research/into/action inc

Final Report

Peak Time Rebate Program Process Evaluation

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EXECUTIVE SUMMARY

San Diego Gas and Electric's 2012 Peak Time Rebate (PTR) rate[1] offered a bill credit to all residential and individually-metered small commercial customers who reduced their energy use when requested by SDG&E during a specific time. Customers were paid 75¢ per kilowatt hour (kWh) reduction during event periods, but were not assessed any penalties for households that did not achieve measurable reduction of electricity usage. To encourage customers to embrace automated enabling demand response technologies, the program paid a premium incentive of $1.25 per kWh reduced for customers enrolled in the Summer Saver air conditioning cycling program. Bill credits are calculated based on event day reduction in electric usage below an established customer-specific reference level (CRL) for that day.

SDG&E called a total of seven Reduce Your Use day events during the summer of 2012. In addition to alert emails sent to all customers with MyAccount, events were announced a day in advance via mass media, including radio announcements, social media, and press releases carried by other media outlets. Customers could also sign up in advance ("opt in") to receive alerts either by email or text message.

In September, 2012, San Diego Gas and Electric (SDG&E) contracted with Research Into Action to conduct a process evaluation of the Peak Time Rebate rate. The objectives of this process evaluation were to: document and assess the implementation process and identify opportunities to improve effectiveness; assess customer awareness of the program including perceptions of, and response to, curtailment requests; and evaluate the effectiveness of the messaging used in the program and suggest improvements to increase customer awareness and understanding. As part of this evaluation, the evaluation team conducted three interviews with program staff, three post-event surveys, a general survey assessing PTR opinions, and three focus groups.

This evaluation is organized around the investigation of four topics:

- PTR awareness and messaging effectiveness
- Event engagement
- Predictors of curtailment
- Opinions and feedback

The following pages provide a summary of the findings for each of these topics and the conclusions and recommendations.

[1] This program was authorized by the CPUC in the SDG&E GRC phase II rate design proceeding by decision D-08-02-034.

AWARENESS

Awareness of the RYU requests was relatively constant across the post event surveys, where the lowest levels of general request awareness were over 65% and the highest were nearly 100%. Respondents were less aware of programmatic details like the opportunity to earn a bill credit and were often unable to recall the specific date of the RYU event. The sources of awareness and the desired method of notification differed substantially between those with MyAccount and those without. Email was the best source of information for MyAccount customers, while those without MyAccount were most likely to report hearing about a RYU day on TV. Alert status is an important variable in both level of awareness and overall engagement with PTR and SDG&E messaging. The fact that customers with MyAccount have registered their email addresses with SDG&E makes them easier to reach and more likely to be aware of programmatic details than those without MyAccount.

ENGAGEMENT

Only those aware of events were asked more detailed questions about overall engagement. Among these contacts, a majority reported making an effort, including turning off lights delaying laundry, and adjusting thermostat settings. Respondents cited several factors behind their engagement including the opportunity to earn a bill credit, helping the environment, and civic responsibility. We found the Alert group contacts more often selected the bill credit as a factor behind their engagement, providing some evidence that the opportunity to earn a bill credit could be driving people to sign up for alerts.

SATISFACTION

Overall, contacts were satisfied with their PTR experience and intended to participate in the future. The RYU event requests were viewed as reasonable by most contacts, and few had complaints about the program or the requests. Although alert opt-in contacts differed demographically from San Diego customers as a whole, a large majority of event-aware contacts indicated that they would likely opt in for alerts if it was required to get an event credit. Satisfaction with the bill credit was low. Many contacts thought that the bill credit was too low, but also that the credit structure benefitted high energy users, or that their “use less than” number was too low. Although few participants were irate, for a small number of contacts the small size of the bill credit earned was a reason to not participate in the future. The most frequent suggestions for improvement concerned increasing or changing program messaging, with many also commenting on the bill credit. Publicizing the results of the event was also a popular suggestion among focus group participants. Contacts were interested in feedback-enabling technologies, and to a lesser extent, demand-response enabling technologies.

PREDICTORS OF CURTAILMENT

Although monthly usage is the largest factor explaining curtailment consistency, event behaviors do explain some of the observed curtailment. Above 260 kWh/month usage, alert opt-ins and those who track their performance online curtail more consistently than others. Below about 260 kWh/month usage, though, curtailment consistency was relatively low, and, except for a small group reporting extreme effort, not driven by reported actions or engagement with RYU days. Overall, reported event behavior explains only a small portion of measured curtailment savings.

KEY RECOMMENDATIONS AND SUPPORTING FINDINGS

	Recommendation	Finding	Why?
Residential	**Use messaging to maximize engagement of targeted segments.**	Not all customer segments are equally suited for PTR.	Awareness of PTR overall was high, but awareness of the bill credit and specific events was lower. While MyAccount holders prefer email or text event notification, non-MyAccount holders prefer mail or TV notification. This preference for mail notification suggests a lack of understanding of the PTR concept. Below 260 kWh/month usage, curtailment consistency is low and only affected by extraordinary effort on event days.
	Identify more aggressive strategies for increasing opt-in participation.	Alert opt-in is a key correlate of curtailment.	Alert opt-ins had the highest event awareness. A majority of all aware contacts reported making an effort on event days. Above 260 kWh/month usage, alert-opt-ins curtail more consistently than others. Despite demographic differences between Alert opt-ins and others, most contacts are likely to opt in for an alert if required for bill credit.
	Consider alternative incentive structures and baseline calculations.	The current incentive structure may not offer enough motivation to participate.	Motivations to participate varied, with over half of all contacts citing non-financial motivations. A majority of alert-opt ins cited the bill credit as their primary motivation, though. Reported event behavior explains a small portion of measured curtailment savings, and monthly usage is the largest factor explaining curtailment consistency. Contacts' agreement with the reasonableness of the bill credit was low and increasing or changing the bill credit was a common suggestion.
	Use interest in PTR as a gateway to other programs.	Self-reports indicate PTR engagement prompts ongoing changes.	Half of those contacts aware of PTR events reported ongoing energy-saving activities outside of event days. Some contacts were interested in more immediate or more granular event feedback, as well as feedback-enabling technologies.
Small Business	**Drop the small business sector from PTR**	Small businesses are hard to reach and have limited interest or ability to participate.	Small commercial contacts were hard to reach by email: SDG&E contact information is often for off-site staff. A majority of aware contacts did not respond to the request. Among the few responders, the bill credit was not a common motivation. Contacts' willingness to respond to future requests is lower than for residential customers; the most frequent comment was that they cannot do more than they are already doing to save energy.

CONCLUSIONS AND RECOMMENDATIONS

SDG&E faces a fundamental choice about how the PTR rate will be implemented going forward. The program can focus on getting savings from as many accounts as possible, or target a subset of SDG&E customers that have opted in. Most of the recommendations below could apply to either option, but how they are implemented will vary depending on the strategy chosen.

Conclusion

1 Not all customer segments are equally suited for PTR. Some sectors are very hard to reach, and others can do little to participate. Event awareness among customers without MyAccount lags behind awareness among those with MyAccount. Generally, low users (260 kWh a month and below) only receive incentives through extraordinary effort. Furthermore, some low users (both actual and perceived) want recognition for their daily efforts to conserve energy.

2 In the program, opting in to receive alerts was a key correlate of consistent curtailment. Opting in for an alert was the most important behavioral factor affecting curtailment performance across multiple event days. Opting in for an alert is important for two reasons. First, lack of awareness is a key barrier to participation, and opting in for an alert virtually ensures event notification. Second, opting in for an alert could reflect increased engagement with PTR because of the commitment represented in the simple action of registering for alerts.

3 The current incentive structure may not offer enough motivation to participate. While the opportunity to earn bill credits emerged as a primary motivator for opting in for an alert, among the overall population participation motivation was relatively evenly split between bill credit, civic engagement, and concern for the environment. Anecdotal evidence suggests that for many customers, the bill credit is an added bonus, rather than their main motivation for participating. Furthermore, many of the contacts who actively track their bill credits are dissatisfied with its amount.

4 Self-reports indicate that engagement with PTR is prompting customers to make ongoing changes in their energy use. Surveys indicate that at least half of those customers who are aware of PTR events report making day-to-day changes in their energy use as a result of PTR. For a notable segment of SDG&E customers, PTR appears to have created a desire for more information about their energy use, which is an opportunity to leverage existing efficiency and demand response programs.

5 Small commercial businesses are hard to reach and have limited interest and ability to participate in RYU days. SDG&E often does not have the contact information for the small business site where the events occur. More importantly, those Small Business customers who were aware of PTR had limited interest or ability to engage: alert opt-in rates and reported rates of effort to reduce energy use were notably lower than for residential customers, and contacts reported low rates of intention to participate in the future.

Recommendation

Use targeted messaging to maximize engagement. Allocate marketing and enrollment efforts towards segments that are more likely to be able and willing to take action when requested. Disengaged customers are not likely to benefit from PTR, because of the difficulty in alerting them of events. While low energy users do not need to be excluded from the program, messaging that acknowledges their existing efforts to conserve might help increase the satisfaction among this group of customers.

Identify more aggressive strategies for increasing opt-in participation. Increasing alert sign-ups would increase awareness of events, and could result in higher overall engagement with RYU days. SDG&E should consider more aggressive strategies for increasing the number of customers signed up for alerts. These strategies could include: provide an incentive to those that sign up for alerts and stay on all season; making alert registration required for receiving curtailment bill credits; offering a phone notification option (via outbound dialing) for customers resistant to email or text notification; or including an opt-in option that does not include alerts.

Consider alternative incentive structures and baseline calculations. Alternative incentive structures could complement existing social motivations to respond to RYU days. Changes could include: reframing the incentive to better reflect its value in comparison to daily energy use costs; displaying additive PTR savings across the season; aggregating and reporting savings across the SDG&E territory; testing gamification strategies; appealing to social altruism by allowing customers to donate their bill credits; incenting the alert opt-in, and providing a bonus later in the year for curtailing.

Use PTR as a gateway to other programs. SDG&E should leverage the interest in household energy use generated by PTR to funnel interested customers into other efficiency and demand response programs and provide more information. For example: the website interface used to check performance could provide links to more information about the IHD program; about the bill credit could appear next to information about Summer Savers and efficiency audits; SDG&E could offer information about or a coupon discounting an IHD to anyone who signs up for a post-event email; promote a time of use pilot or feedback programs offering home area network features.

Eliminate the small business component of RYU days. Most small businesses are unwilling to risk customer or employee discomfort in order to respond to event requests. If SDG&E is interested in continuing to target the small business community, a smaller, opt-in program could allow the utility to focus on small businesses willing or able to take action. Providing a door decal or other public display in exchange for alert opt-ins could align with the community engagement motivations of some small businesses.

1 INTRODUCTION

THIS PROJECT

In September 2012, San Diego Gas and Electric (SDG&E) contracted with Research Into Action to conduct a process evaluation of the Peak Time Rebate rate structure. The objectives of this process evaluation were to:

- Document and assess the implementation process and identify opportunities to improve effectiveness;
- Assess customer awareness of the program including perceptions of, and response to, curtailment requests; and
- Evaluate the effectiveness of the messaging used in the program and suggest improvements to increase customer awareness and understanding.

PEAK TIME REBATE PROGRAM DESCRIPTION

The 2012 Peak Time Rebate (PTR) rate[2] offered a bill credit for customers who reduced their energy use when requested by SDG&E during a specific time. These PTR events can occur as needed on any day of the year, and there is no limit to the number of events that may be called. On event days, this demand response program for residential and small commercial customers paid 75¢ per kilowatt hour (kWh) reduction between the hours of 11am and 6pm, but did not assess any penalties for households that did not achieve measurable reduction of electricity usage. To encourage customers to embrace automated enabling demand response technologies, the program paid a premium incentive of $1.25 per kWh reduced for customers enrolled in the Summer Saver air conditioning cycling program as well as those with communication or curtailment devices such as IHDs and PCTs. Bill credits for each unit of electricity reduced are calculated based on event day reduction in electric usage below an established customer-specific reference level (CRL) for that day.[3]

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2 This program was authorized by the CPUC in the SDG&E GRC phase II rate design proceeding by decision D-08-02-034.

3 The CRL for a weekday event is defined as the total consumption for the PTR event period averaged over the three (3) highest days from within the immediately preceding five (5) similar non-holiday weekdays prior to the event. The highest days are defined to be the days with the highest total consumption between 11:00 a.m. and 6:00 p.m. The similar days will exclude weekends, holidays, other PTR event days, and will exclude other demand response program event days for customers participating in multiple demand response programs. The CRL for a weekend or holiday event is defined as the total consumption during the PTR even period for the highest day from within the immediately preceding three (3) weekend days.

PTR relies on the modification of customer behavior, social change, and customer acceptance of new programs and technologies that make managing energy easier. PTR is an opportunity to begin to transform residential customers' knowledge about time-dependent energy costs through the introduction of event-driven incentive rates.[4]

Following a 2011 pilot program conducted with 3,000 randomly selected residential customers, the 2012 program enrolled all SDG&E residential and individually-metered small commercial rate customers.[5] Customers received a welcome kit describing the main features of the pilot program and inviting them to sign up to receive event notifications by text or email message.

Evolution from Pilot to Program

The 2012 PTR program differed in several ways from the 2011 PTR pilot.

- Enrollment. While the pilot enrolled 3,000 residential customers, the full program enrolled all residential and small commercial SDG&E customers.
- Program notification. The pilot informed all participants about the details of the program by mail, while the program introduced PTR to customers with MyAccount by email, sending letters only to those without MyAccount.
- Event Notification. Like the pilot, the PTR program provided an option to be alerted of RYU day events by email or text notification. For those that did not enroll in notification, the pilot used automated outbound dialing to notify customers of events, while the full PTR program relied on mass media, social media, and email to customers with MyAccount.

2012 EVENT DAYS

Notification of the program went out to participants in the second week of June 2012. The program had seven events in 2012 (Table 1). Although the first event was called as a "test" event, SDG&E provided bill credits for curtailment.

4 Request for Proposals for 2012 Peak time Rebate Evaluation, July 2012

5 Defined as those with less than 20 kW of demand who are on "Schedule A" rate.

Table 1: 2012 PTR Event Days

EVENT DATE	DAY OF WEEK	FLEX ALERT?	HIGH TEMPERATURE *
July 20 "Test" event	Friday		79
August 9	Thursday		79
August 10	Friday	Flex Alert	82
August 11	Saturday		81
August 14	Tuesday	Flex Alert	80
August 21	Tuesday		75
September 15	Saturday		101

* Weather source: Weather Underground

IMPLEMENTATION PROCESSES

The PTR program is run by SDG&E's demand response (DR) team, who activate a series of customer notification steps when a RYU day is called.

Event Calling Procedures

PTR events are called based on a combination of "soft" triggers and assessed capacity need. PTR follows capacity bidding triggers, which are based on the forecasted temperature and expected system load at 2:00 pm. In mid-day meetings during the 2012 DR season, DR staff reviewed the triggers and decided which DR programs to call based on forecasted load need.

During the DR season, the team sends out daily emails to stakeholders listing all of the DR events called that day. These emails reduce confusion about when events would be called. When a PTR event is called for the following day, staff sends two emails: an informal trigger email, giving staff early notice, and a formal trigger email. These emails set off a chain reaction of established processes at SDG&E: the DR marketing staff calls media relations and external affairs to launch media alerts while PTR staff log into the web system to send email alerts to MyAccount customers and those who opted in for text or email alerts.

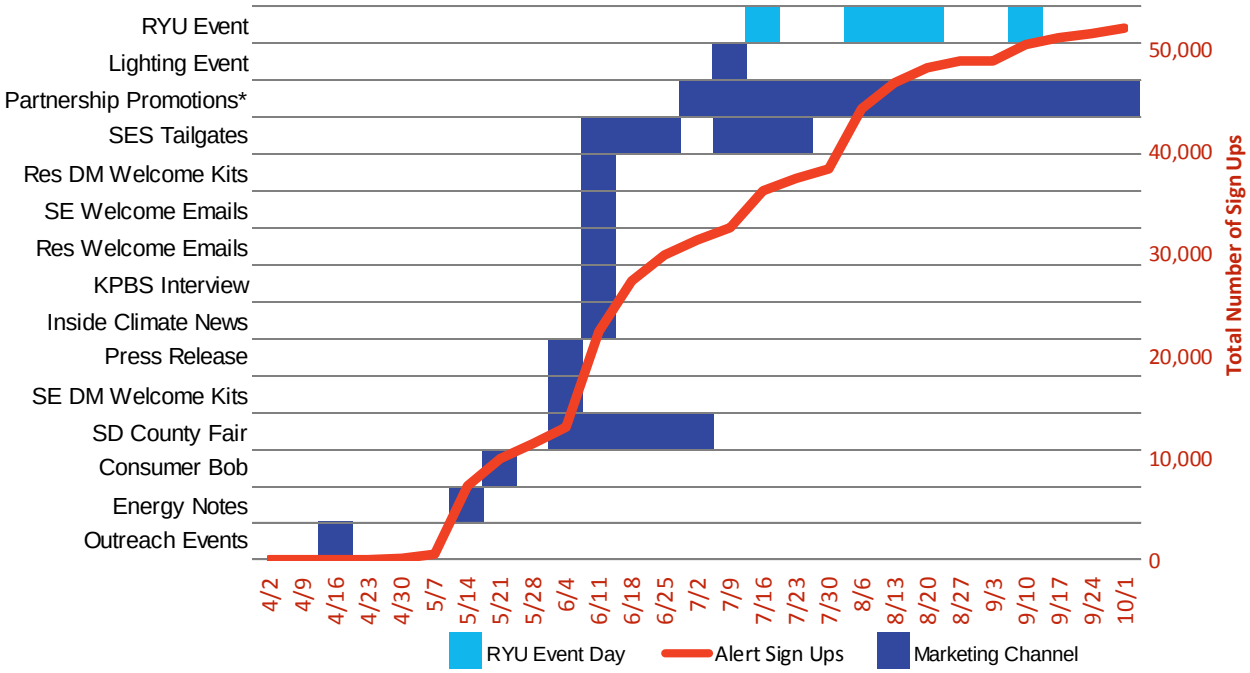
Although statewide Flex-Alert days are independent of RYU days (events that cause capacity constraints in Northern or Central California do not necessarily constrain the San Diego system), alerts for Flex-Alert days are still reported in San Diego media, including television advertisements. To minimize the potential confusion with Flex-Alert days, PTR staff decided to call RYU days on all Flex-Alert days during the demand response season.

Customer Notification

SDG&E staff employed several types of program outreach and marketing to inform customers about the opportunity to earn bill credits and to promote alert opt-ins. Figure 1 summarizes the

types of outreach and marketing activities conducted between April and October, 2012 (purple) and the cumulative number of alert signups occurring during that time period (red).

Figure 1: Outreach and Marketing Channels and Alert Opt-ins



* Partnership promotions were mostly events conducted at big box stores, and continued through October.

In the first two weeks of June, eligible residential and small business customers received a welcome email or welcome kit explaining the PTR program. For customers with MyAccount, this information was sent in a brief email with a link to the PTR website. Those customers without MyAccount received a welcome kit in the mail, containing a letter, an FAQ sheet, and a tip sheet describing what to do on event days. These mailings were similar to the pilot mailings, but combined both environmental and financial messages that had been tested previously. Both means of correspondence (mail and email) included an invitation to sign up for alerts.

Customers could have received event alerts via several channels, including:

- Radio announcements
- Press releases carried by other media
- Social media (Facebook, Twitter)
- Email (opt-in alerts and anyone with MyAccount)
- Text message (opt-in alerts)

Initial Feedback and Lessons Learned

In interviews, program staff reported leveraging good internal communication and the existing DR organizational processes. These conditions enabled them to conduct internal debriefs and respond to early lessons learned. Program staff reported that the main source of early feedback about PTR came from the call center. Program staff reported that the call center had received requests for notifications from customers without cellphones or email. Other customers called because they did not want to receive alert emails. The call center also reported that customers had called in after looking for bill credits, including some that requested bill credits for reducing their use by a fraction of a kWh.

Another source of customer confusion and complaint centered on how to view and understand the threshold for measured curtailment—the "use less than" number on their MyAccount page. Because the CRL was calculated based on a rolling algorithm of usage over the past five days, a customer's CRL could be different when they logged in to check in the day before the event then on the actual event day. Although program staff had made the decision to freeze this CRL the first time the customer logged in to view it, this decision was not implemented at program rollout, and thus some customers saw different CRLs when they logged into the website multiple times. Eventually this issue was corrected so that customers saw a consistent CRL on the website. Similarly, the website initially defaulted to a monthly view, rather than a more granular view, a mistake that was identified and corrected.

The city-wide program also revealed the shortcomings in processing event performance data: it took weeks to know how the event had gone, and the resulting analysis created bigger workload issues for staff than had been anticipated. Staff reported receiving reports of customers impatient to know their event performance.

The city-wide program also illuminated the full costs associated with weather effects on such a large-scale program. Staff found that because of the way the CRL was calculated, events on a cool day following a series of hot days greatly increased the earned bill credits.

THIS EVALUATION

In interviews, program staff identified several issues to explore through the evaluation. We have organized these issues into four main topics:

- Awareness and Messaging Effectiveness. Customer perspectives on effectiveness of messaging in increasing awareness and understanding of PTR. Topics include:
  - Awareness of PTR program elements
  - Method of awareness of PTR
  - Understanding of event requests
  - Feedback on messaging
- Event Engagement. Customer engagement with Event days. Topics include:
  - Event response

- Motivations and barriers to event response
- Use of website resources

➡ PTR Opinions and Feedback. What do customers think of events? What feedback do customers have on future events? Topics include:

- Appropriateness of SDG&E request
- Alert opt-in opinions
- Expectations for the bill credit
- Overall satisfaction
- Customer intention to continue to participate in events
- Responses to potential program changes

➡ Predictors of Curtailment. What demographic, attitudinal, and behavioral factors are associated with event curtailment?

In addition, we include a brief summary of several special populations that were surveyed about their experience during the 2012 season. These populations include subsets of the informed group: Summer Savers, San Diego Energy Challenge participants, and small commercial customers.

READING THIS REPORT

Throughout this report, we present findings from three sources of information from participants: post-event surveys, a general program survey, and three focus groups held in San Diego in January 2013. These three sources have been integrated, where appropriate, to provide insight into the four topics of interest. Purple headings indicate the topic, and grey headings indicate the data source.

We present findings by stratum, but also provide weighted totals where applicable. For more detailed information on interpreting these findings, refer to the Methodology section for definitions of response groups and weighting.

For clarity, the San Diego Energy Challenge, Summer Savers, and Small Commercial populations are generally reported separately, at the end of the report. Additional detail on topics throughout the report can also be found in the Appendices.

2 METHODOLOGY

For this process evaluation, we conducted post-event surveys immediately after each of three events. A more general program survey, fielded in December 2012, sought general information about awareness and understanding with sampled households and businesses in the SDG&E service region. We also used curtailment performance data of the sampled households that completed post-event surveys. In addition, we conducted focus groups of high and low performers in January 2013. The following describes how we collected and analyzed these data, including our sampling strategies.

DATA SOURCES AND SAMPLING

The following sections summarize data sources and sampling for both residential and small commercial populations.

Residential

We conducted four surveys and three focus groups with residential customers. Table 2 provides the survey groups for residential survey data collection activities. Both August and September included SDEC and Summer Saver groups, while July and December surveys only included Alert, MyAccount and No MyAccount groups.

Table 2: Residential survey groups

Survey Type	Month Collected	Mode	Alert	My-Account	No MyAccount	SDEC	Summer Savers
Post Event	July	Phone	X	X	X		
	August	Phone	X	X	X	X	X
	September	Phone + Web	X	X	X	X	X
General	December	Phone	X	X	X		

Table 3 shows details for all residential data collected. For all residential surveys, we stratified samples based on the following strata definitions:

- Summer Savers: Opted in to the Summer Savers demand response program. Air-conditioning is auto-curtailed through a two-way communicable thermostat on high load days. They were invited to sign up for PTR event alerts, and received augmented PTR credit of $1.25/kWh, on top of the annual bill credit they receive.
- SD Energy Challenge: Opted in to the San Diego Energy Challenge contest among SDG&E customers in the San Diego Unified School District (SDUSD), which provided

the chance to compete on behalf of their chosen SDUSD middle school to win cash grants. Participants earned points for their school of choice by saving energy on PTR event days and getting members of their community to sign up and support their team. They received PTR alerts with SDEC branding.

- Alert: Opted in to receive text or email alerts for PTR event days.
- MyAccount: Did not opt in to PTR event alert but has MyAccount.
- No MyAccount: Did not opt in to PTR event alert and does not have MyAccount.

Table 3: Residential data sources and sampling

Data Source	Mode	Strata	Sample Size	Response Rate	Time Data Collected
July Post-Event Survey	Phone	Alert	202	22%	July 2012
		MyAccount	100		
		No MyAccount	100		
		Summer Savers	-		
		SD Energy Challenge	-		
August Post-Event Survey	Phone	Alert	155	13%	August 2012
		MyAccount	70		
		No MyAccount	68		
		Summer Savers	68		
		SD Energy Challenge	70		
September Post-Event Survey	Phone + web	Alert	601	15%	September 2012
		MyAccount	787		
		No MyAccount	236		
		Summer Savers	634		
		SD Energy Challenge	627		
General Program Survey	Phone	Alert	188	22%	December 2012
		MyAccount	155		
		No MyAccount	128		
		Summer Savers	-		
		SD Energy Challenge	-		
Focus Group	Focus group	Low performers	9 to 12	-	January 2013
		High performers (2 groups)	9 to 12		

Small Commercial

Table 4 shows details for all small commercial data collected. For all small commercial surveys, we stratified the samples based on the following strata definitions:

- ➡ Alert: Opted in to receive text or email alerts for PTR event days.
- ➡ Non-alert: Did not opt in to PTR event alert. For some surveys, further stratified by:
  - MyAccount. Did not opt in to PTR event alert but has MyAccount.
  - No MyAccount. Did not opt in to PTR event alert and does not have MyAccount.

Table 4: Small commercial data sources and sampling

DATA SOURCE	MODE	STRATA	SAMPLE SIZE	RR
July Post-Event Survey	Phone	Alert	70	19%
		Non-alert	104	
August Post-Event Survey	Phone	Alert	39	16%
		Non-alert	62	
September Post-Event Survey	Phone + web	Alert	-	10%
		Non-alert MyAccount	148	
		Non-alert no MyAccount	85	

Post-Event Surveys

We conducted post-event surveys immediately after three of the seven RYU events held this summer: July 20, August 14, and September 15. The surveys asked about: respondent understanding and awareness of event days, means of notification, possible actions to reduce electricity use, intent to participate in the future, and general suggestions for program improvement.

For each of the post-event surveys, SDG&E generated a random sample of customers in each stratum from its customer database. We ensured customers were not sampled in multiple surveys. CIC Research, from its San Diego call center, completed the required number of surveys within a week after each event. The sample overrepresented the opt-in groups (Alert, Summer Savers, and San Diego Energy Challenge) relative to the population because we were particularly interested in understanding the event day experiences of those in the opt-in groups (see Survey Response Weighting for sample adjustment). In the end, all three post-event surveys' overall sample exceeded the threshold required to achieve 95%+/-5% confidence and precision. Total response rates ranged between 13% and 22% for residential respondents and between 10% and 19% for small commercial respondents. We did not include Summer Savers and San Diego Energy Challenge strata in the July post-event survey or in the general survey.

In addition, in the September post-event survey we allowed contacts to complete the survey via web in order to cost-effectively increase the number of survey respondents, and test the viability

of that survey mode for PTR. Over 2,500 respondents completed the web survey with response rates of 14% for residential and 5% for small commercial.

General Program Survey

In December 2012, we conducted a general survey of residential customers. This survey was less focused on awareness of a specific event and instead explored customer perceptions of the requests in general including customers' understanding of RYU requests, motivations, and barriers to respond to RYU requests, and other opinions relating to RYU events.

We mirrored the sampling approach used in the residential post-event surveys, and all the surveys were conducted by phone. The overall response rate was at 22%.

Focus Groups

Finally, in January 2013, we conducted focus groups with PTR participants, covering such topics as initial source of awareness, experiences with RYU days, actions taken to curtail, opinions about the structure and reasonableness of the requests, and ideas for improving the campaign. Participants in the focus groups also offered their opinions about the messaging and incentives associated with the RYU-day campaigns.

We conducted two groups in downtown San Diego and a third group in Escondido. We recruited target participants from within reasonable driving distance of the focus group locations based on zip code. All focus group participants were aware of RYU days. Of the three groups, two groups consisted of "high performers" and one group was made up of "low performers," and consisted of 9-12 participants, including a random mix of those who had and had not opted in to alerts. The definition of "high" and "low" performers is below:

- ***High performers*** had measureable curtailment for five or more PTR events and reduced their energy use by twenty percent or more across all events.
- ***Low performers*** had measurable curtailment for one or two PTR events and had an overall increase in energy use during event hours.

Each focus group had the same question structure and was moderated by the same moderator. They lasted at least ninety minutes.

Curtailment Performance Data

SDG&E provided curtailment performance data for all post-event survey respondents. This curtailment data included average monthly kWh use and the bill credit amount earned on each of the seven event days. We used this data to analyze the relationship between participants' demographics, attitudes, and reported behaviors and their energy reduction on event days.

SURVEY RESPONSE WEIGHTING

Figure 2 shows a schematic of population and sample proportions for the survey groups. As seen in the figure, Opt-in groups (including Alert, Summer Savers, and SD Energy Challenge) make up a small proportion of the population, but were oversampled in all surveys. (That is, the opt-in groups accounted for a larger proportion of the survey samples than the population as a whole.) Although this oversampling was intentional to understand these opt-in groups in more detail, we used weighting to correct for this oversampling in order to develop a representative overall estimate of SDG&E customers.

Figure 2: San Diego Post-Event and General Survey Population versus Sampling Approach

Table 5 shows specific population and sample proportions of stratification groups of all surveys in the residential and small commercial sectors. We calculated sample weights for each survey to correct for oversampling opt-in groups.

Table 5: Un-weighted population and sample proportions of stratification groups

Sector	Group	Population Percent	Residential Sample Percent			
			Post Event Surveys			General Program
			July	August	September	
Residential	Summer Savers	2%	-	16%	22%	-
	SD Energy Challenge	0.4%	-	16%	22%	-
	Alerts	3%	50%	36%	21%	40%
	MyAccount	43%	25%	16%	27%	33%
	No MyAccount	52%	25%	16%	8%	27%
	Total	**100%**	**100%**	**100%**	**100%**	**100%**
Small Commercial	Alerts	0.4%	40%	39%	-	-
	MyAccount	31%	35%	32%	64%	-
	No MyAccount	69%	25%	30%	36%	-
	Total	**100%**	**100%**	**100%**	**100%**	**-**

We used post-stratification weighting for this sample adjustment, which mathematically corrects for biases that result from oversampling. Post-stratification weights were calculated according to the following formula so that overall estimates were representative of the population:

$$Stratum\ weight = \frac{\%\ of\ stratum\ in\ population}{\%\ of\ stratum\ in\ sample}$$

While the survey responses within each stratum are reported using un-weighted data, we report overall estimates across the population using the weighted data. Note that the sample sizes of these weighted totals have not been scaled up to represent the population; rather, the relative contribution of the response groups has been scaled so that it is representative of the population.

ANALYSIS OVERVIEW

Although we analyzed each survey separately, throughout the report we have compared results across the three post-event surveys. As mentioned above, all results within strata are unweighted, and only the totals across the whole sample are weighted, which is signified in tables and figures by the label "Wt. Total."

Readers should be aware that, though showing general trends, survey data obtained in the three separate post-event surveys are not methodologically consistent in the following aspects:

- Question wording can be slightly different but measure the same concept.
- In September post-event survey, we used telephone and web modes. We found systematic differences in responses by mode. For most of the analysis, we used only telephone respondents to minimize this mode effect.
- The weighting values vary across surveys due to different sampling plans across groups.

3 AWARENESS AND MESSAGING EFFECTIVENESS

One of the main focuses of the PTR evaluation was to evaluate the effectiveness of the program messaging. Through all three data collection approaches, we sought to understand the extent to which SDG&E customers understood the PTR concept, and measure their awareness of specific event days. We also explored how customer awareness of PTR changed across the demand-response season.

AWARENESS OF PROGRAM

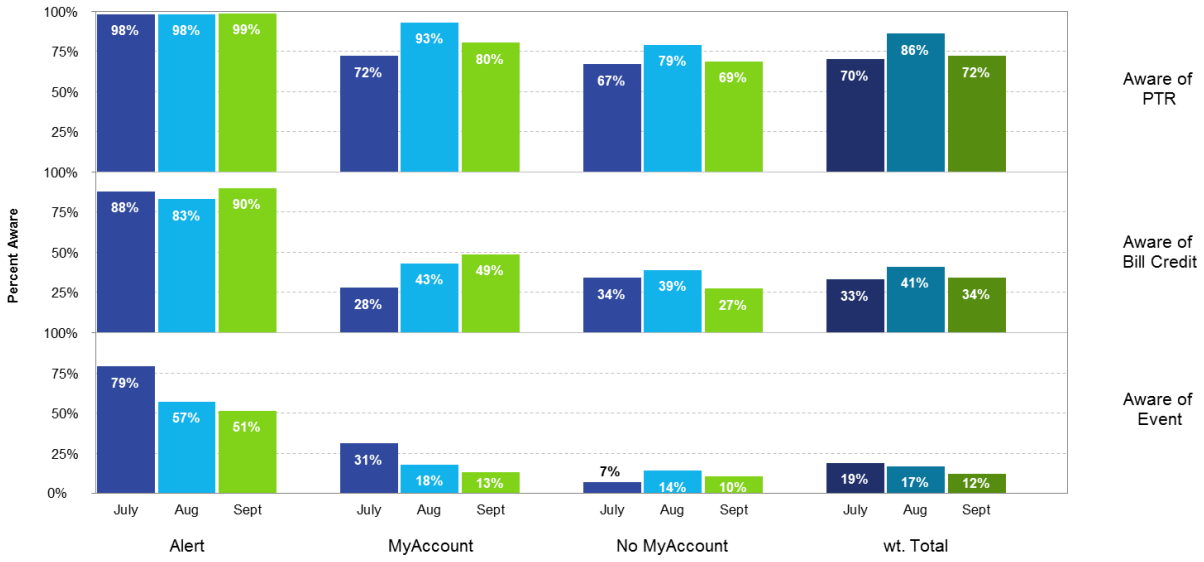
Summary: Awareness of PTR remained relatively constant across the events. General PTR awareness was high, but awareness of the bill credit and of specific events was lower. Awareness was higher among alert opt-ins than among other groups. Less than half of PTR-aware respondents were aware of the option to sign up for email or text notifications. Over three-fourths of event-aware MyAccount contacts were aware of the ability to track usage online.

Contacts reported on their awareness of the PTR concept, the bill credit, and individual events. Contacts also reported on their awareness of program features, such as the ability to opt-in for notifications and check event day performance online.

Post-Event Surveys

In each of the post-event surveys, we asked respondents about three elements of event awareness: whether they had heard anything about SDG&E's *Reduce Your Use* requests, whether they knew that they could earn bill credits for reducing electricity use during the RYU event hours, and whether they were aware of the recent event. Figure 3 shows awareness of these program elements across each of the post-event surveys and each of the three respondent groups. Overall, a majority of contacts were aware of the PTR concept, but less than half were aware of the bill credit, and less than one-fourth were aware of individual events. Awareness of the PTR concept, the bill credit, and the individual events is somewhat higher among Alert group contacts than among others. Awareness did not vary systematically across surveys.

Figure 3: Awareness of RYU days, bill credit, and event[6]



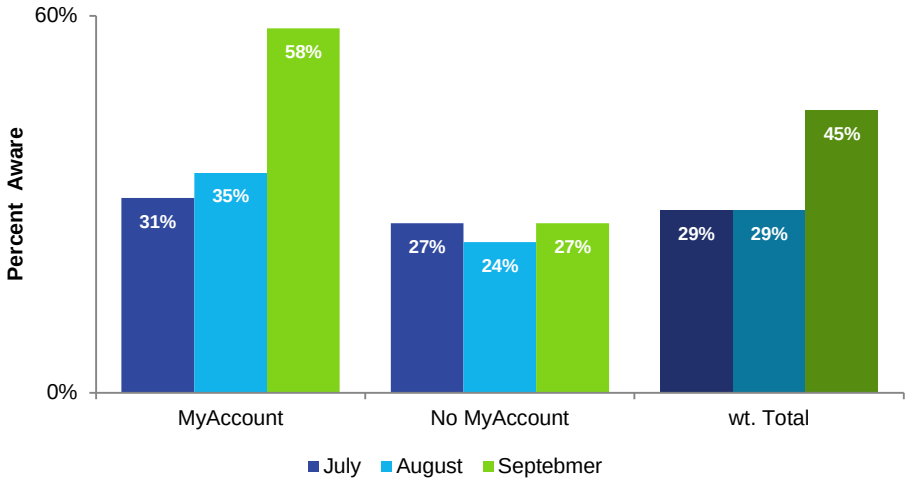
This figure excludes web respondents for the September post-event survey

When web respondents from the September post-event survey are included, it becomes clear that web respondents had higher event awareness than phone respondents (Appendix A, Figure 53). This increased awareness is unsurprising, given that most of the communication about RYU days has been through email, and a web survey sample could be effectively excluding contacts who do not read emails from SDG&E.

We also tracked the level of awareness of the email and text notification option in post-event surveys. Overall, less than a third (29%-30%) of the non-alert groups knew about the notification option, excluding web respondents. Including the web respondents substantially increases the proportion of MyAccount group contacts who were aware of the option: from 36% to 58%.

6 Survey sample sizes for Figure 3:
July: Alert (n=202), MyAccount (n=100), No MyAccount (n=100);
August: Alert (n=155), MyAccount (n=70), No MyAccount (n=68);
September: Alert (n=70), MyAccount (n=76), No MyAccount (n=77).

Figure 4: Awareness of notification option[7]

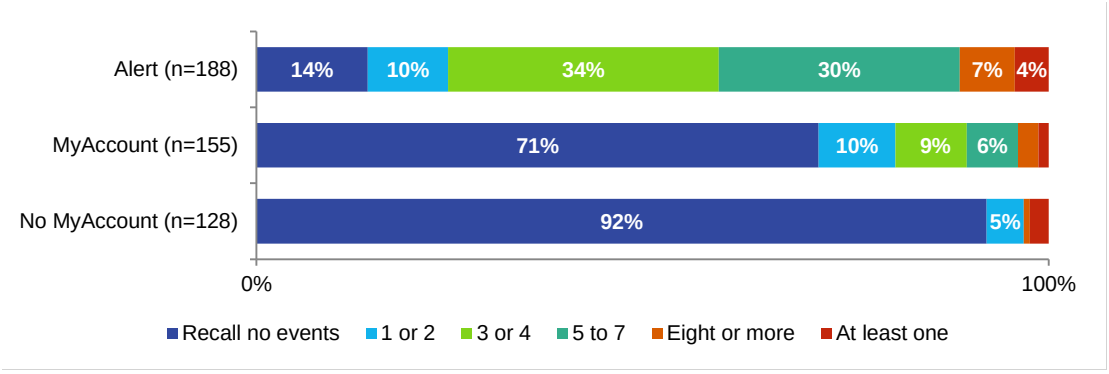


Includes web respondents for September post-event survey

General Program Survey

To gain an understanding of overall PTR event awareness and retention, in the general survey, we asked contacts about the number of events they recalled. Figure 5 shows that event recall varied considerably across groups. A majority of MyAccount and no MyAccount group contacts recalled no specific events (although many were aware of the PTR concept, see Figure 54 in Appendix A). Among those who recalled any events, a minority of contacts recalled more than four. These findings are expected, given that two months had passed since the last event, but suggest that reeducation may be needed in future PTR seasons.

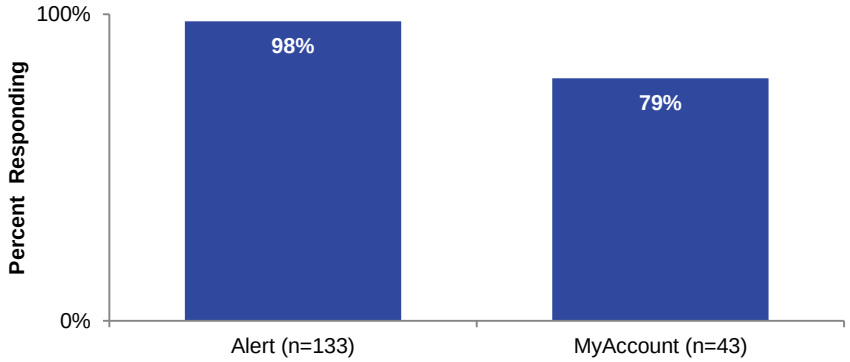
Figure 5: Number of RYU events recalled



[7] Survey sample sizes for Figure 4:
July: Alert (n=64), MyAccount (n=62);
August: Alert (n=46), MyAccount (n=46);
September: Alert (n=657), MyAccount (n=158).

General survey contacts with MyAccount also reported their awareness of the option to check their energy use on SDG&E's website. Over three-fourths of event-aware contacts were aware of this opportunity (Figure 6).

Figure 6: Knowledge of option to check event day energy use on SDG&E's website



Focus Groups

All focus group participants indicated that they were consistently aware of the Reduce Your Use Day events, either through opting in for an alert or by learning of the events through an announcement in the media. Participants were, however, often unsure about the total number of events that had been called in the prior summer, with some recalling more events than others.

About half of the focus group participants reported being aware of option to sign up for any form of alert. Low performers had less awareness of this option to sign up for alerts.

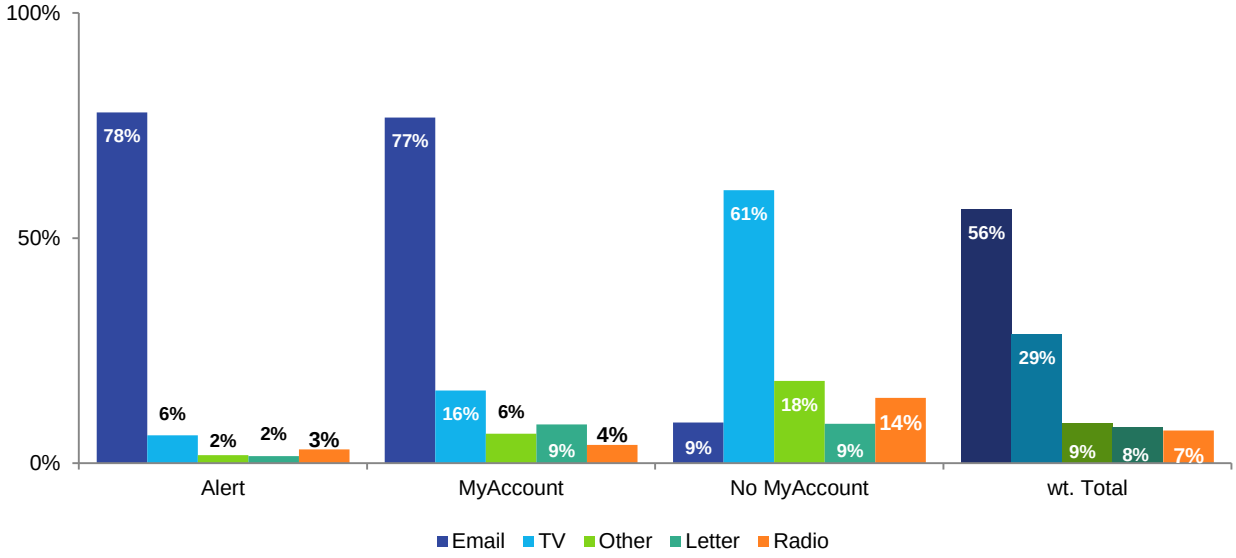
METHOD OF AWARENESS

Summary: Sources of event awareness varied across groups. While contacts reported a variety of means of learning about the PTR concept generally, email (for Alert opt-ins and MyAccount holders) and TV (for those without MyAccount) were the primary means of event awareness overall.

Post-Event Surveys

In post-event surveys, event-aware contacts reported how they had learned of the event day (Figure 7). The most common sources of awareness varied across groups, with email by far the most common source of awareness among Alert and MyAccount group contacts, and TV being the most common source of awareness among the no MyAccount group. The detailed figures in Appendix A (Figure 56, Figure 57, and Figure 58) demonstrate the effects of the FlexAlert day on reported means of awareness. In August, the proportion of No MyAccount group contacts reporting awareness via TV reflects the likely increase in TV coverage the FlexAlert day received.

Figure 7: Top methods of event awareness, averaged across post-event surveys (Multiple responses allowed)[8]

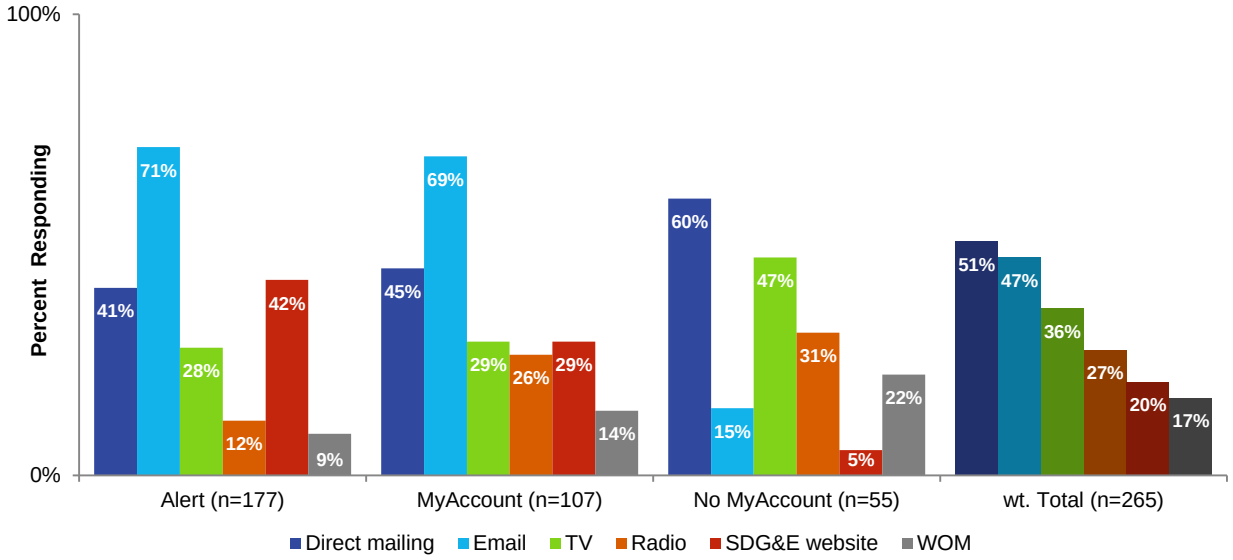


General Program Survey

General survey contacts (including those who reported general awareness of PTR, but not awareness of a specific event) also reported on how they learned of PTR generally (Figure 8). Unlike the means of awareness of specific events reported in the post-event surveys (Figure 7), contacts reported learning of PTR from a variety of sources. Mail was the most commonly reported source of program awareness (51% overall), followed by email, TV, radio and the SDG&E website. Means of awareness differed across the groups: two-thirds of Alert and MyAccount group contacts mentioned email as a source of awareness, compared with less than one-fifth of no MyAccount contacts. Similarly, mail and TV were relatively more frequent sources of awareness for no MyAccount group contacts than others.

[8] Asked of event-aware contacts. See Appendix A for sample sizes.

Figure 8: Top sources of PTR awareness by group (Multiple responses allowed)



Focus Groups

Focus group participants were recruited based on their awareness of the RYU-day campaigns, therefore all participants were at least aware of the promotion. Focus group participants reported varying ways of becoming aware of the Reduce Your Use Days campaign, including emails with their bill, radio ads, mailers, television, and word of mouth.

Focus groups participants recalled seeing messaging from the Reduce Your Use Days campaign consistently and from multiple sources. In addition to promotional ads or alerts, several also mentioned discussing the events with their families, friends, and/or coworkers.

UNDERSTANDING OF REQUESTS

Summary: Among those aware of PTR, most had an understanding of the PTR concept (earning bill credits for energy use reduction on specific days), but one-third of those who had not opted in for an alert were unaware of the bill credit. There was also some confusion over whether alert opt-in was required to participate.

We also attempted to understand the extent to which contacts understood the RYU requests. We identified knowledge of the energy use reduction on a specific day and awareness of the bill credit as the two central elements of the event. To quantify "understanding" of these two concepts, we looked at contacts' unaided recall of event messaging and at awareness of the bill credit. More generally, we also categorized the types of misunderstandings and confusions participants reported in general program feedback.

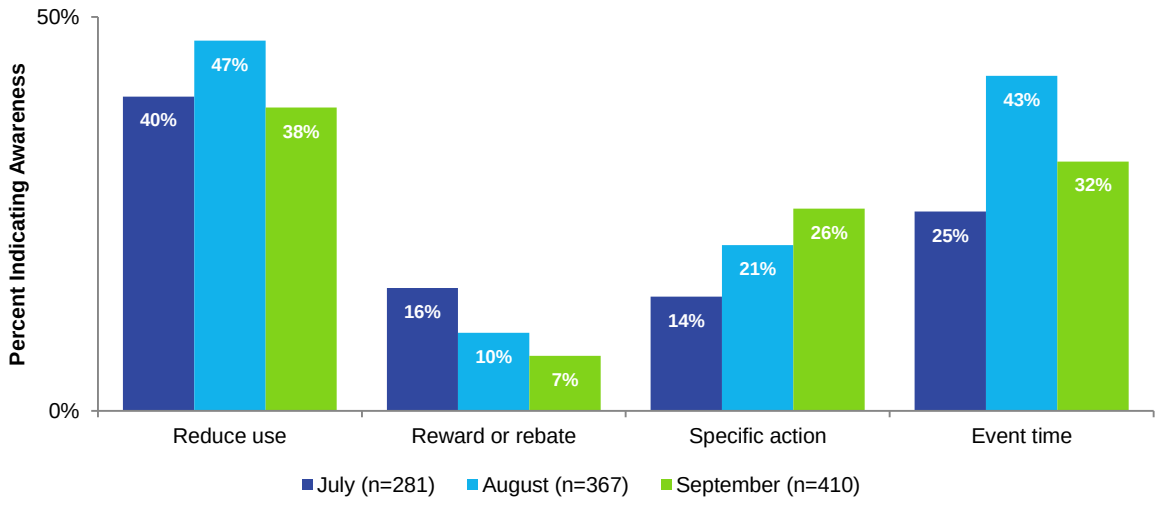
Post-Event Surveys

In all three post-event surveys, we asked in an open-ended format what event-aware contacts remembered the RYU requests asked them to do. We then coded the verbatim responses based on four ideas:

1. Any mentions of *reduce use* or *conservation* – anything that indicated understanding of using less energy;
2. Any mentions of *incentives, credits* – anything that indicated understanding of reward structure;
3. Any mentions of specific energy reduction actions; and
4. Mentions such as *certain time of the day between 11am and 6pm* – anything that indicated understanding of event time.

The most common ideas that the respondents recalled were *reducing use* and *event time* (Figure 9). Awareness of event time is important in that it is an indicator that respondents truly are separating RYU-day messaging from standard energy efficiency or conservation messages. A notable portion of respondents also reported that RYU requests suggested some specific actions they could take such as turning up air conditioning temperature setting or unplugging unused electronics and appliances. Throughout the three surveys, the bill credit was the least frequently mentioned of these concepts.

Figure 9: Message content recall



Percentages are weighted totals of event-aware Alert, MyAccount, and No MyAccount group contacts.

We also categorized the types of confusion expressed by contacts in open-ended comments made during the third post-event survey. Relatively few contacts (5% of those commenting) reported

confusion about the program. Of these commenters, the most common types of confusion concerned the bill credit calculation and amount (Table 6). Relatively few contacts offered comments that indicated global program confusion, or indicated a fundamental misunderstanding of the program.

Table 6: Open-ended comments on program confusion (Multiple responses allowed)

TOPIC	PERCENT (N=42)
Baseline calculation confusion	48%
More information about amount of cost savings	33%
General program confusion	21%

Unweighted results from third post-event survey. Includes Summer Savers and SDEC populations. N is of those providing comments on program confusion.

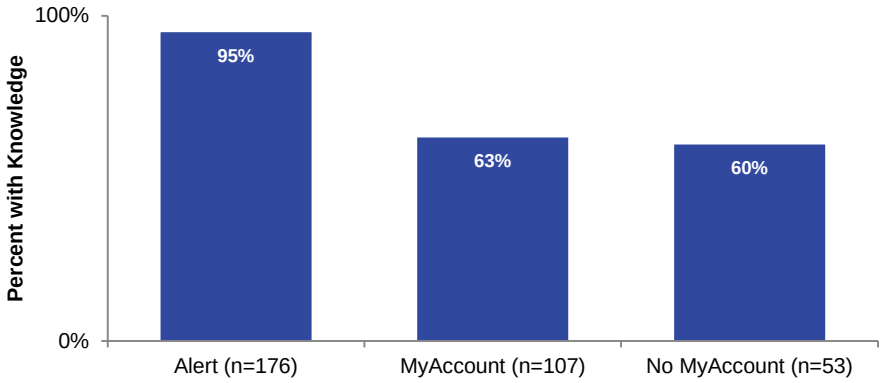
The following comments are indicative of the most common types of reported program confusion:

> *I'd like to know specifically how my usage is determined in order to get a credit on my bill. How is my usage "cap" determined in order to get a credit? Is it based on city use average? Neighborhood average? My own average? Does my usage "cap" reset based on my usage during a particular time frame? That is all very confusing to me.*
>
> *I don't understand what they mean by "reduce".... they don't say reduce by a certain amount, or a certain percentage, or if it's compared to my average usage or just a certain level.*
>
> *Explain the program better. I have no idea what the points or rewards mean. The communication around this has not been very clear.*
>
> *In communications, be more explicit about how much money I can save with how much electricity I can save. I would like numbers.*
>
> *It's a nice idea but reduce from what to what? If there could be better feedback like where the usage was coming from then you could make adjustments.*

General Survey

Similar to the post-event surveys, in the general survey, contacts also tended to recall program messaging as asking them to use less energy, particularly at specific times (See Appendix A, Figure 59). Many also recalled specific actions to reduce use. We also asked general survey contacts about their awareness of the bill credit. When prompted, a majority of PTR-aware contacts reported awareness of the bill credit (Figure 10).

Figure 10: RYU bill credit awareness



Focus Groups

All of the focus group participants understood that they were being asked to use less electricity on certain days during certain times, although many could not recall the exact details at the time of the groups. Participants recalled various levels of detail about the requests, for example:

> *I knew that we were going to be asked to reduce our use. They will send you alerts and ask you to reduce your use. I also remember that if you reduced a certain amount you will get a credit.*

There was some discrepancy among the focus group participants about the meaning of the request. While all understood that they were being asked to use less electricity the following day some thought that they needed to go to the website and sign up for every event separately. One participant mentioned that they had "signed up for a few" but not all of the events, indicating that they did not realize that they only needed to sign up for alerts, not to participate in each event. Some participants were not sure if they had "signed up" or still needed to do so.

CUSTOMER FEEDBACK ON MESSAGING

Summary: Those contacts aware of RYU events were relatively satisfied with the amount of messaging, and thought it helped them know what to do. Preferred means of notification differed across groups: Alert opt-ins and MyAccount contacts preferred email and text message, while non-MyAccount contacts preferred direct mail and TV.

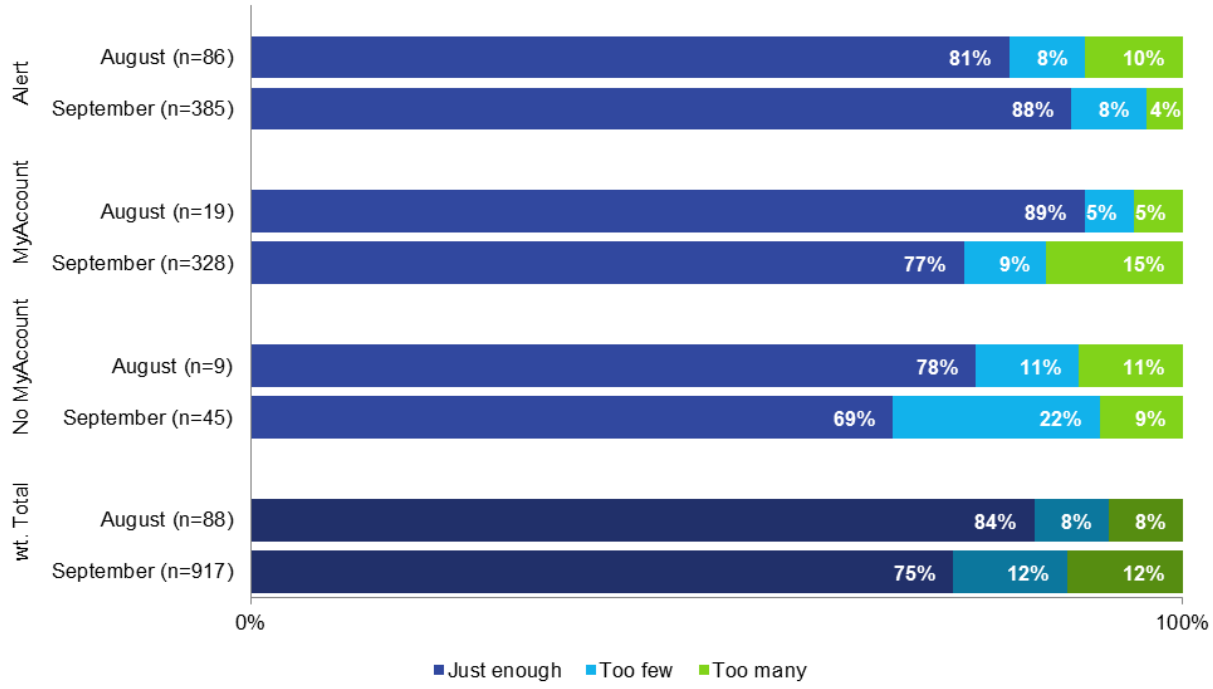
We also sought customer feedback on the amount and clarity of messaging, as well as preferred means of contact in the future.

Post-Event Surveys

In the August and September post-event surveys, event-aware contacts rated the number of event notifications they received. On average, over three-fourths of contacts rated the number of notifications as "just enough" (Figure 11). The no MyAccount group contacts tended to have

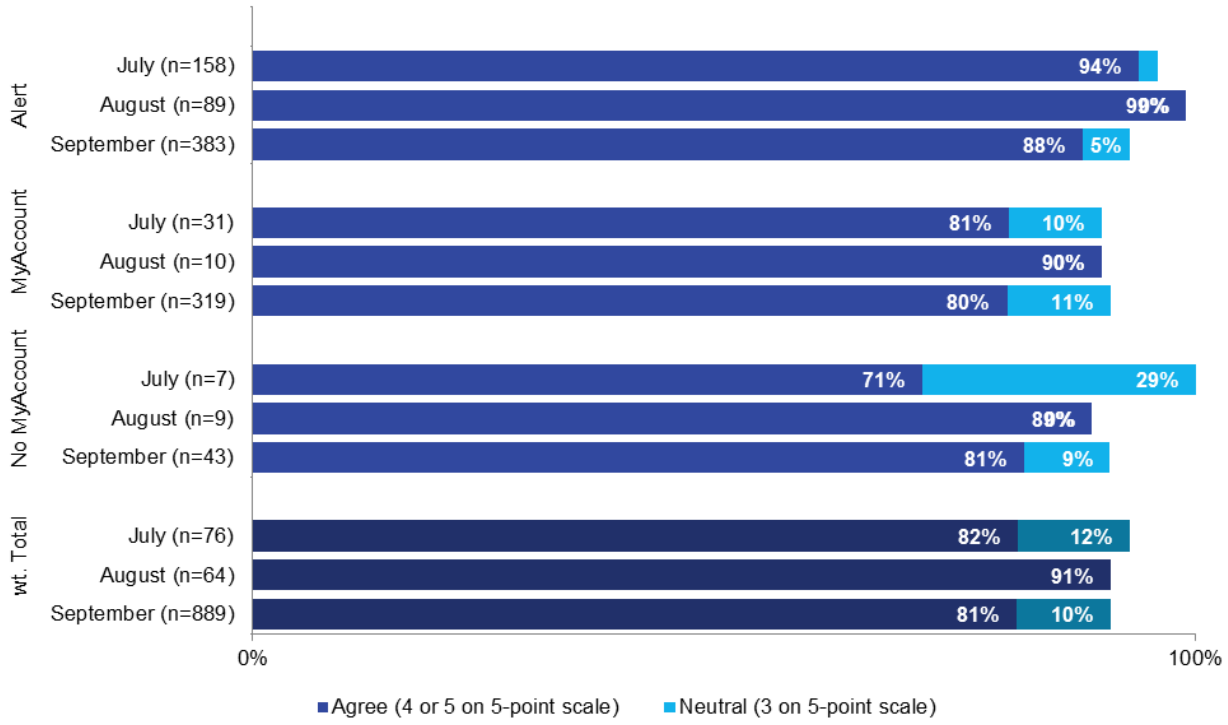
slightly lower proportions of contacts rating "just enough". The remaining ratings were relatively evenly split between "too few" and "too many." The difference in ratings among MyAccount respondents across the two events again illustrates the effects of the inclusion of web-based respondents: the increase in ratings of "too many" notifications corresponded with a change in the type of MyAccount respondents: by using the web survey method, the September survey was skewed towards MyAccount holders who tend to open (and therefore receive) SDG&E emails.

Figure 11: Rating of the number of event notifications



Post-event survey contacts also rated the adequacy of RYU announcements (Figure 12). Overall, disagreement with the adequacy of announcements was less than 10% in each survey. Agreement (a "4" or a "5" on a five-point scale) was highest among Alert group contacts.

Figure 12: Agreement that RYU announcements were adequate



Contacts also provided open-ended feedback about program messaging. In open-ended comments about how SDG&E could make the program easier for them, improvements to program messaging was one of the most frequently discussed topics (in the third post-event survey, 26% of those commenting discussed messaging). Table 7 summarizes these comments. The most frequently mentioned request was for different modes of communication in messages, such as notification by phone, email, or text message. Seven percent of these commenters specified that they thought general program awareness could be increased with additional messaging. Nearly one-third of commenters (29%) requested earlier notification of events. A few contacts (3%) reported that they were not receiving their notifications in advance of the event. A fifth of contacts (19%) requested that program messaging include more tips to save energy, including more customized information about their household's energy use, or what their household could do to save energy (4%). Very few contacts (1% of those commenting on messaging) requested to no longer receive event notifications.

Table 7: Open-ended feedback on program messaging (multiple responses allowed)*

TOPIC	PERCENT (N=225)
Change mode of communication	39%
More advertising to increase general awareness	*7%*
Provide advance notice or reminders of events	34%
Provide earlier notice of events	*29%*
Not receiving advance notice	*3%*
Provide more energy-saving tips	19%
Provide more energy saving information	*14%*
Provide more customized information	*4%*
Notifications work well	8%
Stop providing notifications	1%
Explain why events are held	1%

* Unweighted results from third post-event survey. Includes Summer Savers and SDEC populations. N is of those providing comments on messaging. Italicized comments are sub-topics of the comments directly above.

Representative comments about program messaging include:

Keep up the good work in reminding me about these event days.

I like the thank you text the next day. It means that what we tried to do on the 15th was meaningful and our efforts were noticed.

Many cities have recorded messages sent to residents when a city issue arises. A recorded message of this sort would be helpful to us as we do not always have the TV on nor do we get onto the computer on a daily basis.

Send email with current usage chart embedded. Then send an email after the event with a result graphic.

Need more advertising about Reduce Your Use. Most of my friends had no idea or did not realize that they could get a credit on your bill so they did not bother reducing their usage.

Individualize email messages that say exactly how much I need to reduce and suggestions on how I can achieve it.

The more advance notice the better. I can then plan around it.

Maybe if your commercials gave a compelling argument, maybe with some stats thrown in there to grab demographics that generally don't care about this sort of thing, you might have a wider spread of people aware.

Add testimonials to the website about what people that are saving are doing.

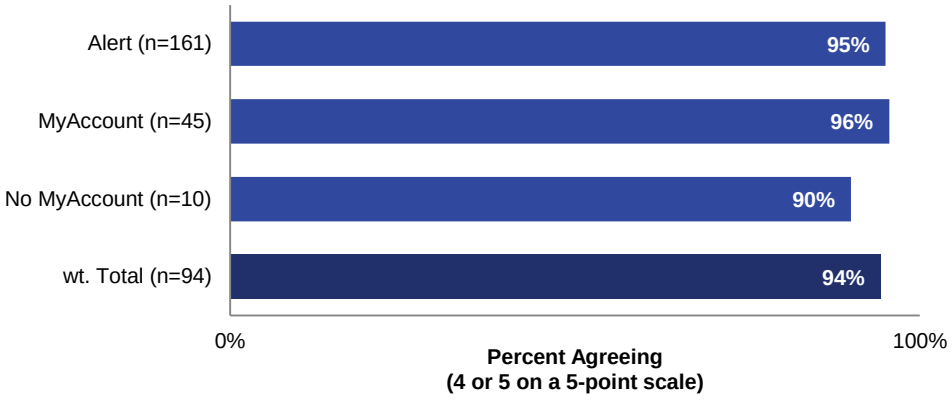
Send energy usage in email so I know what I have target I need to hit.

General Survey

In the general survey, contacts also provided feedback about the clarity of requested behaviors, the timing of notifications, and commented on their preferred means of receiving event notifications.

A large majority of event-aware contacts agreed that the requested behavior was clear (rated a "4" or a "5" on a five-point scale; Figure 13). Additionally, 84% of Alert group contacts agreed that the timing of the notifications gave them enough time to respond to the events (not shown).

Figure 13: Agreement that RYU requested behavior was clear



Percentages exclude "don't know" and "refused" responses

In the general survey, we also asked contacts their preferred modes of communication for future RYU events. Overall, email messages, mailings, text messages, TV announcements, and automated phone calls were the most common choices (Table 8). However, these preferences varied widely across groups. Email and text messages were the most preferred modes for the Alert and MyAccount groups, while the no MyAccount group preferred direct mail and TV (the green bars in Table 8 illustrate this difference).

Table 8: Preferred communication methods for future RYU events (multiple responses allowed)

	ALERT (n=188)	MYACCOUNT (n=155)	NO MYACCOUNT (n=128)	WT. TOTAL (n=471)
Email message	86%	71%	40%	55%
Direct mail	26%	37%	55%	46%
A text message	53%	50%	33%	41%
TV announcement	25%	30%	41%	36%
An automated phone call	29%	30%	35%	33%
Radio announcement	19%	26%	27%	26%
Newspaper articles	10%	12%	21%	17%
Information on the SDG&E website	26%	21%	11%	16%
Facebook, Twitter	18%	22%	9%	15%
Other web news sources	10%	19%	9%	13%

Similar trends are visible in contacts' most-preferred means of event notification (Appendix A, Table 18). One-eighth of contacts (12%, including 15% of those in the no MyAccount group) prefer a phone call over any other means of contact.

While a preference for mail notification may be an indicator of a lack of engagement with RYU days, the relatively high preference for notification by mail also indicates a need for ongoing education about RYU events, and why they are called on certain days.

Focus Groups

Among the focus group participants who knew they could sign up for alerts, all but a few preferred to receive email alerts rather than text alerts. Awareness of the option to receive text alerts was low amongst focus group participants. The few who did receive text message alerts found them useful and expressed satisfaction with the text alerts, but those who had explicitly chosen not to receive text alerts had strong opinions as to why. One participant explained:

> *I don't want advertising texts. That is a medium that I reserve for my friends and family.*

Other reasons for not choosing text alerts included not using text messaging services at all, not wanting to pay for additional text messages, not wanting to share a cell phone number with the utility, and not being aware that text message alerts were an option. Some participants did not realize that signing up for an alert was an option or might be beneficial:

> *I didn't think I needed to get more info because the first email had all the information I needed.*

4 EVENT ENGAGEMENT

As part of our evaluation of the PTR program, we also explored how SDG&E residential customers engaged with RYU events, their motivation for doing so, and the short and long-term effects of their participation. We considered several types of event engagement, including event day effort and actions and use of website resources.

EVENT DAY EFFORT AND ACTIONS

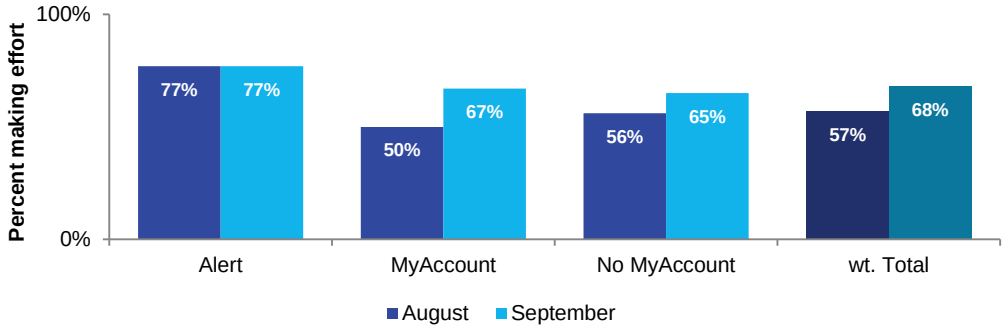
Summary: Among event-aware contacts, about two-thirds reported making an effort on event day. The most commonly mentioned actions performed to reduce energy use included turning off lights, postponing laundry, and adjusting or turning off the air conditioner. Some contacts report extraordinary actions to curtail their use. Some would like more information about the relative effectiveness of actions.

Post-Event Surveys

In the August and September post-event surveys, event-aware contacts reported whether their household had made an effort to reduce their energy use on event days. Figure 14 shows the proportion of contacts who reported at least making "somewhat more effort than usual."[9]

More than half of contacts reported they had made at least "somewhat" more effort to reduce their energy use (57% in August and 68% in September). Though this proportion was the highest among the Alert group, the group differences were not statistically significant.

Figure 14: Proportion making an effort to reduce use[10]



9 The question asked if the household made "a lot more," "somewhat more," "no more," or "less" effort than usual on the event day.

10 Survey samples sizes:
August: Alert (n=118), MyAccount (n=10), No MyAccount (n=9);
September: Alert (n=1,147), MyAccount (n=341), No MyAccount (n=49).

In the September post-event survey, those contacts who reported making an effort on event day reported what actions they took to save energy (Table 9). Among those who made an effort to reduce their energy use, 59% reported turning off lights in unoccupied areas of their home, 56% said they avoided doing laundry during the event time, and 54% turned off or adjusted their air conditioner. Other actions mentioned included avoiding running the dishwasher (38%), unplugging unused electronics (35%), leaving home (32%), and shifting cooking times (24%). An additional 50% reported they also "just tried to use less energy."

Table 9: Actions taken during RYU event: Post-event survey

	PERCENT (N=687)
Turned off lights in unoccupied spaces	59%
Didn't do the laundry	56%
Turned off or adjusted air conditioner	54%
Didn't run the dishwasher	38%
Unplugged unused electronics	35%
Left home	32%
Cooked at a different time	24%
Pre-cooled the house	12%
Turned off pool pump	7%

Weighted results from the September post-event survey.

General Survey

General survey responses confirmed these findings, with 81% of event-aware respondents reporting making at least somewhat more effort than usual on event days. Alert group contacts were more likely to report making a lot more effort than other groups. General survey contacts also reported performing similar actions.[11]

Focus Groups

In focus groups, participants commented on the actions they had taken on event days. Focus group participants reported similar event day actions to those described by the survey respondents. Actions included: turning up thermostats, reducing or eliminating AC usage, turning down hot water heaters, reducing or eliminating use of dishwashers, reducing or eliminating cooking, reducing or eliminating laundry, turning off pool pumps, and unplugging household items such as lighting and electronics. Some participants mentioned less common actions such as:

[11] See Figure 60 and Table 19 in the Appendix.

I turned off the surge protector that connects all my entertainment equipment so I don't have vampire use or whatever they call it.

I turned my reptile tank lights off because it was hot anyway. That was a huge savings for us.

I shut down the computer, at the power strip, got more power bars, and switched to battery operated alarm clocks- since you have to reprogram them if you unplug the plug-in kind.

Participants also told stories of more extreme energy savings actions such as:

I also turned my fridge down a few degrees. And the freezer, I also left it up there. About two settings down.

I charged my medical equipment later or less - electric bed, electric chair and scooter. Went back after 6 and plugged it all back in.

Low and high performers reported take the same actions on the event days as high performers. Low performers were, however, less likely to have pools and more likely to mention reducing lighting usage as a step taken to reduce electricity use. Low performers were also more likely to report that their bills are always low and therefore they did not believe they had much capacity to reduce their usage. Participants with low baseline usage may have a hard time reducing their electricity use enough to see a difference without resorting to extreme measures.

In general, participants did not seem have a good understanding of which actions save the most electricity and often were not sure that their choices were making a difference. Representative comments include:

I'd like [SDG&E] to tell me the top three things in my house that use the most. I don't know what uses the most electricity.

I left lights off, stayed with the natural daylight. I do not know how much difference that makes.

MOTIVATIONS AND BARRIERS TO PARTICIPATION

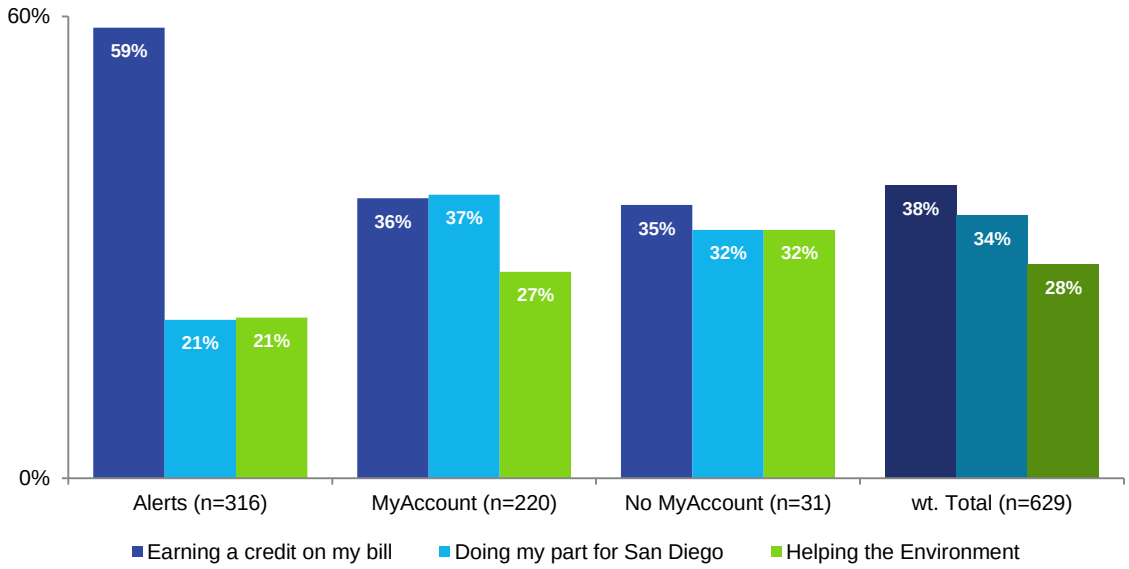
Summary: Respondents cited earning a bill credit, helping the environment, and civic engagement as important factors behind reducing energy use on event days. Alert group contacts were relatively more motivated by the bill credit than others. The most commonly cited barrier to participation was that the contact was already conserving, and that there was nothing more he or she could do.

To better understand event day performance, we also explored the potential motivations for and barriers to curtailing.

Post-Event Surveys

In the September post-event survey, those contacts who had made an effort to reduce their energy use reported on their primary motivation to do so (Figure 15). Given three possible motivations, overall, respondent selections were relatively evenly distributed between earning a bill credit (38%), doing my part for San Diego (34%), and helping the environment (28%). A majority of alert group contacts (59%) reported that earning a bill credit was their primary motivation, though.

Figure 15: Primary motivation to reduce in response to SDG&E's request



Results from the September post-event survey

September post-event survey contacts who had not made an effort to reduce their use also commented on their reasons. Although many contacts did not answer the question, among those that did the most common reasons for not making an effort were that they were already conserving energy, or that it was too hot to participate that day (Table 10). The two non-alert groups mentioned ongoing conservation efforts more frequently than the Alert group contacts (illustrated in grey-shaded cells below).

Table 10: Reasons for not making an effort to curtail during RYU days

REASON	ALERT (N=82)	MYACCOUNT (N=113)	NO MYACCOUNT (N=17)	WT. TOTAL (N=325)
Already make an effort to curtail	18%	35%	53%	40%
Day was too hot	20%	19%	0%	14%
Not at home	17%	10%	12%	10%
Necessary consumption	15%	11%	6%	10%
Doesn't affect my bill enough	13%	4%	0%	4%
Forgot	2%	4%	0%	2%
Not enough time to prepare	5%	1%	0%	1%
Other	5%	10%	18%	12%
No comment	29%	16%	29%	20%

Results from the September post-even survey

Open-ended responses provided additional explanation of these barriers to reducing use on event days. In open-ended comments responding to the question of how SDG&E could make event days work better for customers, 16% of respondents provided comments about their efforts (or lack thereof) to reduce their energy use on event days (Table 11). As the table below indicates, most of these comments discussed the circumstances that limited customers' ability to respond to events. The most frequently mentioned topic was that the respondent already makes a daily effort to conserve energy use (63% of these respondents). One-third of these contacts (37%) reported that there was nothing they could do to reduce energy on event days. Other comments included that customers would try within reason to conserve (15%), that they made an effort but received no credit (13%), that they found the campaign unfair to low energy users (8%), and that medical or other household issues limited their ability to conserve (7%). Just a few contacts (4%) reported that they did not want to participate.

Table 11: Open-ended comments on event day actions (Multiple responses allowed)

TOPIC	PERCENT (N=139)
Already make an effort to conserve	63%
Nothing can do	37%
Will try within reason to conserve	15%
Made an effort, but received no, or not enough, credit	13%
Unfair to low energy users	8%
Circumstances limit ability to conserve (medical issues, small children, or pets)	7%
Do not want to participate	4%

Unweighted results from third post-event survey. Includes Summer Savers and SDEC populations. N is of those providing comments on event day actions.

Representative comments include:

> *The only way I know to further reduce my energy consumption is to unplug my ENERGY STAR refrigerator. As I have told customer reps before, I hardly use any energy so I don't know how to further reduce it. I resent that as an already-energy-efficient household we can't "earn" credits or be eligible for sweepstakes.*
>
> *On the RYU days you need to reduce use to a threshold, which is based on your average normal usage. Since my usage is very low already, it is near impossible to ever meet the required threshold. Thus, I am not inclined to take action to reduce my use.*
>
> *There is not much more I can do to reduce my energy usage. I conserve all I can.*
>
> *I believe I already don't use a lot of energy but if someone came out and told me how to change things to save I would probably implement those changes.*
>
> *While I think it is great in theory, I've found it frustrating in practice. I am *already* very energy efficient - we use almost a THIRD of the energy as the average household our size. We wash only full loads of dishes and laundry, we use energy-efficient bulbs and are generally very careful. Our "reduce your use" quotas are an unrealistic "under 1 kwh" (on weekends, 2 kwh.)! We've tried, but there seems to be no way to reduce our energy to that level short of unplugging the refrigerator, cordless phone and a few other things that need to stay on. I've started to feel like wasteful people are being rewarded if they manage to remember to turn off a couple of unneeded lights and wait to run the dishwasher, while conservation-minded folks receive no incentive because they do that every day.*
>
> *As my household is ranked at the most efficient end of the scale for my demographic, it is difficult to squeeze additional savings. Knowing the targets is critical to determine if the benefits are worth the discomfort and inconvenience. For shutting down all non-essential equipment and sweating in my home for 7 hours with no AC, we received a 75 cent credit-hardly worth it. There is little else we could have done.*
>
> *Most house residents have a better option than apartment dwellers to "reduce your use".*

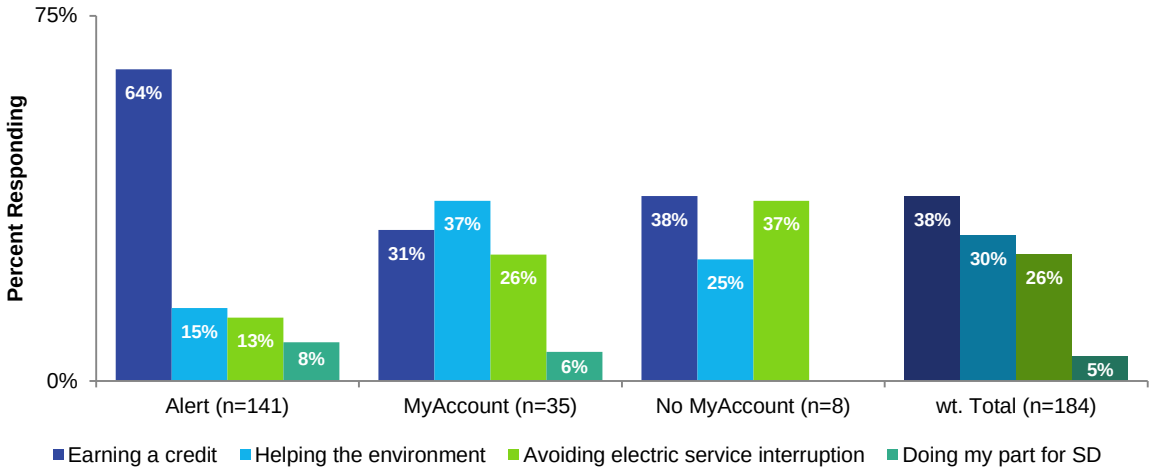
General Survey

General survey event-aware contacts also reported on their motivations for reducing their energy use on event days. In this survey, we added a fourth option to the factors listed in the post-event survey question: "avoiding electric service interruption." As a whole, responses were consistent with the post-event survey responses. Roughly similar proportions respondents each reported that earning a bill credit, helping the environment, and avoiding electric service interruption was the most important factor (38% , 30%, and 26%, respectively; Figure 16). Interestingly, the addition of the "avoiding electric service interruption" response option decreased the number of respondents who picked "doing my part for San Diego" as the most important factor, though. While in the post-event survey, 34% of contacts selected this option (Figure 15), in the general

survey, 5% chose it, and 26% chose "avoiding electric service interruption." Thus, for many contacts, "doing my part for San Diego" is likely synonymous with "doing my part to avoid electric service interruption in San Diego."

Additionally, as seen in the post-event survey responses, a significantly higher proportion of the Alert group selected "earning a credit" than other groups (64% versus 38% overall.)

Figure 16: Primary motivation to reduce use



Focus Groups

In focus groups, participants commented on their motivations and barriers to responding to event day requests. Focus group participants also commented specifically on whether they thought their household had the capacity to participate in event days.

Focus group participants reported varying motivations for participating in Reduce Your Use days. While the campaign emphasized bill credits, the focus group participants offered a variety of other reasons for choosing to take action on the event days. Some of the most popular reasons included being civic minded, saving money on bills, and reducing the overall demand on the grid.

Representative comments about civic mindedness:

> *I did it because I want to be good citizen, be a good steward of our resources, I'm a rule follower… it's the right thing to do.*
>
> *I did it for the benefit of everyone else. Not being self-centered. If someone asks me to do something I will try to be accommodating.*
>
> *For the last few years we knew to conserve so we keep trying—for the general good.*

Representative comments about saving money on bills:

I did it because the more you save the more money you have in your pocket to spend on other things.

The older we get we are living check to check so we want to squeeze everything we can out of turnip, so it's the bill savings—but I would do it just because I should do it.

It saved me fifteen to twenty percent for the bill for that month, so that is really important to me.

Representative comments about reducing overall demand on the grid:

San Onofre [nuclear plant] was off, so we knew there was a possibility of another brownout. We took it seriously.

We are used to hearing about the brownouts and the grid being overloaded.

I do it so we have enough margin to prevent a brownout and to keep power for people who need it – hospitals or the elderly.

I wanted to reduce the pull on the grid.

Focus group participants described the credit as an incentive to reduce, but not the sole or even primary incentive. Participants also found the alerts valuable as a reminder.

The bill credit IS a motivation—you are helping and you are saving energy. It's a pat on the back.

I can also show my kids the credit. Sometimes you do have to sacrifice and that gives you something to show for it. You see a little bit of savings so you feel like it actually worked.

The credit makes you try to keep up with it.

It makes you proud to get the credit.

The credit is a positive reinforcement.

Participants also found the alerts valuable as a reminder.

I like the reminder. If I don't do something I get lazy but those texts remind me to keep up the things I am trying to do.

Although the focus group participants all took at least some action to reduce electricity use on the event days, several indicated that there were barriers to reducing their consumption. Initially, most participants saw room to reduce, but some described a barrier initially determining what actions they could take:

There is nothing else I could do except unplug my alarm clock. Our bills are already really low.

After years of being told to cut down, we were already doing it so we can only change the air conditioning. That did not do enough to be a factor.

I do not use much during the day so I did not think there was anything I could do.

I think it is a good program for people who are frivolous consumers or who have more leeway. We have lived in the same house for a long time so there is not much we can do. We hardly use our air conditioning, we are in our 60s and we get cold.

Other focus group participants had various circumstances that made it difficult for them to reduce their use, typically involving other people in their household or pets:

My husband is very protective of his dog, we have to battle over one degree and I have to convince him that one degree is going to be ok for the dog.

I tried to talk my wife into changing her laundry time, but she didn't want to—especially on the weekend.

My husband grew up with air conditioning and he has a small range of comfort.

I had to convince my kids about the computer and the phone charging. I had to convince them to do it one way or another.

My husband complained bitterly about living without the air conditioning. If we were to do it again we would have to leave. I'm willing to turn it off but if he's home it's not going to happen. He was home on that Saturday so if it happens on the weekend I'd have to send him to the beach.

I would not turn off the air conditioning because I have a puppy.

Some focus group participants also expressed a hesitance to act because of their perception that businesses or other energy consuming entities do not seem to reduce their consumption. Participants expressed a concern about the equitability and fairness of placing the conservation focus on households only.

I try really hard at some but I see business and they are not trying. You need a coat in there! The employees have jackets on, or they have big cracks in their door and the air conditioning just goes out. That made me frustrated. I'd like to see the utility work more with businesses and offices.

Everyone on the grid should be participating.

If you do the best you can, everyone should be trying.

Retirement homes and banks, those are the worst, they have their doors opening all the time.

Finally, we asked focus group participants if they thought they had capacity to reduce their use when they heard about the events. Most participants thought they could take at least some action to reduce, but some indicated that their usage was already very low or that they used only the electricity they absolutely needed. For some, seeing that they could not reduce for the incentive confirmed for them that they are low users already:

> *I learned that my wife and I are already pretty careful consumers- the credits are so small and there's not much more we can do.*
>
> *It's just me and my wife at home and we already do everything we can- but I decided to try it anyways.*
>
> *I thought there were some things I could do- the challenge would be convincing my husband who is home more than I am. I went through the information to make sure I understood it really well and see what we could do.*

USE OF WEBSITE RESOURCES

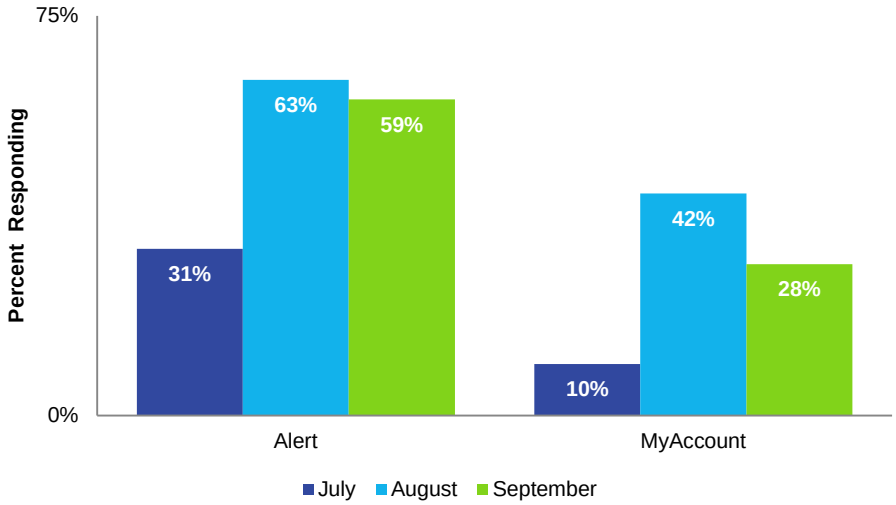
Summary: A majority of alert group contacts used the website at least once. Ratings of satisfaction with website features were moderate.

Another facet of engagement with RYU days is use of the website. For MyAccount users, the SDG&E website includes the ability to view the "use less than" number in advance of the event, and to view performance after the event. We investigated the extent to which contacts used these PTR resources, and whether they found them useful.

Post-Event Surveys

Reported use of the website increased substantially from the July post-event survey to the August post-event survey (Figure 17). Furthermore, website use was higher among Alert opt-ins than MyAccount group contacts. In both the August and September post-event surveys, close to two-thirds of event-aware Alert opt-in contacts reported that they had logged onto the website to check their energy use either before or after the RYU event. For event-aware MyAccount contacts, less than one-half reported logging on to the website (42% in August and 28% in September).

Figure 17: Logged on to website to check energy use[12]



September post-event survey contacts also provided some feedback about the website. In open-ended suggestions about ways to improve the program, 4% of those responding provided feedback about the website. Table 12 summarizes these comments. The most frequent comment was that the website was difficult to use and navigate (42% of commenters), but one-third of these commenters reported that they were unable to access the website, and one-fourth were unable to understand the information provided. Note that although program staff reported early issues with the website showing different "use less than" numbers on subsequent logons, in the September post-event survey, no contacts volunteered that this had been a problem for them.

Table 12: Open-ended comments on website (Multiple responses allowed)

TOPIC	PERCENT (n=36)
Website was difficult to use	42%
Could not access website	33%
Did not understand website information	25%
Other - website	11%

Unweighted results from third post-event survey. Includes Summer Savers and SDEC populations. N is of those providing comments on the website.

Website comments included:

I don't understand the charts that are on the website about my usage.

[12] Survey sample sizes for Figure 17:
July: Alert (n=160), MyAccount (n=31);
August: Alert (n=27), MyAccount (n=12);
September: Alert (n=403), MyAccount (n=349).

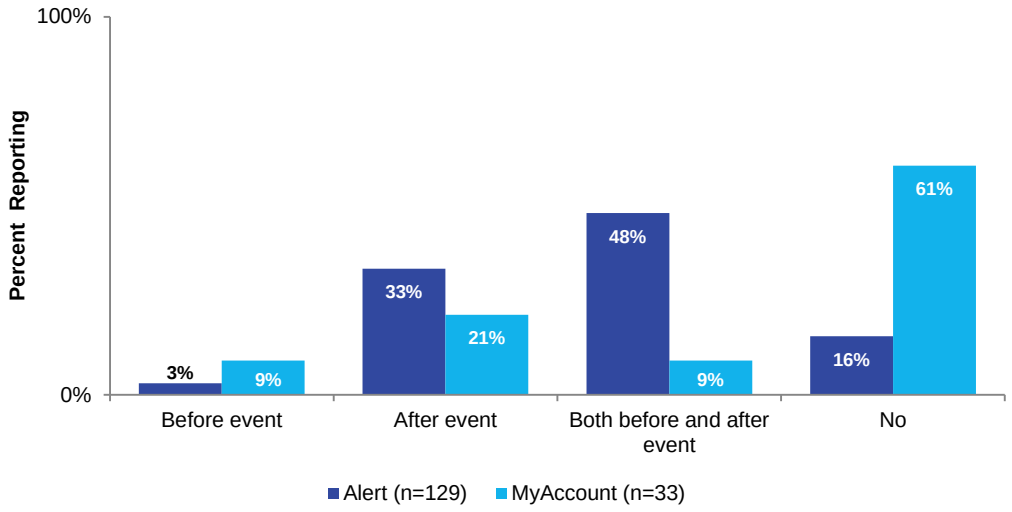
I was unable to get into the file that showed me my percentage of reduction in usage. I'd like for that to be easier to access.

The graphs of my usage are confusing. It's hard to discern what effect my efforts have on my use or my bill. Make it more intuitive for the common household to understand, especially money savings that can be earned.

General Survey

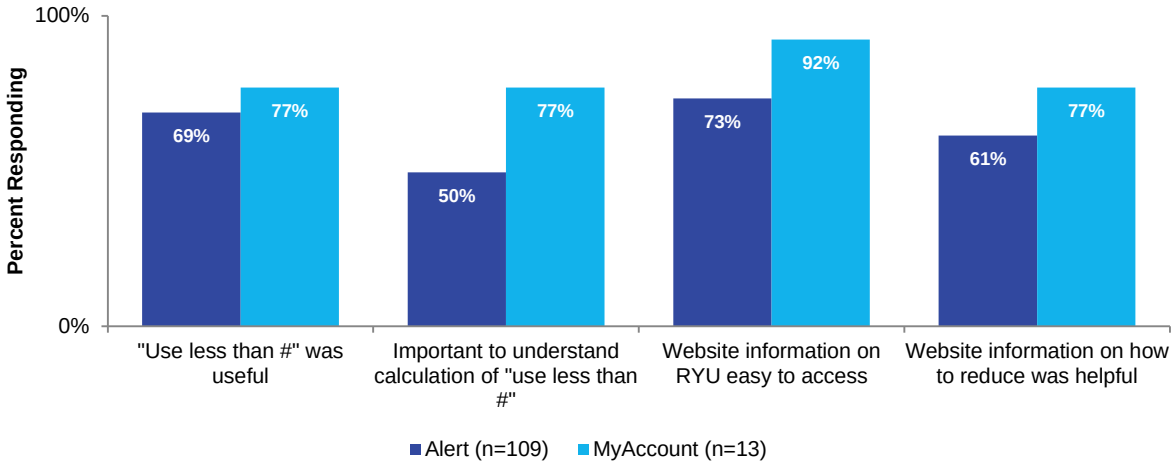
In the general survey, contacts reported on when they had used the website, and rated its usefulness. Of the PTR-aware contacts who reported knowing that they could log on to check their energy use, website use varied (Figure 18). Over three-fourths of Alert group contacts (84%) reported having used the website, compared with 39% of MyAccount group contacts.

Figure 18: Use of SDG&E MyAccount website before, during, and after RYU days



Those contacts who had used the website also rated their agreement with statements about its features (Figure 19). While MyAccount group contacts' ratings tended to be somewhat higher, the website users in the MyAccount sample was small (n=13), and so differences between the two groups are not very meaningful. Three-fourths of Alert group website users (73%) agreed that RYU website information is easy to access, and roughly two-thirds each agreed that the "use less than" number was useful, and that the website information on how to reduce use was helpful (69% and 61%, respectively). Just half of Alert contacts (50%) agreed that it is important to understand how the "use less than" number is calculated.

Figure 19: Ratings of website features (Percent rating 4 or 5 out of a 5-point scale)



We also asked contacts about their use of SDG&E's "Green Button" website feature to download energy use information. A total of 17% of the respondents who have MyAccount reported they had used Green Button. Among the Alert group, the rate of Green Button use was almost twice as high as the non-Alert group (32%). See Appendix A, Figure 61 for more information.

EFFECTS OF PARTICIPATION

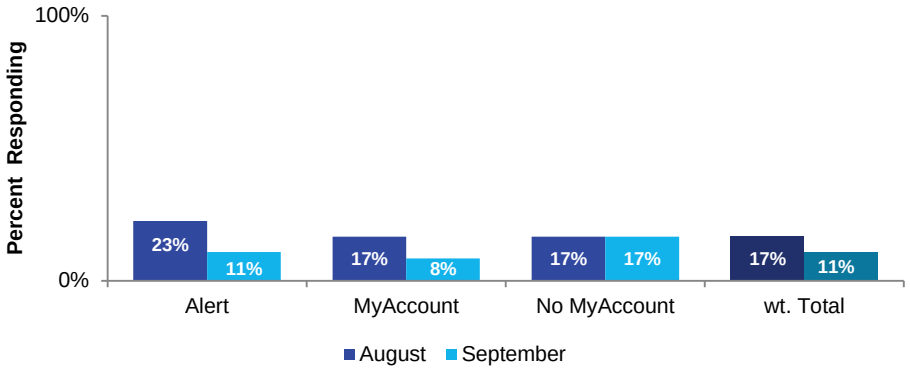
Summary: Between 11% and 17% of contacts reported experiencing excessive heat or other negative effects from participating in events. Half of those contacts who were aware of PTR events reported that they had started performing new day to day actions to save energy as a result of their experience with PTR.

Event-aware contacts commented on both the short-term and long-term effects of responding to RYU days.

Post-Event Surveys

In the post-event surveys, those contacts who reported making some effort to respond to event requests commented on whether they had experienced any negative effects as a result of curtailing. Overall, less than one-fifth of contacts reported experiencing negative effects as a result of participating (Figure 20).

Figure 20: Negative effects experienced as a result of curtailing[13]

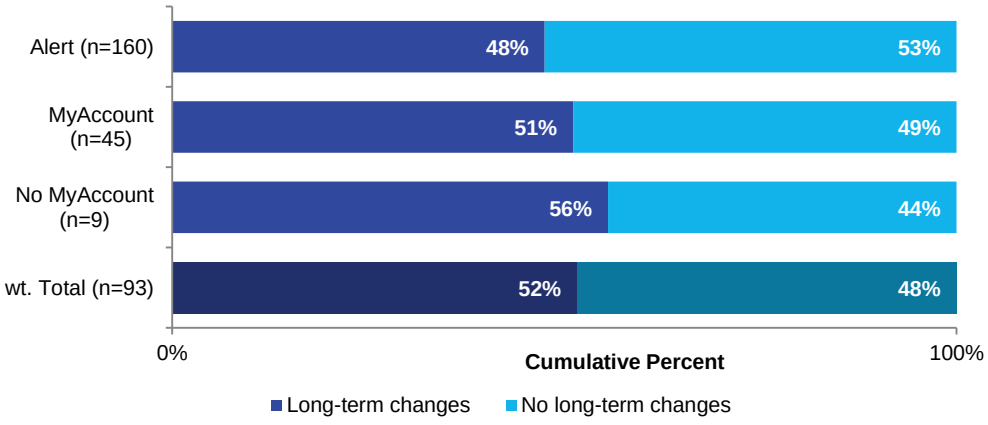


General Survey

General survey responses supported these findings, with 12% of those contacts who made an effort to curtail reporting experiencing negative effects. These negative effects were most commonly heat, but some contacts also mentioned wanting to use their energy using devices.

In the general survey, we also asked event-aware contacts whether they had made any changes in their day-to-day energy use as a result of RYU days and the information they received. A total of 52% of the respondents reported they have made long-term changes (Figure 21). Common changes reported included turning off lights in unoccupied spaces (31%), adjusting air conditioner settings (23%), and turning off unused devices (20%). More than a third of these respondents (34%) reported that RYU days had resulted in higher awareness of their energy usage.

Figure 21: Proportion making long-term changes due to RYU information



[13] Survey sample sizes for Figure 20:
August: Alert (n=111), MyAccount (n=12), No MyAccount (n=6);
September: Alert (n=315), MyAccount (n=215), No MyAccount (n=30).

Focus Groups

We asked the high performing focus group participants how they thought their everyday efforts compared to their friends and neighbors. All of the high performing participants self-identified as above average in terms of conservation efforts on the Reduce Your Use Days, and most described themselves as above average everyday:

> *For me, I'm above average because I know our use is below the average line.*
>
> *I do try harder than most. I try to keep my bill down.*
>
> *I think I conserve more than my neighbors normally AND on Reduce Your Use Days.*
>
> *I know some of my neighbors water the lawn when it's raining. I think about it more than they do. Of course, I do have one neighbor with solar panels, but I try to be conscious of using energy. I haven't asked my neighbors if they are doing it.*
>
> *I think we are above average, we are pretty frugal… and I think we do try very hard on those days.*

While the Reduce Your Use day events encourage conservation during a range of hours on specific days, some focus group participants explained that some of the actions they took for the event days became ongoing behaviors:

> *I turned down the hot water heater from hot to warm. I left it that way for a while.*
>
> *I also talked to my wife and she now does the laundry at night, she switched and has kept doing it.*
>
> *We start drying towels on a rack in the spare room. Now we do that every time, but we didn't do that before.*
>
> *I had to convince my husband that turning off the AC was worth it. He also doesn't unplug his charger, but now he does. That has carried over.*

These long term actions reduced the amount of overall electricity used by participants, but may also affect their ability to reduce on future event days because their level of usage used to calculate reductions would be lower. Several participants agreed that participating in the Reduce Your Use days made them a more active and better informed advocate for conservation. This trend suggests that RYU could lead to long term behavioral change, in addition to facilitating reduced peak demand.

5 PTR OPINIONS AND FEEDBACK

In addition to awareness and engagement with individual event days, we also sought to understand SDG&E customers' opinions about PTR generally. We solicited participant feedback about the requests overall, the alert opt-in option, the bill credit, overall satisfaction, intent to participate in the future, and interest in feedback technologies.

REASONABLENESS OF REQUESTS

Summary: Most contacts found the RYU requests reasonable. To a certain extent, contacts who understood why events were held were more accepting of having events on hot days or on consecutive days.

Contacts provided feedback about the reasonableness of RYU days overall, and about the number of RYU days called by SDG&E over the summer.

Post-Event Surveys

In open-ended suggestions about ways to improve the program, 12% of September post-event survey commenters provided feedback on the overall appropriateness of the event request. The most frequent of these comments (made by 48% of commenters) was complaint that events always occur on hot days (Table 13). Over one-third of these contacts (39%) also requested changes in times or days of the events. The most frequently suggested changes were not holding events on weekends (18%), ending events earlier (5%), or shortening their duration (3%). The remaining commenters made other suggestions ranging from holding events on weekends, to specific comments about how events could fit better with the respondents' work week.

Table 13: Open-ended comments on appropriateness of event request (multiple responses allowed)

TOPIC	PERCENT (N=100)
Issues with having events on hot days	48%
Change times or days of events	39%
Not on weekends	*18%*
Shorter duration	*3%*
End earlier	*5%*
Frequency of events	15%
More often	*12%*
Less often	*3%*

Unweighted results from third post-event survey. Includes Summer Savers and SDEC populations. N is of those providing comments on the appropriateness of request. Italicized comments are sub-topics of the comments directly above.

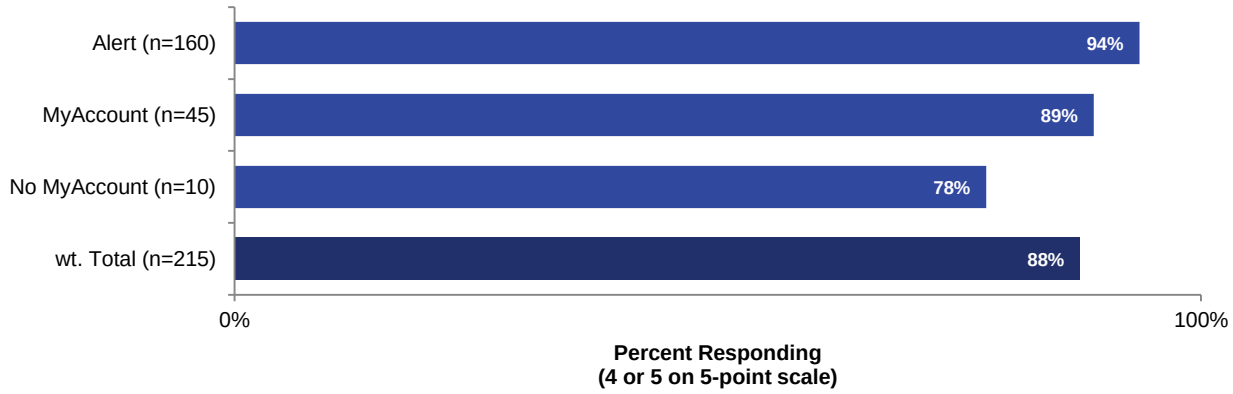
The following comments are representative of these topics:

> *Make them more frequent! The challenge is fun...*
>
> *Don't call multiple events in a row. Use this power sparingly.*
>
> *No reduce your use days on weekends or holidays and have the hours be a little shorter by an hour or two.*
>
> *End earlier than 6pm.*
>
> *Easier on weekdays when we are not home during the day. Harder on weekends because we tend to do chores such as clean the pool and do laundry.*

General Survey

In the general survey, contacts who recalled at least one RYU event indicated their agreement with the statement "the number of Reduce Your Use events that were called this summer was reasonable." Over three-fourths of contacts in each group agreed that the number of events called was reasonable (rated their agreement a "4" or a "5" on a five-point scale; Figure 22). Recall, though, that among those contacts who recalled at least one event, just over half (55%) recalled that there had been more than two RYU events during the summer (Figure 5). Nevertheless, relatively few contacts reported that the number of RYU events they experienced was unreasonable.

Figure 22: Agreement with reasonableness of number of event days



Percentages exclude "don't know" and "refused" responses

Focus Groups

None of the focus group participants indicated that the SDG&E requests seemed inappropriate to them. The level of acceptance for the events was closely tied to the participant's understanding

of why the events are called. For example, participants who did not understand the importance of peak cooling load expressed confusion about the timing of the events:

> *Why can't we do this in the Spring or in October- there are always people doing their laundry during the day. Can't you conserve beforehand?*

While other participants understood the need for the events to occur at certain times:

> *I think it has to do with the power grid. You can't store the power.*
>
> *It's like that [SDG&E] ad with the bowling analogy, where everyone throws their ball at the same time. Everyone is using at the same time. That's all the power going through the grid at the same time. It can overload the grid. During hot weather people use more air conditioning. Consumption in general is just more at that time.*
>
> *Everyone remembers that September where we lost power so they know we need to have that margin.*

We asked participants how often they thought it was reasonable for SDG&E to issue event requests. Most participants agreed that they would attempt to accommodate requests as long as they were issued for a legitimate reason:

> *It has to be based on their needs. If you need a doctor every week, you need it every week. As long as there is a legitimate reason.*
>
> *It depends on the grid structure. If they lose a big power plant that will affect the grid, everyone will have to conserve to prevent brownouts.*

The majority of participants indicated that the amount of events called the previous summer seemed reasonable and some expressed a willingness to accommodate more requests. Representative comments included:

> *I think it's definitely reasonable. I think about 10% of days would be reasonable.*
>
> *The amount they did last summer was reasonable, but it would start to wear on you if it was for several consecutive days in a row. Obviously it's at the peak of the hot days and you are trying not to run your air conditioning. You need a break.*
>
> *I think the more you do it you lose the novelty. If you do it all the time, it's less exciting and becomes just generally telling people to conserve energy again. I'm sure there's a point it becomes too much, but they are not there.*

ALERT OPT-IN OPINIONS

Summary: Although alert opt-in contacts differed demographically from San Diego customers as a whole, a large majority of event-aware contacts indicated that they would likely opt in for alerts if it was required to get an event credit.

Contacts also provided feedback about the option to opt-in for RYU alerts. One of the main indicators of PTR engagement is opting in for alerts. We explored the types of SDG&E customers who had signed up for alerts, and whether customers would be willing to do so in the future.

Post-event Surveys

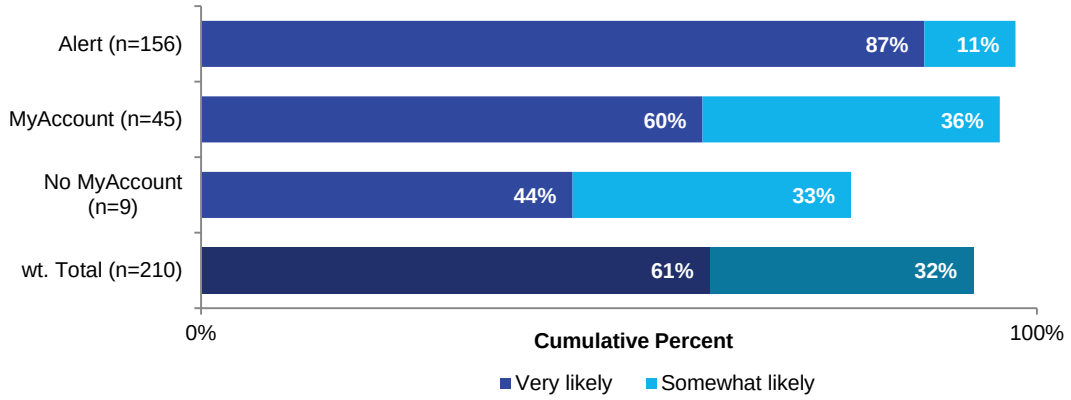
As detailed in the Demographics section, Alert contacts differed from other respondents in several ways. Relative to other surveyed SDG&E customers, alert opt-ins tended to be more educated, have higher incomes, and were more likely Caucasian and homeowners living in single-family detached homes.

Unsurprisingly, Alert contacts were more aware than others of event days (Figure 3), and also reported marginally higher levels of effort on event days (Figure 14).

General Survey

In the general survey, we asked those contacts who recalled at least one RYU day how likely they would be to sign up for email or text notification if it was required to receive RYU bill credits (Figure 23). Overall, more than 90% of the respondents reported they would be at least "somewhat likely" to sign up (at least a two on a three-point scale), and nearly two-thirds (61%) said they would be "very likely" to sign up. Just 8% said "not at all likely." Although the willingness to sign up for notifications was lower among the no MyAccount contacts, this sample was small (n=9), and thus should be interpreted with caution. A large majority of Alert group contacts (87%) said they would be "very likely" to sign-up in order to get a bill credit.

Figure 23: Likelihood of sign-up for notification to get bill credit



Among those few contacts (8%) who said they would be unlikely to sign up, the most frequent reasons given were using email rarely or not texting. A couple of contacts mentioned that they have other priorities.

Focus Groups

After hearing about the Reduce Your Use days, focus groups participants differed in their next steps. Some participants proceeded to the SDG&E website to sign up for email or text alerts while some participants waited to see the alerts on television.

BILL CREDIT EXPECTATIONS

Summary: Satisfaction with the bill credit was low. Many contacts thought that the bill credit was too low, but also that the credit structure benefitted high energy users, or that their "use less than" number was too low. Although few participants were irate, for a small number of contacts the bill credit was a reason to not participate in the future.

Another element of RYU events about which contacts provided overall feedback was the bill credit.

Post-Event Surveys

In open-ended comments about how SDG&E could make it easier for their customers to participate in RYU days, 23% of September post-event survey commenters discussed the bill credit. The most frequent comment was that the bill credit is too low (42%; Table 14). One-fifth of commenters (21%) also mentioned that they would like low energy users to also benefit from the program incentives. Several contacts (16%) commented that their "use less than" number was too low. Several other contacts provided suggestions to change the type or structure of the incentive.

Table 14: Open-ended comments on incentives (Multiple responses allowed)

TOPIC	PERCENT (N=200)
Credit is too low	42%
Provide other benefits for low-energy users	21%
Baseline is too low	16%
Provide an incentive	8%
Change incentive type	7%
Change incentive structure	5%
Other	7%

Unweighted results from third post-event survey. Includes Summer Savers and SDEC populations. N is of those providing comments on incentives.

The following comments are representative of these topics:

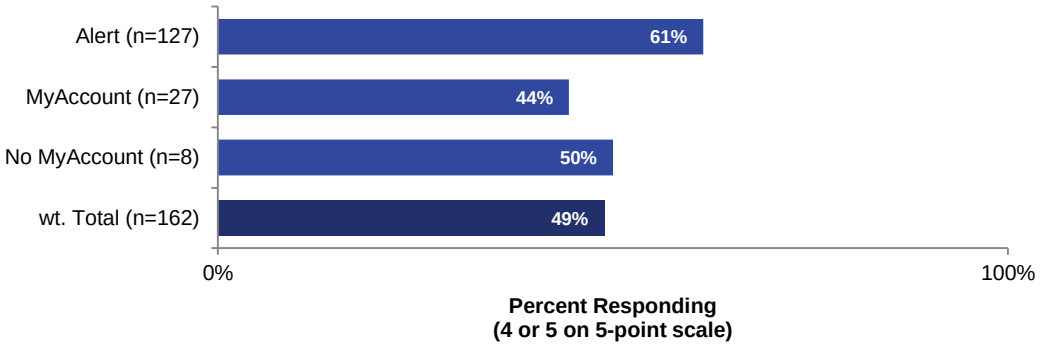
> *Make the energy use goals reasonably attainable. On a previous Reduce Your Use day, we tried really hard to use minimal energy. Even without using the air conditioner and turning everything off that we weren't using, we couldn't get anywhere near the usage goal. It makes you not want to bother trying.*
>
> *Give a bigger discount for people who use less on all days and a really meaningful one on the Reduce Your Use days. The savings is really stingy.*
>
> *It seems like we don't use enough energy to qualify for a credit, even if we go to zero. So that's not much of a motivation, in itself, and doesn't make checking the website worthwhile.*
>
> *Actually give a credit. On the reduce days you need to reduce use to a threshold, which is based on your average normal usage. Since my usage is very low already, it is near impossible to ever meet the required threshold. Thus, I am not inclined to take action to reduce my use.*
>
> *Find a way for those who already use lower amounts of energy to also benefit from the program*
>
> *More credit! Last time in August, didn't use any electricity, except for items usually left plugged in: washer/dryer, clock radios, stove etc... And only got roughly a $2.00 credit for the day!*
>
> *Give a better discount when the energy use is reduced. We only got a $.75 refund.*
>
> *I've started to feel like wasteful people are being rewarded if they manage to remember to turn off a couple of unneeded lights and wait to run the dishwasher, while conservation-minded folks receive no incentive because they do that every day. It's a good way to encourage better habits among wasteful folk, and I definitely approve of that. Unfortunately, the current structure provides little or no reward to those who are already fairly careful bout energy use. Yes, we do it already and doing so is its own reward, but it wouldn't hurt to give us a bit of recognition. Ideally, SDG&E would factor low use into the algorithm used to calculate our daily quotes.*

General Survey

In the general survey, contacts who reported having made an effort to reduce their use at least one event day rated their agreement with the reasonableness of the value of the bill credit they received. On average, less than half of these contacts agreed that the bill credit they received was reasonable (Figure 24). Several contacts (11% of Alert group and No MyAccount group, and 23% of MyAccount group) responded “don’t know.” While excluded from the figure below, these “don’t know” responses indicate that a notable minority of contacts did not track the bill

credit on their bill. Among those contacts who did rate the reasonableness of the bill credit value, overall ratings were relatively low.

Figure 24: Agreement with reasonableness of bill credit value



Percentages exclude "don't know" and "refused" responses

Focus Groups

We asked the focus group participants if the bill credits met their expectations. Consistent with the general survey responses, focus group participant experiences varied from not being aware of what, if any, credit they received to being satisfied with their credit. The majority of participants reported that they were not satisfied with the amount of the credit—but that this dissatisfaction did not dissuade them from wanting to participate in future events.

Representative comments included:

> *The credit met my expectations and I was happy that we were able to meet the goal all but one time—and it helps the grid.*
>
> *I thought of it as a bonus really, we were happy to do it.*
>
> *When I first got it I thought "that's all?" but any savings is a savings. I appreciate any saving that I get. It still gave me encouragement to keep at it. It was a little motivation for me.*
>
> *The credit didn't meet my expectations. The first day I saved $1.25 and it wasn't really worth it. I did change the pool pump setting for the entire summer. We also shut off our second refrigerator during that time. We increased what we did every time and the credit went up, but it only went as high as $4.*
>
> *A grand total of 75 cents and I did everything I could. It's my community service now. For all the things I did, it didn't meet my expectations.*
>
> *I kept doing what I was doing no matter the credit.*

I think I got twenty or so dollars total over the course of it and I didn't expect to get much.

I think I would still do it if it came around again. The credit was nice, it was a plus, but I think it was more about being civic minded. It would be nice to get more of a reward for what we are doing.

Those few participants who expressed dissatisfaction strong enough to consider not participating again indicated that their low baseline usage made it nearly impossible for them to earn a credit.

OVERALL FEEDBACK AND SATISFACTION

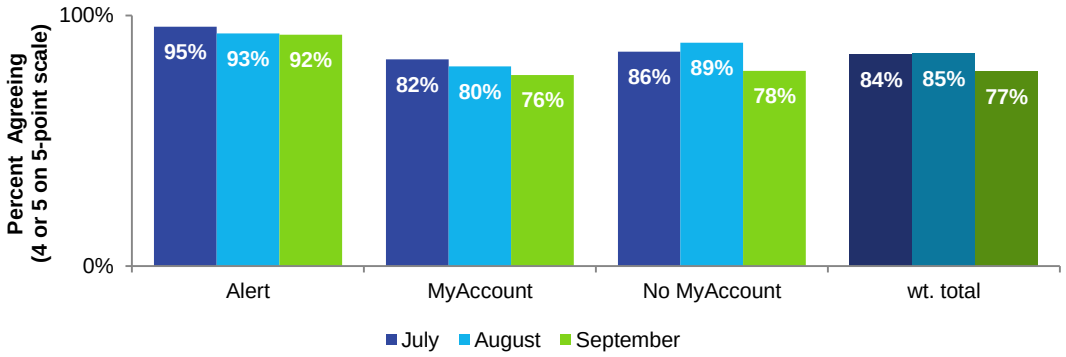
Summary: Overall, contacts were satisfied with their PTR experience and intended to participate in the future. The most frequent suggestions for improvement were on increasing or changing program messaging, with many also commenting on the bill credit. Publicizing the results of the event was also a popular suggestion among focus group participants.

To better understand contacts' overall satisfaction with RYU days, we asked contacts about their overall opinions of RYU days and their intention to participate in the future. Additionally, to understand overarching feedback we categorized the types of suggestions most frequently given to improve RYU days.

Post-Event Surveys

In all three post-event surveys, all contacts (even those who indicated no awareness of PTR) reported their likelihood of responding to future requests. In all three surveys, over three-fourths of contacts indicated they would be likely to participate in the future (rated a "somewhat" or "very" likely on a five-point scale; Figure 25).

Figure 25: Willingness to participate in future events[14]



[14] Survey samples sizes for Figure 25:
July: Alert (n=198), MyAccount (n=97), No MyAccount (n=90);
August: Alert (n=154), MyAccount (n=69), No MyAccount (n=64);
September: Alert (n=567), MyAccount (n=711), No MyAccount (n=212).

The post-event surveys also asked contacts for feedback about how to improve events. Table 15 summarizes the types of comments given by September post-event survey respondents in response to the question of how RYU events could work better for them. Although specific suggestions are documented in respective report sections, this table provides an overall picture of the types of event feedback that participants provided. The most frequent topics mentioned by contacts were program messaging, changing RYU day incentives, and concerns about being unable to reduce more.

Table 15: Open-ended comment topics (multiple responses allowed)

TOPIC	PERCENT (N=853)
Improve messaging	26%
Change incentives	23%
Nothing more that we can do to reduce	17%
Appropriateness of request	12%
Provide advance notice or reminders of events	9%
Provide more or improve feedback	7%
Issues with having events on hot days	6%
Program confusion	5%
Website issues	4%
General positive comment	3%
Improve or increase electricity generation	2%

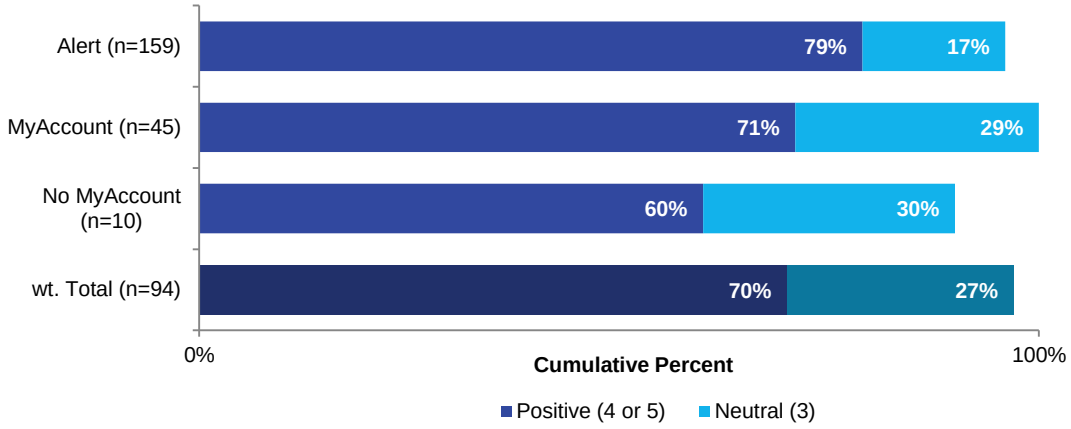
Unweighted results from third post-event survey. Includes Summer Savers and SDEC populations. N is of those providing any comment.

General Survey

General survey respondents also provided open-ended feedback about the program. Their comments echoed those made by comments in the post-event surveys, and are shown in Table 20 in the Additional Survey Responses section of Appendix A.

General survey respondents rated their overall experience with RYU events. Overall, 70% of those contacts who recalled at least one event reported they had positive experiences with RYU days (a “4” or a “5” on a five-point scale), and only a few (3%) said they had negative experiences (Figure 26).

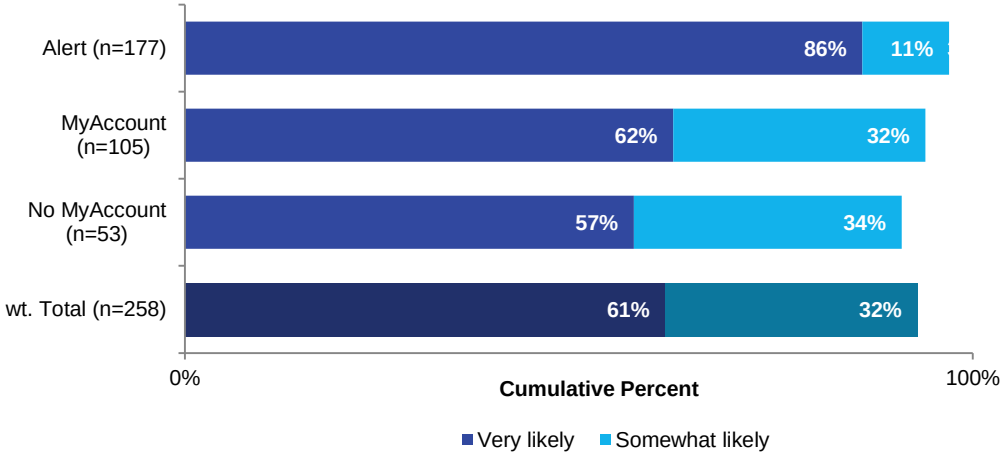
Figure 26: Overall RYU day experience



Five point scale (1 – Very negative to 5 – Very positive). Percentages exclude "don't know" and "refused" responses

We also asked PTR-aware general survey contacts about their likelihood of participation in future RYU events. Consistent with post-event survey responses, a majority of contacts (93%) reported that they would be at least "somewhat" likely to participate in future RYU events (Figure 27). The Alert group was significantly more likely to report a high likelihood of future participation (86% "very likely") than other groups. Overall, seven percent reported that they would be "not at all" likely to participate in the future.

Figure 27: Likelihood of future RYU participation



Three point scale (Very likely, somewhat likely, not at all likely)

Among those seven percent of contacts (18 of 258) who reported they would be unlikely to participate in future events, the most common reasons cited were that they are already conserving as much as they can, that they just don't want to, or that the bill credit is too low.

Focus Groups

As a final question, we asked focus group participants for any suggestions they had for potential improvements to the Reduce Your Use events. Participants most frequently requested minor logistical adjustments or more education for the community as a whole. One popular idea was that the utility should publicize the aggregate results of the event.

Suggestions from focus group participants included:

- Adding the capability to have more than one phone number per household receive a text alert
- Adding the alerts to the ticker on the nighttime news
- Increasing education in schools
- Provide a post-event text or email announcing the amount of reduction achieved, either by the individual or by the entire city
- Encourage businesses to participate and publicize their results
- Create a cell phone/tablet application which would facilitate alerts and provide feedback
- Create an online forum where people can post their experiences and ideas for how to save
- Send one or more tips on how to conserve along with the alert

INTEREST IN FEEDBACK TECHNOLOGIES

Summary: Contacts were interested in feedback-enabling technologies, and to a lesser extent, demand-response enabling technologies. The desire for additional feedback about event performance mentioned by some contacts also suggests that IHDs could be useful for them.

Post-event survey responses indicated that a subset of participants wanted more detailed information about their performance. To understand contacts' interest in feedback and demand response-enabling technology, we introduced general survey and focus group participant contacts to these technologies and asked them whether they would be interested, and also examined contacts' general open-ended program comments to understand the types of energy use feedback they desired.

Post-Event Surveys

In the September post-event survey, seven percent of commenters requested more or different types of feedback about their performance during events. These commenters wanted different

types of feedback (such as feedback via smartphone or via email), [15] clearer feedback, feedback during or right after an event, or more detailed feedback (Table 16). Many of these types of feedback could be provided through an IHD. These comments also suggest that some contacts are unaware of the availability of the post-event email alerting them that information about performance is available.

Table 16: Open-ended comments on energy use feedback (Multiple responses allowed)

TOPIC	PERCENT (N=56)
Different means of feedback (smartphone app, email)	38%
Provided clear, easier to understand feedback	20%
Provide feedback during event	18%
Provide more information about performance	18%
Provide feedback right after event	9%
Other	11%

Representative comments requesting feedback:

> *A follow-up e-mail would be helpful showing how much I reduced my energy -- rather than having to go to the web for this information.*
>
> *Allow me to view credits earned when checking the website from my iPhone*
>
> *It would be great to get feedback if the effort was successful.*
>
> *Being able to see my energy usage on your website in real time would help me learn how much energy laundry, dish washing, computer, etc. requires. Now there is usually a 2 day lag before I can access usage info*
>
> *During the actual event, if I log into the website, I should be able to see if I am indeed conserving. SDGE puts this goal out there, but you have no way of knowing if you are meeting it or not until usually 2 days later.*

General Survey

In the general survey, we introduced the respondents three types of devices that could help them keep better track of their energy use, and asked them how interested they would be in each type of device. The three types of devices were described as:

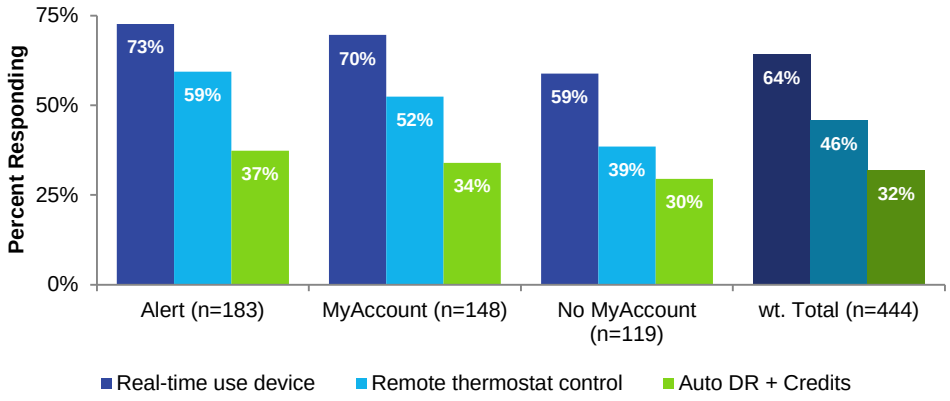
- A device that shows your households' energy usage in real time

[15] Participants can opt in to receive an email alerting them that feedback about their event performance is available on the website.

- A device that allows you to control your thermostat remotely using a website or a smart phone
- A device that allows SDG&E to adjust your thermostat a few degrees on hot days in exchange for a bill credit.

We asked contacts to rate each one using a 5-point scale that measured their level of interest. Figure 28 shows proportions that indicated "interested" in each device type by group. Overall, two-thirds (64%) indicated their interest in a device that shows real time energy use, about a half (46%) indicated interest in a device that controls their thermostat remotely, and a third (32%) was interested in a device that allows SDG&E to setback their thermostat in return of bill credit. For all three devices, particularly the remote thermostat control, the Alert group tended to indicate higher interest than others.

Figure 28: Level of interest in enabling technologies



Focus Groups

During the focus groups, we presented the participants with an example of an in-home display (IHD) and smart thermostat unit. We asked for their feedback on the various types of information and capabilities these tools provide. While some participants were familiar with self-regulating thermostats, no participants were familiar with IHDs. We explained that the IHD would give them real time information about their consumption and allow them to receive alerts from SDG&E directly to the IHD. We explained to participants that the smart thermostat could potentially allow SDG&E to make minor adjustments to their heating and cooling settings, with their permission.

Participants initially had many questions about both pieces of technology. Among their inquiries were:

- Cost of the technology
- How the devices calculate usage

- How difficult the devices are to operate
- If there would be a monthly charge or maintenance plan
- How difficult or costly the device(s) would be to install
- If it would be simple to operate the technology

Participants found the concept of the IHD appealing because it offered them instant feedback and more details about their consumption. Participants liked the idea of the IHD displaying any credit they had earned as a form of motivation. Some participants stated that they would not need an IHD but the technology might be useful for people with high electric bills:

> *If your bill is already less than 50 dollars I bet you are doing things you need to do. If you already have a smaller bill this might not really save you any energy. They should prequalify you with your electricity bill. That's like preaching to the choir, the people who will pay attention and do this are people who are already paying attention and trying to save.*
>
> *They should give the IHDs to high users and see what they do with it and if it helps them save anything. Find out about their experiences.*

In general, participants seemed more receptive to the IHD because they did not want to surrender control of their heating and cooling to the utility. We asked if the control issue could be mitigated with a credit, but those participants who did not find the concept appealing did not believe that a credit would resolve their concerns. Comments included:

> *That is too much big brother. If I'm running something there's a reason why.*
>
> *The credit would have to be substantial to let them control your thermostat*
>
> *I cannot think of any credit that would be big enough.*
>
> *What if you are taking a shower and the water just turns cold? No way.*
>
> *I have to have complete control of my devices; I don't want to give that up. I am very responsible and if I can save energy I will. For me it's not appealing.*

The few participants who found the smart thermostat appealing were more tech savvy and not put off by data sharing or explained that they were often not home and would appreciate the ability to control their thermostat remotely.

6 PREDICTORS OF CURTAILMENT

As part of the evaluation of the PTR program, we attempted to understand the relationship between participant post-event survey responses and measured curtailment on event days. Specifically, we explored whether self-reported demographic, attitudinal, and behavioral factors were related to participants' energy reduction on event days. This analysis builds on a similar analysis conducted as part the evaluation of the pilot program.[16]

We used regression decision tree models to understand the factors that were most related to curtailment and regression analyses to confirm these factors. See the Methodology section of Appendix A for a full explanation of the methods used.

Because the third post event survey had the largest sample size and the most comprehensive list of questions, the curtailment analysis was conducted primarily with this dataset. We have used the second post-event survey to confirm the findings from the third.

RESEARCH QUESTIONS

Our analysis was guided by four questions:

- To what extent is curtailment related to demographic, attitudinal, or behavioral factors?
- To what extent are contacts who were unaware of the program showing curtailment?
- To what extent are contacts who reported making an effort showing curtailment?
- What factors moderate these relationships?

MEASURES OF PERFORMANCE

For each of the three post-event survey datasets, we used three separate measures of performance in this analysis:

- **kWh savings.** Number of kWh saved during event.
- **Binary savings.** Yes/no: Any kWh saved during event.
- **Curtailment consistency.** Number of event days with measured curtailment.

The first two measures of performance quantify performance on a particular event day, while the third quantifies performance across all PTR events. Note that for the August post-event survey,

[16] CALMAC Study ID SDG0260. http://www.calmac.org/publications/SDGE_PTR_Pilot_PE_ID_SDG0260_042312.pdf

the curtailment data used was from the August 14th event, which was the event immediately before the survey and the event about which survey questions were asked.

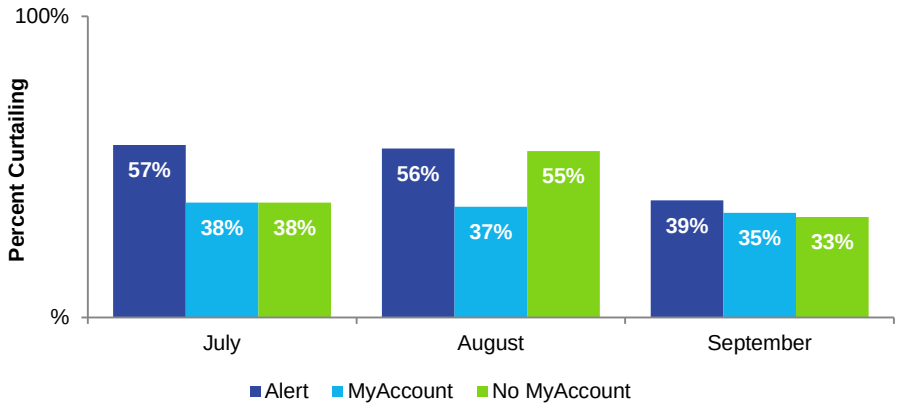
DESCRIPTIVE CURTAILMENT BY GROUP AND ENGAGEMENT

The following section gives an overall view of the correlation between curtailment and awareness, effort, and group. Figure 29 through Figure 35 describe the curtailment performance for each of the three post event survey samples, on two of the three performance metrics described above. (See the kWh Saved Metric section in the Appendix A for more "kWh savings" metric information.)

Binary Savings Metric

While the overall relationship between curtailment and group varied for each post-event, a higher proportion of Alert group respondents curtailed than MyAccount and No MyAccount groups across each post-event (Figure 29).

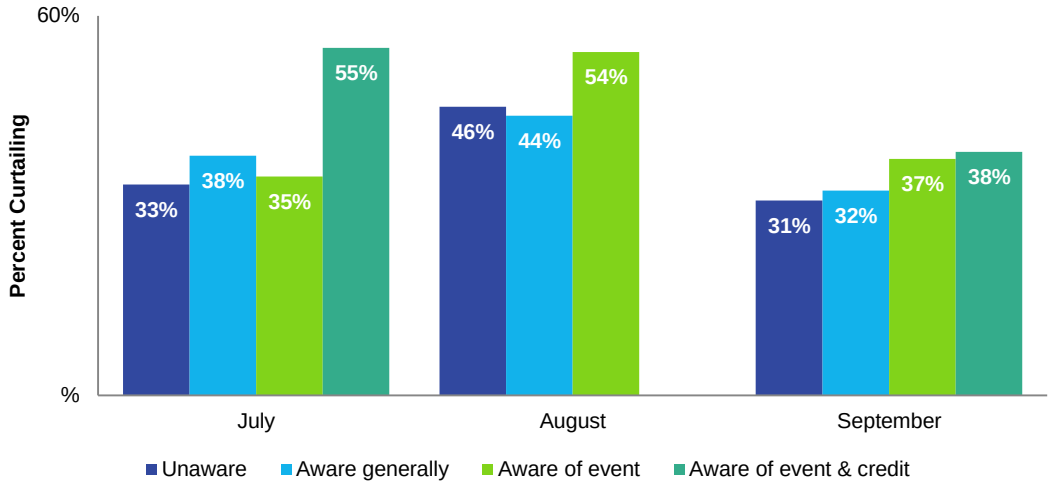
Figure 29: Proportion curtailing by group[17]



Similar to the relationship between curtailment and group, the relationship between the proportion curtailing and level of awareness varies by event date (Figure 30). Each event, however, shows increasing awareness corresponds to an increase in the proportion curtailing.

[17] Sample sizes for Figure 29:
July: Alert (n=201), MyAccount (n=97), No MyAccount (n=97);
August: Alert (n=155), MyAccount (n=68), No MyAccount (n=67);
September: Alert (n=599), MyAccount (n=775), No MyAccount (n=228)

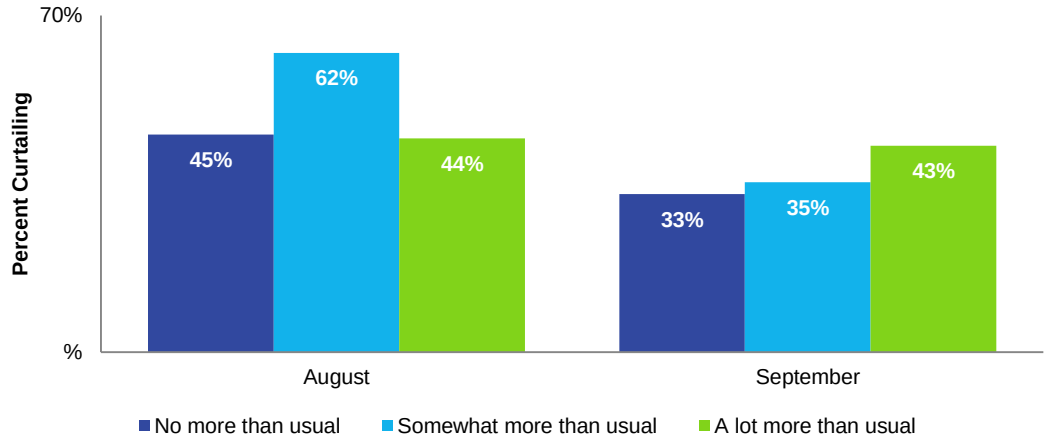
Figure 30: Proportion curtailing by level of awareness[18]



All results are weighted.

Increasing curtailment effort reported by respondents does not consistently predict the proportion of respondents that curtailed during the event (Figure 31).

Figure 31: Proportion curtailing by level of effort[19]

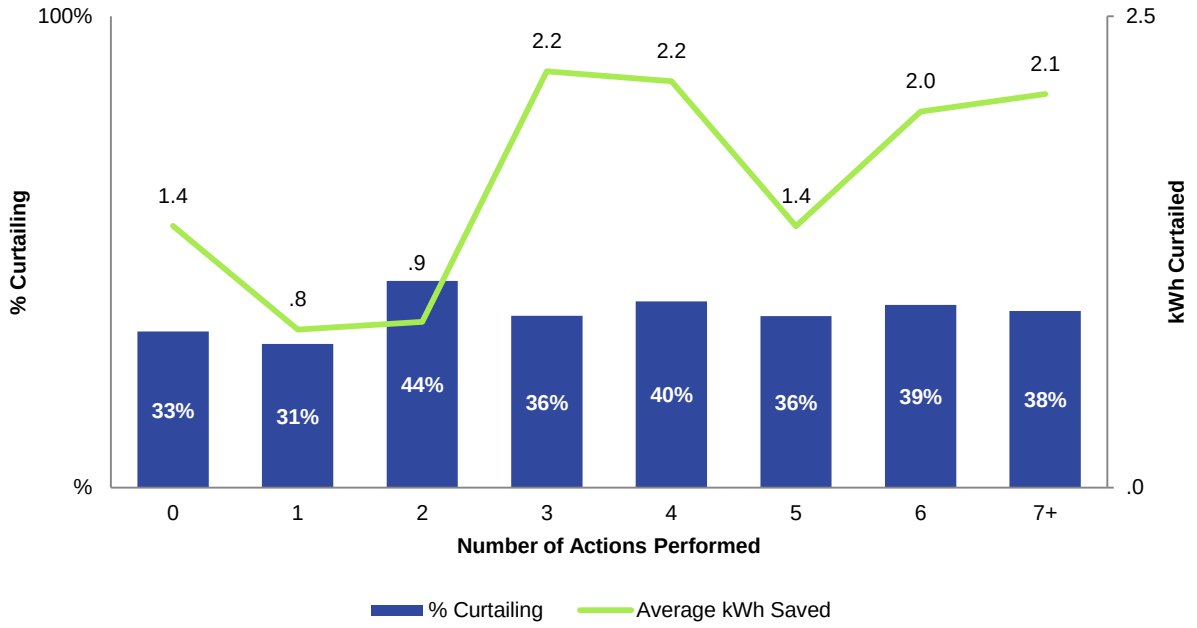


18 Sample sizes for Figure 30:
July: Unaware (n=114), Aware generally (n=198), Aware of event (n=26), Aware of event & credit (n=51);
August: Unaware (n=57), Aware generally (n=260), Aware of event (n=94);
September: Unaware (n=419), Aware generally (n=1,313), Aware of event (n=313), Aware of event & credit (n=720);

19 Sample sizes for Figure 31:
August: No more than usual (n=347), Somewhat (n=37), A lot more(n=27);
September: No more than usual (n=2,077), Somewhat (n=428), A lot more(n=219)

The reported number of actions performed to reduce energy use on event day does not correspond with the proportion of respondents curtailing or with the kWh savings (Figure 32).

Figure 32: Proportion curtailing and average kWh curtailed by number of actions to reduce use[20]



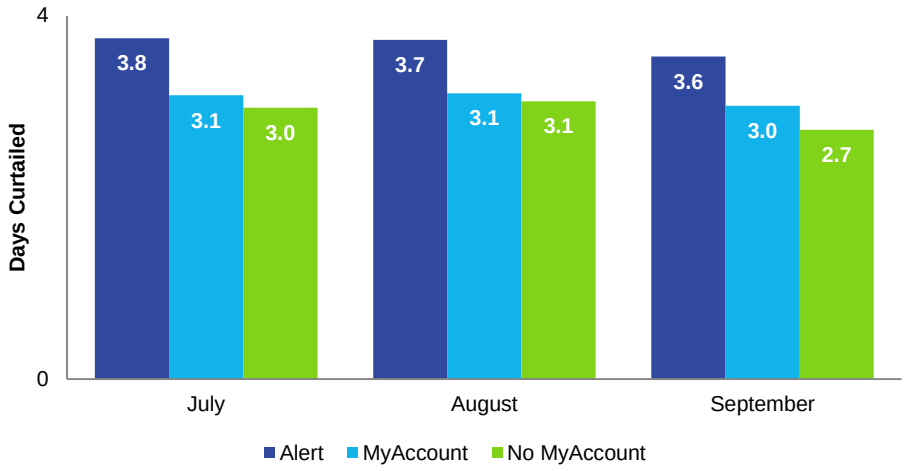
Data from third post-event survey, weighted.

Curtailment Consistency Metric

Respondents with alerts curtailed on more days than MyAccount and No MyAccount groups for all the post-event surveys (Figure 33).

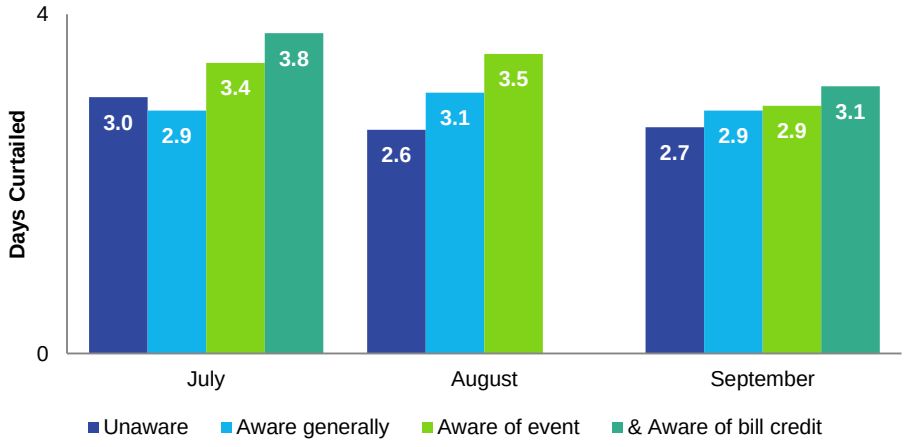
[20] Sample sizes for Figure 32:
Zero (n=2141), One (n=59), Two (n=114), Three (n=118), Four (n=124), Five (n=66), Six (n=80), Seven or more (n=64).

Figure 33: Average number of days curtailed by group[21]



Awareness is also related to number of days curtailed: the more aware the respondent the more days, on average, they curtailed (Figure 34).

Figure 34: Average number of days curtailed by awareness[22]

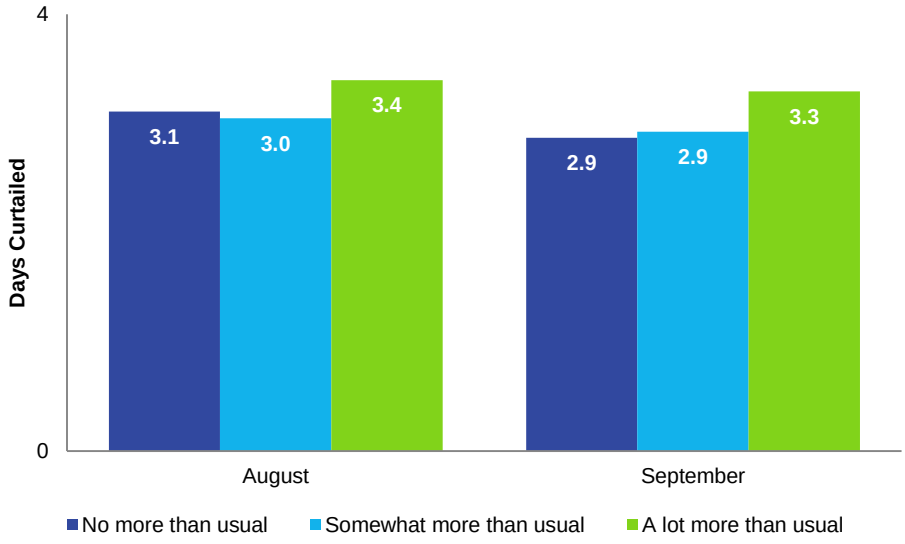


[21] Sample sizes for Figure 33:
July: Alert (n=201), MyAccount (n=97), No MyAccount (n=97);
August: Alert (n=155), MyAccount (n=68), No MyAccount (n=67);
September: Alert (n=599), MyAccount (n=778), No MyAccount (n=229).

[22] Sample sizes for Figure 34:
July: Unaware (n=115), Aware generally (n=198), Aware of event (n=27), Aware of event & credit (n=51);
August: Unaware (n=57), Aware generally (n=260), Aware of event (n=94);
September: Unaware (n=419), Aware generally (n=1,322), Aware of event (n=314), Aware of event & credit (n=721);

Respondents' self-reported level of effort is also related to the number of days curtailed (Figure 35). Those who made a lot more effort than usual had measured curtailment, on average, more days than those that made no effort or some effort.

Figure 35: Average number of days curtailed by level of effort[23]



Overall, both the binary savings and curtailment consistency metrics show that customers who were aware of the events, and customers who made an effort to curtail, tended to curtail more than others. These findings are more consistent *across* events with the curtailment consistency metric than with the binary savings metric, though. For example, in Figure 31, the proportion of customers who curtailed was higher among those who reported a lot of effort only for one of the two events, while, in Figure 35, the number of days curtailed is higher for those who reported a lot of effort than for those who reported no effort on both events. This consistency is unsurprising, given that, for this metric, "effort" on a single event is related to performance across all events.

PREDICTORS OF CURTAILMENT

To better understand the effect of behaviors on curtailment, we conducted statistical analyses to control for some of the other factors that affect curtailment.

[23] Sample sizes for Figure 35:
August: No more than usual (n=347), Somewhat (n=37), A lot more(n=27);
September: No more than usual (n=2,086), Somewhat (n=428), A lot more(n=219)

Key Findings

- Reported behavior explains only a small portion of curtailment behavior and savings. From the descriptive data, we see that two interrelated trends drive this finding. First, there is considerable curtailment among contacts who reported no awareness of the event. In the three post-event surveys, 32% to 44% of contacts who reported no awareness of the event showed some curtailment. Second, many contacts who report making an effort to curtail are not earning bill credits. In the three post-event surveys, 41% to 57% of customers who reported making an effort to curtail their use had no registered curtailment.

- The effect of a customer's behavior on curtailment only emerges when looking at curtailment across multiple events. Reported actions account for a very small proportion of the variance in curtailment when looking at kWh curtailment savings on a single event day. Furthermore, across the event days, the relationship of behavior and curtailment on a single event varies. However, patterns emerge when using a count of events where customers were able to curtail.

- Effort and opting in to receive an alert are related to consistent curtailment. Effort does predict curtailment across multiple events, even when the measure of "effort" is only for a single event. Alert opt-ins tend to curtail somewhat more consistently than non- opt-ins, particularly among higher users.

- There may be a threshold of average kWh use below which, short of extraordinary effort, engagement and behaviors do not predict curtailment consistency. Our analyses indicated that below about 260 kWh/month usage, curtailment consistency was relatively low (less than three of the seven days, on average), and not driven by reported actions or engagement with RYU days. The exception to this is a relatively small number of users who managed relatively high consistency (4.3 of seven days) through extraordinary effort (performing at least 6 of 10 actions mentioned by the interviewer).

Exploratory Analysis of Curtailment Predictors

To better understand which demographic and behavioral predictors best associate with customers' curtailment during PTR events, we used Classification And Regression Tree (CART) modeling. This exploratory analysis examines the relative predictive strength of predictor variables relative to an outcome (in this case, event performance.)[24] That is, these models would determine which predictors were most strongly related to event performance, and also give us a sense of how well these predictors explained event performance.

[24] See Therneau & Atkinson, 2012 "An Introduction to Recursive Partitioning Using the RPART Routines" at http://cran.r-project.org/web/packages/rpart/vignettes/longintro.pdf for a more complete discussion of CART models.

We used CART models with each of the measures of performance discussed above as outcome variables (kWh savings, binary savings, and curtailment consistency.) We included 21 predictor variables in each model, including:

- Demographics
  - Average kWh Use
  - Climate Zone
  - Home size
  - Income
  - Number of occupants
  - Presence of children under 5
  - Presence of children under 18
  - Presence of Seniors
  - Home ownership
  - Ethnicity
  - AC use
  - Pool ownership
- Behavioral
  - Alert opt-in
  - SDEC opt-in
  - MyAccount signup
  - Number of actions taken
  - Level of effort
  - Logon to tracking website
- Awareness & Attitudinal
  - Awareness of event
  - Awareness of concept
  - Motivation to curtail

Since CART models require very large sample sizes, we conducted this analysis with the September 15th data only. We also excluded Summer Savers from this analysis, because we hypothesized that the relationship between actions and savings would be considerably different for those with auto-DR technologies.

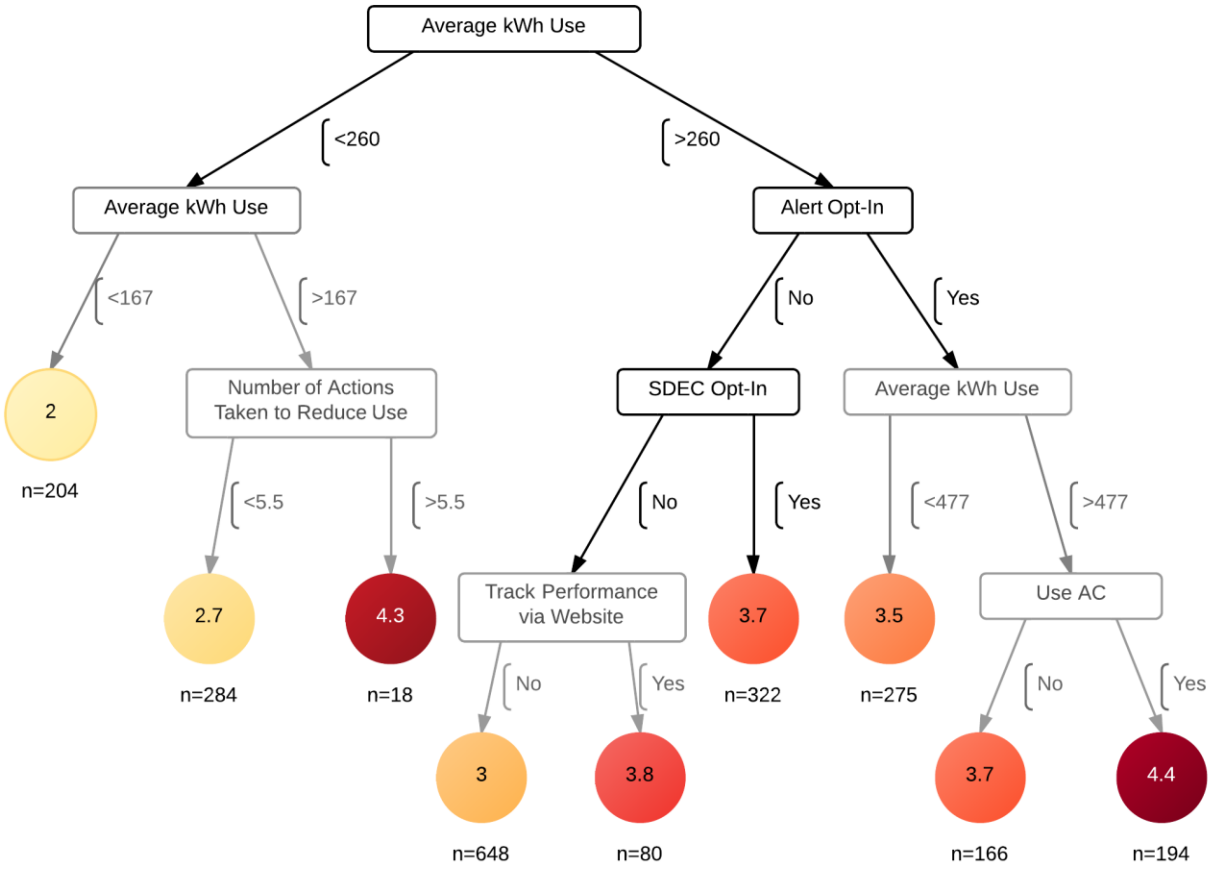
We ran a series of CART models on the three measures of performance (binary curtailment, kWh curtailment, and curtailment consistency). We found that only the model using curtailment consistency as the outcome variable included any behavioral factors (see the Predictors of Curtailment section of Appendix A for a complete discussion of model development.)

Figure 36 shows the regression tree for the model predicting "curtailment consistency" (the number of days reduced, out of seven). Each rectangle or "node" is a variable where the tree splits. The brackets below each "node" show the split points for the variable. (Regression trees

model the best "split" for continuous predictors, such as average monthly kWh use.) The circles are terminal "leaves" in the tree, and they contain the model's estimate for the number of days reduced by that subset of customers. Light colors indicate lower curtailment consistency, while dark colors indicate higher curtailment consistency.

Here, we have shown the best (black) and complete (gray) regression tree for curtailment consistency among the September 15 sample. Although we cannot conclusively say that the gray branches are meaningful predictors of curtailment consistency, we include them here because of the story they tell about the interaction between demographic and behavioral data.

Figure 36: Regression tree (Predictors of curtailment consistency, Data: September 15 sample)



Black nodes are part of best model. Gray nodes not part of the best model, but each increase R^2 by at least 0.005.

From the tree, we see that for customers using less than 260 kWh per month, opting into an alert or to the SDEC program *do not* significantly predict greater consistency of event performance. There is a small subset of customers (n=18) in our sample for who use between 167 and 260 kWh per month who reduced their use an average of 4.3 out of 7 days, by trying very hard (that is, they reported performing at least 6 of the 10 actions we listed during the 9/15 event).

Among those customers using more than 260 kWh a month, signing up to receive alerts or for the SDEC program does predict increased performance consistency, relative to others. Intriguingly, among those who did not opt in to alerts or SDEC, those who reported tracking their performance via the website also had more performing days than their non-tracking counterparts (an average of 3.8 of 7 versus 3 of 7 days).

Finally, among those who opted in to receive alerts, demographic factors again predict performance consistency. Those alert opt-ins using more than 477 kWh per month tended to curtail on more days than those using between 260 and 477. Finally, among those using 477 kWh per month, those with air conditioners were more consistent performers than those without.

This model suggests that engagement with RYU events played a role in how many days customers were able to curtail, but that the largest predictor of consistent curtailment is average monthly electricity use. Subsequent analysis confirms that in addition to kWh use, opting in for an alert and making an effort both play a role in curtailment consistency.

7 RESPONSE GROUP DEMOGRAPHICS

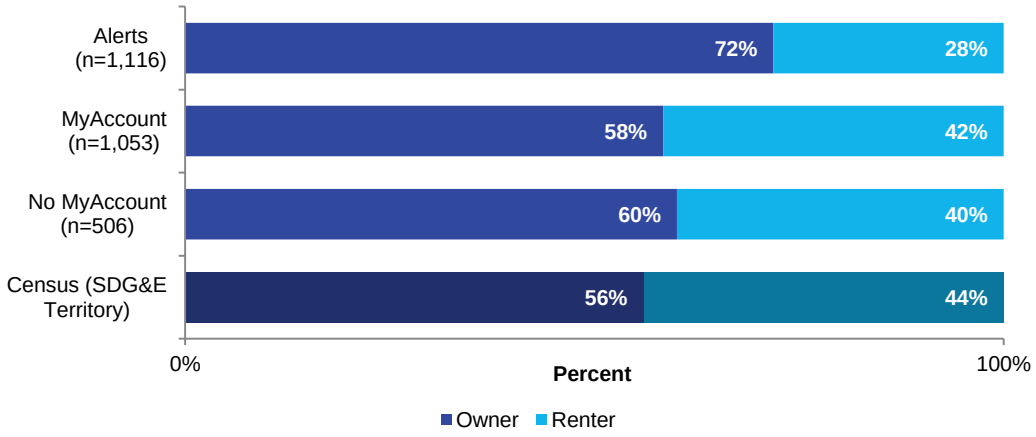
Summary: Demographics of surveyed groups revealed differences between surveyed response groups as well as between surveyed contacts and the SDG&E territory as a whole. Alert contacts differed from other respondents in several ways. Relative to other surveyed SDG&E customers, alert opt-ins tended to be more educated, have higher incomes, and were more likely Caucasian and homeowners living in single-family detached homes. Surveyed contacts also differed from SDG&E census-derived territory totals. Surveyed contacts tended to have more education and were more likely to be Caucasian and own air-conditioning than the territory as a whole.

This chapter summarizes the demographics characteristics of the Alert, MyAccount, and no MyAccount groups surveyed throughout the evaluation, and compares them with the demographic characteristics of SDG&E's territory as a whole.

Wherever possible, survey responses are compared with census data from the SDG&E territory as a whole (as defined by county, zip codes, or, when unavailable, San Diego city limits).[25]

Alert group contacts are more likely than others (including the SDG&E territory as a whole) to own their own homes (Figure 37).

Figure 37: Homeownership

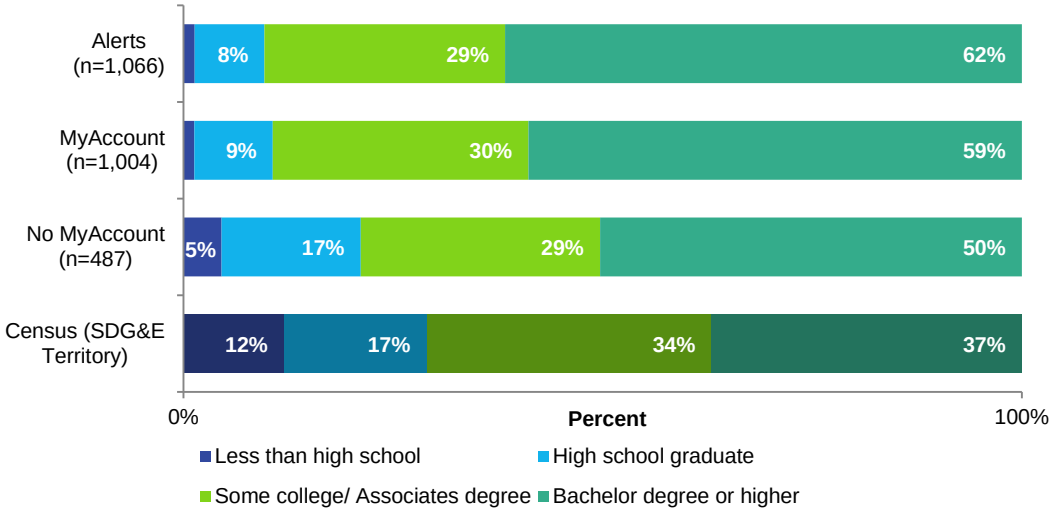


Percentages exclude "don't know" and "refused" responses

[25] Data extracted from the 2010 American Community Survey via the American FactFinder at http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml

Alert and MyAccount group contacts tended to report more education than no MyAccount group contacts, but all three sample groups were more educated than the SDG&E territory as a whole (Figure 38).

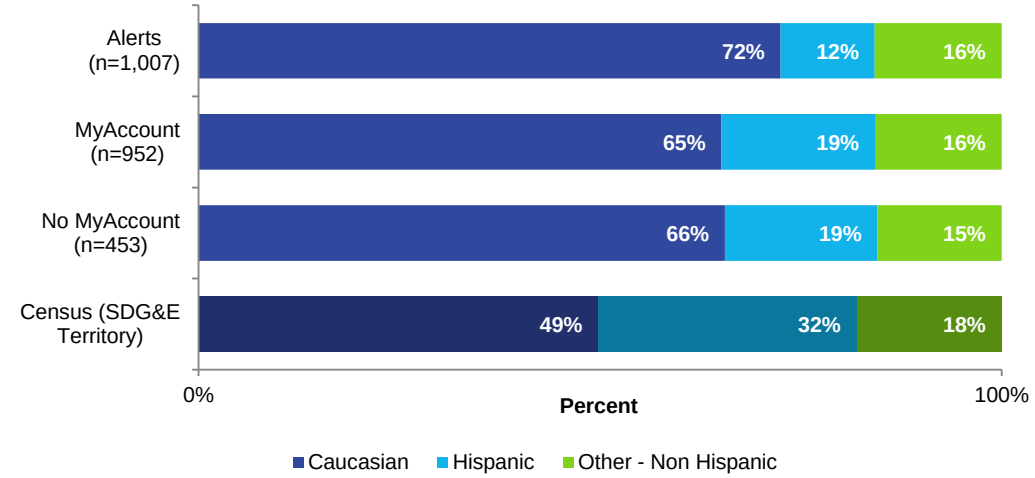
Figure 38: Highest level of education



Percentages exclude "don't know" and "refused" responses

The survey samples over-represent Caucasian respondents and under-represent Hispanic respondents, relative to the SDG&E territory as a whole (Figure 39). Alert group contacts were even more likely to be Caucasian relative to the other groups.

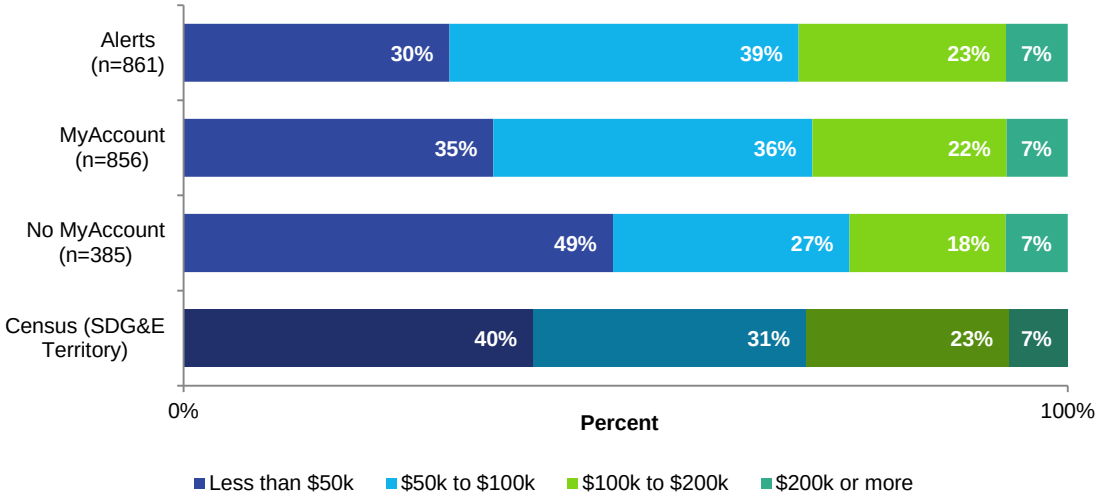
Figure 39: Race and ethnicity



Percentages exclude "don't know" and "refused" responses

A higher proportion of no MyAccount contacts reported making less than $50,000 per year, relative to the Alert and MyAccount groups, and to the SDG&E territory as a whole (Figure 40).

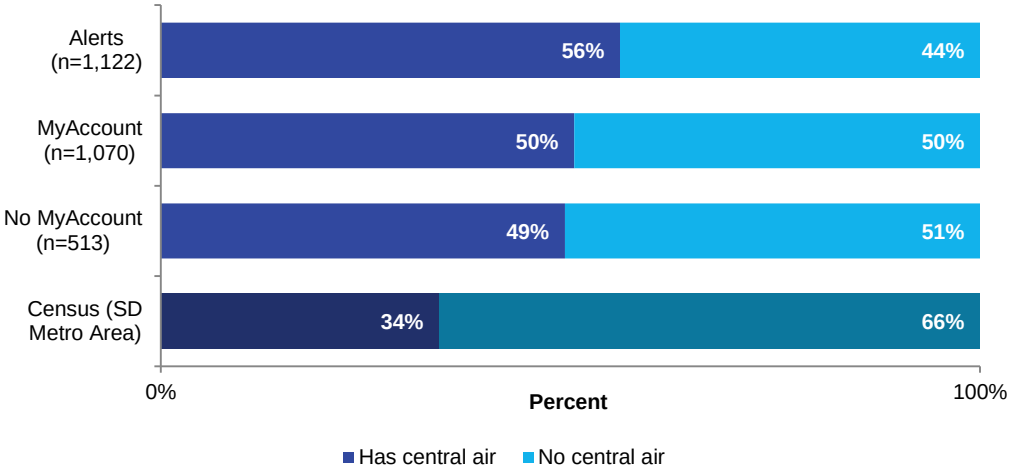
Figure 40: Household income



Percentages exclude "don't know" and "refused" responses

A higher proportion of surveyed respondents have air conditioning than in San Diego as a whole (Figure 41).[26]

Figure 41: Air conditioning

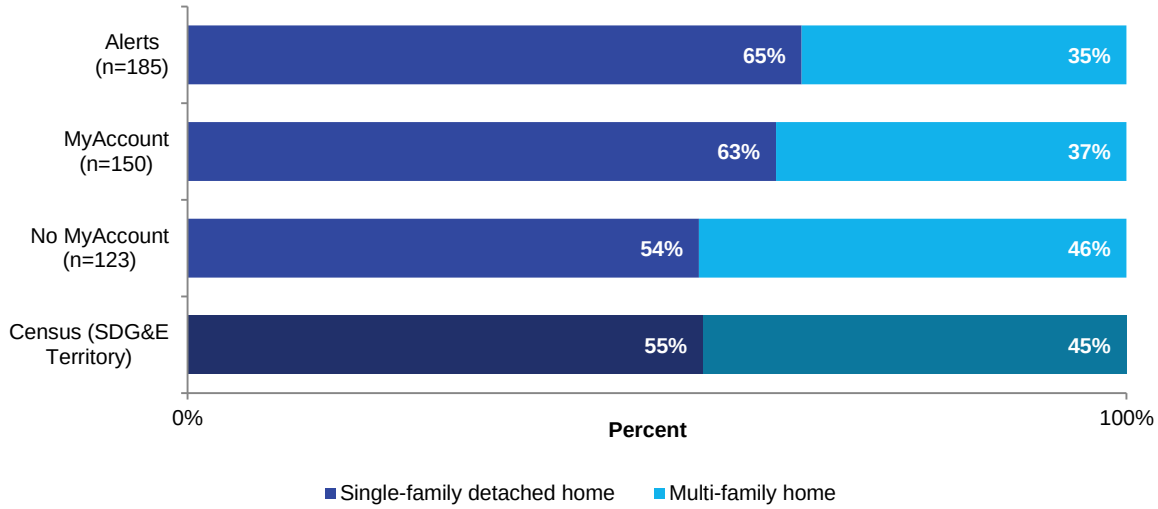


Percentages exclude "don't know" and "refused" responses.

[26] Note that the census comparison here is not the population within SDG&E territory, but rather the San Diego Metro Area.

A higher proportion of Alert and MyAccount group respondents live in single-family detached homes than no MyAccount respondents and the SDG&E territory as a whole (Figure 42).

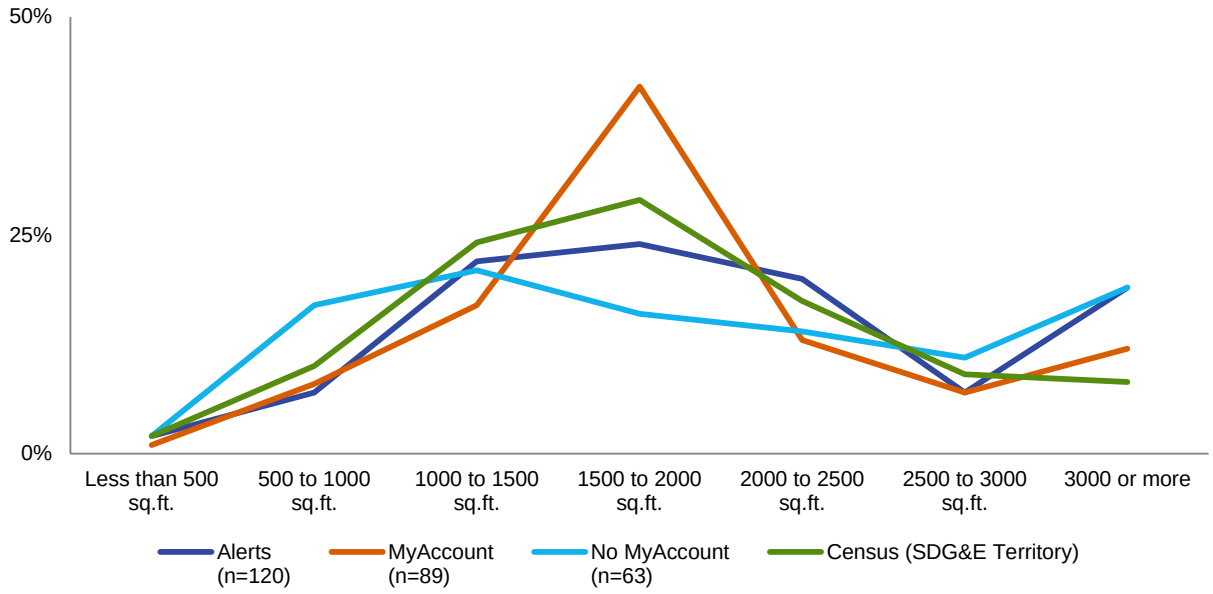
Figure 42: Home type



Percentages exclude "don't know" and "refused" responses

A higher proportion of MyAccount respondents have houses between 1,500 and 2,000 square feet than the Alert and No MyAccount groups or SDG&E territory as a whole. There is also a slightly higher proportion of No MyAccount respondents than others living in smaller homes (500 to 1,000 square feet) and a smaller proportion of No MyAccount respondents than others living in midsize homes (1,500 to 2,000 square feet) when compared to Alert, No MyAccount groups and the population within SDG&E territory (Figure 43).

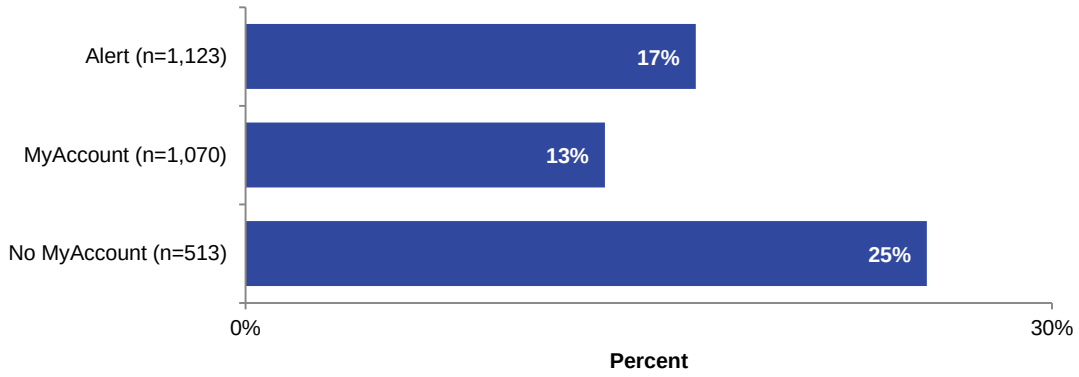
Figure 43: House size



Percentages exclude "don't know" and "refused" responses

Finally, more no MyAccount respondents have at least one senior, aged 70 and above, living in their home than Alert or MyAccount respondents (Figure 44). Equivalent census information was not available.

Figure 44: Percent of households with seniors (age 70 and above)



Percentages exclude "don't know" and "refused" responses

8 SPECIAL POPULATIONS

SUMMER SAVERS & SDEC

Summary: Like Alert group contacts, Summer Saver and SDEC group contacts are distinctly more aware and engaged than the general population, having actively opted in to their programs. Accordingly, the level of awareness, event engagement, and event opinions among these groups are the highest and the most favorable among all the groups, and they resemble the Alert group's responses.

In the August and September post-event surveys, we included samples of customers enrolled in SDG&E's AC cycling program (Summer Savers), and those who signed up for the San Diego Energy Challenge (SDEC). This section presents an overview of key findings for these populations, highlighting any notable differences between these two populations and the Alert opt-in population. Further detail can be found in Appendix C and Appendix D.

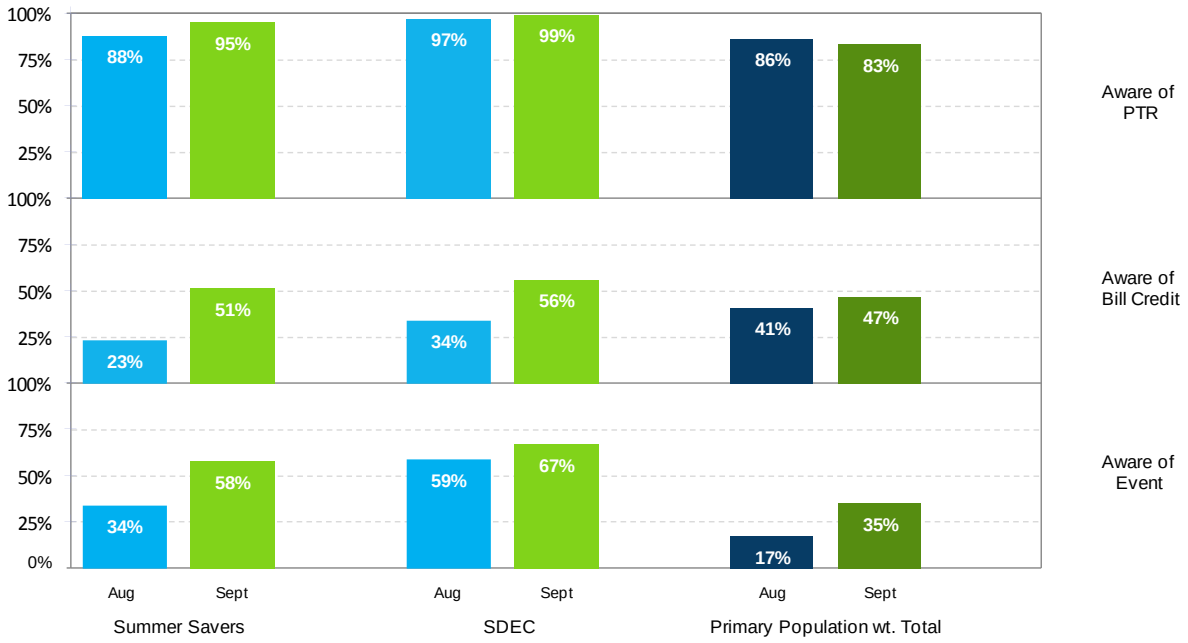
Awareness

Figure 45 summarizes awareness of program elements, comparing Summer Saver participants and SDEC participants with PTR's primary target population (an average of Alert, MyAccount, and no MyAccount groups).

Summer Saver and SDEC participants are equally or even more aware of the communications SDG&E sent out about RYU days than the general population. In both post-event surveys, a vast majority of these groups (88-99%) reported they had heard of RYU days that were happening during the summer months.

Awareness of the bill credit and events among these two groups was somewhat higher than the general population. Comparing these two groups with the Alert group, the Alert group was significantly more aware of bill credit component, but awareness of events was relatively similar across the three opt-in groups (see Figure 3).

Figure 45: Awareness of program elements, across event days[27]

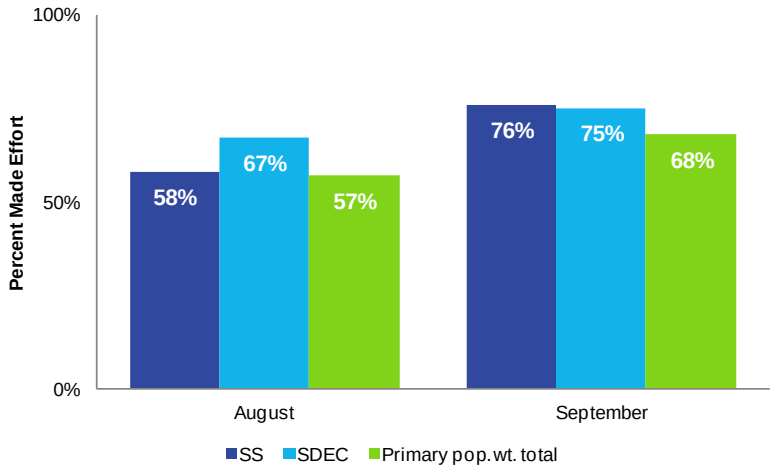


Engagement

Figure 46 shows the percent of event-aware contacts who reported making more effort to reduce energy use than usual during the event. Both Summer Saver and SDEC groups reported similarly high levels of engagement as the primary population during the events. Particularly during the September event, they reported the same level of effort as the Alert group.

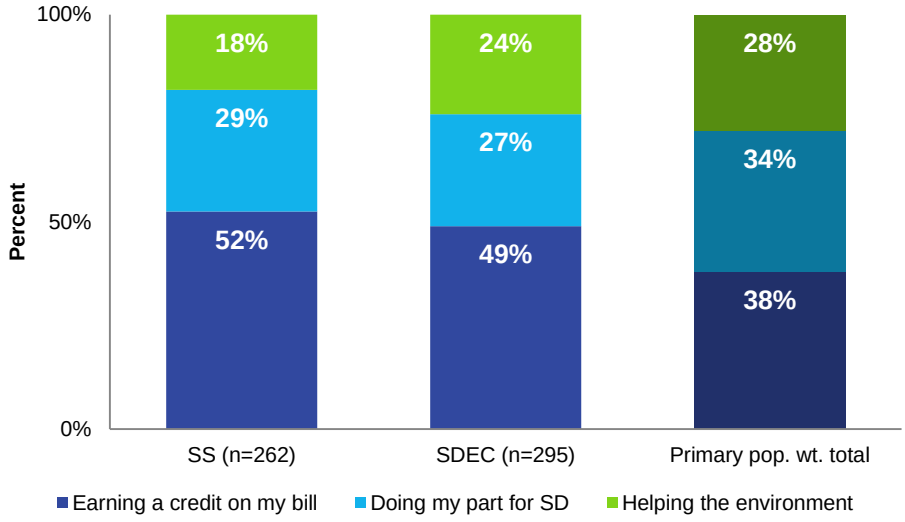
[27] Survey sample sizes:
August: SS (n=68), SDEC (n=70);
September: SS (n=634), SDEC (n=627).

Figure 46: Level of effort to reduce[28]



In the September post-event survey, we asked Summer Savers and SDEC groups what factors were important in their decision to make an effort to reduce their use (Figure 47). Similar to the alert group's reported motivation, Summer Savers and SDEC contacts were more likely than the primary population to report that earning a bill credit was the primary factor in their decision to respond to events. (Note other potential motivators for SDEC participants, including earning prizes, were not offered as one of the response options.)

Figure 47: Important factors to reduce use by group

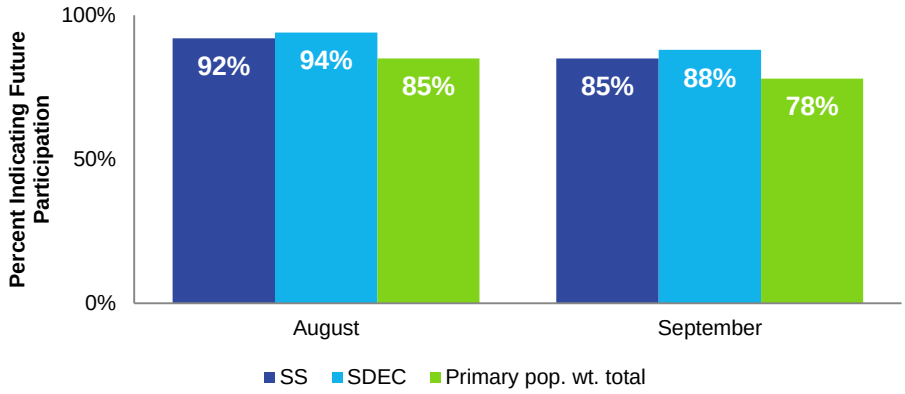


[28] Survey sample sizes:
August: SS (n=19), SDEC (n=30);
September: SS (n=353), SDEC (n=395).

Event Opinions and Feedback

To understand their intention to participate in the future, we asked the respondents to rate the degree to which they agreed with the statement "I will reduce my energy use if SDG&E requests me to use less energy on a specific day." Figure 48 shows the proportion of contacts who "strongly" or "somewhat" agree. In both post-event surveys, a large majority of both Summer Saver and SDEC groups reported intending to participate in future events (85%-95%). These percentages were significantly higher than the primary population, but resembled the Alert group's reported intention.

Figure 48: Future participation intent[29]



SDEC and Summer Savers' feedback on the events was similar to the feedback given by participants overall and open-ended responses have been incorporated into the main body of the report. Consistent with their enrollment in a competition to reduce energy use generally (not just on event days), SDEC participants were particularly likely to self-identify as already making an effort to conserve, and were also particularly likely to suggest changes to the incentive structure. They also requested energy saving tips or feedback more frequently than others.

SMALL COMMERCIAL

Summary: Small commercial contacts were more difficult to notify by email and much less able to respond to event requests than residential customers.

We spoke to small commercial customers about Reduce Your Use days as part of all three post-event surveys. The following section presents a summary of their responses. For more information, see the Post-event memos for each survey wave in Appendices B, C, and D, below.

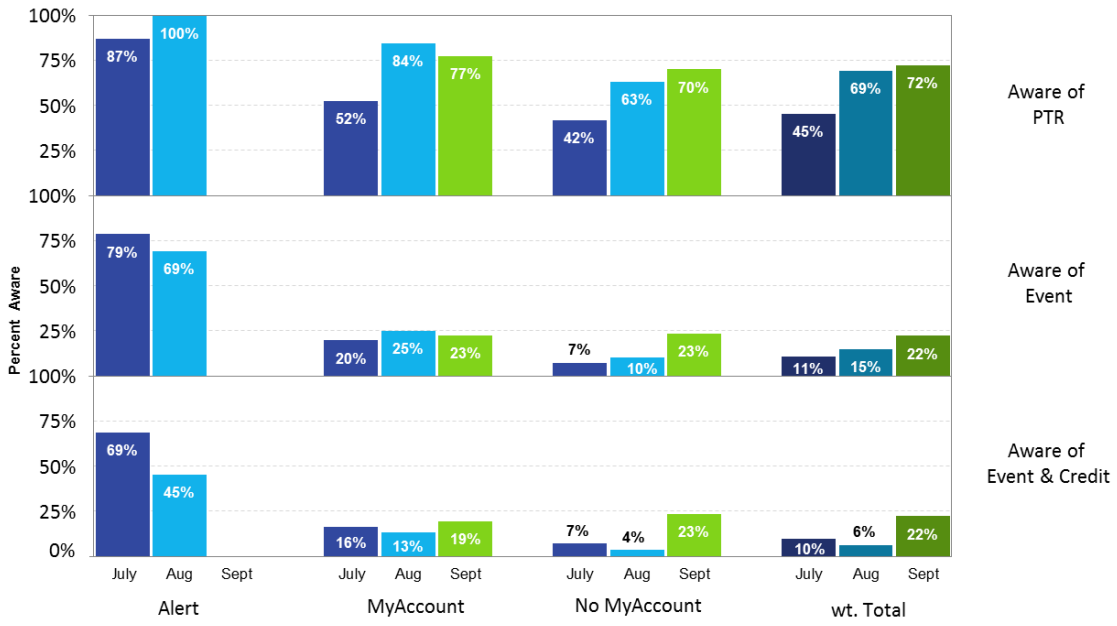
[29] Survey Sample Sizes:
August: SS (n=64) SDEC (n=67);
September: SS (n=595) SDEC (n=587).

Note that we encountered significant difficulties in reaching on-site contacts for these small businesses. Thus we are not confident that this population is representative of small business customers in San Diego.

Awareness

We tracked awareness of PTR program elements across the three post-event surveys. Figure 49 shows general awareness of the PTR program, awareness of the specific event, and awareness of the event and bill credit across response groups and across event days. Program awareness increased over the summer, and by the last RYU event day, just less than three-fourths of contacts were aware of the PTR program. Awareness of the actual event remained below one-fourth, though. The difference in PTR awareness among small commercial customers without and with MyAccount is smaller than the difference between residential customers. This smaller difference may be because the bill-payer is often not an onsite decision-maker. Anecdotally, the survey contractor reported considerable MyAccount information where the bill payer was not at the service address, or even in the state. Several comments reinforced this anecdotal finding that managers may not be direct recipients of MyAccount emails.

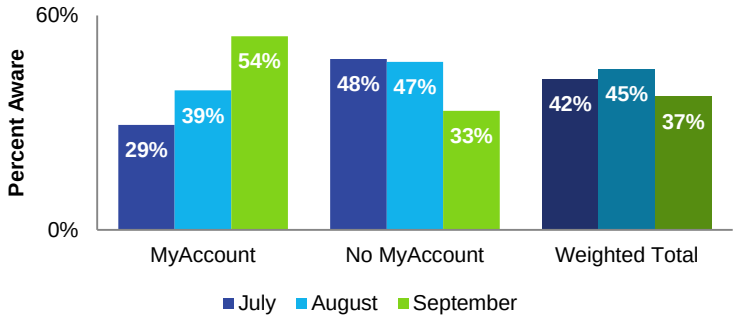
Figure 49: Awareness of program elements, across event days[30]



30 Survey sample sizes:
July: Alert (n=70) MyAccount (n=61) No MyAccount (n=43)
August: Alert (n=39) MyAccount (n=32) No MyAccount (n=30)
September: MyAccount (n=31) No MyAccount (n=30)

Less than half of PTR-aware small commercial contacts were aware of the option to sign up for notifications of event days (Figure 50).

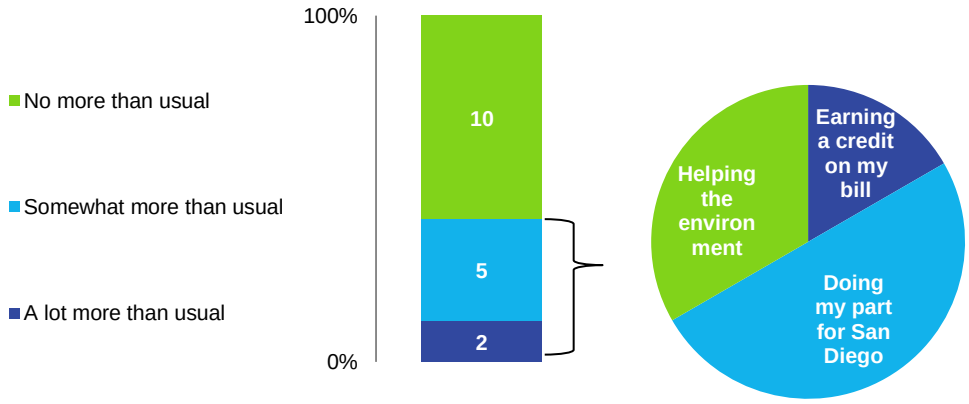
Figure 50: Awareness of alert sign-up opportunity[31]



Engagement

Small commercial contacts also reported on their level of engagement with PTR events. As part of the third post-event survey, small business contacts indicated their level of effort to respond to the request. Of the 17 contacts who were aware of the event day on September 15, less than half (7 of 17) reported making any effort to reduce their energy use (Figure 51). Of those who made an effort, the most commonly reported motivation for doing so was "doing my part for San Diego," (3 contacts) followed by helping the environment (2 contacts).

Figure 51: Event day effort and motivation to reduce use (n=17)



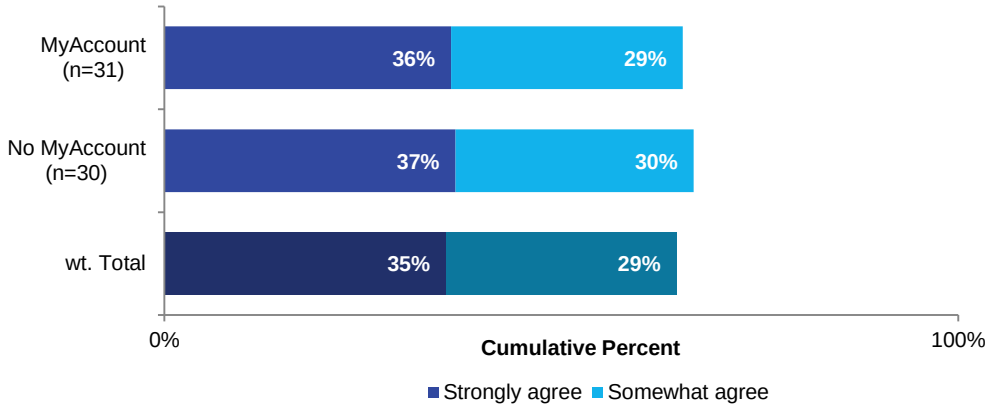
From the phone sample of the third post-event survey, conducted after the 9/15 event

[31] Survey sample sizes:
July: MyAccount (n=34) No MyAccount (n=23)
August: MyAccount (n=17) No MyAccount (n=18)
September: MyAccount (n=24) No MyAccount (n=21)

Event Opinions and Feedback

Small commercial contacts also provided feedback about PTR events, and whether they might respond to similar requests in the future. In the third post-event survey, just under two-thirds of small business contacts (65%) reported that they would reduce their energy use if SDG&E requested them to do so on a specific day (rated a "4" or "5" on a five-point scale; Figure 52).

Figure 52: Intention to participate in future RYU days



From the phone sample from the third post-event survey, conducted after the 9/15 event.

As part of the third post-event survey, 39 small commercial contacts also provided general feedback about ways SDG&E could make RYU days easier for businesses like theirs. Nearly half of contacts (17 of 39) commented that they are constrained in their ability to respond to RYU requests (Table 17). Common reasons mentioned for being unable to respond included that many already try to reduce their energy use or that they are unable to reduce it on a particular day without impacting their sales. At the same time, though, nearly one-fourth of contacts (9 of 39) requested more notification of events. Several contacts also requested more information about saving energy or increasing their energy efficiency.

Table 17: Suggestions to make RYU days easier for businesses (Multiple responses allowed)

COMMENT	COUNT (N=39)
Cannot do more than we are doing	17
Already try to reduce energy use	*10*
Cannot reduce further	*9*
Participating would affect sales/business	*9*
Provide more or advanced notification	12
More notification of events	*9*
Provide earlier notification	*3*
Offer incentives or higher incentives	4
Provide energy saving information	4
Assistance with energy efficiency	3
Do not care about reducing energy use	1

Italicized comments and counts are sub-topics of the comment directly above them.

The following are some representative comments:

"We are a restaurant, so our electrical use is very steady day to day and there is not too much we can do to reduce it on a few days' notice. What works better for us are programs that help us save energy over the long-term."

"Our business is very keen on reducing our energy usage to reduce our operating cost. We are in the process of changing all of our flood lights to LED. The rub is this: we're a retail store and when it's 100 plus degrees out if we set our air-conditioning above 78 we lose sales."

"The program does not work for my business. We are in a service business and cannot reduce our use without losing customers. So it is not economically feasible to reduce use. I think it is a good program, but not relevant for my business."

"We use lighting and computers at our retail location. I'm not sure how you expect us to cut back and stay open."

"I use electricity as I need it. I have a machine shop. What I use is what I need - nothing more, nothing less."

"I think it's harder because we get the information from the property manager, I don't know if there's a way for us, the leasers, to get the information directly from SDG&E."

9 CONCLUSIONS AND RECOMMENDATIONS

This section presents a summary of overarching findings, conclusions, and recommendations that emerged from this process evaluation of the 2012 Peak Time Rebate program. The objectives of this process evaluation were to: document and assess the implementation process and identify opportunities to improve effectiveness; assess customer awareness of the program including perceptions of, and response to, curtailment requests; and evaluate the effectiveness of the messaging used in the program and suggest improvements to increase customer awareness and understanding.

The quantity and variety of survey data collected coupled with analysis of measured curtailment presented the research team with a variety of individual measures of awareness and opinions. We summarize below the key findings we think should guide SDG&E in planning for future program years.

FINDINGS

Awareness

Awareness is generally high, but the details appear to be driven by Alert/MyAccount status.

- Awareness of the RYU requests was relatively constant across the post event surveys, where the lowest levels of general request awareness were over 65% and the highest were nearly 100%. Respondents were less aware of programmatic details like the opportunity to earn bill credit and were often unable to recall the specific date of the RYU event.
- The fact that customers with MyAccount have registered their email addresses with SDG&E makes them easier to reach and more likely to be aware of programmatic details than those without MyAccount.
- The sources of awareness and the desired method of notification differed substantially between those with MyAccount and those without. Email was the best source of information for MyAccount customers, while those without MyAccount were most likely to report hearing about a RYU day on TV.
- Alert status is an important variable in both level of awareness and overall engagement with PTR and SDG&E messaging.

Engagement

Only those aware of events were asked more detailed questions about overall engagement. Among these contacts, a majority reported making an effort, including turning off lights delaying

laundry, and adjusting thermostat settings. Respondents cited several factors behind their engagement including the opportunity to earn a bill credit, helping the environment, and civic responsibility. We found the Alert group contacts more often selected the bill credit as a factor behind their engagement, providing some evidence that the opportunity to earn a bill credit could be driving people to sign up for alerts.

Satisfaction

Overall, contacts were satisfied with their PTR experience and intended to participate in the future.

- The RYU event requests are viewed as reasonable by most contacts, and few had complaints about the program or the requests.
- Although alert opt-in contacts differed demographically from San Diego customers as a whole, a large majority of event-aware contacts indicated that they would likely opt in for alerts if it was required to get an event credit.
- Satisfaction with the bill credit was low. Many contacts thought that the bill credit was too low, but also that the credit structure benefitted high energy users, or that their "use less than" number was too low. Although few participants were irate, for a small number of contacts the small size of the bill credit earned was a reason to not participate in the future.
- The most frequent suggestions for improvement concerned increasing or changing program messaging, with many also commenting on the bill credit. Publicizing the results of the event was also a popular suggestion among focus group participants.
- Contacts were interested in feedback-enabling technologies, and to a lesser extent, demand-response enabling technologies. The desire for additional feedback about event performance mentioned by some contacts also suggests that IHDs would be useful for them.

Predictors of Curtailment

Although monthly usage is the largest factor explaining curtailment consistency, event behaviors do explain some of the observed curtailment. Above 260 kWh/month usage, alert opt-ins and those who track their performance online curtail more consistently than others. Below about 260 kWh/month usage, though, curtailment consistency was relatively low, and, except for a small group reporting extreme effort, not driven by reported actions or engagement with RYU days. Overall, reported event behavior explains only a small portion of measured curtailment savings.

CONCLUSIONS AND RECOMMENDATIONS

SDG&E faces a fundamental choice about how the residential PTR rate will be implemented going forward. The program can focus on getting savings from as many accounts as possible; to increase the impact of the program while continuing to "enroll" the whole territory in the rate, or the program can target a subset of SDG&E customers to achieve "deeper" DR savings among accounts that have opted in. Most of the recommendations below could apply to either option, but how they are implemented will vary depending on the key strategy chosen for future program years.

Conclusion 1: Not all customer segments are equally suited for PTR.

Some sectors are very hard to reach, and others can do little to participate. Event awareness among customers without MyAccount lags behind awareness among those with MyAccount. Television is an effective alert tool for a portion of these contacts, yet many of these customers prefer mail notification of events, indicating a lack of understanding about demand response as well as a lack of engagement.

Average energy usage was the most important factor behind consistent curtailment. Generally, low users (260 kWh a month and below) only receive incentives through extraordinary effort. Furthermore, some low users (both actual and perceived) feel disadvantaged by the program, and want recognition for their daily efforts to conserve energy.

Recommendation 1: Use targeted messaging to maximize engagement.

Allocate marketing and enrollment efforts towards segments that are more likely to be able and willing to take action when requested. Either programmatically or with messaging, the program should target certain sectors that are most likely to respond and who have load to shed during PTR days. Although disengaged customers could no doubt benefit from information about energy efficiency and conservation, they are not likely to benefit from PTR, because of the difficulty in alerting them of events. It is unlikely to be cost-effective to aggressively pursue these customers for PTR.

While low energy users do not need to be excluded from the program, messaging that acknowledges their existing efforts to conserve might help increase the satisfaction among this group of customers.

Conclusion 2: In the program, opting in to receive alerts was a key correlate of consistent curtailment.

Opting in for an alert was the most important behavioral factor affecting curtailment performance across multiple event days. Opting in for an alert is important for two reasons. First, lack of awareness and information is a key barrier to participation, and opting in for an alert virtually ensures event notification. Second, opting in for an alert could reflect increased overall engagement with SDG&E generally and PTR specifically because of the commitment represented in the simple action of registering for alerts.

Recommendation 2: Identify more aggressive strategies for increasing opt-in participation.

Increasing alert sign-ups would increase awareness of events, and could result in higher overall engagement with SDG&E and RYU days. SDG&E should consider more aggressive strategies for increasing the number of customers signed up for alerts. These strategies could include:

- Offering a sign up bonus or provide an incentive to those that sign up for alerts and stay on all season.
- Making alert registration required for receiving curtailment bill credits.
- Offering a phone notification option (via outbound dialing) for customers resistant to email or text notification.
- Including an opt-in option that does not include alerts. For example, customers could go online and fill out a "commitment" to participate, but not receive an alert. This would at least indicate a basic level of awareness and interest—more of a program opt-in than alert opt-in.

Conclusion 3: The current incentive structure may not offer enough motivation to participate.

While the opportunity to earn bill credits emerged as a primary motivator for opting in for an alert, we found that among the overall population participation motivation was relatively evenly split between bill credit, civic engagement, and concern for the environment. Anecdotal evidence suggests that for many customers, the bill credit is an added bonus, rather than their main motivation for participating. Furthermore, many of the contacts who actively track their bill credits are dissatisfied with its amount.

Recommendation 3: Consider alternative incentive structures and baseline calculations.

Alternative incentive structures could complement existing social motivations to respond to RYU days. Some options represent small tweaks while others reflect substantial changes to existing program structure. Changes could include:

- Reframing the incentive to better reflect its value in comparison to daily energy use costs could be helpful in emphasizing the incentive to the customer. For example, while a $1.50 incentive is not substantial when it appears as a line item on a $50 or more monthly electric bill, it is over 100% of daily energy costs.
- Displaying additive PTR savings across the season could further contextualize the credit. Similarly, aggregating and reporting savings across the SDG&E territory could help customers contextualize the significance of collective effort.

- Testing gamification strategies that build on existing motivations to conserve peak load while tapping into community affiliation: have individual or community competitions based on participation rates as well as overall demand or energy savings.
- Appealing to social altruism by allowing customers to donate their bill credits, and then reporting or displaying aggregated total donations is another way to communicate the effect of collective effort.
- Decoupling incentives somewhat from actual performance by incenting the alert opt-in, and providing a bonus later in the year for curtailing by a certain total or on a certain number of event days could train participants to apply a longer time horizon to their expectations for RYU days.
- Treating the opt-in alert as a benefit by emphasizing the fact that those that opt-in saved more than those that did not. Communicating the difference in percentages could communicate the importance of the alert to actual performance.

Conclusion 4: Self reports indicate that engagement with PTR is prompting customers to make ongoing changes in their energy use.

SDG&E customers may not be distinguishing well between short-term demand response and long-term conservation and peak load reduction. Surveys indicate that at least half of those customers who are aware of PTR events have made day-to-day changes in their energy use as a result of PTR. These changes have included avoiding energy use between 11am and 6pm on a daily basis, as well as using less energy overall.

Generally, for a notable segment of SDG&E customers, PTR appears to have created a desire for more information about their energy use. Survey contacts report wanting individualized feedback about opportunities to reduce their home's peak use, real-time feedback about their PTR performance, and the opportunity to earn credits on more event days. While some of these requests may not be feasible for SDG&E to implement as part of the PTR program, they indicate an opportunity to leverage existing efficiency and demand response programs.

Recommendation 4: Use PTR as a gateway to other programs.

SDG&E should leverage the interest in household energy use generated by PTR to funnel interested customers into other efficiency and demand response programs and provide more detailed information. For example:

- The website interface used to check baseline use or curtailment performance could provide links to more information about the IHD program, and information about the bill credit could appear next to information about Summer Savers and efficiency audits. Links to these programs should also be available from the RYU website.

- SDG&E could offer information about or a coupon discounting an IHD to anyone who signs up for a post-event email.
- SDG&E could also tap into this engaged segment of the population to promote a time of use pilot or feedback programs tied to RYU days but that offer home area network features.
- Link RYU pages to other pages about peak use and peak load

Conclusion 5: Small commercial businesses are hard to reach and have limited interest and ability to participate in RYU days.

Small commercial bill-payers are frequently not onsite employees, and thus SDG&E often does not have the contact information for the small business site where the event would be occurring. More importantly, though, those Small Business customers who were aware of PTR had limited interest or ability to engage. Alert opt-in rates for small businesses were notably lower than for residential customers, even though awareness of the notification option was somewhat higher among businesses. Even among those customers who were aware of events, reported rates of effort to reduce energy use were notably lower than for residential customers, with less than half of contacts reporting making an effort. These contacts also reported low rates of intention to participate in the future. The most frequent comment made was that they are unable to reduce energy use beyond what they are already doing.

Recommendation 5: Eliminate the small business component of RYU days.

Most small businesses are unwilling to risk customer or employee discomfort in order to respond to event requests. If SDG&E is interested in continuing to target the small business community, a smaller, opt-in program could allow the utility to focus on small businesses willing or able to take action. Providing a door decal or other public display in exchange for alert opt-ins could align with the community engagement motivations of some small businesses.

APPENDICES

A ADDITIONAL SURVEY RESPONSES

AWARENESS

Figure 53: Post-event survey awareness of PTR, Including web respondents

Figure 54: Awareness of PTR: General survey

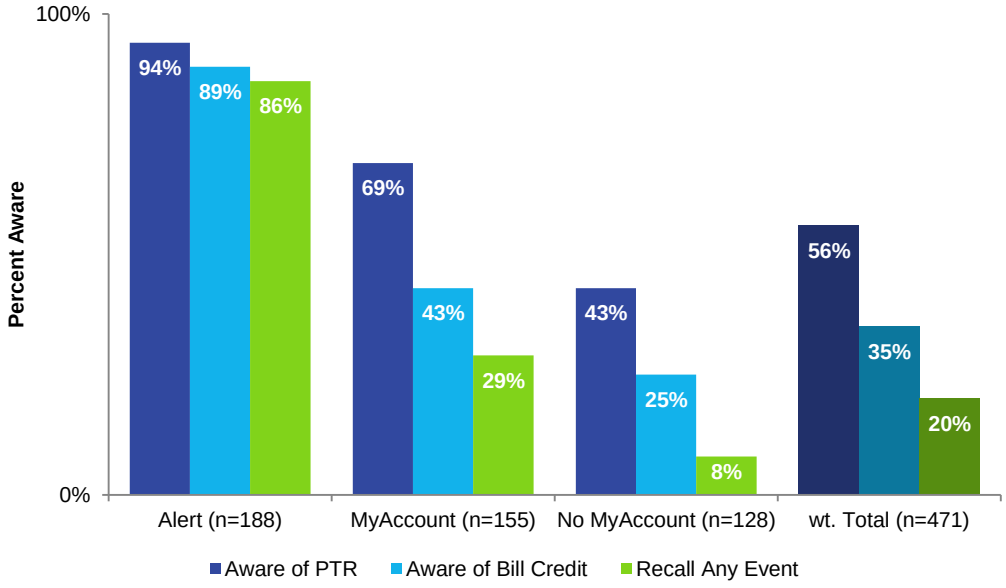
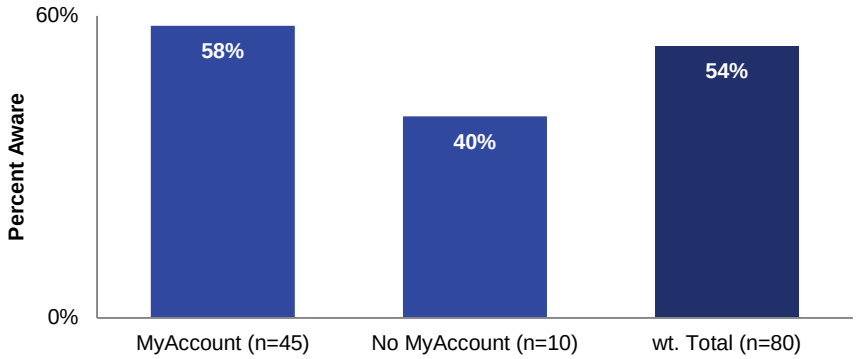


Figure 55: Awareness of email/text notification option by group: General survey



METHOD OF AWARENESS

Figure 56: Alert group means of event awareness: Post-event surveys

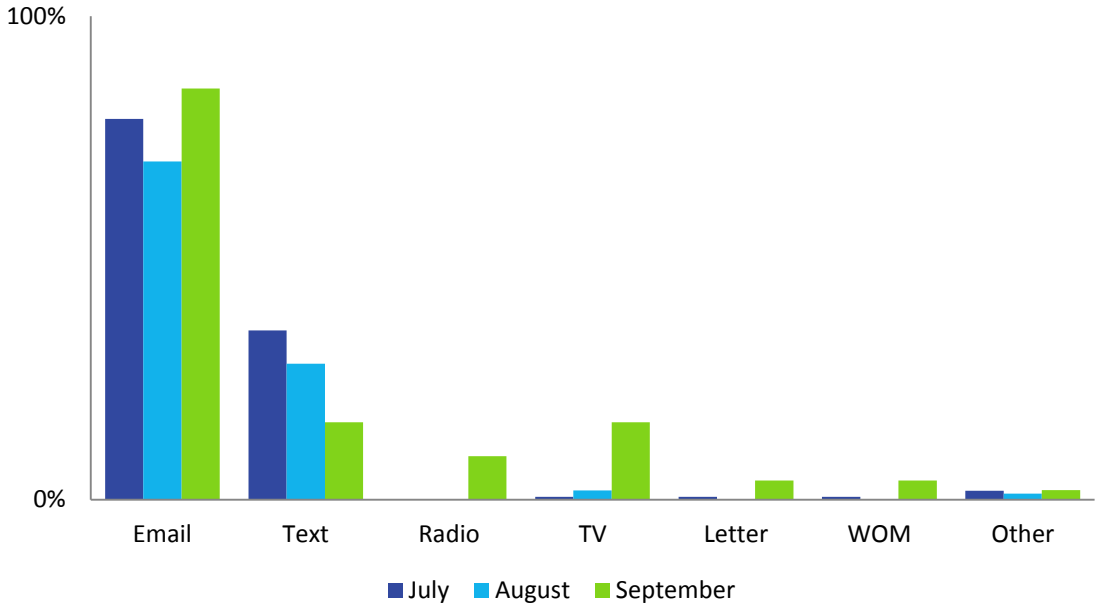


Figure 57: MyAccount group means of event awareness: Post-event surveys

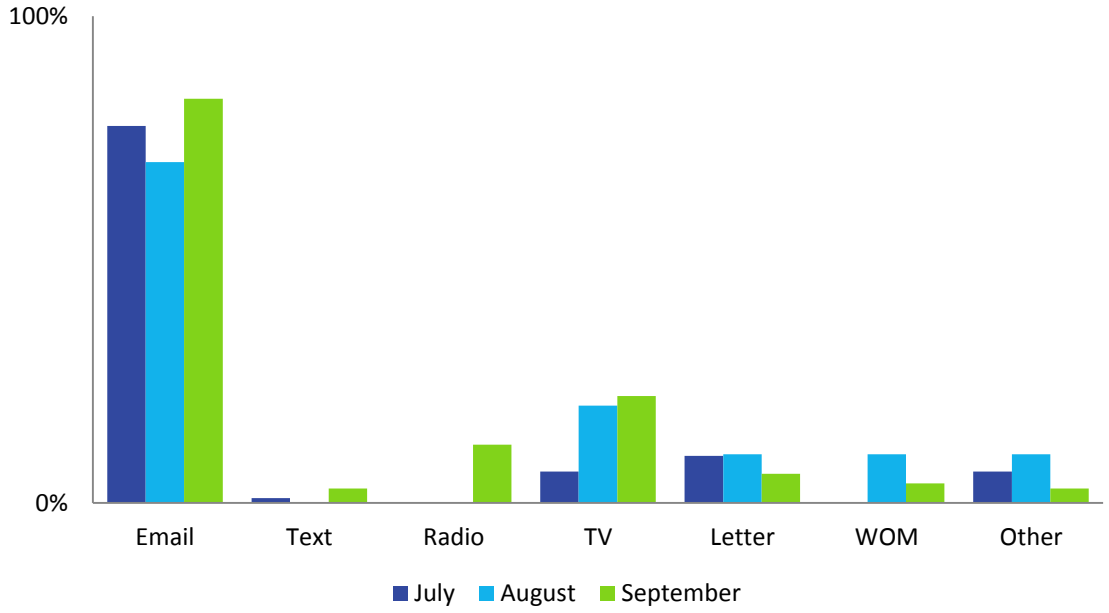


Figure 58: No MyAccount group means of event awareness: Post-event surveys

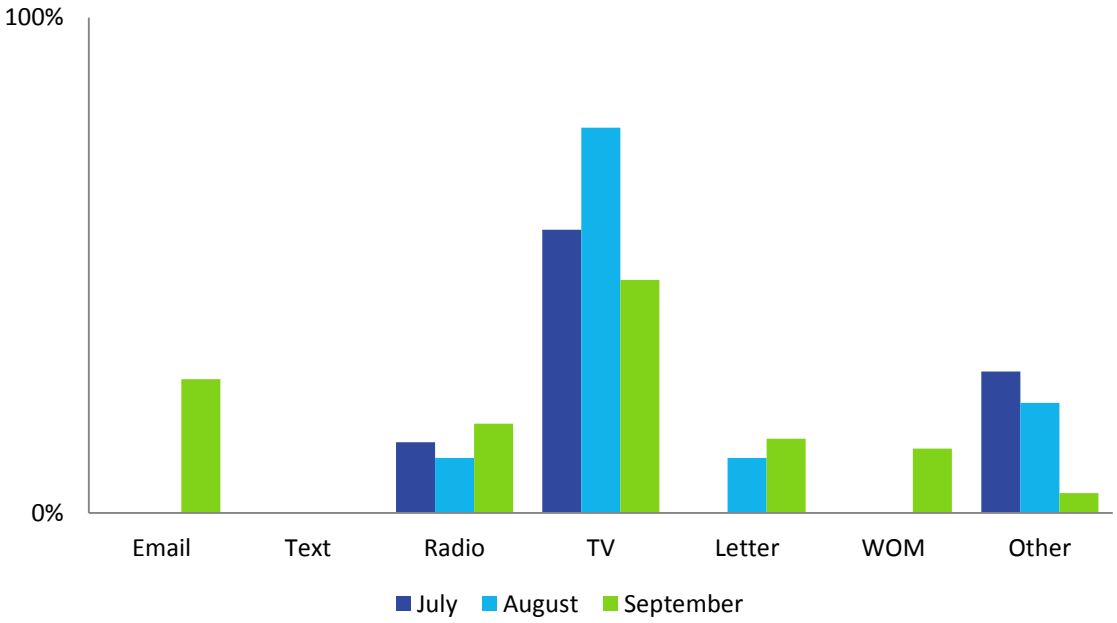


Figure 59: Message content recall: General survey

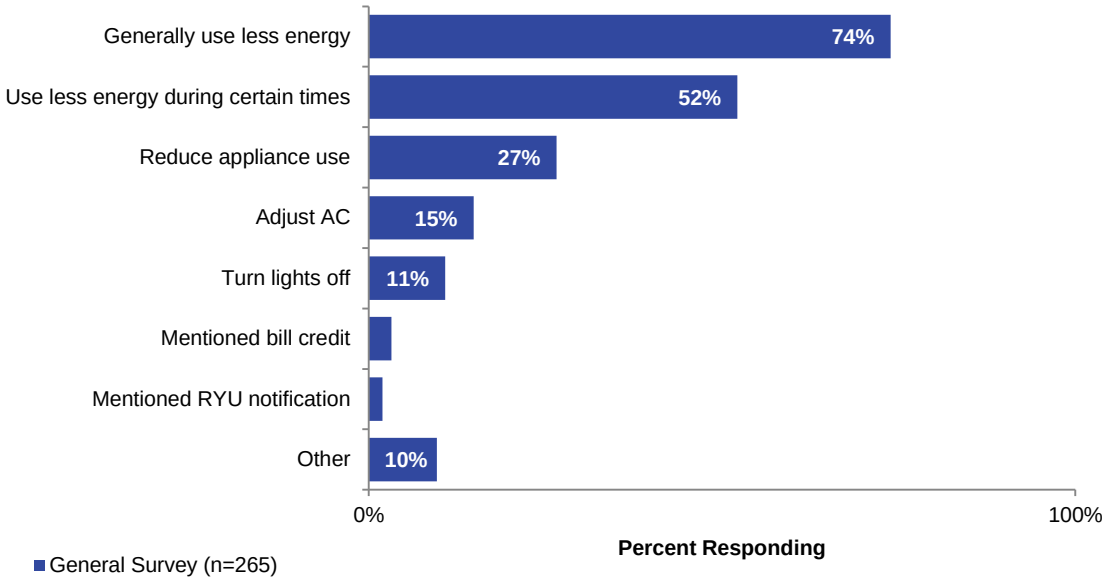


Table 18: Most preferred communication method for future RYU events: General survey

	Alert (n=188)	MyAccount (n=155)	No MyAccount (n=128)	Wt. Total (n=471)
Email Message	56%	46%	20%	33%
A text message	32%	21%	16%	19%
Direct mail	3%	9%	27%	18%
An automated phone call	5%	9%	15%	12%
TV announcement	2%	6%	11%	9%
Radio announcement	1%	5%	5%	5%
Newspaper articles	0%	1%	3%	2%
Information on the SDG&E website	1%	1%	1%	1%
Facebook, Twitter	1%	2%	1%	1%
Other web news sources	0%	1%	0%	0%
Other ways	0%	1%	1%	1%

ENGAGEMENT

General Survey Effort and Actions

Figure 60: Percent of respondents who made an effort to reduce use on RYU days: General survey

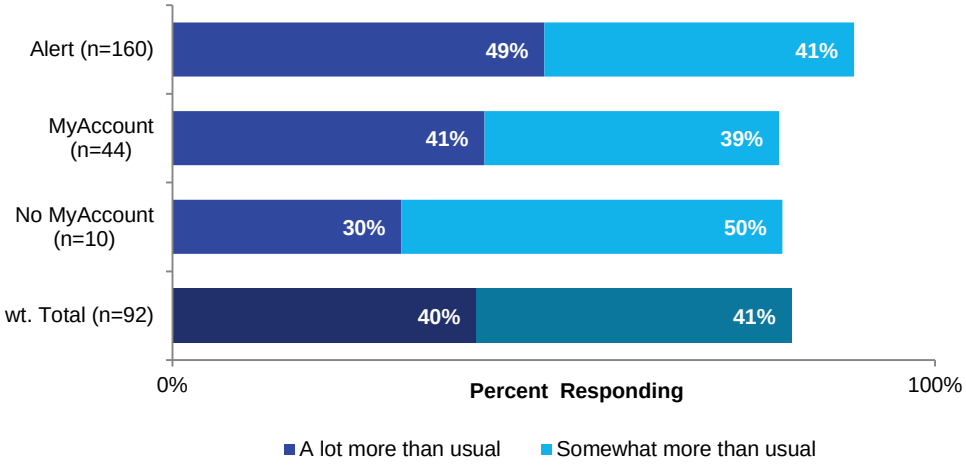


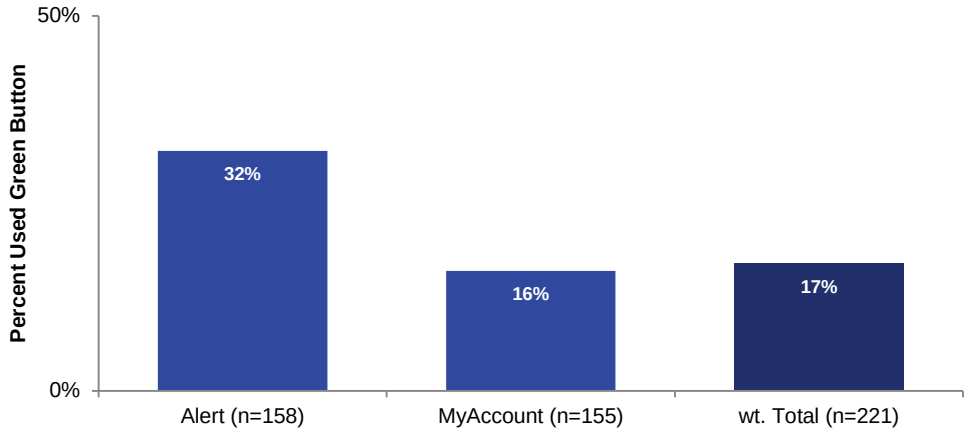
Table 19: Actions taken during RYU event (Mentioned over 10% of the time): General survey

Actions	Alert (n=143)	MyAccount (n=35)	No MyAccount (n=8)	Wt. Total (n=75)
Didn't do the laundry we intended to do during the event time	48%	31%	50%	38%
Turned off the air conditioner	23%	43%	25%	36%
Turned off lights	25%	40%	25%	34%
Unplugged unused electronics	31%	20%	0%	18%
Ran the dishwasher earlier or later than usual	22%	9%	38%	17%
Just tried to use less energy	17%	11%	13%	13%

Use of Website Resources

We also asked respondents whether they had ever used the Green Button on the SDG&E website that allows downloading household's detailed electricity usage. Green Button is available for households that have MyAccount only. A total of 17% of the respondents who have MyAccount reported they had used Green Button. Among the Alert group, the rate of Green Button use was almost twice as high as the non-Alert group (32%).

Figure 61: SDG&E website green button use: General survey



PTR OPINIONS AND FEEDBACK

Table 20: Top five suggestions to make RYU days for better for respondents: General survey

Suggestions	Alert (n=87)	MyAccount (n=23)	No MyAccount (n=6)	Wt. Total (n=50)
Provide advance notification or reminders of events	21	4	2	11
Provide feedback on my performance	12	6	0	9
Provide benefits for those who are already low-energy users	10	3	1	7
Change time of events	7	4	0	6
Change qualifications for credits or incentives	15	2	1	6

PREDICTORS OF CURTAILMENT

Methodology

To understand the factors that were most related to curtailment, we used classification and regression tree (CART) models, and multiple regression analyses to confirm these factors.

Using the RPART package of R, we ran three sets of CART models, one on each of the dependent variables (binary kWh saved, kWh saved, and number of days reduced). Because CART models require large sample sizes, we conducted this analysis using the survey responses from the September post-event survey. (Because of sampling differences and different question wording, we did not combine the three sets of post-event survey data.) Although we experimented with the effects of excluding certain highly correlated independent variables, our

independent variables included those defined in Table 21. Unless indicated with a star, all variables were obtained through self-report.

Table 21: Independent variables included in CART models

Variable	Level of measurement
DEMOGRAPHICS	
Average kWh Use*	continuous
Climate Zone	ordinal
Home size	ordinal
Income	ordinal
Number of occupants	continuous
Presence of children under 5	dichotomous
Presence of children under 18	dichotomous
Presence of Seniors	dichotomous
Home ownership	dichotomous
Ethnicity	dichotomous
AC use	dichotomous
Pool ownership	dichotomous
BEHAVIORAL	
Alert opt-in*	dichotomous
SDEC opt-in*	dichotomous
MyAccount signup*	dichotomous
Number of actions taken	continuous
Level of effort	ordinal
Logon to tracking website	dichotomous
AWARENESS & ATTITUDINAL	
Awareness of event	dichotomous
Awareness of concept	dichotomous
Motivation to curtail	dichotomous
METHODOLOGICAL	
Survey mode (web vs. phone)	dichotomous

* Data source is SDG&E database.

Table 22 summarizes the CART models we ran with each dependent variable, including the definition of the variable, as well as any populations or independent variables excluded. Because Summer Savers have auto-curtailing technology, we hypothesized that the relationship between

reported behavior and curtailment could be considerably different for this population than for the general SDG&E population as a whole. Therefore, we excluded these populations from our sample. Based on an examination of scatterplots of average monthly kWh usage and curtailment, we also identified outliers on these variables (those with more than 1390 kWh/month, or more than 2.5 standard deviations above the mean, and those with more than 50 kWh saved on the September 15th event.) These outliers were excluded from some models, to examine their effect.

Table 22: CART Models

Dependent Variable Definition	Subset *	Excluded Independent Variables
BINARY KWH SAVINGS MODELS		
>0 kWh saved on 9/15		
>0 kWh saved on 9/15	No outliers	
>1 kWh saved on 9/15		
>1 kWh saved on 9/15	No outliers	
KWH SAVINGS MODELS		
kWh Saved		
kWh Saved	No outliers	
kWh Saved	kWh Saved > 0	
kWh Saved	kWh Saved > 0 No outliers	
Normalized kWh Saved (kWh saved/Average kWh use)		Average kWh Use
Normalized kWh Saved (kWh saved/Average kWh use)	No outliers	Average kWh Use
Normalized kWh Saved (kWh saved/Average kWh use)	kWh Saved > 0	Average kWh Use
Normalized kWh Saved (kWh saved/Average kWh use)	kWh Saved > 0 No outliers	Average kWh use
NUMBER OF DAYS REDUCED MODELS		
Number of Days Reduced		
Number of Days Reduced	No outliers	

* Summer Savers excluded from all analyses.

We used multiple regression to confirm the relationships identified in the CART models. Using the same independent variables (all of which were orthogonally coded or mean-centered) we recreated the interactions from the CART model as closely as possible. We then added additional demographic predictors. To test whether the behavioral predictors were significant over and above the effect of the demographic predictors alone, we used stepwise regression, adding the demographic predictors first.

Descriptive Curtailment by Group and Performance Metric

Figure 62: Proportion Curtailing by Group

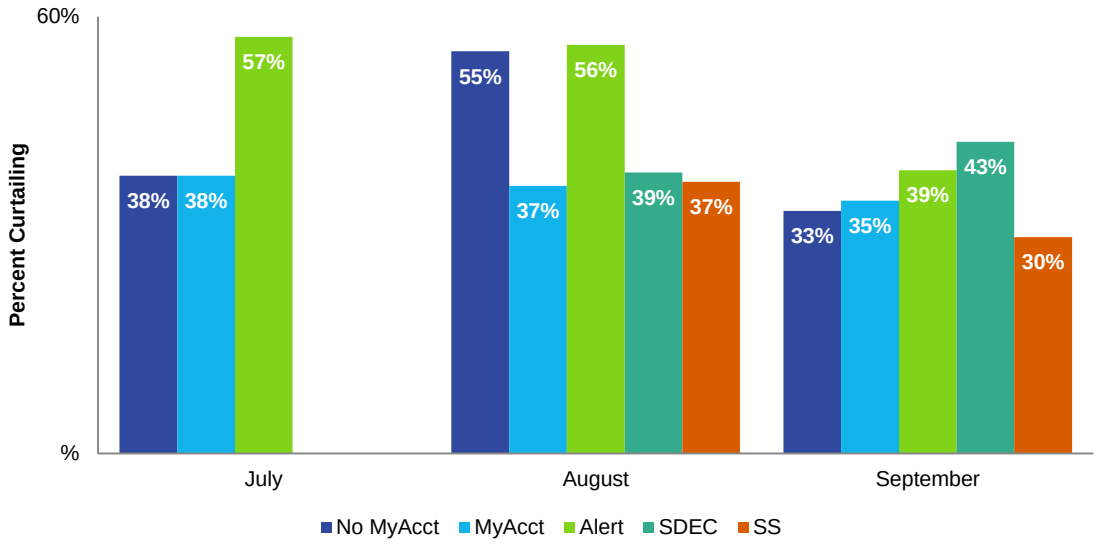


Figure 63: Average kWhs Curtailed by Group

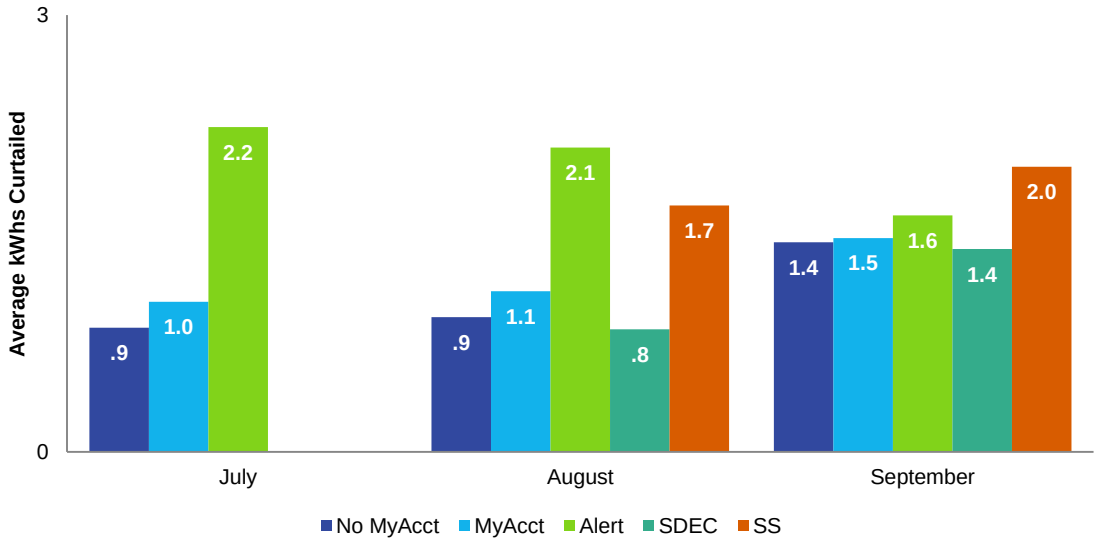
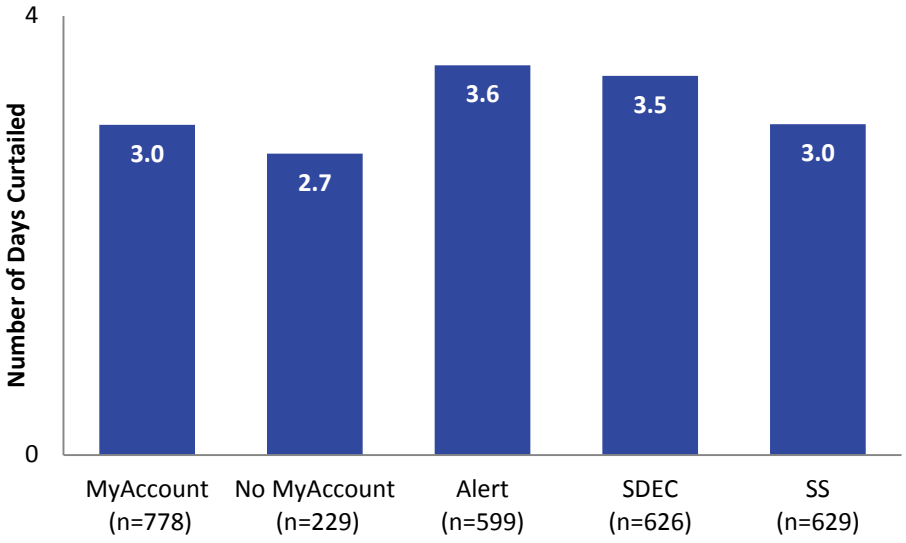


Figure 64: Average Number of Days Curtailed by Group



Data from 9/15 post-event survey, unweighted.

kWh Saved Metric

Figure 65: kWh Saved by Level of Awareness

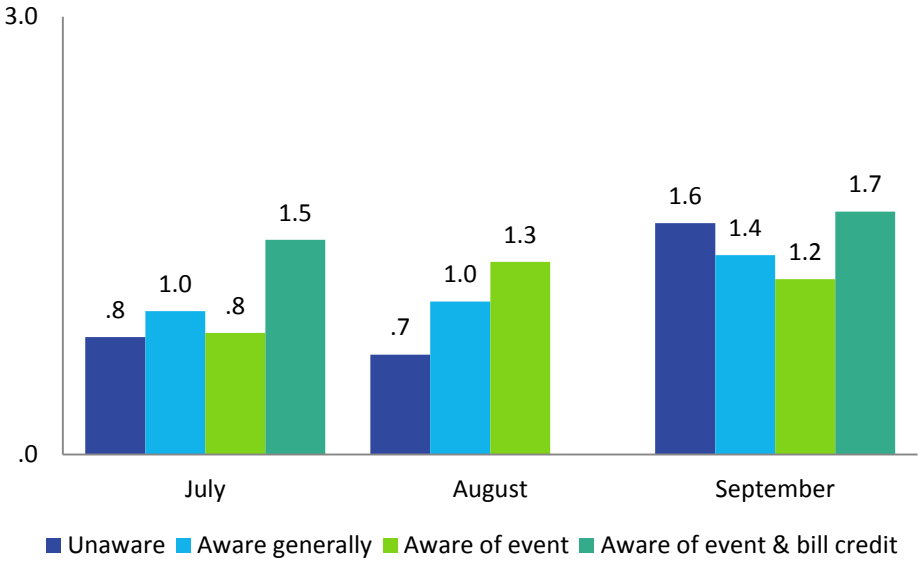
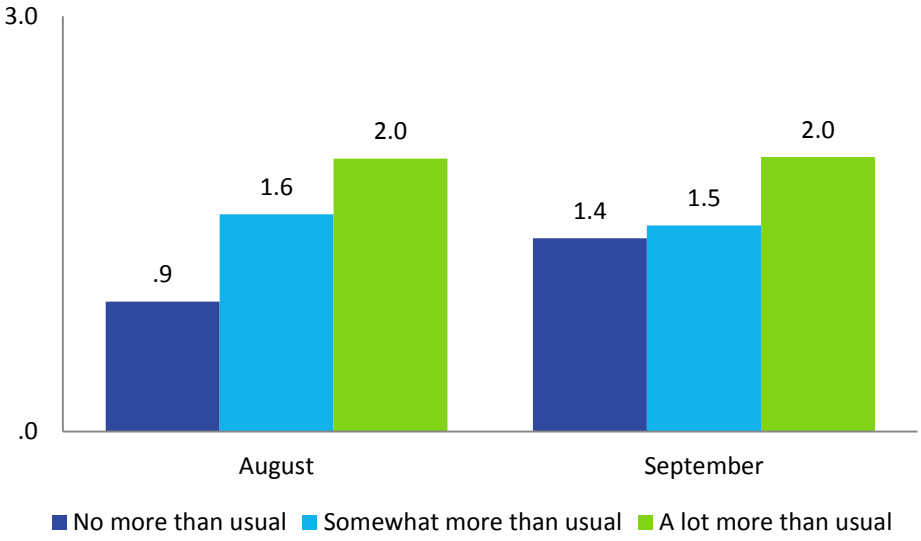


Figure 66: kWh Saved by Level of Effort



Curtailment Predictor Model Development

We conducted a series of CART models with different transformations of the three outcome variables. Table 23 summarizes the results of the best CART model for each of the three outcome variables.[32] The overall predictive power of the "binary savings" model was very low, with an R^2 indicating that the model explained just 3% of the variance in whether or not customers curtailed on September 15th. In fact, a "best" model was not achieved for this outcome variable: all models predicted savings worse than chance. The overall predictive power of the "kWh savings" model was moderate. This model predicted 16% of the variance among those customers who saved at least 1 kWh on September 15. The only two predictors in this model, though, were demographic predictors rather than behavioral or attitudinal ones. That is, awareness of the event and reported actions to reduce energy use during the event were *not* significantly related to increased savings, among those customers who were able to save at least 1 kWh. Finally, the "curtailment consistency" model had modest predictive power (explaining 9% of the variance in the number of days curtailed), but included significant behavioral as well as demographic factors. Specifically, both opting in for an alert and opting in for the San Diego Energy Challenge predicted a greater number of days with measured curtailment.

[32] The best model was determined by "pruning" the initial tree according to the 1-Standard Error rule, choosing the simplest tree where the risk is within one standard error of its achieved minimum.

Table 23: September Event Regression Tree Explanatory Value

Outcome Variable	R^2 Value	Predictors in Best Model
Binary savings (saved any kWh during event)	0.03	N/A
kWh savings (among those who saved ≥1 kWh)	0.16	Average kWh use, AC
Curtailment consistency (number of days)	0.09	Average kWh use, Alert Opt-in, SDEC Opt-in

Confirmatory Regression Analysis

Because our curtailment analysis for the pilot program evaluation showed that relationships between behavioral predictors and outcome variables vary across events, we wanted to confirm these findings with one of the other post-event surveys. We also had concerns about the validity of the sampling for the September 15 post event survey, because the web sample had significantly higher awareness than the phone sample. (Exploratory regression suggested that while the sample mode did affect awareness, it did not affect savings. Nevertheless, we are not completely confident in treating these two samples as equivalent.) Yet because of the smaller sample size for the other two post-event surveys, we were unable to use CART to confirm the observed patterns. Using multiple regression, we created a model that simulated the interactions of the regression tree, and ran it on both the September and the August post-event surveys.[33]

We used stepwise regression to show that the behavioral factors predicted performance consistency better than demographic factors alone. Table 24 and Table 25 show the model fit statistics and significance of the predictors included, respectively. In both the August and September post-event surveys, the model including behavioral variables predicted performance consistency significantly better than demographics alone. In fact, the August post-event survey demographic model did not predict curtailment consistency better than chance. These models explain between 11% and 14% of the variance in curtailment consistency.

Table 24: Model Fit Statistics

	Model R2 Value	
Predictors Included:	**8/14 Event**	**9/15 Event**
Demographics only	.051	.064
Demographics + Group, Survey Responses, & Interaction Terms	.140	.109

DV = Performance Consistency (number of days with curtailment, out of 7).

The coefficients in the models show somewhat different relationships between behavior, demographics, and curtailment consistency. The far column of Table 25 interprets the meaning

[33] With no questions pertaining to event day effort asked in the July post-event survey and suspicions that "test" event performance might differ from regular event performance, we elected not to repeat this analysis on those data.

of the significance of each predictor. Overall, both use and reported effort on the specific event date predict curtailment consistency on both event days. Unlike the September survey findings, in the August dataset, neither opting in for an alert nor participating in SDEC predicts greater curtailment consistency. This lack of relationship between group and curtailment consistency in the August dataset is partially explained by the significant interaction terms, though.

Table 25: Best Fit Model: Significant Predictors and Interpretation

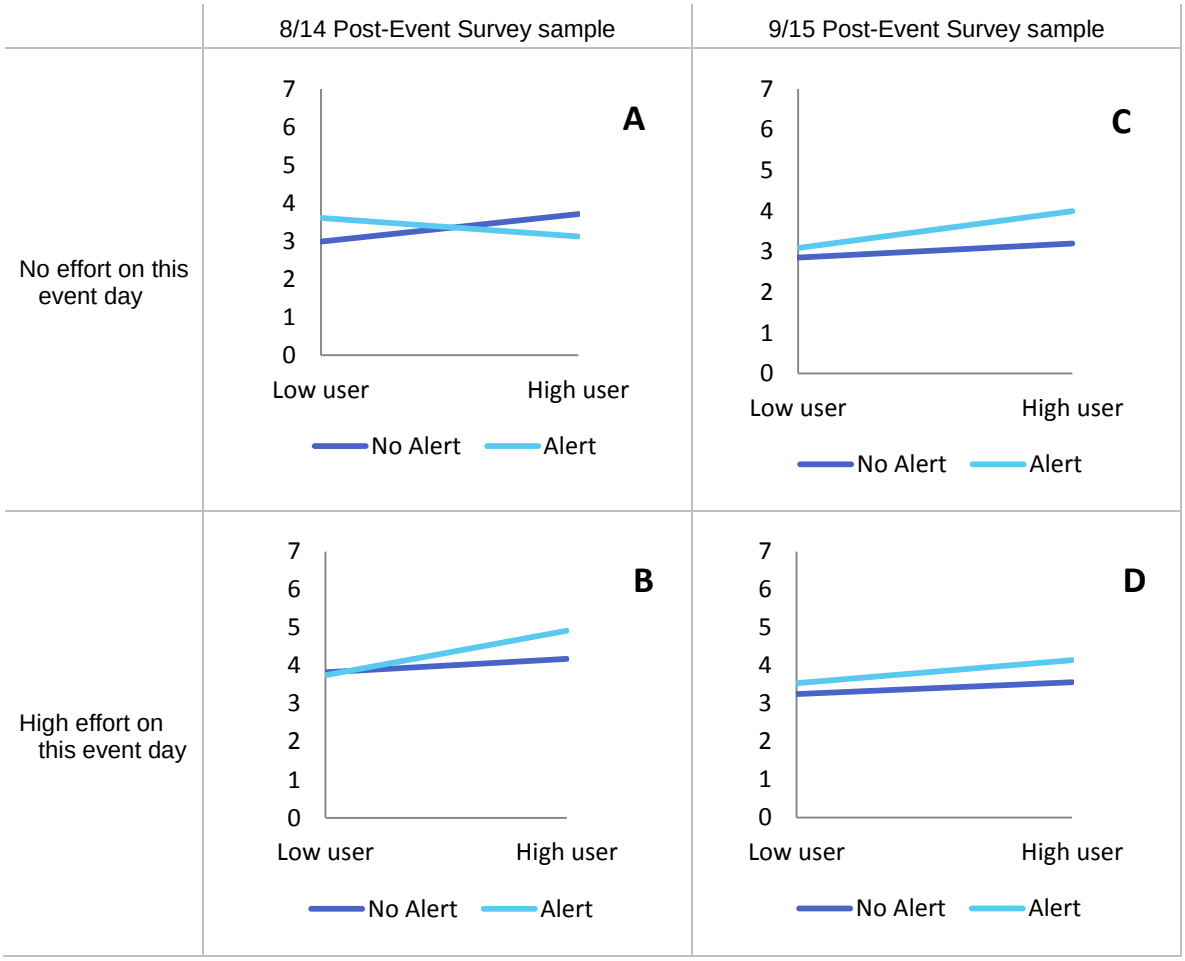
	Predictors	8/14 Event	9/15 Event	Interpretation
Demographics	MyAccount			MyAccount users did not curtail on more days than others
	Homeowner			For the 9/15 sample, homeowners curtailed on more days than renters.
	Income			None of these factors predicted number of days curtailment.
	Size of Home			
	Ethnicity			
	# of Occupants			
	Climate Zone			
	Children under 5			
	Average kWh Use			Customers who used more kWh per month tended to curtail on more days.
Group	Alert Opt-in			For the 9/15 sample, alert opt-ins curtailed on more days than non-alert customers.
	SDEC Participant			For the 9/15 sample, SDEC opt-ins curtailed on more days than non-SDEC customers.
Responses	Effort made on Event Day			Customers who reported making an effort to reduce on that day tended to curtail on more days than others.
	Website Use			Customers who reported tracking their performance via the website did not curtail on significantly more days than customers who did not.
Interaction Terms	Alert * Use			For the 9/15 sample only, the increase in curtailment days for large users was greater for those who signed up for Alerts.
	Effort * Use			The effect of effort on number of curtailment days did not differ for customers using less versus more use.
	Alert * Website			The effect of opting in for an alert did not differ depending on whether customers had logged on to track their use.
	Effort * Alert			The effect of effort on number of curtailment days did not differ depending on whether customers had opted in for an alert.
	Alert * Use * Effort			The effect of use on alert opt-in (line xx) varies by effort for the 8/14 sample. (See Figure 67).

DV = Performance Consistency (number of days with curtailment, out of 7).

Not significant	Marginally significant (p<.10)	Significant (p<.05)	Not in model

To illustrate the meaning of the interaction terms in the models, Figure 67 plots the estimated curtailment consistency (y axis) for each event at different levels of effort, kWh use, and alert status. Table 26 interprets each of these plots individually.

Figure 67: Interaction of Alert Opt-in, Effort, and Use in Predicting Number of Days Curtailed



Y Axis: Curtailment Consistency: Estimated number of days curtailed, out of 7 events (based on best fit regression model).

Low user = 300 kWh per month; High user = 700 kWh per month.

Assumptions: Estimated values, controlling for other factors in model (see Table 25 for factors included).

Table 26: Interaction Chart Interpretation

Each figure shows the estimated number of events reduced (vertical axis) for participants with varying monthly kWh usage (horizontal axis), level of event day effort (chart row 1 vs. 2), and Alert opt-in status (separate lines on the charts). Lines that do not have the same slope show interactions in how use, effort, and alerts predict performance.

A	**Subset:** For customers reporting no effort on the August 14 Event. **Overall:** Averaged across use, customers who opted in for an alert and those who had not had the same average number of days curtailed across the season. **Interaction:** For those who signed up for an alert, low users on average had more days reduced than high users. For those who did not sign up for alerts, low users had fewer days reduced than high users.	C	**Subset:** For customers reporting no effort on September 15 event. **Overall:** Alert opt-ins had significantly more curtailment days than non-alert customers, even among those who reported no effort to reduce on the 9/15 event. **Interaction:** Alert status had more of an effect on curtailment consistency for high users than for low users. Non-alert customers with low and high usage had relatively similar numbers of days curtailed across the PTR season. Alert opt-ins with high usage curtailed significantly more days than those with low usage.
B	**Subset:** For customers reporting effort on August 14 event. **Overall:** On average, customers who opted into an alert curtailed slightly more days than customers who did not. **Interaction:** Alert status had more of an effect on curtailment consistency for high users than for low users. Among non-alert customers, low users and high users had relatively similar average days of curtailment. Among alert opt-ins, though, high users curtailed on significantly more days than non-users.	D	**Subset:** For customers reporting effort on September 15 event. **Overall:** Alert opt-ins had significantly more curtailment days than non-alert customers, even among those who reported no effort to reduce on the 9/15 event. **Interaction:** Alert status had more of an effect on curtailment consistency for high users than for low users. Non-alert customers with low and high usage had relatively similar numbers of days curtailed across the PTR season. Alert opt-ins with high usage curtailed relatively more days than those with low usage.
A&B	The effect of alert status on curtailment consistency differed by effort and use. Alert opt-ins curtailed on significantly more days than non-alert customers, but only among those who made an effort to reduce their energy use and low users who reported *not* making an effort.	C&D	Alert status had more of an effect on curtailment consistency for high users than for low users, regardless of effort on the 9/15 event. Alert opt-ins curtailed on significantly more days than non-alert customers. The difference in days curtailed between Alert opt-ins and non-alert customers is greater for high use customers than for low use customers, though.

Examining these plots, plot A appears to contradict the relationships seen in the other three plots. The direction of the interaction in this plot is the opposite of the direction in the other plots. (That is, the blue aqua line decreases, while the purple line increases.) This interaction doesn't make intuitive sense, and is the reason that the "Alert * Use" interaction, which appears prominently in the regression tree and is significant for the September dataset, is not significant for the August dataset. There are several potential explanations for this interaction. It could be a by-product of the several consecutive events leading up to the 8/14 event. Due to the three other events in the prior week, effort for that particular day might be a particularly poor proxy for effort over the DR season.

Regardless of this outlying plot, though, on average, alert opt-ins tended to curtail more consistently than others, and those who made an effort tended to curtail more consistently than others. Also, high users tended to save slightly more consistently than low users, particularly among alert opt-ins.

B POST-EVENT-MEMO 1

MEMORANDUM

To: Brenda Gettig, Senior Business Analyst

From: Research Into Action

Date: September 10, 2012

Re: 2012 PTR Test Event: Post-Event Survey Findings

This memorandum presents the results of a survey conducted with residential and small commercial customers of San Diego Gas and Electric (SDG&E) following the first county-wide San Diego Reduce Your Use day. This test event was conducted on July 20th, as part of the 2012 Peak Time Rebate Program.

This post-event survey assessed:

- Respondent understanding and awareness of event days
- Means of notification
- Possible actions to reduce electricity use
- Intent to participate in the future
- General suggestions to improve future event days.

METHODOLOGY

Following the county-wide Peak Time Rebate test event on July 20th, 2012, we launched a phone survey of residential and small commercial San Diego Gas and Electric customers. Between July 21 and 26, CIC Research completed 576 surveys of less than seven minutes in length. These surveys asked about: respondent understanding and awareness of event days, means of notification, possible actions to reduce electricity use, intent to participate in the future, and general suggestions.

Sample Development and Weighting

To understand the differing awareness of those who signed up for event day alerts through email or text message, and those who received email alerts because of their use of MyAccount, we

stratified both the residential and commercial samples. Table 27 and Table 28 show the number of surveys completed with each stratum, as well as the population of each.

Because we were particularly interested in understanding the event day experiences of those in the alert groups, the sample overrepresented the alert groups, relative to the population. Thus, to develop an estimate of *overall* RYU day awareness across the SDG&E population, we used proportional weights to correct for this oversampling, according to the following formula:

$$Stratum\ weight = \frac{\%\ of\ stratum\ in\ population}{\%\ of\ stratum\ in\ sample}$$

Table 27 and Table 28 show the weights of the residential and commercial sample strata, respectively, as well as their relative contributions to the weighted totals (shown in the final column). Note that these are proportional, not scaled weights, so the weighted sample size is equal to the unweighted sample size rather than the population as a whole.

Table 27: Residential Population, Sample, and Weights

Sample Group		Population	Sample Size	Weight	Weighted Sample Size
Non-Alert	No MyAccount	658,811	100	2.15	214.7
	Yes MyAccount	544,854	100	1.78	177.5
Alert		30,148	202	0.049	9.8
Total		**1,233,813**	**402**	**N/A**	**402**

Table 28: Small Commercial Population, Sample, and Weights

Sample Group	Population	Sample Size	Weight	Weighted Sample Size
Non-Alert	115,063	104	1.67	173.5
Alert	305	70	0.01	0.5
Total	**115,368**	**174**	**N/A**	**174**

Note that because of the magnitude of oversampling of the "alert" groups (while the alert group makes up half of the residential sample, alert group members make up less than 3% of the population as a whole), the weighted results are approximately equal to the results of the non-alert groups alone. For this reason, weights have not been applied to results within strata, but when results have been averaged across the whole sample. Unless signified by the column header "Wt. Total," all results in this report are unweighted.

RESIDENTIAL

This section presents key findings from the residential post-event survey, and tables showing response frequencies.

Key Findings

- **Overall, half of respondents had a solid understanding of the concept of Reduce Your Use days, while less than a quarter were aware of the July 20th test event.** While awareness of the concept differed significantly across groups, nearly all alert group contacts, and roughly half of those in the non-alert groups had an accurate understanding of RYU days (Table 29). When responses were weighted to represent the population, roughly one fifth were aware that an event had occurred July 20th. Awareness was lowest for those in the non-alert, no MyAccount group.

- **Alert opt-ins had high event awareness and understanding.** Those contacts who had signed up for event notifications (referred to as the "Alert" group in tables below) had higher even awareness than those who had not signed up for alerts: four-fifths of the alert group (79%) was aware of the event on July 20th, compared with 19% across the SDG&E territory population as a whole (referred to as the "Wt. Total" group, below; Table 29).

- **Email blasts to MyAccount customers increased awareness of event day.** Among those contacts who did not sign up to receive an alert, those with MyAccount had significantly higher awareness than those without (31% versus 7%, respectively, were aware of the test event on July 20th; Table 29). Interestingly, 7% of MyAccount group contacts learned of the event day by any means other than email (equivalent to the 7% awareness among the non-MyAccount group, none of whom received event emails; Table 30). This finding suggests that the email blast sent to MyAccount customers was helpful in facilitating awareness among this group, but that only about a quarter of MyAccount customers recalled receiving them.

- **Non-Alert, No MyAccount group have generally positive attitudes but are harder to reach.** This group was similarly willing to reduce their electricity use when future events are called (85% "somewhat" or "strongly" agree; Table 38). Their somewhat lower awareness of the concept of PTR event days (44% compared with 58% of those with My Account; Table 29), and their preference for receiving notifications by phone rather than email (51%, compared with 27% of those with MyAccount, volunteered that they would prefer to receive event day notifications by phone; Table 36), suggests that they may be less receptive to learning about PTR through email or text message.
    - ***To Investigate:*** The No-Alert, Non MyAccount group's comparatively low preference for email notifications (25% of this group prefers event notification by email, compared with 56% of those with MyAccount) suggests that they may be hard to reach by email survey.

- **Recall of event-day mass media messaging was low across all three alert groups.** Less than 5% of contacts in any group recalled hearing about the July 20th event through mass media channels like radio or television (Table 30).
- **Preference for text message notifications was low among both Non-Alert groups.** An average of 6% of the non-alert groups preferred text messages for future event notification (Table 36).
- **Alert groups, event awareness, and understanding of alert days differ across demographic characteristics, in different ways.** The three alert strata differed significantly in terms of race, income, and age, and marginally by level of education (see Table 45 through Table 48). Among the non-alert groups, Non-MyAccount customers tended to be older than those with MyAccount. Home ownership and education was highest among alert group contacts. Awareness of the July 20th event also differed across demographic characteristics: Caucasian and higher-income contacts had significantly higher levels of awareness of the event day, and non-Hispanic contacts had marginally higher levels of awareness than Hispanic contacts (Table 32). On the other hand, understanding of the RYU day concept did not differ significantly across demographic characteristics: contacts were equally likely to understand RYU days, regardless of ethnicity, income, or education (although the effect of race was marginally statistically significant Table 33).
  - ***To investigate:*** To what extent are differences in awareness by demographic characteristics true over and above the differences in group membership?
  - ***To investigate:*** Although differences are low to moderate, current messaging strategies may not be reaching all demographic segments equally.

Summary of Awareness Measurements

Table 29: Summary of Event Awareness Measurements among Residential Respondents

	No Alert		Alert (n=202)	Wt. Total (n=402)	X^2 sig.
	MyAcc. (n=100)	No MyAcc. (n=100)			
Aware of event on July 20th	31%	7%	79%	19%	< 0.0001
Aware of event and bill credit	20%	4%	73%	13%	< 0.0001
Aware of event and event hours	10%	1%	44%	6%	< 0.0001
Aware of event, bill credit, and event hours	8%	0%	41%	5%	< 0.0001
Accurate understanding of PTR concept	58%	44%	95%	51%	< 0.0001

Table 30: Source of Notification

	No Alert		Alert (n=202)
	MyAcc. (n=100)	No MyAcc. (n=100)	
None	69%	93%	21%
Email	24%	0%	62%
Text Message	1%	0%	28%
Other	2%	2%	1%
Radio	0%	1%	0%
TV	2%	4%	0%
Mail	3%	0%	0%
Word of mouth	0%	0%	0%

Table 31: Awareness of Event Notification Option and Use of Website

	No Alert		Alert	Wt. Total
	MyAcc.	No MyAcc.		
Aware of event notification option, among those aware of PTR events	31%	27%	N/A	29%
Used SDG&E website to check energy use, among those aware of 7/20 event	10%	0%	31%	9%

Demographics and Event Awareness

We present the detailed results in two forms below. First are tables with counts and significance reported, followed by the same data presented via bar graph.

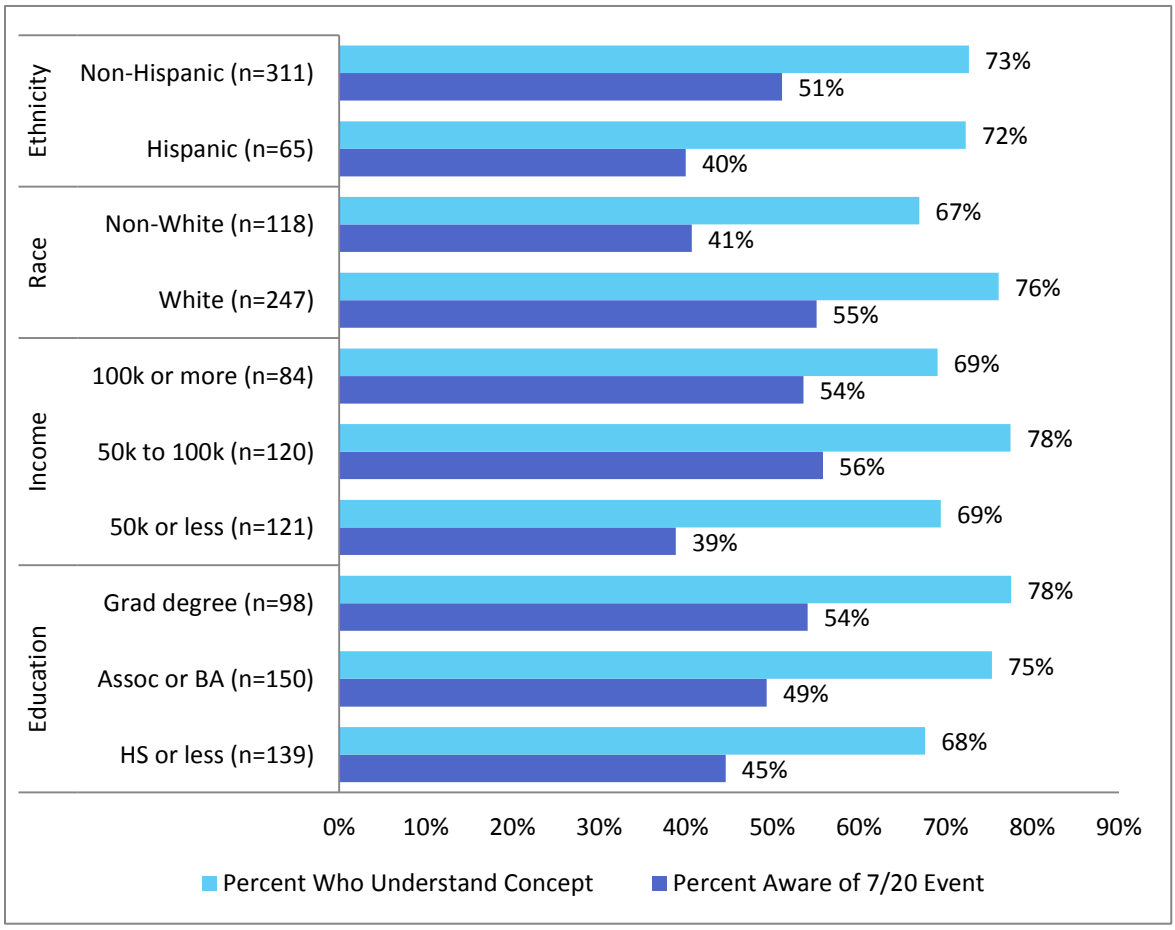
Table 32: Awareness of July 20th Event by Demographics

Demographic Characteristic		Percent Aware	X^2 sig.
Education	HS or less (n=139)	45%	>.05
	Assoc or BA (n=150)	49%	
	Grad degree (n=98)	54%	
Income	50k or less (n=121)	39%	<.05
	50k to 100k (n=120)	56%	
	100k or more (n=84)	54%	
Race	White (n=247)	55%	<.05
	Non-White (n=118)	41%	
Ethnicity	Hispanic (n=65)	40%	0.10
	Non-Hispanic (n=311)	51%	

Table 33: Awareness of Event Day Concept by Demographics

Demographic Characteristic		Percent Who Understand	X^2 sig.
Education	HS or less (n=139)	68%	>.05
	Assoc. or BA (n=150)	75%	
	Grad degree (n=98)	78%	
Income	50k or less (n=121)	69%	>.05
	50k to 100k (n=120)	78%	
	100k or more (n=84)	69%	
Race	White (n=247)	76%	0.065
	Non-White (n=118)	67%	
Ethnicity	Hispanic (n=65)	72%	>.05
	Non-Hispanic (n=311)	73%	

Figure 68: Awareness by Demographic Factors



Possible Actions to Reduce Use

Table 34: Options to Reduce Energy Use

	No Alert		Alert (n=202)
	MyAcc. (n=100)	No MyAcc. (n=100)	
Turn off lights	12%	19%	14%
Reduce AC Temp	16%	10%	19%
Turn off Appliances	17%	14%	35%
Leave the house	13%	5%	10%
Nothing	22%	25%	7%
Other	49%	47%	63%
Don't know	4%	3%	0%

Table 35: Options to Reduce Energy Use – "Other" Mentions

	No Alert		Alert (n=127)
	MyAcc. (n=49)	No MyAcc. (n=47)	
Turn off or don't use energy	42	39	109
• Turn off: TV	17	12	21
• Turn off: PC	9	3	13
• Turn off: AC	11	9	34
• Turn off: Lights	2	0	3
• Turn off: Everything	6	6	11
• Turn off: Vampires (not in use)	8	6	28
• Turn off: Pool Pump or Spa	1	2	12
• Turn off: Refrigerator	0	2	0
• Turn off: Water Heater	2	0	1
• Turn off: Fan	3	1	11
• Turn off: Other	1	5	5
• Turn off: Appliances	3	4	9

	No Alert		Alert (n=127)
	MyAcc. (n=49)	No MyAcc. (n=47)	
Put off doing energy related activities	5	7	23
• Put off: Food prep (or not at all)	4	2	8
• Put off: Dishes	0	0	2
• Put off: Laundry	1	5	10
• Put off: Other	1	0	5
Lower use of energy equipment	3	2	5
• Lower use: AC	1	1	1
• Lower use: TV	1	0	2
• Lower use: Other	0	1	3
Generally reduce energy	0	2	3
Has solar panels, doesn't need to reduce	0	1	0
Not at home during events	0	1	0
Not reducing	0	1	0
Generic other responses	0	0	1

Feedback and Suggestions

Table 36: Best Contact Method for Advance Event Notification

	No Alert		Alert (n=202)	Wt. Total
	MyAcc. (n=100)	No MyAcc. (n=100)		
Text message	7%	4%	23%	6%
Email	56%	25%	64%	40%
Mailing	3%	11%	0%	7%
Phone	27%	53%	9%	41%
Radio	0%	0%	0%	0%
Other	6%	7%	3%	6%
Don’t know	1%	0%	0%	0%

Table 37: Agreement with "Announcement about RYU day events are adequate," among those aware of July 20th event day

	No Alert		Alert (n=158)	Wt. Total
	MyAcc. (n=31)	No MyAcc. (n=7)		
Strongly disagree	0%	0%	2%	0%
Somewhat disagree	10%	0%	3%	7%
Neither agree not disagree	10%	29%	2%	12%
Somewhat agree	29%	43%	25%	32%
Strongly agree	52%	29%	69%	49%

Don't know responses have been excluded.

Table 38: Agreement with "I will reduce my energy use when future RYU days are announced."

	No Alert		Alert (n=198)	Wt. Total
	MyAcc. (n=97)	No MyAcc. (n=90)		
Strongly disagree	4%	1%	1%	2%
Somewhat disagree	5%	6%	2%	5%
Neither agree not disagree	8%	8%	2%	8%
Somewhat agree	28%	32%	34%	30%
Strongly agree	55%	53%	61%	54%

DK responses are excluded.

Table 39: Suggestions to Improve RYU Days

	No Alert		Alert (n=202)
	MyAcc. (n=100)	No MyAcc. (n=100)	
Advanced Notice/more notice	7%	10%	12%
Tips	3%	1%	7%
Money savings/credit information	0%	1%	5%
More information/quick feedback	0%	0%	3%
Different timing/hours	6%	2%	2%
General behaviors described (off topic)	2%	5%	2%
Increase credits	1%	2%	1%

	No Alert		Alert (n=202)
	MyAcc. (n=100)	No MyAcc. (n=100)	
Other request	1%	1%	1%
Increase general awareness	2%	1%	0%
More General Education on how to save/impact of saving	2%	0%	0%
Lower rate	2%	1%	0%
Add solar panels	1%	1%	0%
Treat solar customers better	2%	0%	0%
Help to understand why it helps	2%	0%	0%

Demographics

Table 40: Summer AC Use

	No Alert		Alert (n=202)	Wt. Total
	MyAcc. (n=100)	No MyAcc. (n=100)		
Yes	27%	30%	39%	29%
No	73%	70%	61%	71%

Table 41: Number of Household Members

	No Alert		Alert (n=202)	Wt. Total
	MyAcc. (n=100)	No MyAcc. (n=100)		
1	26%	23%	20%	24%
2	35%	41%	37%	38%
3	10%	10%	16%	10%
4	19%	11%	17%	15%
5	5%	8%	4%	6%
6	3%	1%	3%	2%
7	1%	3%	1%	2%
8	1%	0%	0%	0%
Refused	0%	3%	0%	1%

Table 42: Number of Children Under 5 Years of Age

	No Alert		Alert (n=161)	Wt. Total
	MyAcc. (n=74)	No MyAcc. (n=74)		
0	81%	83%	80%	82%
1	15%	13%	11%	14%
2	1%	1%	8%	2%
3	1%	3%	1%	2%
4	1%	0%	0%	1%

Asked of those with multiple household members.

Table 43: Number of Adults 70 Years or Older

	No Alert		Alert (n=201)	Wt. Total
	MyAcc. (n=100)	No MyAcc. (n=98)		
0	91%	68%	83%	79%
1	7%	21%	10%	15%
2	2%	10%	7%	7%
3	0%	0%	0%	0%

Table 44: Home Size in Square Feet

	No Alert		Alert (n=185)	Wt. Total
	MyAcc. (n=84)	No MyAcc. (n=70)		
Mean	1,496	1,945	1,873	1,726
Minimum	500	200	400	200
Maximum	7,627	8,200	5,700	8,200

Table 45: Do You Own the Home? (Significant difference)

	No Alert		Alert (n=202)	Wt. Total
	MyAcc. (n=100)	No MyAcc. (n=100).		
Yes	46%	56%	69%	52%
No	54%	43%	30%	48%
Refused	0%	1%	0%	0%

Table 46: Household Income (Significant difference)

	No Alert		Alert (n=202)	Wt. Total
	MyAcc. (n=100)	No MyAcc. (n=100)		
Under $50,000	37%	36%	24%	36%
$50,000 to $100,000	31%	22%	33%	26%
$100,000 to $200,000	15%	13%	18%	14%
$200,000 and above	4%	5%	5%	4%
Refused	11%	20%	20%	16%
Don't know	2%	4%	0%	3%

Table 47: Highest Level of Education (Marginally significant difference)

	No Alert		Alert (n=202)	Wt. Total
	MyAcc. (n=100)	No MyAcc. (n=100)		
9th to 12th grade with no diploma	0%	3%	0%	2%
High school graduate or GED	13%	17%	8%	15%
Some college, with no degree	25%	25%	19%	25%
Associate degree	7%	9%	6%	8%
Bachelor's degree	31%	20%	35%	25%
Graduate or professional degree	21%	22%	27%	22%
Refused	3%	4%	4%	4%

Table 48: Race/Ethnicity (Significant difference)

	No Alert		Alert (n=202)
	MyAcc. (n=100)	No MyAcc. (n=100)	
Caucasian	53%	55%	72%
Asian	11%	5%	8%
African American	4%	7%	2%
Pacific Islander	2%	2%	1%
American Indian or Alaska Native	0%	2%	0%
Other	22%	19%	12%
Don't know	8%	13%	7%
Refused	0%	1%	0%

Table 49: Are you Hispanic or Latino descent?

	No Alert		Alert (n=187)	Wt. Total
	MyAcc. (n=97)	No MyAcc. (n=92)		
Yes	25%	22%	11%	23%
No	75%	78%	89%	77%

SMALL COMMERCIAL

This section presents key findings from the residential post-event survey, and tables showing response frequencies.

Key Findings

- **Overall, half of respondents had a solid understanding of the concept of Reduce Your Use days, while less than one-fifth were aware of the July 20th test event.** While awareness of the concept differed significantly across groups, nearly all alert group contacts, and roughly half of those in the non-alert group had an accurate understanding of RYU days (Table 50). When responses were weighted to represent the population, less than one fifth were aware that an event had occurred July 20th.

- **Email is a preferred means of notification for both alert and non-alert groups, but few prefer text message.** In both groups, email was most commonly mentioned as the best method for advance event notification, with 47% of non-alert group contacts and 71% of alert group contacts preferring email notifications (Table 55). (Phone was a close

second in the no alert group, with 41% volunteering it as their preferred means of notification.) Just 4% of each group cited text message as the best means of notification.

- **Recall of mass media event messaging was low among both groups.** Less than five percent of either group recalled receiving notification of the July 20 event through mass media channels (Table 51).
- **Some small businesses, particularly those in the non-alert group, are ambivalent about the feasibility of participating.** One-fourth of the non-alert group reported that there was nothing they could do to reduce their energy use during an event day (Table 53). Similarly, when asked about whether they intended to reduce their energy use in response to future requests, 23% of the non-alert group "strongly agreed" that they would do so, compared with 59% of those in the alert group (Table 57).
- **There are no notable differences among the types of sampled businesses who signed up for alerts, versus those who did not.** Business type, building ownership, square footage, and air conditioning use were all similar across the sampled alert and non-alert groups (Table 59 - Table 62).

Summary of Awareness Measurements

Table 50: Summary of Event Awareness Measurements among Residential Respondents

	No Alert (n=104)	Alert (n=70)	Wt. Total (n=174)	X^2 sig.
Aware of event on July 20th	14%	79%	15%	<.05
Aware of event and bill credit	13%	69%	13%	<.05
Aware of event and event hours	1%	39%	1%	<.05
Aware of event, bill credit, and event hours	1%	34%	1%	<.05
Aware of PTR concept correctly	48%	87%	48%	<.05

Table 51: Source of Notification

	No Alert (n=104)	Alert (n=70)
None	86%	21%
Email	10%	73%
Text Message	0%	11%
Radio	2%	1%
Other	3%	1%
TV	1%	0%
Word of Mouth	1%	0%

Table 52: Awareness of Event Notification Option, Bill Credits, and Use of Website

	No Alert	Alert	Wt. Total
Aware of event notification option, among those aware of PTR events (n=96)	37%	N/A	36%
Used SDG&E website to check energy use, among those aware of July 20th events (n=70)	27%	45%	28%

Possible Actions to Reduce Use

Table 53: Possible Actions to Reduce Energy Use

	No Alert (n=104)	Alert (n=70)
Adjust AC temp	37%	50%
Turn off lights	34%	49%
Nothing	25%	10%
Send staff home early	2%	4%
Close early	2%	1%
Turn off cooking equipment	2%	0%
Send staff to work at home	1%	0%
Other	20%	43%

Table 54: Possible Actions to Reduce Energy Use – "Other" Mentions

	No Alert	Alert
Incorrect explanation	10	6
Did not know	3	5
Turn off or don't use energy (super category)	13	25
• Turn off: TV	1	0
• Turn off: PC	0	7
• Turn off: AC	5	13
• Turn off: Lights	2	1
• Turn off: Everything	0	1
• Turn off: Vampires (not in use)	0	4
• Turn off: Machinery, Equipment, or other Electronics	6	3
• Turn off: Fan	0	1
Change Schedules to off-peak	2	1
Leave facility - stay home	3	0

	No Alert	Alert
Lower use of energy equipment	0	2
Generic other responses	3	2

Feedback and Suggestions

Table 55: Best Contact Method for Advance Event Notification

	No Alert (n=104)	Alert (n=70)	Wt. Total
Email	47%	71%	47%
Phone (volunteered)	41%	21%	41%
Text message	4%	4%	4%
Mailing	1%	1%	1%
Other	7%	1%	7%

Table 56: Agreement with "Announcement about RYU day events are adequate," among those aware of July 20th event

	No Alert (n=15)	Alert (n=53)	Wt. Total
Strongly disagree	0%	2%	0%
Somewhat disagree	7%	0%	8%
Neither agree not disagree	7%	0%	8%
Somewhat agree	40%	26%	38%
Strongly agree	47%	72%	46%

Table 57: Agreement with "I will reduce my energy use when future RYU days are announced."

	No Alert (n=94)	Alert (n=68)	Wt. Total
Strongly disagree	9%	0%	8%
Somewhat disagree	11%	1%	11%
Neither agree not disagree	15%	6%	15%
Somewhat agree	43%	34%	43%
Strongly agree	23%	59%	24%

Table 58: Suggestions to Improved RYU Days

	No Alert	Alert	Wt. Total
Advanced Notice/more notice	10%	9%	10%
More Education on how to save/impact of saving	4%	3%	4%
Different timing/hours	3%	6%	3%
Research business needs/target better	3%	0%	3%
Logging into accounts hard	3%	3%	3%
Make facility more EE/more info on facility	3%	0%	3%
Increase general awareness	2%	0%	2%
More information/quick feedback	2%	1%	2%
Increase credits	2%	3%	2%
Other request	2%	0%	2%
Increase Tenant Awareness	2%	0%	2%
Money savings/credit information	1%	4%	1%
General behaviors described (off topic)	0%	1%	0%
Help to understand why RYU days help	0%	9%	0%
Lower rates	0%	0%	0%

Firmographics

Table 59: Summer AC Use

	No Alert (n=104)	Alert (n=70)	Wt. Total
Yes	68%	74%	68%
No	29%	24%	29%
Refused	3%	1%	3%

Table 60: Business Type

	No Alert (n=104)	Alert (n=70)	Wt. Total
General office	24%	24%	24%
Retail	17%	20%	17%
Food service	8%	4%	7%
Manufacturing	7%	7%	7%
Personal services (spas, gyms, salons)	6%	9%	6%

	No Alert (n=104)	Alert (n=70)	Wt. Total
Medical or dental (including mental health)	6%	4%	6%
Property management	5%	0%	5%
Construction	3%	0%	3%
R&D, biomed, product design	3%	1%	3%
Sales, marketing, advertisement	3%	0%	3%
Parks & recs	3%	0%	3%
Business services (consulting, architecture, engineering)	2%	4%	2%
Education, school, youth programs	2%	4%	2%
Services (repair shops, etc.)	2%	4%	2%
Financial	2%	1%	2%
Religious services	1%	4%	1%
Real estate	1%	3%	1%
Agriculture	1%	1%	1%
Other	6%	7%	6%

Table 61: Building Ownership

	No Alert (n=104)	Alert (n=70)	Wt. Total
Own and occupy the entire building	18%	26%	18%
Own the building and occupy part of it	13%	4%	13%
Lease the space you are in	66%	66%	66%
Something else	2%	4%	2%
Don't know	1%	0%	1%

Table 62: Space Size in Square Feet

	No Alert (n=84)	Alert (n=58)	Wt. Total
Mean	11,618	9,586	11,612
Minimum	600	800	600
Maximum	436,000	150,000	436,000

C POST-EVENT MEMO 2

MEMORANDUM

To: Brenda Gettig, Senior Business Analyst

From: Dulane Moran, Hale Forster and Jun Suzuki, Research Into Action

Date: October 22, 2012

Re: PTR August 14 Post-Event Survey Results

SUMMARY

Residential

- **Awareness.** While awareness of the PTR concept increased since the July post-event survey, levels of awareness of the August 14 event remained similar to—or slightly lower than—July 20 awareness levels. Awareness of the August 14 event was highest among the Energy Challenge and Opt-in Alert groups.
- **Multi-event effects.** The five events in less than two weeks could have caused some confusion about which days were PTR event days. While awareness of the PTR event day concept increased from the previous post-event survey, awareness of the specific event on August 14th was similar or lower than awareness of the July 20 event in most response groups.
- **Alerts.** Most contacts report that the number of notifications they receive is adequate. Email continues to be the main source of event awareness for all response groups except the no-MyAccount group. More contacts reported television as a source of event awareness for this event than for the July event (this notification could be due in part to the TV ads for the state-wide Flex Alert day, though.)
- **Response.** Contacts in the opt-in alert, Summer Savers, and Energy Challenge groups reported the most effort in response to the event request.
- **Feedback.** The most frequent suggestion to improve PTR events was to increase promotion and notification of event days. Some contacts, particularly those in the Energy Challenge response group, requested more performance feedback and recommendations. Increases in bill credit amounts and website usability were mentioned by only a few contacts.

Commercial

- **Awareness.** While awareness of the PTR concept increased since the July post-event survey among small commercial customers, levels of awareness of the August 14 event remained similar to July 20 awareness levels. Awareness among opt-in alert group respondents was much higher than those who had not signed up for alerts.

METHODS

During a cluster of five countywide Peak Time Rebate events between August 9 and August 21, 2012, we launched a phone survey of residential and small commercial San Diego Gas and Electric customers.

Table 63: August Calendar of RYU Events and Survey Timeframe

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
5	6	7	8	9 RYU Day	10 RYU Day	11 RYU Day
12	13	14 RYU Day	15	16 Survey Start	17	18
19	20 Survey End	21 RYU Day	22	23	24	25

Following the August 14 event, between August 16 and August 20, CIC Research completed surveys with 532 SDG&E customers. Interviews lasted less than seven minutes. The survey asked about: respondent understanding and awareness of event days, means of notification, possible actions to reduce electricity use, intent to participate in the future, and general suggestions for program improvement. To maintain consistency with the previous survey, all questions about specific event awareness and actions were asked of the most recent event, on August 14.

Sample Development and Weighting

To understand the differing awareness of those who signed up for event day alerts through email or text message, those who signed up for the San Diego Energy Challenge (SDEC), those who signed up for the Summer Savers program, and those who received email alerts because of their use of MyAccount, we stratified both the residential and commercial samples. For this August survey, we added two additional strata to the residential sample. Table 64 shows the strata for both residential and commercial samples. The first two residential strata were not part of the July 2012 post-event survey.

Table 64: Strata Definitions

Sample	Definition
	RESIDENTIAL
Summer Savers	Opted in to the Summer Savers program. Although Summer Savers participants were invited to sign up for event day alerts, this sample did not opt in for optional PTR alerts. Received augmented PTR credit of $1.25/kWh
SDEC	Opted in to the San Diego Energy Challenge (SDEC) program. Received event alerts by text or email, with SDEC branding.
Alert Opt-in	Not part of the above two groups, but opted in to receive text or email alerts for event days.
MyAccount	Not in any of the above three groups, but has MyAccount. Email alert sent to MyAccount-registered email address.
No MyAccount	Not in any of the top three groups, and does not have MyAccount.
	COMMERCIAL
Alert Opt-in	Opted in to receive text or email alerts for event days. Not part of commercial Summer Savers.
MyAccount	Did not opt in for alerts, but has MyAccount. Email alert sent to MyAccount-registered email address.
No MyAccount	Did not opt in for alerts, and does not have MyAccount.

Note that the commercial sample was initially defined as two strata: Alert opt-in and no-Alert. We have treated the commercial sample as three strata in this analysis. We expanded the commercial strata for two reasons: the random sample of this non-alert strata was not representative of the population of Small Commercial customers, and we wanted to provide consistency with the third post-event survey, which contains both the MyAccount and No-MyAccount strata. Table 67 and Table 68 show the number of surveys completed with each stratum, as well as the population of each.

Because we were particularly interested in understanding the event day experiences of those in the alert groups, the sample overrepresented the alert groups, relative to the population. Thus, to develop an estimate of *overall* RYU day awareness across the SDG&E population, we used proportional weights to correct for this oversampling, according to the following formula:

$$Stratum\ weight = \frac{\%\ of\ stratum\ in\ population}{\%\ of\ stratum\ in\ sample}$$

Table 67 and Table 68 show the weights of the residential and commercial sample strata, respectively, as well as their relative contributions to the weighted totals (shown in the final column). Note that these are proportional, not scaled weights, so the weighted sample size is equal to the unweighted sample size rather than the population as a whole.

Table 65: Residential Population, Sample, and Weights

Sample Group	Population	Sample Size	Weight	Weighted Sample Size
Summer Savers	23,481	68	0.12	8.2
San Diego Energy Challenge	4,379	70	0.02	1.5
Alert Opt-in	41,340	155	0.09	14.3
Yes MyAccount	530,562	70	2.64	184.5
No MyAccount	639,528	68	3.27	222.4
Total	**1,239,290**	**431**	**N/A**	**431**

Table 66: Small Commercial Population, Sample, and Weights

Sample Group	Population	Sample Size	Weight	Weighted Sample Size
Non-Alert, MyAccount	36,130	32	.97	31
Non-Alert, No MyAccount	80,989	30	2.32	70
Alert	416	39	0.01	0.4
Total	**117,535**	**101**	**N/A**	**101**

Response Interpretation

To understand whether responses differed significantly across groups, we used Chi-Square tests. The results of Chi-square analyses are presented in the last column of the tables below. Significant results are reported at $p<.05$, unless otherwise specified. A "significant" Chi-Square finding for any given row in a table means that the observed differences between the unweighted groups are not due to chance. A significant Chi-Square test does *not* allow us to conclude that any two specific groups are significantly different, or that one group is different from the average, but just that the distribution of responses across groups is very likely not due to chance.

Because of the magnitude of oversampling of the "alert" groups (while the alert group makes up half of the residential sample, alert group members make up less than 6% of the population as a whole), the weighted results are approximately equal to the results of the non-alert groups alone. For this reason, weights have not been applied to results within strata, but when results have been averaged across the whole sample. Unless signified by the column header "Wt. Total," all results in this report are unweighted. Significance tests were conducted with unweighted data only.

Additionally, because of the skip patterns in this survey instrument, the number of responses to a given question varies considerably throughout the chapter. To limit the amount of numbers in each table, we have omitted this table sample size. Instead, we have provided an explanation the subset of respondents who answered each question (for example, we have indicated whether a

question was asked of all respondents, or only those who indicated an awareness of the August 14th event.)

RESIDENTIAL FINDINGS

Awareness of Event Days

To understand the level of awareness of the PTR concept, as well as of specific event days, we asked contacts several types of questions to assess awareness. A large majority of residential contacts in each response group were aware of the existence of RYU event days. Even in the non-alert, no MyAccount group, 79% were aware of RYU days generally (Table 67). (This general awareness was defined as having heard anything about RYU days or event requests from SDG&E in the last year.) Awareness of the actual August 14 event was lower, with just under one fifth of contacts reporting awareness of that request, on average.

Awareness differed significantly across alert groups. Over half of contacts in the Energy Challenge response group and in the opt-in alert response group (59% and 57%, respectively) were aware that a RYU request had been issued on August 14th. Awareness among the Summer Saver response group was at 34%. While this level of awareness was higher than the awareness in the non-opt in groups, it was lower than the SDEC group or the opt-in alert group.

Table 67: Awareness Measurements by Group

	Summer Saver	SDEC	Opt-in Alerts	My Acct.	No My Acct.	Wt. Total	Sig.
Aware of RYU days	88%	97%	98%	93%	79%	86%	<.001
Understand PTR concept[1]	64%	69%	83%	43%	40%	42%	<.001
Aware of 8/14 event	34%	59%	57%	18%	14%	17%	<.001
Aware of 8/14 event and event hours	15%	43%	48%	19%	7%	14%	<.001
Aware of 8/14 event and bill credit	23%	34%	29%	13%	6%	10%	<.001
Aware of 8/14 event, credit, and hours	7%	17%	14%	10%	3%	6%	<.05

[1] Aware of PTR days generally, and aware of bill credit.

The program team was interested in understanding the extent to which contacts distinguished between event days and non-event days. Overall, eight percent of respondents falsely identified Sunday or Monday as an event day (Table 68). False identification was highest among the Energy Challenge response group, with 38% of respondents recalling an event day on one of these two days.

Table 68: Event Day Recall Accuracy

	Summer Saver	SDEC	Opt-in Alerts	My Acct.	No My Acct.	Wt. Total	Sig.
Thought 8/12/Sun or 8/13/Mon was event day, among those aware of 8/14	12%	38%	19%	9%	6%	8%	<.001

Awareness of the notification option among the non-alert groups was moderate, with just under one-third of respondents reporting awareness of the notification option (Table 69). A majority of opt-in alert contacts reported using the website to check their energy use in connection with the event.

Table 69: Awareness of Event Notification Option and Use of Website by Group

	Summer Saver	SDEC	Opt-in Alerts	My Acct.	No My Acct.	Wt. Total	Sig.
Aware of email/text notification option, among no alert group (n=92)[1]	-	-	-	35%	24%	29%	ns
Used SDG&E website to check energy use, among those aware of 8/14 event (n=82)[2]	12%	33%	63%	42%	--	27%	<.01

[1] Asked of those who indicated they were aware of PTR concept.

[2] Asked of those who indicated they were aware of the August 14 event.

Sources of Awareness

Among those aware of the event, email was the most frequently mentioned means of notification for all groups except the non-Alert, no MyAccount group (Table 70). For this group, the most frequently mentioned means of notification was television.

Table 70: Source of Event Information, among Those Aware of 8/14 Event by Group (Multiple Responses Allowed)

	Summer Saver	SDEC	Opt-in Alerts	My Acct.	No My Acct.	Wt. Total	Sig.
Email message	65%	83%	69%	70%	0%	39%	<.001
Television	4%	2%	1%	20%	78%	42%	<.001
Letter	--	--	--	10%	11%	9%	<.01
Phone text message	9%	15%	39%	--	--	5%	<.001
Radio	9%	--	--	--	11%	5%	<.01
Word-of-mouth	4%	--	--	10%	--	4%	<.01
Other	9%	--	--	10%	11%	14%	<.001

Overall, those contacts who were aware of the August 14 event were satisfied with the number of notifications they received (Table 71). Nearly one-fifth of Energy Challenge respondents reported that they received too many notifications, though.

Table 71: Number of Notifications

	Summer Saver	SDEC	Opt-in Alerts	My Acct.	No My Acct.	Wt. Total	Sig.
Just enough	69%	79%	78%	86%	70%	83%	Ns
Too many	8%	18%	10%	--	10%	3%	
Too few	8%	--	8%	--	10%	3%	
Don't know	15%	3%	4%	14%	10%	11%	

Preferred method of notification differed across response groups. Email was the most frequently requested means of notification among Energy Challenge, opt-in, and MyAccount response groups. Over half of Summer Saver and non-MyAccount groups volunteered that they would like to be notified by phone, though.

Table 72: Best Contact Method for Future Events

	Summer Saver	SDEC	Opt-in Alerts	My Acct.	No My Acct.	Wt. Total	Sig.
Phone call	56%	17%	18%	23%	65%	47%	<.001
Email message	35%	72%	59%	65%	19%	39%	
Phone text message	2%	8%	20%	8%	6%	7%	
Letter	5%	3%	3%	--	5%	3%	
Radio	--	--	--	--	--	--	
Other	2%	--	--	3%	5%	4%	
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	

Event Day Actions

To understand whether or not respondents know what to do in response to event requests, we also asked all contacts about what they could do to use less energy for an afternoon. One-fifth of contacts (21%) reported that there was "nothing" they could do to participate (Table 73).

Table 73: What Could You Do To Use Less Energy?

	Summer Saver	SDEC	Opt-in Alerts	My Acct.	No My Acct.	Wt. Total	Sig.
Unplug unused electronics or minor appliances	18%	53%	38%	30%	31%	31%	<.001

	Summer Saver	SDEC	Opt-in Alerts	My Acct.	No My Acct.	Wt. Total	Sig.
Postpone use or turn off major appliances	25%	19%	37%	21%	28%	25%	<.05
Adjust or turn off AC	50%	17%	41%	23%	19%	22%	<.001
Leave home	10%	16%	17%	9%	18%	14%	ns
Turn lights off	6%	16%	16%	13%	12%	12%	ns
Other	9%	9%	13%	7%	6%	7%	ns
Nothing	21%	16%	8%	26%	18%	21%	<.01

Respondents' reported level of effort to respond to the August 14 event varied across response groups: just a few opt-in alert group contacts (13%) reported that they made no effort, but half of the MyAccount group reported making no effort (Table 74).

Table 74: Level of Effort Made to Respond to 8/14 Event, Among those Aware of Event

	Summer Saver	SDEC	Opt-in Alerts	My Acct.	No My Acct.	Wt. Total	Sig.
A lot more effort than usual	37%	30%	33%	10%	11%	14%	<.05
Somewhat more effort than usual	21%	37%	54%	40%	44%	43%	
No more or less effort than usual	42%	33%	13%	50%	44%	44%	
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	

Those contacts who reported they made an effort to respond to the event reported whether they experienced any negative effects of participating (Table 75). Overall, less than one-fifth of these contacts reported negative effects. Among those reporting negative effects, a majority said it was hot (80%), and some mentioned other inconveniences such as resetting electronics or shifting times for chores.

Table 75: Negative Effects Experienced (among those made an effort)

	Summer Saver	SDEC	Opt-in Alerts	My Acct.	No My Acct.	Wt. Total	Sig.
Experienced negative effect	38%	23%	23%	17%	17%	18%	ns

Feedback and Suggestions

Contacts rated their agreement with statements about alerts and future events, as well as providing suggestions for improving the PTR program. Overall, agreement that event announcements are adequate was high (91% rated a "4" or "5" on a five-point scale; Table 76.) Similarly, a large majority of contacts agreed that they would reduce their use during future reduce your use events. These ratings did not differ significantly across performance groups. The

most frequently mentioned suggestion (made by 55% of those offering suggestions) was to increase the promotion and notification of event days (Table 77). Nearly half of Energy Challenge contacts (47%) requested feedback and recommendations for future actions, as well. Increasing the bill credit, improving the program design or description, and improving the website, were mentioned by a minority of respondents. Those no MyAccount group contacts making "other" suggestions made varying comments, some of which were based on an incorrect understanding of RYU days (such as the suggestion to provide an incentive) or were more general comments about SDG&E (reduce rates; increase supply).

Table 76: Satisfaction with PTR

Statement		Summer Saver	SDEC	Opt-in Alerts	My Acct.	No My Acct.	Wt. Total	Sig.
RYU event announcements are adequate.[1]	Agree	87%	95%	99%	90%	89%	91%	ns
I will reduce during future RYU events.[2]	Agree	92%	94%	93%	80%	89%	85%	ns

[1] Asked of those aware of August 14 event.

[2] Asked of all.

Table 77: Suggestions for Program Improvement

	Summer Saver (n=16)	SDEC (n=17)	Opt-in Alerts (n=53)	My Acct. (n=13)	No My Acct. (n=11)	Wt. Total (n=110)	Sig.
More promotion and improved notification	38%	24%	32%	69%	45%	55%	ns
Provide feedback and recommendations	6%	47%	17%	15%	9%	12%	<.05
Increased bill credit	13%	6%	11%	8%	--	4%	ns
Improved program design	6%	12%	11%	8%	--	4%	ns
Have event on different day or time	13%	12%	11%	--	--	1%	ns
Clearer program description	--	--	8%	--	--	--	ns
Improved website	--	--	8%	--	--	--	ns
Other	19%	--	2%	15%	45%	29%	ns

Feedback and suggestions about the bill credit and the CRL calculation revealed varying levels of understanding and engagement with the program. Comments include:

- "They need to offer more credit for 7 hours of discomfort - 75 cents one day and $1.50 the next day is not worth it."

- "They need to have tier goals and not just one unrealistic goal. People will give up and quit trying."
- "The level of energy use I had to be under was unrealistic, they took my lowest use of the week and told me to go under that"
- "It wasn't real clear how to find out how much energy we reduced if any."

Demographics

Table 78 summarizes the demographic characteristics across response groups. All characteristics but ethnicity varied significantly between the groups.

Table 78: Summary of Demographic Characteristics by Group

		Summer Saver	SDEC	Opt-in Alerts	My Acct.	No My Acct.	Wt. Total	Sig.
Central air conditioner	Yes	97%	23%	52%	43%	40%	43%	<.001
Presence of senior (70 yr or above)	Yes	32%	9%	21%	13%	51%	33%	<.001
Homeowner	Yes	89%	43%	67%	52%	74%	64%	<.001
Household Income	Under $50K	32%	45%	35%	31%	54%	42%	<.001
	$50 to less than $100K	27%	42%	44%	49%	30%	39%	
	$100K or more	41%	13%	21%	20%	16%	19%	
Education	HS or less	11%	7%	13%	10%	34%	23%	<.001
	Some college	35%	34%	36%	37%	25%	31%	
	Bachelor's or higher	53%	59%	52%	53%	40%	46%	
Ethnicity	White	77%	66%	75%	68%	83%	76%	ns
	Asian	7%	5%	5%	5%	2%	8%	
	Hispanic	8%	14%	13%	10%	7%	11%	
	Black	8%	14%	7%	15%	8%	3%	
	Other	--	2%	--	3%	--	1%	

SMALL COMMERCIAL FINDINGS

Awareness of Event Days

Table 79 presents several measures of awareness both of the August 14 PTR event and of the overall concept of RYU days. A majority of each small commercial response group reported

awareness of RYU days in general, including all of the opt-in alert group, 84% of those with MyAccount, and 63% of those without MyAccount. Awareness of the August 14 event was lower, though: the weighted average awareness of the event on August 14 was 15%, including 69% of those who signed up for alerts. Even among the opt-in group, full understanding of the event (including the potential to earn a bill credit and the hours the event took place), was relatively low, with 18% of opt-in alert contacts reporting awareness.

Table 79: Awareness Measurements by Small Commercial Notification Group

	Opt-in Alerts	My Acct. no alerts	No My Acct. no alerts	Wt. Total	Sig.
Aware of RYU days	100%	84%	63%	70%	<.001
Understand PTR concept[1]	93%	46%	36%	39%	<.01
Aware of 8/14 event	69%	25%	10%	15%	<.001
Aware of 8/14 event and event hours	41%	--	3%	2%	<.001
Aware of 8/14 event and bill credit	45%	13%	4%	7%	<.01
Aware of 8/14 event, credit, and hours	18%	--	--	--	<.01

[1] Aware of PTR days generally, and aware of bill credit.

We also attempted to understand the extent to which small commercial contacts might be misidentifying non-event days as event days. (While Saturday and Tuesday were event days, Sunday and Monday were not, see Table 63.) Overall, less than one-tenth of small-commercial respondents falsely identified either Sunday or Monday as an event day (Table 80). Those registered for opt-in alerts were more likely to falsely identify one of these two days as an event day. This proportion was higher among the alert population, though: one-third of those who opted in for alerts falsely identified one of these two days as an event day.

Table 80: Misconception about Event Day

	Opt-in Alerts	My Acct. no alerts	No My Acct. no alerts	Wt. Total	Sig.
Thought 8/12/Sun or 8/13/Mon is event day, among those aware of 8/14	33%	7%	11%	9%	<.05

Close to half of non-alert group small commercial contacts who were aware of the PTR concept were also aware of the ability to sign up for event notifications (Table 81). Those contacts who had opted in for alerts were the only ones who reported having used the website to check their performance either before or after the event.

Table 81: Awareness of Event Notification Option and Use of Website by Group

	Opt-in Alerts	My Acct. no alerts	No My Acct. no alerts	Wt. Total	Sig.
Aware of email/text notification option, among no alert group	-	39%	47%	45%	ns
Used SDG&E website to check energy use, among those aware of 8/14 event	50%	--	--	1%	ns

Firmographics

Table 82 shows the firmographic characteristics of surveyed small businesses. Firmographics did not vary significantly across response groups.

Table 82: Summary of Firmographic Characteristics by Group

		Opt-in Alerts	My Acct. no alerts	No My Acct. no alerts	Wt. Total	Sig.
Central air conditioner	Yes	91%	71%	73%	73%	ns
Business type	General office	21%	32%	23%	26%	ns
	Retail and wholesale	26%	26%	20%	22%	
	Manufacturing	13%	6%	13%	11%	
	Personal services	8%	13%	7%	9%	
	Food services	--	13%	10%	11%	
	Medical	13%	--	7%	5%	
	Repair	--	--	13%	9%	
	Education	5%	3%	--	1%	
	Other	13%	6%	7%	7%	
Building ownership	Own the building and fully occupy	13%	26%	23%	24%	ns
	Own the building and partially occupy	16%	6%	13%	11%	
	Lease	71%	68%	63%	65%	
Space size	Less than 1,500 SF	39%	30%	32%	31%	ns
	1,500 less than 3,000 SF	33%	23%	20%	21%	
	3,000 less than 4,500 SF	8%	17%	28%	24%	
	More than 4,500 SF	19%	30%	20%	23%	

AWARENESS OVER TIME

The sections below summarize changes in awareness of the PTR concept and of specific curtailment request awareness since the July post-event survey.

Residential

Figure 69 and Figure 70 summarize awareness of the PTR concept and of the specific curtailment request across the July 20 and August 14 events among the Opt-in Alert, MyAccount, and no MyAccount response groups. (Summer Savers and SDEC groups were added for the August survey; awareness levels are shown in Table 67, above.) Awareness of the PTR concept has increased, but awareness of the specific curtailment request decreased from July 20 to August 14, for some groups.

Figure 69: Heard of PTR Concept

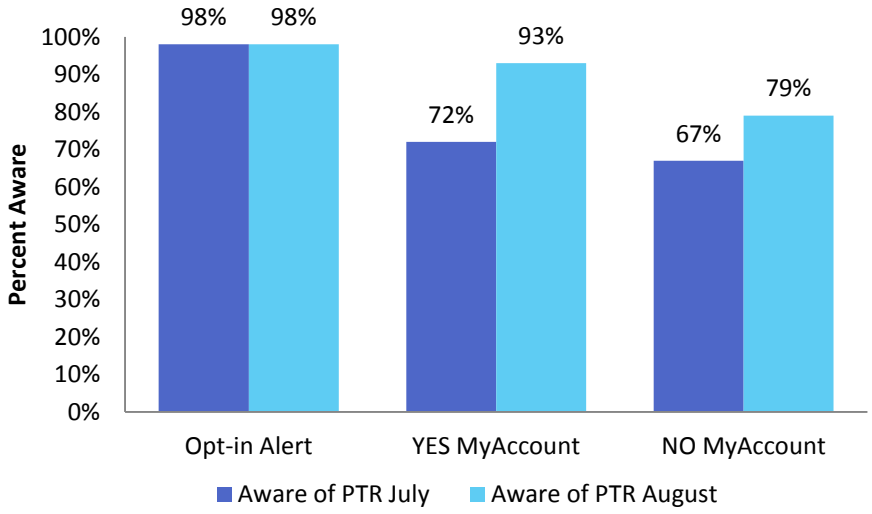
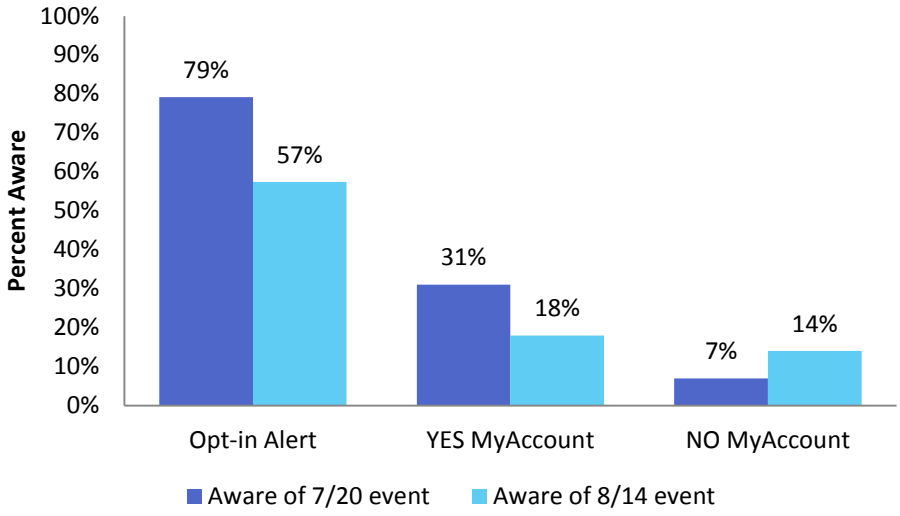


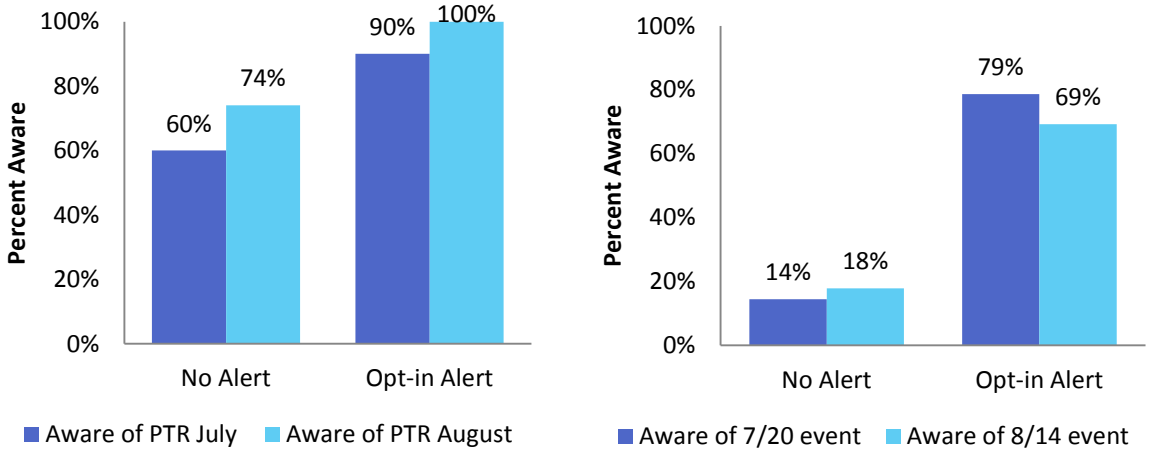
Figure 70: Specific Event Day Awareness



Commercial

For commercial respondents, similar to residential respondents, awareness of the PTR concept increased somewhat from the July to August surveys (Figure 71). Awareness of the specific curtailment request remained relatively constant, though.

Figure 71: Awareness of PTR Concept and Event Days



D POST-EVENT MEMO 3

MEMORANDUM

To: Brenda Gettig, SDG&E Evaluation Manager

From: Dulane Moran

Date: November 26, 2012

Re: PTR 9/15 Post-Event Survey Results

SUMMARY

This memo describes the results from the third 2012 post-event survey, launched in late September 2012 following a September 15 Reduce Your Use (RYU) event.

Residential

- We found differences in response pattern by survey delivery mode. Those who took the survey by email reported significantly greater awareness of RYU days than those who took the survey by phone. SDG&E sent event notifications to everyone with MyAccount emails, so this likely affected who responded to the survey and created response bias among email responders. Because of this, we assume that the phone results are likely to more accurately represent the awareness level of the general San Diego population.
- Demographic characteristics of each of the five groups differ. The Summer Saver and Opt-in Alert groups have higher concentration of homeowners and higher household income, education, and are more likely to be Caucasian.
- While general awareness of RYU days is relatively high, event specific awareness remains below 50% overall. Awareness levels among the No MyAccount group are significantly lower than the rest of the groups.
- More than half of the non-opt-in groups did not know about the availability of RYU notification options.
- Email message was the most common source of the September 15 event information for all the groups except the No MyAccount group. TV advertisements most commonly reached the No MyAccount group.

- Two-thirds of those aware of the September 15 event reported attempting to use less electricity during the event. This was consistent across all the groups.
- The importance of bill credits as a reason to respond to the event is significantly higher among the alert groups, in particular the Opt-in Alert group, than non-opt-in groups. Opting-in to notification may be influenced by a desire to earn bill credits.
- Two-thirds of the respondents reported they are likely to respond to future RYU events. This likelihood is particularly high among the Opt-in Alert group (92%).
- The most common comments provided relating to program improvement suggestions were: a desire to receive higher bill credit; a need to improve the "use less than …" calculation; inability to take more actions to lower their energy use; and preferred modes of event communication.

Small Commercial

- A majority of the respondent firms reported general awareness of RYU days; however, event specific awareness is considerably lower.
- Verbatim feedback indicates many small commercial customers encounter different challenges to respond to RYU events than residential customers.

METHODOLOGY

Following a Reduce Your Use day called on Saturday, September 15, we implemented post-event surveys by phone and web for both residential and small commercial customers of SDG&E. Phone calls occurred between September 20 and October 2. The addition of a web survey option represented a change from the prior two post-event surveys. This option was added to cost-effectively increase the number of survey respondents and to give the research team a chance to test the validity of this survey mode for future surveys. CIC Research completed 430 phone surveys. Over 2,500 respondents completed the web survey (Table 83).

Table 83: Final Sample

	Web	Phone	Total
RESIDENTIAL			
Completed	2,515	369	2,884
Response Rate	14%	15%	-
SMALL COMMERCIAL			
Completed	172	61	233
Response Rate	5%	10%	-

The survey asked respondents about: understanding and awareness of event days; means of notification; possible actions to reduce electricity use; their intent to participate in the future; and general suggestions for program improvement.

Sample Development and Weighting

To understand the differing awareness of those who signed up for event day alerts through email or text message, those who signed up for the San Diego Energy Challenge (SDEC), participants of the Summer Savers program, and those who received email alerts because of their use of MyAccount, we stratified both the residential and commercial samples. Table 84 describes each stratum for both residential and commercial samples. The first three residential groups (Summer Savers, SDEC, and Alert opt-in) are classified as "opt-in" groups throughout the report, because they each opted into a demand-response related program or notification.

Table 84: Strata Definitions

Sample	Definition
	RESIDENTIAL
Summer Savers	Opted in to the Summer Savers program. Although Summer Savers participants were invited to sign up for event day alerts, this sample did not opt in for optional PTR alerts. Received augmented PTR credit of $1.25/kWh.
SDEC	Opted in to the San Diego Energy Challenge (SDEC) program. Received event alerts by text or email, with SDEC branding.
Alert Opt-in	Not part of the above two groups, but opted in to receive text or email alerts for event days.
MyAccount	Not in any of the above three groups, but has MyAccount. Email alerts were sent to MyAccount-registered email address.
No MyAccount	Not in any of the top three groups, and does not have MyAccount.
	COMMERCIAL
MyAccount	Has MyAccount. Email alert sent to MyAccount-registered email address.
No MyAccount	Does not have MyAccount.

Table 85 and Table 86 show the population size, the number of surveys completed, and weight values of each stratum. Because of the varied response rates within each stratum, the resulting sample distribution was disproportionate to the population. In order to develop more accurate overall estimates we used proportional weights to correct for this deviance, according to the following formula:

$$Stratum\ weight = \frac{\%\ of\ stratum\ in\ population}{\%\ of\ stratum\ in\ sample}$$

Table 85: Residential Population, Sample, and Weights

Sample Group	Population	Sample Size	Weight
Summer Savers	23,481	634	0.09
San Diego Energy Challenge	4,379	627	0.02
Alert Opt-in	41,340	600	0.16
Yes MyAccount	530,562	787	1.89
No MyAccount	639,528	236	5.23
Total	**1,239,290**	**2,884**	**-**

Table 86: Small Commercial Population, Sample, and Weights

Sample Group	Population	Sample Size	Weight
Yes MyAccount	80,989	85	1.90
No MyAccount	36,130	148	0.49
Total	**117,119**	**233**	**-**

Notes to Readers

Results within strata are unweighted. We applied weights only to the total estimates signified by the column header "Wt. Total."

Significant tests were conducted using the weighted data. To understand whether responses differed significantly across groups, we used Chi-Square tests. The results of Chi-Square analyses are presented in the last column of the tables below. Significant results are reported at $p<.05$, unless otherwise specified. A "significant" Chi-Square finding for any given row in a table means that the observed differences between the groups are not due to chance. A significant Chi-Square test does *not* allow us to conclude that any two specific groups are significantly different, or that one group is different from the average, but just that the distribution of responses across groups is very likely not due to chance.

Finally, we use phone and web combined data in all of the tables below. It is important to note that we have found systematic differences between phone and web respondents. Web respondents are overall more likely to be aware of and engaged with RYU notifications and PTR messages compared with phone respondents. Considering that SDG&E's main mode of communication with their customers for this program is through web and email, this finding was somewhat anticipated. Even though the phone and web data are combined and weighted, the presence of the high proportion of web respondents means that results are likely overestimating the level of awareness among San Diego households and small businesses. To demonstrate this, we included phone-only numbers in some figures below. Readers should assume the presence of web respondent data in all tables not otherwise labeled. Mode difference analysis is presented in the Appendix A.

FINDINGS – RESIDENTIAL

Demographics

Table 87 summarizes the demographic characteristics across all response groups. We found significant differences in most of these traits; however, these significant findings are mainly due to the distinct characteristics of Summer Saver and SDEC participants as described below.

The Summer Saver group contains a greater proportion of higher-income homeowners with higher levels of education attainment. Almost all of their homes have a central air conditioner, as the program requires. Summer Savers also have the highest percentage of homes with a pool. The SDEC group, on the other hand, has a high proportion of lower income households, and their homes are the least likely to have a central air conditioner or a pool. Opt-in Alerts and MyAccount groups' home characteristics are similar, but Opt-in Alerts group contacts are more likely to be a homeowner and have slightly higher household incomes than MyAccount group. The No MyAccount group has, among all of the five groups, the lowest household income and education, and it has the highest concentration of minority households.

Table 87: Summary of Demographic Characteristics by Group

		Summer Saver	Energy Challenge	Opt-in Alerts	My Acct.	No My Acct.	Wt. Total	Sig.
		N=611	N=604	N=582	N=747	N=224		
Central air conditioner	Yes	99%	36%	56%	52%	52%	**53%**	<.001
Have a pool	Yes	22%	7%	12%	14%	8%	**11%**	<.001
Presence of senior (70 yr or above)	Yes	30%	9%	18%	16%	17%	**17%**	ns
Someone regularly home all day	Yes	69%	55%	67%	58%	59%	**59%**	ns
Homeowner	Yes	94%	53%	76%	62%	62%	**63%**	<.001
HH Income	Under $50K	21%	40%	28%	34%	46%	**38%**	<.001
	$50 to less than $100K	39%	35%	39%	36%	25%	**32%**	
	$100K or more	40%	25%	33%	30%	29%	**30%**	
Education	HS or less	7%	7%	9%	10%	14%	**12%**	<.05
	Some college	22%	28%	29%	29%	30%	**29%**	
	Bachelor's or higher	71%	65%	63%	61%	56%	**59%**	

		Summer Saver	Energy Challenge	Opt-in Alerts	My Acct.	No My Acct.	Wt. Total	Sig.
		N=611	N=604	N=582	N=747	N=224		
Ethnicity	White	78%	70%	80%	74%	69%	**72%**	<.01
	Asian	12%	11%	9%	10%	7%	**9%**	
	Hispanic	4%	8%	5%	10%	12%	**10%**	
	Black	2%	5%	3%	3%	6%	**4%**	
	Other	4%	5%	3%	4%	7%	**5%**	

Awareness Measures

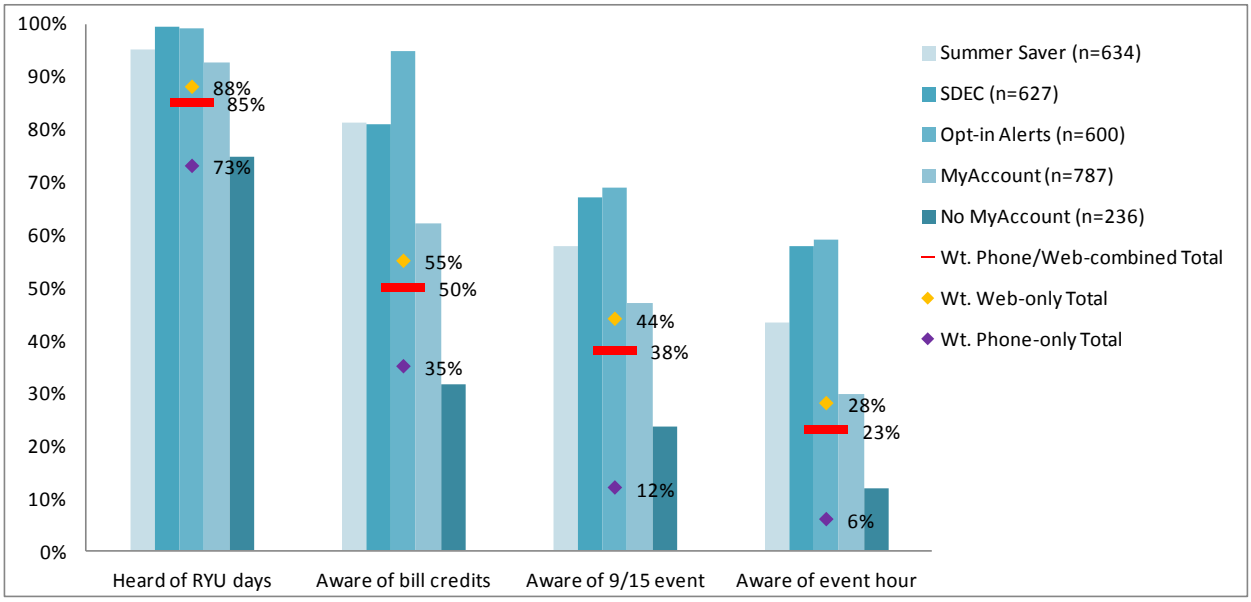
We asked respondents about their awareness of several elements of RYU days – from the broadest indication of general knowledge to familiarity with specific elements of RYU days. Figure 72 illustrates these awareness levels by group (shown as blue bars). It also shows the weighted total of phone and web combined data, as well as web-only and phone-only data to illustrate mode differences (shown as red, yellow, and purple symbols).

A majority of the respondents (85%) reported general awareness of RYU days. These respondents reported that they had seen or heard "Reduce Your Use" requests from SDG&E to reduce energy use during high demand summer days. However, when awareness was defined as those who understood the basic PTR concept – ability to receive bill credit for reducing electricity usage during events – awareness dropped substantially (50%).

When asked about the RYU request on September 15, 38% of contacts were aware of the event. Less than a quarter of the overall respondents were aware of the specific event time frame on the day of the request. Awareness levels measured by these four ways were all significantly different between the groups.

The web-only and phone-only totals show significant mode differences: awareness levels are significantly and systematically higher among web respondents compared with phone respondents; and it is likely that the high proportion of web-respondents is overestimating the awareness of the general household population.

Figure 72: Awareness Measurements by Group



Among those aware of RYU days but in the non-opt-in groups, awareness of the event notification sign-up option was 45% (Table 88). While more than half of those in the MyAccount group (58%) were aware, a significantly lower percent of the No MyAccount group (27%) reported they were aware of this option.

Respondents that were aware of the September 15 event were asked if they had logged on to the SDG&E website to check their electricity usage before and/or after the event. About a third of overall respondents who were aware of the event (32%) reported using the SDG&E website to check their electricity usage before and/or after the RYU event (Table 89). The Opt-in Alert group reported the highest use (59%), and MyAccount group was the lowest in their use of the website (28%). This question was not asked to the No MyAccount group because this group does not have access to this website feature.

Table 88: Awareness of Event Notification Option by Group

	Summer Saver	Energy Challenge	Opt-in Alerts	My Acct. N=657	No My Acct. N=158	Wt. Total	Sig.
Aware of email/text notification option, among non opt-in groups	-	-	-	58%	27%	**45%**	<.001

Table 89: Use of Website by Group

	Summer Saver	Energy Challenge	Opt-in Alerts	My Acct.	No My Acct.	Wt. Total	Sig.
	N=350	N=401	N=403	N=349			
Used SDG&E website to check energy use, among those aware of 9/15 event	40%	49%	59%	28%	-	**32%**	<.001

Sources of Event Information

For all the groups except No MyAccount group, an email message from SDG&E was by far the most common source from which they learned about the September 15 event (80-93%). The No MyAccount group most commonly learned about the event from a TV advertisement or news report (35% and 20% respectively), or on the radio (18%). Interestingly, 27% of the No MyAccount group also reported hearing about the September event via email message (Table 90).

Table 90: Source of Event Information among Those Aware of 9/15 Event by Group*

	Summer Saver	Energy Challenge	Opt-in Alerts	My Acct.	No My Acct.	Wt. Total	Sig.
	N=361	N=412	N=406	N=362	N=55		
Email message	80%	93%	81%	83%	27%	**68%**	<.001
TV advertisement	16%	9%	6%	14%	35%	**19%**	<.001
Radio announcement	13%	7%	9%	12%	18%	**14%**	ns
TV news	10%	3%	8%	9%	20%	**12%**	<.001
Word-of-mouth	2%	6%	4%	4%	13%	**6%**	<.001
Phone text message	13%	8%	25%	3%	0%	**4%**	<.001
Other	2%	2%	2%	1%	4%	**2%**	ns

*Web respondents were presented with pre-coded options to choose from, while phone respondents were asked this question in an open-ended format.

Overall, a majority of those contacts who were aware of the September 15 event (81%) were satisfied with the number of notifications they received (Table 91).

Table 91: Perceived Frequency of Number of Notifications by Group

	Summer Saver	Energy Challenge	Opt-in Alerts	My Acct.	No My Acct.	Wt. Total	Sig.
	N=289	N=368	N=353	N=281			
Just enough	88%	85%	89%	80%	-	**81%**	ns
Too many	6%	9%	3%	14%	-	**13%**	
Too few	6%	7%	8%	6%	-	**6%**	
Total	**100%**	**100%**	**100%**	**100%**	**-**	**100%**	

Event Day Actions

We investigated actions taken on the event day, any barriers or enablers for taking action, and negative experiences during the event.

Among those who were aware of the event, 67% reported attempting to use less electricity than normal during the event on September 15. There were no significant differences among the groups in the level of effort they reported (Table 92).

Table 92: Level of Effort Made to Respond to 9/15 Event by Group

	Summer Saver	Energy Challenge	Opt-in Alerts	My Acct.	No My Acct.	Wt. Total	Sig.
	N=353	N=395	N=399	N=341	N=49		
A lot more effort than usual	31%	28%	30%	23%	22%	**23%**	ns
Somewhat more effort than usual	45%	47%	49%	44%	43%	**44%**	
No more or less effort than usual	24%	25%	21%	33%	35%	**33%**	
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	

Those who made an effort to reduce their energy use reported taking a variety of actions (Table 93). Among the most common actions, 59% reported turning off lights in unoccupied areas of their home, 56% said they avoided doing laundry during the event time, and 54% turned off or adjusted their air conditioner. Other actions mentioned included avoiding running the dishwasher (38%), unplugging unused electronics (35%), leaving home (32%), and shifting cooking time (24%).

Table 93: Specific Actions Taken on the Event Day by Group*

	Summer Saver	Energy Challenge	Opt-in Alerts	My Acct.	No My Acct.	Wt. Total	Sig.
	N=267	N=298	N=317	N=228	N=32		
Turned off lights	56%	69%	64%	55%	69%	**59%**	ns
Not doing laundry	64%	55%	61%	60%	44%	**56%**	<.01
Turned off or adjusted AC	76%	34%	50%	47%	69%	**54%**	<.001
Not running dishwasher	42%	30%	44%	42%	25%	**38%**	<.01
Unplugged electronics	30%	60%	39%	29%	50%	**35%**	<.001
Left home	29%	49%	35%	30%	38%	**32%**	Ns
Shifted cooking time	21%	20%	23%	19%	38%	**24%**	<.001
Pre-cooled the house	15%	7%	11%	13%	9%	**12%**	Ns
Turned off pool pump	12%	5%	9%	6%	9%	**7%**	Ns
Unspecified (just tried to use less)	54%	54%	52%	55%	38%	**50%**	<.01

* Multiple Responses Allowed. Web respondents were presented with pre-coded options to choose from, while phone respondents were asked this question in an open-ended format.

We asked those respondents who reported making no effort to use less electricity during the event time about what prevented them from taking action (Table 94). The most common response was that they thought there was nothing more they could do to use less energy (39%). Other notable reasons for no action included that it was too hot on the event day (14%), and that reducing usage was not possible due to necessary consumption (10%). Ten percent also reported they were not at home during the event time.

Table 94: Reasons for No Actions among Nonresponders by Group (Open-Ended with Precodes Multiple Responses Allowed)

	Summer Saver	Energy Challenge	Opt-in Alerts	My Acct.	No My Acct.	Wt. Total	Sig.
	N=86	N=97	N=82	N=113	N=17		
Already using as little as possible/nothing to do	38%	30%	18%	35%	53%	**39%**	<.05
It was too hot that day	33%	27%	20%	19%	0%	**14%**	<.001
Wasn't possible at the time / necessary consumption	10%	18%	15%	11%	6%	**10%**	Ns
Wasn't home at the time	5%	14%	17%	10%	12%	**10%**	Ns
Doesn't have an effect on bill (previous experience) / goals are difficult to meet	7%	7%	13%	4%	0%	**4%**	<.05

	Summer Saver	Energy Challenge	Opt-in Alerts	My Acct.	No My Acct.	Wt. Total	Sig.
	N=86	N=97	N=82	N=113	N=17		
Did not remember	1%	2%	2%	4%	0%	**3%**	ns
Not enough time to prepare	0%	0%	5%	1%	0%	**1%**	ns
Other	5%	4%	5%	10%	18%	**12%**	ns

We asked respondents who reported making efforts to use less electricity about factors that might have been important to them or convinced them to make an effort to reduce their use on the event day. We offered three choices and asked them to select the most important factor (Table 95). Overall, 'earning a credit on my bill' was the most commonly selected reason (39%), followed by 'doing my part for San Diego' (34%) and 'helping the environment' (27%). We found a significant difference in response patterns between the groups. For the alert groups, particularly the Opt-in Alert group, an opportunity to earn a bill credit was cited as the most important factor significantly more often compared with non -opt-in groups.

Table 95: Important Factors to Make Effort in Reducing Use by Group

	Summer Saver	Energy Challenge	Opt-in Alerts	My Acct.	No My Acct.	Wt. Total	Sig.
	N=262	N=295	N=316	N=220	N=31		
Earning a credit on my bill	52%	49%	59%	36%	35%	**39%**	<.05
Doing my part for San Diego	29%	27%	21%	37%	32%	**34%**	
Helping the environment	18%	24%	21%	27%	32%	**27%**	
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	

Among the respondents who reported making efforts on the event day, 11% said they experienced negative effects (Table 96). The Summer Saver households were significantly more likely to report experiencing negative effects during the event day compared with other groups.

The most common negative effect reported was discomfort due to heat (n=94, 77% of those reported negative effect). Some respondents (n=14, 12%) reported they experienced physical effects such as headache, nosebleed, and an inability to sleep. Some also reported being concerned for the health of the elderly and animals. Other effects were inconvenience, for example getting behind on laundry and other household chores.

Table 96: Negative Effects Experienced by Group

	Summer Saver	Energy Challenge	Opt-in Alerts	My Acct.	No My Acct.	Wt. Total	Sig.
	N=257	N=289	N=315	N=215	N=30		
Experienced negative effect	23%	8%	11%	8%	17%	**11%**	<.05

Feedback

Respondents rated their agreement with statements about RYU event notification and willingness to respond to future events, and provided opinions for improving the PTR program.

A majority of the respondents (81%) agreed that the 'RYU event announcement was adequate' (Table 97). Similarly, a large portion of the respondents (78%) agreed that they would reduce their electricity use during future RYU events. This willingness to reduce in the future differed significantly between groups, and was particularly high among the Opt-in Alert group (92%; Table 97).

Table 97: Satisfaction with PTR Event Announcement by Group

		Summer Saver	Energy Challenge	Opt-in Alerts	My Acct.	No My Acct.	Wt. Total	Sig.
		N=339	N=383	N=383	N=319	N=43		
RYU event announcement was adequate.	Agree	87%	86%	88%	80%	81%	**81%**	ns

Table 98: Willingness to Respond to Future Events by Group

		Summer Saver	Energy Challenge	Opt-in Alerts	My Acct.	No My Acct.	Wt. Total	Sig.
		N=595	N=587	N=567	N=711	N=212		
I will reduce during future RYU events.	Agree	85%	88%	92%	76%	78%	**78%**	<.05

Many respondents provided verbatim responses when asked their opinions of how to improve the program. Table 99 shows the coded responses. The most common topics mentioned were increasing the value of the bill credit or improving the "use less than…" calculation (5%), that as already low energy users, the respondent had nothing more to do (5%), and desired changes in mode of communication (5%).

Table 99: Suggestions for Program Improvement (Open-Ended)

	Wt. Total
Increase bill credit value or improve "use less than …" calculation	5%
Already low energy user, nothing more to do	5%
Opinion in mode of communication	5%
Provide advance notice or reminders of events	2%
Provide more or improved feedback on my performance	2%
Clearer information / program is confusing	2%
Provide more energy saving tips	1%
Provide benefits for those who are already low-energy users	1%
Improve or Increase Electricity Generation	1%
More advertising / Increase awareness	1%
Other	4%

Sample verbatim responses in frequently mentioned categories included:

Increase incentive value or improve "use less than…" calculation

- "I think you need to provide more incentives to customers. My favorite incentive was being able match and to donate funds to schools."
- "Make the energy use goals reasonably attainable. On a previous Reduce Your Use day, we tried really hard to use minimal energy. Even without using the air conditioner and turning everything off that we weren't using, we couldn't get anywhere near the usage goal. It makes you not want to bother trying."
- "Use more realistic baselines for calculation of what is considered a reduction in use. My initial baseline was determined from a period when I was on vacation and had the house shut down."
- "I would like to see a bigger difference in my electric bill. $1.25 hardly seems worth the trouble since I have done nearly everything SDG&E has asked me to do."
- "[O]ne day we left our house for the entire timeframe 11-6, did not leave the AC on, and we still didn't get below the level they said we needed to get below to get $3.00 back! Nothing was on except power strips! When you are already conserving, it is hard to reduce your use much more to get the rebate. I would have to try to use MORE energy the rest of the year so I could then reduce my energy during alerts."
- "I reduced my energy faithfully on more than one of the days that SDG&E sent out the text message. When I checked my bill and saw ONLY a .75 cent credit I decided it was

absolutely RIDICULOUS to sweat without using the fans, get behind on our laundry duties, etc. The incentive is WAY TOO SMALL."

Already low energy user / nothing more to do

- "SDG&E asked me to use less than 1 KWH and I used 0.67 kWh on the same RYU event time but I didn't get the credit... [W]hen I asked customer care they're telling me I need to use 0 KWH when SDG&E asked me to use less than 1kWh, which is practically impossible. What kind of crap program is this?"
- "On the reduce days you need to reduce use to a threshold, which is based on your average normal usage. Since my usage is very low already, it is near impossible to ever meet the required threshold. Thus, I am not inclined to take action to reduce my use."
- "I feel like our household already uses a minimum amount of energy; we don't have air conditioning, don't watch TV until about 9pm, don't use the oven to cook, and do minimal laundry. But we are still told to 'turn up the thermostat to 72 degrees.' When it's 100 degrees in my house, and I'm cooling my child down with washcloths, this is offensive. I don't feel like there are any other ways to reduce my usage, and I'm getting penalized for already having low usage and not being able to cut back any more."
- "The only way I know to further reduce my energy consumption is to unplug my energy star refrigerator. As I told customer reps before, I hardly use any energy so I don't know how to further reduce it. They ignored my challenge to come and show me how to use less energy. I resent that as an already-energy-efficient household we can 'earn' credits or be eligible for sweepstakes."

Opinions in mode of communication

- "It would be better for me to receive a pre-programmed message on my home phone answering machine than a text message on my cell phone."
- "I can only access the internet at the library. Telephone messages left to my home phone would be excellent!"
- "I think the email notification is helpful for me because sometimes I don't hear about it on the TV news or radio. "
- "Text us during the reduce your use period if we are on track for reducing our normal use, not reducing enough to earn a credit, or are using more than energy than normal for us. "

Provide advance notice or reminders of events

- "I am receiving emails from SDG&E the day after they want me to reduce usage. They need to fix this."
- "I need more than 24 hours notice. I would like daily reminders 4-5 days before hand."
- "Notices for Saturday events don't seem to arrive prior to Saturday. It would be helpful to have them earlier. A summary by email of usage for reduce your use days would make it more visible and encouraging to try to reduce next time."
- "I suffer from M.S. and receive a medical baseline allowance because air conditioning is a medical necessity. More notice would be preferable. It helps to plan ahead for housework tasks that require significant amounts of electricity."
- "I would like a two-day notice, if possible."

Provide more or improved feedback on my performance

- "Be more specific as to my energy usage. I was repeatedly told that I was 'close.' This was not informative at all, nor was it motivating."
- "Provide feedback to me as to how much energy I saved. It should be as given as quickly as possible."
- "Allow me to view credits earned when checking the website from my iPhone."
- "Having an application on the web site showing your real time use would be beneficial."
- "If you are going to send a text after the event put useful information in it, not just check online; I already know I can do that. That is a waste of my test message usage. Add testimonials to the website about what people that are saving are doing. Tell people that they can sign up multiple people in their household. The bill payer is not always the energy user."
- "Email detailed information about my energy usage after the reduce your use day, rather than making me log in to my account online."

Clearer information / program is confusing

- "I don't understand what they mean by 'reduce.' They don't say reduce by a certain amount, or a certain percentage, or if it's compared to my average usage or just a certain level."
- "Explain the program better. I have no idea what the points or rewards mean. The communication around this has not been very clear."

- "In communications, be more explicit about how much money I can save with how much electricity I can save. I would like numbers."
- "The graphs of my usage are confusing. It's hard to discern what effect my efforts have on my use or my bill. Make it more intuitive for the common household to understand, especially money savings that can be earned."
- "I do not understand when and how you receive credit on your bill for meeting goals. This part of the program needs better explanation."

SMALL COMMERCIAL

Firmographics

Table 100 summarizes the characteristics of small commercial respondents by firms with MyAccount and No MyAccount. None of the characteristics were significantly different between these two groups.

Eighty percent of the respondent firms reported their occupied space has a central air conditioner. General offices (34%), retail or wholesale (20%), personal services such as spa or salon (12%), and food services (10%) were the main business types represented among the respondents. Sixty-four percent of the respondent firms lease their space, and about a third (36%) own their building but some of them only partially occupy the building they own. The space sizes widely vary but more than half of the respondents occupy a space no larger than 3,000 SF (65%).

Table 100: Summary of Firm Characteristics by Group

Firm Characteristic		MyAcct. N=148	No MyAcct. N=85	Wt. Total	Sig.
Central air conditioner	Yes	77%	82%	**80%**	ns
Business type	General office	30%	35%	**34%**	ns
	Retail/wholesale	17%	22%	**20%**	
	Personal services	9%	14%	**12%**	
	Food service	12%	9%	**10%**	
	Manufacturing	7%	6%	**7%**	
	Medical	6%	4%	**5%**	
	Religious service	3%	1%	**2%**	
	Farm	4%	0%	**1%**	
	Other	12%	9%	**10%**	

Firm Characteristic		MyAcct. N=148	No MyAcct. N=85	Wt. Total	Sig.
Building ownership	Own the building and fully occupy	22%	30%	**27%**	ns
	Own the building and partially occupy	7%	9%	**9%**	
	Lease	71%	61%	**64%**	
Space size	Less than 1,000 SF	20%	20%	**20%**	ns
	1,000 less than 3,000 SF	49%	43%	**45%**	
	3,000 less than 5,000 SF	10%	13%	**12%**	
	More than 5,000 SF	21%	24%	**23%**	

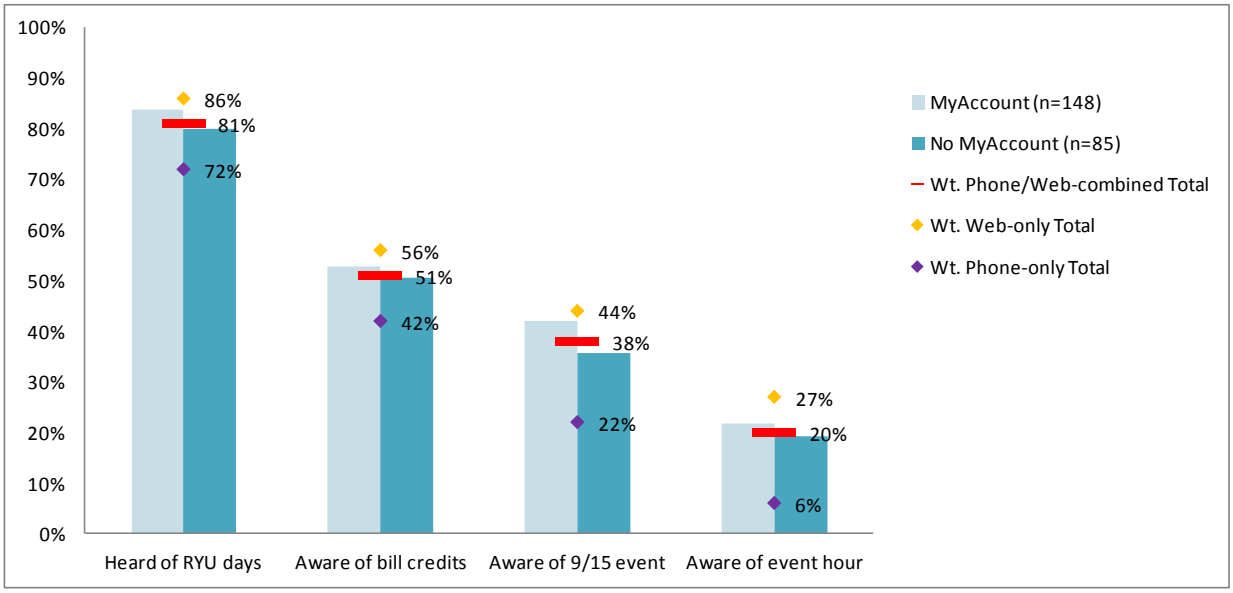
Awareness Measures

Figure 73 shows the different measures of awareness of RYU requests among the small commercial respondents, from the most general awareness of RYU days to specific elements of RYU requests. The figure also includes mode differences to demonstrate likely overestimation among the web respondents as explained in the "Methodology" section.

Overall, a majority of the respondent firms (81%) reported they have heard of RYU days in general. However, only half (51%) understood the general concept of PTR events – receiving bill credits in return of reducing their electricity use during event hours. When asked of the specific RYU event on September 15, slightly over a-third (38%) were aware. We did not find any differences between the groups on any of the awareness measurements.

Similar to the residential respondents, awareness levels among small commercial phone respondents were significantly lower than awareness levels among web respondents.

Figure 73: Awareness Measurements by Group



Event Day Actions

Businesses that made an effort to reduce their energy use reported a variety of actions in attempt to reduce their usage (Table 101). Among the most common actions, 49% reported turning off lights in unoccupied areas, 45% reported tuning off or adjusted air conditioning equipment, and 40% reported unplugging unused electronic equipment. Small percentages of the respondents also reported shutting refrigerator or freezer lights off (14%), pre-cooling the space (12%), or closing their business early (11%). Almost half of the respondents reported they "just tried to use less energy" (45%) without specifying actions.

Table 101: Specific Actions Taken on the Event Day *

	Wt. Total (N=35)
Turned off lights	**49%**
Turned off or adjusted air conditioner	**45%**
Unplugged unused electronics	**40%**
Shut off lights in coolers/freezers	**14%**
Pre-cooled the space	**12%**
Closed business early	**11%**
Just tried to use less energy	**45%**

* Multiple Responses Allowed. Web respondents were presented with pre-coded options to choose from, while phone respondents were asked this question in an open-ended format.

Feedback

Some small commercial respondents provided verbatim comments when they were asked to provide suggestions for program improvement (Table 102). The most frequent topics mentioned include: respondents were unable to reduce their usage more than they already do (6%), they want to receive more or advance notification (5%), and the negative effects of responding on their business operation (3%).

Table 102: Suggestions for Program Improvement (Open-Ended)

	Wt. Total (N=233)
Cannot reduce more / already do what we can	6%
Provide more or advanced notification	5%
Would affect business operations or customer comfort	3%
Offer higher incentives	1%
Provide energy saving information	1%
Assistance with increase energy efficiency	1%
Other	4%

Sample verbatim responses in frequently mentioned categories included:

Cannot reduce more / already do what we can

- "[W]e turn the AC settings higher and turn off excess lights and try to keep the doors closed but we really can't do much because we still have to work and take care of customers."
- "Retail centers have very few options to reduce consumption."
- "The next greatest usage would be lighting and computer use, which is already minimal… [W]e are limited in our ability to respond in a substantive manner to reduce our energy further during alerts."

Provide more or advanced notification

- "Send out notifications a few days in advance. Makes for better planning."
- "[M]aybe easier way to notify us by email. Like a simple email without the fancy advertisements or picture. Maybe a simple step like 1,2,3."
- "[A]n advance warning. Like if there's severe weather like extreme temperature they should send out a warning."

Would affect business operations or customer comfort

- "The program does not work for my business. We are in a service business and cannot reduce our use without losing customers. So it is not economically feasible to reduce use. I think it is a good program, but not relevant for my business."
- "[W]e're a retail store and when it's 100 plus degrees out if we set our air-conditioning above 78 we lose sales."
- "[I]t's extremely difficult, when I put the thermostat to 76 people start complaining that it's warm, people feel uncomfortable."

APPENDIX A: MODE DIFFERENCE ANALYSIS

Residential

Table 103: Summary of Demographic Characteristics by Mode

		Wt. Phone-only N=369	Wt. Web-only N=2,515	Wt. Total	Sig.
Central air conditioner	Yes	43%	56%	**53%**	<.001
Have a pool	Yes	6%	13%	**11%**	<.001
Presence of senior (70 yr or above)	Yes	29%	13%	**17%**	<.001
Someone regularly home all day	Yes	50%	61%	**59%**	<.001
Homeowner	Yes	58%	65%	**63%**	<.01
HH Income	Under $50K	44%	37%	**38%**	<.001
	$50 to less than $100K	33%	31%	**32%**	
	$100K or more	23%	32%	**30%**	
Education	HS or less	20%	9%	**12%**	<.001
	Some college	33%	28%	**29%**	
	Bachelor's or higher	47%	63%	**59%**	
Ethnicity	White	69%	73%	**72%**	ns
	Asian	10%	8%	**9%**	
	Hispanic	11%	10%	**10%**	
	Black	5%	4%	**4%**	
	Other	5%	5%	**5%**	

Table 104: Awareness Measures by Mode

	Wt. Phone-only N=369	Wt. Web-only N=2,515	Wt. Total	Sig.
Head of RYU days	73%	88%	**85%**	<.001
Aware of bill credits	35%	55%	**50%**	<.001
Aware of 9/15 event	12%	44%	**38%**	<.001
Aware of event hour	6%	28%	**23%**	<.001

Table 105: Awareness of Event Notification by Mode

	Wt. Phone-only N=365	Wt. Web-only N=1,705	Wt. Total	Sig.
Aware of email/text notification option, among non-opt-in group	32%	48%	**45%**	<.001

Table 106: Use of Website by Mode

	Wt. Phone-only N=69	Wt. Web-only N=949	Wt. Total	Sig.
Used SDG&E website to check energy use, among those aware of 9/15 event	10%	27%	**32%**	<.01

Table 107: Source of Event Information among Those Aware of 9/15 Event by Mode *

	Wt. Phone-only N=69	Wt. Web-only N=1,007	Wt. Total	Sig.
Email message	33%	70%	**68%**	<.001
TV advertisement	6%	20%	**19%**	<.01
Radio announcement	1%	15%	**14%**	<.01
TV news	41%	10%	**12%**	<.001
Word-of-mouth	3%	7%	**6%**	ns
Phone text message	3%	4%	**4%**	ns
Other	1%	19%	**2%**	<.001

*Multiple Responses Allowed. Web respondents were presented with pre-coded options to choose from, while phone respondents were asked this question in an open-ended format.

Table 108: Perceived Frequency of Number of Notification by Mode

	Wt. Phone-only N=19	Wt. Web-only N=600	Wt. Total	Sig.
Just enough	100%	80%	**81%**	ns
Too many	0%	13%	**13%**	
Too few	0%	7%	**6%**	
Total	**100%**	**28%**	**100%**	

Table 109: Level of Effort Made to Respond to 9/15 Event by Mode

	Wt. Phone-only N=63	Wt. Web-only N=939	Wt. Total	Sig.
A lot more effort than usual	6%	25%	**23%**	<.01
Somewhat more effort than usual	56%	44%	**44%**	
No more or less effort than usual	38%	32%	**33%**	
Total	**100%**	**28%**	**100%**	

Table 110: Specific Actions Taken on the Event Day by Mode*

	Wt. Phone-only N=39	Wt. Web-only N=638	Wt. Total	Sig.
Turned off lights	13%	62%	**59%**	<.001
Not doing laundry	26%	58%	**56%**	<.001
Turned off or adjusted AC	67%	53%	**54%**	ns
Not running dishwasher	5%	40%	**38%**	<.001
Unplugged electronics	31%	35%	**35%**	ns
Left home	8%	34%	**32%**	<.01
Shifted cooking time	0%	26%	**24%**	<.001
Pre-cooled the house	0%	13%	**12%**	<.01
Turned off pool pump	13%	7%	**7%**	ns
Unspecified (just tried to use less)	23	52%	**50%**	<.001

* Multiple Responses Allowed. Web respondents were presented with pre-coded options to choose from, while phone respondents were asked this question in an open-ended format.

Table 111: Reasons for No Actions among Nonresponders by Mode (Open Ended)

	Wt. Phone-only N=24	Wt. Web-only N=301	Wt. Total	Sig.
Already using as little as possible/nothing to do	75%	37%	**39%**	<.001
It was too hot that day	8%	14%	**14%**	ns
Wasn't possible at the time / necessary consumption	4%	10%	**10%**	ns
Wasn't home at the time	0%	11%	**10%**	ns
Doesn't have an effect on bill (previous experience) / goals are difficult to meet	0%	4%	**4%**	ns

	Wt. Phone-only N=24	Wt. Web-only N=301	Wt. Total	Sig.
Did not remember	8%	2%	**3%**	ns
Not enough time to prepare	0%	1%	**1%**	ns
Other	0%	12%	**12%**	ns

Table 112: Important Factors to Make Effort in Reducing Use by Mode

	Wt. Phone-only N=39	Wt. Web-only N=617	Wt. Total	Sig.
Earning a credit on my bill	39%	38%	**39%**	ns
Doing my part for San Diego	26%	35%	**34%**	
Helping the environment	36%	27%	**27%**	
Total	**100%**	**28%**	**100%**	

Table 113: Negative Effects Experienced by Mode

	Wt. Phone-only N=40	Wt. Web-only N=602	Wt. Total	Sig.
Experienced negative effect	30%	10%	**11%**	<.001

Table 114: Satisfaction with PTR Event Announcement by Mode

		Wt. Phone-only N=64	Wt. Web-only N=862	Wt. Total	Sig.
RYU event announcement was adequate.	Agree	98%	80%	**81%**	<.01

Table 115: Willingness to Respond to Future Events by Mode

		Wt. Phone-only N=68	Wt. Web-only N=895	Wt. Total	Sig.
I will reduce during future RYU events.	Agree	97%	80%	**78%**	<.01

Small Commercial

Table 116: Summary of Firm Characteristics by Mode

		Wt. Phone-only N=72	Wt. Web-only N=162	Wt. Total	Sig.
Central air conditioner	Yes	83%	75%	**80%**	ns
Business type	General office	26%	38%	**34%**	<.001
	Retail/wholesale	21%	19%	**20%**	
	Personal services	19%	9%	**12%**	
	Food service	19%	5%	**10%**	
	Manufacturing	10%	5%	**7%**	
	Medical	0%	7%	**5%**	
	Religious service	0%	3%	**2%**	
	Farm	0%	1%	**1%**	
	Other	6%	11%	**10%**	
Building ownership	Own the building and fully occupy	19%	32%	**27%**	<.05
	Own the building and partially occupy	6%	10%	**9%**	
	Lease	76%	58%	**64%**	
Space size	Less than 1,000 SF	20%	19%	**20%**	ns
	1,000 less than 3,000 SF	52%	42%	**45%**	
	3,000 less than 5,000 SF	13%	12%	**12%**	
	More than 5,000 SF	16%	27%	**23%**	

Table 117: Awareness Measures by Mode

	Wt. Phone-only N=72	Wt. Web-only N=162	Wt. Total	Sig.
Head of RYU days	72%	86%	**81%**	<.01
Aware of bill credits	42%	56%	**51%**	<.05
Aware of 9/15 event	22%	44%	**38%**	<.01
Aware of event hour	6%	27%	**20%**	<.001

E STAFF INTERVIEW GUIDE

KEY CONTACT INTERVIEW GUIDE FOR PTR

Contact Name(s):

1. Can you briefly describe your role in the PTR program?

2. Do you have any specific responsibilities associated with….
   a. Calling an event?
   b. Alerting the public or media about an event?
   c. Managing the alert process; crafting messages; website notification or any other part of communicating with those that opted in to notification?
   d. What about reviewing performance data; bill credit calculations or payments?
   e. What about internal coordination at SDG&E?
      i. How does that work?

Adapt questions below based on level/type of involvement identified in Q2:

3. Were customers sent a packet of information about PTR earlier this year? Was it similar to the welcome kit the pilot had? Can we have a copy of this packet?

4. How did people enroll in text or email alerts – do they do this through the website? Through My Account?
   a. Do all groups get the same information? (does it vary by method?)

5. What is the timing of the alerts – is it day-ahead, day-of?
   a. What do the notifications say? Can we see the actual messages?
   b. What type of content is there about what people could do to reduce their energy use? Are there any explicit directions?

6. Have you heard any feedback from participants about these notifications?

7. Are there conservation-only messages with this program too, or just notification?

8. Describe for me when and how an event would be called for the PTR:
   a. Who makes the call? [System operators? Based on: System constraints? Price? Heat?]
   b. Are notices sent to everyone?

9. Are there any key subcontractors for this program? If yes, how are they involved?
   a. [If not covered above] Are they hosting the energy management website?
      i. If yes: Can we see what participants might see if they were log on?

10. Do you try to explain the baseline calculation to PTR participants?

11. How does the experience of Summer Saver different? [We know they earn a somewhat higher payment per kWh curtailed… does their experience differ in any other way?]

12. How did this first citywide program year go?

13. What lessons has SDG&E learned this year about PTR? Are there any improvements already underway, or any changes already implemented based on experience this year?

14. What is working best about the program, from your perspective?

15. We are planning to conduct a survey about general awareness and experience. This survey will be broader than the post-event surveys we've already conducted, what would you most like to learn from that survey, or from this evaluation generally?

16. Are there other important aspects of the program you think we should be aware of? Anything we should have asked about?

F JULY POST-EVENT SURVEYS

RESIDENTIAL PTR / REDUCE YOUR USE SURVEY

Hi, my name is _____ calling from _____ on behalf of San Diego Gas and Electric. (May I speak to _____?)

[IF CORRECT PERSON IS ON THE PHONE, CONTINUE. IF NEW PERSON COMES TO PHONE, REPEAT INTRO, THEN CONTINUE] We are talking to people about their experience with a recent request from SDG&E to reduce energy use during a specific time. My questions should take less than 5 minutes. (LANDLINE:) Is this a good time? (CELL PHONE:) Are you in a safe place to answer 5 minutes of questions? (ARRANGE CB IF NECESSARY)

1. In the past week, have you seen or heard a request to reduce your energy usage from San Diego Gas & Electric? Reduce Your Use requests occur on local news and weather reports, some radio stations, and by email or text notifications.
   1. Yes (SKIP TO Q2)
   2. No (ASK Q1a)
   8. Don't know (ASK Q1a)
   9. Refused (ASK Q1a)

1a. In the past year, have you heard any communications from San Diego Gas & Electric about "Reduce Your Use" days? (If necessary: "This communication would have been about requests to reduce energy use during times of high demand this summer")
   1. Yes
   2. No [SKIP TO Q12]
   3. Don't know (SKIP TO Q12)
   4. Refused (SKIP TO Q12)

2. What did the request to reduce your energy usage say? (DO NOT READ LIST; CHECK ALL THAT APPLY; PROBE WELL:) Did it say anything else?
   1. "Reduce Your Use"
   2. "Flex Alert"
   3. "Test" alert or event
   4. Earn rewards or bill credit when you reduce your electricity usage
   5. Other (SPECIFY): _____
   9. Don't remember

3. Did you sign up to receive an email or text notification about Reduce Your Use days?
   1. Yes [ASK Q4]
   2. No [SKIP TO Q5]

8. Don't know [SKIP TO Q5]
9. Refused [SKIP TO Q5]

4. (ASK NOTIFICATION POPULATION ONLY) Do you remember receiving a message from SDG&E asking you to conserve energy on July 20th?
   1. Yes [ASK Q4A]
   2. No [SKIP TO Q7]

Q4A. How were you notified? [CHECK ALL THAT APPLY]
   1. By Email,
   2. By Text,
   3. Other (SPECIFY): _____
   9. Don't remember

(NOW SKIP TO Q7)

5. (NON-NOTIFICATION POPULATION) Do you recall seeing or hearing anything about a countywide Reduce Your Use day or a request from SDG&E to reduce your energy usage on July 20th?
   1. Yes (CONTINUE)
   2. No (SKIP to Q9)
   9. Don't know (SKIP TO Q9)

6. (NON-NOTIFICATION POPULATION) How did you hear about the Reduce Your Use event [DO NOT READ; CHECK ALL THAT APPLY. AFTER EACH, PROBE:] Any other ways?
   1. Radio
   2. TV
   3. Email from SDG&E
   4. Letter
   5. Word of mouth (a friend; coworker, etc.)
   6. Other (SPECIFY): _____
   9. Don't know

7. Do you recall when, specifically, SDG&E wanted customers to use less electricity? (DO NOT READ CHOICES; ONE ANSWER ONLY)
   1. All the time
   2. Friday, all day (July 20th)
   3. Friday afternoon, 11 to 6 (July 20th)
   4. Friday afternoon, 2 to 6 (July 20th)
   5. Friday evening, 5 to 9 (July 20th)
   6. Next week
   7. Other (SPECIFY): _____
   9. Don't know

8. [Q deleted]

9. Did you know that you could earn bill credits for reducing your energy use during the hours of a Reduce Your Use event?
   1. Yes
   2. No
   8. Not sure/Don't know
   9. Refused

10. [ASK IF Q3 = NO/Don't know/Refused] Did you know you could sign up for an email or text notification about Reduce Your Use days?
   1. Yes
   2. No
   8. Don't know
   9. Refused

11. [ASK IF Q4 OR Q5 = YES; OTHERWISE GO TO Q12] Did you log onto the SDG&E website to check your energy usage, either in preparation for, or after the Reduce Your Use event?
   1. Yes
   2. No
   8. Don't know
   9. Refused

12. If SDG&E wanted to get in touch with you a day in advance about a way to earn bill credits for reducing your energy use, what would be the best way for them to contact you?
   1. Text message
   2. Email
   3. Radio
   4. Mailing
   5. Other (SPECIFY): _____

13. If your household wanted to reduce your energy use for a short period of time, like for an afternoon, what could you do? (DO NOT READ CHOICES; PROBE WELL)
   1. Turn off lights
   2. Adjust A/C temperature
   3. Postpone using major appliances like laundry, dishwasher
   4. Leave home; go somewhere else
   5. Nothing
   6. Other: (SPECIFY): _____
   9. Don't know

Please tell me how much you agree with the following statement(s). (For each one,) please tell me if you strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, or strongly disagree. How about . . . (READ EACH STATEMENT; ROTATE)

14. [ASK IF Q4 OR Q5 = YES] Announcements about Reduce Your Use day events are adequate.

15. [ASK ALL] I will reduce my energy use when future Reduce Your Use days are announced.

16. Deleted

17. [ASK ALL] Do you have any suggestions for how to make "Reduce Your Use" days work better for you? (PROBE WELL)
    1. No

We're almost done. These last questions will help us group your answers with those of other households.

18. Do you have central air conditioning at your house?
    1. Yes
    2. No (SKIP TO Q20)
    8. Don't know/Don't remember (SKIP TO Q20)
    9. Refused (SKIP TO Q20)

19. And do you usually use it during the summertime?
    1. Yes
    2. No
    8. Don't know/Don't remember
    9. Refused

20. Including yourself, how many children and adults normally live in your household on a full-time basis? Please do not include anyone who is just visiting, or children who may be away at college or in the military. Include all members of your household whether or not they are related to you.

    Total number of people in the household: (IF 1, SKIP TO Q20C)

20a. How many of those are children under 5 years of age? _____

20b. How many of those are children between 5 and 18? _____

20c. How many of those are adults 70 or older? _____

21. How large is your home, in square feet? Just give us your best estimate.

    No. of Square Feet: _____
    88. Not Sure / Don't know

99. Refused

22. What is your ZIP code?

23. Do you own the home you live in?
1. Yes
2. No
8. Don't know
9. Refused

24. Which of the following categories includes the total combined income of all members of your household from all sources? Is it . . . (READ CHOICES)
1. under $50,000
2. $50,000 to $100,000
3. $100,000 to $200,000
4. $200,000 and above
8. Not sure / Don't know (DO NOT READ)
9. Refused (DO NOT READ)

25. What is the highest level of education you have completed so far? [READ if needed]
1. Less than 9th grade
2. 9th to 12th grade, with no diploma
3. High school graduate or GED
4. Some college, with no degree
5. Associates degree
6. Bachelor's degree
7. Graduate or professional degree
8. Not sure / Don't know (DO NOT READ)
9. Refused (DO NOT READ)

26. What is your ethnicity? [READ IF NEEDED; UP TO 5 RESPONSES ALLOWED]
1. White
2. Black or African American
3. American Indian or Alaska Native
4. Asian
5. Pacific Islander
6. Other, (SPECIFY): _____
8. Not sure / Don't know (DO NOT READ)
9. Refused (DO NOT READ)

27. Are you of Hispanic or Latino descent?
1. Yes
2. No
8. Not sure / Don't know
9. Refused

Thank you very much for your time and cooperation. We really appreciate your help. Have a good day/evening.

INTERVIEWER, RECORD GENDER:

1. Male
2. Female

SMALL COMMERCIAL PTR / REDUCE YOUR USE SURVEY

Hi, my name is _____ calling from _____ on behalf of San Diego Gas and Electric. We are talking to commercial customers about their experience with a recent request from SDG&E to reduce energy use during a specific time. Can I speak to the person that generally manages your communication with SDG&E?

(IF NO SPECIFIC PERSON, OR WHEN PERSON REACHED….)

My questions should take less than 5 minutes. Is this a good time?

1. In the past week, have you seen or heard a request to Reduce Your energy Usage from San Diego Gas & Electric? Reduce Your Use requests occur on local news and weather reports, some radio stations, and by email or text notifications.
   1. Yes [Skip to Q2]
   2. No (ASK Q1a)
   8. Don't know/don't remember (ASK Q1a)
   9. Refused ASK Q1a)

1a. [If 1 NOT Yes] In the past year, have you received any communication from San Diego Gas & Electric about "Reduce Your Use" days for business like yours? (If necessary: "This communication would have been about requests to reduce energy use during times of high demand this summer")
   1. Yes (CONTINUE)
   2. No [Skip to Q12]
   3. Don't know (SKIP TO Q12)
   4. Refused (SKIP TO Q12)

2. What did the request to reduce your energy usage say? (OPEN ENDED) (DO NOT READ LIST; PROBE WELL:) Did it say anything else?
   1. "Reduce Your Use"
   2. "Flex Alert"
   3. "Test" alert or event
   4. Earn rewards or bill credit when you reduce your electricity usage
   5. Other (SPECIFY): _____

Event Awareness

3. Did you sign up to receive an email or text notification about Reduce Your Use days?
   1. Yes [ASK Q4]
   2. No [SKIP TO Q5]
   8. Don't know/don't remember [SKIP TO Q5]
   9. Refused [SKIP TO Q5]

4. (ASK NOTIFICATION POPULATION ONLY) Do you remember receiving a message from SDG&E asking you to conserve energy on July 20th?
   1. Yes [ASK Q4A]
   2. No [SKIP TO Q7]

Q4A. How were you notified? [DO NOT READ CHOICES; CHECK ALL THAT APPLY]
1. by email
2. by text
3. Other (SPECIFY): _____
9. don't remember

5. (NON-NOTIFICATION POPULATION) Do you recall seeing or hearing anything about countywide Reduce Your Use day or a request from SDG&E to reduce your energy usage on July 20th?
   1. Yes (CONTINUE)
   2. No (SKIP TO Q9)
   9. Don't know (SKIP TO Q9)

6. (NON-NOTIFICATION POPULATION) How did you hear about the Reduce Your Use event? [DO NOT READ; CHECK ALL THAT APPLY. AFTER EACH, PROBE:] Any other ways?
   1. Radio
   2. TV
   3. Email from SDG&E
   4. Letter
   5. Word of mouth (a friend; coworker, etc.)
   6. Other (SPECIFY): _____
   9. Don't know

7. Do you recall when, specifically, SDG&E wanted customers to use less electricity? (DO NOT READ; PROBE TO CODE)
   1. All the time
   2. Friday, all day (July 20th)
   3. Friday afternoon, 11 to 6 (July 20th)
   4. Friday afternoon, 2 to 6 (July 20th)
   5. Friday evening, 5 to 9 (July 20th)
   6. Next week
   7. Other, (SPECIFY): _____
   9. Don't know

8. Deleted

9. Did you know that you could earn bill credits for reducing your energy use during the hours of a Reduce Your Use event?
   1. Yes

2. No
8. Not Sure/Don't know
9. Refused

10. [Ask if Q3 = NO/Don't know/Refused] Did you know you could sign up for an email or text notification about Reduce Your Use days?
    1. Yes
    2. No
    8. Don't know
    9. Refused

11. [ASK IF Q4 OR Q5 = YES; OTHERWISE SKIP TO Q12] Did you log onto the SDG&E website to check your energy usage, either in preparation for, or after the Reduce Your Use event?
    1. Yes
    2. No
    3. Don't know
    4. Refused

12. If SDG&E wanted to get in touch with you a day in advance about a way to earn bill credits for reducing your energy use, what would be the best way for them to contact you?
    1. Text message
    2. Email
    3. Radio
    4. Mailing
    5. Other (SPECIFY): _____

13. If your business wanted to reduce your energy use for a short period of time, , like for an afternoon, what could you do? (DO NOT READ CHOICES; CHECK ALL THAT APPLY; PROBE WELL)
    1. Turn off lights
    2. Adjust A/C temperature
    3. Shut off lights in coolers/freezers
    4. Turn off cooking equipment
    5. Send staff home to work
    6. Send some staff home early
    7. Close early
    8. Nothing
    9. Other: (SPECIFY): _____
    99. Don't know

Satisfaction

Please tell me how much you agree with the following statement(s) ,

Please tell me if you strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, or strongly disagree. How about… (READ EACH STATEMENT; ROTATE)

14. (ASK IF Q4 OR Q5 = YES) Announcements about Reduce Your Use day events are adequate.

15. (ASK ALL) We will reduce energy use when future Reduce Your Use days are announced.

16. Deleted

17. (ASK ALL) Do you have any suggestions for how to make "Reduce Your Use" days work better for businesses like yours? (DO NOT MAKE SUGGESTIONS; PROBE WELL)
    1. No

Firmographics

We're almost done. These last questions will help us group your answers with those of other businesses.

18. Which of the following best describes your business?
    1. Retail
    2. Personal services, such as spas, gyms, salons
    3. Food service
    4. General office
    5. Small Grocery, convenience store, or liquor store
    6. Religious services
    7. Medical or Dental, including mental health
    8. Veterinary
    9. Laundry
    10. Other: (SPECIFY): _____

19. Do you have central air conditioning at your business location?
    1. Yes
    2. No
    8. Don't know
    9. Refused

20 [If Q19 = Yes] And do you usually use it during the summertime?
    1. Yes
    2. No

8. Don't know
9. Refused

21. Does your organization… (READ CHOICES)
    1. Own and occupy the entire building
    2. Own the building and occupy part of it while leasing parts to others
    3. Lease the space you're in, or
    4. Something else?
    9. Don't know

22. What is the approximate square footage of the business location where you work?
    (CLARIFY IF NEEDED:) Just the space your business occupies if you're in a building with other businesses.

    Square Footage: _____
    9. Don't know

23. What is your ZIP code?

Thank you very much for your time and cooperation. We really appreciate your help. Have a good day/evening.

INTERVIEWER, RECORD GENDER:
1. Male
2. Female

G AUGUST POST-EVENT SURVEYS

RESIDENTIAL PTR / REDUCE YOUR USE SURVEY

Hi, my name is _____ calling from _____ on behalf of San Diego Gas and Electric. (May I speak to _____?)

[IF CORRECT PERSON IS ON THE PHONE, CONTINUE. IF NEW PERSON COMES TO PHONE, REPEAT INTRO, THEN CONTINUE] We are talking to people about their experience with the recent requests from SDG&E to reduce energy use during a specific time. My questions should take less than 5 minutes. (LANDLINE:) Is this a good time? (CELL PHONE:) Are you in a safe place to answer 5 minutes of questions? (ARRANGE CB IF NECESSARY)

1. In the past 10 days, have you seen or heard a request to reduce your energy usage from San Diego Gas & Electric? Reduce Your Use requests occur on local news and weather reports, some radio stations, and by email or text notifications.
   1. Yes (SKIP TO Q2)
   2. No (ASK Q1a)
   8. Don't Know (ASK Q1a)
   9. Refused (ASK Q1a)

1a. In the past year, have you heard any communications from San Diego Gas & Electric about "Reduce Your Use" days? (If necessary: "This communication would have been about requests to reduce energy use during times of high demand this summer")
   1. Yes
   2. No [SKIP TO Q12]
   3. Don't know (SKIP TO Q12)
   4. Refused (SKIP TO Q12)

2. What did the request to reduce your energy usage say? (DO NOT READ LIST; CHECK ALL THAT APPLY; PROBE WELL:) Did it say anything else?
   1. "Reduce Your Use"
   2. "Flex Alert"
   3. TV commercial with a hand turning things off
   4. "Test" alert or event
   5. Earn rewards or bill credit when you reduce your electricity usage
   6. Earn bill credit or reward when you reduce your electricity usage at specific times
   7. "AC Cycling" (air conditioner turned off)
   8. "Summer Saver"

9. Other (SPECIFY):_____
10. Don't Remember

3. Did you sign up to receive an email or text notification about Reduce Your Use days?
   1. Yes [ASK Q4]
   2. No [SKIP TO Q5]
   8. Don't Know [SKIP TO Q5]
   9. Refused [SKIP TO Q5]

4. (ASK NOTIFICATION POPULATION ONLY) Do you remember receiving a message from SDG&E asking you to conserve energy on Tuesday, August 14th?
   1. Yes [ASK Q4A]
   2. No [SKIP TO Q7]

Q4A. How were you notified? [CHECK ALL THAT APPLY]
   1. by email,
   2. by text,
   3. Other (SPECIFY) :_____
   9. Don't remember

(NOW SKIP TO Q7)

5. (NON-NOTIFICATION POPULATION) Do you recall seeing or hearing anything about a countywide Reduce Your Use day or a request from SDG&E to reduce your energy usage on Tuesday, August 14th?
   1. Yes (CONTINUE)
   2. No (SKIP to Q9)
   9. Don't know (SKIP TO Q9)

6. (NON-NOTIFICATION POPULATION) How did you hear about the Reduce Your Use event [DO NOT READ; CHECK ALL THAT APPLY. AFTER EACH, PROBE:] Any other ways?
   1. Radio
   2. TV commercial
   3. TV, other programming
   4. Email from SDG&E
   5. Letter
   6. Word of mouth (a friend; coworker, etc.)
   7. Other (SPECIFY) :_____
   9. Don't know

6b. (Ask If Q4 OR Q5 = Yes) What did you think of the number of these event messages or notifications you received? Were there…
   1. Too many

2. Too few
3. Just enough
4. Don't know/Refused

7. Do you recall when, specifically, on August 14th SDG&E wanted customers to use less electricity? (DO NOT READ CHOICES; ONE ANSWER ONLY)
1. All the time
2. All day
3. 11 to 6
4. 2 to 6
5. 5 to 9
6. Next week
7. Other (SPECIFY) :_____
9. Don't know

8a. In response to the request on August 14th, how much effort would you say that you and your household made to reduce your electricity use? Would you say . . . (READ CHOICES)
1. A great deal of effort
2. Moderate effort
3. A little effort
4. No effort
98. Don't know
99. Refused

8b. (ASK if 8a = 1 or 2 or 3) Did you experience any negative effects as a result of cutting back your electricity use on August 14th?
1. Yes
2. No [SKIP TO Q13]
98. Don't know [SKIP TO Q13]
99. Refused [SKIP TO Q13]

8a1. In response to the request on August 14 to reduce energy use, would you say that your household made… (READ CHOICES)
1. A lot more effort than usual
2. Somewhat more effort than usual
3. No more effort than usual
4. Less effort than usual
98. Don't know
99. Ref

8b1. (ASK if 8a1 = 1 or 2) Did you experience any negative effects as a result of cutting back your electricity use on August 14th?
1. Yes

2. No [SKIP TO Q13]
98. Don't know [SKIP TO Q13]
99. Refused [SKIP TO Q13]

8c. [IF Q8b = YES:] What happened? _____

8. Deleted

9. Did you know that you could earn bill credits for reducing your energy use during the hours of a Reduce Your Use event?
1. Yes
2. No
8. Not sure/don't know
9. Refused

10. [ASK IF Q3 = NO/Don't know/Refused] Did you know you could sign up for an email or text notification about Reduce Your Use days?
1. Yes
2. No
8. Don't know
9. Refused

11. [ASK IF Q4 OR Q5 = YES; OTHERWISE GO TO Q12] Did you log onto the SDG&E website to check your energy usage, either in preparation for, or after the Reduce Your Use event?
1. Yes
2. No
8. Don't know
9. Refused

12. If SDG&E wanted to get in touch with you a day in advance about a way to earn bill credits for reducing your energy use, what would be the best way for them to contact you?
1. Text message
2. Email
3. Radio
4. Mailing
5. [DO NOT READ] Phone
6. Other (SPECIFY) :_____

13. If your household wanted to reduce your energy use for a short period of time, like for an afternoon, what could you do? (DO NOT READ CHOICES; PROBE WELL)
1. Turn off lights
2. Adjust A/C temperature

3. Postpone using major appliances like laundry, dishwasher
4. Leave home; go somewhere else
5. Nothing
6. Other: (SPECIFY) :_____
9. Don't know

Q14/15. Please tell me how much you agree with the following statement(s). (For each one,) please tell me if you strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, or strongly disagree. How about . . . (READ EACH STATEMENT; ROTATE)

14. [ASK IF Q4 OR Q5 = YES] Announcements about Reduce Your Use day events are adequate.

15. [ASK ALL] I will reduce my energy use when future Reduce Your Use days are announced.

16. Other than Tuesday the 14th, do you remember other Reduce Your Use days? [CHECK ALL THAT APPLY]:
1. How about Monday, the 13th? Do you remember if there was one on that day?
2. How about last weekend (the 10th and 11th)? (ASK Q16a)
3. Any weekdays last week? (ASK Q16b)
4. None of the above
5. [DO NOT READ] Don't know

16a. [If Q16 = 2, ASK:] Was it Saturday or Sunday or both days?
1. Saturday, August 11
2. Sunday, August 12
3. Both Saturday and Sunday
4. Don't know

16b: [If Q16 = 3] Do you remember which day or days last week? (DO NOT READ CHOICES)
1. Monday, August 6th
2. Tuesday, August 7th
3. Wednesday, August 8th
4. Thursday, August 9th
5. Friday, August 10th
6. Don't know

17. [ASK ALL] Do you have any suggestions for how to make "Reduce Your Use" days work better for you? (PROBE WELL) :_____
1. No
2. (answer)

We're almost done. These last questions will help us group your answers with those of other households.

18. Do you have central air conditioning at your house?
    1. Yes
    2. No (SKIP TO Q20)
    8. Don't know/don't remember (SKIP TO Q20)
    9. Refused (SKIP TO Q20)

19. And do you usually use it during the summertime?
    1. Yes
    2. No
    8. Don't know/Don't remember
    9. Refused

20. Including yourself, how many children and adults normally live in your household on a full-time basis? Please do not include anyone who is just visiting, or children who may be away at college or in the military. Include all members of your household whether or not they are related to you.

    Total number of people in the household: _____ (IF 1, SKIP TO Q20C)

20a. How many of those are children under 5 years of age? _____

20b. How many of those are children between 5 and 18? _____

20c. How many of those are adults 70 or older? _____

21. How large is your home, in square feet? Just give us your best estimate.
    No. of Square Feet:
    88. Not sure / Don't Know
    99. Refused

22. What is your ZIP code? :_____

23. Do you own the home you live in?
    1. Yes
    2. No
    8. Don't know
    9. Refused

24. Which of the following categories includes the total combined income of all members of your household from all sources? Is it . . . (READ CHOICES)
    1. under $50,000

2. $50,000 to $100,000
3. $100,000 to $200,000
4. $200,000 and above
8. Not sure / Don't know (DO NOT READ)
9. Refused (DO NOT READ)

25. What is the highest level of education you have completed so far? [READ if needed]
1. Less than 9th grade
2. 9th to 12th grade, with no diploma
3. High school graduate or GED
4. Some college, with no degree
5. Associates degree
6. Bachelor's degree
7. Graduate or professional degree
8. Not sure / Don't Know (DO NOT READ)
9. Refused (DO NOT READ)

26. What is your ethnicity? [READ IF NEEDED; UP TO 5 RESPONSES ALLOWED]
1. White
2. Black or African American
3. American Indian or Alaska Native
4. Asian
5. Pacific Islander
6. Other, (SPECIFY):_____
8. Not sure / Don't Know (DO NOT READ)
9. Refused (DO NOT READ)

27. Are you of Hispanic or Latino descent?
1. Yes
2. No
8. Not sure / Don't Know
9. Refused

Thank you very much for your time and cooperation. We really appreciate your help. Have a good day/evening.

INTERVIEWER, RECORD GENDER:
1. Male
2. Female

SMALL COMMERCIAL PTR / REDUCE YOUR USE SURVEY

Hi, my name is _____ calling from _____ on behalf of San Diego Gas and Electric. We are talking to commercial customers about their experience with the recent requests from SDG&E to reduce energy use during a specific time. Can I speak to the person that generally manages your communication with SDG&E?

(IF NO SPECIFIC PERSON, OR WHEN PERSON REACHED….)

My questions should take less than 5 minutes. Is this a good time?

1. In the past ten days, have you seen or heard a request to Reduce Your energy Usage from San Diego Gas & Electric? Reduce Your Use requests occur on local news and weather reports, some radio stations, and by email or text notifications.
   1. Yes [Skip to Q2]
   2. No (ASK Q1a)
   8. Don't know/Don't remember (ASK Q1a)
   9. Refused ASK Q1a)

1a. [If 1 NOT Yes] In the past year, have you received any communication from San Diego Gas & Electric about "Reduce Your Use" days for business like yours? (If necessary: "This communication would have been about requests to reduce energy use during times of high demand this summer")
   1. Yes (CONTINUE)
   2. No [Skip to Q12]
   3. Don't know (SKIP TO Q12)
   4. Refused (SKIP TO Q12)

2. What did the request to reduce your energy usage say? (OPEN ENDED) (DO NOT READ LIST; PROBE WELL:) Did it say anything else?
   1. "Reduce Your Use"
   2. "Flex Alert"
   3. TV commercial with a hand turning things off
   4. "Test" alert or event
   5. Earn rewards or bill credit when you reduce your electricity usage
   6. Earn bill credit or reward when you reduce your electricity usage at specific times
   7. "AC Cycling" (air conditioner turned off)
   8. "Summer Saver"
   9. Other (SPECIFY): _____
   10. Don't remember

Event Awareness

3. Did you sign up to receive an email or text notification about Reduce Your Use days?
   1. Yes [ASK Q4]
   2. No [SKIP TO Q5]
   8. Don't know/don't remember [SKIP TO Q5]
   9. Refused [SKIP TO Q5]

4. (ASK NOTIFICATION POPULATION ONLY) Do you remember receiving a message from SDG&E asking you to conserve energy on Tuesday, August 14th?
   1. Yes [ASK Q4A]
   2. No [SKIP TO Q7]

Q4A. How were you notified? [DO NOT READ CHOICES; CHECK ALL THAT APPLY]
1. by email
2. by text
3. Other (SPECIFY):_____
9. don't remember

5. (NON-NOTIFICATION POPULATION) Do you recall seeing or hearing anything about countywide Reduce Your Use day or a request from SDG&E to reduce your energy usage on Tuesday, August 14th?
   1. Yes (CONTINUE)
   2. No (SKIP TO Q9)
   9. Don't know (SKIP TO Q9)

6. (NON-NOTIFICATION POPULATION) How did you hear about the Reduce Your Use event? [DO NOT READ; CHECK ALL THAT APPLY. AFTER EACH, PROBE:] Any other ways?
   1. Radio
   2. TV commercial
   3. TV, other programming
   4. Email from SDG&E
   5. Letter
   6. Word of mouth (a friend; coworker, etc.)
   7. Other (SPECIFY):_____
   9. Don't know

6b. (Ask If Q4 OR Q5 = Yes) What did you think of the number of these event messages or notifications you received? Were there…
   1. Too many
   2. Too few
   3. Just enough
   4. Don't know/Refused

7. Do you recall when, specifically, on August 14th SDG&E wanted customers to use less electricity? (DO NOT READ; PROBE TO CODE)
   1. All the time
   2. All day
   3. 11 to 6
   4. , 2 to 6
   5. 5 to 9
   6. Next week
   7. Other, (SPECIFY):_____
   9. Don't know

8a. In response to the request on August 14th, how much effort would you say that you and your business made to reduce your electricity use?
   1. A great deal of effort
   2. Moderate effort
   3. A little effort
   4. No effort
   98. Don't know
   99. Refused

8b. (ASK if 8 = 1 or 2 or 3) Did you experience any negative effects as a result of cutting back your electricity use on August 14th?
   5. Yes
   6. No [SKIP TO Q13]
   98. Don't know [SKIP TO Q13]
   99. Refused [SKIP TO Q13]

8c. [IF Q8b = YES:] What happened? _____

8. [no question]

9. Did you know that you could earn bill credits for reducing your energy use during the hours of a Reduce Your Use event?
   1. Yes
   2. No
   8. Not Sure/Don't know
   9. Refused

10. [Ask if Q3 = NO/Don't know/Refused] Did you know you could sign up for an email or text notification about Reduce Your Use days?
   1. Yes
   2. No
   8. Don't know
   9. Refused

11. [ASK IF Q4 OR Q5 = YES; OTHERWISE SKIP TO Q12] Did you log onto the SDG&E website to check your energy usage, either in preparation for, or after the Reduce Your Use event?
    1. Yes
    2. No
    3. Don't know
    4. Refused

12. If SDG&E wanted to get in touch with you a day in advance about a way to earn bill credits for reducing your energy use, what would be the best way for them to contact you?
    1. Text message
    2. Email
    3. Radio
    4. Mailing
    5. [DO NOT READ] Phone
    6. Other (SPECIFY):_____

13. If your business wanted to reduce your energy use for a short period of time, , like for an afternoon, what could you do? (DO NOT READ CHOICES; CHECK ALL THAT APPLY; PROBE WELL)
    1. Turn off lights
    2. Adjust A/C temperature
    3. Shut off lights in coolers/freezers
    4. Turn off cooking equipment
    5. Send staff home to work
    6. Send some staff home early
    7. Close early
    8. Nothing
    9. Other: (SPECIFY):_____
    99. Don't know

Satisfaction

Please tell me how much you agree with the following statement(s) ,

Please tell me if you strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, or strongly disagree. How about… (READ EACH STATEMENT; ROTATE)

14. (ASK IF Q4 OR Q5 = YES) Announcements about Reduce Your Use day events are adequate.

15. (ASK ALL) We will reduce energy use when future Reduce Your Use days are announced.

16. Other than Tuesday the 14th, do you remember other Reduce Your Use days? [check all that apply]:
    1. How about Monday, the 13th? Do you remember if there was one on that day?
    2. How about last weekend (the 10th and 11th)?
    3. Any weekdays last week?
    4. None of the above
    5. [do not read] Don't know

Q16a: [If Q16 2 selected] Was it Saturday or Sunday or both days? [Open-ended response:]

Q16b: [If Q16 3 selected] Do you remember which day or days last week? [Open-ended response:]

17. (ASK ALL) Do you have any suggestions for how to make "Reduce Your Use" days work better for businesses like yours? (DO NOT MAKE SUGGESTIONS; PROBE WELL):_____
    1. No

Firmographics

We're almost done. These last questions will help us group your answers with those of other businesses.

18. Which of the following best describes your business:
    1. Retail
    2. Personal services, such as spas, gyms, salons
    3. Food service
    4. General office
    5. Small Grocery, convenience store, or liquor store
    6. Religious services
    7. Medical or Dental, including mental health
    8. Veterinary
    9. Laundry
    10. Other: (SPECIFY):_____

19. Do you have central air conditioning at your business location?
    1. Yes
    2. No
    8. Don't know
    9. Refused

20. [If Q19 = Yes] And do you usually use it during the summertime?
    1. Yes
    2. No
    8. Don't know
    9. Refused

21. Does your organization… (READ CHOICES)
    1. Own and occupy the entire building
    2. Own the building and occupy part of it while leasing parts to others
    3. Lease the space you're in, or
    4. Something else?
    9. Don't know

22. What is the approximate square footage of the business location where you work? (CLARIFY IF NEEDED:) Just the space your business occupies if you're in a building with other businesses.
    Square Footage:
    9. Don't know

23. What is your ZIP code?

Thank you very much for your time and cooperation. We really appreciate your help. Have a good day/evening.

INTERVIEWER, RECORD GENDER:
    1. Male
    2. Female

H SEPTEMBER POST-EVENT SURVEYS

RESIDENTIAL PTR / REDUCE YOUR USE SURVEY

Hi, my name is _____ calling from _____ on behalf of San Diego Gas and Electric. (May I speak to _____?)

[IF CORRECT PERSON IS ON THE PHONE, CONTINUE. IF NEW PERSON COMES TO PHONE, REPEAT INTRO, THEN CONTINUE] We are talking to people about their experience with the recent request from SDG&E to reduce energy use during a specific time. My questions should take less than 5 minutes. (LANDLINE:) Is this a good time? (CELL PHONE:) Are you in a safe place to answer 5 minutes of questions? (ARRANGE CB IF NECESSARY)

1. In the past ten days, have you seen or heard a request to reduce your energy usage from San Diego Gas & Electric? Reduce Your Use requests occur on local news and weather reports, some radio stations, and by email or text notifications.
   1. Yes [SKIP TO Q3]
   2. No
   98. Don't Know
   99. Refused

2. In the past year, have you heard any communications from San Diego Gas & Electric about "Reduce Your Use" days? (If necessary: "This communication would have been about requests to reduce energy use during times of high demand this summer")
   1. Yes
   2. No [SKIP TO Q18]
   98. Don't know [SKIP TO Q18]
   99. Refused [SKIP TO Q18]

3. What did the request to reduce your energy usage say? (DO NOT READ LIST; CHECK ALL THAT APPLY; PROBE WELL) Did it say anything else?
   1. "Reduce Your Use"
   2. "Flex Alert"
   3. TV commercial with a hand turning things off
   4. Earn rewards or bill credit when you reduce your electricity usage
   5. Earn bill credit or reward when you reduce your electricity usage at specific times
   6. "AC Cycling" (air conditioner turned off)
   7. "Summer Saver"
   8. Other (SPECIFY):_____
   98. Don't remember

4. Do you recall seeing or hearing anything about a countywide Reduce Your Use day or a request from SDG&E to reduce your energy usage on Saturday, September 15th?
   1. Yes
   2. No (SKIP to Q14)
   98. Don't know (SKIP TO Q14)

5. How did you hear about the Reduce Your Use event [DO NOT READ; CHECK ALL THAT APPLY. AFTER EACH, PROBE:] Any other ways?
   1. Radio
   2. TV commercial
   3. TV, other programming
   4. Email from SDG&E
   5. Letter
   6. Word of mouth (a friend; coworker, etc.)
   7. Text message
   8. Other (SPECIFY) :_____
   98. Don't know

6. [Ask If Q4 = Yes] What did you think of the number of event messages or notifications you heard or saw? Were there…
   1. Too many
   2. Too few
   3. Just enough
   98. Don't know
   99. Refused

7. Do you recall what time, specifically, on September 15th SDG&E wanted customers to use less electricity? (DO NOT READ CHOICES; ONE ANSWER ONLY)
   1. All day
   2. 11 AM to 6 PM
   3. 2 PM to 6 PM
   4. 5 PM to 9 PM
   7. Other (SPECIFY) :_____
   98. Don't know

8. To use less energy, on Saturday, September 15th, would you say that your household made…(READ CHOICES)
   1. A lot more effort than usual
   2. Somewhat more effort than usual
   3. No more effort than usual
   4. Less effort than usual
   98. Don't know [skip to Q14]
   99. Ref [skip to Q14]

9. [Ask If Q8 = 1 or 2] Why did you make an effort to reduce your use in response to SDG&E's request? Please select the most important factor from the followings [Read all, Randomize]
   1. Earning a credit on my bill
   2. Doing my part for San Diego
   3. Helping the environment
   98. Don't know
   99. Refused

10. [Ask if Q8 = 3 or 4] What stopped you from making an effort to reduce your use in response to SDG&E's request? (SPECIFY): _____

11. [Ask if Q8 = 1 or 2] What did you do to reduce your energy use on Saturday September 15th? [Do not read; probe to code]
   1. Leave the house
   2. Adjust the temperature setting on your air conditioner
   3. Turn off your air conditioner
   4. Did you pre-cool your home - that is, run your air conditioner before the Reduce Your Use time so that you could turn it off later
   5. Shift doing laundry to before or after that time
   6. Turn off lights
   7. Turn off a pool pump
   8. Cook at a different time
   9. Run the dishwasher earlier or later
   10. Unplug unused electronics
   11. Just try to use less energy
   12. Anything else: (SPECIFY): _____
   13. None of the above/Nothing
   98. Don't know
   99. Refused

12. (ASK if Q8 = 1 or 2) Did you experience any negative effects as a result of cutting back your electricity use on September 15th?
   1. Yes
   2. No [SKIP TO Q14]
   98. Don't know [SKIP TO Q14]
   99. Refused [SKIP TO Q14]

13. What happened? _____

14. Did you know that you could earn bill credits for reducing your energy use during the hours of a Reduce Your Use event?
   1. Yes
   2. No

98. Not sure/don't know
99. Refused

15. [If Group NOT EQUAL TO ALERT group] Did you know you could sign up for an email or text notification about Reduce Your Use days?
    1. Yes
    2. No
    98. Don't know
    99. Refused

16. [ASK IF Q4 = YES] Did you log onto the SDG&E website to check your energy usage, either in preparation for, or after the Reduce Your Use event?
    1. Yes
    2. No
    98. Don't know
    99. Refused

Please tell me how much you agree with the following statement(s). (For each one,) please tell me if you strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, or strongly disagree. How about . . . (READ EACH STATEMENT; ROTATE)

17. [ASK IF Q4 = YES] Announcements about Reduce Your Use day events are adequate.
    5. Strongly agree
    4. Somewhat agree
    3. Neither agree nor disagree
    2. Somewhat disagree
    1. Strongly disagree
    98. Don't know
    99. Refused

18. I will reduce my energy use if SDG&E requests me to use less energy on a specific day.
    5. Strongly agree
    4. Somewhat agree
    3. Neither agree nor disagree
    2. Somewhat disagree
    1. Strongly disagree
    98. Don't know
    99. Refused

19. [If Q1 = 1 OR Q2=1] Do you have any suggestions for how to make "Reduce Your Use" days work better for you? (PROBE WELL) :_____
    1. No

We're almost done. These last questions will help us group your answers with those of other households.

20. Do you have central air conditioning at your house?
    1. Yes
    2. No (SKIP TO Q22)
    98. Don't know/don't remember (SKIP TO Q22)
    99. Refused (SKIP TO Q22)

21. And do you usually use it during the summertime?
    1. Yes
    2. No
    98. Don't know/don't remember
    99. Refused

22. Does your house have a pool?
    1. Yes
    2. Yes, in a common area
    3. No
    98. Don't know
    99. Refused

23. Including yourself, how many children and adults normally live in your household on a full-time basis? Please do not include anyone who is just visiting, or children who may be away at college or in the military. Include all members of your household whether or not they are related to you.

    Total number of people in the household: :_____ (IF 1, SKIP TO Q23C)

23a. How many of those are children under 5 years of age? :_____

23b. How many of those are children between 5 and 18? :_____

23c. How many of those are adults 70 or older? :_____

24. Is anyone in your household regularly home all day?
    1. Yes
    2. No
    98. Don't know
    99. Refused

25. How large is your home, in square feet? Just give us your best estimate. Is it… [read options]
    1. Less than 500

2. 500 to less than 1000
3. 1000 to less than 1500
4. 1500 to less than 2000
5. 2000 to less than 2500
6. 2500 to less than 3000
7. 3000 to less than 3500
8. More than 3500
98. Not sure / Don't Know
99. Refused

26. What is your ZIP code? :_____

27. Do you own or rent the home you live in?
1. Own
2. Rent
98. Don't know
99. Refused

28. Which of the following categories includes the total combined pre-tax income of all members of your household from all sources. Is it . . . (READ CHOICES)
1. under $50,000
2. $50,000 to less than $100,000
3. $100,000 to less than $200,000
4. $200,000 and above
98. Not sure / Don't know (DO NOT READ)
99. Refused (DO NOT READ)

29. What is the highest level of education you have completed so far? [READ if needed]
1. No high school diploma
2. High school graduate or GED
3. Some college or Associate degree
4. Bachelor's degree
5. Graduate or professional degree
98. Not sure / Don't Know (DO NOT READ)
99. Refused (DO NOT READ)

30. What is your ethnicity? [READ IF NEEDED; UP TO 5 RESPONSES ALLOWED]
1. White
2. Black or African American
3. American Indian or Alaska Native
4. Asian
5. Pacific Islander
6. Other, (SPECIFY): _____
98. Not sure / Don't Know (DO NOT READ)

99. Refused (DO NOT READ)

31. Are you of Hispanic or Latino descent?
1. Yes
2. No
98. Not sure / Don't Know
99. Refused

Thank you very much for your time and cooperation. We really appreciate your help. Have a good day/evening.

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32. INTERVIEWER, RECORD GENDER:
1. Male
2. Female

SMALL COMMERCIAL PTR / REDUCE YOUR USE SURVEY

Hi, my name is _____ calling from _____ on behalf of San Diego Gas and Electric. We are talking to commercial customers about their experience with the recent request from SDG&E to reduce energy use during a specific time.

Can I speak to the person that generally manages your communication with SDG&E?

(IF NO SPECIFIC PERSON, OR WHEN PERSON REACHED….)

My questions should take less than 5 minutes. Is this a good time?

1. In the past ten days, have you seen or heard a request to reduce your energy usage from San Diego Gas & Electric? Reduce Your Use requests occur on local news and weather reports, some radio stations, and by email or text notifications.
   1. Yes [SKIP TO Q3]
   2. No
   98. Don't Know
   99. Refused

2. In the past year, have you heard any communications from San Diego Gas & Electric about "Reduce Your Use" days for businesses like yours? (If necessary: "This communication would have been about requests to reduce energy use during times of high demand this summer")
   1. Yes
   2. No [SKIP TO Q18]
   98. Don't know [SKIP TO Q18]
   99. Refused [SKIP TO Q18]

3. What did the request to reduce your energy usage say? (DO NOT READ LIST; CHECK ALL THAT APPLY; PROBE WELL) Did it say anything else?
   1. "Reduce Your Use"
   2. "Flex Alert"
   3. TV commercial with a hand turning things off
   4. Earn rewards or bill credit when you reduce your electricity usage
   5. Earn bill credit or reward when you reduce your electricity usage at specific times
   6. "AC Cycling" (air conditioner turned off)
   7. "Summer Saver"
   8. Other (SPECIFY):_____
   98. Don't Remember

4. Do you recall seeing or hearing anything about a countywide Reduce Your Use day or a request from SDG&E to reduce your energy usage on Saturday, September 15th?
   1. Yes

2. No (SKIP to Q14)
98. Don't know (SKIP TO Q14)

5. How did you hear about the Reduce Your Use event [DO NOT READ; CHECK ALL THAT APPLY. AFTER EACH, PROBE:] Any other ways?
1. Radio
2. TV commercial
3. TV, other programming
4. Email from SDG&E
5. Letter
6. Word of mouth (a friend; coworker, etc.)
7. Text message
8. Other (SPECIFY): _____
98. Don't know

6. [Ask If Q4 = Yes] What did you think of the number of these event messages or notifications you received? Were there…
1. Too many
2. Too few
3. Just enough
99. Don't know
100. Refused

7. Do you recall what time, specifically, on September 15th SDG&E wanted customers to use less electricity? (DO NOT READ CHOICES; ONE ANSWER ONLY)
1. All day
2. 11 AM to 6 PM
3. 2 PM to 6 PM
4. 5 PM to 9 PM
7. Other (SPECIFY): _____
98. Don't know

8. In response to the request on September 15th to reduce energy use, would you say that your business made… (READ CHOICES)
1. A lot more effort than usual
2. Somewhat more effort than usual
3. No more effort than usual
4. Less effort than usual
98. Don't know [skip to Q14]
99. Ref [skip to Q14]

9. [Ask If Q8 = 1 or 2] Why did your business make an effort to reduce your use in response to SDG&E's request? Please rank the following factors in order from most to least important [Read all. Randomize; Rank]

1. Earning a credit on my bill
2. Doing my part for San Diego
3. Helping the environment

10. [Ask if Q8 = 3 or 4] What stopped you from making an effort to reduce your use in response to SDG&E's request? (SPECIFY): _____

11. [Ask if Q8 = 1 or 2] What did you do? [Do not read; probe to code]
    1. Close early
    2. Send staff home to work
    3. Send staff home early
    4. Adjust the temperature setting on the air conditioner
    5. Turn off the air conditioner
    6. Did you pre-cool your business - that is, run your air conditioner before the Reduce Your Use time so that you could turn it off later
    7. Turn off lights
    8. Turn off a pool pump
    9. Turn off cooking equipment
    10. Shut off lights in coolers/freezers
    11. Unplug unused electronics
    12. Just try to use less energy
    13. Anything else: (SPECIFY): _____
    14. None of the above/Nothing
    98. Don't know
    99. Refused

12. (ASK if Q8 = 1 or 2) Did you experience any negative effects as a result of cutting back your business's electricity use on September 15th?
    1. Yes
    2. No [SKIP TO Q14]
    98. Don't know [SKIP TO Q14]
    99. Refused [SKIP TO Q14]

13. What happened? _____

14. Did you know that your business could earn bill credits for reducing your energy use during the hours of a Reduce Your Use event?
    1. Yes
    2. No
    98. Not sure/don't know
    99. Refused

15. [If Group NOT EQUAL TO ALERT group] Did you know you could sign up for an email or text notification about Reduce Your Use days?

1. Yes
2. No
98. Don't know
99. Refused

16. [ASK IF Q4 = YES] Did you log onto the SDG&E website to check your business's energy usage, either in preparation for, or after the Reduce Your Use event?
1. Yes
2. No
98. Don't know
99. Refused

Please tell me how much you agree with the following statement(s). (For each one,) please tell me if you strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, or strongly disagree. How about . . . (READ EACH STATEMENT; ROTATE)

17. [ASK IF Q4 = YES] Announcements about Reduce Your Use day events are adequate.
5. Strongly agree
4. Somewhat agree
3. Neither agree nor disagree
2. Somewhat disagree
1. Strongly disagree
98. Don't know
99. Refused

18. We will reduce energy use when future Reduce Your Use days are announced.
5. Strongly agree
4. Somewhat agree
3. Neither agree nor disagree
2. Somewhat disagree
1. Strongly disagree
98. Don't know
99. Refused

19. [If Q1 = 1 OR Q2=1] Do you have any suggestions for how to make "Reduce Your Use" days work better for businesses like yours? (PROBE WELL)
1. No

We're almost done. These last questions will help us group your answers with those of other businesses.

20. Which of the following best describes your business:
1. Retail

2. Personal services, such as spas, gyms, salons
3. Food service
4. General office
5. Small Grocery, convenience store, or liquor store
6. Religious services
7. Medical or Dental, including mental health
8. Veterinary
9. Laundry
10. Other: (SPECIFY): _____

21. Do you have central air conditioning at your business location?
1. Yes
2. No
98. Don't know
99. Refused

22. [If Q21 = Yes] And do you usually use it during the summertime?
1. Yes
2. No
98. Don't know
99. Refused

23. Does your organization… (READ CHOICES)
1. Own and occupy the entire building
2. Own the building and occupy part of it while leasing parts to others
3. Lease the space you're in, or
4. Something else?
9. Don't know

24. What is the approximate square footage of the business location where you work? (CLARIFY IF NEEDED:) Just the space your business occupies if you're in a building with other businesses. Is it…
1. Less than 500
2. 500 to less than 1000
3. 1000 to less than 1500
4. 1500 to less than 2000
5. 2000 to less than 3000
6. 3000 to less than 5000
7. 5000 to less than 10000
8. More than 10000
98. Not sure / Don't Know
99. Refused

25. What is your ZIP code? _____

Thank you very much for your time and cooperation. We really appreciate your help. Have a good day/evening.

---

26. INTERVIEWER, RECORD GENDER:
    1. Male
    2. Female

I GENERAL PROGRAM SURVEY

INTRODUCTION

Hi, my name is _____, I'm calling from CIC Research on behalf of San Diego Gas and Electric. May I speak to [ContactName]?

[IF CONTACT NOT AVAILABLE] Are there other adults living in this household who make your household's energy-related decisions?

[WHEN ELIGIBLE RESPONDENT ON THE PHONE] We are talking to people about the "Reduce Your Use" requests made this past summer by SDG&E. My questions should take about 10 minutes. (LANDLINE:) Is this a good time? (CELL PHONE:) Are you in a safe place to answer 10 minutes of questions? (ARRANGE CB IF NECESSARY)

AWARENESS

1. ASK ALL: Periodically, SDG&E will ask residents to reduce their energy use for an afternoon. These requests are often called "Reduce Your Use" days. In the past year, have you heard anything about "Reduce Your Use" days in San Diego? [CHOOSE ONE]
   1. Yes
   2. No
   98. Don't know
   99. Refused

[IF Q1~=1, SKIP TO Q6]

1a. ASK Q1=1: What do you think SDG&E's Reduce Your Use request was asking you to do?

_____

2. ASK IF Q1=1: Did you know that you could earn bill credits for reducing your electricity use during the hours of a Reduce Your Use event? [CHOOSE ONE]
   1. Yes
   2. No
   98. Don't know
   99. Refused

3. ASK IF Q1=1: I'm going to list several ways you might have heard about Reduce Your Use days. For each one, please let me know if you heard about Reduce Your Use days . . . [READ EACH ONE] [CHOOSE ONE]

TABLE Q3 [RANDOMIZE]		**Yes**	**No**
1	On TV	1	2
2	On the radio	1	2
3	In an email	1	2
4	In the newspaper	1	2
5	In a mailing	1	2
6	On the SDG&E website	1	2
7	Via Facebook or Twitter	1	2
8	From Web news sources	1	2
9	From Friends or family	1	2
97	Any other way? _____	1	2

4. ASK IF Q1=1: Did you receive any specific requests from SDG&E to reduce your electricity use on specific days this summer? [CHOOSE ONE]
   1. Yes
   2. No
   98. Don't know
   99. Refused

[SKIP IF Q4~=1, SKIP TO Q6]

5. ASK IF (Q1=1) AND (Q4=1): How many of these Reduce Your Use day requests do you recall receiving from SDG&E this summer? [CHOOSE ONE]
   1. none
   2. 1 or 2
   3. 3 or 4
   4. 5 to 7
   5. Eight or more
   97. Other, (SPECIFY): _____
   98. Don't know
   99. Refused

NOTIFICATION OPTIONS

6. ASK ALL: I'm going to list several ways SDG&E might let you know about Reduce Your Use days., Please tell me which ones would work for you. How about . . . [READ EACH ONE] [CHOOSE ONE]

[DISPLAY IF Q6=1 >=2]

7. ASK IF (Q6=1 >= 2): Of those you just mentioned, which one is the best way to inform you of Reduce Your Use days? [PROGRAMMER: SHOW YES'S FROM Q6] [READ ANSWERS FROM Q6 IF NECESSARY; CHOOSE ONE]

TABLE Q6/7		**Q6** [RANDOMIZE]		**Q7**
		Yes	**No**	
1	An Email message	1	2	1
2	A text message	1	2	2
3	An automated phone call	1	2	3
4	Radio announcement	1	2	4
5	TV announcement	1	2	5
6	Direct mail	1	2	6
7	Information on the SDG&E website,	1	2	7
8	Facebook, Twitter	1	2	8
9	Other web news sources	1	2	9
10	Newspaper articles	1	2	10
97	Other: _____	1	2	97
98	Don't know			98
99	Refused			99

[SKIP IF Q1~=1, SKIP TO Q27]

[SKIP IF Q4~=1, SKIP TO Q25]

[DISPLAY IF STRATA~=ALERT]

8. ASK IF (Q1=1) AND (Q4=1) AND (STRATA~=ALERT): Did you know you could sign up for an email or text notification about Reduce Your Use days? [CHOOSE ONE]
   1. Yes
   2. No
   98. Don't know
   99. Refused

9. ASK IF (Q1=1) AND (Q4=1): If you had to sign up for email or text notification in order to receive Reduce Your Use bill credits in the future, how likely would you be to sign up? [CHOOSE ONE]
   1. Not at all likely
   2. Somewhat likely
   3. Very likely
   98. Don't know
   99. Refused

[DISPLAY IF Q9=1]

10. ASK IF (Q1=1) AND (Q4=1) AND (Q9=1): What are some reasons why you are not at all likely to sign up for email or text notification? [OPEN-ENDED; DO NOT READ CHOICES]
    1. No email
    2. Don't check email regularly
    3. No cell phone
    4. Don't text
    5. Hassle, other things to worry about
    6. Bill credit too low
    7. Not interested
    8. Other (SPECIFY):_____
    98. Don't know
    99. Refused

EVENT DAY ACTIONS & MOTIVATIONS

11. ASK IF (Q1=1) AND (Q4=1): Thinking about the Reduce Your Use days this summer, would you say that on average your household made . . .? [READ] [CHOOSE ONE]
    1. a lot more effort than usual
    2. somewhat more effort than usual
    3. no more effort than usual, or
    4. less effort than usual to use less electricity?
    98. Don't know
    99. Refused

[DISPLAY IF Q11=1 OR Q11=2]

12. ASK IF (Q1=1) AND (Q4=1) AND (Q11=1 OR Q11=2): Which of the following factors was most important in your effort to reduce your energy use? [RANDOMIZE] [READ] [CHOOSE ONE]
    1. Earning a credit on my bill
    2. Doing my part for San Diego
    3. Helping the environment
    4. Avoiding electric service interruption
    96. NONE OF THE ABOVE
    98. Don't know
    99. Refused

[DISPLAY IF Q11=3 OR Q11=4]

13. ASK IF (Q1=1) AND (Q4=1) AND (Q11=3 OR Q11=4): Still thinking about these Reduce Your Use days, when your household could not or did not make efforts to reduce energy usage, what were some of the reasons? [OPEN-ENDED]
    1. Already conserving as much as possible, nothing more to do
    2. Didn't know what to do
    3. It was too hot that day
    4. I had energy-using activities I couldn't postpone
    5. Not enough time to prepare
    6. Bill credit is too low to respond
    7. Goals are difficult to meet
    8. Wasn't home at the time
    97. Other: _____

[DISPLAY IF Q11=1 OR Q11=2]

14. ASK IF (Q1=1) AND (Q4=1) AND (Q11=1 OR Q11=2): What things did you do differently during these Reduce Your Use days to reduce your energy use? Event times were generally 11AM to 6PM. [OPEN-ENDED] (DO NOT READ CHOICES)
    1. Nothing
    2. Left the house
    3. Adjusted the temperature setting up on the air conditioner
    4. Turned off the air conditioner
    5. Turned off the fan
    6. Pre-cooled your home (ran air conditioner before the Reduce Your Use time and turned it off during the event time)
    7. Didn't do the laundry we intended to do during the event time
    8. Turned off lights
    9. Turned off a pool pump
    10. Cooked at a different time
    11. Ran the dishwasher earlier or later than usual
    12. Unplugged unused electronics
    13. Just tried to use less energy
    97. Other: _____

[DISPLAY IF Q11=1 OR Q11=2]

15. ASK IF (Q1=1) AND (Q4=1) AND (Q11=1 OR Q11=2): Did you or other household members experience any notable inconveniences as a result of cutting back your electricity use on these Reduce Your Use days? [CHOOSE ONE]
    1. Yes
    2. No
    98. Don't know
    99. Refused

[DISPLAY IF Q15=1]

16. ASK IF (Q1=1) AND (Q4=1) AND (Q11=1 OR Q11=2) AND (Q15=1): What happened?

_____

17. ASK IF (Q1=1) AND (Q4=1): As a result of Reduce Your Use days and the information provided to you, has your household made any changes in your on-going, day-to-day energy use? [CHOOSE ONE]
    1. Yes
    2. No
    98. Don't know
    99. Refused

[DISPLAY IF Q17=1]

18. ASK IF (Q1=1) AND (Q4=1) AND (Q17=1): What changes has your household made? [OPEN-ENDED]

_____

WEBSITE

[IF MYACCT~=YES, SKIP TO Q22]

19. ASK IF (Q1=1) AND (Q4=1) AND (MYACCT=YES): Did you know that you could check your energy usage by logging into SDG&E's MyAccount page? [CHOOSE ONE]
    1. Yes
    2. No
    98. Don't know
    99. Refused

[IF Q19~=1, SKIP TO Q22]

20. ASK IF (Q1=1) AND (Q4=1) AND (MYACCT=YES) AND (Q19=1): Did you log onto the SDG&E website to check your energy usage before and/or after the Reduce Your Use event? [CHOOSE ONE]
    1. Yes – before
    2. Yes – after
    3. Yes – both
    4. No
    98. Don't know
    99. Refused

[IF Q20=4 OR Q20=98 OR Q20=99, SKIP TO Q22]

21. ASK IF (Q1=1) AND (Q4=1) AND (MYACCT=YES) AND (Q20=1 OR Q20=2 OR Q20=3): Using a 5-point scale, with 1='strongly disagree' and 5='strongly agree', how would you rate the following statements about the SDG&E website? [CHOOSE ONE]

						[Do not read:]		
TABLE Q21: [RANDOMIZE]	Strongly disagree	2	Neither agree nor disagree	4	Strongly agree	N/A - Did not use	Don't know	Refused
a. The "use less than…" number on the MyAccount page on event days was useful.	1	2	3	4	5	6	98	99
b. It is important for me to understand how the "use less than…" number was calculated.	1	2	3	4	5	6	98	99
c. Information on Reduce Your Use was easy to find on the website	1	2	3	4	5	6	98	99
d. The information on the website on how to reduce energy use during Reduce Your Use days was helpful.	1	2	3	4	5	6	98	99

OPINIONS OF EVENTS

22. ASK IF (Q1=1) AND (Q4=1): Using a 5-point scale, with 1='strongly disagree' and 5='strongly agree', how would you rate the following statements about the Reduce Your Use events? [CHOOSE ONE]

TABLE Q22: [RANDOMIZE]	Strongly disagree	2	Neither agree nor disagree	4	Strongly agree	Don't know	Refused
a. The number of Reduce Your Use events that were called this summer was reasonable.	1	2	3	4	5	98	99
b. [DISPLAY IF Q11=1 OR Q11=2] The value of bill credit you received was reasonable.	1	2	3	4	5	98	99
c. [DISPLAY IF STRATA=ALERT] Timing of notifications gave you enough lead time to respond to the Reduce Your Use events.	1	2	3	4	5	98	99
d. It was clear from Reduce Your Use day requests what you were being asked to do during events.	1	2	3	4	5	98	99

[DISPLAY IF Q22d=1 OR Q22d=2]

22a. ASK IF (Q1=1) AND (Q4=1) AND (Q22d=1 OR Q22d=2): You said Reduce Your Use day requests were not clear. What was unclear to you?

23. ASK IF (Q1=1) AND (Q4=1): What suggestions do you have to make Reduce Your Use days work better for you? [OPEN-ENDED] (DO NOT READ CHOICES; CHECK ALL THAT APPLY)
    1. Provide benefits for those who are already low-energy users
    2. Increase/change qualifications for credits or incentives
    3. Change in mode of communication when notifying events
    4. More advertising/increase awareness
    5. Provide energy saving tips
    6. Clearer information about the program and events
    7. Provide feedback on my performance
    8. Improve website
    9. Improve frequency of events
    10. Change time/day of events
    11. Provide advance notification or reminders of events
    97. Other: _____

24. ASK IF (Q1=1) AND (Q4=1): Using 5-point scale where 1='very negative' and 5='very positive,' how would you rate your overall experience with the Reduce Your Use events? [CHOOSE ONE]
    1. 1='very negative'
    2. 2
    3. 3='neutral'
    4. 4
    5. 5='very positive'
    98. Don't know
    99. Refused

25. ASK IF Q1=1: How likely are you to respond to future Reduce Your Use requests? Would you say . . . [READ] [CHOOSE ONE]
    1. Not at all likely
    2. Somewhat likely, or
    3. Very likely
    98. Don't know
    99. Refused

[DISPLAY IF Q25=1]

26. ASK IF (Q1=1) AND (Q25=1): What are some reasons why you are unlikely to respond to future Reduce Your Use requests? [OPEN-END]
    1. Already conserving as much as possible, nothing more to do
    2. Didn't know what to do

3. Bill credit is too low
4. Goals are difficult to meet
97. Other: _____

ENABLING TECHNOLOGIES

27. ASK ALL: I'm going to list three devices that could help households like yours keep better track of their electricity use. I'd like to know how interested you are in having each device in your home, please use a 5-point scale where 1='not at all interested' and 5='very interested.' How about . . . [READ] [CHOOSE ONE]

TABLE Q27: [RANDOMIZE]	Not at all interested	2	Neutral	4	Very interested	I already have one	Don't know	Refused
a. Something that shows your households' energy usage in real time.	1	2	3	4	5	6	98	99
b. Something that allows SDG&E to adjust your thermostat a few degrees on hot days in exchange for a bill credit.	1	2	3	4	5	6	98	99
c. Something that allows you to control your thermostat remotely using a website or a smart phone.	1	2	3	4	5	6	98	99

[DISPLAY IF MYACCT=YES]

28. ASK IF MYACCT=YES: Have you ever used the Green Button on the SDG&E website that allows you to download your household's detailed electricity usage? [CHOOSE ONE]
1. Yes
2. No
98. Don't know
99. Refused

DEMOGRAPHICS

29. ASK ALL: Is your home a . . . [READ] [CHOOSE ONE]
1. Single-family detached home
2. Multifamily home (including duplex, triplex, fourplex, etc.)
3. Manufactured or mobile home
4. Other: _____
98. Don't know
99. Refused

30. ASK ALL: Do you have a central air conditioning at your house? [READ] [CHOOSE ONE]
    1. Yes
    2. No
    98. Don't know
    99. Refused

31. ASK ALL: Does your house have a pool? [READ] [CHOOSE ONE]
    1. Yes
    2. Yes, in a common area
    3. No
    98. Don't know
    99. Refused

32. ASK ALL: Including yourself, how many children and adults normally live in your household on a full-time basis? Please do not include anyone who is just visiting, or children who may be away at college or in the military. Include all members of your household whether or not they are related to you. [ENTER NUMBER]
    1. _____ Total number of people in the household [IF 1, SKIP TO Q32_4]
    2. _____ How many of those are children under 5 years of age?
    3. _____ How many of those are children between 5 and 18?
    4. _____ How many of those are adults 70 or older?

33. ASK ALL: Is anyone in your household regularly home all day? [CHOOSE ONE]
    1. Yes
    2. No
    98. Don't know
    99. Refused

34. ASK ALL: How large is your home in square feet.? [IF Don't know, READ CATEGORIES] [CHOOSE ONE]
    1. Less than 500
    2. 500 to less than 1,000
    3. 1,000 to less than 1,500
    4. 1,500 to less than 2,000
    5. 2,000 to less than 2,500
    6. 2,500 to less than 3,000
    7. 3,000 to less than 3,500
    8. More than 3,500
    9. Other (DESCRIBE) _____
    98. Don't know
    99. Refused

35. ASK ALL: Do you own or rent your home? [CHOOSE ONE]

1. Own
2. Rent
98. Don't know
99. Refused

36. ASK ALL: Which of the following categories best includes the total combined pre-tax income of all members of your household from all sources in 2011. Is it . . . [READ] [CHOOSE ONE]
1. under $50,000
2. $50,000 to less than $100,000
3. $100,000 to less than $200,000
4. $200,000 and above
98. Don't know
99. Refused

37. ASK ALL: What is the highest level of education you have completed so far? [DON'T READ, PROBE TO CODE] [CHOOSE ONE]
1. No high school diploma
2. High school graduate or GED
3. Some college or Associate degree
4. Bachelor's degree
5. Graduate or professional degree
98. Don't know
99. Refused

38. ASK ALL: Which of the following categories best describes your race? [CHOOSE MANY]
1. White
2. Black or African American
3. American Indian or Alaska Native
4. Asian
5. Pacific Islander
97. Other, (SPECIFY): _____
98. Don't know
99. Refused

39. ASK ALL: Are you of Hispanic or Latino descent? [CHOOSE ONE]
1. Yes
2. No
98. Don't know
99. Refused

Thank you very much for your time and cooperation. We really appreciate your sharing your opinions with us.

40. INTERVIEWER, RECORD GENDER: [CHOOSE ONE]
    1. Male
    2. Female

Thank you!

J PTR FOCUS GROUPS

January 2013

I want to thank you for coming here today. My name is _____ and I work for Research Into Action. I am not an employee of any utility. We are an independent research firm that conducts market research in support of energy efficiency programs all over the country. We've been hired to help SDG&E understand how Reduce Your Use day requests affect households like yours.

I know how busy all of you are, so I really appreciate your willingness to come here and participate in this discussion. This program is fairly new, so your feedback is especially important.

What you say here today will NOT be reported in any way that could identify you, so please feel free to speak freely.

Does anyone have any questions for me?

MODERATOR/PARTICIPANT ROLES (5 MINUTES)

How many of you have participated in a focus group before?

The way this works is that you should feel like this is your group: that you will be the talkers and I will be the listener. Even if you are little tentative or shy, it is really important that you speak up as we need to hear about ALL of your experiences and opinions relating to the questions I'll ask you about your experience with SDG&E's requests to Reduce Your Use.

While I need for you to speak one at a time, so I can hear each of you, I want to encourage you to interact and respond to comments made by others in the group. My job is to make sure that we explore some key topics and that everyone gets a chance to speak. [If there are observers, let them know.]

Ground Rules

Just a few basic rules before we begin.

• The first thing is to participate. Everyone's point of view is important.

• The second thing is to take turns speaking. This way we can all hear each other.

Taping Procedures

Just to let you know - we will be recording the discussion today to have an accurate record of what we discuss and also so I won't have to take so many notes!

Confidentiality

Finally, we ask that you respect each other's privacy. Whatever we say and hear today is just for this group. I know none of us want other people to repeat anything that would violate our privacy, so we all need to trust each other not to do that.

INTRODUCTIONS (5 MINUTES)

Let's get starting by going around the table and introducing ourselves. Please tell us…

1. Your name

2. How long you've lived in San Diego

AWARENESS (10 MINUTES)

I'd like you to think back to how you first heard about Reduce Your Use days.

1. When did you first hear about Reduce Your Use days?
   a. How did you hear about it?
   b. Any other ways? [How about anyone else]

2. When you first heard about Reduce Your Use days, did you understand that you would be asked to reduce your electricity use on certain days?
   a. How did you know this?
   b. Did you know that the requests referred to certain times of the day?
   c. Did anyone search for more information about these requests? If so – how?
   d. Did anyone see any information about the program through Facebook or any other social media? How about from any other sources?
   e. Did any of you log onto the SDG&E website for more information? What did you learn? Was it helpful? Was there anything that could have made the website easier for you to use?
   f. Did you hear about earning a bill credit?
   g. Did you know you could get detailed information about your energy usage on the SDG&E website?
   h. Did you discuss Reduce Your Use days with anyone? [Like family members, or neighbors?]

PARTICIPATION (30 MINUTES)

Now, I'd like to talk about your experience with actual Reduce Your Use days.

1. How did you hear that it was a Reduce Your Use day?
   i. Did you know you could sign up for email or text alerts? How did you know? Did you sign up?
   ii. IF THEY DID NOT SIGN UP: Those of you who didn't, why didn't you sign up for alerts? Is there anything that would have made you want to sign up? What concerns, if any, did you have?

2. When you first heard about the idea of Reduce Your Use Days, did you think you could do something to reduce your energy use?
   a. Did anyone have a different reaction?
   b. Did you take any actions immediately?

3. What made you decide to take action?

4. Thinking now about a specific Reduce Your Use day….What did you actually do? I'm going to make a list on the board. [Note: we can provide dates of actual events or a calendar if necessary.]
   a. Why did you decide to do that? How did you decide what to do?
   b. What did others in your home do?
   c. Did you have to convince anyone to do anything?
   d. Did you do the same things on subsequent days, or did you do different things? Did you keep doing this as more days were announced?
   e. What, if anything, makes these days special?
   f. Are you willing to take different actions than you always take to save energy?

5. Were there things you wanted to do that you couldn't do? (prompt with list on board and then ask for other)
   a. Did you try anything that didn't work or was really difficult?
   b. What consequences, if any, did your actions have on you or your family?

6. Does anyone remember receiving a bill credit for reducing electricity use on a RYU day?

7.
   a. Where did you look to see if you had received a credit? [Note: online? On their bill?]
   b. If so, did the bill credit meet your expectations?
   c. Did this change what you will do in the future? If so, how?
   d. Even if you didn't get a bill credit, was it worth it to reduce use for other reasons?

8. In the future, will you try to reduce your electricity during future reduce your use days?

a. Why? Why not?

GROUP DISCUSSION OF EVENT EXPERIENCE AND REACTION (15 MINUTES)

Considering your experiences, I'd like to ask what you think about the idea of Reduce Your Use requests overall.

1. Why do you think these requests are made?
   a. Why does the utility need to do this?
   b. Are these requests reasonable?
   c. How often would an event like this be reasonable?

2. Thinking of the equipment that's typically running in your house, what do you think you'd be willing to shut down?
   a. Which of those items use the most electricity?

3. Do any of you have a device in your home, sometimes they are called IHDs (In Home Displays) or a Home Energy Management System that controls your thermostat from your phone or a website?
   a. If so, how do you use it?
   i. How often?
   ii. Do you find it helpful?

4. Would you be interested in getting a device that allows you to receive alerts from SDG&E on a small display screen (could have a sample IHD), or installing technology that would automatically shut off devices during event days – regardless of whether or not you were home?
   a. What if these devices allowed you to receive higher bill credits for electricity reductions?

5. SDG&E wants these requests to work well for all customers. Can you tell me what would make it easier for you to reduce your energy use when asked?
   a. What could SDG&E do to make it easier for you to Reduce Your Use on special days?
   b. What is the best way to reach you about an event—or, how would you most like to be informed: text, cell phone call, voice mail, media?
      [SDG&E wants to know if people know they can sign up for text/email notifications, and/or if they are interested in doing so.]
   c. What kind of advertising message is most likely to get your attention?
   d. What would make the message more compelling?
   e. What would motivate you to do more to reduce your electricity use during these events?

f. How important is it to you to earn a bill credit for your reduction?
g.

CONCLUDING REMARKS (10 MINUTES)

As we finish up I wanted to give everyone the opportunity to respond to a more general question…

What would you tell someone that asked you what they should do on a Reduce Your Use day? Would you recommend that they participate? What would you recommend they do?

I know we have let this discussion run somewhat loosely so far, but this time I want to go around the room one person at a time in order to hear from each of you.

_____, would you please start for us?

Thanks for participating in this group. Your comments and suggestions will be used to improve the program in the future.

Please stop by the desk to pick up your check.