



Dairy Cares News, March 2021

California Dairy Farmers Help Lead the Way for Clean Energy

California is leading the nation toward a 100 percent clean energy future. Multiple state policies are working to achieve a cleaner, more efficient energy grid and transportation sector. The state's dairy farmers are also world leaders in energy-smart practices. They're reducing usage, electrifying equipment, generating renewable energy, and producing carbon-negative transportation fuel.



California has already made great strides in its clean energy and energy conservation goals:

- California is the nation's [top producer](#) of electricity from solar, geothermal, and biomass energy.
- The state is the second-largest hydroelectricity producer and the fifth-largest of wind energy.
- An estimated 60% of California's electricity comes from carbon-free sources.
- California accounts for almost half of the nation's [electric vehicle](#) sales and 30% of all public electric charging stations.
- California has the second-lowest [per capita energy use](#) in both the residential and commercial sectors.

The state's family dairy farms play an important role in these milestones, part of their commitment to planet-smart practices. Their clean energy investments also help improve economic sustainability. Offsetting costs is important, with electricity rates already high and [predicted to rise](#) more than 40% over the next ten years.

Energy efficiency and electrification on dairies

Over the past several years, dairy farmers have been partnering with local utility providers to conduct energy audits. The audits identify opportunities, enabling farmers to implement changes that [reduce energy needs](#). Incentive and rebate programs have helped them to invest in the latest, most efficient technologies—changing the way they light barns and milking parlors, pump water, refrigerate milk, and keep cows cool. Individual farms have cut energy use up to 20% through efficiency investments. However, as farms [convert from diesel to electric](#) equipment—reducing reliance on fossil fuels and cleaning the air—their need for electricity is also growing.

Solar dairy farms

Investments in solar energy is another way many dairy farmers are offsetting costs and helping create a cleaner electricity grid. More than 150 of the state's dairy farms are generating solar energy for on-farm usage. The average capacity of these systems is about 1 megawatt (MW). Several dairy farmers are now doubling their investments, adding more panels to achieve 2-3 MW capacity. Depending on farm size and crop irrigation needs, these systems are meeting the majority of farm energy needs.



Steve Maddox is one of more than 150 California dairy farmers who generates solar energy.

Digesters fueling transportation

California is also leading the nation in the development of [dairy digesters](#), which capture methane emissions and create renewable energy. About 140 projects are in operation or in various stages of development. The earliest projects built in the state produce electricity. Now, more than 115 California dairy farms already or will soon create carbon-negative transportation fuel to replace the use of diesel in heavy-duty trucks. These “barn-to-biogas” projects are helping shrink dairy’s carbon footprint to unprecedented levels, while also helping the state meet clean air and transportation goals. Transportation is the largest source of greenhouse gas (GHG) emissions in California, accounting for [more than 50 percent](#) of GHGs. Dairy digesters provide significant farm-related greenhouse gas reductions and play an important role in achieving the state’s climate goals.

Dairy farmers are doing their part to contribute to a sustainable, clean energy future that benefits all Californians.



Jared Fernandes’ family dairy is creating carbon-negative transportation.

Dairy Cares is a statewide coalition supporting economic and environmental sustainability and responsible animal care. Our members include Bar 20 Dairy Farms, California Dairies Inc., California Dairy Campaign, California Dairy Research Foundation, California Farm Bureau Federation, Dairy Farmers of America-Western Area, Dairy Institute of California, F & R Ag Services, Hilmar Cheese Company, Joseph Gallo Farms, Land O’Lakes, Milk Producers Council, Ruan Transport Corp., Yosemite Farm Credit, Zenith Insurance Company, and others. For information, visit DairyCares.com or call 916-441-3318. To subscribe to the newsletter, contact news@dairycares.com.