



Valley Clean Energy Board Meeting

Thursday, July 11, 2019 at 5:30 p.m.

City of Woodland Council Chambers, Woodland, CA

PG&E / Valley Clean Energy Authority CCA Time-of-Use Rate Transition

July 2019



Together, Building
a Better California



Residential TOU Transition Origination

Why TOU Transition?

In an effort to make rates more understandable to customers, more cost-based and to encourage customers to shift usage to times of day that support a cleaner more reliable grid, the CPUC directed Pacific Gas & Electric Company, Southern California Edison & San Diego Gas & Electric to begin Residential Rate Reform.

- **Simplifying the rate structure**
- **Utilization of energy efficiency technologies & promoting conservation**
- **More Accurate Cost Allocation**

Source: CPUC RRR TOU Decision 17-12-023:

<http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M201/K231/201231862.PDF> (Pg 10)

State Campaign – Keep it Golden

- *“A statewide campaign that will be high-level, emotion-based, and provide Californians with the context for the changing rate structure and a vision to rally around.”*
- Provides a **neutral** explanation of TOU



Source: CPUC RRR TOU Decision 17-12-023:

<http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M201/K231/201231862.PDF> (Pg 10)



Time-of-Use Transition Phase I

Background:

- In **April 2018**, PG&E transitioned **~114k** customers to the new TOU Rate (Everyday, 4-9pm)
- Customers received a combination of 90, 60 and 30 Day communications
- 3 CCAs participated: MCE, Sonoma Clean Power & Silicon Valley Clean Energy

Highlights:

- Customer retention has been high through 11 months (over **99,746** customers remain on rate)
- Based on qualitative and quantitative studies, customer awareness has been high (**68%** aware they were part of a transition)
- Self-serve rate change selection was high (**60%** on-line/web)
- Preliminary Load Impacts show an overall reduction of **4.2%** of total peak load per customer per hour

CCA & bundled customer overall performance was similar



Residential TOU Transition Phase 1 (Pilot) Overview

EVERY DAY



Summer	T&D Only	Generation Only	Total
Peak (4-9pm Every Day)	\$0.20425	\$0.17059	\$0.37484
Off-Peak (9pm-4pm Every Day)	\$0.20425	\$0.10715	\$0.31140
Winter	T&D Only	Generation Only	Total
Peak (4-9pm Every Day)	\$0.17362	\$0.11413	\$0.28775
Off-Peak (9pm-4pm Every Day)	\$0.17362	\$0.09680	\$0.27042

Baseline Credit: [\$0.08001] Applied to Baseline Usage Only

***PG&E bundled pricing ETOU-C – effective 3/1/19**

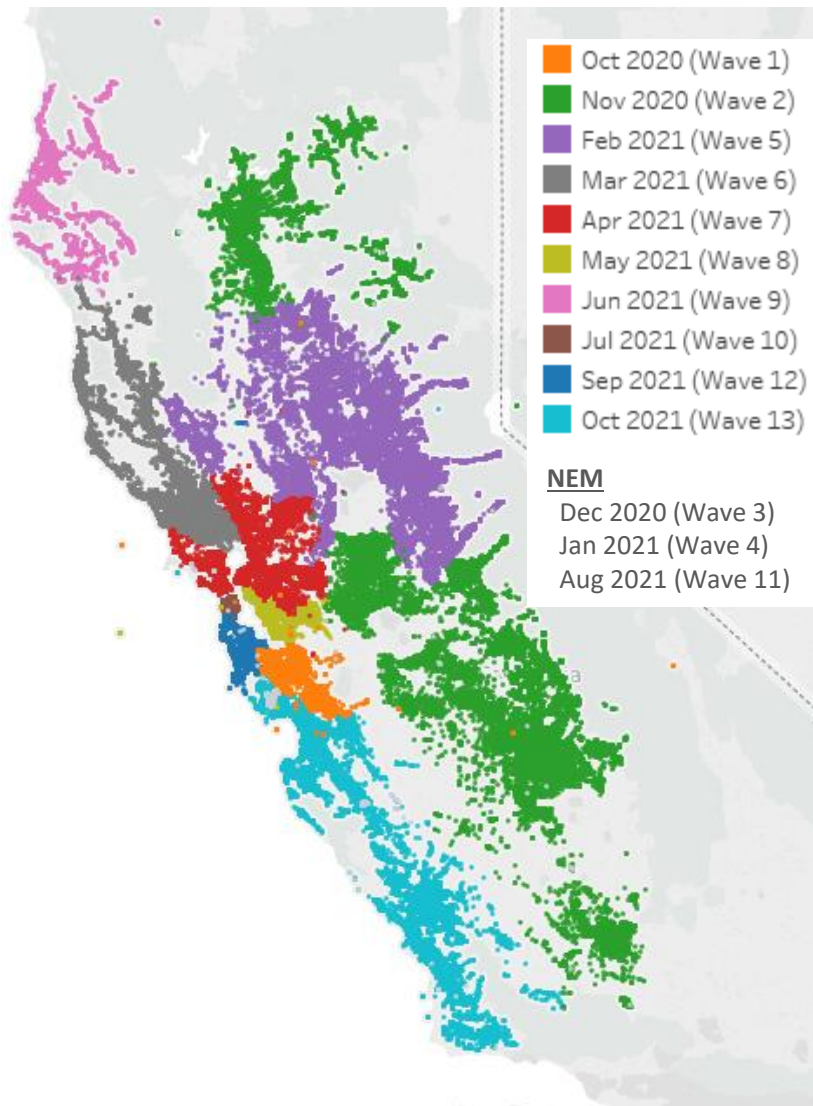


Residential TOU Full Transition Overview

- Beginning in **October 2020**, PG&E will begin transitioning all **eligible E1 Tiered** rate plan customers to “*Time-of-Use Peak Pricing 4pm-9pm Every Day*” (ETOU-C) rate plan.
- ETOU-C rate plan will become the **default rate plan** in October 2020.
- Customers will have the **ability to elect** to remain on their current rate plan or choose another rate plan.
- Up to **12 months of bill protection** will be provided to all PG&E charges for transitioned customers.
- Customers will be provided with a **minimum of 2 notifications prior to the transition** including: information on the New Time-of-Use rate plan, how to remain on their current rate and bill protection.



TOU Full Rollout Plan (13 Waves)



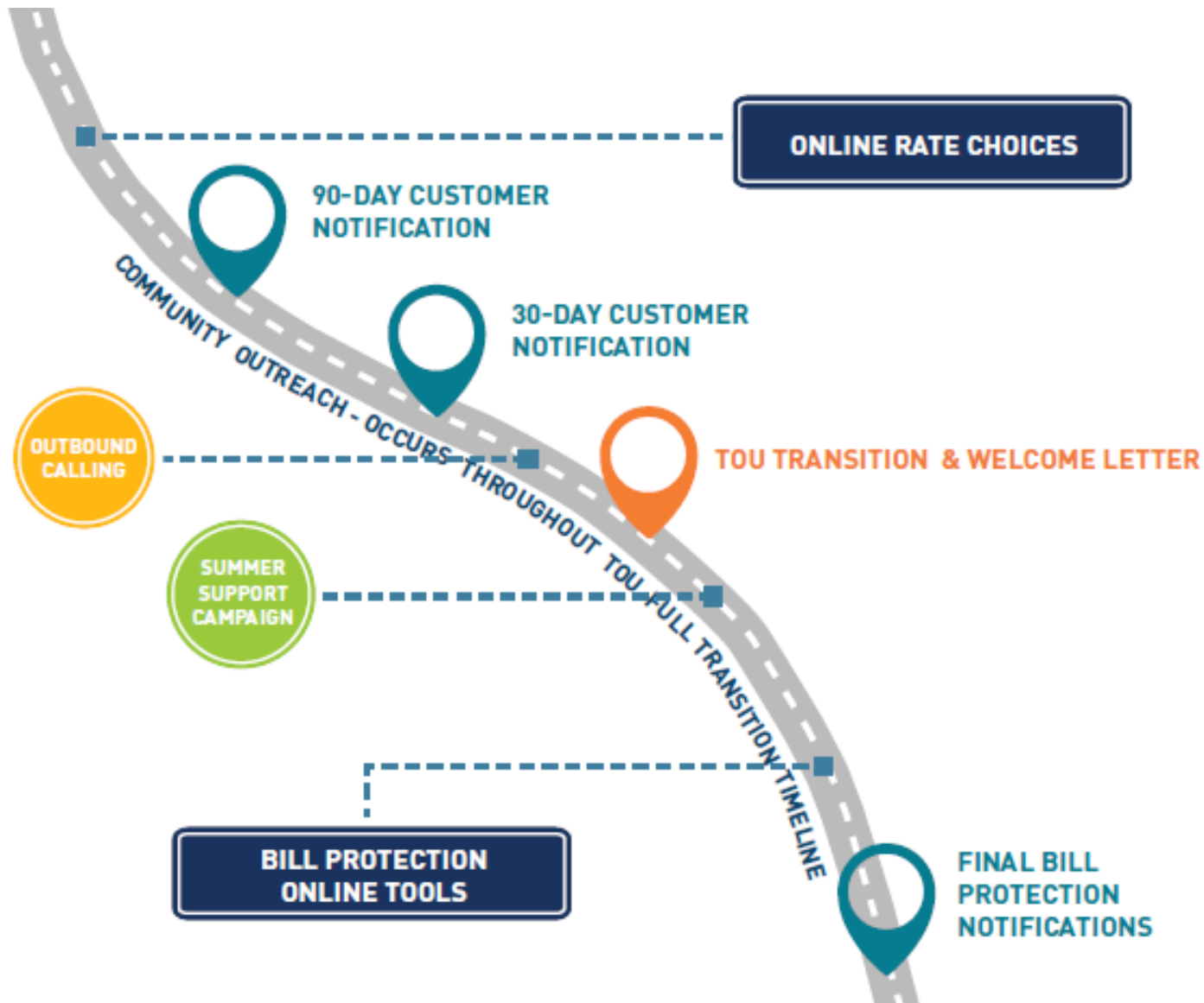
Service Provider Territory		Totals
Counties	Included	
Oct 2020 (Wave 1)		390,000
Santa Clara	San Jose Clean Energy (SJCE)	230,000
	Silicon Valley Clean Energy (SVCE)	170,000
Nov 2020 (Wave 2)		200,000
Fresno, San Joaquin, Kern, Tuolumne, Shasta, Madera, Merced, Tehama, Plumas, Stanislaus, Mariposa, Kings, Tulare, Lassen	PG&E Bundled	200,000
Dec 2020 (Wave 3)		10,000
NEM Only		~10,000
Jan 2021 (Wave 4)		10,000
NEM Only		~10,000
Feb 2021 (Wave 5)		180,000
Placer, El Dorado, Yolo, Butte, Nevada, Calaveras, Lake, Amador, Sutter, Yuba, Glenn, Colusa, Sacramento, Sierra, Alpine	PG&E Bundled	120,000
	Pioneer Community Energy (PIO)	40,000
	Valley Clean Energy (VCE)	20,000
Mar 2021 (Wave 6)		140,000
Sonoma, Mendocino	Sonoma Clean Power	140,000
Apr 2021 (Wave 7)		410,000
Contra Costa, Solano, Marin, Napa	MCE	310,000
	PG&E Bundled	100,000
May 2021 (Wave 8)		400,000
Alameda	East Bay Community Energy (EBCE)	370,000
	PG&E Bundled	30,000
Jun 2021 (Wave 9)		40,000
Humboldt, Trinity, Siskiyou	Redwood Coast Energy Authority (RCEA)	40,000
	PG&E Bundled	850
Jul 2021 (Wave 10)		260,000
San Francisco	CleanPowerSF (CPSF)	260,000
Aug 2021 (Wave 11)		10,000
NEM Only		~10,000
Sept 2021 (Wave 12)		200,000
San Mateo	Peninsula Clean Energy (PCE)	200,000
Oct 2021 (Wave 13)		260,000
Monterey, Santa Cruz, San Luis Obispo, Santa Barbara, San Benito	Monterey Bay Community Power (MBCP)	170,000
	PG&E Bundled	90,000
	King City Community Power	2,300

Note: Customer counts are approximate and depend on final exclusion criteria. Also, assuming NEM customers transition on their true-up date, each wave would have an additional ~10K NEM customers. This table assumes all customers within each CCA territory are enrolled with the CCA service provider.



Residential Transition Notifications Roadmap

*Subject to CPUC decision 7/2019





Residential TOU Full Transition Overview – Generation only Bill Protection Analysis

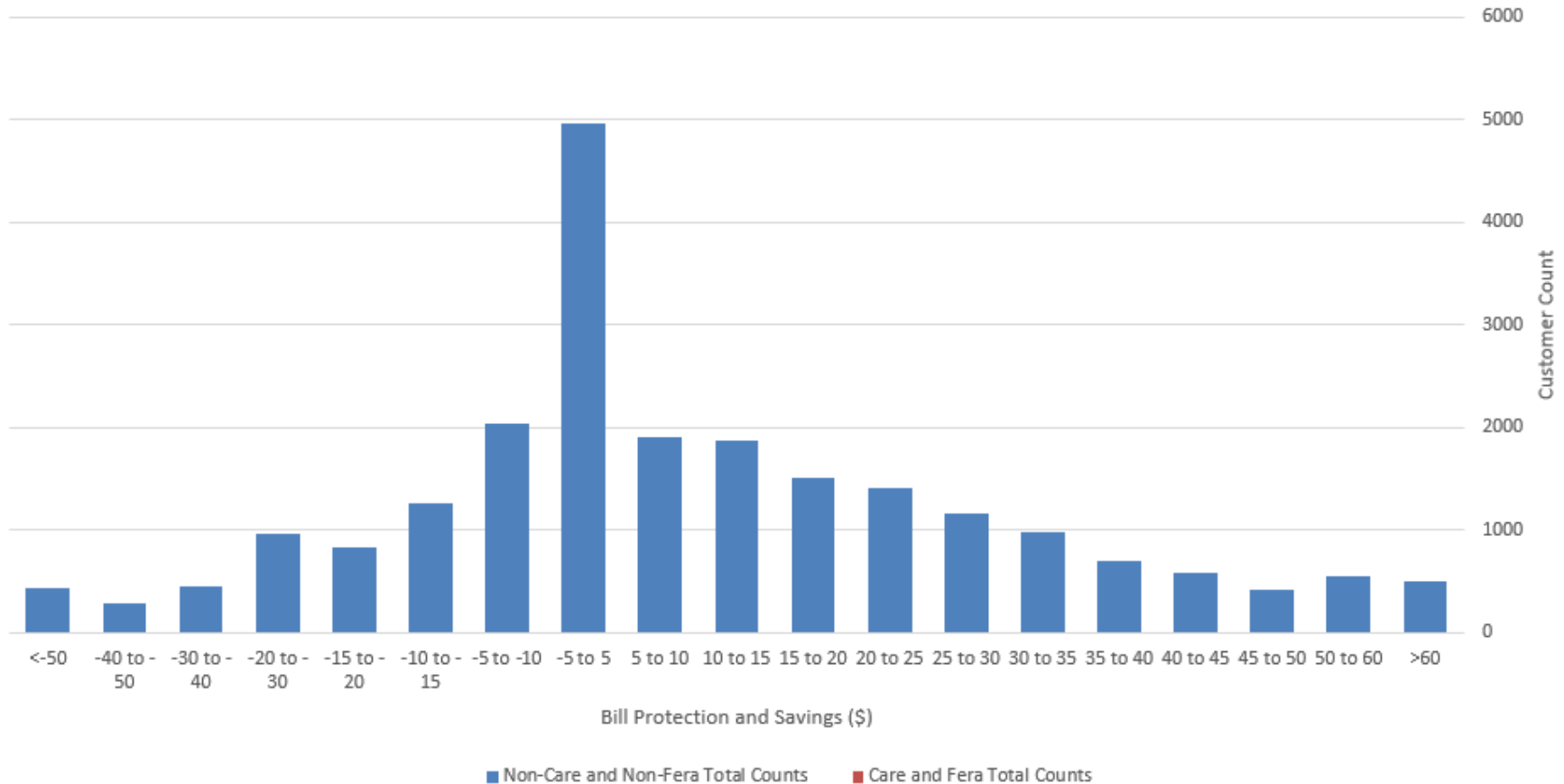
	TOU MORE expensive than Tiered Rate	TOU LESS expensive than Tiered Rate
Estimated Annual Generation Bill Difference (\$)	\$300,934	\$141,697
Number of Customers Impacted	13,784	8,970
Annual Bill Impact/Customer	\$21.83	\$15.80

***Estimates are calculated with PG&E generation pricing**



Residential TOU Full Transition Overview – Generation only Bill Protection Analysis

VCEA Total Count of Bill Protection and Savings



Overall:

- 39% neutral (8,896) – less than +/- \$10 per year impact
- 42% non-benefitters (9,678) – \$10 or more per year impact
- 19% benefitters (4,222) – (\$10) or more per year impact

Traditional Approach:

- TOU rates designed to be **revenue-neutral**
 - assume all customer remain on the rate
 - collect the same revenue as collected with tiered rates
- Resulting **revenue shortfall** due to self-selection
 - some non-benefitters do not remain on the rate
 - can be tracked in a balancing account
- **Rates can be “trued-up”**
 - Adjust rate after first year to collect the first-year shortfall

Alternative Approach:

- Estimate revenue shortfall **in advance & increase rates** via rate adders
 - Estimating revenue shortfall is **very uncertain**
 - Rate adders may be set too high or too low requiring a **subsequent “true-up”**

TOU Residential Full Transition – Environmental Benefits

Greenhouse Gases (GHG):

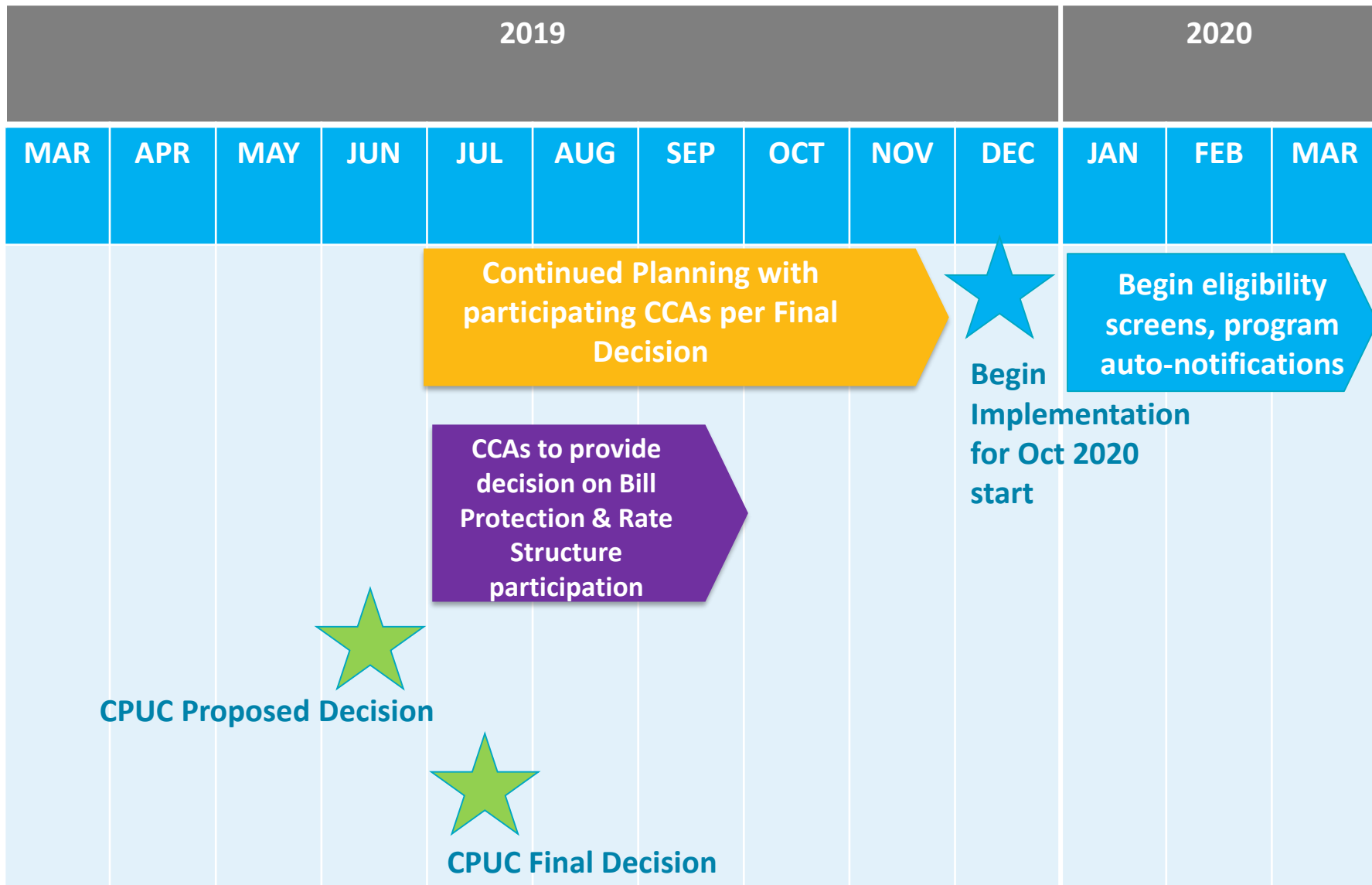
- Estimated savings of 5,000-10,000 tons of CO₂ per year across PG&E territory due to load shifting resulting from the new TOU rate plan
 - Range dependent on number of CCAs following PG&E 4pm-9pm peak period
 - Equivalent to removing about 1 – 2 thousand gas-powered cars from the road
- Greater benefits expected with peak period conservation (versus load shifting) and/or a higher volume of renewables



GHG estimate based on calculations performed in 2018 according to the methodology agreed upon by the CPUC, PG&E, and the other CA IOUs. GHG equivalency based on <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>.



CCA/PG&E Joint Planning Timeline



TOU Residential Full Transition – Why Participate?

- **Support Statewide policy**
 - Align on policies for a cleaner, more reliable energy grid
 - Contribute to greenhouse gas reductions
- **Enhance Customer Experience**
 - Streamlined and consistent experience for Valley Clean Energy Authority's and PG&E's mutual customers
 - Reduced customer confusion
 - CPUC Proposed Decision instructs PG&E to transition tiered customers to the ETOU-C rate plan with a peak distribution component regardless of CCA participation





Appendix



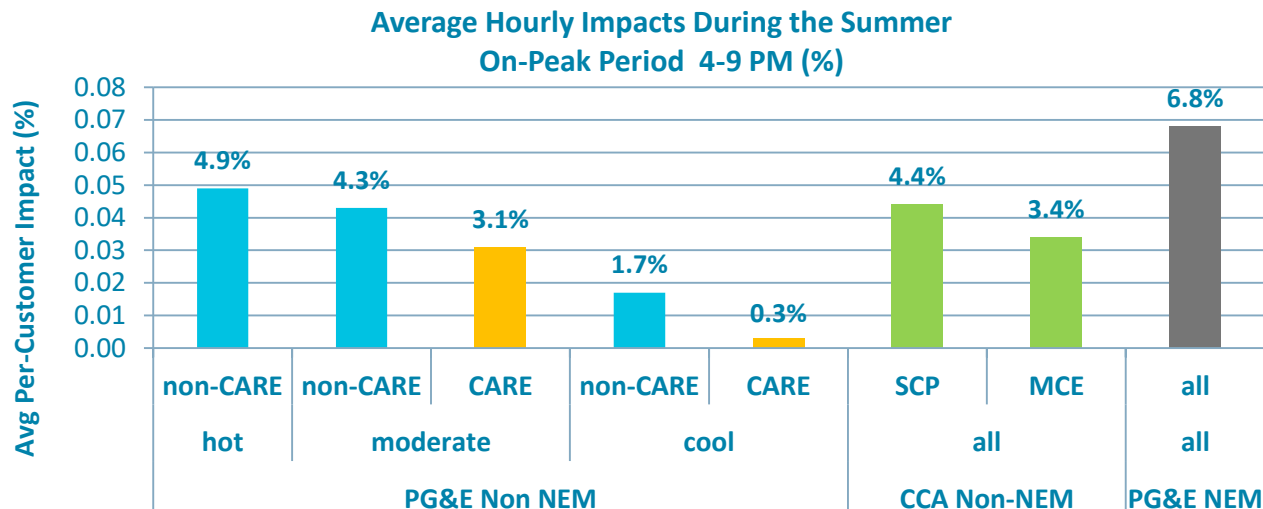
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TOU Transition Phase 1 (Pilot) Overview

Load Shifts & Conservation:

- PG&E preliminary results: overall energy conservation and some load shifting
- Summer load reductions declined or remained the same
 - SCE & SDG&E showed comparable results
- Transitioned TOU rate customers averaged 0.046 kWh daily peak period reduction per customer per hour
 - 4.2% reduction - total peak load per customer per hour
 - Impacts vary across climate zones, customer segments, day types
 - Hot climate customers have highest peak load reduction; 4.9%



CCA Transition customers responded well to the transition from start through post summer months



- Satisfaction with rate plan remains stable at **6.5/10**
- Continued high levels of awareness and understanding
- **53%** of CCA customers say they are taking actions to shift or reduce usage
- Some slight differences in actions taken to shift/reduce – likely due to climate zones



Residential TOU Transition results are encouraging



Overall

- Awareness metrics increased from baseline
 - 84% aware of TOU rate plans Up from 60%
 - 59% aware on a TOU rate Up from 10%
- Customers exceeding awareness and understanding targets set by the CPUC
 - Aware of rate choices and TOU rates
 - Understand benefits of lowering/shifting electricity use
- 78% understand their bill is based on how much energy they use and when they use it
- PG&E's results are comparable or higher than other California IOUs



Residential TOU Transition Phase 1 (Pilot) Targets

Transition customers continue to exceed goal metric target levels

		Wave 2	Baseline	Goal
1	Rate plans are available that give you more control over your bill	46%	-	-
2	Customers know where to go to get info about how to manage their electricity use	52%	52%	66%
3	Customers understand how energy use can impact bills	▲ 6.7	5.1	6.5
4/5	Customers understand the benefits of lowering/shifting their electricity use	▲ 6.9	6.4	7.2
6	Customers are aware that PG&E provides rebates, energy efficiency programs & tips	▲ 70%	64%	72%
7	Customers feel that they were provided useful information explaining their bills	▲ 7.5*	7.0	7.2
8	Customers are aware of TOU rates	▲ 81%	60%	68.8%
9	Customers are aware of rate choices	▲ 52%	35%	47.5%
10	Customers have an optimal experience (satisfaction with products and services)	7.6	7.5	7.3

▲ Significantly higher than baseline

* Wave 1, not asked in Wave 2



Residential TOU Transition Phase 1 (Pilot) Targets

Transition customers continue to have a good understanding of basic TOU rate details

- Baseline average 4.7

	Wave 2	Overall
Bill based on how much you use & time of day you use		7.8
Could pay more unless you adjust some electricity use		6.9
Can switch to another rate plan		6.6
How to manage bill using current rate plan		6.5
How bill will be impacted by TOU rate		6.5



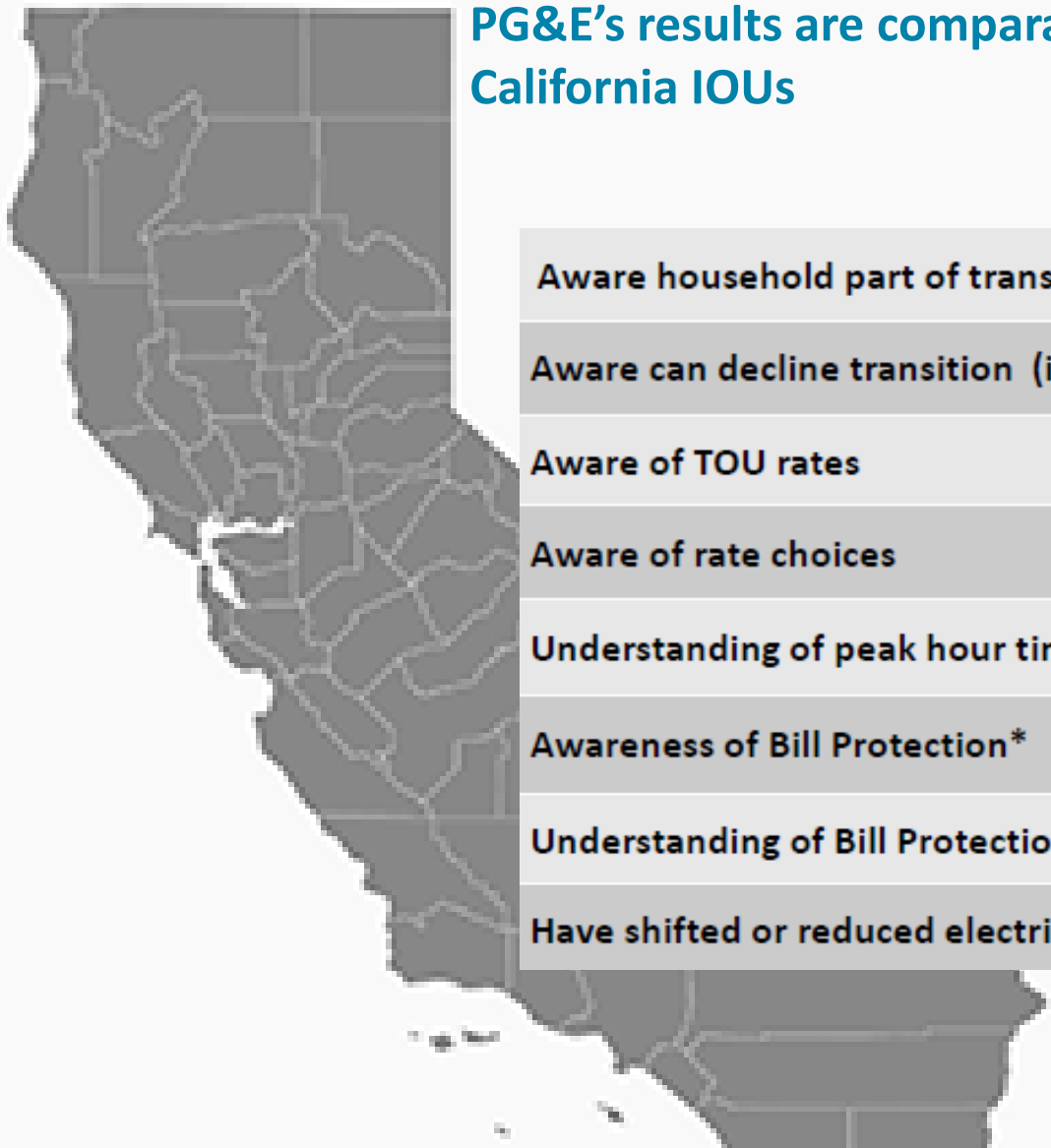
Wave 1 CCA results showed significant uplift

	PG&E Bundled Customers		CCA Customers	
	Baseline Nov/Dec 2017	Post transition Wave 1 – Track C May/Jun 2018	Baseline Nov/Dec 2017	Post transition Wave 1 May /Jun 2018
TOU PHASE I TRANSITION KEY MEASURES				
Customers are aware of TOU rates	60%	86%	45%	86%
Customers are aware household is part of TOU transition	-	66%	-	68%
Customers are on aware they are on a TOU rate plan	10%	59%	7%	57%
Customers are aware of rate choices	35%	62%	21%	58%
Customers understand they could pay more unless they can adjust electricity use	4.8	6.9	4.3	7.0
Customers understand higher priced peak hours	-	62%	-	71%
Customers feel that they were provided useful information explaining impact to bills	7.0	7.1	-	7.7
Customers have an optimal experience (satisfaction with PG&E products and services)	7.5	7.6	7.4	7.6



Residential TOU Transition Phase 1 (Pilot) Targets

PG&E's results are comparable or higher than other California IOUs



	Wave 2	PG&E	SCE	SDG&E
Aware household part of transition		62%	48%	59%
Aware can decline transition (if aware)		64%	60%	69%
Aware of TOU rates		81%	73%	81%
Aware of rate choices		52%	48%	52%
Understanding of peak hour times		62-76%	41-61%	60-72%
Awareness of Bill Protection*		22%	17%	23%
Understanding of Bill Protection		28%	17%	23%
Have shifted or reduced electricity		47%	40%	50%

*SDG&E: 'No-risk pricing'

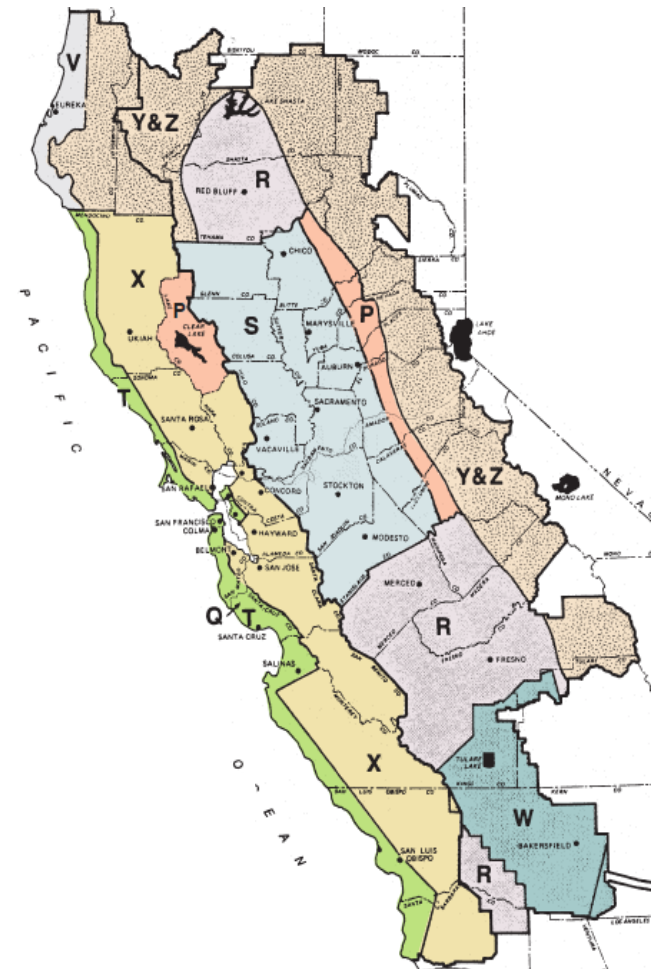


Residential TOU Full Transition – Guiding Principles

- Geographic rollout by **County**
 - Hottest areas well in advance of summer
 - Enables targeted media/community outreach
 - Except NEM: transition in true-up month
- Transition during months customers **do not** experience their highest bills

Months Acceptable for Transition by Baseline Territory										
	Hot				Moderate			Cool		
	P	S	R	W	Q	X	Y	T	V	Z
Oct	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Nov	N	Y	Y	Y	N	N	Y	Y	Y	Y
Dec	N	Y	Y	Y	N	N	Y	Y	Y	Y
Jan	N	Y	Y	Y	N	N	Y	Y	Y	Y
Feb	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Mar	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Apr	Y	Y	Y	Y	N	Y	Y	Y	Y	Y
May	Y	N	N	N	N	Y	Y	Y	Y	Y
Jun	N	N	N	N	N	N	Y	Y	Y	Y
Jul	N	N	N	N	Y	N	Y	Y	Y	Y
Aug	N	N	N	N	Y	N	Y	Y	Y	Y
Sep	Y	N	N	N	Y	Y	Y	Y	Y	Y

Baseline Territories in PG&E Service Area



Item 15 - 2020 Integrated Resource Plan

- Activities are getting under way for the CPUC required 2020 Integrated Resource Plan.
- Filing is due May 1, 2020.
- Templates and data requirements are under development by CPUC staff.
- Informal feedback sessions between stakeholders and CPUC are taking place.

2020 Integrated Resource Plan

Approximate timing	Activity
August 16, 2019	2018 Preferred System Plan LSE Progress Status Data Request Due
Aug/Sep, 2019	CPUC staff release proposed data and requirements for 2020 filing
September, 2019	CPUC release of preliminary RESOLVE Reference System Portfolio
October, 2019	CPUC formal release of Reference System Plan
Oct/Nov, 2019	VCE Board introduction/kick-off of VCE IRP Process
December, 2019	CAC and public meeting on IRP scope and scenarios covered
December, 2019	Proposed Decision Released on Reference System Plan
December, 2019	Final templates, tools, and filing instructions released
February, 2020	Commission Decision on Reference System Plan
February, 2020	Draft IRP ready
March, 2020	VCE Board discussion and feedback on draft IRP
April, 2020	VCE Board Adoption of IRP
May 1, 2020	CPUC IRP Filing Due



Item 16 - Q2 2019 Procurement Update

- 2019 Procurements are essentially complete.
- Procurements for 2020 are 64.4% complete.
- Resource adequacy procurement is underway for 2021 and 2022, as requirement by the CPUC.

Item 16 - Q2 2019 Procurement Update

- 2019 and 2020 Power costs looking better than forecast last November

2019 Power Supply Cost	Target Budget	Current Budget	Net Savings (Costs)
Market Energy	\$ 29,079,467	\$ 27,642,841	\$ 1,436,626
CAISO Variable Fees	\$ 126,983	\$ 123,723	\$ 3,260
REC Costs	\$ 3,470,566	\$ 3,377,424	\$ 93,141
Resource Adequacy Cost	\$ 7,432,636	\$ 7,844,033	\$ (411,397)
CAISO GMC Cost	\$ 319,856	\$ 311,952	\$ 7,903
Market Services Charge	\$ 67,777	\$ 66,037	\$ 1,740
System Operations Charge	\$ 240,078	\$ 233,915	\$ 6,163
SCID Fee	\$ 12,000	\$ 12,000	\$ -
Carbon Free Premium	\$ 1,060,085	\$ 1,060,085	\$ -
2019 Total Power Cost	\$ 41,489,593	\$ 40,360,059	\$ 1,129,534

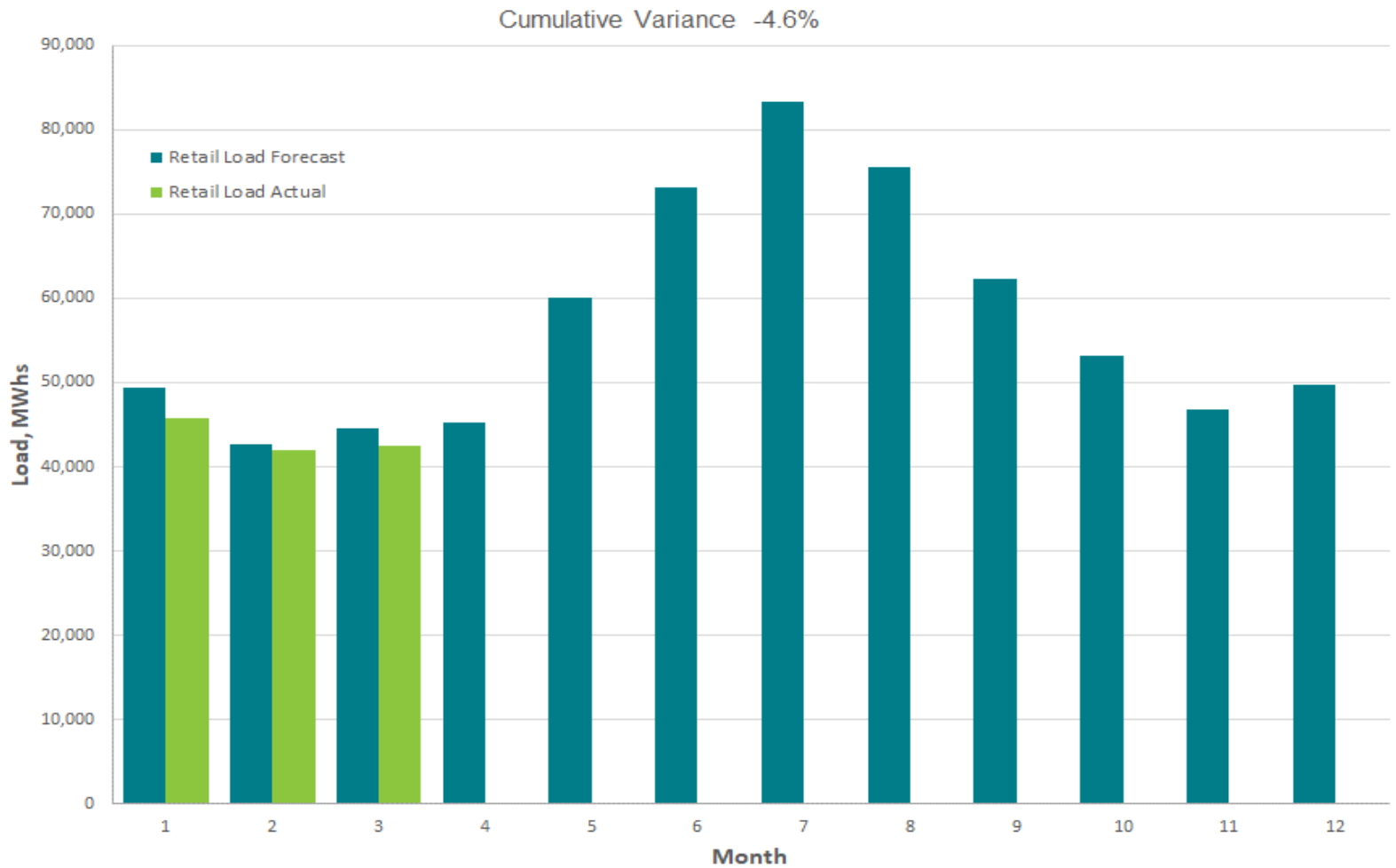
2020 Power Supply Cost	Baseline Forecast	Current Forecast	Net Savings (Costs)
Market Energy	\$ 32,952,900	\$ 31,167,768	\$ 1,785,132
CAISO Variable Fees	\$ 133,891	\$ 133,350	\$ 541
REC Costs	\$ 3,699,395	\$ 3,627,478	\$ 71,917
Resource Adequacy Cost	\$ 7,505,146	\$ 8,501,052	\$ (995,906)
CAISO GMC Cost	\$ 336,603	\$ 335,291	\$ 1,312
Market Services Charge	\$ 71,465	\$ 71,176	\$ 289
System Operations Charge	\$ 253,138	\$ 252,115	\$ 1,023
SCID Fee	\$ 12,000	\$ 12,000	\$ -
Carbon Free Premium	\$ 1,277,433	\$ 1,476,091	\$ (198,658)
2020 Total Power Cost	\$ 45,905,368	\$ 45,241,031	\$ 664,338

Item 16 - Q2 2019 Procurement Update

- 2021 is looking \$5M worse off.

2021 Power Supply Cost	Baseline Forecast	Current Forecast	Net Savings (Costs)
Market Energy	\$ 35,560,603	\$ 35,412,322	\$ 148,280
CAISO Variable Fees	\$ 146,870	\$ 141,690	\$ 5,180
REC Costs	\$ (1,571,224)	\$ 1,442,666	\$ (3,013,889)
Resource Adequacy Cost	\$ 8,097,302	\$ 10,247,249	\$ (2,149,947)
CAISO GMC Cost	\$ 368,069	\$ 355,511	\$ 12,558
Market Services Charge	\$ 78,392	\$ 75,627	\$ 2,765
System Operations Charge	\$ 277,677	\$ 267,884	\$ 9,793
SCID Fee	\$ 12,000	\$ 12,000	\$ -
Carbon Free Premium	\$ 1,401,262	\$ 1,493,722	\$ (92,460)
2021 Total Power Cost	\$ 44,002,882	\$ 49,093,160	\$ (5,090,278)

Item 16 - Q2 2019 Procurement Update



Item 17 – Biannual Enterprise Risk Management (ERM) Report Background

- In 2018, Board adopted an Enterprise Risk Management (ERM) framework
 - Provides transparency and insight into risks that impact VCE
- ERM – strategic approach to risk management
- ERM:
 1. Regulates opportunities and risks
 2. Develop better understanding of opportunities and risks
 3. Actively manage risk exposure down to acceptable levels
 4. Assist in achieving business plan objectives and operational performance

























Item 17 - Summary of 2018 activities

- Established EROC committee and monthly meetings
- Developed ERM framework and tools
- Conducted Risk Survey
- Developed VCE top risk portfolio

Item 17 - Risk Portfolio

- Developed VCE's Risk Portfolio
 - Determined key risks
 - Likelihood and velocity of the risks and potential impacts
 - VCE's ability to reduce or control the risk

Item 17 - Risk Portfolio

Risk	Description	Current Residual Risk	Target Residual Risk
PCIA	Risk that PCIA rate could increase as a result of CPUC decision		
Regulatory & policy risk	Risk of additional regulatory requirements increasing complexity and cost of operations		
Rate structure	Risk of rate design not following marginal costs (non-TOU PCIA, demand charges, varying generation rates)		
Media & community	Risk of unfavorable public communications		
Opt-out rate	Risk of higher than expected opt-out level		
Cyber security & data privacy	Risk of data breach as a result of a cyber breach or physical attack		
Commodity Procurement	Risk of fluctuations associated with commodity prices		
Economy-business agility	Risk that customers will be impacted by poor economy, lowering or flat revenue impacting VCE growth opportunities		
Capital availability/cashflow	Risk that VCE is unable to secure affordable financing		
Business model	Ability to quickly identify and respond to business risks that have the potential to impact the ability to achieve VCE goals.		
Financial Markets Volatility	Swings in global financial markets and currencies may create significant challenges that VCE will have to address		
Changing customer expectation	Risk that customer's changing expectations as a result of innovation may result in reduced customer revenue and loyalty		

Item 17 - Risk Response Plan

- Top 5 VCE Risks from survey and assessments
 - VCE's Response
 - Current trend
 - VCE's plan
 - Trigger/Control
 - Owner

Item 17 - Key Priorities for 2019

- Maintaining operation risk management process