



Lineage Logistics makes cool sustainability moves with demand response

Lineage Logistics is a worldwide leader in cold storage and logistics, with a network of over 450 strategically located facilities. These sophisticated facilities offer comprehensive and innovative solutions for protecting temperature-controlled products.

Because of the need to maintain product quality, the cold chain industry has heavy energy demands and relies on critical assets. However, energy conservation and sustainability are growing in importance. Facilities are looking to boost efficiency and decarbonize, and many states in the U.S. have implemented legislation requiring commercial buildings to become more energy efficient to help meet state energy goals. Participating states include Washington, where Lineage Logistics has facilities.

Lineage Logistics is firmly committed to energy conservation and sustainability. State requirements and internal initiatives underscore Lineage Logistics' need to actively seek energy conservation programs to reduce their environmental footprint and contribute to the company's broader energy management goals. Participating in demand response was the answer.

CASE STUDY



Industry

Cold storage



577 kW

of demand able to be curtailed during an emergency event; 504 kW during a peak demand event



\$16,900+

in earnings from dual participation in Puget Sound Energy's Emergency and Peak Demand programs (mid-season enrollment)



DR strategy

involves shutting down refrigeration systems during an event



“

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—Nick Alderman
Manager, Facility Maintenance I, Lineage Logistics

How demand response aligned with Lineage Logistics’ mission

Demand response is a critical reliability resource leveraged by the electric grid to ensure supply and demand remain balanced to avoid blackouts and brownouts. By leveraging flexibility in their operations, facilities can earn payments by making targeted energy reductions when supply struggles to meet demand, helping maintain a reliable and cost-effective grid. Many grid operators and utilities across North America offer demand response programs, and Puget Sound Energy (PSE) in Washington state is one of them.

Nick Alderman, Manager, Facility Maintenance I at Lineage Logistics, became aware of PSE’s Business Demand Response Program (BDRP) when he joined the company’s Algona facility in July 2023. Given the company’s focus on energy conservation, the Algona facility participating in the BDRP was a logical step. The program aligned with Lineage Logistics’ objectives to enhance energy efficiency and sustainability and meet state requirements. “My company has a very high interest in all energy conservation programs, so it made sense to participate,” Nick says.

Defining an appropriate demand response curtailment strategy

PSE introduced Lineage Logistics to their demand response partner, Enel North America, to build out a plan for success. As part of this bilateral partnership, Enel helps facilities enroll in the BDRP, develop customized curtailment strategies to implement when called upon to participate in demand response events, and maximize payments while keeping operational disruption to a minimum.

Initially, Lineage Logistics had concerns that participating in demand response would negatively impact their operations. This is a reasonable concern for a company that needs to maintain temperature requirements, as participating would involve temporarily shutting down critical equipment. However, their concerns were alleviated when they learned that participation was voluntary and that they could participate regularly during the winter months and then determine when and how they would participate during the peak summer months.

In addition, Enel worked with Lineage Logistics to develop a curtailment strategy, also known as an energy reduction plan, that would allow Lineage Logistics to make periodic energy reductions to participate in the BDRP without impacting their operations. This gave Lineage Logistics peace of mind in their ability to participate successfully in the program. Enel’s guidance ensured Lineage Logistics that their curtailment strategy was both effective and manageable, aligning with our operational capabilities.

When Lineage Logistics receives a notification from Enel about an upcoming demand response event, they shut down refrigeration systems entirely for about two hours at a time. This strategic and temporary load shifting allows the company to participate without disrupting operations and, even more importantly, affecting product quality.

PSE and Enel ensured a seamless participation process for Lineage Logistics. When asked about their experience working with PSE and Enel in the BDRP, Nick said, “Fantastic. It’s a great program, and they are great people to work with. Participation is painless, and we are very satisfied with the experience.”





Participating in multiple value steams to maximize opportunity

The BDRP offers two flavors of demand response: the Emergency Program and the Peak Demand Program. The Emergency Program avoids potential blackouts or brownouts on the PSE grid, and peak shaving programs help stabilize the PSE grid and keep energy prices lower.

Enrollment in both programs enables Lineage Logistics to maximize value by earning significantly more revenue and reducing capacity charges. They earn payments for being on standby and on-call when a demand response event occurs.

Lineage Logistics enrolled into the BDRP during the middle of the 2023/2024 winter season but has already seen success with the program even though they haven't participated for an entire season at the time of this case study publishing. They are set to receive \$16,924.99 for their dual enrollment. They

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accomplished this by achieving 100% of their nominations in the Peak Demand and Emergency Programs, curtailing 504 kW on average for the Peak Demand Program and 577 kW on average for the Emergency Program.

This performance sets them up to achieve even more in the 2024 summer and 2024/2025 winter seasons. In addition, they enrolled a second facility in Washington, their Lynden facility, which will begin participation during the summer of 2024.

Nick encourages other companies to participate in demand response, as he has witnessed the economic and sustainability value. “We absolutely recommend demand response. If we all can contribute even on a small scale as a community, it helps with the broader scope of the program,” he says.

Economic and sustainability value for a win-win solution

In addition to earning revenue for making targeted energy reductions, participating in demand response enables Lineage Logistics to contribute to greener peak capacity on the grid and avoid drawing energy from the grid at times when fossil fuels would have to be burned to power peaker plants. They are also helping to maintain affordable electricity in their community and provide a clean, cost-effective alternative to building new power plants.

Lineage Logistics' participation in the BDRP contributes significantly to the company's broader energy management, efficiency, and sustainability goals across their operational footprint. It aligns with state requirements and the company's internal initiatives to become a greener, more sustainable company. By participating in the BDRP, Lineage Logistics is helping to meet regulatory standards and fulfill their company's commitment to environmental stewardship. And PSE and Enel made Lineage Logistics' experience positive and effortless.