CARGILL PROTEIN FACILITY **MICROGRID**

Revamping the existing grid with smart-grid technology

PowerSecure

ABOUT THE CUSTOMER

Cargill is a food and agriculture producer and distributor serving customers in 70 countries and 150,000 workers.

Cargill's protein facility in Springdale, Arkansas, is one of the largest employers in the city. It consists of 360,000 square feet of production and distribution facilities, processing approximately 50,000 birds a day and producing approximately 300 million pounds of finished goods per year.

THE PROBLEM

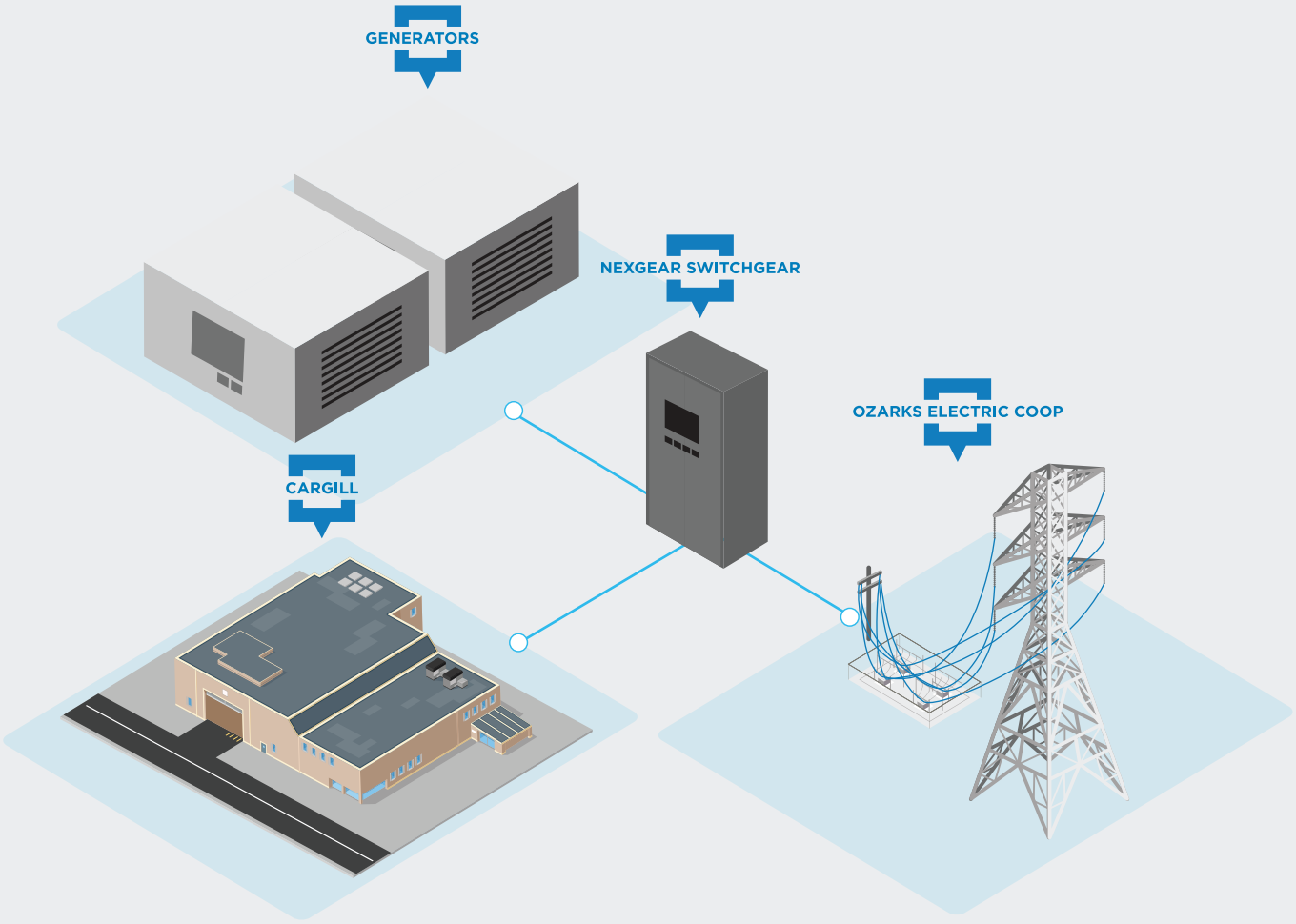
For Cargill, reliability is critical, as this protein facility is a hub for regional poultry producers. In the event of a power outage, multiple suppliers would be impacted. On top of reliability concerns, Cargill's electricity bills were costing more than $2 million a year. Rising electricity costs led Cargill to seek a highly reliable and affordable alternative energy solution.

PowerSecure

THE SOLUTION

PowerSecure engineered, designed, manufactured and continually monitors a fully-integrated, 10 MW power system with smart-grid capabilities to meet Cargill's needs, transforming Cargill's existing grid into a two-way network.

The system initially included four 2,250 kW CAT 3516C diesel gensets (Cargill has since added a fifth) and NexGear switchgear. PowerSecure also worked with the local utility, Ozarks Electric Coop (OECC), to make distribution modifications and primary interconnect with long-term parallel to be able to provide 100% backup power to the facility.



BENEFITS TO CARGILL

1. Annual savings in excess of $1 million per year
2. Improved reliability with 100% backup power
3. Improved resilience with “island mode” capable of serving the entire load
4. Seamless integration to the grid through circuit breakers during load management mode
5. Peak-shaving capabilities to ensure the plant runs smoothly during summer’s hottest days
6. PowerSecure monitors and forecasts peak electricity rates. When rates surpass preset thresholds, PowerSecure remotely controls Cargill’s generators, capable of full voltage and frequency in less than 10 seconds

“In 2009, when an ice storm hit Northwest Arkansas and Kentucky, knocking out power for millions of customers, Cargill ran their generators for six days straight in order to keep producing.”

“We were the only facility in this area to continue processing products. If the plant had been closed for those six days, it would have cost about $1.2 million.”

- Jim Edwards, Cargill engineering manager