

Altex Group cuts energy costs by 8% through device-level energy insights

S2G Energy harnessed Centrica Business Solutions' Panoramic Power™ wireless sensors and PowerRadar™ to help Altex Group take control of its energy costs.



Overview

Altex Group is one of Mexico's most important agro-industrial groups. Its product lines include packed and canned vegetables, frozen fruits, jams and citrus concentrates, with around 70% of its sales coming from the non-domestic market. Thirty percent of its output remains in Mexico, while 50% is exported to the USA and the remaining 20% to Europe and Japan.

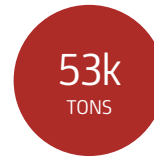
Due to high energy usage in the agricultural industry, Altex Group's priorities were to digitize energy consumption data, optimize factory processes and reduce production costs.

In 2018, the total energy consumption across Altex Group's nine production sites surpassed 65,000 MWh. With energy prices rising by up to 70%, Altex Group was looking to make its operations more energy efficient, enabling it to remain competitive in the market. While it knew that its refrigeration equipment was the most energy-intensive component of its operations, it did not have the data required to make informed decisions towards reducing or reorganizing its overall energy consumption.

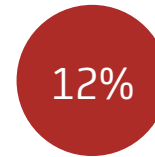
At the same time, it was looking to improve its financial planning processes. Previously, energy forecasting was very roughly approximated – a lot of time and resources were spent towards manually capturing information on energy consumption and reconciling energy expenditure across different plants, cost centers, operations and products.



reduction in overall energy costs



reduction in CO₂ emissions



energy reduction by optimizing compressors

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Most of the positive changes have been achieved through increased behavioral efficiency. Employees of Altex Group plants have shown commitment to the project, complying with proposed strategies to modify their regular activities in a way that positively affects energy consumption and production trends.”

Eduardo Arechiga Calzada, Operations Director, Altex Group

Solution

As a partner of Centrica Business Solutions, S2G deployed the Panoramic Power wireless sensor technology to address the challenges Altex Group was facing.

The sensors were deployed in each production facility to capture the energy consumption data of refrigeration equipment, air compressors, cooling towers, evaporators and other critical assets. Each of the six main plants has an average of 115 pieces of equipment being monitored. The sensors transmit the energy data in real-time to Centrica Business Solutions' complementary energy management platform, PowerRadar, which meets Altex Group's need for real-time data visibility to support critical by-the-minute business decisions. This technology is helping the company cope with steep increases in energy charges across Mexico by enabling it to identify opportunities to reduce its overall energy consumption.

"S2G Energy, harnessing Centrica Business Solutions' technology, was the fastest one to deploy, with over 20 sensors installed and transmitting actionable data within a couple of hours," says Eduardo Arechiga Calzada, Operations Director at Altex Group. "Another plus point is great platform usability, as well as dashboard customization which can be adapted to create a meaningful tool for each plant."

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We now have greater efficiency in the use of resources. It is easier to identify and propose specific projects to increase the efficiency of the equipment and our end customers benefit from the reduction of the carbon footprint associated with our products.”

Eduardo Arechiga Calzada, Operations Director, Altex Group

Customer results

Since implementing Centrica Business Solutions' technology, Altex Group has achieved an overall 8% savings on energy costs over two years, equating to MXN\$17m (US\$843k). When related to production, energy intensity per ton has been reduced by 7.5% while peak demand spikes have also decreased. This has resulted in CO₂ emission savings of 53,553 tons and a 2,180 MWh reduction in energy used, the equivalent to nearly 12,000 passenger vehicles being taken off the road for a year.

After reviewing its energy consumption data, it was identified that energy usage could be reduced if timers were used to switch equipment off during non-operational hours. By installing timers, energy consumption during non-operational hours has been reduced by 4%. A further 12% reduction in energy consumption has also been achieved by analyzing different sequencing of compressor operation to optimize their usage.

Financial planning has also improved. Because it is now based on robust data provided by PowerRadar, the main variables that affect energy consumption have been identified and production planning is now tailored to take advantage of times when energy costs are lower. Energy costs per production line and per equipment are now readily determined and it is easier to schedule predictive maintenance for equipment. Daily, weekly and monthly reports providing valuable insights and firm energy strategies are also now in place.

"Additional value was added to this project through employee training conducted by S2G Energy to boost behavioral change," comments Calzada. "More than 30 people from different levels of the organization are involved in the project and we have weekly talks with managers and technicians."