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Energy Survey: World of Spirits 1722 West 39th Street, Kansas City, MO 64111

Dear Mr. Sachs,

Thank you for participating in Kansas City's first CarrotMob event. The event was a huge success. 325 people spent \$7,015 and approximately 800 pounds of food was donated to Harvesters. According to your winning bid that 24% of total revenue spent at the event would go toward energy efficiency improvements to your store, Metzler Remodeling and Hathmore Technologies have gladly donated our services to help you best use the \$1683.60 put aside for energy efficiency improvements.

On Thursday October 16th a team of energy professionals from Metzler and Hathmore performed an energy survey on your business. Together we generated a list of recommendations for your business, knowing that you do not own the building. After reviewing your water, gas, and electricity bills it is obvious that *the majority of the energy consumption of your business is electricity*. In fact, there are several months during the year where you do not use any gas at all. The major uses of electricity for your business are air conditioning, lighting, and the refrigeration equipment related to all of the coolers.

Knowing our limited budget, our goal is to maximize the use of the money generated by determining what items you would like to do yourself and to work together to prioritize what recommendations you want us to pursue further. Together, we will try to solicit discounts, donations, rebates, and incentives wherever possible. Here is a list (in no particular order) of our recommendations:

Items to be completed by World of Spirits

- a) **Implement an Energy Conservation Plan:** The first step in any energy / environmental initiative is conversation. We recommend implementing standard operating procedures that reduce your energy consumption. For example, turn off all interior, cooler, and neon lights when the business is closed. Turn off back office and cooler lights when they are not in use. Set the building's thermostat down in the cold months and up in the warm months. Verify that all cooler doors are properly closed throughout the day and at close of business. Put a sign on cooler doors asking patrons to make sure that cooler doors are completely closed.
- b) **Use of power-strips and timers for all of the neon signs:** Power-strips enable you to turn off several neon signs at once prohibiting the signs from draining electricity even when they are off. Timers limit the amount of time the neon signs are on, reducing their electricity consumption.
- c) **Replace all incandescent bulbs with CFLs:** We recommend Phillips brand CFLs. There are 5 that need to be replaced (2 interior bulbs in the bathroom, 1 interior bulb in the office, and 2 outdoor bulbs in the cooler).
- d) **Service coolers:** Using the existing service contract, Ed is going to have his cooler hinges adjusted so that the cooler doors shut properly and will make sure that all of the cooler seals are working correctly.
- e) **Replace / repair the weather-stripping of all pedestrian doors:** This will reduce the air leakage between the conditioned and unconditioned space in the building. It is recommended that magnetic weather stripping be used with the steel door frames.
- f) **Confirm current metering rates:** Since there are three meters, it is important to have the appropriate rate for the actual electricity use. For example, one meter is used for exterior lighting and should have the appropriate rate for exterior lighting. This will not reduce energy, but may reduce energy costs.
- g) **Use an electricity usage monitor to determine the consumption of various electrical devices:** The electricity usage monitor was provided by Metzler Remodeling. The neon / LED signs consume up to \$60 / year and the individual coolers consumer up to \$1,000 / year.

Items for Metzler and Hathmore to receive estimates:

- h) Upgrade to LED lighting in the coolers, possibly with motion detectors:** LED lighting uses less electricity and generates less heat than florescent lighting while motion detectors reduce the time the lights are on.
- i) Upgrade the primary building florescent lights to energy efficiency lighting:** Currently there are 30 x 4 Bulb T12 fixtures that consume approx. 200W each, it is suggested that the lighting fixtures be replaced with T5 fixtures (3 bulb, highly reflective) that consume approx. 80W. At a minimum replace the all of the florescent bulbs with T8 bulbs.

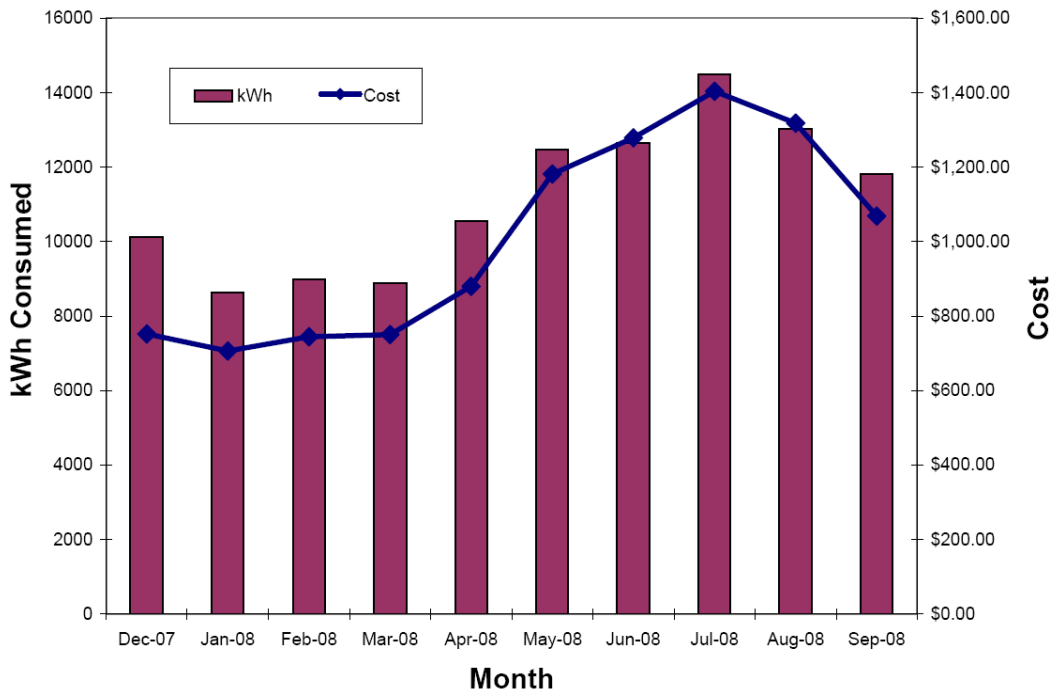
Items for future consideration:

- j) Install an air curtain at the primary entrance door:** This device blows air and keeps cold air out in the winter, warm air out in the summer, and also helps keep out bugs.
- k) Install a line conditioner:** Since there are so many A/C motors keeping the coolers chilled, a line condition may reduce electricity consumption by properly aligning the A/C phases for the equipment.

Next Steps:

- 1) Ed will complete the items he will perform himself and provide the CarrotMob with receipts for the material cost of what was spent.
- 2) Metzler and Hathmore will work with Ed to spend the remaining money on items “h” and “i” above.
- 3) When the energy improvements are complete, the CarrotMob organizers will post information what was done and schedule an event for the CarrotMob to visit World of Spirits and see what items were completed.
- 4) CarrotMob will review the energy bills for World of Spirits to see how much energy was saved.
- 5) The CarrotMob will strike again, perhaps in the first quarter of 2009 in the Waldo area of Kansas City.

World of Spirits - Electricity Consumption



As always, please don't hesitate to contact us with any questions.

Best regards,

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