

# Novogradac Journal of Tax Credits

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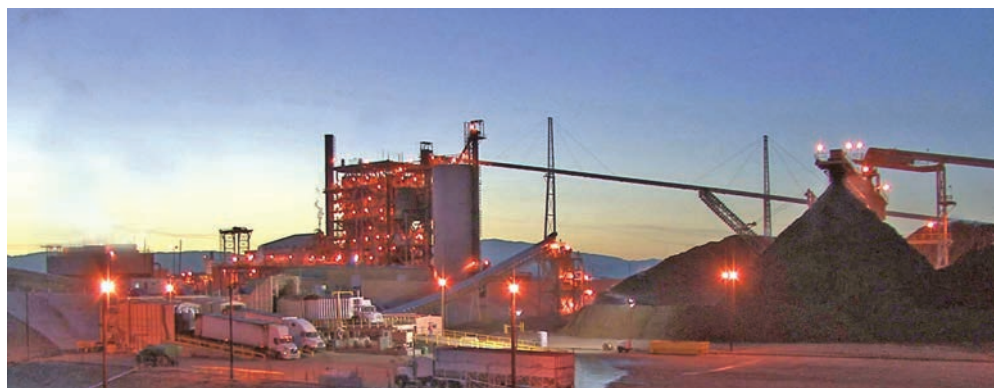
## Biomass Conversion Project Saves Power Plant, Creates Clean Energy Jobs

By Jennifer Hill, Staff Writer, Novogradac & Company LLP

In a dusty valley roughly 20 miles outside Bakersfield, Calif., stands a power plant that Kern County's economy has relied on for more than 20 years. The Mt. Poso Cogeneration Company (MPCC) has been one of the highest-paying industrial employers in the area since it began firing coal in 1989. But the subsequent two decades brought national security concerns over fossil fuel dependence, technological advancements in renewable energy and a growing sense of environmental responsibility. After California began requiring its electric utility companies to derive an increasing percentage of their retail sales from renewable energy sources, a renewal of the original 20-year power purchase agreement (PPA) on which the plant's existence hinged seemed less and less likely.

The situation in 2009 was so dire that the plant's owners considered closing the facility permanently, after its PPA expired that year. "If there's no PPA, there's no facility. Decommissioning was one of the very real possibilities we discussed," said John Miller, MPCC board member, noting the negative effect this course of action would have had on the Bakersfield community.

MPCC explored several avenues to avoid a shutdown, ultimately deciding to convert the facility to run solely on



*Photo: Courtesy of Mt. Poso Cogeneration Company*

**Mt. Poso Cogeneration Company used NMTCs to keep its Bakersfield, Calif. power plant in business by converting the facility to run on biofuel.**

biomass from urban and agricultural wood waste. "The plant was going to close if this project couldn't be put together," Miller said. Instead of cutting their losses, MPCC partners Macpherson Energy Corporation and DTE Energy Services cut the ribbon on their newly converted biomass plant in May, with the help of a \$9 million new markets tax credit (NMTC) allocation from Dudley Ventures Community Investment (DVCi).

The converted facility began generating limited amounts of power from biomass in November 2011, and under a new 15-year PPA with Pacific Gas & Electric, workers are steadily increasing generation to its maximum capacity of 44 megawatts. This electricity is produced by burning biomass in a boiler to heat water and produce steam, which drives a turbine generator. Some of the power plant's steam is piped to Macpherson's nearby oil recovery field to heat oil-bearing

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Photo: Courtesy of Mt. Poso Cogeneration Company

Mt. Poso Cogeneration Company and city officials in May cut the ribbon on the newly converted power plant. From left to right: Mark Rigby, vice president of finance at DTE Energy Services; Steve Sorrentino, president of energy and renewables at DTEES; Bakersfield Mayor Harvey Hall; Bishu Cahterjee, energy advisor at the California Public Utilities Commission; Don Macpherson, president and CEO of Macpherson Energy Corporation; and John Miller, MPCC board member.

sands, thereby enhancing oil production. The oil recovered by this process generally contains water, which is extracted and piped back to the power plant.

Because biomass has a lower energy density than coal, a significant portion of the conversion from coal to biofuel involved creating a 10-acre area to store a 30- to 45-day wood chip supply. The plant consumes 1,000 tons of wood chips per day.

Conventional financing was not available for the \$43 million project because of the market risks associated with a biomass fuel supply. "There's a certain amount of newness to biomass and the answers aren't certain. Without the new markets subsidy this project would not have happened," said Jim Howard, president of DVCI. The NMTC financing alleviated some of the risk by giving MPCC more flexibility to make long-term commitments to their wood products suppliers. In turn, "that allowed [the suppliers] to make some longer-term commitments, and expand and hire more people," Miller said, calling it a domino effect.

MPCC retained all 30 of the plant's employees throughout the 15-month conversion process, despite a period of seven months in 2011 when the facility was not in operation. In addition to preserving the plant's 30 jobs, the project created eight new operational jobs, provided another 115 jobs at the peak of construction, and has generated more than 100 local jobs for wood waste suppliers and other vendors. MPCC works closely with Kern County Employer's Training Resource to provide free on-the-job training for unemployed and underemployed area residents and to place them in new jobs within the plant. "They need a living wage and to be able to support their families in Bakersfield," Miller said, citing the city's high unemployment

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rate and the fact that many of its employment opportunities are seasonal.

"At the time we looked at this project, Bakersfield was experiencing double digit unemployment rates," said En Jung Kim, vice president of community development banking at JPMorgan Chase, which served as the project's NMTC investor. The number of jobs created and retained in an economically distressed community, the fact that without NMTC financing the plant would be decommissioned, and the strong community support for the conversion were all important factors in Chase's decision to invest in the project, Kim said.

Sponsor equity covered the remainder of the conversion project financing, and Mt. Poso was able to take advantage of renewable energy incentives including a state sales tax exemption on its equipment purchases and, now that the facility has been placed in service, production tax credits.

"It's a completely different plant in terms of emissions," Miller said, noting that the conversion has rendered Mt. Poso carbon neutral. "We believe clean biomass energy can work in a lot of other places." ♦

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