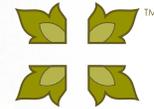
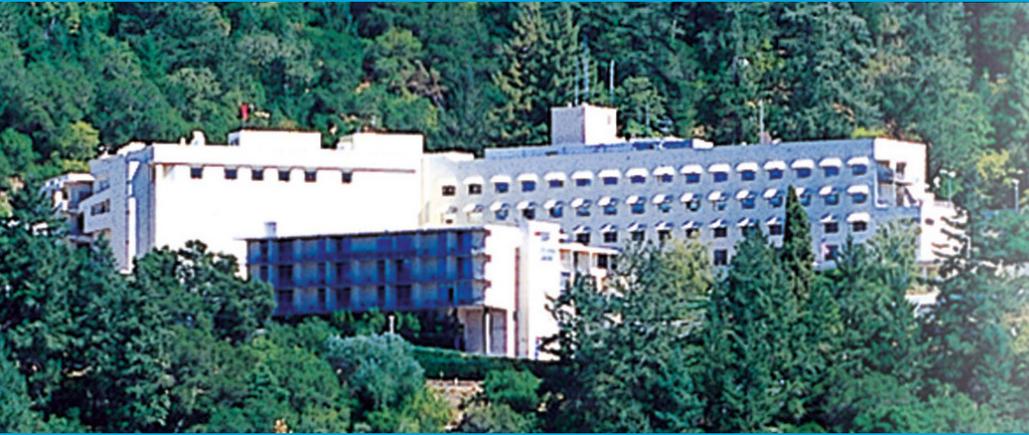




Project Profile

Medical Application



ST. HELENA HOSPITAL
Adventist Health

St. Helena Hospital Generates Healthy Outcomes with Reliable On-site Power

St Helena Hospital, a 181-bed full service community hospital in Napa Valley, CA, is a member of the Adventist Health network. Committed to improving the patient care experience through advanced technology and services, the hospital installed a Doosan fuel cell to provide clean, reliable energy to the 350,000 square foot facility. The Doosan PureCell® Model 400 currently provides 0.64 million Btu/h of high-grade heat (250° F) for space heating and 0.88 million Btu/h of lower-grade heat (140° F) for hot water heating.

The 400kW Doosan fuel cell meets 63 percent of the hospital’s electricity needs and 50 percent of the facility’s space heating and hot water requirements through on-site distributed generation – reducing the hospital’s reliance on the power grid. The PureCell Model 400 unit, which meets California emission standards, is helping St Helena Hospital attain their long-term sustainability goals and realize significant annual savings. Since the fuel cell was installed in 2010 the hospital has been able to conserve 1.2 million gallons of water annually and achieved energy savings of \$170,000/year.

QUANTIFIABLE ENVIRONMENTAL BENEFITS

St. Helena Hospital, St. Helena, Calif. Annual Savings

2 Metric Tons
of Nitrogen Oxides

The PureCell Model 400 reduces nitrogen oxides by more than two metric tons each year – the environmental equivalent of removing 121 cars from the road.**



652 Metric Tons
of Carbon Dioxide

The PureCell Model 400 reduces the facility’s carbon footprint by 652 metric tons each year* – a positive environmental impact that equates to planting 151 acres of forest.**

*Based on U.S. EPA eGrid data for non-baseload generation in sub-region
**Each acre of forest assumed to absorb 1.3 tons of carbon per year (Ref: Intergovernmental Panel on Climate Change)
***Each car assumed to generate 38 lb NOx/Year (Ref: U.S. EPA).

PROJECT OVERVIEW

EQUIPMENT

PureCell® Model 400 combined heat and power solution

INSTALLED

October 2010

LOCATION

St. Helena, California

PROVIDES

- Continuous power for electrical needs
- Heat recovery for space heating and domestic hot water

“Fuel cells are a great choice for businesses that have 24/7 operational needs and the capability to maximize utilization of both the power and the heat generated. Keeping the lights on and the rooms heated is a big job that the Doosan fuel cell has made easier, cheaper and a lot more efficient. Fuel cells are a great alternative energy strategy.”

Stan Tempchin
Director of Facilities
St. Helena Hospital



Doosan Fuel Cell

THE CLEAN ENERGY YOU COUNT ON

The Doosan PureCell® Model 400 System provides clean, reliable, continuous energy for buildings and microgrids. The solution can provide electricity and heat completely independent from the utility grid, keeping critical operations running in the face of power outages from manmade and natural disasters.

From single unit applications for commercial buildings to multi-megawatt installations for data centers, industrial facilities and microgrids, sustainable fuel cells enable building owners and operators to maximize return-on-investment by generating continuous, secure energy efficiently.

The scalable Doosan PureCell System is a clean-tech marvel, providing a complete energy solution that generates combined cooling, heat and power (CCHP). The PureCell System produces 440kW of clean, electricity and 1.7 million Btu/h. of usable heat from natural gas with unmatched reliability.

Doosan offers end-to-end support for developing the right clean energy solution for your business, including initial energy needs assessments, project management, installation, around-the-clock monitoring and innovative financing solutions. With our broad experience in numerous industry sectors, geographies and operating environments, our team will partner with you to help achieve your energy goals now and in the future.

Doosan Fuel Cell America engineers, manufactures and tests each PureCell Model 400 system at its Connecticut headquarters, which, combined with the 50-plus years of fuel cell development and applications experience of United Technologies, Corp., results in a cost-efficient clean energy source that reduces greenhouse gasses, lowers air emissions and saves water.

CONTACT DOOSAN TODAY.
Let's discuss ways we can make
clean energy a reality for your business.



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10-Year
Cell Stack Life

20-Year
Service Plans

90%
System Efficiency

98%
Fleet Uptime

12
MILLION HOURS
of Fleet Field Operation