



MATERIALS FOR 2019 BOARD RETREAT

Friday, June 28, 2019

8:30 a.m. – 2:30 p.m.

Wallis Annenberg Building @ Exposition Park
700 Exposition Park Drive, Los Angeles, CA 90037



Staff Report – Agenda Item 3

To: Clean Power Alliance (CPA) Board of Directors
From: Ted Bardacke, Executive Director
Subject: 2019 Board Retreat
Date: June 28, 2019

2019 BOARD RETREAT

CPA's Board of Directors will conduct a strategy and visioning session focused on key areas impacting CPA's future. Attached to this staff report is an outline for the Retreat along with background materials for the local programs strategy session and the three breakout discussion topics.

Attachments:

- 1) 2019 Board Retreat Overview
- 2) Speaker Biographies
- 3) Materials for Local Programs Strategy Session
- 4) Materials for Breakout 1 – Membership Expansion
- 5) Materials for Breakout 2 – CCAS & Changing Energy Landscape
- 6) Materials for Breakout 3 – Rates



Clean Power Alliance

Board of Directors RETREAT

June 28, 2019

AGENDA ITEM 3 – ATTACHMENT 1

Retreat Outline



**Clean Power Alliance
Board of Directors Retreat
Friday, June 28, 2019**

OVERVIEW

Timeline

8:30 AM	Check In (breakfast provided)
9:00 AM	Call to Order & Board Business Meeting
9:30 AM	Local Programs Strategic Planning Workshop
11:30 AM	Board Photo & Break to Grab Lunch
12:00 PM	Lunchtime Plenary Session
1:00 PM	Afternoon Breakout Sessions
2:00 PM	Breakout Session Report Outs & Closing Remarks
2:30 PM	Adjourn

Retreat Outline

- I. *Local Programs Strategic Planning Workshop*: CPA's local programs consultant team will facilitate an interactive workshop to collect feedback from Board members on priorities for CPA's future suite of local programs. Key questions include:
 - i. CPA has the opportunity to pursue a number of priority outcomes through its local programs, such as GHG reduction, local air quality improvement, job creation, local resiliency and climate adaptation, customer energy cost savings, etc. How should CPA

weigh these various priorities when choosing what programs to develop?

ii. How can CPA balance the pursuit of broad regional impact while addressing specific local needs and attending to populations historically underserved by energy programs and investments?

iii. What role can CPA's member agencies play in program delivery?

II. *Lunchtime Plenary Session:* An expert panel will discuss key issues CPA will face in the coming year. Emphasis will be on the topics to be discussed in the afternoon breakout sessions.

III. *Afternoon Breakout Sessions*

1. *Membership Expansion:* Dozens of jurisdictions in LA and Ventura Counties are not served by a CCA or Publicly Owned Utility (POU). What should be CPA's criteria when pursuing expansion to these jurisdictions? Beyond financial viability, should CPA have defined policy goals that new members would have to align with? How does broad-based expansion mesh with CPA's long-term environmental goals?
2. *CCAS & Changing Energy Landscape:* In the wake of PG&E's bankruptcy filing some Northern California CCAs are pursuing policies that would allow them to operate more like Publicly Owned Utilities. Additionally, SDG&E has announced its desire to exit the energy supply business and SCE has indicated that it is only one major fire away from insolvency. Should CPA seek to operate like a POU without lines and wires? What are the potential risks and benefits from doing so? What other potential changes in California's electric utility industry may affect the way CPA currently does business, and how should we plan to respond?

3. *Rates*: In the Fall of 2019 CPA will need to determine whether it will default its residential customers into Time-of-Use rates and, if so, what those rates will look like. What should be the main policy, financial, and customer impact considerations driving this decision? How will this decision inform other questions about CPA's rate making, including decoupling from SCE's rate structures and timelines, cost of service principles, and the attractiveness of rates that deliver higher environmental performance?

IV. *Report Out from Breakout Sessions & Closing Remarks*



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AGENDA ITEM 3 – ATTACHMENT 2

Speaker Profiles



**Clean Power Alliance
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SPEAKER PROFILES

Local Programs Goals & Priorities Speakers

CPA is working with a team of consultants, lead by Arup, to identify goals and priorities for its future development of local customer programs.

Douglas Nordham, Associate Principal & Project Manager, Arup



Doug Nordham's professional career has involved all phases of the management and growth of businesses in demand response, energy efficiency programs, and electric utility industries. With more than 40 years of hands-on experience in both the public and private sectors, Doug has several decades of experience with electric utility DSM programs—he has designed, managed, implemented, and provided E, M&V services for over 40 utility companies. His DSM program experience includes program design and management for (2) 50-MW Commercial/Industrial Third-Party Programs with Xcel Energy in Denver, Colorado from 1994 to 1999. Doug was also the Program Designer and Manager for several Demand Response programs including HECO, PSE, Tallahassee Utilities, Santee Cooper, SCE, PG&E, and ConEd.

Heather Rosenberg, Associate Principal & Los Angeles Resilience Lead, Arup



An ecologist by training, Heather Rosenberg brings close to 20 years of experience leading sustainability and resilience projects in the built environment. Her systemic approach integrates interdisciplinary teams to bring together technical expertise with stakeholder engagement and a commitment to social equity. Heather has worked with organizations ranging from local governments to real estate investment firms, home healthcare workers, transportation authorities and social justice organizations. Before joining Arup, Heather was the founder and president

of her own successful resilience strategy consulting firm, Fifth Road. She created the Building Resilience Network, a multi-stakeholder initiative designed to help public, private and non-profit organizations weave physical, social and economic resilience into core operations. Heather partnered with the USGBC-LA Chapter to create their Building Resilience-LA program. She convened a diverse team of regional subject matter experts to design a step-by-step process for resilience planning in the Southern California Region.

Tara Davis, Graduate Consultant, Energy & Sustainability Team, Arup



Tara Davis is a Graduate Consultant with the Energy and Sustainability team in Los Angeles. She first joined Arup in 2016 as an Environmental and Sustainability intern in the Sydney, Australia office. While in Australia, Tara helped develop environmental constraints mapping used to advise design decisions on major government developments and assisted with the drafting of Environmental Impact Statements for multiple key highway upgrades. In 2017, Tara interned in the Los Angeles office where she performed extensive research on renewables with an in-depth focus on solar energy. She also designed the renewable energy strategy, central utility plant placement, and low-carbon strategy for a masterplan competition, which Arup won. Since joining as a full-time Graduate Consultant in 2018, Tara has worked on significant projects including the C40 Sustainability pLAN for the City of Los Angeles, LADWP Energy Assessment, and several projects with the U.S. Department of State Bureau of Overseas Building Operations.

Retreat Panel & Breakout Session Speakers

CPA's Executive Director, Ted Bardacke, will moderate a panel discussion featuring two subject matter experts, on CPA's strategy for future growth, emerging energy market issues impacting CCAs statewide, and future considerations for CPA's ratemaking activities. Each speaker will participate in a breakout discussion with Board members to dive further into the issues.

Nick Pappas, Director of Strategic Initiatives and Outreach, CalCCA



Nick Pappas joined CalCCA in 2019 as the Director of Strategic Initiatives and Outreach, a role which blends energy policy development, stakeholder engagement, project management, and data science. A former Capitol staffer and energy lobbyist, Nick has spent much of the last decade negotiating, developing, and informing legislation impacting every segment of California's clean energy transition, from utility-scale renewable development and criteria pollution regulation to non-residential rate design and income-qualified solar programs. Nick left the Capitol community in 2016 to pursue an MS in Energy Systems from the UC Davis College of Engineering, where he was reminded that his enthusiasm for the electric drivetrain is matched only by his enthusiasm for the electric bicycle. Nick is an

ardent advocate for decarbonization and focuses his professional efforts on developing policy solutions which support grid decarbonization, energy and fuel efficiency, and the electrification of transportation, industry, and the built environment.

Brian Horii, Senior Partner, Energy + Environmental Economics (E3)



Brian Horii is an expert in costing and ratemaking, local integrated resource planning, generation system valuation and forecasting, decentralized energy systems, and energy efficiency. He has testified and prepared expert testimony for use in regulatory proceedings in California, Texas, Vermont, and British Columbia and Ontario, Canada. Brian has also designed and implemented numerous quantitative models used in regulatory proceedings, litigation, utility planning, utility requests for resource additions, and utility operations. The models include the “GHG Calculator” used to inform policy decisions on renewable resource and greenhouse gas emission in California, and the “E3 Calculator” used to evaluate all energy efficiency procurement by the California investor-owned utilities since 2006. He earned an M.S. in Civil Engineering and Environmental Planning, and a B.S. in Civil Engineering, both from Stanford.

Ted Bardacke, Executive Director, Clean Power Alliance



Ted Bardacke is Executive Director for Clean Power Alliance, California’s new, locally-operated, electricity provider for 31 communities and approximately one million customers across Los Angeles and Ventura Counties. Ted brings a unique background to the organization that includes broad experience in the public sector, renewable energy planning, sustainability program design, customer service, journalism, education, and non-profit leadership. Prior to joining Clean Power Alliance from the Office of Los Angeles Mayor Eric Garcetti, where he was Director of Infrastructure and Deputy Director of the Mayor’s Sustainability Office. In the 2000s, Ted co-founded the Green Urbanism Program at Global Green USA, and in the 1990s served as a foreign correspondent for the Financial Times of London, based in first in Mexico City and then in Bangkok. Ted holds degrees from Wesleyan University and the Graduate School of Architecture at Columbia University and taught at UCLA’s Luskin School of Public Affairs for the from 2008 to 2018.



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AGENDA ITEM 3 – ATTACHMENT 3

Background Materials for:

Local Programs Goals & Priorities Session



Clean Power Alliance

Local Programs Strategic Plan Process

What are we seeking to accomplish with the Local Programs Strategic Plan?

- 5-Year Strategic Plan to guide customer programs and investments from 2020-2025
- Informed by stakeholder community and the CPA Board of Directors and Community Advisory Committee
- Supported by technical and economic analysis
- Conducted through a rigorous and transparent process
- Will include evaluation of equity, cost, GHG reduction potential, alignment with member agency sustainability goals, and workforce development, amongst other factors.

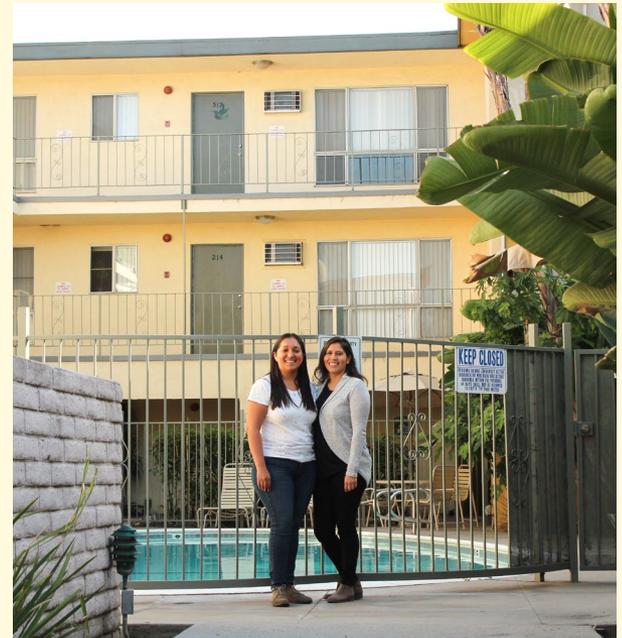
Community Engagement Process

Goal setting workshops:

- CPA CAC Workshop **June 13**
- LA Public Workshop **June 18**
- **CPA Board Workshop June 28**
- Ventura Public Workshop **July 25**
- Stakeholder Interviews **June-July**

On-Line Survey (*English, Spanish, and Chinese*):

- On CPA's website—please spread through your networks!
<https://bit.ly/2X2pBOh>



Goal for Today's Conversation

We want to hear from YOU:

- What are the top priority outcomes for local programs and how should CPA weigh these priorities when selecting programs?
- How to balance broad regional impact while addressing local needs and populations?
- What role can CPA's members play in program delivery?



This Session is NOT

- About specific technologies
- Time to start designing programs

This Session IS

- About identifying critical issues
- Time to articulate guiding principles for CPA programs
- What should CPA programs accomplish?

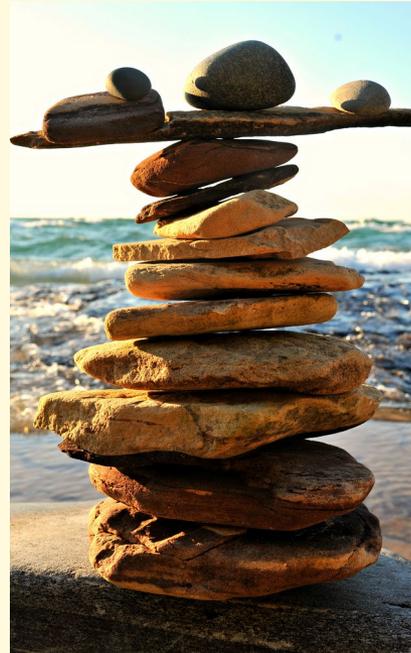
Key Question of Session:

What program outcomes should CPA prioritize?

Areas to Consider

- Environment
- Equity
- Economy
- Resilience

Note: These are all interrelated; consider all as you develop your priorities.



Environment



What are critical environment issues that CPA programs should address?

Social Equity



What dimensions of social equity can CPA programs promote?

Economy



What economic issues should CPA programs address?

- Issues for communities?
- Issues for CPA?

Resilience



What shocks or disruptions should CPA programs protect against?
What underlying vulnerabilities should CPA programs address?

In your groups, discuss and answer:

What program outcomes should CPA prioritize?

While considering previously identified priority outcomes:

Environment

Social Equity

Economy

Resilience

1. Improve air quality and public health
2. Via electrification, reduce GHGs in transportation and buildings
3. Address underserved population/market segments (e.g. renters, multi-family buildings, disadvantaged communities)
4. Cost-effectively manage Southern California's increasing reliance on intermittent electricity resources
5. Leverage other funding sources but don't duplicate other programs
6. Partner with CPA member agencies for implementation to help address local needs, disaster preparedness, resiliency and sustainability
7. Enhance job creation and workforce development in the green economy

Context for Priority Outcomes

Think about what outcomes you'd like to see given this context:

- **Priority Tradeoffs** How should CPA weigh various priorities when choosing what programs to develop?
- **Regional vs Local Applicability** How can CPA balance broad regional impacts while addressing specific local needs and attending to underserved populations? Which improvements are likely to be achieved through a regional approach vs. a local tailored effort?
- **Partnerships** What role can CPA's member agencies play in program delivery?



What program outcomes should CPA prioritize?

Choose 2-4 outcomes and write them down

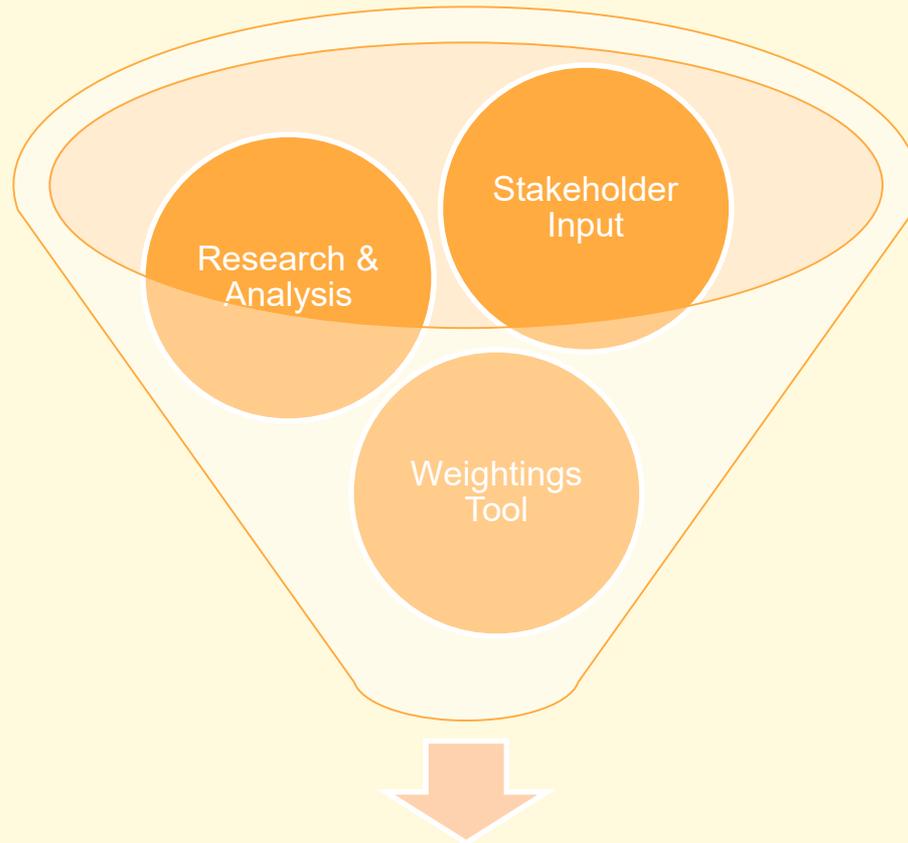
Report Out

Put **2-4** refined outcomes on the wall

You each have **4** dots to vote – one color for local priority outcomes and one color for broad regional outcomes



Next Steps & Timeline



Guidance & Recommendations
Fall 2019; Return back to the CAC and Board

Questions?

Thank you!

APPENDIX

Recap from the last CAC Meeting: Four Ways CPA Can Invest to Achieve Our Goals

- **Rates**, e.g. the creation and use of new rates to support programs, investments, customer behavior
- **Procurement**, e.g. purchasing electricity and energy storage from specific types of technologies within our service territory and/or Los Angeles Ventura Counties
- **Investment of net revenue into programs**, to support up-front investment necessary to launch and/or operate local programs. Could be direct expenditure by CPA or in the form of customer rebates/incentives
- **Administration of public programs funded by state agencies**, e.g. GHG reduction programs funded through CPUC, California Energy Commission, California Air Resources Board

Metrics

Outputs	Working Definition	Notes/Details
Program ROI	Program NPV	NPV for CPA should include all costs (capital, start up, operations) and revenues (e.g., electric sales). Monetize benefits that have real value. Reflect grant funding or other co-investment by external parties.
Customer Financial Impact	Average annual bill savings or cost increase per customer (individual bill-payer) measured against the current cost baseline (customer NPV)	Calculation should account for capital investment, any co-investment by customer, and benefits (e.g., reduced fuel usage/cost, energy savings)
Job Creation Score	Number of jobs created by program	One job=one year FTE equivalent. Further questions to consider: how to quantify/calculate workforce development, temporary vs. permanent; direct, indirect or both
Wage-Impact Score	Program's impact on wages	Measures the type of job created. Consider scoring based on wage blocks.
Equity: DAC Populations Served	Disadvantaged populations covered by the program	Assign points to categories of populations based on their level of need.
Equity: Locational DAC Score	Location of served population(s)	Assign scores to prioritize program concepts that target specific DAC locations with better incentives or other benefits
GHG Benefits	Metric tons CO ₂ e reduced by program	Specific methodology TBD. Additional discussion needed
Criteria Pollutant Score	Air quality benefits created by the program	Sox, Nox, PM10, PM2.5, maybe ozone; rolled up
Feasibility Score	Likelihood of the program's adoption/success	Score based on program's alignment with specific feasibility factors including: sufficient local resources, public awareness, collaboration potential, evaluability, implementer's qualifications, level of effort required by customer, administrative needs. Programs must achieve minimum threshold (TBD) score to move forward
Resiliency Score	Program's impact on local resiliency	Score based on program's alignment with specific feasibility factors including: emergency back up power, islanding, fire mitigation, others TBD

Customer Programs Offered by Other CCAs

	CleanPowerSF	Lancaster Choice Energy	Peninsula Clean Energy	Marin Clean Energy	Sonoma Clean Power	Apple Valley Choice Energy	East Bay Community Energy	Silicon Valley Clean Energy	Pioneer	PRIME	Redwood Coast Energy Authority	Solana Energy Alliance	Monterey Bay Community Power	Clean Power Alliance	San Jose Clean Energy
Budget Billing	In dev.	✓			In dev.						In dev.				
Battery Storage Rate				✓											
Customer Load Shifting				✓	✓										
Demand Response			In dev.	In dev.			In dev.	✓			✓				
EV Bus Program		✓													
EV Incentives		In dev.	In dev.	✓	✓								In dev.		2019-20
EV Load Shifting				✓	✓										
Energy Efficiency		In dev.		✓	✓					In dev.	✓				
Low-Income & Multifamily EE				✓						✓	✓				
Feed-In Tariff	In dev.			✓	✓						In dev.		In dev.		
Fuel Switching				✓	✓			In dev.			✓		In dev.		2019-20
Low Income Solar Incentives	✓		In dev.	✓			2019			✓					
On Bill Repayment	In dev.			✓	In dev.						✓				
Community Outreach Grants			✓						In dev.						
Community Energy Grants			In dev.						In dev.						



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AGENDA ITEM 3 – ATTACHMENT 4

Background Materials for:

Breakout Session #1 – Membership Expansion



Memorandum

To: Clean Power Alliance (CPA) Board of Directors

From: Ted Bardacke, Executive Director

Subject: CPA Expansion Considerations

Date: June 28, 2019

SUMMARY

During its formation phase in 2017 and 2018, CPA was a compelling choice for many local governments. Los Angeles County provided (and continues to provide) start-up costs, while multiple rate offerings and the ability for local communities to choose their own default provided a way to strike a balance between competitive rates, high environmental performance, and local community interests. The opportunity to shape Southern California's broader energy landscape through regional cooperation and to have a locally-controlled energy program was also attractive to new members.

Now, as a large operating CCA covering a wide geographic territory, CPA should consider three main issues when deciding whether and how to pursue further expansion:

- **Geographic:** Are there particular areas to target within LA and Ventura Counties and should expansion outside of LA and Ventura Counties be considered?
- **Financial:** Can CPA continue to self-fund the start-up costs associated with new members and what would be the longer-term cost/rate impact of those new members?
- **Policy:** Are there immediate or future changes to CPA's rate offerings and/or default levels that should be considered and communicated to potential members?

Further details about each of these issues is provided below, including policy options for CPA's future rate tiers.

GEOGRAPHIC LANDSCAPE AND OPPORTUNITIES

In 2020, five new communities in Los Angeles County will establish CCAs. Westlake Village will join CPA, while Pomona, Baldwin Park, Commerce, and Palmdale will launch City-specific CCAs under the Lancaster-controlled Joint Powers Authority (now called CalChoice).

This leaves four geographic clusters which CPA could focus on with an emphasis on pursuing socio-economic and demographic diversity as well as key electrified load pockets like bus depots, light rail power, and ports:

- South Bay Cities, including Hermosa Beach, Torrance, Inglewood, Compton, and Long Beach¹
- Southeast Cities, including South Gate and Maywood
- San Gabriel Valley Cities, including El Monte, Monterey Park, San Gabriel, and Rosemead
- Remaining Ventura County Cities, i.e. Santa Paula, Fillmore, and Port Hueneme²

In addition, the Cities of Santa Barbara, Goleta and Carpinteria, along with Santa Barbara County, have approached CPA about potential membership.

FINANCIAL IMPACT OF NEW MEMBERS

The three major financial considerations in taking on new members are: 1) the ability to finance their launch phase, 2) whether new members put upward or downward pressure on procurement costs (and therefore rates), and 3) how a new member's load profile and default rate choice impacts CPA's overall cost of service. Each of these three

¹ Long Beach is continuing to study forming its own CCA. They face some significant risk as a large portion of their load is concentrated in just a very few customers.

² Santa Paula also filed a 2020 Implementation Plan through CalChoice but has decided to delay launch. It is unlikely that CPA would be a competitive offering for Santa Paula or Fillmore until it could lower Pumping/Agricultural rates.

financial components would be part of study CPA would conduct before accepting a new member.

Regarding start-up financing, CPA staff believes that by 2021 or 2022 it will likely be in a position to finance the inclusion of new members without asking for a contribution from them. This is a major differentiator of CPA compared to CalChoice, which requires start-up working capital to be provided by cities. However, depending on the size of the expansion and time needed to recover those costs, financing new members with internal cash can decrease the amount of liquidity on hand and therefore diminish the strength of CPA in the eyes of credit rating agencies.³

The procurement/rates pressure impact of CPA membership expansion is less certain. Membership expansion in an era of falling energy prices keeps costs for everyone down and reduces upward pressure on rates.⁴ Likewise when energy prices are rising, new membership puts upward pressure on procurement costs and rates as CPA would need to acquire more units of more expensive energy; the additional costs would be socialized across all CPA ratepayers. With significantly rising resource adequacy (RA) costs and volatile Southern California natural gas markets that lead to energy market price spikes, CPA is likely to face this rising price environment through at least 2021/2022. At that time, CPA's long-term renewable energy contracts will start to come on line and start to be a countervailing factor.

The impact of membership expansion on CPA's cost to serve customers and ability to maintain its rate competitiveness while recovering costs is highly dependent on a new member's load profile and the default rate tier they choose. CPA anticipates that over the medium term it will be easier match costs and revenues with the 100% Green customers than with customers on the Lean and Clean rate tiers. Therefore, what default tier a new member elects will be a key consideration in how that new member impacts CPA's financial performance.

³ One way for CPA to mitigate this would be to acquire a larger Revolving Line of Credit.

⁴ Marin Clean Energy was able to maintain rate competitiveness with PG&E in part because of successive expansions during a declining price environment.

DEFAULT RATE POLICY

CPA is still in its infancy when it comes to rate setting policy and mechanics. When doing outreach to prospective members, it is important to be transparent about where CPA is going with its rate structure and options. Given the climate crisis, the desire to continue to differentiate the CPA brand as an environmental leader, further refrain from blindly indexing CPA's rates to SCE's rates, and ensure long-term financial stability, staff has begun internal discussions about the possibility of CPA establishing 100% Green as the default rate across all CPA territory sometime in the 2020s.

There are several variations for how such a transition to 100% Green default might work. The least disruptive would be for CPA to set 100% Green as the default rate for new members jurisdictions and new customers in existing jurisdictions, while still offering lower priced rate options for individual customers to choose. Under this variation, existing customers would not be impacted by establishing this policy. Existing members agencies would retain their right to change their default rate for their entire communities.

Moving in this direction too quickly (e.g., by 2022) would likely limit the pool of interested new members, though it may also make it more financially viable for CPA to take on those members who do decide to join under these conditions. Moving at a more moderate pace towards a 100% Green default (e.g., by 2025 or later) would allow newly joining members to enter the program a lower initial default – thus expanding the pool of new members – while still putting the CPA as a whole on a path to a large 100% Green customer base across territory through new customer accounts and elective default changes by individual member agencies. Under such a moderate scenario, existing members may be asked to similarly target 2025 (or whatever date is chosen for the new members) to move to 100% Green as their default, though this could be extended and would likely be made voluntary until some future date.

In either case, any significant policy moves of this type should be considered prior to having conversations with potential new members and/or studying their financial impact on the organization.



CPA Expansion Considerations

CPA Board Retreat

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Why would CPA want to expand?

- **Geography**
 - Fill in service territory gaps
 - Increase diversity
 - Pick up desired load pockets
- **Financial**
 - Can alter procurement costs – upwards or downwards
 - Follows through to rates
 - Default level of a new member matters
- **Policy**
 - More choices to more customers
 - Higher environmental performance for Southern California

Things to think about

- **Geography**
 - Can create strategy but be ready for opportunity
 - Open to just saying no or very limited “fill-in-the-gap” expansion for the next few years
- **Financial**
 - Mostly a technical matter – could be go/no-go
 - Default choice matters – could influence go/no-go and potential contribution
- **Policy**
 - For future members should they have the same default options
 - What about future customers in existing member agencies

100% Green Default?

- **New Members**
 - After a certain date, they don't get to choose
 - Individual customers can still choose
- **New Customers in Existing Cities**
 - After a certain date, they default in at 100% Green
 - Individual customers can still choose
- **Key Questions Summary**
 - Is the assumption that “expansion is good” accurate?
 - Are there particular policy choices we want to decide/signal ahead of time to potential new members?
 - Is medium to long-term rate harmony at 100% Green a goal?



Clean Power Alliance

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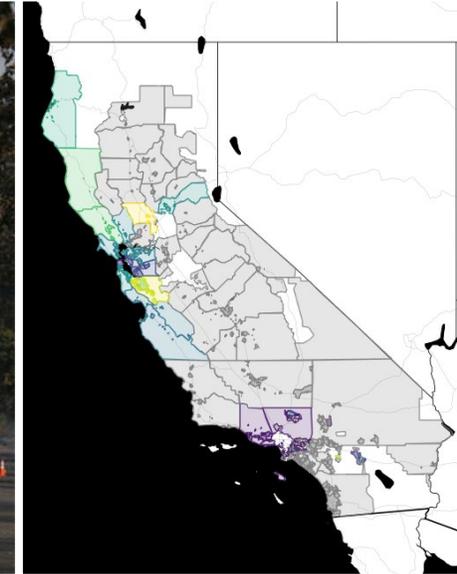
AGENDA ITEM 3 – ATTACHMENT 5

Background Materials for:

**Breakout Session #2 – CCAs and the Changing
Energy Landscape**

CCAs and the Changing Energy Landscape

CPA Board Retreat, June 2019



CALIFORNIA COMMUNITY CHOICE ASSOCIATION cal-cca.org

The Electric System in Transition

California's electric system is undergoing rapid transitions on several axes:

- **Local Power:** CCAs serve 10 million Californians (with more expected in 2020!), rapidly supplanting the traditional retail supplier function of the state's investor-owned utilities.
- **Catastrophic Wildfires:** PG&E is in bankruptcy. SCE and SDG&E are solvent, but wildfire risk looms large.
- **Decarbonization:** Renewable output is booming – in May 2019, CAISO recorded all-time peaks for instantaneous solar (11,358MW) and wind (5,309MW) production.
- **Technology and Choice:** Customers increasingly demand energy choice – community choice, competitive suppliers (DA), distributed generation, smart homes, and more.

A New Regulatory Paradigm?

In the face of these transitions, policymakers are confronting difficult policy questions:

- **Safety:** How will utilities and policymakers address catastrophic wildfire risk?
- **Sustainability:** How to execute the state's vision for a decarbonized energy system?
- **Reliability:** How to ensure sufficient energy resources as we transition away from fossil resources?
- **Affordability:** How to mitigate the cost impacts of these transitions on ratepayers?

Restructuring in the Era of CCA

Overlaid on all of these questions are structural questions about the industry:

- Will energy markets be fully reopened to for-profit providers (direct access)?
- Alternately, will CCAs evolve to look more like municipal utilities sans infrastructure (e.g. provide billing, additional customer service, etc.)?
- If IOUs no longer serve retail load, who will serve customers without a CCA? What should be done with IOU generation portfolios?
- What is the proper role for state agency oversight? State-level coordination? State-level central procurement?

Five Flavors of Future Outcomes

Municipalization	"Community Energy Provider"	Status Quo	Non-Residential Competition	Full Competition
<ul style="list-style-type: none">• All customers served by municipal utility	<ul style="list-style-type: none">• CCA absorbs bundled IOU customers• No expansion of direct access• CCA as POLR in service territory	<ul style="list-style-type: none">• CCA competes with IOU• Competition with direct access, but limited• IOU as POLR	<ul style="list-style-type: none">• CCA competes with direct access providers for non-residential customers• Utility (or other) as POLR	<ul style="list-style-type: none">• CCA competes with direct access providers for all customers• Utility (or other) as POLR

*Provider of Last Resort (POLR): the entity responsible for providing backstop service.



Implications for CCAs

Municipalization / Community Energy Provider

- Increased load certainty and financial stability
- Facilitates “no regrets” investments in new renewable projects, customer programs
- Increased autonomy *and* state oversight / coordination
- Moves “choice” from the customer to local government

Status Quo

- Competition focused on IOU as benchmark
- On-going regulatory and market friction due to unresolved transitional issues
- Widely perceived as unsustainable and unlikely to continue

Partial / Full Retail Competition

- Competition with less regulated, for-profit providers
- Increased risk for long-term or above-market investments due to load uncertainty
- Reaction likely to be push for more centralized procurement and/or state oversight

STABILITY

COMPETITION

CPA's Perspective is Important

These policy choices are actively under debate and have been made a focus of the new Administration*:

- **Central Procurement and State Oversight**
 - AB 56 (E. Garcia), SB 350 (Hertzberg), SB 155 (Bradford)
 - Resource Adequacy Proceeding, Integrated Resource Plan Proceeding
- **Retail Choice and Provider of Last Resort**
 - SB 520 (Hertzberg)
 - CPUC Direct Access Proceeding (SB 237)
- **The Future of IOUs**
 - AB 56 (E. Garcia), SB 350 (Hertzberg)
 - Power Charge Indifference Adjustment Proceeding
 - PG&E Bankruptcy Court



June 20, 2019

The Honorable Gavin Newsom
Governor, State of California
State Capitol
Sacramento, CA 95814

Re: Governor's Strike Force Report and Improving Reliability in California's Electricity Market

Dear Governor Newsom,

The California Community Choice Association (CalCCA) represents California's Community Choice Aggregators (CCAs) and appreciates the responsive and insightful Strike Force Report, *Wildfires and Climate Change: California's Energy Future*.¹ While investor-owned utilities (IOUs) continue to serve their traditional role as providers of electric generation and delivery services, as your Strike Force report notes, "IOUs increasingly are becoming 'poles and wires' – companies that are responsible for constructing, maintaining, and operating the facilities over which electric energy is delivered to customers."² CCAs are the predominant driver of this transition – CCAs now provide the energy supply for 10 million Californians, a figure which is expected to grow dramatically by the early 2020s. CCAs represent all segments of the state's geographic and socioeconomic diversity and are operational in all three of the large IOUs' service territories.

As discussed in the Strike Force Report, transformations are occurring at every level of the state's electric sector. Consistent with our environmental goals, California's generation fleet is rapidly decarbonizing, presenting opportunities and challenges. Energy choices are becoming more local and communities are raising the bar on renewable energy targets. CCAs are enabling California's communities to directly engage in decarbonization through innovative programs at rates often lower than those of the investor-owned utilities. Finally, and most critically, the new reality of catastrophic wildfire risk – in addition to its grave implications for local communities – is forcing a fundamental shift in California's relationship with its utility infrastructure.

It is in this context we must reconsider which regulatory approach is best suited to achieving the ambitious goals envisioned by state and local policymakers with respect to the safety, reliability, affordability, and decarbonization of the electric system. CalCCA provides several recommendations to improve reliability of electricity service, reduce risk associated with IOU operations, and improve community resilience related to catastrophic wildfires.

¹ *Wildfires and Climate Change: California's Energy Future (Strike Force Report)*, April 12, 2019.

<https://www.gov.ca.gov/wp-content/uploads/2019/04/Wildfires-and-Climate-Change-California%E2%80%99s-Energy-Future.pdf>.

² Strike Force Report, p. 19.

Ensuring Reliability in a Decarbonized Future

CalCCA recognizes that the multi-decade transition to a fully decarbonized energy system requires prudence, coordination, and accountability.

- **Adopt Near-Term Modifications of the Resource Adequacy Program to Ensure Reliability and Facilitate Compliance:** CalCCA is actively working with regulators to enact much-needed reform of the state's Resource Adequacy (RA) program, including on-going efforts to develop a sales framework to facilitate the timely sale of excess capacity in IOU portfolios and to utilize multi-year procurement to stabilize the market and sustain necessary power plants otherwise at risk of closure. Further, CalCCA encourages policymakers to shift to the California Independent System Operator's needs assessment for local capacity in assigning compliance obligations to send better and more precise economic signals to load-serving entities (LSEs) developing new reliability resources.
- **Evaluate Resource Adequacy Back-Stop Options Through the Legislative Process:**³ CalCCA supports the development of a central procurement mechanism which would serve as the default buyer for RA while authorizing load-serving entities (LSEs) to self-procure at their discretion. CalCCA's proposal, the *Central Reliability Authority*, would improve reliability and accountability within the RA program. It is important that the scope of central procurement be limited to RA, excluding renewables and other resources, to avoid uncertainty, increased cost and risk that could chill the aggressive renewable procurement currently underway by CCAs.
- **Utilize the Integrated Resource Plan Process to Coordinate and Inform CCA Procurement:** The Integrated Resource Plan (IRP) process should guide, but not mandate LSE procurement. Mandating procurement would eviscerate the local governance and responsibility conferred on CCAs by the California Legislature, jeopardizing the ability of LSEs to achieve California's climate goals at lowest cost. CCAs do not need a mandate as they have exceeded state renewable targets since the first CCA launched. In the current IRP process, CCAs proposed the development of over 10,000 megawatts of new renewable and energy storage projects by 2030 to meet their communities' decarbonization goals – contrasted with all other providers and IOUs combined proposing only 1,000 megawatts. The IRP should let the CCAs deliver on their climate leadership.
- **Establish a Policy to Reduce Reliance on Fossil-Fuels for Electricity:** California's climate leadership has started a rapid transition toward renewable and non-emitting energy resources. However, the collective sum of power plants available to serve customers' local and system peak demand and flexible resource needs continue to be composed largely of natural gas generation. CalCCA supports the development of a policy framework that ensures the continued deployment of clean resources and institutes an orderly transition away from the fossil fuels powering our grid.

³ Strike Force Report, p. 24.

Let Utilities Shed Risk Through a Transition to Public Energy Providers

The IOUs should be completely focused on addressing the pressing and persistent challenges regarding utility infrastructure safety, reliability, and affordability.

- **Establish a Pathway for Utilities to Exit from Electric Generation Service:** In order to better focus on infrastructure safety, policymakers should facilitate the process for an IOU to exit its electricity generation and retail service. In 2019, there is a compelling policy rationale for two IOUs to undergo such a transition: Pacific Gas and Electric, a utility in dire need of organizational reform and an improved focus on the management of its transmission and distribution system, and San Diego Gas and Electric, a utility which expects to lose a majority of its load to CCAs in coming years and has asked policymakers to facilitate an exit. CalCCA believes that state policy goals would be better served through the development of an orderly transition process that facilitates IOU exit at the discretion of either the utility or its regulator.
- **Transition Remaining Utility Customers to Public Energy Providers:** In the event that an IOU ceases to provide electricity generation services, policymakers should transition the IOU's remaining bundled customers to public energy providers. For communities served by CCAs, policymakers should establish a pathway for the CCA to become the sole provider for that community, shifting bundled IOU customers into the CCA, and ease the process for the CCA to municipalize local service. For communities not served by a local government energy provider, a public, central entity should be established to provide energy service unless and until a locally governed alternative is instituted.
- **Right-Size Utility Energy Portfolios Based on Departed Load:** CalCCA supports the development of a process for IOUs to divest their utility-owned generation and third-party power contracts while preserving obligations to existing counterparties. For resources which are divested or resold below cost, utilities would recover stranded costs through a transitional charge to be paid over a fixed period of time which applies to all customers on whose behalf that resource was developed. Leaving these excess resources in the hands of one market participant that has guaranteed cost recovery creates risks of an illiquid market and inflated prices borne by ratepayers.

Addressing Catastrophic Wildfire Risk in the Electric Sector

The “new abnormal” of wildfire risk represents a daunting and unprecedented challenge for all Californians. In addition to the grave direct threat of fires and smoke, the indirect impacts of wildfires pose serious risks to our communities.

- **Improve Coordination Between IOUs and Impacted Communities:** CCAs are in discussions with their distribution utilities to expand the reach of customer communications through CCA channels. CCAs and local government first responders are experiencing significant challenges receiving adequate notification related to Public Safety Power Shutoff (PSPS) events in advance and following de-energization. While IOUs are working diligently to improve coordination, a recent event involved less than 24-hours notice before de-energization and no notice that re-energization took place.
- **Meet the New and Significant Reliability Challenge Caused by PSPS Events:** IOUs have indicated that PSPS events may last five days or longer and advise communities and individuals to be prepared. Much more is needed to prepare communities and their most vulnerable members including seniors and the medically fragile community, critical care facilities, retirement homes, and residential care facilities. CCAs are well positioned to facilitate planning and deployment of community-scale and customer-scale distributed energy resources in communities at risk for PSPS events. The state needs to provide resources and opportunities to meet this new reliability challenge before a PSPS event results in a tragic outcome.
- **Liability Reform Should not be Considered without Organizational Reform:** The Strike Force Report highlights potential methods for mitigating utilities’ liability impacts from wildfires, including establishing funds to manage utility liquidity in the event of catastrophic wildfire liability, revising standards of fault currently in place for utility-ignited fires, and a catastrophic wildfire fund which could serve to socialize the costs of fires across a broader suite of ratepayers⁴. While CalCCA recognizes that a financially stable transmission and distribution system is an essential piece of a well-functioning electric industry, CalCCA strongly urges policymakers not to consider financial or liability reforms applicable to IOUs *until significant reforms are achieved which improve safety and safety culture within the utility*. CalCCA appreciates and echoes the Governor’s comments on April 12 that “All options with PG&E are on the table.”⁵

CalCCA believes that it is time to reduce risk and focus utilities on their core mission of infrastructure safety. CalCCA recommends policymakers develop a comprehensive plan that improves safety and reliability, allows IOUs to shed risk, and meets the new challenges posed by wildfires.

⁴ Strike Force, p. 36-40.

⁵ Governor Newsom’s Remarks on Strike Force Report, CalOES, April 12, 2019. 45:30.
<https://www.youtube.com/watch?v=gncpih-XfrE>

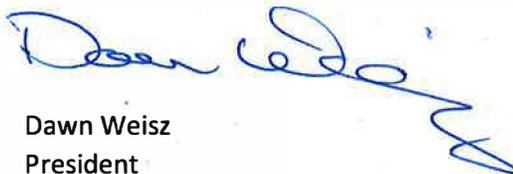
Conclusion

Thank you for your leadership throughout this challenging time in California's history. CalCCA appreciates the opportunity to engage with the Governor's Office, the Administration, and our elected leaders in the State Legislature on these important issues. CalCCA wishes to be a partner to state policymakers as they address these questions and is eager to engage further as legislative and regulatory deliberations move forward.

Sincerely,



Beth Vaughan
Executive Director
California Community Choice Association



Dawn Weisz
President
California Community Choice Association

cc:

The Honorable Toni Atkins, Senate President Pro Tem
The Honorable Anthony Rendon, Speaker of the Assembly



Clean Power Alliance

Board of Directors Retreat

June 28, 2019

AGENDA ITEM 3 – ATTACHMENT 6

Background Materials for:

Breakout Session #3 – Rates

Clean Power Alliance

Residential Default Time-of-Use (TOU) Electric Rate Structure Primer

Prepared for CPA Board Retreat

28 June 2019



Energy+Environmental Economics

TOU Rate Primer

Energy and Environmental Economics, Inc. (E3) was engaged by CPA to support analysis of rate structure options for its residential customers and to recommend a strategy regarding which alternative(s) to pursue. This Primer provides an overview of California policy factors that influence residential rate design for the state's investor-owned utilities (IOUs) and provides information on key issues that the CPA Board will need to consider when deciding on whether to mirror Southern California Edison (SCE) in adopting default Time-of-Use (TOU) rates for its residential customers in 2020.

The CPA Board will consider this decision in the context of a broader discussion about ratemaking. To date, CPA has indexed its rates to SCE's rates, in order to maintain the approved bill comparison ranges for the majority of customers (1-2% savings for Lean Power, 0-1% savings for Clean Power, and 7-9% premium for 100% Green Power). This has necessitated multiple rate changes throughout the course of 2019 to maintain these bill comparisons, exposed CPA to unanticipated cost shifts, and led to a situation where certain customers do not cover the cost to serve them.

The move to residential TOU provides an opportunity for CPA to further reexamine its residential rate setting approach and consider other rate design options, such as different TOU pricing ratios. This would cause CPA to move away from the stated SCE bill comparisons, but may help the organization achieve other goals such as reduced greenhouse gas (GHG) emissions and lower energy costs, which in turn reduce upward pressure on rates. It would also be a further step towards deindexing CPA's rates from SCE's rates, or in other words establishing CPA rates in relation to CPA's cost of service rather than indexed to a specific rate discount or premium to SCE's base rate.

E3 will follow up its participation in the Board retreat with technical analysis that will support the development of recommendations on TOU for the Board to consider in the Fall of 2019.

California Rate Design Policy and the Move to Default TOU

As more renewable energy is being added to California's power system, energy prices have become highly volatile at different times of the day, with low prices during the middle of the day, when solar generation is in abundant supply, and high prices during the early evening, when solar generation decreases and loads increase. TOU rates provide customers with a price signal to consume energy during times when generation supply is plentiful and reduce consumption during peak demand periods.

The benefits of TOU rates include: (1) the potential to shift load to off-peak periods to help absorb renewable energy that would otherwise be curtailed, and (2) reduced system capacity needs and reduced GHG emissions related to shifting load from on-peak to off-peak periods. In addition, reduced need for natural gas plants in the on-peak period can improve local air quality. These potential benefits can be achieved by any customer on a TOU rate structure, regardless of whether they are served by an IOU, CCA, or other retail provider.

Currently, TOU rates are optional for residential customers without photovoltaic (PV) solar. To date, CPA has mirrored SCE's generation rate offerings for residential customers, including offering optional TOU rates to customers who elect to be served on a TOU rate structure.

Residential TOU Default

California's IOUs, including SCE, will begin offering default TOU rates to residential customers starting in October 2020. This change is in accordance with Section 745 of the California Public Utilities Code. This law applies only to an IOU's employment of default time-of-use rates for residential customers; Section 745 does not govern a CCA's determination to default its customers onto TOU rates.

The term "default" means that most residential customers will be transferred from their current rate structure to a TOU design but that customers *may opt out* and instead select a different structure – either TOU or non-TOU – offered by their utility. California IOUs have recently gained preliminary approval from the California Public Utilities Commission (CPUC) regarding the TOU and non-TOU designs they will offer to residential customers.

The CPUC notes that CCAs have the discretion to determine with respect to their own customers, among other things:

- (1) whether its customers should be defaulted to TOU generation rates;
- (2) what the peak periods and price differentials should be for any default TOU generation rate;
- (3) whether to provide bill protection to any customers defaulted onto a TOU generation rate; and
- (4) whether any customer groups should be excluded from a default TOU generation rate.

SCE's default TOU rate design proposals for generation rates reflect the utility's cost of serving bundled residential customers throughout its entire territory. However, CPA has a load shape and cost structure

that differs from SCE's, and therefore may want to consider alternative rate designs rather than mirroring default TOU rate design proposals.

CCA Cooperation and Timing

The CPUC notes that a CCA cannot unilaterally implement a rate without the IOU's assistance. There may be legitimate operational considerations that prevent the IOU, as the billing agent, from implementing a CCA's chosen generation rates and rate structure in the timeframe desired by the CCA, especially during the period when the IOUs will be mass migrating their residential customers onto default TOU rates.

The CPUC ordered that SCE shall prioritize the transition to default TOU of any CCA that: (1) provides notice by October 2019 of its intent to participate in default TOU during the initial default TOU migration, and (2) timely provides rate and implementation details such that a final transition plan can be in place no later than six months prior to the CCA's scheduled default period.

If a CCA is unable to meet the October 2019 notice of intention deadline but is able to finalize a transition plan six months in advance of the scheduled rollout of default TOU to its customers, SCE is ordered to make a good faith effort to accommodate a CCA's transition to default TOU at the scheduled time during the initial default TOU migration period.

Residential Rate Overview

How did we get here and where are we going?

There are numerous goals that utilities and regulators must wrestle with in deciding on rate designs. For example, the goal is to establish rates that:

- Fairly recover costs from customers,
- Are simple to understand,
- Incent customers to use less power when it is most costly to produce that power,
- Are stable and predictable,
- Help promote important public policies, and
- Mitigate unacceptable bill increases for individual customers.

These goals are often at cross purposes with each other, and traditional residential rates in California were driven primarily by simplicity and stability. Furthermore, in response to rising electricity rates due

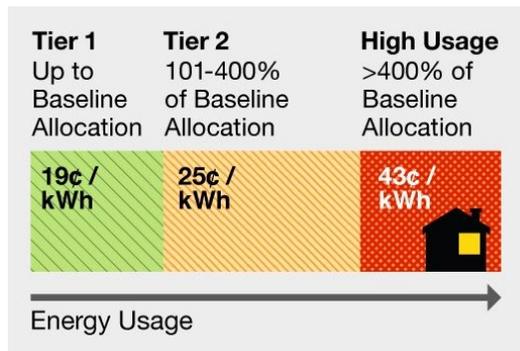
to the oil crisis, in 1975 the California legislature passed Assembly Bill (AB) 167 which directed CPUC to designate a lifeline (baseline) quantity of electricity specifically to cover heating, lighting, cooking and refrigeration. This lifeline requirement created a temporary freeze in rates for a “baseline” level of electricity usage, and thereby established the increasing tier structure where usage above the baseline level was charged higher rates.

SCE Tiered Rates

Currently tiered rates occur only on the transmission and delivery portion of the bill, while SCE’s residential generation rates are the same regardless of usage tier. Therefore, to date CPA has chosen not to offer tiered residential generation rates in order to mirror SCE’s approach. SCE’s tier approach on the delivery is described below.

Tiered Rate Characteristics

- Electricity costs the same flat rate, regardless of when it is used.
- The cost of electricity is the same per kWh within each block, or Tier.
- As you consume more electricity in the month, you may move into the next Tier, and your subsequent usage is billed at that new Tier’s rate.
- The amount you can purchase in each Tier is determined by your Baseline Allocation. Baseline Allocation varies by region and season (due to weather differences) and is higher if you have certain medical devices or are an all-electric home.



Tiered rates that increase like SCE’s create a strong incentive to use less electricity. This promotes conservation programs, and adoption of solar PV.

In addition to the energy charges shown above, the SCE residential rates include both a small Basic Charge and a Minimum Charge. The Basic Charge is the same for all residential customers, regardless of usage. It is generally considered a charge to recover the fixed costs of billing, metering, and account services. The Minimum Charge is also the same for all residential customers and ensures that all residential customers pay at least this Minimum Charge amount each billing period. The Minimum Charge is typically justified via the argument that there is a certain amount of cost that customers impose on the utility even at very low or no usage. Given the simplistic form of the residential rates,

customers may not otherwise be charged for such costs; the Minimum Charge is therefore a means to roughly address this problem.

So why is California moving away from flat tiered rates?

The energy crisis of 2001 caused the introduction of more tiers and much higher cost tiers than had previously existed. In order to protect smaller users, AB 1X did not allow rates to increase for customers with usage below 130% of baseline. Despite this requirement, residential rates needed to rise substantially due to crisis-related costs, forcing the utilities to introduce very large increases to the rates for tiered usage about 130% of baseline.

While this caused some immediate inequity concerns, the problem became a major issue when large residential customers began to install solar PV on their roofs to avoid those large upper tier charges. This created concerns at the utilities and at the CPUC that these large, mostly affluent customers were seeing “overly generous” bill savings and thereby shifting costs onto other utility customers (see *Cost Shifts* box, above).

While tiered rates were recognized as a positive vehicle for encouraging conservation and investment in energy efficiency measures, concerns over the magnitude of the cost shift from customers with solar to those without solar have prompted the beginning of large residential rate changes, both in California and across the United States. In addition, the “flat” aspect of the current tiered rates—that is, the fact that the rates do not vary by time of day—delink the prices that the utility charges for electricity from the cost to provide that electricity.

Why TOU Rates?

TOU rates charge different prices according to when electricity is used. Both SCE and CPA currently offer optional TOU rates which residential customers can elect to be served on. In 2020, SCE will begin transitioning all customers to TOU rates as the default, with non-TOU rates as an option for those that actively opt-out of the TOU structure.

The economic rationale for TOU rates is that they can better reflect what it costs the utility to provide electricity. For example, electricity was traditionally cheapest to produce at night; accordingly, TOU rates had low prices at nighttime and higher prices during the day. These prices encouraged customers

on TOU rates to adjust their consumption to use less electricity during the more-expensive daytime hours, and to shift usage to the less-expensive nighttime hours, if possible.

Larger commercial and industrial customers have long been on TOU rates. This was primarily due to: (1) their larger usage allowed the higher costs of TOU meters (which were more costly than regular meters) to be spread over many units of electricity, making this cost relatively insignificant; (2) there was a greater incentive for these customers to respond to the varying electricity prices given the large size of their electricity bills; and (3) larger customers often had staff that could take the time to understand the more complex rates and adjust facility usage accordingly, shifting consumption out of the higher cost periods to reduce expenses.

For residential customers, the push for TOU rates is driven by several factors: (1) residential customers now have sophisticated smart meters that can be used for TOU rates at no additional cost; (2) TOU rates can reduce prices in the daytime and increase prices in the early evening to reflect the current and projected power market costs, thereby better aligning customer payments with true electricity costs; and (3) TOU rates can support the continued development of smart appliances, which can help reduce customer utility bills by managing usage according to varying prices. TOU rates also can substantially reduce the bill credits earned by new solar customers and thereby reduce cost shifting.

What will SCE's Residential TOU rates look like?

While the rates have not yet been set, based on SCE testimony it is expected they will look similar to SCE's current, optional TOU rates, which CPA has mirrored. There are two basic types of TOU rates that differ primarily in the definition of their on-peak period, which are the hours of the day during which the highest prices are charged.

Both rates have their highest prices per kWh during the early evening (4pm-9pm or 5pm-8pm). The prices are lower for the summer weekends because there is less stress on the system and power costs are lower than during the weekdays. It is important to note that the TOU prices are not a perfect reflection of actual costs; instead they are a compromise between accuracy and simplicity. Given the additional complexity of the TOU rates compared to the current flat, tiered rates, maintaining relative simplicity and consistency of prices is important during the transition. However, the need for consistency may decline over time as customers become more sophisticated and comfortable with the TOU rate structure.

SCE’s Current TOU Rate TOU-D-4-9PM

Better for customers who stay up late. May benefit smaller households in coastal areas with moderately sized homes or condos.

Highest rates: Summer Weekdays 4-9 p.m.

Daily Basic Charge: \$0.03 per day

Minimum Daily Charge: \$0.35 per day

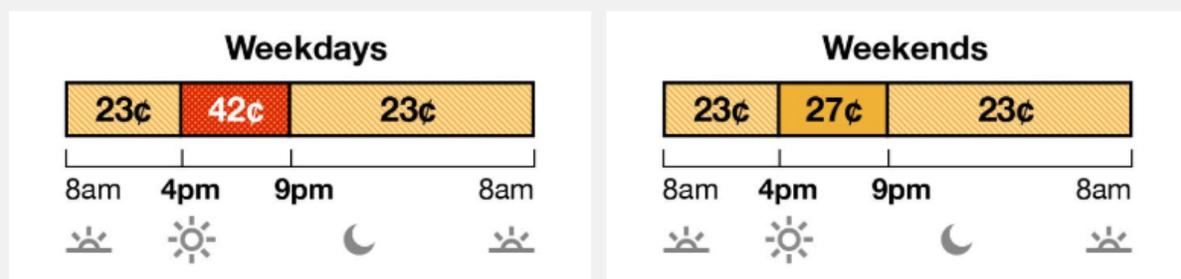
Baseline Credit: \$0.07 per kWh up to your monthly baseline allocation

For example, if your monthly allocation is 200 kWh, you’d see a \$14 credit on your bill. Eligible for bill protection

Summer Rates

Winter Rates

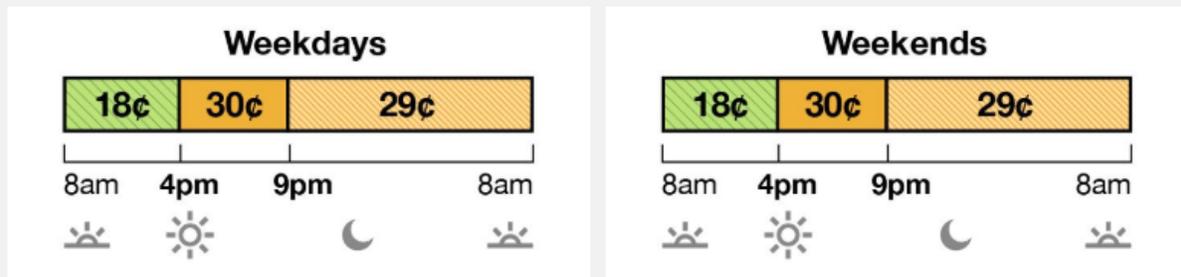
June to September (4 months)



Summer Rates

Winter Rates

October to May (8 months)



Super Off-Peak
 Off-Peak
 Mid-Peak
 On-Peak
 Above rates are per kWh.

SCE’s Current TOU Rate TOU-D-5-8PM

Better for customers who end the night early. May benefit those who are home during the day and tend to live in smaller rented dwellings.

Highest rates: Summer Weekdays 5-8 p.m.

Daily Basic Charge: \$0.03 per day

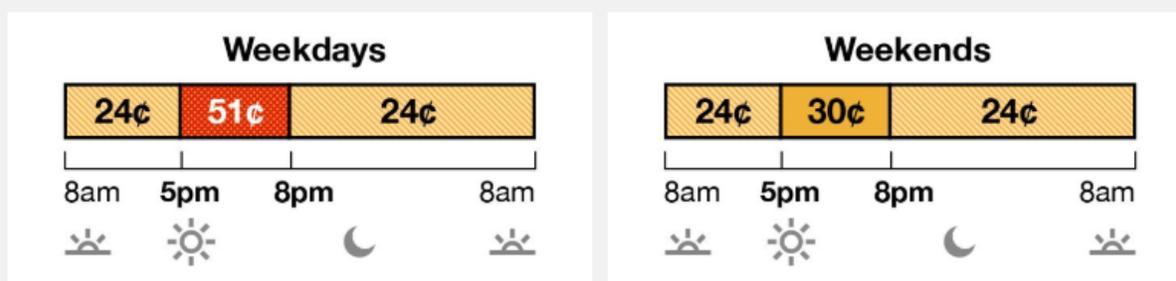
Minimum Daily Charge: \$0.35 per day

Baseline Credit: \$0.08 per kWh up to your monthly baseline allocation

For example, if your monthly allocation is 200 kWh, you’d see a \$16 credit on your bill. Eligible for bill protection.

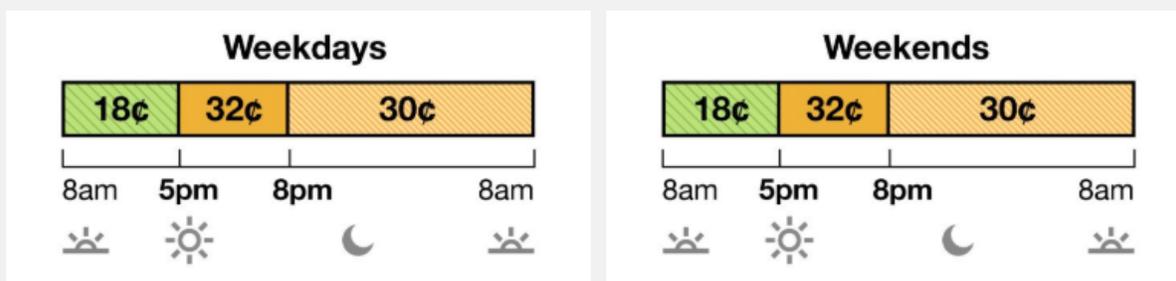
Summer Rates
Winter Rates

June to September (4 months)



Summer Rates
Winter Rates

October to May (8 months)



Super Off-Peak
 Off-Peak
 Mid-Peak
 On-Peak
 Above rates are per kWh.

Bill Protection

For large rate design changes like the move from flat tiered to TOU rates, it is common to provide customers with bill protection during a learning period (typically one year). The purpose of the bill protection is to mitigate adverse bill impacts by guaranteeing that customers will not pay more than x%

higher than they would have paid under the old rate structure. In this case $x = 0$, so customers would be protected from any bill increase due to the move to TOU rates for at least one year.

Bill protection is even more complex of an issue for customers taking service from a CCA, since their total bill is the product of a set of utility prices and CCA prices. The CPUC Proposed Decision on this topic clearly states that the utility is not responsible for bill protection for the generation portion of a CCA customer's bill, but does not clearly state that the utility remains responsible for bill protection for the delivery portion of the bill. This may or may not be an issue depending on the final design of the delivery rates.

CPA Decision Elements

CPA's Board will be asked to make policy decisions regarding the following issues in Q4 2019:

- What rate structures CPA should offer to its residential customers. Potential options include:
 - Continue offering flat generation rates for default service with optional TOU rates;
 - Design optional TOU rates specific to CPA (i.e., with price ratios that may differ from SCE's);
 - Continue offering optional TOU rates similar to SCE;
 - Implement default TOU rates similar to SCE's TOU rates;
 - Design CPA-specific default TOU rates (i.e., with price ratios that may differ from SCE's);
- If CPA elects to offer default TOU rates, whether to offer bill protection and for what period of time (i.e., 12 months to correspond to IOU requirements per CPUC D. 15-07-001, or a different time period);
- Whether to modify SCE's proposed customer exclusions from default TOU.

Each option has its advantages and disadvantages and will differ in degree of alignment with CPA's goals and priorities (i.e., organizational, operational, environmental, financial, customer outreach/communication, and policy). E3's analysis will consider these goals and priorities, as well as CPA's unique load shape and cost structures. This analysis will inform the CPA Board's decision making regarding these elements in Q4 2019.



Energy+Environmental Economics

Default TOU Rates: Catch the Wave or Stay on the Shore?

Clean Power Alliance Board Retreat
June 28, 2019

Brian Horii
Senior Partner



What is at issue?

+SCE Tiered Time-of-Use transition in 2020

- Default TOU moves customers to TOU unless...
 - Customers elect to move to a flat tiered rate , or
 - Customers are part of “protected” groups, such as medical baseline customers.

+Does the CPA follow suit?

+What are the risks?

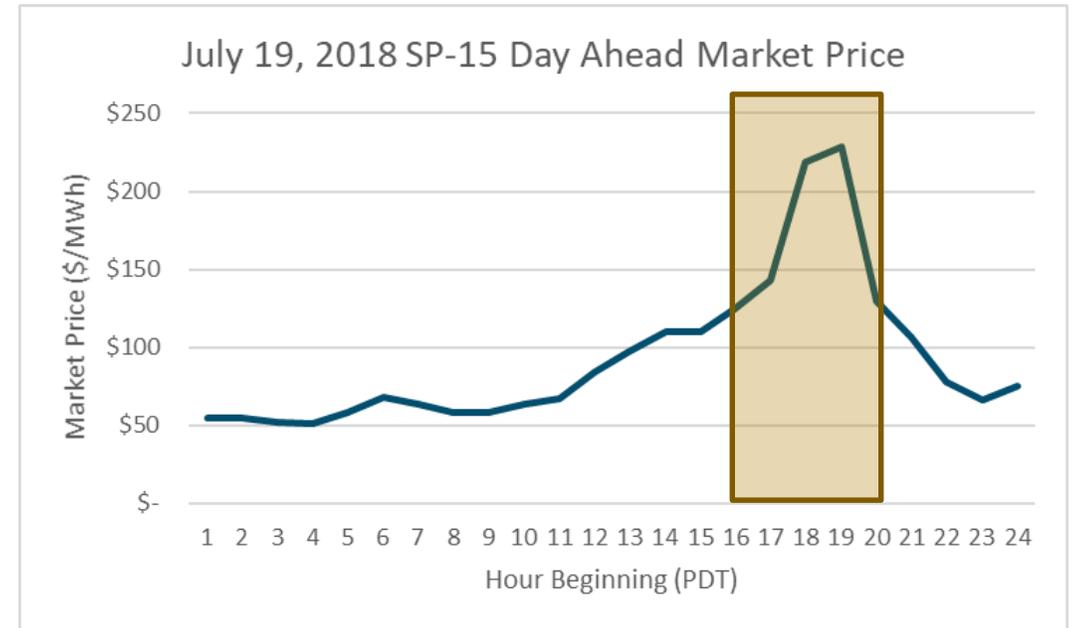
+How can the Domestic rates support CCA policies and goals?



Why Time-of-Use (TOU) Rates?

- + Better align prices with procurement costs
- + Encourage customers to shift usage to lower cost hours
 - Added benefit of GHG reductions / air quality improvements.
- + Reduce cost shift
 - Recover more from PV owners and other customers that use a higher than average percent of their electricity during the high cost evening hours.

Flat Rates are “fair” if all customers are alike



With flat rates, EV owners would start charging as soon as they get home.

TOU rates can get them to delay charging until later at night.





TOU Rate Components

- + Delivery charges (and baselines) apply to all customers (CCA or bundled SCE)
- + Price shopping customers might compare the SCE Generation rates with the CPA offerings.
- + Customers are allowed to opt-out of TOU and stay on flat tiered rates.

SCE Bundled Service	CCA Customer
SCE Delivery	SCE Delivery
SCE Generation	CCA Generation
	CCA Cost Responsibility Surcharge

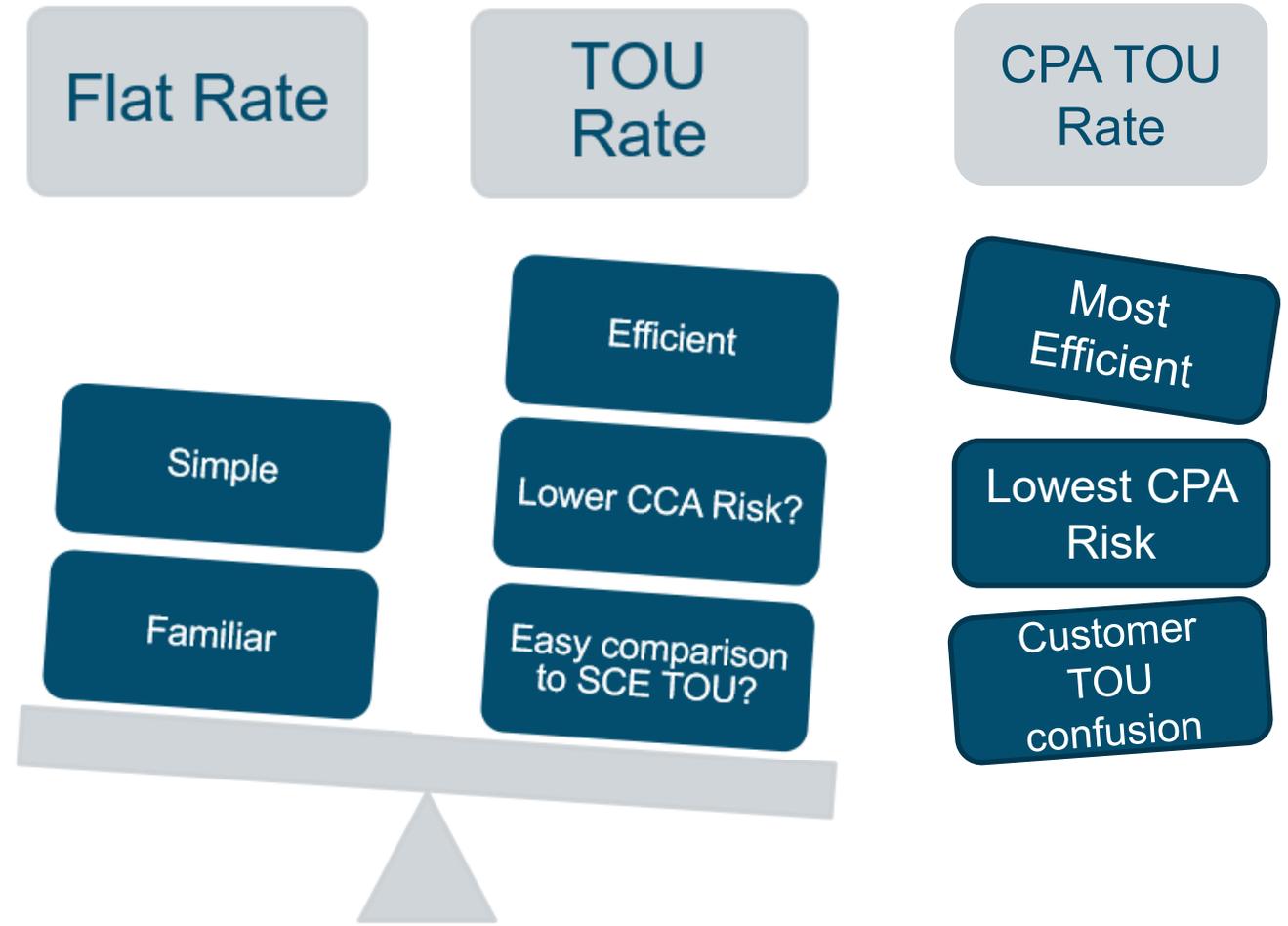
Option 4-9 PM / Option 4-9 PM-CPP	Delivery Service Total ¹	Generation ²	
		UG ^{***}	DWREC ³
Energy Charge - \$/kWh			
Summer Season - On-Peak	0.19398 (I)	0.23061 (I)	(0.00007)
Mid-Peak	0.19398 (I)	0.08053 (I)	(0.00007)
Off-Peak	0.15370 (I)	0.07585 (I)	(0.00007)
Winter Season - Mid-Peak	0.19398 (I)	0.10708 (I)	(0.00007)
Off-Peak	0.15370 (I)	0.13343 (I)	(0.00007)
Super-Off-Peak	0.14891 (I)	0.02635 (I)	(0.00007)
Baseline Credit ^{****} - \$/kWh	(0.07047) (R)	0.00000	
Basic Charge - \$/day			
Single-Family Residence	0.031		
Multi-Family Residence	0.024		
Minimum Charge ^{**} - \$/day			
Single Family Residence	0.346		
Multi-Family Residence	0.346		
Minimum Charge (Medical Baseline) ^{**} - \$/day			
Single Family Residence	0.173		
Multi-Family Residence	0.173		
California Climate Credit ¹⁰	(33.00)		
California Alternate Rates for Energy Discount - %	100.00*		
Family Electric Rate Assistance Discount - %	100.00		



Differing Benefits of Rate Forms

CPA Rate Choices

- + Continue to offer flat rates
- + Mirror SCE's default TOU periods
- + Design CPA-specific default TOU periods
- + Optional TOU rates





What are the criteria for a good rate design?

+ Classic Regulated Utility Principles

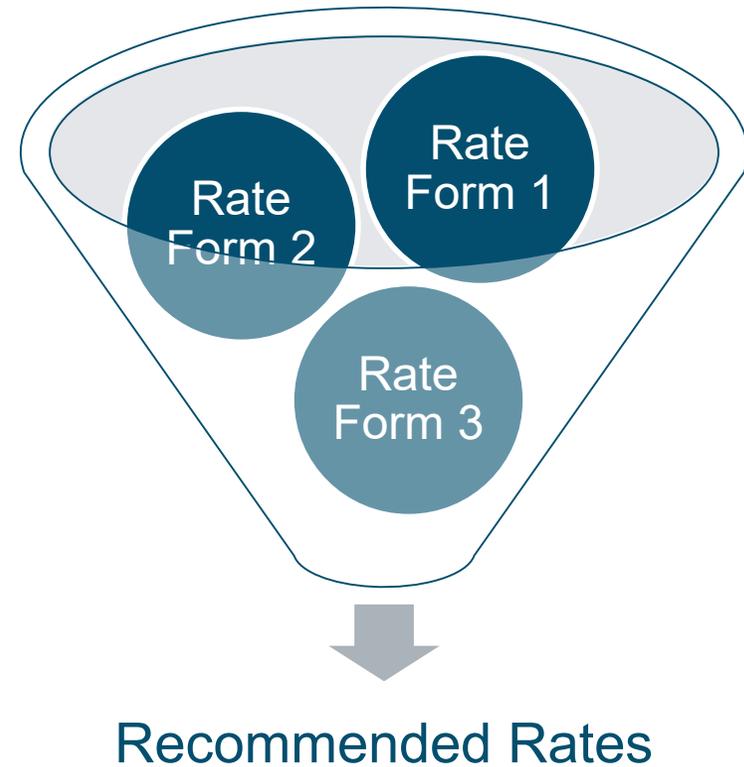
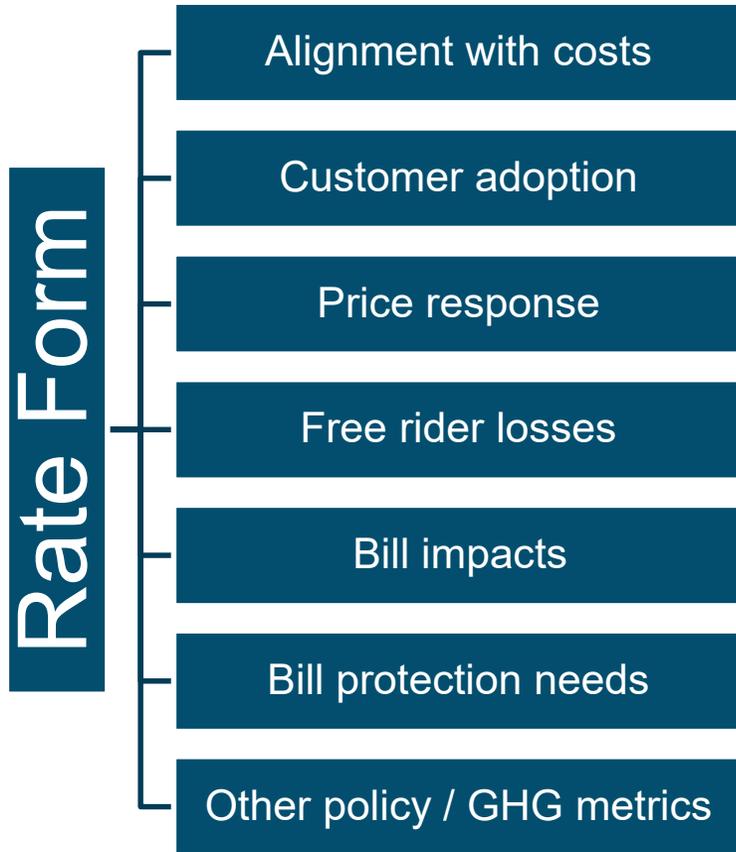
- Fairly recover costs from customers
- Simple to understand
- Incent customers to use less power when it is most costly to produce that power
- Stable and predictable
- Help promote important public policies
- Mitigate unacceptable bill increases for individual customers

+ Additional CPA Issues

- Operational feasibility
 - Customer communication and potential confusion with SCE rates
 - Matching rates to CPA costs (financial risk)
 - Price competitiveness
 - Customer attraction and retention
 - Alignment with CPA Policy / GHG goals
 - Bill protection
 - TOU default exclusions
- } Decision Required



E3 Quantitative Analysis for CPA





Upcoming Issues for Q4 2019

+ What rate structures should CPA offer to its residential customers?

- Need to identify operational, policy, financial, and customer impact priorities
- Sever linkage to SCE rates?
- Same TOU periods?

+ If CPA elects to offer Default TOU rates, then need to decide:

- Whether to offer bill protection and for what period of time.
- Any customer exclusions from default TOU transition
 - Medical baseline customers, CARE/FERA customers, grandfathered solar customers on legacy TOU structures, etc.

+ Other considerations?

Rate Form	Pros	Cons
Flat	Simplest for customers Familiar to customers	Inherent winners and losers when compared to SCE TOU rates
Mirror SCE TOU Periods	Safe form IF CCA costs mimic SCE shape Simple customer decision	Risk if CCA costs do not match SCE TOU pattern Risk that customers will opt-out to a flat rate
CPA-TOU Periods	Reduces cost risk for CCAs Promotes efficient decisions by customers	Complex decision for customers Difficult to message and implement



Energy+Environmental Economics

Appendix



Project Deliverables

+ Analysis is expected to include the following elements:

- Development of residential billing determinants and statistical class weighting factors to enable residential customer bill impact, cost shift, and CPA financial analyses. Customer categories will incorporate load shape, climate zone, and customer type (including any exclusions).
- Review of current rate structures to determine whether they achieve CPA's financial, policy, environmental, organizational, and operational goals.
- Analysis of SCE pilot data that is expected to include bill protection amounts (i.e., generation, distribution), bill savings, and load shift. Results may enable analysis by climate zone, customer type (i.e., NEM or EV participant), and rate schedule.
- Development of residential default rate structure and rate option alternatives, including the Status Quo scenario (mirroring SCE default TOU residential structure and other optional structures); default flat rates with optional TOU rate structure options that may differ from SCE's rate designs; CPA default TOU rate structures alternatives; and tiered/seasonal alternatives that may differ from SCE's rate designs.
- Research and recommend potential take-up and opt-out rates, including the impact that SCE's residential distribution rate structure may have on participation rates.

+ Elements continued

- Development of appropriate elasticity assumptions for each design.
- Calculation of customer bill impacts for each design.
- Estimation of CPA bill protection, before and after any bill protection, by month, for each design.
- Estimation of load shift impacts (i.e., peak load reduction and off-peak load increase) for each design.
- Estimation of the cost shift related to "free riders" on any optional TOU structures.
- Estimation of change in CPA residential class revenues and procurement costs related to each rate design analyzed.
- Evaluation of degree of alignment with CPA's organizational, operational, environmental, financial, customer outreach/communication, and policy goals/priorities.
- Identification of opportunities for CPA residential rate pilot programs.

The resulting pricing strategy will enable CPA to adapt to current and future changes to its procurement mix while continuing to provide appropriate rate structure offerings to the residential class, mitigating bill impacts and cost shifts, and maintaining its financial health.