

## 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. CA-CP 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](http://www.cleanair-coolplanet.org).



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## Case Study



## Transforming the Business of Climate Change One Cup at a Time

### Introduction

While it can be said that America is addicted to petroleum, there is another dark liquid that fuels this nation. Eight out of ten people in this country drink coffee and they average more than three cups a day. Brew up a cup from a combination of carefully selected beans with water and you have an industry worth \$18 billion in annual sales.

#### Green Mountain Coffee Roasters: Counting Beans

**Combined Heat and Power (CHP) Technology**  
Improved electrical energy use efficiency by 70 percent through on-site co-generation of electricity and steam.

**Lighting improvements**  
With \$6,900 from Efficiency Vermont and \$19,029 of its own funds, GMCR retrofitted its entire production facility in 2005 with new, high bay, T5 high output fluorescent lights, saving \$18,906 each year and cutting the plant's lighting energy consumption in half, a move which paid for itself in 13 months.

**Transport biodiesel**  
A combination of retrofits and use of biodiesel fuel in GMCR's delivery fleet is reducing transportation emissions.

Since Green Mountain Coffee Roasters (GMCR) began roasting and serving coffee at a small cafe in Waitsfield, VT, in 1981, environmental stewardship has been a core company value and dedication to the issues of clean water, energy reduction and climate change mitigation is part of their brand.

### The Project

GMCR's commitment to reducing its greenhouse gas (GHG) emissions made it a logical partner for Clean Air-Cool Planet (CA-CP). We initially approached the Waterbury, Vermont-based boutique coffee company in 2002 as part of our Small & Cool program, a joint project between CA-CP and Northeast States for Coordinated Air Use Management (NESCAUM) targeting smaller businesses.

In spring 2003, GMCR and CA-CP signed a formal memorandum of understanding (MOU) outlining a three-point program focused on measuring and reducing greenhouse gas emissions, as well as lowering energy use and cost. In particular, the plan included:

- Undertaking an emissions inventory as a critical first step toward developing a strategy to reduce greenhouse gas (GHG) emissions in GMCR's operations;
- Identifying additional cost-effective renewable energy sources and GHG reduction projects; and
- Developing an outreach program to educate its employees, suppliers, shareholders, customers and consumers about global warming and energy solutions.



In 2003, GMCR offset its roasting and general operations at its headquarters in Waterbury, Vermont. Just one year later, GMCR expanded its efforts to include emissions attributed to their distribution truck fleet, business and employee travel. In doing so, GMCR was able to achieve its goal of neutralizing all of the carbon from its operations. In 2004 alone, GMCR purchased enough renewable energy credits from *NativeEnergy* to offset 8,070.5 short tons of GHG emissions. In 2005, GMCR offset 9,823 short tons of direct greenhouse gas emissions. By 2006, GMCR was able to include outbound freight in its GHG emissions data, and offset a total of 14,860 short tons of greenhouse gases.

## Delivering great coffee and cost savings with fewer emissions

The initial GHG inventory also revealed that 19 percent of direct carbon emissions were generated by its distribution truck fleet, which used gasoline and diesel as its primary energy sources. After-market production changes to its truck fleet, using products such as air dams to streamline box trucks, decreased the emissions impact of its Vermont shipping operations.

Still looking for new ways to reduce its environmental footprint, GMCR converted its Waterbury-based fleet to biodiesel in 2007. “By converting our truck fleet to biodiesel, which requires little if any modification, we hope to send a message to the oil industry that there is a need for cleaner fuel sources and more efficient vehicles,” explains Paul Comey, vice president of environmental affairs.

Biodiesel can be used in any conventional diesel engine, requiring little or no modification to either the engine or fuel system. This type of fuel can be produced from a variety of renewable sources, including animal fats, soybean oil, canola oil, sunflower oil and cottonseed oil, which might one day represent a new “cash-crop” for an agricultural state like Vermont or in areas around the world where coffee beans are grown.

	FY 2003	FY 2004	FY 2005	FY 2006
Propane (gals.)	410,930	428,268	454,852	523,360
Propane (therms)	392,532	409,094	434,487	489,706
Natural gas (CCF)	14,500	14,595	14,606	12,602
Natural gas (therms)	14,500	14,595	14,606	12,602
Electricity (KwH)	3,456,229	3,961,205	5,152,326	5,188,024
Electricity (therms)	116,727	135,192	175,844	177,062
Transportation (miles)	3,966	4,798	6,294	10,754,125
Transportation (therms)	426,708	518,445	661,888	724,658
<b>Total Therms</b>	<b>951,697</b>	<b>1,077,326</b>	<b>1,286,825</b>	<b>1,404,028</b>
Net Sales Dollars (1,000s)	116,727	137,444	161,536	207,582
Therms per \$1000 Net Sales	8.15	7.84	7.97	6.76

## Sharing the results with shareholders: Investing in a sustainable future

We “manage three types of capital—financial, human and environmental,” explains Comey. “Each is important and we strive to find a balance among them. Financial capital success can’t be detrimental to the human and environmental capital.”

By securing reliable coffee sources, installing energy efficient lights, implementing after-market production changes to its truck fleet, and increasing overall energy efficiency in production and delivery operations, GMCR has realized a positive return on investment for its shareholders today and going forward.

One of the biggest challenges for GMCR, as for any public company, is convincing shareholders that integrating environmental and social goals with overall business objectives makes sense. “It looks so ideologically correct, shareholders can’t believe you can save money,” says Comey. “But it’s a sound, cost-effective business practice that also provides environmental benefits.”

## Next Steps

GMCR is committed to making continual reductions in its energy-intensive operations. Looking ahead, GMCR will continue to find additional ways to:

- ✓ Divert its operational waste from landfills by reducing the number of pounds of solid waste as a percentage of net sales dollars. From 2006 to 2007, it had already been reduced from 2.77 tons to 2.66 tons per \$1,000,000 net sales. Continued reductions will involve developing more environmentally-friendly packaging.
- ✓ Continue to reduce facility energy use as a percentage of net sales dollars. Therms per \$1,000 net sales has already been reduced from 8.14 therms per \$1,000 of net sales in 2003 to 6.76 therms per \$1,000 in 2006.
- ✓ Continue to offset 100 percent of *remaining* carbon from direct emissions. This goal in particular will prove especially challenging as the company continues to grow.
- ✓ Develop a program for organic disposal of chaff, a by-product of coffee roasting.

GMCR’s philosophy demonstrates that integrating environmental and social objectives into a corporate business model can add value to a company’s bottom line—realizing both operational efficiency and cost savings for its stakeholders and shareholders, while illustrating that financial results aren’t the only measure of performance.

## Accolades for GMCR

The company’s efforts have earned it several awards and distinctions.

In October 2005, GMCR received the “Green Power Leadership—Purchaser Award” from the U.S. Department of Energy, the Environmental Protection Agency and the Center for Resource Solutions, which recognizes exceptional achievement among partner organizations interested in purchasing green power.

GMCR was also ranked No. 1 on *CRO* magazine’s list of “100 Best Corporate Citizens” in 2006 and 2007.

## Notes

<sup>1</sup> Northern Power Systems is a full service power solutions company that designs, builds, installs and services systems and products for industry, government, military and business to achieve power independence. For more information visit <http://www.northernpower.com>.

<sup>2</sup> Co-generation is the process of using a power station to simultaneously generate both heat and electricity, increasing efficiency.

<sup>3</sup> When renewable energy credits (also known as green tags, green energy certificates or tradable renewable certificates), are purchased from *NativeEnergy*, additional renewable energy projects are guaranteed to be built. In addition, each green tag is retired by CA-CP in order to prevent double-counting of the associated offsets. Green tags is the name given to the environmental attributes of electricity that is produced from a renewable energy source and sold into the power markets simply as electricity, without the producer capturing environmental credit for the source of that power. For more information on *NativeEnergy*, visit their website at [www.nativeenergy.com](http://www.nativeenergy.com).

<sup>4</sup> The United Nations (UN) Millennium Development Goals were adopted by the UN General Assembly in 2000 and serve as a framework which all countries adopted in an effort to support broad global development goals. GMCR chose to focus on the first and seventh goals: eradicate extreme poverty and hunger; and ensure environmental sustainability. For additional information visit <http://www.un.org/millenniumgoals>.