

# Cookline Replacement Study

## Werewolf American Pub San Diego, CA

### Out with the old and in with the new...

As common with many restaurants, Werewolf's kitchen consisted of a medley of cooking equipment and hoods installed by previous owners, most of which were old and inefficient. The Werewolf American Pub, located in San Diego's historic Gaslamp District, is open seven days a week for breakfast, lunch, and dinner. Werewolf is known for its all-you-can-eat Taco Tuesday and weekend brunch. The full-day service, daily specials, and steady stream of customers put a high demand on the kitchen requiring the cooking equipment to operate long hours.

Werewolf's aging cookline made it a great candidate for the Commercial Cooking Equipment and Kitchen Ventilation System Baseline & Replacement Characterization study to research existing kitchen energy use and demonstrate energy savings through strategic equipment replacement. Frontier Energy, Inc., working in conjunction with San Diego Gas & Electric (SDG&E) Company, performed the technical study for the California Energy Commission's (CEC) Natural Gas Research and Development Program.

### BEFORE:

- Werewolf's main line consisted of: two 8-ft ventilation hoods side-by-side, a 6-burner range, two 14-inch fryers, a 2-ft broiler, a 3-ft griddle, and a salamander.
- Werewolf's prep line consisted of: one 6-ft ventilation hood and a convection oven.
- Both cooklines consumed about 22 therms/day.
- The ventilation hoods consumed about 86 kWh/day.



### AFTER:

- Werewolf's main line now consists of: two 8-ft hoods with a Demand Control Kitchen Ventilation (DCKV) System, two 2-ft ENERGY STAR® griddles (33% increase in cooking area), a best-in-class 14-inch ENERGY STAR fryer, a 2-ft broiler (33% increase in cooking area), a half-size combination oven, and energy-efficient Turbo Pots® (used on the range).
- Werewolf's prep line is no longer being used, as the convection oven was replaced with a combi-oven and moved to the main line.
- The main cookline consumes about 19 therms/day.
- The ventilation hoods consume about 31 kWh/day.

Werewolf's makeover resulted in an estimated annual energy cost savings of \$5,360 and a California Utility Rebate incentive of \$3,999, a total savings of \$9,359.

### Annual Operating Costs<sup>1</sup>

Pre-Makeover Costs  \$12,380

Post-Makeover Costs  \$8,220

<sup>1</sup> Electric and gas utility rates based on \$0.17/kWh and \$1.00/therm.

### Operating Savings<sup>1</sup>

Annual Energy Savings<sup>2</sup>  \$5,360

Rebate Savings  \$3,999

<sup>1</sup> fishnick.com/saveenergy/rebates.

<sup>2</sup> includes \$1,200 in space heating.





Energy-efficient combination oven



ENERGY STAR fryer

In partnership with Frontier Energy Inc. and SDG&E, Werewolf took advantage of the SDG&E equipment demo program to gain familiarity with the energy-efficient appliances before they committed to living with them.

## Quick Guide to Werewolf's Savings

	EQUIPMENT UPDATE	ENERGY SAVINGS	BENEFITS
<b>OPTIMIZED KITCHEN HOODS</b>	Removed 6' hood	15.5 kWh	Reduced unnecessary energy consumption
	Added DCKV to two 8' hoods	31.4 kWh	Energy reduction for exhaust and supply fans
		1,200 therms	Space Heating (Improved kitchen comfort)
<b>MAXIMIZED COOKLINE</b>	Replaced convection oven with a combi-oven	51%	Increased flexibility and allowed for menu expansion, self-cleaning
	Replaced 3' griddle with two 2' ENERGY STAR griddles	33% per/sqft	Increase in cooking surface area, dedicated grill for vegetarian customers
	Replaced entry level fryer with an ENERGY STAR fryer	31%	Improved performance, decreased cook-time, faster recovery
	Replaced pots and pans with high-efficiency Turbo Pots	22%	Improved heat transfer to pots and pans
	Replaced 2' broiler with an energy-efficient 2' broiler	33% per/sqft	Increased cooking area, improved performance, innovative technology

Commercial kitchens are often small, crowded, and hot. Werewolf now has a streamlined and efficient cookline with better working conditions for their staff.

## Equipment Savings and Rebates

Fryer Operating Savings	◆ \$301
Fryer Rebate	◆ \$749
Griddle Operating Savings	◆ \$0
Griddle Rebate	◆ \$400
Increase In Cooking Surface Area	◆ 33%
Combi-Oven Operating Savings	◆ \$643
Combi-Oven Rebate	◆ \$1,100
Range Operating Savings	◆ \$166
Broiler Operating Savings	◆ \$140
Increase In Cooking Surface Area	◆ 33%
Prep Line Hood Operating Savings	◆ \$962
DCKV Operating Savings	◆ \$1,948
Space Heating (Kitchen Comfort)	◆ \$1,200
DCKV Rebate	◆ \$1,750



Demand Control Kitchen Ventilation (DCKV) installed in main line hoods



ENERGY STAR griddles and energy-efficient broiler