

TECOGEN[®] / TECOCHILL[®] CM-75 COGENERATION MODULES & CH-150X CHILLER

**SITE: MOTION PICTURE & TELEVISION FUND HOSPITAL
WOODLAND HILLS, CALIFORNIA**

Case Study



It's been called the "Movie Memory Bank" and "Glitter Palace." Founded in 1921 by entertainment icons such as Mary Pickford, Charlie Chaplin, and Douglas Fairbanks, the Motion Picture & Television Fund is a non-profit organization that provides charitable assistance to those in the entertainment industry. Last year, the Fund provided more than \$10 million in social and charitable services to industry workers in need. At the center of the Fund's continuing success is the Motion Picture & Television Fund Hospital in Woodland Hills, California.

Built in 1948, the hospital has grown to include full medical, diagnostic, and surgical services, as well as several levels of retirement and assisted living, all located on a forty-acre campus just west of Los Angeles. And as part of the hospital's commitment to its community and its neighbors, an effort has been made over the past 15 years to maximize energy efficiency and minimize the facility's impact

on the environment. To that end, the Hospital operates an impressive selection of environmentally friendly Tecogen equipment: six 75kW TECOGEN[®] gas engine-driven cogeneration modules and a 150-ton TECOCHILL[®] gas engine-driven chiller.

"Working with Tecogen is a win-win," said Seth Ellis, vice president and chief operating officer for the Motion Picture & Television Fund. "Our organization has always worked hard to be a good neighbor and corporate citizen. We are very pleased to operate this technology that is not only proving cost efficient but is doing something good for the environment as well."

The Hospital first adopted cogeneration technology in 1986 with the installation of two first-generation units from Tecogen. Over the life of those machines, the Hospital realized an estimated savings of more than \$600,000. Energy efficiency at the hospital was further boosted with the installation of a 150-ton TECOCHILL

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unit in September of 2002. This chiller contributed to the base cooling load, thereby reducing the hospital's overall electrical demand. Heat recovered from the engine-driven chiller helped meet the hospital's large demand for hot water and reduce the demand for natural gas. But 15 years after the first two cogeneration systems were installed, it was time to upgrade the Hospital's central plant with more current technology.

"We had no trouble selling that idea to the Board," recalled Mike Spalinger, director of facilities for the Motion Picture & Television Fund Hospital.

"The units are compact and reliable, and we had already seen the cost-saving benefits that a technology like Tecogen's could offer our organization. In fact, the estimated payback time for this latest installation is three years, and that's very attractive for us."

"We demonstrated that we could supply technology with three significant benefits," said Bob Panora, president of Tecogen. "First, we could substantially increase the hospital's energy efficiency, which would allow them to reduce their energy costs. Second, our systems typically have no trouble with a rigorous permitting process, since emissions fall well below even the strictest levels in the Los Angeles area. And third, our systems can cut CO₂ emissions nearly in half, compared with what would be

produced by generating a comparable amount of energy conventionally."

Carbon dioxide (CO₂) is one of the primary "greenhouse gases" scientists believe is responsible for global warming. Since the six new cogeneration units started operating in May of 2003, the hospital has produced an estimated 2.25 million fewer pounds of CO₂ – which represents a 46 percent reduction over previous levels.

Tecogen's equipment, which typically yields better than 90 percent total energy efficiency, also reduces the hospital's energy costs significantly. Each

on-site cogeneration module contains an engine that burns natural gas to power a generator, which in turn produces electricity for the facility. Exhaust heat is recovered to provide hot water, thereby eliminating the need for the gas that is now burned in the hospital's boilers. A portion of the recovered heat will be used to power an absorption chiller due to be installed in 2004, which will further reduce the hospital's overall electricity demand during the summer months.

Thanks to all of Tecogen's energy-saving systems, the Motion Picture and Television Fund now has more negotiating power with their local utility, and continues to be a leader in the community at saving energy and adopting innovative new technologies.

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