THE STORY

In the fall of 2019, Robert Smith, the plant manager at Sierra Aluminum’s Riverside and Fontana locations, looked out over his busy factory floor and wondered how he would get costs under control while maintaining production and safety. He turned to Southern California Edison (SCE) for help.

A free energy efficiency program run by Southern California Edison (SCE) ended up being a big opportunity for cost reductions in the following year. Through this Strategic Energy Management (SEM) program, industrial customers increase operational efficiency, manage energy costs, and learn how to improve both over time. Sierra Aluminum, a metal extrusion company, signed up each of its facilities in Riverside and Fontana, CA and found the program to be a diamond in the rough of a difficult year.

Working closely with their SCE account representatives and SEM coach, Cascade Energy, employee teams at Sierra Aluminum started with a walk-through of their facilities looking for easily achievable operations and maintenance savings. They listened for air leaks and looked for unused equipment left idling—anything that allowed energy to slip through the cracks. Through this initial step alone, Sierra Aluminum found more than $70,000 in savings.

The team then identified areas where they could conserve energy over time and developed a comprehensive plan to implement and maintain these savings. Importantly, SEM strives to influence organizational habits around energy use, integrating the idea of saving energy into daily operations in the same way as safety or quality control plans. In the process, teams often discover new ways to engage employees in the pursuit of cost-saving opportunities, bolstering the success of the program and giving employees a greater sense of ownership in their work.

Sierra Aluminum plans to keep looking for opportunities, estimating they could realize about $130,000 in cost reductions through energy savings.

Since 2018, SCE has helped participating SEM customers save over 16 million kWh equating to more than 8,400 lbs in CO₂ emissions, 960 lbs in SOx, over 4,350 lbs in NOx, and 850 lbs in PM₂·⁵ reductions.

THE TALKING POINT

Customers love energy efficiency. It provides a variety of benefits, not the least of which is lower energy bills. Businesses can enhance productivity and retain workers, while the cost savings get reinvested in other projects or grow the bottom line.

Sources include: Cascade Energy, Inc.; U.S. EPA’s Avoided Emissions and generation Tool (AVERT)
THE VALUE AND AUDIENCE

SCE has outlined its plan to help California meet its aggressive goal of achieving carbon neutrality by 2045. SCE’s Energy Efficiency programs are aligned to support California’s aggressive decarbonization goals. For SCE that means using Energy Efficiency to meet customer needs while reducing energy waste. Having a relationship with large customers such as Sierra Aluminum is key to success.

The SEM program sets the scene for ongoing collaboration between the utility and customer. Participating customers develop a new mindset that not only increases employee buy-in and professional development, but also supports continuous energy improvement—ultimately helping them improve their financial bottomline and make progress on their own corporate sustainability goals.

One of the great things to come out of 2020 was our participation in (SCE’s) SEM program. We’re going to keep moving with it this year and we’re hoping to see about a $130,000 cost reduction.”

—ROBERT SMITH, SIERRA ALUMINUM PLANT MANAGER

THE BROADER IMPACT

The SEM program has engaged large energy users since 2018 with an estimated savings of more than 16 million kWh per year. The state’s other Investor-Owned Utilities have also seen promising results from SEM, with high program participation, cost-effective savings, and encouraging customer satisfaction ratings. This success is due to the program’s emphasis on continuous energy improvement which aligns with industrial customers’ focus on operational efficiency, sustainability, and profitability.

INDUSTRIAL CUSTOMERS SERVED:
31 customers since program inception [2018]

AVERAGE ANNUAL ENERGY SAVINGS:
1 million+ kWh per customer
$135,000 per year

EQUIVALENT ANNUAL AVOIDED AIR POLLUTION PER CUSTOMER: (U.S. EPA ESTIMATE)
540 tons carbon dioxide
60 lbs sulfur dioxide
280 lbs nitrogen oxides
50 lbs particulate matter (PM$_{2.5}$)

THE DETAILS

Sierra Aluminum received free energy efficiency consultation services, including the assistance of a SEM coach to help them through the treasure hunt and energy team building process. In addition, they had access to a “lending library” of equipment to help identify problems, such as air leaks. Sierra received a $10,000 incentive for achieving plan milestones.

ENERGY EFFICIENCY INVESTMENT

<table>
<thead>
<tr>
<th>Systems impacted</th>
<th>Air Compressors, Baghouse Filters (Environmental Control), Extruders, Fans, HVAC, Lighting, Motors, Pumps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total annual energy savings*</td>
<td>550,000 kWh</td>
</tr>
<tr>
<td>Employees engaged</td>
<td>60</td>
</tr>
<tr>
<td>Savings achieved through</td>
<td>Operations and Maintenance only</td>
</tr>
</tbody>
</table>

* Savings reflects 2020 where were impacted by COVID-19

STORY CONTRIBUTED BY: Southern California Edison

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