Our approach to Sustainability

2013

Sustainable Packaging from Sustainable Materials
by a Sustainable Company
Sustainability Strategy

Sustainability deals with global and regional issues concerning the environment, the economy and social responsibility. The implementation of our Group sustainability strategy allows us to continue to operate and enjoy success as a company while taking a responsible stance towards the environment. Our focus and commitment is to be the leading supplier of inherently sustainable packaging and build a sustainable future based on these three pillars of sustainability:

**Environmental**

Our manufacturing processes have an impact on the environment. Ardagh identifies, controls, measures and reduces this impact. We achieve this by reducing energy consumption and emissions, maximising our recycling rate and use of recycled product, optimising our use of secondary packaging materials, managing our waste appropriately by avoiding use of landfills and limiting water usage. Environmental management systems across our regions help to manage our impact so we achieve our ambitious long-term targets.

- Environmental Index Indicator (GoGreen Index)
- Targets for metal and glass including energy, CO2, emissions, waste and water reductions

**Social**

Our Corporate Social Responsibility policy is in the process of being implemented and aims to provide a guideline on social and ethical best practices as well as support decision-making in complex situations. Our CSR policy applies to all employees, encouraging everyone to support our goals. The policy builds on the Group’s Code of Conduct and redefines corporate standards. As part of implementation of this policy is the introduction of the Community Involvement Project Guideline, which provides a systematic approach for finding the most appropriate community involvement projects for Ardagh to be involved in. This fosters our long-term target of having at least one community project per plant by 2017, adding value to our plants and their respective communities. Other Social Activities include:

- Implementation of BSafe! Programme Group wide
- Social and Ethical Performance Systems, Group wide implementation involving the supply chain
- Corporate Mission Statement/Business Ethics
- Frequent sustainability bulletins and report
- Labour/Health and Safety Policy
- Sedex Participation/‘Save Food’ participation
- External audits where appropriate

**Economic**

Our economic stability has impact on the environment, local communities, the economy and other stakeholders. Ardagh continually invests in systems and processes to improve the efficiency of all our operations, thereby reducing costs as well as environmental impact. We focus on customer and supplier partnership programs to strengthen our relationships within the supply chain. This enhances our competitiveness and contributes to the Group’s financial sustainability.

- Reduction of raw material usage and increase of recycled product
- Investing in energy-efficient technologies
- Minimising transportation costs with pack optimisations and back loading
Our aim is to be the leading supplier of inherently sustainable packaging.

**Sustainability Policies**
- Environmental, Social & Ethical

**Sustainability Targets**

**Glass Europe**
- **Environment**
  - Reduce our environmental impact by 2017:
    - Energy Consumption: 18%
    - CO₂ emissions: 25%
    - NO₅ emissions: 41%
    - Particulate emissions: 55%
    - Use of recycled content: 15%
    - Process water consumption: 18%
    - ISO 14001 Management Systems: Implemented at each plant

**Metal**
- **Environment**
  - Reduce our environmental impact by 2017:
    - Energy Consumption: 14%
    - CO₂ emissions: 14%
    - NO₅ emissions: 10%
    - VOC emissions: 10%
    - Water consumption: 15%
    - Waste management: Separate collection on each plant
    - Environmental Management Systems: Implemented at each plant

**Social & Ethical**
- 2017
  - Implementing BSafe! Programme Group wide
  - Community Involvement projects
  - Social & Ethical Performance Systems
  - Group wide implementation involving the supply chain

**Programmes & Activities**

**General**
- Corporate Mission Statement
- Sustainability and CSR Advisory Panel
- Performance Reviews
- External GRI Sustainability Report
- Frequent Bulletin
- Supply Chain Involvement
- Driving Industrial Regulatory agenda

**Environment**
- Environmental Index Indicator (GoGreen Index)
- Targets for Glass & Metal:
  - Energy
  - CO₂
  - Emissions
  - Waste
  - Water
  - Environmental Management Systems
  - Plant LCA Projects
  - Cradle to Cradle Strategy

For more information on the corporate sustainability Key Performance Indicators (KPI), please see our sustainability report at www.ardaghgroup.com/sustainability
**Sustainability Focus**

**Environmental**

- **Energy Conservation**
  - Operational Practices
  - Equipment and Machinery
  - Using Low Carbon Energy
  - Supplier selection is Critical

- **Emission Reduction**
  - Best Available Technique

- **Water Management**
  - Closed loop water systems, where feasible
  - Water treatment systems

- **Material Consumption**
  - Support & Stimulate Recycling
  - Reduction of packaging materials
  - Working closely alongside key Material Suppliers
  - Down Gauging / Light Weighting

- **Waste Management**
  - Intention for zero waste landfill

**Social & Ethical**

- **Working Conditions**
  - Supporting Human Rights
  - Safe Workplaces

- **Transparency**
  - Sedex based Self Assessments

- **Stakeholder Interest**
  - Respecting and Responding to Interests

- **Respect for Rule of Law and International norms of behaviour**

- **Community Involvement**
  - Caring for Local issues
  - Development of Local Initiative

- **Behaving Ethically**
Sustainability Focus

Glass and Metal: Sustainability Credentials

Raw Materials
- No scarce resources

Permanent Materials
- Using, not consuming
- 100% infinitely recyclable
- No loss of quality
- Prevents waste, no down cycling
- Highest recycling rates in the world

Carbon
- No long term carbon emissions

Efficient Supply Chain
- Avoid waste
- Safe
- No cooling required

Health & Long Shelf life
- Preservation - Retained Nutritional value

Principle of Permanent Materials

On the 24th May 2012 the European Parliament endorsed the European Commission’s Resource Efficiency Roadmap, specifically calling for 'Permanent Materials’ to be made a new resource category. This category now works alongside the existing categories of ‘renewable’ and ‘non-renewable’ resources. This recognises the properties which infinitely recyclable permanent materials, such as metals or glass, have.

The definition of ‘permanent materials’ is given by British Standards (Source BS 9805:2011) as “materials for which efforts are made to retain for use in society the energy and raw materials invested in their production at the end of the product life, either through reuse or recycling, with no loss of quality no matter how many times the material is recycled.”

Resource efficiency clarified
The majority of our employees are members of labour unions. We generally negotiate national contracts with our unions, with variations agreed at the local plant level. Most such labour contracts have a duration of one to two years. Our management believes that, overall, our current relations with our employees are good. Our subsidiaries located in the European Union have special negotiating committees which have established a European Works Council (“EWC”) in compliance with EU directives. The EWC acts as a communications conduit and consultative body between our EU subsidiaries and our employees. The EWC meets at least twice a year, and senior management attends these general meetings. The EWC also has the right to be notified of any special circumstances that would have a major impact on the interests of employees. EWC delegates are elected for four-year terms on the basis of legal principles or practices in the relevant countries, while the allocation of EWC delegates between countries is governed by EU directives.

Ensuring equal opportunities for employees is important for Ardagh Group. Given the wide diversity of countries and laws operated across, the approach has been to decentralise the development of policies, procedures and training. All countries within the Group ensure that they have the appropriate policies in place which include issues such as equal access to training and development, promotion and no discrimination on the grounds of gender, religion or sexual orientation. All policies and procedures comply with the local legal requirements and form part of the introduction of new employees to the business and the training of managers.
Health & Safety Performance

We strive to maintain a safe working environment for all of our employees, with safety in the workplace being a key objective, measured through individual accident reports, detailed follow up programmes and key performance indicator reporting. We believe that our safety record sits among the best in the industry.

“Safety first” has become a core part of our culture. It is our vision to achieve zero accidents and so naturally safety is the first item on any operational or general management meeting agenda and it is the first thought before starting work. Over the past few years we have implemented conventional occupational H&S management systems in our plants which are aimed at continuously improving the H&S Performance.

In 2011 we implemented a behavioural safety programme called “BSafe!” as a complementary means for effective incident prevention. The core of this system is people based. We are all responsible for H&S ourselves, colleagues and visitors and have a responsibility to care for each other on the job. “BSafe!” and its programme elements has been developed internally involving the territorial H&S managers in workshops and project teams. The result is a behavioural safety standard for implementation across Ardagh Group.

As a consequence of the mentioned occupational H&S management, the accident prevention has improved significantly over the past number of years.
Economic Performance

As a privately owned company, Ardagh Group does not publish detailed financial information. However, it is important to demonstrate to our stakeholders that Ardagh Group is a financially sound business and is well placed for future growth.

Ardagh Group has reached its current scale and market position through a well-balanced combination of organic growth and strategic acquisitions. A series of acquisitions over the past decade have been successfully integrated into the business, resulting in expansion into new markets and generating cost savings.

Integration of Acquired Businesses

Growth through acquisitions is a key element of Ardagh’s growth strategy. It is important that acquired businesses are quickly aligned with Ardagh’s sustainability vision.
Cradle to Cradle® is a phrase coined by Prof. Dr. Michael Braungart in the 1980’s. His institute is called the Environmental Protection Encouragement Agency (EPEA). The philosophy behind C2C is that products should be designed in such a way that they are 100% recyclable or 100% biodegradable. Also products should not contain toxic substances and be produced with renewable energy. The idea is that in this scenario there is no more waste and depletion, nor a ‘negative footprint’.

The first and most important benefit of a C2C assessment is gaining knowledge on what is inside a product. This is the one and only realistic base for improvement. EPEA has a team of qualified scientists and therefore a great know-how of chemical substances. Every chemical is assessed and evaluated. This evaluation is the feedback for improvement. The next benefit is the knowledge to what extent your product fits in a closed loop circle. This is because with Cradle to Cradle® there should be no more waste and depletion.

Another benefit is knowing your position in terms of water and energy usage during the production process. The aims are to use 100% renewable energy and use water in such a way that it leaves the production facility cleaner than when it entered in the first place.

The project for Ardagh Group started in early 2011. We collected data at chemical level from all the components of the cans, such as tinplate, coatings, inks etc. This information had to be given by suppliers and was sent directly to EPEA. In addition, information about the production process was sent to EPEA for analysis. This included data on water and energy usage as well as information on social policies.

Cradle to Cradle® and this project are changing the current focus on sustainability. In the old paradigm of ‘cradle to grave’, there was a focus on minimizing footprint. A consequence is that things are getting downsized, but that is not a final solution to the problem. A permanent solution is to choose materials that are inherently good.

Becoming C2C-certified requires having a very sustainable product. Given that Ardagh Group is a glass and metal packaging supplier serving a substantial industry, there is a positive impact.

The certificate acknowledges truly sustainable credentials
Glass - Europe

Frozen Cullet
(Germany)

The Frozen Cullet project was internally developed (and awarded with an R&D grant from the German Agency for the Environment, UBA) due to the fact that, under severe weather conditions, furnace preheaters were easily blocked by feeding in too much moisture, ice and snow. This causes additional energy consumption including costs and emissions as well as production losses.

To prevent this from happening, the hot air above the furnace is now captured, heated with a heat exchanger resulting in maximum temperatures of 120°C. The heated air is then blown into the cullet bin (bottom-up) and thus heats up the cullet, which leaves the bin dry and unfrozen. The air with an average temperature of 40°C leaves the cullet bin on the upper side and flows out into the batch house, heating it up once more.

“The frozen cullet project demonstrates the great potential for innovation in our plants, which we need to achieve our ambitious sustainability targets.”

Johan Gorter, CEO Glass Europe

Glass - Europe

Education on Recycling Campaign
(Poland)

During 2012, Ardagh employees in Poland started a campaign to promote recycling in schools. Furnace specialists, environmental managers and health & safety managers gave lectures discussing the overall topic of recycling, the benefits of glass packaging, environmental responsibilities of plants and the technological production process of glass. The tour was hosted by primary and high schools as well as universities and adult schools in Ujście, Gostyń and Wyszków.

In Ujście and Gostyń all schools in place were visited throughout the campaign, which in total educated 4,500 people of different ages.

To engage with the community in future as well, Eco or Earth Days have been introduced by the respective communities and are actively supported by Ardagh.
Metal - North America

Water Savings Project

(American Samoa)

Our Samoa plant has a shared water supply with our customer StarKist. As a result of a water savings project the water consumption has been significantly reduced by more than 1300m³ per month. The project started with a detailed analysis of the water demand system and identified the water coded vacuum system as the main contributor. A water circulation system was designed and installed in order to reduce the initial consumption level. In the control phase of the project, success was documented with regards to stable process conditions and significant water savings.

American Samoa - Water Savings Project

Water Usage in Gallons

Mar Apr May Jun Jul Aug Sept Oct Nov Dec Jan Feb Mar Apr May Jun Jul

117,200 78,400 79,800 26,000 19,106 78,700 26,700 34,100 29,500 29,700 21,200 29,600 22,700 21,800 29,000 50,000
Sustainability - at the heart of everything we do

The full GRI - Compliant report is now available on:
www.ardaghgroup.com

Further information:
www.ardaghgroup.com/sustainability

www.ardaghgroup.com