



Western Dairy News

For the West, About the West, From the West

A collaborative effort of Dairy Specialists from



The Western Energy Crunch California Dairy Industry Braces for Rolling Blackouts

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The California dairy industry is facing a major dilemma this summer, as blackouts become reality. In the first two weeks of May, California has experienced hot weather resulting in high demand and short supplies of electricity, which forced rolling blackouts from San Diego to Sacramento. The California Independent System Operator has said that the state could face 34 days of rolling blackouts during the summer months.

The outages and rate increases for electricity will have an immediate impact on the dairy industry in California, the largest milk producing state in the nation. California is also the largest producer of powdered milk and second largest in cheese manufacturing. These two commodities, especially powder, use substantial amounts of natural gas in the manufacturing process. So far, it has been the high prices and limited supplies of natural gas that has hurt agriculture in California.

Relatively flat utility prices will soon change. In June, all Californians will be hit with an increase in electrical rates that has been approved by the California Public Utilities Commission (CPUC). On May 15, the CPUC voted to approve a plan that will change how customers of the state's largest utility companies, Southern California Edison (SCE) and Pacific Gas and Electric (PG&E), will pay for power. The rate increases will begin appearing in June bills and are retroactive to March 27. Rate

increases for agricultural interests were capped at 15 to 20 percent, the smallest increase among consumer groups. However, the increase will be in addition to the one-cent per kilowatt-hour (kWh) surcharge approved by the CPUC in January. Average industrial rates will be capped at 12.9 cents per kWh and 12.3 cents per kWh for SCE and PG&E customers respectively. The CPUC acknowledged that more increases might be necessary.

As a result of this energy crisis, dairy producers and processors of milk have already petitioned the California Department of Food and Agriculture (CDFA) to hold hearings to determine how these rising utility costs should be absorbed in the pricing formulas administered by the state. The Dairy Marketing Branch, headquartered in Sacramento, has the responsibility of administering the formulas that establish minimum prices for the five separate classes of milk.

To monitor what is happening in the dairy industry, the Dairy Marketing Branch employs a "Cost of Production Unit" to perform audits on dairy farms and a "Manufacturing Cost Unit" to perform audits on manufacturing plants. These audits provide necessary information to CDFA in determining whether to change the pricing formulas that establishes minimum farm level milk prices. The studies are used frequently to establish reasonable manufacturing cost (make) allowances through the public hearing process.

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In Washington State: Energy Costs by Ned L. Zaugg, Dairy Specialist, Washington State University

Automation has its price. As dairymen become more dependent on various types of energy, there is increased vulnerability due to impacts from electrical availability and interruptions, diesel and fertilizer supplies, and the volatility of prices. Energy costs will continue to rise as herd size increases, labor costs increase, and business regulations become more stringent.

Washington State is highly dependent on hydroelectric generation which accounted for 71% of Washington's power supply in 1999. As the summer of 2001 approaches, water levels in reservoirs and snow pack are at a 25-year low. This coincides with an all-time high-energy demand. Rainfall in Western Washington is currently at 60% of normal, which further impacts filling of reservoirs, raising forage crops, and availability of domestic water supplies. Excellent corn and grass silages are raised in Western Washington and supplemented with alfalfa hay imported from Eastern Washington. Forecasts for Eastern Washington indicate severe drought conditions could idle up to 280,000 acres. Thus, the hay growing regions will likely be impacted with reduced yields and quality. Of that 280,000 acres, 90,000 acres in the upper Columbia River will be idled due to sale of their water resources for power generation, water transfer to 130,000 acres in the Yakima Basin, or to maintain river flows. About half the farmers in the grain and hay growing Palouse have indicated that they will reduce production. The lower Columbia River farmers who choose to receive the transferred water must take steps to reduce their water use this year and develop plans for implementing additional efficiency measures over the next five years.

In Utah: Water and Electricity by Allen Young, Dairy Specialist, Utah State University

As I have traveled throughout the Intermountain West, I have found two issues that are on everyone's mind: water and electricity. Recent rains have helped the water situation, but most of the region is below normal for the second or third year in a row. This is concerning many farmers who rely on winter snowpacks to provide enough irrigation water to grow needed crops. The power problems in California are being felt in Utah, Idaho, and Wyoming, as well as other western states. Offers of incentives to disconnect power for June, July and August are coming from several major power companies and rates offered vary.

Offerings have varied from as low as 7¢ a kilowatt hour to as much as 18.5¢. This has created a bargaining chip and competitive climate to see who can get the best rate. Offers seem to still be evolving. Montana appears to be currently power self-sufficient and parts of western Wyoming have locked in power rates that extend for several more years (offers have been made for them to disconnect also), and are not yet feeling the pinch. A major concern resulting from these two problems is that feedstuffs, such as alfalfa, could be in very short supply this year. Many producers are having difficult times finding dairy quality hay. What supplies exist could become very expensive.

Others are concerned about how they will pay high electrical bills. I encourage you to plan now and seriously consider ways to decrease water and power usage by doing such things as milking at off-peak times, recycle plate cooler water by using it to water livestock, and look into energy-efficient vacuum pumps, lights, or other electrical devices.

In Texas: Energy Costs of Fans Ellen Jordan, Dairy Specialist, Texas A & M University

The cow cooling system is area where energy costs can be reduced by improving efficiency, installing thermostats, and optimizing system performance. Thermostatic control, typically installed for less than \$100, will insure that the fans are only operating when environmental conditions dictate. Clean fans work better: Dirt on protective fan guards can decrease air flow by as much as 40%. There is a tremendous variability between 38 " and 48' barn fans. Considerations include quantity of air moved, the amount of air moved per watt, and the size of the fan. The high efficiency motors may cost slightly more initially, but can quickly return your investment in energy savings.

Ventilation Fan Performance Measure

	Air delivery (cfm)	Energy efficiency, (cfm/watt)
36" fans (N=39)		
Low	6400	8.3
High	10300	17.4
48" fans (N=39)		
Low	4100	4.6
High	2300	19.9

Data generated by The Bioenvironmental and Structural Systems laboratory (BESS) at the University of Illinois. Published in Agricultural Ventilation Fans: Performance and Efficiencies, which can be ordered from the Midwest Plan Service on-line at <http://www.mwpsdq.org/> or by calling 1-800-562-3618.

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To monitor what is happening at the farm level, the Cost of Production Unit audits dairy farms on a bimonthly basis tracking selected dairy farms' cost to produce milk. In 2000, the Unit audited 11.3 percent of the 2,195 dairy farms in California. In the audits for the calendar years 1998, 1999, and 2000, the utilities expense category was less than 2 percent of total cost to produce a hundredweight of milk. In 1998, utility costs were 24 cents for every hundredweight of milk produced. In 1999 and 2000, utility expense per hundredweight was 23 cents for both years. The reason utilities expenses have remained relatively flat in the last three years is that producers use very little natural gas to produce milk. Electricity usage has actually decreased, as many producers have purchased more efficient milking equipment. Natural gas prices have more than tripled in the last year, but natural gas usage makes up less than 10 percent of total utilities cost for dairy producers.

Audits performed by the Manufacturing Cost Unit have documented cost for utilities for non-fat powder plants, butter plants and cheddar cheese plants. Powder plants use enormous amounts of natural gas to convert the milk to powder. Audits were performed for selected periods, January 1998 to December 1999. An updated Utilities audit for March 2001 show that natural gas expenses increased nearly three-fold compared to the selected period, whereas electricity prices remained relatively flat. The March 2001 audit also revealed that while the amount of natural gas needed to process butter and cheddar cheese is substantially less than needed for processing powder, the percent cost increase was similar.

CDDA granted a hearing, scheduled for May 31, 2001, to consider amendments to the Stabilization and Marketing Plans for market milk based on petitions received from four organizations: Humboldt Creamery Association, Land O' Lakes, California Dairies, Inc. and Milk Producers Council. These organizations are seeking adjustments to the five separate classes of milk pricing formulas to deal with increased utility rates processors are paying to manufacture milk products.

In January, Californians experienced their initial rolling blackouts. Most California producers have emergency generators that allow them to continue milking operations for short periods of time. Approximately one-half of the producers now have generators capable of not only operating the milking parlor, but also keeping the milk tanks cool. To prepare for additional blackouts, producers and processors have been relying on generators.

The rolling blackouts affected processors more adversely than producers. Many plants were operating at full capacity and did not have additional storage facilities. The interruption in power caused these processors to divert milk to other plants or refuse delivery resulting in a small amount of milk being dumped.

The dairy industry is also looking at alternative electricity sources. One such alternative would be the use of methane digesters to capture gases from cow manure to generate energy. California Governor Gray Davis recently signed Senate Bill 5x, which includes \$10 million specifically for the financing of dairy digesters. At this time, no one is certain what the future is in California regarding energy usage and supplies. One thing is certain, everyone is hoping California doesn't experience a long, hot summer.

The Western Dairy News

is the effort of cooperating dairy specialists in participating Western states. We seek to provide practical, pertinent and original information about issues and events critical to the western dairy industry in the west. The emphasis on issues important throughout these states will provide a valuable perspective on our industry. Our first mailed issue focuses on the energy crunch and includes commentary from specialists in Washington, Utah and Texas.

The Western Dairy News is distributed to over 11,000 participants in the western dairy industry through a cooperative venture with *Dairy Today*. If you would like to receive our newsletter and do not receive *Dairy Today*, please call your state dairy extension specialist.

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