

Sustainability: What more should companies do?

A presentation on Alcoa's commitment to climate change, presented at the June 2005 Conference Board Session on Sustainability

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The theme of this conference is "What more do companies need to do, moving into the future?"

I will address this by sharing the approaches Alcoa has embraced up to this point, our accomplishments, key trends we see developing, and where we will take our company from here. We intend to provide leadership in key areas and be complementary to the scale afforded by collaborating with other companies and other interested entities.

Sustainability

Alcoa believes that sustainable companies are just that - sustainable in the long term. The elements of sustainability, as we perhaps categorize them today, are more than just the right thing to do. Truly, companies embracing sustainable methods are those whose stakeholders, including communities and customers, will allow them to exist into the future. Therefore, the social, environmental, and economic impacts are matters of importance beyond branding or having the NGO community recognize us for trying to do the right thing. They are matters of great importance to the environment, to profitability, and indeed to remaining in business over the long term.

Alcoa Accomplishments and Direction

Alcoa's understanding of sustainability comes from a long history as a large-scale global business. For well over a century, we have sustained operations in hundreds of communities in the far corners of the world. This experience has shaped all of our values: environmental, social and ethical.

Some of the accomplishments and goals of importance to us include:

Lost Workday (LWD) Performance

Alcoa has achieved a 68% reduction in lost workday injuries since 1999. Our goal for safety is zero injuries, and we believe we can attain it for the 131,000 people who come to work at Alcoa every day.

Elimination of Wastes

We are committed to a 60% reduction in SO₂ by 2010, 50% reduction in VOCs by 2008, 30% reduction in NO_x by 2007, and an 80% reduction in mercury emissions by 2007.

Climate Change Strategy

We are beyond the debate about climate change at Alcoa. We have taken definitive steps to make sure that climate change leadership is part of Alcoa's strategy for sustainability. And we have achieved measurable results in emissions, energy use and on other fronts as well.

GHG Emissions

We have reduced Greenhouse Gas Emissions by 25% since 1990. We reached this goal years ahead of our 2010 target date, and we are now focusing on ways of maintaining this leadership as our operations grow.

Energy Efficiency

Because we are an electricity intensive business, we have always understood that efficiency and conservation go hand in hand with both environmental stewardship and sound business strategy. Currently we are actively pursuing more than \$35 million in energy efficiency projects. This commitment has reduced the electricity component of our main product, primary aluminum, by 37% since 1950.

Worldwide SPL Management

Spent Potlining (SPL) is a byproduct of the aluminum smelting process that accounts for a significant part of our solid waste stream. We've made much progress in moving SPL processing out of the 'disposal' model and into recycling as more and more uses for this material become available. By 2006, we expect to achieve a 100% recycling target for current-generation SPL under our management.

Trends Requiring Action

We at Alcoa have made some progress. We have learned something about operating sustainably in a fragile and dynamic world. Have we, and other organizations like us, done enough? Is there more that we can and should be doing? Let me set the stage for this part of the discussion with some facts and observations on climate change – the reason we are all here today.

Oil Consumption

China, the world's most populous country, joined the club of net oil importers in the last decade, driven by forces of modernization and development that are expected to scale up over the near term. This of course is a scenario we in the US are familiar with. Our own appetite for oil and gas is unabated, even as domestic production continues to decline. Worldwide, growing demand is expected to drive growth in oil and gas production to peak sometime in the next decade at more than 30 billion barrels a year.

One component of this demand is the growth of cars and light trucks worldwide, expected to continue as economies in India, China, Latin America and other parts of the world develop affluent economies and the energy-intensive lifestyles that accompany affluence.

Global Temperature Rise

Why this oil picture matters, and why we are here discussing it, is that the emissions of carbon dioxide and other greenhouse gases from the tailpipes of those vehicles, and from the smokestacks of factories and power plants going up worldwide, are growing as well. And as the emissions grow, they are concentrating in the atmosphere. We have been able to measure this. It is indisputable science.

Concurrent with the concentration of greenhouse gases in the atmosphere has been a measured increase in global mean temperatures over the last century.

The debate over whether these two pieces of science are related has ceased in all but a few quarters. Most scientists involved in the effort agree that greenhouse gases from human activities, primarily carbon dioxide, are adding to the earth's natural greenhouse gases, reducing the natural radiation of heat into space.

Alcoa's Direction

We at Alcoa agree with this assessment. And we believe that it is an issue requiring action. Alcoa, a global company, is committed to playing its part in an efficient and cost-effective global response in cooperation with national governments and relevant international agencies.

Commitments Moving Forward

How we live out this direction is part of what I am here to discuss today. We are building on our accomplishments of the past with new commitments to leadership in five key areas affecting the climate change issue and the environment:

- Global warming itself as an issue of action, education and advocacy
- Automobiles: major contributors to the problem and major opportunities for improvement
- Recycling: critical to improving the climate performance of our industry
- Water: though less related to global warming, a key environmental challenge
- Renewable electricity: also critical to the climate performance of our industry and others

Global Warming

Alcoa views global warming as an issue of vital importance, warranting the leadership and contributions of all elements of society. We are determined to do our part, and to provide leadership on the issue wherever we can. We are announcing the following leadership steps:

- We set a goal of reducing GHG by 25% by 2010. We have consistently achieved this goal since 2001 and expect to exceed it. Even with our aggressive growth plans, we will maintain this at least through 2010. Also, as we grow, we expect our GHG intensity from primary aluminum production to improve by 15%, and are working to formalize this goal.

- We will be launching a new program for educating our employees, communities, and civic leaders on the issue of global warming, helping describe what each can do to positively impact this issue.
- We will continue our work with governments and communities worldwide for legislative and regulatory solutions which truly make sense. Let me give you a couple of examples of solutions currently under public discussion. One proposal that does not make sense, in our opinion, is the CDM, or Clean Development Mechanism, at least in its current form. Alcoa believes that win-win projects that provide both environmental and financial benefit should not be precluded from receiving recognition in international GHG trading systems.

On the other hand, Alcoa has and continues to advocate for a comprehensive national GHG emission inventory. Good data is the precursor to actively managing any problem and improving performance. Alcoa has and continues to be actively engaged in the development of relevant international reporting protocols and internal measurement systems.

Automobiles

We believe that expanded use of aluminum in automobiles and light trucks is good for the environment, energy independence, communities, and business. The average car or light truck today contains 250 pounds of aluminum. The potential is easily 400 pounds per vehicle, with a parallel decrease in vehicle weight as aluminum replaces heavier materials. At this level, the nation's light vehicle fleet would achieve a 6% drop in gasoline consumption and 6% reduction in global vehicle carbon emissions. Aluminum gives carmakers a bigger envelope in fuel efficiency, size, performance, safety and recyclability. With the global growth projections we've seen for cars and light trucks, aluminum becomes more and more a key part of the climate change solution.

Today, we are announcing the following leadership steps in the automotive arena:

- We will work within existing and new forums with auto manufacturers, competitors, and various associations to promote advances in automotive design. One of many examples of this initiative is an announcement we made yesterday about sponsoring the production of a next-generation solar vehicle at the University of Michigan for the North American Solar Challenge.
- We will not rest until this message is universally known – not just because it is good for the aluminum business, but because it is truly part of the solution to global warming, leads to energy independence, and contributes to securing a better future for society.

Recycling

We believe that increased rates of recycling are good for the environment, energy independence, communities, and business. And aluminum is a near-perfect material for this effort. Of all the materials used in today's cans, bottles, and other packaging products, aluminum has one of the highest recycling yields. For example, an aluminum can recycles 100% right back into another aluminum can. It's more like reincarnation than

recycling. And the energy it takes to do this is a tiny fraction – just 5% – of the energy it takes to make a new aluminum can from scratch. Aluminum is so recycle-friendly that, by one estimate, 75% of the aluminum ever produced is still in use today.

This energy advantage is where recycling ties in to climate change. From the point of view of an aluminum manufacturer, increasing the amount of recycled raw material we use will have a direct impact on our emissions – and our energy costs as well.

Thus we are announcing the following leadership steps aimed at promoting higher rates of recycling:

- We have commissioned the engineering to expand our North American capacity and flexibility for recycling aluminum. We intend to substantially grow our recycling capabilities.
- We are launching a new campaign to educate our employees, communities, and civic leaders on the benefits of recycling. Our goal is to reinvigorate key stakeholders so we all recycle products we use, to the fullest extent possible.
- We are revealing today a project in Spain, on which we have been working for some time, which achieves a new state of the art in recycling efficiency. This project is far enough along to indicate great success. We are committed to further pursuits on the technology front.
- We recently announced a key partnership in Brazil which has developed recycling technology to separate aluminum and plastic from other carton materials
- Finally, we are affirming today our intent, desire, and full willingness to collaborate with our customers, competitors, and other stakeholders toward a goal of increased recycling. Forums exist already for these discussions. We will be doing as much as we can to foster the discussion and the direction.

Water Reduction

We believe that the availability of clean water is one of the great challenges facing society. We have an action plan for our contribution. Alcoa has reduced process water usage by 17 % and is committed to achieving a 60% reduction by the year 2008 compared to our use in year 2000.

Renewable Electric Power

Alcoa is a founding member of the WRI-sponsored Green Power Development Group, and we have contributed time and talent to its evolution. As part of the Group's renewable energy certificate purchase, the largest in U.S. corporate history, several Alcoa business units purchased credits equivalent to the power consumption of its office settings. In addition, we are investing in more efficient turbines for the hydroelectric systems we own and operate. These turbines produce more power for the very same amount of water released from the reservoir. In some cases, the increased capacity is up to 30%. We think this incremental hydropower is "as green as it gets." Beyond these actions, we are pursuing more green power technologies.

Climate Neutral

I've outlined some specific items that are on Alcoa's climate change to-do list. Our peers in the industry are working on similar initiatives, I'm sure. And we expect to see a lot of collaboration on these initiatives because they can only benefit everyone involved.

Let me offer another to-do, and this one is not just for Alcoa, but for the aluminum industry. We believe that, within the critical transportation sector, the industry can become 'climate neutral' by 2020. In such a state, the global warming impacts of aluminum production will be fully offset by the CO2 emissions saved by its use, on a run-rate basis.

Aluminum saves fuel and recycles like few other materials do. I am aware of no other metal that can support a vision like this. We believe that it can happen, if we in the industry work together. If the vision is shared by our customers, consumers and communities, we may be able to realize it even sooner.

And we believe there's no time to spare.

Closing

In closing, I would challenge companies, communities, NGOs, and civic leaders to create scale, setting aside short-term views so we can collaborate for the purpose of making a difference in the sustainability of our future. We suggest a common direction which includes:

- Embracing climate change as a real problem needing real solutions
- Embracing transportation efficiency
- Embracing recycling and waste stream reduction in as many venues as possible

Alcoa offers its involvement and, where helpful, its leadership!