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Carbon Copy
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CLIMATE LEADERS PARTNERS

ADVANCED MICRO DEVICES, INC.
ALCAN ALUMINUM CORPORATION
ALCOA INC.
BALL CORPORATION
BALTIMORE AIRCOIL COMPANY
BANK OF AMERICA
BAXTER INTERNATIONAL, INC.
BP P.L.C.
CASELLA WASTE SYSTEMS, INC.
CINERGY
EASTMAN KODAK COMPANY
EXELON CORPORATION
FETZER VINEYARDS
FIRST ENVIRONMENT
FPL GROUP, INC.
GENERAL MOTORS CORPORATION
HASBRO
HOLCIM (US) INC.
IBM CORPORATION
INTERFACE, INC.
INTERNATIONAL PAPER
JOHNSON & JOHNSON
LAFARGE NORTH AMERICA
LOCKHEED MARTIN CORPORATION
MILLER BREWING COMPANY
NATIONAL RENEWABLE ENERGY LABORATORY
NORM THOMPSON OUTFITTERS, INC.
PFIZER INC.
PSEG
RAYTHEON COMPANY
S.C. JOHNSON & SON, INC.
SHAKLEE CORPORATION
ST. LAWRENCE CEMENT
STAPLES, INC.
STMICROELECTRONICS
SUN MICROSYSTEMS, INC.
TARGET CORPORATION
UNILEVER HPC
UNITED TECHNOLOGIES CORPORATION
UNITED STATES STEEL CORPORATION
WE ENERGIES

Welcome to Carbon Copy

Welcome to the first edition of Carbon Copy, the newsletter of Climate Leaders. Climate Leaders is a voluntary industry-government partnership that encourages companies to develop long-term comprehensive climate change strategies and set greenhouse gas (GHG) emission reduction goals. Partners benefit by identifying themselves as environmental leaders, receiving technical assistance in the development of their GHG emissions inventory, improving their understanding of their GHG emissions, and creating a lasting record of their accomplishments.

Carbon Copy will be published quarterly as an e-newsletter and will be available on the Climate Leaders Website. Look for the first e-dition in October.

INSIDE THIS ISSUE:

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ATTACHMENT: TAPPING LANDFILL'S POTENTIAL: S.C. JOHNSON HOPES TO TRANSFORM GASES INTO ELECTRICITY FOR PLANT

Climate Leaders Grows to More Than Forty Partners

We are pleased to announce that eleven new partners have recently joined Climate Leaders! Get to know the latest additions.

Baltimore Aircoil Company

Baltimore Aircoil Company, headquartered in Baltimore, Maryland, was founded in 1938 and is a worldwide manufacturer and marketer of evaporative heat transfer and ice thermal storage products that conserve resources and respect the environment. Baltimore Aircoil products make use of the desirable properties of water, one of nature's most abundant cooling media, to provide cooling solutions for air-conditioning, industrial processes, power generation and refrigeration.

Bank of America

As a global financial services company, Bank of America provides corporate financial services in more than 150 countries and has a national consumer banking franchise featuring 4,400 domestic offices, 13,000 ATMs and online banking services used by more than 5 million customers. Bank of America is committed to taking a leadership role in helping to make economic development and environmental protection compatible. The bank believes that environmental protection is an integral component of doing business in today's world.

Exelon Corporation

Exelon Corporation is one of the nation's largest electric utilities with approximately 5 million customers and more than \$15 billion in annual revenues. The company has one of the industry's largest portfolios of electricity generation capacity, with a nationwide reach and strong positions in the Midwest and Mid-Atlantic. Exelon distributes electricity to approximately 5 million customers in Illinois and Pennsylvania and gas to more than 440,000 customers in the Philadelphia area. Exelon is headquartered in Chicago, Illinois.

Fetzer Vineyards

Located in California's Mendocino County, Fetzer Vineyards was founded in 1968 by the Fetzer family and is now part of the Brown-Forman Wine Group. Throughout the last decade, Fetzer has been committed to organic vineyard farming practices, and is a pioneer in solid waste reduction and innovative recycling programs.

Lafarge North America Inc.

Lafarge North America is the largest diversified construction materials company and supplier of cement, aggregates and concrete, and other materials for residential, commercial, institutional and public works construction in the United States and Canada. Lafarge North America is part of the Lafarge Group, a world leader in building materials that is active in 75 countries, and employs more than 77,000 people.

Raytheon Company

Headquartered in Lexington, Massachusetts, Raytheon today is focused on defense, government and commercial electronics and business aviation and special mission aircraft. Raytheon is committed to improving the environment through comprehensive pollution prevention and stewardship of our natural resources. Raytheon supports projects that work on an ecosystem basis, encouraging community participation and collaborative approaches among organizations.

Staples, Inc.

Staples, Inc. launched the office supplies superstore industry with the opening of its first store in Brighton (Boston), Massachusetts, in May 1986. The company is dedicated to protecting and preserving natural resources through four major areas: the purchase and promotion of recycled content products; chain-wide recycling initiatives; energy conservation programs and renewable power procurement; and environmental education for their customers and associates

Sun Microsystems, Inc.

Sun's mission is to solve complex network computing problems for governments, enterprises, and service providers. Since its inception in 1982, Sun Microsystems, Inc. has been a provider of industrial-

strength hardware, software, and services that make the Net work. Sun can be found in more than 100 countries and on the World Wide Web. Sun is committed to providing timely and useful information regarding the company's impact on the environment, their programs, and the health and safety of employees.

United States Steel Corporation

United States Steel Corporation—headquartered in Pittsburgh, Pennsylvania—manufactures and sells a wide variety of steel sheet, plate, tubular and tin products, coke and taconite pellets. On May 20, 2003, U.S. Steel completed the acquisition of most of the steelmaking assets of National Steel Corporation, securing its position as the largest steelmaker in North America and the sixth largest in the world. U.S. Steel is a major supplier of high quality steel products to the automotive, appliance, tin and oil county markets.

United Technologies Corporation

Headquartered in Hartford, Connecticut, United Technologies Corporation provides a broad range of high-technology products and services to the building systems and aerospace industries worldwide. UTC has more than 200 facilities worldwide participating in conservation efforts, including more than 100 in the United States, more than 50 in Europe and nearly 40 in Asia. UTC is the 49th largest company in the U.S. UTC is the parent company of Carrier Corporation, which is the first corporation in the air conditioning and refrigeration industry to join Climate Leaders.

Unilever HPC

Unilever is one of the largest producers of home and personal care products. Unilever's brands include Whisk, Surf, All, Q-tips, Suave, Thermasilk, Mentadent, Dove, Lever 2000, and others. For the past two years, Unilever has embraced an aggressive campaign to reduce its energy and environmental footprint.

Did You Know.... Climate Leaders Partners Take Innovative Strategies to Help Meet GHG Reduction Targets

*Being a Climate Leaders Partner means going beyond business as usual. Our partners are taking aggressive steps and innovative measures to meet their GHG reduction targets, placing them at the forefront of their industry sector. **The attached article (located at the back of this newsletter), reprinted with permission from the Milwaukee Journal Sentinel, describes an innovative strategy that SC Johnson is using to meet their Climate Leaders GHG reduction target.***

Climate Leaders Partners Set GHG Reduction Targets

Climate Leaders is proud to announce the latest GHG reduction targets set by our Partners. These companies have set aggressive goals that are better than business as usual for their sector.

Pfizer is one of the world's largest healthcare companies, providing human and animal pharmaceuticals, as well as consumer products. Pfizer's business success is firmly rooted in its corporate values of setting high goals and driving for achievement. This philosophy is clearly apparent in Pfizer's global Environmental, Health and Safety programs that strive to promote environmental, economic, and social well being in the communities where Pfizer operates.

Pfizer's Goal: To reduce its GHG emissions by 35% per dollar revenue from 2000 to 2007.

St. Lawrence Cement is a producer and supplier of products and services for the construction industry, namely cement, concrete, aggregates, and construction. The company operates in Canada and on the eastern seaboard of the United States and employs a total of 2,800 people. St. Lawrence Cement has an annual cement production capacity of 3.7 million metric tons and 700,000 metric tons of mineral

components. St. Lawrence Cement is a subsidiary of Holcim Ltd, one of the world's leading suppliers of cement, aggregates, concrete, and construction-related services.

St. Lawrence Cement's Goal: To reduce its GHG emissions by 15% per ton of cementitious product from 2000 to 2010.

Johnson & Johnson, with approximately 101,800 employees, is a comprehensive and broad based manufacturer of health care products, as well as a provider of related services for the consumer, pharmaceutical, and professional markets. Johnson & Johnson has more than 197 operating companies in 54 countries around the world, selling products in more than 175 countries. Johnson & Johnson is an active participant in voluntary programs to reduce GHGs and has participated in several other EPA programs, including ENERGY STAR®, Climate Wise, and the Green Power Partnership.

Johnson & Johnson's Goal: To reduce its GHG emissions by a total of 14% from 2001 to 2010.

Previously Announced Climate Leaders Partner Goals:

General Motors Corporation

GM has pledged to reduce total emissions by 10% for all of their North American facilities by 2005.

Holcim (US) Inc.

Holcim has pledged to reduce GHG emissions by 12% per ton of cement from 2000 to 2008.

IBM Corporation

IBM has pledged to reduce CO₂ emissions reductions equivalent to 4% of electricity and fuel use from 2000 to 2005 and reduce PFC emissions by 10% from 2000 to 2005.

Miller Brewing Company

Miller Brewing Company has pledged to reduce emissions by 18% per barrel of production by 2006.

The National Renewable Energy Laboratory

NREL has pledged to reduce GHG emissions by 10% per square foot from 2000 to 2005.

Norm Thompson Outfitters, Inc.

Norm Thompson Outfitters has pledged to reduce GHG emissions by 90% from 2000 to 2005.

SC Johnson & Son, Inc.

SC Johnson & Son has pledged to reduce GHG emissions by 23% per pound of product from 2000 to 2005.

EPA Assists Climate Leaders to Reach GHG Reduction Targets

Climate Leaders Partners have access to technical assistance from a variety of EPA voluntary programs to help them meet their GHG reduction goals. For instance, SC Johnson was able to take advantage of assistance from EPA's Landfill Methane Outreach Program (LMOP) to assess the feasibility of a landfill gas opportunity (see the attached article at the end of this newsletter for details on SC Johnson's project). The following article highlights the LMOP program and the services it can provide.

Considering Landfill Gas Energy in Your GHG Reduction Strategies?



LMOP Is Here to Help!

Landfill gas (LFG) energy projects can play a significant role in meeting a company's GHG reduction goals. Landfill gas (which results from the natural decomposition of organic material in landfills) contains significant quantities of methane – a potent GHG more than 20 times as effective at trapping heat in the atmosphere than CO₂. However, the methane content of LFG also makes it a valuable, local source of renewable energy. LFG can be recovered from landfills and used to produce electricity or used directly to replace fossil fuels in numerous applications. LFG energy projects not only eliminate emissions of methane – they also offset the need for non-renewable resources, such as coal and oil, thereby reducing emissions of air pollutants from conventional resources.

LFG energy can be used to replace fossil fuel use at a Climate Leaders Partner facility, directly reducing GHG emissions from energy use.

In addition, Climate Leaders Partners can invest in LFG projects outside of their facilities, creating GHG offsets. EPA's Landfill Methane Outreach Program (LMOP) is a voluntary partnership program that helps develop and promote LFG energy projects.

More than 300 businesses, landfill owners and operators, communities, states, utilities, and energy users are current LMOP Partners, including corporations such as GM, Interface, International Truck and Engine Corp., Ajinomoto, and Lucent Technologies.

Climate Leaders Partners that are currently involved in LFG energy projects include General Motors (3 projects), SC Johnson & Son, International Paper, We Energies, Cinergy Corp., and Interface, Inc. (planning).

There are currently 340 LFG energy projects around the country, with an installed electricity generating capacity of 1000 megawatts, in addition to the direct supply of 230,000,000 cubic feet per day of landfill gas to industrial applications.

LMOP offers a broad range of products and services that can help meet the needs of Climate Leaders Partners interested in incorporating LFG energy into their climate change strategies:

Identify Potential Projects. LMOP, working with Climate Leaders Partners, can help identify candidate landfill sites in proximity to partner facilities and help match facility fuel needs to LFG availability. LMOP can also help identify potential LFG offsets projects. LFG generation models and financial feasibility studies can be produced using industry specific software (LandGEM and LFGcost). LMOP can also suggest partners that are experts at project engineering and development.

Education/Public Relations. During the project development process LMOP can help in educating the public, elected officials, regulators, and others on the benefits of LFG energy. Assistance may take the form of letters of support, brochures, attendance at public meetings, etc. When the project is launched, LMOP can also assist in grand opening ceremonies, media outreach, and partner recognition.

LFG Project Development Handbook, which provides step-by-step project development guidance, including economic analysis, financing, choosing project partners, environmental permitting, and contracting for services.

Technical fact sheets on a range of topics, including how to adapt boilers to utilize LFG and using microturbines powered with LFG.

Funding Landfill Gas Projects: A Guide to State, Federal, and Foundation Resources, which offers detailed information on state, federal, and foundation funding resources for LFG energy projects, such as loans, grants, renewable energy trust funds, and property, sale, and use tax exemptions.

Case Studies of successful and innovative LFG energy projects. These include projects such as Lucent Technologies, which saves \$100,000 a year on fuel bills by fueling boiler operations with LFG instead of fossil fuels; GM, which expects to save more than \$400,000 per year at one facility by replacing fuel oil with LFG; SC Johnson, who will use LFG in a combined heat and power application at one of their plants and expects to save millions of dollars per year while reducing GHG emissions; and Ajinomoto, which uses LFG to produce steam at its facility and prevents carbon dioxide emissions equivalent to removing more than 23,000 cars from the road.

Follow the Steps to Landfill Gas Energy Development, a brochure that provides an overview of the LFG energy project development process and information about how the LMOP team can work for you.

All these products—and many more—are available in the Products and Services section of LMOP's Web site
www.epa.gov/lmop/products/products.htm

Exciting New Project Feasibility Tool!

Many times the bottom line is what counts in developing LFG energy projects. To that end, **LMOP is excited to announce the development of a new tool that will help in assessing project financial feasibility—LFGCost.**

LFGcost is a model for evaluating the cost and economic performance of several LFG energy technologies, including turbines, microturbines, standard reciprocating engines, small reciprocating engines, direct gas use systems, LFG to liquefied natural gas (LNG) conversion, collection and flaring systems, and leachate evaporators. LFGcost performs many functions:

- Calculates the LFG generation profile of a landfill based on site-specific characteristics and estimates the cost of constructing and operating a LFG energy project at the landfill;
- Estimates the cost of applying the technologies to the landfill, including capital and operating costs for the technology, as well as the costs of the gas collection system;
- Performs an economic analysis of the proposed project to determine economic factors such as the cash flow schedule, payback period, rate of return, and net present value for the project; and
- Provides an estimate of the GHG benefit of the project, including its direct reduction of LFG methane emissions and the indirect reduction of CO₂ emissions from displaced fossil fuel combustion.

Users have the option to change economic assumptions (e.g., interest rates) and technical assumptions, such as specifying whether to size the energy recovery technology for the lowest, average, highest, or user-specified LFG flow over the 15-year project life, and whether to include gas collection and flaring system costs when running the model. EPA is currently testing the beta-version of LFGcost, and will release the final version to the public later this year.

Consider Joining LMOP!

Companies can join the program by signing a voluntary memorandum of understanding. For more information about LMOP, call 1-888-782-7937 or visit the Web site at www.epa.gov/lmop.

PROGRAM UPDATES

DRAFT PROTOCOLS AVAILABLE IN JUNE

The latest draft versions of four cross-sector Climate Leaders core module guidance documents will be released in June. The four guidance documents deal with emissions from **stationary combustion, purchased electricity, mobile sources, and refrigeration and air conditioning (AC) equipment use**. These drafts reflect the comments received from the external peer review process. These guidance documents are currently undergoing a final internal review and will be finalized later this year.

DRAFT PROTOCOLS AVAILABLE FOR COMMENT

Also, currently there are three sector-specific protocols available for review and comment. These sector-specific guidance documents deal with emissions from **cement production, iron and steel production, and manufacturing of refrigeration and AC equipment**. The comment period will be open until the end of August.

CLIMATE LEADERS ICR REQUEST FORWARDED

In compliance with the Paperwork Reduction Act, EPA announces that an Information Collection Request (ICR) for the Climate Leaders Program has been forwarded to the Office of Management and Budget (OMB) for review and approval. Climate Leaders Partners interested in providing comments on this ICR should consult the Federal Register in early June (the timing of the actual publication of the ICR notice is hard to estimate), and follow the instructions in the Federal Register announcement.

UPCOMING EVENTS OF INTEREST

- July 16-18, 2003**—International conference on The Impact of Global Environmental Problems on continental and Coastal Marine Waters, Geneva, Switzerland.
www.unige.ch/sciences/near
- July 29-August 1, 2003**—ACEEE Summer Study on Energy Efficiency in Industry in Rye Brook, New York. For more information visit www.aceee.org
- July 30-August 1, 2003**—Stack Emissions Symposium, Clearwater Beach, Florida.
<http://secure.scientech.com/conferences>
- August 17-20, 2003**—Energy 2003: Real World, Real Solutions - An Energy Efficiency Workshop and Exposition, Lake Buena Vista, Florida. For more information visit www.energy2003.ee.doe.gov
- October 1-3, 2003**—Sustainable Energy Expo & Conference Los Angeles, California.
www.sustainableexpo.com/
- October 21-23, 2003**—The 2003 Business and Energy Conference, New York, New York.
www.conference-board.org/energy.htm
- October 22-24, 2003**—IETA Annual Forum 2003, Ottawa, Canada.
www.ieta.org
- November 11-14, 2003**—Business for Sustainability Annual Conference: Building and Sustaining Solutions, Los Angeles, California.
www.bsr.org

CALL FOR NOMINATIONS

- Nominations for the 2004 EPA Climate Protection Awards are due in mid-October. Visit www.epa.gov/cppd/awards/climproawards.htm for information on the nomination process.



U.S. Environmental Protection Agency

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