Enel finances backup generator upgrade to maximize demand response earnings for Texas hospital

The challenge

With nine backup generators on-site, this hospital was well-positioned to earn payments through ERCOT's demand response (DR) program in Texas, which compensates large energy users that agree to reduce energy consumption when the grid is under duress.

However, the hospital faced two challenges:

- **Compliance:** US Environmental Protection Agency (EPA) regulations restrict DR participation to generators that meet strict standards on performance and hazardous air pollutants, which may require costly equipment upgrades.
- **Operational:** To participate, the facility would need to be able to transition its full electric load on and off its generators with no interruption to power service.

The solution

Enel determined that seven of the diesel engines needed upgrades to qualify for DR, while two engines were already compliant.

Enel financed and implemented the upgrades so the hospital could maximize its earnings without paying any out-of-pocket expenses to cover the project's costs, which exceeded $378K.

Through the agreement, Enel also:

- Conducts tests and dispatch simulations to ensure the facility's backup generators are capable of performing when needed
- Provides advance notification of potential grid instability, enabling the facility to prepare for heightened risk of an outage
- Ensures the facility responds when called upon and receives maximum payments in return
- Provides visibility into energy consumption data so the engineering team can review its performance and overall operational behavior

Results

The upgrades enabled the hospital to enroll 4.2 MW of electric load into ERCOT's DR program, which will earn the organization more than $467K in payments in five years after deducting the upgrade costs.

Industry
Healthcare

Generator
7 engines upgraded; 2 already eligible

Program
4.2 MW enrolled in Texas ERCOT demand response

Net earnings
More than $467,000 in 5 years