

Frequently Asked Questions:

Upgrading Hospital and Healthcare Facility Backup Generators to Increase Demand Response Earnings

With backup generators capable of powering their facilities, many hospitals and other healthcare organizations face an opportunity to earn payments through demand response programs.

Demand response (DR) programs offer incentive payments to large energy users that can curtail energy consumption or transfer electric load off the grid at times when the grid is under duress. Organizations with backup generators can earn higher payments by transitioning large amounts of their facilities' load off the grid and onto on-site generation without shutting down equipment. In addition to the payments, demand response participants also receive advanced notification of grid stability issues, enabling them to prepare proactively and protect their facilities from potential power outages.

Below are answers to some frequently asked questions about how organizations in the healthcare industry can capitalize on this opportunity.

How do I know if my backup generator qualifies to participate in demand response?

In 2016, the US Environmental Protection Agency (EPA) implemented new regulations that require backup generators to meet specific performance and hazardous air standards in order to participate in demand response. Those whose generators do not meet these standards can often upgrade their equipment to start earning payments.

With these regulations in mind, Enel X offers a generator upgrade program so more organizations can participate in demand response without committing to the capital expense required to bring their generator assets into compliance.

Here's how the program works:

1. **Determine Compliance Status:** Not all generators can be upgraded, and some generators don't need to be upgraded to participate. So, as a first step, Enel X will evaluate your assets and determine eligibility and upgrade requirements.
2. **Review the Financials:** Enel X will provide a DR earnings estimate and can help you gather and assess project cost estimates from your preferred vendors. If you don't have the budget to invest, we can cover the project cost for you and will simply deduct it from your future DR earnings.
3. **Complete the Upgrade and Start Earning:** From start to finish an upgrade project can take anywhere from three to six months, but the actual on-site work typically takes only a few days. We'll work with the vendors to ensure the installation is complete prior to the start of the DR program season so you can start earning right away.

How will enrolling my backup generator for demand response affect my compliance with healthcare industry regulations?

With strict regulatory oversight regarding their facilities, equipment, and operations, many healthcare organizations may be reluctant to enroll their backup generator assets in demand response programs.

However, Enel X has helped large hospitals and other healthcare facilities upgrade and leverage their backup generators to enroll their facilities' full electric load in demand response without violating industry regulations, including Joint Commission on Accreditation of Hospital Organizations (JCAHO) standards. Enel X develops custom load curtailment and generator utilization plans designed to maximize earnings while accommodating our customers'

unique operational needs. With nearly two decades developing demand response strategies for large facilities worldwide, Enel X can ensure your participation strategy aligns with all relevant regulations and requirements.

Many hospitals and other healthcare organizations are required to test their generators under load for compliance requirements. Enel X customers often use demand response dispatches as an opportunity to satisfy these testing requirements, while also generating revenue.

Will transitioning my facility's full load onto backup generators for demand response disrupt power availability?

The key to successful demand response participation is minimizing disruption within the facility. Our experience in developing custom load reduction and transfer strategies for our customers enables us to prevent your participation from creating any operational issues.

In fact, many of our customers have found that participating in demand response actually improves their backup generators' performance. The tests and program audits required to participate can verify that your generator assets are capable of supporting your facility's full electric load when needed—such as when the grid goes down—and can reveal areas for improvement that can make your generator assets more efficient and reliable. This is especially true for those that receive backup generator upgrades through Enel X.

As part of the generator upgrade process, the Enel X team can also explore opportunities to implement an ATS upgrade, install an uninterruptible power supply (UPS), or adjust from an open to closed transition for a smooth transfer on and off the grid.

Additionally, demand response dispatches typically occur when the grid is still available, which means your organization can earn payments for participating with no risk to operational uptime.

Do I need to shift my load onto my backup generator assets manually?

How your facility responds during demand response events depends on your organization's preferences.

While some of our customers elect to transfer their facilities' load onto their backup generators manually, Enel X also offers remote transfer capabilities to shift load off the grid automatically and seamlessly when called upon.

For remote dispatch, Enel X installs a site server along with a control wire going to your ATS or switchgear. When dispatched, the site server signal simply puts your generator into "load test," or a similar factory-designated, mode. Enel X does not modify your generator in any fashion, nor does the site server signal override functionality within your generator's existing system. The switchgear and ATS maintain control over all functionality at all times. If the switchgear, ATS, or generator detects an issue (e.g. low voltage, low fuel, etc.), it will transfer power back to the utility, as long as utility power is available, or another failsafe.

How do I participate?

Enel X makes participation easy. We take care of the complex details so you can stay focused on running your business.

Here is how the process works:

1. Our experts work with you to identify your energy reduction potential and create a strategy that delivers maximum value with minimum impact on your operations. We outline these measures in a detailed dispatch participation plan.
2. We may install necessary metering devices at your facility to establish communication with our Network Operations Center (NOC), so we can monitor your energy consumption levels in real-time. In almost all cases, this installation process is performed without any interruption to your current operations and does not require a shutdown or high-voltage electrical work.
3. Your site is then enrolled and ready to respond if and when a dispatch begins. At any time during a dispatch, you can log in to view your performance in real-time. Throughout the process, we fully manage enrollment, measurement, verification, and payments on your behalf.

How do I get started?

To find out if your organization is a good fit for demand response, speak with one of our experts today at www.enelx.com/n-a/en/forms/contact-sales.