



# EnerNOC demand response creates valuable revenue stream for seafood giant

High Liner Foods makes significant energy cuts during emergencies—while maintaining its high level of customer service

## Fast Facts:

**Industry:**  
Food Processing

**Location:**  
Danvers, MA; Portsmouth, NH

**Program:**  
ISO New England Demand Response

**DR Strategy:**  
Curtailment only

**Primary Curtailment Strategy:**  
Processing equipment shutdowns (e.g., blast freezers), lighting and HVAC adjustments

**Annual Payments:**  
Approximately \$45,000

## THE BIG PICTURE

High Liner Foods (HLF) is one of the largest seafood processors in the U.S.—offering a broad portfolio of seafood to leading retail stores, restaurant chains, national distributors, and regional specialists. HLF includes a 100,000 square-foot processing facility in Danvers, MA, a 180,000 square-foot processing facility in Portsmouth, NH, and a 130,000 square-foot storage and distribution center in Peabody, MA. Extensive refrigeration adds up to annual energy costs of more than \$1 million in its Danvers operation, making energy HLF’s largest monthly bill.

An extensive energy audit in 2007 enabled HLF to take a closer look at its energy use. It found that newer technology and innovative ideas could help the company be more efficient and lower its energy use.

Attracted initially by the payments, HLF enrolled in EnerNOC DR in 2008. During a DR event, HLF shuts down its processing operation, without any loss of product or effect on the quality of its seafood. The company uses this occasional, brief downtime for employee training sessions on safe food handling and more.

The summer months (when energy consumption is generally highest)—are also HLF’s slow period. So DR dovetails seamlessly with HLF’s operation. For its participation in DR, HLF receives annual payments of approximately \$45,000 from EnerNOC—in addition to many other benefits. As a processor of an environmentally sensitive commodity, HLF embraces sustainability and environmental responsibility as key corporate goals—and EnerNOC DR is part of that commitment.



## Case Study | High Liner Foods



**Bill DiMento,**  
Director of Manufacturing and Regulatory Affairs

### TAKING ADVANTAGE OF OPPORTUNITIES FOR ENERGY REDUCTION

Seafood is highly perishable and demands careful processing, so food quality and safety are the top priorities for HLF. Its five high-speed processing lines in Danvers include ammonia refrigeration, spiral blast freezers, and other advanced technology that enables quick, safe processing and freezing of more than 41 million pounds of seafood a year.

HLF's energy-intensive processing equipment—along with its large cold storage facility—contribute to an energy bill of more than \$1 million a year. In fact, HLF Danvers is the single largest user of electricity in its community. The high cost of energy led to HLF's 2007 energy audit, which identified major energy-using processes and equipment within both Massachusetts HLF facilities—its processing plant in Danvers, MA and its cold storage and distribution center in nearby Peabody, MA.

"We knew we needed to look at how we use energy and come up with new ways to use technology to reduce our use, and our bills,"

says Bill DiMento, director of manufacturing and regulatory affairs. "From the start, we saw EnerNOC demand response as one way to lower our energy costs—while protecting our business and our community."

During initial discussions with EnerNOC, HLF committed to reducing its energy demand by 400 kW by adjusting its lighting and HVAC

setpoints. However, company leaders saw an opportunity to make a more extensive commitment to DR—and to earn much larger payments. In the end, it chose to reduce energy use by 1.6 MW at its processing plant and 450 kW at its cold storage facility by implementing a broad but temporary shutdown of its processing and cold storage facilities.

"We decided that we could simply shut down our processing operation and refrigerated storage during brief DR events," DiMento recalls. "It made sense for us for a variety of reasons. The higher payments were very attractive. DR events happen during our slow season, so they weren't going to affect production in a way that would decrease customer service levels. And, our processing and storage operations had enough flexibility to enable a brief shutdown—without affecting quality."

HLF receives notification 30 minutes before a DR event, enabling its staff to shut down its facility without incurring any waste and giving the company time to make plant operation decisions that ensure safety.

"We complete the processing that we have underway and then sequence down our operations until only the emergency



lighting is on," says DiMento. "We move all perishables into holding freezers and refrigerators. And we restart our processing lines when the event is over."

Shipping and office operations in its Peabody facility continue ahead unaffected, ensuring an uninterrupted flow of products to HLF customers.

## THE RESULTS

HLF enrolled in EnerNOC demand response in early May 2008 and experienced a DR event within the first week of participation. HLF developed an Energy Demand Response team that consisted of key employees from maintenance, production, IT, and human resources. This team executed decisions, communication, and shutdown sequences for the DR events. This first event was seamless and resulted in over-curtailment of more than 1.7 MW at the Danvers facility, plus on-target reductions of 450 kW at the Peabody facility.

"Having an event so shortly after signing up was certainly a bit of a surprise," says DiMento. "But it went very well and proved that we can afford to shut down without sacrificing quality or customer service at all." The key to HLF's participation in DR is the fact that its state-of-the-art freezers are capable of holding safe temperatures for hours after shutdown. During an event, the company carefully monitors the temperature in its holding freezers, ensuring safety and reducing risk. It also ensures that inventory

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levels are sufficient to avoid any supply issues.

During a DR event, the processing plant's 250 production employees remain at the facility's cafeteria, where they go through new training on food safety and other key issues. "They respond well to DR events since we opt to keep them here for paid training, rather than sending them home," says DiMento. HLF's day-to-day business offices and 100+ office employees continue to function normally throughout the DR event.

HLF's energy reductions of more than 2 MW are significant. The DR participation payments from EnerNOC range from approximately \$40,000 to \$50,000 annually, helping to reduce HLF's energy costs. But that's just one of the many reasons that HLF participates in DR. "As our community's largest energy user, we want to do our part to protect the grid," says DiMento. "We also want to do our part to protect our

environment for generations to come. DR is a key part of that commitment."

## THE BENEFITS

"Personally, I see no downside whatsoever in participating in EnerNOC DR," says DiMento. "It just provides a long list of advantages, from the financial payments to the training opportunities to the opportunity to help our community." The biggest benefits of EnerNOC DR is that it is possible to participate without sacrificing the quality of HLF's products or the high level of service it brings to its customers.

EnerNOC demand response brings a range of other powerful benefits to HLF.

## SIMPLE IMPLEMENTATION

According to DiMento, the implementation and installation process was "seamless, flawless, and painless." The whole process was relatively invisible to HLF, which enabled the company to continue its office work

### What is Demand Response?

Demand response programs from EnerNOC provide payments directly to organizations that choose to voluntarily curtail energy use during times of peak demand. EnerNOC works closely with our customers to define customized curtailment strategies and ensure successful performance during events. EnerNOC absorbs all costs and protects customers from any penalties that can be incurred for not meeting curtailment targets. Our programs help increase energy capacity without requiring construction of new power plants which benefits utilities, their customers, and the environment.

### Want More Information?

**High Liner Foods (USA) is just one of the many innovative organizations that benefit from EnerNOC demand response.**

To find out more, call (617) 532-2102 or visit [www.enernoc.com/get-started](http://www.enernoc.com/get-started).

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without interruption. “EnerNOC is one of the most professional, helpful companies I’ve ever worked with,” says DiMento. “Their staff made sure that everything went smoothly—from start to finish.”

### LOWER ENERGY COSTS

HLF’s DR payments help offset its high energy expenses. With EnerNOC DR, it can generate cash to pay energy bills, but also lower energy costs by using less during times of peak demand.

### INSIGHTFUL ENERGY MONITORING

With free PowerTrak™ monitoring from EnerNOC, HLF can monitor its energy use during DR events and beyond. “We use PowerTrak to take a close look at our peak demand,” says DiMento. “It helps us reduce demand and manage our energy use better. We’ve just started to realize all the many uses for PowerTrak.”

### A NEW TRAINING OPPORTUNITY

HLF’s reallocation of its personnel to training during DR events shows an innovative and productive use of staff downtime. “Training is critical for us, since we’re always fine tuning our processing operation,” says DiMento. “We use DR events as a chance to do additional training for our staff. So we get an opportunity to improve our operations—while reducing our sizable electric bill.”

### A COMMITMENT TO SUSTAINABILITY

HLF has made a strong corporate commitment to sustainability. “We’re focused on the long-term viability of our oceans and fisheries throughout the world,” says DiMento. “We know that everyone has to take part in reducing global environmental impact by making a local commitment—like EnerNOC DR—aimed at reducing our energy use and overall impact.”

### THE FUTURE

DiMento envisions a day when HLF will be able to give back even more energy to the grid during periods of peak demand. “By managing our inventory and customer service levels,” he says, “we might be able to sell more power back to the grid during the peak season.”

In the meantime, DiMento is working with HLF suppliers and other members of its extended organization to ensure that they are lowering their energy use and their environmental impact.

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