



California Bill Analysis Pilot

Final Report

***A Research Project Conducted as Part of the
California Statewide Pricing Pilot (R) 02.06.001***

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Executive Summary

This report presents the results of the California Bill Analysis Pilot program conducted during the summer of 2005 with customers in Southern California Edison (SCE), San Diego Gas and Electric (SDG&E), and Pacific Gas and Electric (PG&E) service territories. The pilot was designed to quantify the benefits of providing customers on dynamic pricing tariffs site-specific diagnostic information as a supplement to their standard utility bill, as part of an ongoing investigation of the benefits of enhanced information for electric pricing options for residential customers.

The Bill Analysis Pilot is an extension of the California Statewide Pricing Pilot (SPP) that began in 2003, in which a sample of customers was offered advanced meters that measured hourly electric use, and time-based electric rates of several designs, in order to determine their responsiveness to dynamic pricing. In 2004, an initial pilot examination was conducted of enhanced information treatments - including Web tools, mail information, and Energy Orb displays - to see if there were potential benefits from assisting customers with their understanding of rates and their response during high-price critical peak periods.

This 2005 study focuses on a more narrowly defined scope than do previous efforts: diagnostic billing information was offered only by Web and mail (without in-home display devices), and the target was limited to residential households who remained voluntarily on the SPP critical peak pricing rates. The objective of this study was to determine the extent to which customized bill analysis would be helpful to these customers in understanding and managing their energy use under the SPP rates, as well as whether this information would amplify their price response and increase their energy savings.

The Bill Analysis Pilot included 152 participants and 118 who served as a control sample. Details regarding the program approach and messages are summarized in Section 1 (Introduction) and Section 2 (Methodology).

The pilot project was evaluated through both qualitative and quantitative methods:

- Participant and control group surveys, as well as two focus group sessions, were conducted at the conclusion of the program to determine the extent to which bill analysis had an effect on customer knowledge and behavior.
- A quantitative impact analysis was conducted using the difference of differences method. Statistical significance of average hourly load impacts was determined based on sample variance and a normal distribution assumption. Further, a nonparametric approach was used to determine if the percentage of customers who used less energy as a result of the bill analysis was statistically significant.
- Website traffic and e-mail click-through data were collected to characterize use and interaction with the bill analysis website and e-mail.

The primary conclusions of the evaluation are summarized below with references to the section of the report in which specific results are discussed.

First, participants engaged actively with the bill analysis. They found it useful and reported that it caused them to take actions to reduce peak usage, resulting in lower electricity bills.

- Most participants – 77% - visited the website at some point during the program. Further, participants began using the program website immediately and the website remained active throughout the summer. This level of use is remarkable when compared to that seen for comparable utility sites offering bill information, where 1-3% of a target population typically visits a website on their own when informed of its benefits.¹ (Section 3.3)
- Many participants found the bill analysis useful in helping them reduce their usage. Nearly half (47%) of survey respondents found the bill analysis useful. An additional 37% gave a more neutral rating, while only 10% felt that it was not useful. (Section 4.1)

“It absolutely was helpful. ... I started being more careful of when I do a load of laundry... I always thought that peak time was ... just until five o’clock ... and then I realized peak time is seven. It slowed me down from doing things like laundry and running my dishwasher ... I was more careful thanks to the billing analysis.”

- A significant portion of survey respondents (46%) stated that they took actions during the critical peak periods that they would not have taken if they hadn’t received the bill analysis; and 49% of respondents stated that they took additional actions during regular peak periods because of the bill analysis. (Section 4.1)

“It showed us where we could cut and save a little more. We had a pool running, the air conditioner, a lot of bigger stuff. We just started cutting back.

- Most participants (62%) noticed reductions in their bills since participating in the CPP-F rate, and approximately half of the participants (51%) noted reductions due to the bill analysis. (Section 4.1)

“After we got it and started making some adjustments... I got into the program and I saw a definite change in our PG&E bill. We started replacing appliances and everything else, and my bill dropped dramatically.”

Second, the quantitative impact analysis showed savings, with statistical significance for some, but not all, results.

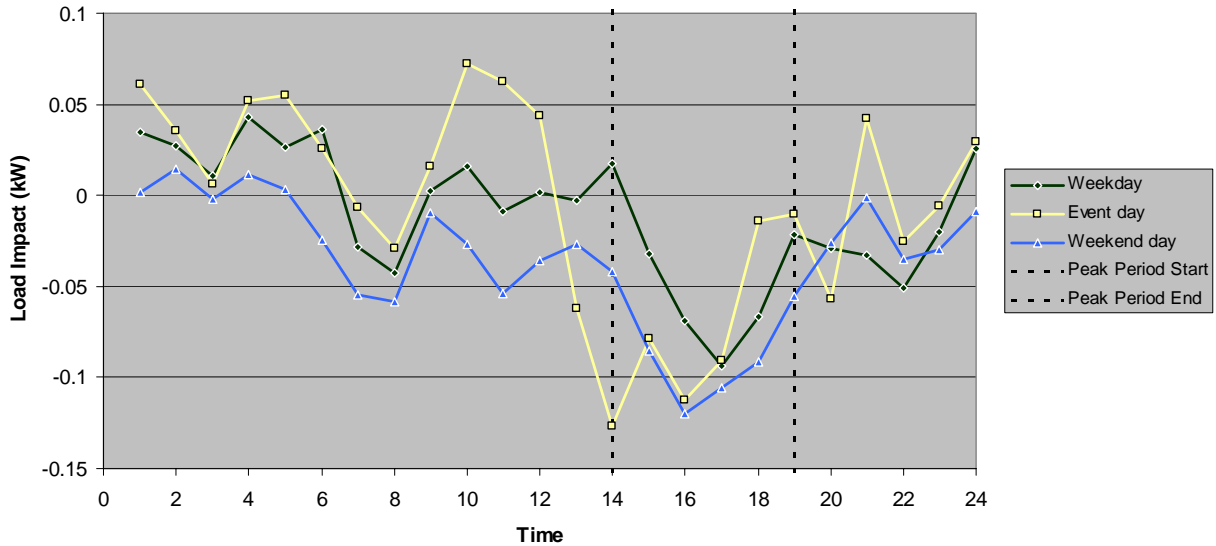
- The bill analysis appeared to have an impact between 2 pm and 7 pm on all days (critical peak event days, weekdays, and weekends)². This suggests a general “conservation effect”

¹ Based on Nexus Energy Software experience with utility clients.

² Peak periods are weekdays between 2 and 7 pm. Critical peak periods are between 2 and 7 pm on days on which a critical peak event is called. In 2005, critical peak events were called on July 12, 13, 14 and 22; August 26; September 28 and 29; and October 6, 7, 13, 14.

attributable to the bill analysis, with customers making changes that become habitual, rather than just in reaction to a critical peak or peak pricing signal. (Sections 4.2, 4.3, 4.4)

Average Adjusted Load Impacts



- The load savings during critical peak periods ranged from a low of 0.010 kW to a high of 0.113 kW, for an average critical peak period savings of 0.061 kW. Given the magnitude of these savings, the sample size, and an assumed normal distribution of variance, these impacts were not found to be statistically significant. (Section 4.3)

Average Adjusted Load Impacts, All Day Types

Hour ending	Event day	Weekday	Weekend day
3:00 pm	-0.078	-0.032	-0.086
4:00 pm	-0.113	-0.069	-0.120
5:00 pm	-0.091	-0.094	-0.106
6:00 pm	-0.014	-0.067	-0.091
7:00 pm	-0.010	-0.022	-0.055
Average across peak hours	-0.061	-0.057	-0.091

- Over certain time periods (peak periods, weekdays generally, and weekends generally), a statistically significant portion of bill analysis participants were found to be more likely to reduce energy use as a result of receiving the bill analysis. This effect was not observed during other time periods including critical peak periods. This again suggests a general “conservation effect” attributable to the bill analysis that may not hold during critical peak periods. (Section 4.4)

Finally, participants are interested in continuing a bill analysis program and provided considerable feedback applicable to a larger-scale rollout of a similar bill analysis program.

- Most participants want to continue receiving the bill analysis. Only 12% of them said they would not want to receive it in the future. (Section 5.3)
- While recipients of the bill analysis generally felt that each section of the bill analysis was clear and well presented, they provided several detailed suggestions to improve the bill analysis presentation. (Section 5.1 and Section 7, Discussion and Recommendations)

“I think it’s great the way they have it broken down by the actual amount during each of those peak periods. It makes me more aware of what the cost is. I think that’s great, and I think it’s pretty clear.”

“They had a lot of good ideas, especially in the area where they have that savings checklist [that] tells you more or less the times that are the better times to do certain things and how much of a savings... when you actually see numbers it’s very helpful, and I think if that wasn’t on there I probably wouldn’t even think twice about it.”

- While customers wanted the bill analysis to continue, the majority is not willing to pay for the bill analysis. However, approximately one-third (29%) of participants and 17% of non-participants stated that they **are** willing to pay at least \$12 per year (or \$1 per month) for this type of information. (Section 5.2).
- Most participants want to continue receiving the bill analysis. Only 12% of them said they never want to receive it. Those that have a computer appear to prefer e-mail to hard copy but many pilot customers do not have computers. Most mail participants (74%) want to continue receiving the bill analysis by mail. Whether or not customers want to receive the information by e-mail is primarily due to whether or not they have a computer. (Section 5.3)

Notably, the process of supplementing utility bill information on the Web using the techniques in this pilot is relatively inexpensive – a large-scale rollout would cost \$2-\$4 per customer per year. It is the low cost of providing site-specific energy diagnostics to customers on the Web, as compared with the much higher costs of in-home hardware such as sub-metering equipment or in-home display devices that make this approach important to evaluate as part of an ongoing consideration of dynamic pricing rates and advanced meter options in California.

1. Introduction

This report presents the results of the California Bill Analysis Pilot program conducted during the summer of 2005 with customers in Southern California Edison (SCE), San Diego Gas and Electric (SDG&E), and Pacific Gas and Electric (PG&E) service territories. The pilot was designed to investigate the benefits of providing customers diagnostic information as a supplement to the standard bill for time-based critical peak rates, as part of an ongoing investigation of electric pricing options for residential customers.

The Bill Analysis Pilot is part of a broader, multi-year Statewide Pricing Pilot (SPP) that began in 2003 under the auspices of the California Public Utilities Commission (CPUC) to evaluate the potential peak demand reduction benefits of time-based rates. In 2003, a sample of customers was offered advanced meters that measured hourly electric use, and time-based electric rates of several designs. In 2004, an initial pilot examination was conducted of information treatments - including Web tools, mail information, and Energy Orb displays - to see if there were potential benefits from assisting customers with their understanding of rates and their response during high price critical peak periods. This earlier study showed that there was promise to the concept: both positive customer reports of interest and some quantitative results showing greater customer demand reduction in peak periods were noted. For the results of this study, see *Final Report – Information Display Pilot*, dated 5 January 2005, by Nexus Energy Software, Opinion Dynamics Corporation, and Primen.

This study focuses on a more narrowly defined scope: diagnostic information was offered only by Web and mail (without in-home display devices), and the target was limited to residential households who remained voluntarily on the SPP critical peak rate. The objective of this study was to determine the extent to which customized bill analysis would be helpful to these customers in understanding and managing their energy use, as well as whether this information would amplify their price response to critical peak electricity rates. This Bill Analysis Pilot was approved by the CPUC Administrative Law Judge's Ruling, dated 18 April 2005 (ALJ ruling).³

Bill analysis techniques were developed further for this pilot effort – diagnostics were redesigned from the 2004 pilot based on earlier customer feedback in surveys and focus groups. Information provided this year was based on a software application that estimated a particular customer's cost by appliance during peak periods as well as summaries of total use during each rate period.

Bill Analysis Pilot participants were recruited by telephone, and a comparable control sample was identified from the entire population of over 300 customers on a residential critical peak rate (CPP-F). This resulted in 152 program participants and 118 who served as a control sample. An automated program website was developed that incorporated home energy survey data available for all participants and processed monthly billing data for each customer to provide an in-depth, customized bill analysis that emphasized (1) when energy is most expensive, (2) how

³ This ruling is in reference to Rulemaking 02-06-001, Order Instituting Rulemaking on Policies and Practices for Advanced Metering, Demand Response, and Dynamic Pricing. Note that the work presented here as the Bill Analysis Pilot was identified within the ALJ Ruling as an Information Display Pilot (IDP). The "IDP" terminology is associated with the previous 2004 pilot conducted by the same Bill Analysis Pilot team. To eliminate potential confusion between the two studies, the IDP terminology has not been carried through to the current study. For the results of this study, see *Final Report – Information Display Pilot*, dated 5 January 2005, by Nexus Energy Software, Opinion Dynamics Corporation, and Primen.

the customer uses energy during peak and critical peak periods,⁴ and (3) how the customer can most effectively reduce peak energy use given their specific home and usage characteristics.

Bill analyses were generally provided to customers monthly, within days after a new bill was generated by the utility. For the 58% of customers who participated in the pilot through e-mail, a customized e-mail with a link to the program website was sent to notify each participant when their updated bill analysis was available along with notification e-mails sent the day prior to a critical peak event. For the remaining 42% who did not provide e-mail addresses, a print version of the website was mailed to the participant each month. The bill analyses were provided within a broader communication strategy that included welcome and reminder post cards.

The pilot project was evaluated through both qualitative and quantitative methods:

- Participant and control group surveys, as well as two focus group sessions, were conducted at the conclusion of the program to determine the extent to which bill analysis had an effect on customer knowledge and behavior.
- A quantitative impact analysis using an approach commonly referred to as the “difference of differences” method, as well as a nonparametric analysis, were conducted to identify the incremental load impact of the bill analysis on both critical peak and non-critical peak days.
- Website traffic and e-mail click-through data were collected to characterize use and interaction with the bill analysis website and e-mail.

This report is organized as follows:

- **Section 2, Methodology** describes the methodology used to conduct the Bill Analysis Pilot, organized according to various components of the program.
- **Section 3, Use of Bill Analysis** characterizes the extent to which the bill analysis was used by participants.
- **Section 4, Impacts of Bill Analysis** identifies qualitative and quantitative impacts of the pilot on participant knowledge and behavior.
- **Section 5, Perceptions of Bill Analysis** presents feedback from participants on the effectiveness and value of the pilot.
- **Section 6, Conclusions** summarizes key conclusions from Sections 3, 4, and 5.
- **Section 7, Discussion and Recommendations** summarizes recommendations based on the Bill Analysis Pilot results applicable to a larger-scale rollout of a similar program.

The pilot results (Sections 3, 4 and 5) are presented in a question-answer format. Several appendices present pilot program materials and results in greater detail.

⁴ Peak periods are weekdays between 2 and 7 pm. Critical peak periods are between 2 and 7 pm on days on which a critical peak event is called. In 2005, critical peak events were called on July 12, 13, 14 and 22; August 26; September 28 and 29; and October 6, 7, 13, 14.

2. Methodology

The methodologies used to conduct the Bill Analysis Pilot are described below according to the various components of the program:

- Bill Analysis
- Recruitment
- Program Communications
- Post-Participation Surveys
- Post-Participation Focus Groups
- Impact Analysis

2.1. Bill Analysis

Within the context of this pilot, bill analysis is the provision of customized information to participants based on their specific monthly bill data and home energy survey data. The bill analysis was produced through an automated program website that was developed by Nexus Energy Software (Nexus) between April and June 2005 and then deployed and operated from 24 June 2005 through 31 October 2005.

The website was branded as the “Shift and Save” program for SCE and PG&E, and as the “Smart Shift and Save” program for SDG&E. Three separate instances of the pilot website were hosted with separate branding for each of the utilities (www.shiftandsave.com/sce, www.shiftandsave.com/pge, www.sdge.com/residential/criticalpeak). Screen shots of the primary bill analysis web page for each utility are included as Appendix A.

The bill analysis emphasized three major messages:

1. Peak energy is expensive—by showing average prices and definitions of critical-peak, on-peak, and off-peak periods;
2. Save money by using less peak energy, especially on critical peak days—by showing a bar chart and calculated benchmark statistics related to the customer’s usage during critical peak and peak periods;
3. Take action, especially on critical peak days—by providing a customized list of measures to reduce peak energy use with estimated savings⁵ and a customized pie chart with a breakdown of end use during peak periods.

The bill analysis also included a savings goal that established a benchmark for each participant based on a 20% reduction of peak energy use in the month prior to the start of the program. This savings goal was updated monthly based on that customer’s reduction in peak energy use during the program period. Further, the website provided extensive content for participants

⁵ Users could interact with the list of measures in two ways. They could expand the name of the measure to get a full description of the measure. They could also select individual measures for which estimated savings would be totaled at the bottom of the list.

interested in more information by providing links to other tools developed by Nexus (Home Energy Center, Thermo Calc, Load Shift Calculator).

To produce the bill analysis, the customer-specific data (gathered by the utilities through a home energy survey) and monthly bill data were entered into the database underlying the program website. Home energy survey data for each participant was entered manually through Microsoft Access database screens.⁶ Monthly bill data was transferred on a daily or regular basis through secure FTP from each utility to the program website. For SCE and PG&E, the FTP process was automated, while for SDGE the process was manual.⁷ The monthly bill data was loaded three days a week during program operation (typically Tuesday, Wednesday, Thursday). Updated bill data was received for most participants (and bill analysis prepared) four or five times during the period in which the program operated.

Note that not all participants received their bill analysis by visiting the program website. Some participants did not have Internet access or chose not to provide an e-mail address and therefore received a hard-copy version of the bill analysis. The various types of participants are described below in Section 2.2 and the channels through which the bill analysis and other program materials were provided to participants are described in Section 2.3.

2.2. Recruitment

Opinion Dynamics Corporation (ODC) recruited program participants from 20 May through 14 June 2005. Recruitment consisted of telephone calls to introduce the program, confirm contact information, determine whether customers had Internet access, and collect e-mail addresses for those with access.

EPRI Solutions split the entire pool of 312 residential (CPP-F) customers into two groups: a potential treatment group for recruiting (212 customers) and a control group that was not contacted (100 customers).⁸ Of the potential treatment group, 152 customers were successfully contacted to become program participants.⁹

⁶ Note that home energy survey data was available for all but 20 of the 152 participants (16 SCE and 4 PG&E). Opinion Dynamics Corporation (ODC) contacted these participants by telephone to gather their home energy survey data. One participant could not be contacted. In this case, Nexus entered typical data given the customer's location and sent a letter asking the customer to complete a paper home energy survey.

⁷ SDG&E chose to keep the process manual due to the small number of participants in the pilot. Nexus notes that the automated process was more successful. The manual steps of requesting, creating, and sending the file by FTP at SDG&E introduced inconsistencies and delays in the process. The automated FTP transfers performed reliably.

⁸ The treatment and control groups were stratified based on climate zone, housing type, and usage level. They were also balanced so that low-income customers were proportionally represented in each group.

⁹ Of 212 in the potential treatment group, 152 were recruited. The remaining 60 customers could not be contacted or indicated that they would not participate. These included:

- 19 unprompted refusals to receive program information
- 8 answering machine messages only (tried at least 10 times on various days/times of days)
- 7 verified language barrier
- 6 verified disconnect
- 8 no answer or busy (tried at least 10 times on various days/times of days)
- 6 initial refusal or hard refusal
- 4 verified wrong number
- 2 other

Table 2.2.1 below shows the breakdown of program participants by utility. The overall participant count is broken down further to indicate counts of those who provided e-mail addresses or those who have Internet access and therefore the potential to visit the program website even if they did not choose to participate by e-mail. Fifty-eight percent (58%) of customers participated by e-mail and the remaining 42% of customers participated through direct mail.¹⁰ Just over a quarter of the direct mail participants (11% of all participants) had Internet access and would presumably be able to visit the program website based on the web address provided in the direct mail bill analysis.

Table 2.2.1: Bill Analysis Pilot Participants

Utility	Participant Count	Provided E-mail	Have Internet Access, But Would Not Provide E-mail	Do Not Have Internet Access, Did Not Provide E-mail
SCE	75	48	9	18
PGE	61	31	8	22
SDGE	16	9	0	7
Total	152	88	17	47
Percentage		58%	11%	31%

Hereafter, those that provided e-mails will be referred to as “e-mail participants” and those that did not will be referred to as “direct mail participants.”

2.3. Program Communications

The bill analysis was provided through two primary channels:

- For e-mail participants, a personalized html e-mail was sent to notify each participant when their updated bill analysis was available. The e-mails were branded separately for each utility and included custom content including a greeting with each customer’s first name and benchmark data based on that participant’s last month of bill data. The e-mails also contained a link to the program website. For SCE and PG&E, the link automatically brought the participant through to the primary bill analysis page without requiring a login. For SDG&E, the link brought the participant to a login page where they entered their account number in order to access the primary bill analysis page. Examples of the bill analysis e-mails are included in Appendix B; these e-mails were processed and typically sent three days each week during program operation (Tuesday, Wednesday, and Thursday).
- For direct mail participants, a 2-page print version of the website was printed out and mailed to the participant each month with a cover letter. The direct mail bill analysis included the URL of the main program login page (www.shiftandsave.com/sce, www.shiftandsave.com/pge, www.sdge.com/residential/criticalpeak) to encourage participants to access the web treatment even if they had not provided an e-mail address.

Of these 60 customers, 18 customers (the verified disconnect, no answer or busy, and verified wrong number) were returned to the control group, leaving a final control group of 118.

¹⁰ One customer chose to stop receiving program e-mails and participate only through direct mail during the first month of program operation.

Direct mail bill analyses were typically sent once a week during program operation (Wednesday).

Note that two additional channels were available to participants to access their bill analysis. First, PG&E provided a link for pilot participants through their own Customer Service On-Line (CSOL) website. This link was provided only to pilot participants (detected through their login to CSOL) with direct login to the pilot program page. Second, any customer could go directly to the program login page and log in manually by account number.

The bill analyses were provided within a broader communication strategy that also included:

- A welcome communication (postcard for direct mail participants and e-mail for e-mail participants) to confirm participation in the program and verify contact information.
- A site launch e-mail to notify e-mail participants that the program web site was initially available.
- Pre-event e-mail messages (for e-mail participants) to remind customers a day in advance of a critical peak event and provide links to the program pages.
- Two reminder postcards (for all participants) to encourage continued participation during the summer and promote the website.

Examples of these additional program e-mails are provided in Appendix B and examples of postcards are included in Appendix C.

2.4. Post-Participation Surveys

At the conclusion of the critical peak event days, ODC attempted to reach all participants to complete a quantitative telephone survey about the changes that they made in response to the critical peak events and/or bill analysis. Seventy-four respondents, or approximately half of all participants in the pilot, completed the survey. Respondents included 31 customers who received the bill analysis by mail, and 43 individuals who received a link to the bill analysis via e-mail. ODC conducted these participant surveys between 21 October 2005 and 6 November 2005.

ODC also attempted to contact all customers who had been selected as the control group. Contacting these customers was (as expected) more difficult than contacting participants since, unlike participants, the control group had not been contacted at the beginning of the pilot. In all, 32 customers from the control group, or approximately 27% of control customers, completed our survey. ODC conducted the control group surveys between 29 October 2005 and 9 November 2005.

Copies of the participant and control surveys are included as Appendix D.

2.5. Post-Participation Focus Groups

To complement the quantitative telephone survey data, ODC conducted two telephone focus groups. These tele-focus groups were held from 7:30 to 9 pm PST on November 15 and November 16.

Each group included seven participants, for a total of 14. In all, the focus groups included four customers from SCE territory and 10 from PG&E territory. Due to the small number of customers on the CPP-F rate in SDG&E territory, we were unable to recruit any SDG&E customers for the tele-focus groups. See Appendix E for the Focus Group Guide, which includes a script for conducting the focus groups.

Participants were sent a packet of information with handouts prior to the group, and were provided with a financial incentive after completion of the focus group. See Appendix F for copies of the tele-focus group handouts. Transcripts of both focus groups are provided as Appendix G.

2.6. Impact Analysis

In order to assess the incremental load impact of the bill analysis, we used a comparison approach sometimes referred to as the “difference of differences” method to investigate two questions:

1. What was the magnitude and statistical significance of the average load impact attributable to the bill analysis?
2. Were bill analysis participants more likely to reduce energy use as a result of receiving the bill analysis?

For the first question, *average load impacts* were estimated for all hours of the day including the peak period (2 pm to 7 pm) on event days, weekdays, and weekend days using the difference of differences method as described below in Section 2.6.1. Then, the sample variance and a normal distribution assumption were used to estimate a 90% confidence interval to assess the statistical significance of the impact.¹¹ For the second question, *individual energy savings* were estimated for each customer, again with the difference of differences method. Then, a nonparametric analysis was used to determine if the percentage of individual customers who used less energy was statistically significantly different as a result of the bill analysis when compared to the random changes in energy use that would be observed if the bill analysis had no effect. This is discussed further in Section 2.6.2.

2.6.1. *Magnitude and statistical significance of average load impacts*

To investigate average load impacts, we split the available population of CPP-F customers into two groups: a treatment group that received the bill analysis and a control group that was similar to the treatment group, but received no bill analysis. Because these customers were part of the SPP population, all were expected to have interval-metered data available for both 2004 and 2005.

To estimate the savings impact of the bill analysis, we first calculated the difference between the treatment group and the control group during the program period, beginning on 30 June 2005. This unadjusted savings impact would be valid if the control group were identical to the treatment group. However, to adjust for any the differences between the two groups, we

¹¹ Note that these analyses were also performed separately using only participants with central air conditioning to determine if these customers responded differently from the entire participant group. The differences were very small and appeared random, and are therefore not presented here.

calculated the difference between the control group and the treatment group during the pre-treatment (summer 2004) period, and then used this difference to adjust the savings estimate, taking the “difference of the two differences.” This can be thought of as a correction to the savings estimate based on the systematic differences between the treatment and control groups.

Because the sample customers for the SPP were stratified based on climate zone, housing type, and usage level, we kept this stratification, and calculated the differences of differences for all the cells containing treatment customers. This grouped similar customers together, thereby reducing variance and making it easier to detect a difference. Once we had the adjusted savings estimate for all cells, we calculated a weighted average adjusted savings, using weights based on the number of sample customers (including treatment and control) in each cell. Using this weighting makes the results representative of the CPP-F customers on the rate during the bill analysis pilot program.

We also had information about whether the customers in the sample were on a low-income rate or not. While we did not stratify based on this information, we did balance the assignments to the treatment and control groups so that low income customers were proportionally represented in each group. Stratifying by income level would have reduced the sample size in some cells to one or zero, which makes any statistical analysis impossible.

The load impact calculations were as follows:

First, for each customer, either treatment or control, we calculated the pre- and post-treatment averages.

$$T_{preload}_{i,*k,h} = \left[\sum_{j=1}^{npre\text{days}_i} preload_{i,j,k,h} \right] / npre\text{days}_i$$

$$T_{postload}_{i,*k,h} = \left[\sum_{j=1}^{npost\text{days}_i} postload_{i,j,k,h} \right] / npost\text{days}_i$$

$$C_{preload}_{i,*k,h} = \left[\sum_{j=1}^{npre\text{days}_i} preload_{i,j,k,h} \right] / npre\text{days}_i$$

$$C_{postload}_{i,*k,h} = \left[\sum_{j=1}^{npost\text{days}_i} postload_{i,j,k,h} \right] / npost\text{days}_i$$

Where

- $preload_{i,j,k,h}$ is the load for customer i , on day j , for hour k , in cell h .
- $Tpreload_{i,*,k,h}$ is the load for customer i , for hour k , in cell h , averaged across days, for a treatment customer, during the "pre" period.
- $Cpreload_{i,*,k,h}$ is the load for customer i , for hour k , in cell h , averaged across days, for a control customer, during the "pre" period.
- $Tpostload_{i,*,k,h}$ is the load for customer i , for hour k , in cell h , averaged across days, for a treatment customer, during the "post" period.
- $Cpostload_{i,*,k,h}$ is the load for customer i , for hour k , in cell h , averaged across days, for a control customer, during the "post" period.
- $npreddays_i$ is the number of pretreatment CPP days for customer i .
- $npostdays_i$ is the number of posttreatment CPP days for customer i .

Then, for each cell, we averaged the customers, keeping treatment and control separate.

$$Tpreload_{*,*,k,h} = \left[\sum_{i=1}^{nTcust_h} Tpreload_{i,*,k,h} \right] / nTcust_h$$

$$Tpostload_{*,*,k,h} = \left[\sum_{i=1}^{nTcust_h} Tpostload_{i,*,k,h} \right] / nTcust_h$$

$$Cpreload_{*,*,k,h} = \left[\sum_{j=1}^{nCcust_h} Cpreload_{i,*,k,h} \right] / nCcust_h$$

$$Cpostload_{*,*,k,h} = \left[\sum_{j=1}^{nCcust_h} Cpostload_{i,*,k,h} \right] / nCcust_h$$

Where

$Tpreload_{*,*,k,h}$ is the load for hour k, in cell h, averaged across treatment customers, during the "pre" period.

$Cpreload_{*,*,k,h}$ is the load for hour k, in cell h, averaged across control customers, during the "pre" period.

$Tpostload_{*,*,k,h}$ is the load for hour k, in cell h, averaged across treatment customers, during the "post" period.

$Cpostload_{*,*,k,h}$ is the load for hour k, in cell h, averaged across control customers, during the "post" period.

$nTcust_h$ is the number of treatment customers in cell h.

$nCcust_h$ is the number of control customers in cell h.

We then calculated the first difference, the treatment load minus the control load, for both the pre and post periods, for each cell.

$$prediff_{k,h} = Tpreload_{*,*,k,h} - Cpreload_{*,*,k,h}$$

$$postdiff_{k,h} = Tpostload_{*,*,k,h} - Cpostload_{*,*,k,h}$$

Where

$prediff_{k,h}$ is the difference between the treatment average and the control average during the pre treatment period, for hour k, in cell h.

$postdiff_{k,h}$ is the difference between the treatment average and the control average during the post treatment period, for hour k, in cell h.

Then we calculated the second difference for each cell, which removes any pretreatment differences between the treatment group and the control group from the impact.

$$celleffect_{k,h} = postdiff_{k,h} - prediff_{k,h}$$

Where

$celleffect_{k,h}$ is the estimated load impact for hour k, in cell h.

Lastly, we calculated the weighted average of the cell impacts, using the number of treatment customers in each cell to calculate the weights.

$$impact_k = \sum_{h=1}^{ncells} w_h \cdot celleffect_{k,h}$$

Where

$$w_h = \frac{ncust_h}{\sum_{l=1}^{ncells} nTcust_h}$$

(both treatment and control) in cell h.

During the recruitment process, we encountered some customers who explicitly refused, unprompted, to participate in the research. These 42 customers were excluded from the impact analysis. We also excluded 11 treatment customers who reported major physical changes to their homes, such as an addition or a swimming pool, or who reported a change in the number of building occupants, such as people moving into or out of the house. Lastly, there were 8 control customers and two treatment customers without valid interval data available. This left 110 control customers and 139 treatment customers included in the impact analysis.

There were 11 critical peak events during 2005 and 12 in 2004. Table 2.6.1 shows the dates of these critical peak events, the day of the week that they fell on, and the number of treatment and control customers who were included in the analysis for each event.

Table 2.6.1. 2004 and 2005 Critical Peak Event Days

Date	Day of week	Control customers included	Treatment customers included
7/14/2004	Wednesday	104	133
7/22/2004	Thursday	102	136
7/26/2004	Monday	105	132
7/27/2004	Tuesday	105	133
8/9/2004	Monday	106	138
8/10/2004	Tuesday	105	136
8/11/2004	Wednesday	105	137
8/27/2004	Friday	105	134
8/31/2004	Tuesday	105	133
9/8/2004	Wednesday	104	134
9/9/2004	Thursday	103	132

9/10/2004	Friday	104	135
7/12/2005	Tuesday	97	134
7/13/2005	Wednesday	97	134
7/14/2005	Thursday	97	135
7/22/2005	Friday	100	133
8/26/2005	Friday	99	134
9/28/2005	Wednesday	98	135
9/29/2005	Thursday	98	134
10/6/2005	Thursday	104	136
10/7/2005	Friday	104	136
10/13/2005	Thursday	103	135
10/14/2005	Friday	102	136

For each event day, there were a handful of customers who did not receive notification of the event from their utility, and so were not billed the critical peak rate for that event. In a few of these cases, the customers did receive e-mail notification from Nexus. If the customer did not get any notification, either from their utility or by e-mail from Nexus, we excluded that customer from the averages for that event day.

2.6.2. Statistical significance of observed individual load impacts

To investigate individual load impacts, we estimated the energy savings, again using a difference of differences approach, during the peak period and throughout the entire day on the average of the event days, the average of the weekdays, and the average of the weekend days. Each treatment customer was compared to the average of the control customers in the appropriate cell. If the treatment had no effect, we would expect that about half of the bill analysis treatment customers would save energy during the peak period, and half would use more, simply because of random variation.

Using a nonparametric approach based on a binomial probability distribution, we can calculate the probability of the results we saw under this assumption of equal probability of increasing and decreasing consumption. If the outcome is very unlikely to occur under the assumption of equal probability, then we have evidence that participants are more likely to reduce energy consumption, and this result is attributable to the bill analysis.

We used a statistical hypothesis test, structured as follows. A null hypothesis, stating the opposite of what the researcher thinks may be the case, is defined. The null hypothesis can be thought of as a statement that “nothing is going on.” Then the data are collected or observed, and the probability of seeing the observed outcome or something more extreme is calculated, based on the assumptions in the null hypothesis. If the probability calculated is smaller than a predetermined critical value, referred to as the alpha level (usually 10% or 5%, sometimes as small as 1%), then we can reject the null hypothesis in favor of the alternate. If the probability of

the observed outcome is larger than the critical value, we cannot reject the null hypothesis, and do not have evidence that “something is going on.”

In our case, we are looking to see if there is evidence that the treatment customers who received the bill analysis use less energy during peak periods, or during all times, on three different day types. We are testing the following six different null hypotheses:

- Treatment customers did not use less energy during critical peak periods (2:00 pm to 7:00 pm) on event days.
- Treatment customers did not use less energy during peak periods (2:00 pm to 7:00 pm) on weekdays.
- Treatment customers did not use less energy during peak periods (2:00 pm to 7:00 pm) on weekend days.
- Treatment customers did not use less energy throughout the whole day on event days.
- Treatment customers did not use less energy throughout the whole day on weekdays.
- Treatment customers did not use less energy throughout the whole day on weekend days.

We calculated the peak and daily energy savings for each customer on each of the three day types (event day, weekday, and weekend day) using difference of differences. Under the null hypothesis, about half of the customers would use more energy and half would use less. Of course, because of random variation, the result would not be exactly half, but it would be close. Using a binomial distribution, we calculated the probability, given equal probabilities, that we would see at least k customers using less energy, where k is the observed number out of 139 treatment customers.

For instance, if the treatment had no effect, we would expect to see about 70 out of the 139 treatment customers saving energy, which would have a high probability associated with it. If the treatment had a definite effect, we would expect more, perhaps 100 out of 139 treatment customers saved energy during an event, which would have a very small probability (about 1/10,000,000). If this calculated probability is less than our predetermined alpha level, we can reject the null hypothesis, and conclude that the treatment reduces energy use. We chose an alpha level of 10%, which seems reasonable for this analysis.

We also chose to use a “one-tailed” test. This tests a difference in only one direction. The null hypothesis is stated as “did not use less” and the alternative is that the treatment customers used less. This is appropriate because we are interested in whether or not the treatment resulted in savings. This test would not be valid to check to see if the treatment customers used more energy as a result of the treatment.

Note that our approach tests whether energy use is reduced or not during peak period as a result of the bill analysis treatment, but does not take into consideration the *magnitude* of the savings. It is a valid method to determine whether or not customers are responding in some way to the treatment, but does not estimate how much they are saving.

3. Use of Bill Analysis

The following five subsections present questions and answers to characterize the extent to which the bill analysis was used by participants.

3.1. How many recall receiving the bill analysis?

Overall, more than three-quarters of the participants contacted recalled receiving the bill analysis (or a link to the bill analysis) at least once. Those that recalled receiving the bill analysis (74 respondents) completed the end-of-summer survey. An additional 24 pilot participants agreed to do the survey but were not surveyed because they claimed not to recall receiving the bill analysis. It should be noted, however, that when we re-contacted these participants to confirm that they had not seen the bill analysis, about half of those that initially claimed not to recall receiving the bill analysis **did** recollect receiving the e-mail or hard copy—indicating that it reached even a larger percentage of customers.

While the majority of participants recalled receiving the bill analysis, there was some confusion among participants about the difference between the information sent out through the Bill Analysis Pilot and the respondent’s utility-provided billing summary.

Table 3.1.1 shows the number of times that participants recall receiving the bill analysis. Many survey respondents (37) stated that they received the bill analysis more than four times despite the fact that only 19 participants were actually sent the bill analysis more than four times throughout the summer.

Table 3.1.1. Participant Recall of Receiving the Bill Analysis

Times	% Recall receiving the bill analysis		
	Total (n=98) (a)	Email (n=59)	Mail (n=39)
Do not recall receiving (b)	24%	27%	21%
1 time	6%	8%	3%
2 times	8%	7%	10%
3 times	10%	8%	13%
4 times	5%	5%	5%
4+ times	38%	34%	44%
Don't know	8%	10%	5%

(a) Note that this table includes 98 customers that were willing to complete the survey.

(b) When we re-contacted these participants to confirm that they had not seen the bill analysis, about half of those that initially claimed not to recall receiving the bill analysis did recollect receiving the e-mail or hard copy.

Participants spoke about both their utility-provided bill and the pilot bill analysis several times during the focus groups without being able to clearly distinguish the difference. Interestingly, focus group participants stated that the information provided by the pilot program was much easier to understand than their utility bill summary. As one focus group participant stated, “We

get two of the packets a month, the second one is called a billing summary and it's really hard to read. It has a total of OAS, and then it has the transmission distribution public purpose program...it's a big piece of paper and it breaks it down, but it's hard to read. I like the other one that we get with the charts. This one I don't understand at all...where it has a rate schedule, E3A, a unit summary."

3.2. Who reported looking at the bill analysis?

Based on focus group comments, it appears that customers may not necessarily look at the bill analysis the first time it is sent, but that recurring mailings provided as part of the pilot are effective in getting customers to review the information. As one focus group participant said, "The first one I got, I just sort of looked at it and thought 'I don't know what that is', and it just didn't seem to make much sense, but the second time I looked at it a little more carefully." Other comments made during the focus group indicate that even as they start to review it more closely, many just glanced at the information given to them, or were drawn to one or two bits of information provided. Over the course of the summer, however, most respondents reviewed the bill analysis.

Of those who received their bill analysis by e-mail, 70% stated that they clicked on the link provided in the e-mail and looked at the website. Actual click-through data indicated that fewer customers clicked on the link provided in the e-mail, as discussed in Section 3.5.

Responses about how frequently customers used the website varied among those who had visited the web site (see Table 3.2.1).

Table 3.2.1. How Frequently Website Was Visited By Email Participants

How frequently did you visit the website?	Email (n=30)
Once	20%
A couple of times	33%
Monthly	27%
More than once a month	20%

Only 6% (n=2) of the mail participants who completed the survey visited the website to look at the online resources and information. More detailed information regarding the actual numbers of participants who visited the website is presented in the following section.

3.3. How many visited the bill analysis website?

Based on site traffic data collected at the bill analysis website, 77% of all program participants visited the website at some point during the program (see Table 3.3.1). Note that the unique number of visitors¹² to the website exceeds the number who participated in the program through

¹² Unique visitors are determined through "cookies" from each participant's Internet browser. Thus, if one participant visits the site multiple times within a period, they are recorded only once.

e-mail or reported having Internet access, indicating that some direct mail participants also visited the program website.¹³

This level of use is remarkable when compared to that seen for comparable utility sites offering bill information, where 1-3% of a target population typically visits a website on their own when informed of its benefits.¹⁴ However, high use rates are consistent with the interest in bill analytics and diagnostics reported elsewhere for customers on standard non-time-based rates. PG&E's new customer service on-line system, launched during this period, has attracted customers at annualized rates exceeding 10% and substantially increased traffic to energy efficiency program pages including online energy audit tools. Similar results are reported at Puget Sound Energy, which continues to confirm that customers are interested in ongoing support to understanding and managing their energy costs.

Table 3.3.1. Number of Website Users Over the Entire Program

	Total	PG&E	SCE	SDG&E
Total Number of Unique Users	117	49	54	14
Total Number of Participants	152	61	75	16
Total Number of E-mail Participants	87	31	47	9
Total Number Reporting Internet Access	105	39	57	9
% of All Participants	77%	80%	72%	88%
% of E-mail Participants	134%	158%	115%	156%
% of Participant with Internet Access	111%	126%	95%	156%

The website remained active throughout the program. As shown in Table 3.3.2, a relatively consistent number of new users - from 5 to 26 visited the website during each month of the program after the first week of operation. These data indicate that recurrent contacts with participants were effective in attracting new users, similar to the way in which recurrent mailings were reported to be effective in getting customers to review information (see Section 3.2).

Table 3.3.2. Number of New Users by Month

	June 24-30	July	August	September	October
Total Number of Unique Users	44	38	38	43	28
Total New Users in Period	44	26	17	24	5

Detailed site traffic data by month and utility is provided for reference in Appendix H.

¹³ It is also possible that other members of a household with a separate computer or a single user using multiple computers may have logged in. Since unique users are counted using Internet cookies, users logging into a single account number from separate computers would be counted separately.

¹⁴ Based on Nexus Energy Software experience with utility clients.

3.4. What did they do at the website?

Based on site traffic data collected at the bill analysis website, users spent an average of seven minutes at the program website (see Table 3.4.1). Most site activity was oriented towards reading the primary results page. Over the entire program period, users checked off individual measures in 12 sessions and only one user expanded a measure description to view additional text.¹⁵ Of the three additional tools provided to users, the Home Energy Center was accessed the most, followed by the Load Shift Calculator. Users did not access the Thermo Calculator.

Table 3.4.1. User Behavior at Website

	Total	PG&E	SCE	SDG&E
Average Session Time (min)	7	6	13	2
Count Sessions Having at Least 1 Measure Checked	12	4	5	3
Users That Viewed Long Descriptions of Measures	1	1	0	0
Number of Measure Summaries Selected for Totaling	5	5	0	0
Home Energy Center Sessions	25	10	7	8
Load Shift Calculator Users	10	5	1	4
Thermo Calculator Users	0	0	0	0

Detailed site traffic data by month and utility is provided for reference in Appendix H.

3.5. How effective were e-mails in attracting participants to the website?

E-mails were intended as the primary channel for participants with Internet access to visit the program website and view their bill analysis. Data collected regarding open and click-through rates for the program e-mails helps to evaluate the effectiveness of this communication channel.

Once a participant opens an e-mail, they may can take three follow-up actions: (1) click on the program website link in the e-mail, (2) go to the program website independently, such as through a bookmarked link in their Internet browser, or (3) do nothing (that is, not visit the program website). Thus, it is not known how many opened e-mails resulted in a user initiating a web session. Regardless, the number of e-mails opened during the program period (235) is comparable to the total number of web sessions that were initiated during the program period (314) (see Table 3.5.1). Thus, e-mail was likely a significant channel for participant access and the data suggest that e-mail was a stronger channel for SCE customers than for PG&E or SDG&E.¹⁶

¹⁵ See Section 2.1 for a description of the ways in which users could interact with measures on the primary bill analysis page.

¹⁶ This conclusion is consistent with the fact that PG&E customers were able to login the program website though their Customer Service online website.

Table 3.5.1. Website Sessions and Opened E-mails

	Total	PG&E	SCE	SDG&E
Total Number of Sessions	314	115	141	58
Total E-mails Opened	235	61	137	37
Opened E-mails/Sessions	75%	53%	97%	64%

Table 3.5.2 shows open rates (number of e-mails opened divided by the number of e-mails delivered) for all program e-mails and separately for bill analysis e-mails and notification e-mails (e-mails announcing the site launch and those sent the day before a critical peak event). The open rate over the entire program period for bill analysis e-mails was 22%, and was 18% for all program e-mails. These rates are slightly lower than an applicable industry average of 28%.¹⁷

Table 3.5.2. Open Rates for E-mails

All E-mails	Total	PG&E	SCE	SDG&E
Total E-mails Delivered	1297	443	713	141
Total E-mails Opened	235	61	137	37
Open Rate	18%	14%	19%	26%
Bill Analysis E-mails (a)	Total	PG&E	SCE	SDG&E
Total E-mails Delivered	310	101	176	33
Total E-mails Opened	68	14	43	11
Open Rate	22%	14%	24%	33%
Notification E-mails (b)	Total	PG&E	SCE	SDG&E
Total E-mails Delivered	987	342	537	108
Total E-mails Opened	167	47	94	26
Open Rate	17%	14%	18%	24%

(a) Bill analysis e-mails are monthly e-mails sent when a participant's bill analysis has been updated with new bill data.

(b) Notification e-mails include the e-mail announcing the site launch and those sent the day before a critical peak event.

¹⁷ From DoubleClick, a provider of digital marketing products, services, and research.

As shown in Figure 3.5.1, open rates (in this case for bill cycle e-mails) started higher—between 30% and 45%—at the beginning and declined over the program period.

Figure 3.5.1. Bill Analysis E-mail Open Rates Over the Program Period

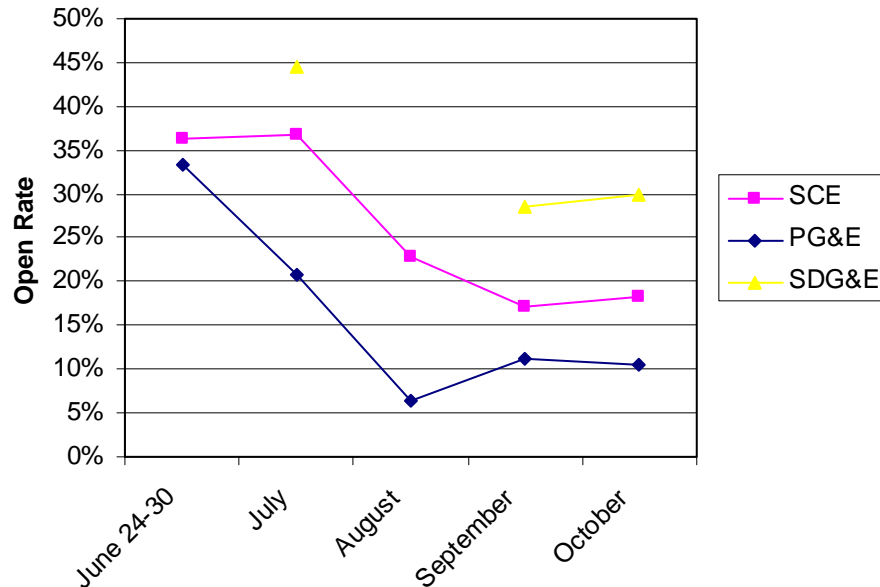


Table 3.5.3 shows click-through rates (the number of unique users that clicked on the program website link in the e-mail) for all program e-mails and separately for bill analysis e-mails and notification e-mails. The click-through rate for the bill analysis e-mails was 8%, comparable to an applicable industry average of 7%.¹⁸ The average click-through rate for all program e-mails was somewhat lower at 3%. The actual number of unique clicks per month is only 25% of the total 167 unique users per month (see underlying monthly Number of Unique Clicks data in Appendix H). Thus, other paths to the program website, such as logging in through a browser bookmark or entering through PG&E’s CSOL pages were also significant channels for participants to access the website.

Table 3.5.3. Click-Through Rates for E-mails

All E-mails	Total (a)	PG&E (a)	SCE (a)	SDG&E (a)
Total E-mails Delivered	1297	443	713	141
Number of Unique Clicks	43	15	22	6
Unique Click Through Rate	3%	3%	3%	4%
Bill Analysis E-mails (b)	Total	PG&E	SCE	SDG&E
Total E-mails Delivered	310	101	176	33
Number of Unique Clicks	24	6	16	2
Unique Click Through Rate	8%	6%	9%	6%

¹⁸ From DoubleClick, a provider of digital marketing products, services, and research.

Notification E-mails (c)	Total	PG&E	SCE	SDG&E
Total E-mails Delivered	987	342	537	108
Number of Unique Clicks	19	9	6	4
Unique Click Through Rate	2%	3%	1%	4%

- (a) The totals by utility and across all utilities are of unique clicks per month, not unique clicks over the entire program period.
 (b) Bill analysis e-mails are monthly e-mails sent when a participant's bill analysis has been updated with new bill data.
 (c) Notification e-mails include the e-mail announcing the site launch and those sent the day before a critical peak event.

3.6. Why do some people not use the web site?

When we explored why some e-mail participants did not use the website, most recalled receiving the e-mail with the link to their bill analysis and stated that they read the information in the e-mail, but indicated that they assumed that the link would provide the **same** information as their bill that they received by mail, so they did not bother visiting the site. As one focus group participant stated, "I thought if I clicked on the e-mail it was going to be the same thing I got in the mail, so I really wasn't interested."

Of those that visited the website, only two e-mail participants stated that they had difficulties logging on; and both respondents stated that the problem was with their computer and not with the website. No other difficulties with the website were reported.

Participants who chose to receive the bill analysis by e-mail indicated that it was primarily due to lack of access to a computer.¹⁹ Some indicated that they simply preferred hard copy. See Table 3.6.1.

Table 3.6.1. Mail Participants Reasons for Not Looking at the Website (multiple response)

Reason	Mail (n=29)
I don't have a computer	55%
I prefer hard copy	28%
Couldn't access the web page	10%
Didn't have time	7%
Don't Know/Refused	7%

¹⁹ Participants without computers were enrolled as direct mail participants in the pilot.

4. Impacts of Bill Analysis

The following five subsections identify the qualitative and quantitative impacts of the pilot on participant knowledge and behavior.

4.1. Who indicated that they made changes because of the bill analysis?

Survey results show that many participants found the bill analysis useful in helping them to reduce their usage. Participants were asked to rate the usefulness of the bill analysis - specifically in helping them to reduce electricity consumption - on a scale of 1 to 10 where 1 is *not at all useful* and 10 is *very useful*. Nearly half (47%) of respondents found the bill analysis useful (rating it a 8, 9 or 10). An additional 37% gave a more neutral rating (5-7), while 10% felt that it was not useful.

Participant and control group respondents reported reducing the amount of electricity used in their homes during critical peak (sometimes also known as super peak) events and peak periods in similar proportions (see Table 4.1.1). Most respondents (whether a participant or not) stated that they took some action.

Table 4.1.1. Reducing the Amount of Energy

Did you reduce the amount of energy you use during...	Participants (n=74)	Non-participant (n=32)
Critical or super peak events?	82%	88%
Peak periods?	78%	91%

When we asked participants specifically about whether the bill analysis led them to take additional actions, a large percentage responded affirmatively (see Table 4.1.2). Specifically, 46% of respondents stated that they took actions during the critical peak periods that they would not have taken if they hadn't received the bill analysis; and 49% of respondents stated that they took additional actions during daily peak periods because of the bill analysis. One focus group participant stated, "There's a lot of good information on this. A lot of things I do now that I wasn't doing before, like I do washing in the evening late, and I am very careful."

So while recipients of the bill analysis report taking some action in similar proportions to customers that did not receive the bill analysis, the number, types and times of the actions may be affected. For example, one focus group participant stated that she had been taking actions prior to receiving the bill analysis; however, after receiving the bill analysis she started pulling window shades and curtains (an action she hadn't considered prior to receiving the bill analysis), and that really made a difference to her electricity bill.

Table 4.1.2. Were Actions a Result of the Bill Analysis?

	Critical or Super Peak Events			Peak Period		
	Total (n=74)	Email (n=43)	Mail (n=31)	Total (n=74)	Email (n=43)	Mail (n=31)

Did not take action	18%	16%	19%	22%	23%	19%
Took actions as a result of bill analysis	46%	49%	42%	49%	56%	39%
Would have taken same action without bill analysis	32%	33%	32%	30%	21%	42%
Don't know	4%	2%	6%	-	-	-

Table 4.1.3 shows that most participants (62%) have noticed reductions in their bills since being on the CPP-F rate and approximately half of the participants receiving the bill analysis (51%) also noticed reductions in their bill since they started receiving the bill analysis.

Table 4.1.3. Reductions in Bill Since Participating in Program and/or Receiving Bill Analysis

	Participants (n=74)	Non-participant (n=32)
Yes, due to CPP-F rate	62%	69%
Yes, due to bill analysis	51%	N/A

Focus group participants generally found the bill analysis to be valuable. One participant stated, “After we got it and made some adjustments and stuff, I got into the program and I saw a definite change in our [electric bill]. We started replacing appliances and everything else, and my bill dropped dramatically.”

4.2. What changes did they say they took as a result of the bill analysis?

The most common methods for customers (whether a participant or not) to reduce their energy use during critical peak or peak periods is by not doing laundry during these times (i.e., shifting when they do their laundry), turning off lights, turning off the air conditioner, and/or shifting the times that they run their dishwasher (see Table 4.2.1).

Table 4.2.1. Changes Made to Reduce Electric Use (multiple responses)

What changes did you make?	During Critical Peak Periods		During Peak Periods	
	Participants (n=61)	Control Group (n=28)	Participants (n=58)	Control Group (n=29)
Did not do laundry	66%	61%	64%	62%
Turned off lights	54%	46%	48%	38%
Turned off air conditioner	41%	43%	36%	41%
Did not run dishwasher	38%	39%	36%	31%
Turned off pool pump	10%	11%	9%	10%
Pulled window shades	7%	11%	2%	7%
Raised thermostat / raised AC temp	7%	7%	5%	21%

Turned down water heater pump	7%	4%	5%	10%
Turned off pool filter	3%	4%	5%	3%
Other/Don't know	3%	15%	9%	6%

While these are actions that customers could take just during critical peak events, comments from focus group participants indicated that they learned to behave differently based on the information provided to them. Moreover, since many of the actions that they were taking were not burdensome, customers may tend to make these changes habitual, rather than just in reaction to the critical peak event signal. This idea, that the changes made by customers during peak periods become habitual, is supported by findings from the impact analysis, which is discussed in detail in Sections 4.3 and 4.4.

4.3. What was the magnitude and statistical significance of the average load impact attributable to the bill analysis?

Through the load impact analysis approach described in Section 2.6.1, it appears that the bill analysis increases the average level of energy savings among residential customers, over and above the CPP-F rate. In the aggregate, our results show greater reductions among the treatment group than among the control group for all day types (event day, weekday, weekend day). Results for all three day types are first presented together, then results for event days and other days (weekdays and weekend days) are discussed separately.

Figure 4.3.1 shows the load impact on the three different day types. A negative load impact indicates savings, with treatment customers using less energy than control customers, adjusted for pretreatment differences. Table 4.3.1 shows the same data - hourly load impact estimates by day type – with an average load impact across the 5 peak hours. These data indicate incremental savings during peak times on event days, weekdays, and weekend days. The average savings was 0.06 kW per participant on event days and weekdays, and 0.09 kW per participant on weekend days.

Figure 4.3.1. Average Adjusted Load Impacts, All Day Types

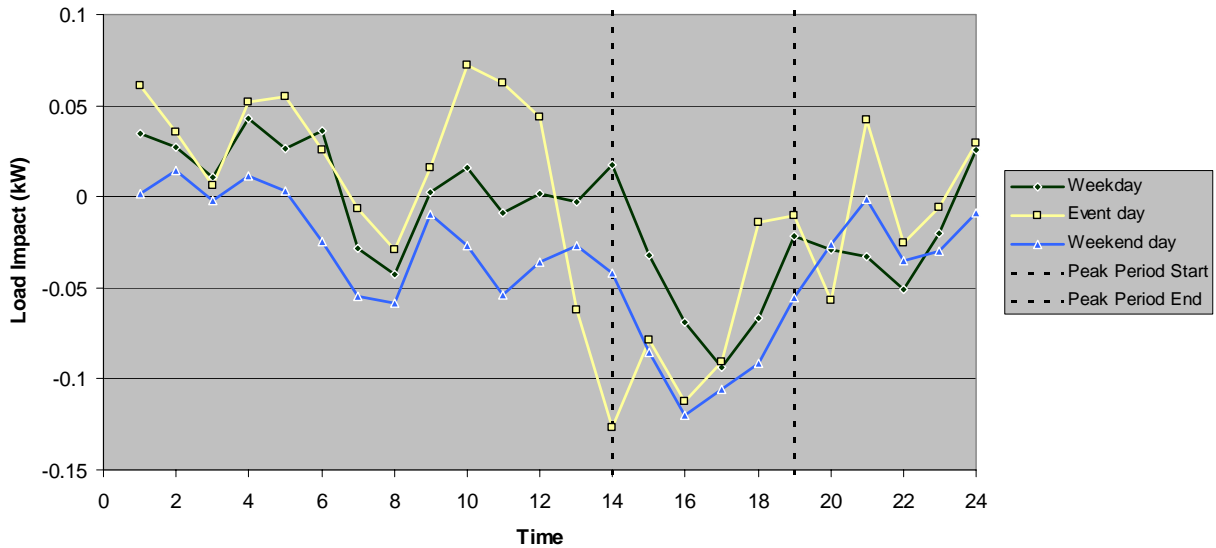


Table 4.3.1. Average Adjusted Load Impacts, All Day Types

Hour ending	Event day	Weekday	Weekend day
3:00 pm	-0.078	-0.032	-0.086
4:00 pm	-0.113	-0.069	-0.120
5:00 pm	-0.091	-0.094	-0.106
6:00 pm	-0.014	-0.067	-0.091
7:00 pm	-0.010	-0.022	-0.055
Average across peak hours	-0.061	-0.057	-0.091

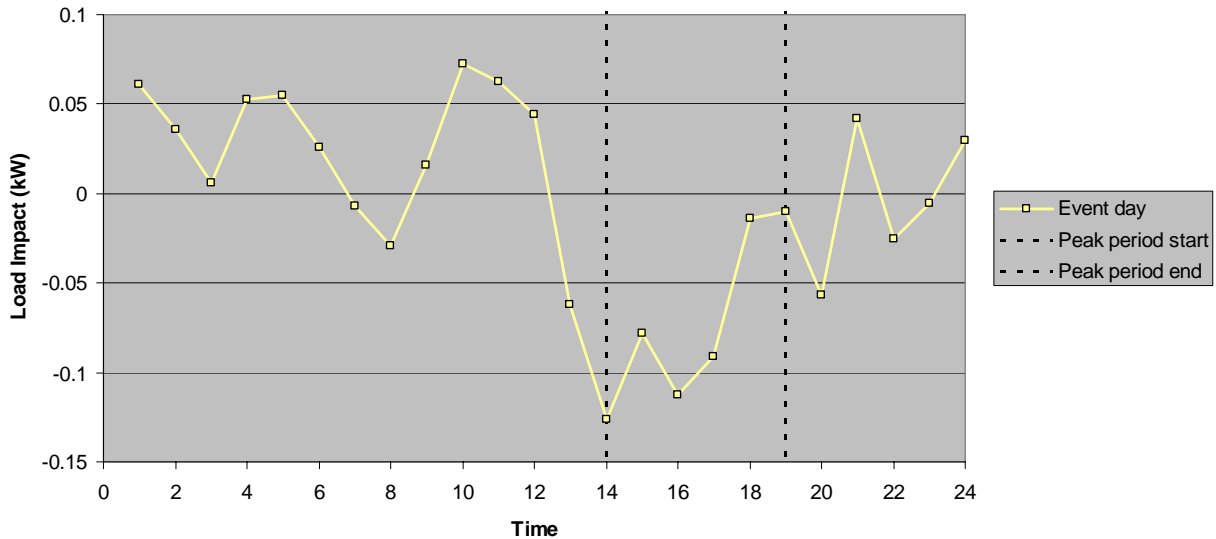
Changes made by participants, whether physical or behavioral, appear to affect all days equally, since all three day types see about the same load impact. This is most likely because changes made by bill analysis customers are either permanent measures, or behaviors that become habitual once they are made aware that these behavior changes could save money (see Section 4.2). Interestingly, the weekend day savings show up in spite of the fact that the CPP-F rate does not include a peak period with higher prices on weekends.

The general shape of the load impact has a noticeable drop in load during the peak period when prices are high. All three day types also show a dip in load from 6 am to 8 am, which is not due to price. This may be a side effect of the specific measures that treatment customers took, or it may be a random effect. Results for event days and other days (weekdays and weekend days) are discussed separately.

Discussion - Event Days

Figure 4.3.2 shows the estimated average load impact for the 11 critical peak event days for 2005. The load for treatment customers is less than the load for control customers for all peak hours, as well as for the two hours immediately before and one hour after the peak period.

Figure 4.3.2. Average Adjusted Load Impacts, Event Days



The load savings range from a low of 0.010 kW to a high of 0.113 kW during the peak period, for an average peak period savings of 0.061 kW. These savings estimates seem to be tied to the peak period. The load on event days drops two hours before the start of the event. This could be random variation, or it could be that the treatment customers begin to shed load early in anticipation of the start of the peak period. We have no specific comments from participants indicating that is happening, but the load impact seems to suggest the possibility.

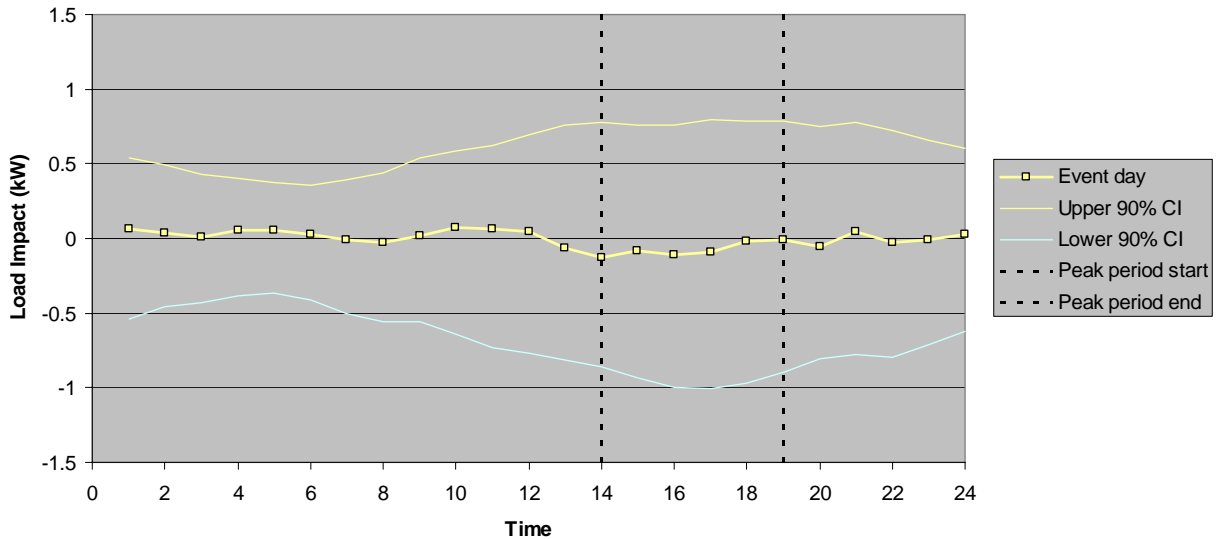
We also calculated 90% confidence intervals for the hourly load impact estimates. Figure 4.3.3 shows the load impact estimates and the 90% confidence intervals. Note that the scale is quite different from Figure 4.3.2. If the 90% confidence interval contains zero, then the impact is not statistically significant (at an alpha level of 0.10). Clearly, the confidence intervals for all hourly load impact values include zero, so the result is not statistically significant based on this difference of differences, normal distribution analysis.

Statistical significance is determined by the magnitude of the response, the sample size, and the variance within the sample. If the 0.06 kW impact accurately represents the true impact, then a future sample would have to be quite large, on the order of 100 times larger than our current sample, to result in a statistically significant estimate.

The energy savings are about one eighth of the incremental average savings for the Information Display Pilot (IDP) conducted in 2004. In the IDP, the incremental average savings for five-hour critical peak days in 2004 was 0.54 kW. The IDP customers received a simpler bill analysis and an energy orb that changed colors during different pricing periods.²⁰

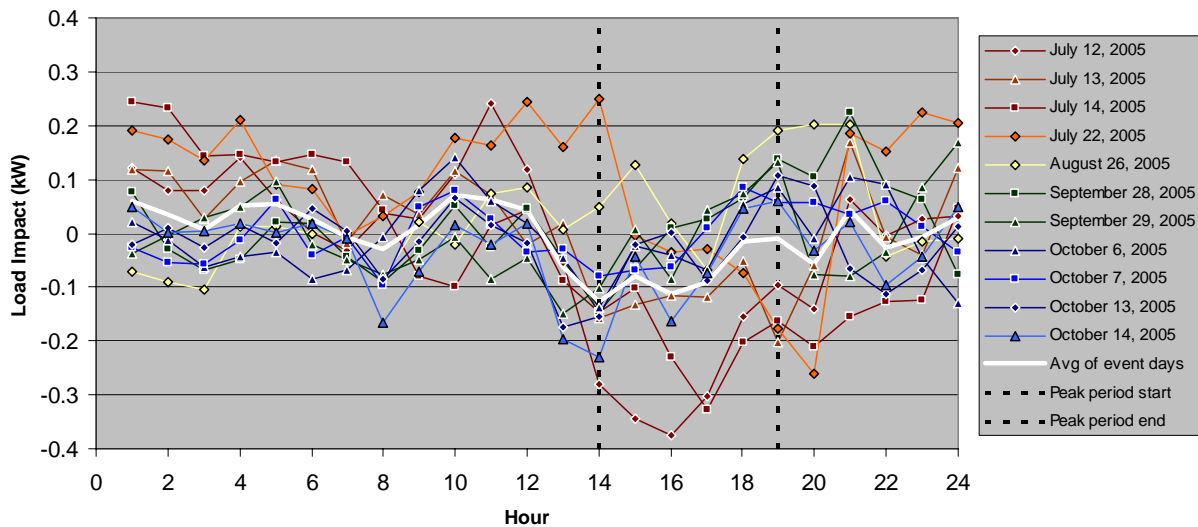
²⁰ See *Final Report – Information Display Pilot*, dated 5 January 2005.

Figure 4.3.3. Average Adjusted Load Impacts, Event Days, with 90% Confidence Intervals



Note that the impact estimates varied across the 11 event days. Figure 4.3.4. shows all eleven event days, along with the average across all the event days that was presented in Figure 4.3.2. There is clearly a lot of random variability, but in general, the shape is similar across most of the event days. Graphs of each individual event day, along with the associated confidence intervals, can be found in Appendix I.

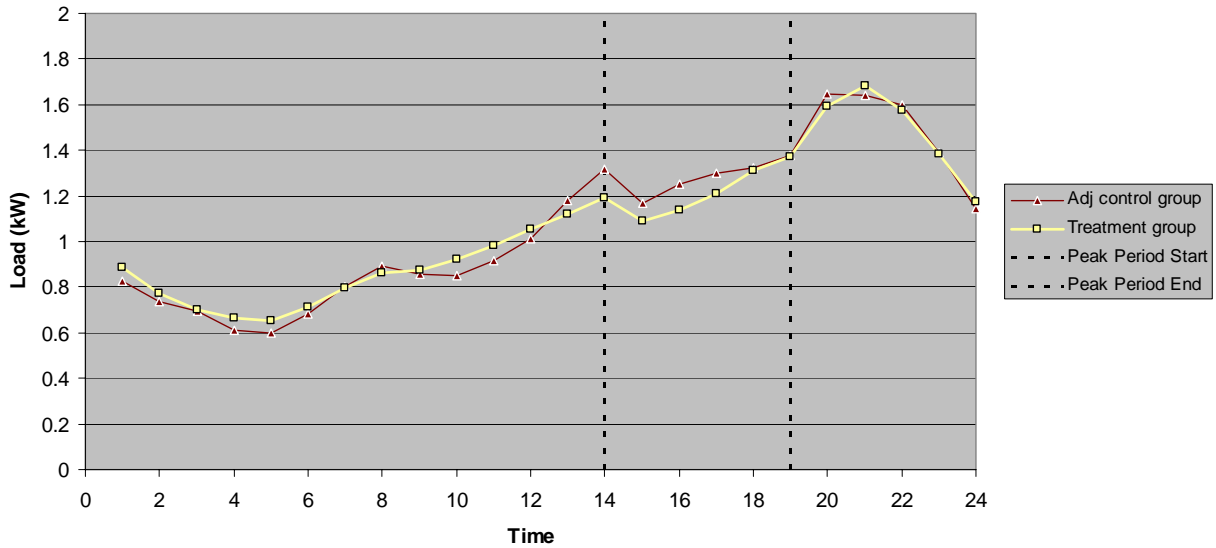
Figure 4.3.4. Average Adjusted Load Impacts by Individual Event Day



While graphs shown above present the load impact estimates precisely, they do not provide an intuitive sense of load responses relative to the average customer load shape. Figure 4.3.5 shows the average load across all event days during the treatment period (2005) for the treatment group, and compares it with the adjusted average load for the control group during the treatment period. The control group load is adjusted by the difference between the treatment

and control group loads during event days during the pre-treatment period (2004). Note that the Y-Axis in this graph is load, rather than a load impact or difference in load. The difference between the two lines in Figure 4.3.5 is approximately the same as the load impact shown in figure 4.3.2.²¹

Figure 4.3.5. Comparison of Loads, Event Days

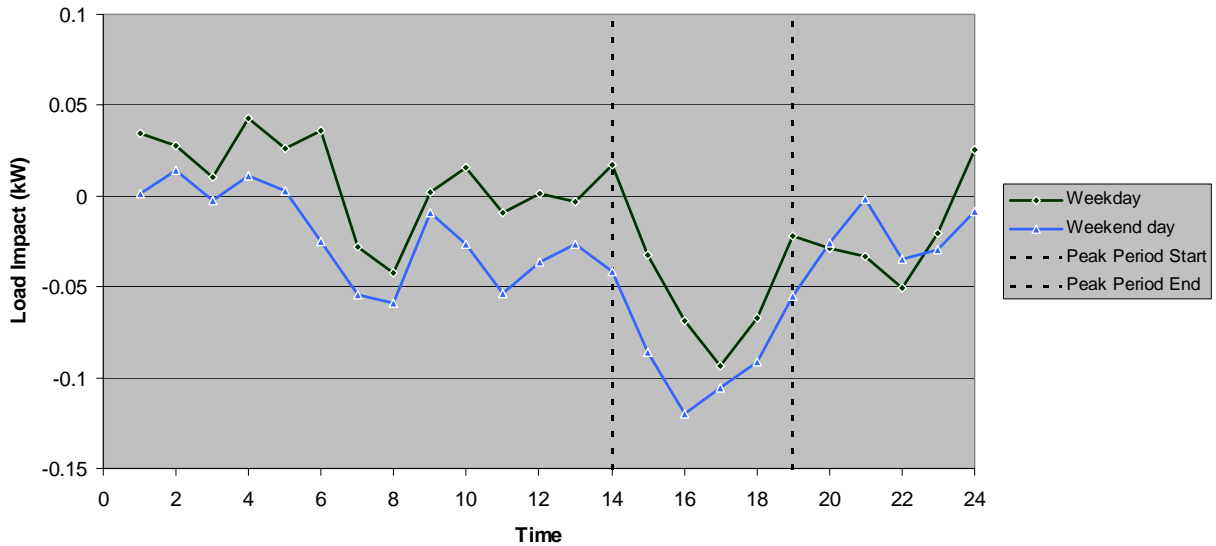


Discussion - Weekdays and Weekend Days

Figure 4.3.6 shows the estimated average load impact for weekdays and weekend days. As seen on event days, the load for treatment customers is less than the load for control customers for all peak hours.

²¹ Any small differences are due to the order of the calculations – the load impacts are calculated for each cell, and then a weighted average is calculated, whereas the two load shapes are calculated separately based on two cell weighted averages.

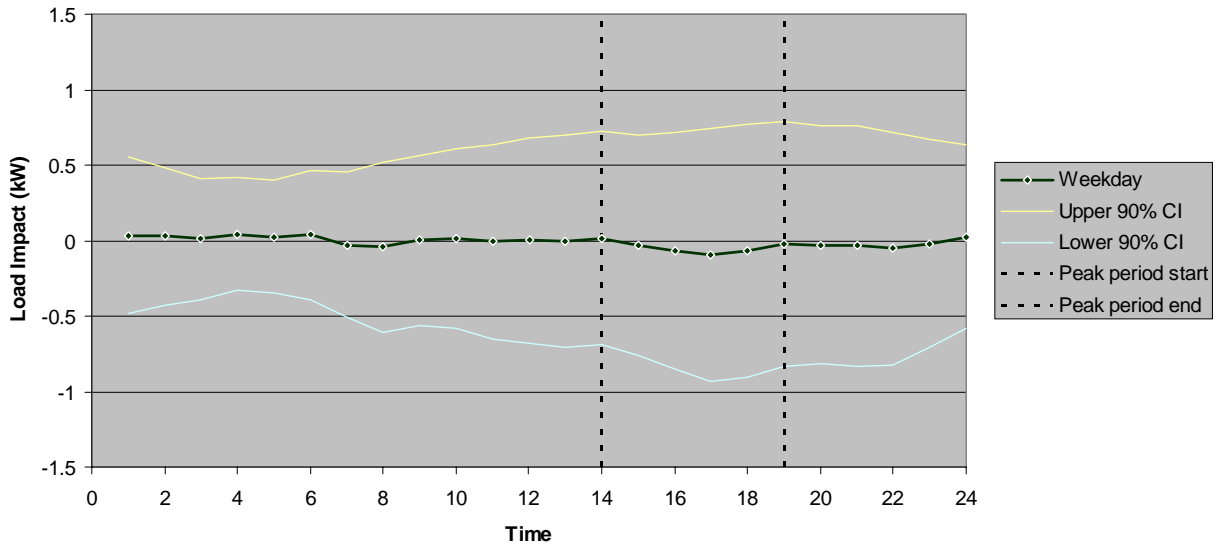
Figure 4.3.6. Average Adjusted Load Impacts, Weekdays and Weekend Days



The estimated load savings during the peak period on weekdays ranged from 0.022 kW to 0.094 kW, with an average across the peak period of about 0.057 kW.

We also calculated 90% confidence intervals for the weekday hourly load impact estimates. Figure 4.3.7 shows the load impact estimates and the 90% confidence intervals for the average weekday load savings. Note that the scale is quite different from Figure 4.3.6 above. If the 90% confidence interval contains zero, then the impact is not statistically significant (at an alpha level of 0.10). Clearly, the confidence intervals for all hourly load impact values include zero, so the average load impact result is not statistically significant based on this difference of differences, normal distribution analysis.

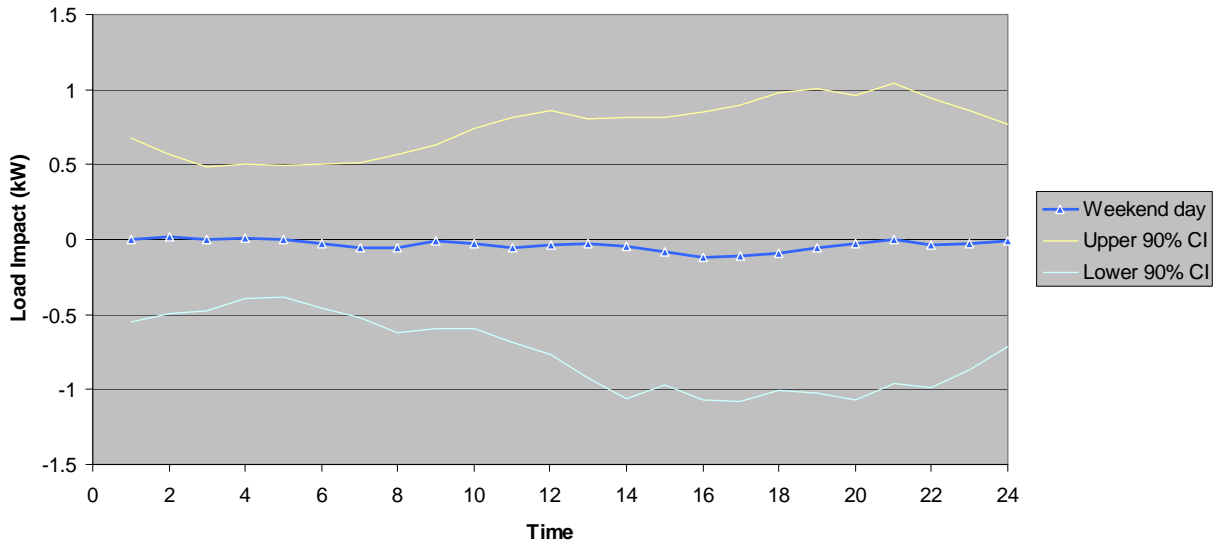
Figure 4.3.7. Average Adjusted Load Impacts, Weekdays, with 90% Confidence Intervals



The savings between 2 pm and 7 pm on weekend days ranged from 0.055 kW to 0.120 kW, with an average savings across the period of 0.091 kW (slightly higher than other days). The small differences between the impacts on the three day types are probably due to random variations and do not represent any systematic effect.

We also calculated 90% confidence intervals for the weekend day hourly load impact estimates. Figure 4.3.8 shows the load impact estimates and the 90% confidence intervals for the average weekend day load savings. Note that the scale is quite different from Figure 4.3.6 above. If the 90% confidence interval contains zero, then the impact is not statistically significant (at an alpha level of 0.10). Clearly, the confidence intervals for all hourly load impact values include zero, so the average load impact result is not statistically significant based on this difference of differences, normal distribution analysis.

Figure 4.3.8. Average Adjusted Load Impacts, Weekend days, with 90% Confidence Intervals



As with the event day graphs, the weekend and weekday graphs shown above present the load impact estimates precisely, but they do not provide an intuitive sense of load responses relative to the average customer load shape. Figures 4.3.9 and figure 4.3.10 show the average load across all weekdays and weekend days, respectively, during the treatment period (2005) for the treatment group, and compare it with the adjusted average load for the control group during the treatment period. The control group load is adjusted by the difference between the treatment and control group loads during the corresponding day type during the pre-treatment period (2004). Note that the Y-Axis in this graph is load, rather than a load impact or difference in load. The difference between the two lines in Figure 4.3.9 is approximately the same as the load impact shown in Figure 4.3.6, and the same relationship holds for Figure 4.3.10 and figure 4.3.6.²²

²² Any small differences are due to the order of the calculations – the load impacts are calculated for each cell, and then a weighted average is calculated, whereas the two load shapes are calculated separately based on two cell weighted averages.

Figure 4.3.9. Comparison of Loads, Weekdays

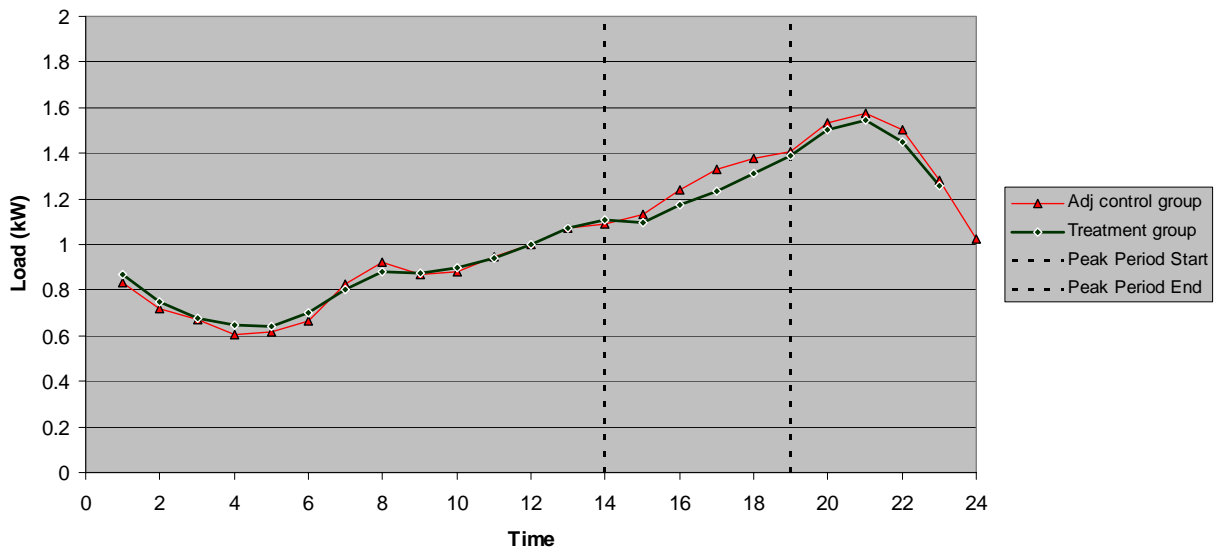
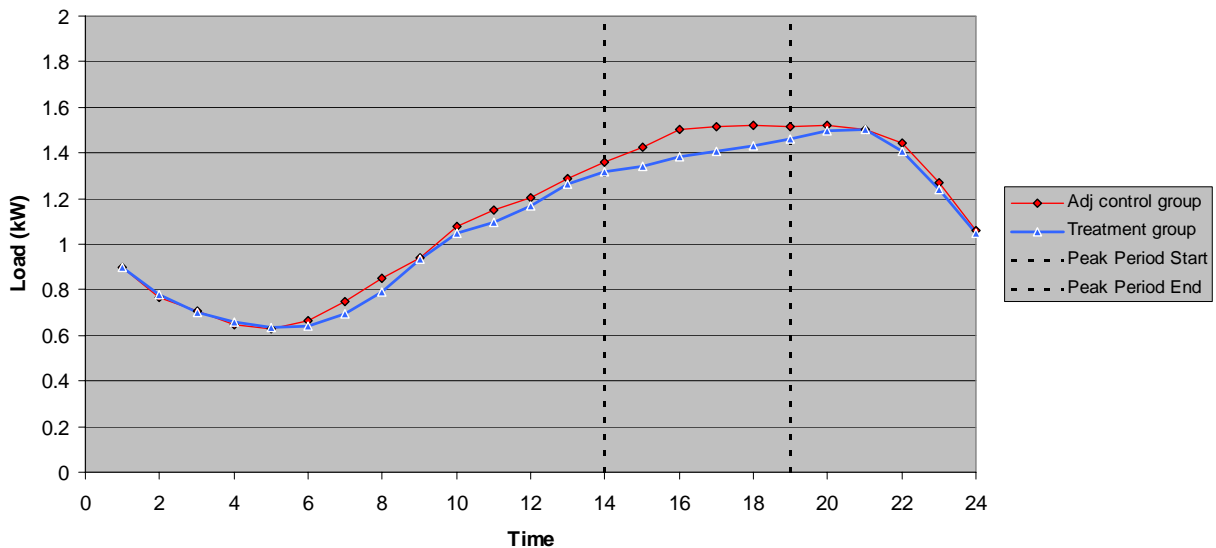


Figure 4.3.10. Comparison of Loads, Weekend Days



4.4. Were bill analysis participants more likely to reduce energy use as a result of receiving the bill analysis?

The nonparametric approach, described in Section 2.6.2, confirms a reduction in use attributable to the bill analysis during some time periods.

For each individual treatment customer, we used the corresponding control group cell as the comparison group, and calculated the savings using a difference of differences approach. Of the

139 treatment customers, the number that used less energy and the number that used more energy are listed in Table 4.4.3.

Table 4.4.3. Nonparametric test results for all day types

Day type	Time period	Number using less energy	Number using more energy	Probability	Significantly Significant Effect (Reject null hypothesis at alpha = 0.10)
Weekday	On-peak energy	82	57	0.0207	Yes
Weekend day	On-peak energy	77	62	0.1175	No
Event day	On-peak energy	71	68	0.4327	No
Weekday	Daily energy	84	55	0.0086	Yes
Weekend day	Daily energy	78	61	0.0873	Yes
Event day	Daily energy	75	64	0.1982	No

On weekdays, there is a statistically significant effect, both during the on-peak period of 2 pm to 7 pm and throughout the day. This means that customers who received the bill analysis information were more likely to use less energy than customers without the information. Both results for weekdays were clearly significant, with a very small probability.

On weekend days, the test on reduction in daily energy was significant, but the test for on-peak period reduction was not significant. However, the results were close to each other, with one falling just below the cut-off probability of 0.10. So we can conclude that the treatment resulted in a higher likelihood of a reduction in daily energy use on weekends, and there is some evidence of a higher likelihood of on-peak energy savings on weekend days. Of course, there is no separate peak pricing period on weekends, but as with the load impact analysis shown above, the changes are similar on weekdays and weekend days.

There is no statistically significant effect for event days. Based on this non-parametric analysis, there is no evidence that customers receiving the treatment are more likely to reduce their energy use during the critical peak period or across all hours on event days.

These results appear somewhat contradictory, since event days all fell on weekdays, and yet the hypothesis tests yield different results. One possibility is that customers change their regular habits, and over the course of many days (all weekdays), there is a small effect. But when you look at only a few days, specifically the eleven event days that fall on the hottest days, there may not be as much of an effect.

The results of this analysis again reinforce the idea that the changes that participants make as a result of the bill analysis information are not specific to particular days or even day types, but are made on all days.

4.5. Will they continue to take action if bill analysis stops?

The majority of participants reported they would continue to take all of the actions they took as a result of the bill analysis if the monthly bill analysis were stopped (see Table 4.5.1).

Table 4.5.1. What Would Happen If Bill Analysis Was Stopped

If you stopped receiving the monthly bill analysis would you...	Total (n=58)	Email (n=36)	Mail (n=22)
Stop taking the actions	8%	5%	14%
Continue to take some of the actions	25%	27%	23%
Continue to take all of the action	61%	65%	55%
Don't know	5%	3%	9%

5. Perceptions of Bill Analysis

The following three subsections present questions and answers to characterize feedback from participants on the effectiveness and value of the pilot.

5.1. What were the most valuable parts of the bill analysis?

In general, recipients of the bill analysis felt that each section of the bill analysis was clear and well presented.

Table 5.1.3. Clarity and Presentation of Bill Analysis

Section	Percent who said the information presented in this section was clear and presented well?		
	Total (n=74)	Email (n=43)	Mail (n=31)
Critical or super peak, on and off peak periods	84%	91%	74%
Bar chart	84%	93%	71%
Personalized checklist of energy saving actions	78%	79%	77%
Pie chart	74%	81%	65%

When participants were asked to rate the ease of understanding the bill analysis (overall) on a scale of 1 to 10 where 1 is *very difficult to understand* and 10 is *very easy to understand*, more than half of the participants (57% total, 60% e-mail, 52% mail) found the bill analysis to be easy to understand (rating it 8, 9 or 10). Very few participants rated the bill analysis below a 4 on the 10-point scale but those that did often cited language barriers as the reason for finding it difficult to understand.

As mentioned in the methodology section (Section 2.1), the bill analysis emphasized three major messages:

1. Peak energy is expensive—by showing average prices and definitions of critical-peak, on-peak, and off-peak periods;
2. Save money by using less peak energy, especially on critical peak days—by showing a bar chart and calculated benchmark statistics related to the customer’s usage during critical peak and peak periods;
3. Take action, especially on critical peak days—by providing a customized list of measures to reduce peak energy use with estimated savings²³ and a customized pie chart with a breakdown of end use during peak periods.

²³ Users could interact with the list of measures in two ways. They could expand the name of the measure to get a full description of the measure. They could also select individual measures for which estimated savings would be totaled at the bottom of the list.

Survey respondents and focus group participants were asked about their thoughts on these and other parts of the bill analysis. Our findings are presented below.

Message 1: Average prices and definitions of critical-peak, on-peak, and off-peak periods

In general, customers stated that they understood the definitions and found them to be useful (see Table 5.1.1). However, while the majority of bill analysis participants and non-participants stated that they understood what the term “critical or super peak energy” means, participants in the focus groups indicated that the bill analysis clarified exactly when the critical peak and peak hours were. In both focus groups, at least one person indicated that they thought the peak time was slightly different than the actual peak time. As one participant stated, “I always thought that peak times was like just until five o’clock, so I would get home from work thinking peak time is over, and then I realized peak time is seven. It slowed me down from doing things like laundry and running my dishwasher and things like that. I was more careful thanks to the bill analysis.” Another said, “I didn’t have the exact time, it was kind of an approximate, but I thought it ended like at six.”

Table 5.1.1. Understanding Critical and Super Peak Energy

Do you understand what critical or super peak energy is?	Participants (n=74)	Non-participant (n=32)
Understand	88%	78%
Need more information	12%	19%
Don't Know	0%	3%

One participant said, “I think it’s great the way they have it broken down by the actual amount during each of those peak periods. It makes me more aware of what the cost is. I think that’s great, and I think it’s pretty clear.” Thus, the definitions were very useful to customers—even those that thought they understood the terms.

One recommendation for this section (offered by a focus group participant) was to highlight the cost during the critical peak to draw more attention to it.

Message 2: Bar chart and calculated benchmark statistics related to the customer’s usage during critical peak and peak periods

The bar chart that shows critical and on-peak usage from month to month was rated to be very helpful by over 60% of the participants that we interviewed.

Customers felt that it was useful because it “actually shows [my] usage.... I am different from everyone else’s usage.” This section ties the bill analysis directly to a customer’s bill (by providing usage) while giving additional information about usage on a critical peak day compared to regular peak times.

Focus group participants and survey respondents also indicated that the bar chart was very easy to understand.

Message 3: Customized list of measures to reduce peak energy use with estimated savings²⁴ and a customized pie chart with a breakdown of end use during peak periods

In the “3. Take Action—Especially on Critical Peak Days” section, participants particularly liked how the recommendations were specific and gave a dollar amount. One participant said, “The one thing that caught my eye on the sample bill analysis itself is the area where it actually showed you dollars, \$5, \$3, and when you look down that list and you are going 5 and 3 is 8 and you know, and you add those dollars up, when you put a big number there with that dollar sign, people are going to look at it.” Another participant felt that, “They had a lot of good ideas, especially in the area where they have that savings checklist, and it tells you more or less the times, which are the better times to do certain things and how much of a savings is very impressive to me, because when I look at that and I see the numbers, when you actually see numbers, it’s very helpful, and I think if that wasn’t on there I probably wouldn’t even think twice about it.”

Participants also seemed drawn to the pie chart. Most felt that this was one of the most useful parts of the bill analysis. Notably, the same focus group respondent who stated that they weren’t interested in the bill analysis because they thought it was going to be the same as the bill, stated that “If I knew that this pie chart was on there telling me how my energy was being used, I would love to see that.”

Comparison Across Bill Analysis Components

Customers were asked what sections of the bill analysis they thought were the most useful. Respondents that recalled each section of the bill analysis were asked to rate on a scale of 1 to 10 where 1 is *not at all useful* and 10 is *very useful*, how useful they found the information in each section in helping them to make decisions on ways to shift or reduce their energy usage (see Table 5.1.2). Control group customers were asked about how useful they would find the information if it were offered to them. Participants found the section that showed what hours each period included and the cost per kWh in each period to be the most useful, although all sections were found to be very useful by 50% or more of participants.

**Table 5.1.2. Usefulness of Information in Bill Analysis
(based on a rating of 8, 9 or 10 on a 10-point scale)**

Section	Participants Found Useful	Control group would find useful
Reminder of hours and kWh costs during critical or super peak, on and off peak periods	68%	N/A
Bar chart that compares your critical or super peak vs. regular on-peak usage	61%	49%
Personalized checklist of energy saving actions	57%	53%
Pie Chart which breaks down usage during the past month by end use	50%	56%

²⁴ Users could interact with the list of measures in two ways. They could expand the name of the measure to get a full description of the measure. They could also select individual measures for which estimated savings would be totaled at the bottom of the list.

Additional Resources

E-mail participants were also asked about the links to additional resources (see Table 5.1.3). Most indicated that they had not explored these links. Only about one in five participants looked at the Home Energy Center or the Load Shift Calculator, which is consistent with the site traffic data (see Section 3.4). However, of the participants that did look at these resources about three-fourths of them found them useful. Non-participants were also asked if they would find these resources useful.

Table 5.1.3. Other Links
(usefulness based on a rating of 8, 9 or 10 on a 10-point scale)

Links to Other Resources	Participants		Non-participants
	Yes, Explored	Found Useful	Would Find Useful
Home Energy Center	19% (n=8)	75% (n=6)	31% (n=10)
Load Shift Calculator	21% (n=9)	78% (n=7)	28% (n=9)
Thermo Calculator (a)	9% (n=4)	25% (n=1)	22% (n=7)

(a) Self-reported responses conflict with site traffic data, provided in see Section 3.4.

Focus group participants also expressed interest in these tools once they realized that they were available. The biggest barrier, however, appears to be alerting customers to their availability (and getting that message through).

Other Comments

Comments from focus group participants indicate that, in general, customers described the bill analysis as useful, and “informative and interesting.” They also stated that the bill analysis provided plenty of detail.

While focus group participants initially commented that they felt that the bill analysis was customized for their home (primarily because it was their billing data); upon further probing, several made comments about how they assume it was just “an average thing” and not specific to their house or apartment because the utility could not have known about their specific home. They did not realize that the information was customized based on the equipment in their home.

Customer Recommendations

Focus group participants were shown alternative formats of the bill analysis and were asked to talk about what they liked and disliked about each section. Participants generally liked simpler formats that focused more on graphics and less on text. Many stated that they just don’t have time to read a lot of text. They liked how the graphics were customized to their own home.

One participant suggested using the bill analysis to inform customers of other utility programs. Another participant suggested making the critical peak cost per kWh a different color from the other rates to make it stand out more.

Customers indicated that they prefer a relatively static format. They did not seem to be interested in “fun facts” and information that would be more newsletter-like and change monthly.



- Customer Service
- Rebates & Savings
- Safety
- Power & Our Environment
- Community & Recreation
- Doing Business
- Edison International

Shift and Save

Saving money and peak energy makes good sense

Joseph Sample Account#: 001234567
 123 Main St., Downey, CA 90240
 Bill Period: 8/3/2005 - 9/1/2005

This summer, you could save \$47 - \$69*

July	August	September	October
0kWh	0kWh	**196 kWh to go...	Peak Savings Goal: 196 kWh

*Reduce your peak energy use by 196kWh or 20% and you could save \$47 - \$69 this summer (July-October). This information is based on your energy usage.

1. Peak Energy Is Expensive - Use It Wisely.

Remember during the summer season:

Critical Peak Energy: \$.54/kWh

- 2 pm to 7 pm
- Monday through Friday on days declared by SCE as Critical Peak days

On-Peak Energy: \$.22/kWh

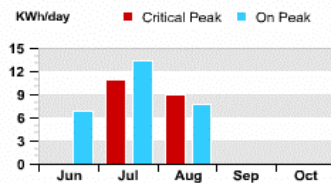
- 2 pm to 7 pm
- Monday through Friday on non-Critical Peak days

Off-Peak Energy: \$.11/kWh

- 7 pm through 2 pm the following day on weekdays
- All day Saturday and Sunday

2. Save Money by Using Less Peak Energy - Especially on Critical Peak Days.

Your Critical Peak vs. On-Peak Usage



Aim to make your critical peak bar lower than your on-peak bar

Your peak energy use on Critical Peak days was 9 kWh per day. This was higher than your average on-peak energy use of 8 kWh per day, which increased your bill by \$1!

On-Peak Usage: You used 12% of your total energy during on-peak hours. Your personal goal is 10%. As a result, you saved 0 kWh.

Get More Energy Savings Information:

Home Energy Center
 Find ways to save money and be more energy efficient specifically for your home with Home Energy Center.

Load Shift Calculator
 You can save money by changing when you use energy. Load Shift Calculator can show you how.

Thermo Calculator
 Easy and quick savings with the turn of a dial or push of a button... Thermo Calculator can show you how you can save by adjusting your thermostat settings.

Add/Update E-mail Address:

To receive an e-mail newsletter for this program or update your e-mail address, please contact us at sceidp@nexusenergy.com.

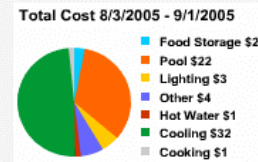
3. Take Action - Especially on Critical Peak Days!

Check off items on the personalized checklist below to see how much money and peak energy you can save! The personalized checklist below is based on information you provided about your home.

Savings Checklist	Estimated Monthly Savings
<input checked="" type="checkbox"/> Before you take that dip... Run your pool filter during off peak hours to save money and energy. More...	\$12-\$18 40-70 kWh
<input checked="" type="checkbox"/> Keep your cool! Save energy. Save money. Raise your thermostat 3 to 5 degrees, during the expensive Critical Peak and On-Peak hours. More...	\$8 16-24 kWh
<input checked="" type="checkbox"/> Made in the Shade! Keep your house cooler by closing window shades and curtains. More...	\$5 12 kWh
<input checked="" type="checkbox"/> Do the dishes later... Save money by doing your dishes after 7 pm, when expensive On-Peak and Critical Peak time periods are over. More...	\$4 13-19 kWh
<input checked="" type="checkbox"/> Wash those duds later... Avoid running your clothes washer during costly On-Peak and Critical Peak hours. Save 50%-75% by running Off-peak. More...	\$2 7 kWh
<input checked="" type="checkbox"/> Flip the switch... Turn off unnecessary lights to save money and power especially during the costly Critical Peak and On-Peak hours. More...	\$2 4 kWh
Total Estimated Monthly Savings:	\$29-\$43 90-140 kWh

Save Energy During Peak Hours:

Do you know how you use energy? The chart below shows how you used energy during peak hours. This is based upon your most recent bill, if available, and is specific to your home.



To save money during peak hours, target appliances that are costing you the most.

FOR OVER 100 YEARS...LIFE. POWERED BY EDISON.



- Customer Service
- Rebates & Savings
- Safety
- Power & Our Environment
- Community & Recreation
- Doing Business
- Edison International

Shift and Save

Saving money and peak energy makes good sense

Joseph Sample Account#: 001234567
 123 Main St., Downey, CA 90240
 Bill Period: 8/3/2005 - 9/1/2005

This summer, you could save \$47 - \$69*

July	August	September	October
0kWh	0kWh	**196 kWh to go...	Peak Savings Goal: 196 kWh

*Reduce your peak energy use by 196kWh or 20% and you could save \$47 - \$69 this summer (July-October). This information is based on your energy usage.

1. Peak Energy Is Expensive - Use It Wisely.

Remember during the summer season:

Critical Peak Energy: \$.54/kWh

- 2 pm to 7 pm
- Monday through Friday on days declared by SCE as Critical Peak days

On-Peak Energy: \$.22/kWh

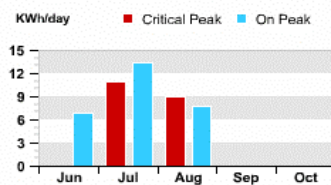
- 2 pm to 7 pm
- Monday through Friday on non-Critical Peak days

Off-Peak Energy: \$.11/kWh

- 7 pm through 2 pm the following day on weekdays
- All day Saturday and Sunday

2. Save Money by Using Less Peak Energy - Especially on Critical Peak Days.

Your Critical Peak vs. On-Peak Usage



Aim to make your critical peak bar lower than your on-peak bar

Your peak energy use on Critical Peak days was 9 kWh per day. This was higher than your average on-peak energy use of 8 kWh per day, which increased your bill by \$1!

On-Peak Usage: You used 12% of your total energy during on-peak hours. Your personal goal is 10%. As a result, you saved 0 kWh.

Get More Energy Savings Information:

Home Energy Center
 Find ways to save money and be more energy efficient specifically for your home with Home Energy Center.

Load Shift Calculator
 You can save money by changing when you use energy. Load Shift Calculator can show you how.

Thermo Calculator
 Easy and quick savings with the turn of a dial or push of a button... Thermo Calculator can show you how you can save by adjusting your thermostat settings.

Add/Update E-mail Address:

To receive an e-mail newsletter for this program or update your e-mail address, please contact us at sceidp@nexusenergy.com.

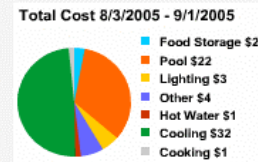
3. Take Action - Especially on Critical Peak Days!

Check off items on the personalized checklist below to see how much money and peak energy you can save! The personalized checklist below is based on information you provided about your home.

Savings Checklist	Estimated Monthly Savings	
<input checked="" type="checkbox"/> Before you take that dip... Run your pool filter during off peak hours to save money and energy. More...	\$12-\$18	40-70 kWh
<input checked="" type="checkbox"/> Keep your cool! Save energy. Save money. Raise your thermostat 3 to 5 degrees, during the expensive Critical Peak and On-Peak hours. More...	\$8	16-24 kWh
<input checked="" type="checkbox"/> Made in the Shade! Keep your house cooler by closing window shades and curtains. More...	\$5	12 kWh
<input checked="" type="checkbox"/> Do the dishes later... Save money by doing your dishes after 7 pm, when expensive On-Peak and Critical Peak time periods are over. More...	\$4	13-19 kWh
<input checked="" type="checkbox"/> Wash those duds later... Avoid running your clothes washer during costly On-Peak and Critical Peak hours. Save 50%-75% by running Off-peak. More...	\$2	7 kWh
<input checked="" type="checkbox"/> Flip the switch... Turn off unnecessary lights to save money and power especially during the costly Critical Peak and On-Peak hours. More...	\$2	4 kWh
Total Estimated Monthly Savings:	\$29-\$43	90-140 kWh

Save Energy During Peak Hours:

Do you know how you use energy? The chart below shows how you used energy during peak hours. This is based upon your most recent bill, if available, and is specific to your home.



To save money during peak hours, target appliances that are costing you the most.

FOR OVER 100 YEARS...LIFE. POWERED BY EDISON.

5.2. How much are they willing to pay for bill analysis?

While customers wanted the bill analysis to continue, the majority of customers are not willing to pay for the bill analysis (see Table 5.2.1). Comments from focus group participants seem to indicate that customers feel that they are paying enough for electricity and that they should receive this type of information for free.

Approximately one-third (29%) of participants and 17% of non-participants, however, stated that they **are** willing to pay at least \$12 per year (or \$1 per month) for this type of information. (Note that the information was described to the non-participants, but they were not as familiar with the information.)

Table 5.2.1. Willingness to Pay For Bill Analysis

Willing to pay?	Participant	Control Group
Nothing	59%	54%
\$2-\$4 per year	8%	17%
\$12 per year	18%	13%
\$20 per year	11%	4%
Don't know	4%	13%

5.3. How and how often do they want to receive bill analysis in the future?

Most participants want to continue receiving the bill analysis. Only 12% of them said they never want to receive it (see Table 5.3.1). Those that have a computer appear to prefer e-mail to hard copy but many pilot customers do not have computers. Most mail participants (74%) want to continue receiving the bill analysis by mail. Whether or not customers want to receive the information by e-mail is primarily due to whether or not they have a computer.

Non-participants were also asked how interested they would be in receiving the bill analysis in the future. They were asked to rate their interest on a 10-point scale where 1 is not at all interested and 10 is very interested. Half of the respondents indicated they were interested (rating a 8, 9, or 10) in receiving the bill analysis. Of the non-participants that are interested and have e-mail access (n=16), 62% (n=10) would be willing to receive the bill analysis by e-mail in the future. In focus group discussions, those with access to a computer seemed to feel comfortable providing their e-mail to their electric utility assuming that it will not be shared with other business.

Table 5.3.1. Customer Desire to Receive Bill Analysis By E-mail

Do you want to receive the bill analysis by e-mail?	Mail Participant (n=31)	Non-participant (n=16)
Yes	26%	62%
No	74%	31%

Most customers that wish to receive the bill analysis by e-mail indicated that they would prefer to receive the information monthly, as was the case with the current pilot (see Table 5.3.2). Customers that prefer mail indicated a preference for receiving this information less frequently. By mail, however, most customers would only want to receive this information three or four times a year instead of monthly (see Table 5.3.3).

Table 5.3.2. How Often Do You Want To Receive The Bill Analysis By Email For Respondents with Internet Access

How often would you want to receive the e-mail reminder?	Participant (n=51)	Non-participant (n=10)
Once a year	2%	0%
Quarterly	25%	20%
Monthly	43%	40%
Whenever info is updated	6%	20%
Weekly	8%	0%
Before critical or super peak	4%	0%
Never	12%	10%
Don't know	0%	10%

Table 5.3.3 How Often Do You Want To Receive The Bill Analysis (For Customers that Prefer Mail or Do Not Have Access to the Internet)

How often would you want to receive the bill analysis?	Mail Participant (n=23)	Non-participant (n=24)
Once a year	4%	4%
Quarterly	52%	46%
Monthly	30%	33%
Weekly	0%	8%
Never	13%	4%
Don't know	0%	4%

Generally the best time to send out the bill analysis would be when the customer's bills are increasing, which may necessitate contacting customers monthly (with the bill). Focus group participants indicated that they are more likely to look for recommendations and compare their usage to previous months when they notice an increase in their bills.

Focus group participants that preferred to receive a hard copy seemed to indicate that they would prefer a simple, inexpensive presentation of the information in their monthly bill.

Event Notification

Customers who recalled receiving notification of a critical peak event were asked about the usefulness of the e-mail (provided as part of the pilot) or phone call (conducted by the utility independent of the pilot) in notifying them of the event. While e-mail customers appreciated the e-mail reminder, the telephone notification is still the most important to customers.

**Table 5.3.4. Usefulness of Different Critical or Super Peak Notification Methods
(mean rating based on a 10-point scale)**

Notification Method	Internet Participant Mean Rating	Mail Participant Mean Rating	Non-participant Mean Rating
Email Notification (Internet part. only)	7.0	N/A	N/A
Telephone (part. & non-part.)	8.7	7.3	8.3

6. Conclusions

The primary conclusions of the evaluation are summarized below, organized into three high-level observations with references to the section of the report in which specific results are discussed.

First, participants engaged actively with the bill analysis. They found it useful and reported that it caused them to take actions to reduce peak usage, resulting in lower electricity bills.

- Most participants – 77% - visited the website at some point during the program. Further, participants began using the program website immediately and the website remained active throughout the summer. This level of use is remarkable when compared to that seen for comparable utility sites offering bill information, where 1-3% of a target population typically visits a website on their own when informed of its benefits.²⁵ (Section 3.3)
- Survey results indicate that many participants found the bill analysis useful in helping them reduce their usage. Nearly half (47%) of participants found the bill analysis useful. An additional 37% gave a more neutral rating, while only 10% felt that it was not useful. (Section 4.1)
- A significant portion of respondents (46%) stated that they took actions during the critical peak periods that they would not have taken if they hadn't received the bill analysis; and 49% of participants stated that they took additional actions during regular peak periods because of the bill analysis. (Section 4.1)
- Most participants (62%) noticed reductions in their bills since participating in the CPP-F rate, and approximately half of the participants (51%) noted reductions due to the bill analysis. (Section 4.1)

²⁵ Based on Nexus Energy Software experience with utility clients.

Second, the quantitative impact analysis showed savings, with statistical significance for some, but not all, results.

- The bill analysis appeared to have an impact between 2 pm and 7 pm on all days (critical peak event days, weekdays, and weekends). This suggests a general “conservation effect” attributable to the bill analysis, with customers making changes that become habitual, rather than just in reaction to a critical peak or peak pricing signal. (Sections 4.2, 4.3, 4.4)
- The load savings during critical peak periods ranged from a low of 0.010 kW to a high of 0.113 kW, for an average critical peak period savings of 0.061 kW. Given the magnitude of these savings, the sample size, and an assumed normal distribution of variance, these impacts were not found to be statistically significant. (Section 4.3)
- Over certain time periods (peak periods, weekdays generally, and weekends generally), a statistically significant portion of bill analysis participants were found to be more likely to reduce energy use as a result of receiving the bill analysis. This effect was not observed during other time periods including critical peak periods. This again suggests a general “conservation effect” attributable to the bill analysis that may not hold during critical peak periods. (Section 4.4)

Finally, participants are interested in continuing a bill analysis program and provided considerable feedback applicable to a larger-scale rollout of a similar bill analysis program.

- Most participants want to continue receiving the bill analysis. Only 12% of them said they would not want to receive it in the future. (Section 5.3)
- While recipients of the bill analysis generally felt that each section of the bill analysis was clear and well presented, they provided several detailed suggestions to improve the bill analysis presentation. (Section 5.1 and Section 7, Discussion and Recommendations)
- While customers wanted the bill analysis to continue, the majority is not willing to pay for the bill analysis. However, approximately one-third (29%) of participants and 17% of non-participants stated that they **are** willing to pay at least \$12 per year (or \$1 per month) for this type of information. (Section 5.2).
- Most participants want to continue receiving the bill analysis. Only 12% of them said they never want to receive it. Those that have a computer appear to prefer e-mail to hard copy but many pilot customers do not have computers. Most mail participants (74%) want to continue receiving the bill analysis by mail. Whether or not customers want to receive the information by e-mail is primarily due to whether or not they have a computer. (Section 5.3)

7. Discussion and Recommendations

The previous section presented high-level conclusions, demonstrating that customers engaged in the bill analysis and reported that it was useful, that a load impact attributable to bill analysis was apparent but its magnitude could not be definitively determined, and that strong interest remains in receiving bill analysis in the future. Given these results, there is strong evidence that, if broadly offered in California, bill analysis will help customers understand and respond to time-based rates. Further, with the modest cost per customer for providing Web-based bill analysis, it is recommended that any implementation of AMI with time-based rates include at least Web-based bill diagnostic support.

Since the magnitude of impact associated with the information was not established by this project with statistical significance, and since alternative methods of providing diagnostic support might have greater benefit to customers and impact on loads, it is recommended that bill analysis continue to be evaluated. Further evaluation will likely result in better understanding of customer responses and improvement of methods.

The techniques for studying bill analysis impacts employed in this project provide a solid basis for methods to be used in the future, as these methods provided useful, systematic, and unbiased information regarding program effectiveness. Future studies would benefit from larger sample sizes, greater focus on new time-based rate participants (rather than 3rd year), as well as samples of customers with more easily modified end uses (such as central air conditioning) to the extent represented in the statewide population.

Further recommendations are made for a large-scale rollout of a bill analysis program to support deployment of an advanced metering infrastructure (AMI) or dynamic pricing initiative below. Recommendations fall into a three areas, as presented below.

7.1. Technical Approach and Program Costs

The pilot demonstrated that a Web-based approach could be established that is scalable and appropriate for large-scale rollout. Data transfer through secure FTP transfer and automated update of the program website operated reliably. On a larger scale, this approach would provide economies of scale and service that would be both secure and cost-effective.

While a web-based approach is scalable and cost-effective, it is also clear that many potential Bill Analysis Pilot customers did not have computers and therefore could not benefit from electronic communications. Those who have a computer appear to prefer e-mail to hard copy, but 42% participated by direct mail and of those, approximately three-quarters want to continue receiving the bill analysis by mail.

Thus, we recommend that a staged approach to larger-scale implementation be pursued, targeting electronic participants first. While this would initially limit the penetration of the analysis, it would allow full evaluation of the benefits associated with the lowest cost approach. After the impact of a fully electronic approach is maximized, an appropriate strategy may be finalized to target direct mail customers. It may very well be that the proportion of customers with computers who are willing to participate electronically will grow over time.

When pursuing a direct mail channel, it is important to consider the relationship between the regular utility bill and the bill analysis. Participants in this pilot showed interest in receiving bill analysis as an insert with their regular bill. By integrating bill analysis with utility bill inserts, the cost of direct mail activities could be minimized.

Also important to keep in mind is that participants indicated that they would actually prefer less frequent contact so long as they receive information when conditions change, such as when a bill increases. The Web-based approach pursued as part of the pilot could easily be modified to only generate customer analysis and communications when conditions change. Less frequent communications could also lower program costs without reducing effectiveness.

Another opportunity for limiting program costs lies in collecting e-mail addresses and home energy survey data through a utility-sponsored process as customers are enrolled on a rate, rather than as part of the program. This would reduce costs associated with single-purpose cold calling.

7.2. Content

While there is room for improving the content of the bill analysis, participants were generally pleased with the analysis materials. The biggest challenge to making the content effective appears to be in making customers understand the extent to which it is tailored for their particular home and usage patterns. Customers are used to receiving generic advice on saving energy. If they can see that the bill analysis is truly customized and is different from generic information seen before, they appear to be receptive to considering that information more fully.

To improve the existing content, participants made the following general suggestions:

- Favor simpler formats that focus more on graphics, but keep sufficient detail so that customers can dig deeper in order to fully understand the material.
- Keep more static format that customers will become accustomed to, but highlight each section of the bill analysis over the course of the program to try to draw attention and alert customers to the value of the bill analysis.
- Highlight the portion of the bill analysis that presents critical peak costs in red.

There are other opportunities to add enhanced functionality to the bill diagnostics that might be worth considering in future efforts:

- Thermostat calculators, in addition to advising households of the financial benefits of reducing peak thermostat settings, could automatically interface with Web-enabled thermostats to implement strategies chosen by the customer.
- A general support tool for Internet addressable appliances could be part of the utility Website, so that any such device (water heater, pool pump, etc) could be shut off or down on critical peak periods if requested by the customer.
- Alerts of critical peak periods, in addition to emails, could include a downloadable object to the computer desktop that provided visual or sound notice through the customer's computer. For customers who are regular web users, this could provide the benefits of physical alert devices (like the Energy Orb) without the expense. As an example, the Southwest Airlines "ding" provides notice of farer sales and has gained acceptance by many Web users.

7.3. Maximizing Impact

The magnitude of the impact observed in this pilot were not fully conclusive: impacts are seen during peak periods and a general conservation effect during broader time periods is discernable; however, load reductions during peak periods were small with the CPP-F participants and not statistically significant. This makes it difficult to extrapolate load reduction impacts to a larger, statewide population.

Impacts may be higher with a broader participant pool. First, the pilot participants have been participants in SPP activities since 2003, and are generally considered to be more sensitized to demand reduction or energy conservation than are typical customers. Thus, there may be more opportunity to capture the “low hanging fruit” of demand reduction potential from a statewide participant pool.

Another approach would be to target customers from which potential savings are greater. Many customers included within the pilot had very low usage – typically customers in the PG&E service territory that do not have air conditioning or other high electric consumption uses such as pool or well pumps. These customers have limited demand reduction potential. Thus, customers with higher consumption and greater opportunity to reduce demand could be targeted for bill analysis. The techniques employed during the bill analysis pilot can equally be employed in both residential and small commercial markets as needed to reach such target markets.

Appendix A: Bill Analysis Website Screen Shot

Bill Analysis Website Screenshot – SCE

Bill Analysis Website Screenshot – PG&E

Bill Analysis Website Screenshot – SDG&E



- Customer Service
- Rebates & Savings
- Safety
- Power & Our Environment
- Community & Recreation
- Doing Business
- Edison International

Shift and Save

Saving money and peak energy makes good sense

Joseph Sample Account#: 001234567
 123 Main St., Downey, CA 90240
 Bill Period: 8/3/2005 - 9/1/2005

This summer, you could save \$47 - \$69*

July	August	September	October
0kWh	0kWh	**196 kWh to go...	Peak Savings Goal: 196 kWh

*Reduce your peak energy use by 196kWh or 20% and you could save \$47 - \$69 this summer (July-October). This information is based on your energy usage.

1. Peak Energy Is Expensive - Use It Wisely.

Remember during the summer season:

Critical Peak Energy: \$.54/kWh

- 2 pm to 7 pm
- Monday through Friday on days declared by SCE as Critical Peak days

On-Peak Energy: \$.22/kWh

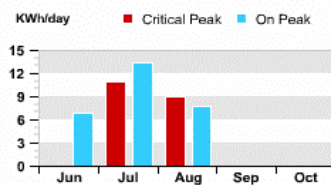
- 2 pm to 7 pm
- Monday through Friday on non-Critical Peak days

Off-Peak Energy: \$.11/kWh

- 7 pm through 2 pm the following day on weekdays
- All day Saturday and Sunday

2. Save Money by Using Less Peak Energy - Especially on Critical Peak Days.

Your Critical Peak vs. On-Peak Usage



Aim to make your critical peak bar lower than your on-peak bar

Your peak energy use on Critical Peak days was 9 kWh per day. This was higher than your average on-peak energy use of 8 kWh per day, which increased your bill by \$1!

On-Peak Usage: You used 12% of your total energy during on-peak hours. Your personal goal is 10%. As a result, you saved 0 kWh.

Get More Energy Savings Information:

Home Energy Center
 Find ways to save money and be more energy efficient specifically for your home with Home Energy Center.

Load Shift Calculator
 You can save money by changing when you use energy. Load Shift Calculator can show you how.

Thermo Calculator
 Easy and quick savings with the turn of a dial or push of a button... Thermo Calculator can show you how you can save by adjusting your thermostat settings.

Add/Update E-mail Address:

To receive an e-mail newsletter for this program or update your e-mail address, please contact us at sceidp@nexusenergy.com.

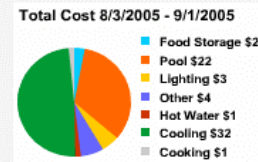
3. Take Action - Especially on Critical Peak Days!

Check off items on the personalized checklist below to see how much money and peak energy you can save! The personalized checklist below is based on information you provided about your home.

<input checked="" type="checkbox"/> Savings Checklist	Estimated Monthly Savings	
<input checked="" type="checkbox"/> Before you take that dip... Run your pool filter during off peak hours to save money and energy. More...	\$12-\$18	40-70 kWh
<input checked="" type="checkbox"/> Keep your cool! Save energy. Save money. Raise your thermostat 3 to 5 degrees, during the expensive Critical Peak and On-Peak hours. More...	\$8	16-24 kWh
<input checked="" type="checkbox"/> Made in the Shade! Keep your house cooler by closing window shades and curtains. More...	\$5	12 kWh
<input checked="" type="checkbox"/> Do the dishes later... Save money by doing your dishes after 7 pm, when expensive On-Peak and Critical Peak time periods are over. More...	\$4	13-19 kWh
<input checked="" type="checkbox"/> Wash those duds later... Avoid running your clothes washer during costly On-Peak and Critical Peak hours. Save 50%-75% by running Off-peak. More...	\$2	7 kWh
<input checked="" type="checkbox"/> Flip the switch... Turn off unnecessary lights to save money and power especially during the costly Critical Peak and On-Peak hours. More...	\$2	4 kWh
Total Estimated Monthly Savings:	\$29-\$43	90-140 kWh

Save Energy During Peak Hours:

Do you know how you use energy? The chart below shows how you used energy during peak hours. This is based upon your most recent bill, if available, and is specific to your home.



To save money during peak hours, target appliances that are costing you the most.

FOR OVER 100 YEARS...LIFE. POWERED BY EDISON.

Shift and Save

Saving money and peak energy makes good sense

Jonathan Doe Account#: 1234567890
 1234 Main St., Bakerfield, CA 93312
 Bill Period: 7/31/2005 - 8/29/2005

This summer, you could save \$23 - \$38*

July	August	September	October	
67kWh	30kWh	**57 kWh to go...	Peak Savings Goal: 155 kWh	

*Reduce your peak energy use by 155kWh or 20% and you could save \$23 - \$38 this summer (July-October). This information is based on your energy usage.

1. Peak Energy Is Expensive - Use It Wisely.

Remember during the summer season:

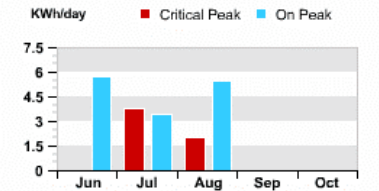
Critical Peak Energy: \$.59/kWh
 - 2 pm to 7 pm
 - Monday through Friday on days declared by PG&E as Critical Peak days

On-Peak Energy: \$.22/kWh
 - 2 pm to 7 pm
 - Monday through Friday on non-Critical Peak days

Off-Peak Energy: \$.10/kWh
 - 7 pm through 2 pm the following day on weekdays
 - All day Saturday and Sunday

2. Save Money by Using Less Peak Energy - Especially on Critical Peak Days.

Your Critical Peak vs. On-Peak Usage



Aim to make your critical peak bar lower than your on-peak bar

Your peak energy use on **Critical Peak days** was 2 kWh per day. This was lower than your average on-peak energy use of 6 kWh per day, which decreased your bill by \$2!

On-Peak Usage: You used 7% of your total energy during on-peak hours. Your personal goal is 10%. As a result, you saved 30.4 kWh.

3. Take Action - Especially on Critical Peak Days!

Check off items on the personalized checklist below to see how much money and peak energy you can save! The personalized checklist below is based on information you provided about your home.

Savings Checklist	Estimated Monthly Savings
<input type="checkbox"/> Keep your cool! Save energy. Save money. Raise your thermostat 3 to 5 degrees, during the expensive Critical Peak and On-Peak hours. More...	\$5 14-20 kWh
<input checked="" type="checkbox"/> Stay out of the kitchen to beat the heat... Keep that kitchen cool and save money by not using your electric range or oven during costly On-Peak and Critical Peak hours. More...	\$3 12 kWh
<input type="checkbox"/> Made in the Shade! Keep your house cooler by closing window shades and curtains. More...	\$3 10 kWh
<input checked="" type="checkbox"/> Before you take that dip... Run your pool filter during off peak hours to save money and energy. More...	\$3 14-20 kWh
<input type="checkbox"/> Do the dishes later... Save money by doing your dishes after 7 pm, when expensive On-Peak and Critical Peak time periods are over. More...	\$2 13-19 kWh
<input type="checkbox"/> Wash those duds later... Avoid running your clothes washer during costly On-Peak and Critical Peak hours. Save 50%-75% by running Off-peak. More...	\$1 7 kWh
<input type="checkbox"/> Flip the switch	



Get More Energy Savings Information:

Home Energy Center
 Find ways to save money and be more energy efficient specifically for your home with Home Energy Center.

Load Shift Calculator
 You can save money by changing when you use energy. Load Shift Calculator can show you how.

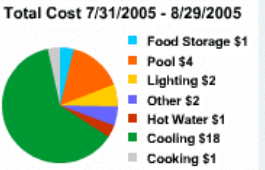
Thermo Calculator
 Easy and quick savings with the turn of a dial or push of a button... Thermo Calculator can show you how you can save by adjusting your thermostat settings.

Add/Update E-mail Address:


To receive an e-mail newsletter for this program or update your e-mail address please contact us at shiftandsave@pge.com

Save Energy During Peak Hours:

Do you know how you use energy? The chart below shows how you used energy during peak hours. This is based upon your most recent bill, if available, and is specific to your home.



To save money during peak hours, target appliances that are costing you the most.



Serving you today.
Planning for tomorrow.™



Home | My Account | Customer Service | About Us | News & Info | Brochures & Forms | Outages | Search

Smart Shift and Save

Saving money and peak energy makes good sense

Jane Sample Account#: 1234567891
134 Main St., San Ysidro, CA 92173
Bill Period: 7/25/2005 - 8/23/2005

This summer, you could save \$21 - \$34*

July	August	September	October	
15kWh	0kWh	**113 kWh to go...	Peak Savings Goal: 127 kWh	

*Reduce your peak energy use by 127kWh or 20% and you could save \$21 - \$34 this summer (July-October). This information is based on your energy usage.

1. Peak Energy Is Expensive - Use It Wisely.

Remember during the summer season:

Critical Peak Energy: \$.66/kWh

- 2 pm to 7 pm
- Monday through Friday on days declared by SDG&E as Critical Peak days

On-Peak Energy: \$.25/kWh

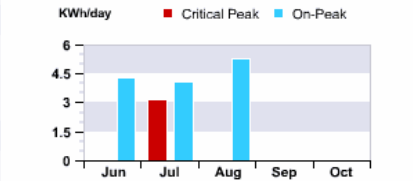
- 2 pm to 7 pm
- Monday through Friday on non-Critical Peak days

Off-Peak Energy: \$.13/kWh

- 7 pm through 2 pm the following day on weekdays
- All day Saturday and Sunday

2. Save Money by Using Less Peak Energy - Especially on Critical Peak Days.

Your Critical Peak vs. On-Peak Usage



Aim to make your critical peak bar lower than your on-peak bar

There was **no CRITICAL PEAK usage** on your bill for the billing cycle that most recently ended. Your average Peak usage was 5 kWh per day. Be sure to make an effort to reduce this amount, save energy, and save money during upcoming Critical Peak events.

On-Peak Usage: You used 14% of your total energy during on-peak hours. Your personal goal is 12%. As a result, you saved 0 kWh.

3. Take Action - Especially on Critical Peak Days!

Check off items on the personalized checklist below to see how much money and peak energy you can save! The personalized checklist below is based on information you provided about your home.

Savings Checklist	Estimated Monthly Savings
<input checked="" type="checkbox"/> Keep your cool! Save energy. Save money. Raise your thermostat 3 to 5 degrees, during the expensive Critical Peak and On-Peak hours. More...	\$4 11-17 kWh
<input checked="" type="checkbox"/> Stay out of the kitchen to beat the heat... Keep that kitchen cool and save money by not using your electric range or oven during costly On-Peak and Critical Peak hours. More...	\$3 12 kWh
<input checked="" type="checkbox"/> Do the dishes later... Save money by doing your dishes after 7 pm, when expensive On-Peak and Critical Peak time periods are over. More...	\$3 13-19 kWh
<input checked="" type="checkbox"/> Made in the Shade! Keep your house cooler by closing window shades and curtains. More...	\$2 9 kWh
<input type="checkbox"/> Wash those duds later... Avoid running your clothes washer during costly On-Peak and Critical Peak hours. Save 50%-75% by running Off-peak. More...	\$1 7 kWh
<input checked="" type="checkbox"/> Flip the switch... Turn off unnecessary lights to save money and power especially during the costly Critical Peak and On-Peak hours. More...	\$1 3 kWh
Total Estimated Monthly Savings:	\$11-\$17 40-70 kWh

Get More Energy Savings Information:

Home Energy Center
Find ways to save money and be more energy efficient specifically for your home with Home Energy Center.

Load Shift Calculator
You can save money by changing when you use energy. Load Shift Calculator can show you how.

Thermo Calculator
Easy and quick savings with the turn of a dial or push of a button... Thermo Calculator can show you how you can save by adjusting your thermostat settings.

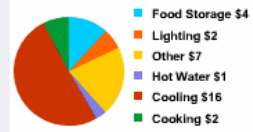
Add/Update E-mail Address:

To receive an e-mail newsletter for this program or update your e-mail address please contact us at sdgeidp@nexusenergy.com

Save Energy During Peak Hours:

Do you know how you use energy? The chart below shows how you used energy during peak hours. This is based upon your most recent bill, if available, and is specific to your home.

Total Cost 7/25/2005 - 8/23/2005



To save money during peak hours, target appliances that are costing you the most.

Appendix B: Bill Analysis Pilot E-mails

Bill Analysis E-mail – SCE

Bill Analysis E-mail – PG&E

Bill Analysis E-mail – SDG&E

Welcome E-mail – SCE

Welcome E-mail – PG&E

Welcome E-mail – SDG&E

Site Launch E-mail – SCE

Site Launch E-mail – PG&E

Site Launch E-mail – SDG&E

Critical Peak Notification E-mail – SCE

Critical Peak Notification E-mail – PG&E

Critical Peak Notification E-mail – SDG&E



SOUTHERN CALIFORNIA
EDISON

An EDISON INTERNATIONAL® Company

Shift and Save

Dear

Check out www.shiftandsave.com/sce to see personalized information about your home's electricity usage and ways that you can reduce your monthly bill.

You can check www.shiftandsave.com/sce any time you want to:

- View personalized information
- Get money and energy saving ideas
- Find out how much you could save
- Estimate the money and kWh you have saved to date

See how your energy use impacted your bill for the past billing cycle by going to www.shiftandsave.com/sce. You'll find information about your bill, how you used your energy on Critical Peak days, and more. To start, we can tell you the following about your usage:

Your peak energy use on **Critical Peak days** was 7 kWh per day. This was lower than your average on-peak energy use of 20 kWh per day, which decreased your bill by \$7!

On-Peak Usage: You used 23% of your total energy during on-peak hours. Your personal goal is 19%. As a result, you saved 0 kWh.

Remember, saving peak energy and saving money makes good sense. Thank you for your participation in the **Shift and Save** program.

Southern California Edison



Shift and Save

Dear _____,

Check out www.shiftandsave.com/pge to see personalized information about your home's electricity usage and ways that you can reduce your monthly bill.

You can check www.shiftandsave.com/pge any time you want to:

- View personalized information
- Get money and energy saving ideas
- Find out how much you could save
- Estimate the money and kWh you have saved to date

See how your energy use impacted your bill for the past billing cycle by going to www.shiftandsave.com/pge. You'll find information about your bill, how you used your energy on Critical Peak days, and more. To start, we can tell you the following about your usage:

Your peak energy use on Critical Peak days was 4 kWh per day. This was lower than your average on-peak energy use of 10 kWh per day, which decreased your bill by \$4!

On-Peak Usage: You used 12% of your total energy during on-peak hours. Your personal goal is 13%. As a result, you saved 15.8 kWh.

Remember, saving peak energy and saving money makes good sense. Thank you for your participation in the **Shift and Save** program.

Pacific Gas and Electric Company

This email was sent to:

by PG&E c/o Nexus Energy Software.

You are receiving this e-mail because you are participating in Pacific Gas & Electric's Shift and Save program. Your participation is very important. To discontinue receiving this special information service by e-mail, please click [here](#) or contact us via Postal Mail at

PG&E Unsubscribe Request c/o Nexus Energy Software
16 Laurel Ave. Ste. 100, Wellesley, MA 02481

You will continue to receive program information by regular mail.

We respect your right to privacy. [View](#) our privacy policy.



Smart Shift and Save

Dear

Check out www.sdge.com/residential/criticalpeak to see personalized information about your home's electricity usage and ways that you can reduce your monthly bill.

You can check www.sdge.com/residential/criticalpeak any time you want to:

- View personalized information
- Get money and energy saving ideas
- Find out how much you could save
- Estimate the money and kWh you have saved to date

See how your energy use impacted your bill for the past billing cycle by going to www.sdge.com/residential/criticalpeak. You'll find information about your bill, how you used your energy on Critical Peak days, and more. To start, we can tell you the following about your usage:

Your peak energy use on **Critical Peak days** was 27 kWh per day. This was lower than your average on-peak energy use of 37 kWh per day, which decreased your bill by \$7!

On-Peak Usage: You used 28% of your total energy during on-peak hours. Your personal goal is 21%. As a result, you saved 0 kWh.

Remember, saving peak energy and saving money makes good sense. Thank you for your participation in the **Smart Shift and Save** program.

San Diego Gas and Electric



SOUTHERN CALIFORNIA
EDISON

An EDISON INTERNATIONAL® Company

Shift and Save

Dear

Thank you for speaking with us and agreeing to participate in Southern California Edison's **Shift and Save** program. Please be sure to keep an eye out for update/notification e-mails over the coming months.

An e-mail notification will be sent to you prior to each Critical Peak event. If you have any questions during the program, please feel free to e-mail us at sceidp@nexusenergy.com or call at 1-877-823-8716.

Thank you again for your participation.

Southern California Edison

Shift and Save

Dear _____,

Thank you for talking with us and agreeing to participate in Pacific Gas and Electric Company's **Shift and Save** program. Please be sure to keep an eye out for update/notification e-mails over the coming months.

An e-mail notification will be sent to you prior to each Critical Peak event. If you have any questions during the program, please feel free to e-mail us at ShiftandSave@pge.com or call at 1-800-933-9555.

Thank you again for your participation.

Pacific Gas and Electric Company

This email was sent to:

by PG&E c/o Nexus Energy Software.

You are receiving this e-mail because you are participating in Pacific Gas & Electric's Shift and Save program. Your participation is very important. To discontinue receiving this special information service by e-mail, please click [here](#) or contact us via Postal Mail at

PG&E Unsubscribe Request c/o Nexus Energy Software
16 Laurel Ave. Ste. 100, Wellesley, MA 02481

You will continue to receive program information by regular mail.

We respect your right to privacy. [View](#) our privacy policy.



Smart Shift and Save

Dear

Thank you for speaking with us and agreeing to participate in San Diego Gas and Electric's **Smart Shift and Save** program. Please be sure to keep an eye out for update/notification e-mails over the coming months.

An e-mail notification will be sent to you prior to each Critical Peak event. If you have any questions during the program please feel free to e-mail us at sdgeidp@nexusenergy.com or call at 1-800-644-6133.

Thank you again for your participation.

San Diego Gas and Electric



SOUTHERN CALIFORNIA
EDISON

An EDISON INTERNATIONAL® Company

Shift and Save

Dear

The **Shift and Save Program** website is live!

Visit www.shiftandsave.com/sce to:

- Understand when energy is most expensive
- View a personalized checklist of actions you can take to save money and peak energy
- Access online tools to help you manage your energy costs

This site is personalized based on your home and your summer energy bills as they become available. Each month, you will receive an e-mail notifying you that a new bill is ready with a link to your personalized web page. As new bills arrive, your **Shift and Save** web page will provide more detail regarding your peak energy use and ways you can save money.

Remember, saving peak energy and saving money makes good sense. Thank you for your participation in the **Shift and Save** program.

Southern California Edison

Shift and Save

Dear

The **Shift and Save Program** website is live!

Visit www.shiftandsave.com/pge to:

- Understand when energy is most expensive
- View a personalized checklist of actions you can take to save money and peak energy
- Access online tools to help you manage your energy costs

This site is personalized based on your home and your summer energy bills as they become available. Each month, you will receive an e-mail notifying you that a new bill is ready with a link to your personalized web page. As new bills arrive, your **Shift and Save** web page will provide more detail regarding your peak energy use and ways you can save money.

Remember, saving peak energy and saving money makes good sense. Thank you for your participation in the **Shift and Save** program.

Pacific Gas and Electric Company



Smart Shift and Save

Dear

The **Smart Shift and Save Program** website is live!

Visit www.sdge.com/residential/criticalpeak to:

- Understand when energy is more expensive
- View a personalized checklist of actions you can take to save money and peak energy
- Access online tools to help you manage your energy costs

This site is personalized based on your home and your summer energy bills as they become available. Each month, you will receive an e-mail notifying you that a new bill is ready with a link to your personalized web page. As new bills arrive, your **Smart Shift and Save** web page will provide more detail regarding your peak energy use and ways you can save money.

Remember, saving peak energy and saving money makes good sense. Thank you for your participation in the **Smart Shift and Save** program.

San Diego Gas and Electric

Appendix C: Bill Analysis Pilot Post Cards

Welcome Postcard – SCE

Welcome Postcard – PG&E

Welcome Postcard – SDG&E

Reminder 1 Postcard – SCE

Reminder 1 Postcard – PG&E

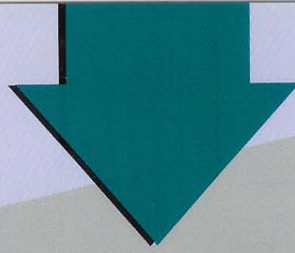
Reminder 1 Postcard – SDG&E

Reminder 2 Postcard – SCE

Reminder 2 Postcard – PG&E

Reminder 2 Postcard – SDG&E

SHIFT & SAVE



Shift your energy use to save money

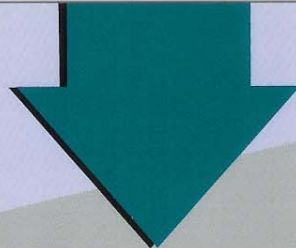
Thank you for speaking with us and agreeing to participate in SCE's Shift and Save program. Please watch your mail during the coming months for customized information about your home's electricity usage and helpful ways to reduce your monthly bill.

If you have any questions about the Shift and Save program, please feel free to contact us at sceidp@nexusenergy.com or call us at 877-823-8716.

Thank you again for your participation.



SHIFT & SAVE



Shift your energy use to save money

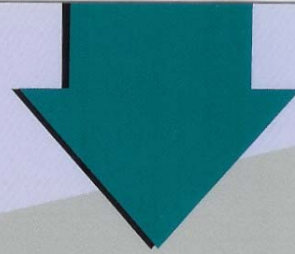
Thank you for speaking with us and agreeing to participate in PG&E's Shift and Save program. Please watch your mail during the coming months for customized information about your home's electricity usage and helpful ways to reduce your monthly bill.

If you have any questions about the Shift and Save program, please feel free to contact us at ShiftandSave@pge.com or call us at 1-800-933-9555.

Thank you again for your participation.



SMART SHIFT & SAVE



Shift your energy use to save money

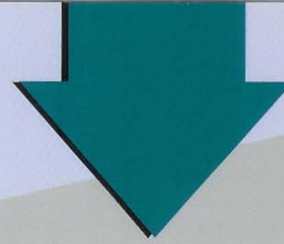
Thank you for agreeing to participate in the SDG&E Smart Shift and Save program. Please watch your mail during the coming months for customized information about your home's electricity usage and helpful ways to reduce your monthly bill.

If you have any questions about the Smart Shift and Save program please contact us at sdgeidp@nexusenergy.com or call us at 800-644-6133.

Thank you again for your participation.



SHIFT & SAVE



Shift your energy use to save money

Thank you for participating in the *Shift and Save* program. By making extra efforts during Critical Peak days, you can save money and energy.

Visit us at www.shiftandsave.com/sce to:

- See how your peak energy use impacts your monthly bill.
- Find additional ways to reduce peak energy use and save money.

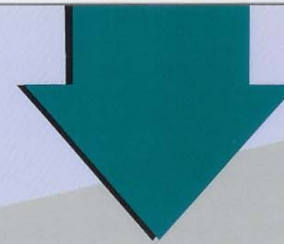
This website was created with you in mind. The website information is personalized based on survey data you provided about **your** home and

your monthly energy bills. It will continue to be updated throughout the summer as an enhancement to your monthly electricity bill. By shifting electricity-consuming activities to off-peak hours (*before 2 p.m. or after 7 p.m.*), you can significantly lower your bill and help California keep the lights on. Saving money and peak energy makes sense.

Thanks again
for your participation.



SHIFT & SAVE



Shift your energy use to save money

Thank you for participating in the *Shift and Save* program. By making extra efforts during Critical Peak days, you can save money and energy.

Visit us at www.shiftandsave.com/pg&e to:

- See how your peak energy use impacts your monthly bill.
- Find additional ways to reduce peak energy use and save money.

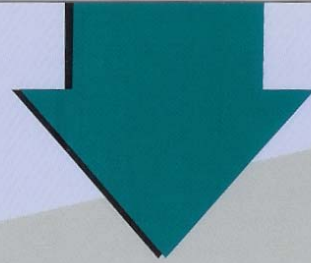
This website was created with you in mind. The website information is personalized based on survey data you provided about **your** home and

your monthly energy bills. It will continue to be updated throughout the summer as an enhancement to your monthly electricity bill. By shifting electricity-consuming activities to off-peak hours (*before 2 p.m. or after 7 p.m.*), you can significantly lower your bill and help California keep the lights on. Saving money and peak energy makes sense.

Thanks again
for your participation.



SMART SHIFT & SAVE



Shift your energy use to save money

Thank you for participating in the *Smart Shift and Save* program. By making extra efforts during Critical Peak days, you can save energy and money. Visit us at

www.sdge.com/residential/criticalpeak to:

- See how your peak energy use impacts your monthly bill.
- Find additional ways to reduce peak energy use and save money.

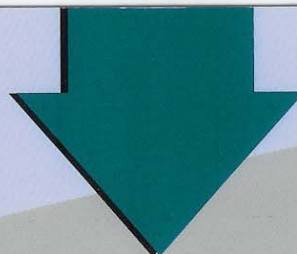
This website was created with you in mind. The website information is personalized based on survey data you provided about **your** home and **your** monthly energy bills.

It will continue to be updated throughout the summer as an enhancement to your monthly electricity bill. By shifting electricity-consuming activities to off-peak hours (*before 2 p.m. or after 7 p.m.*), you can significantly lower your bill and help California keep the lights on. Helping you be more energy-efficient is one of the ways we're working to provide exceptional customer service.

Thanks again
for your participation.



SHIFT & SAVE



Shift Your Energy Use And Save Money

Remember to shift electricity-consuming activities to off-peak hours (before 2 p.m. or after 7 p.m.) – especially on Critical Peak days.

Please continue to visit

www.shiftandsave.com/sce through the end of the summer for updated, personalized information on saving energy and reducing your energy bill.

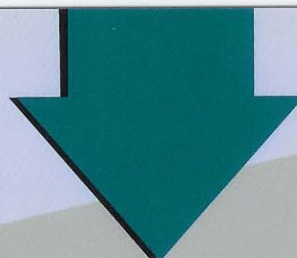
Saving money and peak energy makes sense.

Thanks for your participation.

VISIT WWW.SHIFTANDSAVE.COM/SCE



SHIFT & SAVE



Shift Your Energy Use And Save Money

Remember to shift electricity-consuming activities to off-peak hours (before 2 p.m. or after 7 p.m.) – especially on Critical Peak days.

Please continue to visit

www.shiftandsave.com/pg&e through the end of the summer for updated, personalized information on saving energy and reducing your energy bill.

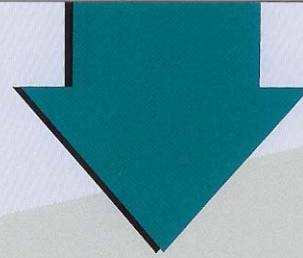
Saving money and peak energy makes sense.

Thanks for your participation.

VISIT WWW.SHIFTANDSAVE.COM/PGE



SMART SHIFT & SAVE



Shift Your Energy Use And Save Money

Remember to shift electricity-consuming activities to off-peak hours (before 2 p.m. or after 7 p.m.) – especially on Critical Peak days.

Please continue to visit

www.sdge.com/residential/criticalpeak

through the end of the summer for updated, personalized information on saving energy and reducing your energy bill.

Helping you save energy is one of the ways we're committed to providing exceptional customer service.

Thanks for your participation.

VISIT WWW.SDGE.COM/RESIDENTIAL/CRITICALPEAK



Appendix D: Surveys

Participant Survey

Control Group Survey



**CA IDP Survey Instrument – Email and Mail Participants
To Be Fielded by Telephone
[Non-Participant Version to Follow]
Final 10/13/05**

Capitalized text in brackets are notes to the interviewer/programmer. Questions that will be mirrored in the non-participant survey for comparison purposes are denoted with an asterisk.

This survey gathers information about the usefulness/effectiveness of the bill analysis among participants.

[OPERATIONS: Note that sample will be coded for the correct utility, and whether participant received the treatment by mail or email. IF email, mark in sample as “INTERNET PARTICIPANT FROM DATABASE.”]

NOTE THAT IF WE ARE UNABLE TO GET A RESPONDENT, PLEASE LEAVE THE FOLLOWING MESSAGE:

“My name is _____ and I am calling from Opinion Dynamics Corporation on behalf of [Southern California Edison / Pacific Gas & Electric/San Diego Gas and Electric]. You are participating in the Shift and Save Program and have been receiving a bill analysis by [email/mail] with information on your energy usage. We are calling to thank you for participating in the Shift and Save Program and to let you know that the program ends October 31st. No critical or super peak events will be called for this year after October, and you will no longer be receiving monthly bill analysis through e-mail, direct mail, or on the website.

We are, however, looking to get your feedback about the information that you have been receiving and whether it has been useful to you so please give us a call at 1-800-XXX-XXXX when you have a chance.”

Intro

Hello. May I please speak with [INSERT NAME OF PARTICIPANT].

My name is _____ and I am calling from Opinion Dynamics Corporation on behalf of [Southern California Edison / Pacific Gas & Electric/San Diego Gas and Electric]. You are participating in the Shift and Save Program and have been receiving a bill analysis by [email/mail] with information on your energy usage. We are calling to thank you for participating in the Shift and Save Program and to let you know that the program ends October 31st. No critical or super peak events will be called for this year after October, and you will no longer be receiving monthly bill analysis through e-mail, direct mail, or on the website.

We are, however, looking to get your feedback about the information that you have been receiving and whether it has been useful to you.

Intro 1. Do you recall receiving [an email with the link to this bill analysis/this bill analysis by mail]? [NOTE TO INTERVIEWER IF NEEDED: As part of the [Shift and Save Program/Smart Shift and Save IF San Diego Gas and Electric], you receive a bill analysis by [email/mail]. This bill analysis is customized to provide information specifically about your home's electricity usage and ways that you can reduce your monthly bill.]

1. Yes
2. No/DK [ASK IF THERE IS SOMEONE ELSE WHO MIGHT HAVE RECEIVED, OR IF NOT, THANK AND TERMINATE]

Readership/Use of Bill Analysis

1. How many times do you recall receiving [an email with the link to this information/this information by mail]?

1. 0 times [THANK AND TERMINATE]
2. 1 time
3. 2 times
4. 3 times
5. 4 times
6. More than 4 times
7. (Don't know)

2. [MAIL PART ONLY, IF MORE THAN 0 ABOVE, Q1=2-6] The hard copy of the bill analysis provided an Internet address where you could go to get additional information. Did you ever visit the web site to look at the online resources and information?

1. Yes [MARK RESPONDENT AS "INTERNET PARTICIPANT GENERAL"]
2. No

[IF Q2=2, ASK QUESTION BELOW AND THEN SKIP TO Q9]

3. Why didn't you look at the web site? [MULTIPLE RESPONSE]

1. I don't have a computer
2. I don't have email
3. I prefer hard copy
4. I couldn't access the web page
5. Other (Specify)
6. (Don't know)

[IF INTERNET PARTICIPANT FROM DATABASE OR Q2=1]

4. How frequently did you visit the web site?

1. Never [=NEVER REVIEWED BILL ANALYSIS]
2. Once
3. A couple of times
4. Monthly (i.e., once a month)
5. More frequently than once a month

6. (Tried but couldn't get on)
7. (Other, Specify)
8. (Don't know) [PROBE TO TRY TO FORCE AN APPROXIMATE RESPONSE]

[IF ONCE OR MORE, Q4=2-7, CONTINUE, OTHERWISE SKIP TO Q9]

5. Did you have any difficulties logging into the web site?

1. Yes
2. No
3. (Don't know)

[IF YES, Q5=1 but not Q4=6]

6. What problems did you have?

1. My account number didn't work
2. I couldn't get the web page to come up
3. Other (Specify)
4. (Don't know)

7. Did you encounter any other difficulties using the web site?

1. Yes
2. No
3. (Don't know)

[IF YES, Q7=1]

8. What problems did you have? [OPEN END]

Customer Understanding of Terms

*9. Would you say that you understand, or would you say that you need more information on what "critical or super peak energy" is?

1. Understand
2. Need more information
3. (Don't know)

Value of Bill Analysis

*10A. Your utility calls the time when they declare the highest electricity price a "critical or super peak event". Over the summer, there were **eleven** critical or super peak events such as the one on **Friday, October 14th** from 2 pm until 7 pm. In general, did you reduce the amount of energy that you were using during these critical or super peak events?

1. Yes
2. No [SKIP TO Q11A]

[IF YES, Q10A=1]

*10B. What changes did you make during critical or super peak events to reduce your electricity use?

1. (Raised air conditioner temperature/raised thermostat)

2. (Turned off air conditioner)
3. (Pulled window shades)
4. (Turned off lights)
5. (Did not run dishwasher)
6. (Did not do laundry)
7. (Turned off pool pump)
8. (Turned off pool filter)
9. (Turned down water heater temp)
10. (Other, specify)

[IF Q10A=1]

10C. Were any of these changes AS A RESULT of the information in the bill analysis or would you have taken the same actions if you had not received the bill analysis?

1. Took actions as a result of the bill analysis
2. Would have taken same actions even without bill analysis
3. (Don't know)

*11A. With your rate, the price of electricity is also high during every weekday afternoon, from 2 pm until 7 pm. This is called the "peak period." Have you taken actions to reduce the amount of energy that you were using during PEAK periods?

1. Yes
2. No [IF NO GO TO Q12]

[IF YES, Q11A=1]

*11B. What changes did you make to reduce your energy use during peak times?

1. (Raised air conditioner temperature/raised thermostat)
2. (Turned off air conditioner)
3. (Pulled window shades)
4. (Turned off lights)
5. (Did not run dishwasher)
6. (Did not do laundry)
7. (Turned off pool pump)
8. (Turned off pool filter)
9. (Turned down water heater temp)
10. (Other, specify)

[IF Q11A=1]

11C. Were any of these changes AS A RESULT of the information in the bill analysis or would you have taken the same actions if you had not received the bill analysis?

1. Took actions as a result of the bill analysis
2. Would have taken same actions even without bill analysis
3. (Don't know)

[SKIP IF Q10A and Q11A=2]

*12. What factors, other than the bill analysis, led you to reduce your energy usage this past summer?

1. No other factors
2. My electricity rate
3. Other (Specify)
4. (Don't know)

*13A. Was there anything that would have led to a significant change in energy use in your home between last summer and this summer, such as making a major renovation, or having people move in or out of your home?¹

1. Yes
2. No
3. (Don't know)

[IF Q13A=1]

*13B. What changes might have led to significant changes in energy use in your home? [OPEN END]

14. Overall, on a scale of 1 to 10 where 1 is not at all useful and 10 is very useful, how useful was the bill analysis in helping you reduce your electricity usage?

Critical Peak Notification Email

[INTERNET PARTICIPANT FROM DATABASE ONLY]

15A. In addition to the monthly email with the link to your bill analysis, do you recall receiving email notifications the day before each critical or super peak event?

1. Yes
2. No
3. (Don't know)

[IF INTERNET PARTICIPANT FROM DATABASE, AND Q15A=1 AND Q4=1]

15B. Did you ever visit your personalized the web site AS A RESULT of an email that you received the day before a critical or super event?

1. Yes
2. No
3. (Don't know)

[INTERNET PARTICIPANT FROM DATABASE ONLY]

16. On a scale of 1-10 how useful was the email notification in alerting you to the critical or super peak event and helping you shift or reduce your energy use?

Reminder Postcards [ALL PARTICIPANTS]

*17. On a scale of 1-10 how useful was the telephone notification in alerting you to the critical or super peak event and helping you shift or reduce your energy use?

¹ If so, we may want to remove them from the impact analysis. [ODC will coordinate with Craig on this.]

18. How many times do you recall receiving a “reminder” postcard about the [Shift and Save Program/Smart Shift and Save Program IF SDG&E CUSTOMER] referring you to the [shiftandsave.com/SDG&E’s critical or super peak IF SDG&E CUSTOMER] web site?

1. 0
2. 1
3. 2
4. 3
5. More than 3 times
6. (Don’t know)

[IF Q18=2-5]

19. On a scale of 1-10 how useful was the postcard notification in alerting you to the critical or super peak event and helping you shift or reduce your energy use?

Effect on Bill

*20. Have you seen any reductions in your electric bill since being on [THE SHIFT AND SAVE PROGRAM/SMART SHIFT AND SAVE PROGRAM]? [NOTE TO INTERVIEWER: THIS DOES NOT REFER TO THE BILL ANALYSIS, JUST THE PROGRAM IN GENERAL]

1. Yes
2. No
3. (Electric bill has increased)
4. (Don’t know)

21. Have you seen any reductions in your electric bill since you started receiving THE BILL ANALYSIS in July of this year?

1. Yes
2. No
3. (Electric bill has increased)
4. (Don’t know)

Changed Behaviors Due to Peak Pricing

[IF TAKING SOME ACTIONS AS A RESULT OF THE BILL ANALYSIS, 10C=1 or 11C=1]

22. If you stopped receiving the **monthly bill analysis**, would you...

1. Stop taking the energy saving actions that you took as a result of the bill analysis
2. Continue to take **some** of the energy savings actions, or
3. Continue to take **all** of the energy saving actions that you took as a result of the bill analysis?

Treatment Aspects

The following questions are about specific parts of the bill analysis. You do not need to have the bill analysis in front of you because I’ll explain what I’m asking about.

23. On a scale of 1 to 10 where 1 is very difficult to understand and 10 is very easy to understand, how would you rate the bill analysis in terms of presentation and ease in understanding the information provided?

24. [IF Q23=1-4 ASK] Why did you give it such a low rating? [OPEN END]

25. The bill analysis offers a reminder of the hours for [critical or super peak, on-peak, and off-peak](#) periods and the cost per kWh during each of those periods.

A. Was the information in this section clear and presented well?

1. Yes
2. No
3. (Don't recall section)

B. [SKIP IF 25A=3] On a scale of 1 to 10 where 1 is not at all useful and 10 is very useful, how useful is this information in helping you to make decisions on ways to shift, or reduce, your energy usage?

26. In the bill analysis, there is a [bar chart](#) that compares your critical or super peak versus your regular on-peak usage per month. This part also tells you how your critical or super peak energy use is affecting your bill and the amount of savings achieved in kWh.

A. Was the information in this section clear and presented well?

1. Yes
2. No
3. (Don't recall section)

B. [SKIP IF 26A=3] On a scale of 1 to 10 where 1 is not at all useful and 10 is very useful, how useful is this information in helping you to make decisions on ways to shift or reduce your energy usage?

27. There is also a section that gives you a [personalized checklist of energy saving actions](#) you can do which presents the estimated monthly savings (in \$ and kWh) of each action.

A. Was the information in this section clear and presented well?

1. Yes
2. No
3. (Don't recall section)

B. [SKIP IF 27A=3] On a scale of 1 to 10 where 1 is not at all useful and 10 is very useful, how useful is this information in helping you to make decisions on ways to shift or reduce your energy usage?

28. There is also a [pie chart](#) which breaks down the energy usage during the past month by end uses or appliances.

A. Was the information in this section clear and presented well?

1. Yes
2. No
3. (Don't recall section)

B. [SKIP IF 28A=3] On a scale of 1 to 10 where 1 is not at all useful and 10 is very useful, how useful is this information in helping you to make decisions on ways to shift or reduce your energy usage?

[INTERNET PARTICIPANTS ONLY CONTINUE, OTHERWISE SKIP TO Q32A]

The web site included links to several other resources.

29A. Did you explore the link to the [Home Energy Center](#)? [The [Home Energy Center](#) helps you find ways to save money and be more energy efficient specifically for your home.] [1=Yes, 2=No, 3=Don't know]

[IF YES, Q29A=1] 29B. On a scale of 1 to 10 where 1 is not at all useful and 10 is very useful, how useful did you find the [Home Energy Center](#)?

30A. Did you explore the link to the [Load Shift Calculator](#)? [The [Load Shift Calculator](#) shows you how you can save money by changing your energy use.]

[IF YES, Q30A=1] 30B. On a scale of 1 to 10 where 1 is not at all useful and 10 is very useful, how useful did you find the [Load Shift Calculator](#)?

31A. Did you explore the link to the [Thermo Calculator](#)? [The [Thermo Calculator](#) shows you how you can save by adjusting your thermostat settings.]

[IF YES, Q31A=1] 31B. On a scale of 1 to 10 where 1 is not at all useful and 10 is very useful, how useful did you find the [Thermo Calculator](#)?

Recommendations for Future²

[MAIL PARTICIPANTS ONLY]

*32A. Would you be willing to receive this bill analysis by **email** in the future?

1. Yes
2. No, don't want to receive it by email
3. No, don't have email/Internet access
4. (Don't know)

[INTERNET PARTICIPANTS OR IF Q32A=1]

*32B. How frequently would you want to receive an email reminder pointing you to the information on the web site, such as the analysis of your energy usage and the tips on how to save energy? [PROBE WITH RESPONSES BUT DO NOT READ "NEVER"]

1. Once a year

² *We will explore how the various messages of the bill analysis resonate in the focus groups.

- a. "Peak Energy Is Expensive - Use It Wisely."
- b. "Saving Money and Peak Energy Makes Good Sense"
- c. "Save Money by Using Less Peak Energy - Especially on Critical Peak Days."
- d. "Take Action - Especially on Critical Peak Days!"

2. Quarterly (once every 3 months)
3. Monthly
4. Whenever information is updated
5. Once a week
6. or Only before Critical or Super Peak Events
7. (Never)
8. (Other, Please Specify)
9. (Don't know)

[IF MAIL PARTICIPANT AND Q32A=2-4]

*32C. How frequently would you want to receive the bill analysis of your energy usage and the tips on how to save energy? [PROBE WITH RESPONSES]

1. Once a year
2. Quarterly (once every 3 months)
3. Monthly or
4. Once a week
5. (Before Critical or Super Peak Events)
6. (Continuously through a website or monitor that you could check.)
7. (Never)
8. (Other, please specify)
9. (Don't know)

[ALL]

*33. Would you be willing to pay \$1 a month, that is, \$12 annually, for the customized information on your energy usage and recommendations on ways to save?

1. Yes
2. No
3. (Don't know)

[IF YES, Q33=1]

*34A. Would you be willing to pay a fee of \$20 per year for this information?

1. Yes
2. No
3. (Don't know)

[IF NO, Q33=2]

*34B. Would you be willing to pay \$2 to \$4 a year for this information?

1. Yes
2. No
3. (Don't know)

*35. Is there any additional information that you would want to help you shift or reduce your electricity usage?

Thank you.

RECRUIT FOR FOCUS GROUPS AT THIS POINT...

[SCE CUSTOMERS ONLY]

We will also be offering customers \$125 to participate in a focus group to explore these issues future. The focus group for SCE Customers will be held the evening of Wednesday, November 9th at the Pacific Palms Resort in the City of Industry. Would you be interested in possibly participating if you qualify for this group?

1. Yes
2. No
3. DK

Would you be able to attend if it were held on another night, such as the evening of Thursday, November 10th?

1. Yes
2. No
3. DK

[IF YES] Thank you. I will include your name as a possible focus group participant, and someone will call you back within the next week if you qualify. Thank you so much for your time.

[IF NO] Thank you so much for your time and input.

[PG&E CUSTOMERS ONLY]

We will also be offering customers \$125 to participate in a focus group to explore these issues future. The focus group for PG&E Customers will be held the evening of Monday, November 7th in either San Francisco or Redwood City. Would you be interested in possibly participating if you qualify for this group?

1. Yes
2. No
3. DK

[IF YES]

Which location would you prefer?

1. San Francisco
2. Redwood City
3. Either
4. DK

[IF YES] Thank you. I will include your name as a possible focus group participant, and someone will call you back within the next week if you qualify. Thank you so much for your time.

[IF NO] Thank you so much for your time and input.

[SDG&E CUSTOMERS]

I appreciate your time and input.

[IF RESPONDENT INDICATES THAT THEY HAVE ADDITIONAL QUESTIONS, INFORM THEM THAT THEY SHOULD CALL THEIR UTILITY SUPPORT CENTER AT [INSERT 1-800-644-6133 FOR SDG&E/or 1-866 300-2090 FOR SCE/ Smarter Energy Line (1-800-933-9555) FOR PG&E]. DURING NORMAL BUSINESS HOURS WEEKDAYS



**CA IDP Survey Instrument – Control Group
To Be Fielded by Telephone
Final 10/26/05**

Capitalized text in brackets are notes to the interviewer/programmer.

Intro

Hello. May I please speak with [INSERT NAME OF PARTICIPANT].

My name is _____ and I am calling from Opinion Dynamics Corporation on behalf of [Southern California Edison / Pacific Gas & Electric/San Diego Gas and Electric]. We are calling to thank you for participating in the Shift and Save Program and to let you know that the program ends October 31st. No critical or super peak events will be called for this year after October.

We are, however, looking to get your feedback about changes you might have made to your energy use. Would you be willing to spend about 5 minutes to answer a few questions?

Customer Understanding of Terms

First I want to ask you about a couple of terms related to your electricity rate.

*9. Would you say that you understand, or would you say that you need more information on what “critical or super peak energy” is?

1. Understand
2. Need more information
3. (Don’t know)

Changes in Usage

*10A. Your utility calls the time when they declare the highest electricity price a “critical or super peak event”. Over the summer, there were **eleven** critical or super peak events such as the one on **Friday, October 14th** from 2 pm until 7 pm. In general, did you reduce the amount of energy that you were using during these critical or super peak events?

1. Yes
2. No [SKIP TO Q11A]

[IF YES, Q10A=1]

*10B. What changes did you make during critical or super peak events to reduce your electricity use?

1. (Raised air conditioner temperature/raised thermostat)

2. (Turned off air conditioner)
3. (Pulled window shades)
4. (Turned off lights)
5. (Did not run dishwasher)
6. (Did not do laundry)
7. (Turned off pool pump)
8. (Turned off pool filter)
9. (Turned down water heater temp)
10. (Other, specify)

*11A. With your rate, the price of electricity is also high during every weekday afternoon, from 2 pm until 7 pm. This is called the “peak period.” Have you taken actions to reduce the amount of energy that you were using during PEAK periods?

1. Yes
2. No [IF NO GO TO Q12]

[IF YES, Q11A=1]

*11B. What changes did you make to reduce your energy use during peak times?

1. (Raised air conditioner temperature/raised thermostat)
2. (Turned off air conditioner)
3. (Pulled window shades)
4. (Turned off lights)
5. (Did not run dishwasher)
6. (Did not do laundry)
7. (Turned off pool pump)
8. (Turned off pool filter)
9. (Turned down water heater temp)
10. (Other, specify)

[SKIP IF Q10A and Q11A=2]

*12. What factors led you to reduce your energy usage this past summer?

1. None
2. My electricity rate
3. Other (Specify)
4. (Don't know)

*13A. Was there anything that would have led to a significant change in energy use in your home between last summer and this summer, such as making a major renovation, or having people move in or out of your home?¹

1. Yes
2. No
3. (Don't know)

[IF Q13A=1]

¹ If so, we may want to remove them from the impact analysis. [ODC will coordinate with Craig on this.]

*13B. What changes might have led to significant changes in energy use in your home? [OPEN END]

Reminder

*17. On a scale of 1-10 how useful was the telephone notification in alerting you to the critical or super peak event and helping you shift or reduce your energy use?

Effect on Bill

*20. Have you seen any reductions in your electric bill since being on the Shift and Save Program?

1. Yes
2. No
3. (Electric bill has increased)
4. (Don't know)

Treatment Aspects

[DELETED]

25-control series. On a scale of 1 to 10 where 1 is not at all useful and 10 is very useful, how useful would the following be in helping you to make decisions on ways to shift, or reduce, your energy usage?

- a [bar chart](#) that compares your critical or super peak versus your regular on-peak usage per month
- a [personalized checklist of energy saving actions](#) you can do which presents the estimated monthly savings (in \$ and kWh) of each action
- a [pie chart](#) which breaks down the energy usage during the past month by end uses or appliances
- an internet site that helps you find ways to save money and be more energy efficient specifically for your home
- an online “Load Shift Calculator” that shows you how you can save money by changing your energy use
- an online “Thermo Calculator” that shows you how you can save by adjusting your thermostat settings

X1. On the same scale of 1 to 10, how interested would you be in receiving an analysis of your bill that presents customized content based on your monthly bill data and a energy survey that you would fill out about your home?

[IF 1-4]

X2. Why aren't you interested?

[ASK ALL]

X3. Do you have access to the Internet?

1. Yes

2. No
3. (Refused)

Recommendations for Future

[IF INTERESTED IN BILL ANALYSIS (rating of X1=5-10) AND THEY HAVE ACCESS TO THE INTERNET, X3=1]

*32A. Would you be willing to receive this bill analysis by **email** in the future? [IF NEEDED: A link would be sent to you that would bring you to a customized site.]

1. Yes
2. No, don't want to receive it by email
3. No, don't have email/Internet access
4. (Don't know)

[IF YES]

*32B. How frequently would you want to receive an email reminder pointing you to the information on the web site, such as the analysis of your energy usage and the tips on how to save energy? [PROBE WITH RESPONSES BUT DO NOT READ "NEVER"]

1. Once a year
2. Quarterly (once every 3 months)
3. Monthly
4. Whenever information is updated
5. Once a week
6. or Only before Critical or Super Peak Events
7. (Never)
8. (Other, Please Specify)
9. (Don't know)

[IF INTERESTED IN BILL ANALYSIS (rating of X1=5-10) AND THEY **DO NOT** HAVE ACCESS TO THE INTERNET, X3=2]

*32C. How frequently would you want to receive a bill analysis by mail of your energy usage and the tips on how to save energy? [PROBE WITH RESPONSES]

1. Once a year
2. Quarterly (once every 3 months)
3. Monthly or
4. Once a week
5. (Before Critical or Super Peak Events)
6. (Continuously through a website or monitor that you could check.)
7. (Never)
8. (Other, please specify)
9. (Don't know)

[IF INTERESTED IN BILL ANALYSIS (rating of 5-10)]

*33. Would you be willing to pay \$1 a month, that is, \$12 annually, for the customized information on your energy usage and recommendations on ways to save?

1. Yes
2. No
3. (Don't know)

[IF YES, Q33=1]

*34A. Would you be willing to pay a fee of \$20 per year for this information?

1. Yes
2. No
3. (Don't know)

[IF NO, Q33=2]

*34B. Would you be willing to pay \$2 to \$4 a year for this information?

1. Yes
2. No
3. (Don't know)

*35. Is there any additional information that you would want to help you shift or reduce your electricity usage?

Thank you.

I appreciate your time and input.

[IF RESPONDENT INDICATES THAT THEY HAVE ADDITIONAL QUESTIONS, INFORM THEM THAT THEY SHOULD CALL THEIR UTILITY SUPPORT CENTER AT [INSERT 1-800-644-6133 FOR SDG&E/or 1-866 300-2090 FOR SCE/ Smarter Energy Line (1-800-933-9555) FOR PG&E]. DURING NORMAL BUSINESS HOURS WEEKDAYS

Appendix E: Focus Group Guide



**CA IDP Draft Focus Group Guide
Residential Customers
PG&E, November 7th (7 to 8:30 pm)
SCE, November 9th (7 to 8:30 pm)**

A. Introduction

Hi. My name _____. I work for Opinion Dynamics and I'm going to be moderating today's discussion.

This focus group is being conducted for [INSERT UTILITY- PG&E/SCE]. We are taping the group so that we can review the tape and report our findings.

B. Background

You were invited because of your participation in the "Shift and Save" Pilot Program. As a participant you received a monthly bill analysis sent to you by [INSERT UTILITY – PG&E/SCE].

Our goal today is to try to provide [INSERT UTILITY- PG&E/SCE] with some feedback regarding information that you want and/or would use to help you reduce your energy consumption. I hope that we'll be able to have an honest and open discussion.

C. Email/Mail

Right now, you receive your regular bill in the mail and a special bill analysis that presents customized content to participants based on their home energy survey data and monthly bill data.

Let's go around by saying our names and whether you received material from the Shift and Save program by email – with a link to the program website - or by mail.

[GAUGE HOW MANY GOT AN EMAIL WITH A LINK TO THE PROGRAM WEBSITE]

And for the mail participants, the bill analysis provided an Internet site where you could go to get additional information. How many of the mail recipients visited this site?

How many of the email recipients visited the web site to look at the online resources and information?

How frequently did you visit the web site?

Did you have any difficulties logging into the web site? . What problems did you have?

Did you encounter any other difficulties navigating the web site?

D. Overview of Unprompted Impressions

Looking at the sheet in front of you - I want to spend some time talking about how useful this information is.

What are your impressions of the type of information and the way it is presented here? Did it meet your expectations?

[SPEND A FEW MINUTES EXPLORING **UNPROMPTED IMPRESSIONS** TO SEE WHAT THE BIGGEST ISSUES ARE, AND THEN REIGN FOCUS GROUP PARTICIPANTS IN TO DISCUSS EACH AREA LISTED BELOW]

E. Content

I want to spend a few minutes talking about the content, or the actual information provided in this billing analysis. [IF NECESSARY: So for a few minutes, let's put aside issues related to the formatting and we will come back to that.]

Customization and Level of Detail

When you received this bill analysis, did you feel that it was customized just for you and reflected your usage and billing data?

Do you think it has the right information to help you shift or reduce your usage?

Is it too detailed, or not detailed enough? [ASK FOR SPECIFIC EXAMPLES]

Value of Information and Moving to Action

I want to discuss each area of the current bill analysis. Let's start with __[INSERT AREA]__

For each area ask:

- a. *Is this information useful?*
- b. *Does this help you reduce your peak electricity use or electricity consumption? Why or why not?*
- c. *How else could this information be presented?*
- c. *Alternatively, what other information would help you to shift or reduce your usage and/or manage your energy costs?*

Area #0 – Month by month presentation of usage at the top

Area #1 – Information on the cost and definition of Critical-, On-, and Off-Peak Energy

Area #2 - Bar Charts Showing Usage; Messaging about saving energy by using less energy at Peak hours and Save Energy During Peak Hours – Pie Chart (comparison between graphical presentations)

Area #3 - Take Action – Energy Savings Checklist/Recommendations

Area #4 – Additional Resources

- a) Home Energy Center
- b) Save and Shift Calculator
- c) Thermo Calculator

Comparison Across Areas

What is your favorite area? Why? What areas would you use the most? The least? Why?

F. Messaging

Right now, the bill analysis centers on three messages [POINT OUT THE NUMBERED MESSAGES ON THE BILL ANALYSIS]:

- “Peak energy is expensive”
- “Save money by using less peak energy, especially on Critical Peak days”
- “Take action, especially on Critical Peak days”

Are there other messages that you think would resonate better with customers? What would make customers want to use this information? What type of information are customers looking for?

G. Lay Out and Formatting/ Alternative Formats

Ok. Now let’s talk more about the layout and formatting.

In general, do you like the basic layout of the bill analysis?

[DISCUSS STORYBOARDS WITH FOUR TO SIX OPTIONS THAT CAN BE VIEWED SIMULTANEOUSLY – AT LEAST ONE BOARD FOR EVERY TWO PARTICIPANTS]

Now I would like to pass around some other alternative formats that have been considered for viewing this information. Pass out materials –

Are any of these alternatives appealing? If yes, what makes them appealing? What do they offer that the “original” bill analysis format does not?

H. Timing

How frequently do you want/need this type of information? [PROBE WITH ONCE, ONCE A MONTH, MORE/LESS FREQUENTLY?] If it were on a website, how frequently would you visit the site?

I. Willingness to Pay

How much would you be willing to pay each month for access to this type of information? [ALTERNATIVELY: Would you use this if it were offered to you for free?]

[FOR PEOPLE WHO WANT IT FOR FREE] What would need to be added to make it valuable enough for you to be willing to pay for something like this?

What is the best way for the utility to charge for this information? Monthly on bill? Other ways?

J. Recruiting Participants/Communication Strategies

What is the best way to tell customers about this information? How can the utilities get this information out? [EXAMPLES INCLUDE: WELCOME EMAILS, POSTCARDS, BILL INSERTS?]

K. Use of the Internet versus Mail

How many of you have email?

In general, are you willing to give out your email address?

How should the utility deal with customers that do not have email or are not willing to give out their email?

What is the most effective way to provide this web-based information to customers? What is the best way to get a customer's email address? What would and/or would not work for you?

Do you think that sending the web page out in hard copy can help drive people to the web site? Will the message on the side of the web page, "Add/Update E-mail Address" work?

What would be more effective? Is there another or a better way to convey this information?

L. Pre-Event Notification

What is the best way to notify you of the super peak or critical peak events?

How much advance notice do you need to alter your behavior?

Right now the utilities call to alert you to a super or critical peak event. Is this effective? What about email? Is there another or a better way to convey this information?

M. Other ideas? [Wrap-Up]

What other information do you think you would want to help you reduce your electricity use? Is there anything else that would be useful to you or that you would want the utilities to provide?

Thank you for your help. We appreciate your time, and as a token of our appreciation, we will be providing each of you with a check. You can pick these up on your way out.

Appendix F: Focus Group Handouts

Sample Billing Analysis – SCE

Sample Billing Analysis – PG&E

Alternative Format #1

Alternative Format #2

Alternative Format #3



- Customer Service
- Rebates & Savings
- Safety
- Power & Our Environment
- Community & Recreation
- Doing Business
- Edison International

Shift and Save

Saving money and peak energy makes good sense

Joseph Sample Account#: 001234567
 123 Main St., Downey, CA 90240
 Bill Period: 8/3/2005 - 9/1/2005

This summer, you could save \$47 - \$69*

July	August	September	October
0kWh	0kWh	**196 kWh to go...	Peak Savings Goal: 196 kWh

*Reduce your peak energy use by 196kWh or 20% and you could save \$47 - \$69 this summer (July-October). This information is based on your energy usage.

1. Peak Energy Is Expensive - Use It Wisely.

Remember during the summer season:

Critical Peak Energy: \$.54/kWh

- 2 pm to 7 pm
- Monday through Friday on days declared by SCE as Critical Peak days

On-Peak Energy: \$.22/kWh

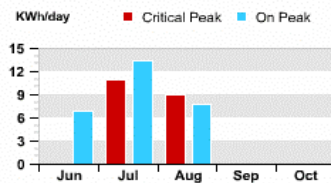
- 2 pm to 7 pm
- Monday through Friday on non-Critical Peak days

Off-Peak Energy: \$.11/kWh

- 7 pm through 2 pm the following day on weekdays
- All day Saturday and Sunday

2. Save Money by Using Less Peak Energy - Especially on Critical Peak Days.

Your Critical Peak vs. On-Peak Usage



Aim to make your critical peak bar lower than your on-peak bar

Your peak energy use on Critical Peak days was 9 kWh per day. This was higher than your average on-peak energy use of 8 kWh per day, which increased your bill by \$1!

On-Peak Usage: You used 12% of your total energy during on-peak hours. Your personal goal is 10%. As a result, you saved 0 kWh.

Get More Energy Savings Information:

Home Energy Center
 Find ways to save money and be more energy efficient specifically for your home with Home Energy Center.

Load Shift Calculator
 You can save money by changing when you use energy. Load Shift Calculator can show you how.

Thermo Calculator
 Easy and quick savings with the turn of a dial or push of a button... Thermo Calculator can show you how you can save by adjusting your thermostat settings.

Add/Update E-mail Address:

To receive an e-mail newsletter for this program or update your e-mail address, please contact us at sceidp@nexusenergy.com.

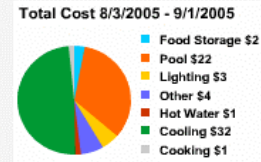
3. Take Action - Especially on Critical Peak Days!

Check off items on the personalized checklist below to see how much money and peak energy you can save! The personalized checklist below is based on information you provided about your home.

Savings Checklist	Estimated Monthly Savings
<input checked="" type="checkbox"/> Before you take that dip... Run your pool filter during off peak hours to save money and energy. More...	\$12-\$18 40-70 kWh
<input checked="" type="checkbox"/> Keep your cool! Save energy. Save money. Raise your thermostat 3 to 5 degrees, during the expensive Critical Peak and On-Peak hours. More...	\$8 16-24 kWh
<input checked="" type="checkbox"/> Made in the Shade! Keep your house cooler by closing window shades and curtains. More...	\$5 12 kWh
<input checked="" type="checkbox"/> Do the dishes later... Save money by doing your dishes after 7 pm, when expensive On-Peak and Critical Peak time periods are over. More...	\$4 13-19 kWh
<input checked="" type="checkbox"/> Wash those duds later... Avoid running your clothes washer during costly On-Peak and Critical Peak hours. Save 50%-75% by running Off-peak. More...	\$2 7 kWh
<input checked="" type="checkbox"/> Flip the switch... Turn off unnecessary lights to save money and power especially during the costly Critical Peak and On-Peak hours. More...	\$2 4 kWh
Total Estimated Monthly Savings:	\$29-\$43 90-140 kWh

Save Energy During Peak Hours:

Do you know how you use energy? The chart below shows how you used energy during peak hours. This is based upon your most recent bill, if available, and is specific to your home.



To save money during peak hours, target appliances that are costing you the most.

FOR OVER 100 YEARS...LIFE. POWERED BY EDISON.

Shift and Save

Saving money and peak energy makes good sense

Jonathan Doe Account#: 1234567890
 1234 Main St., Bakerfield, CA 93312
 Bill Period: 7/31/2005 - 8/29/2005



Get More Energy Savings Information:

Home Energy Center
 Find ways to save money and be more energy efficient specifically for your home with Home Energy Center.

Load Shift Calculator
 You can save money by changing when you use energy. Load Shift Calculator can show you how.

Thermo Calculator
 Easy and quick savings with the turn of a dial or push of a button... Thermo Calculator can show you how you can save by adjusting your thermostat settings.

This summer, you could save \$23 - \$38*

July	August	September	October	
67kWh	30kWh	**57 kWh to go...	Peak Savings Goal: 155 kWh	

*Reduce your peak energy use by 155kWh or 20% and you could save \$23 - \$38 this summer (July-October). This information is based on your energy usage.

1. Peak Energy Is Expensive - Use It Wisely.

Remember during the summer season:

Critical Peak Energy: \$.59/kWh

- 2 pm to 7 pm
- Monday through Friday on days declared by PG&E as Critical Peak days

On-Peak Energy: \$.22/kWh

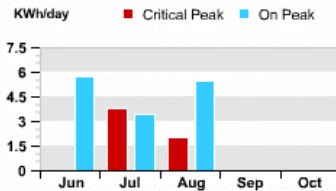
- 2 pm to 7 pm
- Monday through Friday on non-Critical Peak days

Off-Peak Energy: \$.10/kWh

- 7 pm through 2 pm the following day on weekdays
- All day Saturday and Sunday

2. Save Money by Using Less Peak Energy - Especially on Critical Peak Days.

Your Critical Peak vs. On-Peak Usage



Aim to make your critical peak bar lower than your on-peak bar

Your peak energy use on **Critical Peak days** was 2 kWh per day. This was lower than your average on-peak energy use of 6 kWh per day, which decreased your bill by \$2!

On-Peak Usage: You used 7% of your total energy during on-peak hours. Your personal goal is 10%. As a result, you saved 30.4 kWh.

Add/Update E-mail Address:

To receive an e-mail newsletter for this program or update your e-mail address please contact us at shiftandsave@pge.com

3. Take Action - Especially on Critical Peak Days!

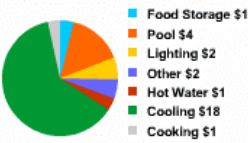
Check off items on the personalized checklist below to see how much money and peak energy you can save! The personalized checklist below is based on information you provided about your home.

Savings Checklist	Estimated Monthly Savings
<input type="checkbox"/> Keep your cool! Save energy. Save money. Raise your thermostat 3 to 5 degrees, during the expensive Critical Peak and On-Peak hours. More...	\$5 14-20 kWh
<input checked="" type="checkbox"/> Stay out of the kitchen to beat the heat... Keep that kitchen cool and save money by not using your electric range or oven during costly On-Peak and Critical Peak hours. More...	\$3 12 kWh
<input type="checkbox"/> Made in the Shade! Keep your house cooler by closing window shades and curtains. More...	\$3 10 kWh
<input checked="" type="checkbox"/> Before you take that dip... Run your pool filter during off peak hours to save money and energy. More...	\$3 14-20 kWh
<input type="checkbox"/> Do the dishes later... Save money by doing your dishes after 7 pm, when expensive On-Peak and Critical Peak time periods are over. More...	\$2 13-19 kWh
<input type="checkbox"/> Wash those duds later... Avoid running your clothes washer during costly On-Peak and Critical Peak hours. Save 50%-75% by running Off-peak. More...	\$1 7 kWh
<input type="checkbox"/> Flip the switch	

Save Energy During Peak Hours:

Do you know how you use energy? The chart below shows how you used energy during peak hours. This is based upon your most recent bill, if available, and is specific to your home.

Total Cost 7/31/2005 - 8/29/2005



To save money during peak hours, target appliances that are costing you the most.

Disclosure | Technical Support

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Critical Peak Program Report

Client logo here

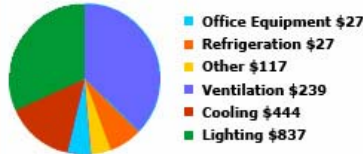
John Doe
Account#: 1234567 at 123 Something Lane, City

January Summary

01/13/2005 Electric Bill

- 📈 Your 1/13/2005 electric bill increased **\$35** compared to the previous month.
- 📈 This month you used **30% of your energy on-peak**. That's **4% more** than the average customer.
- 📈 On Critical peak days, your **peak energy use increased** from an average of 413 kWh per day to 562 kWh/day. This caused an additional charge of **\$98**.

Peak Period Electricity Cost



The chart shows your energy usage during the peak hours last month. The estimated costs were calculated based on data from your advanced meter and survey information you provided.

[Action Link here?](#)

Tools to manage your energy



Replace Old A/C Equipment

Save \$100 High efficiency air conditioners are 50-80% more efficient than units that were available 10 years ago. Replacing low efficiency (EER<9) units with higher efficiency (EER=12) could result in the monthly savings above.



Install Efficient Fluorescent

Lighting...Save \$90 T-8 fluorescent fixtures use 30-40% less electricity compared to "regular" (T-12) fluorescents and generate significantly less heat. The savings estimate shown above is for monthly on-peak energy.



Heating Calc

Thinking about a new heating system? Let Heating Calc help you decide...



Program Name

Find information about programs and resources to maximize your energy use.

Performance Gauge



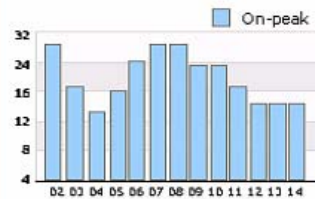
This gauge shows your energy usage compared to other businesses with similar profiles. The estimated costs were calculated based on performance of the average customer.

Monthly and Annual Comparison



The bar chart shows the comparison between your monthly and annual usage per day on this Critical Peak program.

Critical Peak Week



The bar chart shows

ALTERNATIVE FORMAT #2



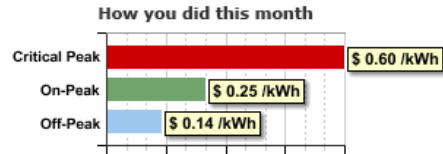
Energy Shift & Save Program

John Doe
Account#: 1234567 at 123 Something Lane, City

Thanks for your participation in the Energy Shift & Save Program. Drive your energy costs down by shifting your critical on-peak energy use to off peak times. Your 8/13/2004 electric bill increased **\$35** compared to the previous month.

💡 Your usage on critical peak days increased from an average of **413 kWh/day to 562 kWh/day**. As a result you were charged an additional **\$98**.

💡 This month you used **30% of your energy on-peak**. That's **4% more** than the average customers.



How much have I saved during peak hours...

By changing the way you use your energy you saved \$X this month. You could save up to 1050 kWh or \$250 to \$500!*



What can I do to save more?

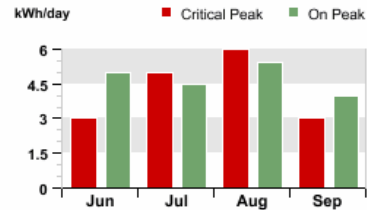
To make an impact on your energy bill and reduce On-Peak energy usage follow the personalized checklist below:

✓ Savings Checklist	Estimated Savings	
<input type="checkbox"/> Give your A/C a Break Raise your thermostat 5 degrees to remain comfortable while decreasing your energy usage. More...	\$90 - 130	456 kWh
<input checked="" type="checkbox"/> Flip the switch Turn off unnecessary lights – especially the high-wattage floodlights typically used in recessed lighting. More...	\$190 - 230	234 kWh
<input type="checkbox"/> Run your pool pump less The National Spa and Pump Institute recommends that you fully filter your pool water once per day. For residential pools, try filtering for 6 hrs per day. More...	\$190 - 230	234 kWh
<input type="checkbox"/> Flip the switch Turn off unnecessary lights – especially the high-wattage floodlights typically used in recessed lighting. More...	\$90 - 130	144 kWh
<input type="checkbox"/> Run your pool pump less The National Spa and Pump Institute recommends that you fully filter your pool water once per day. For residential pools, try filtering for 6 hrs per day. More...	\$190 - 230	234 kWh
Total Estimated Monthly Savings: \$250 - 500 234 kWh		

* Based upon a projection with 20% reduction from your June energy use.

My Peak Performance

Critical Peak vs. On-Peak



This chart shows you Critical Peak usage compared to On-Peak Usage- Aim to make your Critical Peak bar lower than your On-Peak bar. Follow your personalized savings checklist especially on Critical Peak days.

Save Energy During Peak Hours



This chart shows you how you use your energy during peak hours. Understanding which appliances are costing you the most can help you focus your savings efforts. [Home Energy Center...](#)

[Energy Shift Calc](#) [Thermo Calc](#)



Smart Shift and Save Pricing Benefit



Welcome Jon Doe. The Smart Shift & Save plan allows prices to rise when the demand for electricity on hot afternoons is high and fall when demand is low. They can reduce our need to use older and less efficient power plants to meet peak demand for electricity. The positive effects would be similar to reducing traffic during rush hour. Since roads are built with peak traffic in mind, reducing the cars on the highway during rush hour would alleviate the need to add lanes.

Quick Tips

It's a breeze... Save \$18

Cooling is one of the biggest factors in your energy bill, especially during peak hours. If you program your thermostat to a setting a few degrees higher, your usage will decrease substantially. The savings estimated here are based on raising the thermostat between 3 and 5 degrees during peak hours for a typical summer month.

Use that pool timer... Save \$9

Your pool pump can use a considerable amount of energy. You should avoid running the pump during the peak hours from 2 to 7 p.m. on Critical Peak days. If a timer controls your pump, you should consider changing the schedule to always run during off-peak hours. The savings is an estimate of how much less it costs per month to run an average pool pump during the off-peak hours.

Flip the switch... Save \$9

You should make sure that any unneeded lights are turned off – especially the high-wattage floodlights that you may have in your home, typically installed in the ceiling. Instead, use lower wattage task lights whenever possible. Also, check out our rebate program energy saving lighting options. The monthly savings estimated here are based on turning off half of the lights in an average home during the peak period.

Put off dishes... Save \$3

Dishwashers use a considerable amount of hot water. So running your dishwasher during the critical peak period will cause your water heater to run as well. You can save money by making sure that your dishwasher runs only when energy costs are lower. Many dishwashers have a delayed start feature that can make this an easy adjustment. The savings is an estimate of how much more you typically spend every time you run your dishwasher during Peak hours.

Load Shift Calculator

Learn how much you could save by shifting some of your energy usage to off-peak times.

Home Analyzer

Learn how you can improve your home to be more energy efficient and save on your energy bills.

Thermo Calc

Find out how much you can save by adjusting your thermostat settings.

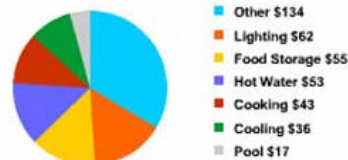
Fun Facts

There are more than 290,000 power poles helping deliver reliable, low-cost power to Los Angeles residents and business.

There are about 250,000 streetlights illuminating the streets of Los Angeles.

Your Peak Performance Scorecard

Peak Period Electricity Cost



The chart above shows how you used energy during the peak hours last month. The costs shown on the chart are estimates. They were calculated using the data from your advanced meter and your answers on the home energy survey.meter and your answers on the home energy survey.

This month you used **30% of your energy On-peak**. That's **15% more** than the average customer.

On **Critical Peak days**, you reduced your normal on-peak energy use from **100 kWh to 80 kWh**.

This reduction netted you savings of about **\$23**. Keep up the great work and savings!

We can create a more secure energy future for California if customers like you reduce energy use by **at least 20% on Critical Peak days**. Last month your energy use **decreased by 30%**.

Great job, you're saving money and helping decrease our need to use older, less efficient power plants during peak periods.

Using Your Programmable Thermostat

Are you using your thermostat to its fullest potential? Is it just the right temperature when you get home? Here are a few tips to using your programmable thermostat that could help you both save energy and keep comfortable:

- Program the change in temperature to occur about a half hour before you would like to feel the difference. Each person's home is different but they all take some time to adjust so by adjusting the timing you're always comfortable and you're not wasting energy when you're not home.
- Recognize peak times when programming to reduce the load and high cost of cooling and heating during those times.
- Remember to set up weekdays separately from weekends. Most people have very different schedules and are often out more during the week so make sure you're not conditioning your home while you're at work.

Appendix G: Focus Group Transcripts

Focus Group on 11/15/05

Focus Group on 11/16/05

11/15/05 - 6:45 p.m.

M – Moderator

R – Respondent

M: Hi, this is Jennifer and I am the moderator for tonight's call.

R: Hi Jennifer. I am Mary Martinez Garcia.

R: Drew Larson.

M: Hi Drew.

R: How are you?

M: Good.

R: I'm Joyce Henderson.

M: We have got a total of eight people tonight, so we will probably wait until right about seven o'clock, maybe a few minutes later, even give people a few minutes after that if we don't have everyone.

R: Where is everybody from?

R: I'm from California.

R: Whereabouts?

R: Merced.

R: I'm just 45 miles from there.

R: Where are you from Fresno?

R: Yeah.

R: Well that's where I am originally from.

R: We're neighbors then.

R: Just about.

R: Well I'm at the very opposite end then.

R: You are down south, huh?

R: Yeah.

- R: Well that's a good place to be probably. Any of the fires or anything affect you there?
- R: Well sometimes. Right now it's very windy here and they have that red flag alert where there is a possibility when the winds kick up that, you know it's fire season for us here. Winds been blowing all day pretty good and I understand that it will be blowing some more until tomorrow. Not too great.
- R: We are just dry and warm here.
- R: Well that's nice. I would prefer that.
- R: We just need a little water though.
- R: Yeah. It's just the weather is so weird now. It's just warm when it should be getting cold.
- R: Yeah it is. We need some water though. You don't want any grass in the hills where you are at.
- R: Well actually where I am at we could use the water here too. It makes it kind of hard to water the lawn when the wind is blowing so hard. The sprinklers come on, but it's not hitting anything.
- R: The more you water, the more you have got to mow it.
- R: That's okay. Not a problem.
- R: What do you folks do?
- R: This is Joyce, and I work part-time as a nanny. Take care of children.
- R: That must be good.
- R: Well I have retired a couple of times, and then they call me and I go back.
- R: How old are the kids?
- R: Well I take care of several I was taking care of three little boys, 9 months, two and one half, and five. A handful. So I did that for a school year and then through the summer I took care, because they are school teachers most of them that I care for, or work with the school, then I took care through the summer a six and eight year old, and then I went back to taking care of the little boys, but I wouldn't commit myself because it was a little tough on this old woman.
- R: I am sure you could handle it just fine.
- R: Well I told her, she wanted me back and I said well honey I'll come back and I won't leave you without someone, but keep your eyes open for someone. So then there was a

- nursery school, well I guess you would call it a daycare, I don't really know what the title of it was, but anyway, she lost several of her children to school, so she had some openings and so the lady I was working for said I don't need you right now but down the road a little ways, and said if I am going to take them I need them now because I am losing money. She was going to fill that spot. So anyway that job ended a little sooner than I expected, but then another lady called and I have been taking care of a 15 month old little girl. I don't have to do that everyday, so it's not so bad.
- R: That's just like having grandchildren.
- R: I only have one.
- R: I have two. They are little. They are just one and three.
- R: Mine's 19.
- R: I work with the City of Fontana and I am a secretary to the Planning Department, and there is a lot of new development here in Fontana. The city is growing and there is just so much going on, so I have my full time job there, and then one day a week I have the grandchildren for the day, and they run me ragged, but playing with them and they love to come to granny's house. That's pretty much what I do and hopefully I can, I've got four more years before I can retire, so hopefully that's the plan anyway. I kind of look forward to that, and I want to be young enough to be able to do that.
- R: That's what we all want to do. We want to retire while we are still able to go somewhere.
- M: How about you Drew, what do you do?
- R: We farm. We have got vineyards and we have 500 and some acres of rice.
- R: I know several farmers around Fresno, do you know the Gegeans? I am familiar with them, I don't really know them. I am familiar with them.
- R: They are good friends.
- R: They are out around the East.
- R: Yes they are, beyond Easton. Between Easton and Caruthers.
- R: Well I am not too far. I was born and raised out around Raisin City.
- R: Oh my goodness. Raisin City. That's a big spot.
- R: I live right around Kermit now. I have lived here for about 65 years. I was born and raised over in Raisin City.
- R: I have some dear friends that lived in Raisin City. Well we had friends, we lived in Fresno, so we had friends from all around there. We had lots of friends there, we still

- have lots of friends, some of them are gone, but there's still a few. Do you ever go to the Caruthers Fair?
- R: It's been several years since I have been there. I rope a lot, and I roped at the Caruthers Fair for several years, and they quit the rodeo at the fair, and I haven't been back since.
- R: They still have a rodeo there. A little one, don't they?
- R: No.
- R: Wait a minute, they don't. You know what, because my husband before he passed away, well when we lived in Fresno we went to the Caruthers Fair every year when our kids were small, that's their memories, and then after we moved, we moved to Oregon and then wound up back in Merced and my husband and I started going back to Caruthers Fair. For the last two years, my kids and I have gone and they said mom we have got to do this every year because we just have so much fun.
- R: It is a nice little fair.
- R: It is.
- R: It's really a community fair.
- R: Yeah, everybody, well of course all the people, it used to be almost like a little family reunion for us, but I don't see anybody anymore. That kind of makes me sad a little bit, but that's okay. I was thinking the Merced fair, that's where I got the rodeo and it's a small...
- R: Yeah I've been to Merced, I've been to the rodeo up there at Turlock.
- R: I think they have a better one at Turlock than they do in Merced.
- R: Do they still have the one in Merced?
- R: Oh yeah. I'm eating a banana if I sound funny. I took a friend of mine to LaMore today and I just came from Fresno actually.
- M: It sounds like we have one more person on the line.
- R: It sounds like we have got somebody else.
- M: Debbie, are you now joining us?
- R: Yes I'm here.
- M: Terrific, and we have three other participants, Mary, Drew, and Joyce, and I'm Jennifer. I am going to be moderating the group and we are going to just give people another five minutes because we have about four people now and we are expecting eight. Sometimes

we don't get everybody, but I would like to get as many as we can. So we are just chatting until then.

R: And don't laugh, I have to call my dog in because he's out in my front yard. She's got to check the perimeter before I make her come in. I actually connected way faster than I thought it would.

M: It sounds like everybody right now is at home, which is great. I hate to have people on cell phones or in cars. We don't really allow that.

R: You mean I can't leave the house and talk while I am going someplace.

M: Well as long as you are on foot. I just don't want to be responsible for any crashes. If someone does get disconnected or needs to go because there is a ruckus at their house and they need to call back in, that's fine. Just when you call back in use the same number and the same passcode. I know that things happen, especially when you are calling in from home. I'm hoping it won't happen to me because I too am calling in from home. So if you lose me for some reason, like my phone just disconnects, I will be calling back. Drew you asked where everyone was located. Everyone should be in California, except for me, I'm in St. Louis. It's nine o'clock here, and if we don't get more people calling in, I'm actually going to call over to Cambridge, the corporate offices of Opinion Dynamics, and see if we can rally up a few more people.

R: So you are out of St. Louis? What's the weather there?

M: Tonight it's not very good. It's pretty windy. They were threatening a tornado, but I don't think it's coming through right here, but it's definitely windy and cold.

R: I've been in Arkansas when they have had them, and I don't like them.

R: I have to laugh, I was born in Arkansas, that's why I'm not there.

R: Most of the people there said I was crazy for living in California, they would never come with these earthquakes.

R: We so rarely rock and roll. Tornadoes are way too often.

R: They are. I have seen the damage they do to a friend of mine's ranch. It's unbelievable what they will do. Just uproot trees and twist them around. It's really something.

R: That's really dangerous.

R: It is. I have been out in the thunderstorms on horseback too and that's no place to be.

R: No, not on a horse. You know what else I don't like about Arkansas, and I was born in Hot Springs, it's not just the tornadoes, it's the ticks, and the chiggers, and the snakes.

11/15/05 - 6:45 p.m.

- R: Snakes don't bother me, but those ticks, I hated them ticks. You have got to check yourself every night for ticks.
- R: That's no joke. That's the truth. I'll never forget going to my grandmother's house and walking in the garage, and there comes snakes across the garage. Good old grandpa went out there and captured the critter.
- R: Those ticks are something else, especially when you get out in that brush where they don't have any cattle or nothing. They are really sick.
- R: The chiggers really liked my father for some reason.
- R: Maybe he was just sweet.
- R: That's what I always told him.
- M: By my watch it's about 7:05 PST. I am going to put you on mute for one minute, I am going to call somebody in Cambridge just to see if we can get a few more people, but when I come back we will get started. Hold on a minute.
- R: Nobody is ever on time anymore.
- R: I ran to the store real quick because I had an errand to run for somebody and I thought I had to hurry, and I pulled in the driveway four minutes till.
- R: You went and got popcorn and soda pop. I know what you did.
- R: Actually I got spaghetti sauce and spaghetti noodles for a neighbor who doesn't drive, but I grabbed me some donuts.
- R: I love them donuts, but I've got diabetes and I'm not supposed to eat them, but I do cheat. That's my trouble.
- R: Well I am overweight. I shouldn't be eating them either, but they were calling my name as I walked by.
- R: Yeah, they do that. They have got a tendency to do that, and they know you by your first name too.
- R: And if you don't hear them the first time, they scream the second time.
- R: My wife she fixes cake, and candy, and different things, and I said don't be doing that. I think she is trying to kill me also.
- R: Are you well insured?
- R: No, I don't want to leave nothing to nobody.

- M: This is Jen and I am back, and we will go ahead and get started with the four people that we have, and they may introduce a couple of more people later if people are still able to call in. It may be that some people are having trouble getting home or something like that. We will just bring them into the discussion if they join. A small group is always good too. I want to welcome everyone. There we go, we have one joining already. Hi Millie. This is Jennifer and I am moderating the discussion tonight, and we have four other participants on the phone, and we are expecting a few more, so we may get a few more introduced, but we are just going to go ahead and get started. I just want to give everyone a little introduction about the discussion tonight. By way of introduction, everyone on the call is a participant in the Shift and Save Pilot program which is being run by the utilities in California and as a participant in the pilot, you all have been receiving your regular monthly bill and then the special billing analysis, and some people have been getting it by mail, and others by e-mail, based upon your preference, so we are just going to go around first and I would like for you to tell me or call out your names and then you can just tell me whether you have been getting it by e-mail or mail. So we will start with Mary.
- R: I am actually getting both.
- M: You are?
- R: Yes. A lot of times it's more convenient for me, sometimes budget wise for me, sometimes I can't wait for the bill, and I am looking on the e-mail. It's easier for me to look it up online. I actually prefer it online. I can study it a little bit better than on the paper.
- M: That's your regular bill that you are getting both ways, right?
- R: Right.
- M: How about the billing analysis, which is what we are calling the sample that we sent out to you, it said Shift and Save and looked like that one page handout. Have you been receiving that by mail or by e-mail?
- R: I'm actually getting both.
- M: You are? Great. How about Debbie?
- R: I have just been getting it by mail.
- M: Debbie, you are okay with being called Debbie?
- R: Yes.
- M: We are expecting a Deborah, so I don't know if she will call in or not, but just wanted to check. How about you Drew?
- R: By mail.

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M: And Joyce?

R: By mail.

M: And Milli?

R: By mail.

M: Did everyone get the UPS package with the handouts?

R: *(Positive Responses)*

M: It had a sample copy of the billing analysis. It's a snapshot of the website. I guess with that we will just get started just talking about this billing analysis. The goal for tonight is to just provide the utilities with some feedback regarding what information you would want to reduce your energy consumption. This call right is scheduled to last about 90 minutes. We are going to be off the call about 8:30 PST, and the other thing that was mentioned in the letter that you received is that you will get a check by regular mail within a couple of weeks as a thank you for participating in the call. One of the things that I wanted to ask was whether any of the people who received the information by mail looked at the website, and I know Mary you looked at both, but did anyone else?

R: This is Debbie, in the beginning I did. I used to take time to do that, and then just overtime I didn't check it as often as I did in the beginning. It was very informative though. I really, really enjoyed it.

M: The website?

R: Right.

M: And Drew, Joyce, or Milli, did any of you look at the website?

R: No.

R: No, because I don't have a computer.

R: Me neither.

M: No computers?

R: No.

M: None of you. Okay. And Mary did you sign up for the e-mail version?

R: Originally I got the mail and when I found out I could pay my bill online, that's when I started using it, and then I started getting it online. I kind of liked that because it's easier for me. Now that the bill comes through the mail, I just kind of look and see how much I owe, but to actually study it, I prefer it on the computer.

- M: So if everyone will just take a look at the single sheet we sent out. It's the sample billing analysis. I just want to talk generally at first about your impressions of this information and the way that it's presented here. So Mary do you want to start? What did you think about it when you first got it?
- R: Well I think it's a very good idea as far as actually telling us when the critical periods are, because for me I work, and I am gone most of the day and those peak times are I felt was good information for me because I know that I am not home, and that I am kind of saving there. But on those days when I am home I am really kind of careful because I look at the bill and I say this is the time when I shouldn't be doing this or shouldn't be doing that, and I have tried to work around that time frame, because sometimes I come home for lunch and normally some people would turn on the T.V. or something like that. Well I don't because I know during that time frame I run into the peak periods. So I find it a great idea as far as the consumption that I am using, especially during those hot months. With the air conditioning, that really helps a lot, so I kind of monitor. They had a lot of good ideas, especially in the area where they have that savings checklist, and it tells you more or less the times, which are the better times to do certain things and how much of a savings is very impressive to me, because when I look at that and I see the numbers, when you actually see numbers, it's very helpful, and I think if that wasn't on there I probably wouldn't even think twice about it.
- M: I'm just going to pause for just a minute because we had two other people join. We had Debra and Claude, so welcome. This is Jennifer, and I am going to be moderating the discussion tonight. We have a total of seven people on the call now, which is great. The way we are going to do this, for the first part of the call I will probably just be calling on people, but if I don't call on you and you have something to add, you can feel free to jump in. If I didn't call on you, then please identify yourself when you speak by saying your name so that we know who is talking. The one question I will ask Deborah and Claude that I have already asked everyone else is how did you receive the billing analysis? Some people received it by mail and some by e-mail? We'll start with Deborah, how did you receive the billing analysis over the past few months?
- R: By mail.
- R: By mail, yeah.
- M: By mail Claude?
- R: Last month I got it by UPS.
- M: That was the handout. Deborah do you have the handout as well
- R: Yes I do.
- M: In there is a single sheet that says sample billing analysis, and it's an example of what you should have been receiving for the past few months. Have you been receiving that by mail or by e-mail over the past few months?

R: Not every month, but sometimes it comes in with my bill.

R: I get it by mail.

M: Deborah, did you ever look at the website?

R: No, I never did.

M: How about you Claude, did you ever look at the website?

R: On the computer?

M: Yes.

R: No, I don't own a computer.

M: Debra do you have a computer?

R: Yes, I do.

M: So we are starting out by just talking about our initial impressions of this one page sample billing analysis, and Mary started us out, so maybe we will move on to Drew. Do you have initial impressions?

R: My bill has been down since I started this program. I haven't really paid that much attention to my deals that you sent me to be honest with you. It's just common sense what I use as a rule, but I was just looking at some of these test samples here of what energy is supposed to use and everything, and it's kind of interesting. On our regular billing ones we get through the mail every month, the diagram, does it show, is that our diagram for what we have used or is that just kind of like sample diagrams or what?

M: When you received this billing analysis, it was customized for you. The one you have in front of you from the handouts, everybody has approximately the same one, and it's just a sample.

R: The ones we get...

M: The ones you get, right, so let me actually ask that question of Debbie. When you looked at the bill analysis, did you feel it was customized for you and reflected your usage and your billing data?

R: Yes I did. I agree with Mary, it absolutely was helpful. I stopped doing some things because I am home all day. I started being more careful of when I do a load of laundry, and in my mind I always thought that peak times was like just until five o'clock, so I would get home from work thinking peak time is over, and then I realized peak time is seven. It slowed me down from doing things like laundry and running my dishwasher and things like that. I was more careful thanks to the billing analysis.

M: How about you Joyce? Did you find it useful?

- R: Yes I did, for the fact being that it just made me more aware that I should be more conservative, and we need this to tell us when the peak hours are because I am like her, I didn't always know when they were, and we always got a phone call telling us what was going to be, when the peak hours were going to be, which was very helpful, but it just made me more aware of what to do, how to save. Yes, I thought it was very helpful.
- M: And Deborah, did you feel that this was customized for you when you received your billing analysis?
- R: It was very good, and the fact that nobody in my house likes me because I always tell them to turn the lights out.
- R: I know just what you feel.
- R: And somebody would want to start a load of laundry and I would tell them nope, it's peak time, you can't turn it on.
- M: So I should give them feedback that it's not a good tool for making friends, but...
- R: Who wants to make friends when you pay the bills?
- M: How about you Milli? Do you think it was too detailed or not detailed enough?
- R: I think it was detailed enough. It was all good and it was very, I was very proud to be in the program because the fact that I noticed that my bill went down a lot and I always am having a conversation with my sons when they come in and put the lights on, saying put them off because it's peak time. I always try to look out for my energy because I am a disabled widow, so I have to manage my dollars carefully. I budget everything I do, and I watch what I do.
- M: And Claude how about you? When you look at this sample billing analysis, what are your initial impressions?
- R: I think it's good. There's a lot of good information on this. A lot of things I do now that I wasn't doing before, like I do washing in the evening late, and I am very careful.
- M: What I would like to do now is talk about each section in a little bit more detail. You don't just get off by just saying it's good, we have to actually explore it a little bit more and see if we can make recommendations for how it can be even better. Let's just start by looking at the top left hand and center part. There's a section right under the name, and the account number, and the address that says this summer you could save X amount of dollars, and it has July Kilowatt Hours Savings, August Kilowatt Hours Savings, and then what you have left to go for September and October. Debbie, do you think this is easy to understand and clear?
- R: To me it was really clear. It made you really focus on what was written there for you, because like you said it's specifically written for us. Each one of these that we got was for our household.

- R: I appreciated it.
- M: Deborah, was it clear that this was your savings, like how much you had saved in those months?
- R: Yes.
- M: Joyce, how about you? How else could this information be presented? Do you have any ideas for other ways?
- R: Actually I don't know how you could make it easier to understand.
- M: So it seems like it's pretty good?
- R: Yeah.
- M: Anybody else have any comments on this one section?
- R: I like that they have this Shift and Save.
- M: The program?
- R: Yes.
- M: I believe, you are still on the rate it's just that they have called the critical peak events for the summer because they use it during the times that the grid is most constrained. The next piece which is right under that, it says Section One, Peak Energy Expense if You Use It Wisely. It sounds like there has been a lot of feedback that this really helps because it has the definitions of the critical peak energy, the on peak and off peak, and what times those were. Does anyone have any suggestions for how this information could be presented differently?
- R: What is this one we are looking at? The analysis billing?
- M: Yeah, on the sample billing analysis, we are looking at the section, I know everything is small so I apologize for that, but we are looking at the section that has a number one, Peak Energy is Expensive, Use it Wisely, and below that it has three definitions, one for critical peak, one for on peak, and one for off peak. Does anyone have any suggestions for how it could be presented differently?
- R: This is Mary, I think it's great the way they have it broken down by the actual amount during each of those peak periods. It makes me more aware of what the cost is. I think that's great, and I think it's pretty clear.
- M: Anybody feel differently?
- R: For some people that are really visual, maybe if they did something like where it says critical peak energy and like it's \$.50 per kilowatt, maybe if that was in red or something

- that's like pay attention here, this is not cheap. It's in black like everything else, but maybe something to draw the eye to that, this is not where you want to go area.
- R: That's a good idea.
- M: Other suggestions for that? How about this number two. It says, Save Money By Using Less Peak Energy and it has a bar chart with your critical peak and on peak usage. Drew, what are your impressions of that? Was it easy to understand what that was trying to tell you?
- R: Yeah it's easy to understand. I think I can understand this a little bit better for one reason. We have used this on the farm for years. We have had our peak hours for irrigation and everything, so this is something that I am familiar with. We have used it on the farms for years, we couldn't start our water until five in the afternoon and run it until six the next morning, and holidays and weekends, so this is something I am familiar with.
- M: Claude, do you think that the bar chart is that something that will help you to reduce your peak electricity use?
- R: Yeah, definitely. This is good. I learn a lot of good information on this program, and before I wasn't doing it. Like peak hours, I am not using anything at all. I try to save as much as possible.
- M: Is there one area of this sample billing analysis that you think is more appealing or more useful for you?
- R: Not really, I think it's pretty clear. You have got to read and understand. It's pretty cool.
- M: How about you Joyce?
- R: I think so too. It's pretty clear to me because we have our, well it shows that it's clear. It shows by the range what we are doing right or wrong.
- M: If you look at that section three that has, Take Action and the Recommendations, were you able to use any of those or take any of those actions on that checklist? These might not have been the exact ones that you saw.
- R: Stay out of the kitchen to beat the heat. Well you know like I said, I was just more aware of when I did things because I could put it off. You know what I mean to stay off of the peak time. I was like one of the gentlemen, he said he waited until later to do his washing, and this makes you more aware of when to use your utilities and everything more than I ever thought. I really never thought too much about it actually until you made us aware that when everybody is using it.
- R: This is Mary, I think it is good because it actually shows the usage that I made. I am different from everyone else's usage because I don't know what everyone else uses, and it's helpful to know that if I did certain things that I would have a savings, and especially

- in the area where it says to close your window shades and the curtains. I have a lot of windows in my house, and like to have them open, but by closing them I did see a difference, I really did, and the house was cooler especially during those really peak periods where it was like 100 degrees and I could tell the difference. I didn't think I could, but I did, and that really helped.
- M: And Mary, I know you said you looked at the e-mail as well. Did you ever explore up in the upper right hand corner it has the home energy center, the load shift calculator, and the thermal calculator with the links to additional resources, did you explore any of those things?
- R: I looked at a couple of things, but sometimes when I would look, because a lot of times when I look at this online, I do it like an hour before everyone else comes into work, so I have more time to focus on it. I didn't actually get to go in and take a lot of time with it, so I need to do that. That's something else I need to look at more carefully.
- M: So first glance what shows up is what's more useful to you, and then maybe later you will get into the...
- R: Right.
- M: Debbie did you also look at the internet version?
- R: Yes.
- M: Did you explore any of these links?
- R: Yeah, I got nosy.
- M: Did you find any of them to be particularly useful to you?
- R: Yeah I did. Like I said, I especially did it in the beginning of the program. I am trying to remember exactly, but I remember getting into it pretty deep. I am trying to focus on what it was that maybe caught my eye the most. I know that I paid attention to like in the home energy center what it was that I could do to try to save here. I don't remember real specifics, it's just been too long. Alzheimer's okay.
- M: How about you Deborah, did you use the internet version?
- R: No I didn't, but the thing is I didn't use my air conditioning as much this summer as I did the summer before, and I noticed a big savings because I went out and bought floor fans and that worked a lot better than turning on, because I have central heating and air, and I saved a lot more money that way, and that way I didn't have it going all the time.
- M: Let me ask some of the people who received this by mail, you are receiving a webshot and it has these links, Joyce were you interested in those links and did you have any opportunity where you even could have explored those, or did you just ignore that piece of it?

- R: Well to be honest, I didn't explore it.
- M: Because you don't have a computer, correct?
- R: I don't have a computer. Well I have one, but I have a student that lives with me and it's in her room, so I don't get to use it.
- M: How about you Milli? Did you have any impressions about that upper right hand corner with the home energy center, the load shift calculator, the thermal calculator?
- R: I don't have a computer neither, but I always go through the paperwork and trying to preserve my energy, and I always pay close attention to the peak hours. I don't have a washer or dryer, which I go out to wash and drive. I only have one T.V., and I have a certain time I watch T.V. and a certain time it's off. Everything so far so good.
- M: Let's ask Debbie, is there anything else that you would want to see in this? Maybe not in this version, but in the next month's version, are there other additional areas that you would like information on?
- R: What PG&E did that really helped, I am unemployed right now, and they came out and insulated my attic, and maybe somewhere on there, I think there's a lot of people out there that would qualify for what PG&E offers. Maybe even on this billing analysis somewhere should be you might check and see if you qualify for these improvements on your home. I was amazed at the things they did to my house this summer and how much of a difference it did make on my bill. It dropped the temperature in my house probably at least ten degrees this summer.
- M: So information on other programs and other things that they have available?
- R: Right. That's my personal opinion, but I think it would be a helpful thing to have on there.
- R: I agree with that Mary because we had put in new windows that were supposed to be energy efficient, and that really helped, and I did not know at the time when we had this installed that we could get a rebate, or through Edison also, and that would be helpful. We were going to do it anyway because we found that there was a difference as far as the cooling of the house and even the heating of the house, a difference that it made by just replacing the windows.
- M: How about you Drew, is there anything else that you think you would want to see on a billing analysis like this? Any other areas or information?
- R: No, not really. It pretty well explains itself actually. Most of the stuff you have on here is just common sense that most people normally do as a rule if they want to save money anyway.
- M: Why don't we move over to the alternative format, so it's the handout that you got that has three pages, and we will kind of look at some other areas, other options that we were

considering and other ways of presenting this material, and maybe that will spark some ideas as well. The one thing that I want to say about the alternative formats before we begin is that these are just mockups, so they are not necessarily formatted or completed, and you may notice that in the alternative format number one this was actually set up for a business. You would receive something that would be similar to this, but obviously we would be talking about your home and it would be for residential customers. Does everybody have that? Is anybody missing the alternative format? Let's start with you Deborah. If you look at alternative format number one, and you can kind of compare it to the sample billing analysis that the utilities have been sending out, but what are your initial impressions of this alternative format number one? Is it more or less difficult to read? Do you like the presentation better or worse?

R: It's easy to read, and it's very informative, and it gives you proper information on performance gauge, and monthly and annual comparisons.

M: That's a good area. Do you like this performance gauge, which it would be a comparison to other homes, and in this case it says comparisons to other businesses, but did you like that?

R: Yes I do.

M: How about you Claude? Is that something that you think you would find useful?

R: I think it's really clear. You get a read on this thing, and you want to use it as less as possible.

M: Milli, are there things that you like about this alternative format number one?

R: Yes, I go strictly by the guideline. I think it's a good guideline. You read it and it explains itself. I think it's good.

M: It seems to have a little bit less information on it than the sample billing analysis that's been sent out. Milli, do you like that better or worse than the sample billing analysis?

R: I think it's better.

M: Better to have a little bit less information. Joyce, how about you? If you look at it there's a box in the upper left hand corner that kind of summarizes the bill and the savings for that customer, and then below that it has like a recommendation section. Again this is geared towards businesses, but it would be geared towards your home. Do you like this presentation better than the sample billing analysis or do you like the sample billing analysis better?

R: Well I am looking at this and I think I may like this one better.

M: For what reason?

R: Well I don't know, it just seems clearer to me for some reason.

- R: It explains itself.
- R: It explains itself better. I like this one.
- M: Other impressions? Anybody else?
- R: I think this is clear because it's really comparing the previous months instead of comparing it to the last three or four months.
- M: So are you looking at that monthly or annual comparison, or which part are you looking at?
- R: I'm looking at the summary.
- M: The January summary?
- R: Yes. That summary is just geared to that particular month and just comparing it from the previous month.
- R: I like that and it just seems that it's not so overwhelming with a lot of numbers.
- R: This is Debbie. The thing that I was mentioning about telling about other things that PG&E has available, that could go in the same area here where it says tools to manage your inner. That would fit right in there with that.
- M: Any other impressions on this alternative format number one? Let's take a look at alternative format number two. Drew do you want to start us out? What are your impressions about this alternative format, and how do you think it compares to the other ones we have seen?
- R: I just turned the page here and I am just looking it over. The print is pretty small.
- M: One of the things it has, if you look, there's an orange bar kind of in the middle, but a little bit high, and it says how much have I saved during peak hours, and it's somewhat the same as that information that was at the top of the sample billing analysis, but it's in a bar format. Does anyone like that better or worse than the KWH?
- R: I think it's better.
- M: Better?
- R: It's probably a little bit better than the other.
- M: What it's trying to explain is how much you save. You can see you saved 420KWH in June, and then 621 on top of that in July, and it has your are aiming for 1,050KWH by the end of September. Is that clear to you Mary?

R: No. For me it just seems, I don't know, just looking at the numbers like that, it's not clear to me. I would really have to look at this section and really read it a couple of times to see what they mean. It's not clear for me.

M: How about you Debbie?

R: After you explained it, it became clear.

M: So it's not clear right off the bat what that was?

R: I think maybe in the gold bar there next to the number it should say in June you saved this much, and in July you saved this much, granted you got June, July, and August under there, but maybe...

(End of Side One of Tape)

R: How much have I saved during peak hours, but if you are just wanting to glance at a bar, or a chart, or something, the bar or chart itself should be labeled a little better.

M: How about the bar chart that's above it that says how you did this month and it has the red, green, and blue bars?

R: That one's good.

R: That's pretty clear.

M: Let's try Drew. Do you think that's clear?

R: Yes it is. It sure shows you what you should be looking for.

M: How about you Milli? Do you understand what that's trying to say?

R: Very clear.

M: There's a section in the bottom right hand corner that says my peak performance and it's similar to the pieces that we saw before, but it kind of groups it into one section that's called my peak performance. Claude, do you like that the way they have grouped it?

R: Yes I do. I think it's pretty clear, you just have to take time and read it and follow the instructions.

M: Let's take a look at the alternative format number three. This one is a little more like a newsletter. Obviously a lot more text, not quite as many graphics. If you look in the middle there's a little fun fact there, and then at the bottom there is something that could change each month. This one is about using your programmable thermostat. Maybe next month it would be about something else. Joyce, why don't you start us off. What do you think about this format for presenting information?

R: I am just looking at it.

- M: That's fine, you can say one thing and change your mind later. But your initial impressions. How about just the fact that there is more text there? Do you like that or do you like it to be more a graphic presentation?
- R: I really haven't had a chance to say yet.
- M: You can keep looking at it.
- R: Let me look a little more.
- M: Everyone should feel free to comment on format one and two if you are flipping back and forth and think of something else, but how about you Debbie, how do you feel about this alternative format number three?
- R: I think number three looks really busy for most people that just picks up their bill and reads, there's no numbers to really compare. Like you said there is a lot of text, I like to read and I would read it, it wouldn't be a problem, but I think there is a lot of people out there that wouldn't have time for this and it would get thrown to the side. I think for general people probably format one because it is more simple, or even format two, but format three I think for most people it's just going to be I don't have time to do this.
- R: She has a point. This is Deborah.
- M: Which one do you prefer of the four formats that we have seen because you can include the sample billing analysis?
- R: The one.
- M: Number one. How about you Mary?
- R: I would prefer the first one. It does have the main information that I need to know about my usage, peak time, and it's pretty compact compared to the rest of them, and I think the last one, there's too much reading. I don't want to read. I want to know what's going on right now. The numbers.
- R: You know how this society is now. We expect instant gratification.
- M: Drew, what do you think about this information like this little fun fact. Is that something that you would find useful, or interesting, or something that you could do without?
- R: If you are going to read everything, it's useful, it's something that I can do without because most of the time I don't have time to look through everything like that. I just like to look through my chart and see what's going on there, and see what I can improve on without getting killed at home.
- M: Do you have a preference Drew for one of the formats?
- R: I think on this format one is probably about the easiest and most useful for me.

- M: Milli, what do you think about having some kind of newsletter type information, like maybe this section on using your programmable thermostat that shows up on format three. Is that something that is of interest to you on your newsletter, or do you want it to be more of a static charts and graphs that you can check and compare month to month?
- R: I think it's okay for month to month.
- M: Month to month. You don't really need the extra information?
- R: No, I don't think so.
- M: How about you Debbie? Do you have a preference for one of the formats?
- R: I kind of like number one the best because it is quick and easy. You learn what it is you need to learn. The little tidbit information thing on number three, I think that's some of the stuff they should put in some of their commercials.
- M: The fun facts type of thing?
- R: Yeah, well heck I never knew there was 290,000 power poles. But also like using your programmable thermostat, that's something they should put on some of their commercials. I don't have a programmable thermostat, but I understand that changes all the time. That information would be good to put out on their commercials and stuff too.
- M: If you receive a monthly billing analysis, would you want it to be something that has the same format, but obviously updated with each month savings, and usage, and things like that, or would you want it to have a little bit of this fun facts and newsletter type information that changes?
- R: There is enough room on number one to keep that information up at the top and then maybe down there at that bottom area where you have that inch or so they can put some of the fun facts down at the bottom, but keep the business and stuff at the top.
- M: Let me ask Drew, how much would you willing to pay each month for information like this?
- R: Nothing.
- M: That is a fair answer.
- R: We are all with you Drew.
- R: We pay enough as it is, we don't need to get no more money involved.
- R: Not only do we want instant gratification, we want it free.
- M: I understand that. Mary would you be willing to pay something like \$1.00 a month? Just a nominal fee for this type of information.

R: I would.

R: Yeah, it would be very helpful.

M: Let's go back to Drew then, what would it take to pay \$1.00 a month?

R: Do you know that's a half a bottle a beer?

R: We have priorities.

R: You bet you. It gets hot here sometimes.

M: Is there any type of information that you would pay for because that's what we are trying to determine, not that they are looking to charge you for it.

R: Well you are trying, you are asking.

M: I am mostly trying to make it more useful to you. I figure if I get you to the point where you are willing to pay \$1.00, that would be really useful.

R: Most of the time to be honest with you, most of the time when I get my billing I get these summaries, I look at my billing and if my billing is up then I start wondering why, then I look at my summaries, otherwise I usually don't. But that's my bottom line, I look at my dollars that I spend for my PG&E this month, and if it varies, I start wondering why, then I start looking. Otherwise, if it stays about the same, because I am pretty preservative on the house, and the grandkids, they are all mad at me all the time, but that don't hurt nothing. Well grandpa it's just \$.50, yeah but \$.50 a day adds up to how much a year. You know what I'm saying.

M: So Drew if this were provided to you for free, which it has been for now, is it something that you would use?

R: You would probably use it, yes.

M: And how frequently would you want to receive this type of information?

R: I don't know if it's necessary every month, but I think it's provided now every month now, but I would say every couple of months.

R: Every two months.

R: Quarterly.

R: Even quarterly.

M: I should say it has been provided every month over the summer, it's no longer being provided at this point because the pilot program has ended, so you won't be getting another one of these, unless you give me that dollar Drew.

- R: I think we just got one the other day. Was that the last one?
- M: Yeah it was at the end of October, I believe, you might have gotten it even into the first week of November. And Joyce, would this be something you would be willing to use if it were offered for free?
- R: Yes.
- M: And how frequently would you want to receive this type of information?
- R: I think quarterly would be enough, would be sufficient. I was going to give you a little how I felt on the...
- M: Which version?
- R: Yes, number three. I think that is way too much information. To be honest, I don't think I would take time to read all of that, and I think format number one is the best also. I have been looking as you all have been talking.
- R: If you kept it quarterly, that would cut down on paperwork, cut down on time, cut down on money for you, then we would get a break.
- R: And you would be giving us a break.
- M: If you look at the sample billing analysis, right now the message is that they focus on is section number one says peak energy is expensive, number two is save money by using less peak energy, especially on critical peak days, and number three is take action, especially on critical peak days. But on these alternative formats, they have other types of messaging or groupings like tools to manage your energy, they have what can I do to save more, they have my peak performance, there's quick tips and fun facts. Are there other messages that you think would resonate better with customers? What do you think is going to reach out to you and make you want to look at that? Let's ask Debbie.
- R: The one thing that caught my eye on the sample billing analysis itself is the area where it actually showed you dollars, \$5, \$3, and when you look down that list and you are going 5 and 3 is 8 and you know, and you add those dollars up, when you put a big number there with that dollar sign, people are going to look at it.
- M: That's a good comment. How about you Deborah, is there any either message here that resonated with you or one that you think would be more appealing than these that would reach out and grab your attention?
- R: What I want to know is if they are going to still call us the day before a critical peak day?
- M: That's a way of notifying you about the critical peak days. This is just a little bit different because it just provides information to supplement that and work with that so that you know what to do.

- R: Yeah, but they are supposed to give us that information anyway. They charge us enough.
- M: Well they can't give you all this by telephone, it's pretty difficult to convey that over the phone.
- R: No, quarterly that information is fine, but they don't need to put it in every month because like everybody else I look at how much I have to spend and if it changes, then I look at the summary, and if my summary is higher than what my expected is, then I get on everybody here at the house. Almost everything in this house is electrical.
- M: So it sounds like this may be something that you would go to when your bill is high and kind of sparks your interest, like that would be the thing that makes you look at this. Is that correct?
- R: Yes.
- M: How about you Milli?
- R: Actually I don't have a lot of electrical appliances, just my microwave and T.V. So far mine is all good.
- M: Did you feel like the billing analysis that you received was really customized for you or did you look at some of the recommendations and say that doesn't really fit into my lifestyle?
- R: I was thinking it was customized for everybody that got it because everything explains itself. It is telling you how you can reserve and how you can save a few dollars on reserving your energy.
- M: Mary, what do you think is the best way to get this information out to customers? I know you got it both by mail and by e-mail, but there is probably other ways as well. How would you want this type of information?
- R: UPS.
- M: I know. That's pretty effective I guess. That and me paying you to be on the call.
- R: Actually, just by including it with the bill, maybe not every month, but I think that would probably be the best way with maybe something separate from the billing that would catch your eye and make you say I need to look at this. But I think it needs to be included in the bill because I think the majority of us will look at it because it's a bill and we have got to pay it, and if that information is there then maybe it would draw our attention that we need to be doing other things for our own savings. I think that's the best way because I know a lot of people don't have computers.
- M: And you said you did receive the hard copy through the mail as well, correct?
- R: Yes.

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- M: Was it with your bill or was it a separate mailing?
- R: No, it's with the bill.
- M: It has been okay.
- R: I'd like to ask a question. My phone is beeping that the battery is low.
- M: So who is this?
- R: Debbie.
- M: If we lose you, at least we know where you went.
- R: I don't want to leave, I want to listen.
- M: You can always call back in. Let me ask people who have e-mail, but maybe not Debbie, Deborah, do you have e-mail?
- R: Yes I do.
- M: Are you generally willing to give out your e-mail address?
- R: No problem.
- M: I was wondering how should the utility deal with customers that maybe are not willing to give out their e-mail address.
- R: I have no problem with it because of the fact that I get so many e-mails and most of it is junk. I just delete it.
- M: How about you Mary, is it tough for you, do you feel like you have to discriminate?
- R: No. I would prefer an e-mail I think because that's one of the things when I am looking online and I see something that says from Edison, I do look into it because to me it's telling me something is going on, or it's very important, and I do like those. So when I do get them, I do look.
- M: If someone calls you and asks you for your e-mail address, are you generally willing to give it out?
- R: Yeah.
- M: And Debbie are you still there?
- R: Yeah.
- M: I know you had an e-mail address as well. Are you willing to give out your e-mail address?

R: Oh sure, why not.

M: I just didn't know. Sometimes people aren't really that willing to give it out to somebody without knowing exactly what it's for, so I just wanted to gauge that.

R: So many people have more than one e-mail address, so I would probably give PG&E my good e-mail address. If it's somebody I don't like, they get my junk e-mail address and it never gets answered.

M: So even just the utility name would help you to give it out?

R: Yeah. I have a lot of love and respect for PG&E, I really do. Like I said, they did enormous amount of work on my house this summer. Not only did they insulate my attic, they put a new back door on for me, they put a door on my hot water heater, they patched a couple of holes in the wall, and they replaced my wall heater.

M: How about some of the people who got it by mail and who don't have e-mail, how do you think they should deal with customers who do not have e-mail? Let's start with Claude. Since you don't have internet or e-mail, how would you want the utility to get this information to you?

R: By mail.

M: Because right now it's a picture of the website, do you like that format or would you rather it be different?

R: I don't have e-mail and I don't have a computer, so the best way for me to receive it would be by mail.

M: Drew, how about you?

R: It would be the same way.

M: Does it bother you at all that some of these things are links or not?

R: No it doesn't bother me.

M: What about, we talked a little about the telephone calls, are there other ways that you would want to be notified about the critical peak events. Let's start with Joyce. Is the telephone generally the best way to tell you that you are having a critical peak event?

R: Well it's wonderful for me, but probably expensive for you guys. I like it, but if there is a cheaper way for you to do it.

M: How much advance notice do you think you need to alter your behavior?

R: Just a day.

M: I believe right now the calls were only a few hours before the critical peak event.

- R: I usually got the calls the day before.
- M: The day before. Does anyone feel that they needed more time or that they could react quicker?
- R: Mine was fast. UPS brought me my package on Friday, it was all good, so I had plenty of time.
- M: How about with the critical peak events? There were I think 11 critical peak events when the price of your electricity went up, did you feel like you needed more time than was given to you to react to that change of usage?
- R: Are you talking about the phone call or the card?
- M: The phone call that you received, I mean one of the other ways you have gotten information was by a postcard I guess.
- R: I got that too.
- R: I got that through the e-mail.
- M: Some people who have e-mail would have gotten an e-mail alert.
- R: I got both the call and the e-mail the day before. That was very helpful.
- M: Was one more helpful than the other? Did you like having them both just to make sure it caught your attention?
- R: It caught my attention because I got them both.
- R: I personally like the phone call. I think they could save their money on the postcard.
- M: Does anyone else have another...
- R: Mine was fine. When UPS brought mine to me on Friday, I thought that was good because they come with the quickness.
- M: I don't have a whole lot of other areas that I want to cover. You guys have been great. I just wanted to see if anyone has other thoughts on messages, or ways of presenting information that would be more effective than what they have seen on these alternative formats, and the sample billing analysis.
- R: I think like on your phone calls you have the day before, personally for me it's better because a lot of times if I get one four or five days ahead of time, I forget. They have called me three or four days ahead of time and then they call me the day before also, and I have had as much as three phone calls in one week on the same deal.
- M: Did you actually take action when you got those phone calls or postcards?

- R: No not really because I don't do too much difference than I normally would anyway.
- M: So do you find this information more helpful for helping you change your behavior on a day to day basis and not so much on that particular day when the critical peak event occurs.
- R: I'm just speaking for me personally. I don't do anything really any different, but when it is peak day, I try to remind them a little bit, hey this is going to be super peak tomorrow, so just take it easy. But normally we pay attention pretty close to it and I've got my bills down to \$60 or \$65 a month now and I think that's pretty darn reasonable from what it could be.
- M: And Debbie, are you still on? No, we lost Debbie. Mary, did you use this information to change your behavior?
- R: What I was doing when we would get the call a lot of times, is it's only myself and my husband in the house and my husband is retired, and I would tell him because he would use a little more during the day, and when I knew a day in advance that we would have a peak period, then I would tell him I got the call and just kind of watch it tomorrow. It made us fully aware of those times, and we were being more careful.
- M: How about you Deborah?
- R: Yep, very handy.
- M: Did you change your behavior as a result of the...
- R: I never did but I made everybody in the house change their behavior.
- M: Did you make them change their behavior everyday or was it on those critical peak days that you especially went to them and said look?
- R: It's an every day job. I have got five adults in this house, and there are four computers, there's five televisions, there are four stereos, and I just have to yell at everybody, turn the light out, turn the thing off, if you are not in the room, turn everything off.
- R: I'd be selling equipment.
- R: If you don't do it everyday, it ain't no use. You have got to practice it everyday, not just once a month.
- R: Everybody hates me because I am always telling them to turn it off.
- R: Well they call me Scrooge.
- M: And Joyce how about you, did you find that you were able to alter your behavior based on the billing analysis that you received?
- R: Absolutely.

M: Was it something that you used to change your behavior everyday, or did you look at these things and change your behavior on those specific critical peak days?

R: Like I said when I first started getting this I was more aware, I paid more attention, but of course when you get the phone call thing then you pay more attention. The phone calls were very helpful for me.

M: That's pretty much it. Does anybody have any last minute comments they want to make on other information that would be helpful to you to reduce your electricity use? I think that comment about some information about the utilities programs is a good comment. Is there anything else that you want the utilities to hear because they will get this information and try to incorporate it into future.

R: This is Deborah and I would really love them to continue the Shift and Save.

R: I think they should put it on everything, not just some of that we volunteer for. There are a lot of people that don't even think anything of it, and here we are trying to save and keep off of everything and I think they should make it for everybody.

M: Expand the program more?

R: Yes.

R: Right.

R: This is Debbie, I made it back. Is that something they are planning on doing?

M: I think that lays with the Public Utilities Commission and the utilities, so that's beyond my knowledge of the program.

R: Well you could put a bug in their ear and tell them that your focus group says go to Shift and Save.

M: That's exactly right because that's what this is about because it is a pilot program and they want to see how well it does, so they will get the feedback that it has been successful and people really like it. I believe that you were on the Shift and Save program, most of you are on the Shift and Save program even before receiving these billing analysis.

R: *(Positive Responses)*

M: Do you feel like you made more changes because of the billing office and you are really happy with the billing office, or was it pretty much the same as when you got on the program originally?

R: I think the billing analysis helped.

M: It kind of gave you another push.

R: It gave us a focus.

M: Any other comments?

R: I definitely think it does too, this is Joyce.

R: This is Deborah, and when I started the program I continued the practice all the way through.

M: So even before you got the billing analysis?

R: Yes.

M: You were yelling at your people?

R: Yes. I'm the one who is paying the bills.

R: My grandson will be here, he's 8 or 9 years old, he'll be here and he'll look up and say grandma you can't cook it's peak time.

M: Definitely the education is here. Any other last minute comments or anything else you think would be useful to you or that you want the utilities to provide?

R: You know what, being everybody watches T.V., why don't they have something like this on a television program.

M: Just alerting people?

R: Yes. It might be effective. I think it would be.

M: I know sometimes in California they have the air days and they tell you the level.

R: It tells you whether to breathe or not to breathe.

R: Do you think that would be a good thing if they could have a program to save some energy, what to do and not to do?

M: Anybody else have any comments on that?

R: That sounds good. Like a 60 second commercial type thing.

R: An energy alert.

M: Do you think that this information would be useful even to people who weren't on the critical peak rates? So say they have just a regular billing rate, they don't have these event days.

R: It would be a savings for them.

M: Any other comments before we go. We get to wrap it up early. Well thank you again. Like I said before you should receive a check by regular mail within a couple of weeks as

11/15/05 - 6:45 p.m.

a thank you for participating in the call, but if you have any questions and you don't receive the check, you can feel free to call either myself Jennifer Mitchell Jackson or Chris Ward who is the one who scheduled you to be in the group, and its 1-800-966-1254. Again just thank you for your help. We appreciate your time.

R: Thank you guys too. Happy Holidays to all.

M: Thank you.

(End of Tape)

11/16/05 – 6:45 p.m.

M – Moderator

R – Respondent

M: Hi. We are just waiting for some more people to join us. We have five people participating in the discussion so far. We won't actually start the official discussion until probably about five past seven. We are just chatting for a few minutes while we wait for three other people. We were just talking about compact fluorescent light bulbs. Someone had said they just learned that they are energy saving light bulbs.

R: I am having a certain amount of trouble understanding what you are saying.

M: I will try to speak up and speak a little bit more clearly. We were just chatting about compact fluorescent light bulbs, which are a type of energy saving light bulb.

R: I have one big room mostly, it is in fact lit by fluorescent lights. They are not the compact fluorescent because it's basically all, I have these fluorescent's on them, that's about it. I live in a very strange, I probably live in a very strange way.

M: What part of California are you in?

R: I'm in northern California in the foothills north and east of Sacramento, and I have a house that sits on the side of the mountain overlooking Lake Oroville.

M: How about Pamela, where are you located?

R: Fresno, California.

R: What did you say?

R: Fresno, California.

R: Is there a Patricia and a Pamela?

R: Yeah, I'm Patricia and I live in San Francisco.

R: I'm Virginia. I am the first one that spoke to you and I am from the Santa Cruz area from Capitola.

M: I'm at a disadvantage tonight because all of the people who we have asked to join us are women. As we are talking, I will just ask you to identify yourself at least for the first part of the discussion just to help a little bit. We are going to give it a couple of more minutes and then I am going to ask one of my colleagues to call the remaining people and then we will get started.

M: Hi. Who is this that joined us?

R: I'm Jill Laird.

11/16/05 – 8:45 p.m.

M: Hi Jill, I'm Jennifer.

R: Hi Jennifer.

M: I'm moderating the discussion tonight and so far we have six people, we are waiting for two more and we are just going to give them another minute or so.

R: All of a sudden it was three minutes to seven and they are probably the same as me.

M: I am going to step off the call for just a minute and I will let them my colleagues know who is not on yet, and then when I come back we will start. So it will be just a couple of more minutes.

R: Do any of you know how this is going to work? This is Becky from Nanticka?

R: This is Patricia from San Francisco. Not actually, except I think she is going to maybe ask us some questions.

R: Ask us individually?

R: Well I don't know. She will put it out there probably, and if we are going to answer we identify ourselves in the answer. That's the way I think it is, I don't know.

R: I guess we will see.

R: You guys understand all this?

R: No.

R: Thank goodness I am not the only one.

R: Me too.

R: I know it's in that envelope, but I don't always look at it.

R: I looked at it and said okay.

R: We're better this year because two of our kids went to college.

R: That's always better.

R: Our daughter moved back last year, and her two children, and they were here a whole year.

R: That's the opposite of my situation.

R: So hopefully this year will be better.

M: This is Jennifer. I am moderating tonight's discussion and I am back. Did Becky or Mary join us?

R: This is Becky.

M: And Mary? No Mary yet. We may have one other person joining us but we will just go ahead and get started. I want to welcome everyone, and again my name is Jennifer. I work for Opinion Dynamics and I am going to be moderating the discussion tonight, and right now we have seven people on the call, and I want to make sure that I have everybody's name. So I am going to call out the first names, and when I call your name I just want you to tell me two things, the first is whether you use e-mail, and the second is whether you have the handouts that came in the UPS package that was sent to you. We will go ahead and start with Becky.

R: I use e-mail and I got the packet.

M: Great. How about Jill?

R: I use e-mail and I have the packet also.

M: Claudia?

R: Yes e-mail and packet.

M: June?

R: No e-mail, but I have the packet.

M: Pamela?

R: I just started the e-mail and I have the packet.

M: Patricia?

R: No e-mail and I have the packet.

M: And Virginia?

R: No e-mail and I have the packet.

M: I want to start by giving you a little introduction. Everyone on the call is a participant in the Shift and Save Pilot program which is a program being run by the utilities in California, so as a participant in the pilot you have been receiving your regular monthly bill like every other customer in California, but over the last few months you have also been receiving either a hard copy billing analysis or an e-mail with a link to a special billing analysis, and if you look at the handout we sent, the single sheet there that says sample billing analysis at the top, that's what I am talking about when I say billing analysis. So if everyone can just kind of keep that in front of them, we will be referring to that quite often. Before I get too far, I just want to confirm that the discussion tonight

- is scheduled to last 90 minutes, so we will be off the phone by 8:30 PST and you will be receiving a check by regular mail within a couple of weeks just as a thank you for participating in the call. At least for the first part of the call I am probably just going to be calling on people. If I don't call on you though and you have something to add, you should feel free to jump in, and if you do jump in, just kind of identify yourself when you speak by your first name just so I know who is talking. Just to tell you what we want to do tonight, we want to try and provide the utilities with some feedback, and these handouts that you have in front of you are a starting point, but as a group we are trying to brainstorm and come up with even better ideas for ways of presenting information and the types of information that will help you save energy. So with that, we'll jump in. I want to ask questions, so we will call on Becky first. Everybody was notified by telephone of these critical peak events, but did you receive an e-mail notification of the critical peak events?
- R: I got three notifications, e-mail, my cell phone, and my regular phone.
- M: Okay, and on the e-mail one did you ever click on that link and get to a page that looks like this sample billing analysis?
- R: No, I never did that.
- M: How about you Jill?
- R: Usually they called me first, and so when I got on to my e-mail and saw the Shift and Save, I didn't even click on it because I knew what it was about.
- M: Did you ever get to the website that looks like this sample billing analysis?
- R: No.
- M: Claudia?
- R: Same thing. I get home phone and an e-mail and now I wish I had clicked on it.
- M: So you didn't ever look at it?
- R: No.
- M: Well you are getting a chance to look at it tonight, and I guess Pamela you said you just recently got e-mail, but did you ever get an e-mail or receive an e-mail notification?
- R: No. We have only been doing the e-mail for just a couple of weeks with them. They left several messages on my home phone.
- M: Do you recall ever receiving something like this billing analysis in the mail?
- R: Yes.
- M: Did you ever go to the internet and try to log in?

R: No I didn't.

M: How about June? Did you receive something like this by mail?

R: Yes, I get one every month.

M: And Mary? Oh, Mary's not here. Sorry. She might have. Patricia?

R: Yes, I also received by mail.

M: And Virginia?

R: By mail, yes.

M: Did any of the people that I asked about the e-mail, did any of you receive this sample billing analysis by mail?

R: This is Becky, I did.

M: You did.

R: This is Jill, I did also.

M: So it seems like even when the e-mail was sent out you also received a hard copy. So you did see it?

R: Yes.

M: Okay. Terrific.

R: Can I tell you something?

M: Sure.

R: When I was notified by phone, it would ring at the same time. I guess it was a computer doing it.

M: Or a very talented person. Did that work for you?

R: Yeah.

M: So there weren't any problems with that?

R: Oh no, not at all.

M: Let's just take a look at the Sample Billing Analysis. I want us to spend just a few minutes kind of talking generally about how useful this information is, so just take a look at it and we will start by just getting general impressions. I know you probably haven't had that much time to look at it, so as the call goes on you can add more things as you

- look at it a little bit more closely. But how about Claudia, what are your initial impressions of this Sample Billing Analysis?
- R: Very informative. It's kind of general still.
- M: How about you Jill?
- R: It was always informative and interesting.
- M: When you received it, because obviously the one in front of us is just a sample we all have one for either Jonathan Doe or Joseph Sample, but when you received yours did you feel like it was customized for you?
- R: Yes I did.
- M: How about you June, did you feel like it was customized for you?
- R: Yes. I think it obviously was.
- M: Is there anything that would have made it feel more customized?
- R: Well actually I am on another program with PG&E where I had contracted to be on where I am billed by off peak, on peak, and super peak. So I had already established, and I got a bunch of stuff from them as well, and I find that the other program has better graphics, because one of the things that I like about it is that it actually tells you how much energy you use on a specific day that they have called for super peak days.
- M: Is it hard copy information that is sent to you?
- R: Yes.
- M: Is it sent with your bill?
- R: No, it's separate.
- M: And it didn't look like this? This is in coordination with the rate itself.
- R: No.
- R: What's the other program called? This is Becky.
- R: I have no idea.
- R: I know this is called Shift and Save, right?
- M: Right. I wasn't aware of another piece of information that was being sent out, although it is possible.

- R: It must be a different program because when someone called me up to ask me about this, it got confusing as to which program they were talking about, or which billing I was talking about. It got somewhat confusing.
- M: Tell me again, you mentioned how much energy you use. Is it every day? Is that what you liked about that other information?
- R: Well I certainly liked it, it doesn't tell you how much you use everyday except that it will tell you how much you use on the specific days that they call for super peak billing and so I like that, and I had already gotten into the habit of not using energy from two to seven, so I had really no problems adjusting to the whole thing, and quite frankly this sample bill that you send out, eventually you see what they are talking about, but the first one I got I just sort of looked at it and thought I don't know what that is, and it just didn't seem to make much sense, but the second time I looked at it a little more carefully, finally figured out what they were talking about, and that was fine.
- M: How about you Pamela, what were your initial impressions when you got this in the mail?
- R: When I first opened it and glanced it was a little confusing, but then once I started sifting through all of the pages and it all made perfect sense, and it was pretty interesting because you don't realize what you are using and at what time. Most of our household is gone during the day and don't get home until 6:30 or 7:00 when I get home, so that's when laundry would start and dinner. It seemed like it was going to work pretty well for us.
- M: So did you find information in this to be useful?
- R: Yeah.
- M: Was there anything in particular that was more useful than other parts of the billing analysis?
- R: No basically it showed us where we could cut and save a little more. We had a pool running, the air condition, a lot of bigger stuff. We just started cutting back. There were times when the filtering system was kicking on, and we would turn the air conditioning up a little bit so it wasn't running so often.
- M: One thing I should mention because I think Pamela was flipping through the pages, the way it's formatted on the Sample Billing Analysis is different than the way you would have received it through the mail. We kind of just put it on one page so we could look at the whole thing.
- R: Can I ask you a question real quick? This is Becky. On the right hand corner is total costs, they have food storage, pool, lighting, was that on our bill?
- M: Are you looking at the alternative format?

- R: No, I am looking at the Sample Billing Analysis.
- M: And it has food storage?
- R: On the right hand corner it has total costs, and it has the different colors for food storage, pool, lighting, and I wondered if that was on our bill. I don't remember seeing that.
- M: Oh I see the pie chart kind of at the bottom right. This is an example. I am not sure if it was altered slightly. Your particular one might not have said food storage or pool if you don't have a pool.
- R: No we have a pool, but I would like to know what we use at each area.
- M: The pie chart kind of explains how much of your electricity is being used by a particular piece of equipment in your home.
- R: I didn't realize that.
- M: You didn't realize that. Are there other people, how about you Patricia, did you realize that was what?
- R: Actually I did in looking at this where she said total costs.
- M: Do you remember seeing it in some of the ones that came out each month?
- R: I don't remember, but then I didn't look that closely at the ones, certainly not as closely as I'm looking at it tonight.
- M: How about Virginia?
- R: Same thing. I really didn't pay any attention to it until you mentioned it. Now I am looking but I don't have a pool, and I live in a very tiny little house.
- M: Right, and yours wouldn't look like this, but this is just an example.
- R: I am looking, I never looked this closely before, I mean there is so much of it I had forgotten if I did. I look at it each month somewhat.
- R: This is Jill and I am just going through some of my old ones, and I have never had that on my bill either. I just get a bar chart showing off peak, on peak, super peak.
- R: This is Becky and that's what I remember getting.
- R: This is June. That's what I am talking about is the other one, and that's not a part of the peak.
- R: What I get is the first part of the Sample Billing Analysis, but not the bottom part.
- M: Okay. So you get...

- R: I get until the dark blue take action.
- M: Well that makes sense. Maybe this is just part that would show up on the internet. I am not that familiar with it, but I know this is how it was created for the internet, but then we had a lot of people who obviously don't have e-mail so they also did a mailing.
- R: That's just a bar chart with your usage for the month, on peak, off peak.
- R: Oh that part. That bar chart.
- M: Do you feel this pie chart would have been useful? Would you have liked this to be mailed out?
- R: I think it would be great.
- M: Is there anybody on the call who did see this pie chart?
- R: This is June, and yeah it comes in mine every month. I get the two pages, and the second one has the pie chart, and I must admit I looked at it, as a matter of fact I just got my last one out of the filing cabinet, and it does say food storage, lighting, other hot water, cooling, and cooking, and I know I had looked at it before and thought how would they know how much I use for each of these things.
- M: So you have this feeling that maybe it's not really customized for your home?
- R: How can they tell, when the electricity is running through the meter and it's just electricity, how do they know what is food storage, what is lighting, what is hot water? As a matter of fact my hot water is propane, it's not electric at all.
- M: Were there other people on the call tonight that felt the same way or feel the same way now?
- R: Yes. I think so too. How do they determine that?
- R: Patricia. Isn't this just a not particularly specific, but an average thing? That's what I thought it was. I didn't feel that it was specific to particularly my house or apartment, or whatever, but that it was just generally.
- R: On the bill it says this is specific to your home.
- R: Yeah it says that, but for instance, this is June, food storage while my refrigerator is running, certainly in the summertime and no time during the peak hours do I ever have any lights on. I live on the side of a mountain with a lot of glass in my house, and I assure you that a light never goes on. My hot water is heated by butane, my cooking is as well.
- M: What about the other parts of the bill? That was Patricia that was talking?
- R: No this is June.

- M: What about like this under number two it says save money by using less peak energy and it has the bar chart, did you feel like that or do you feel like that is customized for your home, it's based on your homes use? It shows the critical peak and the on peak usage. I'll let you think about it. How about you Virginia? Did you have any feelings like it was customized or even suggestions for what would make it feel more customized for you?
- R: I think it works fine for me because they called me and told me when the critical hours are in the days that I am supposed to watch. I do and I certainly have been good with by bill.
- R: This is Becky, I would like to just try to figure out because it seems like my husband and I try to do everything they suggest and yet our bill is so high every month.
- M: When you received this Sample Billing Analysis, not the sample one, but when you received the one that is customized for your home, was it useful to you? Did it help you to reduce your usage or give you suggestions?
- R: The suggestions helped, and like I said we tried all these different things, but we really didn't, I didn't see any savings. Just one month when we had our refrigerator in the garage that was using a lot of energy, we placed it with an energy saver, the next month I saw a big savings.
- M: How about Pamela, when you looked at this, on the left had side there is a section that says number one peak energy is expensive, use it wisely, and it has some definitions of critical peak energy, on peak energy, and off peak energy and what times those are, did you find that section to be useful?
- R: Yeah it was.
- M: Did you know which times were peak, non peak, and off peak before receiving this Billing Analysis?
- R: I didn't have the exact time, it was kind of an approximate, but I thought it ended like at six. After we got it and making some adjustments and stuff, I got into the program and I saw a definite change in our PG&E. We started replacing appliances and everything else, and my bill dropped dramatically.
- M: Claudia how about you? Did you look at the section that's called Take Energy with recommendations for what to do? Did you say you had seen that before?
- R: It was all on the e-mails. I didn't get the hard copies and I never clicked on it and now I wish I had. I am very excited about seeing that because I really have a high bill and I am going I can really do better than this, and it shows me on my regular bar chart this stuff, because super peak I am great at, it's just my peak hours that I should do better at.
- M: So you have been receiving these e-mails that say tomorrow is a critical date.

- R: I turn everything off. Those super peaks I am great at.
- M: What kind of message on that e-mail do you think would have made you click? Is there something that you would have read or something they could have said to make you look at that?
- R: Yeah because it said your bill is ready but it just didn't get my interest enough to click on it and find out all the information that's on it.
- M: What do you think it would take? Win \$100 million dollars?
- R: That would get most of us.
- M: Is there something that would have been catching or something they could have said?
- R: There's something, I don't know what it is, instead of just saying your bill is ready and whatever.
- R: This is Jill, I just thought it was repetitive. I thought if I clicked on the e-mail it was going to be the same thing I got in the mail, so I wasn't really interested. But if I knew that this pie chart was on there telling me how my energy was being used, I would love to see that. It was, but I never clicked on it because I thought it was just exactly what I was getting in the mail. I started getting the mailers first and then somehow someone called and got my e-mail address so I thought it was the same thing.
- R: I did too. I am surprised that so many people don't know about this. I go visit people and they are washing and I am wondering why they are washing at this time.
- M: You are on a special rate where it's more expensive for you during those times because I think it's less expensive other times where they give you other services. For those people who received this in the mail and have e-mail, so Becky, Jill, Claudia, did you get, if you look at the upper right hand corner there's a section that says Get More Energy Savings Information and it has three underlined bolded areas which says Home Energy Center, Load Shift Calculator, and Thermal Calculator. Was that on the thing that was mailed to you? Do you remember seeing that?
- R: Not on mine.
- R: Was that on another bill?
- M: Right now it's on the Sample Billing Analysis upper right hand corner and it's that section that says Get More Energy Savings Information.
- R: This is Becky and I didn't see that.
- R: This is Jill and I do remember seeing that on the e-mail though.
- R: On the e-mail, not on the paper that we get in the mail.

R: This is June, and I get that all the time.

M: You see this section all the time?

R: Yeah, I have got it on my regular bill. I wanted to tell you getting back to this pie chart, I will tell you what it says on mine and you see what you make of it, your peak energy use on critical peak days was 1 KWH per day. This was lower than your average on peak energy use of 1 KWH per day, which decreased your bill by a dollar. Now would you like to work that out?

M: I have to admit I didn't follow.

R: Well what it's saying that during critical peak days I used 1 KWH, on regular on peak times I used 1 KWH, the same.

M: Pretty darn low.

R: Well see I had already got in the habit and by two o'clock in the afternoon I am ready to slow down, and in fact that two to five period is the time I am usually reading, so there is nothing on in the house except for the refrigerator, and two or three LED clocks.

M: Right. So your usage is very, very low.

R: I even got in the habit of pulling the plug on my television set because I know that I had heard some time ago about do you know how much leaking your electricity does and the instant on TV's was one of the things that they mentioned that uses a lot more power than you might think, so I even started pulling the plug on those, so there's not really much more I can do. Then I do turn the T.V. on at five o'clock and start watching the news, but otherwise I could stop watching the news from five to seven, but that's not likely to happen, and since I've got it down to 1 KWH during that time anyway, it's not that big a deal.

M: I wanted to just talk a little bit about these sections of Home Energy Center, the Load Shift Calculator, and Thermal Calculator because it sounds like nobody really explored those, but those are actually additional resources that if you did have internet access you could go into that and use those tools to understand your usage and ways that you could save. I know again that nobody really had a chance to explore that, but let me ask Pamela since you are new e-mail person, is that something that you think you would be interested in exploring?

R: I'll go in and start looking at them.

M: It might be useful now that you look at it and understand what it is.

R: Yeah.

M: Anybody else like Claudia?

- R: I will definitely look at that. I just didn't realize, I thought it was like a copy of my bill. It didn't occur to me that it was an analysis.
- R: This is Becky, I thought the same thing and I am anxious to go in and look now.
- M: I think receiving it in hard copy it maybe made you think that too because it is a link but it's obviously not going to be a link on your piece of paper. And just to clarify we talked a little bit about this being customized and how much it is customized or not, and what was done, they did do a survey of your home and you probably answered it or maybe someone else in your home gave some information about what is in your home, so that's how they know if you have a pool or not, so they do try to customize this billing analysis for your home based on the equipment in your home and the answers that you gave. That doesn't mean they couldn't do an even better job if they asked you maybe some other questions, but I just wanted to clarify that there is some customization that occurs. So that pie chart they attempted to customize it for your home, or they would have attempted.
- R: This is Pam, it seems like at the time they called to see if we wanted to be set up to see if we wanted to try the Shift and Save, they had asked all these questions and then they sent out a questionnaire mailer just within a week or so it seems like I got it and filled all the information out. They asked how many ceiling fans, how many refrigerators, air conditioners, heaters, what type, and all that.
- M: Right, and it's that survey, and maybe as a regular customer you don't associate this survey that you might have taken months ago within this billing analysis that came out, and maybe I don't know, Virginia do you think it would help you if you knew that this was customized based on the survey information you gave or something like that?
- R: I told them that everything I had in my house which is very little, I have a tiny little house, I don't have any cooling system, no washer, I live in practically one room, a light on the lagoon in Capitola.
- R: Your bill must be really low?
- M: How about Patricia? Did you realize that the survey that you took...
- R: If you really want to know, I don't remember the survey.
- R: I remember the survey.
- R: I don't remember the survey either, but it doesn't mean that it didn't happen, it wasn't important enough that I noticed it, I guess.
- R: I didn't remember, this is Patricia, I didn't remember anyone calling on a survey and asking about the different things that I have, T.V., refrigerator, whatever. Maybe they did and I just don't remember it.

M: Or it could have been by mail, I don't know all the details of what went into it, so I might have misspoke as far as the calling.

R: Yeah, because I have a small apartment also.

M: Well they might have just looked in your home.

R: This is Becky and I remember when they first asked me to be on the program and they sent the questionnaire, and that was a year and one half ago, wasn't it?

M: Right.

R: That was some time ago.

M: That might be it too. That might be what they used to input into this. Let's go ahead and look at some of these alternative formats too just to give us a sense of how else they might present information and which ones you might like better or worse. If you can pull out the handout that's the three pages stapled together. These are just again mockups, they are not really completely formatted and you may notice that this first one, alternative format number one, is actually for a business, so you actually have to put on your glasses there and pretend it says residential and it's customized for your home. The one that comes to your home wouldn't be talking about office equipment, but it would be talking about your home. Let's start with Jill. What are your initial impressions of this one and how it compares to the Sample Billing Analysis that is on the single page?

R: Just taking a glance at it, I like the pie chart and I like the monthly and annual comparisons, and the critical peak week, that works fine too, but when it's a critical peak time I am so careful. I don't think I could save anywhere else. I am really aware that it's happening. It's fun to see the bar chart when it comes, but sometimes, I live in Fresno and it's 115 degrees and we have to have our air on a little bit and it's so expensive. That's the part I hated about this, but it's good to see how much we did use, but again the pie chart and just to compare, I like the comparison.

M: How about Pamela, how do you think this compares to the Sample Billing Analysis? Do you think it's more or less difficult to read?

R: I think it's about the same. I think the pie chart would be quite helpful, and I agree with the monthly and annual comparison. I liked it, but I also live in Fresno, and when it's 115 degrees, I'm in an older home, you come home and it's almost 100 degrees in the house sometimes, it's hard not to turn that air conditioning on to cool it off, so I am guilty of blowing a couple of peak times. I think this sample is actually better than what we got, and I thought at the time what we got was quite helpful.

M: What makes you say that? What do you like about it?

R: I think it just goes into more depth, more in depth information. The pie chart breaks it down more. To see what we use currently as compared to this time last month, or even this time last year, I don't know for some reason it interests me.

M: How about you Claudia, how do you like this alternative format number one? Do you like it, do you dislike it?

R: I like it. It's a little bit more readable.

M: Maybe a little bit simpler?

R: Yes.

M: Do you like the fact that it has more of the graphics?

R: Yeah, anytime you don't have a lot of writing, you will actually look at it. The graphics catches your eye and then you look at it and then you will read. Too much writing you don't read any of it.

M: Patricia, if you look at the second graphic down, it's a bar and it kind of shows where your home and how it compares to the average home, is that something that would be of interest to you? That performance gauge?

R: Yeah I think so. I never really studied this before, but in studying it I think it probably could help except that I am just not home that much. I don't get home until probably six o'clock, and I leave about five o'clock. I think most of mine is off peak, but my bill still seems to be a pretty good amount.

M: Let's go ahead and look at, we are going to flip through some of these other ones too, so let's look at alternative format number two, the second page, and I will ask Becky, what are your impressions of this format and how it compares to the other ones?

R: Well I liked the first one best.

M: The first one meaning?

R: The one that we just looked at, the alternative format number one. It seems like it was a lot clearer. Someone else said it, the less wording and more graphs, it seems like it makes it simpler. You are more apt to read it.

M: If you look at the Sample Billing Analysis at the very top, this is the single sheet of paper again, under the name, and the account number, and the address, there is a section that says this summer you could save X amount of dollars and it has your savings in July, your savings in August, and then how much more you have to go to get to your peak savings goal. On alternative format number two, there is an orange bar in the middle that is supposed to show the same type of information but in a graphic form, so it shows your savings in June, your savings in July, your savings in August, and you are trying to get to that savings goal. Which presentation of that material do you like more?

R: I like, this is Becky, I like the one on the first page.

M: The Sample Billing Analysis?

R: Yes.

M: So in that case you like the text a little bit more?

R: Right. Really it's fine but this other one is easier to understand.

M: How about you June?

R: I don't know, either one of them look okay, it's simply a matter I think of what you get used to.

M: Was it clear to you what that first section where it shows the savings, was that clear to you?

R: On the sample billing?

M: Correct.

R: Yeah.

M: So you didn't need the bar chart, you understood what it was?

R: It's kind of a bar anyway, isn't it? I think it's sort of like one and half of the other.

M: Let's go ahead and look at the final alternative format number three, and maybe Jill can just kind of give her impressions of this format.

R: I haven't even looked at this one yet.

M: It's got a lot more words, a little bit more newsletter like.

R: When I read use the pool time or save \$9.00, I am always thinking I am already using it off peak hours, I am doing the best I can, like I think I know all that stuff already. I have four teenagers and when they come home at three o'clock and they start cooking, and turning the air on, and all that stuff, I am trying to teach them, but when it's a hot day, it's kind of like I already know this, but sometimes we just don't use it wisely, the power wisely.

R: It's kind of beyond your control. This is June, and the point is of course I live alone so I can do whatever I want, and I have complete control over it, and the thought of trying to master something with three or four teenagers is just impossible. What I do all the time is when it's a hot day and we get up to 110 degrees up here sometimes too, but what I do is I cool the house down pretty good before two o'clock, and then simply turn the air conditioning off, but I live in a house that's only about five years old, and it's built with a big overhang on the south, so that in the summertime the sun doesn't get to the windows, and everything is double insulated, so during that two to seven period, the temperature will only go up about ten degrees, almost no matter how hot it gets outside.

M: I am kind of hearing mixed messages because I know a lot of people feel that there is not a whole lot more they can do, they are taking the actions, they are not using energy during the peak times, and obviously they have to clean their point at some point.

R: Early in the morning we have changed everything that we do, this is Jill again, but as far as just living in Fresno in the middle of the summer, that's the hardest time for us, otherwise we are fine with the Shift and Save. We don't run the heat if it's a critical peak day, which rarely happens in the winter, but we can handle all that, but if you are having guests over at six o'clock on a 115 degree day, then...

M: Yeah, you are going to use your air conditioner, or you are not going to have guests. Would you want this information now? I know you feel like it's limited to what you can do, do you feel like the information that's being provided is useful to some degree or at least interesting to you?

R: It's a good reminder, but I think most of us know it already. I know to use the pool sweep early in the morning, turn lights off, I know all that...

(End of Side One of Tape)

M: Well it sounds like there is a few people on here you would be in competition with because they are doing everything too. How about, let's go to Patricia, on this alternative format number three if you look at the bottom right hand corner, there is a section that says using your programmable thermostat and you may or may not have a programmable thermostat, but this is like a little bit of information, it's a little bit newsletter like, it might change each month.

R: Which one is this?

M: On the alternative format number three, the last page that has a lot of text on it. It's kind of a brownish or grayish box at the bottom right hand corner. That box might have different information in there each month. Do you like the idea of a little bit of a newsletter feel and information that changes each month, or would you prefer to have something that is more static, and the same format each month but just kind of updates new pictures and new information based on your usage, or a combination of the two?

R: Well let's see, I don't know, I just have a thermostat that you put it on whatever degree and a lot of times I don't even use it, so that means my heat doesn't come on.

M: And there is a section in the middle of this alternative format number three that says fun facts, and rather than just presenting the direct information it's kind of like fun information. Virginia, is that something that you find appealing or is it something you can do without?

R: Which one is that?

M: Alternative format number three, it's an orange section kind of in the middle and it says fun facts, there are more than 290,000 power poles helping deliver reliable low cost

- power to Los Angeles, and of course if you weren't in Los Angeles it might say something else, but are you interested in that type of information?
- R: Sure I would read it. I read all the stuff, so I am interested in anything. I am living in the most perfect area. We don't ever get too hot. Maybe one day out of the year, and it's not really cold. It's right on the lagoon out in Santa Cruz, if anybody knows where that is. I have got fluorescent lights, I don't have a cooling system, and I am interested in all of this, and I turn mine totally off in the afternoons when I am supposed to.
- M: Pamela, you have looked at all of these formats where there is alternative format number one, number two, number three, and then the original billing analysis, which one would you prefer?
- R: I think a combination of the sample billing analysis and two.
- M: Those are somewhat similar. What is it that appeals to you about those?
- R: I like the bar that has the critical peak on, peak off. I like seeing how we are doing. Where it shows how much you have saved during peak hours, and what the savings goal is, I kind of like that from the first sample billing analysis.
- M: Jill, how about you? Do you have a preference for one format over the other or one type of information over the other?
- R: Probably the second one I like the best. I like my peak performance in the right hand bottom right.
- M: That it's kind of grouped together and presented that way.
- R: And what can I do to save more. That's kind of the thing I was talking about. I already know all that, but if I do it, that's another story, but I do know better, but it's good to be reminded I suppose.
- R: This is Patricia, I have a question. Now that the holidays are coming up, do you have any information on approximately what it costs to light your Christmas tree?
- M: I have to say I don't have any right now, but you could always try your utility company.
- R: I just think that maybe some of our bills would go up with Christmas trees.
- M: That's probably true.
- R: But who is willing to give up Christmas trees, I'm not.
- R: This is June. If you have got the new lights, those things are really tiny and usually it will say right on the light itself how much.
- M: Right, I think they do have energy savings. If you have old ones, you might want to replace them.

R: The worst part of that is if you have some really old ones, they are almost antiques.

R: Don't turn them on until seven o'clock.

M: Is there anybody that preferred a format other than alternative format number two?

R: This is June, I think two is fine.

R: This is Patricia, and I think so too, that two is pretty good. It would be nice to have, on number three where it says home analyzer, to learn what you can do, replacing something or whatever to bring your bill down. Of course living in that apartment, there's not a lot you can do about it sometimes. They buy your refrigerator.

M: June, you received this by mail, right?

R: Yes.

M: That actually is a link to an online resource that people can use and input some more information about their home and find out additional information. Is there some way that you can think of that you would want to get that type of feedback if you don't have internet you can't get onto that home analyzer? Would you want to have a tear out postcard or something else?

R: I could probably get someone to bring it up anyway for me. Some of my friends have, most of my friends have computers and all that.

M: Did anyone prefer alternative format number one to number two?

R: I did, this is Becky. I liked number one better.

R: This is Claudia, and I liked number one also.

M: The one thing I want to point out about number one is that it does not have the savings checklist on it. Do you think it's important to have that on this? I guess we will start with Claudia.

R: What I can do to save more?

M: Yeah, what I can do to save more and if you look at the sample billing analysis in the same section that's take action on critical peak days.

R: They sent us at the beginning a calculator, hard plastic type of calculator, and how much the appliances cost description, and the cost of electricity. Now it doesn't go up high enough, it only goes to \$.20 where your peak period is more, and your super peak is more.

M: Is it something that you go online to look at?

R: No they sent it to us. I thought it would be really great to calculate.

R: Is that the billing summary?

R: It came probably when I first signed up for it.

M: It's a physical calculator right?

R: It's a plastic that you can slide the insert goes, the cost of electricity is 15 ½, 14 ½, 14, 13 ½, 13, you can slide it that way, but it only goes up to \$.20, so it says home video per hour take two cents, and it goes through all the different televisions, toaster, washing machines, per hour, per day, or whatever. It would be great to know what it is costing you. That kind of thing that you can see at the peak hours this is going to cost you the same thing, or the super peak. It just doesn't go up high enough.

M: You thought that was useful. How about you Becky?

R: I never got that.

M: On alternative format one, I just wanted to point out that doesn't have these recommendations on it, do you feel like you would want the recommendations there or you could do without them?

R: I could do without them. Like everybody else is saying, we are doing everything that we can right now, and like everybody's house is different, but we have a very large house, I am so anxious to save because we pay so much every month.

M: I apologize, I can't remember if it was Patricia or June on who said they liked this number two first, but you referred to my peak performance section and also the what I can do to save more, and those kind of major messages, and those are different than what's on the Sample Billing Analysis. On the Sample Billing Analysis the messages are peak energy is expensive, save money by using less peak energy and take action. I guess let's go to Patricia. Can you think of other types of messages that would be more grabbing or resonate better with you?

R: No. In the first place I am participating in this, and I think I would read these things more carefully anyway than I did before.

M: Well that brings me back to the question I asked earlier and let me ask Jill, what would it take to get you to look at this stuff and to look at it more in depth?

R: I don't know. Honestly when I always got my bill, I was too scared to look at it, but it's getting better, I'm getting the hang of it here.

M: Just because it's too confusing?

R: No, because it's so scary because it's so expensive.

M: Okay.

- R: To get me to look at it more, like I said before I think I am doing all I can do to keep the off peak hours when I am doing things, and the on peak or super peak hours just minimal, and like I already know that, but to make me look at these handouts, I don't know. Now that I am really looking at them, they are pretty interesting. I wish I would have spent more time looking at them in the first place too, but I don't know what would make me look at them. I don't know.
- R: This is Becky, I have a question. We get two of the packets a month, the second one is called a billing summary and it's really hard to read. It has a total of OAS, and then it has the transmission distribution public purpose program.
- M: That sounds like your bill, right?
- R: No, it's a big piece of paper and it breaks it down, but it's hard to read. I like the other one that we get with the charts. This one I don't understand at all. Where it has a rate schedule, E3A, unit summary.
- M: I think a lot of those little breakout items are mandated by law, they have to send that.
- R: Is that why we get them?
- M: Yeah. I guess they don't have to explain them to you or clearly explain them, I think it is probably explained somewhere. Would you want this billing analysis to work better with your bill and help explain that stuff as well?
- R: I don't need it, because I like the charts and what I have used compared to other months or years.
- M: June, how much do you think you would be willing to pay each month for access to this type of information?
- R: To pay for it?
- M: Yes.
- R: Not much, because like I said I have got a pretty new house, it's very well insulated, it's situated to the sun so that it helps out, and I don't pay an awful lot of attention to these things when they come, but I'll make everybody really jealous, but my highest bill this summer for one month was \$35.00.
- R: I am looking at mine for \$577.00.
- R: It's a new house, it's small, there's just me, so I never have to do a load of laundry, I won't vacuum during those hours, I don't do anything.
- M: Would you use this information if it were offered to you for free do you think?
- R: Well I don't even use it very much, so as far as I am concerned I really don't need it.

M: I don't know who it was that said it was \$577.

R: That was Jill.

M: Even though you are doing all you can do, clearly you are not doing all you can do.

R: I am looking at 2004 here, but now that two kids have gone off to college it was only \$200 and something.

R: This is Becky, our August bill was \$614, but then at the time, I was telling the other ladies earlier that my daughter and two of my grandchildren were living here too, and that's when we changed the refrigerator, so what can we do?

M: Do you think, would you be willing Becky to pay for this type of information each month?

R: I know I would read it if I got it for free, but I don't think I would want to pay for it because I seem to pay so much already.

M: I am going to ask the people with e-mail addresses, so actually let's start with Pamela, in general are you willing to give out your e-mail address?

R: Sure.

M: How about you Becky?

R: Yes, I don't mind giving it out, as long as it isn't given to other businesses.

M: We are trying to figure out how the utility should deal with customers that may be aren't willing to give out their e-mail address for security reasons, or because they don't want to get spam, and a lot of times if you just call them it's difficult to just get an e-mail address without explaining to them, but then you can't explain unless you have their e-mail address. Does anyone have any suggestions for how the utility should deal with customers who aren't willing to give out their e-mail?

R: This is June, can I say that this whole Shift and Save and all this paperwork they are sending us is costing too much money, and we are paying for this information. As a matter of fact, I wrote to the CFO for PG&E and sent him all this paperwork that I get every month and said I really object to this because surely this stuff must be costing them ten dollars to send me all this stuff that they send me every month. Some of it is duplicate, most of it is just a waste of my time.

R: But this is a special program though.

M: This is a pilot and they are testing ways to send information.

R: Most of it, I think that they should be able to incorporate this stuff in the bill, and if they can do it with an extra sheet of paper that comes right along with the bill, all this extra

- stuff is just a waste of money, and it is in our PG&E bill. We are paying for it, and it seems to me that they could be more efficient. Send it out on a regular grade paper instead of this slick, heavy grade stuff.
- M: What you got for this focus group is a little different too.
- R: Except this Shift and Save we get this every month. We get a two page thing, heavy paper, slick expensive stuff, and all the time it takes to produce it, and I am absolutely certain that all that information can be formatted in a much simpler way, and just as easy to understand, and can be another piece of paper which comes along with our bill for the same postage.
- M: Patricia, how about you since you get it by mail too?
- R: Actually I feel the same way that June does. I think it's a tremendous amount of money that they are spending, although I understand that this is for the focus group.
- M: This UPS package is totally separate, but the heavier paper would you rather have had the...
- R: I just as soon gotten it with my bill on plain old paper that they do the bill on.
- M: Does anyone feel differently than that?
- R: This is Jill, from last year to this year I saved over \$500 on my PG&E bill and I don't think I would have if I wouldn't have been on the program. I don't know that I need all of the paperwork, but I don't know if they could do it every couple of months, but it does help to see that you are progressing, and you are saving money because your off peak hours are less than your neighbors who are not on the focus group.
- R: This is June, sure I think that information is useful and especially when they call super peak days and you want to double check to make sure.
- R: Just once in a while would be enough. I don't know that I need it every month, but it's nice to see that you are making progress.
- R: I think that information is useful, I just think that it could be formatted in a much...
- R: One piece of paper, small writing.
- R: I don't care about fun facts, I don't look at my bill for fun facts, and all I want to know is how much energy I have used, how much did it cost me, and I am smart enough to know what I am using and if I seem to be using too much sometimes then I will know what causes it. I just feel that there is too much trying to hand hold that I don't need.
- M: How frequently June would you want the information?
- R: I think every month is fine.

M: If it's in with your bill?

R: But it should be simple enough to be included in the bill.

R: This is Pam, I am probably like a lot of people and you open up your PG&E bill, but when we do open it we are looking at the bottom line to see what to do, but on the other hand getting this information is helpful. When I look at it and I think it's too high, right away I am going to look to see what I can do or where I can cut back to make a difference. So maybe getting the information quarterly in the bill. They have been sending out some large, I feel robbed because I got plain paper, but it was color and you could see the graph, but it was large and it wasn't folded up like a regular PG&E bill, I think they can get a lot of the information on one to two sheets quarterly.

M: Say it's in with your bill, and my first instinct is to look at the bottom line and maybe throw away the other stuff that's in there. What would make you look at this particular information, because I think even when it was sent on heavy paper, a lot of people didn't look at it that closely, so do you think you would look at it if it was in your bill and what would it take, how would you format it, or would you have one really big graphic?

R: I think I looked at it automatically because as a kid growing up my parents were constantly watching their PG&E bill, so I remember my mom looking and it would say this time last year we used this much so why is it that our bill is so much more this month, and there were rate changes and stuff in it. She would sit us down and make us try to analyze what we are using and how it changed.

M: How about Becky, you had the ability to look at it online and now that you know what it is you have these resources. Is this something now that you know that you could have looked at it online, would you have rather had it in your bill?

R: Actually I enjoy getting it every month. I really wasn't upset by the cost of paper or anything. In the future I am anxious to look at it online. Quarterly would be fine with me.

M: Would you just want to keep receiving an e-mail, or would you want something in your bill, or some other way?

R: Whatever way, because I do look at the bill, and the bill would be fine.

M: Claudia, how about you?

R: I like the e-mail and I wish I would have done it because it gave us a choice, do you want e-mail sent to you, and I chose the other but I didn't realize that. It's more graphic, the colors and everything are online much better than a little piece of paper. I think there is so much more information that they can put. The performance gauge, the monthly comparisons, those sort of things.

- R: This is Pam. I just agreed to start getting my bill online actually, so I let my husband know if you see something from PG&E e-mail print it, and it's funny it prints out on one page, but when they mail it we have an envelope full of stuff.
- M: I think for those of you who have access to e-mail, that is one of the cheaper ways to get this information to you, but not everybody has a computer, and not everybody has e-mail. How about Patricia, how often would you want to receive this information?
- R: I would think that we don't need it every month. Maybe three times or four times a year, but I think that would be sufficient.
- M: Do you know when the critical peak events occur because my initial understanding was that most of those occur in the summer, but that might be the time when you want this information more frequently I guess. Does anybody feel that they should get it more frequently in the summer than in the winter or does it not really matter what season it is?
- R: This is Becky, I think the summer months it would be nice to have a little bit more information. In the winter we never have critical peak days.
- M: Anyone else? One of the things that I think I heard was that the hard copy was not very successful in driving people to the website, even those people who got the e-mail and who have internet access didn't really go to the website after looking at that hard copy, is that correct Jill, Becky, Claudia?
- R: That's correct. I wish I had now.
- M: Can you think of anything that might have helped you?
- R: Knowing this information was on there, and more information was on there.
- M: It's great to have these focus groups, but we are not going to be able to do this with every customer.
- R: This is Claudia and I thought it was how to manage your energy more. Just the same thing, rhetoric. Like you said, do you want the same thing time after time? I think that gets boring and you won't look at all.
- M: So maybe switch the messages a little bit?
- R: So that's kind of what I thought, they just want to say turn off your air conditioner, lower this, and it was the same thing, that's why I didn't think it wasn't going to be just for me. I wanted something more personal, and if they let us know or something, for showing me for my bill, it's not just ways to save money, but how I spent the money and whatever.
- R: This is Becky. I would like to know what appliances are taking the most energy. Whether it's the cooling system, the washer/dryer.

- M: That pie chart is supposed to convey that type of information. Is there another way that you would want it?
- R: This is the first time I have seen the pie chart.
- M: So you liked that?
- R: Yeah I liked that.
- M: And that might be something that would catch your attention?
- R: That would catch my attention.
- M: Anyone else?
- R: Ask them about that what I told you the energy cost calculator and it shows exactly air conditioner, electric blanket, Christmas tree lights, clock, and all the appliances, and a description of them, and it showed you how much per hour it was, and I think that's really great.
- R: I would love to have one.
- R: Where did you get this?
- R: Edison sent it to me. Everything is on here.
- M: Do you think you need this?
- R: Like I said it only went up to \$.20 KWH and it wasn't high enough to show me how much it was charging me on my on peak.
- R: This is June, the on peak and off peak is explained though right on your bill.
- R: This calculator shows you exactly how much for the television or the microwave. Mine is like \$.11 for off peak but it's \$.27 on peak, and it's \$.64 super peak.
- M: The cost of using each appliance during the various time periods is useful. Any other comments or things you would like to see? If we don't have any other comments, that's about all I have. I want to thank you for your time.
- R: Well thank you.
- R: Thank you for your information.
- M: We appreciate all the comments that we got, and hopefully it will come back to you in some form or other whether it's lighter paper or something in your bill. Thank you again, and you should receive a check by regular mail in a couple of weeks as a thank you. If you have any questions about this focus group or other things, and you don't receive the check, you can always feel free to call me Jennifer Mitchell Jackson or Chris Ward who

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is the one that scheduled the focus group for me, and the phone number is on that letter. It's 1-800-966-1254.

R: One last thing you were wondering how people would get the e-mails, if you just assure people that it's not being used, they just want to be reassured that it's not going to be passed on, sold or anything. It's for your benefit and for you to save money.

R: That's the way I felt too.

M: Anyone else with a last minute comment? Thank you all.

(End of Tape)

Appendix H: Site Traffic and E-mail Click-Through Data

Site Traffic and E-mail Clickthrough Data - DRAFT

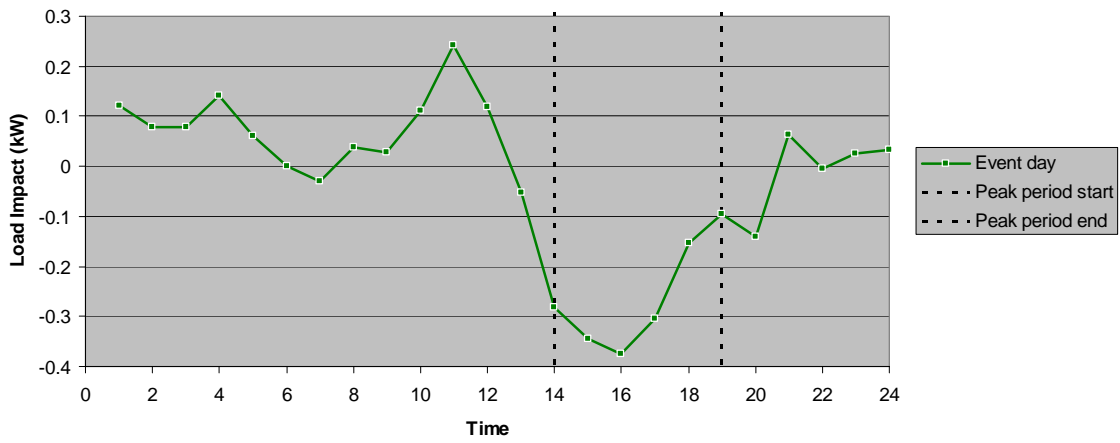
Participant reference numbers	June 24-30			July			August			September			October			June 24 - October 31			
	PG&E	SCE	SDG&E	PG&E	SCE	SDG&E	PG&E	SCE	SDG&E	PG&E	SCE	SDG&E	PG&E	SCE	SDG&E	PG&E	SCE	SDG&E	
Total Number of Participants	61	75	16	61	75	16	61	75	16	61	75	16	61	75	16	61	75	16	
Total Number of E-mail Participants	31	48	9	31	47	9	31	47	9	31	47	9	31	47	9	31	47	9	
Total Number Reporting Internet Access	39	57	9	39	57	9	39	57	9	39	57	9	39	57	9	39	57	9	
Total Number of Direct Mail Participants	30	27	7	30	28	7	30	28	7	30	28	7	30	28	7	30	28	7	
How many visited the bill analysis website?																			
Total Number of Sessions	30	36	20	26	22	13	22	28	5	26	34	17	12	21	7	115	141	58	
Total Number of Unique Users	19	19	6	19	15	4	14	22	2	16	19	8	10	15	3	49	54	14	
% of E-mail Participants	61%	40%	67%	61%	32%	44%	45%	47%	22%	52%	40%	89%	32%	32%	33%	158%	115%	156%	
% of Participants Reporting Internet Access	49%	33%	67%	49%	26%	44%	36%	39%	22%	41%	33%	89%	26%	26%	33%	126%	95%	156%	
% of All Participants	31%	25%	38%	31%	20%	25%	23%	29%	13%	26%	25%	50%	16%	20%	19%	80%	72%	88%	
Total New Users in Period	19	19	6	14	10	2	4	11	2	10	10	4	1	4	0	49	54	14	
Total Unique Return Users in Period	17	16	6	12	13	4	12	16	1	10	10	6	9	12	3	32	36	11	
What did they do at the website?																			
Average Session Time (min)	4	5	6	11	2	2	2	2	0	6	13	2	3	53	3	6	13	2	
Count Sessions Having at Least 1 Measure Checked	1	1	1	1	0	0	0	1	0	2	2	2	0	1	0	4	5	3	
Users That Viewed Long Descriptions of Measures	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	
Number of Measure Summaries Selected for Totaling Home Energy Center Sessions	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	5	0	0	
Load Shift Calculator Unique Users	7	6	7	1	0	1	0	0	2	0	0	0	0	1	0	10	7	8	
Thermo Calculator Unique Users	1	0	4	2	0	1	0	0	0	2	0	0	0	1	0	5	1	4	
How effective were e-mails - bill analysis e-mails?																			
Distribution list	10	12	0	26	41	9	32	49	0	19	36	14	25	47	10	-	-	-	
Bounces	1	1	0	2	3	0	1	1	0	1	1	0	1	3	0	-	-	-	
Total E-mails Delivered	9	11	0	24	38	9	31	48	0	18	35	14	19	44	10	101	176	33	
Total E-mails Opened	3	4	0	5	14	4	2	11	0	2	6	4	2	8	3	14	43	11	
Open Rate (b)	33%	36%	-	21%	37%	44%	6%	23%	-	11%	17%	29%	11%	18%	30%	14%	24%	33%	
Number of Unique Clicks	1	1	0	3	5	2	0	7	0	0	1	0	2	2	0	6	16	2	
Unique Click Through Rate (c)	11%	9%	-	13%	13%	22%	0%	15%	-	0%	3%	0%	11%	5%	0%	6%	9%	6%	
Number of opt outs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
How effective were e-mails - notification e-mails? (a)																			
Distribution list	31	48	9	124	188	36	31	47	9	60	92	18	116	182	36	-	-	-	
Bounces	4	5	0	10	8	0	2	2	0	3	2	0	1	3	0	-	-	-	
Total E-mails Delivered	27	43	9	114	180	36	29	45	9	57	90	18	115	179	36	342	537	108	
Total E-mails Opened	8	13	2	18	35	7	4	11	2	8	12	5	9	23	10	47	94	26	
Open Rate (b)	30%	30%	22%	16%	19%	19%	14%	24%	22%	14%	13%	28%	8%	13%	28%	14%	18%	24%	
Number of Unique Clicks	5	1	1	4	1	2	0	0	0	0	1	0	0	3	1	9	6	4	
Unique Click Through Rate (c)	19%	2%	11%	4%	1%	6%	0%	0%	0%	0%	1%	0%	0%	2%	3%	3%	1%	4%	
Number of opt outs	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	
Opt out rate	0%	2%	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	

Notes:

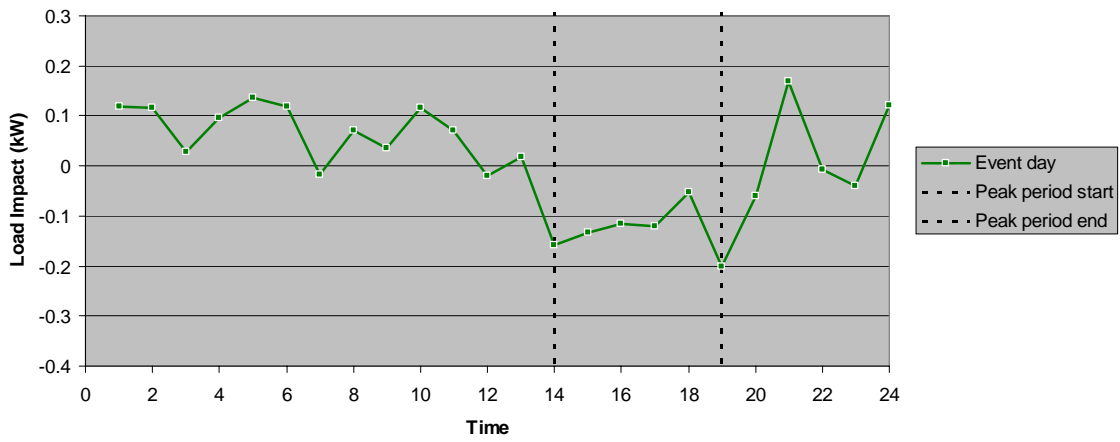
(a) Notification e-mails include site launch e-mail on June 24 and critical peak event e-mails for July 12, 13, 14 and 22; August 26; September 28, 29; October 6, 7, 13, 14.

Appendix I: Average Adjusted Load Impacts for Individual Event Days

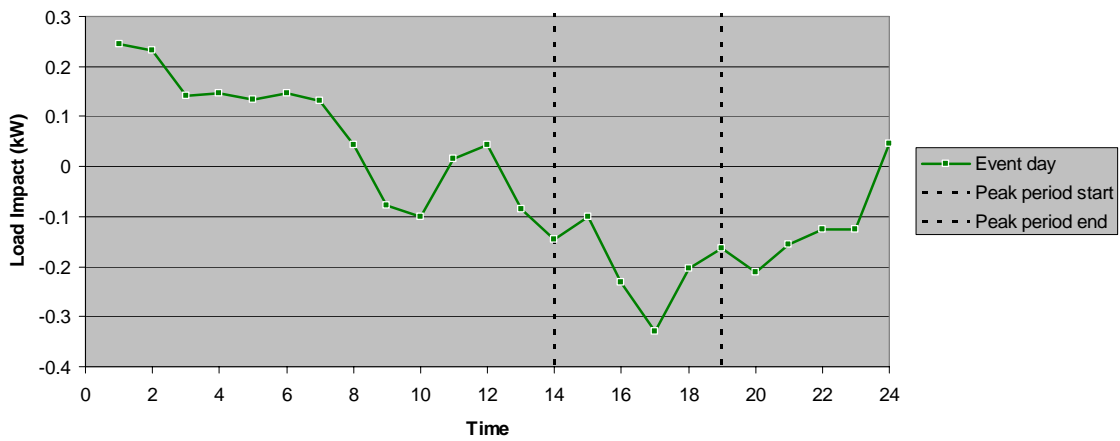
July 12. 2005



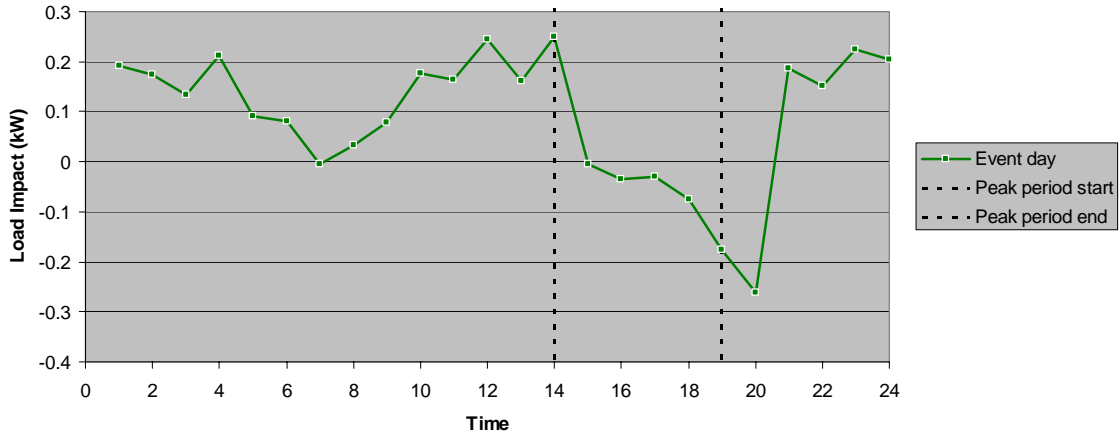
July 13. 2005



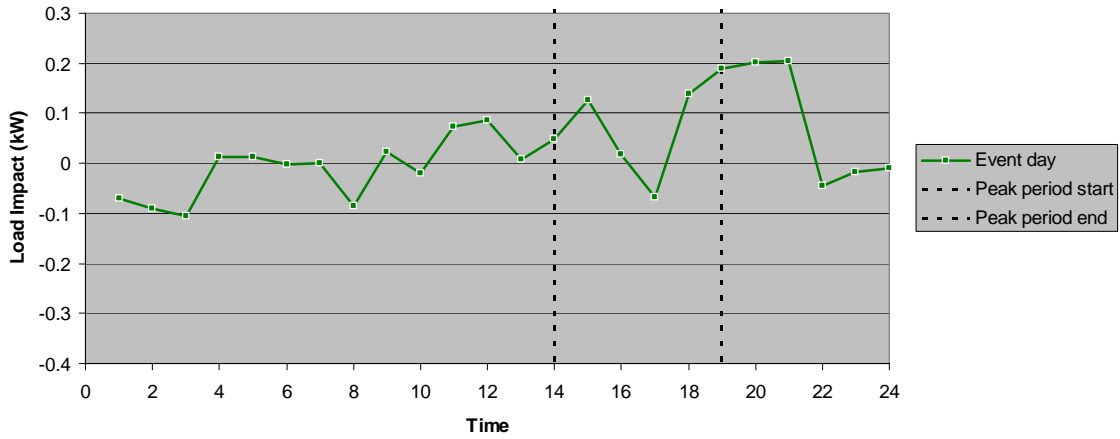
July 14. 2005



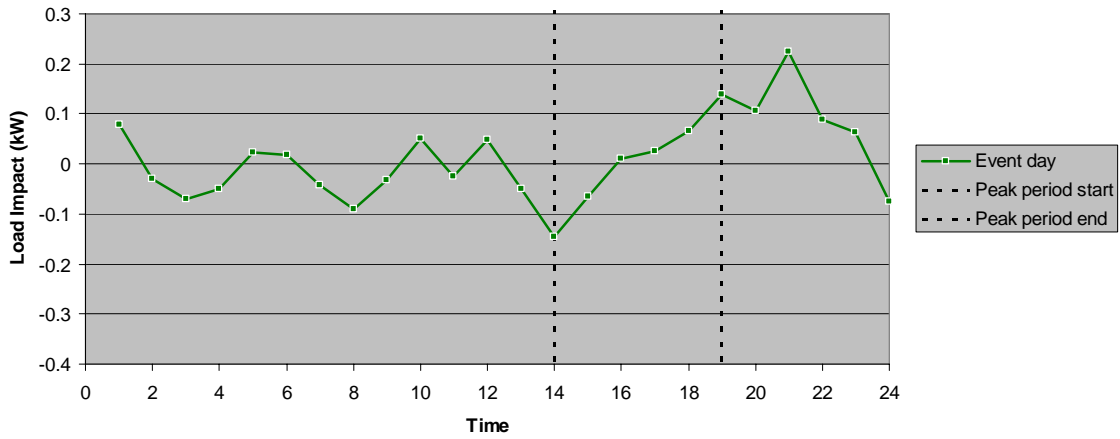
July 22. 2005



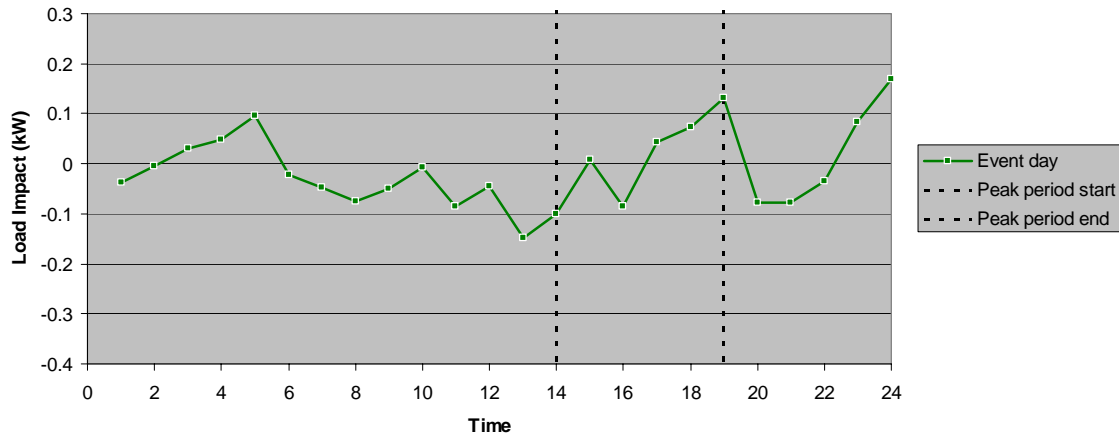
August 26. 2005



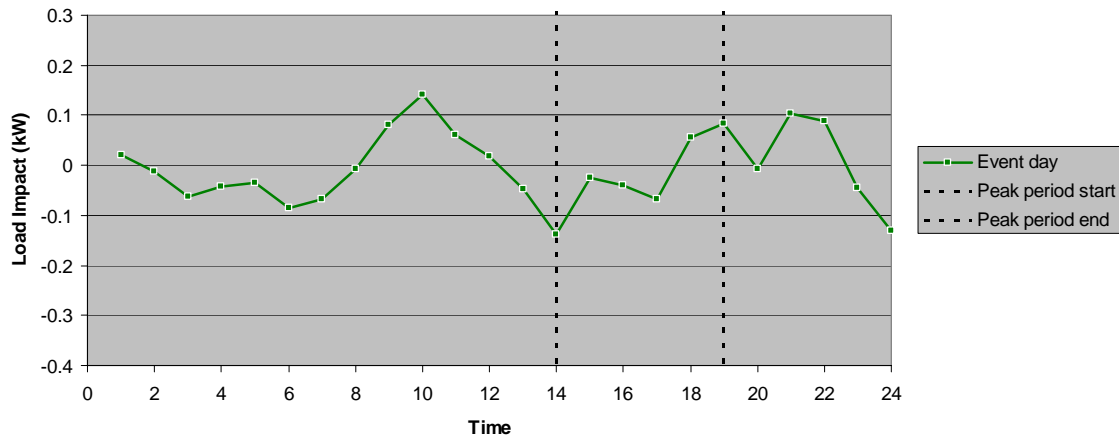
September 28. 2005



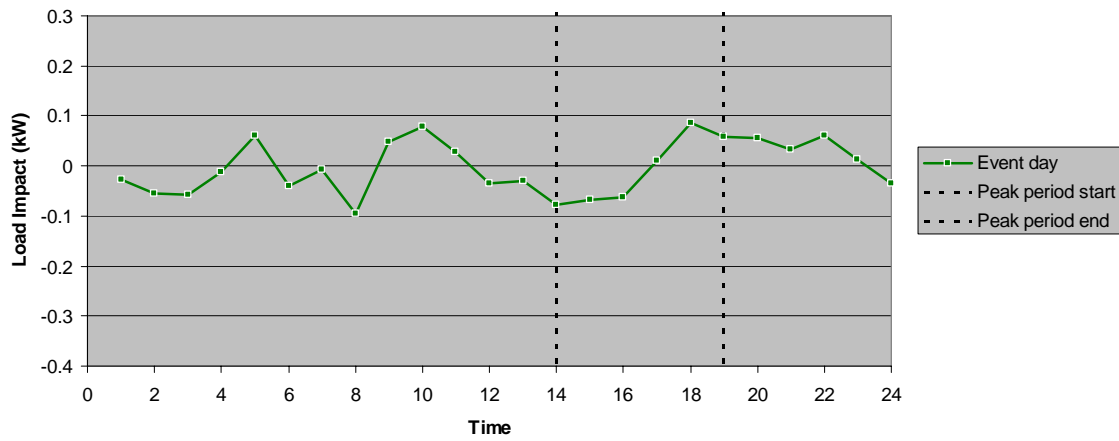
September 29. 2005



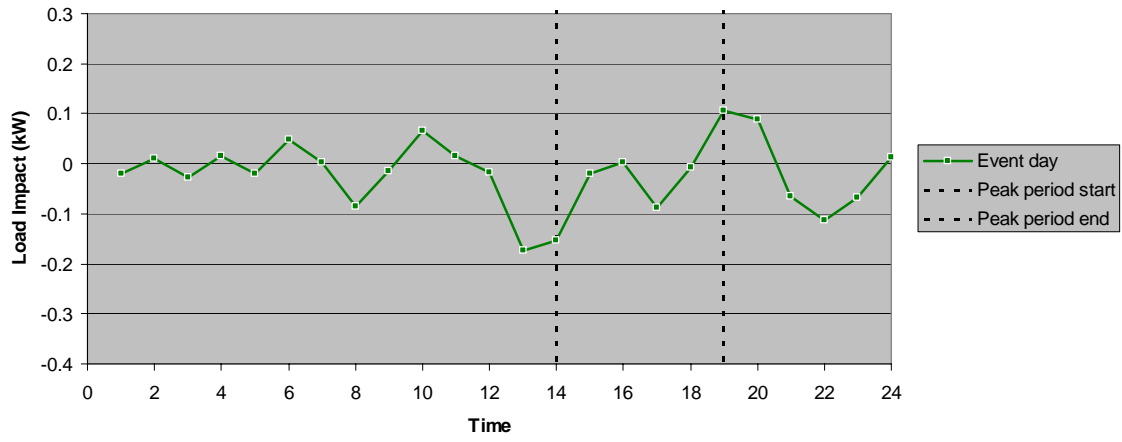
October 6. 2005



October 7. 2005



October 13. 2005



October 14. 2005

