

December 2016

DEFINING NEW TOU RATES

QUALITATIVE RESEARCH REPORT



01.

Introduction (pgs.3-7)

02.

The Big Picture (pgs.8-13)

03.

Empowering Power (pgs.14-30)

04.

Motivating Behavior Change (pgs.31-36)

05.

Enter TOU (pgs.37-53)

06.

User-Generated Rate Programs (pgs.54-61)

07.

Reactions to Potential Positionings (pgs.62-67)



CHAPTER 1

INTRODUCTION



THE ESSENTIAL QUESTION



We begin each study by defining a core question that serves as the focal point of our work. We find that grounding both stakeholders and consumer target audiences with a Northstar question ensures concrete answers and a pathway for clear action planning. The essential question for this project and the research questions that follow suit are highlighted here and on the following pages.

WHAT KIND(S) OF TIME OF USE RATE(S) WOULD WORK BEST FOR CUSTOMERS, AND WHAT TOOLS & SOLUTIONS WOULD THEY LIKE TO HELP MANAGE THEIR BILLS UNDER THIS NEW TYPE OF RATE?



DISCOVER

Needs identification

Understand current values, behaviors, needs, and pain points associated with household energy practices



DEFINE

Articulate new-to-world TOU rates

Identify a new-to-world TOU rate experience, including its ideal elements, structure(s), and stated impact on behavior

RESEARCH OBJECTIVES



IMAGINE

Anticipated coping behaviors & solutions

Understand what tools and solutions customers envision as being helpful in adapting to the new world of TOU rates



PROFILE

Who likes what

Understand how lifestyle, income, views on energy conservation, and other elements impact TOU rate opinions





QUALITATIVE METHOD OVERVIEW

16

in-home
family/
friend
sessions

9

co-creation
workshops

- Conducted in November 2016
- Each session two hours in length

key participant qualifications

- Mix of segments from SCE database
- Mix of genders, ethnicities, income levels
- No sensitive industry
- Ages 21-80
- Resides in single family home or condominium
- Mix of pet ownership
- Responsible for paying their electricity bill
- Must be able to identify Southern California Edison as electricity provider
- Mix of satisfaction levels with electricity provider
- Mix of attitudes toward energy conservation
- Some own solar panels, electric vehicles
- Some who work from home

GROUP CONFIGURATION

:: in-home family/friend sessions ::

	HOME DURING THE DAY		NOT HOME DURING THE DAY		TOTAL
	LOW-INCOME	HIGH-INCOME	LOW-INCOME	HIGH-INCOME	
Inland					
Moreno Valley	2	--	--	--	2
Ontario	2	3	2	1	8
Coastal					
Long Beach	--	--	1	1	2
Huntington Beach	2	2	--	--	4

16 in-home family/
friend sessions

:: co-creation workshops :: 9-12 participants per group

	HOME DURING THE DAY		NOT HOME DURING THE DAY		TOTAL
	LOW-INCOME	HIGH-INCOME	LOW-INCOME	HIGH-INCOME	
Inland					
Ontario	2 (1 Senior only group)	2	1	2 (1 group in Irvine)	7
Coastal					
Huntington Beach	1	--	1	--	2

9 co-creation
sessions

16

7



The image features a teal background with two palm trees. One palm tree is on the left, leaning towards the center. The other is on the right, leaning towards the center. A white triangle is superimposed over the scene, with its top vertex pointing upwards and its base at the bottom. The text 'CHAPTER 2' is centered within the triangle.

CHAPTER 2

**THE BIG
PICTURE**

OVERALL SUMMARY

THREE BIG TAKEAWAYS

No. **2** PROACTIVE FEEDBACK, CHOICE & SPECIAL PROVISIONS ARE A RECIPE FOR SUCCESS.

- Real-time metrics, goals, thresholds, notifications, and itemization would all be welcomed features as part of TOU.
- Some choice in peak hours as well as positive reinforcement via incentives/rebates (vs. penalties) would create greater receptivity and engagement.
- A shorter peak hour window and/or an earlier end time is valued due to the flexibility it offers for evening usage.
- Options and education, particularly for those with fixed schedules during peak hours, could mitigate backlash.
- With less disposable income, lower income customers are more sensitive to increases in bills, and extra effort needs to be made to ensure their well-being.
- Inland communities hope for billing stability and relief, particularly in summer.

No. **1** BUY-IN FOR TOU STARTS WITH ALLEVIATING FEAR & INFORMING ON THE BASICS.

- Customers fear the worst – higher bills, corporate greed, continued lack of info, etc.
- TOU can be the catalyst for deeper relationships with customers. It starts with transparency and education, both of which are deeply desired.
- The case for TOU needs to be built around caring for the environment AND opportunities for cost savings.
- Alternative energy is considered the future, an inspirational means to solve cost and environmental issues. How can TOU piggy-back off this desire?

No. **3** USER-GENERATED RATE STRUCTURES EMPHASIZE SIMPLICITY & FAIRNESS, NECESSARY TOU VALUES.

- Alternative TOUs: shorter but more costly peak hour window :: earlier end time :: choice of peak hours :: tiered peak hours (e.g., cost decreases to middle rate at ~7-8pm)
- Peak hour pyramid: 6pm is the highest rate of the day, and rates level up/down based on proximity to 6pm
- Flat rate, rates by home square footage, or # of people
- Pre-packaged cell-phone-like rate plan options

CHAPTER BY CHAPTER AT A GLANCE



1| EMPOWERING POWER: PRIMARY CUSTOMER WISHES

- Consumers desire greater partnership from SCE. Informing, educating, inspiring customers are all considered missing currently. *This spells opportunity for SCE.*
- Barriers to conserving are multi-faceted – ranging from inertia, to questioning SCE's motives, to not knowing how or why to save. *Messaging should dispel corporate greed & the mystery of the grid.*
- Developing alternative energy is desired more than managing the grid. *SCE needs to better activate & promote its alternative energy strategy.*



2| MOTIVATING BEHAVIOR CHANGE

- Customers desire a clear cause & effect for their actions.
- Choice and personalization are becoming expected, and SCE performs poorly in this key area.
- *Consider ways to offer timely feedback & choice in the new TOU.*



3| ENTER TOU

- Key strengths: Easy to understand, offers more control, empowers low-income HHs, "I can do my part", fresh start each day
- Key weaknesses: fear of higher bills, unfair to 9-5ers, doesn't reduce overall usage, profit motivation looms, 5-hour peak hour window is too big
- Opportunities: end peak hours earlier, shorter window, introduce multi-faceted feedback, education, and rebate/incentives
- Threats: desire for alternative energy, weekend usage boom, inertia, apathy
- *Choice of an shorter, more costly peak hour window + an earlier end time.*



4| USER-GENERATED RATE STRUCTURES

- Alternative TOUs: shorter but more costly peak hour window :: earlier end time :: choice of peak hours :: tiered peak hours (cost decreases to middle rate ~7-8pm)
- Peak hour pyramid: 6pm is the highest rate of the day, and rates level up/down based on proximity to 6pm
- Flat rate, rates by home square footage or # of people in HH
- Pre-packaged cell-phone-like rate plan options



5| REACTIONS TO POTENTIAL POSITIONINGS

- Customers desire emotional context, and the lifeline message was well-received. However, cost savings is by far the most motivating factor.

THREE PRINCIPLES

FOR TOU DEVELOPMENT



Make customers feel they can influence their desired outcomes (conservation, bill amounts, etc.)



Easy access to info, tools, features, etc. in customers' day-to-day lives



A feeling of partnership, clear goals, and positive reinforcement



THE CUSTOMER WISH LIST



TRANSPARENCY

- :: Be upfront about motives & plans ::
- :: Tell us why ::



CONTROL

- :: No more surprises ::
- :: Allow us ownership over our energy usage + bills ::
- :: Give us options & choice ::



KNOWLEDGE

- :: Educate us on all things power ::
- :: School programs ::
- :: Visual/digestible info ::



SIMPLICITY

- :: Make the rate plan simple ::
- :: Stability in billing ::



RELATIONSHIP

- :: Partnership mentality ::
- :: Communicate regularly ::
- :: Progress updates on overall + individual goals ::
- :: Calm our nerves that rates aren't going to skyrocket ::
- :: Empathy for different schedules + situations ::



INSPIRATION

- :: Become an authority on alternative energy ::
- :: Motivate us ::
- :: Offer a clear plan for our collective future ::



THE SCE TO DO LIST



BUILD THE RIGHT PROGRAM

- Consider narrowing the peak hour window (with a higher rate)
- Consider moving the end time up
- Build in choice and options (e.g., choice from a set of peak hours)
- Build in a basic weekend peak hour plan



CREATE BUY-IN & MOMENTUM EARLY

- Points to emphasize: *fresh start each day, give your appliances the evening off, more control; less power, build your own power calendar*
- Alleviate concerns about rate hikes
- Whimsically tackle inertia in messaging



LAUNCH IT

- Multi-media launch program with unified messaging
- Promote/modify the CARE program for low-income households
- Offer billing stability/fairness for inland communities
- Extra help in transition/education for seniors
- Consider celebrity and/or government endorsement
- School partnerships
- Dedicated customer service teams



MULTI-FACTED FEEDBACK LOOPS

- App/website dashboard that facilitates desired behaviors & engagement:
 - Notifications, trends, tips & tricks, alerts, real time stats, amount saved, goal-setting, incentives, gamification, on-going messaging
- Text alerts with daily reminders during launch phase
 - Alerts when you're reaching high usage thresholds
 - "Today's a particularly tough day" messages
- Consider building a smart panel mounted to walls to show real time usage



SUSTAIN THE "ENERGY"

- Clear & consistent communication of benefits (control, conservation, simplicity, etc.)
- Empathetic & on-going education (fridge decal, video series, new rate calculator, magazine-style guide, visual/frequent bill inserts)
- On-going tips & tricks pushed to mobile + bills



THE FUTURE

- Provide a 5-10 year roadmap that outlines the vision for energy conservation, alternative energy, etc.





CHAPTER 3

EMPOWERING POWER:

A FEW BIG CUSTOMER WANTS, NEEDS & WISHES

EMPOWERED POWER

CUSTOMER NEEDS & WISHES TO
BECOME A MORE THOUGHTFUL, ENGAGED USER

1

TRANSPARENCY

We wish the energy company would just be honest and upfront with us.

2

CONTROL

We wish our bills didn't fluctuate and be so unpredictable each month. We want to know exactly how we can impact our bill and not have any surprises.

3

KNOWLEDGE

We feel clueless, and the bill doesn't clarify anything. We hope to be educated on all topics related to energy – the bill, peak hours, how much we use, how we should change our usage, what impact we could have on the bill. The list goes on and on.

4

SIMPLICITY

The tier system is so opaque; we wish the system was more straightforward so we knew what to do to be responsible users and manage our bills.

5

RELATIONSHIP

We want the energy provider to treat us like a partner – communicate with us, work with us, educate us, motivate us. Today, we never hear from them, and when we do, it's just for us to pay them.

6

INSPIRATION

There's nothing more motivating than seeing new technology, new features, and improvements. Alternative energy seems to be the wave of the future, and we'd like SCE to be a leader on that front.



IT FEELS LIKE US VS. THEM.

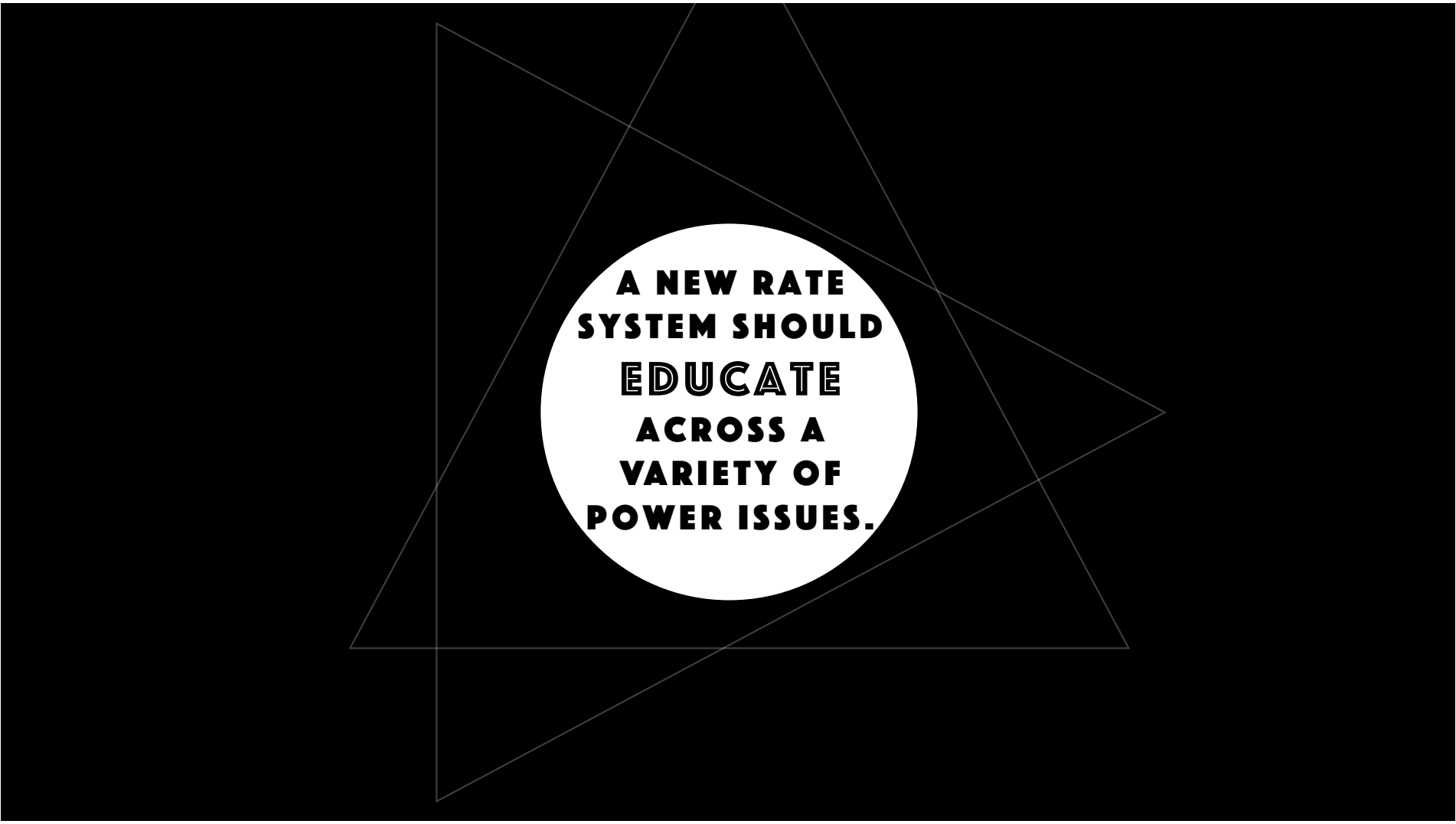
Edison tells us what to do, but they don't tell us what *they're* doing to conserve or create new energy. If our state is in need, let's work together for a better future.

I DON'T SEE EDISON MAKING CHANGES OTHER

THAN THEM TELLING US WHAT TO DO.

LET'S MAKE IT A PARTNERSHIP.





**A NEW RATE
SYSTEM SHOULD
EDUCATE
ACROSS A
VARIETY OF
POWER ISSUES.**

KNOWLEDGE I

KNOWLEDGE IS POWER: 10 COMMON QUESTIONS



ENERGY SAVING

I try different ways to
save but see no
difference on my bill.
what can I do?
::
what appliances use
the most energy?
::
is energy finite, or
can they "just make
more?"



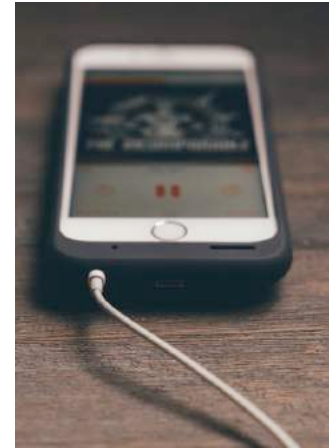
BILLING

how do I make sense
of all the info on my
bill?
::
how can I combat
seasonal differences
in my bill?



SYSTEMS

how does the grid
really work?
::
when are peak hours,
& why are they
important?
::
why isn't SCE leading
the charge for
alternative energy?



FEEDBACK

can i get feedback on
my usage prior to my
bill?
::
how/when do i move to
the next tier?



KNOWLEDGE II: ILLUSTRATIVE EXAMPLES FROM FASHION

TRACEABILITY: KNOWING HOW ENERGY IS SOURCED, GENERATED & MANAGED WOULD GO A LONG WAY TO ENCOURAGE US TO CONSERVE.

TAKING A PAGE FROM FASHION PROVIDES USEFUL INSPIRATION:



LEVI'S

Levi's regularly conducts a lifecycle assessment study to assess the full environmental impact of its products. This has led to the production of low-water/energy jeans, recycling/re-use standards, and sustainable cotton production.

MEASUREMENT



EVERLANE

Everlane offers full transparency on its factory relationships, including sharing its ethical practices. Further, the brand offers an open book on how much their products cost to make and their mark-up.

TRANSPARENCY



NUDIE JEANS

Nudie Jeans manufactures its clothing using 100% organic cotton, has fully transparent production, and promotes sustainable consumption patterns. This includes: free repair services, recycling your worn out denim, and re-selling your secondhand clothing.

RE-USE



KNOWLEDGE III

THE TIER SYSTEM IS
UNPOPULAR & “AS CLEAR AS MUD.”

CLEAR THE TIER.

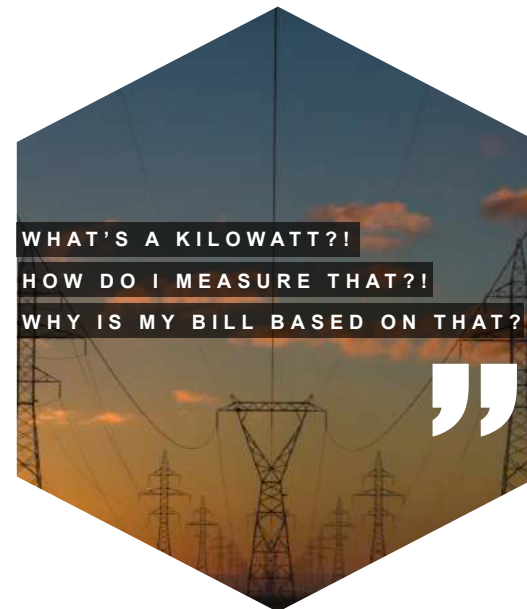
We wish we knew how and when we move across tiers.

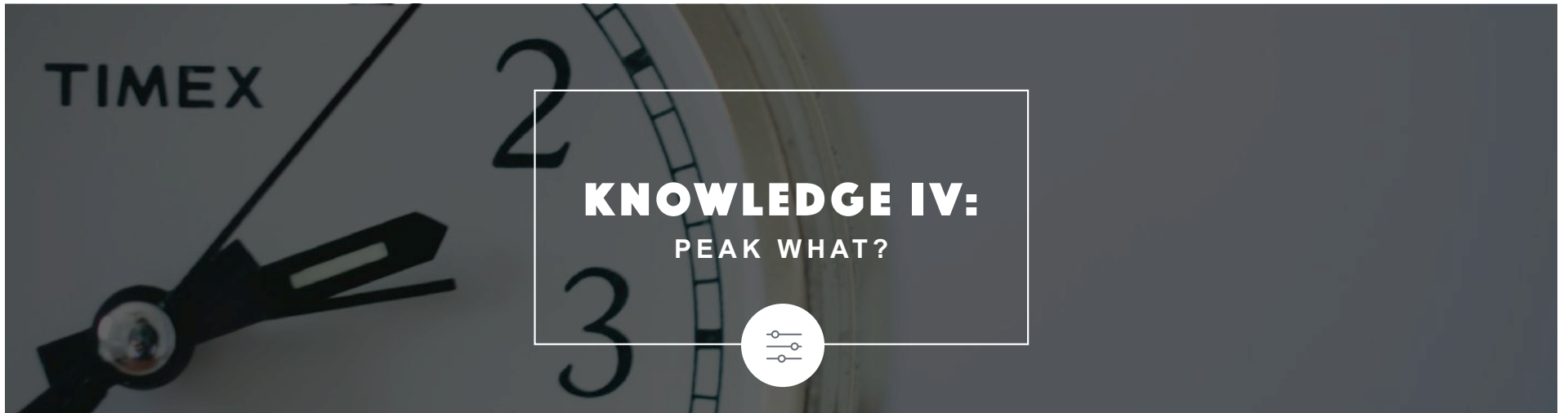
FEEDBACK LOOP.

Tiers provide almost no feedback on how our actions translate into saving energy, making us feel powerless/without control.

INNOVATE & COMMUNICATE.

An appliance-by-appliance breakdown would help, saving tips & tricks, as would threshold alerts BEFORE we get our bill.





What exactly are peak hours, and why do we have them? Some of us already follow the peak hour recommendations and feel we are charged based on peak hours. And how does business usage affect us? Some of us believe peak hours are business hours; others think it's afternoon to early evening. Either way, we assume they end ~6:00 p.m. when businesses stop using so much power.

WE ALL JUST WANT A SYSTEM WE UNDERSTAND.



KNOWLEDGE V: SCE IN SCHOOLS

WHAT IF OUR CHILDREN LEARNED THE IMPORTANCE OF THIS ISSUE?
THEY DON'T HAVE A CLUE NOW, BUT THEY COULD REALLY MOTIVATE PARENTS.

Adults tend to live in their own little worlds. When you speak to a child, particularly at a school, they bring that info home, and it seeds through a household, seeds through neighbors. The message blossoms.





BIG BARRIERS TO CONSERVATION

SUMMARIZING THE BIG BARRIERS TO CONSERVATION



- Lack of knowledge
- Inability to compare usage to others
- Inertia
- Tiered system without timely feedback makes us feel helpless
- Edison can just “buy” or “make more” power. The profit motive is a big deal and makes it hard to believe that Edison really wants people to conserve.
- Don't know the peak times we should avoid usage
- Solar might be the way to go in the future
- What's in it for me?





THE POWER OF CLEAN

SCE SHOULD BE AN AUTHORITY IN ALTERNATIVE ENERGY

We wish we focused more on utilizing clean energy sources, particularly solar. We have such a sunny state and so much land! That should be our focus, even more so than managing the grid.

What if Edison partnered with solar companies, or at least told us that they do, and worked on innovative ideas like whole-house batteries?

If Edison can prove they're creating cleaner energy, I'm happy to pay more.

”



WATER > ENERGY

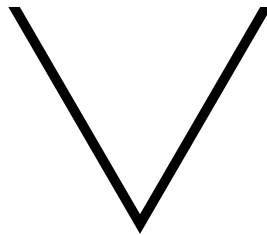
Energy is so ethereal; we have no idea how it's made. That's why it's hard for us to equate energy conservation with water conservation.

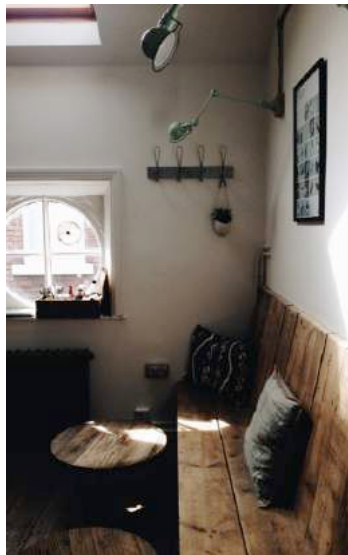
We feel the urgency of conserving water much more acutely than the need to conserve electricity. However, helping us understand the current state of the energy grid, the necessity of conserving electricity, and the urgency of the situation would create buy-in on energy conservation too.





EMPOWERING BY USER TYPE





LOW INCOME VS. HIGH INCOME

LOW INCOME HOUSEHOLDS

We feel helpless. Each month we hold our breath when the electricity bill comes; it's our most expensive utility, and we have no idea if it will make or break us. We conserve like crazy – shutting off lights incessantly, following peak hours, anything we can – but still, it makes no difference.

We're literally in the dark about how to conserve energy and save costs. Should I unplug my stove...oops it's gas...we didn't know that til this interview. We called for help but to no avail. Would someone just tell us what pulls the most energy? We're out of options. Help!

:: UNPREDICTABLE BILLS ::

:: DISTRESS ::

:: EDUCATION PLEASE ::

:: COSTS MORE IMPORTANT THAN THE ENVIRONMENT ::

HIGH INCOME HOUSEHOLDS

Some of us realize the grid is overloaded and believe we need to do something about it. The tier system isn't really working. What are we going to do about the future? It's time for change.

For others of us, because we can afford energy without much pain, we don't think about it much.

:: SOPHISTICATED ::

:: SAVVY ::

:: FUTURE-ORIENTED ::

:: APATHETIC ::

YOUNGER VS. OLDER

MILLENNIALS

The amount we waste is mind-boggling. And this applies to all our resources. For energy, we want to help, but we feel helpless ourselves. We're tired of simply just turning off the lights; that's what our parents care about. We want to make big change for our planet.

We're foggy about the nitty gritty of tiers and peak hours. We care more about real data – what is the average use within communities? Am I doing well enough? Better? What are today's energy sources? How we can be better about clean alternatives? We wish there was an *Electricity for Dummies*. And we want data and insights that are bite-sized and highly visual. We don't like fine print or legalese.

== CHANGE-MAKERS ==

== ALTERNATIVE ENERGY ==

== VISUAL INFO ==

FAMILIES

When it comes to energy, we're as responsible as we can be, but it's hard. Nothing we do feels impactful. We avoid the AC when we can, but we need to keep our kids cool. To that end, we have a predictable schedule that we don't want to mess with. Shifting behaviors, beyond minor things, would be hard. We want to be mindful of the environment, but don't really know how to get the most out of energy.

== HIGHLY SCHEDULED ==

== LIMITED LOAD SHIFT ABILITY ==

== CARE FOR ENVIRONMENT ==

== LIMITED KNOWLEDGE ==

SENIORS

The energy companies are just out for themselves. It's not like we have any choice; they're just going to hit us in the pocketbook when the going gets tough. We don't understand our bills each month. It's always high, even though we're constantly turning lights off.

Many of us don't use that much power, so we don't care that much about it. We suppose we could do things earlier/later if we had to, especially if it saves us a few bucks.

== SKEPTICAL ==

== INERTIA ==

== SOME RIGIDITY ==



INLAND VS. COASTAL

INLAND COMMUNITIES

Give us a break on our rates; it's so hard to avoid using the AC. Each summer month, we have to pay a ridiculous amount. In other months, there's a high degree of fluctuation and unpredictability. We dislike the tier system; it feels like we are stuck in Tier 3 no matter what we try.

== FRUSTRATED ==

== OVERPAYING ==

== LOSE-LOSE SYSTEM ==

COASTAL COMMUNITIES

Since we live near the ocean, our bills are in pretty good shape. We don't really see a need for changing the system, other than if it's for the environment. We don't understand our bills, but they're an acceptable amount.

== OCEAN EFFECT ==

== SATISFIED ==

== AMBIVALENT TO CHANGING RATES ==



A landscape photograph featuring several high-voltage power line towers and a fence in the foreground. The scene is set against a sunset sky with a color gradient from yellow to orange to red. A large white circle is overlaid on the center of the image, containing the chapter title.

CHAPTER 4

**MOTIVATING
BEHAVIOR
CHANGE**

CLEAR CAUSE & EFFECT

We would love to know how our usage patterns impact our bills each month. It's currently a black box without much apparent rhyme or reason. We've tried tinkering with our usage; we've even tried massive shifts in an effort to lower our bills, but to no avail. We would change our behavior if we knew how to make a real impact.



EXAMPLES

- Itemized usage results
- Usage tracking, thresholds, and notifications
- Breakouts of how much energy appliances/devices use



SAVE ENERGY, END WASTEFULNESS.

We live in an extremely wasteful culture. We want to be a part of anything that helps us protect our precious resources. Accordingly, we are ready to hear about energy and catapult it into the conservation movement.

**I FEEL A BIT HELPLESS; SO CAL IS THE LAND OF WASTEFULNESS.
YOU LOOK OUTSIDE AT NIGHT, AND IT'S STILL LIKE IT'S SUNNY.
THERE'S 20 MILLION PEOPLE, SO WHAT CAN I DO? I DON'T
KNOW, OTHER THAN TURNING OFF THE LIGHTS.**

”





STICK TO THE FACTS.

The people behind water conservation have presented the facts clearly, making saving a no-brainer. We want SCE to do the same.

IF YOU PUT UP A BILLBOARD THAT IT TAKES THREE GALLONS OF WATER TO MAKE ONE ALMOND, I'M GONNA PAY ATTENTION AND CHANGE MY BEHAVIOR.



OPTIONS PLEASE.

WE'RE ACCUSTOMED TO HAVING CHOICE & PERSONALIZATION IN THE OTHER SERVICES WE RECEIVE. WILL SCE EVER OFFER OPTIONS?

DIFFERENT RATE PLANS
It would be cool if we could individualize the rates, create your own program.

PERKS & INCENTIVES
Maybe Edison could give you a discount one time and credit your account \$50 for being a good customer all year.

ENERGY-SAVER PROGRAMS
What if you kept within your tiers, you'd get one month free? That motivates people to stay with it.

OR, WILL IT ALWAYS BE ONE SIZE FITS ALL?



LEVEL WITH US.

We're suspicious that corporate greed might be driving this. Edison hasn't done anything notably groundbreaking or environmental; why start now?

Higher energy prices/saving money is THE most motivating reason to change behavior, but we want to understand why costs are going to be higher at certain times. Why would power cost Edison more to produce or buy at certain times of the day? Once we feel reassured that the cause is legitimate and the change in rates is not being motivated by greed, we're in.

I'D FEEL BETTER ABOUT SCE IF I KNEW

THEY WEREN'T JUST IN IT FOR THE MONEY.





CHAPTER 5

ENTER TOU:

Reactions to the potential
new rate structure

TOU SWOT ANALYSIS

AT A GLANCE

- EASY TO UNDERSTAND
- MORE CONTROL
- EMPOWERS LOW INCOME HHs
- I COULD DO MY PART
- FRESH START EACH DAY

- END PEAK HOURS EARLIER
- SHORTER PEAK HOUR WINDOW
- MULTI-FACETED FEEDBACK
- EMPATHETIC EDUCATION
- REBATES & INCENTIVES

S

W

O

T

- UNFAIR TO 9-5ers
- WON'T REDUCE TOTAL USAGE
- FEAR OF HIGHER BILLS
- 5-HOUR PEAK PERIOD IS TOO BIG
- PROFIT MOTIVATION LOOMS

- ALTERNATIVE POWER
- INERTIA IS REAL
- MAKE UP FOR IT ON THE WEEKENDS



TOU SWOT ANALYSIS

KEY STRENGTHS

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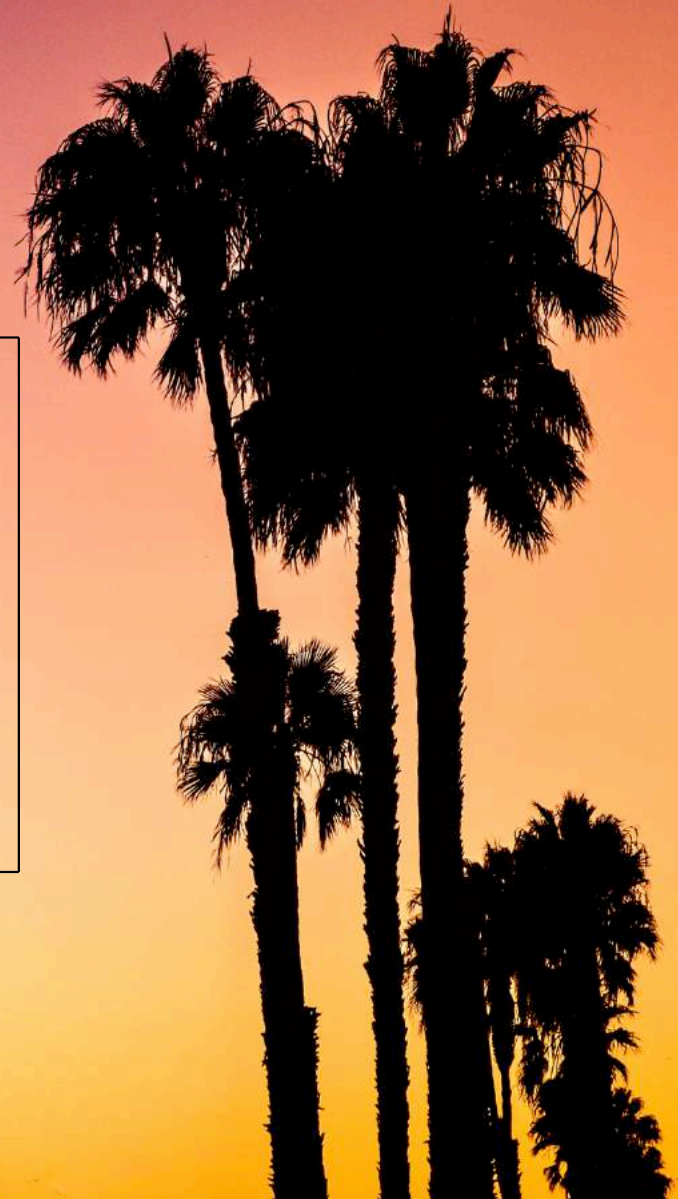
- ✧ Easy to understand, remember
- ✧ Offers more control; encourages load shifting for those with flexible schedules
- ✧ Empowers low-income households, those with flexible schedules, to save money
- ✧ Follows the basics of supply & demand
- ✧ Shifting behaviors would make me feel like *"I'm doing my part"*
- ✧ Lets you build your own energy usage plan, which could lower bills
- ✧ Fresh start on energy usage each day

IF YOU WANT TO LOWER YOUR BILL, THIS GIVES YOU AN ACTION PLAN.

THIS IS MUCH MORE SIMPLISTIC. IT'S AM, PM & NIGHT. THAT'S HOW THE REAL WORLD OPERATES.

IT'S REASONABLE FOR THEM TO COME UP WITH A SYSTEM THAT SPREADS OUT ENERGY USAGE A LITTLE MORE.

”



TOU SWOT ANALYSIS

KEY WEAKNESSES

W

Unfair; many of us can't shift behavior during the proposed peak time

How does shifting behaviors within the day reduce overall usage?

Fear bills will be higher

To some, a five-hour peak window is asking too much

Question the motivation behind TOU

I'M NOT SURE IF THEY'RE DOING THIS BECAUSE THE SYSTEM IS OVERLOADED, IN WHICH CASE I UNDERSTAND, BUT I'M MORE THAN A LITTLE A SKEPTICAL. THEY'RE ENCOURAGING ME TO SAVE; WHY CAN'T THEY?

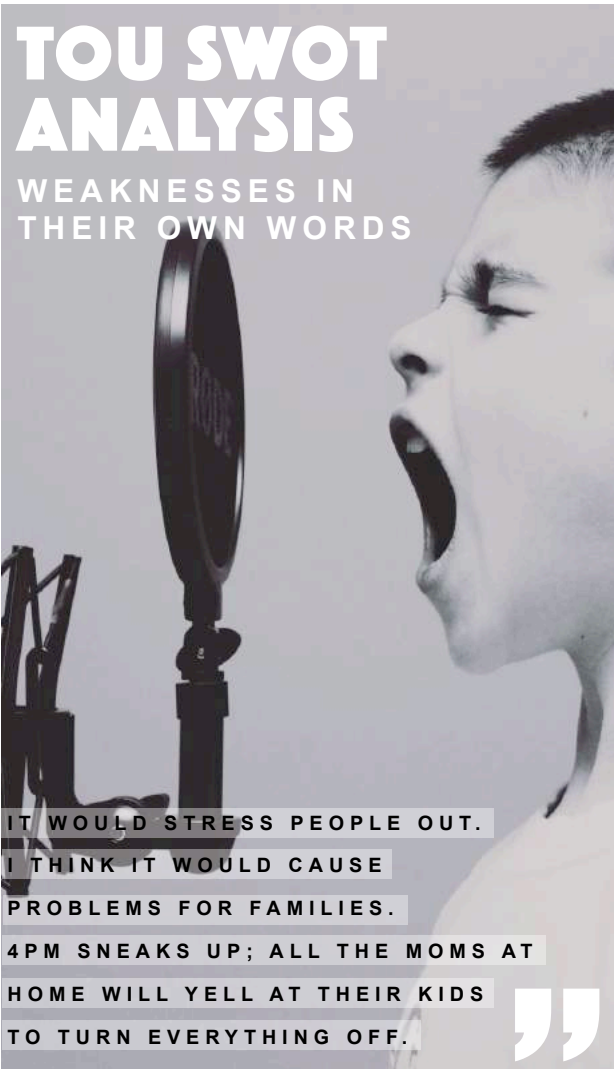
”

EDISON IS TRYING TO GET YOU TO USE POWER WHEN IT'S CHEAPEST FOR THEM, NOT WHEN THEY DON'T HAVE MUCH POWER AVAILABLE.


”

TOU SWOT ANALYSIS

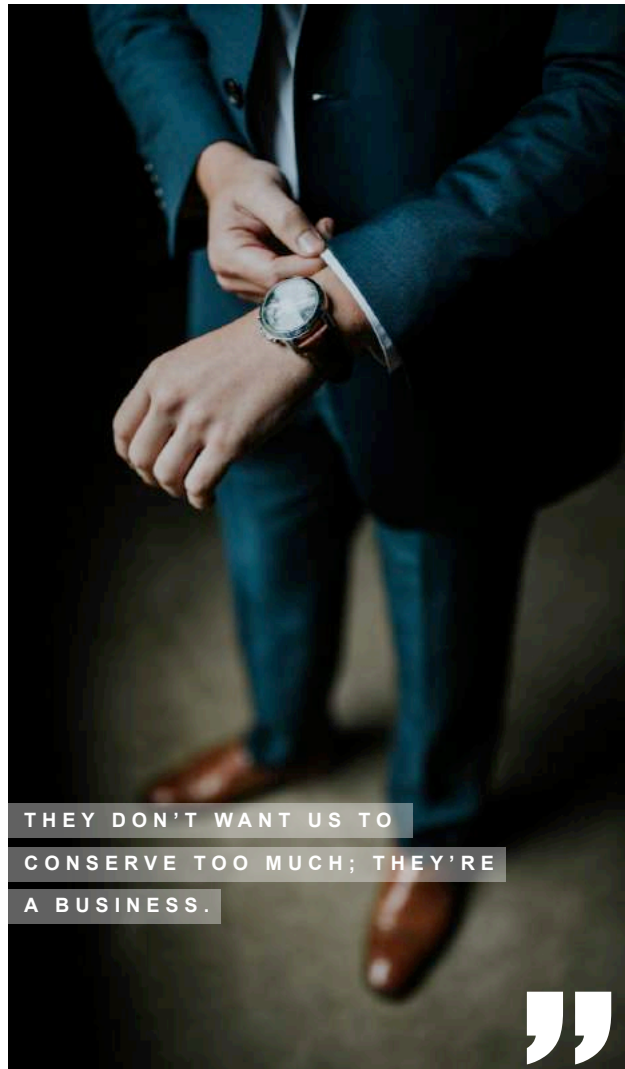
WEAKNESSES IN
THEIR OWN WORDS



IT WOULD STRESS PEOPLE OUT.
I THINK IT WOULD CAUSE
PROBLEMS FOR FAMILIES.
4PM SNEAKS UP; ALL THE MOMS AT
HOME WILL YELL AT THEIR KIDS
TO TURN EVERYTHING OFF.



WHO WANTS TO GET UP AT 3AM
TO DO THEIR LAUNDRY SO THEY
CAN SAVE ENERGY?



THEY DON'T WANT US TO
CONSERVE TOO MUCH; THEY'RE
A BUSINESS.



TOU SWOT ANALYSIS

OPPORTUNITY I: EARLIER, THE BETTER

O

What if peak hours ended earlier? Offering 1-2 hours at the beginning and/or end of the day -- when large appliances can be used at lower rate -- is most important for time-shifting our usage.




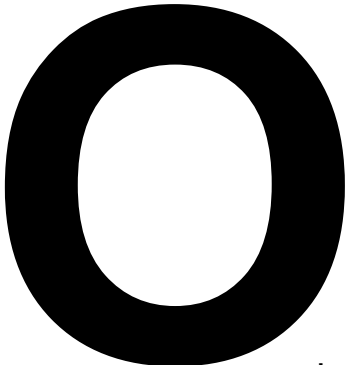
WE COULD THROW IN A COUPLE LOADS BEFORE OR AFTER DINNER.

IT'S HITTING THE FAMILY COMMUNITY; THERE ARE MANY THINGS GOING ON DURING THIS PERIOD.



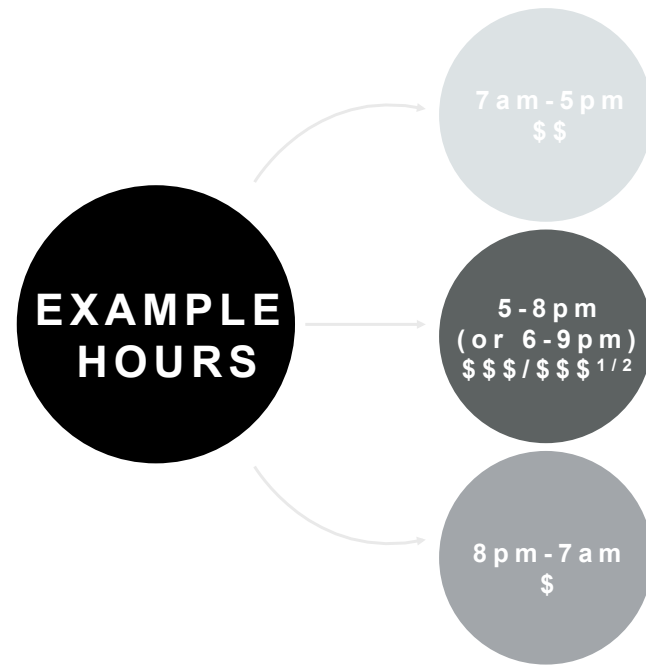
TOU SWOT ANALYSIS

OPPORTUNITY II: LESS IS MORE



Many of us would be open to paying slightly more for a shorter high rate time period.

”
instead of five long hours to bear through, you'd have three simple hours.



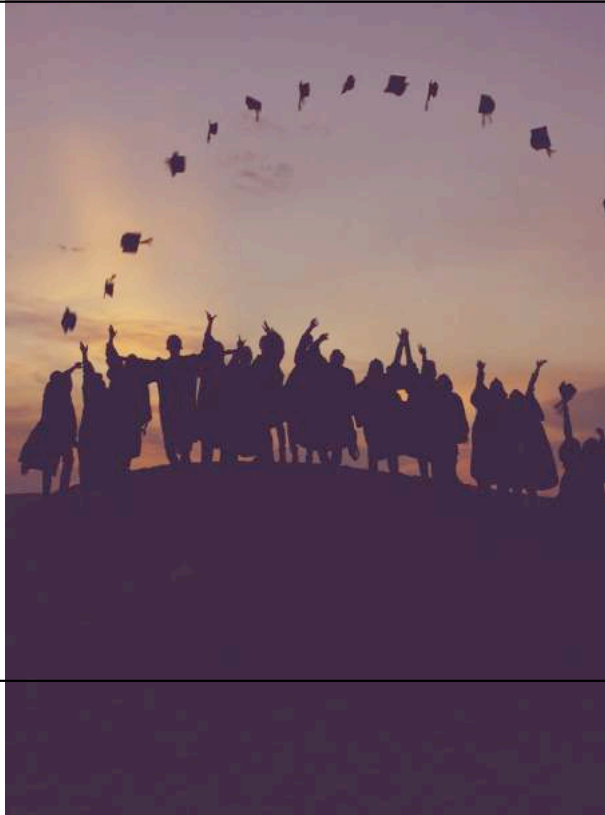
TOU SWOT ANALYSIS

OPPORTUNITY III: EMPATHETIC EDUCATION

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CONTENT

- **Rate calculator:** tier system vs. TOU – online, infographic-driven
- A **video** that explains how the new system works
- A **fridge decal** that shows TOU time periods & costs
- **Default customers into programs** and push-notifications & let them opt out
- A **magazine-style TOU guide**
- More **visual**, frequent **bill inserts**
- Sharing which appliances use more/less energy



EXPERTISE

- Edison makes recommendations on when to do certain chores, appliances
- Messages on conservation from state government would magnify importance
- School partnerships to educate kids, who can in turn motivate parents
- Dedicated customer service teams



TOU SWOT ANALYSIS

OPPORTUNITY IV: MULTI-FACETED FEEDBACK LOOPS

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BEHAVIOR MODIFICATION

- TOU app & notifications, month-over month usage data, tips & tricks, alerts, real time stats, amount saved, etc.
- Inform us on how much money & energy we would save via load shifting
- Smart panel mounted to walls to show real time usage
- H/M/L usage indicators on current meters



ENGAGEMENT

- Goal-setting, tracking goals, and incentives for reaching goals
- Gamify conservation with friends, neighbors, etc.
- On-going media messaging



BILLING

- Visually depict how much power we use & how much money we spend in each TOU daypart



TOU SWOT ANALYSIS

OPPORTUNITY V: \$ SAVINGS



O

- Rebates and incentives for reducing usage
- Offer rebates for us who live in inland communities in particular, due to our continuous need for AC in the summer
- Make rebates and incentives really explicit on the bill so SCE gets credit for it
- Provisions for low-income households (e.g., greater promotion of the CARE plan)



We've had credits, and we don't know when or why they come. What did we do to get that on our bill? If we don't know how we created it, how are we supposed to repeat that next month?



TOU SWOT ANALYSIS

OPPORTUNITY VI:
MAKE THE WEBSITE MORE INVITING TO AID IN TOU ADOPTION

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We rarely explore the Edison website and are unaware of useful tools there.

When we learn these tools exist, we're excited to use them.



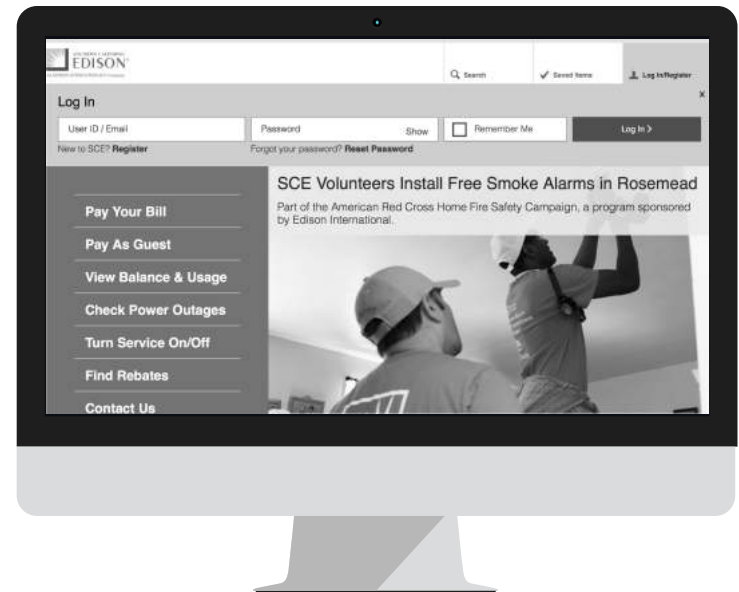
today, I'm like, 'I'll wait until the end of the month, and it's always a surprise.'



HEADLINE TOU
ON THE WEBSITE



PROVIDE HIGHLY
VISUAL, SIMPLE
GRAPHICS & INTERFACES



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THREATS I:
ALTERNATIVE POWER

TOU SWOT ANALYSIS

I wish we could harness solar energy for ourselves....!d like to basically be off the grid.
As big and sunny as California is, there's literally only one little spot where I see windmills
and one spot near Mammoth with a field of solar panels. There's massive amounts of
land we could use for these things!

There's so many crazy things we could start implementing.

”



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THREATS II: INERTIA IS REAL

TOU SWOT ANALYSIS

Change is hard. Many of us have a negative immediate reaction upon first hearing the about TOU because all this is so complicated. And then it snowballs. We're worried rates will go up. Some of us can't change our schedules. Why are they doing this again?

Honestly, this change is a bit nerve-wracking because of the pending cost implications and because we don't really understand why things need to change. As such, providing a thorough, empathetic introduction is key. After we learn more, we realize there is more opportunity to control costs and become open to the idea.



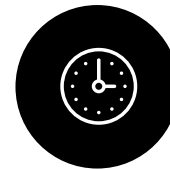
I wouldn't be able to use energy in a different way because I have such a set schedule.



You can raise the price, but like with water, there are still people who are going to buy lots of water, so they can have that beautiful yard. Same with energy; it won't change anything.



I just think there's so much going on that keeping track of everything is just a little overwhelming.



I'm going to cook dinner at a certain time. I'm not going to work around their schedule or not feed my kid.



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THREATS III:
MORE THAN INERTIA, APATHY COULD SET IN



TOU SWOT ANALYSIS

It's hard to care because I can't change my life. I can't quit my job or my family. What am I supposed to do?

THAT'S THE HEART OF FAMILY TIME. I DON'T WANT TO THINK ABOUT SAVING MONEY OR ELECTRICITY AT THE EXPENSE OF FAMILY TIME.

WHY RAISE PRICES WHEN I ACTUALLY NEED TO USE ELECTRICITY? IT FEELS LIKE PRICE GOUGING, AND I WOULD FEEL HELPLESS.

”





TOU SWOT ANALYSIS

THREATS IV: WEEKEND CONFUSION

We're wondering if there would be weekend TOU rates? For some of us, 9am-4pm is probably the greatest time of use. But we think differing TOU rates during the weekend would be confusing. We might also make up for the weekday savings on the weekends.



TOU: CATALYST FOR PARTNERSHIP

We want to know why we need to do this. We need to know that SCE is in this with us. Having a trustworthy relationship will make us want to be a part of the solution.



INFORM WHY

They need to communicate with us and tell us why, and we need to do what we can do to save.



RADICAL TRANSPARENCY

I think one thing that people want to take away from this is what kind of company is Edison? Are you a utility company that's for-profit, and you don't care how much we use? Or, do you want us to be well-informed customers, and we'll have a relationship where we try and conserve, and you supply the electricity, but it's a fair relationship?



EVERYONE DOES THEIR PART

They should say, 'For every light switch you turn off or something you unplug, we're going to install a solar panel. It should be more of a two-way street here. I think we should want to work together.'



TRACKING & MONITORING TOU UPON LAUNCH

VISUAL :: SIMPLE :: REAL-TIME



text alerts

- Upon launch, daily reminders before peak hours begin
- Alerts when you're reaching high usage thresholds
- "Today's a particularly tough day" messages



app

- Daily usage chart
- Appliance-by appliance breakdown
- Tips & tricks
- Incentive programs: "for X watts saved, save a tree"
- Threshold alerts
- Fact of the day/month



bill

- Pie chart billing peak hour breakouts
- Inserts with tips & tricks
- Goal-setting and performance reviews





CHAPTER 6

**USER-GENERATED
RATE SYSTEMS**

USER-GENERATED RATE SYSTEMS

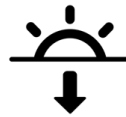
ALTERNATE TOUs

SCE proposed:



1 | DAYTIME

:: 8am-4pm ::
:: \$\$::



2 | AFTERNOON/EVENING

:: 4pm-9pm ::
:: \$\$\$::



3 | NIGHT + EARLY MORNING

:: 9pm-8am ::
:: \$::

SCE customer proposed options:

MORE EVENING TIME

8am-3pm: \$\$
3-8pm: \$\$\$
8pm-7am: \$

More time to get stuff done in the evening.

SHORTER PEAK HOURS BUT MORE EXPENSIVE

8am-4pm: \$\$
4-7pm: \$\$\$\$ (or 5-8pm)
7pm-8am: \$

Even more time to get stuff done in the evening.

MOST COMMON

CHOOSE YOUR PEAK HOURS

6am-4pm: \$\$
4-7pm: \$\$\$\$
7pm-6am: \$
OR:
8am-6pm: \$\$
6-9pm: \$\$\$\$
9pm-8am: \$

Choice increases buy-in and satisfaction.

On weekends, you could choose from a couple different peak hour options as well.

AFTER SCHOOL = PEAK HOURS

6am-2pm: \$\$
2-7pm: \$\$\$
7pm-6am: \$

Educates children, easier for working professionals.



USER-GENERATED RATE SYSTEMS

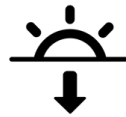
ALTERNATE TOUs (CONTINUED)

SCE proposed:



1 | DAYTIME

:: 8am-4pm ::
:: \$\$::



2 | AFTERNOON/EVENING

:: 4pm-9pm ::
:: \$\$\$::



3 | NIGHT + EARLY MORNING

:: 9pm-8am ::
:: \$::

Add'l SCE customer proposed options:

TIERED PEAK HOURS

8am-4pm: \$\$
4-7pm: \$\$\$*
7-9pm: \$\$
9pm-8am: \$

** If your energy consumption is less than the average HH, you get a credit on your bill quarterly.*

Less of a penalty for working professionals without schedule flexibility.

THE PROPOSED PEAK HOURS, WITH A TWIST

8am-4pm: \$\$
4-9pm: \$\$\$ **OR** 4-7pm: \$\$\$\$
9pm-8am: \$

Choice increases buy-in and satisfaction.

DIFFERENT TOUs BY SEASON + GEOGRAPHY

EXAMPLE:
Spring/Summer on the Coast
(little AC usage)
8am-4pm: \$\$
4-12am: \$\$\$
12am-8am: \$

Spring/Summer Inland
(lots of AC usage during the day)
8am-4pm: \$\$\$
4-12am: \$\$
12am-8am: \$

Also includes a Maintenance Incentive. If a HH demonstrates consistent load shifting away from peak hours, they would get an extra bonus.



USER-GENERATED RATE SYSTEMS

THE 6PM PEAK PYRAMID

6pm is the highest rate of the day, and rates level up/down based on proximity to 6pm. We would become accustomed to a single hour of the day being the climax of energy usage, learning to adjust our behavior accordingly. The simplicity of this framework makes it easy for all and its rolling nature increase fairness.

strengths

simplicity

fairness

easier to market

weaknesses

difficult to calculate

difficult to defend

may only lead to load

shifting at specified hour





USER-GENERATED RATE SYSTEMS

THE FLAT RATE

What if we had a flat rate structure with penalties and incentives?

Edison would take the average household usage in my community into account as well as my household's personal past 12-month usage behavior to arrive at a reasonable and easily understood flat rate. If we go over this rate, we are charged for an extra "block" of energy. If we stay below the established threshold, we get a credit.

strengths

predictable each month
easy to understand
encourages conservation

weaknesses

calculating a fair flat rate
might be hard for low income households
doesn't encourage conservation during peak hours

USER-GENERATED RATE SYSTEMS

BY SQUARE FOOTAGE

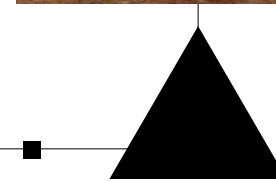
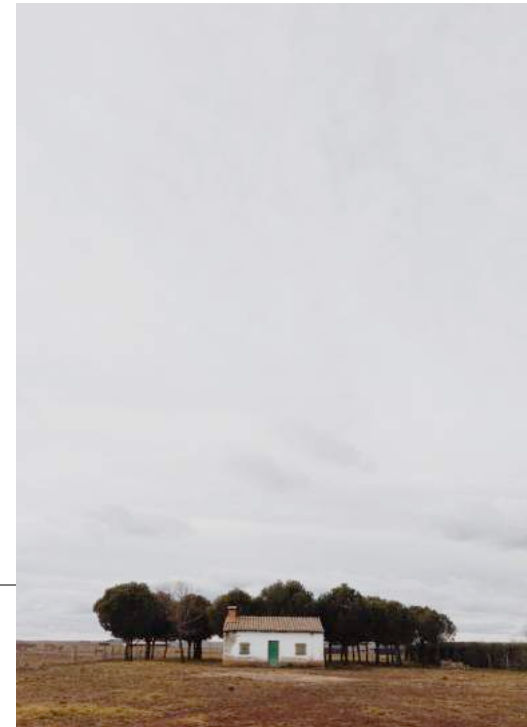
What if large homes had a set of rates, and smaller ones had their own?

strengths

simplicity
helps low-income families

weaknesses

may not encourage conservation
not fair to large homes; harder for them to conserve
large homes may not have high usage
how big is big? subjective & neighborhood dependent





THE PER PERSON MODEL

What if each person in a home was allocated a specific amount of energy each month? Go over the total allotted amount, and there's a penalty. Stay under, and there's a reward. The household could then decide who pays the overages/receives the credit.

strengths

simplicity

encourages conservation

weaknesses

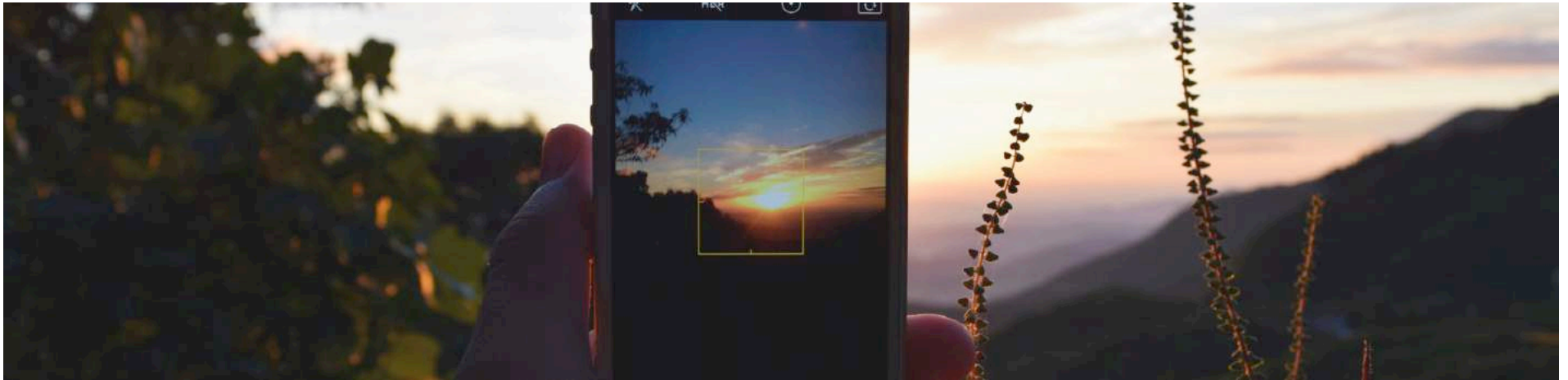
penalizes large families

hard to track number of people in homes

does not encourage conservation during peak hours

what if I use less than my roommate?





USER-GENERATED RATE SYSTEMS
THE CELL PHONE PLAN

What if each household chooses an energy plan from a choice of L/M/H amount of energy? Similar to cell phone plans, alerts + overages charges are provided. Each plan could also include incentives for reduced usage.

strengths

familiarity

ability to personalize/customize

weaknesses

hard to make an informed decision

how can conservation be built in?

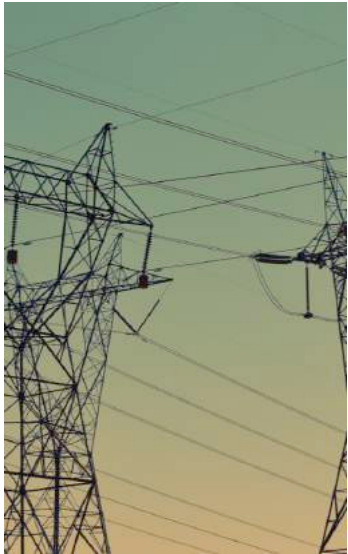
too similar to current tier system



An aerial photograph of a city at dusk, with a purple and blue gradient overlay. The city lights are visible, and the sky is a mix of purple and blue. The text is centered in a white box.

CHAPTER 7

**REACTIONS TO
POTENTIAL
POSITIONINGS**



POSITIONING STATEMENTS

#1: low appeal

You and your phone can't be separated – it's your lifeline. But what about your phone's lifeline? Haven't thought about it? It's electricity and the electric grid that brings it to you. In fact, both keep you connected to the people and things you care about the most.

California's power grid has to adapt and work hard every day to meet the demands you put on it; and at certain times of the day the demand you plus millions of your fellow Californians put on it can strain the grid. If it's to continue to keep you connected to the people you care about, it needs you to be thoughtful about when and how much demand you put on it.

:: in a nutshell ::

- Recognize the emotional appeal
- Some of us immediately think of blackouts
- Phone is interpreted as focus; not energy

:: in their own words ::

There's more emotion in this statement because people care more about other people than just conserving and the environment.





POSITIONING STATEMENTS

#2: moderate appeal

As a Californian, you care about having a clean, healthy environment for you and your family to live in. In California, we lead the nation in generating clean energy from solar, wind, and other non-polluting resources, which will help us all to lead healthier lives and build a more responsible energy future.

During the peak times when demand for electricity is higher, other less clean energy resources have to be used to meet the full electricity requirements. When we are all more thoughtful about when we use energy and lower our usage during those high electricity demand times, we can reduce our need for the less clean energy resources, giving you and your family a cleaner, healthier environment.

:: in a nutshell ::

- Draws in "green" customers
- Needs more specific info about clean vs. dirty energy
 - Lack of specificity leads to skepticism/lacks persuasion
- Needs to level-up the intensity of the need to conserve

:: in their own words ::

I know how we hook into solar, but how do we hook into wind? So we all should put a windmill in our yard?

It makes it seem like our job is already done..like we've already reached our goals. ”



POSITIONING STATEMENTS

#3: moderate appeal

As Californians, we are known for our bold ideas and innovative thinking—electricity is no exception. We continue to evolve how we produce and use electricity, and our power grid makes it possible for people to plug in solar panels, batteries, electric vehicles, and more. All of this technology will help Californians have flexibility, more choice in how they use energy - and ultimately better value.

:: in a nutshell ::

- Explanation of electrical grid strain is simple & appealing
- “Bold” and “innovation” are over-used
- Most consumers agree that the TOU rates are innovative, but that positioning them in this way is not appealing

The next innovation is a new way to manage our demand on the power grid. When too many of us use too much energy at the same time, our power grid has to work harder which can decrease its reliability. The solution is to control how much and when we use electricity, spreading out our demand on the grid. By continuing to learn how you can manage your energy use, you can be assured of better, more reliable electricity for all your needs.

:: in their own words ::

I really like the layman's words.

I don't think there's enough fire and brimstone there.

I feel like those are words that are overused. When you say, “innovation” and “bold ideas.” It feels kind of cheesy to me.



POSITIONING STATEMENTS

#4: highest appeal

As a Californian, you enjoy the many wonders of this state, including the resources that are shared by us all. When demand increases for these shared resources, you encounter things like rush hour bridge tolls, increased ticket pricing to an event, or surge pricing for services that are in high-demand. On the flip side, you know that if you use these services at times when demand is lower, you can save time and money.

Electricity also has high demand at certain times. Later in the day and during the evening when demand for electricity increases, higher cost electricity resources have to be used to meet the needs of millions of Californians. Why pay the higher costs of high-demand hours of the day if you can shift some of your usage away from these hours and take advantage of electricity when it is plentiful and available at a lower cost? By thinking about when you use electricity and reducing your usage during the peak hours, you better can manage electricity costs.

:: in a nutshell ::

- Most relatable
- Cost savings is the most resonating message
- Good examples are provided, other than toll bridges (not relatable to So Cal)
- Some see the examples as wants, while electricity (like water) is considered a need
- Needs more emotion

:: in their own words ::

It's all about costs. We've all got to pay the bills.

It's making it logical for us – you should have to pay more money for using electricity at a certain time.



POSITIONING STATEMENTS

example solution:

First paragraph of #1 + #4's message

You and your phone can't be separated – it's your lifeline. But what about your phone's lifeline? It's electricity and the electric grid that brings it to you. In fact, both keep you connected to the people and things you care about the most.

Similar to other services and resources, electricity has high demand at certain times. And when demand increases, you encounter things like increased pricing or surge pricing; think about tickets to an event or premium pricing for services in high demand. On the flip side, you know that if you use these services at times when demand is lower, you can save time and money.

This same premise goes for electricity. Later in the day and during the evening when demand for electricity increases, higher cost electricity resources have to be used to meet the needs of millions of Californians. Why pay the higher costs of high-demand hours of the day if you can shift some of your usage away from these hours and take advantage of electricity when it is plentiful and available at a lower cost? By thinking about when you use electricity and reducing your usage during the peak hours, you better can manage electricity costs and stay connected to those who matter most to you.

