Arnold Schwarzenegger,
Governor

BERKELEY LAMP APPLICATIONS STUDY

PIER FINAL PROJECT REPORT

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Prepared By:
California Lighting Technology Center

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Prepared By:
California Lighting Technology Center
Michael Siminovitch
Erik Page
Michael Gross
Davis, CA
Contract # 500-99-013, WA 74

Prepared For:

California Energy Commission
Public Interest Energy Research (PIER) Program

Michael Seaman
Contract Manager

Ann Peterson
Program Area Team Lead

Nancy Jenkins
Office Manager
ENERGY EFFICIENCY RESEARCH OFFICE

Martha Krebs, Ph.D.
Deputy Director
ENERGY RESEARCH AND DEVELOPMENT DIVISION

B. B. Blevins
Executive Director

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Contact Information:
Project Manager:
Michael Siminovitch
California Lighting Technology Center
University of California
1554 Drew Avenue
Davis, CA 95616
530-757-3496 mjsiminovitch@ucdavis.edu

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Preface

The Public Interest Energy Research (PIER) Program supports public interest energy research and development that will help improve the quality of life in California by bringing environmentally safe, affordable, and reliable energy services and products to the marketplace.

The PIER Program, managed by the California Energy Commission (Commission), annually awards up to $62 million to conduct the most promising public interest energy research by partnering with Research, Development, and Demonstration (RD&D) organizations, including individuals, businesses, utilities, and public or private research institutions.

PIER funding efforts are focused on the following six RD&D program areas:

- Buildings End-Use Energy Efficiency
- Industrial/Agricultural/Water End-Use Energy Efficiency
- Renewable Energy
- Environmentally-Preferred Advanced Generation
- Energy-Related Environmental Research
- Strategic Energy Research.

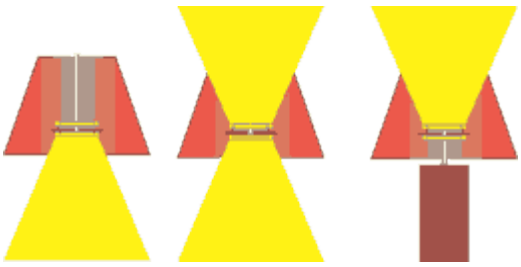
What follows is the final report for the Berkeley Lamp Applications Study, California Energy Commission Contract #500-99-013, Work Authorization #74, conducted by the California Lighting Technology Center. This project contributes to the Building End-Use Energy Efficiency program.

For more information on the PIER Program, please visit the Commission's Web site at: http://www.energy.ca.gov/research/index.html or contact the Commission's Publications Unit at 916-654-5200.

Executive Summary

The purpose of the Berkeley Lamp Applications Study project was to conduct a field study to determine user satisfaction and identify product improvement suggestions that would improve market acceptance. Two secondary goals were to give California state agencies experience with the technology employed by the Berkeley Lamp and to confirm energy savings compared with standard overhead lighting.

The Berkeley Lamp is a table-top light fixture (luminaire) that provides energy-efficient ambient and task light from fluorescent light bulbs. At full power, the Berkeley Lamp provides the combined luminous output of a 300-watt halogen lamp and a 150-watt, incandescent table lamp while using only a quarter of the energy. The lamp uses two independently controllable and fully dimmable 55 watt compact fluorescent bulbs (CFLs). One of the bulbs directs light downward, illuminating the table or desk. The other directs light towards the ceiling, providing high-quality indirect lighting. The fixture can be operated in three modes: downwards only, upwards only, or both up and down together. The luminaire was designed as a system to maximize the efficient distribution of light as well as to provide warm-colored light (2700 Kelvin---similar to that of an incandescent bulb) and uniform shade brightness.



ALL DOWN **UP & DOWN** **ALL UP**

The Berkeley Lamp was developed by researchers at the Lawrence Berkeley National Laboratory with funding from the U.S. Department of Energy's Office of Building Technologies, State and Community Programs and the California Energy Commission. The Lamp's prototype design was completed by Light Corporation of Grand Haven, Michigan, in 2000, such that it became a commercially-available product. However, at $190, the relatively high cost of the lamp has stimulated interest in availability of a less-expensive version that can appeal to a wider market. This study, involving consumer preferences, is a step towards development of that alternative.

Two sites in Sacramento, CA were selected for demonstration of the Berkeley Lamp to gather user preference and energy-efficiency data:

- California Environmental Protection Agency (CalEPA)
- Department of General Services (DGS).

At the two locations, a total of eighty participants were asked to use the Berkeley Lamp at their worksites for 3-6 months and to complete a user preference survey.

Survey Results

The research team collected user feedback with a web based survey. The key results include:

- 96% rated their overall impression the Berkeley Lamp as positive or very positive.
- 96% rated the Berkeley Lamp lighting quality as good or excellent.
- 54% never or rarely used their overhead lights after receiving the Berkeley Lamp.

- 89% preferred the Berkeley Lamp's warm lamp color compared with the typical cool-colored overhead and cubicle fluorescent lamps.

The user feedback yielded some design suggestions concerning the Berkeley Lamp's form factor:

- 31% would prefer a floor lamp version instead of the current desktop version
- 92% liked the looks of the current Berkeley Lamp and there were no new suggestions for design improvements.
- A few users requested a smaller shade to facilitate use on their crowded desktops.

Energy Savings Results

Approximately 43% energy savings were accrued from the use of the Berkeley Lamp when compared to standard overhead lighting. The installation of occupancy sensors, placed in some test offices, led to an additional 27% savings.

The data showed the lamps are not always shut off during typical use. For example, some users left their lights on overnight on occasion. The occupancy sensors also recorded some usage between the 5 PM and 2 AM, indicating a need by janitorial staff for light to clean the offices. The data also showed a slight decline in usage at 12PM, indicating that people sometimes leave their lights on during lunch. The study concluded that, even when factors of overnight use, nighttime cleaning and lunchtime lighting are included, the Berkeley Lamp has positive energy efficiency benefits in comparison to conventional office lighting. Overall, the Berkeley Lamp saved 42% to 58% of electrical energy vs. conventional office lighting.

Conclusion

Data from the field study revealed positive user feedback and solid energy savings from use of the Berkeley Lamp. The user survey also provided information on the lamp's design. Partially as a result of this project, the Berkeley Lamp gained inclusion in the State of California's OfficeMax ordering system, with a product announcement faxed to all state agencies. Near the end of the project, a second company, Full Spectrum Solutions, licensed the Berkeley Lamp technology from Lawrence Berkeley National Laboratory. Full Spectrum plans to introduce its version of the Berkeley Lamp in 2006.

Abstract

The purpose of the Berkeley Lamp Applications Study project was to conduct a field study to determine user satisfaction and identify their product improvement suggestions that would improve market acceptance. Two secondary goals were to give California state agencies experience with the technology and to confirm energy savings compared with standard overhead lighting. Approximately 43% savings were accrued from the use of the Berkeley Lamp when compared to standard overhead lighting. The installation of the occupancy sensors on the lamps added an additional 27% savings.

The primary objective of the Berkeley Lamp application study was to use the results from the web based survey to give design improvement ideas to LightCorp. The key results include:

- 96% of users rated their overall impression the Berkeley Lamp as positive or very positive;
- 96% rated the Berkeley Lamp lighting quality as good or excellent;
- 54% never or rarely used their overhead lights after receiving the Berkeley Lamp;
- 89% preferred the Berkeley Lamp's warm lamp color compared with the typical cool-colored overhead lamps.

The only significant design suggestions revolved around the Berkeley Lamp's form factor. Data from the survey showed that 31% of users would prefer a floor lamp version to the current desktop version, although 92% liked the looks of the current Berkeley Lamp. There were no added suggestions for design improvements. LightCorp will consider these suggestions if they revise this product. Currently the product can be purchased through Office Max, the official office supply supplier to the state. Another supplier, Full Spectrum Solutions, has licensed the technology and plans to offer a product by late 2006.

Introduction

The purpose of this project was to conduct a field study of the Berkeley Lamp, an innovative task lamp developed by Lawrence Berkeley National Laboratory (LBNL). The study was to identify how to make the Berkeley Lamp a bigger success in the market. A number of Berkeley Lamps were installed in office test sites with the objective of gaining an understanding of how the lamps perform in terms of energy savings under different operating conditions. The project also gathered an understanding of how people operate the lamps and measured their overall acceptance. The work authorization resulted in recommendations for future technology development activities, identified user satisfaction, product improvements, and documented, with engineering calculations, the energy savings. A web based survey was used to document user satisfaction as well as to receive design improvement ideas.

Project Objectives were to:

- Measure the energy usage after the installation of the Berkeley Lamp in each office to show energy savings compared to energy usage prior to Berkeley Lamp installation.
- Determine how users use the dimming and switching control features.
- Determine the user satisfaction with the Berkeley Lamp as well as receive user recommendations for design improvements.
- Present results of energy savings and user recommendations to LightCorp.

Project Approach

The California Lighting Technology Center (CLTC) staff sought office buildings where personnel were interested in participating in a study of the Berkeley Lamp. CLTC staff coordinated efforts with LightCorp and with key personnel at the Department of General Services (DGS) to determine appropriate locations for the study. CLTC staff used digital power meters to accurately measure the energy used by each Berkeley Lamp. An estimate of energy consumption was done prior to Berkeley Lamp installation to show actual energy savings obtained by Berkeley Lamp. A web based survey was developed to determine user satisfaction of the lamp. Included in the survey was a section for design improvement ideas. CLTC organized the survey results and design ideas to present to LightCorp for possible future improvements on the Berkeley Lamp.

Project Outcomes

Outcome #1—Characterize Energy Use

One project objective was to measure the energy usage after the installation of the Berkeley Lamp in each office to show energy savings and compare it to energy usage prior to Berkeley Lamp installation. CLTC staff coordinated efforts with DGS to decide which sites should be used for the study. Sites and participants were chosen based on the following considerations:

- Locations should be influential in lighting technology and dedicated to energy efficient lighting.
- Locations should be able to use new technology and spread the new technology to mainstream office buildings in California.

- Locations should have up-to-date lighting technology installed to prove that the Berkeley Lamp will have greater energy savings than current lighting fixtures.
- Locations should have 20 to 40 participants willing to use the lamp exclusively for 3 to 6 months.
- Locations should be able to place the Berkeley Lamps in single, closed offices so we could obtain accurate power readings of the Berkeley Lamp. Cubicles were not considered to be appropriate placement sites as they might get light from other sources and might not need the Berkeley Lamp as much as a closed office.
- Participants should be willing to complete a user survey to determine their likes and dislikes with the use of the Berkeley Lamp.

CLTC staff coordinated efforts with LightCorp and with personnel at the Department of General Services (DGS) to determine appropriate locations for the study. We placed 40 lamps at DGS, 40 lamps at the California Environmental Protection Agency (CalEPA), and 20 lamps at the Division of State Architects (DSA). LightCorp agreed to develop and donate 100 lamps to CLTC to distribute to CalEPA, DGS and DSA. CLTC staff notified the California Energy Commission by email of the sites selected for the study.

After receiving 100 Berkeley Lamps from LightCorp, CLTC staff coordinated with personnel at DGS and CalEPA to determine office placement for the Berkeley Lamps. CLTC staff worked with Dan Burgoyne from DGS and Jeff Castner from CalEPA to determine how to distribute 40 lamps at each location. Shannon Gillgrass assisted with the placement of 20 lamps at DSA.

Digital power meters were used to monitor the power consumed by selected Berkeley Lamps. The digital power meter is a black box that plugs into a wall socket and the Berkeley Lamp is plugged into the box. Every five minutes the digital meter recorded the average power used by the Berkeley Lamp during the previous five minutes. The digital power meter recorded data in text format with the date and time. Digital power meters were set for four week record time, at which point CLTC staff uploaded the text files with power readings and set the meters to run for another four weeks. A total of eight weeks of Berkeley Lamp energy usage was monitored.

The baseline energy report was computed with reference to the Advanced Lighting Guidelines:1993. On page 3-19 the Advance Lighting Guidelines: 1993 shows that a recess static closed, F32T8 Lamp fixture with 3 lamps and a electronic standard rapid start ballast will run 83 Watts of power per fixture. Two fixtures are currently installed in each office, producing 166 Watts of power. Based on a 9 hour work schedule, 1.49 kWhrs of energy will be used each day in each office.

The records from the digital power meters were gathered, averaged and compared to the estimated energy use prior to Berkeley Lamp installation. Added energy savings were obtained by using an occupancy sensor to turn off Berkeley Lamps when people were not present. Results of energy savings of the Berkeley Lamp and occupancy sensor savings are shown in Table 1 and Figure 1. Table 1 shows the average daily usage of kilowatt-hours per day at DGS and CalEPA, compared to an average daily usage of the estimated overhead lighting. The manual results relate to turning the Berkeley Lamp on and off manually with the switch. The occupancy results relate to having an occupancy sensor hooked up to the Berkeley Lamp to turn the lamp on and

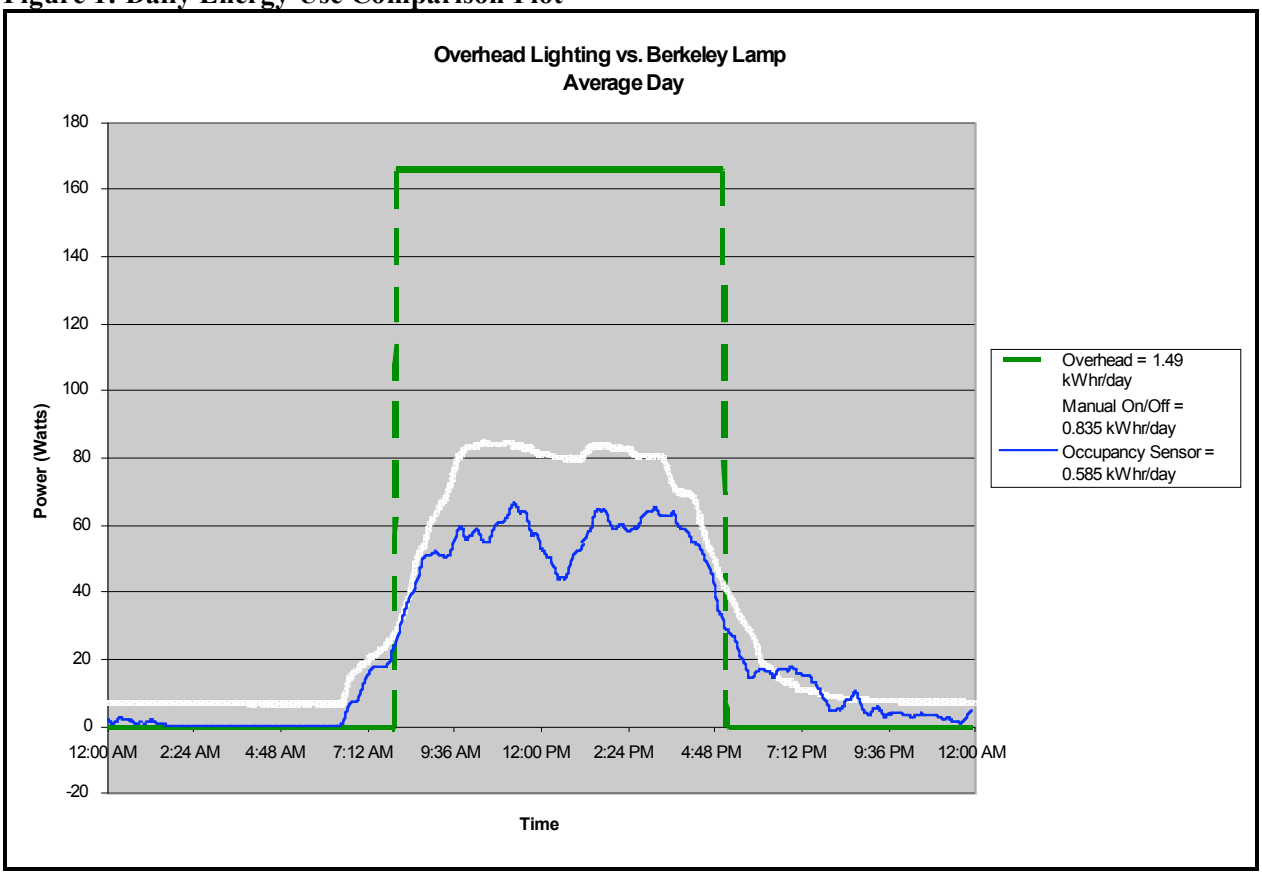
off automatically when someone enters or leaves the room. The average kilowatt-hours (kWhr) used per day with use of the Berkeley Lamp is 0.835 kWhr at DGS and 0.87 kWhr at CalEPA. Compared to the overhead lighting kWhr usage per day of 1.49 kWhr, the Berkeley Lamp produced savings of 0.655 kWhr at DGS and 0.62 kWhr at CalEPA. This resulted in a 43 percent savings with use of the Berkeley Lamp as an alternative to overhead lighting. The use of an occupancy sensor saved an additional 0.25 kWhr per day at DGS and 0.205 kWhr per day at CalEPA over the standard manual switch. This resulted in 27 percent additional savings with use of an occupancy sensor over the manual switch.

Table 1: Detailed Energy Analysis

Site	Control Option	Energy Use (kWh/day)		Energy Savings		Dollar Savings (Per year)	
		Base Case	Berkeley Lamp	Vs. overhead	Vs. BL manual	Vs. overhead	Vs. BL manual
DGS	Manual	1.49 kWh	0.835 kWh	43.96 %	Base	24.56	Base
	Occupancy	1.49 kWh	0.585 kWh	60.74 %	29.94 %	33.94	9.38
EPA	Manual	1.49 kWh	0.87 kWh	41.61 %	Base	23.25	Base
	Occupancy	1.49 kWh	0.665 kWh	55.37 %	23.56 %	30.94	7.69
Average	Manual	1.49 kWh	0.853 kWh	42.79 %	Base	23.91	Base
	Occupancy	1.49 kWh	0.625 kWh	58.06 %	26.75 %	32.44	8.53

Figure 1 shows the average daily usage pattern for three different test cases: (1) prior to the Berkeley Lamp installation, (2) Berkeley Lamps with manual switches, and (3) Berkeley Lamps with occupancy sensors. This indicates the amount of energy that could be saved by using the Berkeley Lamp as a replacement to overhead lighting, as well as the added savings with use of an occupancy sensor.

Figure 1: Daily Energy Use Comparison Plot



Outcome #2—Characterize Satisfaction and Identify Design Improvements

The second project objective was to determine the user satisfaction with the Berkeley Lamp, as well as receive user recommendations for design improvements. A web-based survey was developed to determine user satisfaction. The survey included 20 multiple choice questions that enabled CLTC staff to understand how the lamp was used and whether participants felt that standard overhead lighting was still needed with the Berkeley Lamp. The survey also included a section in which participants could include anonymous comments about the Berkeley Lamp. We anticipated that comments would include improvement ideas for the lamp. The survey was emailed to participants on September 29th, 2004. A copy of the survey with all results can be found in the appendices.

Of the responses received to this survey, 50% were from females and 50% were from males, with an average age of 40 to 49 years old. 73% of people using the lamp had an office smaller than 125 square feet, while only 15% of people using the lamp had an office larger than 150 square feet. Only 31% of users had an office with a window or other daylighting source.

The results from the survey show the majority of the people with a Berkeley Lamp (96%) enjoyed using it. 65% of Berkeley Lamp users found the lighting in their office to be fair, poor, or terrible prior to installing the lamp. After installation of the lamp, 96% of users found the lighting in their office to be good or excellent. This showed an obvious improvement in lighting

quality for employees. In fact, 35% of users felt that the reduction in eye strain and glare in the office was greatly reduced, and 46% of users felt glare was somewhat reduced. Many of the respondents (42%) found that with the use of the Berkeley Lamp they never needed overhead lighting. Prior to the Berkeley Lamp, 81% of people always had their over head lighting on and 100% of people used it periodically. With the Berkeley Lamp, 42% of people turned their overhead lighting off and never turned it on again. Of the people who did use their overhead lighting, only 20% felt the need to have 6 or more 32Watt fluorescent tubes turned on.

The ability to dim the Berkeley Lamp was another added energy saver. 50% of users said they used the dimming feature of the lamp. 69% of people who received a lamp also received an occupancy sensor. Of the people who received an occupancy sensor, 77% thought it was a positive or very positive feature for the lamp. 6% found the occupancy sensor to be a negative aspect to the lamp. 62% even felt the lamp should have an occupancy sensor built into the lamp. The Berkeley Lamp is built to use 2700K lamps and those received positive feedback from most users. 89% of users felt the warm color temperature is positive or very positive, while 12% found the light to be negative and would prefer a cooler color temperature. The people who do not like the 2700K generally have bad eyes and need the cooler light to see better.

The design of the Berkeley Lamp is very unique and 92% of users like the style of the lamp. 69% of users like the table lamp while 31% of users would prefer a floor lamp model to free up space of the desk. The people who like the table lamp also liked the convenience of the plug at the base of the lamp.

The only significant design suggestions revolved around the Berkeley Lamp's form factor:

- 31% would prefer a floor lamp version to the current desktop version
- 92% liked the looks of the current Berkeley Lamp and there were no new suggestions for design improvements.
- A few users requested a smaller shade to facilitate use on their crowded desktops, but that is the only design improvement mentioned.

Outcome #3—Determine How Users Use The Dimming and Switching Control Features.

An added energy saving tool built into the Berkeley Lamp is the ability to dim. Both task and ambient light can be turned on and off and dimmed individually. The lamp can run at any combination between 22 Watts to 123 Watts, giving a maximum reduction of 82.1 percent. Unfortunately only 50 percent of users actually took advantage of the dimming and control feature of the Berkeley Lamp. The users who did not use the dimming feature used the lamp exclusively and needed all the flux that the lamp produces to light up the entire office. The 50 percent of people who did use the control and dimming feature often did not use the Berkeley Lamp exclusively. Some people used the Berkeley Lamp as a task light only. These users felt that low level ambient light was optimal with the standard overhead lighting. The overhead lighting was not run at full power at the few instances where this occurred. In general the overhead lighting that was left on was reduced to 30 percent maximum power.

Dimming proves to be an added energy saving component to the Berkeley Lamp. The ability to turn off 60 to 70 percent of the overhead light and only use the task lighting aspect of the Berkeley lamp will still save around 60 Watts of energy. This accumulates to 0.54 kWhrs a day,

assuming a 9 hour work day and the standard 6 overhead T8 lamps. CLTC staff were unable to determine whether users used the task lighting or ambient lighting specifically, but found dimming to be relatively common.

Outcome #4—Impact Design Changes

The final project objective was to present results of energy savings and user recommendations to LightCorp, the product manufacturer. CLTC staff presented the preliminary survey results to LightCorp staff in person at CLTC on August 4, 2004, sent draft written results on December 23, 2004, and this final draft report on March 28, 2005. Their staff was pleased to receive the results, though surprised to find no suggestions for design changes, except to produce a floor lamp model or smaller shade. LightCorp will consider the survey results if they revise this product, but they are not planning any design changes.

Conclusions and Recommendations

Energy savings with use of a Berkeley Lamp, as opposed to standard overhead lighting, are approximately 50 percent, with an additional 25 percent savings with an occupancy sensor. These energy-saving estimates assume that overhead lighting is turned off entirely and the Berkeley Lamp is used exclusively. The finding that the Berkeley Lamp saved approximately 50% is consistent with prior metered studies of the Berkeley Lamp. The finding that the occupancy sensor saved an additional 25% is new information that can be utilized by lighting companies in determining if it would be practical for Berkeley Lamps to include integrated occupancy sensors.

A few issues that came up in the comment area of the web based survey include references to the color temperature and the brightness level. Remembering that only 12% of people did not like the 2700K lamps; one person who prefers very cool fluorescent tubes felt the warm color was too great of a contrast. This individual did note that due to bad eyesight, it was necessary to keep both the overhead fluorescent tubes and the Berkeley Lamp on. Another person stated that with their bad eyesight more light was needed, but they wanted more light with 2700K fluorescent tubes. A comment was made that there was insufficient light for reading documents, but when working at the computer the Berkeley Lamp was adequate. So the use of a low-powered task light is all that was needed in addition to the Berkeley Lamp, and it was only needed when reading documents. One user felt the lamp had the ideal amount of light and perfect color temperature for after-hours work. This person felt the contrast between the Berkeley Lamp's light and the standard overhead lighting during the day was too great, causing a little bit of glare on their eyes. Most of the user improvement ideas had to do with the color temperature and the addition of a floor model.

Many people do not have enough room on their desk for a large fixture, causing a few people to not want the standard Berkeley Lamp at work.. Other table lamp problems occurred because of the size of the lamp shade; some felt it is too large. But that did not deter one person from making the comment that they would love to buy a couple of lamps for their home. A smaller shade option or a floor lamp version could help address these concerns from the users.

While most users liked the idea of an occupancy sensor; some showed concerns about the location of the sensor. The suggestion was made to locate the sensor as high up the lamp as possible to prevent objects from obstructing the view of the sensor. Any location that does not easily get blocked by miscellaneous desktop objects and has a clear line of site to the user is an adequate location.

The users overall impression of the lamp is that it is great and well-liked by almost everyone using it, with 96% giving it a positive or very positive rating. The only significant design suggestions revolved around the Berkeley Lamp's form factor:

- 31% would prefer a floor lamp version to the current desktop version
- 92% liked the looks of the current Berkeley Lamp and there were no new suggestions for design improvements.
- A few users requested a smaller shade to facilitate easier use on their crowded desktops.

The field study yielded information about user preferences and practices that could be of service to lighting companies interested in the Berkeley Lamp technology. As of 2005, LightCorp had not indicated an intention to modify its Berkeley Lamp product. But Full Spectrum, which has also acquired rights to the technology, is intending to introduce a new version of the Berkeley Lamp, using a different form factor, in late 2006.

State agencies can easily purchase the Berkeley Lamp from two sources—Office Max, the official office supply supplier to the state (although the product is not listed in the catalogue), and Sierra Lake Group, Inc. (760-443-2200), a certified California small businesses. Other organizations also facilitate purchases, as noted on the Light Corp web site: http://www.lightcorp.com/Product.cfm?id=24 .

References

Electric Power Research Institute, Advanced Lighting Guidelines: 1993 (Revision 1), (Palo Alto, California, EPRI Report Number TR-101022-R1) May 1993. http://www.epri.com/OrderableitemDesc.asp?product_id=TR-101022-R1&targetnid=23&value=99T011.0&marketnid=5&oitype=1&searchdate=5/1/1993

Appendix A—Raw Data: Survey Results

The following tables summarize responses from the web based survey. At the end of the survey there was a comment section where users could respond to their likes and dislikes about the Berkeley Lamp. All responses are following the survey.

1. What is your overall impression of the Berkeley Lamp?

Response	*% of Answers*	*Ratio*
Very Positive:	50%	13 / 26
Positive:	46%	12 / 26
Neutral:	4%	1 / 26
Negative:	0%	0 / 26
Very Negative:	0%	0 / 26

2. What is your age group?

Response	*% of Answers*	*Ratio*
20-29:	0%	0 / 26
30-39:	15%	4 / 26
40-49:	54%	14 / 26
50-59:	31%	8 / 26
60+:	0%	0 / 26

3. What is your gender?

Response	*% of Answers*	*Ratio*
Male:	50%	13 / 26
Female:	50%	13 / 26

4. What is the approximate size of your office in square feet?

Response	*% of Answers*	*Ratio*
0-100:	23%	6 / 26
101-125:	50%	13 / 26
126-150:	12%	3 / 26
151-175:	15%	4 / 26
176+:	0%	0 / 26

5. How would you rate the overall "Lighting Quality" in your office BEFORE you got the Berkeley Lamp?

Response	*% of Answers*	*Ratio*
Terrible:	4%	1 / 26
Poor:	15%	4 / 26
Fair:	46%	12 / 26
Good:	35%	9 / 26
Excellent:	0%	0 / 26

6. How would you rate the overall "Lighting Quality" in your office AFTER getting the Berkeley Lamp?

Response	*% of Answers*	*Ratio*
Terrible:	0%	0 / 26
Poor:	0%	0 / 26
Fair:	4%	1 / 26
Good:	54%	14 / 26
Excellent:	42%	11 / 26

7. What effect do you feel the Berkeley Lamp has on your visibility (i.e., reducing eye strain, glare, etc.)?

Response	*% of Answers*	*Ratio*
Great:	35%	9 / 26
Somewhat:	46%	12 / 26
None:	19%	5 / 26
Worse:	0%	0 / 26

8. When working in your office, how often did you use your overhead lighting BEFORE you got the Berkeley Lamp?

Response	*% of Answers*	*Ratio*
Never:	0%	0 / 26
Rarely:	8%	2 / 26
Sometimes:	4%	1 / 26
Usually:	8%	2 / 26
Always:	81%	21 / 26

9. How often do you use the overhead lighting now that you have the Berkeley Lamp?

Response	*% of Answers*	*Ratio*
Never:	42%	11 / 26

Response	*% of Answers*	*Ratio*
Rarely:	12%	3 / 26
Sometimes:	0%	0 / 26
Usually:	15%	4 / 26
Always:	31%	8 / 26

10. How many overhead lighting lamps did you continue using after receiving the Berkeley Lamp? Count the number of fluorescent tubes that turn on when you activate your overhead lighting.

Response	*% of Answers*	*Ratio*
0:	54%	14 / 26
1:	0%	0 / 26
2:	15%	4 / 26
3:	0%	0 / 26
4:	12%	3 / 26
5:	0%	0 / 26
6:	12%	3 / 26
7+:	8%	2 / 26

11. Do you ever adjust the light level of either component (top or bottom) of your Berkeley Lamp?

Response	*% of Answers*	*Ratio*
Yes:	50%	13 / 26
No:	50%	13 / 26

12. Were you a recipient of an occupancy sensor during the study phase?

Response	*% of Answers*	*Ratio*
Yes:	69%	18 / 26
No:	31%	8 / 26

13. If you did received an occupancy sensor, what is your overall impression of the sensor?

Response	*% of Answers*	*Ratio*
Very Positive:	44%	8 / 18
Positive:	33%	6 / 18
Neutral:	17%	3 / 18
Negative:	6%	1 / 18
Very Negative:	0%	0 / 18

14. Do you think the Berkeley Lamp should have a motion sensor built into it?

Response	*% of Answers*	*Ratio*
Yes:	62%	16 / 26
No:	38%	10 / 26

15. The Berkeley Lamp has a very warm, yellow light compared to overhead lighting which is a cooler, white light. What is your overall impression of the warm, yellow light coming from the Berkeley Lamp?

Response	*% of Answers*	*Ratio*
Very Positive:	54%	14 / 26
Positive:	35%	9 / 26
Neutral:	0%	0 / 26
Negative:	12%	3 / 26
Very Negative:	0%	0 / 26

16. Is your desk within 15 feet of a window or another significant daylight source?

Response	*% of Answers*	*Ratio*
Yes:	31%	8 / 26
No:	69%	18 / 26

17. Some users have indicated that they would prefer a floor lamp version of the Berkeley Lamp. Would you prefer a floor lamp version of the Berkeley Lamp or its current Berkeley Lamp version?

Response	*% of Answers*	*Ratio*
Table:	69%	18 / 26
Floor:	31%	8 / 26

18. Do you like the looks of the Berkeley Lamp? Do you like the black, triangular base? (Add comments at the end for improvement ideas in design)

Response	*% of Answers*	*Ratio*
Yes:	92%	24 / 26
No:	8%	2 / 26

19. Even though you were instructed not to use the extra plug on the base of the Berkeley Lamp, do you think it is a feature you would use in the future?

Response	*% of Answers*	*Ratio*
Yes:	69%	18 / 26
No:	31%	8 / 26

20. User Comments:

1. If you can replace the overhead tubes with the Berkeley tubes that would be great. I like the lamp but it does add an extra piece of furniture.

2. I have very bad eyes and require a lot of light to see clearly. To address this need for light, my Business Services staff put the newer natural white lights tubes in my office which provide a very clear light for me to see. The yellow light from the test lamp does not seem as good to me.

3. I would have liked to put it on my desktop, but the shade was too big...a floor model would allow me to place it next to my desk.

4. On number 14, a sensor is a good idea; however, if it's in the lamp it may be difficult to 'aim' it at the occupant so that it will work properly.

5. I would love to buy a couple for my home!

6. Great stuff. My only complaint is that it's not quite bright enough. It's the only light I use for my whole office at night, and it's fine. But if one of the bulbs were 20% brighter or so, that'd probably do it for a 150 sq. ft. office. –db

7. I received positive feedback from staff and visitors. Everyone likes the overall look, design, and appearance/feel it gives the work area. It makes the work area seem more "homely." Also, the lamp helped reduce the strong glare given off by the regular white overhead light. I was able to reduce the overhead lights from six tubes down to two tubes. However, due to the location of the table lamp in my office, I would prefer floor lamp model. The current location of the lamp produces too much glare for me due to my eye glasses. "Plays/Messes" with my eyes. Overall it is a great product.

8. I really like the lamps for after hour working, e.i., after 6:00 p.m. when the overhead lights turn off. It was very convenient to have the Berkeley Lamp because the other desk lighting provide does not provide as much lighting. My office is an internal hard office with no windows close by.

9. I answered the above questions from the perspective of the interior windowless office I had when I first received the lamp. I have since moved to an office with a large window. In my prior office, I used a task lamp with the Berkeley lamp. The Berkeley lamp was all I needed if I was working on my computer, but if I turned to do alot of reading at my desk, I would use the task lamp as it was closer to my desk surface. After moving to the window office, I use the Berkeley lamp exclusively. I much prefer the quality of the lamp as opposed to the overhead lights.

10. The sensor should be more sensitive.

11. Your survey has some limitations due to situational differences. I find the Berkeley light to be great, partly because my regular office lights turn off at 6:00 p.m. and tyhe Berkeley light provides excellent light to meet my needs when this occurs. You probably also ought to provide a middle choice in areas such as Floor or Table version of the light. I currently have a table version and am very satisfied with it. However, a floor standing model would also be beneficial for certain uses. Thank you.

12. The triangular shape combined with a "residential" looking lampshade are kind of an odd mix and have a large footprint. A built-in occupancy sensor would be great, preferably adjustable for sensitivity, direction and the ability to disable it if not desired in some instances. A suggested location for the motion sensor would be just below the top triangular connetion of the three rods just below the lampshade. That way, it is more difficult to obstruct motion sensing by people placing objects (photos, etc.) between the occupant and the sensor.

13. I enjoyed the light of the lamp. The lamp provided the extra light I needed by my desk. I did use the extra plug feature (sorry) and liked it very much. If the lamp was a standing model, this feature would not be as convenient. I could not rely only on this lamp as my only source of light for my interior office, but it was a complement to my existing overhead light. If I keep the lamp, I will ask to reduce the overhead lighting.

14. People who visited me often made comments about how they enjoyed the soft lighting.

15. If a sensor was built into the lamp, I would like to be able to adjust the timer. I really like the lamp but I guess the sensor attachment is not very sensitive because the lamp keeps turning off unless there is motion very close to the sensor. I am located in a cubicle in a large room but I had most of the overhead lights taken out and use only the Berkeley lamp the outside light from the window. It is much easier on my eyes and get less headaches. Thanks!

16. I'd prefer if it were 20% brighter on one or both lights. –db

Appendix B—Raw Data: Energy Use

The following seven tables include the raw data from each digital power meter used in the field test. Each table contains the average usage of each power meter. The averages of each power meter are organized in separate categories depending on location and use of an occupancy sensor. The average usage of each person is averaged into on large average to give the usage of an average day at DGS or CalEPA.

Trip 1 CalEPA: Manual On/Off Data

The Average of the averages	1	2	The total	
	AVERAGE	AVERAGE	Average	kWhrs
12:00 AM	0	0	0	
12:05 AM	0	0	0	
12:10 AM	0	0	0	
12:15 AM	0	0	0	
12:20 AM	0	0	0	
12:25 AM	0	0	0	
12:30 AM	0	0	0	
12:35 AM	0	0	0	
12:40 AM	0	0	0	
12:45 AM	0	0	0	
12:50 AM	0	0	0	
12:55 AM	0	0	0	0
1:00 AM	0	0	0	
1:05 AM	0	0	0	
1:10 AM	0	0	0	
1:15 AM	0	0	0	
1:20 AM	0	0	0	
1:25 AM	0	0	0	
1:30 AM	0	0	0	
1:35 AM	0	0	0	
1:40 AM	0	0	0	
1:45 AM	0	0	0	
1:50 AM	0	0	0	
1:55 AM	0	0	0	0
2:00 AM	0	0	0	
2:05 AM	0	0	0	
2:10 AM	0	0	0	
2:15 AM	0	0	0	
2:20 AM	0	0	0	
2:25 AM	0	0	0	
2:30 AM	0	0	0	
2:35 AM	0	0	0	
2:40 AM	0	0	0	
2:45 AM	0	0	0	
2:50 AM	0	0	0	
2:55 AM	0	0	0	0
3:00 AM	0	0	0	
3:05 AM	0	0	0	
3:10 AM	0	0	0	
3:15 AM	0	0	0	
3:20 AM	0	0	0	
3:25 AM	0	0	0	
3:30 AM	0	0	0	
3:35 AM	0	0	0	
3:40 AM	0	0	0	
3:45 AM	0	0	0	
3:50 AM	0	0	0	
3:55 AM	0	0	0	0
4:00 AM	0	0	0	
4:05 AM	0	0	0	
4:10 AM	0	0	0	
4:15 AM	0	0	0	
4:20 AM	0	0	0	

The Average of the averages	1	2	The total	
	AVERAGE	AVERAGE	Average	kWhrs
4:25 AM	0	0	0	
4:30 AM	0	0	0	
4:35 AM	0	0	0	
4:40 AM	0	0	0	
4:45 AM	0	0	0	
4:50 AM	0	0	0	
4:55 AM	0	0	0	0
5:00 AM	0	0	0	
5:05 AM	0	0	0	
5:10 AM	0	0	0	
5:15 AM	0	0	0	
5:20 AM	0	0	0	
5:25 AM	0	0	0	
5:30 AM	0	0	0	
5:35 AM	0	0	0	
5:40 AM	0	0	0	
5:45 AM	0	0	0	
5:50 AM	0	0	0	
5:55 AM	0	0	0	0
6:00 AM	0	0	0	
6:05 AM	0	0	0	
6:10 AM	0	0	0	
6:15 AM	0	0	0	
6:20 AM	0	0	0	
6:25 AM	0	0	0	
6:30 AM	0	0	0	
6:35 AM	0	0	0	
6:40 AM	0	0	0	
6:45 AM	0	0	0	
6:50 AM	0	0	0	
6:55 AM	0	0	0	0
7:00 AM	2	0	1	
7:05 AM	14	7	10	
7:10 AM	30	51	40	
7:15 AM	39	75	57	
7:20 AM	45	87	66	
7:25 AM	59	92	75	
7:30 AM	77	99	88	
7:35 AM	83	99	91	
7:40 AM	83	99	91	
7:45 AM	83	99	91	
7:50 AM	83	99	91	
7:55 AM	83	98	91	66
8:00 AM	83	99	91	
8:05 AM	86	99	92	
8:10 AM	92	99	95	
8:15 AM	96	99	97	
8:20 AM	96	98	97	
8:25 AM	96	98	97	
8:30 AM	96	98	97	
8:35 AM	96	98	97	
8:40 AM	96	98	97	
8:45 AM	96	98	97	
8:50 AM	96	98	97	
8:55 AM	96	98	97	96
9:00 AM	96	98	97	
9:05 AM	96	98	97	
9:10 AM	96	98	97	
9:15 AM	96	98	97	
9:20 AM	96	98	97	
9:25 AM	96	98	97	
9:30 AM	96	98	97	
9:35 AM	96	98	97	
9:40 AM	96	98	97	
9:45 AM	96	98	97	
9:50 AM	96	98	97	
9:55 AM	96	98	97	97

The Average of the averages	1	2	The total	
	AVERAGE	AVERAGE	Average	kWhrs
10:00 AM	96	98	97	
10:05 AM	96	98	97	
10:10 AM	96	98	97	
10:15 AM	96	98	97	
10:20 AM	96	98	97	
10:25 AM	95	98	97	
10:30 AM	96	98	97	
10:35 AM	96	97	97	
10:40 AM	96	98	97	
10:45 AM	96	98	97	
10:50 AM	97	98	97	
10:55 AM	103	98	100	97
11:00 AM	102	98	100	
11:05 AM	102	98	100	
11:10 AM	102	98	100	
11:15 AM	102	98	100	
11:20 AM	102	98	100	
11:25 AM	103	98	100	
11:30 AM	102	98	100	
11:35 AM	102	98	100	
11:40 AM	102	98	100	
11:45 AM	102	98	100	
11:50 AM	102	98	100	
11:55 AM	102	98	100	100
12:00 PM	99	98	99	
12:05 PM	96	98	97	
12:10 PM	96	98	97	
12:15 PM	96	98	97	
12:20 PM	96	98	97	
12:25 PM	96	98	97	
12:30 PM	96	98	97	
12:35 PM	96	98	97	
12:40 PM	96	98	97	
12:45 PM	96	98	97	
12:50 PM	96	97	97	
12:55 PM	96	98	97	97
1:00 PM	96	98	97	
1:05 PM	96	98	97	
1:10 PM	96	98	97	
1:15 PM	96	98	97	
1:20 PM	96	98	97	
1:25 PM	96	98	97	
1:30 PM	96	98	97	
1:35 PM	96	99	97	
1:40 PM	97	98	97	
1:45 PM	96	98	97	
1:50 PM	97	98	97	
1:55 PM	96	98	97	97
2:00 PM	97	98	98	
2:05 PM	97	98	98	
2:10 PM	97	98	97	
2:15 PM	97	98	97	
2:20 PM	97	98	98	
2:25 PM	97	99	98	
2:30 PM	96	99	98	
2:35 PM	97	99	98	
2:40 PM	92	99	95	
2:45 PM	90	99	94	
2:50 PM	84	99	91	
2:55 PM	83	98	91	96
3:00 PM	84	99	91	
3:05 PM	84	99	91	
3:10 PM	84	99	91	
3:15 PM	84	99	91	
3:20 PM	84	99	91	
3:25 PM	84	99	91	
3:30 PM	84	99	91	

The Average of the averages	1	2	The total	
	AVERAGE	AVERAGE	Average	kWhrs
3:35 PM	84	99	92	
3:40 PM	84	99	91	
3:45 PM	84	99	92	
3:50 PM	84	99	92	
3:55 PM	84	99	92	91
4:00 PM	84	90	87	
4:05 PM	84	16	50	
4:10 PM	84	0	42	
4:15 PM	85	0	42	
4:20 PM	77	0	38	
4:25 PM	60	0	30	
4:30 PM	48	0	24	
4:35 PM	41	0	20	
4:40 PM	27	0	13	
4:45 PM	20	0	10	
4:50 PM	20	0	10	
4:55 PM	20	0	10	31
5:00 PM	20	0	10	
5:05 PM	16	0	8	
5:10 PM	13	0	7	
5:15 PM	13	0	7	
5:20 PM	7	0	3	
5:25 PM	7	0	3	
5:30 PM	7	0	3	
5:35 PM	7	0	3	
5:40 PM	7	0	3	
5:45 PM	3	0	2	
5:50 PM	0	0	0	
5:55 PM	0	0	0	4
6:00 PM	0	0	0	
6:05 PM	0	0	0	
6:10 PM	0	0	0	
6:15 PM	0	0	0	
6:20 PM	0	0	0	
6:25 PM	0	0	0	
6:30 PM	0	0	0	
6:35 PM	0	0	0	
6:40 PM	0	0	0	
6:45 PM	0	0	0	
6:50 PM	0	0	0	
6:55 PM	0	0	0	0
7:00 PM	0	0	0	
7:05 PM	0	0	0	
7:10 PM	0	0	0	
7:15 PM	0	0	0	
7:20 PM	0	0	0	
7:25 PM	0	0	0	
7:30 PM	0	0	0	
7:35 PM	0	0	0	
7:40 PM	0	0	0	
7:45 PM	0	0	0	
7:50 PM	0	0	0	
7:55 PM	0	0	0	0
8:00 PM	0	0	0	
8:05 PM	0	0	0	
8:10 PM	0	0	0	
8:15 PM	0	0	0	
8:20 PM	0	0	0	
8:25 PM	0	0	0	
8:30 PM	0	0	0	
8:35 PM	0	0	0	
8:40 PM	0	0	0	
8:45 PM	0	0	0	
8:50 PM	0	0	0	
8:55 PM	0	0	0	0
9:00 PM	0	0	0	
9:05 PM	0	0	0	

The Average of the averages	1	2	The total Average	kWhrs
	AVERAGE	AVERAGE		
9:10 PM	0	0	0	
9:15 PM	0	0	0	
9:20 PM	0	0	0	
9:25 PM	0	0	0	
9:30 PM	0	0	0	
9:35 PM	0	0	0	
9:40 PM	0	0	0	
9:45 PM	0	0	0	
9:50 PM	0	0	0	
9:55 PM	0	0	0	0
10:00 PM	0	0	0	
10:05 PM	0	0	0	
10:10 PM	0	0	0	
10:15 PM	0	0	0	
10:20 PM	0	0	0	
10:25 PM	0	0	0	
10:30 PM	0	0	0	
10:35 PM	0	0	0	
10:40 PM	0	0	0	
10:45 PM	0	0	0	
10:50 PM	0	0	0	
10:55 PM	0	0	0	0
11:00 PM	0	0	0	
11:05 PM	0	0	0	
11:10 PM	0	0	0	
11:15 PM	0	0	0	
11:20 PM	0	0	0	
11:25 PM	0	0	0	
11:30 PM	0	0	0	
11:35 PM	0	0	0	
11:40 PM	0	0	0	
11:45 PM	0	0	0	
11:50 PM	0	0	0	
11:55 PM	0	0	0	0
TOTAL	10,527	10,426	10,477	873
				0.87

Trip 1 CalEPA: Occupancy Sensor Data

Average of the averages	1.00	2	3	4	5.00	6	7	8	9	Total	
	Ave	Ave	Ave	Ave	Ave	Ave	Ave	mAve	Ave	Ave	kWhrs
12:00 AM	15	0	7	0	0	1	7	0	0	**3**	
12:05 AM	15	0	7	0	0	1	7	0	0	**3**	
12:10 AM	15	0	7	0	0	1	7	0	0	**3**	
12:15 AM	15	0	3	0	0	1	7	0	0	**3**	
12:20 AM	15	0	0	0	0	1	7	0	0	**3**	
12:25 AM	15	1	0	0	0	1	7	0	0	**3**	
12:30 AM	15	3	1	0	0	1	7	0	0	**3**	
12:35 AM	15	3	7	0	0	1	7	0	0	**4**	
12:40 AM	15	3	7	0	0	1	6	0	0	**4**	
12:45 AM	15	3	7	0	0	1	0	0	0	**3**	
12:50 AM	15	3	7	0	0	1	0	0	0	**3**	
12:55 AM	15	2	7	0	0	1	0	0	0	**3**	3
1:00 AM	15	0	7	0	0	1	0	0	0	**3**	
1:05 AM	15	0	7	0	0	1	0	0	0	**3**	
1:10 AM	15	0	5	0	0	1	0	0	0	**2**	
1:15 AM	15	0	0	0	0	1	0	0	0	**2**	
1:20 AM	15	0	0	0	0	1	0	0	0	**2**	
1:25 AM	15	0	0	0	0	1	0	0	0	**2**	
1:30 AM	15	0	0	0	0	1	0	0	0	**2**	
1:35 AM	15	0	0	0	0	1	0	0	0	**2**	
1:40 AM	15	0	0	0	0	1	0	0	0	**2**	
1:45 AM	15	0	0	0	0	1	0	0	0	**2**	
1:50 AM	15	0	0	0	0	1	0	0	0	**2**	
1:55 AM	15	0	0	0	0	1	0	0	0	**2**	2
2:00 AM	15	0	0	0	0	1	0	0	0	**2**	
2:05 AM	15	0	0	0	0	1	0	0	0	**2**	
2:10 AM	15	0	0	0	0	1	0	0	0	**2**	
2:15 AM	15	0	0	0	0	1	0	0	0	**2**	
2:20 AM	15	0	0	0	0	1	0	0	0	**2**	
2:25 AM	15	0	0	0	0	1	0	0	0	**2**	
2:30 AM	15	0	0	0	0	1	0	0	0	**2**	
2:35 AM	15	0	0	0	0	1	0	0	0	**2**	
2:40 AM	15	0	0	0	0	1	0	0	0	**2**	
2:45 AM	15	0	0	0	0	1	0	0	0	**2**	
2:50 AM	15	0	0	0	0	1	0	0	0	**2**	
2:55 AM	15	0	0	0	0	1	0	0	0	**2**	2
3:00 AM	15	0	0	0	0	1	0	0	0	**2**	
3:05 AM	15	0	0	0	0	1	0	0	0	**2**	
3:10 AM	15	0	0	0	0	1	0	0	0	**2**	
3:15 AM	15	0	0	0	0	1	0	0	0	**2**	
3:20 AM	15	0	0	0	0	1	0	0	0	**2**	
3:25 AM	15	0	0	0	0	1	0	0	0	**2**	
3:30 AM	15	0	0	1	0	1	0	0	0	**2**	
3:35 AM	15	0	0	6	0	1	0	0	0	**2**	
3:40 AM	15	0	0	6	0	1	0	0	0	**2**	
3:45 AM	15	0	0	6	0	1	0	0	0	**2**	
3:50 AM	15	0	0	6	0	1	0	0	0	**2**	
3:55 AM	15	0	0	6	0	1	0	0	0	**2**	2
4:00 AM	15	0	0	6	0	1	0	0	0	**2**	
4:05 AM	15	0	0	2	0	1	0	0	0	**2**	
4:10 AM	15	0	0	0	0	1	0	0	0	**2**	
4:15 AM	15	0	0	0	0	1	0	0	0	**2**	
4:20 AM	15	0	0	0	0	1	0	0	0	**2**	
4:25 AM	15	0	0	0	0	1	0	0	0	**2**	
4:30 AM	15	0	0	0	0	1	0	0	0	**2**	
4:35 AM	15	0	0	0	0	1	0	0	0	**2**	
4:40 AM	15	0	0	0	0	1	0	0	0	**2**	
4:45 AM	15	0	0	0	0	1	0	0	0	**2**	
4:50 AM	15	0	0	0	0	1	0	0	0	**2**	
4:55 AM	15	0	0	0	0	1	0	0	0	**2**	2
5:00 AM	15	0	0	0	0	1	0	0	0	**2**	
5:05 AM	15	0	0	0	0	1	0	0	0	**2**	
5:10 AM	15	0	0	0	0	1	0	0	0	**2**	
5:15 AM	15	0	0	0	0	1	0	0	0	**2**	
5:20 AM	15	0	0	0	0	1	0	0	0	**2**	
5:25 AM	15	0	0	0	0	1	0	0	0	**2**	
5:30 AM	15	0	0	0	0	1	0	0	0	**2**	

Average of the averages	1.00	2	3	4	5.00	6	7	8	9	Total	
	Ave	Ave	Ave	Ave	Ave	Ave	Ave	mAve	Ave	Ave	kWhrs
5:35 AM	15	3	0	0	0	1	0	0	0	**2**	
5:40 AM	15	3	0	0	0	1	0	0	0	**2**	
5:45 AM	15	3	0	0	0	1	0	0	0	**2**	
5:50 AM	15	3	0	0	0	1	0	0	0	**2**	
5:55 AM	15	3	0	0	0	1	0	0	0	**2**	2
6:00 AM	15	3	0	0	0	1	0	0	0	**2**	
6:05 AM	15	0	0	0	0	1	0	0	0	**2**	
6:10 AM	15	0	0	0	0	1	0	0	6	**2**	
6:15 AM	15	0	0	0	0	1	0	0	8	**3**	
6:20 AM	15	0	0	0	0	1	0	0	8	**3**	
6:25 AM	15	0	0	0	0	1	0	0	8	**3**	
6:30 AM	15	0	0	0	0	1	0	0	8	**3**	
6:35 AM	15	0	0	0	0	1	0	0	8	**3**	
6:40 AM	15	0	0	0	0	1	0	0	3	**2**	
6:45 AM	15	0	1	0	5	1	0	0	0	**2**	
6:50 AM	15	0	6	0	9	1	0	0	0	**3**	
6:55 AM	15	0	8	0	11	1	0	0	0	**4**	3
7:00 AM	15	0	23	0	14	1	0	0	0	**6**	
7:05 AM	15	0	51	0	14	1	0	0	0	**9**	
7:10 AM	15	0	90	0	16	1	0	0	0	**14**	
7:15 AM	15	0	92	0	15	1	1	0	0	**14**	
7:20 AM	15	0	92	0	12	1	7	0	3	**14**	
7:25 AM	23	0	92	0	17	1	7	0	8	**17**	
7:30 AM	38	4	92	1	21	1	7	0	8	**19**	
7:35 AM	44	19	92	6	19	0	7	2	8	**22**	
7:40 AM	45	31	91	11	15	1	7	18	8	**25**	
7:45 AM	45	37	83	15	19	0	7	41	8	**28**	
7:50 AM	45	42	68	23	21	0	5	42	5	**28**	
7:55 AM	45	44	30	27	21	0	8	42	0	**24**	18
8:00 AM	45	44	13	36	25	0	14	45	0	**25**	
8:05 AM	55	46	16	64	26	0	14	66	0	**32**	
8:10 AM	57	43	22	75	26	7	17	85	0	**37**	
8:15 AM	64	40	31	78	31	26	21	92	0	**43**	
8:20 AM	64	44	65	86	40	75	30	83	0	**54**	
8:25 AM	64	44	78	80	54	88	65	80	0	**62**	
8:30 AM	64	47	80	80	72	99	71	76	1	**66**	
8:35 AM	64	47	85	80	79	99	77	76	8	**68**	
8:40 AM	64	46	91	82	81	99	77	82	8	**70**	
8:45 AM	64	48	91	91	80	98	77	76	8	**70**	
8:50 AM	64	45	91	91	85	98	78	76	15	**71**	
8:55 AM	64	48	91	91	89	98	82	76	16	**73**	56
9:00 AM	64	48	91	91	96	98	85	75	17	**74**	
9:05 AM	64	48	91	91	94	98	85	73	25	**74**	
9:10 AM	64	48	91	91	77	98	85	68	29	**72**	
9:15 AM	66	47	87	84	62	98	84	67	35	**70**	
9:20 AM	71	48	90	79	66	98	84	64	53	**72**	
9:25 AM	79	48	91	79	72	98	85	68	59	**75**	
9:30 AM	83	46	85	79	78	98	85	71	66	**77**	
9:35 AM	82	44	84	79	77	98	84	76	66	**77**	
9:40 AM	82	44	84	79	73	98	85	73	71	**77**	
9:45 AM	82	47	79	79	73	98	85	62	66	**74**	
9:50 AM	82	48	78	79	76	98	85	67	69	**76**	
9:55 AM	83	48	68	79	77	98	84	66	75	**75**	74
10:00 AM	83	48	58	79	73	98	84	59	70	**72**	
10:05 AM	83	48	58	79	72	98	84	59	66	**72**	
10:10 AM	83	45	58	79	68	98	86	68	66	**72**	
10:15 AM	83	46	64	79	68	98	92	76	66	**75**	
10:20 AM	83	48	64	79	68	98	91	73	66	**74**	
10:25 AM	83	49	64	79	71	98	86	76	56	**73**	
10:30 AM	83	49	64	79	73	98	84	75	59	**74**	
10:35 AM	83	50	64	81	79	98	80	77	66	**75**	
10:40 AM	83	51	55	84	81	98	75	84	66	**75**	
10:45 AM	83	54	60	85	73	98	72	76	66	**74**	
10:50 AM	83	56	65	85	73	98	77	76	66	**75**	
10:55 AM	83	56	59	85	69	103	81	76	81	**77**	74
11:00 AM	83	56	63	85	63	107	92	84	89	**80**	
11:05 AM	83	57	64	85	56	107	99	85	91	**81**	
11:10 AM	83	55	65	87	53	107	99	84	91	**80**	
11:15 AM	83	56	77	91	48	107	99	85	91	**82**	
11:20 AM	83	55	84	91	43	107	99	78	91	**81**	

Average of the averages	1.00	2	3	4	5.00	6	7	8	9	Total	
	Ave	Ave	Ave	Ave	Ave	Ave	Ave	mAve	Ave	Ave	kWhrs
11:25 AM	83	55	87	90	39	106	96	81	83	**80**	
11:30 AM	83	54	86	86	46	106	87	85	83	**80**	
11:35 AM	83	53	84	85	45	106	85	98	83	**80**	
11:40 AM	83	51	88	75	52	107	85	101	83	**80**	
11:45 AM	83	52	91	63	62	106	85	101	83	**81**	
11:50 AM	83	43	91	59	73	106	85	101	83	**80**	
11:55 AM	83	47	90	62	68	106	85	101	83	**81**	80
12:00 PM	83	50	85	61	75	107	84	101	83	**81**	
12:05 PM	80	51	87	51	70	106	91	98	79	**79**	
12:10 PM	75	51	91	55	78	106	88	91	74	**79**	
12:15 PM	75	48	91	56	81	107	90	74	65	**76**	
12:20 PM	75	47	90	56	83	106	84	59	58	**73**	
12:25 PM	75	45	91	44	77	106	81	34	58	**68**	
12:30 PM	75	43	91	35	76	106	89	25	58	**67**	
12:35 PM	75	43	91	38	77	106	92	33	58	**68**	
12:40 PM	75	44	91	40	79	106	87	27	51	**67**	
12:45 PM	75	45	91	50	78	106	85	20	41	**66**	
12:50 PM	75	41	90	52	71	106	85	17	30	**63**	
12:55 PM	75	44	91	57	65	106	85	17	31	**63**	71
1:00 PM	76	45	91	59	66	106	85	19	42	**65**	
1:05 PM	83	50	91	65	73	106	78	21	42	**68**	
1:10 PM	84	53	91	74	69	106	78	39	42	**71**	
1:15 PM	86	53	91	68	75	106	78	58	47	**74**	
1:20 PM	86	57	92	68	85	106	78	64	58	**77**	
1:25 PM	86	59	85	73	87	106	85	74	60	**79**	
1:30 PM	86	56	85	75	86	106	74	85	51	**78**	
1:35 PM	86	55	85	88	82	106	74	86	62	**81**	
1:40 PM	86	56	73	86	72	106	79	102	67	**81**	
1:45 PM	86	56	72	86	74	106	84	102	69	**82**	
1:50 PM	87	57	69	90	75	105	85	102	75	**83**	
1:55 PM	87	57	66	91	66	106	72	101	75	**80**	76
2:00 PM	87	57	65	91	70	106	73	89	81	**80**	
2:05 PM	87	54	66	91	70	106	71	85	77	**79**	
2:10 PM	87	58	69	91	63	106	71	85	75	**78**	
2:15 PM	87	60	72	91	61	106	66	93	75	**79**	
2:20 PM	87	61	72	90	61	106	64	94	75	**79**	
2:25 PM	87	61	72	85	65	106	71	93	75	**79**	
2:30 PM	87	61	77	85	66	106	66	85	75	**79**	
2:35 PM	87	59	85	80	66	105	64	85	76	**79**	
2:40 PM	87	54	87	80	66	106	68	85	84	**79**	
2:45 PM	87	52	86	80	59	106	73	87	77	**78**	
2:50 PM	87	55	92	76	55	106	86	94	75	**81**	
2:55 PM	87	56	92	74	59	105	80	94	73	**80**	79
3:00 PM	87	56	92	74	56	105	73	101	67	**79**	
3:05 PM	87	56	92	74	60	105	71	103	72	**80**	
3:10 PM	87	59	88	71	61	105	71	96	73	**79**	
3:15 PM	87	60	79	72	64	105	71	94	76	**79**	
3:20 PM	87	60	75	74	56	105	64	86	84	**77**	
3:25 PM	87	60	72	78	52	105	57	87	84	**76**	
3:30 PM	87	58	72	80	46	105	53	95	84	**76**	
3:35 PM	87	55	73	89	51	104	57	95	84	**77**	
3:40 PM	87	53	78	91	53	104	58	95	84	**78**	
3:45 PM	87	54	79	86	49	104	70	95	84	**79**	
3:50 PM	87	56	79	86	61	104	74	98	84	**81**	
3:55 PM	87	54	79	86	62	104	79	103	92	**83**	79
4:00 PM	88	48	77	89	56	104	79	103	92	**82**	
4:05 PM	87	48	56	92	50	104	80	95	92	**78**	
4:10 PM	88	48	42	88	47	104	86	95	92	**77**	
4:15 PM	88	54	33	86	50	104	80	91	92	**75**	
4:20 PM	82	55	25	86	48	104	65	86	92	**71**	
4:25 PM	63	54	17	86	40	104	58	79	84	**65**	
4:30 PM	35	52	13	78	37	104	56	69	77	**58**	
4:35 PM	18	48	11	75	35	104	66	69	76	**56**	
4:40 PM	15	48	7	75	38	103	79	67	59	**54**	
4:45 PM	15	43	7	75	41	103	79	58	56	**53**	
4:50 PM	15	41	7	75	41	103	79	41	50	**50**	
4:55 PM	15	41	7	75	51	103	79	24	51	**49**	64
5:00 PM	15	37	7	75	61	103	70	14	30	**46**	
5:05 PM	15	22	7	81	62	103	56	2	9	**40**	
5:10 PM	15	13	7	81	64	103	42	0	14	**38**	
5:15 PM	15	10	7	82	61	103	25	0	22	**36**	

Average of the averages	1.00	2	3	4	5.00	6	7	8	9	Total	
	Ave	Ave	Ave	Ave	Ave	Ave	Ave	mAve	Ave	Ave	kWhrs
5:20 PM	15	8	3	87	62	102	22	0	17	**35**	
5:25 PM	15	7	0	78	66	97	20	0	17	**33**	
5:30 PM	15	0	0	50	65	94	10	0	20	**28**	
5:35 PM	15	0	0	26	60	83	7	0	26	**24**	
5:40 PM	15	0	0	11	61	69	7	0	25	**21**	
5:45 PM	15	0	0	6	59	69	7	0	24	**20**	
5:50 PM	15	0	0	1	61	60	7	0	26	**19**	
5:55 PM	15	0	0	0	61	40	0	0	26	**16**	30
6:00 PM	15	0	0	1	55	30	0	0	22	**14**	
6:05 PM	15	0	0	6	51	25	0	0	17	**13**	
6:10 PM	15	0	0	6	51	19	0	0	14	**12**	
6:15 PM	15	0	0	7	49	19	0	0	3	**10**	
6:20 PM	15	0	0	12	43	11	0	0	0	**9**	
6:25 PM	15	0	0	12	38	2	0	0	0	**7**	
6:30 PM	15	0	0	12	39	2	0	0	0	**7**	
6:35 PM	15	0	0	7	35	2	0	0	0	**7**	
6:40 PM	15	0	0	6	31	2	0	0	0	**6**	
6:45 PM	15	0	0	6	28	2	0	0	0	**6**	
6:50 PM	15	0	0	1	22	2	0	0	0	**5**	
6:55 PM	16	0	0	0	25	2	0	0	0	**5**	8
7:00 PM	15	0	0	0	26	2	0	0	0	**5**	
7:05 PM	15	0	0	0	24	2	0	0	0	**5**	
7:10 PM	15	0	0	0	20	2	0	0	0	**4**	
7:15 PM	15	0	0	0	18	2	0	0	0	**4**	
7:20 PM	15	0	0	0	13	2	0	0	0	**3**	
7:25 PM	15	0	0	0	8	2	0	0	0	**3**	
7:30 PM	15	0	0	0	0	2	0	0	0	**2**	
7:35 PM	15	0	0	0	4	2	0	0	0	**2**	
7:40 PM	15	0	0	0	5	1	0	0	0	**2**	
7:45 PM	15	0	0	0	3	1	0	0	0	**2**	
7:50 PM	15	0	0	0	0	1	0	0	0	**2**	
7:55 PM	15	1	0	0	0	1	0	0	5	**3**	3
8:00 PM	15	3	0	0	0	1	0	0	9	**3**	
8:05 PM	15	3	0	0	0	1	0	0	9	**3**	
8:10 PM	15	3	0	0	0	1	0	0	9	**3**	
8:15 PM	15	3	0	0	0	1	0	0	9	**3**	
8:20 PM	15	3	0	0	0	1	0	0	9	**3**	
8:25 PM	15	1	0	0	0	1	0	0	3	**2**	
8:30 PM	15	0	0	0	0	1	0	0	0	**2**	
8:35 PM	15	0	0	0	0	1	0	0	4	**2**	
8:40 PM	15	0	0	0	0	1	0	0	8	**3**	
8:45 PM	15	0	0	0	0	1	0	0	8	**3**	
8:50 PM	15	0	0	2	0	1	0	0	8	**3**	
8:55 PM	15	0	0	6	0	1	5	0	8	**4**	3
9:00 PM	15	0	0	6	0	1	7	0	8	**4**	
9:05 PM	15	0	0	6	0	1	7	0	8	**4**	
9:10 PM	15	0	0	6	0	1	7	0	2	**3**	
9:15 PM	15	0	0	6	0	1	7	0	0	**3**	
9:20 PM	15	0	0	6	0	1	7	0	0	**3**	
9:25 PM	15	0	0	0	0	1	1	0	0	**2**	
9:30 PM	15	0	0	0	0	1	0	0	0	**2**	
9:35 PM	15	0	0	0	0	1	0	0	0	**2**	
9:40 PM	15	0	0	0	0	1	0	0	0	**2**	
9:45 PM	15	0	0	0	0	1	5	0	0	**2**	
9:50 PM	15	0	0	0	0	1	7	0	0	**3**	
9:55 PM	15	0	0	0	0	1	7	0	0	**3**	3
10:00 PM	15	0	0	0	0	1	7	0	0	**3**	
10:05 PM	15	0	0	5	0	1	7	0	0	**3**	
10:10 PM	15	0	0	6	0	1	7	0	0	**3**	
10:15 PM	15	0	4	6	0	1	1	0	0	**3**	
10:20 PM	15	0	6	6	0	1	0	0	0	**3**	
10:25 PM	15	0	7	6	0	1	0	0	0	**3**	
10:30 PM	15	0	7	6	0	1	1	0	0	**3**	
10:35 PM	15	0	7	3	0	1	7	0	8	**5**	
10:40 PM	15	0	4	0	0	1	10	0	9	**4**	
10:45 PM	15	0	0	0	0	1	14	0	8	**4**	
10:50 PM	15	1	0	0	0	1	14	0	8	**4**	
10:55 PM	15	7	0	0	0	1	14	0	8	**5**	4
11:00 PM	15	7	0	0	0	1	13	0	8	**5**	
11:05 PM	15	7	0	0	0	1	7	0	0	**3**	
11:10 PM	15	7	0	0	0	1	4	0	0	**3**	

Average of the averages	1.00	2	3	4	5.00	6	7	8	9	Total	
	Ave	Ave	Ave	Ave	Ave	Ave	Ave	mAve	Ave	Ave	kWhrs
11:15 PM	15	7	0	0	0	1	0	0	0	**3**	
11:20 PM	15	5	0	0	0	1	0	0	0	**2**	
11:25 PM	15	3	0	3	0	1	0	0	0	**3**	
11:30 PM	15	3	0	6	0	1	0	0	0	**3**	
11:35 PM	15	3	0	6	0	1	6	0	0	**3**	
11:40 PM	15	3	0	6	0	1	7	0	0	**4**	
11:45 PM	15	3	0	6	0	1	7	0	0	**4**	
11:50 PM	15	2	4	6	0	1	7	0	0	**4**	
11:55 PM	15	3	7	5	0	1	7	0	0	**4**	3
TOTAL	11,172	5,883	8,800	9,206	8,471	12,01	8,842	8,394	7,255	**8,893**	741
											0.74

Trip 2: CalEPA Occupancy Sensor Data

Average of the averages	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	ALL	
Time	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	AVE	kWhr
12:00 AM	0	0	0	0	0	10	0	13	0	0	0	0	0	0	0	0	0	0	**1**	
12:05 AM	0	0	0	0	0	10	0	13	0	0	0	0	0	0	0	0	0	0	**1**	
12:10 AM	0	0	0	0	0	10	0	13	0	0	0	0	0	0	0	0	0	0	**1**	
12:15 AM	0	0	0	0	0	10	0	6	0	0	0	0	0	0	0	0	0	0	**1**	
12:20 AM	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	**1**	
12:25 AM	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	**1**	
12:30 AM	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	**1**	
12:35 AM	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0	0	**1**	
12:40 AM	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0	0	**1**	
12:45 AM	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0	0	**1**	
12:50 AM	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0	0	**1**	
12:55 AM	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0	0	**1**	1
1:00 AM	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	**1**	
1:05 AM	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	**1**	
1:10 AM	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	**1**	
1:15 AM	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	**1**	
1:20 AM	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	**1**	
1:25 AM	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	**1**	
1:30 AM	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	**1**	
1:35 AM	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	**1**	
1:40 AM	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	**1**	
1:45 AM	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	**1**	
1:50 AM	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	**1**	
1:55 AM	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	**1**	1
2:00 AM	0	0	0	0	0	0	0	6	0	0	7	0	0	0	0	0	0	0	**1**	
2:05 AM	0	0	0	0	0	0	0	6	0	0	7	0	0	0	0	0	0	0	**1**	
2:10 AM	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	0	**1**	
2:15 AM	0	0	0	0	0	0	0	6	0	0	7	0	0	0	0	0	0	0	**1**	
2:20 AM	0	0	0	0	0	0	0	6	0	0	7	0	0	0	0	0	0	0	**1**	
2:25 AM	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	**1**	
2:30 AM	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	**1**	
2:35 AM	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	**1**	
2:40 AM	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	**1**	
2:45 AM	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	**1**	
2:50 AM	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	**1**	
2:55 AM	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	**1**	1
3:00 AM	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	**1**	
3:05 AM	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	**1**	
3:10 AM	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	**1**	
3:15 AM	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	**1**	
3:20 AM	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	**0**	
3:25 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
3:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
3:35 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	

Average of the averages	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	ALL	
Time	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	AVE	kWhr
3:40 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
3:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
3:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
3:55 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
4:05 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
4:10 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
4:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
4:20 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
4:25 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
4:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
4:35 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
4:40 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
4:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
4:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
4:55 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
5:05 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
5:10 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
5:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
5:20 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
5:25 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
5:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
5:35 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	**0**	
5:40 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	**1**	
5:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	**1**	
5:50 AM	0	0	0	0	0	0	4	0	0	0	0	0	0	0	7	0	0	0	**1**	
5:55 AM	0	0	0	0	0	0	7	0	0	0	0	0	0	0	7	0	0	0	**1**	0
6:00 AM	0	0	0	0	0	0	7	0	0	0	0	0	0	0	7	0	0	0	**1**	
6:05 AM	0	0	0	0	0	0	7	0	0	0	0	0	0	0	7	0	0	0	**1**	
6:10 AM	0	0	0	0	0	0	7	0	0	0	0	0	0	0	7	1	0	0	**1**	
6:15 AM	0	0	0	0	0	0	7	0	0	0	0	0	0	0	7	6	0	0	**1**	
6:20 AM	0	0	0	0	0	0	3	0	0	0	0	0	0	0	7	6	0	0	**1**	
6:25 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	6	0	0	**1**	
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	8	0	0	**2**	
6:35 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	13	0	0	**3**	
6:40 AM	0	0	0	0	0	0	0	0	6	0	7	0	0	0	17	16	0	0	**4**	
6:45 AM	0	0	0	0	0	0	0	0	8	0	7	0	0	0	28	19	0	4	**6**	
6:50 AM	0	1	0	0	0	0	0	0	8	0	8	0	0	0	41	19	0	22	**9**	
6:55 AM	7	1	0	0	0	0	0	0	12	0	16	0	0	0	58	19	0	44	**14**	4
7:00 AM	18	1	0	0	0	0	0	0	16	0	31	0	0	0	80	25	0	52	**19**	
7:05 AM	30	1	0	0	0	0	0	0	16	0	76	0	0	0	81	25	2	54	**23**	
7:10 AM	60	0	0	0	0	0	0	0	14	0	96	0	0	0	81	26	3	58	**25**	
7:15 AM	87	0	0	0	0	0	0	0	8	0	98	0	0	0	87	31	6	58	**26**	
7:20 AM	93	2	0	0	0	0	0	0	8	6	96	7	0	0	87	33	6	58	**27**	
7:25 AM	98	3	0	0	0	0	0	0	6	7	92	8	1	0	86	25	6	58	**26**	

Average of the averages	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	ALL	
Time	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	AVE	kWhr
7:30 AM	99	3	0	0	0	0	0	0	1	7	92	8	20	0	88	27	4	60	**28**	
7:35 AM	99	2	0	0	0	0	0	0	8	7	92	8	29	0	96	23	3	63	**30**	
7:40 AM	99	1	0	0	0	0	0	0	10	7	92	8	39	0	88	23	0	63	**30**	
7:45 AM	99	0	0	0	0	0	0	0	27	7	95	8	41	0	88	26	0	60	**32**	
7:50 AM	99	0	0	0	0	0	4	0	38	0	88	0	53	0	88	32	0	60	**33**	
7:55 AM	97	0	0	0	0	0	7	0	56	7	65	8	54	0	88	34	0	63	**34**	28
8:00 AM	99	2	0	0	2	0	7	0	56	10	23	8	54	0	88	35	0	58	**30**	
8:05 AM	99	7	0	0	11	0	7	0	67	20	12	15	57	0	95	35	0	58	**33**	
8:10 AM	95	11	0	0	33	0	14	0	73	21	11	17	64	24	96	41	1	58	**37**	
8:15 AM	98	17	0	0	50	1	23	0	85	25	19	21	62	36	96	45	3	58	**41**	
8:20 AM	98	20	0	0	57	9	34	0	94	28	52	25	62	83	90	52	3	58	**50**	
8:25 AM	94	22	0	0	67	15	65	6	95	34	85	31	62	101	81	48	3	58	**55**	
8:30 AM	91	23	0	0	68	15	74	6	95	35	94	33	62	100	81	43	3	54	**55**	
8:35 AM	89	23	0	0	68	15	86	6	95	38	91	36	62	99	83	51	2	54	**56**	
8:40 AM	90	22	0	0	69	15	86	9	93	37	91	35	51	100	89	53	1	53	**56**	
8:45 AM	92	21	0	0	73	15	86	13	95	36	89	34	51	100	94	57	8	51	**57**	
8:50 AM	87	23	0	0	66	6	86	13	95	38	92	37	55	99	88	66	12	51	**59**	
8:55 AM	87	23	0	0	63	6	86	13	95	30	95	27	55	99	87	71	11	51	**58**	49
9:00 AM	87	23	0	0	57	23	86	13	95	26	98	23	55	99	74	71	12	51	**56**	
9:05 AM	87	22	0	0	68	31	86	13	100	32	98	29	48	99	78	68	12	50	**57**	
9:10 AM	87	22	0	0	70	34	86	19	102	33	98	30	59	99	81	62	14	51	**59**	
9:15 AM	85	21	0	0	74	42	86	14	102	32	98	30	60	98	81	75	6	47	**59**	
9:20 AM	83	21	0	0	75	49	86	12	102	31	95	29	60	98	76	79	3	48	**58**	
9:25 AM	87	21	0	0	76	51	81	13	102	26	92	23	60	98	74	82	3	45	**56**	
9:30 AM	87	21	0	0	81	42	67	13	100	28	85	25	48	98	69	82	7	43	**54**	
9:35 AM	87	21	0	0	80	42	63	13	95	28	79	25	48	98	73	82	11	40	**54**	
9:40 AM	87	21	0	0	71	49	63	24	95	34	79	32	48	98	74	81	12	35	**56**	
9:45 AM	89	21	0	0	72	51	69	25	95	39	79	37	48	98	73	76	13	33	**56**	
9:50 AM	82	21	0	0	66	51	74	25	95	42	79	39	48	98	80	71	15	33	**57**	
9:55 AM	78	21	0	0	65	46	78	31	98	43	79	39	48	98	78	64	18	35	**57**	57
10:00 AM	76	22	0	0	65	46	78	38	102	43	74	39	54	98	74	66	19	36	**59**	
10:05 AM	76	22	0	0	65	46	78	37	102	42	73	38	67	98	80	67	21	37	**60**	
10:10 AM	76	21	0	0	63	46	78	36	102	42	74	38	76	98	96	65	23	37	**62**	
10:15 AM	73	22	0	0	69	46	78	32	102	40	73	36	75	98	95	53	23	37	**60**	
10:20 AM	71	21	0	0	73	46	73	32	102	39	79	35	75	78	86	47	23	37	**57**	
10:25 AM	65	21	0	0	73	44	70	36	102	40	75	36	63	65	74	47	21	36	**54**	
10:30 AM	70	21	0	0	73	33	69	39	102	40	71	36	63	65	73	39	19	36	**53**	
10:35 AM	73	21	0	0	69	28	64	27	102	40	73	36	63	65	67	37	17	39	**52**	
10:40 AM	76	21	0	0	73	28	64	26	100	43	74	47	63	65	62	41	16	40	**52**	
10:45 AM	75	21	0	0	68	28	64	27	102	45	68	51	64	65	52	42	16	40	**52**	
10:50 AM	75	21	0	0	72	28	64	32	102	46	68	53	64	65	52	47	16	45	**54**	
10:55 AM	71	21	0	0	78	28	65	35	102	46	71	53	64	65	53	47	19	50	**55**	56
11:00 AM	71	21	0	0	78	28	79	35	102	46	79	53	59	65	59	48	19	48	**56**	
11:05 AM	71	21	0	0	78	29	85	35	102	46	80	53	58	67	59	51	19	47	**56**	
11:10 AM	62	21	0	0	74	33	86	32	102	46	85	53	58	100	67	47	22	45	**60**	
11:15 AM	65	22	0	0	73	50	87	32	102	46	80	53	57	100	75	47	22	46	**60**	

Average of the averages	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	ALL	
Time	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	AVE	kWhr
11:20 AM	59	22	0	0	73	52	86	38	102	46	72	53	57	99	82	44	24	47	**60**	
11:25 AM	58	22	0	0	73	58	86	39	99	46	64	53	57	99	82	37	24	46	**59**	
11:30 AM	60	22	0	1	73	57	86	32	86	46	72	53	58	99	76	36	24	46	**57**	
11:35 AM	60	21	0	18	73	57	86	36	78	44	79	50	58	99	74	49	21	47	**58**	
11:40 AM	62	23	0	18	71	63	80	36	74	40	79	46	56	99	75	53	18	45	**56**	
11:45 AM	55	23	0	18	71	66	80	32	76	40	79	46	55	99	80	59	20	44	**57**	
11:50 AM	51	23	0	12	72	66	80	24	69	40	70	46	55	99	74	65	21	43	**55**	
11:55 AM	41	22	0	13	63	66	80	23	60	41	73	47	55	99	78	62	21	43	**55**	57
12:00 PM	33	21	0	12	61	66	74	26	38	50	73	57	61	99	75	59	21	40	**54**	
12:05 PM	33	21	0	12	53	66	70	26	27	51	73	58	62	99	74	59	21	42	**54**	
12:10 PM	32	21	0	12	53	66	78	25	29	43	68	49	63	99	74	61	19	43	**52**	
12:15 PM	32	21	0	11	39	66	81	30	30	43	73	49	64	99	76	64	18	41	**53**	
12:20 PM	33	19	0	0	36	61	80	35	23	43	78	49	64	99	83	65	21	42	**55**	
12:25 PM	38	13	0	0	29	57	80	39	32	43	80	49	63	99	95	69	21	44	**58**	
12:30 PM	47	12	0	0	18	57	80	41	30	37	92	42	64	99	92	67	21	43	**57**	
12:35 PM	56	11	0	0	12	60	80	43	32	37	94	42	64	99	89	64	21	44	**57**	
12:40 PM	61	9	0	0	11	62	72	40	38	45	98	51	64	99	89	73	21	43	**60**	
12:45 PM	64	13	0	0	7	49	72	38	33	37	98	42	64	99	85	70	21	44	**57**	
12:50 PM	66	17	0	0	10	34	72	45	38	29	94	33	61	98	84	65	21	43	**55**	
12:55 PM	67	20	0	1	12	21	72	48	53	23	92	26	64	99	89	71	21	51	**58**	56
1:00 PM	70	23	0	0	15	10	72	45	66	24	98	27	64	99	89	71	21	54	**60**	
1:05 PM	76	24	0	0	17	10	72	56	67	24	98	27	64	99	86	76	21	53	**61**	
1:10 PM	77	22	0	0	17	10	72	57	71	25	92	28	64	99	85	80	21	47	**61**	
1:15 PM	77	22	0	0	27	25	72	57	79	30	92	34	64	99	71	66	21	51	**60**	
1:20 PM	77	21	0	0	48	34	72	57	82	30	92	34	64	98	64	65	21	49	**60**	
1:25 PM	72	21	0	0	61	47	72	54	87	30	92	34	64	99	61	65	21	44	**59**	
1:30 PM	71	21	0	0	72	61	66	47	88	30	91	34	64	99	61	64	21	42	**58**	
1:35 PM	72	21	0	0	74	66	66	34	88	38	91	43	64	99	59	68	21	45	**59**	
1:40 PM	71	21	0	0	79	65	66	27	89	39	92	45	64	99	60	71	21	45	**59**	
1:45 PM	72	21	0	0	82	65	66	32	88	39	92	44	64	99	65	74	25	42	**60**	
1:50 PM	72	18	0	0	78	65	66	32	88	39	92	44	64	99	74	76	30	44	**62**	
1:55 PM	79	18	0	0	77	62	62	34	93	39	89	44	64	99	69	69	30	44	**61**	60
2:00 PM	76	20	0	0	77	56	64	38	94	39	86	44	64	99	67	64	31	42	**61**	
2:05 PM	76	20	0	0	81	63	64	45	92	39	86	44	64	99	62	64	31	44	**61**	
2:10 PM	77	20	0	0	81	65	64	54	96	39	88	44	64	99	58	63	29	47	**62**	
2:15 PM	80	22	0	0	81	64	63	60	101	31	89	35	64	99	52	59	21	47	**60**	
2:20 PM	79	22	0	0	75	63	57	68	103	36	81	41	64	86	52	58	21	42	**59**	
2:25 PM	77	21	0	0	75	62	53	70	94	39	74	44	64	67	52	54	19	44	**57**	
2:30 PM	79	21	0	0	75	61	51	64	83	37	71	43	56	67	53	53	17	44	**53**	
2:35 PM	82	21	0	0	71	61	67	62	81	37	62	42	55	67	54	52	15	44	**52**	
2:40 PM	82	22	0	0	71	61	72	58	87	37	62	42	55	66	59	58	15	44	**53**	
2:45 PM	82	24	0	0	75	61	73	58	96	37	62	42	55	66	62	64	18	45	**55**	
2:50 PM	77	23	0	0	75	66	71	58	96	38	65	43	55	66	67	63	18	47	**56**	
2:55 PM	77	23	0	0	75	70	79	58	96	35	68	40	43	66	67	58	19	49	**54**	57
3:00 PM	77	24	0	0	68	70	86	48	96	30	80	34	43	66	71	65	21	51	**55**	
3:05 PM	82	24	0	0	68	65	87	51	96	27	86	31	43	67	67	58	24	51	**55**	

Average of the averages	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	ALL	
Time	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	AVE	kWhr
3:10 PM	82	23	0	0	71	65	87	52	88	27	86	31	43	98	65	55	24	51	**56**	
3:15 PM	82	22	0	0	74	72	87	52	75	26	83	30	40	98	67	63	24	49	**55**	
3:20 PM	80	21	0	0	73	74	84	52	74	27	64	30	44	98	71	61	24	47	**54**	
3:25 PM	78	21	0	0	71	77	81	52	69	27	59	31	50	58	73	61	24	47	**50**	
3:30 PM	83	21	0	0	80	70	79	52	71	20	58	23	50	33	75	60	22	47	**46**	
3:35 PM	88	21	0	0	79	74	77	53	75	14	51	16	40	33	75	63	22	47	**44**	
3:40 PM	88	21	0	0	70	75	81	58	83	19	49	21	42	32	79	73	24	47	**48**	
3:45 PM	88	21	0	0	74	71	72	64	89	23	43	26	52	33	89	74	24	47	**51**	
3:50 PM	82	22	0	0	74	66	72	64	89	23	50	26	52	32	89	69	24	49	**52**	
3:55 PM	77	23	0	0	74	71	72	71	89	29	56	33	57	60	89	66	24	51	**57**	52
4:00 PM	68	23	0	0	80	75	74	65	89	30	56	34	59	66	89	71	24	51	**58**	
4:05 PM	42	23	0	0	81	75	79	66	89	33	56	38	59	65	89	80	31	51	**60**	
4:10 PM	22	24	0	0	80	73	75	61	89	30	56	34	58	79	86	78	36	51	**60**	
4:15 PM	20	24	0	0	74	66	70	58	89	27	53	31	58	100	75	69	40	51	**59**	
4:20 PM	17	24	0	0	62	66	70	61	92	33	38	38	59	67	71	69	40	51	**56**	
4:25 PM	12	24	0	0	63	64	71	71	96	33	34	38	58	67	60	71	40	45	**56**	
4:30 PM	7	23	0	0	64	65	76	78	95	31	37	35	59	81	60	71	33	44	**57**	
4:35 PM	10	22	0	0	61	66	73	78	81	22	34	25	59	99	60	71	30	44	**55**	
4:40 PM	6	23	0	0	57	47	72	74	81	20	25	23	56	99	60	67	28	44	**52**	
4:45 PM	6	23	0	0	39	40	69	72	81	19	21	22	46	99	60	63	28	44	**50**	
4:50 PM	6	23	0	0	21	40	58	72	75	19	12	21	29	99	60	65	28	43	**48**	
4:55 PM	2	23	0	0	9	43	44	70	74	19	2	21	7	99	57	70	28	31	**43**	54
5:00 PM	0	22	0	0	7	35	38	65	74	19	6	22	0	99	55	68	28	8	**40**	
5:05 PM	0	22	0	0	7	25	20	68	74	19	6	22	0	99	48	71	28	1	**40**	
5:10 PM	0	20	0	0	1	21	0	65	78	9	6	10	0	99	45	70	27	3	**38**	
5:15 PM	0	16	0	0	0	21	0	61	82	6	6	7	0	98	47	70	25	3	**37**	
5:20 PM	0	15	0	0	0	21	0	59	82	6	6	7	0	98	39	72	25	3	**36**	
5:25 PM	0	11	0	0	0	11	0	59	70	6	0	7	0	99	38	64	25	6	**34**	
5:30 PM	0	8	0	0	0	4	0	62	37	6	0	7	0	99	38	59	25	7	**31**	
5:35 PM	0	8	0	0	0	2	0	59	12	6	0	7	0	98	38	59	25	7	**28**	
5:40 PM	0	7	0	0	0	2	5	59	8	5	0	6	0	99	31	59	25	4	**27**	
5:45 PM	0	6	0	0	0	2	6	58	0	0	0	0	0	72	30	56	25	4	**22**	
5:50 PM	0	3	0	6	0	2	6	52	0	0	0	0	0	66	30	55	25	4	**21**	
5:55 PM	0	2	0	1	0	2	6	53	0	0	0	0	0	66	30	57	25	1	**21**	31
6:00 PM	0	1	0	0	0	2	6	42	0	0	0	0	0	66	22	49	25	0	**18**	
6:05 PM	0	1	0	0	0	2	6	31	0	0	0	0	0	53	21	46	30	0	**16**	
6:10 PM	0	1	0	0	0	2	0	21	0	0	3	0	0	33	14	47	38	0	**14**	
6:15 PM	0	1	0	0	0	2	0	20	0	0	6	0	0	27	7	51	37	4	**14**	
6:20 PM	0	1	0	0	0	2	0	20	0	0	6	0	0	0	7	54	37	4	**12**	
6:25 PM	0	1	0	0	0	3	6	20	0	0	6	0	0	0	7	53	36	7	**12**	
6:30 PM	0	1	0	0	0	11	6	19	0	0	6	0	0	0	7	53	31	7	**11**	
6:35 PM	0	0	0	0	0	11	6	18	0	0	6	0	0	0	7	46	31	7	**11**	
6:40 PM	0	0	0	0	0	11	14	13	0	0	6	0	0	0	7	35	31	7	**9**	
6:45 PM	0	0	0	0	0	11	15	13	0	0	5	0	0	0	7	25	31	4	**8**	
6:50 PM	0	0	2	17	0	11	13	13	0	0	0	0	0	0	7	26	21	4	**6**	
6:55 PM	0	0	4	19	0	11	12	13	0	0	0	0	0	0	7	26	16	6	**6**	11

Average of the averages	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	ALL	
Time	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	AVE	kWhr
7:00 PM	0	0	4	6	0	11	17	13	0	0	0	0	0	0	7	24	22	5	**6**	
7:05 PM	0	0	4	5	0	4	17	13	0	0	0	0	0	0	7	18	19	7	**6**	
7:10 PM	0	0	4	5	0	2	8	13	0	0	0	0	0	0	9	18	14	7	**5**	
7:15 PM	0	0	4	5	0	2	8	13	0	0	0	0	0	0	7	18	14	7	**5**	
7:20 PM	0	0	1	5	0	2	8	13	0	0	0	0	0	0	11	18	14	6	**6**	
7:25 PM	0	0	0	5	0	2	3	13	0	0	0	0	0	0	15	13	7	3	**5**	
7:30 PM	0	0	0	6	0	9	0	13	0	0	0	0	0	0	15	12	5	2	**4**	
7:35 PM	0	0	0	6	0	11	5	13	0	0	2	0	0	0	12	12	5	0	**4**	
7:40 PM	0	0	16	6	0	11	9	13	0	0	6	0	0	0	8	11	2	0	**4**	
7:45 PM	0	0	32	5	0	11	8	13	0	0	6	0	0	0	2	6	2	0	**3**	
7:50 PM	0	0	35	5	0	11	8	13	0	0	6	0	0	0	0	5	2	0	**2**	
7:55 PM	0	0	58	5	0	10	8	13	0	0	6	0	0	0	0	0	1	0	**2**	4
8:00 PM	0	0	66	5	0	4	8	13	0	0	4	0	0	0	0	0	0	0	**2**	
8:05 PM	0	0	67	5	0	1	3	19	0	0	0	0	0	0	0	6	7	0	**3**	
8:10 PM	0	0	74	5	0	1	0	19	0	0	0	0	0	0	0	6	7	0	**3**	
8:15 PM	0	0	83	5	0	1	0	19	0	0	0	0	0	0	0	6	7	0	**3**	
8:20 PM	0	0	90	5	0	1	0	19	0	0	0	0	0	0	0	6	7	0	**3**	
8:25 PM	0	0	84	6	0	1	0	19	0	0	0	0	0	0	0	6	7	0	**3**	
8:30 PM	0	0	85	6	0	1	0	17	0	0	0	0	0	0	0	6	7	0	**3**	
8:35 PM	0	0	86	18	0	1	0	9	0	0	0	0	0	0	0	6	3	0	**2**	
8:40 PM	0	0	86	24	0	1	0	6	0	0	6	0	0	0	0	6	3	0	**2**	
8:45 PM	0	0	87	24	0	1	0	11	0	6	6	7	0	0	0	6	3	0	**4**	
8:50 PM	0	0	87	24	0	1	0	13	0	6	6	7	0	0	0	6	3	0	**4**	
8:55 PM	0	0	88	24	0	1	0	13	0	6	6	7	0	0	0	6	2	0	**4**	3
9:00 PM	0	0	88	20	0	1	0	13	0	6	6	7	0	0	0	6	0	0	**3**	
9:05 PM	0	0	88	11	0	1	0	13	0	6	6	7	0	0	0	6	0	0	**3**	
9:10 PM	0	0	80	11	0	1	0	13	0	5	6	6	0	0	0	6	0	0	**3**	
9:15 PM	0	0	77	11	0	1	8	12	0	0	4	0	0	0	0	0	0	0	**1**	
9:20 PM	0	0	86	11	0	1	8	6	0	0	0	0	0	0	0	0	0	0	**1**	
9:25 PM	0	0	79	11	0	1	8	6	0	0	0	0	0	0	0	0	0	0	**1**	
9:30 PM	0	0	77	11	0	1	8	6	0	0	0	0	0	0	0	0	0	0	**1**	
9:35 PM	0	0	72	11	0	1	8	6	0	0	0	0	0	0	0	0	0	0	**1**	
9:40 PM	0	0	66	11	0	1	8	6	0	0	0	0	0	0	0	0	0	0	**1**	
9:45 PM	0	0	66	11	0	1	0	6	0	0	0	0	0	0	0	0	0	0	**1**	
9:50 PM	0	0	66	11	0	1	0	6	0	0	0	0	0	0	0	0	0	0	**1**	
9:55 PM	0	0	66	11	0	1	0	6	0	0	0	0	0	0	0	0	0	0	**1**	1
10:00 PM	0	0	67	11	0	1	0	6	0	0	0	0	0	0	0	0	0	0	**1**	
10:05 PM	0	0	67	11	0	1	2	6	0	0	6	0	0	0	0	0	0	0	**1**	
10:10 PM	0	0	63	11	0	1	6	6	0	0	6	0	0	0	0	0	0	0	**1**	
10:15 PM	0	0	56	11	0	1	6	6	0	2	6	3	0	0	0	0	0	0	**2**	
10:20 PM	0	0	56	11	0	1	6	6	0	7	6	7	0	0	0	0	0	0	**2**	
10:25 PM	0	0	56	11	0	1	6	6	0	6	6	7	0	0	0	0	0	0	**2**	
10:30 PM	0	0	56	11	0	1	6	6	0	6	1	7	0	0	0	0	0	0	**2**	
10:35 PM	0	0	56	11	0	1	6	6	0	6	0	7	0	0	0	0	0	0	**2**	
10:40 PM	0	0	56	11	0	1	6	6	0	6	0	7	0	0	7	0	0	0	**2**	
10:45 PM	0	0	56	11	0	1	6	6	0	6	0	7	0	0	7	0	3	1	**3**	

Average of the averages	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	ALL	
Time	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	Ave	AVE	kWhr
10:50 PM	0	0	56	11	0	1	5	6	0	6	2	7	0	0	7	0	3	4	**3**	
10:55 PM	0	0	48	11	0	1	0	6	0	6	6	7	0	0	7	5	4	5	**4**	2
11:00 PM	0	0	38	11	0	1	0	6	0	2	6	3	0	0	7	6	5	7	**4**	
11:05 PM	0	0	33	11	0	1	0	6	0	0	6	0	0	0	7	6	5	7	**3**	
11:10 PM	0	0	33	11	0	5	0	6	0	0	6	0	0	0	7	6	5	7	**3**	
11:15 PM	0	0	33	9	0	10	0	6	0	0	6	0	0	0	7	0	5	7	**3**	
11:20 PM	0	0	31	6	0	10	0	6	4	0	0	0	0	0	6	0	5	7	**3**	
11:25 PM	0	0	22	13	0	10	0	6	8	0	0	0	0	0	0	0	5	7	**2**	
11:30 PM	0	0	22	15	0	10	0	6	8	0	0	0	0	0	0	0	3	6	**2**	
11:35 PM	0	0	22	15	0	10	0	6	7	0	0	0	0	0	0	0	1	3	**2**	
11:40 PM	0	0	16	15	0	10	0	10	8	0	0	0	0	0	0	5	1	1	**2**	
11:45 PM	0	0	2	16	0	10	0	13	8	0	0	0	0	0	0	6	3	0	**3**	
11:50 PM	0	0	0	15	0	10	0	13	6	0	0	0	0	0	0	6	3	0	**3**	
11:55 PM	0	0	0	0	0	10	0	13	0	0	0	0	0	0	0	0	3	0	**1**	3
TOTAL	8,317	2,400	3,007	784	6,673	5,669	8,170	6,113	9,829	3,913	9,109	4,217	6,428	10,385	10,037	8,637	3,034	5,911	**7,056**	588
																				0.59

Trip 1 DGS: Manual On/Off Data

Average of the averages	1	2	3	4	5	6	7	Total	
	AVE	AVE	AVE	AVE	AVE	AVE	AVE	average	kWhrs
12:00 AM	4	0	0	27	0	0	45	11	
12:05 AM	4	0	0	27	0	0	45	11	
12:10 AM	4	0	0	27	0	0	44	11	
12:15 AM	4	0	0	27	0	0	45	11	
12:20 AM	4	0	0	27	0	0	45	11	
12:25 AM	4	0	0	27	0	0	45	11	
12:30 AM	4	0	0	27	0	0	45	11	
12:35 AM	4	0	0	27	0	0	45	11	
12:40 AM	4	0	0	27	0	0	45	11	
12:45 AM	4	0	0	27	0	0	45	11	
12:50 AM	4	0	0	27	0	0	45	11	
12:55 AM	4	0	0	27	0	0	45	11	11
1:00 AM	4	0	0	27	0	0	45	11	
1:05 AM	4	0	0	27	0	0	45	11	
1:10 AM	4	0	0	27	0	0	45	11	
1:15 AM	4	0	0	27	0	0	45	11	
1:20 AM	4	0	0	24	0	0	45	10	
1:25 AM	4	0	0	24	0	0	45	10	
1:30 AM	4	0	0	24	0	0	45	10	
1:35 AM	4	0	0	24	0	0	45	10	
1:40 AM	4	0	0	24	0	0	45	10	
1:45 AM	4	0	0	24	0	0	45	10	
1:50 AM	4	0	0	24	0	0	45	10	
1:55 AM	4	0	0	24	0	0	45	10	11
2:00 AM	4	0	0	24	0	0	45	10	
2:05 AM	4	0	0	24	0	0	45	10	
2:10 AM	4	0	0	24	0	0	45	10	
2:15 AM	4	0	0	24	0	0	45	10	
2:20 AM	4	0	0	24	0	0	45	10	
2:25 AM	4	0	0	24	0	0	45	10	
2:30 AM	4	0	0	24	0	0	45	10	
2:35 AM	4	0	0	24	0	0	45	10	
2:40 AM	4	0	0	24	0	0	45	10	
2:45 AM	4	0	0	24	0	0	45	10	
2:50 AM	4	0	0	24	0	0	45	10	
2:55 AM	4	0	0	24	0	0	45	10	10
3:00 AM	4	0	0	24	0	0	45	10	
3:05 AM	4	0	0	24	0	0	45	10	
3:10 AM	4	0	0	24	0	0	45	10	
3:15 AM	4	0	0	24	0	0	45	10	
3:20 AM	4	0	0	24	0	0	45	10	
3:25 AM	4	0	0	24	0	0	45	10	
3:30 AM	4	0	0	24	0	0	45	10	
3:35 AM	4	0	0	24	0	0	45	10	
3:40 AM	4	0	0	24	0	0	45	10	
3:45 AM	4	0	0	24	0	0	45	10	
3:50 AM	4	0	0	24	0	0	45	10	
3:55 AM	4	0	0	24	0	0	45	10	10
4:00 AM	4	0	0	24	0	0	45	10	
4:05 AM	4	0	0	24	0	0	45	10	
4:10 AM	4	0	0	24	0	0	45	10	
4:15 AM	4	0	0	24	0	0	45	10	
4:20 AM	4	0	0	24	0	0	45	10	
4:25 AM	4	0	0	24	0	0	45	10	
4:30 AM	4	0	0	24	0	0	45	10	
4:35 AM	4	0	0	24	0	0	45	10	
4:40 AM	4	0	0	24	0	0	45	10	
4:45 AM	4	0	0	24	0	0	45	10	
4:50 AM	4	0	0	24	0	0	45	10	
4:55 AM	4	0	0	24	0	0	45	10	10
5:00 AM	4	0	0	24	0	0	45	10	
5:05 AM	4	0	0	24	0	0	45	10	
5:10 AM	4	0	0	24	0	0	45	10	
5:15 AM	4	0	0	24	0	0	45	10	
5:20 AM	4	0	0	24	0	0	45	10	
5:25 AM	4	0	0	24	0	0	45	10	
5:30 AM	4	0	0	24	0	0	45	10	

Average of the averages	1	2	3	4	5	6	7	Total	
	AVE	AVE	AVE	AVE	AVE	AVE	AVE	average	kWhrs
5:35 AM	4	0	0	24	0	0	45	10	
5:40 AM	4	0	0	24	0	0	45	10	
5:45 AM	4	0	0	24	0	0	45	10	
5:50 AM	4	0	0	24	0	0	44	10	
5:55 AM	4	0	0	24	0	0	45	10	10
6:00 AM	4	0	0	24	0	0	45	10	
6:05 AM	4	0	0	24	0	0	44	10	
6:10 AM	4	0	0	24	0	0	45	10	
6:15 AM	4	0	0	24	0	0	45	10	
6:20 AM	4	0	0	24	0	0	45	10	
6:25 AM	4	0	0	24	0	0	45	10	
6:30 AM	4	2	0	24	0	0	45	11	
6:35 AM	4	54	0	24	0	0	45	18	
6:40 AM	4	96	0	24	0	0	45	24	
6:45 AM	4	102	7	24	0	0	45	26	
6:50 AM	4	102	7	24	0	0	45	26	
6:55 AM	4	101	7	24	0	0	45	26	16
7:00 AM	4	101	7	24	0	0	45	26	
7:05 AM	4	101	7	24	0	0	46	26	
7:10 AM	4	101	7	24	0	0	44	26	
7:15 AM	4	101	7	24	0	0	44	26	
7:20 AM	4	101	7	24	0	0	44	26	
7:25 AM	4	101	10	24	0	0	44	26	
7:30 AM	4	101	13	24	0	0	44	27	
7:35 AM	4	101	13	24	0	4	44	27	
7:40 AM	4	100	13	24	0	14	39	28	
7:45 AM	4	100	13	24	0	29	39	30	
7:50 AM	4	100	13	28	0	30	39	31	
7:55 AM	4	100	18	31	0	31	38	32	27
8:00 AM	4	100	22	35	0	36	34	33	
8:05 AM	4	100	39	42	0	39	34	37	
8:10 AM	4	100	54	51	0	39	34	40	
8:15 AM	4	100	77	52	0	45	34	45	
8:20 AM	4	100	80	52	0	59	34	47	
8:25 AM	4	100	80	55	0	72	34	49	
8:30 AM	4	100	82	60	0	85	37	53	
8:35 AM	4	100	87	63	0	84	38	54	
8:40 AM	4	100	89	65	0	89	37	55	
8:45 AM	4	100	95	65	0	86	37	55	
8:50 AM	4	100	95	66	0	85	38	55	
8:55 AM	9	101	96	67	0	86	46	58	48
9:00 AM	19	101	98	68	7	87	58	62	
9:05 AM	19	101	102	68	10	87	65	65	
9:10 AM	20	101	100	68	16	87	65	66	
9:15 AM	22	101	97	69	29	94	66	68	
9:20 AM	23	101	97	69	33	94	72	70	
9:25 AM	23	101	98	70	47	94	73	72	
9:30 AM	37	101	103	70	57	94	81	78	
9:35 AM	60	101	106	70	58	94	88	82	
9:40 AM	73	101	100	69	64	94	96	85	
9:45 AM	76	101	96	72	64	94	98	86	
9:50 AM	75	101	107	72	69	95	106	89	
9:55 AM	78	101	112	72	71	95	106	91	76
10:00 AM	78	101	110	72	71	95	107	90	
10:05 AM	78	101	103	73	71	94	105	89	
10:10 AM	77	101	97	77	71	94	106	89	
10:15 AM	78	101	100	76	71	94	105	89	
10:20 AM	78	101	102	76	72	94	108	90	
10:25 AM	78	101	101	79	77	94	110	91	
10:30 AM	76	101	101	79	77	94	109	91	
10:35 AM	75	100	98	79	77	94	109	90	
10:40 AM	76	100	96	79	77	94	109	90	
10:45 AM	75	100	96	79	80	94	106	90	
10:50 AM	75	100	96	79	81	94	108	90	
10:55 AM	75	101	96	79	82	94	107	90	90
11:00 AM	75	100	99	79	82	94	108	91	
11:05 AM	75	101	94	80	84	94	107	91	
11:10 AM	75	101	90	82	88	94	106	91	
11:15 AM	75	101	90	81	88	94	106	91	
11:20 AM	75	100	90	81	88	94	106	91	

Average of the averages	1	2	3	4	5	6	7	Total	
	AVE	AVE	AVE	AVE	AVE	AVE	AVE	average	kWhrs
11:25 AM	75	100	90	84	88	88	107	90	
11:30 AM	75	100	89	84	87	82	105	89	
11:35 AM	75	101	89	83	85	87	106	89	
11:40 AM	75	100	89	83	85	87	107	89	
11:45 AM	75	100	89	84	85	83	106	89	
11:50 AM	79	101	89	83	85	80	106	89	
11:55 AM	78	101	89	81	85	70	108	88	90
12:00 PM	78	101	98	81	85	71	110	89	
12:05 PM	77	101	100	81	85	70	108	89	
12:10 PM	77	101	95	81	85	70	109	88	
12:15 PM	77	101	94	79	91	65	109	88	
12:20 PM	77	101	95	79	91	57	105	86	
12:25 PM	77	101	92	79	92	57	103	86	
12:30 PM	77	100	93	79	92	57	101	86	
12:35 PM	77	100	94	79	92	57	104	86	
12:40 PM	77	101	94	79	92	57	104	86	
12:45 PM	76	100	94	79	91	57	103	86	
12:50 PM	77	100	94	79	91	57	100	85	
12:55 PM	76	100	89	79	91	55	100	84	87
1:00 PM	76	100	89	79	91	53	101	84	
1:05 PM	76	100	88	75	91	54	101	84	
1:10 PM	76	100	89	73	91	65	102	85	
1:15 PM	76	100	95	73	91	77	101	88	
1:20 PM	76	100	98	75	91	78	105	89	
1:25 PM	77	100	96	75	91	80	102	89	
1:30 PM	76	100	98	75	91	89	103	90	
1:35 PM	76	100	95	76	91	89	105	90	
1:40 PM	76	100	102	78	91	89	105	92	
1:45 PM	76	100	103	78	91	89	104	92	
1:50 PM	76	100	100	78	92	94	102	92	
1:55 PM	76	100	95	78	92	95	102	91	89
2:00 PM	75	100	92	78	91	95	102	90	
2:05 PM	75	100	91	78	92	95	102	90	
2:10 PM	72	100	91	78	91	92	110	91	
2:15 PM	72	100	91	78	92	89	108	90	
2:20 PM	72	100	85	78	95	89	110	90	
2:25 PM	72	100	85	78	95	88	110	90	
2:30 PM	72	100	83	78	95	83	109	89	
2:35 PM	72	100	84	79	95	83	108	89	
2:40 PM	72	100	84	79	95	83	106	88	
2:45 PM	72	99	84	79	95	83	107	88	
2:50 PM	72	95	84	79	95	83	112	88	
2:55 PM	72	95	84	79	95	83	111	88	89
3:00 PM	72	95	84	79	95	83	111	88	
3:05 PM	72	95	87	79	95	89	109	89	
3:10 PM	72	95	89	79	95	89	111	90	
3:15 PM	72	94	89	81	95	89	111	90	
3:20 PM	72	90	89	81	95	89	113	90	
3:25 PM	72	81	92	81	95	89	109	88	
3:30 PM	72	60	89	81	95	89	111	85	
3:35 PM	72	26	93	81	91	89	112	80	
3:40 PM	72	7	95	81	90	89	112	78	
3:45 PM	72	0	98	81	88	89	110	77	
3:50 PM	72	0	100	81	88	89	113	78	
3:55 PM	72	0	94	81	88	89	114	77	84
4:00 PM	72	0	97	81	89	92	113	78	
4:05 PM	72	0	96	81	89	95	111	78	
4:10 PM	72	0	97	81	89	95	110	78	
4:15 PM	72	0	85	81	89	91	112	76	
4:20 PM	72	0	81	80	89	87	113	75	
4:25 PM	72	0	73	74	84	87	114	72	
4:30 PM	72	0	63	67	82	81	115	69	
4:35 PM	72	0	49	64	80	80	114	66	
4:40 PM	72	0	45	64	79	80	117	65	
4:45 PM	72	0	41	62	79	80	116	64	
4:50 PM	70	0	41	60	77	74	117	63	
4:55 PM	68	0	39	55	73	73	116	61	70
5:00 PM	68	0	27	53	73	73	115	58	
5:05 PM	68	0	21	48	73	73	114	57	
5:10 PM	67	0	18	44	71	73	110	55	

Average of the averages	1	2	3	4	5	6	7	Total	
	AVE	AVE	AVE	AVE	AVE	AVE	AVE	average	kWhrs
5:15 PM	68	0	7	43	67	73	104	52	
5:20 PM	68	0	7	43	66	67	106	51	
5:25 PM	68	0	6	41	60	66	106	49	
5:30 PM	62	0	6	41	59	63	102	48	
5:35 PM	55	0	6	41	57	58	104	46	
5:40 PM	54	0	6	41	53	51	100	44	
5:45 PM	51	0	6	41	50	44	95	41	
5:50 PM	47	0	4	41	45	44	93	39	
5:55 PM	47	0	1	41	40	42	93	38	48
6:00 PM	37	0	1	41	33	29	84	32	
6:05 PM	30	0	1	41	26	29	81	30	
6:10 PM	26	0	1	41	27	29	76	29	
6:15 PM	26	0	1	41	24	29	73	28	
6:20 PM	26	0	1	41	21	25	66	26	
6:25 PM	22	0	1	41	21	22	64	24	
6:30 PM	16	0	1	41	19	22	63	23	
6:35 PM	9	0	1	41	19	22	64	22	
6:40 PM	7	0	1	41	19	22	62	22	
6:45 PM	7	0	1	41	19	22	58	21	
6:50 PM	7	0	1	41	19	22	57	21	
6:55 PM	7	0	1	38	19	17	57	20	25
7:00 PM	5	0	1	38	19	15	56	19	
7:05 PM	4	0	1	38	13	8	54	17	
7:10 PM	4	0	1	38	13	7	54	17	
7:15 PM	4	0	1	38	13	7	52	17	
7:20 PM	4	0	1	36	13	7	52	16	
7:25 PM	4	0	1	36	13	7	52	16	
7:30 PM	4	0	1	36	13	7	52	16	
7:35 PM	4	0	1	36	9	7	51	16	
7:40 PM	4	0	1	36	7	4	51	15	
7:45 PM	4	0	1	34	7	0	51	14	
7:50 PM	4	0	1	33	7	0	51	14	
7:55 PM	4	0	1	33	7	0	53	14	16
8:00 PM	4	0	1	33	7	0	52	14	
8:05 PM	4	0	1	33	7	0	53	14	
8:10 PM	4	0	1	33	7	0	53	14	
8:15 PM	4	0	0	33	7	0	53	14	
8:20 PM	4	0	0	33	7	0	52	14	
8:25 PM	4	0	0	31	7	0	50	13	
8:30 PM	4	0	0	30	7	0	50	13	
8:35 PM	4	0	0	31	7	0	50	13	
8:40 PM	4	0	0	30	7	0	50	13	
8:45 PM	4	0	0	30	7	0	50	13	
8:50 PM	4	0	0	31	7	0	50	13	
8:55 PM	4	0	0	31	6	0	50	13	13
9:00 PM	4	0	0	31	1	0	50	12	
9:05 PM	4	0	0	30	0	0	49	12	
9:10 PM	4	0	0	31	0	0	49	12	
9:15 PM	4	0	0	31	0	0	49	12	
9:20 PM	4	0	0	31	0	0	49	12	
9:25 PM	4	0	0	31	0	0	49	12	
9:30 PM	4	0	0	31	0	0	49	12	
9:35 PM	4	0	0	31	0	0	48	12	
9:40 PM	4	0	0	31	0	0	48	12	
9:45 PM	4	0	0	31	0	0	48	12	
9:50 PM	4	0	0	31	0	0	48	12	
9:55 PM	4	0	0	29	0	0	48	12	12
10:00 PM	4	0	0	28	0	0	48	11	
10:05 PM	4	0	0	28	0	0	48	11	
10:10 PM	4	0	0	28	0	0	48	11	
10:15 PM	4	0	0	28	0	0	48	11	
10:20 PM	4	0	0	28	0	0	48	11	
10:25 PM	4	0	0	28	0	0	48	11	
10:30 PM	4	0	0	28	0	0	47	11	
10:35 PM	4	0	0	28	0	0	48	11	
10:40 PM	4	0	0	28	0	0	47	11	
10:45 PM	4	0	0	28	0	0	47	11	
10:50 PM	4	0	0	28	0	0	47	11	
10:55 PM	4	0	0	28	0	0	47	11	11
11:00 PM	4	0	0	28	0	0	48	11	

Average of the averages	1	2	3	4	5	6	7	Total	
	AVE	AVE	AVE	AVE	AVE	AVE	AVE	average	kWhrs
11:05 PM	4	0	0	28	0	0	47	11	
11:10 PM	4	0	0	28	0	0	48	11	
11:15 PM	4	0	0	28	0	0	48	11	
11:20 PM	4	0	0	28	0	0	48	11	
11:25 PM	4	0	0	28	0	0	47	11	
11:30 PM	4	0	0	28	0	0	48	11	
11:35 PM	4	0	0	28	0	0	48	11	
11:40 PM	4	0	0	26	0	0	48	11	
11:45 PM	4	0	0	26	0	0	48	11	
11:50 PM	4	0	0	26	0	0	48	11	
11:55 PM	4	0	0	26	0	0	48	11	11
TOTAL	8,418	10,739	9,912	13,242	9,069	10,099	19,739	11,603	967
							kWhr	0.04	0.97

Trip 1: DGS Occupancy Sensor data

The Average of	1	2	3	4	5	6	7	8	9	The Entire average	kWhrs
	AVE	AVE	AVE	AVE	AVE	AVE	AVE	AVE	AVE		
12:00 AM	0	0	0	0	10	0	5	0	0	2	
12:05 AM	0	0	0	0	10	0	5	0	0	2	
12:10 AM	0	0	0	0	2	0	5	0	0	1	
12:15 AM	0	0	0	0	1	0	6	0	0	1	
12:20 AM	0	0	0	0	10	1	10	0	0	2	
12:25 AM	0	0	0	0	10	8	5	0	0	3	
12:30 AM	0	0	0	0	10	16	5	0	0	3	
12:35 AM	0	0	0	0	10	16	5	0	0	3	
12:40 AM	0	0	0	0	2	16	5	0	0	3	
12:45 AM	0	0	0	0	0	16	4	0	0	2	
12:50 AM	0	0	0	0	0	15	0	0	0	2	
12:55 AM	0	0	0	0	2	8	0	0	0	1	2
1:00 AM	0	0	0	0	10	0	0	0	0	1	
1:05 AM	0	0	0	0	10	0	0	0	0	1	
1:10 AM	0	0	0	0	10	6	0	0	0	2	
1:15 AM	0	0	0	0	16	8	0	0	0	3	
1:20 AM	0	0	0	0	12	8	0	0	0	2	
1:25 AM	0	0	0	0	10	8	0	0	0	2	
1:30 AM	0	0	0	0	10	8	0	0	0	2	
1:35 AM	0	0	0	0	6	8	0	0	0	2	
1:40 AM	0	0	0	0	0	0	0	0	0	0	
1:45 AM	0	0	0	0	0	0	0	0	0	0	
1:50 AM	0	0	0	0	0	0	0	0	0	0	
1:55 AM	0	0	0	0	0	0	0	0	0	0	1
2:00 AM	0	0	0	0	0	0	0	0	0	0	
2:05 AM	0	0	0	0	0	0	0	0	0	0	
2:10 AM	0	0	0	0	0	0	0	0	0	0	
2:15 AM	0	0	0	0	0	0	0	0	0	0	
2:20 AM	0	0	0	0	0	0	0	0	0	0	
2:25 AM	0	0	0	0	0	0	0	0	0	0	
2:30 AM	0	0	0	0	0	0	0	0	0	0	
2:35 AM	0	0	0	0	0	0	0	0	0	0	
2:40 AM	0	0	0	0	0	0	0	0	0	0	
2:45 AM	0	0	0	0	0	0	0	0	0	0	
2:50 AM	0	0	0	0	0	0	0	0	0	0	
2:55 AM	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	
3:05 AM	0	0	0	0	0	0	0	0	0	0	
3:10 AM	0	0	0	0	0	0	0	0	0	0	
3:15 AM	0	0	0	0	0	0	0	0	0	0	
3:20 AM	0	0	0	0	0	0	0	0	0	0	
3:25 AM	0	0	0	0	0	0	0	0	0	0	
3:30 AM	0	0	0	0	0	0	0	0	0	0	
3:35 AM	0	0	0	0	0	0	0	0	0	0	
3:40 AM	0	0	0	0	0	0	0	0	0	0	
3:45 AM	0	0	0	0	0	0	0	0	0	0	
3:50 AM	0	0	0	0	0	0	0	0	0	0	
3:55 AM	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	
4:05 AM	0	0	0	0	0	0	0	0	0	0	
4:10 AM	0	0	0	0	0	0	0	0	0	0	
4:15 AM	0	0	0	0	0	0	0	0	0	0	

The Average of	1	2	3	4	5	6	7	8	9	The Entire average	kWhrs
	AVE	AVE	AVE	AVE	AVE	AVE	AVE	AVE	AVE		
4:20 AM	0	0	0	0	0	0	0	0	0	0	
4:25 AM	0	0	0	0	0	0	0	0	0	0	
4:30 AM	0	0	0	0	0	0	0	0	0	0	
4:35 AM	0	0	0	0	0	0	0	0	0	0	
4:40 AM	0	0	0	0	0	0	0	0	0	0	
4:45 AM	0	0	0	0	0	0	0	0	0	0	
4:50 AM	0	0	0	0	0	0	0	0	0	0	
4:55 AM	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	
5:05 AM	0	0	0	0	0	0	0	0	0	0	
5:10 AM	0	0	0	0	0	0	0	0	0	0	
5:15 AM	0	0	0	0	0	0	0	0	0	0	
5:20 AM	0	0	0	0	0	0	0	0	0	0	
5:25 AM	0	0	0	0	0	0	0	0	0	0	
5:30 AM	0	0	0	0	0	0	0	0	0	0	
5:35 AM	0	0	0	0	0	0	0	0	0	0	
5:40 AM	0	0	0	0	0	0	0	0	0	0	
5:45 AM	0	0	0	0	0	0	0	0	0	0	
5:50 AM	0	0	0	0	0	0	0	0	0	0	
5:55 AM	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0	0	0	0	
6:05 AM	0	0	0	0	0	0	0	0	0	0	
6:10 AM	0	0	0	0	0	0	0	0	0	0	
6:15 AM	0	0	0	0	0	0	0	0	0	0	
6:20 AM	0	0	0	0	0	0	0	0	0	0	
6:25 AM	0	0	0	0	7	0	0	0	0	1	
6:30 AM	0	0	0	0	10	0	0	0	0	1	
6:35 AM	0	0	0	0	10	0	0	0	0	1	
6:40 AM	0	0	0	0	10	0	0	1	0	1	
6:45 AM	0	0	0	0	6	0	0	13	0	2	
6:50 AM	0	0	0	0	0	0	0	15	0	2	
6:55 AM	0	0	0	0	0	0	0	15	0	2	1
7:00 AM	0	0	0	0	0	0	6	31	0	4	
7:05 AM	0	0	0	0	0	0	23	52	0	8	
7:10 AM	0	0	0	0	0	0	37	62	0	11	
7:15 AM	0	0	0	0	0	3	47	62	0	12	
7:20 AM	0	0	0	0	0	13	49	62	0	14	
7:25 AM	0	0	0	0	0	16	49	58	0	14	
7:30 AM	0	0	0	0	0	16	49	58	0	14	
7:35 AM	0	0	0	0	0	16	49	58	0	14	
7:40 AM	0	0	0	0	0	16	49	62	0	14	
7:45 AM	0	0	0	0	0	13	49	77	0	15	
7:50 AM	0	2	0	0	0	6	52	81	0	16	
7:55 AM	0	15	0	0	0	8	54	83	0	18	13
8:00 AM	1	24	0	0	0	8	54	83	0	19	
8:05 AM	7	27	0	0	2	9	54	85	0	20	
8:10 AM	7	33	0	0	16	16	54	88	0	24	
8:15 AM	17	25	8	0	20	16	54	86	0	25	
8:20 AM	25	24	16	0	20	11	53	83	0	26	
8:25 AM	35	25	15	0	32	8	53	75	0	27	
8:30 AM	39	29	19	0	40	8	54	77	0	29	
8:35 AM	39	29	31	22	50	15	53	77	0	35	
8:40 AM	42	29	30	64	58	13	53	78	0	41	
8:45 AM	51	32	40	73	60	15	53	89	7	47	
8:50 AM	52	34	46	74	60	15	54	92	11	49	
8:55 AM	49	34	46	76	53	15	54	89	11	48	32
9:00 AM	45	34	47	75	51	17	54	94	11	48	
9:05 AM	49	31	63	75	51	23	54	95	13	50	
9:10 AM	52	29	62	75	50	29	54	94	8	50	
9:15 AM	52	32	63	68	54	38	54	93	8	51	
9:20 AM	52	34	64	51	59	45	54	89	8	50	
9:25 AM	52	34	64	41	61	47	54	87	5	49	
9:30 AM	46	34	65	25	61	47	54	82	14	48	
9:35 AM	45	34	65	25	60	48	54	75	28	48	
9:40 AM	50	34	65	25	60	48	54	71	37	49	
9:45 AM	47	34	65	25	52	55	54	69	56	51	
9:50 AM	52	34	66	25	50	55	54	67	59	51	
9:55 AM	51	33	52	25	50	55	54	61	59	49	50
10:00 AM	51	27	36	25	50	62	54	58	59	47	
10:05 AM	52	28	32	25	50	63	54	66	60	48	
10:10 AM	51	28	32	25	50	63	54	66	59	48	
10:15 AM	51	24	26	25	44	63	54	66	60	46	
10:20 AM	51	24	16	25	40	57	54	60	67	44	
10:25 AM	52	27	17	25	40	46	51	50	70	42	

The Average of	1	2	3	4	5	6	7	8	9	The Entire average	kWhrs
	AVE	AVE	AVE	AVE	AVE	AVE	AVE	AVE	AVE		
10:30 AM	48	29	33	25	40	40	39	50	70	42	
10:35 AM	52	29	43	25	40	43	42	50	70	44	
10:40 AM	52	29	54	25	40	47	49	50	70	46	
10:45 AM	52	29	67	25	46	49	49	50	70	48	
10:50 AM	52	29	67	25	53	54	53	50	66	50	
10:55 AM	52	29	67	25	50	54	54	55	64	50	46
11:00 AM	52	33	67	25	54	54	54	55	73	52	
11:05 AM	52	34	67	45	61	49	58	50	75	54	
11:10 AM	52	36	67	51	66	54	59	50	75	56	
11:15 AM	52	36	66	50	62	54	59	46	75	56	
11:20 AM	52	33	67	53	46	54	59	41	75	53	
11:25 AM	52	34	66	50	40	54	59	38	70	51	
11:30 AM	52	37	66	66	49	54	59	46	70	55	
11:35 AM	52	43	49	65	46	54	59	51	70	54	
11:40 AM	52	44	50	50	50	54	59	57	70	54	
11:45 AM	52	44	50	37	53	58	54	61	61	52	
11:50 AM	49	42	43	25	60	62	50	57	59	50	
11:55 AM	45	37	35	25	48	69	43	52	59	46	53
12:00 PM	45	28	33	25	32	64	40	41	50	40	
12:05 PM	45	20	33	25	28	55	40	45	41	37	
12:10 PM	45	15	25	25	10	55	36	46	41	33	
12:15 PM	45	12	32	25	6	49	25	49	38	31	
12:20 PM	42	9	32	25	0	47	25	51	33	29	
12:25 PM	33	5	33	25	0	46	25	51	24	27	
12:30 PM	38	3	38	25	0	31	21	52	8	24	
12:35 PM	39	1	43	25	0	20	23	59	5	24	
12:40 PM	39	6	43	25	0	15	30	59	0	24	
12:45 PM	39	18	54	25	0	18	29	59	0	27	
12:50 PM	39	25	79	25	5	23	29	60	0	32	
12:55 PM	39	26	80	25	12	23	43	60	0	34	30
1:00 PM	39	29	72	25	20	23	51	60	0	36	
1:05 PM	39	31	66	25	27	25	54	64	0	37	
1:10 PM	33	38	50	18	46	31	54	66	0	37	
1:15 PM	33	39	50	26	51	35	58	66	0	40	
1:20 PM	33	39	50	26	56	49	59	70	1	42	
1:25 PM	40	42	50	27	56	55	59	71	15	46	
1:30 PM	39	44	61	34	61	52	59	72	42	52	
1:35 PM	38	44	66	37	61	54	59	71	53	54	
1:40 PM	33	40	67	38	59	54	59	66	67	53	
1:45 PM	33	39	67	38	59	54	59	62	75	54	
1:50 PM	31	39	67	28	38	54	57	62	75	50	
1:55 PM	40	39	66	25	30	43	45	62	76	47	46
2:00 PM	39	39	66	25	30	39	39	62	78	46	
2:05 PM	39	39	67	25	30	39	39	62	74	46	
2:10 PM	40	38	66	25	40	39	39	65	74	47	
2:15 PM	42	35	66	25	40	39	39	67	75	47	
2:20 PM	38	38	60	25	35	34	38	68	75	46	
2:25 PM	45	40	50	25	40	31	48	66	68	46	
2:30 PM	45	44	53	25	40	37	49	66	63	47	
2:35 PM	45	44	66	25	40	32	49	66	58	47	
2:40 PM	45	44	66	25	45	32	49	63	56	47	
2:45 PM	44	44	67	25	51	33	54	71	56	49	
2:50 PM	50	44	66	25	60	40	54	71	56	52	
2:55 PM	51	44	66	25	60	47	55	71	56	53	48
3:00 PM	53	44	67	25	65	43	59	70	56	53	
3:05 PM	58	41	67	25	69	55	58	66	56	55	
3:10 PM	58	44	66	25	70	55	58	67	51	55	
3:15 PM	58	40	66	25	70	54	58	71	48	54	
3:20 PM	55	39	67	25	59	55	58	71	59	54	
3:25 PM	34	44	67	25	50	55	58	72	63	52	
3:30 PM	29	39	67	25	40	55	55	68	63	49	
3:35 PM	37	37	66	25	40	55	55	67	62	49	
3:40 PM	40	40	66	25	48	62	56	67	60	52	
3:45 PM	44	48	66	25	43	62	54	42	52	48	
3:50 PM	46	49	66	26	52	70	54	23	60	49	
3:55 PM	53	49	66	25	60	68	49	14	60	49	52
4:00 PM	57	46	67	25	65	62	48	11	60	49	
4:05 PM	48	49	53	26	71	62	49	6	60	47	
4:10 PM	47	49	50	26	51	62	49	5	49	43	
4:15 PM	47	49	45	26	55	58	49	1	42	41	
4:20 PM	50	46	33	50	61	54	49	0	30	41	
4:25 PM	47	42	33	51	64	54	49	0	30	41	
4:30 PM	40	34	33	51	60	55	50	5	26	39	
4:35 PM	39	34	33	51	50	63	50	5	19	38	
4:40 PM	39	30	33	51	62	51	50	5	19	38	

The Average of	1	2	3	4	5	6	7	8	9	The Entire average	kWhrs
	AVE	AVE	AVE	AVE	AVE	AVE	AVE	AVE	AVE		
4:45 PM	33	27	33	47	59	47	43	4	12	34	
4:50 PM	26	8	33	26	51	40	21	0	8	23	
4:55 PM	20	0	17	23	50	31	0	0	8	16	38
5:00 PM	16	0	10	26	50	31	0	0	8	16	
5:05 PM	7	0	0	26	38	31	0	0	8	12	
5:10 PM	7	3	0	26	22	33	0	0	3	10	
5:15 PM	5	1	0	26	16	39	0	0	0	10	
5:20 PM	0	0	0	25	10	38	0	0	0	8	
5:25 PM	0	0	0	25	0	34	0	0	0	7	
5:30 PM	2	0	0	26	0	30	0	0	0	6	
5:35 PM	7	0	0	26	0	24	0	0	0	6	
5:40 PM	7	0	0	25	0	24	0	0	0	6	
5:45 PM	7	0	0	26	0	23	0	0	0	6	
5:50 PM	7	0	0	26	0	13	0	0	0	5	
5:55 PM	7	0	0	26	0	8	3	0	0	5	8
6:00 PM	7	0	0	26	0	0	10	0	0	5	
6:05 PM	7	0	0	26	0	0	10	6	0	5	
6:10 PM	7	0	0	26	0	0	10	11	0	6	
6:15 PM	7	0	0	26	0	0	20	11	7	8	
6:20 PM	7	0	0	26	0	0	34	18	12	11	
6:25 PM	9	0	0	26	0	0	42	19	11	12	
6:30 PM	8	0	0	26	0	0	26	35	11	12	
6:35 PM	7	0	0	26	8	0	26	37	9	12	
6:40 PM	7	0	0	26	10	0	17	28	7	11	
6:45 PM	7	0	0	26	10	0	13	17	23	11	
6:50 PM	7	0	0	26	10	0	5	1	23	8	
6:55 PM	3	0	0	26	4	0	0	17	23	8	9
7:00 PM	0	0	0	26	0	0	0	25	21	8	
7:05 PM	0	0	0	26	1	0	0	28	5	7	
7:10 PM	0	0	0	26	17	0	0	29	0	8	
7:15 PM	0	0	0	26	23	0	0	17	11	8	
7:20 PM	0	0	0	26	31	5	0	13	20	11	
7:25 PM	0	0	0	26	31	21	0	11	26	13	
7:30 PM	0	0	0	26	18	32	0	4	26	12	
7:35 PM	0	0	1	26	10	41	0	6	22	12	
7:40 PM	0	0	17	26	0	41	0	8	9	11	
7:45 PM	0	0	15	26	0	41	0	10	6	11	
7:50 PM	0	0	15	26	0	33	0	6	7	10	
7:55 PM	0	0	15	26	0	18	0	8	7	8	10
8:00 PM	0	0	15	26	0	5	0	5	9	7	
8:05 PM	0	0	15	26	0	0	0	4	19	7	
8:10 PM	0	0	16	25	0	0	0	3	23	7	
8:15 PM	0	0	16	25	0	0	4	0	23	8	
8:20 PM	7	0	16	26	0	0	10	0	29	10	
8:25 PM	20	0	16	25	7	0	18	0	29	13	
8:30 PM	15	0	6	26	10	0	27	2	18	12	
8:35 PM	7	0	0	26	10	0	30	5	18	11	
8:40 PM	7	0	15	26	10	0	30	5	18	12	
8:45 PM	7	0	16	25	6	0	25	5	7	10	
8:50 PM	0	0	17	26	0	0	20	2	7	8	
8:55 PM	4	0	17	26	0	0	9	0	3	7	9
9:00 PM	7	0	10	26	0	0	2	0	7	6	
9:05 PM	7	0	1	26	0	0	0	0	7	4	
9:10 PM	7	0	17	26	0	4	0	0	7	7	
9:15 PM	7	0	16	25	0	8	0	0	7	7	
9:20 PM	7	0	16	26	0	8	0	0	7	7	
9:25 PM	3	0	17	26	0	8	0	0	0	6	
9:30 PM	0	0	7	26	0	8	0	0	0	4	
9:35 PM	0	0	0	26	0	8	0	0	0	4	
9:40 PM	0	0	0	26	0	3	0	0	0	3	
9:45 PM	0	0	0	26	9	0	0	0	0	4	
9:50 PM	0	0	0	26	10	0	0	0	0	4	
9:55 PM	0	0	0	26	10	0	0	0	0	4	5
10:00 PM	0	0	0	26	10	0	0	0	0	4	
10:05 PM	0	0	0	26	4	0	0	0	0	3	
10:10 PM	0	0	0	21	0	0	0	0	0	2	
10:15 PM	0	0	0	0	0	0	0	0	0	0	
10:20 PM	0	0	0	0	0	0	0	0	0	0	
10:25 PM	0	0	0	0	0	0	0	0	0	0	
10:30 PM	0	0	0	0	0	0	0	0	0	0	
10:35 PM	0	0	0	0	0	0	0	0	0	0	
10:40 PM	0	0	13	0	0	0	0	0	0	1	
10:45 PM	0	0	16	0	0	0	0	0	0	2	
10:50 PM	0	0	17	0	0	0	0	0	0	2	
10:55 PM	0	0	16	0	0	0	0	0	0	2	1

The Average of	1	2	3	4	5	6	7	8	9	The Entire average	kWhrs
	AVE	AVE	AVE	AVE	AVE	AVE	AVE	AVE	AVE		
11:00 PM	0	0	10	0	0	0	0	0	0	1	
11:05 PM	0	0	0	0	0	0	0	0	0	0	
11:10 PM	0	0	0	0	0	0	3	0	0	0	
11:15 PM	0	0	0	0	0	0	5	0	0	1	
11:20 PM	0	0	0	0	0	0	5	0	0	1	
11:25 PM	0	0	0	0	0	0	5	0	0	1	
11:30 PM	0	0	0	0	0	0	5	0	0	1	
11:35 PM	0	0	0	0	0	0	5	0	0	1	
11:40 PM	0	0	0	0	0	0	2	0	0	0	
11:45 PM	0	0	0	0	1	0	0	0	0	0	
11:50 PM	0	0	0	0	10	0	0	0	0	1	
11:55 PM	0	0	0	0	10	0	5	0	0	2	1
TOTAL	4,927	3,593	5,831	4,996	5,394	5,568	6,312	7,403	4,979	5,445	454
											0.45

Trip 2 DGS: Manual On/Off Data

The Average of	1	2	3	4	5	6	7	8	The Total Average	kWhrs
	AVE	AVE	AVE	AVE	AVE	AVE	AVE	AVE		
12:00 AM	0	0	10	2	18	0	0	0	4	
12:05 AM	0	0	10	2	19	0	0	0	4	
12:10 AM	0	0	10	2	19	0	0	0	4	
12:15 AM	0	0	10	2	18	0	0	0	4	
12:20 AM	0	0	10	2	19	0	0	0	4	
12:25 AM	0	0	10	2	19	0	0	0	4	
12:30 AM	0	0	10	2	19	0	0	0	4	
12:35 AM	0	0	10	2	19	0	0	0	4	
12:40 AM	0	0	10	2	19	0	0	0	4	
12:45 AM	0	0	10	2	19	0	0	0	4	
12:50 AM	0	0	10	2	19	0	0	0	4	
12:55 AM	0	0	10	2	19	0	0	0	4	4
1:00 AM	0	0	10	2	18	0	0	0	4	
1:05 AM	0	0	10	2	19	0	0	0	4	
1:10 AM	0	0	10	2	18	0	0	0	4	
1:15 AM	0	0	10	2	19	0	0	0	4	
1:20 AM	0	0	10	2	19	0	0	0	4	
1:25 AM	0	0	10	2	19	0	0	0	4	
1:30 AM	0	0	10	2	18	0	0	0	4	
1:35 AM	0	0	10	2	18	0	0	0	4	
1:40 AM	0	0	10	2	18	0	0	0	4	
1:45 AM	0	0	10	2	18	0	0	0	4	
1:50 AM	0	0	10	2	18	0	0	0	4	
1:55 AM	0	0	10	2	18	0	0	0	4	4
2:00 AM	0	0	10	2	19	0	0	0	4	
2:05 AM	0	0	10	2	18	0	0	0	4	
2:10 AM	0	0	10	2	18	0	0	0	4	
2:15 AM	0	0	10	2	19	0	0	0	4	
2:20 AM	0	0	10	2	19	0	0	0	4	
2:25 AM	0	0	10	2	19	0	0	0	4	
2:30 AM	0	0	10	2	19	0	0	0	4	
2:35 AM	0	0	10	2	19	0	0	0	4	
2:40 AM	0	0	10	2	19	0	0	0	4	
2:45 AM	0	0	10	2	19	0	0	0	4	
2:50 AM	0	0	10	2	19	0	0	0	4	
2:55 AM	0	0	10	2	19	0	0	0	4	4
3:00 AM	0	0	10	2	19	0	0	0	4	
3:05 AM	0	0	10	2	19	0	0	0	4	
3:10 AM	0	0	10	2	19	0	0	0	4	
3:15 AM	0	0	10	2	19	0	0	0	4	
3:20 AM	0	0	10	2	19	0	0	0	4	
3:25 AM	0	0	10	2	19	0	0	0	4	
3:30 AM	0	0	10	2	18	0	0	0	4	
3:35 AM	0	0	10	2	19	0	0	0	4	
3:40 AM	0	0	10	2	19	0	0	0	4	
3:45 AM	0	0	10	2	19	0	0	0	4	
3:50 AM	0	0	10	2	19	0	0	0	4	
3:55 AM	0	0	10	2	19	0	0	0	4	4
4:00 AM	0	0	10	2	18	0	0	0	4	
4:05 AM	0	0	10	2	19	0	0	0	4	
4:10 AM	0	0	10	2	19	0	0	0	4	
4:15 AM	0	0	10	2	19	0	0	0	4	
4:20 AM	0	0	10	2	18	0	0	0	4	
4:25 AM	0	0	10	2	19	0	0	0	4	
4:30 AM	0	0	10	2	18	0	0	0	4	
4:35 AM	0	0	10	2	18	0	0	0	4	
4:40 AM	0	0	10	2	18	0	0	0	4	
4:45 AM	0	0	10	2	18	0	0	0	4	
4:50 AM	0	0	10	2	18	0	0	0	4	
4:55 AM	0	0	10	2	18	0	0	0	4	4
5:00 AM	0	0	10	2	18	0	0	0	4	
5:05 AM	0	0	10	2	18	0	0	0	4	
5:10 AM	0	0	10	2	19	0	0	0	4	
5:15 AM	0	0	10	2	19	0	0	0	4	
5:20 AM	0	0	10	2	19	0	0	0	4	
5:25 AM	0	0	10	2	19	0	0	0	4	
5:30 AM	0	0	10	2	19	0	0	0	4	
5:35 AM	0	0	10	2	19	0	0	0	4	
5:40 AM	0	0	10	2	19	0	0	0	4	
5:45 AM	0	0	10	2	19	0	0	0	4	
5:50 AM	0	0	10	2	19	0	0	0	4	
5:55 AM	0	0	9	2	19	0	0	0	4	4

The Average of	1	2	3	4	5	6	7	8	The Total Average	kWhrs
	AVE	AVE	AVE	AVE	AVE	AVE	AVE	AVE		
6:00 AM	0	0	9	2	19	0	0	0	4	
6:05 AM	0	0	9	2	19	0	0	0	4	
6:10 AM	0	0	9	2	19	0	0	0	4	
6:15 AM	0	0	9	2	18	0	0	0	4	
6:20 AM	0	0	9	2	18	0	0	0	4	
6:25 AM	0	0	9	2	19	0	0	0	4	
6:30 AM	0	0	9	2	18	0	0	0	4	
6:35 AM	0	0	9	2	19	0	0	0	4	
6:40 AM	0	0	9	2	19	0	3	0	4	
6:45 AM	0	0	9	2	19	0	10	0	5	
6:50 AM	0	0	9	2	19	0	26	0	7	
6:55 AM	0	0	9	2	18	0	39	0	9	5
7:00 AM	0	0	9	2	18	0	56	0	11	
7:05 AM	0	0	9	2	19	0	63	0	12	
7:10 AM	0	0	9	2	18	0	76	0	13	
7:15 AM	2	0	9	2	19	0	82	13	16	
7:20 AM	7	0	9	2	18	1	82	12	16	
7:25 AM	6	0	9	2	19	7	82	12	17	
7:30 AM	6	0	9	2	19	15	82	13	18	
7:35 AM	6	0	9	2	19	27	82	12	20	
7:40 AM	6	0	9	2	19	28	82	12	20	
7:45 AM	6	0	9	2	18	34	87	12	21	
7:50 AM	6	0	9	2	18	34	89	15	22	
7:55 AM	9	0	9	2	18	34	88	25	23	17
8:00 AM	18	1	3	2	18	34	89	24	24	
8:05 AM	31	7	3	2	19	34	88	24	26	
8:10 AM	37	12	3	2	19	34	88	25	27	
8:15 AM	38	12	3	3	19	34	88	35	29	
8:20 AM	41	13	3	8	19	36	94	37	31	
8:25 AM	42	27	3	19	19	48	95	53	38	
8:30 AM	48	32	3	36	19	75	95	51	45	
8:35 AM	48	45	3	47	19	81	100	51	49	
8:40 AM	49	50	3	51	19	81	102	52	51	
8:45 AM	50	52	3	54	24	84	102	51	53	
8:50 AM	51	63	33	55	38	83	102	52	60	
8:55 AM	52	63	68	55	39	83	96	52	63	41
9:00 AM	47	63	62	55	38	84	96	52	62	
9:05 AM	47	63	60	55	38	91	96	55	63	
9:10 AM	53	63	57	54	38	90	96	70	65	
9:15 AM	58	62	57	54	40	90	96	70	66	
9:20 AM	60	57	57	54	49	90	96	71	67	
9:25 AM	56	67	57	54	55	95	92	71	68	
9:30 AM	54	67	59	54	56	96	90	71	68	
9:35 AM	54	67	59	54	84	96	89	70	72	
9:40 AM	54	73	60	54	113	95	83	70	75	
9:45 AM	54	73	60	54	115	96	83	71	76	
9:50 AM	55	77	60	51	111	96	83	70	75	
9:55 AM	55	80	60	51	109	96	84	73	76	69
10:00 AM	55	80	60	51	104	95	84	90	77	
10:05 AM	62	79	60	51	104	95	83	90	78	
10:10 AM	64	84	60	51	103	95	83	90	79	
10:15 AM	64	86	60	51	103	95	83	89	79	
10:20 AM	64	90	60	51	103	95	83	79	78	
10:25 AM	64	92	60	51	103	95	83	79	78	
10:30 AM	64	92	60	51	103	95	83	79	78	
10:35 AM	64	92	61	51	103	95	83	79	78	
10:40 AM	64	92	60	51	103	95	83	79	78	
10:45 AM	64	92	60	51	103	95	83	79	78	
10:50 AM	64	92	60	50	103	95	83	79	78	
10:55 AM	64	92	61	51	103	95	83	79	78	78
11:00 AM	67	92	61	51	103	95	83	79	79	
11:05 AM	71	92	60	51	103	95	83	79	79	
11:10 AM	71	88	61	50	103	95	83	78	79	
11:15 AM	64	82	61	50	103	95	83	78	77	
11:20 AM	61	88	60	50	103	95	83	79	77	
11:25 AM	53	92	68	50	103	95	83	79	78	
11:30 AM	48	91	65	50	103	94	83	78	77	
11:35 AM	43	98	65	50	103	89	83	88	77	
11:40 AM	44	98	65	50	103	81	83	94	77	
11:45 AM	44	98	65	50	103	81	83	83	76	
11:50 AM	44	98	63	51	103	81	83	83	76	
11:55 AM	44	98	62	51	103	76	83	83	75	77
12:00 PM	44	99	62	51	103	76	77	83	74	
12:05 PM	44	98	62	51	103	76	77	83	74	
12:10 PM	44	98	62	51	103	76	77	83	74	

The Average of	1	2	3	4	5	6	7	8	The Total Average	kWhrs
	AVE	AVE	AVE	AVE	AVE	AVE	AVE	AVE		
12:15 PM	44	98	62	51	103	76	77	83	74	
12:20 PM	51	98	62	50	103	76	77	83	75	
12:25 PM	51	98	62	51	103	76	77	83	75	
12:30 PM	51	98	62	51	103	76	77	83	75	
12:35 PM	51	95	62	51	103	76	77	83	75	
12:40 PM	51	88	62	51	103	76	77	83	74	
12:45 PM	55	88	62	50	103	76	77	83	74	
12:50 PM	58	88	62	54	103	78	76	83	75	
12:55 PM	58	88	62	54	103	81	77	83	76	75
1:00 PM	58	98	62	54	102	81	69	83	76	
1:05 PM	60	105	62	54	103	84	64	83	77	
1:10 PM	65	104	62	54	103	86	62	83	77	
1:15 PM	65	104	62	52	102	87	57	83	77	
1:20 PM	70	104	62	51	102	92	57	83	78	
1:25 PM	73	104	62	51	103	92	57	83	78	
1:30 PM	73	104	62	51	103	89	54	82	77	
1:35 PM	73	105	62	51	103	87	51	83	77	
1:40 PM	73	104	62	51	103	87	51	82	77	
1:45 PM	72	104	61	51	103	87	51	82	77	
1:50 PM	73	104	62	51	103	83	51	82	76	
1:55 PM	73	104	62	51	103	81	51	83	76	77
2:00 PM	73	104	62	51	102	80	51	82	76	
2:05 PM	73	104	62	51	102	81	51	82	76	
2:10 PM	73	104	62	51	103	81	51	82	76	
2:15 PM	73	104	62	51	103	81	51	83	76	
2:20 PM	75	104	62	52	102	81	51	82	76	
2:25 PM	76	104	62	51	102	81	51	82	76	
2:30 PM	79	98	62	51	103	81	41	83	75	
2:35 PM	79	94	63	51	100	81	38	82	74	
2:40 PM	79	94	62	51	96	82	38	82	73	
2:45 PM	79	94	62	51	96	86	38	82	74	
2:50 PM	79	94	62	51	96	86	38	82	74	
2:55 PM	79	93	62	51	96	86	38	83	73	75
3:00 PM	79	88	62	51	96	86	38	83	73	
3:05 PM	79	88	62	50	96	86	38	82	73	
3:10 PM	79	88	62	48	92	86	38	83	72	
3:15 PM	79	88	63	48	86	86	38	83	71	
3:20 PM	79	88	62	48	83	86	35	83	71	
3:25 PM	78	88	63	48	76	86	28	83	69	
3:30 PM	72	88	63	48	69	86	26	83	67	
3:35 PM	72	88	62	48	69	86	21	83	66	
3:40 PM	70	88	60	48	69	86	13	83	65	
3:45 PM	65	88	60	48	69	86	13	83	64	
3:50 PM	65	88	60	48	64	80	13	83	63	
3:55 PM	65	88	60	48	55	82	13	83	62	68
4:00 PM	64	88	65	48	55	84	8	87	62	
4:05 PM	62	88	69	46	55	84	6	81	61	
4:10 PM	62	88	69	42	53	84	6	74	60	
4:15 PM	62	88	69	41	49	84	6	74	59	
4:20 PM	62	88	63	39	46	84	6	33	53	
4:25 PM	59	88	60	35	39	82	2	12	47	
4:30 PM	60	84	60	29	42	78	0	12	46	
4:35 PM	59	82	47	24	40	78	0	12	43	
4:40 PM	59	75	40	23	35	74	0	12	40	
4:45 PM	59	52	40	19	35	72	0	12	36	
4:50 PM	58	50	22	17	35	72	0	1	32	
4:55 PM	59	36	20	17	35	72	0	0	30	47
5:00 PM	59	27	20	14	34	69	0	0	28	
5:05 PM	62	13	20	11	32	65	0	0	25	
5:10 PM	61	13	20	9	32	61	0	0	24	
5:15 PM	61	13	20	8	32	59	0	0	24	
5:20 PM	61	13	16	5	30	55	0	0	22	
5:25 PM	60	13	0	3	25	49	0	0	19	
5:30 PM	54	11	0	2	25	46	0	0	17	
5:35 PM	54	6	0	2	25	46	0	0	17	
5:40 PM	54	6	0	2	25	45	0	0	16	
5:45 PM	54	6	0	2	25	43	0	0	16	
5:50 PM	54	6	0	2	25	32	0	0	15	
5:55 PM	47	0	0	2	25	27	0	0	13	20
6:00 PM	40	0	0	2	25	21	0	0	11	
6:05 PM	30	0	0	2	25	10	0	0	8	
6:10 PM	21	0	9	2	25	8	0	0	8	
6:15 PM	20	0	14	2	25	8	0	0	9	
6:20 PM	23	0	14	2	25	8	0	0	9	
6:25 PM	21	0	14	2	25	6	0	0	9	

The Average of	1	2	3	4	5	6	7	8	The Total Average	kWhrs
	AVE	AVE	AVE	AVE	AVE	AVE	AVE	AVE		
6:30 PM	17	0	14	2	22	1	0	0	7	
6:35 PM	17	0	13	2	19	1	0	0	6	
6:40 PM	17	0	8	2	19	1	0	0	6	
6:45 PM	17	0	8	2	19	1	0	0	6	
6:50 PM	17	0	8	2	19	1	0	0	6	
6:55 PM	17	0	8	2	19	1	0	0	6	8
7:00 PM	17	0	8	2	19	1	0	0	6	
7:05 PM	17	0	8	2	19	1	0	0	6	
7:10 PM	17	0	8	2	19	1	0	0	6	
7:15 PM	17	0	8	2	19	1	0	0	6	
7:20 PM	17	0	8	2	19	1	0	0	6	
7:25 PM	17	0	8	2	18	1	0	0	6	
7:30 PM	17	0	8	2	19	1	0	0	6	
7:35 PM	17	0	8	2	19	1	0	0	6	
7:40 PM	17	0	8	2	19	1	0	0	6	
7:45 PM	17	0	8	2	19	1	0	0	6	
7:50 PM	7	0	8	2	18	1	0	0	5	
7:55 PM	7	0	8	2	18	1	0	0	5	6
8:00 PM	7	0	8	2	18	1	0	0	5	
8:05 PM	7	0	8	2	18	1	0	0	5	
8:10 PM	7	0	8	2	18	1	0	0	5	
8:15 PM	4	0	8	2	18	1	0	0	4	
8:20 PM	0	0	8	2	18	1	0	0	4	
8:25 PM	0	0	8	2	18	1	0	0	4	
8:30 PM	0	0	8	2	18	1	0	0	4	
8:35 PM	0	0	8	2	19	1	0	0	4	
8:40 PM	0	0	8	2	18	1	0	0	4	
8:45 PM	0	0	8	2	19	1	0	0	4	
8:50 PM	0	0	8	2	19	1	0	0	4	
8:55 PM	0	0	8	2	19	1	0	0	4	4
9:00 PM	0	0	8	2	19	1	0	0	4	
9:05 PM	0	0	8	2	19	1	0	0	4	
9:10 PM	0	0	8	2	19	1	0	0	4	
9:15 PM	0	0	8	2	19	1	0	0	4	
9:20 PM	0	0	8	2	19	1	0	0	4	
9:25 PM	0	0	8	2	19	1	0	0	4	
9:30 PM	0	0	8	2	19	1	0	0	4	
9:35 PM	0	0	8	2	19	1	0	0	4	
9:40 PM	0	0	8	2	19	1	0	0	4	
9:45 PM	0	0	8	2	19	1	0	0	4	
9:50 PM	0	0	8	2	19	1	0	0	4	
9:55 PM	0	0	8	2	19	1	0	0	4	4
10:00 PM	0	0	8	2	19	1	0	0	4	
10:05 PM	0	0	8	2	19	1	0	0	4	
10:10 PM	0	0	8	2	19	1	0	0	4	
10:15 PM	0	0	8	2	19	1	0	0	4	
10:20 PM	0	0	8	2	19	1	0	0	4	
10:25 PM	0	0	8	2	19	1	0	0	4	
10:30 PM	0	0	8	2	19	1	0	0	4	
10:35 PM	0	0	8	2	19	1	0	0	4	
10:40 PM	0	0	8	2	19	1	0	0	4	
10:45 PM	0	0	8	2	19	1	0	0	4	
10:50 PM	0	0	8	2	19	1	0	0	4	
10:55 PM	0	0	8	2	19	1	0	0	4	4
11:00 PM	0	0	8	2	19	1	0	0	4	
11:05 PM	0	0	8	2	19	1	0	0	4	
11:10 PM	0	0	8	2	19	1	0	0	4	
11:15 PM	0	0	8	2	19	1	0	0	4	
11:20 PM	0	0	8	2	19	1	0	0	4	
11:25 PM	0	0	8	2	19	1	0	0	4	
11:30 PM	0	0	8	2	19	1	0	0	4	
11:35 PM	0	0	8	2	19	1	0	0	4	
11:40 PM	0	0	8	2	19	1	0	0	4	
11:45 PM	0	0	8	2	19	1	0	0	4	
11:50 PM	0	0	8	2	19	1	0	0	4	
11:55 PM	0	0	8	2	19	1	0	0	4	4
TOTAL	7,707	9,025	7,498	5,377	12,191	9,863	7,731	7,795	8,398	700
										0.70

Trip 2: DGS Occupancy Sensor Data

The Average of the averages	1	2	3	4	5	6	7	8	the	
	AVE	AVE	AVE	AVE	AVE	AVE	AVE	AVE	average	kWhrs
12:00 AM	22	0	0	0	0	0	0	0	3	
12:05 AM	13	0	0	0	0	0	0	0	2	
12:10 AM	3	0	0	0	0	0	0	0	0	
12:15 AM	13	0	0	0	0	0	0	0	2	
12:20 AM	15	0	0	0	0	5	0	0	2	
12:25 AM	12	0	0	0	0	6	0	0	2	
12:30 AM	1	0	0	0	0	6	0	0	1	
12:35 AM	0	0	0	0	0	6	0	0	1	
12:40 AM	0	0	0	0	0	6	0	0	1	
12:45 AM	0	0	0	0	0	1	0	0	0	
12:50 AM	0	0	0	0	0	0	0	0	0	
12:55 AM	0	0	0	0	0	5	0	0	1	1
1:00 AM	0	0	0	0	0	6	0	0	1	
1:05 AM	0	0	0	0	0	6	0	0	1	
1:10 AM	0	0	0	0	0	6	0	0	1	
1:15 AM	0	0	0	0	0	6	0	0	1	
1:20 AM	0	0	0	0	0	1	0	0	0	
1:25 AM	0	0	0	0	0	0	0	0	0	
1:30 AM	0	0	0	0	0	0	0	0	0	
1:35 AM	0	0	0	0	0	0	0	0	0	
1:40 AM	0	0	0	0	0	0	0	0	0	
1:45 AM	0	0	0	0	0	0	0	0	0	
1:50 AM	0	0	0	0	0	0	0	0	0	
1:55 AM	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	
2:05 AM	0	0	0	0	0	0	0	0	0	
2:10 AM	0	0	0	0	0	0	0	0	0	
2:15 AM	0	0	0	0	0	0	0	0	0	
2:20 AM	0	0	0	0	0	0	0	0	0	
2:25 AM	0	0	0	0	0	0	0	0	0	
2:30 AM	0	0	0	0	0	0	0	0	0	
2:35 AM	0	0	0	0	0	0	0	0	0	
2:40 AM	0	0	0	0	0	0	0	0	0	
2:45 AM	0	0	0	0	0	0	0	0	0	
2:50 AM	0	0	0	0	0	0	0	0	0	
2:55 AM	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	
3:05 AM	0	0	0	0	0	0	0	0	0	
3:10 AM	0	0	0	0	0	0	0	0	0	
3:15 AM	0	0	0	0	0	0	0	0	0	
3:20 AM	0	0	0	0	0	0	0	0	0	
3:25 AM	0	0	0	0	0	0	0	0	0	
3:30 AM	0	0	0	0	0	0	0	0	0	
3:35 AM	0	0	0	0	0	0	0	0	0	
3:40 AM	0	0	0	0	0	0	0	0	0	
3:45 AM	0	0	0	0	0	0	0	0	0	
3:50 AM	0	0	0	0	0	0	0	0	0	
3:55 AM	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	
4:05 AM	0	0	0	0	0	0	0	0	0	
4:10 AM	0	0	0	0	0	0	0	0	0	
4:15 AM	0	0	0	0	0	0	0	0	0	
4:20 AM	0	0	0	0	0	0	0	0	0	
4:25 AM	0	0	0	0	0	0	0	0	0	
4:30 AM	0	0	0	0	0	0	0	0	0	
4:35 AM	0	0	0	0	0	0	0	0	0	
4:40 AM	0	0	0	0	0	0	0	0	0	
4:45 AM	0	0	0	0	0	0	0	0	0	
4:50 AM	0	0	0	0	0	0	0	0	0	
4:55 AM	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	
5:05 AM	0	0	0	0	0	0	0	0	0	
5:10 AM	0	0	0	0	0	0	0	0	0	
5:15 AM	0	0	0	0	0	0	0	0	0	
5:20 AM	0	0	0	0	0	0	0	0	0	
5:25 AM	0	0	0	0	0	0	0	0	0	
5:30 AM	0	0	0	0	0	0	0	0	0	
5:35 AM	0	0	0	0	0	0	0	0	0	

The Average of the averages	1	2	3	4	5	6	7	8	the	
	AVE	AVE	AVE	AVE	AVE	AVE	AVE	AVE	average	kWhrs
5:40 AM	0	0	0	0	0	0	0	0	0	
5:45 AM	0	0	0	0	0	0	0	0	0	
5:50 AM	0	0	0	0	0	0	0	0	0	
5:55 AM	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0	0	0	
6:05 AM	0	0	0	0	0	0	0	0	0	
6:10 AM	0	0	0	0	0	0	0	0	0	
6:15 AM	0	0	0	0	0	0	0	0	0	
6:20 AM	0	0	0	0	0	0	0	0	0	
6:25 AM	0	0	0	0	0	0	0	0	0	
6:30 AM	0	0	0	0	0	0	0	0	0	
6:35 AM	36	0	0	0	0	0	0	0	5	
6:40 AM	79	0	0	0	0	0	0	0	10	
6:45 AM	94	0	0	2	0	0	0	0	12	
6:50 AM	94	0	0	5	0	0	0	0	12	
6:55 AM	94	0	0	12	0	0	0	0	13	4
7:00 AM	94	0	0	26	0	0	0	0	15	
7:05 AM	94	0	0	36	0	0	0	0	16	
7:10 AM	94	0	0	42	0	0	0	0	17	
7:15 AM	94	4	0	46	0	1	3	2	19	
7:20 AM	94	7	0	48	0	6	8	5	21	
7:25 AM	94	7	0	51	0	6	8	9	22	
7:30 AM	94	7	0	51	0	6	8	9	22	
7:35 AM	94	7	0	53	0	6	8	7	22	
7:40 AM	94	7	0	56	0	5	3	6	21	
7:45 AM	93	4	0	61	0	6	2	0	21	
7:50 AM	93	10	0	65	0	13	9	3	24	
7:55 AM	93	13	7	65	0	29	8	4	28	21
8:00 AM	93	13	15	65	0	51	8	4	31	
8:05 AM	93	13	36	62	0	73	8	4	36	
8:10 AM	92	14	53	67	0	89	9	4	41	
8:15 AM	90	13	55	73	0	100	17	4	44	
8:20 AM	94	12	62	80	0	107	28	4	48	
8:25 AM	93	13	62	84	0	108	43	4	51	
8:30 AM	93	17	64	80	0	108	56	4	53	
8:35 AM	86	21	69	79	0	104	56	4	52	
8:40 AM	86	25	72	66	3	104	59	5	53	
8:45 AM	86	29	81	53	6	104	59	8	53	
8:50 AM	86	31	76	56	6	107	51	8	53	
8:55 AM	94	38	77	57	8	109	43	8	54	48
9:00 AM	91	34	77	57	19	109	50	5	55	
9:05 AM	88	30	70	50	29	109	52	2	54	
9:10 AM	94	27	65	47	30	108	46	1	52	
9:15 AM	94	23	56	36	37	105	51	7	51	
9:20 AM	94	16	54	22	45	102	51	23	51	
9:25 AM	94	26	48	23	50	90	51	34	52	
9:30 AM	95	49	48	24	48	85	55	40	55	
9:35 AM	92	65	45	25	55	87	60	51	60	
9:40 AM	94	79	48	34	53	80	66	62	65	
9:45 AM	94	90	47	41	54	79	73	65	68	
9:50 AM	92	96	45	40	49	74	70	65	66	
9:55 AM	81	90	43	44	42	67	67	65	62	58
10:00 AM	81	97	48	47	42	72	75	63	66	
10:05 AM	86	92	48	46	42	75	75	64	66	
10:10 AM	85	96	51	48	43	83	75	71	69	
10:15 AM	94	94	54	41	52	89	74	73	71	
10:20 AM	94	93	46	44	49	92	66	74	70	
10:25 AM	94	94	47	44	56	83	53	74	68	
10:30 AM	94	92	48	45	60	75	57	74	68	
10:35 AM	92	87	50	46	56	74	63	70	67	
10:40 AM	94	90	49	54	62	73	64	70	70	
10:45 AM	94	91	49	57	72	74	65	74	72	
10:50 AM	94	96	55	49	73	77	64	68	72	
10:55 AM	87	96	51	48	78	80	61	69	71	69
11:00 AM	87	97	51	48	76	80	57	76	71	
11:05 AM	87	99	51	49	75	81	50	78	71	
11:10 AM	85	107	51	53	81	86	50	78	74	
11:15 AM	81	114	54	60	88	88	56	77	77	
11:20 AM	81	107	56	56	93	104	59	69	78	
11:25 AM	72	105	56	66	85	97	59	66	76	

The Average of the averages	1	2	3	4	5	6	7	8	the	
	AVE	AVE	AVE	AVE	AVE	AVE	AVE	AVE	average	kWhrs
11:30 AM	74	104	54	66	78	83	59	65	73	
11:35 AM	74	99	51	66	78	80	59	72	72	
11:40 AM	52	101	44	65	69	80	57	75	68	
11:45 AM	32	98	36	55	69	85	45	69	61	
11:50 AM	60	98	28	57	67	88	43	83	65	
11:55 AM	61	95	31	61	67	88	50	85	67	71
12:00 PM	62	84	40	64	69	86	46	82	66	
12:05 PM	75	62	35	71	76	91	50	80	67	
12:10 PM	83	67	34	69	79	86	51	76	68	
12:15 PM	88	75	34	72	79	80	51	76	69	
12:20 PM	91	73	33	71	73	75	46	72	67	
12:25 PM	95	74	24	71	64	76	43	71	65	
12:30 PM	91	76	21	68	62	87	42	63	64	
12:35 PM	85	74	28	74	65	89	50	58	65	
12:40 PM	81	73	28	76	62	80	51	60	64	
12:45 PM	81	77	28	80	57	77	51	62	64	
12:50 PM	81	84	25	80	56	81	60	62	66	
12:55 PM	82	75	33	80	56	82	78	62	68	66
1:00 PM	85	74	34	80	56	82	75	62	69	
1:05 PM	81	75	35	77	53	82	78	62	68	
1:10 PM	77	76	44	80	58	87	90	62	72	
1:15 PM	74	76	53	75	57	92	94	62	73	
1:20 PM	82	84	51	69	51	89	98	62	73	
1:25 PM	81	85	46	74	51	92	93	65	73	
1:30 PM	81	91	46	78	62	95	89	66	76	
1:35 PM	81	94	45	72	61	93	90	66	75	
1:40 PM	81	90	43	61	67	98	95	63	75	
1:45 PM	81	88	52	46	72	98	102	65	75	
1:50 PM	79	91	60	42	70	98	100	66	76	
1:55 PM	74	87	62	45	67	93	93	68	73	73
2:00 PM	74	89	62	45	63	86	84	65	71	
2:05 PM	78	88	59	46	62	86	84	71	72	
2:10 PM	87	83	56	44	62	86	84	76	72	
2:15 PM	87	87	60	44	63	82	84	78	73	
2:20 PM	82	94	55	44	66	75	84	74	72	
2:25 PM	83	98	51	40	67	64	85	74	70	
2:30 PM	87	99	51	39	64	64	84	74	70	
2:35 PM	87	103	49	44	62	67	84	74	71	
2:40 PM	87	103	45	43	62	73	78	75	71	
2:45 PM	87	108	45	47	59	78	78	77	73	
2:50 PM	87	97	46	51	67	85	78	78	74	
2:55 PM	86	103	51	59	66	80	76	77	75	72
3:00 PM	80	102	51	66	67	80	76	75	75	
3:05 PM	86	90	51	67	68	79	76	73	74	
3:10 PM	87	89	52	72	73	77	76	77	75	
3:15 PM	88	86	52	69	72	67	76	73	73	
3:20 PM	87	81	46	66	74	67	76	69	71	
3:25 PM	86	83	49	67	87	77	76	65	74	
3:30 PM	81	84	55	71	90	80	77	75	77	
3:35 PM	75	77	56	68	90	80	84	82	77	
3:40 PM	74	82	51	62	90	80	84	84	76	
3:45 PM	54	82	48	66	88	82	84	83	73	
3:50 PM	16	82	43	69	84	91	82	84	69	
3:55 PM	1	92	45	75	84	92	73	85	68	73
4:00 PM	0	94	45	76	84	92	70	83	68	
4:05 PM	0	90	45	76	84	92	70	86	68	
4:10 PM	0	93	45	72	84	86	72	86	67	
4:15 PM	0	93	42	73	83	91	78	86	68	
4:20 PM	0	88	45	75	80	92	70	86	67	
4:25 PM	0	82	45	60	78	90	78	86	65	
4:30 PM	0	82	45	39	79	88	78	86	62	
4:35 PM	0	84	45	27	79	86	69	86	59	
4:40 PM	0	83	47	14	63	86	61	86	55	
4:45 PM	0	80	47	13	62	86	61	86	55	
4:50 PM	0	82	45	10	62	86	61	86	54	
4:55 PM	0	81	41	9	62	86	49	86	52	62
5:00 PM	0	79	45	8	62	86	39	86	51	
5:05 PM	0	71	37	4	57	88	28	86	46	
5:10 PM	0	71	32	3	62	92	28	86	47	
5:15 PM	0	69	18	0	62	95	28	86	45	

The Average of the averages	1	2	3	4	5	6	7	8	the	
	AVE	AVE	AVE	AVE	AVE	AVE	AVE	AVE	average	kWhrs
5:20 PM	0	74	17	0	68	87	30	86	45	
5:25 PM	0	72	14	0	67	75	17	84	41	
5:30 PM	0	71	11	0	64	48	17	77	36	
5:35 PM	0	67	6	0	64	37	14	74	33	
5:40 PM	0	63	6	0	57	30	9	72	30	
5:45 PM	0	47	6	0	49	20	0	65	23	
5:50 PM	0	41	1	0	45	40	0	63	24	
5:55 PM	0	53	0	0	40	52	0	64	26	37
6:00 PM	0	53	0	0	40	67	0	64	28	
6:05 PM	0	54	0	0	45	70	0	66	29	
6:10 PM	0	50	0	0	45	65	0	65	28	
6:15 PM	0	54	0	0	44	41	0	60	25	
6:20 PM	0	41	0	3	41	26	0	58	21	
6:25 PM	0	36	0	5	31	16	0	44	17	
6:30 PM	0	45	0	23	32	13	0	42	19	
6:35 PM	0	46	0	43	34	12	0	42	22	
6:40 PM	0	46	6	59	34	9	0	32	23	
6:45 PM	0	39	6	70	34	4	14	24	24	
6:50 PM	0	42	6	53	31	0	41	32	25	
6:55 PM	0	40	6	32	28	0	68	44	27	24
7:00 PM	0	37	6	16	28	0	70	54	26	
7:05 PM	0	29	10	5	25	0	78	52	25	
7:10 PM	0	26	28	1	23	0	67	46	24	
7:15 PM	0	28	45	0	23	0	45	31	21	
7:20 PM	0	33	59	0	23	0	17	26	20	
7:25 PM	0	26	59	0	17	0	16	25	18	
7:30 PM	0	27	50	0	11	0	11	17	15	
7:35 PM	0	28	36	0	11	0	17	20	14	
7:40 PM	0	27	24	0	11	0	17	14	12	
7:45 PM	0	16	12	0	8	0	17	12	8	
7:50 PM	0	12	8	0	6	0	17	8	6	
7:55 PM	0	7	7	0	6	0	14	4	5	16
8:00 PM	0	7	8	0	6	0	0	3	3	
8:05 PM	0	1	6	0	6	0	0	2	2	
8:10 PM	4	0	6	0	5	0	0	0	2	
8:15 PM	7	0	11	0	0	0	0	0	2	
8:20 PM	7	0	6	0	0	0	0	0	2	
8:25 PM	4	0	6	12	0	0	0	0	3	
8:30 PM	0	0	6	28	0	0	0	0	4	
8:35 PM	0	0	1	51	0	0	0	0	7	
8:40 PM	3	0	0	63	0	0	0	0	8	
8:45 PM	7	0	0	58	0	0	0	0	8	
8:50 PM	7	0	0	42	0	0	0	0	6	
8:55 PM	4	0	0	21	0	0	0	0	3	4
9:00 PM	3	0	0	12	0	0	0	0	2	
9:05 PM	10	0	0	4	0	0	0	0	2	
9:10 PM	27	0	0	1	0	0	0	0	3	
9:15 PM	31	0	0	0	0	0	0	0	4	
9:20 PM	33	0	0	0	0	0	0	0	4	
9:25 PM	16	0	0	0	0	0	0	0	2	
9:30 PM	9	0	0	0	0	0	0	0	1	
9:35 PM	10	0	0	0	0	0	12	0	3	
9:40 PM	14	0	0	0	0	0	17	0	4	
9:45 PM	12	0	0	0	0	0	19	0	4	
9:50 PM	7	0	0	0	0	0	26	0	4	
9:55 PM	0	0	0	0	0	7	26	0	4	3
10:00 PM	0	0	0	0	0	12	12	1	3	
10:05 PM	0	0	0	0	0	13	10	3	3	
10:10 PM	0	0	0	0	0	19	16	3	5	
10:15 PM	0	0	0	0	1	19	18	3	5	
10:20 PM	0	0	0	0	6	12	28	3	6	
10:25 PM	0	0	0	0	6	7	34	3	6	
10:30 PM	0	0	0	0	6	12	38	3	7	
10:35 PM	0	0	0	0	6	6	39	3	7	
10:40 PM	0	0	0	0	0	6	34	3	5	
10:45 PM	0	0	0	0	0	6	31	3	5	
10:50 PM	0	0	0	0	0	9	26	3	5	
10:55 PM	0	0	0	0	0	10	26	3	5	5
11:00 PM	0	0	0	0	0	19	17	3	5	
11:05 PM	0	0	0	0	0	19	15	3	5	

The Average of the averages	1	2	3	4	5	6	7	8	the	
	AVE	AVE	AVE	AVE	AVE	AVE	AVE	AVE	average	kWhrs
11:10 PM	0	0	0	0	0	23	9	3	4	
11:15 PM	0	0	0	0	0	28	7	3	5	
11:20 PM	0	0	0	0	0	22	0	3	3	
11:25 PM	0	0	0	0	0	12	0	3	2	
11:30 PM	0	0	0	0	0	12	0	3	2	
11:35 PM	0	0	0	0	0	9	0	3	1	
11:40 PM	18	0	0	0	0	0	0	3	3	
11:45 PM	36	0	0	0	0	0	0	3	5	
11:50 PM	50	0	0	0	0	0	0	3	7	
11:55 PM	60	0	0	0	0	0	0	3	8	4
TOTAL	9,882	10,026	5,831	7,357	7,663	10,773	8,259	8,585	8,547	712
									kWhr	0.71