



HOSPITALITY
FACT SHEET

Energy Management for Your Business

PG&E's Energy Solutions for Ozonated Laundry Systems in Hospitality Facilities

Industry Facts

Pacific Gas and Electric Company (PG&E) recommends that hotel owners and operators consider the benefits of adding ozone to their laundry operations. PG&E continues to partner with hospitality facilities to provide technical assistance and pay incentives for projects that incorporate ozone into laundry operations.

Ozone generators installed in plumbing systems may help lower the consumption of natural gas, electricity and water, while decreasing sewage costs. The energy and money saving benefits make ozone an excellent choice for any laundry facility.

What is Ozone?

Ozone, a form of oxygen found naturally in the Earth's atmosphere, has strong oxidizing properties. Quick to react to a range of substances, ozone is a more effective and safe cleaning agent than chlorine and many common disinfectants.

Generated from dry air, ozone is readily available. It removes soils effectively and works in cold water, cleaning fabrics by removing electrons from soils and breaking down the molecules for release from linens and towels. After a wash cycle, excess ozone breaks down into oxygen gas and harmlessly mixes with the atmosphere. For hospitality facilities, the use of ozone can mean less energy consumption and lower costs.

How Ozone in Laundry Operations Reduces Energy Consumption and Costs:

- Reduces hot water consumption because ozone works best with cold water, resulting in less gas usage
- Reduces need for fabric softener, shortening drying times and saving electricity
- Reduces need for chemicals, detergents and bleaches, increasing savings
- Reduces labor costs by shortening laundry cycles and time spent sorting and rewashing
- Reduces water and sewer costs due to fewer chemicals used in laundry process
- Reduces exposure to chemicals and heat, extending the life of linens and increasing fabric softness and freshness

Case Study: The Hilton Garden Inn—Emeryville

The Hilton Garden Inn—Emeryville installed an ozone generator and associated plumbing at a total cost of \$14,000. Incentives and rebates from PG&E and East Bay Municipal Utility District (EBMUD) covered part of the project cost.





Here is a Breakdown of Savings by Category:

Water and Sewage

Hot and cold water flowing into three washer-extractors was monitored for 30 days prior to and after installation of the ozone system. During that time, hot water consumption decreased by 91 percent, while cold-water use increased only by about 41 percent. Total water consumption decreased by an average of 2,432 gallons per day or over 35 percent—equivalent to consuming 863,000 fewer gallons of water per year, with much less water going down the sewer. Estimated cost savings are \$18.72 per day, or \$6,835 per year.

Electricity

Shorter washing and drying times means reduced use of the motors within laundry equipment. The estimated annual washer and dryer electricity savings due to the ozone system is 8,651 kWh. Estimated electricity savings are \$779 per year, or 3.5 percent of overall energy savings.

Natural Gas

The annual decrease of 1.32 million gallons in hot water consumption is estimated to decrease natural gas usage by 28.4 therms per day, or 10,383 therms per year. Estimated savings from reduced hot water consumption is \$12,397, or nearly 89 percent of the cost to install the ozone system.

Shorter dryer run times reduces natural gas use by 0.133 therms per load. Based on 40 dryer loads per day, daily savings are 5.34 therms, or 1,948 therms per year. Estimated savings from reduced dryer times are \$2,326 per year.

The total annual natural gas savings are 12,331 therms, or \$14,723, which represent two-thirds of the overall savings achieved by the ozone system and more than covers its costs.

Payback

The ozone system has a simple payback of 7.5 months from quantifiable energy savings. With available rebates and incentives, the payback period is significantly shorter. The hotel received incentives from EBMUD for \$1,740 and from PG&E for \$7,086 for a total of \$8,826. These incentives reduced the payback period to just 83 days.

Summary of Savings for 11 Hotels

After installing ozone generators in their laundry facilities, 11 Bay Area hotels with 44 to 306 guest rooms realized energy savings of between 2,944 and 14,117 therms. Total annual water consumption savings at the smallest hotel was 4,475 gallons, with the largest saving 1,839,500 gallons. Hot water savings ranged between 296,740 and 2,066,792 gallons. Total project costs varied from \$13,000 to \$23,165, with PG&E's paid incentives ranging from \$2,159 to \$10,501. Hotels using ozone systems in their laundry facilities quickly realized energy and cost savings.

Your Next Steps with PG&E

For more information on how PG&E can help your laundry facility manage energy consumption and reduce costs, visit www.pge.com/hospitality.

You can also contact your PG&E account representative or call our Business Customer Service Center at **1-800-468-4743**.