Get More From Commercial and Industrial Demand Response

Energy Intelligence Software and Managed Services for Utilities
Today’s market dynamics—rising power plant construction costs, the need for transmission and distribution upgrades, growing penetration of renewables, new environmental regulations, market price volatility—make resource planning with traditional supply-side resources more difficult, expensive, and uncertain than ever. To address these challenges, many utilities, grid operators, and power retailers use demand response (DR), securing a reliable, cost-effective approach to supporting grid reliability and managing risk while delivering customer value.

**Demand Response Is What We Do**

Enel X is the global leader in commercial and industrial (C&I) demand response (DR). Utilities, system operators, and retailers turn to us for a diverse range of capacity, economic, and ancillary services resources, using our advanced energy intelligence software and technology platform and our proven approaches to C&I customer engagement and program optimization.

Hundreds of utilities have partnered with Enel X to implement cost-effective DR programs. With tens of thousands of megawatts of electrical load under management, Enel X understands that each utility faces unique challenges. That’s why clients engage us to design and deploy DR solutions that are custom-tailored to meet their specific needs and objectives.

“**When we saw Enel X’s Network Operations Center, we knew they had the infrastructure in place to deliver megawatts as quickly as we needed them.**”

—Al Grinnell, Manager Commercial and Industrial Account Management, Tampa Electric (TECO)

**A Resource You Can Count On**

Utility control rooms count on resources showing up when dispatched—you need to know DR will provide the grid with a predictable outcome. With Enel X’s patented software and technology platform, you can view the performance of DR assets in real time, so there’s no guesswork involved. Our clients benefit from Enel X’s US$200 million investment to date in technology and more than a decade of behind-the-meter expertise in delivering a firm capacity resource, giving utilities reliability without the expense of building new infrastructure or training new staff.
Effective Program Design and Deployment

Designing and implementing a successful C&I DR program that optimizes realized capacity and customer participation requires effectively balancing a number of elements related to resource reliability, customer engagement and satisfaction, and cost-effectiveness. Enel X can help you maximize the value of your DR program by partnering with you to define the ideal approach to deployment that takes into consideration both your needs and those of your customers.

Once those needs are defined, we leverage our years of experience implementing the world’s most robust DR programs to build a network that meets your objectives.

Our DR Capabilities

> Lead generation and marketing.
> Customer recruitment and contracting.
> Site enablement, audits, and curtailment plans.
> Dispatch management notifications and performance management.
> Measurement and verification (M&V)
> Portfolio management, nominations, settlement, and payment.

Throughout the engagement, you and our program operations managers hold regular progress meetings to ensure full transparency and successful execution.

Software-Enabled Program Visibility

As a client, you and your customers gain visibility into DR dispatch performance. Built on a secure, open, and scalable web services-based architecture, our energy intelligence software analyzes and presents real-time data—typically in one- or five-minute intervals—captured by Enel X Site Servers.

You can use our secure, cloud-based software to schedule, monitor, and analyze DR capacity. With our flexible dispatch scheduling options, you can manage your C&I program for optimal performance while avoiding customer fatigue. You can also use Enel X’s software to access real-time interval data for participating customers during non-dispatch periods to support load research and planning activities.

DR program participants also benefit from access to their real-time energy data. By logging in to view performance, participants can ensure they are hitting energy reduction targets and track demand response payments.

Our DR Capabilities

> Support for a wide variety of baseline options for measurement and verification, depending on your specific program rules
> Detailed performance and settlement reports
> Optional mobile application
> Optional data integration API to import meter data
> Available C&I customer application customization, including white labeling, single sign-on, and language localization

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Customer view of Enel X’s cloud-based energy intelligence software
Because Data Quality Matters

Our metering and control hardware serves as a secure communications gateway that facilitates two-way data transfer, automated load control, and continuous real-time monitoring of each site in your program portfolio.

Easily connected to your customers’ existing electrical meters, the Enel X Site Server (ESS) is equipped to read and record interval data, typically through KYZ pulse outputs. The ESS communicates this data back to our Network Operations Center using secure protocols via either wired (LAN) or wireless (GSM, CDMA, or satellite) communications. All ESS interaction with the utility meter is one-way, read-only communication, so there is no risk of interference with utility meter readings or power quality. Enel X also offers specialized hardware options for irrigation load control applications.

Dispatch Management Control Center

Similar to a utility control center, Enel X’s Network Operations Center (NOC) continuously monitors each site’s connectivity and energy consumption. During a dispatch, the NOC tracks energy reductions at each site, and gives you real-time visibility into aggregated load reduction data as the dispatch unfolds. Throughout the dispatch, patented software tools continuously evaluate performance, automatically identifying underperformers and initiating remediation protocols.

Commitment to Security and Interoperability

Enel X serves on the boards for many smart grid and automated DR open standards, including OpenADR 2.0b—helping utilities future-proof their investments in Enel X software and technology. We are firmly committed to rigorous security standards throughout our software and technology platform, utilizing the latest technologies and protocols and operational best practices.

“Enel X demand response, successfully deployed by many of our respected industry peers, allows us to get the firm capacity we need to respond to peak load demands during our summer peak season.”

—Warren Kline, Customer Service and Regional Operations Vice President, Idaho Power Company
The Right Solution for You and Your Customers

Each utility faces unique challenges in implementing and managing its C&I DR program. Whether you are looking for an end-to-end program deployment solution with a firm capacity guarantee, or support on specific aspects of your in-house DR program to improve performance, customer satisfaction, and cost-effectiveness, our flexible managed service solutions for DR can deliver a customized offering that best suits your specific requirements.

Program Support With Enel X’s Software and Services

For internally managed, tariff-based, or interruptible load programs, our SaaS based offering can give you the added visibility and tools to more effectively manage your program. Smaller-scale programs or those deployed by competitive retailers that prefer to contract directly with their customers for load reduction can also benefit.

Enel X’s software and services supports a broad range of C&I DR programs—leveraging our energy intelligence software as a stand-alone solution or in combination with customer engagement and program optimization support—on a service-level-agreement basis.

Enel X’s Software and Services

> Integrated software, hardware, and infrastructure: industry-leading tools to help improve program performance and cost-effectiveness with options to enhance brand experience

> Customer engagement and program optimization support: choice of a suite of field-proven professional services to design and deploy strategies to maximize customer participation

> Program incentives provided via tariff: utility maintains full ownership of the customer relationship

> Services-based contract: flexibility to tailor the partnership with Enel X to meet specific program support needs

Firm Capacity With Enel X’s Turnkey Solution

With our full-service turnkey offering, Enel X manages all aspects of DR program deployment and management—from customer recruitment through settlement—with a firm capacity guarantee.

Enel X’s turnkey solution leverages our deep experience with aggregated portfolios of diverse C&I customers. Similar to a power purchase agreement, Enel X commits to specific capacity and event performance metrics, backed by our solid financial position and track record of success.

Enel X’s Turnkey Solution

> Integrated software, hardware, and infrastructure: proven tools to achieve program objectives with options to enhance brand experience

> Full-service turnkey program implementation: effective strategies to successfully engage C&I customers in DR for a reliable resource, from sales and recruitment, to contracting and enablement, to performance management

> Capacity-based contract: guaranteed capacity and performance

> Long-term firm pricing: 100 percent pay-for-performance based on capacity delivered
Engage Your C&I Customers in Demand Response
A successfully executed DR program can help enhance your customers' satisfaction. In fact, Enel X’s C&I customer satisfaction surveys consistently find that DR helps maintain and improve customers’ overall opinion of their utility.

We have engaged thousands of C&I customers like yours in DR, across a range of industries worldwide. With deep behind-the-meter experience, focused exclusively on the non-residential market, Enel X has successfully enabled sites for active program participation. Utilities that engage us to manage their DR portfolios consistently achieve reliable program performance.

Your Brand Front and Center
We understand your customers are just that—YOUR customers. You can white-label our software and all marketing initiatives with your brand identity to support customer relationship and satisfaction objectives.

Tailored, Proven Strategies
The diverse and often complex load profiles across C&I segments can make it difficult to design and execute a program with appeal to a broad cross-section of customers. That's where Enel X's experience making DR work for thousands of C&I sites can help. Engagement strategies for a Fortune 500 manufacturer, for example, differ from strategies to engage a grocery store chain or farm. Our experience working with a range of C&I organizations—from hospitals and universities to manufacturers and retailers—enables us to build DR programs that can meet your program's unique needs and effectively engage your customers.

Flexible, Customer-Friendly DR
The capabilities of specific C&I customers will not often match a utility's resource needs perfectly, whether because of dispatch duration, frequency, or other constraints. Our expertise in managing aggregated DR portfolios accommodates for this diversity while at the end of the day, delivers your contracted capacity.

“Enel X was excellent. 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.”

—Robert Garcia, Ybor City District Cooling, participating customer in Tampa Electric Networked Demand Response Program

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Enel X Has Partnered With Leading Utilities, Grid Operators, and Energy Retailers Worldwide

> Alberta Electric System Operator
> AEP Texas
> Ausgrid
> Australian Energy Market Operator
> Bonneville Power Administration
> CenterPoint Energy
> Consolidated Edison
> Electric Reliability Council of Texas
> ERM Power
> Genesis Energy
> Independent System Operator of New England
> Idaho Power
> Louisville Gas and Electric and Kentucky Utilities
> Midwest Energy
> New York Independent System Operator
> ONCOR
> Ontario Power Authority
> Pacific Gas & Electric
> Rocky Mountain Power / PacifiCorp
> PJM Interconnection
> Portland General Electric
> Public Service Company of New Mexico
> Salt River Project
> San Diego Gas & Electric
> Southern California Edison
> Tampa Electric Company
> Tennessee Valley Authority
> Transgrid
> Transpower
> Tucson Electric Power
> Xcel Energy