



# 2008 Sustainability Highlights

# Table of Contents

<b>1</b>	<b>Chairman &amp; CEO Statement</b>
<b>3</b>	<b>Sustainability Report Review</b>
<b>5</b>	<b>Sustainability Approach</b>
<b>6</b>	<b>Human Rights &amp; Ethics</b>
<b>7</b>	<b>Environment</b>
<b>9</b>	<b>Health &amp; Safety</b>
<b>10</b>	<b>Our People</b>
<b>11</b>	<b>Community</b>
<b>12</b>	<b>Economic</b>
<b>13</b>	<b>Awards</b>

## About Alcoa

Alcoa is the world leader in the production and management of primary aluminum, fabricated aluminum, and alumina combined through its active and growing participation in all major aspects of the industry.

### Forward-Looking Statements

Certain statements in this report relate to future events and expectations and, as such, constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements include those containing such words as “anticipates,” “believes,” “estimates,” “expects,” “hopes,” “targets,” “should,” “will,” “will likely result,” “forecast,” “outlook,” “projects,” or similar expressions. All statements that reflect Alcoa’s expectations, assumptions or projections about the future other than statements of historical fact are forward-looking statements, including, without limitation, forecasts concerning aluminum industry growth or other trend projections, anticipated financial results or operating performance, and statements about Alcoa’s strategies, objectives, goals, targets, outlook, and business and financial prospects. Forward-looking statements are subject to a number of known and unknown risks, uncertainties, and other factors that may cause Alcoa’s actual results to differ materially from those expressed or implied in the forward-looking statements. Alcoa disclaims any intention or obligation to update publicly any forward-looking statements, whether in response to new information, future events or otherwise, except as required by applicable law.

Some of the important factors that could cause actual results to differ materially from those in the forward-looking statements include: uncertainties regarding the duration or severity of the current global economic downturn and their impact on Alcoa; material adverse changes in aluminum industry conditions generally, including global supply and demand conditions and fluctuations, including sustained declines or further deterioration, in London Metal Exchange-based prices for primary aluminum; material adverse changes in the markets served by Alcoa, including the transportation, building, construction, distribution, packaging, industrial gas turbine, and other markets; Alcoa’s inability to achieve the level of cash conservation, cash generation, cost reductions, debt-to-capital ratio, return on capital or productivity improvements, or earnings or revenue growth anticipated by management; significant increases in power or energy costs (e.g., electricity, natural gas and fuel oil), or interruption or unavailability of energy supplies; significant increases in the costs of other raw materials, including carbon products, caustic soda and other key inputs, or significant lag effects for decreases in commodity- or LME-linked costs of production; continued volatility or deterioration in the financial markets, or the failure of financial institutions to fulfill their commitments to Alcoa under

committed credit facilities; further downgrades in Alcoa’s credit ratings, material increases in Alcoa’s cost of borrowing or an inability to access the credit or capital markets; operating factors such as supply disruptions, labor disputes or failure of equipment or processes to meet specifications; Alcoa’s inability to successfully implement its Brazilian growth projects or portfolio streamlining strategy, including divestitures of non-core businesses, as planned or to realize expected benefits; political and economic risks associated with foreign activities, including fluctuations in foreign currency exchange rates or changes in the laws or governmental regulations or policies in the countries in which Alcoa operates; significant legal proceedings or investigations, changes in law or other contingencies that cannot be predicted with certainty; adverse effects or uncertainties regarding the impacts of climate change, climate change regulations or greenhouse effects; significant costs and liabilities associated with numerous complex and increasingly stringent environmental laws and regulations; adverse changes in Alcoa’s relationships with, or a significant downturn in the business or financial condition of, key customers or suppliers; and the other risk factors summarized in Alcoa’s Annual Report on Form 10-K for the year ended December 31, 2008 and other SEC reports.

# Chairman & CEO Statement

The worldwide economic crisis presents Alcoa and our customers with unprecedented challenges. While the duration or severity of the crisis is uncertain, one thing is clear: Alcoa's strategy is to emerge stronger than ever when the economy recovers. That strategy includes a continued emphasis on sustainability.

At Alcoa, sustainability is a core value. We believe that financial success, environmental excellence, and social responsibility are totally aligned. You'll see how this relationship benefits our communities, customers, and shareholders throughout our online *2008 Sustainability Report*.

During 2008, we traveled to many Alcoa locations and witnessed the significant strides we've made in integrating sustainability into all facets of our business operations. Our commitment to sustainability is alive and well.

In these tough times, as we focus on conserving cash and reducing costs to meet our commitments to our shareholders, we also are reaffirming our commitment to our core values—living by the highest standards of ethics; protecting the health and safety of our people every minute of every day; preserving the well-being of the environment and natural resources; striving to grow as an inclusionary, high-performance workplace; and making meaningful contributions to the communities where Alcoans work and live.



*Alain J. P. Belda*  
Chairman

In the pages of this report, you'll see our values come to life. We'll highlight several areas that show our progress, and a few where we have more work to do.

Areas where we made progress in 2008 include:

- **Ethics:** The Covalence Ethics Index ranked Alcoa sixth in ethical reputation among all companies worldwide and first in the Resources category;
- **Climate Change:** Thanks to ongoing efforts by our Global Primary Products Group, we continued the reductions in our greenhouse gas emissions in 2008. We now have achieved a 36% reduction from a 1990 base year—a 44% improvement over our target reduction of 25% by 2010;
- **Waste:** Landfilled waste was 52% below the 2000 base year, putting us in position to achieve our 75% reduction target by 2010;
- **Safety:** We ended the year with 75.9% of our locations having zero lost workdays and 44.4% of them with no recordable injuries;
- **Stakeholder Engagement/Community:** 90% of our worldwide operating locations now have



*Klaus Kleinfeld*  
President and Chief Executive Officer

community programs, putting us on schedule to reach our target of 100% by 2010. In 2008, Alcoa and Alcoa Foundation invested more than US\$50.6 million in the communities in which we operate worldwide; and

- **Employee Engagement:** We improved worldwide employee engagement scores by two percentage points in our Global Voices Survey, and 24% of our global employees participated in community service projects during our annual Month of Service.

Despite these advances in our sustainability initiatives, we fell short of our high standards in the area of health and safety in 2008. We had five fatalities—five more than is ever acceptable to us.

## Chairman & CEO Statement *(continued)*

Our principal safety shortcoming was in Russia. Following the fatalities at our plant in Samara, Russia, we immediately dispatched to the site an intervention team representing a combined 200 years of Alcoa safety experience. The team analyzed the underlying issues that contributed to the fatalities and further diagnosed the broader fatality prevention situation across all of Alcoa. Team members found that 4,118 fatality risks had been eliminated since Alcoa had acquired the Samara facility, and they identified further risks that now are being addressed.

We take a death in the workplace personally, and we have re-emphasized to our leaders, employees, and contractors that Alcoa's safety standards are non-negotiable. Those who fail to adhere to those standards will not remain at the company.

In our progress toward the long-term goals outlined in our 2020 Strategic Framework for Sustainability, there are two other areas where we need to increase the pace of improvement.

Although we reduced mercury emissions by 23% against our base year 2000 level, we came short of our objective to achieve an 80% reduction by 2008. It is now clear that we will not be able to achieve our target of a 90% reduction by 2009. While

disappointed with our progress to date, we are leading the industry's efforts to address mercury, which occurs naturally in the bauxite ore that we mine. We remain committed to finding practical solutions.

We improved our reduction in freshwater usage during 2008, reaching a 28% reduction against base year 2000 levels. However, we will fall short of our target to achieve a 60% reduction by 2009 and a 70% reduction by 2010.

During 2009, we will review these and *all* of our 2020 goals and either establish new targets for goals already met, recommit to achieving existing goals, or reevaluate the timing or the scope of the goals not met. We knew when we developed the goals that they were aggressive and may not be achievable, but our aim was to stretch our people to think differently and to reach beyond incremental improvement. We will maintain that philosophy as we reassess our targets.

As we continuously improve our internal processes to reach high standards of sustainability, we are also producing materials that dramatically improve sustainability around the globe.

In a world where the dominant trends are population growth, urbanization, and growth of energy demands, aluminum is an ideal material. Strong but lightweight, it is an essential component of green buildings in fast-growing urban areas. It improves fuel efficiency and emissions reductions in all modes of transportation. Because it is totally and infinitely recyclable, it is the perfect packaging material to reduce waste in overtaxed landfills. Alcoa's product—and the sustainable ways in which we provide it—will continue

to play a key role in the sustainable life and health of our planet and its people.

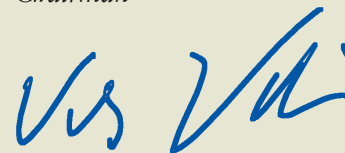
Our shared commitment in 2009 and beyond must be to not merely maintain, but also to *enhance* our sustainability efforts.

We are interested in hearing what our stakeholders think about our sustainability performance and reporting efforts—and how we can improve both. Please email us at [sustainability@alcoa.com](mailto:sustainability@alcoa.com) with your thoughts and suggestions.



Alain Belda

*Chairman*



Klaus Kleinfeld

*President and Chief Executive Officer*

# Sustainability Report Review

*For our 2007 sustainability report, we used the services of the independent firm AccountAbility to convene and facilitate a pilot sustainability report review panel to help us identify gaps in our reporting and take an initial step toward incorporating third-party assurance into our process.*

*Since then, we have continued to address the issues and gaps the pilot panel found most significant. We also engaged AccountAbility to develop an independent commentary on our 2008 online reporting to provide a review of the continued response to the panel's recommendations and advice and also give us direction for continuous improvement in our reporting process.*

*The following is AccountAbility's commentary, which we could not revise and were required to publish.*

In 2007, Alcoa convened a Stakeholder Panel, facilitated by AccountAbility, to review and provide public commentary on its Sustainability Report. In developing its 2008 report, Alcoa asked AccountAbility to guide the company in responding to the Panel's comments, and to offer a summary and reflection on the progress it has made in strengthening its reporting. Our commentary is not an audit or verification statement, but aims to provide guidance to Alcoa and its report readers.

## **Summary looking back to the 2007 Panel Letter**

Alcoa's 2008 sustainability reporting has made significant advances in responding to the comments of the Stakeholder Panel. Notably, the reporting provides a deeper understanding of Alcoa's position and responses to several specific challenges and dilemmas, including the financial crisis, climate change mitigation, and safety. It gives greater emphasis to stakeholders' viewpoints and the context for its policies and actions, in particular through the inclusion of staff perspectives and case studies, providing valuable insight into how and why the company is implementing its global commitments in different ways in different locations. Several specific issues, including water management and recycling, are discussed in more detail, as well as greater case material reviewing the company's human rights impacts. One major theme highlighted by the Panel, the company's approach to biodiversity, remains under development.

## **Response to the Stakeholder Panel recommendations**

*Last year, Panel members agreed that Alcoa had provided significant and useful information on how it manages its sustainability performance. However, they called for*

*further disclosure on how sustainability is reflected in senior executive responsibilities and incentives. They also hoped that Alcoa would provide more practical examples of how it is engaging with stakeholders to inform its own decision-making and provide more thorough coverage on engagement with local authorities.*

In this year's reporting, Alcoa discloses increased information on sustainability-related responsibilities, including announcing that it has elevated responsibility for global sustainability from Director to Vice President level, and highlighting new roles created to manage the company's procurement sustainability strategy. While the report does not provide full disclosure on how sustainability is reflected in executive remuneration, there is additional disclosure about how targets are set and who is responsible for local implementation. More detail is provided regarding public policy engagements in the European Region, but more information could be provided regarding engagements in the development of climate change policy in developing countries.

*Last year, while commending the coverage of Alcoa's reporting on many issues material to Alcoa's business and stakeholders, Panel members called for a stronger discussion of how Alcoa's ambitious business growth strategy and the broader development of the industry aligns with sustainability goals. They also called for more thorough disclosure on the recycling and recyclability of aluminium and the use of renewable energy, as well as on Alcoa's action to protect sustainable livelihoods and human rights commitments throughout its value chain.*

The 2008 sustainability reporting presents the company's sustainability commitments in the context of its business strategy and provides



## Sustainability Report Review *(continued)*

extended reflections on the direction of the sector and, in particular, the role that aluminium plays in climate change mitigation. Alcoa has also strengthened disclosure on internal and external recycling challenges, the use of renewable energy, and human rights, including providing information and case studies of how environment, health, and safety (EHS) and local economic development issues are managed within supply chain and contractor relationships.

*In 2007, panel members agreed that Alcoa's reporting of targets and performance data for most material issues was adequate to enable progress to be assessed, but they asked the company to put these targets into context with more regional breakdowns of data, reference to international norms and industry benchmarks, and stakeholder feedback. In particular, the panel urged Alcoa to back up its water use figures with broader discussion on how it is managing water use across its global operations and also to identify targets and provide greater coverage on the issue of biodiversity and ecosystem conservation.*

In its 2008 sustainability reporting, Alcoa has included more viewpoints from both external and internal stakeholders to provide additional context to its performance data. Case studies link back to and so demonstrate how the company is implementing its global goals and vision and illuminate local challenges. For the 2009 report, the company indicates that it will aim to report its performance metrics alongside credible industry benchmarks, where appropriate. However, it has not yet met the Panel's request to provide more clarity on its position in reference to international norms and standards. The report provides details of both water usage data and management, but does not include targets

and indicators on biodiversity and ecosystems. Alcoa plans to address this gap in 2009 when it reviews its 2020 community framework.

### AccountAbility's reflections for 2009

Alcoa has made significant advances in responding to Stakeholder Panel comments. If it strengthens its reporting on biodiversity and on its position in relation to relevant international norms and standards, as well as continuing to deepen its discussion of the alignment between its business strategy and sustainability goals, we believe that it will have met both the spirit and the specifics of the Stakeholder Panel recommendations.

Going beyond this, but reflecting on the panel discussions in 2007 and our conversations with senior Alcoa executives during this report review, we offer three lenses on the company's sustainability strategy and performance, which Alcoa could use to further advance its thinking, reporting, and impacts on sustainability:

- **Looking at the whole lifecycle of aluminium.** With climate change a critical issue, the 2008 report discusses the impacts on the atmosphere associated with aluminium in the production, use, and recycling phases of its lifecycle. But it does not offer an overall assessment of the relative scale and scope for improvement of each of these areas. Providing a picture of the impacts of aluminium across its whole lifecycle could help Alcoa and its stakeholders more clearly identify where the company's most valuable potential contributions to climate change mitigation are to be found, whether in reducing its own greenhouse gas emissions or in reducing the overall greenhouse gas emissions intensity of the global economy through innovative

and energy-efficient uses of aluminium.

- **Looking to the future.** The report reflects on the dominant trends of population growth, urbanization, and growth of energy demands, but does not yet provide a proactive and forward-looking reflection on what these trends and possible responses amongst Alcoa's stakeholders could mean for the future of the business and the diverse communities it serves. For example, how far could more efficient aluminium recycling reduce the need for extraction, and how would this impact on workers and communities dependent on the industry? What is Alcoa's long-term vision for the aluminium industry in contributing to climate stabilization in the face of different energy and carbon price and technological development options? Reflecting on these long-term questions would help Alcoa demonstrate leadership in developing responsible strategies for navigating the future.

- **Looking at interconnections.** While the 2008 report covers many material social and environmental issues, it addresses each in isolation without tackling either the interconnectivity between the company's impacts in different areas (such as water, ecosystems, and local economic development) or the linkage between sustainability issues and business performance. Moving away from this issue-by-issue approach toward one that integrates social and environmental challenges and opportunities with business strategy would enable Alcoa to use its sustainability reporting to help bring together its broad community of external and internal stakeholders in co-designing business solutions to meet these challenges.

# Sustainability Approach



At Alcoa, sustainability is defined as using our values to build financial success, environmental excellence, and social responsibility through

partnerships in order to deliver net long-term benefits to our shareowners, employees, customers, suppliers, and the communities in which we operate.

We are fully committed to maintaining our sustainability direction, even during very difficult times. By doing so, we will emerge from this global economic crisis even stronger.

Our goal is to integrate sustainability concepts into our processes so they become part of how we do business. At the corporate level, we take a leadership role on sustainability issues that are not only important to us but also to our industry and beyond. For example, climate change is clearly a global challenge, and it is our key sustainability issue as a company (see the Environment section on page 7 for more details).

Other key sustainability achievements in 2008 included the following:

- Elevated responsibility for global sustainability from the director level to the vice president level;
- Announced a six-year extension to the Alcoa Foundation Conservation & Sustainability Fellowship Program;
- Created a new role in our procurement organization—director of sustainability—to manage overall coordination of the procurement sustainability strategy; and
- Elevated our Sustainable Infrastructure Market Development Team into a center of excellence at Alcoa, with its main pursuit being to develop and maintain global competency in sustainable product design and market growth.

We were recognized for our sustainability efforts through inclusion in the Dow Jones Sustainability Index for the seventh time and being named one of the most sustainable companies in the world at the World Economic Forum in Davos, Switzerland, for the fourth (2008) and fifth (2009) years in a row.

## 2020 Strategic Framework for Sustainability

Developed in 2000 by an internal worldwide team that analyzed environmental and social trends since 1990 and looked 20 years into the future, Alcoa's 2020 Strategic Framework for Sustainability has since evolved into a comprehensive roadmap for our businesses and locations to integrate all aspects of sustainability into their day-to-day operations.

The framework is built around six focus areas:

- Economic benefit;
- Respect and protect people: employees;
- Respect and protect people: communities;
- Safe and sustainable products and processes;
- Meet the needs of current and future generations through efficient resource use; and
- Accountability and governance.

Included are long-term targets and short- and long-term metrics for each focus area that were agreed upon with the business leaders and technical experts throughout the company. These targets are very aggressive and are designed to stretch the organization to think differently



**Dmitry Safin**  
Information  
Technology  
Compliance  
Coordinator,  
Samara, Russia

***"While working at Alcoa, I've learned that sustainability is one of Alcoa's best values. And it's not only words."***

to drive optimum performance, as opposed to conservative objectives that we would be fairly certain we would meet.

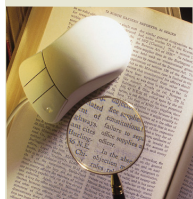
We have met or exceeded several of these very aggressive targets, but we have also fallen, or will fall, short of some of the targets, especially those regarding resource efficiency. Where we have or expect to fall short of our goals, we are revising our strategy and/or modifying the goals or timeline to achieve them in light of technical challenges and the current economic conditions that will limit funds for research and development.

## Sustainability Reporting

To give stakeholders access to more detailed and current information on our sustainability performance, we offer online reporting ([www.alcoa.com/sustainability](http://www.alcoa.com/sustainability)) supplemented by this year-end highlights report. The information is for Alcoa's global operations during the period January 1 through December 31, 2008, unless otherwise noted.

Sustainability reporting is one part of our commitment to reporting. It should be read in conjunction with Alcoa's 2008 Annual Report, Form 10-K for the year ended December 31, 2008, Alcoa's other SEC filings, and other information contained on [www.alcoa.com](http://www.alcoa.com).

# Human Rights & Ethics



## Human Rights

Alcoa is a global enterprise that does business in many dynamic markets. We rely on our culture in the first instance—Alcoa

employees living Alcoa's values—to ensure that we conduct business in a way that respects human rights.

This is a universal approach and not restricted to developed, or developing, economies. Externally, in those instances where we do have direct influence, we extend the requirements and aspirations expressed within our values, principles, and policies to the business dealings of our suppliers and contractors.

We respect all national laws and international human rights norms. The values and principles that underpin these laws and norms inform and guide our own policy and behavior. While the primary responsibility for human rights lies with the various governments, we are committed to helping them avoid human rights violations.

## Children and Young Workers

As a fundamental principle, we do not employ children or support the use of child labor. We do encourage the creation of educational, training or apprenticeship programs tied to formal education for young people.

## Freedom of Engagement

We believe that people should work because they want or need to, not because they are forced to do so. We prohibit the use of prison labor, forcibly indentured labor, bonded labor, slavery, or servitude.

## Equality of Opportunity

We recognize, respect, and embrace the cultural differences found in the worldwide marketplace. Our workplace is a meritocracy where our goal is to attract, develop, promote, and retain the best people from all cultures and segments of the population, based on ability. We have zero tolerance for discrimination or harassment of any kind.

## Compensation

We ensure that compensation meets or exceeds the legal minimums and is competitive with industry standards. Our compensation philosophy is clearly communicated to employees and is in full compliance with all applicable laws.

## Freedom of Association

We recognize and respect the freedom of individual Alcoans to join, or refrain from joining, legally authorized associations or organizations.

## Relationships with Indigenous People

Within the framework of our values, we respect the cultures, customs and values of the people in communities where we operate and take into account their needs, concerns, and aspirations.

## Ethics & Compliance

Alcoa's Ethics and Compliance Program is intended to ensure that all Alcoa employees understand and fully comply with the letter and spirit of the laws and regulations that govern our businesses, as well as our business conduct policies and guidelines.

The program is designed, implemented, and enforced so that it will be effective in preventing and detecting conduct not conducive to our values. As a global manufacturing company doing business in many countries, we



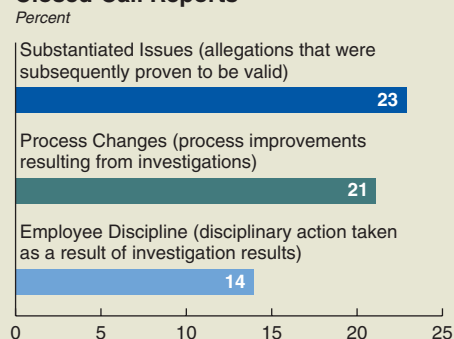
**Tenille Jolly**  
Environment,  
Health, and Safety  
Consultant, Pinjarra  
Alumina Refinery,  
Australia

***"The only way we can continue to provide the same quality of living to the future generations on Earth is through sustainability."***

have long recognized the importance of adhering to a common set of ethics policies and values and using an effective global program to clearly communicate and enforce these standards throughout the company.

Our global Ethics and Compliance Line provides employees and other concerned parties an anonymous channel for expressing concerns and raising issues about workplace activities and business practices. The line is available to Alcoa employees worldwide, with the local toll-free compliance lines answered in the caller's native language.

## Ethics and Compliance Line Closed-Call Reports





# Environment



Operating in a manner that protects and promotes the health and well-being of the environment is a core value to Alcoa. As such, two of

the most important environmental challenges for our company are climate change and water use.

## Climate Change

The global voice to address climate change grows louder every day, and there is much anticipation for increased commitment to achieve a post-Kyoto-period agreement in the negotiations to take place in Copenhagen at the end of 2009. We continued our leadership within the industry, and we've been actively engaged in the process.

In 1998, we established a Climate Change Strategy Team that developed and promoted our position on climate change, including our target of reducing greenhouse gas (GHG) emissions by 25% below 1990 levels by 2010. We achieved that goal in 2003, despite our continuous growth.

We refined our global strategy in 2008 to adapt to specific outcomes emerging from regional legislative developments. The five main elements of this new strategy are:

- **Policy Engagement**—We are actively involved in climate legislation within each of our operating regions to ensure that our early action is acknowledged and our concerns are understood. We participated in the United Nations Framework Convention on Climate Change's 14<sup>th</sup> Conference of Parties in Poznan, Poland, and maintained our leadership position on federal climate policy through our involvement in the U.S. Climate Action Partnership (USCAP). We also developed a quantitative model that will allow us to forecast the impact of emerging legislative programs in terms of compliance requirements and the cost of energy.
- **Emissions Reduction**—We continued to reduce our absolute greenhouse gas emissions in 2008, achieving a 36% reduction from 1990 levels. A key achievement was our global network of aluminum smelters reducing perfluorocarbons (PFCs)—a greenhouse gas—by an additional 1.1 million tons as part of our One Million Ton Challenge. We continue to aggressively explore opportunities to reduce energy intensity in each of our processes and the resulting indirect carbon dioxide (CO<sub>2</sub>) emissions. We also continue to research transformational production technology that will reduce direct emissions, improve energy efficiency, or both.
- **Strategic Energy Decisions**—Alcoa supports the use of renewable energy, and we are engaged in the installation of solar and wind generation projects at several of



**Wang Fulian**  
Alcoa Business  
System Coordinator,  
Alcoa (Kunshan)  
Aluminum Products,  
China

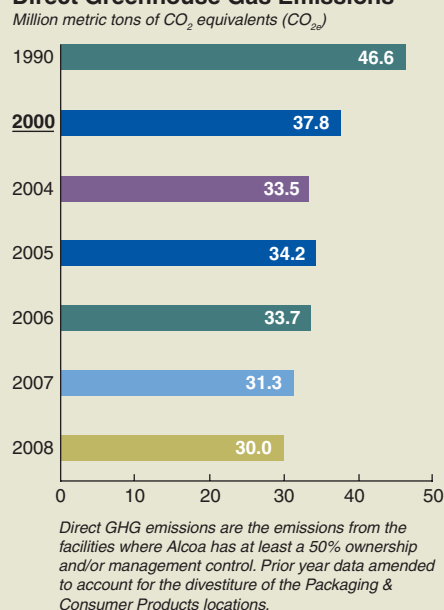
***“Our environment, knowledge, and ability are considered our resources. Sustainability is about using our resources wisely to achieve continual development.”***

our smaller plants. For our primary metals operations, we incorporate a preference for no to low carbon sources to power our smelters. Today, our company's hydroelectric facilities generate billions of kilowatt hours for Alcoa operations worldwide, with about 60% of our smelter output powered by hydroelectricity.

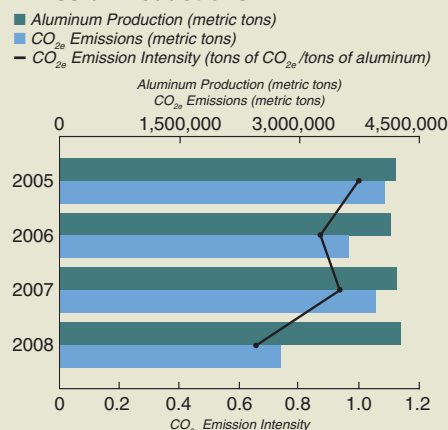
- **Product and Market Evolution**—In 2008, we increased our focus on helping key customers understand both the role that aluminum can play in the mitigation of global warming and the benefits of our products through product-specific life-cycle analyses. We also have been actively promoting end-user recycling, working with local communities and governments to facilitate improvement in recycling rates. In 2008, we announced a goal to help drive the recycling rate of used beverage containers (UBCs) from the 2007 U.S. recycling rate of around 54% to 75% by 2015.

- Stakeholder Engagement**—We continue to seek out active discussion with global and regional stakeholders to ensure that we stay informed on specific concerns and advancements regarding critical policy or technical solutions. We also participate in many external surveys of corporations and their efforts to address climate change and their carbon footprint.

## Direct Greenhouse Gas Emissions



## Smelter Greenhouse Gas Emission Reductions



## Water

At Alcoa, we reinforce the concept that water is a key raw material that must be managed closely in terms of availability and cost. This will allow us to avoid business risk and remain welcomed in the communities where we currently operate or desire to grow.

In 2008, our reduction in freshwater use versus 2000 levels improved to 28%. However, we now know that our goal of a 60% reduction in water use by 2009 and 70% by 2010 from a base year of 2000 will not be met. The timelines for meeting this aggressive goal will be revised as we further investigate opportunities to achieve reductions where they are needed most.

Our efforts to reduce water use are based on a risk priority plan to take action first in regions where the issue is most sensitive. Our highest priority is currently in Australia, where the long run of reduced rainfall has considerably raised awareness to the need for water conservation.

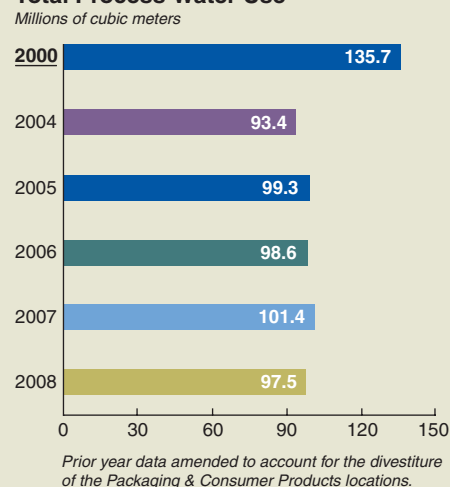
Key actions to reduce our water usage in 2008 included the following:

- Detailed a strategy for reducing water use in Australia that involves using secondary sources of water for production, reducing evaporation losses for stored water, and exploring production technologies that require less water;

- Completed a closed-loop ingot water system at our Fusina plant in Italy, reducing water consumption there by nearly 90%;
- Initiated a conversion to a dry-ash handling system at our power plant in Evansville, Indiana (USA), that will reduce annual water consumption by 5 million cubic meters (1.3 billion gallons). This work should be completed in 2009; and
- Initiated design of a recirculation system for the air compressor cooling system at our smelter in Ferndale, Washington (USA), that will reduce annual water use by 75%.

As funding for projects in 2009 will be limited, we will use this year to further refine our prioritized list of actions, provide detailed design for some innovative concepts, and explore some strategic partnerships to improve the effectiveness of actions we will take in subsequent years.

## Total Process Water Use



# Health & Safety



At Alcoa, we strive to work safely in a manner that protects and promotes the health and well-being of our employees, contractors, and the communities in which we operate because it is fundamentally the right thing to do. As such, zero work-related injuries and illnesses has been our long-standing goal.

## Health

We establish and track long-term and incremental targets to quantitatively monitor progress toward achieving our stated health goals and the ideal state.

Progress on key health metrics for the 2006-2008 cycle to eliminate the need for protective equipment or other controls includes the following:

- 22% reduction in the number of employees in noise exposures exceeding Alcoa limits (three-year goal was 20%);
- 35% reduction in the number of employees in chemical exposures exceeding Alcoa limits (three-year goal was 20%); and
- 74% control of targeted ergonomic risks (2007-2008 goal was 100%), which was achieved despite the locations adding to their pool of targeted risks by nearly 50% over the two years.

## Safety

Progress toward our goal of zero work-related injuries remained relatively flat in 2008, and we ended the year with a lost workday incident rate of 0.12 and a total recordable rate of 1.34. However, our risk-based focus to injury prevention is having a positive impact on incident severity year over year. As of December 2008, the total days lost due to a work-related injury during the year was 25,115, which compares very favorably with the 50,646 total days lost in 2007.

While this safety performance is certainly noteworthy, it was marred by the disappointment and tragedy associated with four employee fatalities and one contractor death during the year.

We undertook a number of actions during 2008 that were focused on fatality prevention, including:

- Sending an intervention team to our Samara, Russia, facility to gain a deeper understanding of the underlying issues that may have contributed to three fatalities at that location over a six-week period;
- Challenging each location to conduct a fatality prevention self-assessment during 2008;
- Actively participating in the Organization Resources Counselors' Fatality Prevention Task Force; and
- Asking three independent consultants to review our historical fatalities from 2004 to 2008, along with a sampling of other high-consequence events, in an attempt to identify potential opportunities related to our catastrophic incident experience.



**Robert Kasdiran**  
Environment,  
Health, and Safety  
Area Coordinator,  
Suralco (Suriname)

***"If we talk about sustainability, then there are three important elements: maintain, preserve, and manage."***

According to the consultants, we are generally working on a lot of the right issues with the right focus, particularly as it relates to human performance and error precursors. To prevent gaps from developing in our protective systems, however, we must continue to make available the resources needed to support safety through the application of sound engineering practices, inspection, testing, and maintenance programs, along with capital to fund projects that address risks. The capital piece of this will be most difficult in 2009 due to the economic imperatives thrust upon us by the current global economic downturn.

## Incident Rates

	Lost Workday Incident Rate	Total Recordable Incident Rate
2004	0.13	1.85
2005	0.12	1.47
2006	0.11	1.38
2007	0.12	1.46
2008	0.12	1.34

*Lost workday (LWD) incident rate represents the number of injuries and illnesses resulting in one or more days away from work with or without days of job transfer or restrictions per 100 full-time workers. Total recordable incident (TRI) rate represents the number of injuries and illnesses resulting in days away from work, job transfer or restriction, medical treatment, or other recordables per 100 full-time workers.*

# Our People



Our people are the foundation of our success throughout the world. Our goal is to attract, develop, and retain the best talent and create an environment

that enables each employee to contribute to our collective success. This goal is especially challenging and critical in today's turbulent economic times.

The global recession has had a significant impact on our company and has forced us to curtail operations in many parts of the world and make the decision to sell several of our downstream businesses. In 2008, we sold our packaging businesses, which accounted for a reduction of 10,000 employees worldwide. In early 2009, we announced further planned divestitures and additional headcount reductions that will impact 13,500 employees and 1,700 contractors by the end of 2009. Finally, we have instituted a global salary and hiring freeze.

Within this economic environment, we continue to create a work environment where:

- Alcoa has become a preferred employer with a diverse and skilled workforce accountable to clear standards;
- Work is done in an environment where feedback, problem solving, and process improvements are built into the daily routine;
- Pay, recognition, and career development are linked to delivering business results; and

- The Alcoa values and employee pride inside and outside the workplace are evident across the organization.

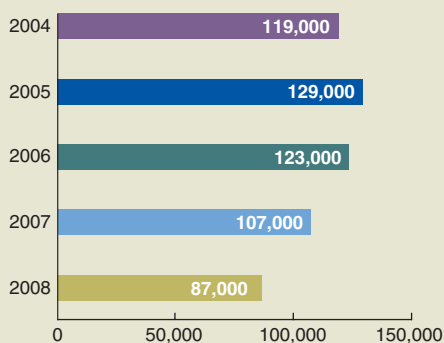
To reach this target, our HR function is partnering with the business units to set specific actions, timetables, and metrics that provide direction and measurement against progress. There are challenges that must be overcome, and these include the global nature of the company, differing cultural issues and governmental regulations, and our decentralized structure.

## Inclusion

Our strength as a company is to leverage the differences and many perspectives that our people bring to the workplace. The global nature of Alcoa allows people from all backgrounds to excel in their own country or internationally. We embrace differences and seek talent regardless of nationality, gender, or age.

Leadership accountability for inclusion is integrated into the overall business strategy, and the results are tied to incentive compensation. In 2008, we added a diversity goal to our annual cash incentive compensation plan for increasing global female employment and U.S. minority employment in the professional and executive ranks. On a corporate-wide basis, we exceeded the 2008 goal.

## Number of Employees



*Alcoa does not aggregate global data differentiating part-time from full-time employees. Decline in employment numbers due to a series of divestitures.*



**Natalie Irving**  
Community Relations  
Officer, Alcoa,  
Jamaica

***“Sustainability is preserving our resources and not compromising them so that a future generation can benefit.”***

## Employee Engagement

In 2008, we conducted our third annual global employee engagement survey—Global Voices, One Company. Nearly 89,000 employees (95% of the workforce) were invited to participate in the web- and print-based survey, which was produced in 15 languages and contained 35 questions measuring 10 dimensions of the employee experience.

The overall response rate remained high at 77% versus 68% in 2007, and overall employee engagement increased to 52% from 50% the prior year.

We reviewed the survey results with employees and put action plans in place to improve the overall engagement levels.



# Community



Wherever Alcoa operates across the globe, each of our businesses has its roots in local communities, where the people we employ, suppliers

we choose, and organizations with which we partner are all integral to the regional social fabric.

The volatile economic climate has significantly changed Alcoa's business and considerably impacted those around us. Through these difficult times, we are ever mindful of the economic and social implications of our business decisions on local communities and continue to work in partnership with those around us as we navigate these present challenges.

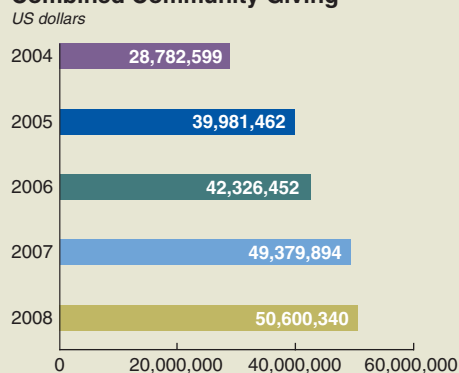
## Contributing to Community

In 2008, the combined giving of Alcoa and Alcoa Foundation reached more than US\$50.6 million. Alcoa Foundation provided nearly US\$26.2 million in grants in 35 countries where Alcoa operates, with Alcoa and Alcoa-related foundations contributing another US\$24.4 million to support projects and partnerships with non-governmental organizations around the world.

Despite the shifting landscape, Alcoa and Alcoa Foundation are steadfast in our commitment to communities in which Alcoa has a presence. The Foundation continues to work alongside Alcoa businesses and community partners to assess the local impact of the global downturn and ensure our resources are being targeted to areas of priority need.

For example, a package of US\$150,000 in grants to partners Icelandic Church Aid, the East Iceland Vocational Rehabilitation Service, and an immigrant integration initiative in North Iceland is assisting with the provision of food, social services, training, and job-finding services to those impacted by that country's economic crisis.

## Combined Community Giving



## Employee Volunteer Initiatives

Alcoa is committed to supporting the efforts of our employees as they work to improve the quality of life in their individual communities. Employee volunteerism offers a growing and global opportunity to deepen the engagement with our communities, and it is a source of lasting, positive social impact.

In 2008, Alcoa employees gave more than 705,000 hours of voluntary service, the equivalent of over 350 people working full time. This employee service earned local community organizations almost US\$4 million in Alcoa volunteer matching grants.

## Community Consultation

In 2008, we continued the roll-out of the Alcoa Community Framework—a tool and process we use to facilitate and measure ongoing relationship-building and com-



**Ibrahima Saran Diallo**  
Surveyor,  
Alcoa Guinea

***“We speak about sustainability when the activities of mankind do not affect the well-being of future generations.”***

munications between Alcoa and our community stakeholders—in Africa, Asia, the Caribbean, Europe, and South America. About 90% of our worldwide operating locations had established community programs as of year end.

We also continued our consultation with communities in Greenland, where we are studying the feasibility of constructing a combined hydro-electric system and aluminum smelter. Public meetings in January, June, and September 2008 provided project updates and a forum for responding to community questions and an opportunity to meet with representatives from local businesses, hunting and fishing organizations, and other special interest groups.

In the Boké prefecture in Guinea, extensive consultation continued in 2008 with communities that will be affected in the event the proposed alumina refinery project proceeds on the selected Kabata site. These communities include those that will require relocation, as well as those that will act as hosts to those being relocated.

# Economic



We understand the importance of the economic value we generate to our shareholders, customers, employees, and the communities in which we operate.

Disciplined financial management is essential to ensure long-term success for us and our stakeholders. We maintain robust financial controls, a strong dedication to financial returns, and an intense focus on creating value through top-line growth, strategic capital spending, and cost-reduction activities.

In 2008, raw materials, energy, and other input costs were once again significantly higher than in the previous year. The U.S. dollar also weakened considerably against the Brazilian real, one of the main currencies in which we operate. Additionally, global economic markets began an unprecedented decline, which resulted in a historic drop in the London Metal Exchange (LME) cash price per metric ton of aluminum in the second half of 2008.

Our 2008 financial performance included the following:

- Sales of US\$26.9 billion, despite the absence of 10 months of revenue related to the Packaging and Consumer businesses;
- US\$229 million in income from continuing operations, or US\$0.28 per diluted share, which includes US\$670 million of restructuring and other charges;
- Cash from operations of US\$1.234 billion, which was reduced by pension contributions of US\$523 million;
- Cash on hand of US\$762 million, which was almost double historical levels; and
- Debt-to-capital ratio of 42.5%.

A strong balance sheet—measured in terms of the relationship between debt and total capitalization—is crucial to enabling profitable growth through both the general economic and aluminum cycles. Our target debt-to-total capitalization is between 30% and 35%.

At the end of 2008, our debt-to-total capitalization stood at 42.5%. While not in our target range, we believe the actions we initiated to conserve cash will impact this ratio in a positive manner. Even though our debt-to-total capitalization is higher than we like, our balance sheet is relatively strong considering the status of the economic and financial markets in which we are operating across the globe.

In 2009, we will conserve cash and preserve liquidity through every possible avenue to manage Alcoa through the global economic downturn. This will be accomplished through the actions we initiated during the second half of 2008, which will continue throughout 2009. These include:

- Reduction of our alumina refinery and aluminum smelting production by 1.5 million metric-tons-per-year (mtpy) and 750,000 mtpy, respectively, which was completed during the first quarter of 2009;
- Suspension of the share repurchase program;
- Targeted headcount reductions across the globe;
- Implementation of a global salary and hiring freeze;
- Greater scrutiny over the daily management of Alcoa's cash position;
- The addition of a new 364-day US\$1.9 billion revolving credit facility (we already have a US\$3.3 billion revolving credit facility that matures in 2012);

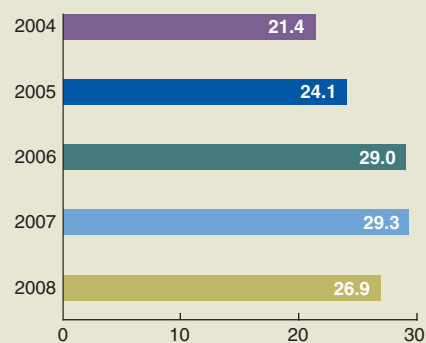
- A number of changes to our capital expenditures policy, including dramatically lowering approval levels, halting planned or in-process growth projects where it is economically feasible, and stopping all non-critical capital expenditures (capital expenditures are deemed critical if they maintain compliance with the law, keep a facility operating, or satisfy customer requirements if the benefits outweigh the costs); and
- The planned disposition of under-achieving businesses (Electrical and Electronic Solutions, Global Foil, and Transportation Products Europe).

We initiated the following additional actions in March 2009:

- Procurement efficiencies and overhead rationalization, reducing costs annually by US\$2 billion and US\$400 million, respectively, by 2010;
- Working capital efficiencies, yielding US\$800 million in cash improvements in 2009;
- Reduction in the quarterly common stock dividend, resulting in more than US\$400 million in cash savings; and
- Issuance of 172.5 million shares of common stock and US\$575 million of convertible notes, yielding proceeds of US\$1.4 billion.

## Sales

Billions of US dollars



Data changes from prior reporting due to reclassification of businesses as discontinued operations.

# Awards

We measure our sustainability progress in many ways, including the awards and recognition we receive from external organizations and those we grant internally to recognize outstanding performance at individual, team, and organizational levels.

Here are a few examples of corporate-wide awards we earned in 2008 and early 2009. A more complete listing of internal and external awards can be found at [www.alcoa.com](http://www.alcoa.com) under Sustainability.

## 2009

### One of the Most Sustainable Corporations in the World—

Corporate Knights and Innovest

### Top Company in the Basic Resource Category and One of the Top Ten Ethical Companies in All Industries—Covalence

### Most Admired Metals Company—Fortune Magazine

## 2008

### One of the Most Sustainable Corporations in the World—

Corporate Knights and Innovest

### Dow Jones Sustainability Index (seventh year)

### One of the World's Most Ethical Companies—Ethisphere Magazine

### 2008 Most Admired Companies—Fortune Magazine

### Environmental Leader (Alain Belda, Alcoa Chairman)—Asia Society

### Empower the Green Enterprise Award—Oracle

### Carbon Disclosure Leadership Index—Carbon Disclosure Project

### Opening Minds Corporate Leadership Award—Institute of International Education

### Global Innovation Award—Nissan Motor Company

## Saving the Turtles of the Amazon

With some species threatened by extinction, turtles in and around the Juruti region of Brazil have a chance to not only survive but thrive through the combined efforts of Alcoa, community members, and non-governmental organizations focused on saving these Amazonian inhabitants.

In early 2008, Alcoa and the citizens of Juruti helped release almost 7,700 baby turtles into the wild as part of Juruti's participation in the "Turtles of the Amazon" project. Designed to help citizens in Amazonian communities conserve and manage turtles in their area, the project is a joint effort between the Chico Mendes Institute for Biodiversity Conservation (ICMBio) through the National Center for Conservation and Management of Reptiles and Amphibians (RAN), as well as Alcoa and the communities.

Long a source of food and other commercial products, Amazonian turtles faced increased pressure due to excessive harvesting, degradation and



destruction of their natural habitat, lack of conservation programs, and more. In response, the "Turtles of the Amazon" project began in 1979 and has resulted in the release of more than 56 million baby turtles.

Alcoa became a partner in the project in 2007 after independently working with

the local communities in Juruti's lake regions to release 440 baby turtles. This effort included Alcoa-conducted training on turtle management and conservation that was attended by volunteers from three pilot communities in the Juruti region. The project contributed to a change in the values and behavior of the participants.

"In the past, I invaded nature a lot," said volunteer Carlos Humberto da Silva Magalhães. "I've become aware of just what I was doing, and now I work for the benefit of other communities."

Today, Alcoa provides financial and other support to the "Turtles of the Amazon" project, which has expanded to 11 communities in the Juruti region. In early 2008, ICMBio opened the Turtle Project Juruti Advanced Research Unit with financial and logistical support from Alcoa. The unit offers a base for nature management, as well as sustainable technologies, permanent environmental education programs, and a children's club focusing on community schools.



Alcoa  
390 Park Avenue  
New York, NY 10022  
USA

Phone: 1 212 836 2600  
Fax: 1 212 836 2818

Internet: [www.alcoa.com](http://www.alcoa.com)

Online sustainability reporting:  
[www.alcoa.com/sustainability](http://www.alcoa.com/sustainability)

*To provide feedback on Alcoa's  
sustainability report, please send an  
e-mail to [sustainability@alcoa.com](mailto:sustainability@alcoa.com).*