

# SMUD News Release

Sacramento Municipal Utility District

• News Media Services

• 916•732•5111

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## Local dairy latest to make renewable energy for Sacramento

Five hundred milk cows are the latest source of renewable power for the Sacramento Municipal Utility District (SMUD) as Sacramento County's first manure digester is officially put into service at the Cal-Denier Dairy in southern Sacramento County. In addition to providing renewable energy, the new digester captures methane emissions – a greenhouse gas which contributes to global warming and is 22 times more potent than CO<sub>2</sub>.

Milk cows produce about 120 pounds of combined manure and urine each day. Cal-Denier uses a flush manure management method to clean the stalls. The flushed manure is then stored in a holding pond or lagoon.

Cal-Denier's new digester is an ambient temperature covered lagoon digester designed by RCM Digesters. The flushed manure is retained in the digester for approximately 40 days. As the manure decomposes, biogas is produced and accumulates under the cover. The gas is then collected and sent to a 65kW baseload engine generator made by I Power Energy Systems.

The digester lagoon is 389 feet by 162 feet and 24 feet deep. It is lined with high density polyethylene (HDPE) plastic. A cover of the same material hermetically seals the lagoon. A secondary pond, also lined, is built to the same dimensions and functions as a storage pond for the stabilized digester effluent, which is then used for crop irrigation and fertilization.

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## 2-2-2-2 Local dairy latest to make renewable energy for Sacramento

Dairy manure digesters have many benefits for both the community and the dairy. Everyone benefits from the reduction of greenhouse gas emissions and the additional renewable energy. Benefits for the Cal-Denier Dairy include the reduction of odor and flies, better fertilizer for crops which reduces the need for commercial fertilizer, electricity to offset the dairy's electric usage, and a new source of revenue from the sale of surplus electricity to SMUD.

SMUD's Dairy Digester Incentive program provided 13 percent capital cost incentive to match the 25 percent USDA Rural Development grant, set up net metering crediting of the farm's meters at retail rates (about 10 cents/kilowatt hour), provided a power purchase agreement for surplus electricity, provided 50 percent of the USDA grant application cost and helped with permitting, interconnection and additional grants. Approximate capital cost of the digester system is \$700,000.

Additional funding for the digester project was provided by the U.S. Department of Agriculture (USDA) Rural Development Program, U.S. Department of Agriculture Natural Resources Conservation Service (USDA NRCS) and the California Energy Commission, through the Western United Resource Development (WURD) fund administration.

For additional information about SMUD's Dairy Digester Incentive program contact Marco Lemes at [mlemes@smud.org](mailto:mlemes@smud.org).

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**WESTERN UNITED RESOURCE DEVELOPMENT, INC.**



### 3-3-3-3 Local dairy latest to make renewable energy for Sacramento

Print-quality files are available for the images that follow.

Send requests to [media@smud.org](mailto:media@smud.org)



**Suggested photo caption:** Cal-Denier Dairy owner/operator Fred Denier powers up Sacramento County's first dairy digester.

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#### 4-4-4-4 Local dairy latest to make renewable energy for Sacramento



**Suggested photo caption:** This two-acre covered lagoon captures methane gas from cow manure that is then used to make electricity.



**Suggested photo caption:** Some of Cal-Denier's 500 milk cows that help make renewable power for Sacramento County's first dairy digester.

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