Bright ideas: Dairy farms light the way for a greener future

For more than two centuries, families in California have sustained their dairy farming legacy by passing down core values and refining the science of caring for the cows and the land. As they strive for continuous improvement, they are updating much of the technology used inside their barns and milking parlors. Implementing ongoing operational and efficiency advancements is one way dairy families have reduced their dependence on fossil fuels and have helped sustain their operations.

The higher costs of labor, regulatory compliance, and energy are just a few of the challenges dairy farm families face today. In the last ten years, utility rates for California dairy farms have increased as much as 54 percent. To combat these rising costs, dairy farmers have partnered with their local utility companies to become more energy efficient.

Dairy farm families earn incentives as they switch to the latest, most-efficient technologies—changing the way they light barns and parlors, pump water, refrigerate milk, and keep cows comfortable. This includes the installation of plate coolers, which pre-cool milk as it enters refrigerated holding tanks. Milk is typically about 98 degrees Fahrenheit when it comes from the cow, and it is then quickly cooled to about 38 degrees. Using plate coolers streamlines one of the most energy-intensive processes on a dairy farm. Other improvements include installation of LED lighting and switching to more efficient, variable-speed pumps.

At the same time, dairy farm families continue to do more to keep their cows comfortable. Farms are expanding their cow-comfort programs by providing cows with energy-efficient fans, soakers, and misters, all controlled by temperature sensors, much like the thermostats in our homes. By installing such energy-efficient cooling equipment, dairy farmers earn rebates from their utility provider.

In the past five years, dairy farms, in cooperation with Pacific Gas and Electric Company (PG&E), have saved a total of nearly $9 million by reducing their energy needs. PG&E has invested more than $6 million in incentives
and rebates to help dairy farms switch to more efficient technologies. The overall results are a savings to the dairy farms—helping provide some much-needed relief to the overall rising costs of production, while continually decreasing dairy’s carbon “ hoofprint.” In the last five years alone, energy conservation practices have allowed dairies in PG&E’s service territory to avoid the emission of 39,761 metric tons of carbon dioxide.

Increasing energy efficiency is one way dairy farm families diligently work to make the best use of our natural resources. California dairy farms are already sitting at the cutting edge, as the state pursues even more ambitious clean energy goals. Not only are farms reducing their energy use, they’re increasingly adopting renewable energy through the widespread installation of solar energy projects, and the development of methane digesters.

These bright ideas add up to significantly benefit both the economy and our environment.

See PG&E’s Dairy Farm Savings Report Card.