



# Cabot Creamery makes demand response a critical part of its environmental stewardship

Makers of the “World’s Best Cheddar” reduce energy while producing award-winning cheese and dairy products

## Fast Facts:

**Industry:**  
Agriculture/Food Manufacturing

**Location:**  
Cabot, VT

**Program:**  
ISO New England Demand Response

**DR Strategy:**  
Curtailment only

**Primary Curtailment Strategy:**  
Alter manufacturing processes

**Annual Payments:**  
Approximately \$20,000

## THE BIG PICTURE

Cabot Creamery Cooperative has operated continuously in Vermont since 1919 and makes a full line of cheese, yogurt, sour cream, cottage cheese, and butter. Cabot Creamery is owned by the dairy farm families of Agri-Mark, the Northeast’s premier dairy cooperative. As a farm-based organization, Cabot Creamery is well aware of the need to protect the environment and is committed to implementing sustainable business practices.

Cabot Creamery participates in EnerNOC’s demand response (DR) program designed to reduce energy use. During a DR

event, Cabot Creamery shuts down large refrigeration and ice-making machinery within its manufacturing facilities—reducing 1,000 kilowatts (kW) of electricity. Cabot Creamery receives estimated annual payments of \$20,000 from EnerNOC for DR. In 2007 it won a Demand Response Achievement Award from ISO New England, its regional electric grid operator, for its energy management efforts.



# Case Study | Cabot Creamery



## REDUCING ENERGY WHILE KEEPING QUALITY HIGH

"Cabot Creamery is known for the high quality of our products, so we would never do anything that could jeopardize our quality or brand," says Jed Davis, director of sustainability at Cabot Creamery. "Certain parts of the process of making the 'World's Best Cheddar' are basically sacrosanct, or extremely inflexible. But there are areas within our processes where we have some flexibility—and that's where we're able to curtail energy use."

This flexibility within processes—such as creation of cultured products (yogurt, sour cream, and other "soft" dairy products)—enables Cabot Creamery to shut down elements of its manufacturing line for several hours without any repercussions. "Some of our products have to incubate for several hours," says Randy Swartz, maintenance manager. "So there are opportunities to shut down without affecting quality in any way."

Cabot Creamery's facilities are extensive, including a 50,000-square-foot manufacturing facility and a 95,000-square-foot cut-and-wrap facility for processing and packaging. These facilities include equipment

that use a significant amount of electricity, including refrigeration units and ice-making machinery. During a DR event, these are the main sources of energy reductions.

For example, during an emergency DR event in August of 2007, Cabot Creamery shut down key manufacturing areas for 2.5 hours. "The lights were still on but production in certain areas, such as batch pasteurization, came to a halt," says Swartz. "Everyone knew

that we were going through a DR event. But it didn't matter. We simply did those processes later, after the event was over."

The result is a sense of accomplishment and engagement among the Cabot Creamery staff. "It's really great to be able to see results right there at the manufacturing plant," says Davis. "Everyone has a sense that we're doing the right thing for our company, our region, and beyond. The excitement among our team is really high."

## THE RESULTS

During deployment phases, Cabot Creamery was slated to reduce 750 kW of energy. However, during testing, it delivered more than 1,000 kW by shutting down additional equipment. "We were really glad to see that we were able to curtail more energy than anticipated," says Swartz, who also spearheads other energy reduction efforts. "All without affecting production."

Payments from EnerNOC total approximately \$20,000 annually. These payments are deposited in a special fund that pays for additional energy reduction efforts. "In this way, our DR program has even more impact on our overall energy use," says Davis. "It



Cabot Creamery, a farm-based organization located in northern Vermont, participates in EnerNOC DR as part of its commitment to the local community.

helps us pay for lighting upgrades and new efficiency efforts throughout the company.”

## THE BENEFITS

The biggest benefit of EnerNOC DR is how it integrates seamlessly with Cabot Creamery’s production environment. “Demand response works symbiotically with our existing processes,” says Davis. “It didn’t require any wholesale changes to implement, or generate any new costs. And events don’t really affect our production. We just make some adjustments in timing.”

During its first year of experience with DR, Cabot Creamery found that EnerNOC delivers significant benefits beyond financial payments:

### A NO-RISK APPROACH

During initial discussions with EnerNOC, Cabot Creamery officials admit that they were a little wary of demand response. “It just sounded too good to be true,” recalls Swartz. “We kept waiting for the catch—some hidden expense or risk. But there just wasn’t one. We didn’t have to pay anything up front. The metering was free. There weren’t any penalties if we didn’t achieve our curtailment target. It was a win-win situation for us.”

### BETTER MONITORING

As part of the DR implementation, EnerNOC installed its web-based, energy management software, PowerTrak®, to measure Cabot Creamery’s energy use. This metering system is free, and serves as a value-added element

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Jed Davis, Director of Sustainability

of the program. “It’s pretty amazing,” says Swartz. “EnerNOC gave us a tool that lets us do more than simply measure the impact of a DR event. We can monitor our overall energy use across all of our facilities. During the hot summer months and other peak energy periods, I keep a close eye on the monitoring system and use it to help make decisions about energy use.”

### SEAMLESS RESPONSE

Cabot Creamery responds manually to requests for energy reduction, which come via emails and phone calls to Swartz and other key facilities personnel. “We’ve got it down to a science,” says Swartz. “We get a call and click the EnerNOC button within our building management system to shut down the appropriate machinery when we’re ready. Then when we go back online, we bring it all back up in stages. It goes really, really smoothly.”

### A NEW OPPORTUNITY TO INNOVATE

Cabot Creamery prides itself on its high level of innovation and creativity as a company. Demand response fits well within its unique corporate culture. “Our work with EnerNOC keeps the momentum of innovation going throughout our energy management efforts,” says Davis. “It inspires new, exciting projects by getting our people to think creatively about energy management and reduction. It really opens our eyes to new possibilities.” For example, DR has inspired a close examination of other ways to increase efficiency within the manufacturing area.

### A COMPREHENSIVE DR SOLUTION

“The EnerNOC team has been awesome,” says Swartz. “The excellent customer service, free meters, payments—it all adds up to a great package.”

## What is Demand Response?

Demand response programs from EnerNOC provide payments directly to organizations that choose to reduce energy use during times of peak demand. EnerNOC works closely with our customers to define customized energy reduction strategies and ensure successful performance during events. EnerNOC absorbs all costs and protects customers from any penalties that can be incurred for not meeting reduction targets. Our programs help stabilize your region’s energy resources without requiring construction of new power plants—benefiting utilities, their customers, and the environment.

## Want More Information?

Cabot Creamery is just one of the many innovative organizations that benefit from EnerNOC demand response.

To find out more, call (866) 366-7820 or visit [www.enernoc.com/get-started](http://www.enernoc.com/get-started).

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Randy Swartz, Maintenance Manager

### THE FUTURE

Now that Cabot Creamery has achieved strong results at the main campus in Cabot, Vermont, it plans to expand its DR participation to its sister facilities in Vermont and New York. “We’ve had a very successful pilot year,” concludes Davis. “Now we’re looking at how we can expand, replicate our model internally, and inspire companies beyond our own.”

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