



**CASE STUDY:**  
MEMORIAL CARE  
HEALTH SYSTEM

**INDUSTRY:**  
HEALTHCARE



**MEMORIAL CARE  
HEALTH SYSTEM**

**LOCATION:**  
Long Beach, CA

**PROBLEM:**  
Poor operating efficiency of  
existing heating equipment.

**GOAL:**  
Improving operating effi-  
ciency to comply with South  
Coast Air Quality Manage-  
ment District emission re-  
quirements.

**SOLUTION:**  
Retrofit the existing fire tube  
boilers with our Ultra Cmax  
dual fuel burners and auto-  
mated controls with touch-  
screen displays

**RESULTS:**  
Met the 9 PPM mandated  
emissions while significant-  
ly improving efficiency and  
reducing operating costs.

## Ultra Low NOx Burner Installation for MemorialCare Health System

MemorialCare Health System is a not-for-profit delivery provider that is well known for its unique approach to healthcare, focusing on evidence-based, best practice medicine. The organization has received top rankings from independent rating agencies for being one of the most well managed health-care systems in the country.

MemorialCare has locations in a number of key cities throughout Southern California, including Long Beach Memorial Medical Center and Community Hospital of Long Beach in Long Beach, and Saddleback Memorial Medical Center in Laguna Niguel. To improve operating efficiency and comply with upcoming South Coast Air Quality Management District emission requirements, they contracted with California Boiler to retrofit their existing boilers with new burners and control systems. California Boiler has a long-standing reputation for delivering outstanding boiler service to MemorialCare.

The three water tube boilers at Long Beach Memorial were retrofitted with Power Flame's Nova Plus metal mesh burners, new controls and variable frequency drives to reduce electrical consumption. The new 500 HP burners would meet the 9 PPM mandated emission levels and allow for conversion to oil should the hospital experience an emergency disruption to its gas service.

The three fire tube boilers at Saddleback Memorial were retrofitted with Power Flame's new Ultra Cmax dual fuel burners and automated controls with touchscreen displays. The new 250 HP burners would meet the 9 PPM mandated emissions while significantly raising the turndown and reducing the load on the motor. The quick change over from gas to amber fuel oil firing and high efficiency of these burners will save the hospital thousands of dollars a year in fuel and electricity costs.

The three 300 HP fire tube boilers at Community Hospital were retrofitted with one Power Flame Nova Plus fiber mesh burner (gas only) and two Power Flame Ultra Cmax dual fuel burners, controls and variable frequency drives. Just like Saddleback Memorial, the new burners would meet the 9 PPM mandated emissions while significantly improving efficiency and reducing operating costs. The two dual fuel burners (UCM) were installed in case of an emergency switch over from gas to amber fuel oil.

California Boiler also provided fully automated control systems for all three facilities. The new control systems featured intuitive touch screen interface capable of displaying and communicating operating data including gas flow, steam flow and boiler status. All three retrofit projects were completed and successfully tested well in advance of the 2013 compliance deadline.

Long Beach Memorial now enjoys a significant reduction in electricity costs as well as the satisfaction of knowing that their new burners meet mandated emission levels. At Saddleback Memorial and Community Hospital the optimal efficiency of their new Ultra Cmax burners will pay dividends for years to come in the form of fuel and electricity savings while meeting the mandated emission levels.

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