



RETHINK BUSINESS

How Addressing Climate Change Can Improve The Bottom Line

Learnings From WWF Climate Savers Companies

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RETHINK PROFITABILITY

The Climate Savers program is one of WWF's key global platforms to engage business in climate change management. Developed in 1998, Climate Savers mobilizes companies to face the challenge of greenhouse gas (GHG) reduction and dispel the myth that sustainability is a threat to profit.

Foreword

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FOR CANADIAN BUSINESS, THE THREAT OF CLIMATE CHANGE LOOMS LARGE.

Nonetheless, despite its reputation as a clean, eco-loving country of verdant forests and sparkling rivers, Canada remains a major laggard in climate protection. According to official statistics, it has one of the highest rates of per capita CO₂ emissions of any country in the world. The conditions for a major change in this situation are hardly propitious either. The economy is wedded to fossil fuels, and the federal government has been reluctant to tackle the problem of climate change through national regulation. It is clear that we need to look elsewhere for meaningful change.

Hotels, soft drinks, information technology, and paper – these might not be the obvious places to look for leadership in climate solutions in the country. However, this report demonstrates that these are indeed some of the industries where a quiet Canadian revolution is beginning to take shape. Each of the companies featured here – Fairmont Hotels & Resorts, The Coca-Cola Company, Hewlett-Packard Canada, and Catalyst Paper – have demonstrated a willingness to take a



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step beyond their industry rivals. They have all made an impressive commitment to reduce absolute levels of greenhouse gas emissions. And they have each demonstrated in their own way that doing so can also make good commercial sense. Their performance is far from perfect. But these companies can all point to significant progress that sets a benchmark for others to follow.

The decision to take a lead on climate change is not taken lightly. WWF's Climate Savers program, though, is a great example of what can be achieved when businesses and non-profit organizations decide to work together to achieve common goals. Such partnerships are tough to get right. Different priorities, a clash of values, alternative

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ways of seeing the world: these can all derail the best-laid plans for collaboration. But WWF Climate Savers program works because it offers a framework for action that is animated by a set of clearly articulated goals. Participating companies work with WWF to set themselves a challenging but achievable target for absolute emissions reductions. Not a one-size-fits-all target that doesn't take account of the company and its industry's current realities. But also not a soft proportional target that allows firms to maintain or even increase total emissions as their business grows. These kinds of pragmatic but hard targets are the only ones that will work in the fight against climate change. The participating companies have shown great sense, but also no little courage, in making them.

The Climate Savers program is not just about targets, though. In fact, some of the participating companies already had impressive goals and carbon-reduction programs even before joining the initiative. But what Climate Savers does is provide support, advice, evaluation, and perhaps most importantly, a forum for the exchange of ideas and the communication of progress, that enables the program participants to better achieve their goals. And some of those achievements are certainly notable. Each company featured has been able to assess its carbon footprint and tackle the areas of greatest impact. HP

“The Climate Savers program is not just about targets. In fact, some of the participating companies already had impressive goals and carbon-reduction programs even before joining the initiative. What Climate Savers does is provide support, advice, evaluation, and a forum for the exchange of ideas and the communication of progress.”

should be particularly congratulated for extending its commitments to its entire supply chain. Beyond measurement systems and emissions reductions, though, it is heartening to see that member companies have managed to secure business-related benefits too, whether in terms of cost savings, reductions in risk, or generating new business. Such successes are vital for maintaining commitment from within, especially in the early stages of any change process.

The case studies also showcase the development of new tools, processes, and products. Coca-Cola's new vending technologies, Catalyst's switch to renewable energy sources, Fairmont's carbon management program, and HP's Halo Telepresence “virtual meeting experience” are all truly impressive developments. As we move forward, however, more attention will need to be placed on developing radical new products and services that have the potential to revolutionize tomorrow's carbon-neutral markets. The greatest resource that business can bring to the climate problem is the wellspring of innovation and creativity that resides in companies across the world. To date, though, Canadian firms have yet to truly distinguish themselves as carbon economy innovators. I hope that the experience and wisdom distilled in this report will provide the foundation on which such a future will be built. These Climate Savers companies are leading the way. But there's still a long way to go.

Why Address Climate Change?

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Reduced GHG emissions
Reduced energy cost
Reduced GHG tax and market risks
Improved products
Customer and employee satisfaction
Information exchange

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BENEFITS



RETHINK CHANGE

Key Learnings From
WWF Climate Savers Companies

Key Learnings

1 PREAMBLE

This report highlights the successes, challenges, and key learnings of WWF's Climate Savers companies. Collectively, the participating companies deliver over 14 million tons of greenhouse gas (GHG) savings annually. In addition, they experience significant cost, competitive, and operational benefits. Environmental responsibility is not only good for the planet but is also a mechanism that can enable companies to grow profits while conducting business in a sustainable manner.

Most Climate Savers companies have used similar fundamentals in their reduction programs. While not all the activities apply to all organizations and many can be challenging to deploy, they have been proven as effective building blocks towards change. Key strategies employed by the Climate Savers companies to reduce their emissions include: integrating GHG goals with other key business deliverables; holistically identifying areas of GHG reduction opportunity; creating and fostering innovative solutions; measuring and reporting GHG data; providing support tools; developing key relationships; and educating and influencing the public and policy-makers. While not all of these approaches will necessarily apply to all companies, and not to the same extent, there are aspects of each that can be used to help companies reduce GHG emissions.

For those firms not yet ready to commit to the Climate Savers approach, WWF also has a solid history of forging working partnerships with organizations aimed at improving their environmental performance and protecting aspects of their local ecosystem.

This report is not only intended to highlight the significant impact the corporate sector can play in transition to a low-carbon economy but it is also meant to serve as a guide for companies that are either thinking of beginning their sustainability journey or ones that have already started on the path.



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CLIMATE SAVER

LEARN THE STEPS TO
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About Climate Savers

The Climate Savers program is one of WWF's key global platforms to engage business in climate change management. Developed in 1998, Climate Savers mobilizes companies to face the challenge of greenhouse gas (GHG) reduction and dispel the myth that sustainability is a threat to profit. Today, some of the world's largest and most respected companies are WWF Climate Savers, helping to advance policy and transform the market towards a low-carbon economy and sustainable future. The Climate Savers program continues to grow and provide benefits to participating companies, including positive Return on Investment (ROI) on GHG reduction and an enhanced reputation. WWF-Canada engages those Climate Savers companies that are headquartered in Canada or are Canadian subsidiaries of global companies that have signed on to the program.

Some of the GHG reduction solutions that have been successfully implemented by the Climate Savers companies focus on:

- **Energy efficiency in manufacturing of products**
- **Energy efficiency within organizations and their facilities**
- **Fuel-switching and increased use of energy cogeneration**
- **Conversion to renewable energy supplies**
- **Transport efficiency**
- **Energy-efficient products, measurement tools and services**
- **Financing schemes for energy efficient innovations**

By the end of 2010, WWF Climate Savers companies will have collectively reduced GHG emissions by an estimated 50 million tons since the program's inception. This amount is equivalent to the annual emissions of Switzerland. By challenging companies to lead their industry in carbon efficiency, WWF Climate Savers program contributes to the transition to a sustainable energy future, and to the goal of keeping global warming well below 2°C, in line with WWF's mission.

“WWF's Climate Savers program includes a who's who of the business world, including corporations such as Johnson & Johnson, IBM, and Nike. Fairmont is pleased to join this exclusive group of responsible organizations by becoming a fully accredited member of the Climate Savers program.”

– Brian Richardson, Vice President, Marketing, Fairmont Hotels & Resorts

Key Learnings

3 BENEFITS OF ADDRESSING CLIMATE CHANGE

Climate Savers companies have experienced improvements not only in their GHG emissions but also in their financial, strategic, and product performance as well as reputation. The following outcomes are observations from Canadian Climate Savers companies with informed learnings from some of their global parent corporations.

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Reduced energy cost

Reduced GHG tax and market risks

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Customer and employee satisfaction

Information exchange

3.1

REDUCED GHG EMISSIONS

All of the Climate Savers participating companies have been able to make significant GHG emission reductions delivering annual GHG savings of 14 million tons. For example, **Catalyst Paper** has eliminated over 1 million tonnes of GHG emissions from its paper mills without having to cut production. Similarly, **The Coca-Cola Company** stabilized its GHG growth as its system's emissions grew only by 1 per cent from 2006 to 2007 despite sales volume increases of 6 per cent. **Hewlett-Packard** has pledged to reduce its products' energy and associated GHG emissions by 40 per cent below 2005 levels by 2011. Delivery of this goal is well underway with reductions in notebook PC energy consumption already surpassing targets.

These types of Climate Savers GHG reduction efforts can also improve the companies' profitability, strategic positioning and thinking, market opportunities, and employee satisfaction.

3.2

REDUCED ENERGY COST

Companies' direct GHG emissions as well as emissions from their supply chain (the system of companies and services that brings in raw resources and delivers finished products) and the subsequent use of their products are ultimately tied to fossil fuel usage in transportation, production of materials, electricity, and thermal heat. This direct linkage means companies that can reduce their GHG footprint will also reduce their fossil fuel dependence and its associated costs. For example, the 14 million tons of annual Climate Savers GHG reductions is equivalent to reducing 5.2 billion litres of gasoline consumption – translating into impressive savings worth over \$5 billion. The past five years have seen significant price increases for fossil fuels and the future only bodes higher energy costs¹. This reality is making energy-efficiency projects viable relative to their costs and rate of return. As an example, **Coca-Cola Bottling Company** (CCB) in Canada, delivers over \$700,000 per year in electricity savings with its new energy-efficiency lighting in all of its facilities with a payback period of three years.

1: Jeff Rubin (former chief economist at CIBC World Markets Inc), "Why Your World Is About to Get a Whole Lot Smaller", Random House, 2009

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3.3

REDUCED GHG TAX AND MARKET RISKS

Government plans to implement policies, such as cap and trade programs, will establish GHG emissions maximums that will effectively tax GHG at estimated prices between \$15 and \$50 per tonne CO₂e (with some economists estimating prices as high as \$200 per tonne in the future²). Companies with less GHG exposure will position themselves well to avoid this cost and GHG risk, which is increasingly being considered by the financiers and financial markets around the world. As seen in early 2010, the U.S. Securities and Exchange Commission (SEC) ruled that companies must consider the impacts of global warming and their efforts to curb climate change when disclosing business risks to investors³. Similarly in British Columbia today, where a sliding \$10 to \$30 per tonne CO₂e fossil fuel GHG tax is already in place, **Catalyst Paper's** reduction efforts are currently providing savings of \$15 million per year in avoided GHG tax. This amount will reach \$30 million by 2012. Clearly, GHG emissions are becoming mainstream aspects of business operations and need to be considered not only as an environmental but also financial risk.

3.4

IMPROVED PRODUCTS

Addressing companies' impact on climate change can often have positive effects on their business model, processes and products. Some Climate Savers companies have found that the climate challenge incents development of better products. For example, **Hewlett-Packard** strived to reduce the energy consumption of its laptops, and in so doing, delivered units in its highest volume desktop and notebook PC families that use 41 per cent less power (over 2005 levels). This development saves HP's customers money on electricity costs and prolongs the operating time of its laptops.



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2: assets.wwf.ca/downloads/wwf_response_ontcapandtrademarch_09.pdf

3: <http://www.sec.gov/news/press/2010/2010-15.htm>

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3 BENEFITS OF ADDRESSING CLIMATE CHANGE

3.5 CUSTOMER AND EMPLOYEE SATISFACTION

Today, levels of environmental and climate change awareness are higher than ever before. Customer satisfaction and employee retention continue to be challenges as organizations fight to retain business and talent. Climate Savers companies have successfully engaged both their customers and employees on the GHG reduction issue and, in so doing, have improved satisfaction and the success of the initiatives themselves. For example, **Fairmont Hotels and Resorts** has chosen to implement green travel packages providing guests with the experience to visit the hotel's vegetated green roof or play a round of golf on a green powered golf cart. Fairmont recognizes its colleagues through quarterly and annual awards including Green Team of the Quarter, Environmental Hotel of the Year (evergreen and seedling category), EnviroStar of the Year and Environmental Engineer of the Year. Not only are these initiatives saving energy, but are also visible reminders of the company commitment for its employees and customers. This supports the company strategy to brand itself as a sustainable organization and demonstrate unique solutions to addressing climate change.

3.6 INFORMATION EXCHANGE

Companies addressing climate change can greatly benefit from information exchange. The concentration of knowledge and capability is extremely helpful in motivating organizations to use innovative approaches that have been proven successful elsewhere and to set appropriate targets and expectations. The Climate Savers program creates a platform for progressive, like-minded organizations to share knowledge and GHG strategies. The frequency and the content of the regular Climate Savers summits and meetings allow participants to form strong bonds while improving their perspective of emerging issues through a capable WWF lens. For example, promotion of the **U.S. EPA's SmartWay** program has resulted in many Climate Savers participants adopting the initiative. In fact HP was the first company to certify its North American distribution network to SmartWay and has since leveraged this in its **Eco Highlights** labelling scheme. This ability to differentiate can be used as part of companies' marketing outreach program along with their GHG reduction activities.

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While the Climate Savers program has 23 members spanning multiple sectors and geographies, there is relative uniformity in the strategies that have been employed to deliver these results. Virtually all participants have implemented facets of each of the activities, outlined in this section, into their successful emission reduction programs. Although many of these actions are not easy to implement, they are proven approaches to delivering results. In addition, while this list is not exhaustive, it represents a number of important elements that further the move towards less GHG intensive business practices.

GHG REDUCTION STRATEGIES

Integrate strategies

Make sure new GHG strategies line up with existing plans

Be holistic in identifying opportunities

Reduction opportunities are throughout your entire organization and its supply chain and geographies

Be innovative in developing solutions

New ideas will reduce emissions and improve company performance

Estimate, measure and report GHGs

Treat your GHGs like financials in how they're estimated and reported to stakeholders – build measurement capabilities

Use tools to support the effort

Deploy guidance throughout the organization to help drive change

Develop partnerships

Existing expertise should be accessed to accelerate change; WWF Climate Savers program facilitates knowledge transfer

Influence policymakers and your improve reputation

Leading companies have an opportunity to shape policy and improve their brand reputation

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4 GHG REDUCTION STRATEGIES

4.1

INTEGRATE GHG REDUCTION STRATEGIES INTO BUSINESS MODELS

Typically, companies find that integrating environmental commitments into their broader organizational strategy enables development of holistic and unified initiatives. Thus, it is important to engage and obtain top-down support, on the reduction process and its explicit goals, from company owners, boards of directors, senior executives, and managers. The presence of a single entity owning the sustainability agenda within an organization is also significant as it establishes accountability and provides direction and leadership at a more accessible level. Without fundamental support from the top down, initiatives which are seen as voluntary could be less likely to succeed. In addition, bottom up initiatives driven by local employees, regions or divisions are equally critical. Ultimately, it is the employees who are responsible for managing the daily, on-the-ground operations that use energy and thus they need to be engaged in GHG reduction strategies. Involvement across the entire breadth and depth of companies brings capacity and allows for creative solutions development. Thus, ideally, GHG reduction considerations, idea generation and implementation should be developed throughout the entire organization engaging the majority of its employees. The act of setting goals to reduce GHG emissions and involving a diverse group of company employees can nurture creativity and ownership with solutions that quickly follow.

For example, **Hewlett-Packard** created the Green Advocates program, which educates employee volunteers on the company's environmental legacy and programs. Through regular training, employees become ambassadors who share the environmental information with their colleagues as well as with HP customers. In another example, **Fairmont Hotels and Resorts** established Green Teams at each facility, made up of diverse cross sections of employees who are



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charged with developing programs at the facility that meet the needs and values of the specific environment in which the facility operates.

The integration of sustainability strategies into the business model also needs to allow for flexibility. Successful Climate Savers companies have developed approaches that focus on what can be done today while remaining flexible in the long term. Starting out, companies should consider opportunities with the greatest return based on effort. To instill confidence, simple projects that deliver results can set the tone for the remainder of the program. Ultimately, Climate Savers companies have found “walking before running” to be the most effective means of moving forward. **Fairmont Hotels and Resorts** began its journey by conducting energy audits at all of its Canadian resort locations, which resulted in initial identification of over 300 possible reduction activities. Similarly, **Catalyst Paper** recognized it could

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reduce GHG emissions by focusing on reducing fossil fuel purchases; subsequent optimization of its wood waste fuel mixtures delivered both GHG and cost reductions. **Hewlett-Packard** undertook assessments of its emissions footprint across the entire global organization to understand where it had the greatest impact and opportunities. The company found that its supply chain and customers' use of its products were responsible for the greatest discharges, orders of magnitude higher than its own facilities, and have thus become a major focus of reduction efforts. Finally, **The Coca-Cola Company** identified transportation emissions opportunities and delivered its first hybrid electric delivery truck in 2006 as an entry into changing transport technology.

Companies must strive to implement sustainability into their business model, and gain true commitment to the philosophy behind these projects. They also have to be able to sincerely communicate their sustainability plan. A growing global trend in the past five years is the identification of greenwashing by well-intentioned and respected companies. Disingenuous statements or quiet abandonment of once hailed (but non-sustainable) projects is potential fodder for criticism from green watchdogs.

There are pitfalls to be aware of when integrating GHG initiatives into the business. Many opportunities take years to be realized and can require greater resources than initially expected. Thus, organizations must be realistic in setting timelines for delivery of results and budgeting for associated costs. Further, once committed, companies need to be patient in the execution, completion and realization of the project benefits. This is especially important in times of economic recession or leadership change.



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4.2

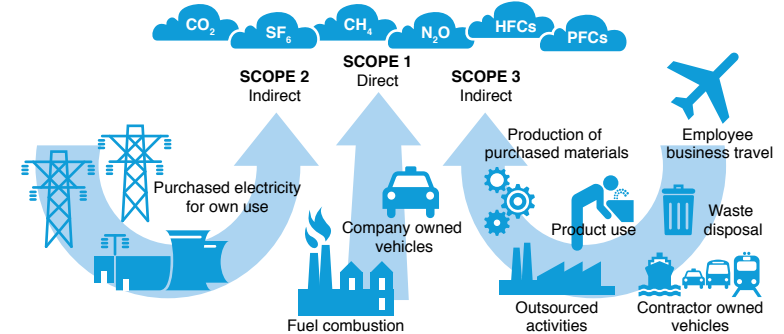
BE HOLISTIC IN OPPORTUNITY SEEKING

Companies' ecological footprints, and the associated GHG emissions, are often larger than most realize. Under the leading GHG accounting protocol developed by the World Resources Institute/World Business Council for Sustainable Development (**WRI/WBCSD**), GHG emissions are categorized as Scope 1, Scope 2, and Scope 3.

Scope 1 is direct emissions from fossil fuels generated from facilities and vehicle fleets. Scope 2 is indirect emissions from purchased electricity and thermal energy. Scope 3 is indirect emissions from the entire supply chain and even product lifecycle. Opportunities to reduce GHGs exist in all three of these spheres. As a result, companies need to consider their resources before deciding on appropriate areas of focus.

Companies should try to be all-encompassing in considering their approach to reduce GHG emissions. An organization should assess its footprint in all three scopes when defining the most attractive reduction opportunities. Typically, the Climate Savers companies focused first on Scope 1 and 2 emissions as those are often easier to address and can bring more timely cost savings than Scope 3 emissions. Gaining benefits from low hanging fruit in Scope 1 and 2 would usually provide companies with momentum to start to tackle emissions in their supply chain – Scope 3. However, this approach might not work for all companies. For example, organizations that have limited resources and large reduction opportunities in their supply chain might want to primarily focus on capturing the benefits in their Scope 3 emissions. Clearly, companies need to evaluate what approach is best for them given their footprint, reduction capabilities and resources.

Regardless of the initial focus, companies need to consider emissions outside of their direct control – those of their suppliers



Source: WRI/WBCSD protocol / Illustration Warren Wheeler

and customers. As Ray Anderson, Chairman of Interface Inc., states, "You've got to quit thinking of yourself as some stand-alone organization. You are your entire supply chain—from mine and wellhead to the incinerator and landfill. And if you want to begin to reduce your environmental footprint, the quickest way to start is to find those suppliers who've already reduced theirs."⁴ Organizations should also analyze the ecological impact of their products and services in the customer use phase. For some companies, such as **Hewlett-Packard**, the greatest GHG emissions stem from product use. Scope 3 emissions are important to consider from an environmental as well as business perspective. Initiatives aimed to reduce customer emissions often lead to innovative product development, increased customer satisfaction and ultimately a competitive advantage.

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4: http://www.purchasing.com/article/229917-Revenue_stream_flows_from_recycling_efforts.php

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As previously mentioned, **Hewlett-Packard** thoroughly assessed its GHG emissions and found that customers' use of its products and manufacturers in its supply chain are the single biggest contributors. Based on that work, the company has included the energy efficiency of its finished products as a goal and strived to deliver material reductions in that area. Today Hewlett-Packard is a leading company focusing on emissions throughout the entire lifecycle of products – from suppliers to customers. Through its Green Procurement practices, **Hewlett-Packard** is working with its suppliers to improve their GHG performance. The company has audited tier 1 suppliers and found they were responsible for over 3.5 million tonnes CO₂e. This represents an area for great GHG and cost-reduction opportunity. As a result, **Hewlett-Packard** is now working with its suppliers on energy-efficiency improvement strategies.

A common mistake for companies starting to tackle the climate challenge is committing to too ambitious objectives. Typically, companies have been most successful by beginning their sustainability journey with small scope initiatives with conservative and realistic expectations for benefits and costs. As internal knowledge and confidence grows then companies can proceed to undertake more demanding projects. Companies with little expertise, just starting on the sustainability journey, may benefit from outside expertise to determine the right low hanging fruit, whether in scope 1, 2 or 3, to pursue.

“You’ve got to quit thinking of yourself as some stand-alone organization. You are your entire supply chain—from mine and wellhead to the incinerator and landfill. And if you want to begin to reduce your environmental footprint, the quickest way to start is to find those suppliers who’ve already reduced theirs.”

– Ray Anderson, Chairman of Interface Inc.



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BE INNOVATIVE WITH SOLUTIONS

Many forward-looking organizations today are recognizing the opportunity created in the face of the climate change crisis. While new technologies and approaches promise to revolutionize business, the challenge remains in having the courage and talent to develop those solutions. All manner of opportunities exist to reduce fossil fuel uses: efficient electrical consumption, simplification of supply chains and even transformation of company services and products. These endpoints can be achieved through changes in technology, products, employee behaviour, and procurement strategies. As such, it is vitally important to engage company employees to foster creativity and innovation in order to develop financially and environmentally beneficial solutions.

Climate Savers organizations have shown particular innovation in solving old problems to improve their GHG emissions and their competitive position. **The Coca-Cola Company**, for example, has reinvented its vending machines, which are responsible for the largest portion of the company's GHG footprint. The company has developed a smart temperature control unit which adjusts the vending machine's operation based on the hours of the premises. Further, **The Coca-Cola Company** is experimenting with replacement of hydro-fluorocarbons (which are highly concentrated greenhouse gases) with CO₂ systems. These new machines were deployed at the 2010 Winter Olympics with the added benefit of brand exposure for the company.

Hewlett-Packard undertook a massive consolidation of its 85 data centres across the world into three paired facilities in the United States using the most sophisticated energy-efficiency standards. As a result, Hewlett-Packard reduced its energy use by 60 per cent, network costs by 50 per cent, and operational spending dropped from 4 per cent of total revenue to just 2 per cent.

Catalyst Paper modified its paper products to reduce customer costs and GHG emissions. The company developed lighter weight paper grades which still provide the same printable area and paper quality but use less fibre and have lower transportation, warehousing, printing and mailing costs. Recent increases in bulk mailing costs for American customers have made this strategy particularly relevant.

Fairmont Hotels and Resorts has not taken a one size fits all approach. Rather, the company has left innovation to each facility where expertise of employees at each site contributes to the development of solutions. This organic approach maximizes freedom to experiment with opportunity and share the best ideas across the company.

Organizations working to innovate in their field should be realistic in their outlook on successes and potential failures. Leadership should be prepared to accept that not all initiatives work out as planned but do present themselves as constructive learnings for subsequent attempts.

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4.4

ESTIMATE, MEASURE, AND REPORT

Most performance management programs today dictate that companies achieve the goals that they can measure; this fact certainly applies to GHG emissions. Entities interested in making reductions must undertake a baseline estimate of their key emissions and periodically review these levels to assess their reduction progress. WWF recommends that the **WRI/WBCSD GHG Protocol** be adopted. This protocol is the most widely used international accounting tool for government and business leaders to understand, quantify, and manage greenhouse gas emissions. The protocol is the result of a decade-long partnership between the World Resources Institute and the World Business Council for Sustainable Development. The protocol offers concise, easy-to-use guidelines for estimating company and project GHG emissions as well as sectoral specific guides.

In developing initial GHG estimates and subsequent measures, an appropriate level of resolution within companies should be established to help identify opportunities. Much like an accounting exercise, organizations will determine department level, facility level, and organization totals within discrete activity types like manufacturing, transportation, and support services. It is important to develop local as well as global reporting. With multinational companies establishing global Climate Savers commitments, there is a possibility for the company's local representatives to either adopt and even excel at the established targets or hide behind the global targets and not enforce them. Country-specific reporting will help multinational companies establish benchmarks, identify slow adopters and foster GHG reduction competition. GHG reporting is also increasingly important given the gradual shift in GHG reporting from voluntary to regulatory along with the financial market interest in GHG risk management as underscored by the recent SEC ruling.



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Proper development of GHG metrics and measurement of GHG emissions is crucial. There are two key GHG metrics which should be established. First, an absolute measure of tonnes of CO₂e should be made. Second, an intensity metric should be created based on the organization's output. For example, **The Coca-Cola Company** estimates kg GHG per litre of product while **Catalyst Paper** estimates kg GHG per tonne of paper. Companies without measureable products will often adopt kg GHG per dollar revenue. Freight companies often adopt kg GHG per tonne km freight. The key is for companies to establish both an absolute and intensity measure so that the organization can track the size of its footprint and the footprint associated with its business activity. This is especially important since absolute emissions can be impacted by reductions in business activity rather than actual improvement in performance.

Organizations can also consider direct measurement of activities that they know have associated GHG emissions. For example, **The Coca-Cola Company** not only targets GHG but also the recycling of packaging and water usage. These metrics can serve as a proxy for GHG emissions since they are energy and material input intensive. They also represent areas of cost to the business, which if monitored and addressed, can deliver cost savings and improved profitability. **Hewlett-Packard** has implemented such strategies. Beyond direct GHGs, the company is also focusing on reducing product weight and energy consumption, reducing packaging weight, and increasing the use of recycled plastics and paper fibre. Holistically, all these strategies not only reduce GHG emissions but also costs and resource use.



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The science of the measurement of GHGs is still in its infancy and, consequently, there is no absolute uniformity in the expert community regarding best approaches to these calculations and measures. It is very easy for an organization to get derailed trying to deliver emissions estimates at unneeded levels of resolution with unnecessary levels of accuracy. For the most part, first pass estimates should be developed to provide direction towards the most cost effective opportunities. Therefore, companies should strive to balance accuracy of estimates versus their costs.

Key Learnings

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4.5

TOOLS TO SUPPORT THE EFFORT

Once an organization has begun its program to reduce its GHG footprint and improve its competitive position, the ongoing effort must be supported. This is critical since reduction programs can take upwards of five years to fully materialize, involve technology deployment, business process changes, and changes in employee behaviour.

To support ongoing monitoring and progress, companies can take advantage of a number of environmental management systems, usually registered to or designed along the **ISO 14000 standard**, which can provide the rigour and process that allow companies to continuously improve. If such programs are already in place then it is a natural progression to include GHG abatement in the goals of that program.

Catalyst Paper took this step by including GHG management in its programs and designing its GHG accounting to meet the ISO 14064 standard. Otherwise, organizations will need systems that can at least track and report key GHG and related metrics to present to company leadership. These are usually tied to accounting systems, since supplies, fuels and electricity purchases play a major role in determining the GHG footprint. In larger organizations, there are often disconnections between the procurement of these and the ultimate users. In such cases, GHG tracking systems provide crucial feedback to all parties regarding the effectiveness of their activities. Green procurement programs, while creating value and GHG reductions, are very difficult to manage. Procurement education on GHG topics like intensity, transportation, and lifecycle is a must-have for supply chain initiatives.

Often, in the process of supporting GHG reduction strategies, companies also design new tools and solutions. For example, **Hewlett-Packard** developed Halo Telepresence, which is a video teleconferencing system available to its employees. The company encourages its employees to utilize this tool by prohibiting employees from booking flights to offices that have a Halo system. The company



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expects to see the reduction of 20,000 trips each year, resulting in the elimination of more than 39,000 metric tonnes of CO₂. This is the equivalent of taking 6,500 cars off the road for one year and produces millions of dollars in annual savings. **Coca-Cola Bottling Company** (CCB) deployed energy conservation toolkits to all production facilities to assist with benchmarking energy-efficiency performance and the identification of opportunities with existing delivery systems, equipment and production processes. It is also important to support individual reduction efforts. In order to do this successfully, it is best to illustrate to individuals the environmental impact of their actions. One of the simplest yet most effective tools for this is a GHG calculator that enables users to estimate certain aspects of their GHG footprint. **Hewlett-Packard** was a leader in developing a **GHG calculation tool** for its products and as part of its WWF partnership program, assisted WWF in developing a GHG calculator called the **Living Planet Community**, which encourages Canadians to learn about the intensity of their lifestyles and make lighter GHG choices.

Beyond numerical efforts to support reduction strategies, companies need to also consider level of communications within and outside the organization. Employees need to know that their efforts are supported by the leadership and they must have access to ideas and opportunities developed at their workplace. In changing employee behaviour, the HR department may play a role in developing new corporate practices, such as change management or travel policies. Company stakeholders like the public, neighbors, customers, and suppliers will also take interest and may provide valuable perspectives. For example, **Catalyst Paper's** extensive stakeholder outreach resulted in the identification and development of a manufactured carbon neutral paper grade specifically for a single marquee customer and is now sold across North America. **Hewlett-Packard** initiated groundbreaking work in providing support that educates both



© NASA

its customers and suppliers. For example, the company identified customer consequences of shifting from personal printers to group printers within an office and produced a change management white paper to address this. On the supply chain front, Hewlett-Packard's well established program includes guidance to its small suppliers on improving their GHG performance.

A pitfall in providing tools to the reduction effort is providing either too much or too onerous support. Companies can often get overwhelmed in trying to deploy programs from a corporate office that are unnecessarily complex or redundant. To avoid this, companies should seek employee feedback on most appropriate support platforms for the biggest impact given company efforts.

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4.6

DEVELOP PARTNERSHIPS AND NETWORKS

Cross-pollination of ideas and activities within a network or partnership can provide companies with great insights and best practices. This is especially important today as the science, measurement, and reduction of GHG emissions are in early development relative to other corporate initiatives such as health and safety or quality control. WWF Climate Savers program is an example of a successful partnership that can facilitate knowledge sharing and transfer, and help drive ambitious GHG reduction performance. It showcases the opportunity that exists for companies to establish themselves as leaders of GHG reductions in their sector and use the claim to gain a competitive advantage. Thus, companies looking to reduce emissions should attempt to join or develop a network of like-minded organizations to take advantage of the knowledge already at the table. For example, **Hewlett-Packard** is a founding member of **Electronics Product Stewardship Canada**, which developed an end-of-life treatment standard, ensuring the safe and environmentally responsible management of end-of-life electronics in Canada. **Hewlett-Packard** is also facilitating the transition to a low-carbon economy by collaborating with WWF Climate Savers, Combat Climate Change, the International Partnership on Climate Change and the Pew Center for Global Climate Change along with many educational activities and organizations.

Collaboration within companies' own networks and supply chains can also help them identify important reduction strategies. **Catalyst Paper** has been working with partners both up and down the supply chain for a number of years to both quantify and reduce the size of its footprint. Through these collaborations, Catalyst has learned that GHG from transport of finished paper accounts for over 28 per cent of its total GHG lifecycle and is particularly susceptible to the mode of transportation. This learning made Catalyst consider approaches to address these emissions. Another Climate Savers company – **Hewlett-Packard** – has an advanced partnership with its suppliers. The company has long recognized the enormous impact wielded by its supply chain, and thus launched its supply chain Social and Environmental Responsibility (SER) program in 2000. The company's \$50 billion (U.S.) annual spending on procurement guarantees that Hewlett-Packard has potential to influence and help improve the organizations they do business with. The company pioneered the establishment of the **Electronic Industry Code of Conduct** (EICC). In 2008, 142 suppliers at 246 facilities were audited and the results are now being used to identify improvement opportunities. Hewlett-Packard was the first electronics company to announce the emissions of its key suppliers.

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4.7

INFLUENCE POLICY-MAKERS, PUBLIC OPINION, AND BEHAVIOUR

North America's new GHG economy has created new issues that some companies must address. Government GHG policy continues to be an area of uncertainty and risk. For sophisticated organizations with sizeable GHG footprints or fossil fuel exposure, this uncertainty translates into risk on their income statement and risk in undertaking projects which use energy. These types of companies need GHG certainty in their strategic planning.

Unfortunately, companies operating on the leading edge of performance can become “collateral damage” as governments create GHG policy to incent the lowest common denominator. **Catalyst Paper** was an early adopter of low GHG technologies and eliminated 1 million tonnes of CO₂e emissions between 1990 and 2005, equivalent to a 70 per cent reduction. However, public policy in Canada and British Columbia did not grant Catalyst credit for early actions nor did it release the company from having to meet mandatory percentage reductions in keeping with the entire jurisdiction. A pragmatic way to help deliver rational policy is to work with and influence policy-makers through network groups and partnerships with groups like WWF. Entities interested in reducing GHGs should also ensure that they are actively engaging all levels of government. Many of the more advanced Climate Savers participants have active government outreach programs to this end or have leveraged industry associations to act on their behalf.

Companies can also leverage their strong brands to influence public opinion and behaviour. Reducing CO₂ emissions creates the opportunity to differentiate companies' brands, and provides a strong communication platform. Organizations with a leading GHG track record or special products have a rare opportunity to distance themselves from competition by highlighting their actions and the



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pedigree of their products or service. For example, **The Coca-Cola Company**, with one of the world's most recognized brands, chose to support **WWF's Earth Hour** by turning off many of its major lit advertisement boards around the world and encouraging iCoke members online to support the initiative. This work promotes Coca-Cola brand and supports the company's corporate actions, while highlighting the Earth Hour program, encouraging individuals to take action and helping drive change in behaviour.

Many Climate Savers companies highlight their sustainability strategies while educating and engaging their customers to reduce their emissions. **Hewlett-Packard** developed an **Eco Solutions website** that not only highlights the company's sustainability programs but also its product offerings that help consumers meet those same goals.

Catalyst Paper was one of the first North American paper manufacturers to offer a GHG neutral paper product. The company has reduced the paper's Scope 1 emissions as far as possible and purchased legitimate GHG offsets to eliminate the remaining emissions. **Fairmont Hotels and Resorts** doesn't manufacture products for consumption but rather services and it hopes guests will choose greener hotel rooms. The company has been a strong supporter of **WWF's Earth Hour** and key awareness campaigns including sustainable commuting challenges. Fairmont is working on improving energy performance by embracing the **LEED green building standard** and implementing procurement standards that favor local goods and services with lower transportation footprints. Companies should showcase examples of their sustainability initiatives and report on them in their CSR reports in order to educate the public on their efforts.



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Working with government on policy development or in the public domain on perception and behaviour can be difficult. Organizations should be careful to choose issues that they can realistically change or at least influence. 2009 represented one of the most tumultuous years in development and failure of international GHG policy, yet there was progress in North America. Slowly, public awareness and education in this area is growing but ongoing challenges and skepticism around the legitimacy of the GHG issue continue. Educating all stakeholders about the science, challenges, and opportunities of climate change is a task organizations must consider.

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5 OUTLOOK

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The pressing need to reverse climate change has never been more evident. Growing public awareness and government actions to regulate GHG discharge make corporate reduction efforts paramount. Programs like WWF's Climate Savers highlight the fact that GHG emissions reductions go hand-in-hand with improvements in organizational performance. Companies targeting their footprint can also expect to see improved financials, lower fossil fuel exposure with better risk profiles, new product opportunities and improvements, higher employee satisfaction, and greater understanding of the issue.



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© Mark HOBSON / WWF-Canada

In delivering GHG reductions, there are common activities that have been observed across most Climate Savers participants. While not all these activities will necessarily apply to all organizations and certainly are not easy to deploy, they have been proven as effective building blocks towards change.

Reducing GHG emissions means organizations must integrate strategies into their existing plans; survey their entire business to identify economic reduction opportunities; be innovative in creating solutions not yet even imagined; use effective GHG measurement and tracking systems; deploy reduction tools that can help the entire company; develop strong networks with areas of GHG expertise; and look for opportunities to differentiate and build a reputation that recognizes excellence in GHG performance. With this guidance and a desire to contribute to the climate change solution, WWF believes companies can materially reduce their GHG emissions.

Small & Medium Enterprises

THE OPPORTUNITY FOR SMALL AND MEDIUM ENTERPRISES TO ADDRESS CLIMATE CHANGE

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SMALL & MEDIUM
ENTERPRISES

Small and Medium Enterprises (SMEs) must not be overlooked on the journey towards the new low-carbon economy. The SME sector continues to grow steadily, accounting for over one quarter of Canada's GDP¹, and is becoming increasingly integrated into supply chains of large companies.

Just like large business, SMEs recognize the link between sound environmental practices, long-term business profit and growth, and a healthy economy. According to a recent survey by the Canadian Federation of Independent Business², SMEs across Canada have expressed a strong belief that protecting the environment and growing the economy can go hand in hand. Although SMEs may not have the organizational influence and resources of large enterprise, they are uniquely positioned to implement and inform the development of innovative yet practical approaches to addressing environmental issues.

The key learnings from this report – while highlighting the climate change management strategies of large companies – can serve as a guide to SMEs on how to approach and integrate sustainability and GHG reduction into their own business. As with large companies, SMEs who take action on climate change will experience cost, competitive and operational benefits.

Moreover, as large industry continues to integrate sustainability into corporate practice, it will recognize that climate change management strategies must include the impact of SMEs along the supply chain. SMEs that proactively assess and manage the risks and opportunities of climate change will be better equipped to gain access to new markets that emerge from this shift towards sustainability. Working together to raise standards, increase innovation and gain new competitive advantage offers a win-win situation for both big and small companies in the new low carbon economy.

FOR MORE INFORMATION

To learn more about the impact of climate change on SMEs and strategies to mitigate risks and capture new opportunities through practical business solutions, please refer to:

A Guide to Climate Change for Small- to Medium-sized Enterprises by Canadian Chamber of Commerce and Pollution Probe

<http://www.pollutionprobe.org/Reports/Guide%20to%20CC%20for%20SMEs.pdf>

1: Statistics Canada

2: Achieving Eco-prosperity: SME's perspective on the environment, Canadian Federation of Independent Business, 2007



Catalyst Paper

Case Study 1

Setting a Canadian standard

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CASE STUDY 1
Catalyst Paper

COMPANY OVERVIEW

Catalyst Paper, based in Richmond, B.C., makes a diverse range of specialty printing papers, newsprint, and pulp. The company was created through various mergers and acquisitions over the years, but the main branch of its family tree was British Columbia Forest Products Limited, which was formed in 1946 as a logging and sawmilling company.

Today, Catalyst is the largest producer of specialty printing papers and newsprint and the only producer of lightweight coated paper in western North America. Its customers include international retailers, publishers, commercial printers and paper manufacturers. With five facilities located in B.C. and one in Arizona, Catalyst has a combined annual production capacity of 2.5 million tonnes.

“Verified environmental performance is one of the best opportunities to differentiate our company and our suite of products in a crowded market, where demand has been trending down even as expectations continue to rise.”

– Tom Crowley, Senior Vice President, Sales and Marketing



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Catalyst Paper

COMMITMENT TO ENVIRONMENTAL LEADERSHIP

Partnering with WWF has allowed Catalyst to further its commitment to the environment. Catalyst believes environmental leadership is integral to its business. Social responsibility is a core value of Catalyst, and as the largest purchaser of forest products in coastal B.C., the company understands that it has a responsibility to be a leader in the sustainability movement.

Catalyst recognized early that climate change was increasingly affecting business models, risks, and operations, and that is why it acted to reduce greenhouse gas (GHG) emissions. The company's low-GHG production platform placed it at the forefront of manufacturing-sector GHG-neutral product offerings. This is evident in its reputation as an environmental leader, recognized by organizations such as Corporate Knights, Jantzi Research, and BC Hydro, and in associated annual corporate social responsibility rankings.

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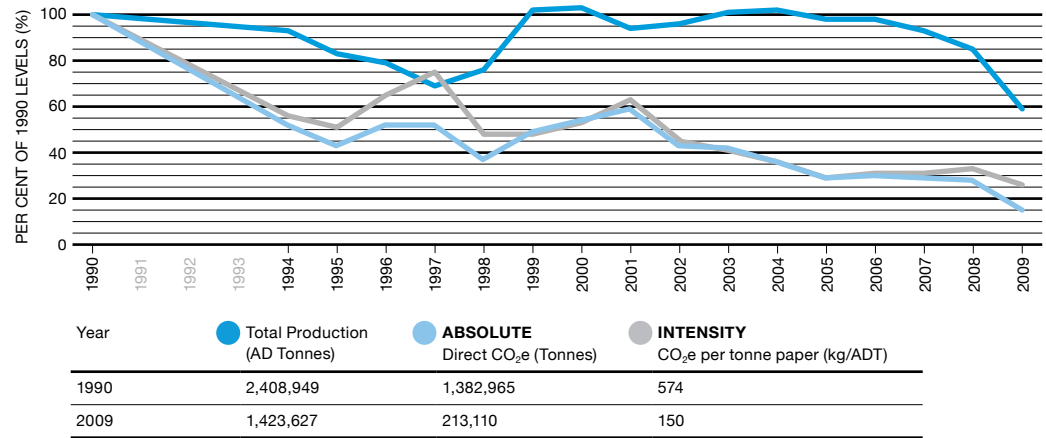
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Catalyst Paper

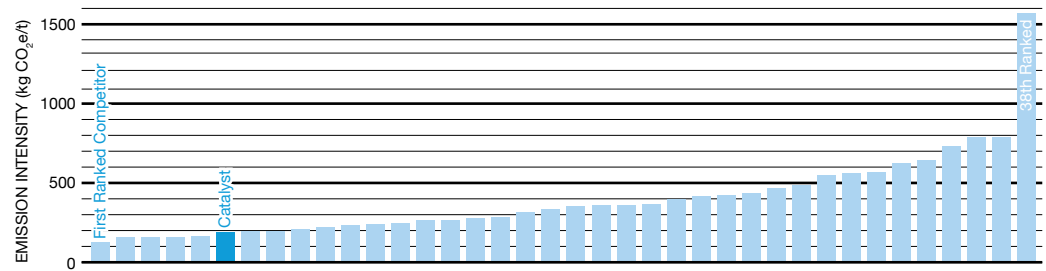
Historical Emissions and Reductions

Production and CO₂e reductions for Canadian operations, 1990 to 2009 (some data years missing)



Source: Catalyst Paper

Catalyst's footprint in comparison to its peers



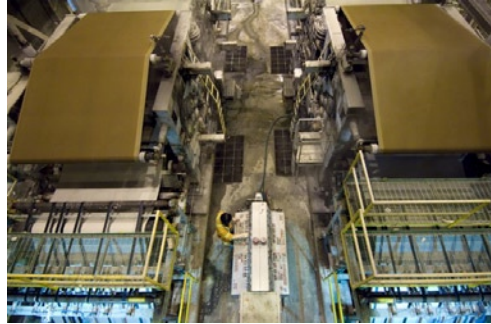
Source: Catalyst Paper Greenhouse Gas Reduction Performance and Outlook – June 28, 2007: Catalyst vs Competitors (FPAC Data)]

Catalyst Paper

COMMITMENT TO ENVIRONMENTAL LEADERSHIP

EARLY RECOGNITION OF LINKAGE BETWEEN EMISSIONS FOOTPRINT AND COSTS

Catalyst started tracking and managing its GHG emissions back in 1993 and recognized at that time the direct linkage between fossil fuel expenditure and its emissions footprint. Premised on that fact, the company has spent the past 15 years focusing on reducing fossil fuels through fuel-switching, energy reduction initiatives, and use of recycled fibre in its products. Fuel-switching activities have centred around elimination of fossil fuels in favour of GHG neutral wood wastes through the expenditure of about \$250 million on boiler upgrades. Energy reduction initiatives have included installation of high efficiency equipment, better reuse of waste heat and improved management of systems for compressed air, steam, and water. Strategic inclusion of recycled fibre, which requires less energy to convert into paper, guarantees below average energy consumption. While it has exhausted its fuel-switching opportunities, Catalyst still believes that further energy reduction work will create more GHG savings.



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CATALYST AND THE CLIMATE SAVERS PROGRAM

REINFORCING COMMITMENT TO SUSTAINABILITY

Catalyst joined WWF's Climate Savers program to reinforce the company's commitment to environmental sustainability and gain expertise that could translate into distinct brand positioning. As part of its Climate Savers commitment, Catalyst set one of the most ambitious emissions reductions goals of any large corporation worldwide – a sustained 70 per cent reduction in greenhouse gas emissions by 2010 relative to 1990 levels.¹

The company has maintained or exceeded the 70 per cent reduction annually since 2005, with the exception of 2007 when its reduction was 69 per cent. In 2008, Catalyst's absolute levels of CO₂ emissions were 73 per cent below 1990 levels. This achievement has coincided with an intense period of industry restructuring and transformation.

Due to its commitment to Climate Savers targets, between 2002 and 2005, Catalyst cut the use of fossil fuels by 46 per cent, resulting in a total savings of \$18 million. The reduced reliance on fossil fuel and improved energy efficiency have been particularly important in recent years as the paper industry suffered major setbacks and the world economy shifted into recession.

Catalyst's partnership with WWF and its Climate Savers commitment is helping the company develop a unique brand position and value proposition through its low-GHG footprint products.



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“We see good value in looking to the expertise of credible and science-based groups such as WWF, which can engage with us both critically and constructively as we strive to make better business decisions and improve our sustainability performance.”

– Lyn Brown, Vice President Corporate Relations
and Social Responsibility, Catalyst Paper

¹: Catalyst's engagement with Climate Savers and its commitment to this target pre-date the 2008 acquisition of its recycled paper mill at Snowflake, Arizona. References to emission reductions and energy mix in this case study therefore encompass only its Canadian operations, which account for 86 per cent of its total production capacity.

Catalyst Paper

THE CATALYST STRATEGY

Sustainability is ingrained in Catalyst's business approach and operations. The company's low-GHG paper production strategy was founded on three business pillars:

1. **FUEL SWITCHING**
2. **ENERGY EFFICIENCY**
3. **RECYCLING**

Reduced energy use and conversion to renewable fuels are key aspects of Catalyst's GHG-management strategy, which serves to significantly reduce fossil fuel reliance and energy costs. The company also has a significant stake in the recovery and recycling of paper, helping to further reduce energy use and GHG emissions.



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Catalyst Paper

THE CATALYST STRATEGY

FOCUS ON GREATEST EMISSIONS

Although GHG emissions occur at every step of the paper supply chain, from the forest floor to the customer's door, the largest single component of Catalyst's GHG footprint lies within its manufacturing process. Thus, Catalyst's main focus is on reducing direct GHG emissions. Until domestic and global GHG regulations are clarified and harmonized, Catalyst has deferred GHG accounting for emissions beyond its direct control, such as those associated with sourcing and transporting raw materials to the mill or printing finished products.

KEY INITIATIVES TO REDUCE IMPACT

Fuel-switching is one of the biggest drivers for GHG emissions reduction, followed by increased energy efficiency, and shutdown of old, inefficient machines and facilities. Fuel-switching accounts for approximately 66 per cent of Catalyst's GHG reduction. Energy efficiency accounts for 24 per cent of the reduction, and closing of assets for another 10 per cent.

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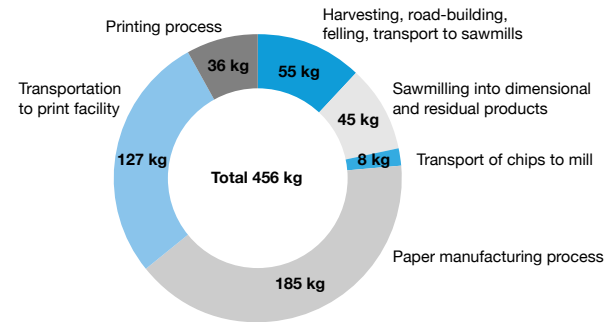
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GHG Emissions by Activity

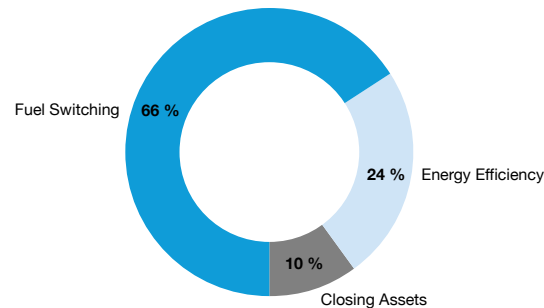
(CO₂e/ADt)²



Source: Towards a Common Cause: The Embrace of Carbon Along a Supply Chain by J.G. Bull, G. Kissack, C. Elliott, R.A. Kozak and G.Q. Bull

Emission Cuts per Initiative

(as per cent of the overall reduction)



Source: Catalyst Paper

Catalyst Paper

INITIATIVE 1: FUEL SWITCHING

BACKGROUND

The majority of Catalyst's GHG emissions come from fossil fuels used to generate steam and electricity. The company significantly reduced its GHG emissions by switching to cleaner energy.

PROCESS

Catalyst focused on reducing its plants' reliance on fossil fuels and converting to renewable energy sources such as biomass. Over the years, Catalyst has been using more biomass energy, obtained from wood waste such as bark, wood shavings, and sawdust. Biomass fuel is clean and it is Canada's second-largest renewable energy source.

COST

Catalyst has invested approximately \$250 million in capital investments since the late 1990s to switch from fossil fuels to GHG-neutral biomass fuels at its Canadian operations.

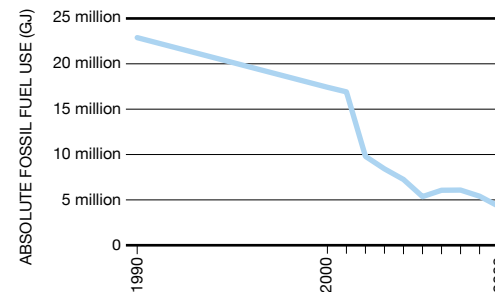
OUTCOME

Catalyst was very successful in its fuel-switching efforts. By 2009, fossil fuel use was down over 50 per cent relative to 2003 and the energy mix was 86 per cent renewable. Most of the self-generated green energy is EcoLogo certified. As with any energy source, the challenge is the company's dependence on the energy inputs and their variability. Thus, Catalyst's ability to use biomass fuels is greatly dependent on the availability of biomass inputs. Over the past two years, upheaval in the forest products industry has impacted supply of biomass fuels. This has hurt Catalyst's ability to maximize its use of biomass energy.

Fossil fuel data for Canadian operations 1990 to 2009

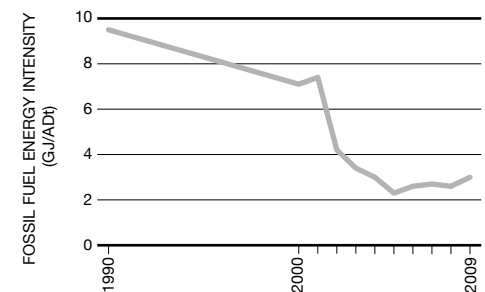
(Some data years missing)

Absolute use



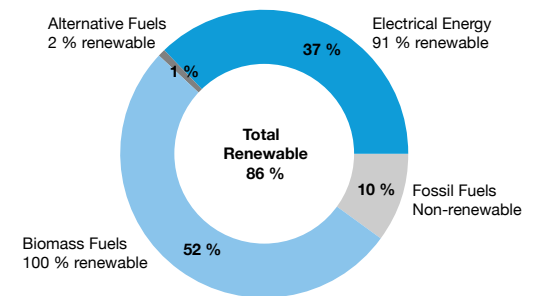
Source: Catalyst Paper

Intensity



Energy Mix and Renewability

Canadian Operations, 2009 data



Source: Catalyst Paper

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CASE STUDY 1
Catalyst Paper

Catalyst Paper

INITIATIVE 2: ENERGY EFFICIENCY

BACKGROUND

Catalyst works continuously to reduce and optimize its purchased energy use. This improves energy efficiency, saves money, and minimizes the need for BC Hydro to import electricity from non-renewable sources.

PROCESS

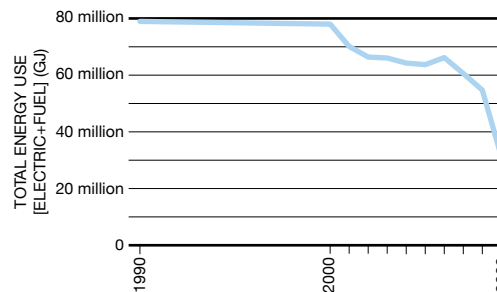
The company implemented processes that increase paper production with less energy. Examples of energy efficiency programs include installations of upgraded motors, lighting, and a shutdown of unnecessary motors and equipment.

Pulp and paper mills are tremendously complex operations with long lifespans and their equipment configurations don't necessarily remain in complete alignment with evolving raw materials, processes, and product specifications. This realization was the starting point for a kraft mill simplification project at Crofton Division in 2007, which resulted in removal of about 2,500 horsepower of unnecessary energy use and annual savings of approximately \$1 million. An operating specialist identified redundancies and simplifications that would not compromise key performance indicators.

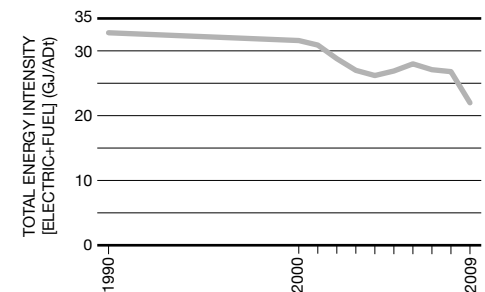
Total energy data for Canadian operations 1990 to 2009

(Some data years missing)

Absolute use



Intensity



Source: Catalyst Paper

COST

Tens of millions of dollars have been invested across all mills for energy projects. The most recent conservation initiatives have been small-scale, involving moderate or no capital investments relating to, for example, lighting, compressed air, pumping, and metering.

OUTCOMES

Recent conservation initiatives enabled Catalyst to reduce its purchased energy requirements by a further 1.9 per cent (relative to a target of two per cent) or 86,000 MWh in 2007. The above initiatives resulted in a savings of about 47,300 tonnes of GHG emissions. Reducing the energy used to manufacture products accounts for 24 per cent of the overall GHG emission reductions. In 2009, there were substantial changes to the company's Canadian operations with production curtailments that materially impacted the use of energy. This change is also reflected in temporary anomalies in its intensity measures.

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Catalyst Paper

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INITIATIVE 3: RECYCLING

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CASE STUDY 1
Catalyst Paper

BACKGROUND

With the Paper Recycling Division (PRD) in B.C. and the 2008 purchase of a recycled fibre mill in Arizona, Catalyst is one of the leading recycled paper operations in North America. Catalyst acquired a 100 per cent recycled newsprint mill in Snowflake, Arizona as part of its ongoing effort to develop a more cost-effective operation platform to enhance the company's position in the North American market. Snowflake is one of the lowest-cost newsprint mills in North America and it is located close to growth markets that offer access to good-quality recovered paper supplies and a natural hedge against currency fluctuations. It has recently expanded its production capacities to include specialty papers.

PROCESS

The recycling divisions use newspapers and magazines to produce valuable de-inked pulp that can be used to manufacture various paper grades with recycled content. Operational changes at PRD resulted in a 1 per cent increase in yield and an associated 7 per cent reduction in energy consumption in 2008. Additionally, Catalyst's 2008 acquisition of the Snowflake mill added 347,000 tonnes of capacity, representing nearly 15 per cent of Catalyst's total production capacity.



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COST

Acquisition of the Snowflake recycling facility cost \$161 million and the PRD cost approximately \$60 million when acquired in 2003.

OUTCOMES

The use of recovered paper decreases demands on virgin fibre supplies, facilitates less energy-intensive production, and prevents carbon dioxide releases that would occur from paper decomposing in landfills. Each tonne of paper kept out of a typical landfill avoids about 720 kg CO₂ emissions.

The production of de-inked pulp at PRD and recycled paper at Snowflake resulted in recovered paper making up 19 per cent of Catalyst's total fibre supply in 2008 (up from six per cent in 2007, prior to the Snowflake acquisition), and increased the average recycled content in the company's products from six per cent in 2007 to 17 per cent in 2008.

Catalyst Paper

OVERALL OUTCOMES

Fuel switching, energy efficiency and recycling initiatives enabled Catalyst to reduce its GHG emissions from its Canadian operations by 85 per cent below 1990 levels on an absolute basis and 74 per cent below on an intensity basis in 2009.

Catalyst's commitment to reducing its footprint has been greatly successful, enabling it to achieve significant reductions ahead of schedule. The company achieved an additional 3 per cent reduction two years ahead of its self-imposed deadline and its emissions continue to be at or significantly below the Canadian industry average (246 kg CO₂e per tonne).

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SECURING FURTHER GHG REDUCTIONS

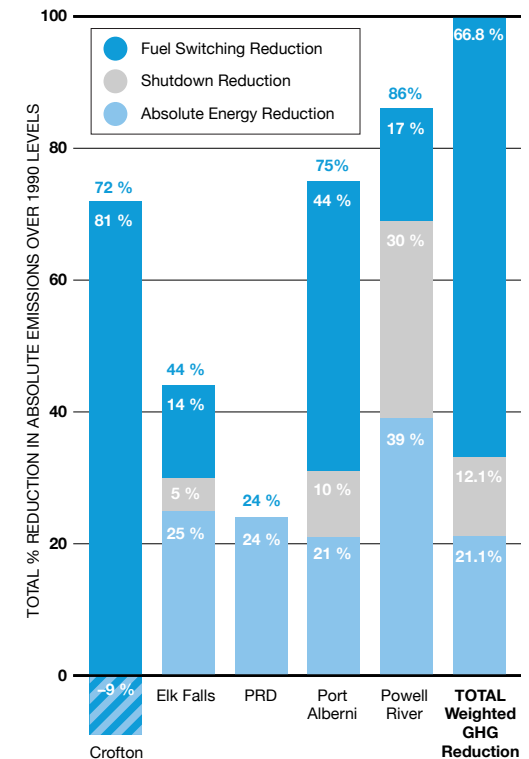
Improvements in internal operations are an extremely important component of any company's sustainability strategy but they're only one part of the larger sustainability journey. In order to clearly evaluate a product's GHG footprint, businesses need to examine GHG, sustainability, and supply chains in parallel. Trade-offs between manufacturing, modes of transport, and distances traveled must be understood in terms of the product's total GHG impact.

Catalyst has begun to focus on its supply chain to realize further GHG reductions. The company has been actively communicating with its supply chain partners on GHG issues, and is undertaking a number of initiatives including optimal use of low-GHG modes of

transportation such as sea-based shipping for its products. The company also uses EPA SmartWay partners for the majority of its freight shipping, ensuring maximum energy efficiency, and reducing energy costs and GHG emissions. Catalyst became a registered SmartWay partner itself during 2009. Catalyst's sales force is also educating customers on the benefits of low-GHG transportation and just-in-time delivery that allow for rail and marine shipping. By achieving significant internal GHG emission reductions and focusing on supply chain emissions, Catalyst sets an example as a sustainability leader, taking into consideration the overall GHG impact of its products.

GHG Reductions per Plant in Canada

Compared to 1990 levels (based on 2005 data)



Source: GHG reduction and performance PDF, 2007

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CASE STUDY 1
Catalyst Paper

Catalyst Paper

EFFECTIVE MECHANISMS FOR COMPANY DIFFERENTIATION

Catalyst's focus on the three main environmental initiatives – fuel-switching, energy efficiency, recycling – enabled it to translate its gains into product offerings for its customers. The consequent reduction of paper's GHG footprint gave Catalyst an opportunity to competitively differentiate itself from the interchangeable commodities market. Catalyst brought to market its Catalyst Cooled manufactured GHG-neutral paper and its lighter basis-weight paper.

CATALYST COOLED MANUFACTURED CARBON-NEUTRAL PAPER

Catalyst Cooled manufactured GHG-neutral paper was introduced in 2007, making Catalyst the first company to mass-market manufactured GHG-neutral paper. This product addresses customers' concerns by ensuring no net increase in GHG emissions results from manufacturing the paper they purchase (i.e., zero net Scope 1 manufacturing-related GHG emissions).

The GHG-neutral promise means that Catalyst accounts for and offsets emissions that are within the company's direct control. Emissions originated further up or down the supply chain (e.g., relating to forest harvesting and product transportation) are not accounted for, given the complexity of the calculations involved. Because paper-manufacturing accounts for the largest single component of the total GHG footprint over the lifecycle of paper products, the Catalyst Cooled product enables customers to

significantly improve their GHG performance.

As the concern over climate change and GHG emissions grows, so does consumer interest in GHG-neutral products. Given this developing trend, Catalyst Cooled manufactured GHG-neutral paper not only builds on the company's steady reduction of GHG emissions but also positions Catalyst to differentiate itself from its competitors and take advantage of evolving consumer preferences.

LIGHTER BASIS-WEIGHT PAPER

Catalyst also pioneered the production of high-quality, lighter basis-weight papers, which deliver a larger printing surface per unit of product weight. These papers require less fibre and fewer raw materials and chemicals for the manufacturing process, and also less energy throughout the production, shipping, and printing stages. Lighter basis-weight paper addresses individuals' environmental concerns in addition to being a cost-competitive product.

As outlined above, Catalyst's three main environmental initiatives decreased operational costs and enabled the company to develop a unique product line for its customers.

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CASE STUDY 1
Catalyst Paper

Benefits of partnering with WWF

Through its partnership with WWF, Catalyst has been able to stay alert so it can anticipate issues, manage risk, mobilize resources, address credibility and capacity gaps, reconcile global and local perspectives, resolve tensions around natural resource conservation and management issues, and grow the network of values-driven allies.

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CASE STUDY 1
Catalyst Paper

KEY COMPETITIVE ADVANTAGES

- **Low fossil fuel cost exposure** (86 per cent renewable usage in 2009)
- **Low carbon footprint** (85 per cent absolute reduction in 2009 relative to 1990)
- **Market leadership** with launch of Catalyst Cooled manufactured carbon-neutral paper
- **Extensive paper recycling** capacity and expertise
- **Diversified products** with emphasis on environmentally preferred lower basis weights
- **Largest producer** of specialty printing papers and newsprint in western North America, and only producer of lightweight coated paper
- **Third party certifications**, including FSC Certified Fibre, PEFC Certified Fibre, ISO 9000 Certified Facilities and ISO 14000 Certified Facilities



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Catalyst Paper

CHALLENGES

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CASE STUDY 1
Catalyst Paper

Some of the challenges that Catalyst is facing, directly and indirectly tied to its GHG emissions reductions, are the economic downturn, the paper-industry downturn, additional future regulations, and lack of Scope 3 calculations. As the world economy and paper markets encountered difficult times, Catalyst struggled to make a profit. In fact, the company has not turned a profit in more than five years. However, its focus on energy and cost efficiency has helped preserve its viability in a demand-constrained industry during a worldwide recession.

ECONOMIC DOWNTURN

Catalyst and the entire forest products industry have faced very difficult market conditions in the last few years. The economic downturn exacerbated significant industry challenges already created by demand declines, input shortages, and cost increases. As the world economy shifted into recession, Catalyst's energy-efficiency initiatives and cost-efficiency focus became even more prudent and critical to its survival.

PAPER INDUSTRY DOWNTURN

The paper industry has been suffering from declining demand and input shortages. Demand has declined in part due to the increased production of content into digital formats.

REGULATIONS

Catalyst was early to adopt measures to reduce GHG emissions, but under Canada's proposed regulatory regime it will be worse off than companies that have done little or nothing. As part of its Climate Savers program, Catalyst reduced emissions by 70 per cent from 1990 levels, more than 10 times the six per cent commitment under the Kyoto Protocol. If allowances under a cap and trade system are calculated using an average of the previous 10 years' emissions, the company will find itself in a position where further reductions to comply with shrinking allowances are impossible to achieve in an economically viable manner.

Under Canada's proposed emissions plan, companies will have to cut emissions 20 per cent below 2006 levels by 2020. This means that the early adopters, such as Catalyst, which made the most aggressive reductions prior to 2006, will be worse off than those companies that have done little. The key issue is switching the base year from which emissions cuts are calculated. The federal plan suggests using 2006 as baseline rather than 1990 as specified in the Kyoto Protocol.

LACK OF SCOPE 3 CALCULATIONS

Catalyst currently tracks Scope 1 emissions, and Scope 2 emissions associated with its purchased electricity and steam consumption. Scope 3 emissions might become more important for Catalyst to meet Canada's proposed emissions plan. Currently, the company does not have systems in place to measure Scope 3 emissions.

“Finding new ways forward often begins by challenging and setting aside outdated assumptions ... we want to ensure that additional regulatory measures account adequately for the significant GHG reductions we have already achieved.”

– Richard Garneau, President

and Chief Executive Officer, Catalyst Paper

Catalyst Paper

CONCLUSION AND OUTLOOK

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CASE STUDY 1
Catalyst Paper

All future commerce will eventually include GHG costs. Climate change is an environmental issue that has heightened consumer awareness. Regulatory, policy, and advertiser demands will enforce or reward reduced footprints. By addressing climate change concerns early through fuel-switching, energy efficiency, recycling, and its product offerings, Catalyst has positioned itself to compete in a GHG-constrained market. With the introduction of GHG regulations and heightened consumer demand for greener products, Catalyst's low-GHG products are expected to increase in competitive appeal.

As companies move forward in reducing GHG emissions, additional initiatives should be considered. On the procurement side, supply chain studies for Catalyst have shown that there is a great deal of unseen GHG in procurement and shipping practices. Companies should review the GHG footprint of products consumed, including footprints created to deliver consumable products. On the shipping front, the use of sea and rail shipping produces the lightest GHG footprint, but results in slower delivery times compared to road and air shipping. Companies must make customers aware of the importance of lighter footprints for them to accept slower shipping.

Once companies have made all the GHG reductions they can, they need to consider what else can be done by working together with suppliers and other stakeholders. Areas of excellence and innovation spring up when associated organizations work together. The successful relationship between Catalyst and WWF is proof of that.



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Case Study 2

Growing business while reducing GHG emissions

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CASE STUDY 2
The Coca-Cola Company

COMPANY OVERVIEW

The Coca-Cola Company is the world's leading non-alcoholic beverage company. While it is best-known for its signature drink Coca-Cola, it has a beverage portfolio of nearly 500 brands and more than 3,000 beverage products. The Company brings quality sparkling and still beverages to consumers around the world at a rate of nearly 1.6 billion servings per day. The Coca-Cola Company is based in Atlanta, Georgia, employs 90,500 people worldwide, and has operations in over 200 countries.

In Canada, The Coca-Cola Company is represented by Coca-Cola Ltd. (CCL), and markets top beverage brands such as Coca-Cola, Diet Coke as well as Minute Maid, Five Alive, FUZE, Fruitopia, Nestea, Dasani and PowerAde. CCL has approximately 300 employees in 7 offices, including one production facility for Minute Maid beverages.

Coca-Cola Bottling Company (CCB) is the primary Canadian bottler responsible for manufacturing, sales and distribution of most Coca-Cola brands in Canada. The company



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operates in all ten provinces and employs 6,000 people in 60 facilities. CCB is an indirect, wholly owned subsidiary of Coca-Cola Enterprises (CCE), the world's largest Coca-Cola bottler, serving 419 million people across 7 countries in North America and Western Europe. CCE employs 72,000 people, and annually sells nearly 2 billion cases of product worth \$21.8B USD.

The two companies, CCL and CCB, form the Coca-Cola System (or the System) in Canada. While the two entities operate separately, they share a common commitment to sustainable business practices in Canada.

Coca-Cola Canada

THE PURSUIT OF ENVIRONMENTAL EXCELLENCE

The pursuit of environmental excellence is a priority for the Coca-Cola System in Canada. The System believes that environmental sustainability is an important global issue and recognizes that climate change may have long-term direct and indirect implications for the business and its supply chain.

The Coca-Cola System in Canada is committed to Corporate Responsibility and Sustainability (CRS), and aims to be a CRS leader within the global Coca-Cola System. The System's three key environmental pillars – Sustainable Packaging/Recycling, Water Stewardship and Energy Conservation/Climate Change – were identified as areas where the organization could have the greatest impact.

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CASE STUDY 2
The Coca-Cola Company



SUSTAINABLE PACKAGING/RECYCLING

The Coca-Cola System in Canada is working to reduce the impact of its packaging while maximizing the use of renewable, reusable and recyclable resources, with the goal of recovering the equivalent of 100 per cent of its packaging. To achieve this goal, CCB will undertake initiatives such as increasing the recycled content in PET (polyethylene terephthalate) bottles to an average of 10 per cent where commercially viable, and recovering or recycling over 90 per cent of materials at production facilities.



WATER STEWARDSHIP

The Coca-Cola System in Canada is working to establish a water-sustainable operation that uses 1.3 litres of water for every litre of product produced. The System's initiatives include protecting watersheds in areas of operation and reducing plant water usage by 10 per cent by 2010.



ENERGY AND CLIMATE PROTECTION

The Coca-Cola System in Canada is working to decrease greenhouse gas (GHG) emissions in its sales, manufacturing, fleet, facilities and marketing operations. In 2008, CCB calculated its GHG footprint and set emission reduction targets. Becoming part of the World Wildlife Fund (WWF) Climate Savers program will assist the System in achieving its reduction targets.

DEVELOPING A COMPREHENSIVE CLIMATE CHANGE STRATEGY

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CASE STUDY 2
The Coca-Cola Company

In Canada, the System's overall climate protection strategy is focused on four key areas: sales and marketing equipment (vending machines, coolers, etc.), facilities, fleet, and public awareness and action.

CCB is undertaking environmental initiatives in areas where it is certain a significant difference will result. Current environmental initiatives include improving the energy-efficiency of its manufacturing operations, deploying Canada's largest fleet of heavy-duty hybrid electric delivery trucks and introducing HFC-free and more energy-efficient sales and marketing equipment. Coca-Cola Bottling Company is driving the majority of the initiatives as most of the activities contained within them reside within CCB's control.

The System's energy conservation and climate change goals include: emission reduction targets of the overall GHG footprint of its business operations of 15 per cent by 2020, as compared to the 2007 baseline; ensuring all new sales and marketing equipment is on average 20 per cent more energy efficient by 2010; and expanding hybrid electric technology in the fleet.



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COCA-COLA AND THE CLIMATE SAVERS PROGRAM

WWF has a global partnership with The Coca-Cola Company with its targets also extending to the Canadian system. The Coca-Cola Company joined WWF's Climate Savers program in order to guide the Company's climate change strategy and improve its credibility. In Canada, the Coca-Cola System's Climate Savers efforts are focused on manufacturing facilities and bottling plants, where the principal climate protection activity is energy efficiency. CCE has committed to reducing its GHG emissions by 15 per cent by the year 2020 as compared to its 2007 baseline. Taking into account business growth forecasts, this would be the equivalent of having to achieve a 40 per cent emissions reduction in 2020.

“We are proud to bring our global partnership with WWF to life in Canada and we hope to make a positive difference by reducing our footprint, investing in conservation, and dedicating our marketing resources toward fighting climate change to protect the polar bear.”¹

– Nikos Koumettis, President, Coca-Cola in Canada.

1: http://wwf.ca/about_us/business/footprint/#CocaCola

Coca-Cola Canada

COCA-COLA'S GHG FOOTPRINT AND GREATEST GHG REDUCTION OPPORTUNITIES

In 2008, Coca-Cola Enterprises measured its global and country-level GHG footprint. CCE's GHG footprint was calculated using the World Resources Institute and World Business Council for Sustainable Development's Greenhouse Gas (GHG) Protocol, the leading global standard for GHG accounting. By country, the Canadian bottler's (CCB) footprint is third largest within CCE's international operations; however it is relatively small compared to the US footprint.

CCB's GHG footprint will not be published until later this year but it is expected to closely reflect that of CCE's. Thus, for the purpose of this report, CCE's GHG footprint analysis will be used to illustrate CCB's GHG emissions per activity and identify GHG reduction opportunities.

The analysis reveals that CCE's largest GHG footprint is in Scope 3, followed by Scope 1 and then Scope 2. Scope 1 emissions are direct emissions from its owned and operated sources, such as fuel burned during day-to-day operations. Scope 2 emissions are indirect emissions resulting from electricity purchased and used in its business. Scope 3 emissions are indirect emissions that occur at or from other sources that are generated as a consequence of business and thus are much more complex to address than Scope 1 and 2 emissions. Although they are optional to measure and report, CCE chose to include and report Scope 3 emissions from its third-party distribution, sales and marketing equipment and business travel.

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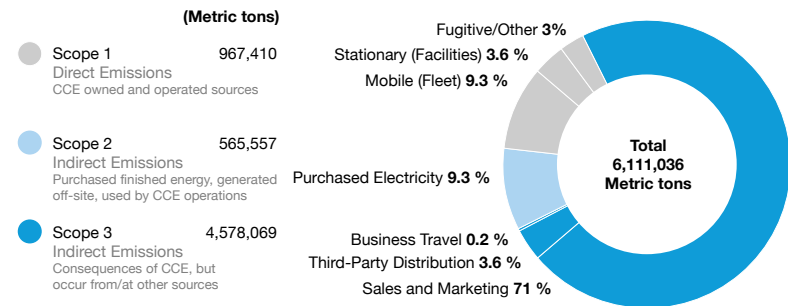
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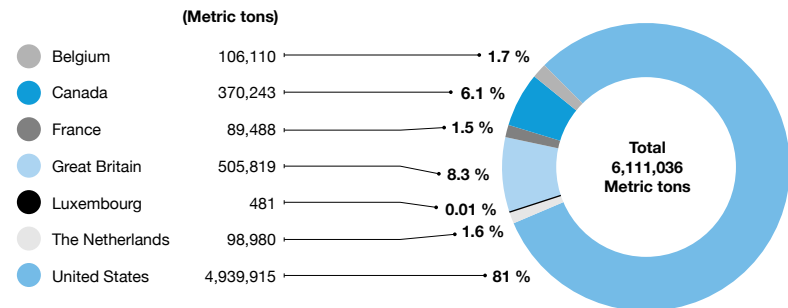
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Carbon Footprint of Operations Emissions by Scope and Source

(2008 data, using Greenhouse Gas Protocol)



Carbon Footprint by Country



Source: http://www.cokecce.com/crs-reports/2009/e_index.html

Coca-Cola Canada

KEY GHG REDUCTION INITIATIVES

The Coca-Cola System in Canada is addressing Scope 1 and 2 emissions by focusing on improving the energy-efficiency of its manufacturing operations and deploying Canada's largest fleet of heavy-duty hybrid electric delivery trucks. Within Scope 3, the System is introducing more energy-efficient and HFC-free sales and marketing equipment.

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INITIATIVE 1: ENERGY CONSERVATION TOOLKIT

BACKGROUND

Coca-Cola Bottling Company's nine production facilities use power to transport ingredients, run heating and cooling systems, operate production lines, and package finished goods.

PROCESS

In 2007, CCB introduced an Energy Conservation Toolkit to assist production facilities with benchmarking their performance and identifying opportunities to improve energy efficiency within delivery systems, equipment and production.

OUTCOME

Electrical usage ratio refers to the amount of electricity consumed to manufacture product. In 2006, CCB's production facilities produced 35.5 litres of product per kWh of energy, compared to 30.7 litres in 2007 – a 13 per cent improvement.

INITIATIVE 2: ENERGY-EFFICIENT LIGHTING

BACKGROUND

Energy-efficient lighting can greatly reduce energy use and thus GHG emissions. According to Coca-Cola Enterprises (CCE), the most significant reduction in energy consumption comes from its project to install industrial and high-bay fluorescent lighting throughout North American facilities.

PROCESS

In 2009, CCB converted 19 of its facilities to energy-efficient T8 Ultra High Bay lighting. The company also looked at opportunities for improved lighting placement and installed a lighting sensor system to ensure optimal energy efficiency.

OUTCOME

The upgraded lighting system uses 50 per cent less energy and provides 50 per cent more light, resulting in an annual energy savings of \$760,000.

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TRANSPORTATION AND FLEET INITIATIVES

A critical part of the company's commitment to achieve a 15 per cent reduction in its GHG footprint by 2020 is expanding its hybrid truck fleet.

INITIATIVE 1: HYBRID VEHICLES

BACKGROUND

Coca-Cola Bottling Company (CCB) has approximately 3,800 pieces of transportation equipment in its fleet, including delivery trucks, forklifts, pallet jacks, cars and tractor-trailers. CCB is in the process of evaluating energy conservation for all these vehicles while also looking for ways to further incorporate hybrid technology into its fleet. Coca-Cola Ltd. (CCL) has 85 pieces of transportation equipment in its fleet – three trucks, 51 company vehicles and 31 forklifts and pallet trucks.

After an intensive, three-year research and design program with Eaton Corporation, Coca-Cola Enterprises (CCE) introduced the first heavy-duty hybrid electric delivery truck into its fleet in 2006. Shortly thereafter, the trucks were also introduced in the Canadian fleet.

PROCESS

In 2008, CCB introduced 22 heavy-duty hybrid electric vehicles to its fleet. At the time, these were the largest heavy-duty hybrid delivery trucks in Canada. In September 2009, CCB announced the addition of 15 even larger hybrid trucks. These new delivery trucks join CCB's existing fleet of 20 hybrid side-bay vehicles, 2 hybrid straight trucks and 42 hybrid sales cars.

OUTCOME

These hybrid vehicles improve fuel consumption and reduce emissions by approximately 30 per cent. In addition, they create less noise and emissions when stopped in traffic.



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OTHER FLEET INITIATIVES

CCB has also introduced a policy to reduce unnecessary vehicle idling, aiming to conserve energy, reduce GHG emissions, and improve air quality and respiratory health. In 2008, it updated the policy to include light vehicles and autos. The company also asks its drivers to follow measures to improve fuel efficiency.

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“The introduction of these hybrid electric trucks is the kind of corporate commitment to addressing climate change that I applaud. Businesses and residents in Toronto have shown repeatedly that they are committed to cutting greenhouse gases in whatever ways they can and this is further evidence of that.” – David Miller, Mayor, Toronto, Ontario

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SALES AND MARKETING EQUIPMENT INITIATIVES

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The vendors, coolers and fountain machines that help serve chilled beverages to consumers are operated by CCB's customers at their place of business and represent CCB's greatest source of GHG emissions. Since the equipment resides with and is controlled by its customers, the company is continuously working with customers to identify energy saving opportunities and increase the energy efficiency of its equipment.²

According to CCE, "new equipment is now 50 per cent more efficient than coolers and vending machines purchased in 2000. We [CCE] have determined that through our projected purchases of new equipment and adjustments made to the current fleet of equipment in the marketplace, we will reduce the energy consumption of our sales and marketing equipment estate by around 40 per cent."³

CCB's goal is to ensure that new equipment is 20 per cent more energy efficient by 2010.

INITIATIVE 1: ENERGY MANAGEMENT SYSTEM (EMS-55)

BACKGROUND

To increase the energy efficiency of its vending equipment, CCE developed a smart temperature control unit, the EMS-55.

PROCESS

The EMS-55 unit is a major part of CCB's commitment to reducing the climate impacts of its vending equipment. These proprietary devices activate lights and adjust cooling power based on usage signals. The EMS-55 units improve energy efficiency by up to 35 per cent.

OUTCOME

As of October 2009, more than 2,000 of these devices have been installed in CCB's equipment. All new CCB coolers that hold more than 250 litres of product will have EMS-55 units installed.



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2 & 3: http://www.cokecce.com/crs-reports/2009/e_index.html

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SALES AND MARKETING EQUIPMENT INITIATIVES

INITIATIVE 2: HFC-FREE REFRIGERATION

BACKGROUND

Still widely used in commercial and domestic refrigeration, hydrofluorocarbons (HFCs) have significant global warming impact. CCB has already eliminated HFCs from the insulation in its equipment, which resulted in 75 per cent fewer direct greenhouse gas emissions, and is working to completely eliminate HFCs from all its equipment. All new refrigeration equipment will be HFC-free.

PROCESS

Coca-Cola Enterprises has invested heavily in research and development to discover technology to help reduce direct GHG emissions from refrigerants. CCB is piloting alternative refrigerant gases, such as carbon dioxide, a natural refrigerant that is HFC-free, which has less direct climate impact and improves energy efficiency under typical operating conditions. While the economic viability of such technology still poses a challenge, the System placed 1,400 HFC-free eKOfresh coolers at the Vancouver 2010 Olympic Winter Games.



OUTCOME

This new equipment generates 75 per cent fewer direct GHG emissions compared to traditional sales equipment. The 1,400 eKOfresh coolers will reduce GHG emissions by approximately 5,600 tonnes, comparable to taking about 1,200 cars off the road for an entire year.



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PUBLIC AWARENESS AND ACTION INITIATIVES

In addition to minimizing the impacts of their own operations, CCL and CCB also work with partners, employees and local communities to support environmental conservation.

INITIATIVE 1: GREEN STEWARD

In order to engage its employees in environmental conservation, CCB launched the Green Steward Initiative in 2007. Employees were asked to implement initiatives that would improve recycling, water conservation, or energy efficiency within their facilities. The winning entries ranged from installing a plastic baler to recover and recycle the stretch film used to wrap product pallets for delivery, to establishing recycling zones throughout facilities; contributions were then made to local conservation groups chosen by the winners. The program was so successful that in 2008, participation increased by 80 per cent.

INITIATIVE 4: REFRIGERANTS, NATURALLY!

On a global level, The Coca-Cola Company also advocates for more environmentally responsible industry standards. The Coca-Cola Company is a co-founder of the Refrigerants, Naturally! initiative, an alliance within the food and beverage industry formed to address global climate change through promotion of HFC-free alternative refrigeration technologies that protect the Earth's climate and ozone layer.

INITIATIVE 5: UN GLOBAL COMPACT'S "CARING FOR CLIMATE"

The Coca-Cola Company also serves as a global climate change advocate through UN Global Compact's "Caring for Climate: The Business Leadership Platform." The Platform is a global call to businesses and governments to speed up action on climate change. As a result, the company has committed to increase energy efficiency and reduce emissions from its operations. The company has also committed to engage its global supply chain to work toward the common objective of advancing practical climate change solutions.

INITIATIVE 2: EARTH HOUR

To help raise awareness of climate change, CCL supports WWF's Earth Hour. CCL turned off its major billboard signs and reached out to over 800,000 iCoke members, encouraging them to sign up and participate in Earth Hour. Both CCL and CCB encouraged employees to join the effort at work as well as at home.

INITIATIVE 3: CRS IN ACTION WEEK

CRS in Action Week engaged every CCB employee in celebrating its CRS efforts. The company developed daily communications to help share its CRS achievements and local facilities organized community outreach events and invited guest speakers from local environmental groups to help educate and inform.

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The Coca-Cola Company

Benefits of partnering with WWF

WWF's Climate Savers program added credibility to existing efforts of the Coca-Cola System in Canada and helped to streamline its climate change strategy.

WWF's Climate Savers program helped the Coca-Cola System position itself competitively within the new, carbon-conscious market place.

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CASE STUDY 2
The Coca-Cola Company

KEY COMPETITIVE ADVANTAGES

- **Capturing operational efficiencies**
- **Driving effectiveness and innovation**
- **Eliminating waste**
- **Driving employee engagement**
- **Exceeding customer expectations**
- **Meeting growing consumer trends**
- **Enhancing image and reputation**
- **Developing effective stakeholder and issues management**



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KEY LEARNINGS, CHALLENGES AND OUTCOMES

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IMPLEMENTING SUCCESSFUL SUSTAINABILITY STRATEGIES

For Coca-Cola in Canada to achieve its Climate Savers targets, the company set clear long-term goals, with attainable interim measures, and integrated these measures into its short- and long-term operational frameworks and plans. In addition, a strong commitment from the company's senior management to the Climate Savers program has been essential. The System also made every effort to integrate CRS into its operations, including having a CRS Champion at every major facility.

TECHNOLOGY CHALLENGES ON COCA-COLA'S SUSTAINABILITY JOURNEY

The two greatest challenges the System faces in implementing its Climate Savers targets go hand-in-hand. Many of the technologies required come with an incremental cost, and some of the needed technologies don't yet exist, which means investments must be made to develop them.



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GLOBAL GHG REDUCTION OUTCOMES FOR COCA-COLA

In 2009, the global bottling company, CCE, was recognized for its CRS achievements by Newsweek magazine in its first-ever environmental rankings of the 500 largest U.S. companies based on environmental performance, policies and reputation. Coca-Cola Enterprises ranked number 1 in the Food and Beverage Sector and number 36 in the overall list.

Globally, The Coca-Cola Company's emissions increased by 1 per cent in 2007 compared to 2006 (4.86 million tonnes), while the system's unit case volume grew 6 per cent from 2006 to 2007. The system expects to hold its 2015 emissions from manufacturing globally at or below the corresponding emissions from the base year of 2004 (4.7 million tonnes). Similarly to a number of Climate Savers companies, The Coca-Cola Company recognizes that success in reaching its Climate Savers goals while still growing the business is a matter of first slowing, then stopping, then reversing the trajectory of its emissions.

Coca-Cola Canada

CONCLUSION AND OUTLOOK

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How Addressing Climate Change
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CASE STUDY 2
The Coca-Cola Company

The Coca-Cola Company, including its international representatives and bottlers, has worked diligently to “green” its business operations and, through its environmental programs, has become an industry leader. Its partnership with WWF Climate Savers allowed The Coca-Cola Company to strengthen its climate change strategy, stretch its targets and leverage its strong brand to become a global leader and advocate for environmental conservation efforts. Through The Coca-Cola Company’s global environmental programs and initiatives, and the efforts of its local entities, including CCL and CCB, The Company demonstrated that it has the capability to make a lasting impact on its employees, customers, consumers, suppliers and the communities in which it operates.

Looking into the future The Coca-Cola System in Canada will continue to work to meet its current GHG reduction goals. As new technologies emerge, new environmental initiatives and ambitious goals will be developed and introduced into the company’s CRS programs. As the company continues to grow, it will continue to find ways to reduce its environmental impact. Being a leading global beverage manufacturer of widely recognized brands, the company truly understands the effects its business operations can have on the environment and the importance of minimizing its environmental footprint.

“Solving society’s largest challenges takes real leadership and partnership among business, government and civil organizations. We have seen through our own experiences – time and again – that our business in any market is only as healthy and sustainable as the community in which we operate. We’ve long recognized the responsibility to lead in this area but we’re also wise enough to know that we can’t do it alone.”⁴

– Muhtar Kent President and CEO



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4: Climate Savers Fact Sheet
http://assets.panda.org/downloads/wwfcs_partner_factsheets_photo_cover_and_title.pdf



Fairmont Hotels & Resorts

Case Study 3



Local innovation drives company-wide success

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How Addressing Climate Change
Can Improve The Bottom Line

CASE STUDY 3
Fairmont Hotels & Resorts

COMPANY OVERVIEW

Fairmont Hotels & Resorts (Fairmont), a leader in the global hospitality industry, is a collection of owned and managed luxury hotels, including landmarks such as the Fairmont Le Château Frontenac in Quebec City, The Plaza in New York, The Savoy in London, and Kenya's Fairmont Mount Kenya Safari Club. As of October 2009, Fairmont managed 56 resorts and urban destinations across 16 countries, employed 30,000 staff, and has plans to develop over 25 new properties in the coming years.

“Working alongside WWF, a proven, respected, and knowledgeable organization, will substantiate and streamline Fairmont’s climate change strategy and accelerate our ability to reduce our CO₂ greenhouse gas emissions.”

– Sarah Dayboll, Manger, Environmental Affairs, Fairmont Raffles Hotels International



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FAIRMONT'S GREEN PARTNERSHIP PROGRAM AND ENVIRONMENTAL LEADERSHIP

HISTORY

Fairmont was founded on an enduring connection to the land and the communities where it does business. The company recognized the importance of its environmental impact long before sustainability became the new buzzword. In 1990, its Canadian hotels pioneered the Green Partnership, a comprehensive commitment to minimize its hotels' impact on the planet, and published an accompanying guidebook on sustainable best practices in the lodging industry. This green philosophy has grown to become a core value of the company and today Green Teams of Fairmont colleagues in 60 locations worldwide ensure that the company's quest for sustainable solutions continues to evolve.

The Fairmont Green Partnership program focuses on sustainable, accountable practices at all levels of operations, from a corporate level to each individual property. This is achieved through improvements in the areas of water and energy conservation, waste management, and innovative community outreach programs involving local groups and partnerships. The program is a success because it involves all colleagues in a unified effort to effect change. Although the Green Partnership is managed corporately, each property has a Green Team, composed of hotel employee volunteers who carry out corporate environmental mandates and strategies. Each Green Team shapes its individual program in innovative ways to reflect the needs and values of the geographic area and environment where the hotel is located. This allows the Green Teams to address environmental issues that most affect the areas where they work, live, and play.

The Green Partnership program has grown to become a point of differentiation for the brand, gained significant importance in competing for business, attracted media attention, and is Fairmont's main corporate social responsibility platform. Today, the hotel chain continues to lead by example with its firm commitment to expanding its Green Partnership program and developing partnerships with organizations such as WWF.



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FAIRMONT AND THE CLIMATE SAVERS PROGRAM

STREAMLINING THE COMPANY'S CLIMATE CHANGE STRATEGY

Fairmont was the first global hotel brand to join WWF's Climate Savers program. Managing properties situated in some of the most exclusive and pristine areas in the world, the brand was already recognized as an industry leader in sustainable management, but required a comprehensive approach to address climate change.

Fairmont's commitment to the Climate Savers program is to reduce its greenhouse gas (GHG) corporate-wide emissions by 20 per cent of its 2006 levels by 2013. The company's approach is to achieve emission reductions by improving energy efficiency in its properties, implementing green building practices, and increasing the use of renewable energy supply. In order to identify the biggest GHG reduction opportunities to achieve its Climate Savers commitments, Fairmont developed a new Energy and Carbon Management Program, which

“We see our Climate Savers partnership with WWF as a sound strategic decision, one that will help ensure destination health and contribute to the financial stability of the industry.”

– Tom Storey, President, Fairmont Hotels & Resorts

provides individual properties and staff with a framework to track, monitor, and reduce its GHG emissions on a consistent and measurable basis. As new hotels are added to Fairmont's existing portfolio, the company will ensure new properties participate in the Energy and Carbon Management Program and work to reduce their GHG emissions. In addition, existing design and construction standards will be updated to incorporate and reflect LEED standards by the end of 2011. The company has also committed to sharing best practices with other organizations and to increasing guest and employee engagement in reducing its overall GHG footprint.

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FAIRMONT'S GHG FOOTPRINT AND STRATEGY

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Due to the nature of hotels and resorts, most GHG emissions come from operations and maintenance of properties. Fairmont's approach is to achieve emission reductions by improving energy efficiency in its properties and increasing the use of renewable energy supply. Energy generation is a major source of GHG emission and, for the hotel industry, energy generation for heating, cooling, and lighting are major aspects of operating costs. Thus, energy-reduction initiatives are important because they can not only mitigate environmental impact but also have a positive affect on the company's bottom line.

In 2006, Fairmont's Canadian properties underwent an energy audit to identify opportunities for energy reduction. As a result, more than 300 potential energy demand-reduction projects were identified. This audit also provided an excellent opportunity to share best practices among the engineering teams.

Fairmont has been able to reduce its energy consumption by implementing various initiatives such as installing energy-efficient lighting and using new technology including



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cogeneration, green power purchase, and upgraded equipment. (See **Appendix C** for more detail).

Fairmont's goal is to further improve operational efficiencies and reduce energy use through capital works projects such as lighting retrofits, refining purchasing policies, and increasing the implementation of green technologies in the construction and design process.

FAIRMONT'S KEY INITIATIVES TO MANAGING GHG EMISSIONS

INITIATIVE 1: ENERGY AND CARBON MANAGEMENT PROGRAM

BACKGROUND

As a result of joining the Climate Savers program, Fairmont established the Energy and Carbon Management program in 2009, in order to properly conduct a greenhouse gas emissions inventory for its operations and streamline its GHG strategy. Fairmont measured its emissions for Scope 1 (direct emissions) and Scope 2 (electricity consumption) across its 53 management properties, dating back to 2006 levels. Along with its Energy and Carbon Management program, Fairmont developed a five-year plan, which includes energy and emission reduction goals.



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PROCESS

Each Fairmont property is provided with the guidance, tools, and support needed to start capturing energy and GHG emissions data on a regular basis. The data is used to guide reporting against the program progress, from a global to an individual property level. Properties will be notified of their own progress and Fairmont's overall progress on a quarterly basis.

BENEFITS

The Energy and Carbon Management program allows Fairmont to identify largest GHG "hot spots" and set appropriate reduction targets. This helps General Managers of each property develop measures that not only reduce their GHG emissions but also reduce their energy consumption and costs. Continuous measuring and progress-monitoring ensure that Fairmont is on track to achieving its commitments. Finally, reporting on key data and progress will add credibility to Fairmont's sustainability strategy and safeguard it against "green-washing" speculations.

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INITIATIVE 1: ENERGY AND CARBON MANAGEMENT PROGRAM

CASE STUDY

FAIRMONT KENAUK, AT LE CHÂTEAU MONTEBELLO RESORT IN QUEBEC

OVERVIEW

All of the thirteen chalets at Fairmont Kenauk at Le Château Montebello, situated on several lakes within an immense private property, are off the electrical grid and use solar power systems to supply about half of their power demand.

COST

The cost of the system installation varies between \$15,000 and \$50,000 depending on the size of the chalet.

BENEFITS

The solar power systems at Fairmont Kenauk not only have environmental benefits but also fit with the hotel's natural setting and its strategy to preserve the area it is located in. Connecting to the grid is not realistic given the remote and secluded locations of the chalets. Without solar systems, the chalets would be completely dependent on fossil fuels such as propane, gasoline, and diesel fuel for generators. In addition to the environmental impact of burning fossil fuels, the noise and impact on air quality would not be in keeping with the nature of the chalet experience offered.

CASE STUDY

THE FAIRMONT CHATEAU LAKE LOUISE, ALBERTA

OVERVIEW

Since 2003, The Fairmont Chateau Lake Louise has been purchasing green power through an agreement with the Canadian Eco-Logo certified Canadian Hydro Developers. As of 2007, 50 per cent of the property's electricity needs were met by a blend of run-of-river and wind electricity generation.

COST

The cost of the property's green power is based on the Alberta Power Pool price, thus the cost of green energy fluctuates depending on the published cost of electricity over a billing period. On average, its green power costs are similar to the price of regular power, as the cost varies depending on the pool price.

BENEFITS

Green power has minimal impacts on the environment and produces fewer greenhouse gas emissions compared to traditional generation methods. In addition, green power can mitigate risk and cost increases if future fossil fuel prices soar.

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INITIATIVE 1: ENERGY AND CARBON MANAGEMENT PROGRAM

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CASE STUDY

FAIRMONT PALLISER, CALGARY, ALBERTA

OVERVIEW

The Fairmont Palliser has completed the Enviro Tower project, the most technically advanced cooling tower water treatment system in North America. The system's technology replaces traditional chemical treatment, providing complete control of corrosion, scale, and other factors to create an exceptionally clean system that reduces water consumption and energy while eliminating toxic water discharge. The tower also improves chiller efficiency and provides an annual cost savings in cleaning of \$3,200.

COST

The cost of installation averaged \$32,850. The estimated payback time for the project is 3.5 years.

BENEFITS

The Enviro Tower will provide a chemical treatment cost savings of \$8,200 and a savings of 1009m3 in chemicals a year. The Enviro Tower will provide an annual water savings of \$1,308 per year and an annual savings of 9,508 gallons of water. Increased overall performance of the hotel's heating and cooling system was also achieved.

CASE STUDY

THE FAIRMONT WATERFRONT, VANCOUVER, B.C.

OVERVIEW

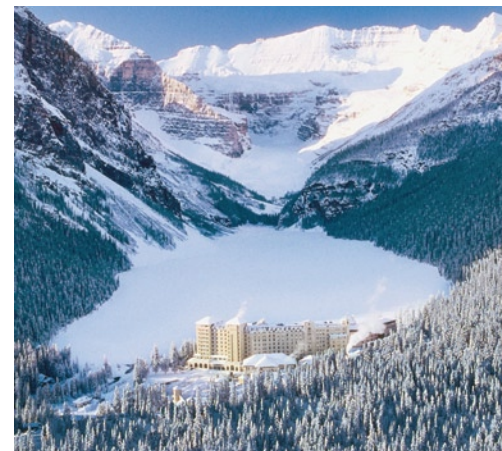
The Fairmont Waterfront installed a heat-recovery system that captures condensate – steam condensed back into water from domestic hot-water tanks – and uses it to preheat incoming city water.

COST

The cost of the project was approximately \$26,000.

BENEFITS

Installing the heat-recovery system saves an estimated 305,380 kilowatt-hours (1,100 GJ) per year, enough energy to power approximately seven average-sized Canadian homes.



INITIATIVE 2: SUSTAINABLE DESIGN AND CONSTRUCTION

In addition to adopting best practice examples from renewable energy and retrofit strategies to reduce operational emissions, Fairmont is addressing sustainable design and construction. Existing design and construction standards are being improved to reflect and incorporate LEED (Leadership in Energy and Environmental Design) standards by 2011. This is being achieved by educating hotel development partners to design, site, and construct Fairmont properties following internationally recognized green building standards, such as the International Tourism Partnership Sustainable Hotel Manual and the U.S. Green Building Council Leadership in Energy and Environmental Design (LEED). By 2011, the company's corporate offices will be relocated to a building with a LEED NC (new construction) Gold target in Toronto, Canada.

INITIATIVE 3: GREEN IT

In summer 2009, Fairmont announced a comprehensive sustainability plan to address its technology infrastructure and information technology (IT) operations. Aimed at limiting waste, purchasing responsibly, conserving energy, and reducing the company's overall GHG footprint, Fairmont's Green IT plan includes the introduction of a workstation power-down schedule, electronic waste diversion in markets where programs exist, and the development of donation standards aligning with qualified and respected recycling companies and charities. In addition, Fairmont will optimize purchasing efficiencies, including crafting a green procurement policy to ensure the brand uses technology products that are either EPA Energy Star- or Electronic Product Environmental Assessment Tool (EPEAT)-rated, as well as services that address Extended Product Responsibility (EPR) programs. The Green IT initiative at Fairmont was rolled out property-wide throughout 2009. In support of the new Green IT initiative, power settings on all Fairmont workstations and laptops, which are centrally managed by the brand, will be set to automatically power down after one hour of inactivity. By adopting this power management principle, Fairmont expects to reduce its energy consumption by 2,692,683 kWh per year, resulting in a savings of 1,356 tonnes of CO₂, the equivalent of avoiding the burning of 3,155 barrels of oil annually.

INITIATIVE 4: SUPPLY CHAIN AND GREEN PURCHASING

Apart from focusing on Scope 1 and 2 emissions, Fairmont is working with its suppliers to further reduce emissions. Through the Climate Savers program, Fairmont committed to developing a comprehensive Green Procurement Policy and Supplier Code of Conduct to engage and educate its top suppliers, who represent approximately 25 per cent of the overall value of its supply chain.

Fairmont strives to work with its suppliers to improve the efficiency of manufacturing operations, to implement energy-efficient product design, and to minimize shipping frequencies and packaging waste. The company purchases local supplies where possible. Additionally, the company works to reduce emissions generated by guests traveling to Fairmont properties by partnering with taxis, limos, and buses that are hybrid or use biofuels.

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Benefits of partnering with WWF

Becoming part of the Climate Savers program helped Fairmont substantiate and streamline its climate change strategy and accelerate its ability to reduce its CO₂ emissions. It helped Fairmont develop clear reduction targets and a system that can track properties' progress, showcase success stories, and share best practices.

“The Climate Savers program pushes you that extra step – to reach beyond your limits – which at one point your organization may have thought was not possible. By being part of the Climate Savers program, we have received validation of our actions, demonstrating we as a company are on the right track to reducing our emissions and supporting a clean economy as we look to expand our operations.”

– Sarah Dayboll, Manger, Environmental Affairs,
Fairmont Raffles Hotels International

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KEY COMPETITIVE ADVANTAGES

- **Driving innovation at local sites**
- **Driving employee engagement**
- **Exceeding guest expectations**
- **Enhancing brand reputation**
- **Enhancing partnership relations**
- **Streamlining operational efficiencies & program management**

CHALLENGES

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Early on, Fairmont realized that its exceptional historic properties would offer special challenges, as physical layout, equipment, surrounding environment, and location varied greatly from one property to another. To maintain its reputation for excellent service, both client comfort and convenience were essential when retrofitting the hotel rooms. The company worked diligently to maintain a complex balance between providing superior hotel services and environmentally conscious initiatives, such as voluntary sheet and towel exchange. While addressing the misconception that being environmentally friendly does not come at a higher cost, Fairmont quickly realized the positive benefits to its bottom line, and proceeded to implement further initiatives.

Due to Fairmont's international presence, communicating the goals of the Climate Savers program and getting full cooperation from all properties proved to be challenging. When working with various cultures and languages, it is imperative there is a clear understanding of the programs and processes, providing communication tools in appropriate languages, to foster a sense of pride and understanding from employee contributions both on a local and global scale.



CONCLUSION AND OUTLOOK

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With more than 50 distinctive hotels and 23,000 hotel rooms around the globe, Fairmont leads by example with innovative programs and a strong commitment to expanding its Green Partnership program and reducing GHG emissions. By focusing on improvements in sustainability, waste management, energy- and water-use reductions, local community outreach programs and partnerships, the program is able to meet and exceed industry expectations of operational sustainability. Fairmont's Green Partnership program charted the course on sustainable hotel operations and this green philosophy has become a core value of the company. Its partnership with WWF helped to solidify that commitment and increased Fairmont's visibility as an environmental leader. In addition, the Climate Savers program helped Fairmont incorporate a comprehensive GHG strategy into its sustainability plan, which will help Fairmont accelerate its ability to reduce its CO₂ emissions.

Looking to the future, Fairmont's expansion plans focus on diversifying its properties and regional expansion to Asia, Europe, the Middle East, and Africa. A major challenge and focus of the expansion will be ensuring that new properties are built to reflect sustainable design and construction standards, and will be aligned with the company's Energy and Carbon Management program, in support of the company's climate change targets. All properties will also have to continue to implement and maintain existing green initiatives to further reduce GHG emissions, as well as seek out new and innovative environmental initiatives. Overall, Fairmont is well poised to continue its sector leadership on environmental issues.



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Revolutionizing the IT industry

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COMPANY OVERVIEW

Hewlett-Packard (Canada) Co., established in Montreal, Quebec in 1961, is a wholly owned subsidiary of California-based Hewlett-Packard Co. As the world's largest technology company, HP brings together a portfolio that spans printing, personal computing, software, services, and IT (Information Technology) infrastructure to solve an array of customer problems. HP Canada has an extensive network of dealers and authorized service personnel, and 25 offices across the country.

“At HP, we believe that environmental sustainability is not an option, but an imperative. For HP, environmental sustainability is about providing products and services that are environmentally sound throughout their life cycles, and conducting our operations in an environmentally responsible manner.”¹

– Paul Tsaparis, President and CEO, Hewlett-Packard (Canada) Co.



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1: <http://www.hp.com/canada/corporate/philanthropy/wwf.html>

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HP'S COMMITMENT TO THE ENVIRONMENT

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HP has been an innovative leader in environmental sustainability for decades. The company is committed to responding to environmental challenges by delivering smart, practical, and groundbreaking solutions that help HP and its customers minimize environmental impacts, increase productivity and save money. The company has focused on the innovation of environmentally sound product design and performance, improving the energy efficiency of its solutions, and extending product reuse and recycling programs to its customers. HP's mission is to be the most environmentally responsible IT company by creating interest, awareness, differentiation, preference, and advantage for HP and its partners.

While the global greenhouse gas (GHG) impact of the information technology (IT) sector is relatively small compared to many other sectors involved in manufacturing and service delivery, HP is very conscious of, and has set its sights on, the important role IT can play in implementing a low-carbon economy. The Smart 2020 report by The Climate Group found that Information and Communications Technology (ICT) is a key sector in the fight against climate change and could enable emission reductions of 7.8Gt of CO₂e in 2020 – equivalent of 15 per cent of business as usual emissions.²

HP looks far beyond its own operations and works with key stakeholders, including its suppliers, business partners, customers, employees, policy-makers, academic institutions, and organizations, to support and encourage environmental processes, education, standards and practices in the IT sector and beyond. The importance of environmental responsibility in HP's business is unmistakable as Mark Hurd, Chairman and CEO of HP states, "Environmental responsibility is good business. We've reached the tipping point where the price and performance of IT are no longer compromised by being green, but are now enhanced by it."



2: Smart 2020, The Climate Group <http://www.smart2020.org/publications/>

HP AND CLIMATE SAVERS PROGRAM

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RATIONALE FOR JOINING

HP's long history of environmental leadership was not well understood by HP's stakeholders. As competitors were beginning to move into this area, HP felt the need to have its programs validated and supported by a credible third party. With HP and WWF's objectives and values well aligned, WWF's Climate Savers program was a natural candidate for HP and complemented the existing global partnership between the two organizations.

HP joined Climate Savers in February 2008. The company and WWF are jointly focused on reducing greenhouse gas emissions, improving energy use, using technology in conservation, and educating others to take action. Partnering with an internationally recognized and respected environmental NGO (non-governmental organization) like WWF gave HP's environmental strategy the validation it deserved and required to set the company apart from its competitors.

HP's Climate Savers commitment is unique amongst Climate Savers companies as it includes initiatives in Scopes 1, 2, and 3 of the GHG Protocol.³ By including all three scopes, HP is addressing direct GHG emissions from operations, indirect GHG emissions from purchased electricity, and other indirect GHG emissions such as outsourced activity and product use. This is important as it enables HP to consider all areas of the product cycle, especially product use that greatly increases the impact of HP's commitments.

“HP has been an environmentally-sensitive company for decades; it's simply part of our culture and DNA. We take a leadership role in climate change initiatives like WWF Climate Savers, and we will continue to seek innovative ways to reduce our carbon footprint.”⁴

– Mark Hurd, Chairman and CEO, HP



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3: The Greenhouse Gas Protocol Initiative <http://www.ghgprotocol.org>

4: <http://www.worldwildlife.org/who/media/press/2008/WWFPresitem6630.html>

CORPORATE CLIMATE AND ENERGY GOALS

OVERALL FOR 2010

HP will reduce the combined energy consumption and associated GHG emissions of HP operations and products to 25 per cent below 2005 levels by achieving the following:

OPERATIONS

HP will reduce energy consumption and the resulting GHG emissions from HP-owned and HP-leased facilities worldwide to 16 per cent below 2005 levels.

PRODUCTS

HP will reduce the energy consumption of HP products⁵ and associated GHG emissions through specific goals for representative product categories, including the following goal for HP's high-volume printer, server, and desktop and notebook PC families:

- **By 2011**, HP will improve the overall energy efficiency of HP ink and laser printing products by 40 per cent, relative to 2005⁶

OVERALL FOR 2012

Double voluntary purchases of renewable energy to 8 per cent by 2012 (in addition to the renewable energy available by default in the power grid).

In order to achieve these aggressive goals, environmental innovations will be made throughout every facet of the business, including operations, product design, energy efficiency, logistics efficiencies, and data-centre efficiency solutions.

For other environmental and social goals see **Data and Goals in the Global Citizenship Report 2008**.

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CORPORATE CLIMATE AND ENERGY GOALS

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PROGRESS

HP has already exceeded some of its own goals and renewed them. For example, HP's goal to reduce energy consumption of volume desktop and notebook PCs by 25 per cent relative to 2005 was met and exceeded a full year and a half ahead of schedule. HP has reduced the energy consumption of its highest volume desktop and notebook PCs by 41 per cent since 2005. In addition, in September 2009, HP met its goal of reducing combined energy consumption and associated GHG emissions of HP operations and products to 25 per cent below 2005 levels by 2010, over a year early. Between 2005 and 2008 HP's combined product innovations and operational efficiencies have reduced its GHG emissions by more than 4 million metric tons. HP has reduced its energy used in operations by 9 per cent since 2005.



HP'S GHG FOOTPRINT

A large contribution to HP's GHG emissions arises from the use of its products, which is part of Scope 3 of the GHG protocol. This is an area that can be complex to analyze and influence as customers' use of HP products is outside of HP's direct control. It is something that traditional sustainability programs have not addressed. However, HP feels it is essential to address Scope 3 emissions to move towards a low-carbon economy as referenced in the Smart 2020 report by The Climate Group. Other large contributors to GHG emissions include product manufacturing and product transport.

HP, as with all other companies, wields the strongest control over GHG reduction opportunities within its own operations and in employee business travel. This is particularly true as HP's long record of measuring this data has resulted in the company having a strong base from which to build on.

The table to the right outlines HP's GHG footprint and level of the company's influence in each sector.

Greenhouse gas emissions related to HP's business

CATEGORY (CLICK LINK FOR MORE DETAIL)	2008 EMISSIONS (TONNES CO ₂ E)	LEVEL OF INFLUENCE	OUR INFLUENCE
<u>HP operations</u>	1,448,500	High	We manage our facilities and data centres to reduce energy consumption
<u>HP employee business travel</u>	425,000	High	Our travel policies and telepresence solutions reduce business travel
<u>Product manufacturing</u>	3,500,000	Medium	We work with our first-tier suppliers to report and reduce their energy use
<u>Product transport</u>	1,800,000	Medium	We optimize distribution networks and convert to lower-energy transport modes where appropriate
<u>Product use</u>	Roughly an order of magnitude more than HP operations	Medium	We design products and offer services to use less energy, but customers determine the use of our products
<u>Product recycling</u> (CO ₂ e avoided)	300,000	Medium	We offer reuse and recycling services, but customers determine the treatment of their products at end of life

Source: HP Global Citizenship Report 2008
<http://www.hp.com/hpinfo/globalcitizenship/gcreport/>

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THE HP STRATEGY

OUR HOUSE, YOUR HOUSE, OUR WORLD

HP's environmental strategy incorporates all aspects of its sustainability journey from its own operations, through its supply chain, to its customers, the community, and the economy. HP goes beyond business as usual by not only reducing its own GHG footprint but also that of its clients and the world in which they live. HP focused first on identifying and implementing GHG reduction opportunities within its operations and supply chain. It then looked outward to move its community and business environment to a low-carbon economy. The figure to the right demonstrates HP's environmental strategy.

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BUSINESS DRIVERS

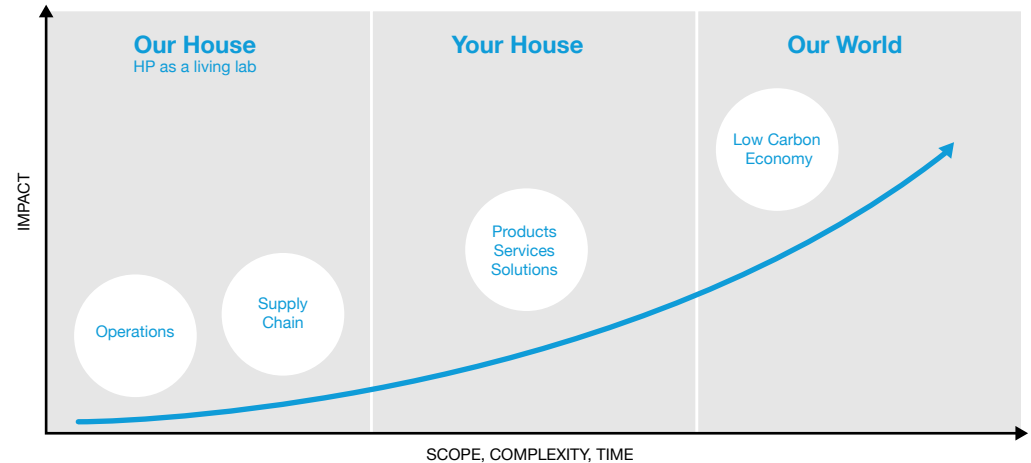
- **Cost reduction**
- **Customer opportunity**
- **Productivity**
- **Environmental stewardship**

PRIORITIES

- **Energy efficiency**
- **Resource conservation**
- **Reuse/Recycle**
- **Sustainable IT ecosystems**

HP's Environmental Strategy

Helping Achieve Business and Sustainability Goals



Source: Hewlett-Packard

Hewlett-Packard

HP'S HOUSE: OPERATIONS

HP identified areas critical to achieving its goal to reduce energy consumption and the resulting GHG emissions from HP-owned and HP-leased facilities worldwide to 20 per cent below 2005 levels by 2013. Two key areas include: consolidating its data centres and expanding its use of renewable energy sources.

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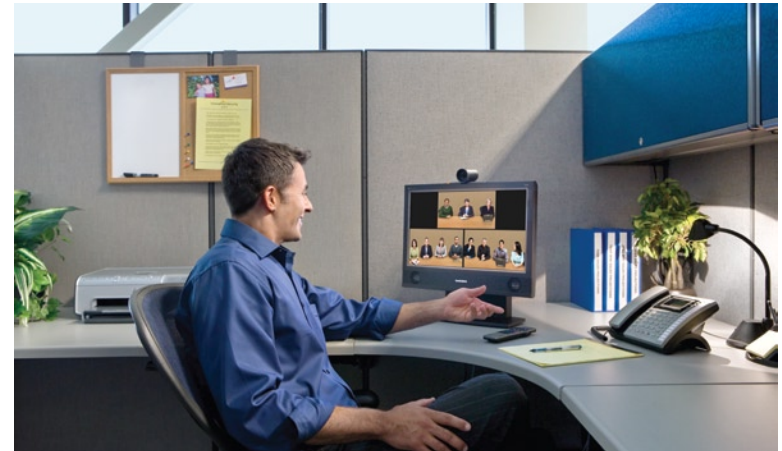
INITIATIVE 1: CONSOLIDATION OF EXISTING FACILITIES

BACKGROUND

Ninety eight per cent of HP's Scope 1 GHG emissions are generated by its operations around the world. Recognizing this, in 2005 HP took the first step towards consolidating its 85 data centres worldwide into three data centre pairs.

PROCESS

The three-year process embraced data centre consolidation, platform consolidation and standardization, and large increases in processing power, storage capacity, and network bandwidth. By 2008, HP had consolidated 85 data centres worldwide into six next-generation data centres in three U.S cities, built to the highest energy-efficiency standards.



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OUTCOMES

As a result of the consolidation, HP reduced its annual energy consumption by 60 per cent, its networking costs by 50 per cent, and its business technology operational spending from 4 per cent to 2 per cent of revenue.

HP also realized a net reduction of 2.9 million square feet in its real estate holdings, at a time when its business was growing, by ensuring optimal efficiency in the use of facilities. In addition, the consolidation also improved service levels by eliminating older technologies.

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HP'S HOUSE: OPERATIONS

INITIATIVE 2: HALO TELEPRESENCE

In addition to its facilities, HP also recognizes the great GHG impact of employee business travel, in particular air travel. Using its IT expertise, HP developed an innovative solution to address this issue.

BACKGROUND

HP's Halo Telepresence is a life-like virtual meeting experience, enabling effective collaboration among geographically separated teams and individuals. The use of HP's Halo Telepresence can greatly reduce financial and environmental costs associated with business travel and is strongly encouraged within HP.

PROCESS

When HP employees request travel arrangements to any of the 34 destinations in 14 countries where the company has Halo Studios, the travel system prompts them to book a Halo studio instead. By implementing this technology, HP estimates that each studio results in an average of one less flight per day, which reduces CO₂ emissions, saves money, and increases productivity.



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OUTCOMES

Due to the increase in the number of Halo studios, HP expects to see a reduction of approximately 20,000 trips each year, resulting in the elimination of more than 39,000 metric tonnes of CO₂. This is the equivalent of taking 6,500 cars off the road for one year and produces millions of dollars in annual savings. On a per studio basis, the net CO₂e savings are more than 230 tonnes each year. In 2008 fiscal year, travel-dollar savings and the number of trips saved at HP both exceeded original estimates by 30 per cent.

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HP'S HOUSE: SUPPLY CHAIN INITIATIVES

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As the world's leading IT company, HP operates the largest supply chain in the technology industry, spending over \$50 billion U.S.. HP has long recognized the enormous impact wielded by its supply chain and has a legacy of supply chain social and environmental leadership. The company launched its supply chain Social and Environmental Responsibility (SER) program in 2000 with a goal to achieve engagement, transparency, and results. HP requires its suppliers to conform to the same rigorous ethical, social, and environmental standards to which it holds itself. As a result, HP has implemented a number of GHG reduction initiatives within its supply chain, including releasing emissions data of its suppliers. In 2008, HP released a list of its top suppliers, representing more than 95 per cent of the supply chain procurement spending. This made HP the first Information Technology company to announce the emissions of its key suppliers.

In 2008, HP audited 142 suppliers at 246 facilities to ensure compliance with HP's code of conduct and incidences of non-conformance were substantially reduced. The aggregated CO₂e emissions associated with more than 80 per cent of HP's first-tier manufacturing expenditures totalled approximately 3.5 million tonnes of carbon dioxide equivalent. HP plans



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to use this data to incorporate energy efficiency into how it manages its first-tier suppliers.

Focusing on large suppliers is not sufficient to raise social and environmental standards in the global supply chain. Second- and third-tier suppliers must also be included for greatest impact. Because of their size, these suppliers often lack the resources or expertise to proactively meet higher social and environmental standards. Recognizing this, in 2008 HP published guidelines to help multinationals raise the performance of smaller suppliers, which are often contracted by first-tier suppliers on their behalf. The guidelines were jointly developed with the Danish Commerce and Companies Agency and were based on a study of HP suppliers in Eastern Europe. The study examined how HP's supply chain SER program equips first-tier suppliers to assess and train their own suppliers on effective management systems, occupational health and safety issues, and environmental practices. This cascade effect of engaging smaller suppliers is key to how HP is driving rigorous standards throughout the IT supply chain.

HP'S HOUSE: SUPPLY CHAIN INITIATIVES

INITIATIVE 1: REDUCING GHGs IN TRANSPORTATION

BACKGROUND

Each year transporting HP's products produces about 2 million tonnes of GHG emissions. The majority of these emissions result from international air freight; smaller amounts (about 25 per cent) result from road transport and parcel freight.

PROCESS

HP has implemented a strategy focusing on transportation "modal shifts" from air to ocean and road to rail, to reduce GHG emissions. HP is also optimizing its distribution network to decrease the distance from distribution centres to resellers. In addition, the company is converting from wood to recyclable plastic pallets, which are less than a quarter of the weight.

OUTCOMES

As a result of these initiatives HP was able to reduce 25,000 tonnes of CO₂. For example, HP's conversion to plastic pallets has eliminated 7,000 tonnes of CO₂. Also, HP has reduced CO₂e emissions by an estimated 4,200 tonnes per year through bypassing its central distribution hub in Western Europe for notebook computers coming from Shanghai en route to Dubai, Johannesburg, and Moscow.

In addition, HP was the first company to be approved by the U.S. EPA to display the SmartWay logo on its product packaging. SmartWay is a freight industry program aimed at reducing fuel consumption and lowering GHG emissions during the shipping process. In 2008, HP was honored with a SmartWay Excellence Award, indicating HP's significant contributions to a more sustainable transportation process.

Leveraging the U.S. success, HP Canada called upon local carrier J.D. Smith and Sons Ltd. to partner with SmartWay. Since much of HP Canada's product is transported by world-wide carriers already enrolled in the program, J.D. Smith's involvement was crucial to the Canadian transportation industry, as they are the largest Canadian-based carrier used by HP. In December 2008, J.D. Smith and Sons Ltd. was recognized by the U.S. Environmental Protection Agency as a SmartWay Transport Partner and as a result, more than 95 per cent of HP Canada volume is now shipped using a SmartWay Transport certified partner.



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YOUR HOUSE: PRODUCT MANUFACTURING AND DESIGN

HP's commitment to continually improve the energy efficiency of its products collectively represents HP's greatest impact on sustainability. Environmental issues have been integral to HP's product research and development programs for decades, positioning the company as a clear leader in this area within the IT sector.

INITIATIVE 1: DESIGN FOR ENVIRONMENT: PACKAGING AND RECYCLING

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BACKGROUND

Environmental issues have been integral to HP's research and development programs since 1992 when it first launched its formal Design for Environment (DfE) program. DfE is central to HP's design strategy of its products and environmental issues are considered early in the design process to make the biggest impact. HP is aggressive in its pursuit of product energy efficiency and continues to invest in research and development to further improve energy efficiency. HP personal computers are leading the industry in the Gold and Silver categories of the U.S. Electronic Product Environmental Assessment Tool.

PROCESS

As part of HP's Design for Environment (DfE) program, HP's product designers identify, prioritize, and recommend environmental improvements for products in the design stage, focusing on three top priorities: energy efficiency, design for recyclability, and materials innovation. HP's global network of environmental product stewards works with design and development teams to incorporate environmental innovations into products and to measure performance.

For example, the smaller size of the HP Consumer Slimline PC saved 8,500 tonnes of metal in one year, enough to build the Eiffel Tower. By incorporating environmental considerations from the outset, HP increases efficiency throughout the entire lifecycle of a product, from design, raw materials, and manufacturing and distribution, through to use and end-of-use.

Two key initiatives focusing on GHG reduction in HP products have centred on increased use of recycled content and packaging improvements. Integrating recycled content to develop a closed loop recycling system in HP's inkjet cartridges has been an admired and recognized accomplishment. HP received special recognition from the Society of Plastics that stated that, "HP's use of recycled plastic in an application as technically demanding as its inkjet cartridges represents an unprecedented engineering innovation." GHG reductions are also a result of packaging improvements, including new designs and increased recycling content. In addition, HP received a gold Environmental Printing Award from Canada's PrintAction in 2009.

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YOUR HOUSE: PRODUCT MANUFACTURING AND DESIGN

INITIATIVE 1: DESIGN FOR ENVIRONMENT: PACKAGING AND RECYCLING

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OUTCOMES

By using recycled plastic in its print cartridges, HP has used enough recycled plastic to fill more than 200 tractor trailers and create more than 200 million HP inkjet cartridges globally. HP used more than 5 million pounds of recycled plastic in original HP inkjet cartridges in 2007 alone. HP's use of recycled plastic closes the product design loop. The innovative resin formulation is competitive with virgin resins on both price and performance factors. Having such a material will greatly facilitate additional environmental design innovations at HP, such as incorporating recycled content into HP hardware. The final stage of the plastic recycling process for inkjet cartridges is through a Canadian contract manufacturer based in Montreal. HP Canada retains strong linkages to this company and is keen to promote this sustainable business development with a Canadian partner.

GHG emissions were further reduced by redesigning LaserJet packaging, producing cartons manufactured with 30 to 80 per cent post-consumer recycled content and a new design allowing for 45 per cent less



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packaging material (by weight) and reduced energy use during transportation. As a result, HP is continually recognized for its innovative programs and sustainable customer solutions. Product improvements also translate into savings for HP customers as energy-efficient products lead to reduced business and personal energy use.

OUR WORLD: LOW-CARBON ECONOMY

In line with HP's strategy, the company is collaborating with a number of organizations, governments, and individuals worldwide to support and develop a low-carbon economy.



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Some of HP's collaborations and accomplishments include:

- **Being a founding member and key supporter of Electronics Product Stewardship Canada (EPSC).** This industry association pioneered a worldwide first in collaborating to develop an end-of-life treatment standard (the EPSC Recycling Vendor Qualification Standard) for waste electronics which has been implemented in 5 provincial jurisdictions, ensuring the safe and environmentally responsible management of end-of-life electronics⁷
- **HP is actively engaged with retailers and provincial governments to implement provincial end-of-life electronics programs** that have collectively diverted over 100,000 tonnes of e waste from Canadian landfills
- **Creating the only HP chair at a university** – in Corporate Social Responsibility, at York University's Schulich School of Business
- **Working with Learning for a Sustainable Future to develop Resources for Rethinking** – a bilingual peer-reviewed database of education materials designed specifically for Canadian teachers that is both grade- and curriculum-matched
- **Working with WWF-Canada to develop an online community** – The Living Planet Community – for Canadians who want to make simple but significant changes in their lifestyles to help fight climate change and reduce their environmental impacts

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7: Electronics Product Stewardship Canada <http://www.epsc.ca/rvqp.html>

Benefits of partnering with WWF

Partnering with WWF gave HP's environmental strategy the validation it deserved and required to set the company apart from its competitors. In addition, by becoming a Climate Saver and focusing on its entire product lifecycle, HP is preparing for possible future legislation on climate change and other key areas such as IT recycling. Being ahead of the game ensures that HP retains its leadership role when the movement towards a low-carbon economy becomes more mainstream.

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KEY COMPETITIVE ADVANTAGES

- **First major computer manufacturer to support the 80Plus Program, offering 80 percent efficient power supplies on business desktop PCs**
- **First in the industry to introduce PCs to meet the more stringent hardware requirements of ENERGY STAR 4.0 with the HPCompaq dc5750 Business Desktop PC**
- **First company to carry EPA SmartWay logo on product packaging**
- **Introduced first U.S. Electronic Product Environmental Assessment Tool Gold product, the HP Compaq rp5700 Business Desktop PC, that features a five year lifecycle, 80 percent efficient power supply and components made from recycled plastics**
- **In 2009 introduced industry's first configurable ENERGY STAR 4.0 consumer desktop, the HP Pavilion a6360t , and the broadest selection of EPEAT Gold listed desktops and notebooks**



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KEY LEARNINGS AND CHALLENGES

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LESSONS LEARNED

HP learned there is a genuine need for a standardized, scalable, online reporting protocol that would facilitate reporting down the supply chain to enable year-over-year comparisons and performance tracking. The focus on environmental issues is growing across all industries, but it is such a complex issue that many companies don't know where to begin. About half of HP Canada's suppliers have never calculated their GHG emissions. This represents a great opportunity to identify significant new reductions. Suppliers have a mutual interest and benefit in reporting, tracking, and optimizing energy use for environmental and economic benefits.

Establishing standards for end-of-life treatment of products is also critical. HP created its own standards some time ago and played a key role in achieving a common industry standard, a first in the area of Extended Producer Responsibility (EPR) in Canada. Governments are not always aware of industry leadership positions and sometimes inadvertently penalize companies that show leadership. Consequently, companies should be undertaking EPR-type programs because they support their business strategy rather than simply offering shelter from legislation.

Accounting for changes to business-as-usual was also a key lesson learned through HP's acquisition of EDS, now known as HP Enterprise Services. HP Enterprise Services provides applications, business process, and infrastructure technology outsourcing services, consulting, and support to more than 1,000 business and government clients in 90 countries. Now one of the largest segments of HP, Enterprise Services offers the breadth of HP's extended portfolio to offer the most comprehensive end-to-end IT services. The huge growth of the company in a short time frame will have a significant impact on the GHG calculations and will need to be accounted for. The Climate Savers targets will need to be adjusted to reflect this change in circumstance.

CHALLENGES

HP has encountered a number of challenges in its efforts to adapt to a low-carbon economy. Since joining Climate Savers, HP Canada has determined there is a lack of tools available for companies to calculate their GHG emissions and a lack of standardization in calculating GHG emissions for the industry.

Also, GHG reduction efforts are often difficult to prove. Measuring efforts such as paper reduction, through the use of Smart Web printing or pull-printing strategies, for example, is difficult. Demonstrating these benefits to customers can be a winning proposition for HP but the complexities of measuring reductions make it difficult to demonstrate. HP has created a tool called **The Carbon Footprint Calculator** to assist customers in both measuring their current footprint and assessing the impact that various footprint reduction strategies can make. This web enabled tool is made available free of charge and calculates the impacts for both printing and computing products.

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CONCLUSION AND OUTLOOK

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With the planet being reshaped by factors such as climate change and an increasing depletion of natural resources, HP has long recognized that a strong commitment to environmental sustainability is required for the continued success of its business. HP's lead in this area has given rise to the development of innovative technologies, such as teleconferencing, innovation in product design, packaging, and waste reduction, as well as strong environmental policies in all areas, including operations, recycling, and supply chain.

Critical factors for HP's success with the Climate Savers program have been evaluating existing programs such as recycling and energy reduction, and then selecting programs with the highest CO₂ savings, enabling it to identify key areas for early success. Recycling has always been an important program for HP; the company continues to develop its recycling programs, recognizing that addressing electronic waste is important. HP has long maintained an environmental management system that requires the tracking and reporting of energy and water usage, waste generation and diversion.

Looking to the future, HP is committed to remaining an environmental leader and innovator in the IT industry. The company recognizes the need for solid groundwork to be laid internationally and nationally for climate



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change initiatives to be effective and, as a result, HP actively supports policy efforts to mitigate climate change and promote the benefits of a low-carbon economy. One priority outcome that HP Canada would like to see as a result of mobilizing the industry and government is the standardization of measurements, and the development of consistent tools and processes to ensure that organizations are measuring in the same manner.

HP will continue to build on its environmental programs and initiatives to further reduce GHG emissions, waste, and energy consumption, and to increase its recycling capabilities and the use of recycled products. HP's current environmental initiatives provide a solid foundation to meet Climate Savers commitments.

HP's rare combination of technology, size, and scale puts it in a unique position to take a leading role in the urgent drive to make meaningful and sustainable progress on the environment.



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RETHINK YOUR BUSINESS

Join WWF Climate Savers

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JOIN WWF
CLIMATE SAVERS

READY TO TAKE THE NEXT STEP?

Through the support and expertise of WWF, the Climate Savers program entails the development of world-class absolute (vs. intensity-based) GHG reduction targets, with the company commitment to these targets acknowledged via signed agreement, monitored and verified by an independent third party.

THE STEPS TO JOINING WWF CLIMATE SAVERS

- 1 Initial exploratory discussions and signing of letter of intent
- 2 Selection and contracting of technical consultant
- 3 Evaluation of data for reference scenario, scope and targets
- 4 Presentation of ambitious proposal to WWF
- 5 Drafting Memorandum of Understanding (MoU) and final negotiations
- 6 Signature of MoU between company and WWF & communication
- 7 Annual reporting and verification and potential adjustments or corrections
- 8 Implementation, review meetings and outreach

FOR MORE INFORMATION

Please visit www.wwf.ca/business



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Climate Savers

Appendix A

GLOSSARY OF TERMS

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APPENDIX A
Glossary of Terms

Absolute emissions – measure of tonnes of CO₂e equivalents of greenhouse gases

Biosphere – the earth’s atmosphere, vegetation, soils, and oceans

Cap and trade programs – carbon reduction instrument that limits carbon emissions and enables trading of carbon emissions rights

CO₂ – carbon dioxide, which is the primary greenhouse gas derived from combustion of fossil fuels

CO₂e – effective carbon dioxide that is a cumulative measure of all greenhouse gases expressed as carbon dioxide

Energy cogeneration – generation of both thermal energy and electricity from combustion of fuels

Environmental Management System – a tool to improve environmental performance using documented procedures and declared targets

Fossil Fuels – fuels from the earth’s crust like oil, coal, and natural gas

GHG Protocol – calculation methodologies for estimating emissions from companies, projects, and other entities

Greenhouse gases (GHGs) – gases in the atmosphere that absorb radiation

Greenwashing – misleading use of information to portray environmental excellence

Hydrofluorocarbons – highly intensive greenhouse gases usually used as refrigerants

Intensity emissions – GHG emissions per unit of business activity

IPCC – Intergovernmental Panel on Climate Change overseen by the United Nations

ISO 14000 – a certification standard of an environmental management system (EMS)

ISO 14064 – greenhouse gas EMS certification

Scope 1 – GHG emissions from direct combustion of fossil fuels as defined by the WRI/WBCSD

Scope 2 – GHG emissions from purchased electricity as defined by the WRI/WBCSD

Scope 3 – GHG emissions from supply chains and other company activities as defined by the SmartWay Program – U.S. government freight program highlighting low carbon freight companies

Supply Chain – Is the delivery system of providing resources to companies and the delivery of their products to their customers

WRI/WBCSD - World Resources Institute/ World Business Council for Sustainable Development that jointly developed the GHG Protocol

Appendix B

THE BASIC SCIENCE OF GREENHOUSE GASES

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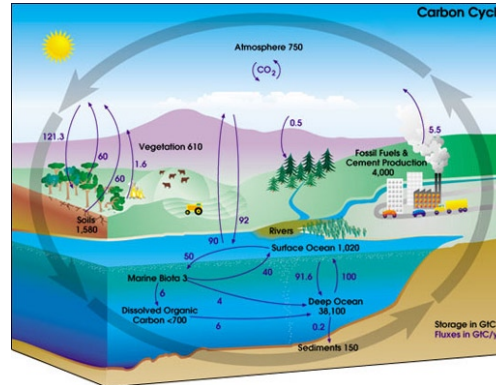
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APPENDIX B
Basics of the Science of GHG

Naturally occurring greenhouse gases in the atmosphere insulate our planet from the cold universe. Human use of fossil fuels has created an imbalance of these greenhouse gases (GHGs) in the atmosphere. Scientifically, there is strong consensus that we must limit the global temperature rise to no more than 2°C in order to avoid catastrophic consequences. These increasing levels of atmospheric GHGs must be stabilized by individuals and organizations in order to avoid these disastrous effects.

Our planet is unique in its proximity to the sun and its atmosphere, which allows just enough solar warmth to sustain life. This fragile balance is maintained by a layer of carbon dioxide (CO₂) in the atmosphere and is referred to as the greenhouse effect. Carbon dioxide (CO₂) is one of five gases that contributes to the greenhouse effect; the other five gases include methane, nitrous oxide, and three types of halocarbons. All six of these GHG gases are often collectively referred to as atmospheric carbon or “effective carbon dioxide” (CO₂e).



Source: NASA

The GHGs in the earth’s biosphere (which includes the atmosphere, the oceans, the vegetation, and soils) have been well balanced for millions of years. This means that the amount of GHGs being released into the atmosphere and absorbed by the biosphere has been approximately the same. As such, atmospheric GHG levels were stable.

This fragile balance has been disturbed by the use of fossil fuels like coal, oil, and natural gas to satisfy our hunger for energy. Fossil

fuels are in essence former plant matter from many millions of years ago. This decayed plant matter has been safely locked away in the earth’s crust for millennia until the start of the industrial revolution, about 260 years ago.

We are now discharging GHGs at an ever-increasing rate into the atmosphere at about 5 billion tonnes of CO₂ annually, which is making our GHG layer more concentrated. CO₂ concentrations, once stable at about 280 parts per million (ppm) in the atmosphere, have now reached about 387 ppm today. This strengthening of the greenhouse effect is making the earth warmer and rapidly changing the conditions under which life previously thrived for millions of years.

Today, most climate scientists agree that concentrations of 450 ppm GHG would result in an average temperature increase of 2°C in the atmosphere, which is likely to result in catastrophic natural disasters. Many stakeholders in the global policy debate, including WWF, are trying to ensure that the 450 ppm level is established as the maximum allowable level in developing global solutions.¹

1: Climate Solutions: WWF’s Vision for 2050.
Found at: <http://assets.panda.org/downloads/climatesolutionweb.pdf>

Appendix C

FAIRMONT HOTELS & RESORTS: PROJECTS BY FACILITY

DELTA TORONTO AIRPORT WEST

OVERVIEW

- 296 rooms
- almost \$700,000 in upgrades
- savings of over \$80,000 per year

MEASURES IMPLEMENTED

- 2700 lights upgraded
- centralized energy management system
- wireless control of lighting in parking area

Project managed by Direct Energy Business Services Technology and Solutions Group (formerly known as Enbridge Integrated Building Technologies Inc.)

DELTA TORONTO EAST

OVERVIEW

- 368 guest rooms with a 2000-m² indoor atrium
- 18-year old facility
- \$600,000 energy efficiency program
- savings of over \$110,000 per year

MEASURES IMPLEMENTED

- 8500 lights upgraded
- 3.5-million-Btu boiler replaced with four commercial-sized units with a capacity of 4.0 million Btu
- computerized energy management system installed for all measurable energy-consuming functions

Project managed by Direct Energy Business Services Technology and Solutions Group

FAIRMONT CHÂTEAU LAURIER

OVERVIEW

- 429 guest rooms
- over \$3 million in energy retrofits
- savings of over \$575,000 per year

MEASURES IMPLEMENTED

- installation of a high-efficiency boiler plant to replace the district steam heating system
- installation of high-efficiency incremental units in all guest rooms
- installation of an integrated building automation system
- lighting retrofit in common areas and guest rooms

Project managed by Direct Energy Business Services Technology and Solutions Group

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APPENDIX C
Fairmont Projects by Facility

Appendix C

FAIRMONT HOTELS & RESORTS: PROJECTS BY FACILITY

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APPENDIX C
Fairmont Projects by Facility

THE FAIRMONT CHATEAU LAKE LOUISE

OVERVIEW

- 487 guest rooms
- \$460,000 in renovations
- over \$250,000 in annual savings

MEASURES IMPLEMENTED

- a complete lighting retrofit, from T-12 to T-8 electronic ballasts in the service areas and compact fluorescent lights for the guest rooms
- glycol heat-recovery, recycling exhaust-fan heat to corridor make-up
- Metasys® building automation system, with scheduled time control of lobby and administrative-area fans
- installation of HVAC controls
- installation of a heat-recovery system

Project managed by Johnson Controls, Inc.

THE FAIRMONT BANFF SPRINGS

OVERVIEW

- over 770 guest rooms
- over \$600,000 in retrofits
- more than \$315,000 in annual savings

MEASURES IMPLEMENTED

- TransAlta Corporation meter consolidation saves about \$200,000 a year
- comprehensive lighting retrofit of all guest rooms
- temperature-control retrofits
- optimization of control system
- dishwasher booster conversion
- changes to fluid drives in main boiler room

Project managed by Honeywell Inc.

FAIRMONT THE QUEEN ELIZABETH

OVERVIEW

- over 1000 guest rooms
- almost \$3 million in renovations
- approximately \$500,000 per year in savings

MEASURES IMPLEMENTED

- lighting retrofit of common areas and guest suites
- EXCEL 5000® direct digital control (DDC) energy management system
- steam trap replacement
- ventilation air control for guest suites
- ventilation waste-heat recovery
- installation of new 300- and 700-ton energy-efficient chillers
- installation of two-speed motors for laundry ventilation system

Project managed by Honeywell Inc.

Appendix D

HEWLETT-PACKARD ENVIRONMENTAL RESOURCES

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APPENDIX D
HP Environmental Resources

RECYCLING

HP Planet Partners

<http://www.hp.com/recycle>

TOOLS

HP Carbon Footprint Calculator

<http://www.hp.com/go/carbonfootprint>

WHITE PAPERS AND GUIDES

Green Procurement White Paper

http://www.hpcollateral.com/Files/EcoCollateral_20091120_HP_Green_Procurement_White_Paper_July_2009_EN_gmfu.pdf

Green IT for Dummies

http://www.hpcollateral.com/Files/EcoCollateral_20100115_GreenITforDummiesSpecialEdition_yilup.pdf

Green IT Action Plan for Printing

<http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA2-3271ENW.pdf>

Sustainability Guidance for Events White Paper

http://www.hpcollateral.com/Files/EcoCollateral_20100305_Sustainability_Guidance_for_Events_gntl.pdf

Blueprint for Reducing Energy Costs in Your Data Center

http://www.hpcollateral.com/Files/EcoCollateral_20091120_HP_CFS_EEA_Business_Whitepaper_uzlw.pdf

Acknowledgements

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ACKNOWLEDGEMENTS

WWF-Canada would like to thank Hewlett-Packard Canada for its generous financial and technical support in developing this publication, and for the invaluable guidance of HP's experts including Frances Edmonds and Carole Long.

WWF-Canada would also like to thank Catalyst Paper, Coca-Cola Ltd., Coca-Cola Bottling Company, Fairmont Resorts & Hotels, and Hewlett-Packard Canada for their participation in the creation of this report.

Thank you to various reviewers and contributors including Joanne Adair, Hadley Archer, Emma Chapman, Jessica Carn, Kate Conrad, Monica Da Ponte, Graham Kissack, Josh Laughren, Adrienne Lo, Alina Racoviceanu, Christina Topp, and Dominika Wrona.

Thank you to our designers and creative advisors James Cook and Warren Wheeler from Henry. www.henrydesign.ca

Thanks is also due to Ketchum for its contribution to this publication.

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ABOUT WWF-CANADA

WWF-Canada (World Wildlife Fund Canada) is a member of WWF, one of the world's largest independent conservation organizations, active in more than 100 countries. WWF is creating solutions to the most serious conservation challenges facing our planet, helping people and nature to thrive. In Canada, we create solutions to conservation issues important to Canadians and the world. WWF-Canada works collaboratively with governments, businesses and the public to help fight climate change, the single biggest environmental threat to our planet; conserve our oceans and freshwater resources; and educate and mobilize people to build a conservation culture.



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