



**SUSTAINABILITY  
REPORT**



**I** INTRODUCTION TO THE REPORT

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**II** GLASS AND THE CIRCULAR ECONOMY

---

**III** MAIN FIGURES FOR 2017

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**IV** SUSTAINABILITY AS A FUNDAMENTAL VALUE

---

**V** CREATING VALUE WITH GLASS

---

**VI** PROTECTING THE ENVIRONMENT

---

**VII** SOCIAL COMMITMENT

---

**VIII** CHALLENGES 2018

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## I. Introduction to the Report

For almost a decade, Vidrala has published its Sustainability Report, which reflects the key results related to the most important aspects of its activity. When this document was first created many years ago, it had a purely environmental profile. However over recent years it has evolved to be able to respond to demands for information from its stakeholders. Vidrala decided that internationally recognised standards, such as ISO 14001:2015, ISO 22000, OHSAS 18001, GRI (Global Reporting Initiative) standards, the principles of the Global Compact and the *Directive on the disclosure of non-financial information and diversity*, should be used as the benchmarks in an attempt to respond to these demands.

Since the publication of the first report, Vidrala has undergone significant growth in scale. The growth has been particularly significant over the last five years, with a firm focus on ensuring the growth is both sustained and sustainable. Vidrala has gone from being a local bottle factory to a multi-site, international organisation. The driving force behind this growth has been Vidrala's unwavering pursuit of finding new ways to create the best product, satisfy its customers, and take care of the environment and its people, as set out in the *Vidrala Group's Occupational Risk Prevention and Environmental Policy document*. These principles govern the daily activities of Vidrala and also the structure this report.

Vidrala's 2017 Sustainability Report reflects the performance of the company in the field of sustainability with facts and figures, particularly with regard to environmental and social matters. Every year, Vidrala makes a commitment to the stakeholders that make up its value chain, by communicating its management results, the objectives that have been achieved, the challenges to be met and the expectations of the organisation.

## II. Glass and the Circular Economy

The *Europa 2020 Strategy* is the main tool promoted by the European Union, the key aim of which is to remedy the shortcomings of the current growth model and to create conducive conditions for a different, smarter, more sustainable and inclusive type of growth.

This strategy should allow the European Union to achieve smart growth through the development of knowledge and innovation - sustainable growth based on a "greener", more resource-efficient and competitive economy and inclusive growth aimed at strengthening employment, social and territorial cohesion.

Both the strategy itself and the "*Roadmap to a resource-efficient Europe*" initiative include the objectives and means to transform the current economy, based on the intensive use of resources, into a new growth model based on the efficient use of resources. The European Commission has developed an *Action Plan for the Circular Economy along these lines*.

The Circular Economy presents opportunities that the glass manufacturing sector has been able to integrate in a natural way for years.

These include:

- The efficient use of natural resources (including the incorporation of secondary raw materials) and energy.
- More sustainable product design.
- The adoption of the best technologies to reduce emissions.
- The commitment to consumers for the appropriate use and management at the end of the product's lifecycle (glass collection and recycling systems).
- A commitment to creating employment and economic development locally.



Glass is 100% recyclable and it can be recycled an infinite number of times without losing any of its intrinsic properties, either in terms of quantity or quality. In order to close the material cycle, it is necessary to raise awareness in society. In addition, thanks to its recycling, the use of raw materials and energy is minimised and CO<sub>2</sub> emissions are reduced.

Evidence of this contribution to the Circular Economy is reflected in the document *“Contribución Económica, Ambiental y Social del sector del vidrio en España – Vidrio España y la economía circular. Balance 2014/2016”* (Economic, Environmental and Social Contribution of the glass sector in Spain - Spanish glass and the circular economy. 2014/2016 Balance), in which Vidrala played a part as a member of ANFEVI (Spanish Association of Glass Container Manufacturers) by providing information about its plants in Spain (Aiala Vidrio, Castellar Vidrio and Crisnova).

The collaboration through ANFEVI or through other organisations that encourage the use of glass is a commitment by Vidrala to the sector, aimed at promoting more sustainable behaviour and fostering knowledge about the industry. **By doing so, the Vidrala Group integrates the concerns of different organisations and institutions regarding the promotion of the circular economy in order to turn it into a real model of more sustainable production.**





# CREATING VALUE AND FUTURE IN A SUSTAINABLE WAY

## VIDRALA IN 2017

OVER  
**3,700**  
EMPLOYEES



OVER  
**90,000**  
HOURS OF TRAINING IN 2017



**9**  
MANUFACTURING  
SITES




**21**  
FURNACES



ALMOST  
**8.0 BILLION**  
CONTAINERS  
PRODUCED PER YEAR



**51%**  
USE OF RECYCLED  
GLASS



OVER  
**1,600**  
CUSTOMERS



**-5%**  
CO<sub>2</sub> EMISSIONS



INVESTMENT IN OUR FACILITIES  
OVER **EUR 300 MILLION**  
IN THE LAST 5 YEARS



**-16%**  
NO<sub>x</sub> EMISSIONS



**-11%**  
GENERATED  
WASTE





## IV. Sustainability as a fundamental value

### The 2030 Agenda and Sustainable Development Goals (SDGs).

The planet is currently facing enormous economic, social and environmental challenges. In order to combat them, the international community has established a new roadmap for the coming years, which was adopted in 2015 by member countries of the United Nations. The roadmap's most recognized content is the 17 Sustainable Development Goals (SDGs), which translate into 169 goals covering social, environmental and economic aspects.



## THE ROLE OF COMPANIES

The Global Compact as a UN initiative for private sector business sustainability is a catalyst for the efforts of companies and organisations in achieving the SDGs. A new paradigm for action and collaboration is opening up for public and private entities. It is not possible to achieve business success without a sustainable environment. At the same time, development at a local or international level requires the active presence and participation of companies. This binomial draws a new dimension of corporate social responsibility that is calling for change. According to the 2030 Agenda document, "Our journey will involve Governments as well as Parliaments, the UN system and other international institutions, local authorities, indigenous peoples, civil society, business and the private sector, the scientific and academic community – and all people". Source: Global Compact's Spanish Network ([www.pactomundial.org](http://www.pactomundial.org)).

The contribution of companies can be approached from three approaches that are not mutually exclusive and provide different returns:

1. The development of philanthropic actions, not related to the company's activities, by which it seeks to improve the social and environmental conditions of the environments in which the company does or does not operate.
2. The implementation of initiatives related to the operations of the organisation in order to reduce and eliminate negative impacts and enhance those that are positive for stakeholders.
3. The development of innovative products and services, within the framework of the company's sector of activity, which contribute to the goals established for the SDGs, while generating new business opportunities.



## VIDRALA'S ROLE

In the case of Vidrala, none of these approaches has been excluded and the activities carried out for each of them are set out in this document, which may be summarised as follows:

- Conception and design of more sustainable (lighter) products.
- Efficient use of natural resources, through the incorporation of cullet as a raw material.
- Efficient use of energy, mainly natural gas.
- Reduction of atmospheric emissions and waste through the adoption of efficient treatment technologies.
- Implementation of the Industry 4.0.
- Awareness-raising and public awareness.





## V. Creating value with glass

Vidrala is committed to placing people, customers and suppliers at the heart of its management strategy. It is important that the strategy makes best use of the abilities of Vidrala's team, continually evolving and developing to meet the needs of its major stakeholders, in a way that also generates of value for the environment. For the organization, working with glass is a commitment to the material that best represents the values of the company:

- **Transparent, as a link to customers and shareholders.**
- **Sustainable, as a commitment to the environment.**
- **Tough, as a commitment to innovation and continuous improvement.**
- **Noble, like the teams of people and their development.**

Vidrala's success is formalised in a mission that has been developed since 1965, growing as a team, making essential tools out of innovation and continuous improvement in order to be a leading supplier in sustainable packaging solutions. Vidrala's success is based on the satisfaction of its customers and employees, on optimal operational performance and profitability and continuous re-investment.

## EXCELLENCE AT WORK

For the Vidrala Group, success is demonstrated by being one of the organisations with the greatest influence and recent growth in the sector. After consolidating growth in previous years, 2017 ended with the addition of a new plant in Portugal. This expansion is not just about making more glass. Vidrala wants to offer a better response to its customers, manufacture in a more efficient way and promote local development in the areas where its plants are located. For this reason, formalising this step in Portugal is a source of satisfaction in continuing to excel in these areas. This operational excellence is part of a vocation to fully serve our stakeholders. The aim is to strengthen an industrial management system that optimises processes by increasing their efficiency and effectiveness and improving the level of service at a competitive cost. Thanks to this, the Group is able to enhance the degree of improvement linked to operational differences between plants. This is all achieved through promoting a systematic approach to improving operations, which is capable of responding to the challenges posed by an increasingly global, volatile and complex market.







## VIDRALA AND TECHNOLOGY FOR ZERO DEFECT PRODUCTION

For the Vidrala Group, collaboration with other organisations is a constant in the quest for business excellence. An advanced system was put into operation during 2017 that makes it possible to automatically detect the presence of bubbles in bottles during the production process, with the aim of offering the best product and boosting the Group's competitiveness. This innovation is part of the zero defects manufacturing paradigm. To this end, Vidrala has been working with the Tecnalía technology corporation.

It is a system installed in the production line, capable of inspecting 100% of production in real time. Thanks to a linear camera with a telecentric lens and specific lighting, an image is captured and processed on a specific platform that reconstructs the image of each container. This system determines the number of bubbles per container, taking into account their density and other parameters.

Thanks to this project, Vidrala is able to develop expert knowledge and its own technology capable of solving one of the main causes for rejecting containers, thus gaining in efficiency and response capacity.

The management of excellence at Vidrala also requires a solid management system that is capable of minimising operating risks and promoting plant growth from a perspective of sustainability and healthy working environments. In order to comply with the excellence model, the Group completed 2017 successfully, making progress in its effort to integrate the new ISO 14001:2015 standards relating to environmental management and OHSAS18001 regarding occupational risk prevention. At the same time, new IT tools have been developed that support the management of all aspects, including this integrated system. This is an ambitious leap forward in quality for standards, accompanied by an intensive training programme for those responsible for implementing it.

As a complement to the integrated management system, specific improvement projects have been consolidated in some plants, which also contribute significantly to advancing a model of excellence of their own. These include:

- Aiala Vidrio, which has kept its greenhouse gas emissions inventory certification as per the ISO14064 standard.
- Crisnova Vidrio, which has integrated the Energy Management System certification as per the ISO50001 standard for glass melting activities.
- Castellar Vidrio, which is committed to conveying the importance of environmental education through projects developed in collaboration with primary and secondary schools.

Thanks to its performance in environmental protection and management, the Vidrala Group has managed to end 2017 with no legal non-conformities.

Over recent years, the different Vidrala Group plants have adapted their corresponding **integrated environmental authorisations (IEAs)** to the requirements of the BAT (best available techniques) conclusions defined in the BREF document for the glass sector and the *Industrial Emissions Directive*. The renovations to some of the plants were successfully completed during 2017, while the remaining plants are in progress. In all cases, the Vidrala Group is implementing the best techniques proposed by the competent authorities.





## COMMITTING TO CONTINUOUS INNOVATION AND IMPROVEMENT

For the Vidrala Group, constant innovation results in sustained growth.

When applied to any element of the value chain, innovation is the driver of change promoted by its own R&D&I department. Innovation is evident, in the first place, thanks to this human team and through the facilities for controlling raw materials and finished products, managing the quality of the process to the maximum. Vidrala continuously invests in aspects such as improving analyses for statistical control, new designs, better processes or improved production capacity of the installations. All of this is done with a view to improving the service offered to customers. Vidrala Group is recognised as an example of special contribution to the regional and local economies in which it operates. It contributes towards balancing trade balances, mitigating container imports from other continents, boosting exports of packaged products, generating value chains in the distribution process, creating direct and indirect quality employment and reducing the ecological footprint. Few other industrial sectors have such a positive impact. These are all key drivers for the glass sector to remain as an important player in the new innovative economic growth.

\*Methodological note: the data in this report reported cover the time period 2015-2017. In addition to data from the plants located in Spain, Portugal, Italy and Belgium and the Group's central services, this includes the plants in Northern Ireland, the United Kingdom and the new plant in Portugal.





## VI. Protecting the environment

### GLASS RECYCLING

For the Vidrala Group, all economic growth is connected to sustainable development. The glass container manufacturing industry is a special example of a contribution to the circular economy model. With nine plants in six European countries, the Vidrala Group is in a position to be one of the leading driving forces of glass recycling in Europe. In this way, the continent's commitment to developing a new industrial model in balance with the environment is made visible. A commitment that requires all of the links that make up the glass packaging value chain to be connected together: industries, public administrations, foundations, the civil sector and European citizens. Coordinated action by everyone will close the cycle and allow the circular economy to generate economic, environmental and social benefits. In countries such as Spain, Italy or Portugal, where many more glass-packed products are exported than imported, the consolidation of an efficient glass collection system is a fundamental part of the industry model with a lower environmental impact.

#### Why is using cullet beneficial to the environment?

- It requires less energy to melt.
- It makes it possible to reduce greenhouse gas emissions.
- It reduces the need for raw materials from nature.

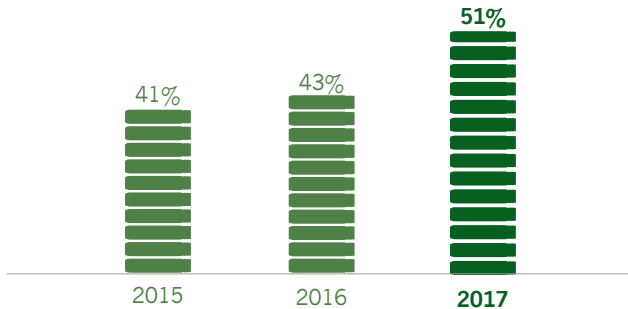
In this regard, raising public awareness is a key task. Promoting a selective collection of quality is raising public awareness about glass recycling. All this should help achieve the ambitious European recycling targets: 75% recycled glass by 2020. As a result of the collective effort in the sector, in 2015, citizens in 28 European countries contributed to recycling 74% of the packaging put on the market. Therefore, playing an important role in supporting the European Circular Economy Strategy provides motivation for the Vidrala Group. Working tirelessly to make statistics a reality in order to achieve an increasingly sustainable glass container sector is a source of pride. It is no coincidence, therefore, that the **Group's nine manufacturing plants are certified under the ISO 14001:2015** environmental management standard. Throughout this new economic model, Vidrala, as a manufacturer of containers, encourages the use of materials with a lower environmental impact, by prioritising the purchase of recycled glass over other raw materials and transforming it by means of a complex industrial process into new containers of the same quality.

In the Vidrala Group's glass container manufacturing furnaces, cullet is incorporated from two sources. Firstly, glass which originates from selective collection (called external cullet). And secondly, rejected glass generated in the production process itself (called internal cullet). The sum of these two types of cullet is commonly known as total cullet. In the case of Vidrala, in 2017 **the usage rate of recycled glass on total raw materials was 51%**, demonstrating the Group's efforts in continuing the push for sustainability from the outset. Whenever the availability of materials and technical characteristics allow it, Vidrala includes a high percentage of recycled glass in the formulation of the containers it makes. This represents a considerable saving of natural resources and a reduction in the energy intensity of the process.



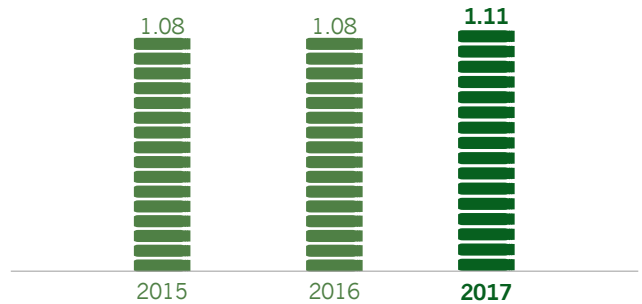
## EVOLUTION OF THE INCORPORATION OF CULLET 2015-2017

**Rate of cullet**  
In percentage



## EVOLUTION OF THE CONSUMPTION OF MATERIALS 2015-2017

**Total raw materials consumed**  
Tonne/tonne of molten glass\*

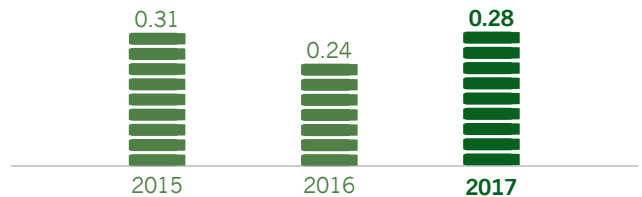


## MATERIAL REQUIREMENTS

In the new framework of the circular economy, the challenge for the European glass industry is to maintain the capacity to generate value and grow in a way that is not linked to a greater need for raw materials. The Vidrala Group makes a distinction between the requirements for raw material (those needed to make up the glass container itself) and auxiliary materials (those that allow the manufacturing process to be carried out). The Vidrala Group works to ensure that the recycling, reuse and efficiency of these materials form the guidelines for using natural resources.

During 2017, the Vidrala Group significantly increased the overall amount of containers that it put on the market, as well as the tonnage of molten glass extracted from its furnaces. Due to the technical requirements for manufacturing containers and the availability of cullet, the relative consumption of raw and auxiliary materials was slightly higher than in the previous year. Repairs and renovations of furnaces have a particular impact, which means a greater need for auxiliary materials for their fine tuning.

**Auxiliary materials consumed**  
Kg/tonne of molten glass



*\*The tonnage of molten glass (t.m.g.) has been implemented as a unit of reference throughout the report. Thanks to this approach, improvement can be assessed over the years and compared to the performance of other companies in the same sector.*



## ∞ | 12 AFFORDABLE AND NON-CONTAMINATING ENERGY

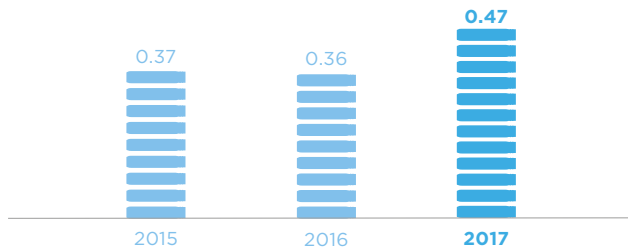
Sustainable Development Goal No. 12: ensure access to affordable, reliable, sustainable, and modern energy for everyone.

The goal of sustainable consumption and production is to make more, better products with fewer resources. It is about creating profits from economic activities by reducing the use of resources, degradation and pollution, while achieving a better quality of life. The Vidrala Group adopts a systemic, integrated approach, aware that to achieve this goal requires cooperation between the participants in the glass container value chain: manufacturers, distributors, traders and consumers.

Another of the requirements of most industrial activities is the use of water. Being aware of its importance, scarcity and cost, Vidrala tries to optimise water usage at its facilities. To this end, Vidrala plants have reuse and recirculation systems that make it possible to optimise its water use as much as possible.

### EVOLUTION OF THE CONSUMPTION OF WATER 2015-2017

Total water consumption  
m<sup>3</sup>/tonne of molten glass



However, despite this, due to the growth in production and renovation of some plants, the average ratio of total consumption for the Vidrala Group was higher than in the previous period. Nevertheless, it remains within the optimum usage range. With regard to the use of water, the Group recirculates more than half of the water it consumes. All of the water resources supplied to the plants are strictly controlled through the various collection authorisations in place in the different countries in which Vidrala is present. Whatever the region, the source of water is the supply network itself, wells or watercourses close to the plants, provided that they comply with the operating and control conditions set out in the corresponding permits. Vidrala is working to optimise these ratios to make the glass making activity more environmentally friendly.

## Water Tap Icon | 6 AFFORDABLE AND NON-CONTAMINATING ENERGY

Sustainable Development Goal No. 6: ensure the availability and sustainable management of water.

One of the goals establishes the need to manage water efficiently, while at the same time taking care of water quality by reducing pollution, eliminating discharges and minimising the emission of chemicals and hazardous materials. The work and environmental management of the Vidrala Group ensures legal compliance with the use of water and provides a firm commitment to reducing the need to use this scarce resource.



## ENERGY REQUIREMENTS

Energy is the main environmental vector in the manufacturing process of glass containers. This is a continuous, active process, 24 hours a day, 365 days a year, which requires strict and rigorous management (from controlling combustion, maintaining furnaces or monitoring the melting process). These internal aspects, together with the economic cost of energy, make energy efficiency the cornerstone of Vidrala's operational priorities, involving not only cost optimisation, but also, more importantly from an environmental point of view, the reduction of greenhouse gas emissions.

As an example of the importance Vidrala gives to the management of aspects related to the energy efficiency and sustainability of the activity, priority is given to external certification processes to ensure disciplined internal systems evaluated by independent third parties. In this regard, Vidrala has certification of the Crisnova Vidrio plant in line with the ISO 50001 energy management standard, with the idea of extending this management to other plants.

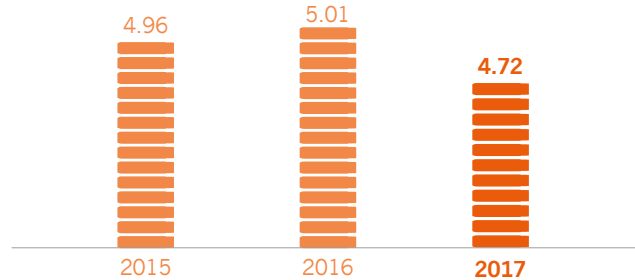
In the report, the Vidrala Group distinguishes between direct energy consumption (mainly natural gas) and indirect energy (electricity).

An important aspect related to energy management is Vidrala's ability to use cullet to manufacture its containers. Thanks to an increase in the amount of recycled glass used in 2017, the impact on primary energy consumption has reduced for each tonne of glass produced. In terms of energy efficiency, any action adds and contributes to generating containers with a lower environmental footprint. The results for 2017 show the result of strict management and control of energy consumption. Thanks to the investment projects to provide the furnaces with the greatest operability and energy efficiency, it is possible to achieve a significant reduction in the primary energy consumption required to melt glass.

## EVOLUTION OF THE DIRECT CONSUMPTION OF ENERGY 2015-2017

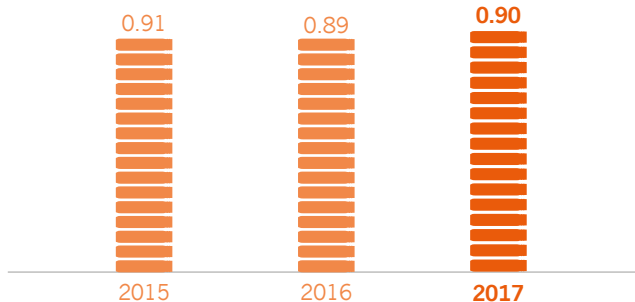
### Direct energy consumed

Gigajoules/tonne of molten glass



### Indirect energy consumed

Gigajoules/tonne of molten glass





## DESIGN AND INNOVATION AT THE SERVICE OF ENERGY EFFICIENCY IN VIDRALA FURNACES.

In 2017, the Vidrala Group's Italian plant launched a completely renovated furnace. Furnaces are a key element in the manufacturing processes of glass containers. Due to their continuous activity, any measure that focuses on improving their energy consumption and increasing efficiency has a major impact. That is why the Corsico plant rebuilt one of its furnaces. It took the opportunity to introduce a number of improvements that made it possible to fully comply with the BATs, increasing energy savings and reducing emissions. In this way, the new furnace complies with all of the primary measures and new emission limits recommended by the BATs for the glass sector.

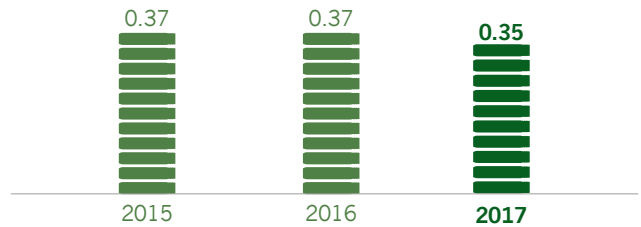
## ATMOSPHERIC EMISSIONS

For the Vidrala Group, complying with the requirements regarding emissions is ongoing work that requires improvement in the environmental management of all of the elements involved in the process. A significant number of Vidrala's environmental policy actions are focused on this aspect, as the company is aware that this is one of the major improvement areas being undertaken across Vidrala's plants. As a result, the comparison of accumulated emissions over the last three years shows a 5% decrease in CO<sub>2</sub> emissions per tonne of molten glass.

## EVOLUTION OF GHG EMISSIONS 2015-2017

### Greenhouse gas emissions

Tonne/tonne of molten glass



7

### AFFORDABLE AND NON-CONTAMINATING ENERGY

Sustainable Development Goal No. 7: ensure access to affordable, reliable, sustainable, and modern energy for everyone.

One of the most significant impacts is energy consumption, both direct and indirect. Therefore, the Vidrala Group focuses much of its efforts on improving this aspect. This is not only an issue linked to a direct economic benefit from lower consumption, but it also reduces emissions associated with this, with a consequent improvement of the air quality in the immediate environment. Glass container manufacturing is energy intensive, so this aspect is critical in assessing the environmental performance of the sector.



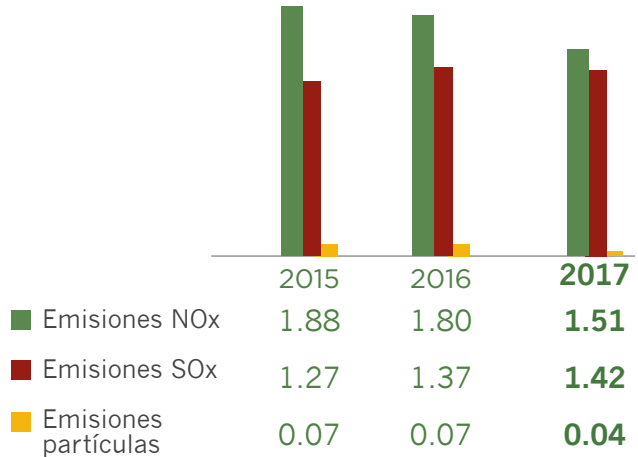
This reduction is explained, in the main, for three reasons, making it possible to achieve the greenhouse gas emission reduction targets. Firstly, with glass, as already explained, the increasing use of cullet from selective collection and rejections in the plants themselves. Secondly, investments associated with environmental improvements that have been implemented at Vidrala factories.

Finally, the development and application of an energy management system for furnaces implemented at the Group's plants, which has made it possible to optimise energy consumption in recent years. Vidrala's firm commitment to reducing greenhouse gas emissions is also reflected in the fact that the Vidrala Group's plants are under the *European Emissions Directive*. This requires the company to remain in a constant process of improvement, working on reducing emissions. Essentially, action is taken on reducing the fuel consumption requirements of the furnaces, so that the control of emissions of gases such as nitrogen oxides, sulphur oxides and particles is a key beneficial result.



### EVOLUTION OF NOx, SOx AND OTHER SIGNIFICANT EMISSIONS 2015-2017

NOx, SOx and other significant emissions  
Kg/tonne of molten glass



NOx is a pollutant created during combustion processes, which depends on the fuel used (natural gas, mainly) and the conditions of the process itself. Vidrala Group's plants are permanently monitoring and adjusting the different parameters based on production needs, while continually monitoring strict compliance with the conditions set out in the respective environmental authorisations for each facility. The joint work of the teams managing Vidrala plants has enabled the relative NOx emissions to be reduced by 12% in 2017 compared to the previous period. This puts the rate at the lowest levels in recent years.





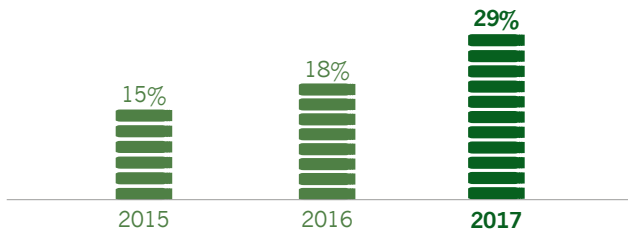
## AWARD FOR VIDRALA'S MOST SUSTAINABLE TRANSPORT

The Vidrala Group plant in United Kingdom won an award at the Glass Focus Awards 2017 in recognition of its investment of £6 million pounds in Elton on rail access. Thanks to this project, it is possible to deliver around 50% of the raw materials directly to the plant by rail, saving millions of kilometres on the road each year and reducing CO<sub>2</sub> emissions by around 2,400 tonnes annually. This action is an example of how the life cycle of containers is continually being explored to help suppliers and customers create a supply chain that minimises their environmental footprint. The railway project is a roadmap that the Vidrala Group has taken to be one of the most sustainable glass manufacturers in the world.

Among other measures that the Vidrala Group applies regarding the control of atmospheric emissions are electrostatic precipitation systems (to reduce the emission of particles) with preliminary desulphurisation (to reduce the emission of sulphur oxides). With this technology, the Vidrala Group can recover a portion of the sulphur emitted as sulphates from precipitation. In 2017, 29% of the sulphate could be recovered. In addition to the above, as additional measures, the Group is committed to adopting primary measures, such as the special design of furnaces, the use of burners with lower NOx emission rates and the replacement of part of the fossil fuel with electrical energy.

## SULPHATE RECOVERY 2015-2017

**Sulphate recovered**  
In percentage




# 13

## AFFORDABLE AND NON-CONTAMINATING ENERGY

Sustainable Development Goal No. 13: take urgent action to combat climate change and its impacts.

Climate change affects all countries on all continents. It has a negative impact on the economy and on the lives of individuals, regions and countries. For this reason, the Vidrala Group is committed to continue reducing greenhouse gas emissions in order to mitigate their impact and commit to a more sustainable future for all.





## WASTE MANAGEMENT

Trends point to the aforementioned circular economy as the new economic model that can offer solutions to larger environmental problems, such as waste management. The Vidrala Group is aware that the best waste is waste that is not generated. And, if it is generated, each of the fractions should be managed in the most sustainable way possible, following the European waste management hierarchy. In view of the evolution of the data associated to waste generation, Vidrala's efforts to reduce the volume of these materials that are not used for Vidrala's activity have been successful.

When it is technically and economically feasible, waste management is carried out internally at the Group's own plants. For the rest of the waste, the Group has partners who are responsible for its recovery in accordance with current legislation and technologies. Four categories are used by the group: hazardous waste (HW) is managed by authorised agents (e.g. contaminated demolition waste or toxic elements). Non-hazardous recoverable waste (NHRW) is waste that can be used by the Group itself or by others (such as wood, cardboard, etc.). Non-hazardous non-recoverable waste (NHNRW), such as inert waste or municipal solid waste (MSW), are managed by authorized companies, which are responsible for their collection.

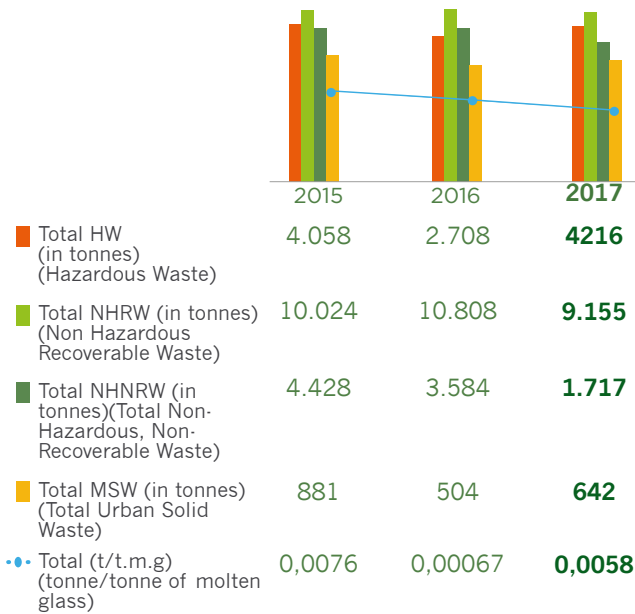




## EVOLUTION OF WASTE GENERATION BY TYPE, 2015-2017

### Waste generation

By waste type and year (tonne)



In total, the Vidrala Group has reduced the total volume of waste it generated in 2017 by 10.6% compared to 2016. The increase in hazardous waste is due to the repair and renovation of furnaces and the extraordinary maintenance of the infrastructure linked to cooling at some of the plants, which has an impact on a larger quantity of this type of waste. The group is currently working on implementing preventive plans to optimise reagent consumption and on waste recovery projects in other industrial processes. This is all done with the firm intention of achieving the lowest possible figures in terms of waste generation and management.



## NATURA, VIDRALA'S MOST SUSTAINABLE COLLECTION

Eco-design has meant a new concept in the world of product development. Introducing such criteria into the manufacture of glass containers means improving the environmental performance of products throughout their life cycle. This involves addressing the creation of containers with a holistic concept of the product: from the design itself to the use of raw materials and inclusion of cullet, the manufacturing process, its transportation and distribution and end of life. For the Vidrala Group, its environmental performance is passed on in each of the containers it puts on the market. The Natura range represents the philosophy of environmentally-friendly work: containers that meet all expectations with minimum impact on the environment. Natura is a range of bottles that are lighter than their equivalent models on the market. **On average, these containers incorporate 43% less glass to create the same type of container, resulting in less need for raw materials, water and energy.** Sales of these models grew in the last period, thanks to Vidrala's ability to adapt the Natura range models to the specific needs of its customers.





## ENVIRONMENTAL INVESTMENT AND EXPENSES

With regard to initiatives to mitigate its environmental impact, the Vidrala Group is making significant economic investments aimed exclusively at improving environmental performance. **During 2017, more than 1.1 million euros was allocated to expenses directly related to the sustainability of its plants, and more than 20 million euros to routine and unscheduled investments.** Making repairs to and rebuilding the furnaces, applying new designs, adopting Best Available Techniques (BATs) and implementing actions aimed at improving energy efficiency and other process improvements involve a significant amount of financial resources and have, ultimately, made it possible to improve the environmental performance of the Vidrala Group. **In short, the resources invested are an example of the commitment to promoting a transition towards a more sustainable manufacturing model, seeking to adapt existing technology to something more effective aimed at reducing environmental impact.**





## VII. Social commitment

### TO WORKERS

The Vidrala Group has integrated the need to carry out its activity in a healthy, safe and secure working environment into its organisation. This means strengthening the commitment to the maximum satisfaction of one of the most important stakeholders, the workers.

In order to facilitate the creation of safe work places in the daily lives of all of the people who work for the organisation, the Vidrala Group's plants have implemented an Integrated Environmental and Occupational Health and Safety Management System, in accordance with the OHSAS 18000 and ISO 14001 standards. The Vidrala Group promotes a preventive culture, with the aim of ensuring the highest levels of safety, health and well-being. The efforts of the Vidrala Group's entire human team are reflected in the figures: the medium-term accident rate indicators continue to show a downward trend. **Thanks to these ongoing efforts, from 2011 to 2017 accidents with absence from work fell by 43% and the severity index was down 23%.**

The team of prevention technicians is working with innovative applications and tools to detect and assess risks in different areas of the organisation. With the aim of continuing to improve the indicators obtained, in 2017 an ongoing activity was undertaken to monitor and analyse the accident rate results at all of the Group's plants, using the statistics available thanks to a new computer tool for identifying trends and their causes. The ambitious management of aspects arising from occupational risk prevention is a priority for the Vidrala Group. For this reason, in addition to the analysis of previous years, a new accident investigation procedure has been introduced, as well as a management system that systematises, monitors compliance and integrates these aspects into the chain of command. The courses of action in this area related to these issues in the coming years will preferably focus more on raising staff awareness, technical training and promoting safe behaviour projects, increasing the number of audits and the continuous monitoring of each plant's plans.

For the Vidrala Group, occupational risk prevention is a priority for ensuring that people carry out their work in a healthy, motivating and safe way. **Promoting the health and well-being of all of the people in the various Vidrala teams is a priority in a sector with the characteristics and specialisation like the glass container manufacturing sector.**





## 8 AFFORDABLE AND NON-CONTAMINATING ENERGY

Sustainable Development Goal No. 8: promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work.

As the UN itself recognises, in order to achieve sustainable economic development, societies must create the conditions necessary for people to have access to quality jobs, stimulating the economy without harming the environment.

In terms of professional development, a measure promoted at the plants in the United Kingdom and Ireland was the development of a questionnaire for workers at both plants. With the collaboration of an external company, a survey was conducted in 2017 on the effectiveness of internal communication and their degree of satisfaction. Thanks to the information gathered, issues were highlighted that made it possible to implement a plan to promote and consolidate the corporate values. For the first time, a clear identity has been defined for the business and its people, meaning that the entire team will understand what success means and how to achieve it. As a result, progress has been made in increasing motivation, staff retention and productivity levels.

## PROFESSIONAL DEVELOPMENT

For the Vidrala Group, committing to people who are part of the business project is unquestionable. This translates into promoting the health of the people who work for the Vidrala Group, promoting professional development, initiative and equal opportunities. The Vidrala Group ended 2017 with more than 3,700 employees, with an average age of around 41. A stable, quality working environment also depends on promoting job stability. In this sense, the percentage of permanent contracts within the Vidrala Group is 93%. In addition to employment stability, the Vidrala Group promotes equality and non-discrimination as one of the cornerstone principles in the process of professionally developing people.

Vidrala is committed to training and professional development, reaching an average of 21.28 hours of training per employee for 2017. Real commitment to training is only possible when it comes to quality training. It is a priority for the organisation to have a trained workforce that constitutes a group of professional and well-trained individuals. Only in this way will the Vidrala Group be able to meet the increasingly demanding requirements of the food and beverage market. In 2017, a level of compliance of more than 86% was achieved regarding training plans, representing more than 90,000 hours of training and learning.





## VIDRALA ACADEMY

### SHARING KNOWLEDGE TO PROMOTE A MORE SUSTAINABLE SECTOR

For the last four years, the Vidrala Group has had a space in which to train professionals in the glass sector in order to increase their productivity and efficiency. Vidrala Academy aims to become the partner of companies working in the glass container ecosystem, so as to maximise efficiency and improve the final quality of products. This will all help to improve the level of sustainability across the entire industry.

Vidrala Academy, which is based at the Group's UK-based plant, provides support through Vidrala to the world, allowing the glass industry to share good working practices to achieve excellence in the manufacture of glass containers.



### TO CUSTOMERS

The Vidrala Group's commitment to its customers is expressed in the supply of containers that meet the agreed functionality and quality requirements, complying with the strictest requirements in terms of food safety, quality and sustainability.

The Vidrala Group accompanies its customers in the search for solutions to their needs, collaborating with them in developing tailor-made products and envisioning future consumer trends.

This commitment to the customer is reflected in the surveys that the Vidrala Group undertakes annually. **More than 80% of the customers surveyed recommend the Vidrala Group as a benchmark supplier.** They are the best results in nine years of satisfaction surveys. Understanding customer perception is key to Vidrala, as it is the most direct channel for assessing the most strategic aspects and being able to evolve and continue to improve in those areas that are considered to be the least satisfactory.

The survey highlighted other elements that are key to the Vidrala Group, such as food safety. In this sense, good manufacturing and hygiene practices and the degree of depth of risk analyses are two of the most valued attributes for those who responded to the survey. It is noteworthy how, out of all of the attributes assessed, **the organisation's attitude in terms of friendliness and courtesy was valued very highly.** It is no coincidence that, in times like these, it is the human quality of the manufacturers that is valued, as well as the quality of the product. The Vidrala Group continues to work daily to achieve maximum customer satisfaction.



## VIDRALA GROUP AND BODEGAS TORRES: SHARED COMMITMENT TO A SUSTAINABLE FUTURE

An example of the work that the Vidrala Group does with its customers to promote a more sustainable value chain is the project undertaken with Bodegas Torres. This organisation has recognised Vidrala's true commitment to the environment, due to the implementation of projects and initiatives that promote energy efficiency in its processes and have meant a significant reduction in emissions. Bodegas Torres has analysed the impact associated to the life cycle of its product and concluded that 80% of its carbon footprint relates to the activity of its suppliers. As a result, the reduction achieved by Vidrala has had a positive impact on the final balance of CO<sub>2</sub> emissions from the winery, as the balance covers the entire cycle of a bottle of wine, from the vineyard to its final transportation.

**Vidrala received the Torres & Earth 'Best Glass Supplier' award for manufacturing lighter bottles and the efficiency of its production processes.** The close collaboration with Torres has made it possible to develop more environmentally-friendly bottles, because, as they are lighter (up to 130 grams in weight), they require less energy in their manufacture and transportation, **which means a 26% reduction in total CO<sub>2</sub> emissions compared to 2008.**

## THE IMPORTANCE OF COMMUNICATION

Handling communication effectively with all of the stakeholders can be challenging. During the past year, different actions were undertaken to make progress in this area. One example was the Group's plant in the UK and Ireland, which chose to install digital screens in its staff canteens. This measure makes direct communication possible with those people who do not have work e-mails or telephones. At the same time, access to and the communication of news via e-mail is being expanded, meaning a new digital e-mail channel for communications will be developed in the coming months, so that all staff can receive important updates regarding their work.

In addition to these internal communication actions, in recent years the Vidrala Group has wanted to expand the communication channels that keep it in contact with different stakeholders at an external level. Together with the website itself, which has been completely redesigned and updated, the Group maintains active channels on social networks such as Twitter, LinkedIn and YouTube. Each one of them has its own content that brings the reality of the organisation closer through multiple audiovisual languages.







## VIDRALA AND ITS STAKEHOLDERS ON SOCIAL NETWORKS



Thanks to @Vidrala\_Group for making it possible to have another year with the best bottles for sending our liquid gold to the people adopting olive trees who support this project: <http://apadrinaunolivo.org> #vidrala #botellas #vidrio #cristal #apadrinaunolivo



Glass industry

One of the potential applications of @reslag\_eu is the #Glass industry and companies like @Vidrala\_Group #H2020



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Be Basque Talent: @bebasquetalent: Talentia challenge 2017-2018 / Vidrala challenge: <http://youtu.be/RmQRG-KdG2o?a>



Very good numbers in recent years for @ANFEVI\_ESP companies, with awareness raised about their #vidrioEspaña process



## TO THE LOCAL COMMUNITY

### SOCIAL PROJECT

For Vidrala, social commitment integrates this approach of closeness and unites it to the community of people who make up the group towards a common initiative aimed at local groups. As part of this commitment, following the terrible fires in the area during 2017, the Portugal plant collaborated with the Marinha Grande Association of Volunteer Firefighters. Moreover, the plants in Spain continued the collaboration established in previous years and once again supported the AECC (Spanish Cancer Association) in the fight against this disease through support, prevention and research. In Italy, collaboration also focused on the fight against cancer. **Overall, the people of the Vidrala Group gave almost €22,000 to the Social Project in 2017, taking the contributions from both the workers and the company itself into account.**

In an effort to encourage performance and internal participation, the Vidrala Group has been working for several years on a collaboration system between the organisation and the workers. This contribution is the result of a participation initiative in which they encourage suggestions for the improvement of their personnel. The company contributes an amount of money for each suggestion presented by its employees and every year they allocate it to a social or charity initiative. For the second consecutive year, Vidrala and Aiala Vidrio decided to donate it to Biocruces to carry out research in Paediatric Oncology projects. The head of the paediatrics department at Hospital Universitario Cruces and manager of one of the scientific departments at Biocruces highlighted the importance of these contributions from society, companies and associations, as the development of children's oncology treatments is not usually an area of interest for pharmaceutical laboratories, due to its complexity and cost. However, cancer is the leading cause of infant mortality in our country.

## 2ND EDITION OF MASTERGLASS

The second edition of the MasterGlass competition, organised by Vidrala and the Faculty of Engineering of the University of Deusto, took place in 2017. It is a competition that seeks to promote innovation, creativity and practicality in the design of glass containers, always within an environmentally sustainable and efficient process. The participants, all of them students of Industrial Design, Engineering or Graphic Arts from all over Spain, submitted more than 50 proposals, individually and in groups, for the two categories selected: bottles and small bottles. The jury, which was made up of Juli Capella and Mario Ruiz from the National Design Awards, Marcelo Leslabay, professor at the University of Deusto and Director of Experimenta, and Jon Abad, chairman of EIDE, evaluated aspects such as innovation, originality, functionality, practicality and new ideas in closure systems or caps.

**The ICE Pure Icelandic Water project**, by Santiago Garau de Meer, Xavi Anducas and Huijun Jiang of the Polytechnic University of Catalonia received first prize. A transparent glass bottle which, at first sight, transmits the sensation of pure, frozen water in an effective way, which the jury valued for its high communication capacity and a sober graphic application of the brand that does not visually interfere with the vision of the content. Three runners-up prizes were also awarded: for Encuentro, a proposal by Cristina López and Carlos Lobo, from the Escuela Superior de Diseño de la Región de Murcia (Murcia Design School), which links two wine bottles by means of a longitudinal section and solves the functional problems of space; for ACE, a convertible cocktail shaker bottle thanks to the kit inside its cap, by Ane de la Brena, Sian Roberson, Igor Romero and Asier Fernández de Antona from the University of Mondragon; and for hERA, an elegant clear glass milk bottle by Ainhoa Irigoien, Garoa Gómez and Iñigo Puerta de Tecnun, from the University of Navarra.





## WORKING TOGETHER AT A LOCAL LEVEL

In 2017, a new committee was created that will serve as a forum for dialogue with the community in Derrylin, joining the one at the Vidrala Group's plant in Elton. The two committees are made up of people who are considered local community leaders and meet three times a year.

During the meetings, experiences are exchanged, concerns are shared and problems are resolved, thus generating positive working relationships with the local community. In addition, the committees also oversee the contribution of the local funds to local charitable causes with which the Vidrala Group collaborates.

## VIII. Challenges 2018

The Vidrala Group has shown itself to be a team committed to environmental and social sustainability. The future undoubtedly lies in continuing to commit to quality and sustainability as an opportunity for increasing the efficiency of the glass container manufacturing process. A process in which innovation and the latest technology are allies in responding to the challenges posed by the circular economy and on which work is already underway. In addition to this, consolidating the reduction in greenhouse gas emissions will help position the glass container manufacturing sector towards mitigating climate change. In daily management, the promotion of health in the workplace, commitment to the customer and commitment to sustainable development objectives will mark the way forward to keeping glass as an example of the most sustainable material.





[www.vidrala.com/report2017](http://www.vidrala.com/report2017)



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