



# Enel helps Tampa Electric Company cut peak demand, delivering up to 40 MW of turnkey demand response

## The big picture

Tampa Electric Company is the principal subsidiary of Emera Inc., a diverse energy and services company. Tampa Electric has supplied the Tampa Bay area with electricity since 1899 and currently serves more than 670,000 customers within a service area that covers 2,000 square miles across west-central Florida.

Tampa Electric faces increasing system demand, higher costs, and a strong need for an environmentally responsible solution for managing peak demand. In 2006, the company began exploring the possibility of adding demand response (DR) to its demand-side management (DSM) portfolio, which already included interruptible rates, residential direct load control, and other offerings. After careful evaluation of several solutions providers, Tampa Electric selected Enel X as its demand response partner in 2007, based on Enel's expertise and Tampa Electric's confidence in Enel's ability to deliver the targeted reduction.

Working closely with Tampa Electric, Enel enrolled commercial and industrial customers during a six-month program implementation. This work culminated in October 2008, when Enel conducted a two-hour test from its state-of-the-art Network Operations Center (NOC) in Boston. During this first dispatch, customers delivered more than their contracted energy reduction targets, dropping approximately 31.7 megawatts (MW) from the grid.

## Building a successful demand response program

At its core, the challenge of implementing an effective demand response program centers on two key areas – technology and trust. During initial evaluations of DR solutions and solutions providers, Tampa Electric explored these important issues via careful questions, site visits, and discussions with current Enel customers. Did Enel have the technology, expertise, and experience necessary to deliver the nominated curtailment amount? Could Tampa Electric trust the Enel team to work closely with its valued commercial and industrial customers?

### CASE STUDY



#### Program Name

Tampa Electric Networked Demand Response



#### Program Period

Year-round



#### Program Hours

7 AM – 7 PM, weekdays



#### Dispatch Notification

30 minutes



#### Dispatch Duration

1 – 8 hours



#### Demand Response Strategies

Curtailment and permitted generation



#### Response Methods

Automatic and Manual, Enel automatically controls many customers from its Network Operations Center



Ultimately, Tampa Electric management answered a resounding “yes” to both questions. Enel’s track record provided powerful proof of its advanced technology, as well as its ability to partner effectively with utility account representatives.

The Tampa Electric–Enel story began in 2006, when Tampa Electric began evaluating all programs and opportunities to strengthen its demand-side management portfolio and avoid escalating costs. “We were intrigued by demand response and open to the possibilities,” recalls Howard Bryant, manager of rates and regulatory affairs. “And in evaluating DR vendors, Enel clearly stood out from its competitors. They excelled at customer communication and the technological enablers of DR. Clearly, they were much more advanced than other vendors.”

A visit to Enel’s Network Operations Center in Boston also helped highlight technological expertise in the minds of Tampa Electric managers. “When we saw the NOC, we knew that Enel had the infrastructure in place to deliver megawatts as quickly as we needed them,” says Al Grinnell, manager, commercial and industrial account management. The Tampa Electric team also contacted current Enel references and heard firsthand about Enel’s commitment to exceptional customer service. Enel quickly became Tampa Electric’s vendor of choice for demand response.

Working closely with departments throughout the utility, Enel designed a demand response program that addressed Tampa Electric’s need for new capacity delivered in a cost-effective, environmentally friendly manner. The Enel demand response solution also complemented Tampa Electric’s existing portfolio of demand-side management efforts.

Part of the challenge of implementing DR in Florida involves ensuring approval by regulators. Tampa Electric worked closely with the Florida Public Service Commission to get the program approved. “The commission clearly understood the value and potential of DR,” says Bryant. “But they were concerned about turning it over to a third party like Enel. Could we count on getting the capacity when we asked for it? Would Enel be able to perform?” These critical questions merited careful attention. Following regulatory scrutiny, the Tampa Electric demand response program received approval in late 2007 and the implementation process began.

With its new demand response program, Tampa Electric focused on an untapped market segment. Eligible participants included commercial and industrial customers in the Tampa Electric service territory that were not already part of another DSM program.

Together, Enel and Tampa Electric defined a list of target customers – primarily middle-tier assigned accounts with the potential to participate in demand response without any discernible impact on business operations. “We looked at customers and accounts that were best-suited for demand response, likely to perform well during a dispatch, and the most natural fit with our program,” says Grinnell. Prospects included city and county agencies, telecommunication companies, big-box retailers, grocery stores, and more.

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— Jackie Perrone, Manager of Energy Management Services

“For us, getting accounts signed up for demand response was secondary to a more important goal – the customer had to be happy throughout the process,” says Grinnell. “During implementation, we leveraged our credibility with our customers with Enel’s demand response expertise. We defined our roles, managed expectations, and marketed the program across various business segments. And all of us at Tampa Electric agree that the implementation phase was a truly successful partnership.”

Tampa-based Ybor City District Cooling, which enrolled in the program in September of 2008, attests to Enel’s professionalism throughout the demand response process. “Enel was excellent,” remarks Robert Garcia, VP of New Business Development. “Their enrollment checklist walked us through the whole process. Their people were incredibly helpful and answered all our questions. And they’re always available when we need them. I wish everything went this smoothly.”

Over the course of the enrollment period, Tampa Electric and Enel collaborated closely, seamlessly, and effectively to enroll a wide range of customers – including attending joint field visits. “It’s an intentionally diverse set of customers,” says Grinnell. “This approach helps us ensure that we’ll have the capacity we need, every time we need it.”

## The results

Testing in October 2008 showed that Enel and Tampa Electric’s exceptional efforts in the field paid off. The result was over-performance, with delivery of an average of 31.7 MW – approximately twelve percent over the nominated amount. “Enel has high standards,” says Jackie Perrone, manager of energy management services at Tampa Electric. “And it showed in the testing process, which definitely received an A from us.”

Testing proved that the portfolio of companies enrolled by Enel was able to deliver consistent, reliable load reduction throughout a two-hour audit window. Enel’s on-site energy monitoring software collects and analyzes real-time energy data from each site, enabling participants to see how their performance is tracking against target reductions. In addition, Enel’s Network Operations team uses the platform to automatically identify underperformers and then conduct targeted outreach to troubleshoot.

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## The benefits

Enel demand response provides Tampa Electric with a powerful benefit – a reliable method of addressing and reducing summer and winter system peak demand. “As an electric company employee, I recognize that we’re here to serve our customers and deliver a return to our shareholders,” says Perrone. “Programs like demand response show that we can accomplish both of these goals in an environmentally friendly way.”

## Other benefits Enel brings to Tampa Electric include:

### A full end-to-end solution

Enel’s demand response solution includes program design and implementation, customer recruitment and retention, site enablement, event dispatch and management, reconciliation, and verification. This comprehensive solution helps ensure that Tampa Electric gets the results it needs – tapping Enel’s wide-ranging strengths and extensive experience – while minimizing risk.

### Enhanced utility branding

While Enel leads the implementation and management of Tampa Electric’s demand response program, all marketing materials and program information are branded clearly as Tampa Electric Company’s Networked Demand Response Program. “We wanted Tampa Electric to be front and center throughout the process,” says Bryant. “And Enel was open and willing to fit right in with us.” High visibility throughout the process helps Tampa Electric enhance and deepen its relationships with these critical commercial and industrial customers.

### A customized approach for end users

Enel recognizes that every commercial and industrial account is different. During implementation, Enel audited each customer facility to design energy reduction strategies specifically for that facility. It installed, programmed, and tested communications and relay technology equipment. All of this on-site work required

close collaboration with customers with different needs, concerns, and levels of knowledge about energy, and all of it was done at no cost to the customer.

“Enel was willing to handle each customer individually,” says Perrone. “They figured out what each customer needed and how to make sure they were satisfied and happy.” During implementation, Enel drew upon its experience with thousands of commercial and industrial facilities to tailor its approach to meet the specific needs of each customer.

## Regulatory compliance

Demand response is a critical part of Tampa Electric’s overall DSM programs, which enable it to reduce demand via a portfolio of initiatives – all reviewed and approved by state regulators. “Regulated marketplaces pose special challenges,” says Bryant. “Enel understands the needs of regulators and knows how to meet them, while helping us broaden our portfolio.”

## Comprehensive energy management information

As part of the Tampa Electric Networked Demand Response Program, participating customers receive access to Enel’s monitoring software and hardware. This software provides each customer site with advanced online monitoring and analytics of its facility’s energy use.

This information helps customers optimize their energy consumption and improve overall operational efficiency. Enel’s platform is an attractive element of the program – one that provides a compelling benefit to enrolled accounts, at no cost.

## A solid partnership

Much of the program’s success hinged on the Tampa Electric-Enel partnership. “Enel is an outstanding company to do business with,” says Perrone. “They have exceeded our expectations. And Enel provided the knowledge, experience, high level of customer service, and a winning attitude that made demand response work for us.”

## The future

Tampa Electric has already achieved its full enrollment capacity, which it will draw upon to enhance system reliability, respond to grid issues, and ensure consistent, high-quality service to its more than 80,000 commercial and industrial customers. The company continues to generate interest in the four-year program and identify potential new participants. “We’re seeing a significant increase in requests for audits and information about our various energy efficiency programs,” says Perrone. “A lot of companies are developing internal goals for energy efficiency and looking for new ways to cut costs, generate new revenues, and help the environment. For these customers, DR is a great option.”