

## Case Study

## ShopRite

*New York and New Jersey*

After ShopRite lost millions of dollars due to outages during Hurricane Sandy, Unison Energy installed microgrids that allow the stores to stay fully operational even during lengthy grid disturbances.

When Hurricane Sandy hit in 2012, many ShopRite stores in New Jersey and Long Island lost power — and millions of dollars. Outages stretched for over a week, spoiling refrigerated inventory and preventing sales. After this disaster, ShopRite realized it needed a truly resilient energy solution.

Many grid outage remedies are both expensive and ineffective. A grocery store could easily spend \$30,000 on dry ice that lasts only a few hours to temporarily keep goods refrigerated. Likewise, diesel backup generators cost hundreds of thousands of dollars per store, are prone to failures during start-up, and are difficult to keep fueled during an emergency.

Instead, ShopRite chose to partner with Unison Energy, which installs, owns, and operates microgrids that offer both day-one cost savings and decades of energy resiliency. Unison Energy designs its systems to suit each store's unique energy needs and take advantage of any local utility incentives. So far, Unison Energy has installed ten combined heat and power microgrid systems for ShopRite stores in Long Island and New Jersey. These systems are comprised of natural gas engines that provide power 24/7, with many using cogeneration technology to capture waste heat, generate hot and chilled water, and increase the total system efficiency.

7.95 MW of installed electric capacity across ten ShopRite stores in New Jersey and Long Island

Engines sized to meet each site's peak summer demand

Load following and automatic island mode capabilities

19 outages avoided in 2019 with on-site generation and automatic islanding

Reduced each store's carbon footprint, by 57% in Long Island and 31% in New Jersey\*

\*EPA non-baseload emissions data (eGRID 2016)



*Unison custom-designed a structure to support two CHP engines over an existing high-traffic loading dock.*

ShopRite's decision has already paid off. In summer 2019, ShopRite stores were hit with 19 separate island mode events, lasting from two hours to over eight days at one store located on a particularly unstable utility feeder. During these events, the stores seamlessly transitioned into island mode when the main utility breakers opened. Because Unison Energy's microgrids receive natural gas even when the grid is down, the systems continued to operate during even the longest outages. The ShopRite stores were able to serve the community and sell much-needed supplies to their customers without any interruption.

Microgrids have also been a cost-effective choice for ShopRite stores. The microgrids provide savings versus the utility during normal operations. However, the real savings come during an outage, as stores no longer have to discard perishables if grid outages extend past a few hours. Additional savings can result from reduced insurance premiums and fewer equipment replacements for electrical components damaged by power spikes.

These savings are significant, but ShopRite store owners agree on the biggest advantage. Melissa Buonadonna, a ShopRite owner-operator in Bay Shore, NY, said:

*"It's nice to know that you can work your day, go home, and if there's a storm, you have peace of mind — for our associates, for our product, for the customers who are coming in and shopping. It's a major relief."*

# Unison Energy

## Who We Are



We own and operate distributed generation systems that operate as microgrids.



We operate systems in CA, MD, NJ, and NY, with additional projects underway.



We finance projects on our balance sheet, with no outside capital required.



We design and implement our systems using internal engineering and project management teams.



We operate our sites using in-house field service technicians, engineers, and a 24/365 staffed monitoring center.