Drinking Fountains & Water Coolers

ENERGY SAVING – FACT SHEET

Energy Savings for Drinking Fountains

Several universities and governmental agencies across the country have advocated the unplugging of refrigerated drinking fountains as a way to save energy and cut costs. Drinking fountain manufacturers have estimated energy consumption of refrigerated fountains to be between 7.8–10.8 kWh per 40-hour work week.[1] This consumption can vary widely due to usage rates, ambient conditions, feed water temperatures, and rated capacity of the units. In North Carolina, the average electrical cost to run a refrigerated drinking fountain is approximately $35 - $48 per year.

Unplugging Drinking Fountains—Addressing the Issues

When considering unplugging drinking fountains, facility managers should address these issues:

1. Higher use drinking fountains are likely the best applications for unplugging. Since all refrigerated drinking fountains have internal water reservoirs (~ 2 quarts), some manufacturers have expressed concern that water could become stagnant or distasteful after long periods of non-use (i.e., months). This concern is not an issue for non-refrigerated drinking fountains that have no reservoir. The American National Standard Institute requires refrigerated drinking fountain water to be delivered at 40 to 50°F.
2. Consider the application and the reactions of employees, students, patients, clients and public users to be affected by the change of supplying unchilled water.
3. Consider the ease of disconnecting the refrigeration units. Many drinking fountains have a electrical cord and are plugged in a wall outlet. Others are internally wired into an electrical box hidden by the fountain housing.
4. Some new models of refrigerated water fountains require electricity to dispense water.[2]

Other Options for Fountains

- Some facilities staff have wired drinking fountain into light switch circuits which would be shut off on nights and weekends.
- The use of inexpensive timers (<$10) could also be considered to shut off fountains during unoccupied time period (e.g., nights).
- Consider establishing a policy that all new drinking fountains will be un-refrigerated models.
- On some newer refrigerated drinking fountains, the water temperature setting can be adjusted up to 50°F and thus will help save energy and money.

Bottled Water Cooler Options

Manufacturers have estimated the average electrical consumption of water coolers to be between 3.5—4.5 kWh per 40-hour work week (for a 1.2 amp unit). This equates to a cost of $16 - $20 per year using average NC commercial electrical rates.

When considering purchasing water coolers, facilities staff should choose Energy Star rated coolers which are better insulated and have higher efficiency refrigeration units. The Energy Star program estimates that an Energy Star rated water cooler can save up to $4 per year for the same initial cooler cost.[3]

Estimating Your Cost Savings

Typical Savings for Unplugging Drinking Fountains

_____ # of Refrigerated Drinking Fountains Unplugged x $42/year = $_____ savings per year*

*Assumes NC average commercial rate of 8.6¢ per kWh and 9.5 kWh/week consumption.

References & Resources:

1. Calculated by using Manufacturers watts from their specification sheets , 40 hours per week and a 60% operating rate. Manufacturers specification sheets located at the following websites:
   - OASIS http://www.drinking-fountain.net/p8acinfo.html
   - ELKAY http://www.drinkingfountains.us/ez.html
   - Halsey Taylor http://www.drinking-fountain.us/hacinfo.html

2. According the manufacturers specification sheets from the websites above, OASIS uses mechanical activation of the supply valve while ELKAY and Halsey Taylor use solenoid valves requiring electricity to operate.

3. Energy Star Bottled Water Coolers information.
   http://www.energystar.gov/index.cfm?c=water_coolers.pr_water_coolers

Sponsored by the State Energy Office, N.C. Department of Administration and the U.S. Department of Energy, with State Energy Program funds, in cooperation with the **Land-of-Sky Regional Council (Waste Reduction Partners)** and the **NCDPPEA**. However, any opinion, findings, conclusions, or recommendations expressed herein are those of the author(s) and do not necessarily reflect the views of either the N.C. Department of Administration or the U.S. Department of Energy.

Revised by Waste Reduction Partners– 03/2010

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