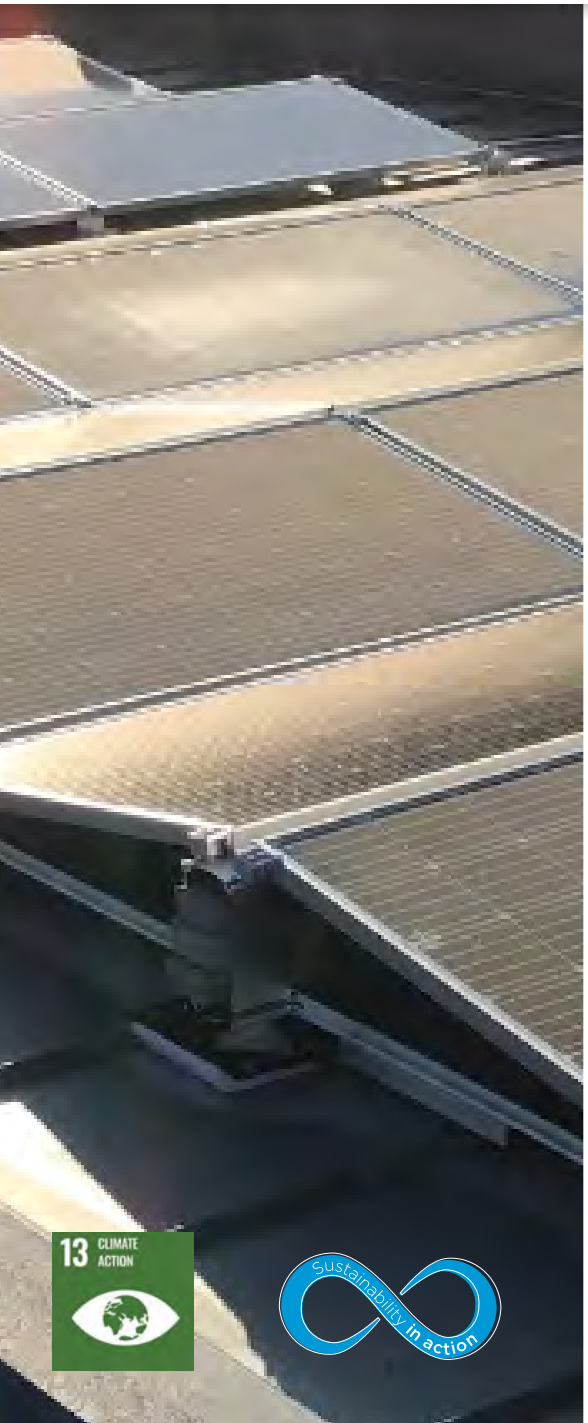
Energy reduction

Since the launch of our Global Energy Programme in 2018, we are investing annually in energy efficiency projects. AGP - Europe invested approximately €6 million during 2020 in energy efficiency, and many of these projects were associated with modernising and upgrading energy intensive equipment. The team installed 23 new compressors and vacuum pumps, which resulted in approximately 2% of total electricity saving across AGP - Europe.

think energy
reuse. reduce

The team installed 23 new compressors and vacuum pumps, which resulted in approximately 2% of total electricity saving.





Sustainability in action

AMP - Europe

Enzesfeld Solar

In the **Emissions** pillar of our sustainability strategy, one of our targets is to transition to 100% renewable electricity. This will in turn contribute significantly to a reduction in emissions as outlined in our 2030 targets.

Among the many Emissions initiatives taking place across the business, our Enzesfeld facility is taking huge strides forward with solar panel technology. The team installed a photovoltaic system at the end of 2020 with the mounting of 93 solar panels on the facility's roof. The technical team also integrated the solar installation into the facility's IT system in order to gauge performance.

The installation of the photovoltaic system will enhance the sustainability of our production process and reduce the amount of electricity we take from the grid, thereby reducing of the CO_2 footprint of the Enzesfeld facility.

The team at Enzesfeld has proudly linked this to one of their Community Involvement Projects whereby the team donated trees to be planted within their local community. In addition, the team provided a charging station for employees to charge their electric vehicles.

The team installed a photovoltaic system at the end of 2020 with the mounting of 93 solar panels on the facility's roof.

Sustainability in action

AMP - Europe

Thermal oxidisers

Thanks to continuous investment and improvements at our facilities in Hassloch and Hermsdorf in Germany, along with La Ciotat in France, we have successfully refurbished our Regenerative Thermal Oxidisers (RTOs) during the reporting period. RTOs are typically used to remove air pollutants such as volatile organic compounds (VOC) from the air streams in our facilities.

The refurbishments have also contributed to reducing our carbon footprint at each location as the newly-refurbished RTOs are more energy efficient, resulting in a CO_2 saving of approximately 780 tonnes or 3,510,000 kWh of natural gas.

Hermsdorf, Germany

Hassloch, Germany

La Ciotat, France

Sustainability in action

AMP - South America

LEED Certification in São Paulo

LEED (Leadership in Energy and Environmental Design) is the most widely-used green building rating system globally. It provides a framework for healthy, highly efficient, and cost-saving green buildings. LEED certification is a globally recognised symbol of sustainability achievement and leadership. Our Brazilian office in São Paolo is located in The One Condomunium building which is silver rating certified. The building is recognised as having several environmental advantages including:

- Reduced water and energy consumption
- Improved safety performance
- Sustainable waste management.

Energy-efficient buildings help reduce pollution and improve outdoor air quality in industrialised areas, making LEED a critical tool in reducing smog.

+ To learn more about LEED certification, click here

Environmental data overview*

As we intensify our sustainability efforts, we believe we need to increase our ambition in relation to our emissions and ecology pillars, therefore, this will be the last year we report on 2025 targets. We have accelerated our focus towards more ambitious 2030 targets taking into considerations anticipated business growth.

CO_2

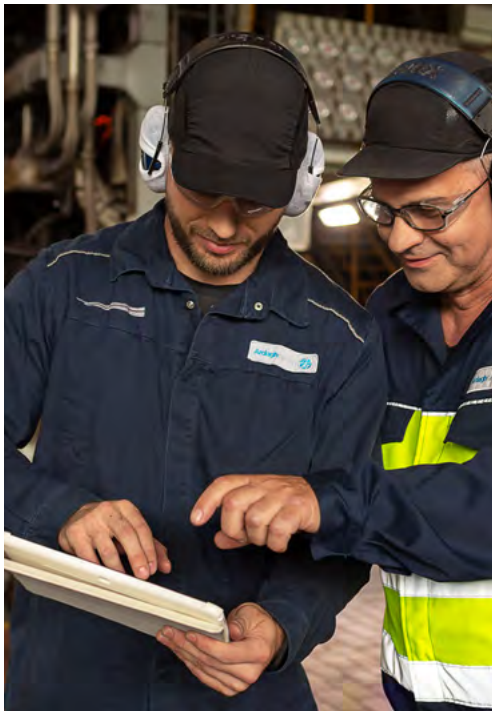
In 2016, we set an absolute carbon reduction target of 17% by 2025. Since then, we have grown as a business while executing energy efficiency projects across our facilities and commenced our Renewable Energy Programme + resulting in relatively flat carbon emissions in 2020 compared to 2016.

VOC

A 4% absolute reduction in VOC emissions was set as our target for 2025 compared to 2016 baseline. An overall 1% increase in VOC emissions was recorded. This was due to an increase in production. As we now look to our 2030 targets, we are implementing new and innovative technical solutions including incineration of VOCs and the possible strategic procurement of upstream material.

NOx

We originally set a NOx reduction target of 17%. Today, our reduction stands at 18%.



VOC	[metric tonnes]
2019	2,769
2020	2,707

NOx	[metric tonnes]
2019	7,813
2020	7,324

*Ardagh sustainability data excludes Trivium Packaging

	Year	AMP CO_2 [metric tonnes]	AGP CO_2 [metric tonnes]
Scope 1	**2019**	138,767	2,312,070
	2020	136,759	2,250,330
Scope 2	**2019**	209,195	856,399
	2020	210,123	865,535
Scope 3*	**2019**	3,142,092*	1,376,322
	2020	2,838,019	1,278,911
Total emissions	**2019**	3,490,054*	4,544,791
	2020	3,184,901	4,394,776

Scope 1 – Direct emissions such as those from production and transport on site
Scope 2 – Indirect emissions from electricity use
Scope 3 – Upstream emissions such as those from raw material sourcing, transport and waste

*We previously reported 3,228,123 metric tonnes of Scope 3 emissions for AMP. The relevant figures have been restated to reflect more accurate data.

Energy intensity - AMP

AMP [kWh/1000 units]	2019	2020
Electricity	20.3	20.0
Fossil fuels	18.6	17.7
Total energy	38.9	37.7

Energy intensity - AGP

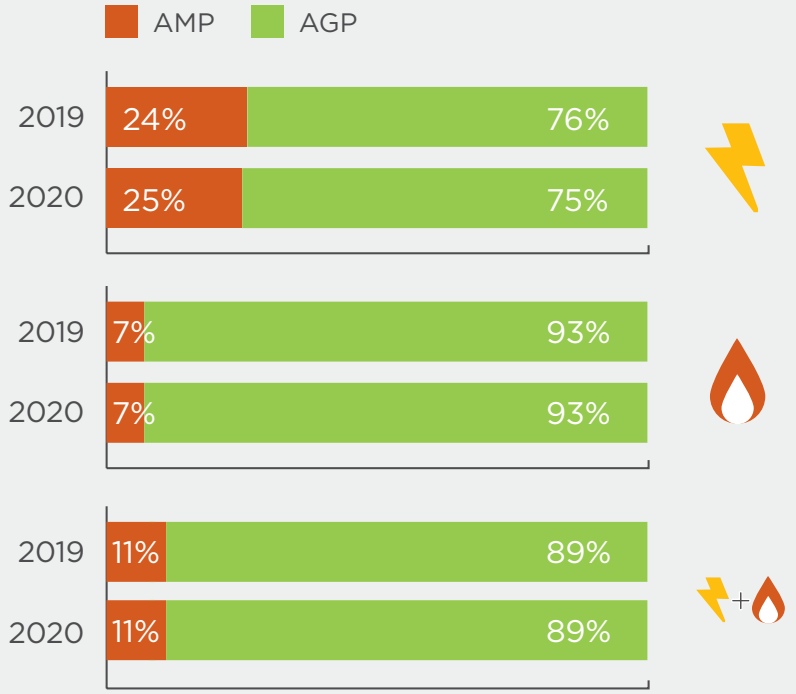
AGP [MWh/tonne packed]	2019	2020
Electricity	0.4	0.4
Fossil fuels	1.7	1.7
Total energy	2.1	2.1

Energy usage

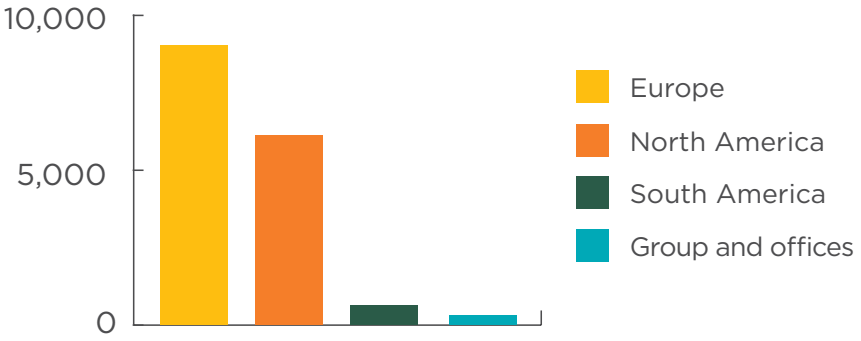
Electricity	2019	2020
AMP [MWh used]	746,364	764,072
AGP [MWh used]	2,304,804	2,310,504

Fossil fuels[1]	2019	2020
AMP [MWh used]	686,232	674,202
AGP [MWh used]	9,193,962	8,972,439

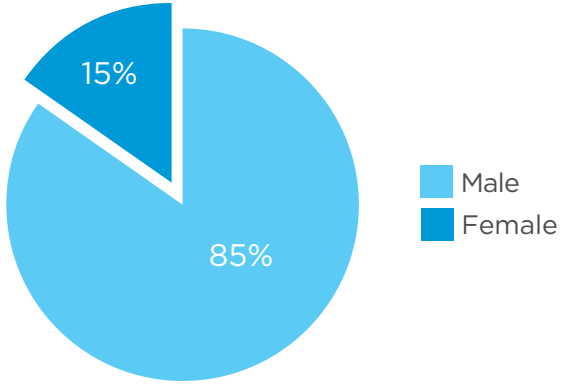
Total energy	2019	2020
AMP [MWh used]	1,432,596	1,438,274
AGP [MWh used]	11,498,766	11,282,934



Employees 2020



Europe	9,013
North America	6,120
South America	656
Group and offices	332
Total employees	16,121



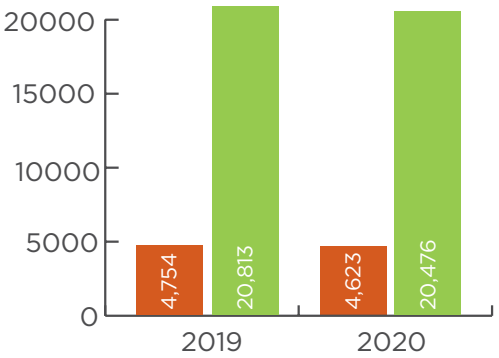
[1]Natural gas | Diesel | LPG | HFO | Hot water

Waste

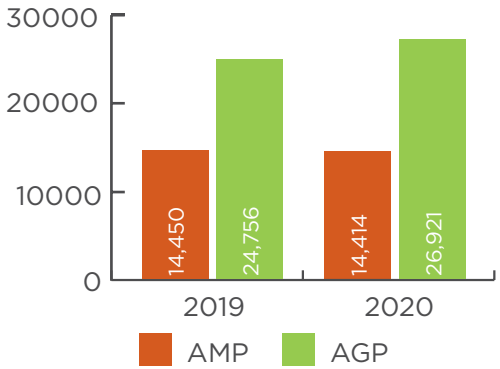
In 2016, we announced a waste recovery target rate of 10% by 2025 to decrease materials sent to landfill. We have increased our waste to landfill from 2016-2020 by 1%. Our 2030 targets are more ambitious and we will actively pursue zero waste to landfill[1] status for all locations.

+ Click here for more sustainability data

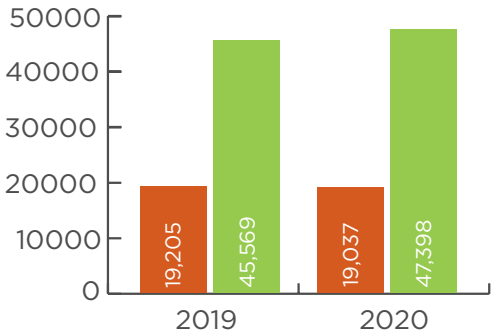
Disposed waste [metric tonnes]



Recycled waste [metric tonnes]



Total waste [metric tonnes]



Cullet[2]

[1]Zero waste to landfill for operational waste streams where allowable by regulation | [2]Average use of internal and external cullet

Materials used

Glass melted [t]

2019: 6,479,660 | **2020:** 6,268,522

Aluminium [t]

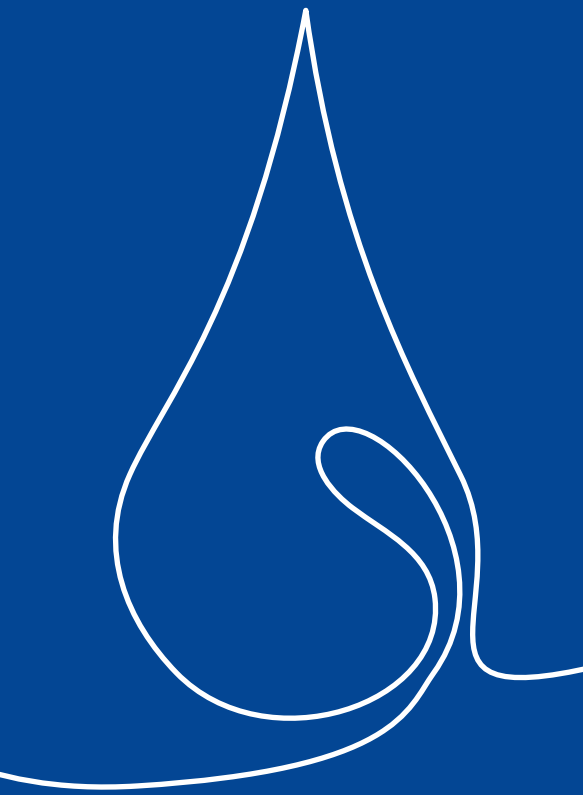
2019: 579,320 | **2020:** 560,216

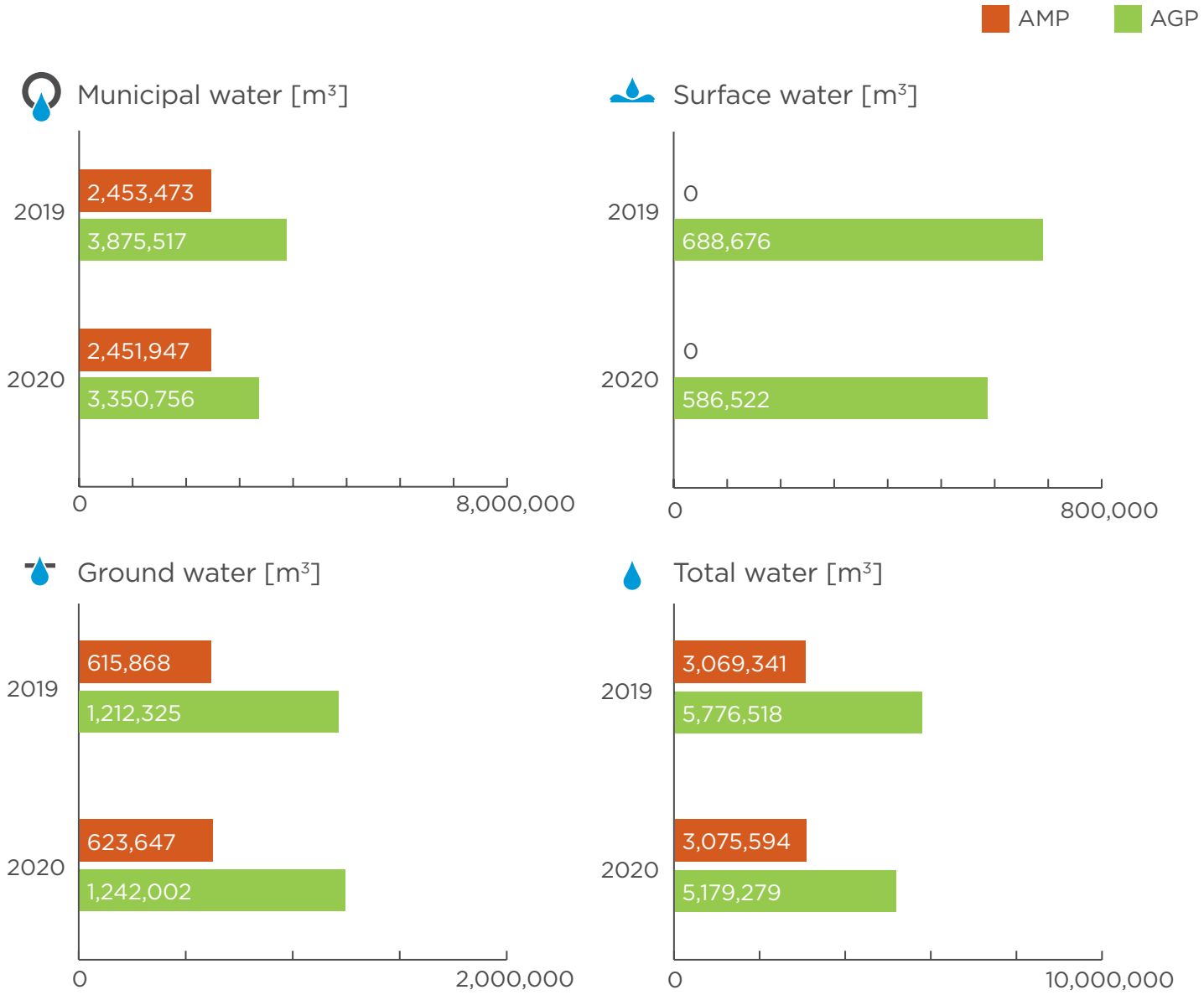
Steel [t]

2019: 61,329 | **2020:** 60,840

Water use

Our 2025 target of a 9% absolute reduction in water usage is tracking ahead of plan. By year-end 2020 we achieved an absolute reduction of 7% in water usage. Through the installation of closed loop water systems and working together with our suppliers on water efficiency projects, we have made significant achievements to date. (See more information on our water treatment programme in AMP - South America +).





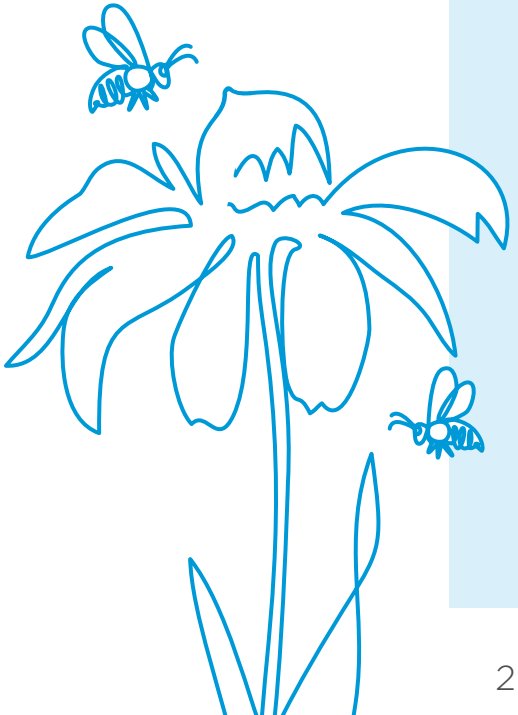
Ecology

As part of our **Ecology** pillar, we have increased our efforts to protect and promote **biodiversity** and natural habitats surrounding our facilities. We are proud to support the UN Convention on Biological Diversity and **Sustainable Development Goal 15** Life on Land. The majority of our facilities are located in industrial or mixed-use areas. Only three of our European facilities (two AMP and one AGP) are located within a 100-metre radius of protected areas such as Natura 2000 and nationally designated sites. In the U.S., we have no facilities close to areas which are covered under the U.S. Geological Survey.

Four of our AGP facilities in Germany collaborated to create a **biodiversity** initiative for one of nature's smallest but most vital creatures – the honeybee. We partnered with Bee Rent, a German bee conservation initiative, to co-manage our new beehives in the grounds of our facilities. The aim is to nurture the bee population as well as the health of the local ecosystem by installing hives containing up to 100,000 bees. We hope to expand this **biodiversity** initiative across our other locations in the future.

The popular BBC UK wildlife programme *Autumnwatch* paid a special visit to our Barnsley, UK AGP facility in 2020 to film some magnificent Peregrine Falcons and Kingfisher birds that have made their home at our facility for the past number of years. While we're busy producing thousands of glass bottles and jars inside our facility, our

wildlife residents have been thriving in some of the unused areas of the grounds and can be seen perched high on the chimney stack and circling the site daily.



Sustainability in action

Group

Bee is for biodiversity

To support the UN Convention on Biological Diversity Sustainable Development Goal 15 Life on Land we celebrated World Bee Day (May 20, 2021) with a bit of a buzz. Members of our AGP team in Germany collaborated to create a biodiversity initiative for one of nature's smallest, yet most vital creatures - the bee. To protect and conserve these vital pollinators - key to the reproduction of our food and drink crops, our teams installed beehives across three of our German locations. By installing beehives containing up to 100,000 bees, we aim to nurture the bee population and the health of the local ecosystem.

Installing the beehives will enable the bees to thrive in a protected environment so they can pollinate plants and consequently increase biodiversity in the areas they pollinate. The installation of the hives will contribute to improving the environmental ecosystems in our local communities. At harvest time, we look forward to packaging our honey in infinitely sustainable glass jars and donating this wonderful combination of pure honey in glass jars to local causes. We're excited to watch our busy bees in action.

Supply network collaboration

Our commitment to the SBTi is also demonstrated along our supply chain. In 2020, we launched our Supplier Engagement Programme to promote regular, active engagement with our supply network to encourage the adoption of more sustainable practices. Through collaboration, we aim to develop and disseminate best practices adhering to our **Ecological**, **Emissions** and **Social** pillars throughout our supply network.

Through this programme, we are collaborating with our supply chain partners to explore innovative solutions to reduce Scope 3 CO_2 emissions.

Last year we invited our supply network to a virtual conference to share our strategy and targets, as well as encourage open discussion on ways we can all do things better - together. We will continually assess the sustainable performance of our supply network through regular communications, the setting and monitoring of KPIs and identifying improvement areas to support our targets and commitments.

Raw materials sourced through our supply network include sand, soda ash, steel and aluminium. We actively encourage our supply network to implement social and environmental standards to ensure these raw materials are responsibly extracted and in compliance with legal requirements. Our supply network must adhere to our Responsible Procurement Policy [+] which outlines the standards we require of them in matters pertaining to social, ethical and the environment. We operate with a responsible and regulated procurement approach and our policy includes our commitment to ensure conflict-free sourcing.

+ Learn more about conflict-free sourcing

Sand

Soda ash

Steel

Aluminium

Sustainability in action

AGP - North America

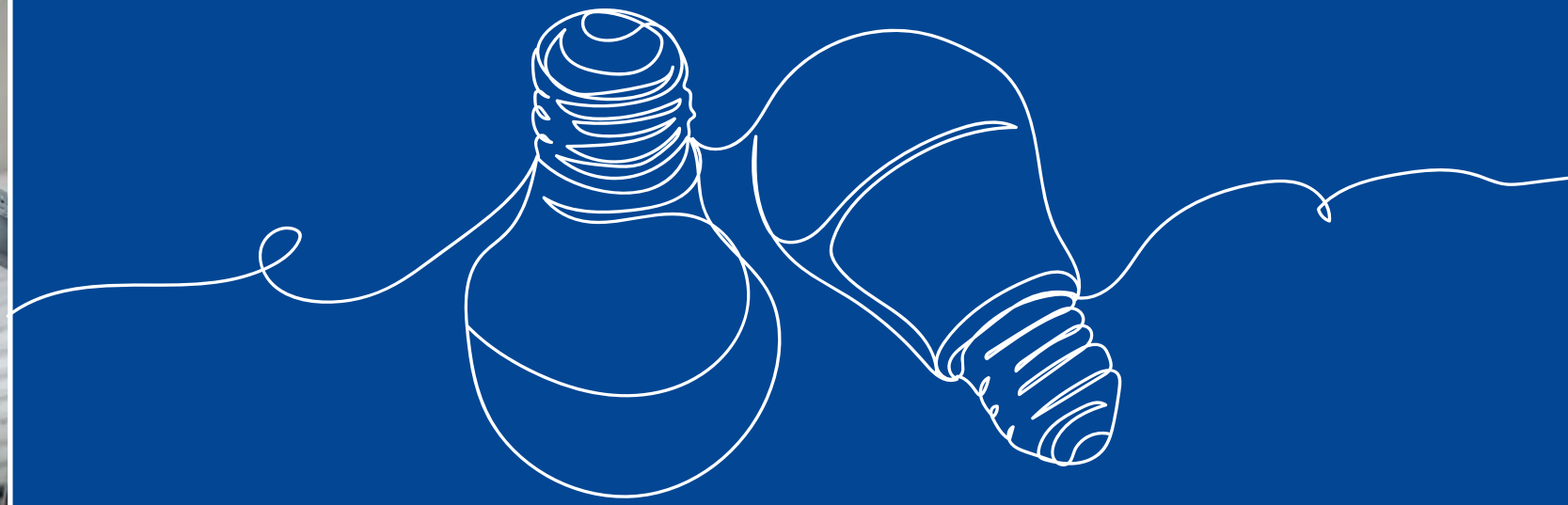
Future is brighter

Our AGP facilities in Dolton, Illinois; Madera and Fairfield (warehouse) California; Seattle, Washington achieved their goal to improve lighting levels sustainably by switching to energy efficient LED fixtures. The new fixtures contribute not only to better housekeeping and safety, but also to improvements in inspection, production and quality. In addition, they also use less electricity thereby conserving natural resources and reducing the impact on the environment.

The new LED fixtures consume 20-30% of the total energy of the old fixtures (High Intensity Discharge (HID) and fluorescent) and with added occupancy controls, the new lights automatically switch off when not in use. In the event of a power outage, HID lighting requires several minutes to cool down before restarting. The new LED fixtures are immediate, thereby affording us an added safety benefit.

In total, we installed more than 8,000 energy efficient fixtures which reduces our annual electricity consumption at these sites by 5.5 GWh of electricity. That is equivalent to approximately 4,000 metric tonnes of CO_2 or the electricity consumed by 700 households. Thanks to the collaboration with our utility suppliers and lighting contractors, the future of these four AGP - North America facilities is brighter.

We reduced our annual electricity consumption at four facilities by 5.5 GWh of electricity.



Social sustainability

We strongly value the relationship we have with our people and giving back to the local communities in which we live and work. This is core to our social sustainability strategy and aligns with our core values of Trust, Teamwork and Excellence.

We have established a Social Sustainability Committee, reporting and accountable to the Board Sustainability Committee, whose remit is to fine-tune our focus on social sustainability initiatives to ensure their delivery.

We recognise the need to promote an inclusive and diverse culture at Ardagh. To help drive some of our strategic objectives in the areas of Diversity, Equity and Inclusion (DE&I) and employee wellbeing, we will soon launch an employee survey to gather insights and establish a baseline of our current status quo while setting targets for the future.

We have conducted several DE&I workshops along with unconscious bias training so as to enhance awareness and understanding of differences.

Code of Conduct & Core Values

At Ardagh we believe in doing business the right way. We are committed to complying with all applicable laws and operating in an ethical and honest way – always. Our Code of Conduct applies to all our people and guides our business and all who work with us. Our Code sets clear expectations about what we deem acceptable behaviours and clearly sets out our approach to sustainability, ethics and employment practices amongst other items.

Our Code of Conduct is supported by our Core Values of **Trust, Teamwork** and **Excellence** - values which form the foundation of our business.

+ For more on Ardagh's Code of Conduct click here

Trust

Teamwork

Excellence

+ For more on Ardagh's Core Values click here

BSafe! Health and safety at Ardagh

We take our responsibility for health and safety as an employer very seriously. Prevention of physical harm and the provision of support for mental health and wellbeing are a vital part of our duty of care to our people. This was particularly evident during the recent Covid-19 pandemic.

A health and safety management programme - BSafe! - underpins our safety culture. BSafe! continuously raises awareness of health and safety at Ardagh, the role of personal protective equipment, and our constant improvement in workplace and procedural safety.

We regularly review the effectiveness of BSafe! with internal audits, and elements of our safety management including policies, planning, implementation and operation, corrective action and timely safety reviews to ensure accountability and the safety of everyone at Ardagh.

Each of our businesses have defined their short- and long-term safety objectives for the strengthening of safety culture and processes to maintain our continuous improvement of safety performance. These are integrated into formal plans and deployment processes.

BSafe!

Progress of these plans is regularly reported to the executive team. The following safety initiatives have also been agreed:

- Implementation of ISO 45001 for alignment with all regions
- Full deployment of Ardagh Life Safety Rules – The BSafe!-7
- Introduction of group-wide Continuous Professional Development (CPD) programme in safety.

By 2025, we aim to deliver a 20% improvement on the following key safety performance metrics[1]:

1 **ARAR**

Ardagh Recordable Accident Rate (ARAR) - lost and medically treated accident rate

2 **Severity**

Severity - lost calendar days and restricted duty days per 100 employees per annum.

	2020 baseline	2025 target
ARAR	1.25	1.00
Severity	35.9	27

[1] Base year is 2020.

	2019	2020
# of lost time accidents/ 100 full time employees	0.47	0.35
# lost time and medically treated accidents/ 100 full time employees	1.52	1.25
# of lost time and restricted duty days/100 full time employees per year	46.7	35.9

Fatal accident statement

Ensuring a safe and healthy work environment is, and always will be, our main priority. In any manufacturing environment, accidents have the potential to occur at any time. Tragically, three fatal accidents occurred at our German and Brazilian facilities during 2020 involving contractors and vehicles. We deeply regret these accidents. Our sympathies are with the families and friends of those who lost their lives.

Following thorough root-cause analysis, lessons learned were shared and incorporated with best practice across the business. The new traffic safety management programme has resulted in a revision of procedures including site traffic flow, the extended use of technology and improved training and awareness programmes.

Sustainability in action

AMP - North America

Leveraging differences to strengthen teams

We believe it is through leveraging our distinct experiences, perspectives and differences that we will build a culture founded on Our Core Values of Trust, Teamwork and Excellence. Thus, as part of our Diversity, Equity and Inclusion (DE&I) strategies, AMP - North America has implemented unconscious bias training across all leadership personnel, plant management and office locations.

The training course has helped to facilitate participants in understanding the value of individual perspectives and experiences. At the end of the training, participants understood what unconscious bias is, how to identify its impact on their personal and professional lives, and how to work empathetically with teammates.

This unconscious bias training furthers our commitments to our DE&I strategy and our investment in our people. The training doesn't end after the courses are completed. After each session, participants are asked to form small groups to continue growing, meeting regularly to discuss how they are progressing toward understanding, accepting and utilising differences to eliminate any obstacles in uncovering our full potential as the best team in our industry.

Community Involvement Projects

Having witnessed many people across the globe suffer huge loss and upheaval during the pandemic, the **Social** pillar of our strategy has become a key focus for us and has accelerated our activity in this space. Our social impact is determined by how we manage our relationships with **our people, our customers, our suppliers and our communities**. We are eager to foster our positive social impact by:

- Being a good employer - providing a safe working environment, having the right diversity, equity and inclusion structures in place
- Supplying safe and innovative products throughout the food and beverage supply chain and
- Sourcing responsibly and by giving back to the communities we live and work in.

Community Involvement Projects are a key component of our **Social** pillar.

Each Ardagh location has a goal to achieve at least one meaningful project annually, generally connected to recycling and education.

In 2021, we undertook a major re-evaluation of our approach to Community Involvement Projects. A survey was distributed across key functions and departments and the feedback helped to shape our new approach to these projects, making them more aligned to our business operations and its needs.

As part of our renewed commitment to social sustainability, we now have a dedicated Social Sustainability Ambassador Network in place, consisting of representatives for each location. This enables us to exchange best practice, share ideas and collaborate across functions to achieve our goals.

World Cleanup Week

Every September, World Cleanup Day sees 50 million people around the world come together to clean their local communities. In September 2021, we were delighted that so many of our employees came together to take part in this global initiative. Our teams across Europe and the Americas volunteered to clean up designated areas of their local communities and zones within our facilities. Projects included litter picking and collecting of metal and glass containers for recycling. We are proud to support this initiative to demonstrate our commitment to zero waste.

Sustainability in action

AGP - Europe

Cullet briquettes

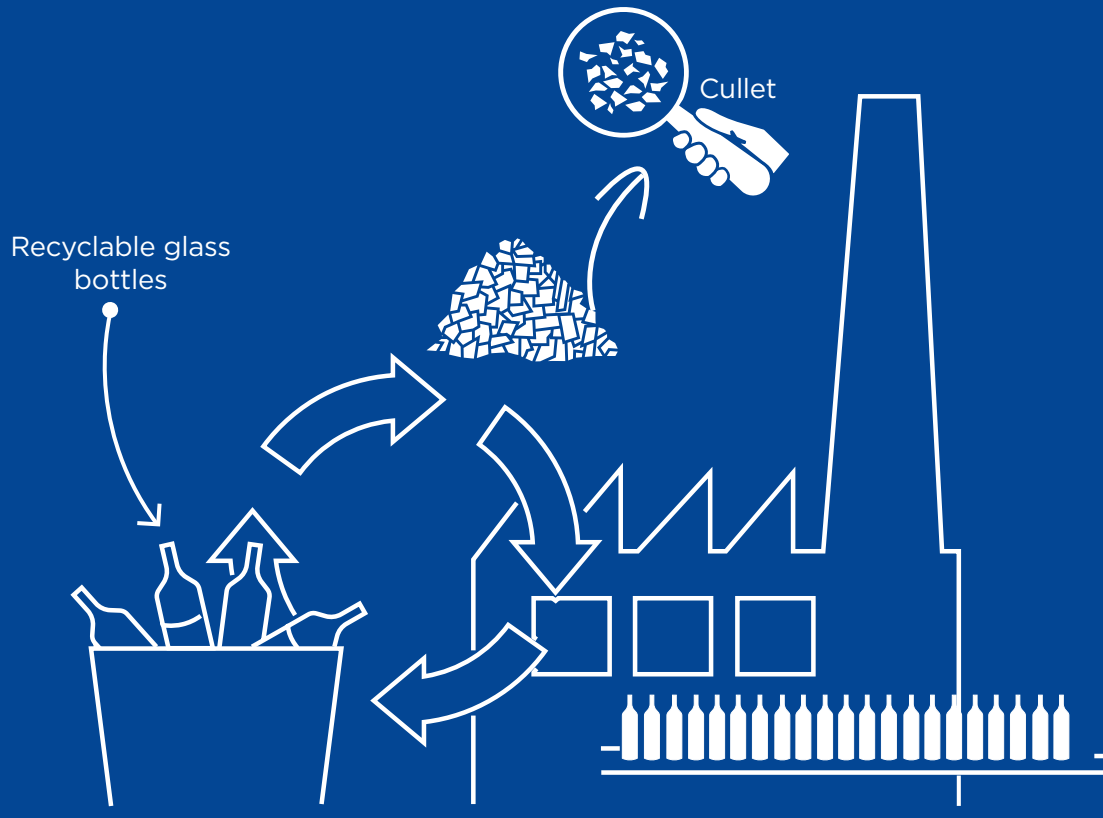
When glass is collected for recycling, it will contain contaminants that need to be removed by the glass recycling plants to ensure the recovered glass (cullet) is suitable for remelt. During collection and processing, approximately 10% of the total collected may be broken into small particles referred to as “fines”. These fines, because they contain excessive amounts of Loose Organics and CSP (ceramic, stone and porcelain), create problems if they enter the furnace for remelt, causing blistering and inclusions in new containers. As they are too small to be sorted, they are often diverted into aggregate or end up in landfill.

We therefore investigated how to achieve full recyclability of collected glass containers, including the 10% which is currently lost to remelt. The project goal was to transform the fines by milling and binding them together to produce briquettes which could be remelted without any negative impact in the furnace or creating defects in the glass containers.

+ Learn more about the project here

The project to transform the fines into a briquette is driven by the known benefits of using cullet:

- Energy consumption - For every 10% of cullet used, energy costs are reduced by 2-3%
- Carbon dioxide - For every six tonnes of cullet used, CO_2 is reduced by one tonne
- Environmental impact – A reduction in quarrying for raw material such as sand, soda ash and limestone
- Reduction of waste - reusing glass as a valuable raw material.



Education
Sustainability in action
Group

Investing in STEM education in local communities

Our vision for the future is to expand our educational initiatives to the communities in which we operate. Under the **Social** pillar of our sustainability strategy, we have committed to invest approximately **$50 million** from 2021-2032 in the local communities in which our U.S. facilities are located.

These investments support high-quality teachers in science, technology, engineering and mathematics (STEM) disciplines to inspire students' STEM understanding and interest.

We laid the groundwork in 2020 by reviewing dozens of organisations to partner with and chose Project Lead the Way (PLTW) due to their high impact, national reach, experience serving under-served students and strong management. PLTW provides students from pre-kindergarten through high school (PreK-12) with hands-on manufacturing and engineering pathway options and real-world challenges, while focusing on teacher training and continuous innovation.

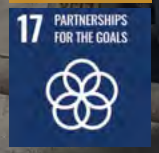
Through PLTW, we plan to deliver positive results for more than 2,000 schools and **500,000** PreK-12 students in our local communities.

Working with PLTW will help us guide engagement and volunteer efforts between Ardagh employees and educational institutions, as well as drive improvements in student capabilities, formal testing results and, ultimately, entry into STEM career fields. This investment will lead to more opportunities at Ardagh, enabling students with practical, hands-on knowledge in STEM disciplines to work with our teams. We intend to launch similar education initiatives in our Brazilian and European communities.

Project partner:

PROJECT LEAD THE WAY PLTW

We have committed to invest $50 million over 10 years to benefit 500,000+ students.



Sustainability in action

AGP - Europe

Education on recycling at school

Following a local school visit to our Doncaster, UK, AGP - Europe facility in August 2019, the children, parents and teachers who discovered how recycled glass is turned into new containers by Ardagh were inspired to recycle their own glass bottles and jars. One enthusiastic parent took to Twitter to ask for a glass recycling bank to be installed on the school grounds. This inspired our Doncaster Plant Director who collaborated with glass collection company, URM UK Ltd, to place two mixed glass bottle banks on the school's grounds. The banks enable the children, parents and teachers to recycle their empty glass containers as part of their daily journey to school.

Prior to the banks being installed, local families reported they didn't have easy access to glass recycling and were disposing of their empty glass containers in the general waste. A few months after the banks were installed, URM collected the contents from the banks which had a combined uplift of 1.12 tonnes of glass, equating to a saving of 650 tonnes of CO_2.

Families now recycle their glass containers at the school glass banks, which divert more than a tonne of glass from landfill. We are so proud of this great initiative, which shows how a local business can forge positive relationships with the community and encourage recycling from a young age.

myLearning

From technical training to professional **education** and leadership development, we offer **learning and development** opportunities to all our employees in order to help them reach their full potential. In the past, we have partnered with leading external suppliers to develop programmes ranging from strategic leadership development, management training and technical training including Lean Six Sigma. During 2019, as part of our vision to provide active learning on the job, we implemented our new digital learning platform – **myLearning** – that makes learning content available to our teams from any location.

myLearning was created in **2019** to revolutionise the way we deliver learning and development to all employees at Ardagh. The platform is a single source and access point for employees to obtain training tools and content, empowering them to take charge of their career development. Accessible via PC, tablet, smartphone or via one of our dedicated myLearning plant rooms, one of the many benefits of myLearning is the ability to share learning content at the touch of a button.

Whether it's health and safety, technical training, professional skills or leadership development training, myLearning will help everyone at Ardagh to receive the learning relevant to them and ensure consistent, high-quality learning content in various media. Since its launch in 2019, the following progressive steps have been taken:

- We established a **dedicated myLearning team** to manage smooth deployment of myLearning by the end of June 2021 across all Ardagh locations
- A **Learning and Development Governance Structure** was formed to ensure that learning tools and content loaded to the platform meet quality and technical standards, are shared across our locations, and are continuously reviewed and improved
- Dedicated **myLearning training rooms** are now in every production facility.

The way we work together, communicate, and solve problems has changed vastly due to the pandemic. We will continue to expand the importance of the myLearning platform by expanding its offering to accommodate our changing working environments and new ways of working.

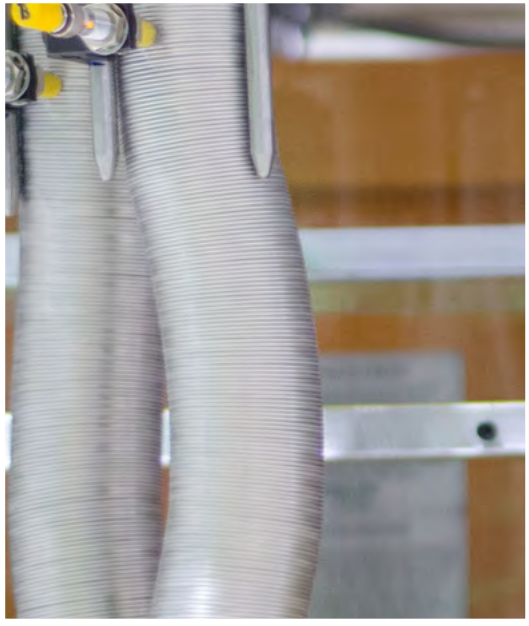
myLearning

Learning at your fingertips

"Providing each of our plants with access to our myLearning platform is the foundation to enable our learning organisation strategy and support our long range plan. We have already invested in industry-leading technical content for myLearning in addition to developing a large amount of content internally and this will provide our employees with innovative learning material enabling continuous training throughout their career with us. We will continue to add to this library, supporting the on-going skills development of our people. All our teams at each of our facilities has access to myLearning training rooms which create an effective learning environment."

Victoria Moore

– Ardagh Group myLearning Manager



Sustainability in action

Group

Ardagh Young Creatives

The London Design Museum is devoted to contemporary design, exhibiting product, industrial, graphic, fashion and architectural pieces. The Museum is committed to supporting the next generation of designers and, we were inspired by their mission of reflecting the designer's role in social, technological and environmental change. We therefore embarked on a new sponsorship programme with the museum, aimed at inspiring, up-skilling and nurturing our next generation of young talent. Ardagh Young Creatives aims to support a more representative and inclusive design industry by transferring skills, talent and lived experience.

The programme began in May 2021 with a small group of young people aged between 14 - 16 years from under-represented groups in London. They embarked on a six-month creative journey which will hopefully be a gateway for them into a career in design. The group will take part in mentoring, workshops, hands-on projects - including a masterclass in product design with Ardagh's design team in the UK.

Both Ardagh and the Design Museum hope this programme will be led by its young participants - what's covered in the course should be what is most important to them. We hope to inspire them to reach for their creative goals and realise that it is possible for them to have a career in design across all industries.

Project partner:

the DESIGN MUSEUM

Why is circularity important?

The circular economy model designs out waste and pollution and keeps products and materials in use. Circularity defines the infinitely recyclable metal and glass packaging products we create for brand owners around the world.

Our products deliver high recycled content rates, which support our customers' sustainability targets and ultimately contribute to a circular economy. In conjunction, our work with our trade associations and local communities on the benefits of recycling helps to put a strong focus on the circular economy.

When recycling rates in the community are low, the potential for reducing emissions by using recycled source material to create new packaging is reduced.

An example of how we overcame this is witnessed with our team in AMP – North America who worked in partnership with industry peers and the Can Manufacturing Institute (CMI) to create a grant programme to fund material recovery facilities. The Can Capture Grant Programme launched in 2021 awarded grants to recycling facilities in Florida, North Carolina and Texas to aid the installation of equipment to help capture more than 36 million aluminium beverage cans per annum.

The goal to increase the number of recycling facilities can help further decrease the generation of GHGs. Using recycled material instead of raw aluminium decreases emission production by 90%.

The aluminium and glass packaging we produce can be recycled by a melting process and re-used for packaging or other applications. This process is referred to as a 'closed loop' material cycle, as the material can be recycled repeatedly without loss of quality or functionality. Our packaging substrates are examples of how a closed loop cycle works. Increased use and recycling of metal and glass packaging can be a cornerstone of a circular economy and a step forward in achieving carbon neutrality.

In the U.S., AGP – North America is a proud board member of the Glass Recycling Foundation which funds the "Don't Trash Glass" campaign to encourage commercial establishments to recycle their glass packaging.

For example, bars and restaurants are provided with dedicated glass recycling containers to fill. A glass hauler then collects the materials for delivery to a glass processor who then returns the processed, clean glass as cullet to glass packaging manufacturers such as Ardagh for production into new glass bottles and jars. These glass containers eventually return to the bars and restaurants filled with food and beverage products to enjoy, thereby closing to glass loop. This campaign also received funding from the Glass Packaging Institute, of which we are also a proud member.

Sustainability in action

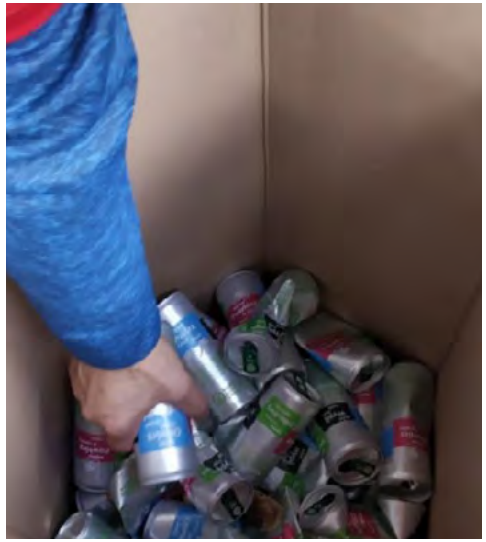
AMP - Europe

Circularity in action

Recan is a packaging recovery organisation in Poland owned by Ardagh. It operates four recycling centres collecting used beverage cans for the purposes of recycling. Its goal is to maximise the beverage can recycle rate to ensure a circular economy and deliver the best sustainable packaging recovery system in Poland.

To promote recycling awareness in Poland, Recan supports and participates in programmes coordinated with the Recal Foundation [+] which promotes the recycling of beverage cans. Established in 1995, Recal's sponsors include Ardagh, CANPACK and European aluminium suppliers. Poland's recycling rate for beverage cans in 1995 was in the region of 2%, and since then this rate has risen to 80%, compared to the average European rate[1] of 70% in part thanks to the efforts of Recal.

recan



+ To learn more about the Recal Foundation click here

recal alu
FOUNDATION FOR RECOVERY OF ALUMINIUM PACKAGING

[1]Interpack

Circular economy – Closing the loop

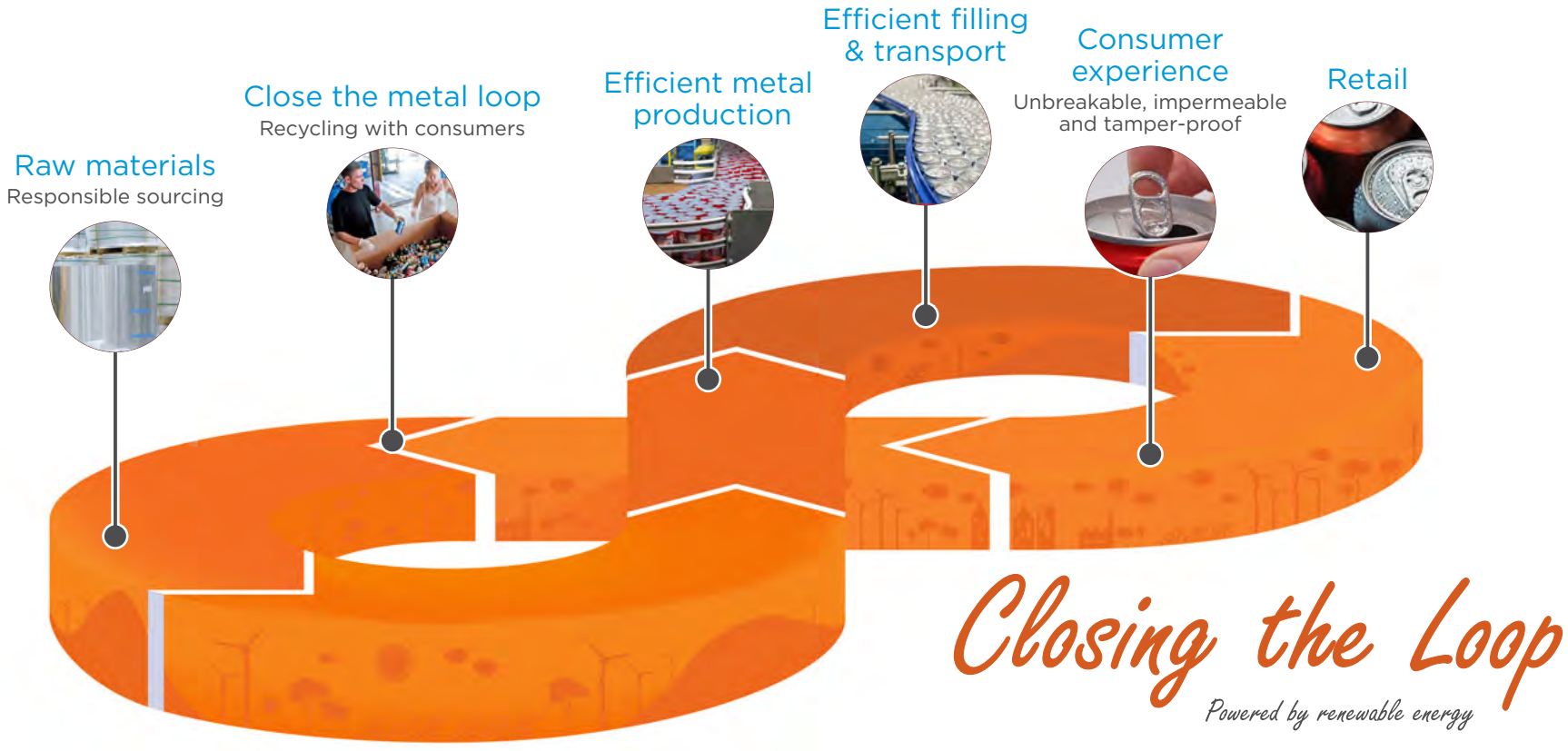
We are witnessing a heightened awareness of packaging from a sustainability perspective. This was brought to the forefront amidst the Covid-19 pandemic, which sparked public debate and demand for both brands and consumers alike to make more sustainable choices.

We are proud to produce **infinitely recyclable** metal and glass packaging solutions and work in partnership with our customers to meet their sustainability objectives. Through our innovations in product design, both our metal and glass containers have witnessed progressive downgauging (metal cans) and light weighting (metal and glass containers) over the years.

Ardagh is committed to meeting the requirements of a true **circular economy**, where materials are not just used and discarded but recovered and recycled endlessly. We are aligned with measurable step changes toward this objective, having joined the Science-Based Targets initiative (SBTi). The SBTi is centered on reducing greenhouse gas emissions (GHG) in alignment with the Paris Agreement 2015 where governments mutually pledged to limit the annual global temperature increase to 1.5 degrees Celsius.

The realisation of a net carbon neutral economy is dependent on achieving a large degree of "circularity" of generated

Metal and the circular economy



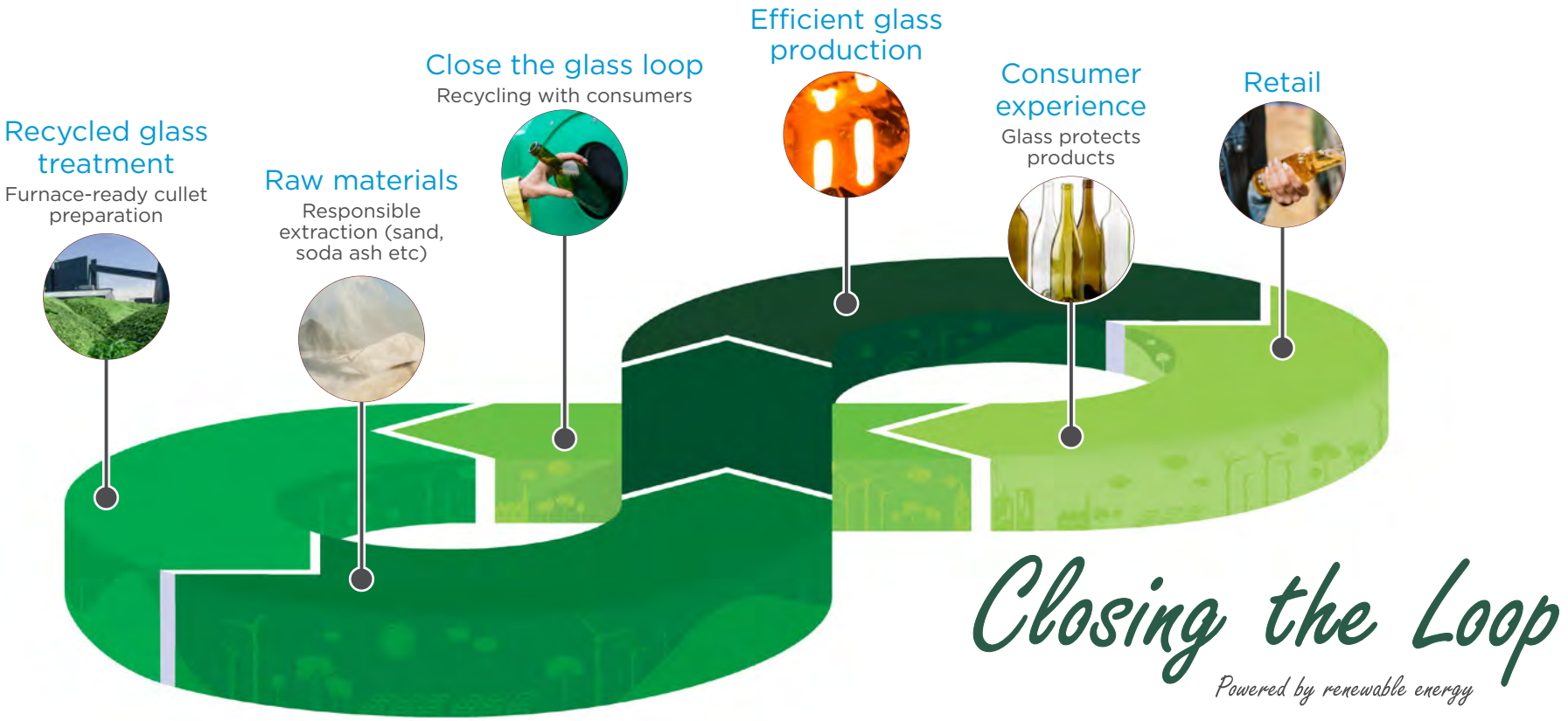
material. A use and re-use system where the emissions-generating manufacturing of new material is greatly limited, and materials are recycled and turned into new consumable products again and again without loss in quality.

Circularity defines the infinitely recyclable metal and glass packaging products Ardagh creates for brand owners around the world. Some other packaging materials become degraded during recycling, limiting their ability to be endlessly recycled. This is known as an 'open loop' material cycle. Metal and glass packaging is recycled by melting processes and can be re-used for packaging or other applications. This process is referred to as a 'closed loop' material cycle, as the material can be recycled repeatedly without loss of quality or functionality.

Metal and glass packaging are key examples of how a closed loop cycle works. Increased use of, and recycling of, metal and glass packaging can be a cornerstone of a circular economy and a strong step forward in achieving carbon neutrality. We work tirelessly with organisations such as FEVE, CMI and Glass Packaging Institute (GPI) to increase metal and glass packaging recycling rates to ensure we provide our customers with a truly circular solution.

+ For more on our sustainable partnerships click here

Glass and the circular economy



Sustainability in action

AGP - Europe

Sustainability and circularity investments in Italy

Vetreco S.r.l. glass recycling facility opened in Supino, Southern Italy, in October 2013. Together with our joint venture partners Zignago and Verallia, we have continually invested to not only increase the processing capacity but also to further improve the quality of the cullet supplied. From an initial processing capacity level of 220 Kt of recycled glass cullet, the facility is now capable of processing 370 Kt per year, making it one of the largest glass recycling facilities in the world.

At the time of opening in 2013, the collection rate of waste glass in Southern Italy was 16 kg per capita compared to 40 kg per capita in the North. As a result of increased glass recycling capability and continued efforts by the agency responsible for glass collection – CoReVe, the rate is now 32 Kg per capita.

Significant investments were made in Vetreco in 2019 and 2010 including:

- A re-sorting line to process waste streams containing up to 80% of cullet contaminated with ceramic, stone and porcelain
- A second sorting line in the pre-selection area to both increase capacity and improve the waste sorting process for the separation of plastic, paper, and metals for recycling, thereby reducing the volume of waste for disposal
- A fourth line of optical sorters was installed to handle the increased throughput of material while allowing for a 50% reduction in the volume of additional processing for fine grained material
- Three new wheel loaders with enhanced safety features, greater fuel efficiency and lower CO_2 emissions.

Looking forward, Vetreco plans to install a new, more efficient dryer in 2021 to reduce gas consumption. Vetreco has obtained the following certifications:

- ISO 9001 (Quality, 2015)
- ISO 14001 (Environment, 2016)
- ISO 45001 (Health & Safety, 2018).

These certifications have helped Vetreco to achieve an important milestone in employee safety which saw the facility celebrate four accident-free years in February 2021.

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

Sustainability in action

Sustainability in action

AGP - Europe

Leeseringen cullet recycling facility

Leeseringen is a joint venture between Ardagh Group and Remondis. In May 2020, redevelopment of the entire site was completed. This comprised of replacing the 40-year-old facility, near Nienburg on the Weser River, with a state-of-the-art cullet recycling facility with a capacity of 180,000 tonnes per annum.

Photo-optics sorting equipment combined with near-infrared and X-ray fluorescence technology now enable maximum recovery of quality cullet with reduced CO_2 emissions, waste to landfill and energy consumption. In addition, energy-saving components, an energy-efficient cullet drier and an intelligent process control system, ensure an efficient production process that provides quality, furnace-ready cullet for our AGP facility in Nienburg, Germany.

Leeseringen is one of the most modern glass recycling facilities in Europe.

Sustainability in action

AGP - North America

Journey to zero waste

As part of our role in the circular economy, AGP - North America investigated the possibilities of waste recovery, especially in relation to diverting waste from landfill. To achieve this, our team collaborated with our waste supplier to identify recycling opportunities. In 2019 our facilities in Burlington, Wisconsin and Ruston, Louisiana successfully diverted 100% of their non-hazardous oily debris from landfill and converted it for energy recovery and alternative use.

The facilities segregated oily debris in a special container that is shipped to a processing facility. That process involved sorting through waste bin contents, removing any metals for recycling, passing the remaining contents through a shredder and then on to a press. The press recovered free flowing oil, which was collected in drums and sent for recycling. The remaining oily debris solids were then shredded and transferred to a pelletizer to be formed into alternative fuel pellets.

This achievement was made possible thanks to collaboration with our waste suppliers in identifying recycling opportunities to ensure zero waste to landfill. We will roll out the methodology to our other facilities.

13 CLIMATE ACTION

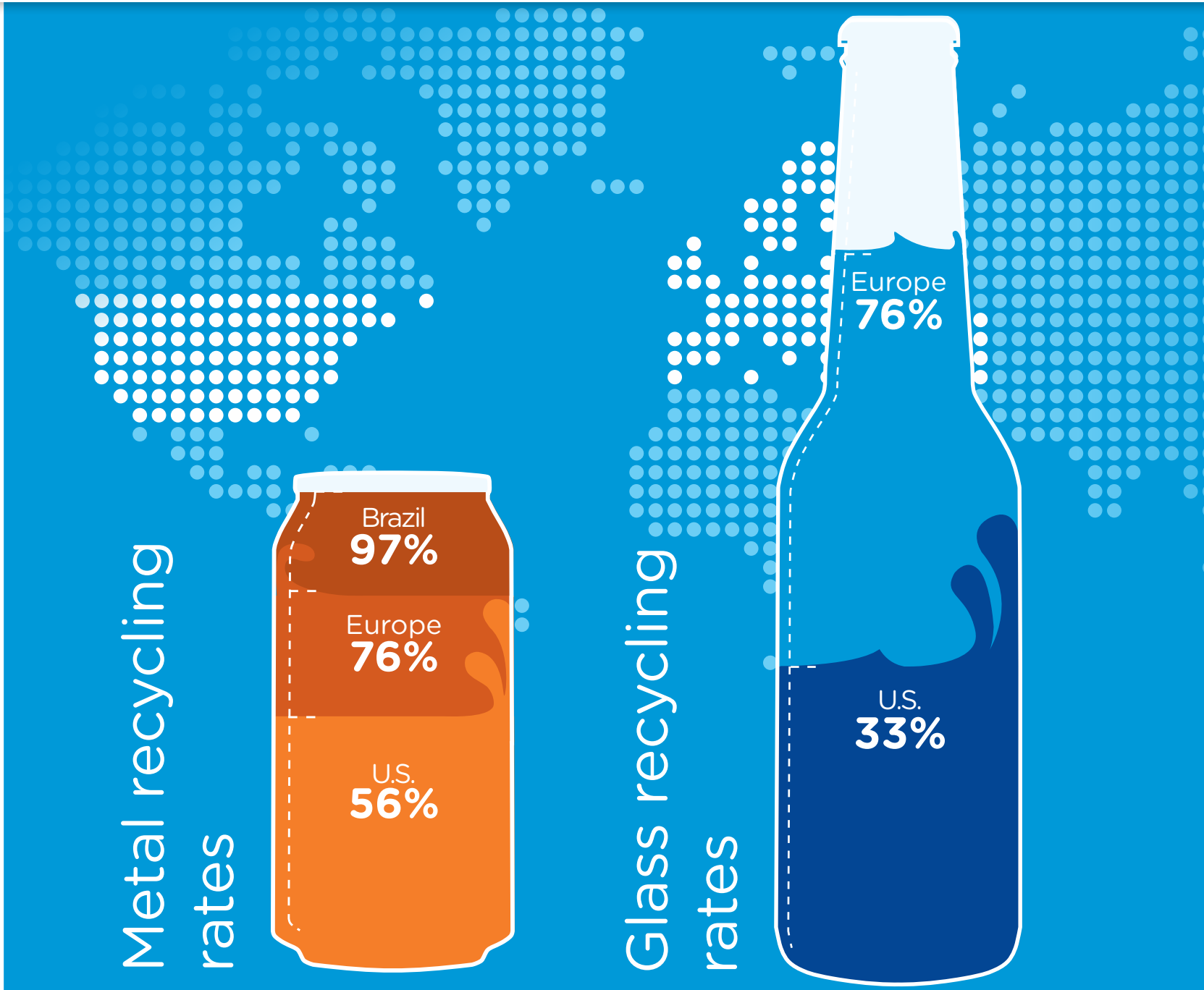
Sustainability in action

Recycling rates

- Metal - Brazil: 97%[1]
- Aluminium - Europe: 76%[2]
- Aluminium - U.S.: 56%[3]

- Glass - Europe: 76%[4]
- Glass - U.S.: 33%[5]

(1) Abralatas
(2) EAA
(3) Aluminium Association
(4) FEVE
(5) GPI



Innovation at Ardagh

We constantly explore new technologies and develop inspiring ideas, to create unique stand-out and shelf appeal for our customers' brands in the food and beverage sectors. We develop ideas in response to market trends and consumer needs.

The AMP team has refined our production processes over the years, resulting in a reduction of the weight of our cans. For example, our European 33cl can has been reduced in weight by 7% since 2009, making it the most sustainable can on the market today. Reducing weight without compromising on quality or performance is one of the innovative ways in which we are taking a responsible environmental approach to innovation.

The AGP team has worked tirelessly to maximise the quantity of glass cullet for remelt in our furnaces. In Europe, for example we developed a method of forming cullet briquettes from the fine particle glass rejected during the recycling process. Due to their small size, glass fines cannot be processed in the usual way to ensure all unwanted organics and ceramic contaminants are removed. Without treatment, they can cause defects in the creation of new glass containers. Working with valued partners, we developed a recipe and method to produce briquettes from the rejected glass, which can be melted safely without any adverse effects, thereby closing the recycling loop.

Sustainability in action

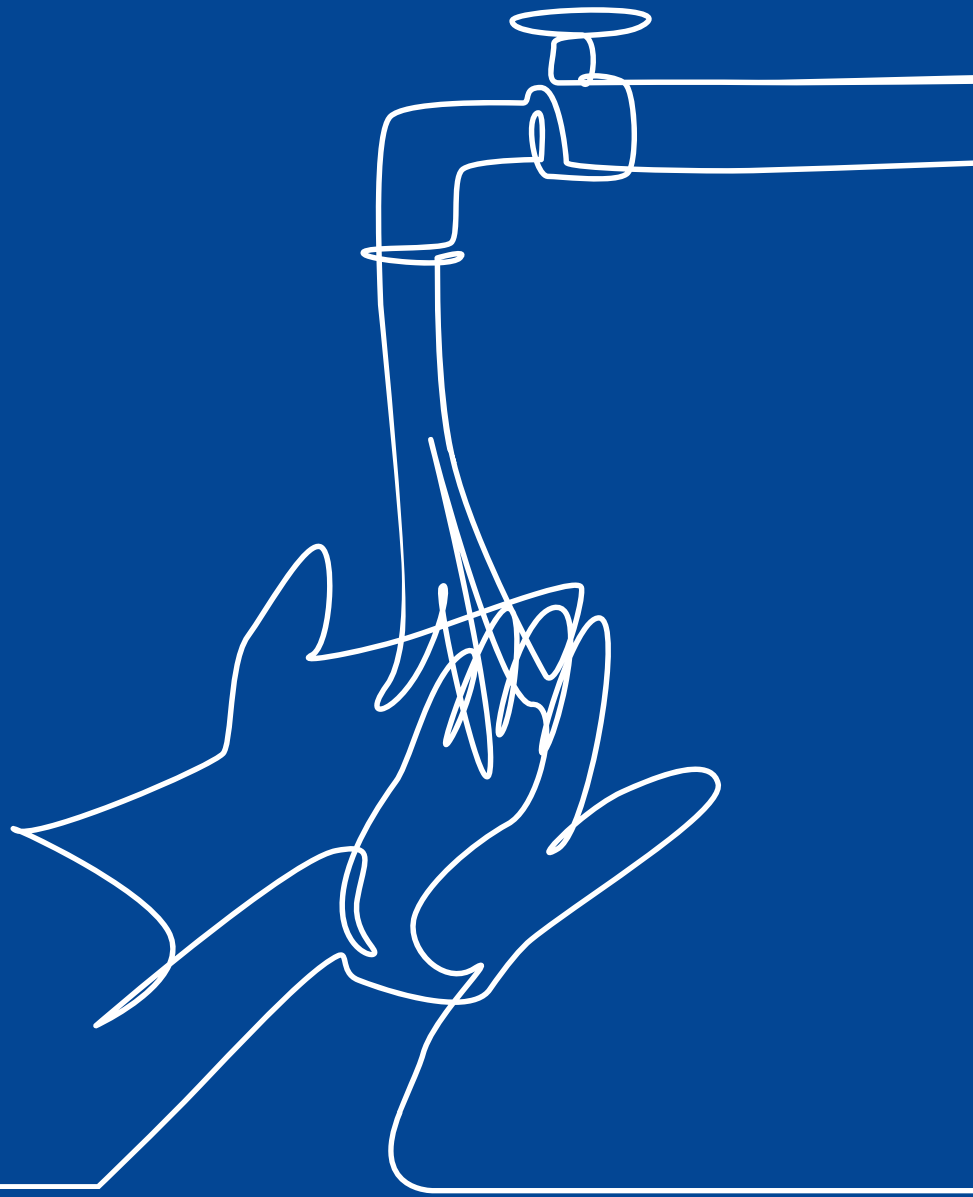
AMP - South America

Water treatment programme in Brazil

At Ardagh, we take water stewardship seriously. Access to fresh water is essential to everyone and therefore we continually investigate how our operations can:

- reduce consumption, especially in areas of water stress
- monitor usage with water benchmarking for efficiency and
- conserve one of our most precious resources.

Projects in this area include water recirculation, treatment and recycling. AMP – South America is currently using a Membrane Biological Reactor (MBR) or a waste-water treatment on-site at our Alagoinhas facility. The MBR would enable us to treat the wastewater from the facility in order to discharge it safely and under strict parameters defined by Brazil's Environmental Agency. The current capacity for the new MBR is 15 m^3/h.



Industry associations

Ardagh and its peers, customers and stakeholders are committed to achieving a circular economy.

While our products are already inherent examples of circularity, it is the act of recycling our products that bring to life the full closed loop potential of metal and glass packaging. We support and contribute to improving recycle rates in each region we operate.

We are proud to be members of many associations around the world and take a leading role to shape the sustainability agenda for the industry.

These associations enable us to monitor legislative developments and, most importantly, allow us to lend our voice to many campaigns close to our heart such as recycling.

Metal associations:

ABRALATAS
ASSOCIAÇÃO BRASILEIRA DOS FABRICANTES DE LATAS DE ALUMÍNIO

Can Manufacturers Institute

EUROPEN
The European Organization for Packaging and the Environment

every can counts

Metal Packaging Europe

Glass associations:

FEVE
The European Container Glass Federation

glass packaging institute

GLASS RECYCLING COALITION
MEMBER
glassrecycles.org

ArdaghGroup

The following highlights some of the many inspirational campaigns and initiatives we support:

+ Learn more about Every Can Counts here

Every Can Counts

ECC is a European partnership between beverage can manufacturers and aluminium suppliers. They ran an inspirational campaign during the pandemic that encouraged consumers to recycle their metal beverage cans. The campaign aimed to enhance education, raise awareness and share the benefits of recycling beverage cans with a particular focus on “On the Go” recycling. As part of the campaign, ECC constructed a giant rainbow archway comprising 2,000 recycled drinks cans on Brighton seafront in the UK with a nod to essential and front-line workers. The four-metre-high installation also promoted the infinite recyclability of metal beverage cans.

Abralatas

The Brazilian Association of Aluminum Can Manufacturers was established in 2003 to promote and increase the awareness of sustainable aluminium can packaging produced in Brazil. Among its many promotional initiatives, it continuously shares the benefits of aluminum beverage cans as well as the industry’s standing as one of the most sustainable in Brazil, across social and mainstream media. Abralatas is proud to share Brazil’s envious recycling rate for aluminum cans, which today stands at just above 97%.

+ Learn more about Abralatas here

Sustainability in action

AMP - North America

Partnering with CMI to improve recycling

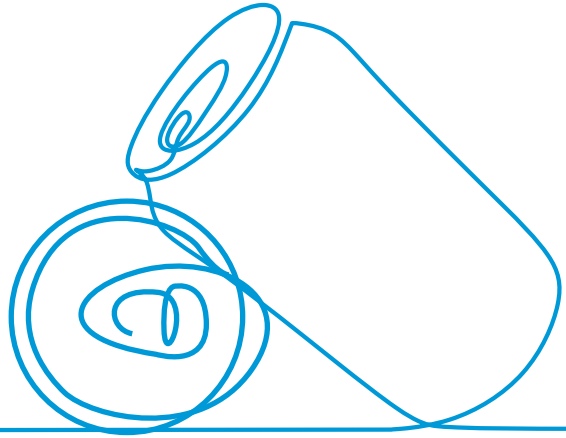
While we produce infinitely recyclable metal and glass packaging, we also need to ensure our products are returned through recycling as part of the circular economy. When recycling rates are low, the great potential for reducing emissions by using recycled source material to create new packaging is reduced.

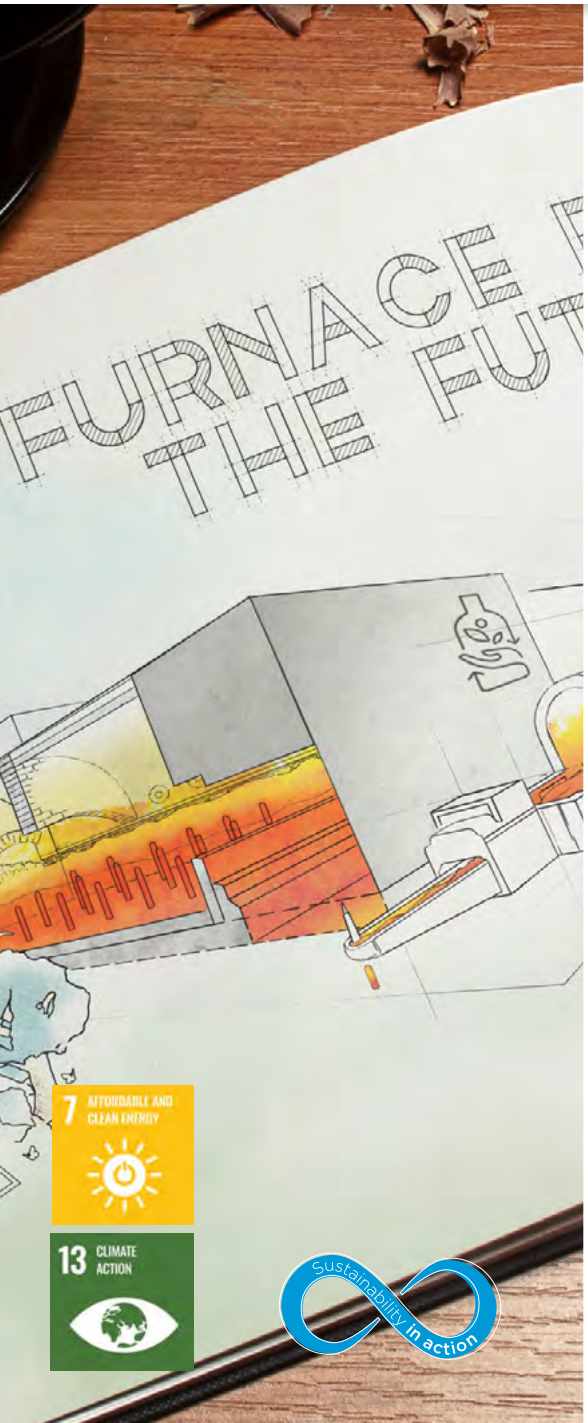
AMP - North America addressed the need to recover lost beverage cans by joining industry partners through the Can Manufacturing Institute, our industry association, to create a grant scheme that directly funds material recovery facilities (MRF).

The Can Capture Grant Program planning began in 2020, but officially launched in early 2021, accepting proposals from MRFs for grants to fund eddy currents, robots and other equipment or process improvement activities to capture used beverage cans (UBCs) at the MRFs. In April 2021, recycling facilities in North Carolina and Texas were awarded the initial grants, which will be used to install equipment to help capture more than 36 million aluminium UBCs a year that were previously mis-sorted. The recovered metal has such high value that it will help fund the MRF operation.

The goal is clear - by increasing the number of UBCs that are captured at MRFs through more successful sorting strategies, MRFs can help further decrease the generation of greenhouse gas emissions, as using recycled material instead of prime aluminium decreases emission production by 90%.

Can Manufacturers Institute





Sustainability in action

AGP - Europe

Furnace for the Future

In early 2020, Ardagh was proud to announce our participation in a joint-industry project with FEVE – Furnace for the Future (F4F) – which aims to cut CO_2 emissions by up to 60%[1].

We are playing a key role in this F4F project, which will be the world's first large-scale hybrid furnace which has a fuel mix of 80% green electricity, 20% fossil fuels. The proposed new F4F will be constructed at one of our AGP facilities in Germany. This technological initiative has the potential to significantly de-carbonise the glass production process over the long-term.

F4F is a fundamental milestone in the glass industry's decarbonisation journey towards climate-neutral glass packaging. The industry adopted a collaborative approach with this project where 20 glass container producers have mobilised resources to work on and fund it. Our aim is to demonstrate the viability of electric melting on a commercial scale, which would revolutionise the consumer glass packaging market.

+ Learn more about Furnace for the Future

FEVE

FEVE is the European Federation of Glass Packaging Makers and Ardagh is a long-standing member taking active roles at both board and committee levels, contributing to many key initiatives.

FEVE has targeted an increase in glass recycling rates in the EU to 90% by 2030 through its Close The Glass Loop initiative, which we are very proud to support. The aim of this initiative is to unite the glass collection and recycling value chain, and to establish a material stewardship programme that will result in more bottle-to-bottle recycling.

+ Learn more about Close the Glass Loop

[1]Subject to EU Innovation Fund Grant.

Sustainability in action

Ardagh is committed to working for a more sustainable future. Our sustainability in action projects help us to achieve our goals through innovation and collaboration.

AMP - Europe
Enzesfeld Solar +

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AMP - North America
Leveraging differences to strengthen teams +

AMP - Europe
Circularity in action +

AMP - North America
Partnering with CMI to improve recycling +

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AMP - South America
LEED Certification in São Paulo +

AMP - South America
Water treatment programme in Brazil +

AMP - Europe
Thermal oxidisers +

AGP - Europe
Cullet Briquettes +

AGP - Europe
Energy reduction +

AGP - Europe
Education on recycling at school +

AGP - Europe
Furnace for the Future +

AGP - Europe
Sustainability and circularity investments in Italy +

AGP - Europe
Leeseringen cullet recycling facility +

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AGP - North America
Glass site transport goes electric +

AGP - North America
Future is brighter +

AGP - North America
Journey to zero waste +

Group
Bee is for Biodiversity +

Group
Giving back +

Group
Investing in STEM education in local communities +

Group
Ardagh Young Creatives +

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