Residential Time-of-Use Rate Transition

Don Bray
Director of Account Services & Community Relations

August 2019
Overview

• Quick TOU review – from February BOD meeting

• Key decisions for 2020 transition
  o Confirm SVCE TOU participation
  o Confirm bill protection

• Next Steps
  o Joint marketing, education & outreach (ME&O)
  o 2020/2021 rate analysis
Statewide TOU Transition

• Per the CPUC, ‘tiered rate’ residential customers in IOU territories will be transitioned to a TOU-based rate plan

• All PG&E T&D customers in Santa Clara County currently scheduled for ‘Wave 1’ in October 2020

• Rollout plan accounts for climate zones, other local concerns

• CCAs may/may not participate
Changing CA Grid Dynamics

- Dramatic ramp in fossil-fuel generation now required late afternoon
- Grid prices ~2X during peak evening demand
Current E-1 ‘Tiered’ Rate

- 208,000 (87%) of SVCE residential customers are on the tiered E-1 rate schedule
- The more you use, the higher the rate – meant to encourage overall usage reduction
- Ineffective in encouraging electrification or mitigating steep ramp in demand between 4 p.m – 9 p.m.
How will TOU work?

• **When** you use electricity is as important as **how much** you use
  o Electricity rates will be lower 19 hours a day
  o Encourages use when electricity is cheaper/cleaner
  o TOU rates affect both generation (SVCE) and T&D (PG&E)

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**Check the hour before using power**

The **Time-of-Use (Peak Pricing 4–9 p.m. Every Day)** rate plan has two time periods:

- **Lowest price (OFF-PEAK)**
  - 19 hours each day
- **Highest price (PEAK)**
  - 5 hours each day

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**7 DAYS A WEEK**

- **OFF-PEAK**
  - Midnight
- **PEAK**
  - 4 p.m., 9 p.m.
- **OFF-PEAK**
  - Midnight
TOU Transition Pilot - Learnings

- PG&E Phase 1 TOU transition pilot for 150,000 customers in 2018/2019

- Included 18,000 MCE and Sonoma Clean Power customers, as well as ~7,500 SVCE Milpitas customers
Joint Communications - Pilot

- PG&E and SVCE collaborated on co-branded customer notifications
- Notifications sent 90, 60, 30 days prior, plus welcome transition letter
- Included a tailored annual estimate of the new TOU rate impact, and alternative rates

Sample letter from Milpitas TOU pilot
TOU Pilot Results - SVCE

- 70% opted to participate (remain) in the pilot
- 15% switched to another TOU rate, 15% remained on E-1
- Transitioned customers – changes in demand:
  - ~5% load shift in moderate/hot climates, 0.5% for CARE
  - Some overall load reduction

![Sample Hourly Load for Avg. Customer Jun-Sep Estimated vs. Actual Observed](chart.png)
Bill Protection

• CPUC requires IOUs offer bill protection for the first 12 months:
  o allows customers to try new TOU rate risk-free
  o if customers pay more than they would have on their former rate plan, PG&E the difference
  o similarly, SVCE offered bill protection for TOU pilot
Pilot Results – Savings and Bill Protection

- 307 ‘bill protected’ customers = totaling $6,226
- 2,628 customers’ savings = totaling $62,194
- 5,010 participating customers totaled $68,420
  - Average SVCE revenue impact/customer = $13.65

<table>
<thead>
<tr>
<th></th>
<th>Spend &gt; $10, CARE spend &gt; $5</th>
<th>Non-CARE +/- $10, CARE +/- $5</th>
<th>Save &gt; $10, CARE save &gt; $5</th>
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<tr>
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<td>Bill Protection</td>
<td>Neutral</td>
<td>Savings</td>
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<td># Customers</td>
<td>$ Total</td>
<td>$ Average</td>
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<td>CARE</td>
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<td>Total</td>
<td>307</td>
<td>$ 6,225.78</td>
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TOU Transition – Forecasted Participation

• SVCE currently has ~208,000 E1 residential customers

• Certain groups are ineligible:
  o CARE/FERA customers in hot climate zones
  o medical baseline customers
  o new move-ins with less than 12 months of usage

• Staff expects participation of 70% of the eligible 75% of E1 customers
  o TOU transition participating customers: ~109,000
Bill Protection and Savings Forecast

- Avg SVCE revenue impact per transition customer = $13.65
- ~109,000 participating customers
- Total impact to top-line revenue = ($1.49M)
- Per the pilot, the population that saves money on TOU will be the largest

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<th>Total Impact to Top-line Revenue</th>
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<td>Customer Savings</td>
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<tr>
<td>53% of Participating Customers</td>
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<td>($1,341,000)</td>
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Statewide Marketing Campaign

- Keep California Golden
  - Under Energy Upgrade CA brand
  - Expected launch in SVCE service area Feb. 2020
  - More info: [https://www.energyupgradeca.org/](https://www.energyupgradeca.org/)
Summary

• Staff recommends participation in the TOU transition, including one year of bill protection:
  o Lower-priced power when demand is lower
  o Customer savings, low risk
  o More customer choice and control
  o Encourages greater use of renewable energy
  o Removes penalty for strategic electrification
  o PG&E’s T&D rates move to TOU - regardless
Recommendations

1. Confirm participation with PG&E for CPUC filings
   - Confirm SVCE TOU transition
   - Confirm SVCE will offer bill protection for first year

2. In late 2019/early 2020, perform financial modeling and rate analysis for E-1 to TOU
   - Update impact of 2020 E-1 and E-TOU rates
Questions?
PROPOSED
FY 2019-20
OPERATING BUDGET
BOARD OF DIRECTORS
AUGUST 14, 2019
BUDGET TIMELINE
ROADMAP

FY 2019-20 Operating Budget

- Jun: Strategic Plan approved
- Jul: Department Budgets developed
- Aug: Proposed Budget reviewed by Board
- Aug: Finance & Admin Committee Review
- Sept: Approval from Board
- Oct: Oct 1 – New Budget Year
FINANCIAL SUMMARY

Energy Revenues
$318.2 MM
12.6% Growth over Mid-Year based on 3.9 million MWh's

Energy Costs
$244.7 MM
4.4% Growth over Mid-Year. Commodity prices have stabilized.

Operating Margin
$56.9 MM
Margin to fund reserves, programs, capital and debt service

Budget Surplus
$52 MM
76.4% Growth over Mid-Year

Reserves
$150 MM
End the FY at Reserve Target Range of 180 Days
COMPARE TO MID-YEAR

SURPLUS INCREASE
$22.5 MILLION

ENERGY REVENUES
$35.6 MILLION
FAVORABLE

- No change to rates or PCIA
- GreenPrime increase due to better participation
- No change to Load or Customer Accounts

POWER SUPPLY
($10.3 MILLION)
UNFAVORABLE

- Energy and Env. Products reflect latest market prices
- Fiscal Year load is well hedged at >80% with 100% for Oct-Dec
- Board Approved change to procurement portfolio (PCC2) ~$5 million reduction in costs
- 3% contingency built in budget to cover price spikes

BILLING & DATA MGMT
($0.2 MILLION)
UNFAVORABLE

- Slight increase due to update of rates/meter from PG&E

OTHER OPERATING
($3.1 MILLION)
UNFAVORABLE

- Staffing includes 2 new positions
- Professional Services increase due to various department initiatives
- Marketing includes long-term data management strategy and awareness
- Lease increase is based on expected office expansion

NON-OPERATING
$1.3 MILLION
FAVORABLE

- Investment income reflects better interest rates and higher cash balance
- Debt service is for the renewal of the line of credit
- Grants revenues from HPWH Grant

TRANSFERS AND OTHER EXPENSES
($0.9 MILLION)
UNFAVORABLE

- Programs is formula based with 2% of energy revenues allocated to programs.
- CAPEX increase for Office Expansion
REVENUES INPUTS

- No changes to rates from last rate change
  - Generation rates change effective August 1
  - 4% discount to PG&E rates
  - Most likely rates remain stable until Spring 2020
- No load growth
  - Direct Access not a factor in 2020
- No change to customer participation rate
ACCOUNTS & SALES

Customer Accounts
• 267,000 Accounts

Energy Sales (MWh’s)
• 3.9 million MWh’s
Nearly all of $320.3 million of budgeted revenues are from energy sales to customers.

SVCE vulnerable to economic downturn and changes in rates.

Long-term revenue vulnerability from Direct Access.
POWER SUPPLY

- $244.6 million Energy Supply Cost
- Modest increase vs. the Mid-Year as commodity prices have stabilized
- Well hedged for FY 2019-20
- Resource Adequacy increases each year
TOTAL EXPENSES

- $268.3 million Cash Outflow
- Low Overhead keeps SVCE nimble to respond to changing business
Strategic Plan
- Funding to support increased Board input into the strategic planning process
- Less task-orientated document

PG&E Bankruptcy
- Funding for continued monitoring and strategic action as the bankruptcy unfolds

Collaboration
- Continued collaboration with other Bay Area CCAs

Board
- General Counsel
- Board/Committee meetings support
Cybersecurity
Major new funding to support cybersecurity initiatives
Focus is on security and reliability

Credit Rating
Funding for Moody’s Financial Advisor
Renew Line of Credit

Facility Improvements
Increased rent budget to support larger work space
Increase capital budget to support move either in our current building or somewhere else

HR/Payroll Improvements
Maintain competitive compensation and benefits package
Rollout of better payroll and human resource services

Risk Management
Support for risk management of agency (insurance, etc.)
Support for risk management of energy supply and compliance

Power Pre-Pay
Support for analysis and possible execution of a power prepay agreement that would lower power supply cost
PPA Negotiations
Consultants and Legal support for not just new PPA negotiations but monitoring and action for issues that arise from the 3 PPAs signed last year

Portfolio Optimization
Controlling Power Supply Costs
Assist with Direct Access strategies and response

Operations
Scheduling Coordination
Resource Adequacy cost-sharing consultant
Other Power Procurement support including risk management, load forecasting, and software tools to support more integrated trade system

Integrated Resource Plan (IRP)
Preparation and filing in 2020
All areas of the agency involved but Reg/Leg will be partnering with Power Supply
Account Services & Community Relations

Data Management
- Negotiations for contract renewal with Calpine
- Long-Term data management strategies

Outreach
- Outreach grants
- Events

Awareness
- Market surveys
- Advertising

Programs Support
- Works closely with the Decarbonization and Grid Innovations Team to roll out programs

Required Notifications
- Funding for various mailers that are required by the CPUC, such as the annual joint rate mailer, with coordination of PG&E
**Regulatory & Legislative**

- **Pro-Active with Legislature**
  - Funding for Lobbyist presence
  - Funding for continued communications with key stakeholders

- **CaICCA**
  - Membership Dues
  - Support of various committees and initiatives

- **Rates**
  - PG&E General Rate Case
  - 2020 ERRA Forecast

- **Workforce Development**
  - Funding for continued rollout
**Decarbonization & Grid Innovation Programs**

**Programs Funding**
- Continue with the 2% of energy revenues formula for annual funding of programs
- Carry over unused $ from this fiscal year by creating programs fund

**Programs Roadmap**
- Continued rollout of various programs identified in the roadmap
- Updates to the roadmap

**Tools**
- Invest in data analytics and other software platforms
PERSONNEL

• CEO authorized to fill 25 FTE positions
  • As of August, 21 positions filled
• Adjust salary tables by 4% based on CPI Bay Area-Urban index
  • More positions than authorized due to broadbanding
• This summer conduct compensation study
  • 2-year cycle
PERSONNEL (cont.)

- Increase of two (2) positions
  - Analyst position in the Decarbonization Grid Innovations Dept.
    - Support for programs rollout with a focus on the “building/construction” decarbonization efforts
  - Rates Manager position in the Finance & Administration Dept.
    - Rates monitoring and forecasting
    - Develop innovative rates in response to Direct Access
    - Strategic action on rates issues
PERSONNEL (cont.)

• Longer-Term may add 1-2 positions
  • Unknown now but would reflect needs of the agency in the future
  • Compare to other CCAs and POUs
    • Staff developing metrics to determine recommended staffing target

• Part-Time/Students/Interns
  • Proposed budget funds 5 part-time positions
CASH RESERVES

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<td>FY 2020-21</td>
<td>$200,000</td>
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<td>FY 2021-22</td>
<td>$250,000</td>
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Target: $300,000
Max: $350,000
Min: $250,000
UNCERTAINTY AND RISK

POWER SUPPLY
Higher market prices for capacity and energy; underlying commodity volatility; credit rating

PG&E BANKRUPTCY
Customer reserves; plan of reorganization

LEGISLATION
IOUs exit retail; Central Buyer

DIRECT ACCESS
Prepare now for 2021

REGULATIONS
PG&E Restructuring; Central Buyer

RATES
Unknown on PCIA and PG&E Rates

RESERVES
NEXT STEPS

Step 1
Receive feedback from Board and public.

Step 2
Assumptions reviewed. Incorporate feedback from Board meeting. Power Supply updated with latest hedges and reflects most recent market prices.

Step 3
Review with Finance and Administration Committee in September.

Step 4
Recommended Budget presented to Board on September 11th for adoption.
THANK YOU
CCA FTE COMPARISON

Authorized FTE's

- MBCP
- MCE
- PCE
- SCP
- SVCE Proposed
- EBCE
RATIO COMPARISON

Operating Margin/FTE

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<th></th>
<th>EBCE</th>
<th>SVCE Proposed</th>
<th>SCP</th>
<th>PCE</th>
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Thousands
Outline

1. Background & context
2. SVCE/PCE Reach Code Effort
3. Where we go from here
Outline

1. Background & context
2. SVCE/PCE Reach Code Effort
3. Where we go from here
We Are In a Climate Crisis

Around the BBC

Climate Change Becomes an Issue for Ratings Agencies

The risk of a ratings downgrade can pressure cities and companies to take steps to mitigate climate risks, such as from sea level rise.

BY KRISTOFER TIGUE
AUG. 31, 2019

We must change food production to save the world, says leaked report

Cutting carbon from transport and energy ‘not enough’ IPCC finds

Our planet is in crisis. But until we call it a crisis, no one will listen

We study disaster preparedness and ‘climate change’ is far too mild to describe the existential threat we face

July was the hottest month humans have ever recorded, data shows

Scientists found that the planet is on pace for one of its hottest years, and the data all but guarantee that the period from 2015 to 2019 will go down as the warmest five-year period on record.

By Brady Dennis and Andrew Freedman • 2 hours ago

Screenshots of news articles from Aug 5, 2019
GHG Emissions Goals

ACHIEVING CALIFORNIA'S 2050 GHG GOAL WILL REQUIRE AN ADDITIONAL 61-74% REDUCTION BELOW FORECASTED 2030 LEVEL.

PROPOSED 2025 TARGET: 40% BELOW 2015 LEVELS (2.42 MMT CO2E)
PROPOSED 2030 TARGET: 50% BELOW 2015 LEVELS (2.01 MMT CO2E)
CALIFORNIA 2030 TARGET: 40% BELOW 1990 LEVELS
CALIFORNIA 2050 TARGET: 80% BELOW 1990 LEVELS

THIS REDUCTION WILL REQUIRE AN UNPRECEDENTED SHIFT AWAY FROM NATURAL GAS IN COMMERCIAL AND RESIDENTIAL BUILDINGS, AND GASOLINE VEHICLES.

PRESENTATION
Overarching Decarb Strategy

• Procure & maintain a sustainable, affordable and carbon-free **power supply**
• Electrify the **built environment** and **mobility**
• Promote **energy efficiency** & successful **grid integration**
Wave of Local Action Across CA

- 50+ cities pursuing reach codes
- On July 16, Berkeley banned gas in new construction
- PG&E publicly supported the Berkeley gas ban
Outline

1. Background & context
2. SVCE/PCE Reach Code Effort
3. Where we go from here
Why adopt a reach code?

- Cities have climate (emission reduction) goals
- All-electric buildings are more cost effective, safer, healthier
- Electric vehicles emit less pollution and have a lower cost to operate
- Fiscal prudence – more cost effective to address at new construction
Summary of Code Development

City Staff
Sustainability
Building
Planning
Economic Dev.

Methods
Focused meetings
Group meetings
Public meetings
Webinars
Phone calls
Presentations
Discussions
One-pagers

Stakeholders
Realtors
Affordable Housing
Organized Labor
Commercial Real Estate
Developers & Builders
Retail Property Associations
Chambers/Business Associations
Environmental advocates
Etc.

Shaping the Code
Building Codes

All 11 sections must be adopted this year by Council.

Reach Code
(amend some sections within these two parts only)

Energy
Part 6

CALGreen
Part 11
Reach Codes – inside the building

All-Electric Buildings
Adopt 2019 Code as is.

Dual-Fuel Buildings
Adopt 2019 Code +
• Pre-wiring for Future Electric Devices
• Increase Energy Efficiency
• Install Solar Thermal or Battery Storage (residential only)
## Reach Codes – EV Charging only

### EV Charging Base Code

<table>
<thead>
<tr>
<th>Category</th>
<th>Quantity</th>
<th>Speed</th>
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<td>Single Family</td>
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<tr>
<td>Residential</td>
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### EV Charging Reach Code

Increase the **Quantity**, **Speed**, and/or **Readiness**

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**CALGreen Part 11**
## Engagement To Date

<table>
<thead>
<tr>
<th>City</th>
<th>Letter of Intent</th>
<th>June All-Hands Meeting</th>
<th>City Staff Meeting(s)</th>
<th>Commission Meeting</th>
<th>Council Briefing</th>
<th>Council Reading</th>
<th>Council Vote</th>
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<tr>
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Outline

1. Background & context
2. SVCE/PCE Reach Code Effort
3. Where we go from here
Summary Timeline

<table>
<thead>
<tr>
<th>Item</th>
<th>Date</th>
<th>Leader</th>
<th>Participant(s)</th>
<th>Consultant Support Available</th>
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<tbody>
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<td>Cost Effectiveness Study</td>
<td>Feb 2019</td>
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<td>SVCE/PCE</td>
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- Transitioning leadership to the cities
- SVCE and Consultants providing support for each of these next steps
# Council Meetings

<table>
<thead>
<tr>
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<td>Morgan Hill</td>
<td>Oct 23</td>
<td>Nov 6</td>
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<tr>
<td>Milpitas</td>
<td>Sept</td>
<td>Oct</td>
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<td>Cupertino</td>
<td>Oct</td>
<td>Nov</td>
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<tr>
<td>Sunnyvale</td>
<td>Pending</td>
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<td>Los Altos Hills</td>
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<td>Monte Sereno</td>
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<td>Gilroy</td>
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<td>County of Santa Clara</td>
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<td>Campbell</td>
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<td>Saratoga</td>
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**We’re available to support with:**
- Briefing(s)
- Study Session(s)
- First Reading – Q&A support

**Additional upcoming engagement:**
- Two regional Electrification Expos in October
- SVSCE sponsoring Silicon Valley Business Journal’s Structures Award for all-electric buildings
- All-Electric Showcase Awards announced soon
- All-electric home tours planned
Call to Action

• **If you are currently engaged...**
  • Inform your city staff you are looking forward to seeing their recommendations or you would like a study session
  • Encourage staff to utilize our support

• **If you are not currently engaged...**
  • It’s not too late!
Affordable Housing

• Affordable Housing Developers
  ▪ Reached out to 5 Priority Developers, Engaged 4
  ▪ None have stated opposition
  ▪ Affordable housing developers already choosing all-electric
  ▪ Important topics:
    o centralized water heating costs/technical requirements
    o sizing of electrical service
    o Low volume of EV’s within these communities
Labor & Workforce Development

• Organized Labor
  ▪ Engaged in San Mateo and Santa Clara County
  ▪ Positive responses about overall electrification efforts
  ▪ Encourage the use of skilled union labor
  ▪ Asked us about training for new technologies
• Please see Q2 2019 quarterly programs update for workforce development activities
Pipe natural gas to site, for use in gas water heater

- 58% system efficiency
- 235 therms/yr
- 1.25 MT CO2e

Generate electricity from natural gas, for use in electric resistance water heater

- 45% system efficiency
- 303 therms
- 1.61 MT CO2e
Natural Gas – the current view

Pipe natural gas to site, for use in gas water heater

- Natural Gas (CH4)
- 97% efficiency
- 60% efficiency
- 58% system efficiency
- 235 therms/yr
- 1.25 MT CO2e

Generate carbon-free electricity for use in electric heat pump water heater

- 94% efficiency
- 300% efficiency
- 282% system efficiency
- 48 therms (energy equiv.)
- 0 MT CO2e

Silicon Valley Clean Energy