

ESTABLISHMENT LABS

GRID STABILITY AND EFFICIENCY IN COSTA RICA



Case

Establishment Labs is a global leader in the production of high tech medical and aesthetic equipment and operates in an area of Costa Rica that is subject to frequent **electrical blackouts and has an unreliable connection to the grid**. The factory's backup system was built with **two 750-kVA diesel generators**, an inefficient solution both economically and environmentally, which Establishment Labs wanted to improve to ensure that its facilities have **energy security and production efficiency**.



Objectives

- **Increased stability** in grid connection
- A **modern and reliable** energy backup system
- **Reduced** energy costs
- **Less** environmental impact



Solution

Establishment Labs turned to **Demand Energy**, an **Enel X** company, for the installation of a microgrid, which includes photovoltaic panels, an innovative storage system and **DEN.OS software**, a smart control platform. In this way, the company is able to accumulate all the energy produced by the photovoltaic system directly on site through a system of **lithium ion batteries** in addition to optimizing in real time the energy management thanks to the software.

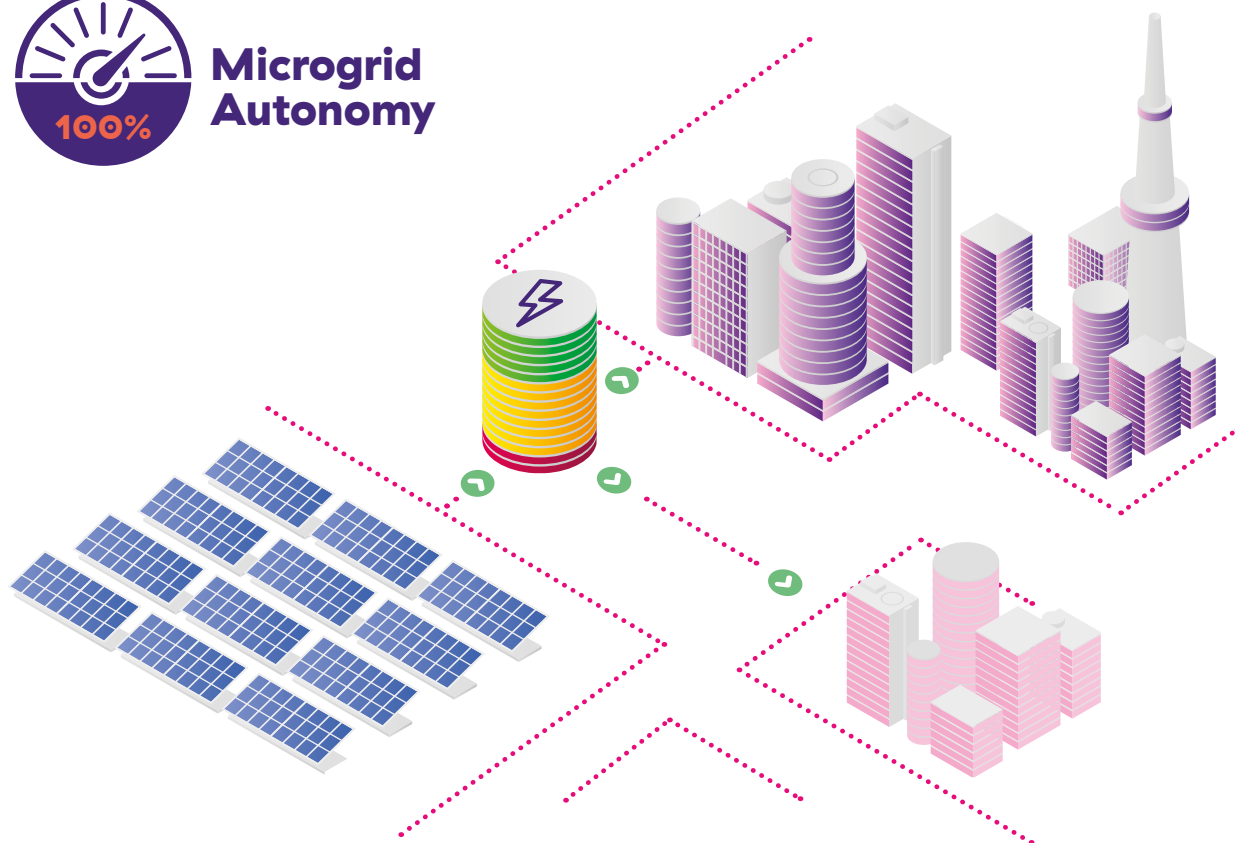
Demand Energy's solution includes:

- A 276-kW photovoltaic system
- 500-kW/1-MWh lithium ion storage
- DEN.OS software for monitoring and optimization

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Application

Demand Energy's solution allowed the factory to automatically go into "island" mode during the **1 July 2017 blackout**, when about 1.4 million users were in the dark for 3 hours in seven Central American countries and then reconnect to the network in automatic mode. The microgrid enabled the factory to be **completely autonomous** and to use only the energy produced by the photovoltaic panels and stored by the batteries. In this way, the entire production process and the so-called "**white room**", where the latest generation of medical aids are sterilized, were preserved.

Microgrid
Autonomy

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Benefits

- **Complete protection** from power outages and electrical surges
- **Total electrical autonomy** for the systems
- **Sustainable solution** with reduced CO₂ emissions



Economic Advantages

The **microgrid** brought Establishment Labs **significant savings**. The company can avoid any risk of stops in production in case of blackout, significantly reduces its gas consumption and gained a **5% reduction** on their energy bills thanks to self-production.



Highlights

- **A solution suited to increased resilience**
- **Cost reduction and savings on billing**
- **Sustainable solution for self-consumption**



Do you want to know more?

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Enel X is Enel's new Global Business Line, focused on electric mobility, vehicle to grid projects, recharging infrastructure, energy efficiency management, batteries and energy optimization platforms, public lighting and distributed generation systems. Enel X aims to capitalize on the transformation of the energy industry, understanding and servicing the needs of Enel's global customer base by exploring opportunities, developing customer-centric, innovative products using digital solutions.