

# Adding More **Aluminum**

Creating Value

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Sustainability  
Report 2014



Novelis

# Contents



By adding high-recycled-content Novelis aluminum to their products, our customers are creating value for consumers – and for the world. The following sections explain how.

## 2

### Overview

- 3 Welcome
- 4 Letter from Our Chief Executive Officer
- 6 Performance Summary
- 7 About Novelis

## 9

### Strategy

- 10 Pioneering a New Way of Doing Business
- 16 Materiality
- 18 Stakeholder Engagement
- 21 Sustainability Management and Governance

## 23

### Sourcing

- 24 Re-engineering Our Supply Chain

## 67

### Consumers

- 68 Engaging with Consumers
- 72 Product Safety and Health



## 60

### Customers

- 61 Delivering Value to Our Customers
- 62 Sector Focus: Automotive
- 64 Sector Focus: Beverage Can
- 66 Sector Focus: Specialties

## 30

### Manufacturing

- 31 Our Manufacturing Operations
- 33 Our Environmental Performance
- 46 Developing Our People
- 52 Engaging with Our Communities

## 73

### About This Report

- 74 The Global Reporting Initiative Index
- 81 UNGC Communication on Progress Index
- 83 Awards and Recognitions

# Welcome

At Novelis, we have set an ambitious goal to use 80% recycled aluminum inputs in our operations by 2020. This goal is transforming our company and dramatically improving the sustainability profile of our products throughout their life cycle.

This sustainability report, our fourth, reviews our continued progress toward this goal – as well as our other key targets – at each life cycle stage: sourcing, manufacturing, customer use and end-of-life with consumers.

We have aligned this report to conform to the new G4 Sustainability Reporting Guidelines of the Global Reporting Initiative (GRI) at the Comprehensive level. Please see About This Report (p. 73) for an abbreviated GRI index and for more information about the report’s scope and boundaries.



## Sourcing

Reached 46% recycled content by the end of FY14



## Manufacturing

In FY14, reduced energy intensity by 5% and water use intensity and absolute GHG emissions by 4% each



## Customers

Invested approx. \$550 million since 2012 to triple our capacity to serve the auto industry by 2015



## Consumers

Helping consumers reduce their carbon emissions. Accepted into WWF Climate Savers Program.

# Letter from Our Chief Executive Officer



## To Our Stakeholders:

At Novelis, we are relentlessly focused on achieving our vision to lead our industry by producing the most innovative, technologically advanced, low-carbon aluminum flat rolled products on the market. Accomplishing this demands much more than business as usual. It requires us to pioneer a fundamentally new way of thinking and operating. It also requires a willingness to not only embrace disruption within our own company, but also to create it in our industry and the markets we serve.

This new way of operating entails shifting our business model from a traditional linear approach to an increasingly closed-loop one. This shift will enable us to accelerate and capitalize on the sustainability potential of aluminum as a lightweight, infinitely recyclable metal – and to dramatically reduce the embedded carbon in our products. It demands we apply our industry-leading research and technology capabilities to create the product innovations needed to close the loop. And, in an increasingly energy- and carbon-constrained operating environment, we are convinced it will be a key source of competitive advantage for our company – and for our customers.

At the core of our company's transformation is our unprecedented target to use 80% recycled inputs by 2020, compared to 33% three years ago. This target has implications for nearly every aspect of our business – from the basic design of our products and our portfolio mix, to the structure of our supply chain and our relationships with our customers. But when we reach it, we will cut our absolute, life cycle greenhouse gas emissions in half, even with significantly increased production, and achieve our objective to be *the* low-carbon aluminum producer.

Another key component of our transformation is a dramatic expansion of our capacity to serve the automotive industry, the fastest-growing market for our products, as automakers increasingly turn to aluminum to lightweight their vehicles. When our latest projects come online, our automotive sheet capacity will reach 900 kilotons annually – a three-fold increase in just two years.

By the end of our 2014 fiscal year (FY14), we had reached 46% recycled inputs, putting us firmly on track to achieve our interim goal of 50% by 2015. We also reduced our absolute greenhouse gas emissions by 17% since our baseline – including 4% in FY14 alone.

While our increased use of recycled aluminum – and corresponding decreased reliance on primary aluminum – is central to our shift toward a closed-loop and low-carbon business model, it's just one element of our broader sustainability strategy. We are also focused on implementing sustainable manufacturing processes in our own operations, and on what we see as the other foundations of being a sustainable company: operating ethically and responsibly, protecting the health and safety of our people, developing our employees and contributing to the communities where we operate.

Our shift toward a closed-loop and low-carbon approach is also requiring us to engage and partner with a broader and more diverse set of stakeholders, to challenge and inform our thinking and to advance shared objectives that cannot be achieved on our own. In FY14, for example, we launched a new partnership with the World Wildlife Fund (WWF). Novelis was accepted into WWF's Climate Savers Program, an exclusive initiative to encourage companies to reduce their operational carbon footprint and act as agents of change within their spheres of influence.

We also remain committed to the United Nations Global Compact, to which Novelis is a signatory. This report serves as our third Global Compact Communication on Progress, and we are continuing to work to implement its 10 principles.

I have fundamental confidence in Novelis' ability to create and apply the disruptive innovations required to drive the radical change we envision.

### Our FY14 Progress

As we detail in this report, in FY14 Novelis continued to execute on its aggressive growth plans, and we made solid progress toward our business and sustainability objectives, even in the face of some significant market challenges. The scale and pace of change and expansion underway in our company remains unprecedented – and yet our execution remains superb, which is a testament to the talented, committed and hardworking Novelis employees around the world.

Building on our long-time partnerships with Jaguar Land Rover and other major global carmakers, we further strengthened our position as the leading supplier of aluminum sheet to the automotive industry when we were selected in FY14 as a key supplier for Ford Motor Company's new aluminum-intensive 2015 F-150 pickup truck.

In addition, we continued to work with all of our automotive customers to implement closed-loop manufacturing processes in which we take back their production scrap, re-melt it, cast it and roll it again. And we advanced our efforts to take the closed-loop model even further by developing new, more easily recycled alloys – and by leveraging higher-recycled-content materials – in automotive applications.

FY14 also marked the commercial debut of evercan™ – the world's first independently certified, high-recycled-content aluminum beverage can sheet – when Red Hare Brewing Company announced it would package its craft beer exclusively in cans made of Novelis' evercan sheet. The product is a technical breakthrough and represents a huge step forward in enabling aluminum to realize its full sustainability potential. We remain focused on closing the gap to our ultimate goal of creating a 100% recycled content aluminum beverage can.

During the year, we also expanded recycling capacity in all of our operating regions – including putting the finishing touches on our new recycling center in Nachterstedt, Germany, commissioned in June 2014. The new facility will be the world's largest and most advanced aluminum recycling center – and it will firmly solidify Novelis' position as the largest recycler of aluminum in the world.

As we acknowledged when we set our ambitious sustainability targets in 2011, we were committing to do things we didn't yet know how to do, using technologies we had not yet invented. But then, as now, I have fundamental confidence in Novelis' ability to create and apply the disruptive innovations required to drive the radical change we envision.

Since then, we have made great strides and filled in many of the unknowns – though certainly many challenges and uncertainties remain. In the process, we've also rocked the boat, at times seeking to move faster or more aggressively on sustainability than some of our stakeholders. But I am firmly convinced that the transformation Novelis is leading is what society wants – and what the planet and the global economy need – and that it will be the key driver of our company's long-term success.

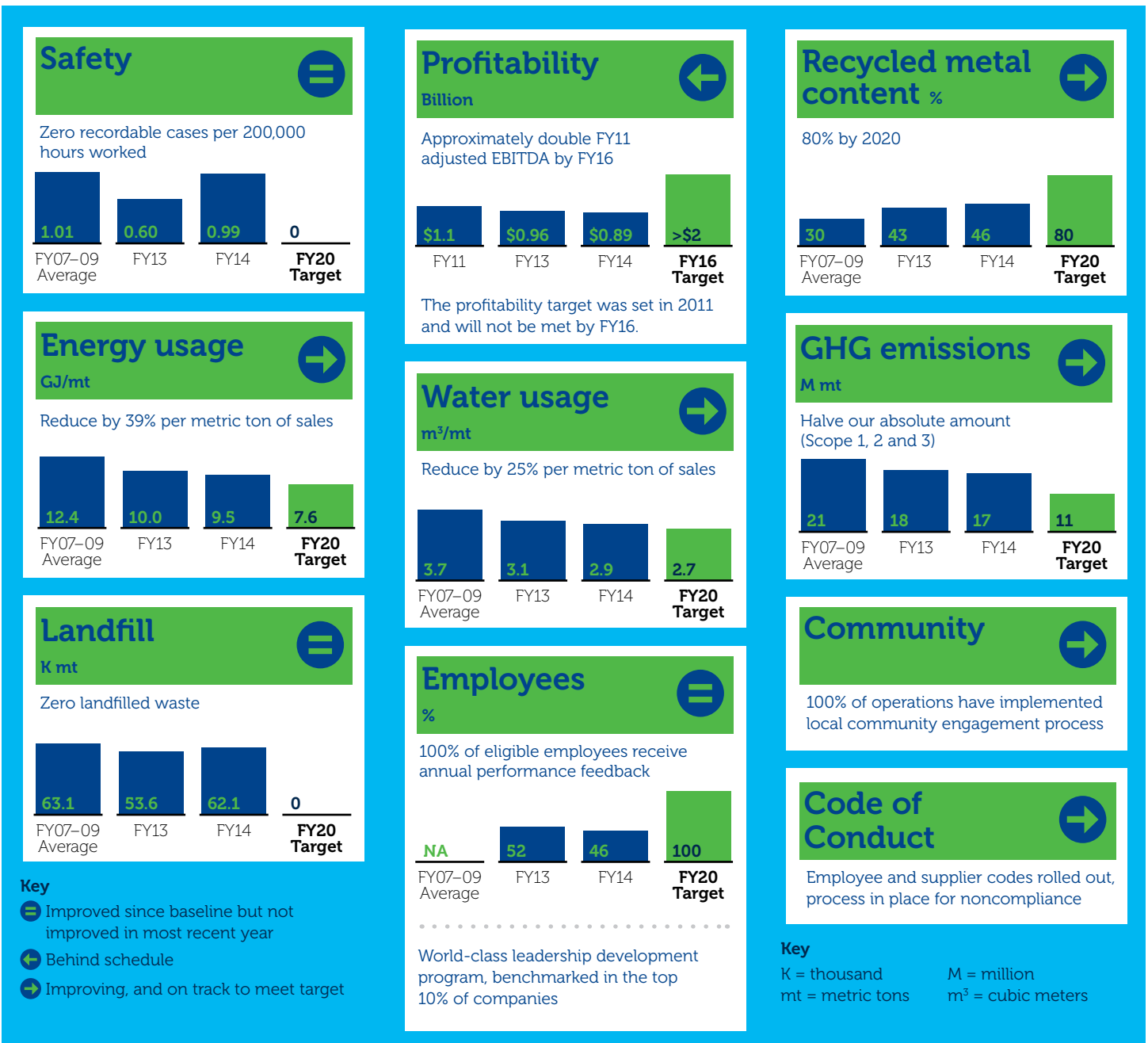
Thank you for taking the time to learn about Novelis' vision to lead our industry through sustainability and innovation. We invite your feedback and partnership as we work to make it a reality.

*Philip R. Martens*

**Philip R. Martens**, President and Chief Executive Officer

# Performance Summary

Our overall progress toward our targets continues to be strong. While there is some variability in our year-on-year performance, we believe we are firmly on track to achieve the targets.



These corporate-wide sustainability targets use the average of fiscal years 2007–2009 as a baseline and fiscal year 2020 as an end date (with the exception of the profitability target). We will review our targets for 2020 in next year’s report.

# About Novelis

Novelis is the world's largest manufacturer of rolled aluminum and the global leader in aluminum recycling.

We deliver environmentally sustainable solutions for the most technologically demanding applications in sectors including automotive, beverage can and high-end specialties such as architecture and consumer electronics.

We are primarily an aluminum converter – that is, we convert aluminum ingots into flat rolled products (FRP).

In FY14, 46% of our aluminum inputs were recycled aluminum. To recycle aluminum, we shred and de-coat scrap, remelt it (mixing in primary aluminum and alloys when necessary) and cast it into ingots. Aluminum is infinitely recyclable; the quality is not degraded in the recycling process. When we use primary aluminum, we buy the ingots from aluminum producers and traders.

## Key Novelis Facts and Figures for FY14

**HQ** Headquarters

**👤** Employees<sup>1</sup>

**💰** Sales

**🏭** Operating facilities<sup>1</sup>

**\$9.8**  
billion  
in net sales

**2,895**  
metric  
kilotons<sup>2</sup>  
of FRP shipments

**11,410**  
employees globally

### Global HQ and Global Research & Technology Center (GRTC)

**HQ** Atlanta, Georgia, USA, and Kennesaw, Georgia, USA

**👤** 395 (280 HQ + 115 GRTC)

**🏭** Global Research & Technology Center

### North America

**HQ** Atlanta, Georgia, USA

**👤** 2,755

**💰** \$3.1 billion

**🏭** 10 plants (including 2 fully dedicated recycling facilities and 1 plant with recycling operations)

### South America

**HQ** São Paulo, Brazil

**👤** 1,820

**💰** \$1.6 billion

**🏭** 2 rolling plants (1 with recycling operations), 1 primary aluminum smelter

### Europe

**HQ** Zurich, Switzerland

**👤** 4,550

**💰** \$3.3 billion

**🏭** 9 plants (including 1 fully dedicated recycling facility and 2 plants with recycling operations)

### Asia

**HQ** Seoul, South Korea

**👤** 1,890

**💰** \$1.9 billion

**🏭** 3 plants (2 with recycling operations)

<sup>1</sup> As of March 31, 2014.

<sup>2</sup> One metric kiloton (kt) is 1,000 metric tons.

# Where Novelis Aluminum is Used

Novelis aluminum is used in four key market categories: can, automotive, high-end specialties and other. The following percentages show how our business breaks down by market, as measured by flat rolled product shipments in FY14.

## 62%

**Can:** Aluminum cans – used for both beverages and food – are light, stackable and use space efficiently, making them convenient and cost-efficient to ship. While our automotive and specialty categories are growing, aluminum for cans still makes up a large part of our product portfolio.

**Sector focus:** page 64

## 9%

**Automotive:** Aluminum is used in vehicle structures as well as body panels, side walls, doors, hoods, trims and other applications. Aluminum components are lighter weight and thus deliver better fuel economy and improved emissions performance compared to traditional metals.

**Sector focus:** page 62

## 12%

**High-End Specialties:** Specialty applications include consumer electronics such as smartphones, tablets, laptops, e-readers and flat-screen TVs; architecture and building materials; transportation applications in vehicles other than cars; industrial equipment; heating and cooling systems and more.

**Sector focus:** page 66

## 17%

**Other:** This category includes aluminum for foil and other light-gauge products.





# Strategy

Our goal is simple: to be the undisputed leader in the aluminum rolled products industry. Innovation and sustainability are the foundations of the strategy that will get us there.

## We're Adding...

### Sustainability Commitment

Novelis is building our company's future on sustainability. It is integral to our business strategy and driving changes in our processes and decision making across literally every aspect of our company.

Novelis has invested approximately

**\$2 billion**

since 2011 to expand our recycling and production capacity

### Expanded Capacity

Our low-carbon business strategy is based on aggressively positioning our company to meet the rapidly growing demand for aluminum flat rolled products. We are making record capital investments to expand our recycling operations and production capacity.

### Disruptive Innovation

We are applying an entirely new, more sustainable way of thinking – combined with our unrivaled technical capabilities – to fundamentally re-engineer how we operate and the products we make.

## We're Creating...

### A Closed-Loop Business Model

As we increase our recycled inputs, we are transforming our business model from a traditional linear approach to a closed-loop one – dramatically reducing the life cycle impacts of our products and pioneering the way toward the circular economy.

### Competitive Advantage

We are convinced that Novelis' commitment to sustainability is a key differentiator and source of competitive advantage for our company. Our customers are increasingly focused on sustainability – and Novelis is their go-to partner.

### Value for Our Customers and Society

In a carbon- and resource-constrained world, we are halving the embedded carbon in our products, enabling our customers to make their products more sustainable and helping facilitate the transition to the low-carbon economy of the future.

# Pioneering a New Way of Doing Business

Sustainability is at the heart of our business strategy – and will be a key source of our competitive advantage.

In short, our strategy is designed to reduce the embedded carbon in our products, and we are achieving it by pioneering a fundamentally new way of doing business.

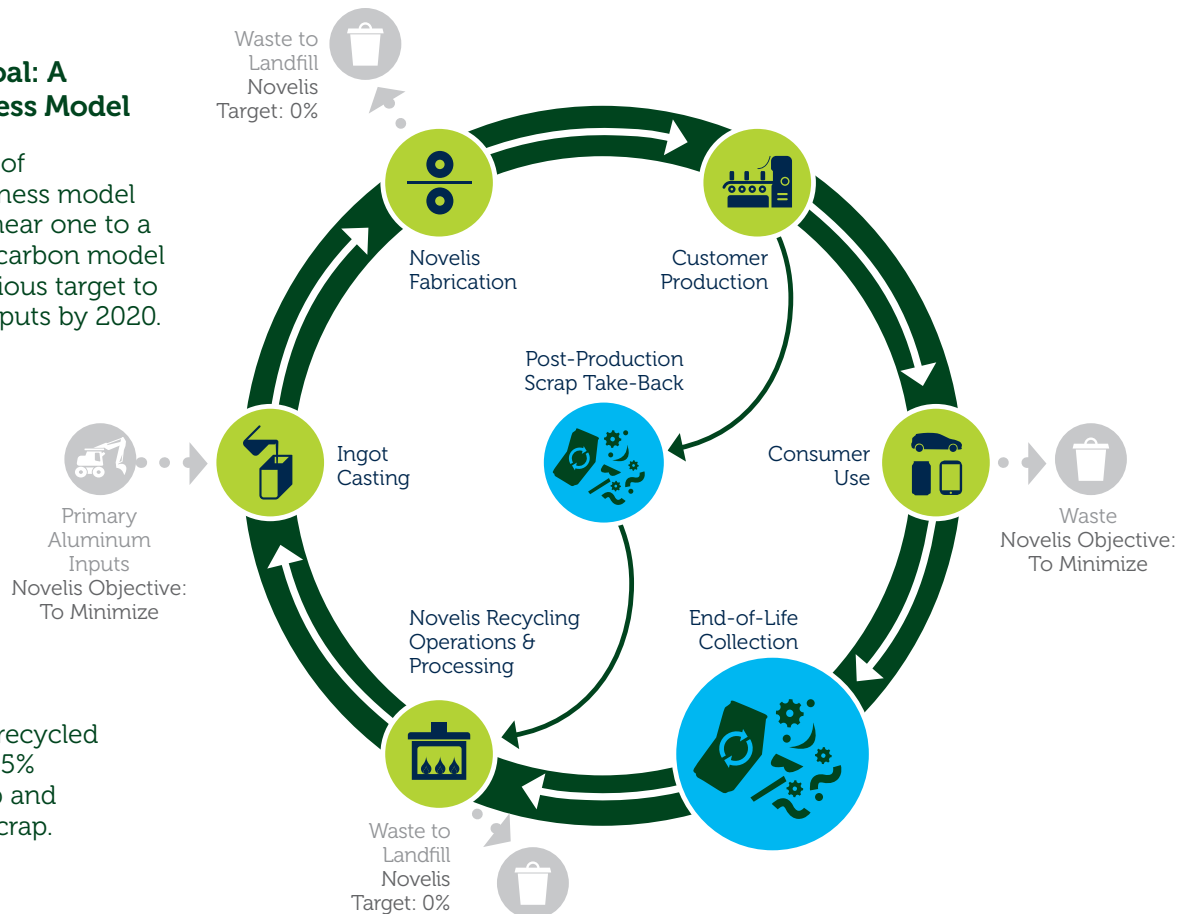
Traditionally, the aluminum industry has relied on a largely linear business model, with primary aluminum – made through a process of extracting alumina from the mined substance bauxite – as the key input. Recycling has also always been a part of the value chain, but primary aluminum has remained the predominant material input. At Novelis, for example, primary aluminum comprised an average of 70% of our aluminum inputs between FY07 and FY09, with the remaining 30% made up of recycled aluminum.

However, recycled aluminum avoids 95% of the energy use and greenhouse gas emissions associated with primary aluminum production. Consequently, Novelis believes that realizing the full sustainability potential of aluminum depends on the industry decreasing its reliance on primary aluminum by shifting toward recycled aluminum as the predominant input. Doing so will dramatically reduce our company’s – and the industry’s – carbon footprint, as well as our production costs, and increase the security of supply.

Novelis is leading the way toward this shift – and in doing so, we are not only strengthening our company, but also disrupting our industry and delivering value to our customers and society.

**Figure 1: Novelis’ Goal: A Closed-Loop Business Model**

We are in the process of transforming our business model from the traditional linear one to a closed-loop and low-carbon model – driven by our ambitious target to reach 80% recycled inputs by 2020.



Our vision is that our recycled inputs will comprise 25% post-production scrap and 75% post-consumer scrap.

# Drivers of Demand for Our Products

We are in the midst of a period of rapid growth in our industry. Demand for aluminum flat rolled products (FRP) is expected to grow by more than 55% worldwide from 2013 to 2020 – from 21 million metric tons to 30 million metric tons. The increasing demand is being driven, in part, by economic growth in emerging markets that is enabling more people to buy more consumer products, many of which contain aluminum – from food packaging and beverage cans to cars and electronics.

Equally – or more so – demand is being propelled by sustainability drivers such as climate change, rising energy demand and natural resource scarcity. Aluminum is inherently strong, malleable and conductive. It is also infinitely recyclable and lightweight – which is critical in an energy- and carbon-constrained environment. Indeed, because of the very nature of aluminum, substituting it for other materials has the

potential to reduce energy use and greenhouse gas emissions – and those benefits are even more dramatic when recycled aluminum is used. As a result, manufacturers are increasing their use of aluminum in a growing range of products.

The average amount of aluminum in every new vehicle produced in North America is expected to increase

## 75%

between 2012 and 2025 (Source: Ducker Worldwide)

The largest growth in demand for FRP is in the automotive sector, with a projected annual growth rate of approximately 25-30% per year through 2020. Car manufacturers are dramatically increasing their use of aluminum as a means of lightweighting vehicles, a key enabler for achieving the fuel-efficiency increases that consumers are demanding and governments are mandating around the world.

## Creating Business Value Through Sustainability

The centerpiece of our sustainability strategy is our target to reach 80% recycled inputs by 2020, which has implications for nearly every aspect of our business – from our operational footprint and value chain structure to our manufacturing processes and product design specifications. It is also why we are reshaping our product portfolio to be concentrated on higher-value, lower-carbon products. Our low-carbon product strategy is focused, in particular, on dramatically expanding our capacity to serve the automotive industry, where carmakers are increasingly turning to aluminum to lightweight vehicles.

When we reach 80% recycled inputs, we will eliminate 10 million metric tons of greenhouse gases (GHGs) from the aluminum production chain – cutting our absolute Scope 1, 2 and 3 emissions in half.

The benefits of the closed-loop model are not only tremendous from a sustainability perspective, but from a business perspective as well: closing the loop enables us to secure reliable, independent sources of input material, and improves the efficiency of materials procurement, manufacturing and supply chain operations.

While a slower than expected recovery in the global economy will prevent us from achieving our FY16 profitability target, we firmly believe in the long-term trends driving demand for flat rolled products and remain confident that our three-pronged strategy of increasing recycled content, optimizing our global footprint and growing our premium product portfolio will enable us to improve our financial performance in coming years.

In addition, the shift that Novelis, as the world's largest aluminum buyer, is making toward a closed-loop model has significant benefits beyond our own company. The investments we are making will increase global recycling capacity by more than 3 million metric tons and will stimulate end-of-life recycling rates.

Sustainable manufacturing is also integral to our shift toward a closed-loop model, and our targets for energy, water and waste are driving changes across our operations. In addition, we are focused on what we view as the foundation of being a sustainable enterprise: operating ethically and responsibly; protecting the health and safety of our people; ensuring we develop and maintain an adequate talent pipeline; and contributing to the communities where we operate.

# Positioning Novelis to Meet Growing Demand

Our business strategy is based on aggressively positioning our company to meet the rapidly growing demand for aluminum FRP. We are making record capital investments to expand our recycling operations and production capacity to serve the automotive, beverage can and high-end specialties markets.

In particular, we are increasing our capacity to meet the fast-growing demand in the automotive sector – when all of the new lines are commissioned in late 2015, Novelis’ global automotive sheet capacity will reach approximately 900 kilotons (kt) per year, a three-fold increase from 2013.

## Since 2011, Novelis has made nearly \$2 billion in capital investments in strategic geographic locations. Recent highlights include:



**USA: Oswego, NY**  
Commissioned two new automotive sheet finishing lines in 2013/2014, and a third to go online in 2015, along with plans to upgrade and expand recycling operations **360 kt automotive sheet**



**U.K.: Latchford**  
Commissioned plant for closed-loop automotive aluminum recycling **65 kt**



**Germany: Göttingen**  
Expanded automotive sheet production capacity **20 kt**



**Germany: Alunorf**  
Expanded recycling capacity and expanding finishing capacity for beverage can sheet **50 kt recycling**



**Germany: Nachterstedt**  
Expanding automotive finishing lines (to come online in 2015), and constructed the world’s largest recycling facility (commissioned in 2014). **120 kt of automotive and 400 kt recycling**



**Brazil: Pinda**  
Expanding rolling and recycling capabilities and adding a coating line for can end stock **220 kt rolling, 190 kt recycling, and 100 kt beverage can finishing**



**Italy: Pieve Emanuele**  
Commissioned new aluminum recycling and casting line **15 kt**



**China: Changzhou**  
Commissioned a new automotive sheet finishing plant in 2014 **120 kt**



**South Korea: Ulsan and Yeongju**  
Completed a two-year rolling and recycling expansion project **350 kt rolling and 265 kt recycling**



- Rolling capacity
- Automotive sheet production and finishing
- Can coating line and/or finishing
- Recycling expansion

# Unlocking Advantage Through Innovation and Technology

We believe that disruptive innovation and groundbreaking technology will be the essential enablers for achieving our ambitious business and sustainability goals. Reaching 80% recycled inputs – and fully capitalizing on the sustainability potential of aluminum – will require rethinking the fundamental design of our products, and re-engineering the processes to make them.

Our Global Research & Technology Center, located near our headquarters in Atlanta, Georgia, USA, serves as a global hub for our research and development efforts and

has put Novelis at the forefront of our industry. There, our scientists, researchers and engineers work together under one roof – alongside our commercial and operational teams and in close cooperation with our customers – to create the product and process innovations to meet our customers' needs today, and develop the next-generation, low-carbon aluminum products of the future.

## In Partnership with Universities to Advance Research



“

**Graeme Marshall, Director, Global Research & Development, Novelis**

“Through partnerships with universities, Novelis has leveraged the knowledge, resources and research capabilities of professors and students to help make our company the technology and innovation leader in our industry. At the same time, these partnerships have enabled the next generation of scientists and engineers to gain hands-on experience in applied research and development.”

While Novelis has its own industry-leading research facilities, we are extending our research and technology capabilities further by establishing partnerships with leading universities with programs in materials science, chemistry and engineering. Through these relationships, Novelis scientists can leverage their research by tapping into the extensive knowledge of university professors and students, as well as access unique research equipment that has limited availability. For example, in recent years Novelis-sponsored PhD projects have investigated mixed-metal corrosion, developed algorithms for automation systems, explored the origin and evolution of surface structures and researched the atomic behavior of high-strength automotive sheet.

The partnerships also enable university researchers to get hands-on experience in industrial aluminum applications and rolled products processing with

mentoring by Novelis scientists and engineers, typically through funding of PhD students, collaborative work or intern programs. These partnerships also help Novelis create connections with potential future employees, as researchers or as participants in our Engineering Development Program – a valuable benefit given the intense competition among companies to recruit young engineers.

Novelis seeks to partner with the best research establishments in our technical fields, and we collaborate with internationally renowned universities in Canada, Europe, the U.K. and the United States. Examples include McMaster and University of British Columbia in Canada; Aachen and Zurich (ETH) in Europe; Manchester and Swansea in the U.K.; and Georgia Tech and the Colorado School of Mines in the United States.

# Our Strategy and FY14 Highlights

## We're Adding...



### Our Business Strategy

#### Grow our premium product portfolio

to focus on high-value, low-carbon products in the automotive, beverage can and specialties markets

#### Expand production capacity

and optimize our geographic footprint to serve key markets

#### Expand our recycling capacity



For more details on our recent investments in expanding our production and recycling capacity, see p. 12.

### Sustainability Strategic Objectives



Sourcing

**Reduce the embedded carbon** in our products by increasing recycled content

Re-engineer and minimize risk within our **supply chain**



Manufacturing

Maintain **safe, efficient operations** and **minimize natural resource use**

Ensure an adequate supply of **talent**

Maintain our **social license** to operate



Customers

Provide value to our customers, in particular by helping them meet their **sustainability objectives**



Consumers

**Increase post-consumer recycling** of aluminum

Help our customers make **sustainable products** that consumers want

# We're Creating...

**FY14 Highlights**

Reached **46% recycled content** by the end of FY14

Recycled **50 billion** used beverage cans

Continued roll-out of **Supplier Code of Conduct**

Sourcing

Reduced **energy intensity by 5%** and **water use intensity** and absolute **GHG emissions by 4%** each

Graduated the first class of **53 young engineers** from our Engineering Development Program

**Donated \$3.3 million** through Novelis Neighbor, and our employees volunteered 20,626 hours

Manufacturing

Announced the commercial **debut of evercan™** high-recycled-content aluminum beverage can sheet

**Invested approximately \$550 million since 2012** to triple our capacity to serve the auto industry by 2015

Selected as one of the key aluminum **suppliers for Ford's 2015 aluminum-intensive F-150** pickup truck

Customers

Worked with Forum for the Future to explore consumer and **stakeholder attitudes** about sustainable packaging and brand preference

Helping consumers reduce their carbon emissions. Accepted into **WWF Climate Savers Program**.

Continued to support several key programs that **educate consumers** about recycling

Consumers

# Materiality

In 2011, Novelis conducted a materiality assessment to help us identify the issues that are most important to our business and our stakeholders. We regularly review and evaluate these material issues to determine if they remain consistent and relevant, and if there are any new and emerging issues we need to address.

Our original assessment informed the development of our sustainability strategy and priorities, and helped us establish our 2020 targets. Our regular review of the issues takes place as part of our ongoing engagement with external stakeholders, as well as our business planning, strategy development and risk management processes.

Since conducting the initial assessment, engagement with a range of internal and external stakeholders – including our Sustainability Advisory Council – has affirmed that the broad set of issues we identified as most material for Novelis and our stakeholders remain relevant and accurate.

In transitioning to use the new Global Reporting Initiative G4 guidelines for this year's report, we also re-evaluated our materiality assessment, analyzed how our material issues aligned with the new G4 framework and took steps to ensure our report content reflects Novelis' most material issues and impacts (see About This Report, p. 73).

**Figure 2: Novelis' Material Issues and the Location of Their Impacts**





# Our Material Issues



Novelis Material Issue	Applicable Aspects in the Global Reporting Initiative G4 Guidelines <sup>1</sup>	Relevant Life Cycle Stage (Boundary Determination)			
<b>Metal and other resource availability</b>	<i>None Applicable</i>	●			
<b>Recycled metal inputs</b>	EN: Materials	●	●	●	●
<b>Responsible sourcing</b>	EN: Supplier Environmental Assessment LA: Supplier Assessment for Labor Practices HR: Supplier Human Rights Assessment SO: Supplier Assessment for Impacts on Society	●			
<b>Profitable growth</b>	EC: Economic Performance		●		
<b>Attracting and retaining talent</b>	LA: Employment LA: Labor/Management Relations LA: Training and Education LA: Diversity and Equal Opportunity LA: Equal Pay for Women and Men		●		
<b>Environmental impact and carbon emissions of our products</b>	EN: Emissions EN: Products and Services		●	●	●
<b>Environmental footprint of our operations</b>	EN: Materials EN: Emissions EN: Effluents and Waste EN: Energy EN: Water		●		●
<b>Health and safety</b>	LA: Occupational Health and Safety		●		
<b>Ethical behavior and compliance</b>	EN: Compliance		●		●
<b>Quality of customer service</b>	<i>None Applicable</i>		●	●	
<b>Environmental impact and carbon emissions from our customers' products</b>	EN: Emissions EN: Products and Services			●	●
<b>Sustainable product innovation</b>	EN: Products and Services		●	●	●
<b>Post-consumer recycling</b>	EN: Products and Services EN: Materials	●			●
<b>Reducing waste and resource use</b>	EN: Effluents and Waste		●		●
<b>Policy engagement</b>	SO: Public Policy				●
<b>Consumer in-use sustainability benefits</b>	EN: Products and Services PR: Customer Health and Safety			●	●
<b>Community engagement</b>	SO: Local Communities		●		●

<sup>1</sup> For more information about the Global Reporting Initiative (GRI) G4 guidelines, go to: [globalreporting.org](http://globalreporting.org).

# Stakeholder Engagement

Engaging with our stakeholders has been a critical part of helping Novelis identify the material sustainability issues facing our business, and we have used the insights provided by stakeholders to help inform our strategy and priorities and establish our sustainability targets.

Our stakeholders include employees and employee representatives, customers, suppliers, debt holders, our board and investor, regulators and policy makers, the communities in which we operate, and sustainability organizations, including nongovernmental organizations and academic institutions concerned about the social, environmental and climate impacts of the production and use of aluminum products.

As our efforts have shifted from defining *what* we want to accomplish to focusing more on *how* we want to achieve it, we have found that ongoing stakeholder engagement is also valuable in helping us reaffirm our material issues and identify emerging ones. Stakeholder engagement also enables us to get external perspectives on Novelis' sustainability performance and insights on new strategies and approaches for addressing key issues.

We engage with our stakeholders through a variety of means. For example, as part of our daily operations, we work closely with our suppliers and customers. We also have formal community engagement, giving and volunteer programs in place at all our sites, which provide insight into the priorities and concerns of local community members. In addition, we communicate and partner with a range of nongovernmental organizations directly or through participation in events and other forums. For example, in FY13 we expanded our relationship with SustainAbility, a think tank and strategy consultancy, by joining the Engaging Stakeholders network. And in 2014, we began a partnership with the World Wildlife Fund by joining its Climate Savers Program (see p. 20).

We also engage with fellow companies in our industry and other stakeholders through our involvement in various industry associations, such as the Brazilian Aluminum Association (Associação Brasileira do Alumínio), European Aluminium Association, the Aluminium Stewardship Initiative, and others.

## Partnering to Achieve Our Goals

Beyond helping to *inform* our sustainability strategy, stakeholder engagement is an essential component of *implementing* our strategy. Our life cycle approach requires working to shape and shift policies, practices and behaviors that are outside our direct sphere of control – most notably related to post-consumer recycling, consumer product design, scrap collection infrastructure, and recycling and climate policies. As a result, achieving Novelis' goals requires partnering with a broad range of external organizations and initiatives to advance our common objectives.

In FY14, for example, we engaged with Forum for the Future to leverage its expertise on consumer attitudes about sustainability. As part of this effort, Novelis commissioned Forum for the Future to explore consumer and stakeholder attitudes toward sustainable packaging and brand preference (see p. 68). In addition, we sponsored and participated in the BoP Global Network Summit in Brazil, organized by Enterprise for a Sustainable World and Global Social Impact. The goal of the Summit was to share information about business models focused on the base of the pyramid (BoP), an area Novelis is exploring as we increase our procurement of scrap aluminum from "street level" collectors in emerging economies (see p. 27).

# Sustainability Advisory Council

Our Sustainability Advisory Council, established in FY12 and made up of highly respected experts and leaders in the sustainability field, is one of the key ongoing mechanisms we use to solicit external expertise, advice and critical analysis of our sustainability efforts. Members include:

- **Matt Arnold**, Managing Director and Head of Sustainable Finance, JPMorgan Chase
- **Stuart Hart**, Steven Grossman Endowed Chair in Sustainable Business, University of Vermont Business School; and S.C. Johnson Chair Emeritus in Sustainable Global Enterprise, Cornell University
- **Jeffrey Keefer**, Former Executive Vice President, DuPont
- **Miguel Milano**, Board Member Instituto LIFE, Fundação O Boticário de Proteção a Natureza
- **Jonathon Porritt**, Founder, Forum for the Future

To ensure the Council has a direct line of communication with the most senior decision makers in our company, Novelis' CEO, Chief Commercial and Strategy Officer and Chief Sustainability Officer are also members of the Council. The Council has two formal meetings per year, and members provide input on an ad hoc basis between meetings.

In FY14, we established a regional-level Sustainability Advisory Council in Brazil. Members of the Council include Miguel Milano – who also sits on our corporate-level Council – senior leaders from Novelis' Brazilian business unit, and Novelis' Chief Sustainability Officer. The purpose is to provide a mechanism for gaining insight and informing strategy with a focus on the unique sustainability issues, challenges and opportunities in Brazil. Over time, we hope to replicate the model in other Novelis business units and regions.

## Engaging on Policy

To date, the majority of Novelis' advocacy on global and national public policy issues has been conducted through industry associations, rather than directly with policy makers. Increasingly, however, we are looking to organizations such as Ceres, As You Sow, The Container Recycling Institute and others not only for their expertise, but also to enable Novelis to be more engaged in policy issues. In particular, we are focusing on policies relating to climate change and end-of-life recycling, which will be key to achieving our strategic goals.

For example, Novelis was a signatory to a letter submitted to U.S. President Barack Obama in June 2014 from the Business for Innovative Climate and Energy Policy (BICEP) coalition, a project of Ceres, expressing support for the administration's proposed Carbon Pollution Standard for Existing Power Plants.



Photo: Andy Doran (seated), Senior Manager Sustainability & Recycling Development, Novelis – who served as the Chair of the Resource Association from its founding in 2011 to 2014 – signing the Charter with representatives of the Surrey Waste Partnership, October 2013.

### Advocating for Increased Transparency in the Recycling Supply Chain

For decades, Novelis has been actively involved in recycling and policy development programs in the U.K., but we felt that more coordinated action was needed to help strengthen supply chain accountability and improve the quality of recycle. That is why, in 2011, we helped establish and became a founding member of The Resource Association, an advocacy body for the materials reprocessing and recycling industries ([www.resourceassociation.com](http://www.resourceassociation.com)).

The organization quickly established a wide membership of reprocessors of aluminum and other materials, such as paper and plastics, and supply chain companies, which collectively recover and recycle more than 7 million metric tons annually and employ over 7,000 people.

One of the early actions of the Association was to launch The End Destinations of Recycling Charter, a voluntary commitment to provide comprehensive information about the end destination of materials collected for recycling. The Charter aims to improve transparency in the recycling supply chain and enhance public confidence in recycling by enabling people to see what happens to the recyclable material they provide. By mid-2014, there were 95 (and growing) signatories to the Charter, all committed to providing transparency for the materials that residents treat as waste, but Novelis and other companies know are valuable resources.

# 100 million metric tons

of greenhouse gas emissions have been cut by Climate Savers member companies as of May 2012 with the support of the WWF since the program began in 1999



“

**Phil Martens, President and Chief Executive Officer, Novelis**

“We believe that reducing greenhouse gas emissions, increasing the amount of recycled materials we use, decreasing water and energy use in operations and reducing landfill waste are not just important parts of a sustainability effort – they are an integral part of our overarching business strategy. By partnering with the WWF, such a well-known and respected leader in sustainability, Novelis not only demonstrates its commitment to sustainability, but leads the future of an entire market category.”

## In Partnership with the **World Wildlife Fund**



“

**Carter Roberts, President and CEO of WWF**

“To meet the challenges of resource scarcity and risks to the planet in the 21<sup>st</sup> century, we need bold leadership from all sectors. Novelis understands this and is making the kind of ambitious commitments that can not only change their company, but transform an entire industry.”

As part of our effort to become the low-carbon leader in our industry, in 2014, Novelis joined the World Wildlife Fund (WWF) Climate Savers Program, an exclusive initiative of the WWF to encourage companies to reduce their operational carbon footprint and act as agents of change within their sphere of influence. Following a rigorous review of Novelis’ strategy, policies and commitments related to carbon, the WWF accepted Novelis into the program – making us the only metals company to be accepted to date.

Through the review process, the WWF provided Novelis with valuable feedback, including a recommendation

that Novelis develop a renewable energy goal as part of the company’s overall carbon strategy. As a Climate Savers Program member, Novelis has established WWF commitments that align with the company’s sustainability agenda, and outside experts will track Novelis’ progress.

We believe that partnering with the WWF will help Novelis advance its efforts to reduce greenhouse gas emissions and lead our industry in addressing climate change. Additionally, we look forward to expanding our partnership with the WWF over time to focus on other key issues, such as water and recycling.

# Sustainability Management and Governance

At Novelis, we take an integrated, cohesive approach to managing sustainability issues alongside, and on par with, our other financial and operational objectives.

## Corporate Governance and Policy Framework

Management of our company starts with our strict adherence to corporate governance principles. Novelis' Board of Directors is composed of six directors, all of whom were appointed by our sole shareholder, Hindalco Industries Limited, which is a publicly held company whose shares are listed for trading on the Mumbai Stock Exchange, the National Stock Exchange of India and the Luxembourg Stock Exchange. Our Board oversees and provides guidance on the overall direction of our company, while our executive officers are responsible for the day-to-day management.

Novelis has a Code of Ethics for Senior Financial Officers, which reflects our commitment to financial integrity and to full and accurate financial disclosure in compliance with applicable accounting policies, laws and regulations.

Novelis' employee Code of Conduct provides guidelines for employees to ensure that they are acting within Novelis' standard of ethics. The Code covers five key areas: acting with integrity and in Novelis' best interests; promoting a desirable work environment; safeguarding the company's assets; engaging in ethical interactions with government; and dealing fairly with third parties. Novelis' Supplier Code of Conduct provides guidelines for how we expect our suppliers to conduct business in an ethical and responsible manner (see p. 29).

## Sustainability Management at Novelis

Our Vice President and Chief Sustainability Officer, who reports to our CEO, is responsible for leading implementation of the company's sustainability strategy. Because our sustainability strategy is integrated into our corporate strategy and cuts across all aspects of our business, implementation is by necessity cross-functional. All of Novelis' senior executives have responsibility for delivering on some aspect of the plan, and sustainability aspects are integrated into a range of policies and systems we use to manage our company.

Our sustainability targets, alongside financial and operational ones, essentially form our company's scorecard, which we use to monitor the company's performance against our strategic objectives. Novelis' sustainability programs, initiatives and progress are reviewed at a minimum at the monthly Global Operating Committee meetings, and adjustments are made based on the results of these reviews. Where relevant, the Board of Directors is briefed on sustainability issues as part of Novelis' strategy review by Novelis' President and Chief Executive Officer.



## Q&A

with **John Gardner**  
Chief Sustainability Officer,  
Novelis

**Q:** What's your role in the company?

**A:** Novelis had been doing solid work in many areas of sustainability for years, but hadn't fully glued it all together or linked it to business strategy. That is why my role was created. Our core Sustainability team is very small, which is deliberate. We didn't want this to be a standalone department. But our definition of sustainability is very broad, and it is core to our strategy for growing our business. So, the Sustainability team's role is to facilitate the whole company thinking about and taking ownership for sustainability.

One way we do that is to bring in a longer-term and externally focused perspective about future trends and their implications. But we can't just star gaze. We have to find that magical spot of looking and thinking both short and long term across the whole business and then engage our colleagues in the conversation. We also serve as internal consultants to help people address sustainability issues, and we are helping grow our recycling business and expand our sustainable product offerings. For example, the Sustainability team has been deeply involved in the development and launch of evercan™. We are also working with customers and other stakeholders on life cycle and circular economy issues to improve sustainability performance, from design to post-consumer recycling.

I feel so incredibly lucky to be given this opportunity – I think I have the best job in the company.

“

Sustainability is core to our business strategy. The Sustainability team's role is to facilitate the whole company's thinking about and taking ownership for sustainability.”

**Q:** Why was brand management recently added to your portfolio?

**A:** It's a reflection of how fundamental sustainability is in our business strategy. We operate in what has traditionally been viewed as a commodity business, but Novelis' strategy is driven by the belief that sustainability will be a key source of competitive advantage for us. So sustainability needs to be a central part of what we communicate and engage with our customers and other stakeholders about.

And what we say needs to be totally robust and credible – it can't be just PR. So, the new structure is designed to ensure that sustainability thinking is fully integrated into our brand – and that it's fully informed by, and aligned with, what we're doing on the ground.

**Q:** How do you assess Novelis' sustainability progress to date? What are the most significant challenges ahead?

**A:** Our progress has been amazing. There are some “two steps forward, one step back” cycles – for example, last year a few construction projects caused an uptick in our waste numbers – but the overall trend is firmly in the right direction. The talented people across our business are driving that progress. We have fantastic in-house experts in a whole host of areas who are working to find the innovative solutions we need. And we have strong interest and emerging partnerships with customers and others on developing low-carbon sustainable products.

But we do have challenges. We always knew that achieving what we set out to would require going into uncharted territory – and that there are important variables over which we don't have a lot of control, such as post-consumer recycling. We've also come to more fully appreciate the challenges that can arise because of the ways we are disrupting our industry. We want to move faster or further than some of our stakeholders, and so we need to work harder at making the case for the shared benefit of going where we're trying to lead.

# Sourcing

Novelis' sustainability strategy is driving profound changes in how we structure and manage our supply chain as we work to dramatically increase our use of recycled metal inputs.

## We're Adding...

### An Unprecedented Goal

We are working to reduce the embedded carbon in our products by increasing our recycled inputs to 80% by 2020 – up from just 30% five years ago – which is transforming our company and setting a new benchmark in our industry.

### A Comprehensive Strategy

Our strategy for reaching 80% touches on every aspect of our business and requires us not only to re-engineer our supply chain, but also to redesign our products and the processes we use to make them.

### The World's Largest Recycling Network

We are making significant investments to increase our global recycling capacity by expanding existing facilities and building new ones. We're also expanding our scrap purchasing system and diversifying the kinds of recycled aluminum we purchase and process.

## We're Creating...

### A More Resilient and Sustainable Supply Chain

By shifting our sourcing model and implementing a responsible sourcing program, we are increasing the security of supply of essential raw materials, reducing risk and improving sustainability practices within our supply chain.

### An Improved Life Cycle Footprint

Because recycled aluminum avoids 95% of the greenhouse gas emissions associated with primary aluminum production – and uses less energy and water – our increased use of recycled inputs dramatically improves the life cycle environmental footprint of our products.

**46%**  
recycled metal  
inputs in FY14,  
up 16 percentage  
points from our  
baseline

# Re-engineering Our Supply Chain

Our Target		Baseline (FY07–FY09 Average)	FY14 Performance	FY20 Target
Recycled metal content	80% by 2020	30%	46%	80%

See p. 6 for our full performance summary.

Novelis' sustainability strategy is driving profound changes in how we source our aluminum inputs. At the heart of our strategy is our goal to reduce the embedded carbon in our products by increasing our recycled inputs to 80% by 2020. Achieving this goal will require not only re-engineering our entire supply chain, but also redesigning our products themselves and the processes we use to make them. But when we reach our goal, we will dramatically improve the life cycle footprint of our products and increase the security of supply of essential raw materials.

## Our Supply Chain Impacts and Risks

Novelis' recycled inputs target is a central focus of our sustainability strategy because our most material environmental impacts and social risks occur "upstream" in our value chain through our sourcing of primary aluminum. As a result, the most significant way that Novelis – the world's largest purchaser of primary aluminum – can reduce its environmental and social impacts is by decreasing our reliance on primary aluminum.

Primary aluminum is produced through a process of extracting alumina from the mined substance bauxite and then refining it into liquid metal. While primary aluminum producers have increased their resource efficiency substantially over time, primary aluminum production remains a relatively water- and energy-intensive process, and therefore generates significant amounts of greenhouse gas (GHG) emissions.

Mining operations also have the potential to impact local biodiversity, water quality and other natural resources. In addition, because some mining operations take place in locations where laws regarding working conditions and human rights are not well-established or consistently enforced, they also have the potential to present a range of social risks.

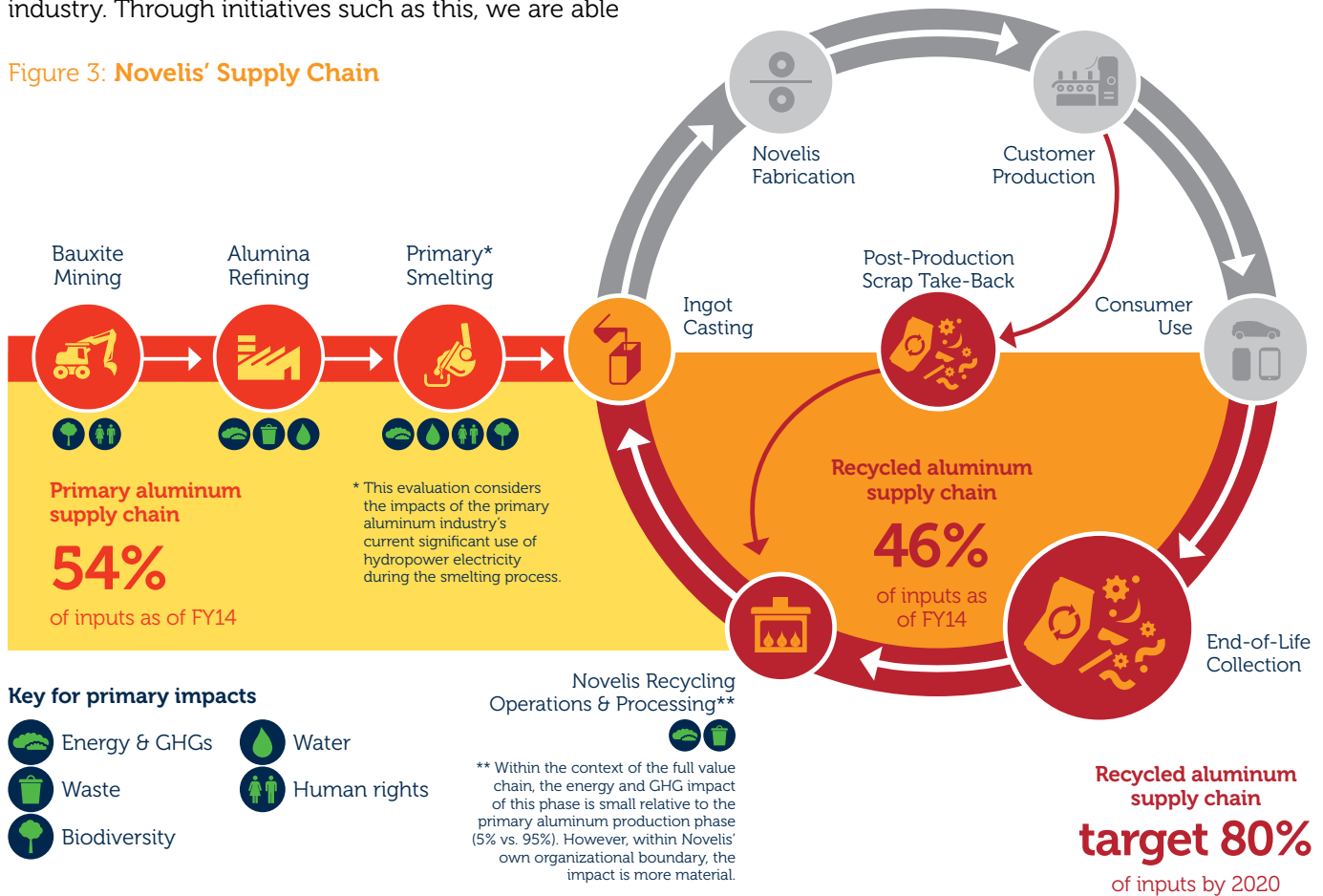
At the end of FY14, primary aluminum comprised 54% of Novelis' aluminum inputs. Our goal is to reduce primary aluminum to 20% of our inputs by 2020, with the remaining 80% made up of recycled aluminum. Recycled aluminum requires approximately 5% of the energy needed to produce primary aluminum, so when we reach our goal we will eliminate 10 million metric tons of GHGs from our value chain and cut our absolute GHG emissions in half – even with increased production volumes.



However, even when we reach 80% recycled inputs, we will continue to utilize primary raw materials. As a result, we are involved in industry associations, such as the Aluminum Stewardship Initiative, that are working to find ways to minimize the environmental impacts and social risks associated with primary aluminum production and raise the performance bar across the industry. Through initiatives such as this, we are able

to engage directly with our primary aluminum suppliers – which also have their own sustainability programs in place – as well as a range of other stakeholders to continue to find ways to support reducing the impacts of primary aluminum production.

Figure 3: **Novelis' Supply Chain**



### Security of Aluminum Supply

In recent years, the supply of aluminum into the market has been artificially constrained – and premiums have been artificially inflated – as a result of speculative financial transactions and the systematic delaying of metal shipments from London Metal Exchange (LME) warehouses. Approximately two-thirds of all aluminum in LME warehouses is in only two locations, both of which have waiting times where it can take up to two years for companies like Novelis to get access to the metal.

Even as we increase our use of recycled inputs, we will nonetheless still purchase some primary aluminum. As a result, we are collaborating with a broad range of other aluminum purchasers, through an organization called the Aluminum Users Group, to address the LME warehousing issue. We also continue to advocate for changes to LME warehousing rules to prevent supply and price manipulation.

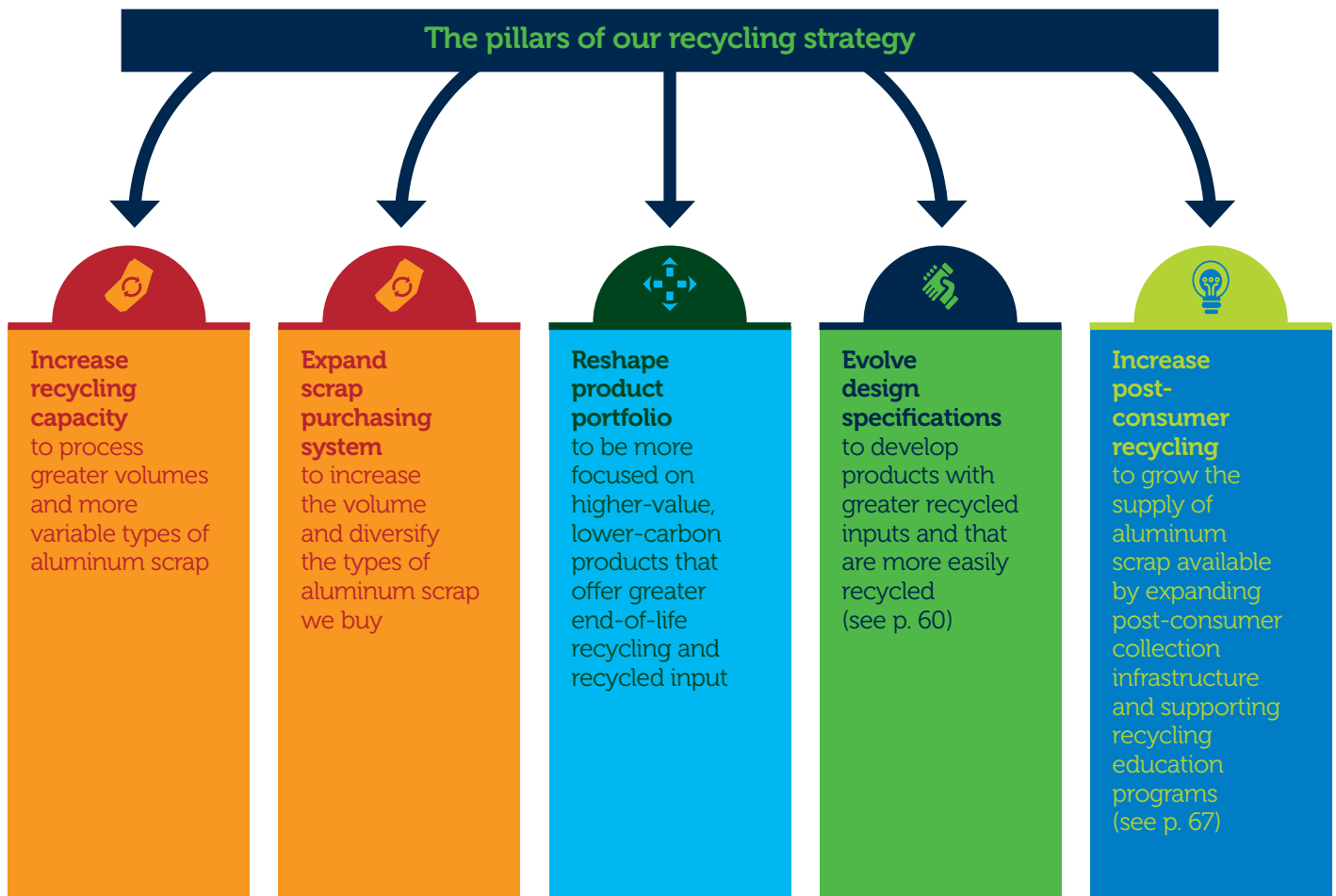
Our strategy to increase our recycled content to 80% will increasingly insulate Novelis from such supply issues in the primary sector. In addition, as primary and sheet ingot are generally purchased at prices set on the LME (plus local market and product premiums), we will also be insulated from potential price volatility by reducing our dependence on primary sheet ingot.



# Our Global Recycling Strategy

On the surface, our 80% recycled inputs target is a sourcing issue. In practice, however, achieving it will require taking steps at every stage of the value chain – and will have implications for nearly every aspect of our business.

## Getting to 80%



## Why only 80%?

While our 80% target is aggressive, it nonetheless recognizes that we will continue to require some primary aluminum to manufacture our products. This is due to the long life aluminum has in use in many products, as well as overall increasing global demand for aluminum – which means recycled content alone will not be sufficient to satisfy demand. We will also continue to need to add primary aluminum to some recycled scrap to ensure the appropriate alloy composition. However, in order to further decrease our reliance on primary aluminum, we are focusing many of our current research and innovation efforts on developing new scrap-friendly alloys. Our launch of evercan™ can body sheet – already certified to contain a minimum of 90% recycled content – is a key output of those efforts, and we are hard at work developing can sheet with even higher recycled content.

## Expanding the World's Largest Recycling Network

Novelis is already the world's largest aluminum recycler, but with our company's aggressive growth plans and ambitious recycling target, we are continuing to invest in expanding our recycling operations. Our strategy calls for Novelis to achieve global recycling capacity of more than 3 million metric tons of scrap by 2020 – up from 1.2 million metric tons in 2010. Since 2011, we have invested approximately \$500 million to expand our recycling operations, which will take us to 2.1 million metric tons of recycling capacity by 2015.

In FY14, we expanded recycling facilities and capabilities in all of our operating regions (see p. 12). At our Latchford plant in the U.K., for example, we commissioned an expansion project that increases the plant's recycling capacity by over a third – and makes the plant Europe's largest closed-loop recycling operation for automotive aluminum rolled products. During the year, we also completed an upgrade to Latchford's sorting capabilities. The state-of-the-art equipment enhances the plant's ability to remove residual plastic and paper from contaminated bales of used beverage cans (UBCs), prior to them being melted down and recycled – doubling the plant's capacity to process UBCs. In addition, we opened a new aluminum recycling and continuous casting line at our Pieve Emanuele facility in Italy and an expansion of 190 kilotons of UBC recycling capacity at our Pindamonhangaba (Pinda) mill in Brazil.

Although we realize that more investments will need to be made to achieve our target, all of the upgrades and investments in FY14 will be necessary to help us reach 80% recycled inputs by 2020.

## Building a Scrap Pipeline

To achieve our recycled inputs goal, we need to not only expand our capacity to process aluminum scrap – we also need to dramatically increase the supply of aluminum scrap we purchase. Currently, UBCs are our largest source of scrap – making up approximately 38% of the scrap we process. We currently buy the equivalent of approximately 50 billion UBCs a year – but we expect that to grow to around 60 billion annually by 2015. We have also significantly increased, and will continue to increase, our purchase of non-can post-consumer scrap.

To increase our supply of UBCs, we have created scrap collection networks in Vietnam and Brazil that are designed to enable us to connect directly with scrap collectors at the “street level,” rather than only purchasing from large dealers. Our new recycling center in Ho Chi Minh City, Vietnam, handles the procurement, cleaning and baling of UBCs – which are then sent to our recycling facility in Yeongju, South Korea, to be recycled and re-rolled into can sheet. An equivalent amount of can sheet is then sent back to Vietnam to be remade into beverage cans – creating an effective closed-loop system. In FY14 – the first year the center was in operation – Novelis collected as much as 2,000 metric tons of aluminum scrap per month and over 13,000 metric tons in the first year.

In Brazil, we currently operate seven scrap collection centers through which we buy UBCs directly from small collectors. Each center was designed to purchase and process around 500 metric tons of scrap per month, of which 200 metric tons are from UBCs, with increased volumes at certain times of the year, such as warmer seasons. Looking ahead, our plan is to expand the centers into other regions, and to open two new collection centers per year.

### The Largest Aluminum Recycling Facility in the World

In FY14, we reached several key milestones in the construction of our new, \$250 million aluminum recycling and casting center in Nachterstedt, Germany. The center began operations in the summer of 2014 and is projected to be the largest and most advanced recycling facility in the world. It will be able to process 18 different types of aluminum scrap, as well as remove paper, plastic and nonferrous metals from the scrap stream. Once fully online, it will produce up to 400,000 metric tons of aluminum sheet ingot from recycled material annually – and it will take Novelis to 50% recycled inputs in our products globally.

Photo: The first production-sized trial ingot – almost 10 meters long – was successfully cast at Novelis' new recycling and casting center in Nachterstedt, Germany, in June 2014.



## Turning Our Customers into Our Suppliers

Securing an adequate supply of scrap to meet our recycling target also depends on diversifying beyond UBCs. One of the key tools we are using to do that is establishing closed-loop agreements with our customers. It's an approach we have used with our beverage can customers for several years but, more recently, we have begun to make it standard practice with our customers in the automotive sector, in particular, as well as other sectors such as electronics.

As much as possible, our contracts include an agreement to buy back the aluminum scrap our customers generate during production, which we then recycle and roll into new products. In the automotive sector, for example, as much as 50% of the aluminum sheet we supply to our customers could end up as scrap – so the potential volume of scrap coming back to us is significant. We expect that, by 2020, these arrangements with our customers across all of our markets will provide approximately a quarter of our total recycled inputs.

These agreements also provide an opportunity to dramatically advance the closed-loop business model Novelis is working toward. When we expanded our recycling operations at our Latchford plant in Warrington, U.K., in FY14, for example, we invested in new equipment for recycling automotive aluminum scrap from Jaguar Land Rover (JLR), one of Novelis' long-standing customers. During the recycling process, the scrap is re-melted and cast into 11 metric ton

ingots, each ingot saving approximately 100 metric tons of GHG emissions when compared to ingots produced from primary aluminum. The ingots are then rolled back into automotive sheet at Novelis' specialized rolling facilities. In some cases, we are even taking our approach a step further by making the transportation logistics of our products and our customers' scrap even more efficient. By using specially designed trucks, we are able to deliver coils of aluminum coming off our lines to our customer, which will then be loaded with aluminum scrap from the customer's stamping plants and returned back to our plant to be made back into coils for that same customer.

This emerging closed-loop model reduces the environmental footprint of Novelis' operations and that of our customers, such as JLR. The expansion at Latchford will avoid nearly 530,000 metric tons of GHG emissions over the total aluminum value chain annually compared to using primary aluminum. It also strengthens Novelis' cooperative, long-term relationships with JLR and other customers, driving the development of innovative, sustainable products and processes.

More than  
**227 metric tons**

of GHG emissions are saved per ingot using recycled aluminum scrap, compared to primary aluminum (for a typical 25 metric ton ingot)



The 2014 Range Rover: the world's first all-aluminum-bodied SUV

Photo: Credit JLR

# Responsible Sourcing

Alongside our efforts to shift our sourcing model, we are also taking steps to minimize risk across our supply chain broadly by encouraging transparency, responsibility and sustainable business practices among our suppliers.

In FY13, Novelis launched a new Supplier Code of Conduct that provides guidelines for how we expect our suppliers to conduct business in an ethical and responsible manner. While many of our suppliers already have robust policies and practices in place consistent with the expectations in our Code, we nonetheless wanted to ensure all of our suppliers are aware of, and adhering to, Novelis' standards.

The Code, available on our website, is based on externally accepted principles, including the United Nations Global Compact, of which Novelis is a signatory. The Code outlines expectations for our suppliers in the areas of legal compliance, labor and human rights, abolition of child labor, health and safety, environmental protection, and promotion of the Code within their own supply chains. All Novelis suppliers will be expected to agree to the terms of the Code and uphold the Code in all their operations.

Suppliers will be required to provide Novelis with an affirmation that they have read and understand the Novelis Supplier Code of Conduct and agree to adhere to its provisions. We will monitor compliance through supplier self-assessments, conducted via questionnaires and surveys. In addition, in instances where we have reason to believe a supplier may not be in compliance with our Code, we will conduct supplier audits and inspections. In addition, we are building the Code into our procurement processes, such that the Code will be part of the contract agreements for all new suppliers.

In FY14, we began roll-out of the Code by distributing it to our key global suppliers. By the end of the year, we had received signed affirmations from 60% of those suppliers. In FY15, we will distribute the Code to our remaining global and regional suppliers.



## Conflict Minerals Update

In 2012, the United States Securities and Exchange Commission issued a rule as part of the Dodd-Frank Act that requires public companies to disclose whether they use conflict minerals, and whether the minerals originated in the Democratic Republic of the Congo or adjoining countries. The concern is that mining for certain minerals – particularly tantalum, tin, tungsten and gold – often takes place in environments where armed conflict and human rights abuses are present, and that proceeds from the sale of the minerals help to finance the conflict.

Based on our internal assessment, none of the aluminum or alloys in our supply chain contain conflict minerals that are necessary to the production or functionality of Novelis products. However, certain of the products we produce for the beverage can market have a thin coating produced using a tin catalyst applied to them before shipping to our customers. These tin catalysts are used at very low levels by certain of our coatings suppliers.

Novelis has engaged with our suppliers and determined that, based on our reasonable country of origin inquiry, we have no reason to believe that any necessary conflict minerals in our supply chain originated in the Democratic Republic of the Congo or an adjoining country.

# Manufacturing

Across our manufacturing operations, we focus on delivering strong environmental performance, robust human resources and safety programs, and meaningful engagement with the communities where our facilities are located.

## We're Adding...

### Ambitious Environmental Goals to Drive Performance

We have set challenging goals in the areas of GHG emissions, energy use, water use and waste to landfill, and we have put global programs and processes in place to help achieve them.

### A Comprehensive System for Managing Safety

The motto of our Novelis Safety System is "Together We are Safe," and we are spreading this mindset and associated behaviors throughout our global operations.

### Employee Engagement in Community Programs

Our Novelis Neighbor program makes a real difference in the communities where we operate by putting employee volunteers to work on key local projects and programs.

## We're Creating...

### Innovative Solutions to Get to Zero Waste

Our facilities are finding new, innovative ways to recycle hard-to-handle wastes, such as spent refractory bricks and baghouse dust.

### A New Generation of Talented Engineers

Our two-year Engineering Development Program is educating our young engineers in all aspects of our business and helping to make Novelis a go-to employer for top engineering talent.

### A Company Tradition of Giving Back

October 2013 marked the second annual One Novelis Volunteer Month – a successful, focused effort to complete multiple employee volunteer projects near our sites around the globe.



# Our Manufacturing Operations

The manufacturing phase of Novelis' product life cycle presents a range of sustainability issues and impacts. These include environmental impacts from our operations; the recruitment, development and engagement of our employees; and our interactions with the communities in which our facilities are located. Our sustainability strategy focuses on driving progress in all of these areas.

Our Targets		Baseline (FY07–FY09 Average)	FY14 Performance	FY20 Target
<b>2020 Operational Targets</b>				
<b>Energy usage</b>	Reduce by 39% per metric ton of sales	12.4 GJ/mt	9.5 GJ/mt	7.6 GJ/mt
<b>Water usage</b>	Reduce by 25% per metric ton of sales	3.7 m <sup>3</sup> /mt	2.9 m <sup>3</sup> /mt	2.7 m <sup>3</sup> /mt
<b>GHG emissions</b>	Halve our absolute amount (Scope 1, 2 and 3)	21M mt	17M mt	11M mt
<b>Landfill</b>	Zero landfilled waste	63.1K mt	62.1K mt	0K mt
<b>2020 People Targets</b>				
<b>Safety</b>	Zero recordable injuries	1.01	0.99	0
<b>Employees</b>	100% of eligible employees receive annual performance feedback	NA	46%	100%
	World-class leadership development program, benchmarked in the top 10% of companies	NA	In progress	Benchmarked in top 10%
<b>Community</b>	100% of operations have implemented local community engagement process	NA	100%	100%
<b>Code of Conduct</b>	Employee and supplier codes rolled out, process in place to handle noncompliance	NA	In progress	100%

See p. 6 for our full performance summary.

## Our *One Novelis* Approach

As a fast-growing global company operating on four continents, it's essential that our people and facilities stay aligned and focused on our company's business strategy and sustainability goals. To help foster that alignment, we have developed an approach we call *One Novelis*.

*One Novelis* is helping to drive consistency and standardization in both people and process management. On the people side, we have been working to transform and align our talent management practices to eliminate regional and local differences. On the process side, we are more consistently initiating lean manufacturing principles, strengthening and standardizing health and safety practices and environmental management, and developing new ways to maximize use of our plants, increasing both productivity and customer service.

As part of *One Novelis*, we have launched a new integrated enterprise resource planning system called Novelis 2.0. This system, which was launched in the United States in 2012 and continued to be rolled out globally in April 2014, is allowing us to operate as a more integrated company with consistent business processes and information systems. For example, this system is now more consistently tracking our financial, manufacturing, commercial and other business data at the global level.

### Sharing Global Best Practices

One outcome we are working to facilitate through *One Novelis* is more collaboration among our global employees. Recently, Novelis employees from Europe and South America traveled to the United States to gain training in key areas that will be important as our operations expand. Specifically, employees from our Nachterstedt, Germany, recycling center, which is due to come online in 2014, traveled to Berea, Kentucky, USA, to learn more about the recycling and casting process at that site. Similarly, employees from Brazil traveled to Warren, Ohio, USA, for a two-week training in can coating, in preparation for the can coating line opening at our Pinda plant.



## Our Environment, Health, Safety and Quality Management Systems

To ensure rigorous, consistent management of environment, health, safety and quality (EHS&Q) issues, all Novelis manufacturing sites are certified according to the following internationally recognized management systems:

- The ISO 14001 environmental management standard
- The OHSAS 18001 Occupational Health and Safety Specification
- Either the ISO 9001 or ISO/TS16949 quality management system standards<sup>1</sup>

Novelis' Chief Technical Officer oversees our operations, engineering, research and development, and EHS&Q functions. Our global EHS team develops standards, provides expertise and facilitates best-practice sharing across Novelis, while local line managers and plant EHS staff throughout our many manufacturing sites are accountable for EHS performance at the plant level.

Our CEO leads our EHS Steering Committee, which oversees EHS strategy and performance at the global level. Similar cross-functional teams operate at the regional and plant levels and are championed by senior line managers with the support of EHS professionals, Human Resources staff and Communication partners. The teams provide leadership, direction and strategy to effectively implement programs and initiatives.

<sup>1</sup> Except our Toronto foil packaging plant, which was not ISO 9001/TS16949. We sold this plant as of June 30, 2014. Our new Changzhou, China, plant is in the process of commissioning and therefore has not yet been certified to ISO standards.



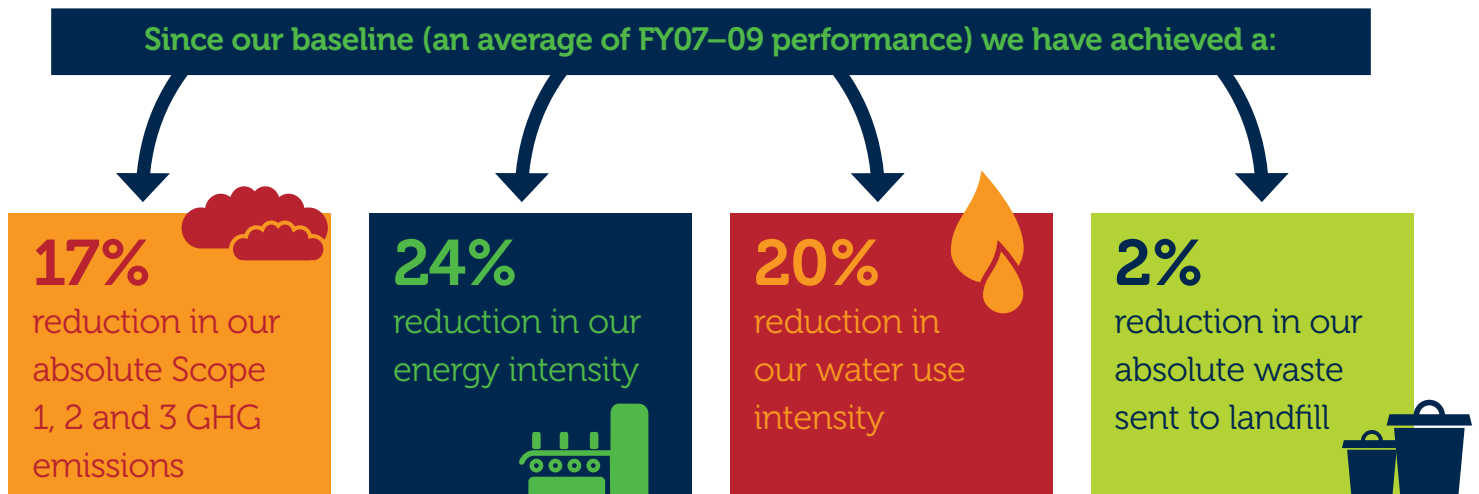
We also operate a network of committees at the global and site levels focused on energy use, water use and waste sent to landfill. These committees are charged with developing strategies for achieving their respective environmental goals, recommending annual targets for plants and regions, developing mechanisms for sharing best practices, and reporting out successes, roadblocks and needs. The site-level committees conduct surveys, develop action plans, and coordinate and implement specific activities at their location.

We report on our EHS performance through this sustainability report and to various regulatory agencies as required. We also report our carbon dioxide emissions and energy use to the Carbon Disclosure Project (CDP).

For FY15, Novelis piloted a more collaborative approach to our annual EHS audit program, with the audit teams being drawn from operations, molten metal processing and line management, as opposed to solely from the EHS function. The approach also includes a focus on preventing the most serious potential injuries. Thus far, our plants in Sierre, Switzerland; Santo André, Brazil; Bukit Raja, Malaysia; and Warren, Ohio, USA, have each undertaken audits using this new approach, which has been broadly well received.

## Our Environmental Performance

From a life cycle perspective, our most significant environmental issues are the use of energy, the emission of GHGs, the use of water, waste sent to landfill and, to a lesser degree, non-GHG air emissions. We are undertaking an array of efforts to help reduce the impacts of our manufacturing facilities in each of these areas.



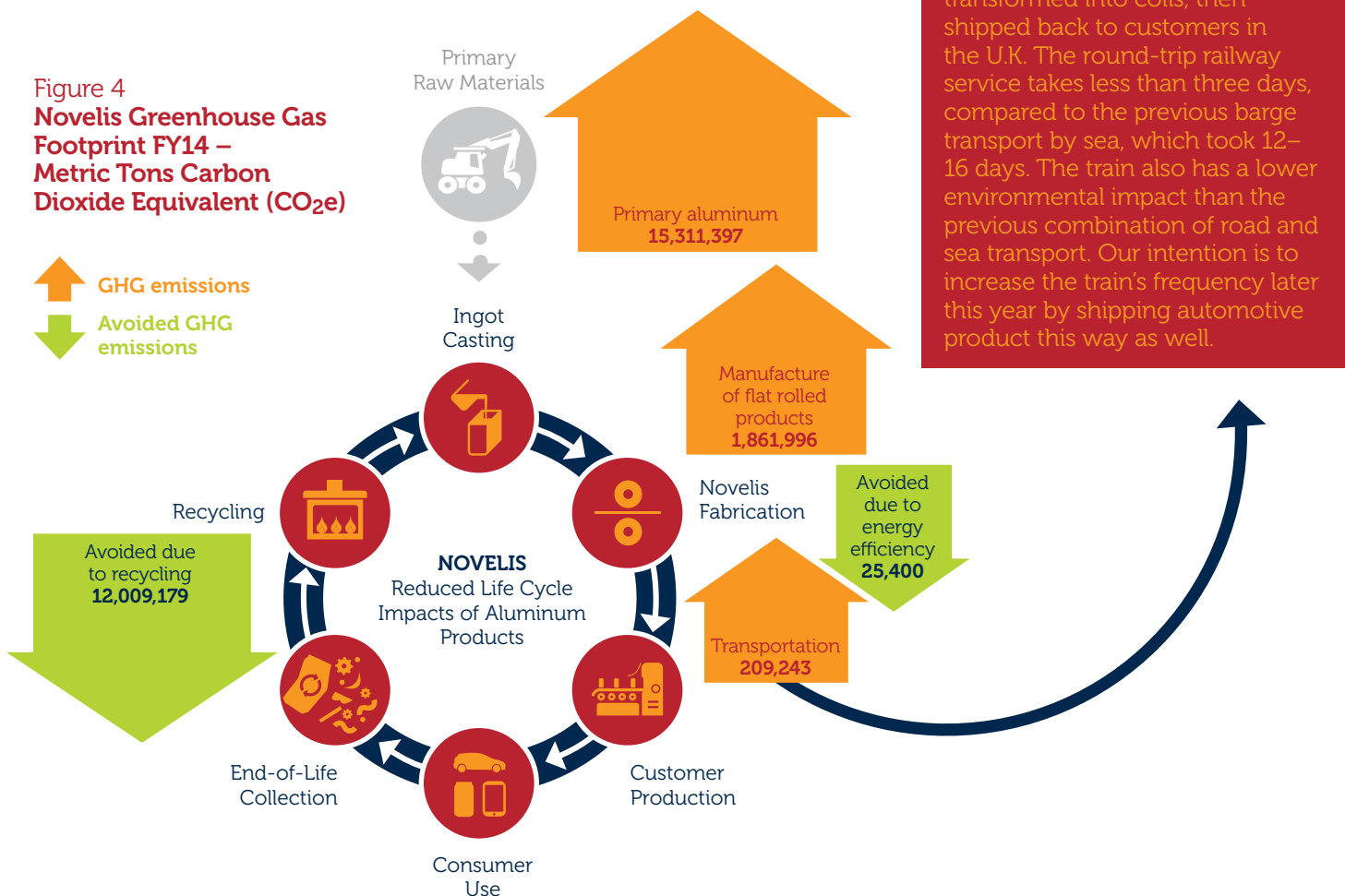
# Greenhouse Gas Emissions

We believe society must address climate change by transitioning to a more sustainable, low-carbon economy. For Novelis, the increasingly evident risks and opportunities related to climate change have been a central driver of our business strategy. The risks for Novelis include, for example, increased costs for energy and energy-intensive raw materials, as well as the costs of adhering to increasingly stringent GHG emission regulations around the world.

The opportunities for Novelis are equally compelling, however. We are transforming our business model to dramatically decrease the embedded carbon in our products by increasing our use of recycled aluminum inputs. In so doing, we are positioning our portfolio to capitalize on new business opportunities, as consumer demand for sustainable alternatives continues to rise.

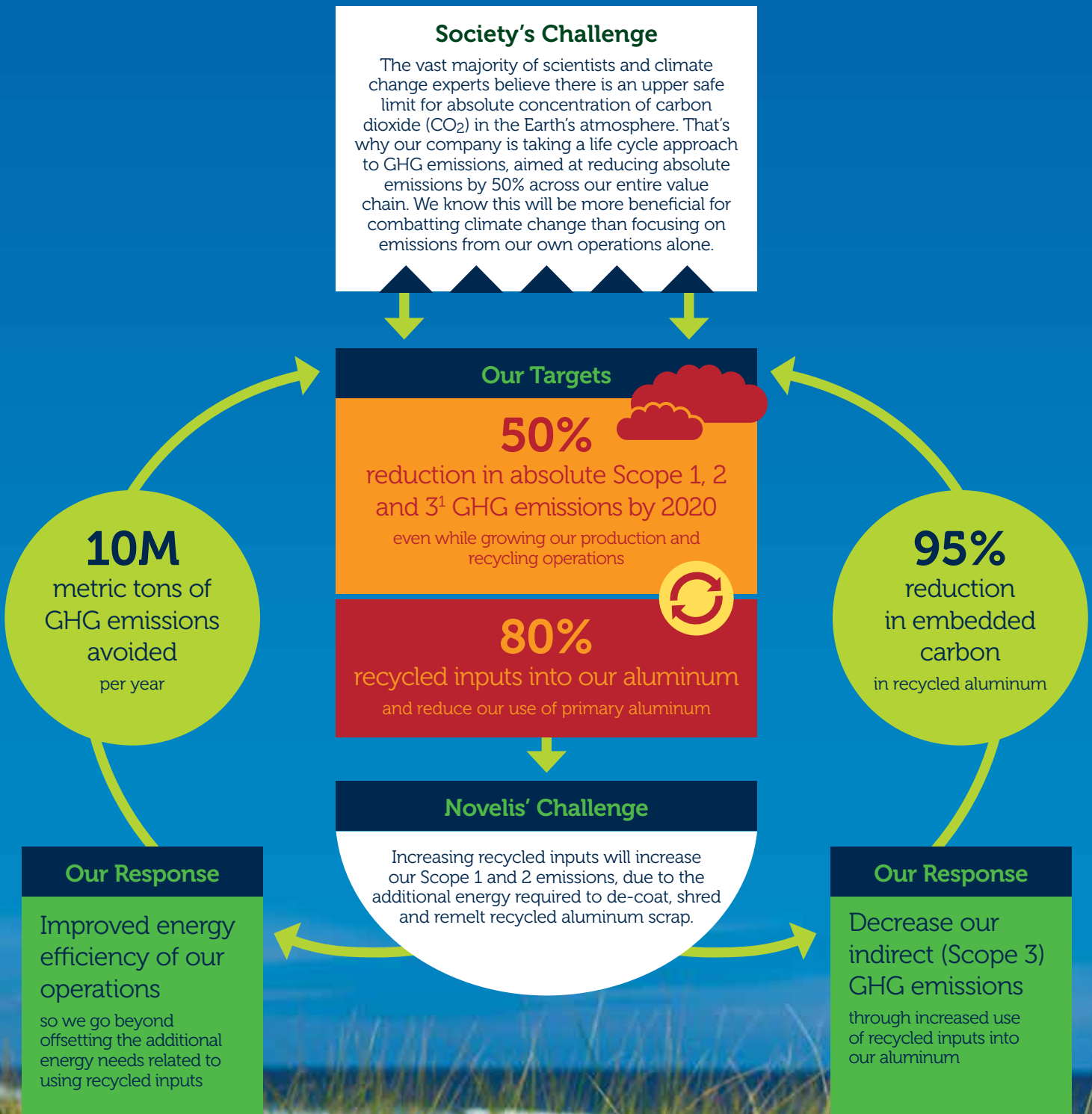
We view our efforts as not only the right thing to do for society, but also as a key competitive advantage for our company today and in the long term. Our current GHG footprint (for FY14) is shown in Figure 4.

**Figure 4  
Novelis Greenhouse Gas Footprint FY14 – Metric Tons Carbon Dioxide Equivalent (CO<sub>2</sub>e)**



**Rail Transport in Europe**  
 In December 2013, we began operating a dedicated round-trip railway service that efficiently delivers material between Novelis locations in Germany and the U.K. Three times a week, aluminum coils (destined to become can product) from Norf, Göttingen and Nachterstedt are loaded onto the train for delivery to our can customers in the U.K. On the return trip, aluminum ingots – weighing up to 27 metric tons each – are loaded from Novelis' Recycling Center in Latchford. Once in Norf, the ingots are transformed into coils, then shipped back to customers in the U.K. The round-trip railway service takes less than three days, compared to the previous barge transport by sea, which took 12–16 days. The train also has a lower environmental impact than the previous combination of road and sea transport. Our intention is to increase the train's frequency later this year by shipping automotive product this way as well.

## Greenhouse Gas Emissions: An Absolute Target for an Absolute Challenge



<sup>1</sup> Scope 1 and 2 emissions are those that result from our own operations, either from burning fuels ourselves (Scope 1) or from our purchase of power (e.g., electricity) from other entities (Scope 2). Scope 3 emissions are those outside of Novelis' direct operations but within our products' life cycles, e.g., emissions related to our purchase of primary aluminum, which is made using energy-intensive processes, and emissions related to transportation to Novelis customers.

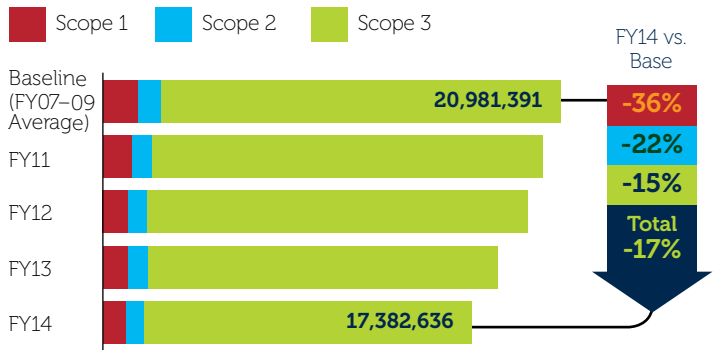
We have set a goal to reduce our absolute Scope 1, 2 and 3 GHG emissions by 50% by 2020, compared to our baseline, which is an average of fiscal years 2007–2009 (FY07–09) emissions (see Figure 5). So far, we have reduced these absolute GHG emissions by 17% since the baseline. In FY14 alone, we achieved a 4% reduction in absolute emissions.

The majority of this decrease is attributable to a reduction in Scope 3 emissions resulting from our reduced purchases of primary aluminum, though we did also reduce Scope 1 and 2 emissions significantly in FY14 through energy-efficiency efforts and switching from fuel oil to natural gas at one of our largest plants. Looking forward, we expect continued absolute GHG reductions to be driven largely by reductions in Scope 3 emissions, as our Scope 1 and 2 emissions will be more challenging to reduce as we increase the size and scale of our recycling operations.

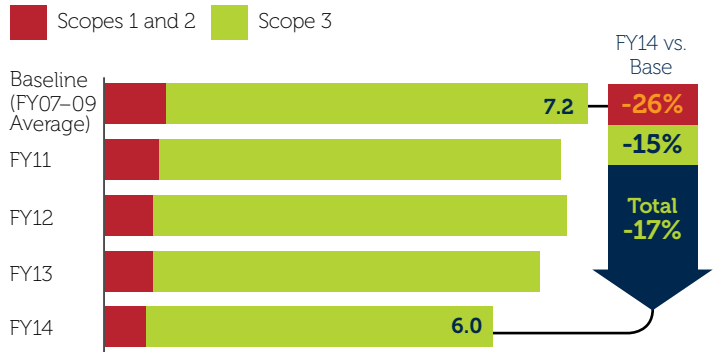
Our GHG emissions per metric ton of sales (i.e., our emissions intensity) have decreased by 17% since our baseline, and by about 8% in FY14 (see Figure 6).

To further demonstrate our commitment to reducing emissions, in 2013 we became a signatory to the United Nations' Caring for Climate initiative. Caring for Climate seeks to help stem climate change by mobilizing business leaders to implement climate change solutions and policies. (See [www.caringforclimate.org](http://www.caringforclimate.org).) Also, in 2014 we joined the WWF Climate Savers Program (see p. 20).

**Figure 5: Scope 1, 2 and 3 GHG Emissions (metric tons CO<sub>2</sub>e)**



**Figure 6: Scope 1, 2 and 3 GHG Emissions Intensity (metric tons CO<sub>2</sub>e/metric tons FRP sales)**

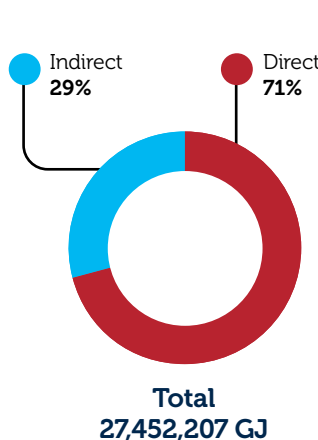


## Energy Use

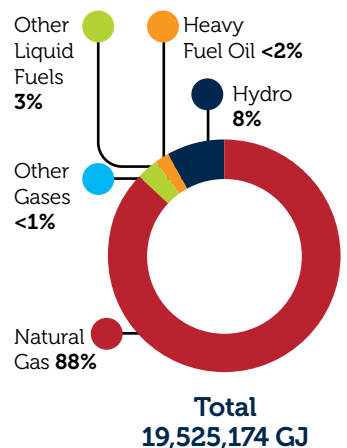
We use several sources of energy in our manufacturing operations (see Figures 7, 8 and 9). The majority of our energy usage occurs at our recycling casting centers, during the process of hot rolling and cold rolling aluminum, and at our small Ouro Preto smelter in South America, where we continue to operate one pot line. Natural gas used directly at our facilities (particularly for melting) and purchased electricity (particularly for rolling) are the most significant types of energy use for Novelis. We also use fuel oil, transport fuel and other energy sources.

Of the energy we purchase, 30% comes from renewable sources and 23% from nuclear power (see Figure 9). Through FY14, our South American segment operated its own hydroelectric facilities to provide power to the Ouro Preto smelter. The sale of these hydroelectric facilities was agreed to as of March 31, 2014, but we anticipate the transaction will not be finalized before the end of 2014. Moving forward, as part of our partnership with the World Wildlife Fund, we plan to develop a global renewable energy strategy and an associated renewable energy goal (see p. 20).

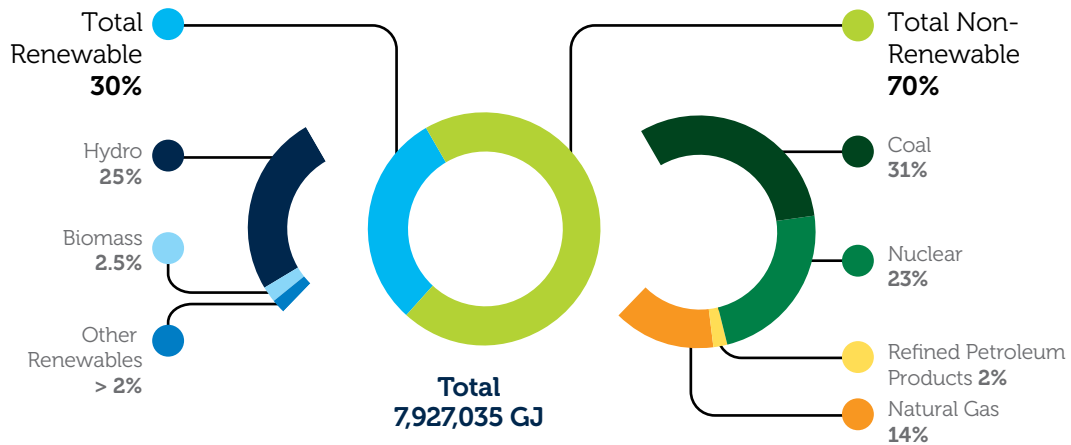
**Figure 7: Direct and Indirect Energy Use, FY14**



**Figure 8: Types of Direct Energy Use, FY14**



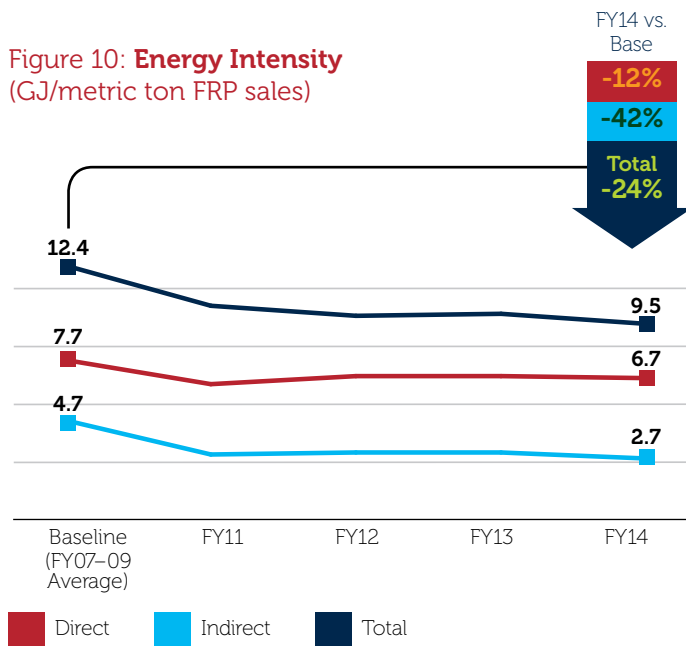
**Figure 9: Types of Indirect Energy Use, FY14**



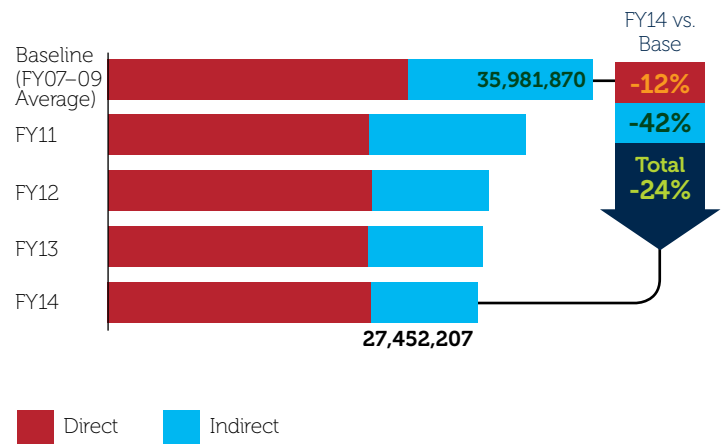
We have set a goal to decrease our energy intensity by 39% by 2020 from our FY07–09 average baseline. By the end of FY14, our energy intensity had decreased 24% compared to our baseline; it was down 5% in FY14 alone (see Figure 10). Our total energy use has also decreased 24% since our baseline, but was down only 1% in FY14 (see Figure 11).

Progress toward our energy intensity goal is affected by a variety of competing factors. Energy-efficiency projects and increased sales drive our results in the right direction, while increases in recycling and changes in product mix offset those improvements. For example, our manufacturing processes run most efficiently when they operate at close to capacity; in times of lower output, our energy intensity performance may fall off.

**Figure 10: Energy Intensity (GJ/metric ton FRP sales)**



**Figure 11: Total Direct and Indirect Energy Use (GJ)**



## In Partnership with the U.S. Department of Energy



“

**Mark Johnson**, Director,  
Advanced Manufacturing Office,  
U.S. Department of Energy

“Novelis’ commitment to reducing its energy intensity by 25% over 10 years establishes the company as a leader in industrial energy efficiency and helps advance the nation’s progress toward a sustainable, clean-energy future.”



### Novelis Joins the DOE’s Better Plants Program

In FY14, we began partnering with the U.S. Department of Energy (DOE) as a part of the DOE’s Better Buildings, Better Plants program. This national partnership program aims to help companies save billions of dollars in energy costs, create new jobs, strengthen competitiveness and promote greater energy security across the U.S. manufacturing sector.

For our part, Novelis has pledged to reduce the energy intensity of our U.S. plants by 25% over the next 10 years, which aligns with our existing energy goal. The DOE will work with our U.S. facilities to help analyze each plant’s energy usage, assist in implementing advanced technology and software to support the plant’s energy-saving goals and provide in-plant training to take on energy-saving projects. Although the DOE is limited to assisting plants only in the United States, we will share best practices learned from this partnership with our facilities around the world.

## How We Are Managing Our Energy Use

We are taking a variety of actions to help reduce our energy use and improve our energy efficiency. For example, our plants are working to improve the metering and monitoring of their energy use. The largest energy users do monthly energy reporting by major process operations (i.e., remelt, casting, rolling and finishing), and we are now working with operators at the asset level on their specific processes and equipment. Enhanced monitoring and reporting allow us to compare and benchmark in detail the performance of similar operations, as well as organize “rapid improvement events” to address specific processes at one plant or several.

In FY13, we established energy specifications for capital projects and conducted energy assessments; we continue to do this at all plants on a rolling basis. Also, we have built a formal energy training program into our Engineering Development Program (see p. 49). The training covers a variety of issues relating to energy efficiency and management.

In FY14, we developed an operational energy policy, to accelerate our progress toward meeting our 39% reduction goal and reduce our contribution to climate change. The policy calls on us to aggressively improve our energy efficiency, reduce carbon emissions and use a systematic approach to energy management. It also makes clear that Novelis leaders maintain accountability for our energy performance and are committed to providing the necessary resources to meet our energy objectives. The policy will be deployed in FY15.

Also for FY15, we have developed a program of “energy challenges,” through which each plant will be challenged to reduce their compressed air leaks. We will give the plants a timeline – such as one quarter or six months – to reduce such leaks in a specific area. We will then recognize and give awards to plants that meet the goal. We hope to conduct at least two of these challenges per year, going forward.

## How We Are Optimizing Our Operations

In FY14, our plants undertook a variety of specific initiatives to drive down energy use and GHG emissions. We estimate that these initiatives resulted in energy savings of over 770,000 gigajoules (GJ), which is equivalent to nearly 3% of our total energy use in FY14.

We seek to improve efficiency at every step and to evaluate our operations as a whole to improve performance. For example:

- In our operations, large furnaces melt aluminum and alloying agents with heat generated by burning fuel. During fuel combustion, an optimal air-to-fuel ratio ensures that all the fuel is completely burned. We have learned to adjust the fuel supply with increasing levels of precision in order to ensure that burners do not release more fuel than can be optimally burned.
- We have also improved the way we add alloys to molten aluminum, such that we reduce the number of times the furnace is opened and minimize the heat that escapes.
- Molten aluminum must be maintained at a certain temperature to be transferred to the next step in the process. Limiting upstream operations until downstream capacity is available has resulted in reduced holding times during which the aluminum must be maintained in a molten state.

- After aluminum is rolled, heat is sometimes used to alter its physical properties, a practice called annealing. Heat may also be used to dry paint lacquer. We have increasingly planned production such that processes with similar temperature requirements are conducted in succession, limiting the energy associated with raising and lowering temperatures.
- We have long recognized that compressed air is one of the least-efficient energy systems in a plant, so we are always looking for ways to make it more efficient and/or reduce its use – for example, by changing air pressures, identifying leaks and upgrading systems where possible.

We make every effort to maintain and optimize our existing equipment, but as new technology is discovered we seek to implement the most energy-efficient upgrades. The largest use of natural gas in our operations is for melting aluminum scrap and producing specific alloys. Consistently advancing our furnace burner technology is therefore a priority, and we have undertaken several large-scale projects to upgrade and replace burners in the past year. We are also working to upgrade the wide variety of motors in use in our operations. Motors with variable-speed drives allow for more-efficient use of electrical energy and enable us to respond quickly to ever-shifting energy demands.

## Energy-Efficiency Projects

Our facilities implemented a variety of projects in FY14 to help improve our energy efficiency, including the following:

### Brazil

#### Multiple Efficiency Initiatives in Pinda

At our Pinda, Brazil, facility, we reduced our electricity energy intensity by 5% in FY14 by implementing a wide array of efficiency initiatives.

For instance, we replaced seven standard-efficiency motors with high-efficiency models. We also optimized the set points of our air compressors to maximize efficiency and conducted a complete air compressor leakage assessment, fixing numerous small leaks. Also, we implemented a daily energy inspection, to check that all lights and equipment are turned off at the end of the day.

In addition, Novelis South America developed and implemented a communications campaign to raise employee awareness of natural resource use, including energy.

### South Korea

#### Reducing Natural Gas Use in Yeongju

On the coating line at our Yeongju plant, we installed a bleed damper between the exhaust duct and the incinerator. This enabled us to speed up the coating line, making production faster and more efficient, without creating unsafe heat conditions in the incinerator. The bleed damper helps to control the pressure of the volatile organic compounds and create an optimal air mixture for incineration. In so doing, it also reduced our natural gas use on the coating line by 25%.



# Water Use

Our processes are not very water-intensive compared to many other manufacturing industries and agriculture. But because water scarcity has become a worldwide concern, we are working hard to optimize our water use.

In our operations, the process that uses the most water is the casting of ingots after remelting recycled materials. As we increase our recycling of scrap (in line with our goal to use more recycled inputs), we will do more ingot casting, which could push up our water use. We have thus been working to use water in this process more efficiently. Of course, the smelting process by which primary aluminum is made is more water-intensive than the recycling process, so even if our absolute, direct water use rises the more we recycle, the overall life cycle water use for our products will decrease.

We have set a goal to reduce our water use intensity by 25% by 2020. As of the end of FY14, compared to our baseline, we have reduced water use intensity by 20%, which puts us on track to achieve the 25% goal. In FY14 alone, we decreased our water use intensity by 4% (see Figure 12). From FY13 to FY14, our absolute water usage was relatively flat; however it is down 20% since our baseline (see Figure 13).

We have achieved this progress to date in part due to water-efficiency improvements throughout our operations, including: establishing cleaning practices and schedules for cooling towers, regularly cleaning and inspecting boilers, repairing leaking water pipes, upgrading to chemical feed systems for water treatment, installing metering and valving systems, and installing temperature monitoring to control cooling operations.

During FY14, we conducted a detailed water survey at all of our facilities. The survey requested that sites provide information on their water usage, including water intake and discharge types and volumes (i.e., the "water balance"), operations in which water is used in the facility, and water management techniques and procedures. The survey results will be used to drive future water reductions and best practice sharing. For FY15, we are continuing to operationalize our regional water committees, with a focus on best practice sharing between the plants and the scoping of key water-efficiency projects.

Figure 12: **Water Use Intensity** (cubic meters/metric ton FRP sales)

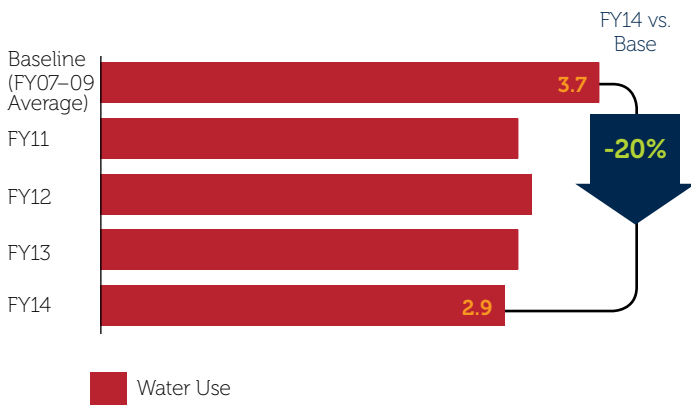
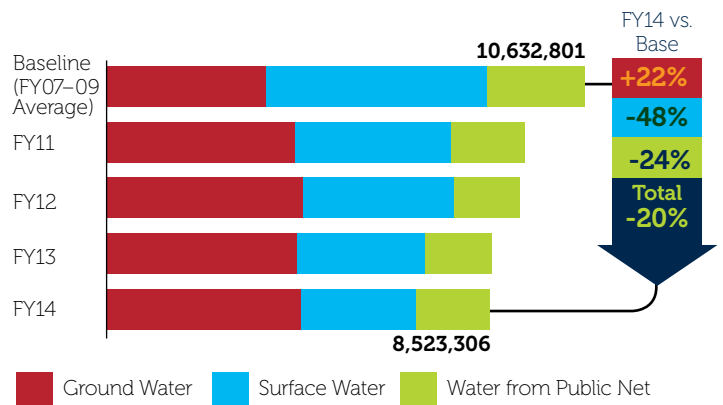


Figure 13: **Water Withdrawals** (cubic meters)





## Water Conservation Projects

The following are a sampling of the water-efficiency and water-reduction projects undertaken by our facilities in FY14:

### Brazil

#### Water Intensity Improvements in Pinda

In FY14, we set out to reduce our water use intensity at our Pinda facility by 2% over FY13, to help drive progress toward our companywide goal. We not only met this facility goal, but exceeded it, achieving nearly a 6% reduction. We accomplished this through a number of measures, including automating some of the systems that were previously manual (e.g., for maintaining proper water levels in storage tanks, and for water “blowdown” in the cooling towers); implementing a more rigorous leak inspection program; and reusing water that was previously discharged. Also in FY14, a sustainability campaign was launched in order to improve engagement around natural resource consumption and provide tips to identify and reduce the water consumption inside and outside of the plant.



### South Korea

#### Small Projects for Big Reductions in Ulsan

At our facility in Ulsan, South Korea, we identified old, underground water piping as a significant source of water leakage. In FY14, we repaired this piping, saving 15,364 cubic meters of water per year. We estimate that this and other smaller water-reduction projects, including repairing other leaks and installing metering, will result in a reduction in water usage in South Korea of over 30,000 cubic meters per year.



### United States

#### Recycling Water in Oswego, New York

Deionized (DI) water is a key ingredient in the coolant used in our hot rolling processes. DI is produced from potable water through a physical separation process known as reverse osmosis. The demineralized portion of the water represents approximately 75% of the feed water supply; once separated it is blended with other products to produce hot rolling coolant. At our Oswego facility, prior to 2013, the remaining 25% of DI concentrate water was discharged to the local sewer authority. Separately, we use raw water from Lake Ontario for aluminum ingot casting at this facility. An analysis of the DI concentrate discharge water showed similarities to this Lake Ontario raw water. So, we diverted the DI concentrate water to our casting water process, reducing our raw water intake from Lake Ontario by approximately 49,000 cubic meters per year.



#### Replacing Heat Exchangers in Fairmont, West Virginia

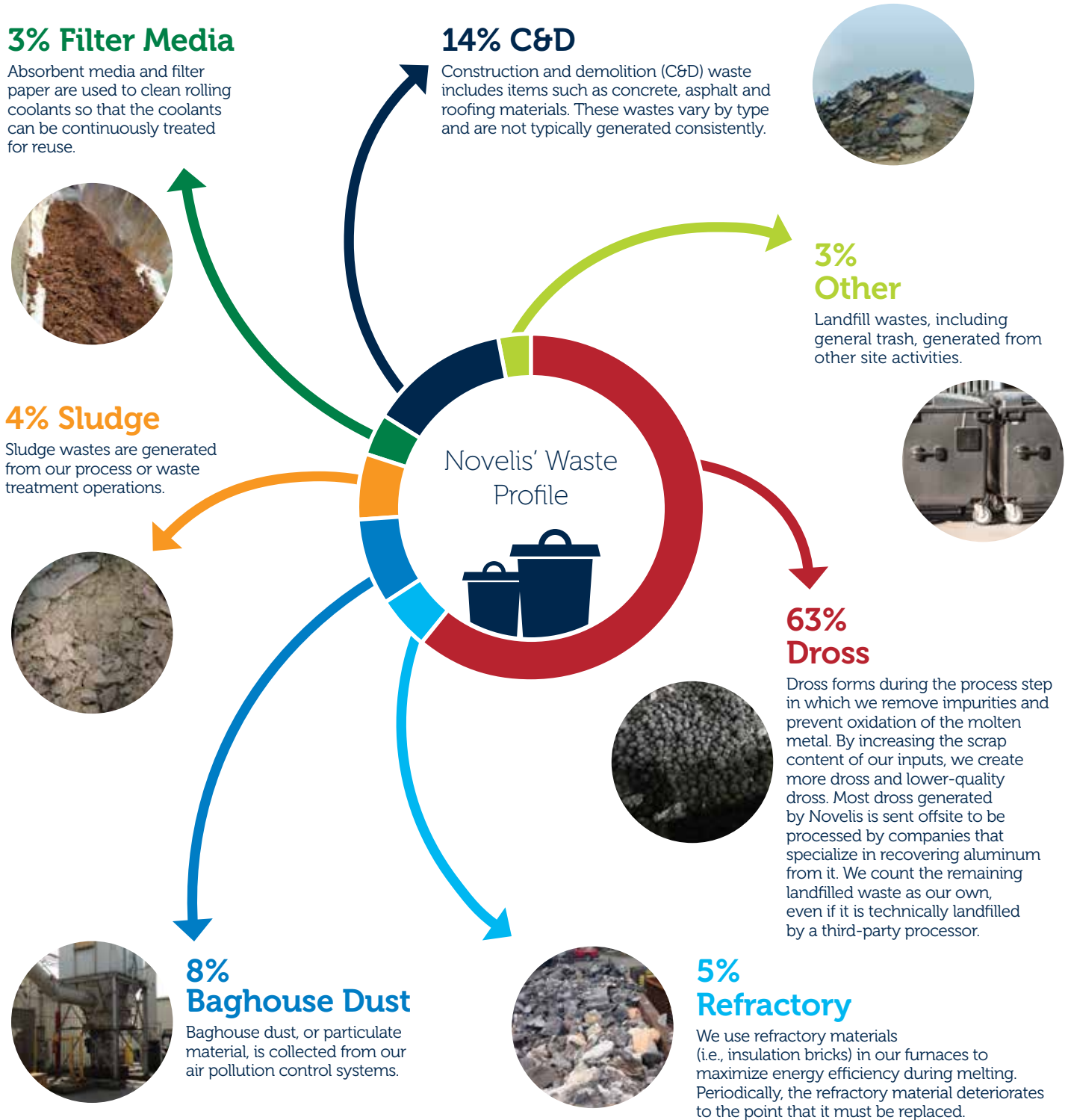
Our Fairmont facility decreased its water use intensity by 15% in FY14. This was accomplished by replacing the heat exchangers in one of the mills, and replacing leaking underground piping with above-ground piping.

#### Reducing Water Use in Greensboro, Georgia

At our Greensboro facility, we have reduced our water consumption and wastewater discharge by 31,000 cubic meters (together) by working hand in hand with our water treatment chemical supplier. For example, we were able to identify inconsistencies in the chemistry of our water obtained through on-site wells. We switched over to a municipal water source and, with the use of an electronic monitoring and control system (which reads the conductivity, pH and chemicals in the water), we have increased our recycling and reuse of the water from two to six times.

# Waste to Landfill

Novelis operations produce a wide variety of wastes (see below). In FY14, we recycled 77% of all of the wastes we produced – an 18% increase over FY13 (see Figure 14).



We have a goal of sending zero waste to landfill by 2020. To accomplish this, we are working diligently to reduce waste generation and find feasible recycling solutions for wastes that currently have limited markets. We have engaged both our operational and research and development experts to develop solutions for these wastes.

Since our baseline, our total waste has increased as our company has grown and as we have increased our use of recycled inputs. The use of recycled inputs currently results in an increase in dross production and makes the dross – our largest waste product by volume – more difficult to recycle (see p. 42). Despite our progress in decreasing the amount of non-dross waste going to landfill since our baseline, an increase in dross production as well as construction and demolition waste resulted in just a 2% decrease in our overall waste to landfill and a 1% decrease in waste-to-landfill intensity in FY14 as compared to our FY07–09 baseline (see Figures 15 and 16).

In FY14 alone, both dross and non-dross waste to landfill increased. The increase in non-dross waste was primarily due to a significant increase in construction-related wastes associated with our South American operations. We expanded and upgraded the roadways at our Pinda plant in Brazil in FY14, sending much of the associated debris to a landfill. As a result, in FY14 our absolute waste to landfill increased by 16% and our waste-to-landfill intensity rose by 11%. If the one-time construction and demolition waste is not factored in, however, our absolute waste to landfill increased only 1% in FY14 and waste-to-landfill intensity decreased 4%. In FY15, considerations for alternative roadway construction and demolition repair work should result in a significant reduction in this type of waste sent to landfill.

Determining solutions for all of our waste types is essential for us to meet our ultimate goal of zero waste to landfill by 2020. However, the production of dross associated with recycling scrap presents our most significant challenge – especially because dross from recycling certain types of scrap contains significantly less recoverable aluminum. We will continue to look for creative solutions for dross recycling using global best practices and by developing new processing technologies.

Figure 14: Waste by Process Method, FY14

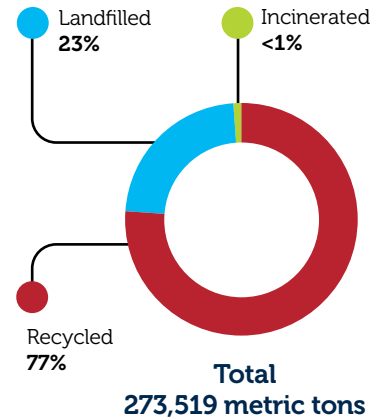


Figure 15: Waste to Landfill (metric tons)

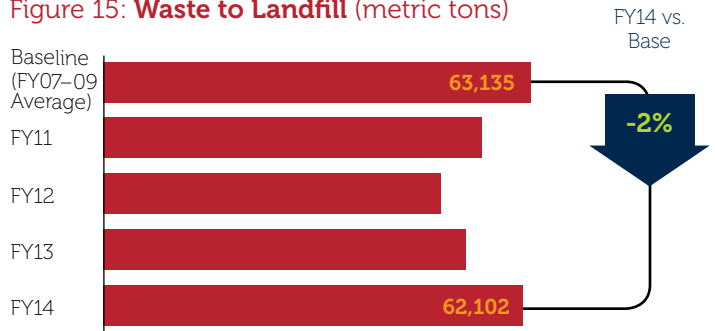
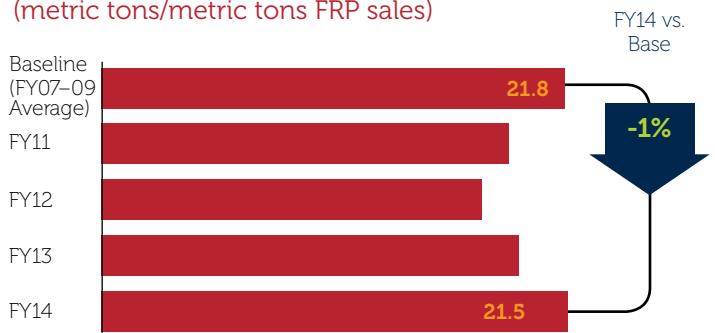


Figure 16: Waste-to-Landfill Intensity (metric tons/metric tons FRP sales)



## Waste Reduction Initiatives

The following are among our examples of progress in waste reduction for FY14:

### United States

#### Refractory Waste Reductions

Over the last two years, Novelis North American remelt sites (Berea and Logan, Kentucky; Oswego, New York; and Greensboro, Georgia) have initiated programs to recycle their refractory waste. As a result, the region as a whole recycled 1,550 tons of refractory in FY14, for a 63% recycling rate for this material. Beria had the highest individual rate, recycling 90% of their refractory waste in FY13 and FY14. Oswego just began recycling this material in FY14, but already achieved a 47% rate in the first year. The goal within North America is to increase our recycling programs so that 100% of refractory is ultimately recycled.

#### Baghouse Waste Reductions in Berea

In Berea, Kentucky, one of our waste-related initiatives in FY14 was to reduce waste from the air pollution control system (the "baghouse"). This system uses lime to neutralize emissions from our de-coater incinerator and holding furnace units. The spent lime collected in the baghouse has traditionally then been landfilled. In FY14, we optimized the lime feed system, allowing us to meet emission standards while reducing associated baghouse waste by 180,000 kg per year.

### South Korea

#### Recycling Pilot Projects in Yeongju

Our Yeongju facility in South Korea has been actively exploring options for achieving zero waste to landfill. In FY14, Yeongju began recycling sludge for use in cement, which will reduce the quantity of landfilled waste by 500,000 kg per year. The average landfill of sludge at this plant was 94 metric tons per month and dross to landfill was 880 metric tons per month, but as of October 2013, both of these metrics were reduced to zero. This is saving our Yeongju facility approximately \$300,000 per year in landfill costs.



### United Kingdom

#### Baghouse Waste Reductions in Latchford

At our Latchford, U.K., facility, baghouse waste was one of the only remaining waste streams that was still sent to landfill. In FY14, this facility began working with a company to use the baghouse dust for void filling in aggregate and road hardcore. This project is expected to result in landfill waste reductions of 300,000 kg per year.

For FY15, we will continue to explore opportunities to reduce, reuse or recycle the various types of landfill wastes that we generate. Many of these wastes are recycled in some regions of the world but not others. These differences are due to market conditions, resource availability and/or local regulations. We will continue to share best practices around the globe and look to create markets for all landfill wastes in all regions.

## Biodiversity

Novelis operates in many locations across the globe and knows that conserving diverse ecosystems is important to the communities in which we operate and to our overall mission to reduce our impact on the environment.

The most significant biodiversity impacts in the life cycle of our products occur in our supply chain, during the production of primary aluminum. Bauxite mining results in land disturbances, and alumina refining may require the construction of red mud lakes. Our strategy

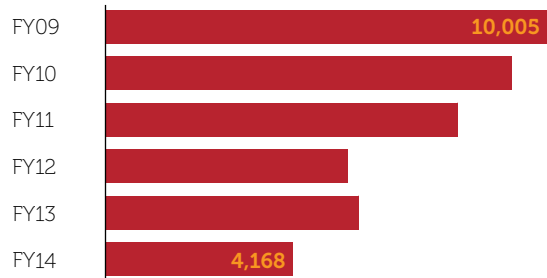
of maximizing recycling is to reduce demand for primary aluminum, minimizing the need for new bauxite mining and alumina refining.

None of our currently operational or newly announced sites exist within the boundaries of a United Nations Biosphere Reserve, Ramsar Wetland or UNESCO World Heritage Site. Thus, at this time, none of our facilities have been identified as within the boundaries of protected or high-biodiversity areas.

# Non-GHG Air Emissions

Novelis' total non-GHG air emissions declined by 25% in FY14 (see Figure 17). The primary reason for this was the reduction of our smelter operations in Ouro Preto, Brazil, resulting from the shut down of one of our pot lines. We experienced small increases in air emissions at facilities that have either increased their aluminum recycling efforts or have completed expansion projects, such as our cold mill expansion in Yeongju and our hot mill expansion in Ulsan (both in South Korea). However, the new expansion projects have been designed with modern air emissions control equipment, as described below, which should improve air emissions going forward.

Figure 17: **Total Estimated Air Emissions** (metric tons)



Note: Figures represent estimates of pollutants tracked from stack emissions only. Novelis has not developed emission estimates for persistent organic pollutants.

## Air Emission Reduction Projects

The following are examples of our facilities' efforts to reduce non-GHG air emissions.

### South Korea

#### Upgraded Cold Mill in Yeongju

Our Yeongju facility recently installed a new cold mill to increase production at the facility. The new cold mill is designed to operate using water for cooling aluminum sheet, thereby decreasing the amount of oil-based lubricants required and lowering the air emissions associated with such lubricants. In addition, the new mill was installed with high-efficiency pollution control equipment equipped with double impact filters for oil removal.

#### New Hot Finishing Mill in Ulsan

In FY14, our Ulsan, South Korea, facility completed the installation of a new hot aluminum finishing mill, which will considerably increase the facility's capacity. The new mill is equipped with an advanced air filtration system (including hooding, exhaust and filtration), which is designed to capture 90% of particulate emissions over 1 micron in size.



### United States

#### Decreasing Dust in Berea

Our Berea, Kentucky, facility was faced with the problem of dust accumulation from aluminum melting operations. The accumulation of dust may be dangerous and needs to be properly managed. In FY14, the facility installed a dust collection system to better control the problem in the melting area.



# Developing Our People

Every day around the world, Novelis employees contribute their talents, ingenuity and commitment to quality and top performance to help the company succeed. In return, we seek to provide a meaningful and rewarding place to work, including not only competitive pay and benefits but also a safe working environment and ample opportunities for professional growth and development.

## Health and Safety

One of our core values as a company is to keep our employees and contractors safe on the job. And doing so requires commitment and vigilance, as our operations present an array of potential safety risks.

These risks may arise from the use of mobile equipment on the shop floor, for example, or from the extremely hot temperatures used to melt aluminum. To minimize such risks, we employ solid safety programs at all of our plants, train extensively on safety procedures and behaviors, require the use of personal protective equipment and machine safeguarding instruments, and eliminate safety hazards wherever possible.

The Novelis Safety System (NSS) is our comprehensive system for identifying and mitigating risks, ensuring that employees work safely and monitoring their performance. The NSS has six key components:

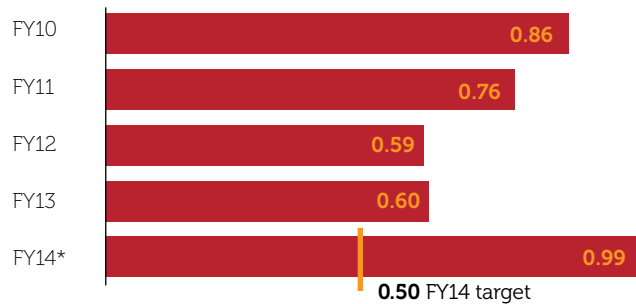
education, communication, appearance, recognition, process and accountability. The motto of the NSS is "Together We Are Safe," and we have sought to spread this mindset and associated behaviors and practices throughout our global operations.

In recent years – and in line with our *One Novelis* effort to function as a cohesive global entity – we have standardized the signage and safety icons in our plants, to ensure the clear communication of safety messages and to enable our staff and management to understand those messages when they travel between plants. In another standardization effort, our Corporate Communications teams recently developed a global standard protocol for crisis communications. The protocol outlines exactly how employees and their families, customers and local communities will be contacted if business operations are ever disrupted due to a crisis.

### 2013 Safety Milestones



Figure 18: Recordable Case Rate



\*A new, stricter system for recording injuries was adopted in FY14.

In the past we have collected and tracked global safety data for our employees and contractors using our Novelis Injury and Illness Recordkeeping System (NIRS). In 2013 we adopted a new system based on U.S. Occupational Safety and Health Administration (OSHA) standards and applied it globally in our business. Though the two systems are very similar, the OSHA-based system is more stringent in some respects, requiring us to record things (such as a very small amount of hearing loss) as illnesses or injuries that we previously only recorded for OSHA recordkeeping requirements.

In part because of the change in our measurement system, our recordable case rate – the aggregate measure of injuries, illnesses and fatalities – increased last year,

from 0.60 cases per 200,000 hours worked in FY13 to 0.99 such cases in FY14 (see Figure 18). Our ultimate goal for this rate remains zero. We are now working to address key issues raised by the OSHA-based standards, such as noise levels in our plants, so we can drive decreases in this rate in the coming years. We experienced no fatalities in FY14.

Our plants conduct safety-related activities throughout the year, to keep the issue top of mind and engage employees in developing safe practices. In December 2013, for example, our Yeongju and Ulsan plants in Korea held a safety campaign to educate employees more fully in the Novelis Safety System. Employees were also asked to brainstorm safety improvement ideas; they submitted nearly 300 entries. Plant EHS leaders selected the top three ideas at each site, which were then implemented over the following months.

Our internal Global EHS Awards recognize Novelis sites that meet strict, metric-based safety criteria. For FY14, four Novelis plants earned Gold awards in this program: Pieve and Bresso (Italy), Santo André (Brazil) and Logan (Kentucky, USA). Celebrations are held to recognize each site's achievement, and the plants receive funding from Novelis for grants to drive safety awareness in their communities. Gold winners, for example, receive \$2,500 to donate. This money can be used to support any safety-related organization of the plant's choosing.

## Employee Engagement

In recent years, as our company has expanded and implemented a range of changes to harmonize our business processes and systems, we have bolstered our efforts to communicate with our employees, solicit their feedback and engage them in building the Novelis of the future. Such rapid change within a company can present exciting new opportunities for employees, but we know it can also be challenging and raise concerns, so we are working to be responsive to those concerns.

In October 2013, we conducted a companywide employee engagement survey called "Our Voice." Nearly 6,800 employees, or about 71% of our workforce, completed the survey, which was designed to gauge attitudes and opinions about working at Novelis.

Overall, the survey showed that employees are engaged in and energized by their jobs, are proud to work for Novelis and are committed to the company. The feedback also indicated that employees understand how their work contributes to the success of the business, which is critical for us achieving our goals.

The survey also revealed areas for improvement, including a desire for increased open and honest

communication (especially regarding the future of our business), better change management and additional opportunities for professional growth. Action plans are currently being developed at the global and plant levels to help us improve in these areas.

In recent years, we have also taken steps to increase our internal communications efforts. For instance, our CEO now conducts regular interactive webcasts for employees, and our senior leaders frequently visit plants and conduct town hall meetings. We also develop and distribute a wide variety of informative publications and other communications for employees. In February 2014, we launched an enhanced corporate intranet, which includes new features that employees can use to connect with their Novelis colleagues around the globe.

We are committed to continuing open communication and dialogue with all of our employees – unionized and nonunionized. In FY14, approximately 63% of our employees were represented by labor unions, and their employment conditions were governed by collective bargaining agreements.

## Employee Evaluations

We believe employee evaluations are essential to both individuals and our company as a whole. For individuals, such evaluations provide valuable performance feedback and help employees understand how they can advance their careers at Novelis. Collectively, such evaluations help keep employees focused on how they can contribute to the success of the business – which helps to propel the whole organization forward.

In FY11, we established a corporate-wide sustainability target regarding employee evaluations. Our goal for 2020 is that 100% of eligible employees will be receiving annual performance feedback. In FY13 we reported that 52% of our eligible employees received annual

performance reviews. In FY14, we recognized that we had regional variation in what was defined as a performance review – especially for non-management employees working on the shop floor. In FY14, we clarified and tightened up that definition. Measuring using the new standard, we determined that 46% of employees received performance reviews in FY14, including 100% of our managers.

## Employee Recognition

Recognizing individuals and teams for outstanding performance is one way to drive excellence throughout the business. In the past year we have launched three new recognition programs to do just that.

Our Culture in Action program honors teams of Novelis employees that have made important contributions to the company in the categories of safety, results orientation, consumer focus and sustainability. The purpose of this program is to help create a *One Novelis* corporate culture based on a shared set of values and attributes. The first Culture in Action winners were announced in September 2013.

To recognize the most exceptional engineers and scientists within Novelis, we created the Novelis Fellowship program, the company's most prestigious technical honors. The program designates Distinguished Engineers and Distinguished Scientists and, at the highest level, Novelis Fellows. To be considered for one of these designations, candidates must be highly skilled technical experts with a sustained body of independent and innovative engineering and scientific work that demonstrates a measurable business impact. In October 2013, we announced four, first-ever designees in this program, including one Novelis Fellow (see sidebar).

Finally, we also created the Novelis Technical Achievement Awards program. These annual awards celebrate innovative business solutions that are achieved by teams through outstanding work in technology and engineering. The Technical Achievement Awards are based on four components: complexity of the project, inventiveness or disruptiveness, technical outcome or impact, and applicability across multiple sites.

### Bob Wagstaff, Director of Molten Metal Processing, and Novelis Fellow



Bob Wagstaff is one of the world's leading experts in the melting and solidification of aluminum and its alloys.

During his 30-year career, he has invented several leading-edge technologies for aluminum processing that have improved efficiency and safety. Bob holds more than 20 U.S. patents and more than 40 with the World Intellectual Property Organization, all focused on applying complex engineering principles to normal workday processes. He has been honored with many industry and leadership awards, both inside and outside of Novelis. One leading industry publication called Bob "an innovative giant and an industry pioneer."



Photo: Sustainability-related Culture in Action winners



# Talent Management

As we continue to grow as a company, so does our need to recruit, develop and retain top talent across the organization.

Finding qualified engineers and scientists, in particular, is an ongoing challenge. To help ensure we continue to attract the best candidates, our global Human Resources team has launched an employee referral program, called Novelis Connects, as a way to reward existing employees for bringing new employees into the company. We have seen that referrals by existing employees tend to be better cultural fits, stay longer and are more successful at Novelis. All salaried employees are eligible to participate in Novelis Connects, and if a referred candidate is hired, the current employee earns a monetary reward.

Once employees are onboard, we aim to help them further develop their skills and leadership abilities through our extensive talent management programs. We are working to develop a world-class leadership development program that is global in scope, with consistent, high-quality offerings across regions and departments. Our specific goal is that by 2020 our program be benchmarked, by a qualified external expert, within the top 10% of world-class companies that have development programs.

## Investing in Young Engineers



# 200+

individuals have been involved in the Engineering Development Program (EDP) since the first wave began in mid-2011. The first class of 53 graduated from the program in 2013. The EDP has since grown to around 80 participants per class.



“

**Peter Evans**, EDP enrollee and Mechanical Engineer at Novelis' Novi, Michigan, USA, facility

“The EDP gave me a 30,000-foot view of the company and a good understanding of what Novelis is all about. The opportunities [this program] will supply you, and the growth it will offer you in the future, are unbelievable.”

As a company, we need to hire and develop a significant number of new engineers over the next decade in order to maintain our leadership pipeline and support our aggressive growth plans. Our two-year EDP is helping us to do just that.

Launched in 2011, the EDP is designed to strengthen Novelis' engineering talent pool by accelerating the development of early-career engineers through classroom learning and on-the-job experience.

Vinzenz Hofmann, a current EDP enrollee, is just the kind of person we had in mind when we developed this program. Two years ago, Vinzenz was completing his engineering degree at the University of Stuttgart in Germany. Today, he is a Development Engineer at

Novelis' plant in Sierre, Switzerland, where he works on creating new products and processes to serve the automotive market.

Through the EDP, Vinzenz gets to experience and learn about Novelis' full range of operations and products. “My favorite part of the EDP is visiting different plants and facilities around the world during the learning weeks,” Vinzenz said.

The EDP is also helping to grow the Novelis brand on college campuses and at recruitment events. Asked why he came to work for Novelis, Vinzenz said, “I thought I would go into the forming business and do deep drawing of automotive parts. But the atmosphere, the people and the Engineering Development Program put Novelis at the top of the list.”

### Engineering Development Program

A two-year development program tailored to engineering graduates and early-career engineers (see p. 49)

- Placement in one of our 29 manufacturing plants across the globe
- Structured learning curriculum for technical, professional and leadership skill-building experiences
- Special assignments designed to provide broad exposure to Novelis operations
- On-the-job assignments and projects to accelerate learning and development
- Networking, mentoring and coaching

166\*

### Leadership Essentials I

A four-day course on foundational leadership skills for first-line leaders

- Delivered locally in all regions
- Open enrollment
- Leadership topics include coaching, conflict resolution and influential leadership

423\*

### Leadership Essentials II

A three-day course on foundational leadership skills for new site/function leaders

- Delivered in all regions
- Open enrollment
- Leadership topics include developing talent, global mindset and emotional intelligence

64\*



Our six leadership development programs



106\*

### Leadership Launch Program

A two-week course (over three months) for first-line managers focused on leadership skills for building *One Novelis*

- Delivered in all regions
- By nomination only
- Tools to optimize leadership effectiveness
- On-the-job, work-based assignments
- 360-degree multi-rater assessment
- Mentoring and coaching

105\*

### Accelerated Leadership Program

A three-week program (over six months) for managers, focused on leadership skills for driving profitable growth

- Delivered in two locations around the world
- By nomination only
- Includes a focus on business and financial acumen, global mindset, strategic thinking, talent optimization and leading change
- Project teams focused on solving current Novelis business challenges
- Multiple leadership self-assessments including the 360-degree multi-rater assessment
- Global networking
- Mentoring and coaching

85\*

### Global Leadership Program

A four-week program (over nine months) for executives focused on leadership for developing and implementing global strategy and operational excellence

- Delivered in multiple locations around the world
- By nomination only
- Focus on global leadership and strategy and operational excellence, as well as talent development and optimization
- Project teams focused on solving complex, global and current Novelis business challenges
- Multiple leadership self-assessments including the 360-degree multi-rater assessment
- Global networking
- Capstone activity
- Mentoring and coaching

\* Number of participants to date globally

## Investing in Women in the Workforce



Photo: Rehana Hashmi presenting in Atlanta, Georgia, USA

“

**Joanne McInnerney**, VP of Global Talent Management

“We know that women provide immense value not only to our business, but to any business. The fact is, gender-diverse boards and leadership teams make better, more profitable and more sustainable business decisions. As such, we are working to develop a formal strategy around further engaging women in our workforce.”

At Novelis, we have a vision to increase the visibility of and promote the career advancement of women leaders within our company, ultimately increasing the number of women in leadership positions. We recently conducted an internal analysis of where we stand with regard to attracting, developing and retaining women in leadership positions. From this, we are developing a formal strategy around further engaging women in our workforce as well as female potential candidates.

One question we are asking ourselves is if we have our “fair share” of women in the industry. That is, we are comparing the percentage of female graduates or professionals in different fields (such as mechanical engineering or metallurgy) against our employee diversity in those fields. We are not seeking to set

diversity quotas, but rather are using the “fair share” concept as a benchmark to determine where we may have gaps in how we attract and retain women.

In March 2014, we showed our support of women in leadership by organizing our first annual events for International Women’s Day at our headquarters in Atlanta and our offices in Seoul, South Korea. The Atlanta event featured a keynote address by Rehana Hashmi, a renowned human rights activist from Pakistan, as well as remarks from Novelis CEO Phil Martens and VP of Global Talent Management Joanne McInnerney, followed by small group discussions. We are committed to holding similar events in all regions next year.

## Employee Code of Conduct and Human Rights

At Novelis, we are committed to acting with integrity, in good faith and in accordance with good corporate governance. We are also committed to human rights, nondiscrimination and sustainability.

In FY13, to ensure that our employees act in accord with these commitments, we updated our Employee Code of Conduct and distributed it to all employees. In April 2014, all office-based employees were required to complete an online training module on the Code of Conduct. For employees who work on the manufacturing floor or who do not have regular access to a computer, classroom-

style trainings will be administered in the first and second quarters of FY15. The trainings are designed to ensure that everyone fully understands the Code and their role in upholding it.

Also, we remain a signatory to the United Nations Global Compact. As such, we commit to align our operations and strategies with universally accepted principles in the areas of human and labor rights, including child and forced labor, as well as the environment and anticorruption (see p. 81).

# Engaging with Our Communities

Novelis is a global company with a global reach – we have production sites on four continents. But we are deeply engaged at a local level as well. In each of the communities where our facilities are located, we seek to be good citizens by listening and being responsive to the needs of the community. We have formal processes to engage with community members, which in turn enables us to target our charitable investments and employee volunteering to issues and causes of importance in that location.

## Novelis Neighbor

All Novelis operating sites have community initiatives in place, managed through a program we call Novelis Neighbor. Novelis Neighbor enables our employees to connect with the people who live in the communities where Novelis operates and, in the process, engage in a personal way with our neighbors. Novelis Neighbor “site champions” at each location are responsible for managing and tracking the community outreach, charitable investment and volunteer activities at their facilities. Through the Novelis Neighbor program, each Novelis region is allotted funds for charitable giving, which they in turn distribute to individual Novelis facilities for use in their communities.

Through Novelis Neighbor, we have achieved our goal of having formal community engagement processes at 100% of our operations. And we continue to implement formalized processes for routinely engaging in dialogue with neighbors, nongovernmental organizations, local government officials, other companies and community stakeholders. Our objective is to receive input that enables us to better identify, understand and address the most important issues in the communities where we operate. In addition, we have instituted a formal process of documenting dialogue with community stakeholders.



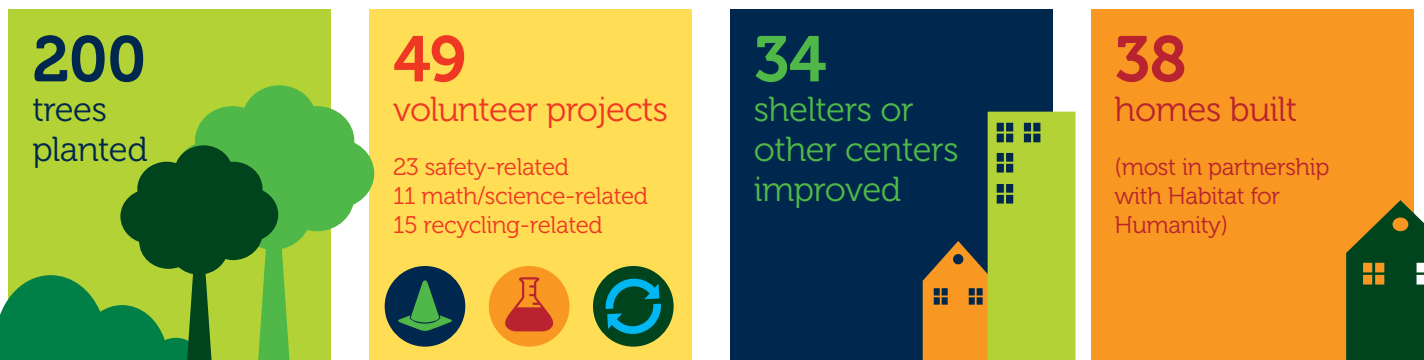
# One Novelis Volunteer Month

One major Novelis Neighbor program is the One Novelis Volunteer Month – a focused effort to fund and execute large-scale employee volunteer projects in October. The second annual Volunteer Month took place in October 2013. Four new sites (three in Asia and one in Europe) joined this year. All told, 35 Novelis sites in 12 countries completed 49 projects. With more people and sites involved, we are increasing our global impact, as noted below.

## In our FY14 One Novelis Volunteer Month We Added...



## We Created...



# Community Engagement Initiatives

We engage in a wide array of community initiatives, many of which are run through our Novelis Neighbor program and others that are separate. Either way, these initiatives typically fall into our three main areas of focus: safety, math and science education, and recycling. Two of our initiatives – Habitat for Humanity (see below) and FIRST (see p. 56) – are global in scope.

## In Partnership with Habitat for Humanity



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**Jonathan T.M. Reckford, CEO,**  
Habitat for Humanity International

“We are so grateful for the additional resources Novelis brought to the partnership [with the Aditya Birla Group], and for its commitment in green building practices that will strengthen our work in North America and around the world. We look forward to a continuing partnership that reflects our shared goal of environmental stewardship and our shared vision of a world where everyone has a safe, decent and affordable place to live and thrive.”

### The Safety and Security of Home

Novelis has been involved with Habitat for Humanity for more than a decade, providing financial support and giving employees the opportunity to volunteer to build homes for underprivileged families. At the corporate level, we have pledged \$500,000 to support Habitat in a multi-year agreement (2011–2015). As part of this support, we helped to sponsor Habitat’s Affiliate Conference in March 2013, which attracted 84 exhibitors and 2,100 registered delegates.

Many of our facilities and offices around the world partner with local Habitat affiliates. In South Korea in 2013, for example, we donated \$75,000 to the Habitat Korea affiliate, and our employees helped to build a housing complex for 24 underprivileged families in the Korean city of Chuncheon.

In another example, our recycling plant in Greensboro, Georgia, USA, partnered with Habitat beginning in 2005 on a communitywide can collection campaign. As part of the partnership, Novelis provided two trailers for collection and also agreed to receive and refund Habitat for the value of the cans collected. By 2013, residents of

Greensboro had recycled 2.2 million cans – enough to fund the construction of a Habitat for Humanity home. In October 2013, our Greensboro employees helped to build the home, which was dubbed “The House that Cans Built.”

**\$500,000**

pledged to support Habitat in a multi-year agreement (2011–2015)

In October 2013 in Atlanta, Georgia, Novelis sponsored employee volunteers to build alongside a partner family as part of a “blitz build.” More than 200 Novelis employees – from both Novelis headquarters and our Kennesaw, Georgia, research center – helped construct the Habitat home over the course of a week.

Novelis also helps to support Habitat’s IndiaBUILDS North America campaign, which is seeking to raise funds in North America to support Habitat home-building in India. (Our parent company, the Aditya Birla Group, has had a long partnership with Habitat for Humanity in India.) IndiaBUILDS North America plans to mobilize \$20 million from 2013 to 2018 to help at least 15,000 families in India gain access to decent housing, clean water and proper sanitation.

**Improving a Children's Home in Pinda**  
(pictured below left)

Employees in Pinda, Brazil, volunteered to improve a local children's home called Lar da Criança Nova Esperança ("New Hope Children's Home"). They made safety improvements to the building, collected books to donate to the children and spent time teaching the children about recycling, sustainability and future career paths.



**Upgrading a Center for People with Disabilities** (pictured below right)

Employees from our Latchford, U.K., facility volunteered at the Walton Lea Partnership, a charity that provides educational and work opportunities for adults with disabilities. Our employees painted the interior of a "learning cabin," set up rain barrels to catch rainwater, improved the facility's recycling program and helped to make the living space safer for the winter. We were inspired to support this charity in part because they use recycling as a way to raise money. They recycle and resell furniture and bicycles, for example, which not only provides work for their clients but also raises much-needed funds for the group.



**Safety**



“

**Don Bossi, President, FIRST**

“I am excited that Novelis is such a strong supporter of FIRST and our mission. Together, we can help young people explore their entrepreneurial thinking and leadership potential. I look forward to working with more Novelis volunteers who believe that FIRST is truly an investment in the future.”



“

**Tim Stanistreet, Lead Rolling Process Scientist, Novelis Global Research & Technology Center and FIRST Robotics Competition Mentor**

“Novelis is interested in hiring good engineers. We don't put money into FIRST to get something out straightaway, but we know that in five to six years when participants of the FIRST robotics teams come out of college, they will have the skills we need to develop our business. We are looking to develop the engineers of the future.”

### In Partnership with **FIRST**



**30,000+**

people attended this year's annual FIRST Robotics World Championship held in April 2014 in St. Louis, Missouri, USA

### Educating the Next Generation of Engineers: Supporting FIRST Robotics

In 2012, Novelis began an international partnership with FIRST, supporting robotics teams and competitions in every region in which we operate. FIRST stands for “For Inspiration and Recognition of Science and Technology,” and its mission is to inspire the next generation of engineers, technologists and scientists through mentor-based programs and robotics competitions.

Novelis supports FIRST International by funding 15 FIRST teams worldwide; funding regional tournaments in Europe, South Korea and the United States; and volunteering as mentors for local FIRST robotics teams. Many of the Novelis mentors for FIRST are engineers

and find it both professionally and personally rewarding to share their expertise with the FIRST teams and contribute to the development of the next generation of engineers, technologists and scientists.

We also help to sponsor the annual FIRST Robotics World Championship. This year's competition was held in April 2014 in St. Louis, Missouri. More than 30,000 people attended, watching student-designed and -built robots compete to do things such as throw balls in baskets and move objects. Four Novelis-sponsored teams from the United States and South Korea made it to the World Championship in 2013.



### Making STEM Education Fun (pictured right)

As part of the One Novelis Volunteer Month, our plants in Göttingen, Lüdenscheid and Ohle, Germany, visited local secondary schools to interact with students and encourage education in the STEM fields – science, technology, engineering and math. The Novelis facilities donated LEGO® Mindstorms sets, which allow students to build and program robots, and held training sessions to help students build the robots. We also donated notebook computers to the schools. All told, the three facilities contributed nearly \$70,000 worth of equipment. As part of this effort, nearly 70 elementary-age students from eight different schools in Göttingen participated in a local robotics contest. Over four months, the students worked together to construct unique, programmed robots. At the contest, the top two teams won a Novelis-sponsored trip to the National Phaeno Robot Festival, a perfect place for the students to expand their interest in science.

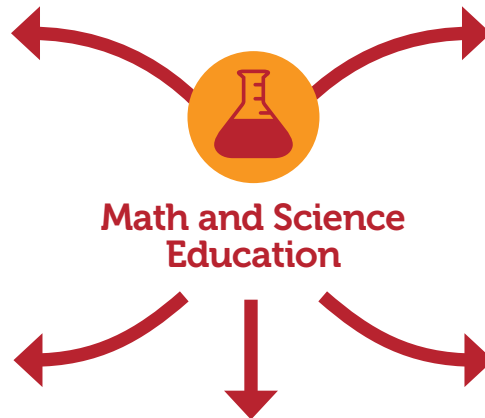
### Family Day at the Museum (pictured below)

Our office in Shanghai, China, planned a special outing for 46 underprivileged children from a local home. As part of the day, Novelis employees and their families accompanied the children to the Shanghai Science and Technology Museum, where they were able to experience science and technology firsthand.



### Outfitting a Science Classroom (pictured below)

Employees from our Ulsan plant in South Korea provided a local elementary school with a full suite of science equipment and materials, to help improve science education at the school. The children were previously using a music room for science class, and did not have appropriate equipment for the science curriculum. The new classroom has been dubbed the Novelis Invention Laboratory.



### Scholarships for Students in South Korea

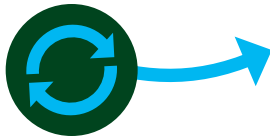
Since 2009, our Yeongju plant in South Korea has provided scholarships to academically outstanding local students who come from economically disadvantaged families. In early 2014, we continued this tradition by presenting scholarships worth nearly \$10,000 to 18 students from nine local high schools. Two of the scholarships were for excellence in math and science. Separately, our Yeongju plant's marathon running club has provided scholarships to underprivileged students by donating one Korean won (the local currency) for every meter they run in organized marathons. All told, the club has raised more than 1.2 million won (about \$20,500) since 2004. (The money has come from a combination of employee fundraising and Novelis.) One of the beneficiaries, Gyeongmi Kim – who received scholarship money from the club for three years in a row – recently received her teaching degree and is now a schoolteacher.

### STEM Scholarship Program for Children of Employees (pictured below)

In 2013, we began offering four \$5,000 scholarships to dependents of Novelis employees based in North America. Applicants must be in pursuit of a STEM-related undergraduate degree. The first four scholarship recipients were announced in April 2014 – two high school seniors and two college sophomores. We will consider expanding the scholarship program to other regions in the future.



## Recycling



### Promoting Recycling in South Korea

In July 2013, Novelis Korea held a “Novelis Greenbiz Camp” – a three-day recycling education camp for 50 elementary-aged children. The camp’s programs aimed to raise awareness of the need for aluminum recycling and the environmental benefits of such recycling, and to extend Novelis’ sustainable business philosophy into the local community. The camp was co-sponsored by Junior Achievement Korea, a global youth education group. Campers also visited the Novelis Yeongju Recycling Center, Asia’s largest aluminum recycling facility.

In a separate effort in November 2013, the Yeongju plant held a two-day recycling competition, in which units and teams competed to see who could bring in the most used beverage cans for recycling. About 350 employees participated, together with their friends and families, collecting a total of approximately 8,000 cans for recycling. During the same event, 30 members of the Yeongju employees’ volunteer club conducted a river cleanup day, picking up trash – including aluminum beverage cans – along the nearby Seo River.

## In Partnership with **Can Collector Cooperatives**



“

**Camille Carletti**, Coordinator of Reciclázaro Association for the Selective Collection Program

“This project was crucial for boosting management within the cooperatives, strengthening their work, providing new ways for selling the material generated and envisioning a better quality of life for cooperative members. Some companies have the conscience to focus on the reverse logistics of their products. The partnership between Novelis and the cooperatives does this, and the benefits are enjoyed by all.”

### Supporting Collector Cooperatives in Brazil

In Brazil, we have begun to develop relationships with several can collectors’ cooperatives. The 200+ members of these cooperatives, who are typically poor and in some cases recovering addicts, sort through recyclables to separate them by material so they can be sold.

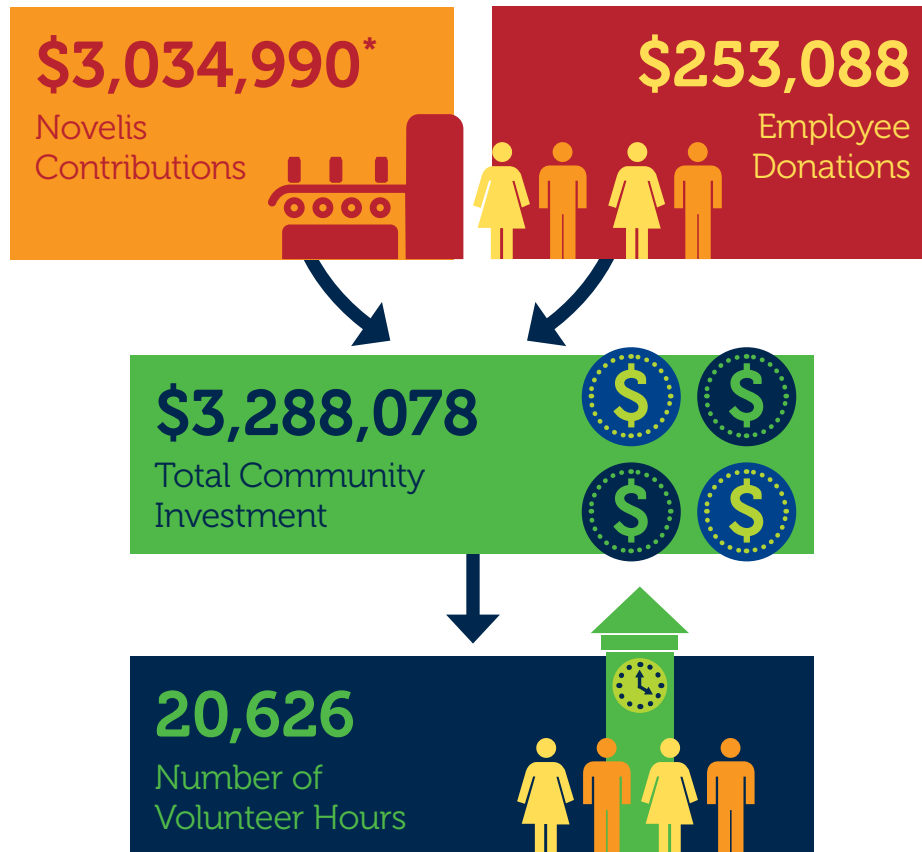
We have interacted closely with five of the cooperatives over the past year. Specifically, we contracted with a local nongovernmental organization (NGO) to have it assess these cooperatives’ needs and provide assistance to increase their productivity. Some of the needs identified included better business management (including invoicing and accounting), improved safety conditions and more secure relationships with buyers of the used cans (as buyers are sometimes undependable and unscrupulous).

The NGO’s work has produced several outcomes. First, Novelis began purchasing cans from the cooperatives, providing a dependable outlet for their recyclables.

In addition, the NGO gave the cooperatives a shared computer and – with input from cooperative members – developed software that will help the cooperatives with sending invoices and bookkeeping. Members are now being trained to use the software. The NGO also hired a safety expert to advise on safe working conditions.

In addition, a photographer was hired to take photos of the collectors’ work. Each cooperative will be given a photo album that will illustrate the importance of the collectors’ role in the recycling process and show the transformation that their work inspires – both for the aluminum material and for the collectors personally.

In addition to efforts with these five cooperatives, we have begun buying cans from an additional three – bringing to eight the total number of cooperatives from which we purchase in São Paulo.

Figure 19: **Novelis' Charitable Investments in FY14**

\* All monetary figures are in U.S. dollars. The total amount contributed includes \$946,833 in tax redirects in Brazil. (Novelis South America has the opportunity, at the encouragement of the Brazilian government, to earmark a portion of our corporate taxes each year to benefit nongovernmental organizations. These are known as "tax redirects.")

## Candongga Consortium

The Candonga Consortium, a joint venture between Novelis and Vale, was formed in 2003 to construct a hydroelectric power plant to supply energy to Novelis' primary aluminum smelter in Ouro Preto. The power plant, which became operational in 2004, required the flooding of a river valley and the relocation of 137 families. Those affected were consulted regarding resettlement and, in collaboration with the state government, the Consortium committed to a variety of actions to compensate and provide future support to those affected.

Since the Consortium's inception, Novelis has been actively working with the affected families on a variety of community economic development projects, such as small business development and vocational training, and to raise awareness about environmental issues. In June 2014, Novelis received partial regulatory approval for the sale of our hydroelectric energy assets in Brazil; full approval is still pending. The buyers of those facilities will thus be responsible for the ongoing Candonga Consortium community dialogue.

# Customers

We are delivering value to our customers not simply as a supplier of high-quality aluminum products, but also as a key partner in developing solutions to improve the sustainability of their products.

When our recent investments come online in late 2015, Novelis will

**triple its automotive sheet capacity**

compared to just a year ago, reaching approximately 900 metric kilotons per year.



## We're Adding...

### A Lower-Carbon Material

Novelis' unprecedented goal to reach 80% recycled aluminum inputs means we are providing our customers with aluminum sheet with ever-lower embedded carbon – which in turn reduces our customers' carbon footprints.

### Innovation Capabilities

We have an unrelenting focus on innovation across our technical, commercial and operational teams aimed at developing solutions to meet our customers' needs and help them improve the sustainability of their products.

## We're Creating...

### Lasting Partnerships

Our customers include some of the most well-respected brands in the world, and we have forged long-term relationships with them by providing value as a reliable and trusted design, technical and sustainability partner.

### Innovative and Sustainable Products

We are collaborating with our customers to create the most innovative and advanced aluminum products and to evolve product design to increase recycled content and make it easier to recycle aluminum at the end of product life.

### Closed-Loop Business Models of the Future

We are developing new models for closed-loop manufacturing and recycling, including taking back our customers' production scrap, working with them to collect post-consumer scrap and redesigning products to facilitate end-of-life recycling.

Photo: The aluminum-intensive Jaguar F-Type sports car

# Delivering Value to Our Customers

Novelis' customers span numerous sectors and include many of the most well-known and respected brands in the world. We work closely with our customers not simply as a supplier of aluminum flat rolled products, but also as a technical partner and catalyst for innovation. Together, we're imagining and designing the most advanced, sophisticated and sustainable aluminum products in the world.

Novelis' commitment to lead our industry through sustainability and innovation is an increasingly important differentiator for our company – and a key reason we are the partner of choice for our customers. Driven by consumer preferences, government regulations and natural resource constraints, customers in our core markets of automotive, beverage can and high-end specialties are keenly focused on reducing the environmental footprint of their products – as is Novelis.

The inherent properties of aluminum – lightweight, recyclable and versatile – make it an obvious solution for improving product sustainability. But, as we like to point out, our customers aren't just buying aluminum – they're buying *Novelis aluminum*. And that means they are buying aluminum with ever-decreasing embedded carbon, as we work toward our goal of using 80% recycled inputs by 2020.

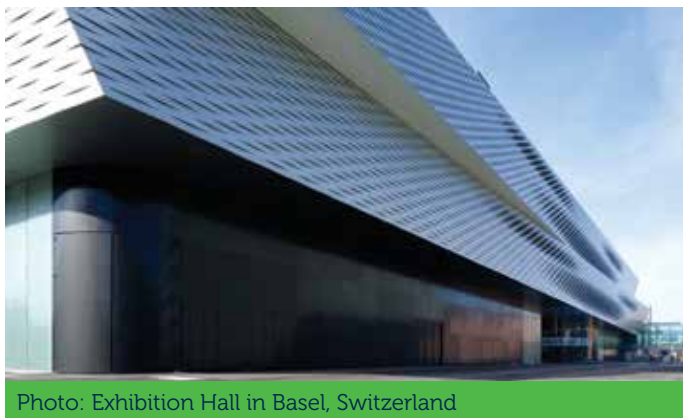


Photo: Exhibition Hall in Basel, Switzerland

## Partnering to Meet Sustainability Goals

Novelis' target to reach 80% recycled inputs has clear benefits for our customers. When we improve the sustainability profile of our products that, in turn, improves the sustainability of the end product. But we cannot achieve this target in isolation. We must collaborate with our customers to evolve the fundamental design of products and to develop new models for closed-loop manufacturing and recycling.

For example, different alloy compositions can make it either easier or more difficult to recycle aluminum. That's why one of our key areas of focus is developing alloy compositions that make it easier to recycle aluminum at the end of a product's life – as we did with evercan™ and as we are doing with our key automotive customers (see p. 62). Product design also impacts how easily aluminum can be separated and recycled at the end of life, so we are working with our customers to integrate end-of-life thinking into product design to facilitate recycling.

We know that by partnering with our customers to provide them the innovative, high-quality products they need, while at the same time helping them achieve their sustainability objectives, we will help ensure the long-term success of their companies – and ours.

# Sector Focus: Automotive

Automotive is the single fastest-growing market for our products, and sustainability is the biggest driver of the increasing demand. As automakers face more stringent fuel economy and CO<sub>2</sub> emissions standards, they are turning to aluminum to lightweight their vehicles – accelerating the virtuous circle of reduced weight enabling smaller engine size and better fuel efficiency. Novelis is the world's leading supplier of aluminum sheet to the automotive industry. And, with our unrivaled research and technology capabilities, our company has helped to pioneer the aluminum revolution that's underway in the auto industry.

## Redesigning the Ford F-150

Aluminum takes center stage in Ford's dramatic redesign of its 2015 F-150 pickup truck – and Novelis is pleased to continue our long-time relationship with Ford as one of the key aluminum suppliers for the revolutionary new vehicle. With a body and bed that for the first time includes high-strength, military-grade aluminum alloys, the new F-150 weighs in as much as 700 pounds less than its predecessor – making it more capable and more efficient than ever.

Engineers at Ford designed the F-150 to set the new standard in full-size pickups. Not only is the aluminum body stronger, more dent resistant and more corrosion resistant than ever before, but the new truck can tow and haul more, accelerate and stop faster, and operate more efficiently.

In redesigning the truck, Ford also improved the ease and efficiency of repair and maximized the opportunities for recycling of aluminum scrap.

With the all-new F-150, Ford has designed and built the toughest and smartest F-150 ever.

## We're Adding...

### Highest-Quality, Most-Advanced & Lowest-Carbon Products

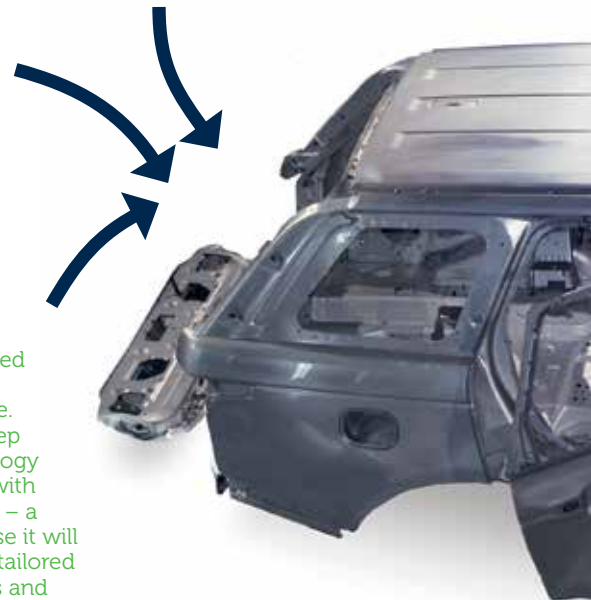
Our products are featured in more than 180 vehicle models – including the all-aluminum Range Rover and new aluminum-intensive Ford F-150 – and are fundamentally changing the automotive industry by enabling new levels of effectiveness and efficiency. And as Novelis progresses toward our 80% recycled inputs target, we are dramatically lowering the carbon footprint of our – and our customers' – products.

### Industry-Leading Research & Innovation

In partnership with our customers, Novelis has developed a comprehensive, leading-edge automotive technology package. And recently we've taken it a step further with an exciting technology for the use of tailored welding with aluminum for the auto industry – a potential game-changer because it will enable carmakers to substitute tailored aluminum blanks for body parts and structural components, eliminating reinforcements and overlapping joints. This change has numerous benefits – it reduces material use and weight, improves crash performance and cuts both costs and CO<sub>2</sub> emissions.

### Unmatched Global Capacity

We are aggressively increasing our capacity to meet the growing demand for automotive sheet and positioning our operational footprint to be the only company in our industry serving auto manufacturers on three continents – including the world's first aluminum automotive sheet facility in China, which began commissioning in July 2014. With recent investments of more than \$550 million, Novelis will triple its automotive sheet capacity by 2015.



# We're Creating...

## Lighter, More Fuel-Efficient & Safer Vehicles

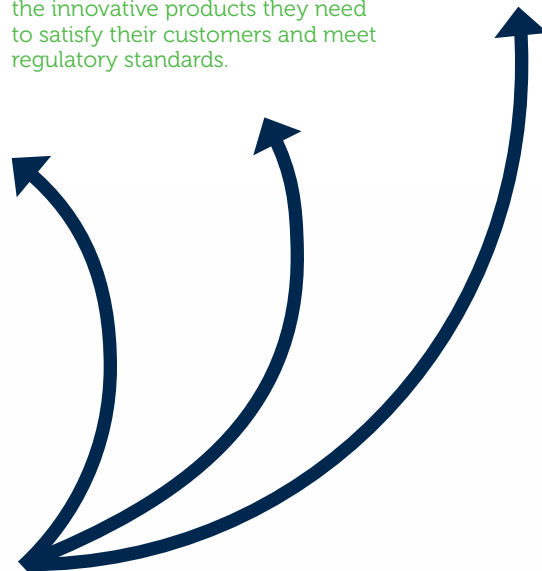
Every 10% reduction in vehicle weight results in 5–7% fuel savings, so automobiles made from aluminum offer better fuel efficiency, without compromising size or performance. The all-aluminum-bodied Range Rover, for example, is 420 kg lighter than the previous model – while its CO<sub>2</sub> emissions have gone from 253 g/km to 196 g/km. Not only is aluminum light, it's also strong: Aluminum absorbs more energy per kilogram than steel. That means aluminum structural components offer equivalent – or superior – safety performance compared to traditional steel designs.

## Business Growth & Customer Value

Expansion of our leadership in the automotive sector is a cornerstone of Novelis' aggressive growth plans. We expect our business in the automotive sector to grow from 9% of our portfolio today to approximately 25% by 2020. We are also providing value to our auto customers by designing and delivering the innovative products they need to satisfy their customers and meet regulatory standards.

## Closed-Loop Arrangements

We're creating closed-loop arrangements with our auto customers through which we buy back their production scrap aluminum. The benefits in supply chain management efficiencies – as well as the reduced carbon footprint – of these arrangements are tremendous. We're also developing new, more easily recycled alloys for automotive applications and leveraging higher-recycled-content materials to close the loop even further.



For vehicles produced in North America, by 2025:

**7 in 10**

new pickups will have an all-aluminum body

**46%**

Aluminum penetration in doors will reach **46%**

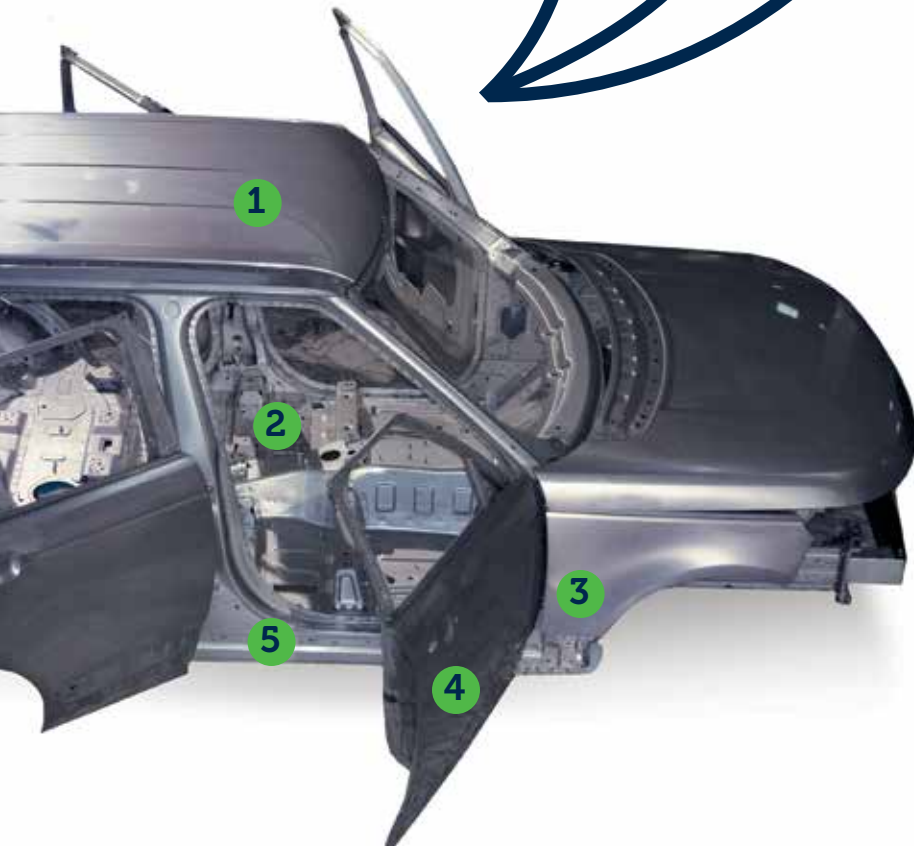
**85%**

Aluminum penetration in hoods will reach **85%**

**18%**

Aluminum penetration in complete bodies will reach **18%**

Source: Ducker Worldwide, "2015 North American Light Vehicle Aluminum Content Study"



### Aluminum Applications in Vehicles

After decades of using aluminum for components such as doors and hoods, automakers are now going a step further by introducing all-aluminum vehicles. Key applications for aluminum in cars include:

- 1** Body-in-White or Complete Vehicle Body
- 2** Structural Components
- 3** Body Panels and Side Walls
- 4** Doors, Hoods and Trunks
- 5** Car Trims and Sealings

Photo: Credit JLR

# Sector Focus: Beverage Can

In an ever more carbon- and resource-constrained world, aluminum beverage cans offer many sustainability advantages over other materials. Their light weight cuts down on the energy required to ship them. They are also 100% recyclable; used beverage cans are melted down and turned into a new can inexpensively and efficiently, with a “can-to-can” cycle of about 60 days. It’s a good start – but Novelis is not content to stop there. That’s why we are working to re-engineer a 100% recyclable, up to 100% recycled aluminum can of the future.



## Bringing evercan™ to Store Shelves

In 2014, Red Hare Brewing Company announced it would package its craft beer exclusively in cans made of Novelis’ evercan aluminum sheet, marking the commercial debut of evercan, the world’s first independently certified, high-recycled-content aluminum sheet for beverage cans. Red Hare, based in Georgia, is one of the fastest-growing micro-breweries in the United States. The company selected evercan aluminum as part of its commitment to reduce its environmental footprint, while preserving the freshness and enhancing the taste of its beer.

“Novelis’ evercan is a perfect fit for Red Hare,” noted Roger Davis, founder and CEO of Red Hare. “The independent certification of the closed-loop recycling process behind evercan strengthens our commitment to employing the best in sustainable business practices, making evercan a natural extension of the Red Hare brand.”

Red Hare was the first craft brewery in Georgia to package its products in aluminum cans, following a trend in the micro-brewery industry to move from bottles to cans as a way to expand distribution and appeal to consumers. Nearly 400 craft brewers in nearly every state in the United States are canning more than 1,300 different beers.

## We’re Adding...

### Innovation & Technological Expertise

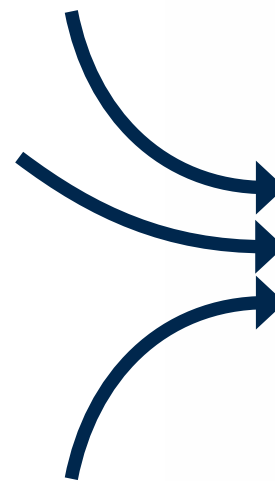
While aluminum cans are something many take for granted, for Novelis they are the subject of ongoing technical refinement and innovation. We deliver industry-leading technological expertise and facilities via our applied can technology laboratories around the world. And our own can pilot line at our Global Research & Technology Center has been invaluable in enabling us to quickly and efficiently develop and test customized solutions for customers.

### The World’s Largest Recycling Network

Novelis is not only the world’s largest producer of beverage can sheet, but also the world’s largest recycler of aluminum beverage cans. We recycle approximately 50 billion UBCs per year. Novelis operates aluminum beverage can recycling facilities on four continents and drives increased recycling of cans across the globe. Our recycling efforts are a key part of achieving our goal of using 80% recycled inputs by 2020 – and helping close the loop in the aluminum can market.

### Consumer Insights

In 2014, we commissioned consumer market research, in partnership with Forum for the Future, to help us refine our understanding of consumer views regarding recycled content in consumer products. The research showed that consumers react positively toward companies that use sustainable packaging, and they would consider switching to a comparable brand that offered a more sustainable option (see p. 68).





# We're Creating...

## A Smaller Carbon Footprint for Our Customers

Like Novelis, our beverage can customers are actively working to reduce the carbon footprint of their products. As we implement our recycling strategy, we are dramatically reducing the carbon footprint of not only our products, but our customers' products as well. And the impact is significant: At our target of 80% recycled content and high end-of-life recycling, our can sheet will generate 2.5 metric tons of CO<sub>2</sub> per metric ton of product – 75% less CO<sub>2</sub> than if there were no recycling.

## Solutions to Improve Today's Can

We are continually working to improve the design, profile and attributes of today's aluminum can. For example, we are exploring opportunities to further "down-gauge," meaning use less material, while maintaining or improving performance. We also worked with our customers to develop a laminate can-end coating that takes significantly less energy to produce than the traditional liquid coatings. And we are focused on innovations to secure – and expand – the future success of aluminum cans, such as re-sealable aluminum bottles.

## Tomorrow's Ultimate Sustainable Package

With the introduction of the first generation evercan™ – independently certified can body sheet to be made of at least 90% recycled material – Novelis has taken a critical step toward our ultimate goal: a can made with up to 100% recycled material. We will progress our alloy development, can design and recycling capability to enable this.



## 23 million metric tons

reduction in GHG emissions for can production globally if all cans were made from 100% recycled aluminum, instead of the current average of about 50% – equivalent to eliminating the emissions from more than 4.4 million automobiles every year

### Reinventing the Aluminum Can with evercan™

Aluminum beverage cans are already 100% recyclable, but to fully close the loop they need to be made from 100% recycled content – a technical challenge that requires evolving the design specifications of today's can. Novelis has been hard at work doing just that. Our recently launched evercan aluminum beverage can sheet is:

- The world's first independently certified, high-recycled-content aluminum beverage can sheet – certified by SCS Global Services, a trusted leader in environmental, sustainability and food quality certification, auditing, testing and standards development.
- Certified to contain at least 90% recycled content – the highest guaranteed recycled content aluminum can sheet available today – which, when combined with the can ends during the can-making process, enables the creation of a beverage container containing a minimum of 70% recycled aluminum.
- Industry standard aluminum can body sheet – meets all current beverage can-making requirements – that helps our beverage can customers and their supply chain partners lower their carbon footprints, and enables environmentally conscious consumers to purchase low-carbon-footprint products.

# Sector Focus: Specialties

Novelis' Specialties group has a diverse portfolio that includes consumer electronics, architecture and building materials, industrial equipment and more. Across all these markets, demand for aluminum is increasing, driven by a variety of factors – not least of which is sustainability. Electronics manufacturers, for example, value aluminum's light weight, recyclability and recycled content – especially important where there are product take-back laws. In architecture and building, aluminum enables architects to bring innovative designs to life, while also improving the durability and efficiency of buildings and increasing recycled content – a key requirement for achieving many "green building" certifications.

## Creating a Carbon-Neutral City

Sønderborg, Denmark, has set a goal of becoming a CO<sub>2</sub>-neutral city – and Novelis aluminum is going to help the city achieve it. As part of the effort, renowned architect Frank Gehry designed the new "Kontor C" office building, which features a 4,000-square-meter façade made from Novelis pre-painted aluminum ff2®. The material was chosen based on its 100% recyclability, durability and recycled content. Compared to other metals, Novelis' ff2 aluminum is easy for architects and builders to use due to its excellent workability and mechanical properties. Novelis is proud to have created such a reliable and environmentally friendly material that is making its mark on sustainable cities around the world.

## We're Adding...

### Innovations in Design and Applications

Our technical group works closely with our specialties customers to design aluminum components that can be substituted for parts previously made of other materials – helping improve performance and durability and reduce weight. In 2014, for example, we debuted new high-strength aluminum sandwich panels – commonly used for exterior building walls and roofs – that weigh only one-third as much as steel and resist corrosion and discoloration.

### Life Cycle Thinking

We are innovating to provide our customers with aluminum for their products made with alloys containing more recycled content – and that are more easily recycled at the product's end of life. For example, we have begun testing a new design that will enable us to increase the use of recycled inputs from 25% to 80% in a range of applications, from electronics to architecture, while still meeting our customers' alloy specifications.

## We're Creating...

### More Sustainable Products

We're helping customers make their products lighter, not only by substituting aluminum for other materials, but also by downgauging the aluminum we provide – meaning we use less material, with no sacrifice to performance. And with aluminum's recyclability – and Novelis' ever-increasing use of recycled content – we are providing our customers with products that have a lower carbon footprint, use less energy to transport, take fewer resources to produce, and create less waste at the end of their life.

### Safer Products

We are researching ways to make products safer, such as finding alternatives to materials identified as potentially hazardous that are used in food contact aluminum applications. For example, we developed an alternative to BPA, a substance found in coatings and banned in France starting in 2015, to coat our finished food serving trays and lids. We commercialized this new technology, which was then adopted by Air France for use in their food trays.

Photo: Novelis shines at 2014 Olympics in Sochi, Russia.



# Consumers

We are working to increase post-consumer aluminum recycling rates through consumer education and advocacy for robust recycling systems. We also seek to better understand consumer viewpoints about sustainability.

For every ton of aluminum that replaces traditional metal in a vehicle, consumers save

## 20 metric tons CO<sub>2</sub>

over the lifetime of the car

## We're Adding...

### A Commitment to Improving Recycling Infrastructure

We are developing tailored strategies – in partnership with customers, municipalities and other stakeholders – that address gaps in recycling infrastructure in key markets.

### More Low-Carbon Aluminum

We're providing our customers with high-recycled-content aluminum, which ultimately gives consumers more environmentally friendly product options.

### Post-Consumer Recycling Capacity

We operate state-of-the-art collection and recycling centers in Vietnam, the U.K. and Brazil, to help increase the processing of post-consumer used beverage cans.

## We're Creating...

### Deeper Insight into Consumer Viewpoints

We have commissioned market research to help us assess support for recycled content in consumer products – knowledge that is useful for both our own business and that of our customers.

### Reduced Consumer Impacts on the Environment

By buying products that have a lower carbon footprint, consumers' own impacts on the environment are reduced.

### More Informed Consumers

Through sponsorship of consumer education programs, we're raising awareness of the critical importance of recycling and the infinite recyclability of aluminum.



# Engaging with Consumers

While Novelis does not sell products directly to consumers, we nonetheless engage with consumers in a number of ways. For instance, we work to gain insight into consumer viewpoints about sustainability and recycling, and to educate consumers about the importance of recycling. We also support efforts to make post-consumer aluminum recycling easy and convenient, since such recycling is essential to our efforts to “close the loop” on the aluminum life cycle.

## Consumer Viewpoints on Sustainability

“Green” products are big business these days. More and more, consumers are considering the sustainability attributes of the products they buy. In response, companies across sectors are increasingly touting the environmental benefits of their offerings. At Novelis, we are actively helping these companies, which are our customers, to create products that are more sustainable. This is a natural fit for us, as aluminum – and in particular, low-carbon, high-recycled-content aluminum – offers a number of environmental benefits compared to alternative materials.

To succeed in this realm, we know we must listen to what consumers want and need and find ways to meet those needs. In early 2014, we commissioned market research of consumers and key stakeholders to help us refine our understanding of their views regarding recycled content in consumer products. The research was undertaken by Forum for the Future, a sustainable development NGO. This research was part of a broader collaboration between Forum for the Future and Novelis that is exploring how to take sustainable disruptive innovation to scale.

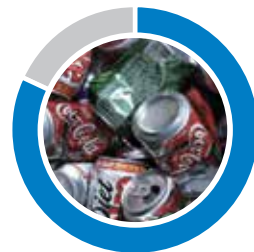
The project involved desk research, stakeholder interviews, focus groups and a quantitative survey. The researchers surveyed more than 3,000 canned drink purchasers in the United States, United Kingdom and Poland, for instance, and interviewed 12 expert stakeholders in the United States and United Kingdom from major retailers, NGOs and other organizations (see Figure 20).

Figure 20: Consumer Research Findings



**68%**

of respondents agreed that if taste and price were the same, they would consider switching to another drink/beverage brand that had a better environmental impact.



**82%**

of respondents agreed that companies should increase the amount of recycled material in packaging.



**75%**

of respondents agreed that companies should make it easier for consumers to help the environment.

Source: Commissioned survey of 3,000+ individuals in the U.S., U.K. and Poland by Madano Partnership, in conjunction with Forum for the Future consumer research

### Taken together, our consumer research efforts yielded the following key findings, among others:

- Sustainability does influence consumer choice at the grocery store, and people want to get involved in corporate sustainability efforts.
- People react positively toward companies that use sustainable packaging, and they would consider switching to a comparable brand that offered a more sustainable option.
- However, consumers are bombarded with environmental messages, so brands must convey information about the issues as well as the expected individual and collective impact.
- Waste reduction is an important issue for consumers, and people increasingly say they are prepared to switch or boycott brands that behave irresponsibly.
- Consumers see recycling as a shared responsibility among themselves, governments and beverage companies.
- For many of these reasons, the high-recycled-content evercan™ innovation was appealing to consumers in all the countries where the research took place.

We found these findings insightful and useful, especially as they are supportive of our efforts to increase the recycled aluminum content and offer high-recycled-content products such as evercan™. Forum for the Future produced a downloadable, public-facing report summarizing the key findings from this research; search for “Scaling Disruptive Innovation in Sustainable Packaging” at the following website: [www.forumforthefuture.org](http://www.forumforthefuture.org).

## Increasing Post-Consumer Recycling

Consumer behavior helps to determine how much aluminum makes it back into the recycling stream and how much ends up in landfill. That’s why we work to make recycling easy and convenient and support programs that educate consumers about the importance of recycling.

### Why Post-Consumer Recycling is Important

As discussed in the Sourcing section (see p. 23), we are making significant efforts to increase the amount of scrap aluminum we buy and process, so we can achieve 80% recycled inputs. At present, post-consumer recycled aluminum accounts for about 67% of our total scrap inputs. And the majority of that post-consumer material is used beverage containers (UBCs) – i.e., aluminum cans.

UBCs are the world’s most-recycled beverage containers, and Novelis is the lead recycler of UBCs in the world. We currently process about 50 billion cans a year, and we expect that our global consumption of UBCs needs to grow to more than 60 billion cans in the coming years. Securing that volume of UBCs, however, depends on increasing post-consumer recycling rates.

UBC recycling rates around the world vary significantly. Although the global average is around 70%, we estimate that only about 51% of UBCs in the United States are recycled, compared to 68% in Western Europe and 98% in Brazil. These differences stem from the

fact that recycling policy, consumer motivation and infrastructure are often local in nature. In many areas, well-developed systems exist for collecting, sorting and processing aluminum cans. Elsewhere, systems are less developed, more fragmented or more limited. Also, UBC recycling services may be provided by government agencies, by the private sector or by public–private partnerships, depending on location.

While UBCs will remain the primary source of post-consumer material we purchase, we are also working to buy and process more of other types of post-consumer aluminum as well – for example, aluminum from automotive and electronic products. Electronics collection and recycling systems are often not as well developed as UBC systems, and are also variable among locales and regions. In the longer term, we will be seeking to grow the take-back of aluminum from high-aluminum-content vehicles that have reached the end of their useful lives.

Clearly, there is no one-size-fits-all approach to developing and expanding the collection and recycling of various types of post-consumer aluminum, and it is challenging for a single company like Novelis to drive large-scale change. That’s why we seek to develop tailored strategies – in partnership with customers, municipalities and other stakeholders – that address important gaps in key locations.

Figure 21: Recycling Opportunities for Consumers



## Making Recycling Convenient

We are strong advocates for the expansion of recycling infrastructure – and increasingly we are directly creating that infrastructure ourselves. We now operate a recycling center in Ho Chi Minh City, Vietnam, to handle the procurement, cleaning and baling of UBCs in that country. And in Brazil, we operate seven scrap collection centers to help us increase our supply of material for recycling in that country. In both of these countries, we buy aluminum directly from many small community and

micro-enterprise collectors, not just from large, third-party traders (see p. 27). We have plans to open two new scrap collection centers each year, in other regions, for the next several years.

We also support efficient post-consumer recycling policy and infrastructure development appropriate to local needs. In addition, we are involved in several programs that seek to boost recycling through improved collection and infrastructure, including the following:

### Every Can Counts

This initiative in Europe, sponsored by Novelis and other supply chain stakeholders, focuses on increasing away-from-home recycling by providing more than 11,500 recycling collection points at businesses, schools, concerts and sporting events. Since its founding in 2009, Every Can Counts has worked with more than 1,500 organizations to start up and promote beverage can recycling for their staffs and customers. The program launched initially in the United Kingdom and is now active in seven European countries.

Recently, Every Can Counts developed an easy-to-use tool that illustrates the energy savings created by aluminum can recycling. The “Can-culator” works out how many beverage cans could be recycled in a year at a given workplace or school (based on the number of employees or students), and then shows how long a PC or a light bulb could run on that saved energy (see [everycancounts.co.uk/canculator](http://everycancounts.co.uk/canculator)).

### Curbside Value Partnership

In the United States we are an active member and funder of the Curbside Value Partnership (CVP), a nonprofit that seeks to increase household participation in curbside recycling programs by consulting with communities and carrying out education and data analysis.

The CVP has worked with 31 communities and four states since its creation in 2005, and these communities have seen an average 23% increase in recycling volume and 18% increase in participation as a result. Currently, the CVP is focused on helping communities switch from recycling bins to larger rolling carts, which are expected to increase recycling rates (because people won't stop recycling when the bin gets full).



## Educating Consumers

We organize and support recycling-related consumer education and awareness efforts in locations around the world – particularly where recycling rates are relatively lower.

### United Kingdom

#### ThinkCans Program

Our ThinkCans program has promoted education and awareness over the past decade about aluminum can recycling at work, home, school and charities. The Cash for Cans aspect of the program (which was actually set up earlier, in 1991) provides the recycling bins and educational leaflets needed for schools and charities to run can drives, and then pays the organizations for the cans collected.

#### MetalMatters

A recycling education program called MetalMatters has reached more than 2.4 million households since it launched in 2009. MetalMatters' educational campaigns focus on "transformation" – that is, the fact that metal packaging can be endlessly recycled into a wide variety of products. Funded and supported by Novelis and other industry partners, MetalMatters campaigns have increased recycling rates in every community in which they have run.

### South Korea

#### Greenbiz Camp

In South Korea, Novelis Korea held a "Greenbiz Camp" in 2013. This three-day camp educated 50 elementary-aged children about recycling and sustainability. See the Manufacturing section (p. 58) for more on this program.



### United States



#### One More Generation

We also partner with a unique Atlanta-based environmental organization called One More Generation (OMG). Started by two pre-teens, OMG developed a week-long curriculum for elementary-aged children about the importance of recycling. OMG delivers the curriculum itself and, through funding from Novelis, also developed a guide that allows teachers to deliver it. While the materials originally focused on plastics recycling, Novelis worked with OMG to incorporate information about the critical need to recycle aluminum as well. The OMG founders have given their recycling presentation to thousands of students, parents and teachers across the United States, and now have plans in place to expand internationally – first to the United Kingdom.

#### Atlanta Falcons

As the "Official Recycling Partner" of the Atlanta Falcons professional football team, Novelis sponsors messaging at Falcons' games that educates fans about the importance of recycling. Novelis also partners with the Falcons to sponsor a Green Team Ambassadors contest with local schools. More than 50 schools participated in the four-month Green Team Ambassadors contest in 2013, all agreeing to promote the recycling of aluminum cans.



#### The Great American Can Roundup School Challenge

Through our membership in the Can Manufacturers Institute, we help to sponsor the Great American Can Roundup School Challenge. This competition – which awards monetary prizes to schools in each U.S. state that collect the most beverage cans – educates students about the importance and benefits of recycling cans. In 2013, more than 1,000 schools competed in the contest, ultimately diverting more than 200,000 pounds of aluminum cans from landfills.

# Product Safety and Health

At Novelis, we work to ensure that our products meet high standards of safety and quality for our customers, and, in turn, for the consumers of their end products.

We comply with the rigorous safety requirements of our automotive customers. And for some food and beverage applications, we certify that we meet demanding regulatory consumer safety requirements. All scientific evaluations to date, produced by internationally respected organizations, have found aluminum to be safe for use in the full range of its current applications.

Aluminum is present in various chemical forms in rocks, soil and vegetation, and is found naturally in most water supplies. As a result, humans regularly ingest it. However, the body has highly effective barriers to exclude aluminum and similar metals, and in healthy individuals, the kidneys quickly excrete most of the absorbed aluminum. Patients with severe kidney problems, including those on dialysis treatment, often face problems, including the inability to excrete absorbed aluminum. The use of modern aluminum-free dialysate solutions now prevents “dialysis dementia.”

Acute dialysis dementia described in the early days of renal dialysis has no connection with Alzheimer’s disease. In 1997, a task group under the auspices of the World Health Organization and the United Nations Environment Programme concluded that no evidence exists to support the premise that aluminum causes, exacerbates or accelerates Alzheimer’s disease.

Bisphenol A (BPA) is a basic building block of the resins used in epoxy coatings that serve as protective linings for metal packaging as well as many plastic products. Coatings containing BPA are currently found in almost all aluminum and steel beverage cans. Regulatory agencies in the U.S., Canada, Europe, Japan, Australia and New Zealand have stated that scientific evidence has consistently shown that these coatings are safe. In March 2012, the United States Food and Drug Administration said that no compelling scientific evidence exists to justify new restrictions on BPA. Also, a report by Health Canada concluded that the average adult would have to consume 940 canned beverages in a single day to approach the “tolerable daily intake” level of BPA exposure.

Novelis recognizes, however, that some consumers have become concerned about potential health hazards associated with BPA. And, some governments have begun to regulate the use of BPA in certain products (e.g., plastic baby bottles), and they are considering the regulation of BPA in other products. In early 2013, for example, the state of California held a consultation on whether to add BPA to a list of what it considers to be potentially harmful chemicals. The French government has taken a more aggressive approach: Beginning in January 2015, it will prohibit the manufacture, import, export and commercialization of all food and beverage packaging using BPA.

As a result of consumer concerns and these types of emerging regulations, Novelis has been actively working to develop sustainable alternatives to the current BPA-based epoxy coatings. Because we are but one link in the long beverage packaging supply chain, we are collaborating with coating suppliers, can makers and beverage companies to research and develop solutions, whether new coatings or other potential alternatives to BPA, for our customers. As discussed on p. 64, our can pilot line has proven particularly useful in enabling us to test BPA alternatives for our customers in real-world manufacturing conditions.

The work to find alternatives is complicated by the fact that each region in the world has somewhat different requirements for coatings based upon government regulations, customer preferences and the types of beverages sold. In Asia and the Middle East, for instance, many beverages must undergo a “retort” (mild pasteurization) process, which creates an additional demand on the coating. In North and South America, press speeds are quite fast, so the coating must exhibit superior forming and toughness characteristics. At present, several BPA coating alternatives for cans meeting these various regional requirements are relatively far along in development and are being evaluated in market trials and assessed for regulatory approval.



# About This Report

This is Novelis' fourth annual sustainability report, published in the fall of 2014.

## Scope and Boundaries

This report was prepared in accordance with the principles of materiality (see p. 16), as well as completeness, balance, comparability, accuracy, reliability, timeliness and clarity. We applied quality principles to its data collection and reporting process, and used Global Reporting Initiative reporting principles (see p. 74) in compiling the data.

The report focuses on our most material impacts and opportunities – those that are of most importance to our company and our stakeholders. These issues are either currently affecting, or will affect, our business activities, and Novelis has some level of indirect or direct influence over them (see p. 17).

This report covers all Novelis Inc. divisions, subsidiaries and legal entities in the nine countries in which we are present. It includes our joint ventures. We have included 50% of the Alunorf joint venture in Germany where we have 50% of plant output, and 55% of the Logan facility in the United States, where we own 40% of outstanding common shares, but receive 55% of plant output due to equipment investments. The financial and environmental data results for these operations are included in our companywide data in this report at these percentages. For the operations in Korea and Malaysia, we report operational data at 100%. In Korea, we hold an approximate 100% equity interest in the Ulsan and Yeongju plants. We hold a 59% equity interest in the Aluminum Company of Malaysia Berhad, a publicly traded company that operates from Bukit Raja, Selangor, Malaysia. Unlike our production-sharing joint ventures at Alunorf and Logan, we market 100% of the Korean and Malaysian plants' output.

The full Global Reporting Initiative (GRI) content index lists details of organizational changes that could affect the future year-on-year comparability of data, where applicable. Data measurement techniques and the bases of calculations, if relevant, are noted with the data graphics and tables. In some cases, the data may have changed slightly since our last report due to the following: improved processes for calculations, estimations, conversion factors, reporting periods (calendar year to fiscal year), or improved methodologies (e.g., tracking actual numbers instead of using estimates). For example, our baseline average for our landfilled waste target has been updated the past two years due to an effort to better track and improve our estimation of the amount of waste from dross processing that is ultimately landfilled. Also note, some data points (e.g., percent reductions of environmental metrics) may not appear to calculate correctly, but this is due to rounding.

## Reporting Period

The primary financial and environmental data and information contained in this report cover the period from April 1, 2013, to March 31, 2014, which is Novelis' 2014 fiscal year (FY14). Additional relevant baseline data or context from preceding years is included where specified.

## Assurance

We did not seek third-party assurance of this report; however, we systematically gathered our data with future assurance in mind. Some of the data we disclose has undergone various forms of internal and third-party verification. For example, most financial data was derived from financial statements included in the Annual Report on Form 10-K (see p.67 of the Form 10-K), and some environmental data was reported to regulatory authorities. In addition, the third-party environmental and sustainability certifier SCS Global Services, Inc., certified the recycled content for evercan™.

# The Global Reporting Initiative Index

We have aligned this report to conform to the Global Reporting Initiative (GRI) G4 Sustainability Reporting Guidelines at the Comprehensive level. Novelis received a GRI 'Materiality Matters' check for this report, which verifies that, at the time of publication of the G4 Guidelines-based report, General Standard Disclosures G4-17 to G4-27 were correctly located in both the Content Index and in the text of the final report. During FY14, we still owned mining rights in the Ouro Preto region of Brazil, though they were not being utilized. These sites have since been divested.

As such, Novelis has consulted the G4 Mining and Metals Sector Disclosures and has responded where they are applicable to our operations in FY14. We have included an abbreviated GRI Content Index on the following pages, to help readers easily locate information on indicators spelled out in the GRI guidelines. Supplemental data and other information on our performance against the GRI's criteria can be found in the complete GRI Content Index on our website at [novelis.com/sustainability](http://novelis.com/sustainability). We discuss our approach to external assurance for this report on page 73.

## GRI Index in Accordance with Comprehensive G4 Guidelines

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### General Standard Disclosures

#### Strategy and Analysis

G4 Indicator	Report Section or Location	Page	Omission / Assurance
G4-1	Letter from Our Chief Executive Officer	4–5	○
G4-2	Letter from Our Chief Executive Officer	4–5	○
	Performance Summary	6	
	Strategy	9–22	
	Novelis FY14 10-K	16–24	

#### Organizational Profile

G4 Indicator	Report Section or Location	Page	Omission / Assurance
G4-3	About Novelis	7–8	○
G4-4	About Novelis	7–8	○
	Where Novelis Aluminum is Used	8	
	Corporate website: <a href="#">Who We Are</a>		
G4-5	About Novelis	7–8	○
G4-6	About Novelis	7–8	○
	Novelis FY14 10-K	10–11; 25–28	
	Full GRI Index		
G4-7	Full GRI Index		○
	About Novelis Sustainability Management and Governance	7–8 21	
G4-8	About Novelis	7–8	○
	Where Novelis Aluminum is Used	8	
	Customers	60–66	

#### Organizational Profile **continued...**

G4 Indicator	Report Section or Location	Page	Omission / Assurance
G4-9	About Novelis	7–8	●
	Full GRI Index	Appendix A	
	Corporate website: <a href="#">Investors</a> Novelis FY14 10-K		
G4-10	Full GRI Index	Appendix B	○
G4-11	Employee Engagement	47	○
G4-12	Re-engineering Our Supply Chain	24–29	○
G4-13	Positioning Novelis to Meet Growing Demand	12	○
	Full GRI Index Novelis FY14 10-K	38–39	
G4-14	Full GRI Index		○
G4-15	Stakeholder Engagement	18–20	○
	Responsible Sourcing	29	
	Full GRI Index		

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## Identified Material Aspects and Boundaries

G4 Indicator	Report Section or Location	Page	Omission / Assurance
G4-16	Stakeholder Engagement Full GRI Index	18–20	○
G4-17	Full GRI Index About Novelis Scope and Boundaries Novelis FY14 10-K	7–8 73	○
G4-18	Materiality Stakeholder Engagement Full GRI Index	16–17 18–20	○
G4-19	Materiality	16–17	○
G4-20	Materiality Scope and Boundaries Reporting Period	16–17 73 73	○
G4-21	Materiality Scope and Boundaries Reporting Period	16–17 73 73	○
G4-22	Reporting Period Scope and Boundaries	73 73	○
G4-23	Reporting Period	73	○

## Stakeholder Engagement

G4 Indicator	Report Section or Location	Page	Omission / Assurance
G4-24	Stakeholder Engagement	18–20	○
G4-25	Stakeholder Engagement	18–20	○
G4-26	Stakeholder Engagement	18–20	○
G4-27	Stakeholder Engagement	18–20	○

## Report Profile

G4 Indicator	Report Section or Location	Page	Omission / Assurance
G4-28	Reporting Period	73	○
G4-29	Full GRI Index		○
G4-30	Full GRI Index Reporting Period	73	○
G4-31	Report Back Cover		○
G4-32	GRI Index	74–80	○
G4-33	Assurance	73	○

## Governance

G4 Indicator	Report Section or Location	Page	Omission / Assurance
G4-34	Sustainability Management and Governance Full GRI Index Corporate Website: Executive Officers Corporate Website: Board of Directors Novelis FY14 10-K	21–22    139–143	○
G4-35	Sustainability Management and Governance Our Environment, Health, Safety and Quality Management Systems Full GRI Index	21–22 32–33	○
G4-36	Sustainability Advisory Council Sustainability Management and Governance	19 21–22	○
G4-37	Stakeholder Engagement Sustainability Advisory Council Engaging on Policy Full GRI Index	18–20 19 19	○
G4-38	Sustainability Management and Governance Full GRI Index Corporate Website: Executive Officers Corporate Website: Board of Directors Novelis FY14 10-K	21–22    139–143	○
G4-39	Full GRI Index		○
G4-40	Full GRI Index Novelis FY14 10-K	139–143	○
G4-41	Full GRI Index Corporate Website: Code of Conduct Corporate Website: Code of Ethics		○
G4-42	Sustainability Management and Governance Full GRI Index	21–22	○
G4-43	Full GRI Index		○
G4-44	Full GRI Index		○
G4-45	Full GRI Index Novelis FY14 10-K	139–143	○

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## ➔ Governance **continued...**

G4 Indicator	Report Section or Location	Page	Omission / Assurance
G4-46	Full GRI Index <a href="#">Novelis FY14 10-K</a>	139–143	○
G4-47	Full GRI Index		○
G4-48	Sustainability Management and Governance Full GRI Index	21–22	○
G4-49	Full GRI Index		○
G4-50	Full GRI Index		○
G4-51	Full GRI Index <a href="#">Novelis FY14 10-K</a>	143–147	○
G4-52	Full GRI Index <a href="#">Novelis FY14 10-K</a>	143–147	○
G4-53	Full GRI Index See response to G4-51 <a href="#">Novelis FY14 10-K</a>	143–147	○
G4-54	-	Data is confidential	
G4-55	-	Data is confidential	

## Ethics and Integrity

G4 Indicator	Report Section or Location	Page	Omission / Assurance
G4-56	Sustainability Management and Governance Employee Code of Conduct and Human Rights <a href="#">Corporate Website: Code of Conduct</a> <a href="#">Corporate Website: Code of Ethics</a> Full GRI Index	21–22 51	○
G4-57	Sustainability Management and Governance Employee Code of Conduct and Human Rights <a href="#">Corporate Website: Code of Conduct</a> <a href="#">Corporate Website: Code of Ethics</a> Full GRI Index	21–22 51	○
G4-58	Full GRI Index		○

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## Specific Standard Disclosures

### Economic

G4 Indicator	Report Section or Location	Page	Omission / Assurance
<b>Aspect: Economic Performance</b>			
DMA	Performance Summary	6	○
	About Novelis	7–8	
	Sustainability Management and Governance	21–22	
G4-EC1	About Novelis	7–8	● See assurance statement, page 73
	Novelis' Charitable Investments	59	
	<a href="#">Novelis FY14 10-K</a>	4, 9, 35, 37, 48	
	Full GRI Index		
G4-EC2	CEO Letter	4–5	○
	Drivers of Demand for Our Products	11	
	Engaging on Policy	19	
	Greenhouse Gas Emissions	34–36	
	Energy Use	36–39	
	Full GRI Index		
G4-EC3	Full GRI Index		○
	<a href="#">Novelis FY14 10-K</a>	20, 54, 78, 147	
G4-EC4	Full GRI Index		○
<b>Aspect: Market Presence</b>		<b>Aspect did not meet threshold for materiality</b>	
<b>Aspect: Indirect Economic Impacts</b>		<b>Aspect did not meet threshold for materiality</b>	
<b>Aspect: Procurement Practices</b>		<b>Aspect did not meet threshold for materiality</b>	

### Environmental

<b>Aspect: Materials</b>			
DMA	Pioneering a New Way of Doing Business	10	○
	Sustainability Management and Governance	21–22	
	Sourcing	23–29	
	Full GRI Index		
G4-EN1	Full GRI Index		○
G4-EN2	Re-engineering Our Supply Chain	24–29	○
	Full GRI Index		
<b>Aspect: Energy</b>			
DMA	In partnership with the World Wildlife Fund	20	○
	Sustainability Management and Governance	21–22	
	Our Environment, Health, Safety and Quality Management Systems	32–33	
	Energy Use	36–39	
	Full GRI Index		
	Full GRI Index		

### Environmental continued...

G4 Indicator	Report Section or Location	Page	Omission / Assurance
G4-EN3	Energy Use	36–39	○
	Full GRI Index		
G4-EN4	Greenhouse Gas Emissions	34–36	○
	Energy Use	36–39	
	Full GRI Index		
G4-EN5	Energy Use	36–39	○
	Full GRI Index		
G4-EN6	Pioneering a New Way of Doing Business	10	○
	Energy Use	36–39	
	Full GRI Index		
G4-EN7	Energy Use	36–39	○
	Customers	60–66	
	Full GRI Index		
<b>Aspect: Water</b>			
DMA	Sustainability Management and Governance	21–22	○
	Our Environment, Health, Safety and Quality Management Systems	32–33	
	Water Use	40–41	
	Full GRI Index		
G4-EN8	Water Use	40–41	○
G4-EN9	-	Not available: we expect this data to be available in the next 3–5 years	
G4-EN10	Water Use	40–41	○
	Full GRI Index		
<b>Aspect: Biodiversity</b>		<b>Aspect did not meet threshold for materiality</b>	
<b>Aspect: Emissions</b>			
DMA	Sustainability Management and Governance	21–22	○
	Greenhouse Gas Emissions	34–36	
	Non-GHG Air Emissions	45	
	Full GRI Index		
G4-EN15	Greenhouse Gas Emissions	34–36	○
	Full GRI Index		
G4-EN16	Greenhouse Gas Emissions	34–36	○
	Full GRI Index		
G4-EN17	Greenhouse Gas Emissions	34–36	○
	Full GRI Index		
G4-EN18	Greenhouse Gas Emissions	34–36	○
	Full GRI Index		
G4-EN19	Greenhouse Gas Emissions	34–36	○
	Full GRI Index		

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## ➤ Environmental continued...

G4 Indicator	Report Section or Location	Page	Omission / Assurance
G4-EN20	Full GRI Index		○
G4-EN21	Non-GHG Air Emissions	45	○
	Full GRI Index		
<b>Aspect: Effluents and Waste</b>			
DMA	Sustainability Management and Governance	21–22	○
	Our Environment, Health, Safety and Quality Management Systems	32–33	
	Waste to Landfill	42–44	
	Full GRI Index		
G4-EN22	Water Use	40–41	○
	Full GRI Index		
G4-EN23	Waste to Landfill	42–44	○
	Full GRI Index		
G4-EN24	Full GRI Index		○
G4-EN25	Full GRI Index		○
G4-EN26	Full GRI Index		○
<b>Aspect: Products and Services</b>			
DMA	See DMA for Materials and all other Environmental aspect DMAs		○
	Strategy	9–15	
	Sustainability Management and Governance	21–22	
	Customers	60–66	
	Consumers	67–72	
	Full GRI Index		
G4-EN27	Pioneering a New Way of Doing Business	10–15	○
	Sourcing	23–29	
	Our Environmental Performance	33–45	
	Customers	60–66	
	Increasing Post-Consumer Recycling	69–71	
	Full GRI Index		
G4-EN28	Increasing Post-Consumer Recycling	69–71	○
	Full GRI Index		
<b>Aspect: Compliance</b>			
DMA	Sustainability Management and Governance	21–22	○
	Our Environment, Health, Safety and Quality Management Systems	32–33	
	Full GRI Index		
G4-EN29	Full GRI Index		○

## ➤ Environmental continued...

G4 Indicator	Report Section or Location	Page	Omission / Assurance
<b>Aspect: Transport</b>		Aspect did not meet threshold for materiality	
<b>Aspect: Overall</b>		Aspect did not meet threshold for materiality	
<b>Aspect: Supplier Environmental Assessment</b>			
DMA	Sustainability Management and Governance	21–22	○
	Our Supply Chain Impacts and Risks	24–25	
	Responsible Sourcing	29	
	Full GRI Index		
G4-EN32	Full GRI Index		○
G4-EN33	Full GRI Index		○
<b>Aspect: Environmental Grievance Mechanisms</b>		Aspect did not meet threshold for materiality	

## Social – Labor Practices and Decent Work

**Aspect: Employment**

DMA	Sustainability Management and Governance	21–22	○
	Developing Our People	46–51	
	Full GRI Index		
G4-LA1	Full GRI Index		○
G4-LA2	Full GRI Index		○
G4-LA3	-	Per company policy, this information is confidential	

**Aspect: Labor/Management Relations**

DMA	Sustainability Management and Governance	21–22	○
	Employee Engagement	47	
	Full GRI Index		
MM4	Full GRI Index		○
G4-LA4	Full GRI Index		○

**Aspect: Occupational Health & Safety**

DMA	Sustainability Management and Governance	21–22	○
	Our Environment, Health, Safety and Quality Management Systems	32–33	
	Health and Safety	46–47	
	Full GRI Index		
G4-LA5	Our Environment, Health, Safety and Quality Management Systems	32–33	○
	Full GRI Index		
G4-LA6	Health and Safety	46–47	○
	Full GRI Index		
G4-LA7	Full GRI Index		○
G4-LA8	Full GRI Index		○

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## ➤ Labor Practices and Decent Work **continued...**

G4 Indicator	Report Section or Location	Page	Omission / Assurance
<b>Aspect: Training and Education</b>			
DMA	Sustainability Management and Governance	21–22	○
	Employee Evaluations	48	
	Talent Management	49–51	
	Full GRI Index		
G4-LA9	Sharing Global Best Practices	32	○
	Novelis Joins the DOE's Better Plants Program	38	
	How We Are Managing Our Energy Use	38	
	Employee Code of Conduct and Human Rights	51	
	Full GRI Index		
G4-LA10	Employee Evaluations	48	○
	Employee Recognitions	48	
	Talent Management	49–51	
	Full GRI Index		
G4-LA11	Employee Evaluations	48	○
<b>Aspect: Diversity and Equal Opportunity</b>			
DMA	Sustainability Management and Governance	21–22	○
	Investing in Women in the Workforce	51	
	Employee Code of Conduct and Human Rights	51	
	<a href="#">Novelis Code of Conduct</a>		
	<a href="#">Corporate Governance website</a>		
	Full GRI Index		
G4-LA12	Full GRI Index		○
	<a href="#">Corporate Website: Executive Officers</a>		
	<a href="#">Corporate Website: Board of Directors</a>		
	Novelis FY14 10-K	139–143	

## ➤ Labor Practices and Decent Work **continued...**

G4 Indicator	Report Section or Location	Page	Omission / Assurance
<b>Aspect: Equal Remuneration for Women and Men</b>			
DMA	Sustainability Management and Governance	21–22	○
	Investing in Women in the Workforce	51	
	Employee Code of Conduct and Human Rights	51	
	<a href="#">Corporate Governance website</a>		
G4-LA13	-	Per company policy, this information is confidential	
<b>Aspect: Supplier Assessment for Labor Practices</b>			
DMA	Sustainability Management and Governance	21–22	○
	Our Supply Chain Impacts and Risks	24–25	
	Responsible Sourcing	29	
	<a href="#">Novelis Supplier Code of Conduct</a>		
G4-LA14	Full GRI Index		○
G4-LA15	Full GRI Index		○
<b>Aspect: Labor Practices Grievance Mechanisms</b>		<b>Aspect did not meet threshold for materiality</b>	

## Human Rights

Aspect: Investment	Aspect did not meet threshold for materiality
Aspect: Non-Discrimination	Aspect did not meet threshold for materiality
Aspect: Freedom of Association and Collective Bargaining	Aspect did not meet threshold for materiality
Aspect: Child Labor	Aspect did not meet threshold for materiality
Aspect: Forced and Compulsory Labor	Aspect did not meet threshold for materiality
Aspect: Security Practices	Aspect did not meet threshold for materiality
Aspect: Indigenous Rights	Aspect did not meet threshold for materiality
Aspect: Assessment	Aspect did not meet threshold for materiality

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## Human Rights **continued...**

G4 Indicator	Report Section or Location	Page	Omission / Assurance
<b>Aspect: Supplier Human Rights Assessment</b>			
DMA	Sustainability Management and Governance	21–22	○
	Our Supply Chain Impacts and Risks	24–25	
	Responsible Sourcing	29	
	Novelis Supplier Code of Conduct		
	Full GRI Index		
G4-HR10	Responsible Sourcing	29	○
	Full GRI Index		
G4-HR11	Responsible Sourcing	29	○
	Full GRI Index		
<b>Aspect: Human Rights Grievance Mechanisms</b>		<b>Aspect did not meet threshold for materiality</b>	

## Society

<b>Aspect: Local Communities</b>			
DMA	Sustainability Management and Governance	21–22	○
	Engaging with Our Communities	52–59	
	Making Recycling Convenient	70	
	Educating Consumers	71	
	Full GRI Index		
G4-SO1	Engaging with Our Communities	52–59	○
	Engaging with Consumers	67–72	
	Full GRI Index		
G4-SO2	Full GRI Index		○
<b>Aspect: Anti-corruption</b>		<b>Aspect did not meet threshold for materiality</b>	
<b>Aspect: Public Policy</b>			
DMA	Sustainability Management and Governance	21–22	○
	Engaging on Policy	19	
	Full GRI Index		
G4-SO6	Full GRI Index		○
<b>Aspect: Anti-Competitive Behavior</b>		<b>Aspect did not meet threshold for materiality</b>	
<b>Aspect: Compliance</b>		<b>Aspect did not meet threshold for materiality</b>	
<b>Aspect: Supplier Assessment for Impacts on Society</b>			
DMA	Sustainability Management and Governance	21–22	○
	Our Supply Chain Impacts and Risks	24–25	
	Responsible Sourcing	29	
	Full GRI Index		
G4-SO9	Full GRI Index		○
G4-SO10	Full GRI Index		○
<b>Aspect: Grievance Mechanisms for Impacts on Society</b>			

## Product Responsibility

G4 Indicator	Report Section or Location	Page	Omission / Assurance
<b>Aspect: Materials Stewardship</b>			
DMA	Sustainability Management and Governance	21–22	○
	Pioneering a New Way of Doing Business	10	
	Re-Engineering Our Supply Chain	24–25	
	Our Global Recycling Strategy	26–28	
	Waste to Landfill	42–44	
	Increasing Post-Consumer Recycling	69–71	
	Full GRI Index		
<b>Aspect: Customer Health and Safety</b>			
DMA	Sustainability Management and Governance	21–22	○
	Our Environment, Health, Safety and Quality Management Systems	32–33	
	Product Safety and Health	72	
	Full GRI Index		
G4-PR1	Product Safety and Health	72	○
	Full GRI Index		
G4-PR2	Full GRI Index		○
<b>Aspect: Product and Service Labelling</b>		<b>Aspect did not meet threshold for materiality</b>	
<b>Aspect: Marketing Communications</b>		<b>Aspect did not meet threshold for materiality</b>	
<b>Aspect: Customer Privacy</b>		<b>Aspect did not meet threshold for materiality</b>	
<b>Aspect: Compliance</b>		<b>Aspect did not meet threshold for materiality</b>	



# UNGC Communication on Progress Index

As a signatory of the United Nations Global Compact (UNGC), we are committed to upholding the Compact's principles on human rights, labor standards, environment and anti-corruption in our everyday business operations as well as reporting our progress.



## Ten Principles of the UN Global Compact

Principle	References: GRI Index/Other	References: Report Section	Report Page	
<b>HUMAN RIGHTS</b>				
1. Businesses should support and respect the protection of internationally proclaimed human rights; and	Novelis endorses the UNGC, International Labor Organization's Conventions on Human Rights and the Universal Declaration of Human Rights.	CEO Letter	4-5	
	General Standard Disclosures: G4-14, 15, 45, 53, 56, 57	Sustainability Management and Governance	21-22	
	DMAs: Diversity and Equal Opportunity, Equal Remuneration for Women and Men, Supplier Human Rights Assessment	Our Supply Chain Impacts and Risks	24-25	
	Specific Standard Disclosures: G4-HR10, 11 <a href="#">Corporate Governance website</a>	Responsible Sourcing	29	
2. Make sure that they are not complicit in human rights abuses.	General Standard Disclosures: G4-37, 47, 49, 53, 58	CEO Letter	4-5	
	DMAs: Diversity and Equal Opportunity, Equal Remuneration for Women and Men, Supplier Human Rights Assessment	Sustainability Management and Governance	21-22	
	Specific Standard Disclosures: G4-HR10, 11	Responsible Sourcing	29	
	<a href="#">Corporate Governance website</a>	Investing in Women in the Workforce	51	
<b>LABOR</b>	3. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining, and	Employee Code of Conduct and Human Rights	51	
		General Standard Disclosures: G4-14, 15, 37, 45, 47, 49, 58	Sustainability Management and Governance	21-22
		DMAs: Labor/Management Relations	Responsible Sourcing	29
		Specific Standard Disclosures: G4-LA4 <a href="#">Corporate Governance website</a>	Employee Engagement	47
4. The elimination of all forms of forced and compulsory labor,	General Standard Disclosures: G4-14, 15, 45, 53, 56, 57	Employee Code of Conduct and Human Rights	51	
		DMAs: Supplier Assessment for Labor Practices, Supplier Human Rights Assessment	Responsible Sourcing	29
		Specific Standard Disclosures: G4-LA14, 15, HR10, 11	Sustainability Management and Governance	21-22
		<a href="#">Corporate Governance website</a>	Responsible Sourcing	29
5. The effective abolition of child labor,	General Standard Disclosures: G4-14, 15, 45, 53, 56, 57	Employee Code of Conduct and Human Rights	51	
		DMAs: Supplier Assessment for Labor Practices, Supplier Human Rights Assessment	Sustainability Management and Governance	21-22
		Specific Standard Disclosures: G4-LA14, 15, HR10, 11	Responsible Sourcing	29
		<a href="#">Corporate Governance website</a>	Employee Code of Conduct and Human Rights	51

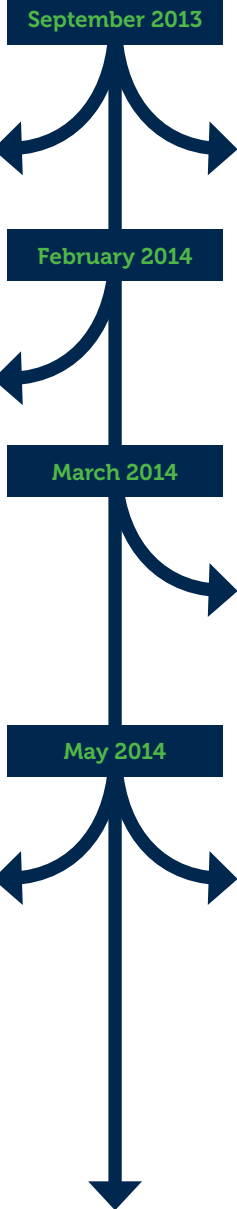
 Ten Principles of the UN Global Compact **continued...**

Principle	References: GRI Index/Other	References: Report Section	Report Page
6. The elimination of discrimination in respect of employment and occupation.	Novelis does not discriminate on the basis of race, religion, national origin, color, sex, age, veteran status, or disability. General Standard Disclosures: G4-14, 15, 45, 53, 56, 57 Specific Standard Disclosures: G4-LA12, 13 DMAs: Diversity and Equal Opportunity, Equal Remuneration for Women and Men, Supplier Assessment for Labor Practices, Supplier Human Rights Assessment <a href="#">Corporate Governance website</a>	Sustainability Management and Governance Responsible Sourcing Investing in Women in the Workforce Employee Code of Conduct and Human Rights	21–22 29 51 51
<b>ENVIRONMENT</b>			
7. Businesses should support a precautionary approach to environmental challenges, and	General Standard Disclosures: G4-14 Specific Standard Disclosures: G4-EN27 DMAs: Products and Services	CEO Letter Strategy Sourcing Our Environment, Health, Safety and Quality Management Systems	4–5 9–22 23–29 32–33
8. Undertake initiatives to promote greater environmental responsibility,	General Standard Disclosures: G4-14, 15, 16, 27, 37, 45 Specific Standard Disclosures: G4-EN2, 6, 7, 10, 19, 27, 32, 33  DMAs: Materials, Energy, Water, Emissions, Products and Services, Effluents and Waste, Supplier Environmental Assessment <a href="#">Corporate Website: Novelis Environment, Health, Safety, and Quality Policy</a>	CEO Letter Strategy  Stakeholder Engagement  Sustainability Management and Governance Sourcing Our Environment, Health, Safety and Quality Management Systems Our Environmental Performance Community Engagement Initiatives: Recycling Increasing Post-Consumer Recycling	4–5 9–22  18–20  21–22 23–29 32–33 33–45 58 69–71
9. Encourage the development and diffusion of environmentally friendly technologies.	Specific Standard Disclosures: G4-6, 7, 10, 27, 32, 33 DMAs: Energy, Water, Products and Services, Effluents and Waste, Supplier Environmental Assessment <a href="#">Corporate Website: Novelis Environment, Health, Safety, and Quality Policy</a>	CEO Letter Strategy  Stakeholder Engagement  Sustainability Management and Governance Sourcing Our Environment, Health, Safety and Quality Management Systems Our Environmental Performance Consumer Viewpoints on Sustainability	4–5 9–22  18–20  21–22 23–29 32–33 33–45 68–69
<b>ANTI-CORRUPTION</b>			
10. Businesses should work against corruption in all its forms, including extortion and bribery.	Novelis does not tolerate corruption, extortion or bribery. General Standard Disclosures: G4-15, 41, 45, 49, 50, 56, 57 <a href="#">Corporate Governance website</a>	Sustainability Management and Governance Responsible Sourcing Employee Code of Conduct and Human Rights	21–22 29 51

# Awards and Recognitions



In September 2013, Metal Bulletin named Novelis Aluminum Fabricator of the Year and also recognized our Yeongju Recycling Center as Best Brownfield Technology Project.



Also in September, Novelis Korea Limited, the Asia-Pacific operating unit of Novelis Inc., won the South Korean Prime Minister's 2013 Leading Resource Recycling Corporation Award. The award was given in recognition of our efforts to minimize our environmental footprint, including through aluminum recycling, resource conservation and carbon emission reduction.



In February 2014, Novelis was recognized among the U.S. Environmental Protection Agency's Climate Leadership Awardees, specifically for Excellence in Greenhouse Gas Management (Goal Achievement Award).

In March 2014, Novelis was honored as an Outstanding Contributor for Investment Promotion by the Changzhou National High-Tech District in China. This award is given to investors who have made a significant contribution to the development of the city. Novelis was recognized for our \$100 million investment to build the country's first aluminum automotive sheet plant, which will be commissioned in late 2014.



In May 2014, for the second year in a row, Novelis earned recognition at the Platts Global Metals Awards ceremony in London.

This year, we took home gold in the category of Industry Leadership in Aluminum, in recognition of our leadership as a first mover and our willingness to take risks and transform our business. Platts also honored Novelis as a finalist for Breakthrough Innovation of the Year for our state-of-the-art cold rolling mills in Pinda, Brazil, and Yeongju, South Korea, and as a finalist for the Corporate Social Responsibility Award. In 2013, Platts named Novelis Global Metals Company of the Year and named the Novelis CEO, Phil Martens, CEO of the Year.

May 2014

Novelis took home the 2014 Edison Green Award™ Silver Trophy in May 2014 for transforming to a closed-loop business model and pursuing aggressive sustainability targets. The Edison Green Award recognizes an organization's commitment to developing sustainable solutions and green business models. Edison Award winners are judged by more than 3,000 senior business executives and academics from across the nation.



Two Novelis employees also earned well-deserved recognition recently. Leslie Joyce, Senior Vice President and Chief People Officer, won the first-ever Values Award from the Best Practice Institute (BPI) in late 2013. The award recognizes talent management leaders who best exemplify BPI's core values. In 2014, Joyce won another award – the SHRM-Atlanta Pegasus Award honoring excellence in human resources. This award was presented at the 24th Annual Society for Human Resource Management–Atlanta (SHRM) Conference.

Karen Renner, Novelis' Vice President and Chief Information Officer (CIO), was named Georgia CIO of the Year in late 2013 by the Georgia CIO Leadership Association. Renner was honored for her leadership, business value creation, innovation and community involvement.



Novelis Inc. is the global leader in aluminum rolled products and the world's largest recycler of aluminum. The company operates in nine countries, has approximately 11,200 employees and reported revenue of approximately \$10 billion for its 2014 fiscal year. Novelis supplies premium aluminum sheet and foil products to transportation, packaging, construction, industrial and consumer electronics markets throughout North America, Europe, Asia and South America. The company is part of the Aditya Birla Group, a multinational conglomerate based in Mumbai, India. For more information, visit [novelis.com](http://novelis.com) and follow us at [facebook.com/NovelisInc](https://facebook.com/NovelisInc) and [twitter.com/Novelis](https://twitter.com/Novelis).

We very much welcome your feedback or partnership on sustainability. If you have any questions or comments about this sustainability report or about sustainability at Novelis, please contact:

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# Novelis

Not just aluminum, Novelis Aluminum.™