Agricultural Sector SEM Lite

To increase energy savings in the ag sector, we offer a Strategic Energy Management (SEM) Lite program. This program builds on the principles of traditional SEM with a shortened timeline and lighter engagement that corresponds with available ag staffing levels and resources on site.

THE APPROACH

We use a multi-faceted approach to integrate into the ag customer team, with the engagement scaled to the facility size and its resources.

01 High-Level Facility Scope
Are there low and no cost opportunities? Offer quick and easy adjustments or tips. Identify capital projects and determine if facility is a tune-up candidate.

02 Discussion + Implementation Plan
Consider recommended options and potential savings with customer. Design implementation plan with customer feedback.

03 Dual Path: Tune Up
Implement during time on site (3-5 days). Develop opportunity register and follow up for 6 months with monthly calls. Create energy model to track and report savings.

04 Dual Path: Custom Projects
Evaluate each project individually and as a portfolio for cost-effective savings overall, using expected savings and project costs.

THE OBJECTIVE

Identify and claim 0.60 aMW of energy savings this year in the ag industry through SEM Lite with an expected BC of 3.78.

BACKGROUND

The ag sector is a dominant industry in Chelan County that uses approximately 18.4 aMW annually (10% of local load). It employs about 10% to 15% of the workforce in the county and is a driver of local economic development.

The ag sector represents an important energy saving opportunity. SEM improves the energy efficiency of facilities as they are built or upgraded.

2020 PORTFOLIO

Portfolio savings and incentive costs are shown below, including projections and actual savings claimed and incentives paid through June.

Portfolio Energy Savings

Portfolio Incentive Costs

Incentives ($1M)
RECENT PROJECT

Chelan Fruit
Project Costs: $764k | Estimated Savings: 0.54 Amw
Fall 2019 to present

In August 2016, a wildfire destroyed nearly all the structures of Chelan Fruit. The facility was rebuilt; however, it was never commissioned. So, we were able to identify many opportunities for energy saving improvements when we first scoped the Chelan Fruit facility last fall. We completed an extensive tune up of the facility and seven large capital projects, including:

No Cost: Set points throughout the plant were reviewed and adjusted to save energy without compromising functioning or comfort. For example, winter set points in the engine room were lowered from 80°F to 55°F.

Low Cost: The engine room lights had manual switches and were often left on unnecessarily for days at a time. We replaced the switches with rotary timer controls to minimize unnecessary runtimes.

Capital Project: The packing line had 300 lights that were permanently on, without any switches or controls beyond the circuit breaker. We added lighting controls, saving 0.11 aMW. The largest energy saving custom project was adding VFDs to evaporator fans, which saves 0.33 aMW.