



ABOUT CLEAN AIR—COOL PLANET

Clean Air-Cool Planet is the leading science-based, non-partisan, non-profit organization dedicated solely to finding and promoting solutions to global warming. Through our Climate Policy Center we develop and promote economically efficient and innovative climate policies. Clean Air-Cool Planet provides hands-on assistance to companies, campuses, communities and science centers throughout the Northeast to help them reduce their carbon emissions. We celebrate the commitment, innovation and success of our partners as they implement practical climate solutions that demonstrate the economic opportunities and environmental benefits of action on climate change.

Find out more at:

www.cleanair-coolplanet.org

CLEAN AIR—COOL PLANET

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AWARDS AND RECOGNITION As a result of its environmental efforts, Oakhurst Dairy has been recognized for its leadership by a range of organizations. In October 2007, Clean Air—Cool Planet awarded Oakhurst its Climate Champion Award for corporate action on global warming. The company was selected for demonstrating an enterprise-wide commitment to reducing heat-trapping gases, a willingness to be transparent in its efforts and for helping to support effective policy in the region. Also that month, Oakhurst became the first recipient of the Environmental Hero Award, presented by *Heart of New Hampshire Magazine*. In September 2007, as part of an effort to begin tracking greenhouse gas emissions in a select portion of its supply chain, Wal-Mart singled out Oakhurst Dairy as one of a small percentage of the retailer's 60,000 suppliers that were taking steps to reduce their carbon footprint.

FUTURE ENDEAVORS

As an extension of its solar thermal system, Oakhurst is working with the installer Ascendant Energy on an effort to reach back upstream in its supply chain to help small businesses that could benefit most from new technology. The solar thermal system at the Oakhurst processing plant was also engineered to allow for future expansion that will help to further reduce the company's dependence on imported fossil fuels. Among the other options under consideration going forward are onboard refrigeration units that keep the milk at optimal temperatures without relying on separate generators that consume additional fuel. In June 2008, the first Sustainability Summit for U.S. Dairy convened to discuss options for reducing the impact of milk processing and increasing value for the dairy industry. The Carbon Council, an industry-wide team that includes Oakhurst COO Bill Bennett, has been leading efforts to design a greenhouse gas "roadmap" for the industry — a specific action plan for reducing emissions.



“The cows that produce milk for Oakhurst literally eat, drink and breathe our Maine environment, so it's only natural that we would want to protect and preserve it for future generations.”

—Stan Bennett, President
Oakhurst Dairy

“Oakhurst Dairy is setting the standard for businesses and organizations in our state and throughout the country.”

—Olympia Snowe,
Maine Senator



TAKING ALL THE RIGHT STEPS: A Maine Dairy Reduces Its Carbon Footprint

INTRODUCTION

Family-owned Oakhurst Dairy of Portland, Maine, has a solid tradition of environmental stewardship, expressed in its long-time commitment to “The natural goodness of Maine.” As one of New England's environmental leaders, Oakhurst has focused in recent years on the effort to reduce greenhouse gases.

When people enjoy dairy products, few consider how a gallon of milk might contribute to global warming. In fact, by far the largest single source of heat-trapping gases linked to global warming from milk production is farm emissions, which contribute roughly 10 lbs. of carbon dioxide (CO₂) per gallon of milk. And 85% of those emissions come from one source: the cow. While a critical issue, it is not one owned or controlled by the dairy itself. In addition to the methane produced by cows, industry wide commercial milk production raises a number of concerns including CO₂ emissions related to transportation as well as the energy used in the pasteurization process.

Scientists considering the potential impacts of climate change in the Northeast have identified heat waves and prolonged drought as two significant threats to the industry, as heat-stressed cows generally produce less milk. Oakhurst Dairy recognizes the challenges of a changing climate and is taking responsibility for its impact through a strategy of innovative, proactive solutions and by reaching out to form creative collaborations.



Oakhurst Dairy headquarters in Portland, Maine

CASE STUDY



OAKHURST DAIRY:

Taking on the Carbon Challenge

COMMITMENTS

Oakhurst was one of the first organizations to sign on to a voluntary State of Maine program aimed at cutting greenhouse gas emissions. Under the Governor's Carbon Challenge, Oakhurst set an aggressive goal of reducing carbon 20% by 2010. Oakhurst networked with Clean Air—Cool Planet to identify resources to help develop and implement a carbon management strategy.

PROJECTS

- Energy efficiency & conservation
- Alternative fuels and hybrid vehicles
- On-site renewable energy
- Contributions to municipal tree planting campaign

CO₂ EMISSION REDUCTIONS

By implementing a variety of initiatives since 2002, Oakhurst has reduced its CO₂ emissions by 1,630 metric tons annually, which is equivalent to taking 262 cars off the road for a year.

FUNDING SOURCES

All of the initiatives were directly funded by the company.

LESSONS LEARNED

Environmental initiatives often come with an up-front investment presenting internal hurdles that, when overcome, are well worth the effort and expense. Going green makes a business more efficient and can generate goodwill from customers.

“If it's good for the environment, it's good for business.”

—Stan Bennett, President
Oakhurst Dairy



MILLENNIUM TREE CHALLENGE

In 1993, Oakhurst began its first major tree planting and restoration initiative with the Millennium Tree Challenge. One thousand trees were planted, helping to restore both shade and beauty to Portland, the "Forest City."

In 2008, *Organic Gardening Magazine* named Portland, Maine, the greenest small city in the United States in part due to its acres of parkland and trails.

It is also estimated that these trees have removed 26,000 pounds of CO₂ from the air and released 13,000 pounds of oxygen into the city of Portland.

"Whether it's solar, wind, tidal or innovative wood products, we must be aggressive in our pursuit of energy alternatives. Oakhurst is showing great leadership with its solar project, which further underscores the company's commitment to a cleaner planet and a stronger Maine."

—John Baldacci, Maine Governor

REDUCING OAKHURST'S CARBON FOOTPRINT

Three generations of the Bennett family have made caring for the environment a core value of the Oakhurst brand. Every year, the company donates 10% of profits to organizations that support the health of kids and the environment. Oakhurst is known and respected for its community and civic leadership. Today, the company is finding ways to operate more efficiently, **in an increasingly competitive marketplace**, with less impact on the environment. In recent years the company has taken dramatic steps to reduce its carbon footprint.

GOVERNOR'S CARBON CHALLENGE (GCC) In 2004, Governor John Baldacci put into action a first-in-the-nation voluntary carbon dioxide emission reduction program. The goal of the GCC was to encourage organizations to develop strategies to reduce direct emissions from on-site fuel combustion and company-owned vehicles, as well as from indirect sources such as purchased electricity. Oakhurst became one of the first Maine firms to participate in the campaign, at the recommendation of Clean Air-Cool Planet, a leading non-profit in the business of solving the global warming problem by developing economically efficient and innovative climate policies and mobilizing civic engagement to implement practical climate solutions. Under the GCC program, Oakhurst set a goal of a 20% reduction by 2010 (15% direct greenhouse gas emissions and 5% indirect), using their 1998 carbon footprint as a baseline. By completing an inventory of all forms of energy consumed by the company's operations, their 1998 carbon footprint was calculated at 12,594 metric tons of CO₂. In the case of Oakhurst, the system boundaries of the footprint begin with raw product entering the processing plant and end with the delivery of packaged milk to the store via truck. Emission factors include electricity, natural gas, diesel fuel, heating oil, refrigerant leakage and packaging.

REROUTING SOFTWARE The company maintains 92 delivery routes covering four states, carrying dairy products to 1,800 accounts. In 2005 Oakhurst purchased rerouting software to help make its truck fleet more efficient. Oakhurst understood that reducing travel time would have a positive impact on carbon emissions by reducing fuel consumption and, in a period of rising energy costs, help hold the line on price increases. As a result of the system reorganization, Oakhurst operates 67 routes servicing roughly the same number of accounts, and the company plans to review delivery route efficiency on a regular basis. In the first year of using the software, the company reduced its purchases of diesel by 88,000 gallons, reducing greenhouse gases by almost 970 tons.

PLANT EXPANSION By measuring, monitoring and managing its greenhouse gas emissions, Oakhurst realized early on that it needed to concentrate on projects that would deliver long-term cost savings. Clean Air-Cool Planet recommended a process engineering firm which identified a number of improvements through an energy audit. In 2005 when the time came to expand the processing plant located in downtown Portland, Maine, Oakhurst integrated a number of those energy efficiency and conservation projects in a multimillion-dollar expansion project that included insulated cold tanks and a hot water recovery system.

TRANSPORTATION The next initiative came in 2005 when Oakhurst took steps to reduce transportation-related carbon emissions. Working with its non-profit partner, the company calculated that by switching from diesel to B20, (a 20% soy/80% petroleum blend) it could reduce annual fleet emissions by 1,332 metric tons while simultaneously cutting its dependence on foreign oil, keeping more dollars in the U.S. More than 100 box trucks and tractors were converted to biodiesel without any modifications. The largest private biodiesel fleet in New England at the time, Oakhurst helped raise the bar, encouraging other companies, not just in the region, to reexamine the impact of their operations on the environment. Maine Senator Olympia Snowe, an ardent supporter of the environment, said that Oakhurst Dairy is "setting the standard for business and organizations in our state and throughout the country." Finally Oakhurst embarked on a program to swap out company-owned vehicles, which accumulated 20,000-25,000 miles per year, for hybrid SUVs, raising the fleet average from 18 to 25 mpg.

INSTALLATION OF SOLAR PANELS The processing of milk requires large quantities of hot water for pasteurization and for cleaning cases and equipment. Oakhurst relies on #2 heating oil for heating hot water. Faced with the doubling of prices, the company began exploring options that would help the bottom line and be good for the environment as well. In the spring of 2008 the company became home to one of the

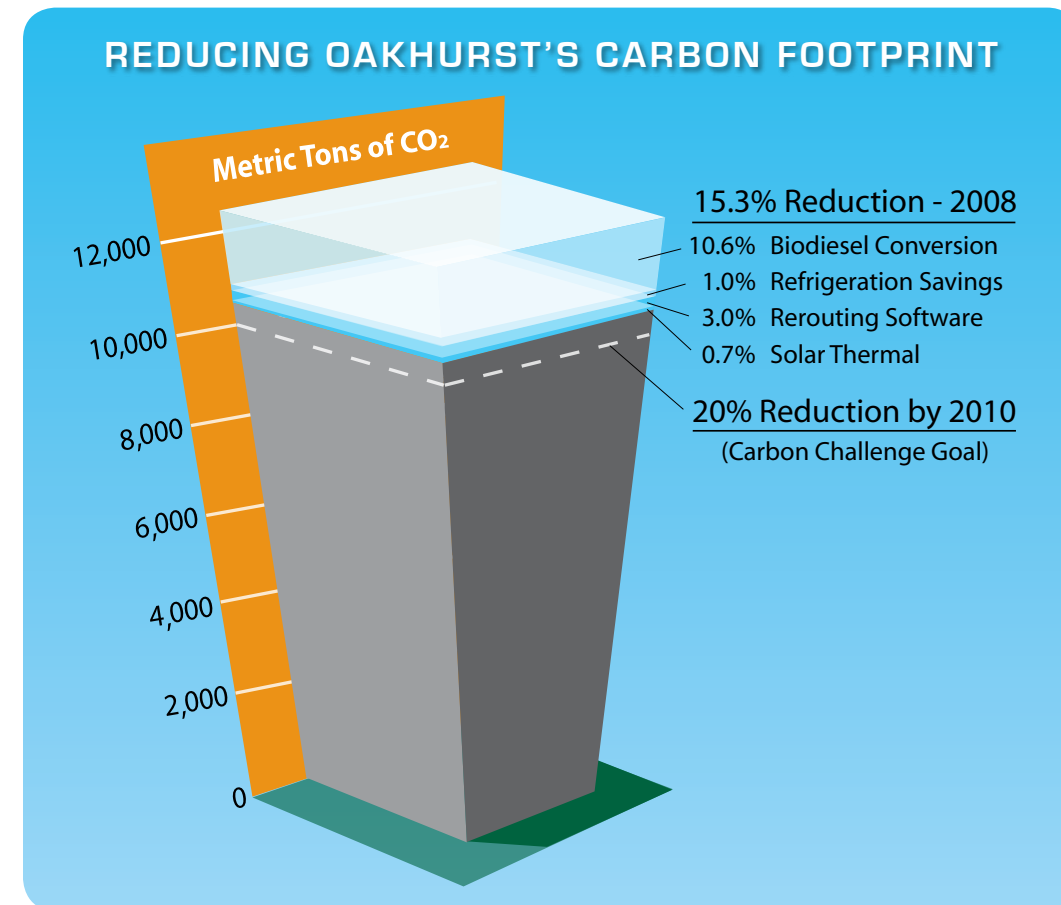
largest commercial solar thermal systems in the Northeast when it installed 75 panels, approximately 2,500 square feet, on the roof of its headquarters in Portland. When the sun is shining, the panels preheat domestic water, which reduces the consumption of heating oil by more than 5,000 gallons per year. At the same time, Oakhurst incorporated a hot water recovery system that saved an additional 2,500 gallons of heating oil. This represents a CO₂ reduction of 88 metric tons.

REFRIGERATION SAVINGS Under new operational guidelines, all Oakhurst products are removed from refrigeration trucks at the end of the day and the refrigeration units are shut down. This practice saves significant fuel and electricity and reduces CO₂ emissions by 120 metric tons.

Over the years, Oakhurst has made additional operational adjustments to their systems to further their commitment to the environment. Those changes include:

- **Recycling** oil filters, anti-freeze and waste oil
- Installing equipment in refrigeration units to **improve efficiency**
- Purchasing **retreads**, which often record better gas mileage and require less oil to manufacture
- Switching truck refrigeration systems to **avoid ozone-depleting Freon gas**—Oakhurst Dairy has been CFC-free for more than 10 years
- **Installing idle regulators** to reduce emissions
- **Installing truck speed "governors"**

Each effort that Oakhurst has embarked on, whether something as small as idle regulators or as significant as an investment in solar panels, has had cost implications. As with any corporation, there is a need to focus on the bottom line. However, as a family run business, Oakhurst balances those demands with its commitment to protect the environment, to improve the communities in which it operates and ultimately to provide a quality product to consumers. These core beliefs serve as a catalyst for the company's efforts to reduce greenhouse gas emissions.



MEASURABLE RESULTS

CARBON CHALLENGE

On March 17, 2008, Maine's Department of Environmental Protection and the Governor's administration recognized Oakhurst for meeting part of its carbon reduction goal ahead of schedule with a significant 12% reduction in reported carbon emissions.

REROUTING SOFTWARE

88,000 gallons of diesel fuel is now saved annually, representing more than 400 metric tons of CO₂.

SWITCH TO BIODIESEL

Approximately 137,628 gallons of petroleum diesel fuel a year is saved by purchasing B20 biodiesel fuel, representing 1,332 metric tons of CO₂ each year since the switch was made.

INSTALLATION OF SOLAR PANELS

Approximately 7,500 gallons of heating oil per year will be saved, representing 88 metric tons of CO₂ per year, equivalent to the amount of CO₂ absorbed by 340 acres of hardwood trees per year.

"Oakhurst exemplifies the institutional commitment to reducing heat-trapping gases and solving the climate change problem."

—Adam Markham, Executive Director, Clean Air-Cool Planet