California Public Utilities Commission

Residential Rate Reform Through 2019

California Public Utilities Commission Energy Division

October 30, 2015

Outline

- Background and history of rate reform
- Implementation of rate reform
- Impacts and what customers can do
- SUE surcharge
- Time-of-use rates
- Timeline and Next Steps

Background/History

- In 2001, wholesale market manipulation led to the energy crisis, which caused rolling blackouts across California and caused havoc with the recently deregulated electric industry.

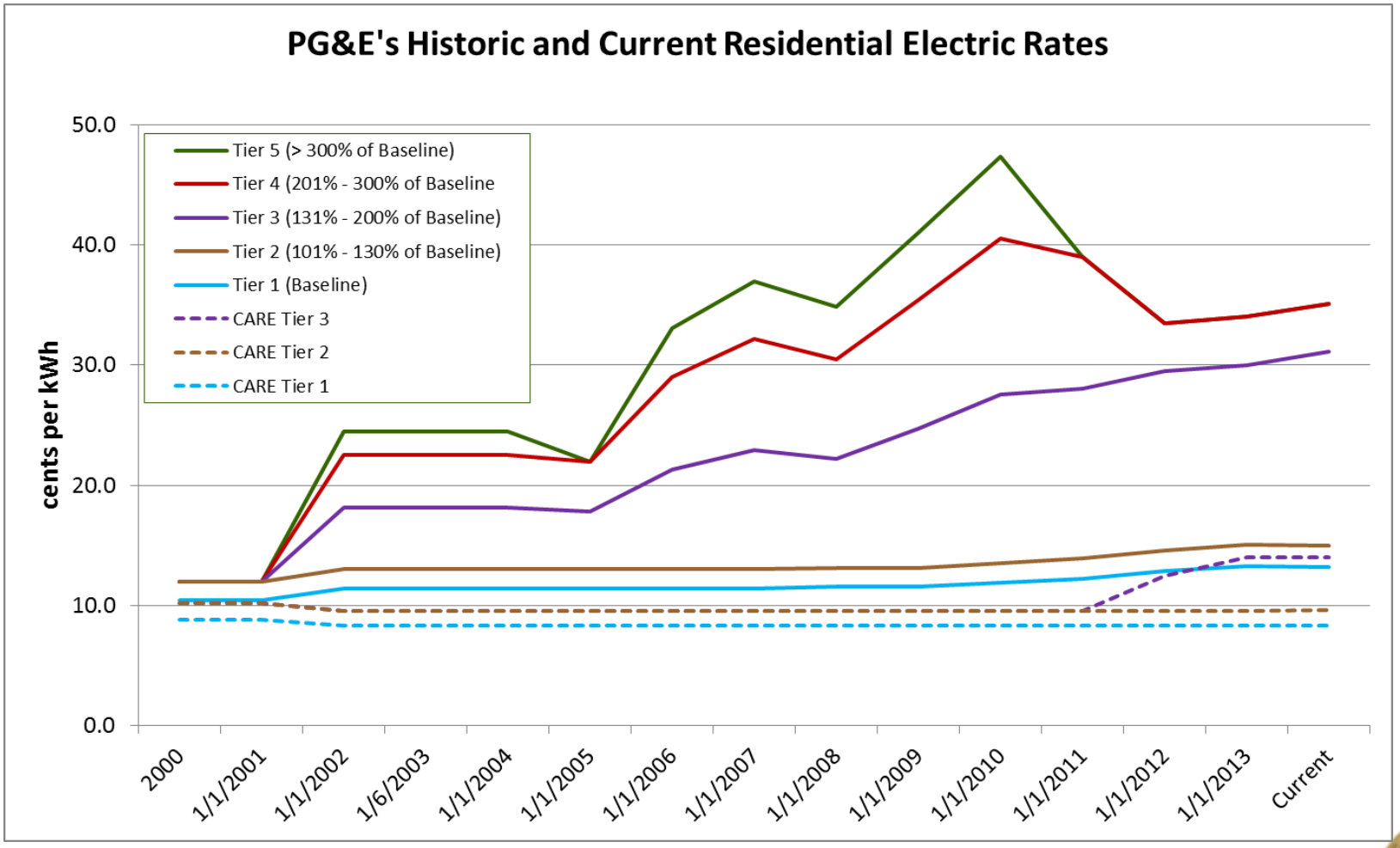
- On February 1, 2001, the state Legislature passed AB 1X, which capped rates for all residential energy use up to 130% of baseline at their February 2001 levels. CARE rates were also capped at their July 2001 levels.
  - CARE stands for California Alternative Rates for Energy and is the CPUC's low-income program for energy customers.

- In practice, this meant that the first two tiers of the rate structure were **frozen** as a customer protection.
  - In the last 14 years, this meant that all rate increases to pay for the system have gone to the upper tiers.
  - For example, a customer in the current Tier 4 is using twice the amount of power as a customer in Tier 1 but paying 4 times as much for that power, a more extreme form of inverted block pricing

Tiered Rates

- Electric rates in California are “tiered”, meaning that different blocks of electricity usage are billed at different rates.
  - Tier 1 constitutes usage up to the *baseline,* which is set between 50% and **60%** of average residential consumption in a climate zone.
  - Baseline power is the lowest cost tier and results from 1970s legislation to ensure low cost power for basic use
  - Tier 2 is usage between 100% of baseline and 130% of baseline.
  - Tier 3 is 130% to 200% and Tier 4 is all usage over 200% of baseline.

California Rates: 2000-2014



What is Rate Reform?

- Our goal is to transition California residential customers to default time-of-use rates by 2019
- Rate reform is a multi-year rebalancing of the electric rate structure
- Pursuant to AB327 the CARE discount will gradually be reduced to between 30-35% by 2020 (from a current effective discount of up to 43% in PG&E territory)

Procedural Background

- Senate Bill 695 in 2009 set the stage by allowing limited increases to the capped Tier 1 and Tier 2 rates, returning some rate authority back to the CPUC. It also set a schedule for introducing time variant rates to residential customers
- On June 21, 2012, the Commission instituted Rulemaking 12-06-013 on its own motion "to examine current residential electric rate design, including the tier structure in effect for residential customers, the state of time variant and dynamic pricing, potential pathways from tiers to time variant and dynamic pricing, and preferable residential rate design to be implemented **when statutory restrictions are lifted**." The goal was to find a way to bring rates closer to cost and to implement time-variant pricing.
- The utilities submitted 'blue sky' proposals for optimal rate design structures for when restrictions were lifted.

Assembly Bill 327

- In October 2013, Assembly Bill 327 (Perea) was signed into law, removing many of the restrictions on residential rate design.
  - Utilities were required to offer default rates with at *least* two tiers, with the first consisting of baseline quantities. In effect this allowed the utilities to reduce the number of tiers to two.
  - Allows the Commission to require or authorize default time of use rates by January 2018
  - Requires that the effective CARE discount to be no less than 30 or more than 35% of the non-discount rate
  - Allows the commission to adopt new or expanded fixed charges, but does not require them
  - Requires that any increases or charges be phased in gradually

- AB 327 has many provisions related to Net Energy Metering which are being addressed in the NEM 2.0 proceeding. The Commission is required to develop a new standard net metering tariff by December 31, 2015

What was Rate Reform intended to accomplish?

- Removing the distortions from a rate structure which had gotten far away from cost causation, which is a guiding principle of CPUC ratemaking

- Implementation of time-variant rates which has been a Commission policy since the 2003 Vision Statement

- Preparing the state for a renewable and distributed generation future

How Will Rate Reform be Implemented?

- Senate Bill 695 in 2009 and Assembly Bill 327 in 2013 authorized the rebalancing of the tiers.

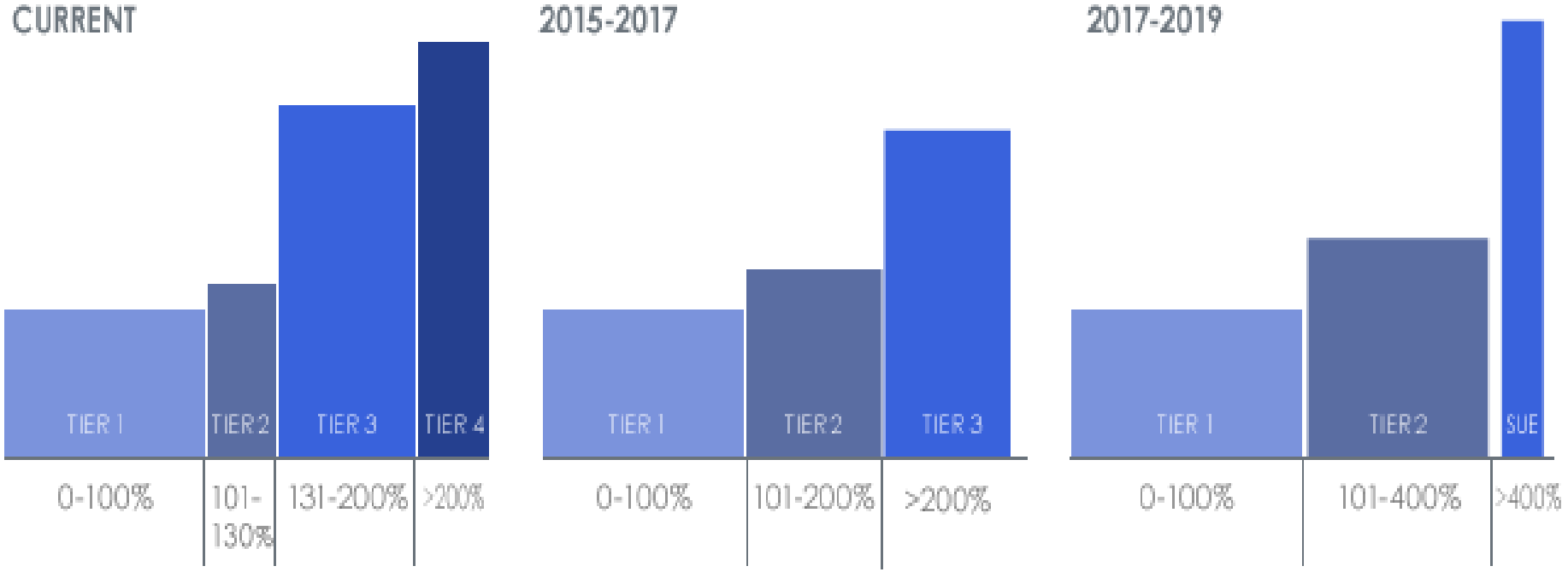
- The rate structure approved by the CPUC in July will gradually increase the rates in Tiers 1 and 2 and gradually reduce the rates in Tiers 3 and 4. It will also collapse the tiers.

- The end state will be a two tier system in 2018 where the second tier of usage costs only 25% more than the first tier of usage. In addition, there will be a "super-user" surcharge that will affect fewer than 10% of customers.

- The CPUC has worked with the utilities, consumer groups, clean energy, and energy efficiency advocates as well as other stakeholders over the last 3 years to ensure that this process is gradual and does not unduly burden Tier 1 and Tier 2 customers.

Illustration of Structural Changes

Residential Electric Rate Structure



Questions?

Impacts on Customers

- This process **does not allow the utilities to collect more money**, it spreads the total amount collected more proportionately to usage.

- Customers currently in Tiers 1 and 2 may see bill impacts of $3-4 a month each year, i.e., bills may be $10-12 a month greater in 2018 than they are in 2014. Customers currently in Tiers 3 and 4 will see their bills decrease by a similar amount.

- The minimum bill amount will increase from $5 to $10 (and from $2.50 to $5 for CARE customers). This only applies to people who zero out their usage for the month. This contributes to paying for the infrastructure of the distribution system.

- The utilities are charged with bringing low-cost/no-cost energy saving programs and tools to those customers projected to have highest bill impacts.

Rate Reform and Rooftop Solar Generation

- As the previous steeply tiered rates are flattened, this may change the economics of solar adoption, shortening the payback for lower usage customers, and lengthening the payback for higher usage customers.
- D.15-07-001 found:
  - Finding of Fact (FOF) 58. Steeply tiered rates are not the most economically efficient method for encouraging customers to invest in energy efficiency improvements or rooftop solar.
  - FOF 134. TOU rates will allow residential customers to make more economically efficient decisions about investing in energy efficiency improvements and rooftop solar.
  - FOF 135. TOU rates will help customers align their investments with the IOUs' avoided costs.
  - A two-tier structure will continue to provide a conservation signal, while bringing rates closer to cost and thereby sending more accurate price signals to customers. (p.108)

Rate Reform and Net Energy Metering

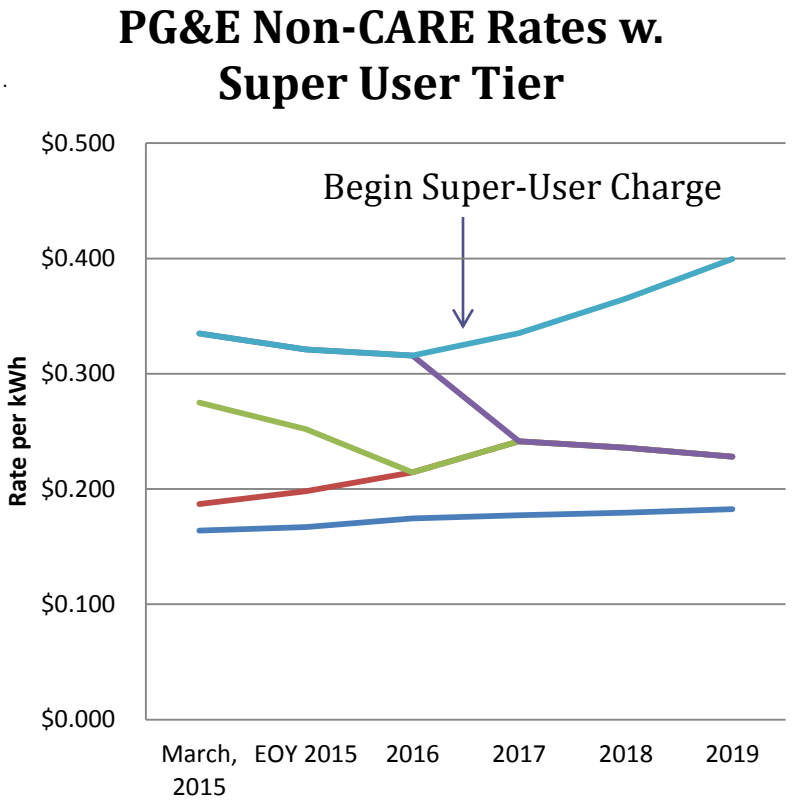
- D.14-03-041 recognized that customers who invest in renewable generation systems and participate in NEM tariffs should have an opportunity to recoup their initial investment and allowed these customers to retain the benefit of the existing NEM tariff for 20 years
  - FOF 136. The NEM tariff was "grandfathered" [by D.14-03-041], but because the NEM tariff is an "overlay" rate, NEM customers will be impacted by rate changes in this proceeding.
  - FOF 142. Customers on TOU tariffs should be permitted to remain on them for up to five years.
  - FOF 143. Five years is sufficient time for NEM customers to determine how to respond to new TOU periods.

Rate Reform and Conservation

- For energy efficiency, as for solar, tier flattening shortens the payback for lower usage customers, and lengthens the payback for higher usage customers.
- Conservation effects of tiered rates depend upon higher-usage customers having higher price elasticities. "However, we did not find that the evidence presented in this proceeding clearly shows a correlation between electricity usage and elasticity".(p.60)
  - … we cannot find with certainty that the rate design proposals will decrease (or increase) conservation, we can find that any impacts to conservation from the proposed rate design changes would be relatively small and would not unreasonably impact conservation. (p.61)

Preventing Energy Waste

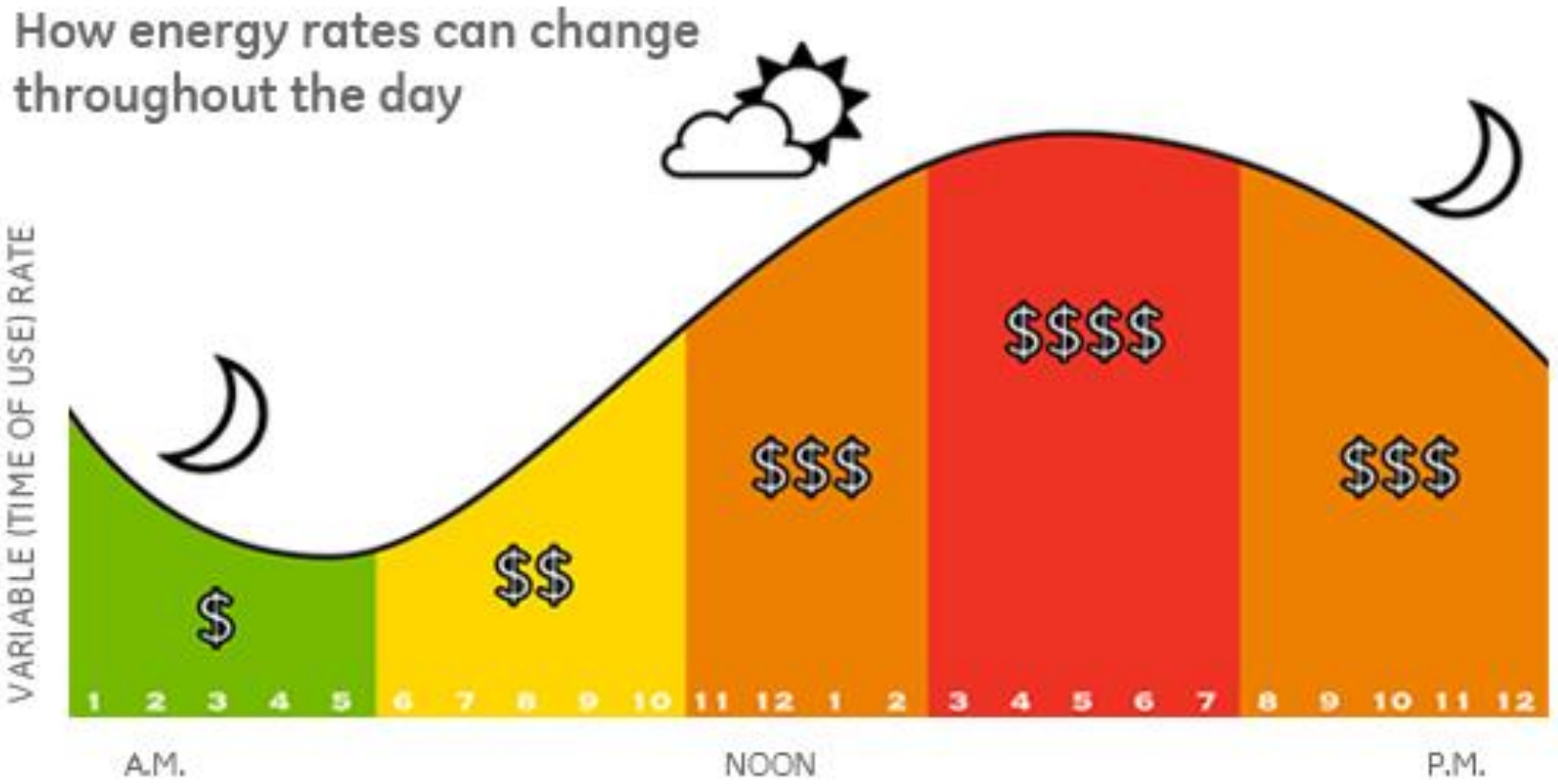
- In 2017, a super-user energy surcharge will begin for those customers who use very high amounts of energy: 400% of baseline or more.
- This was included to ensure that those customers who are truly using much more than is necessary are penalized.
- The super-user surcharge will be an extra $.0.20 per kWh.



Time-of-Use Rates

- In 2019, at the end of this process, the state will introduce default time-of-use (TOU) rates for residential customers.
- Mandatory time-of-use rates are already in place for all commercial and industrial customers in California.
- TOU rates mean that electricity will cost the most at the times when it is most expensive in the wholesale markets run by CAISO. These are generally the times of highest demand.
- Many customers already understand the concept of electric time-of-use through the Flex Your Power campaigns, PG&E's SmartRate, and other programs that encourage conservation during hot summer afternoons when demand is highest.
- A study conducted in the course of the rate reform process found that 19% of customers believed they were already on a TOU rate. Currently only 3.4% of PG&E customers are on a TOU rate.

Illustration of Energy Costs and Time-of-Use



Source: GE

Time-of-Use Rates

- This rate structure is designed to give customers the most power to reduce their bills while also running the state's electric system most efficiently. Time of use rates will feature the highest prices when energy is the scarcest and the lowest prices when it is the most abundant.

- By using high consuming devices at low-cost times, customers will be able to cut their bills significantly while reducing use of the most inefficient, expensive, and carbon intensive forms of power generation.

- At any time, customers will be able to opt-out back onto the two tiered rate described previously.

Next Steps

- Currently, the CPUC, the utilities, and other stakeholders such as consumer advocates and environmental groups are working to develop marketing and outreach plans to help customers understand the upcoming rate changes.

- There is also a collaborative process to pilot different TOU rate designs between now and 2019 to find the most optimal, customer-friendly and easy to understand rate to use as the default. The utilities will file Applications to the CPUC in 2018 with the rates they believe fit this definition, using the data obtained from the pilots.

- The CPUC will hold a Residential Electric Rate Summit (RERS) on November 17, 2015, to discuss the bill impacts of rate reform and progress made in developing TOU rates. The utilities will be required to present on their marketing and progress in outreach to consumers on rate reform. This summit will be held annually until 2019. Please check the CPUC website to find the webcast on Nov. 17th.

Timeline

2015-2018

- Collapse from 4 to 2 tiers
- Low-cost/no-cost energy efficiency campaign

2017

- Super-user energy surcharge begins

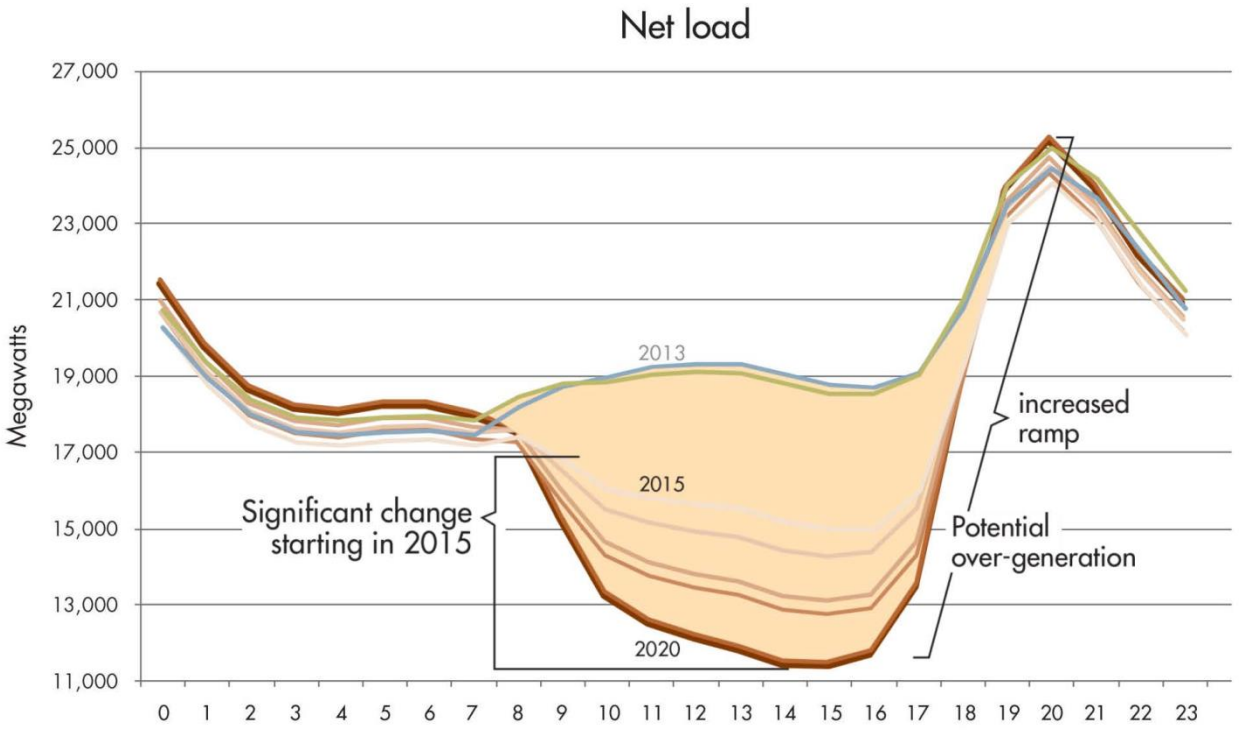
2019

- Default Time-of-use rates

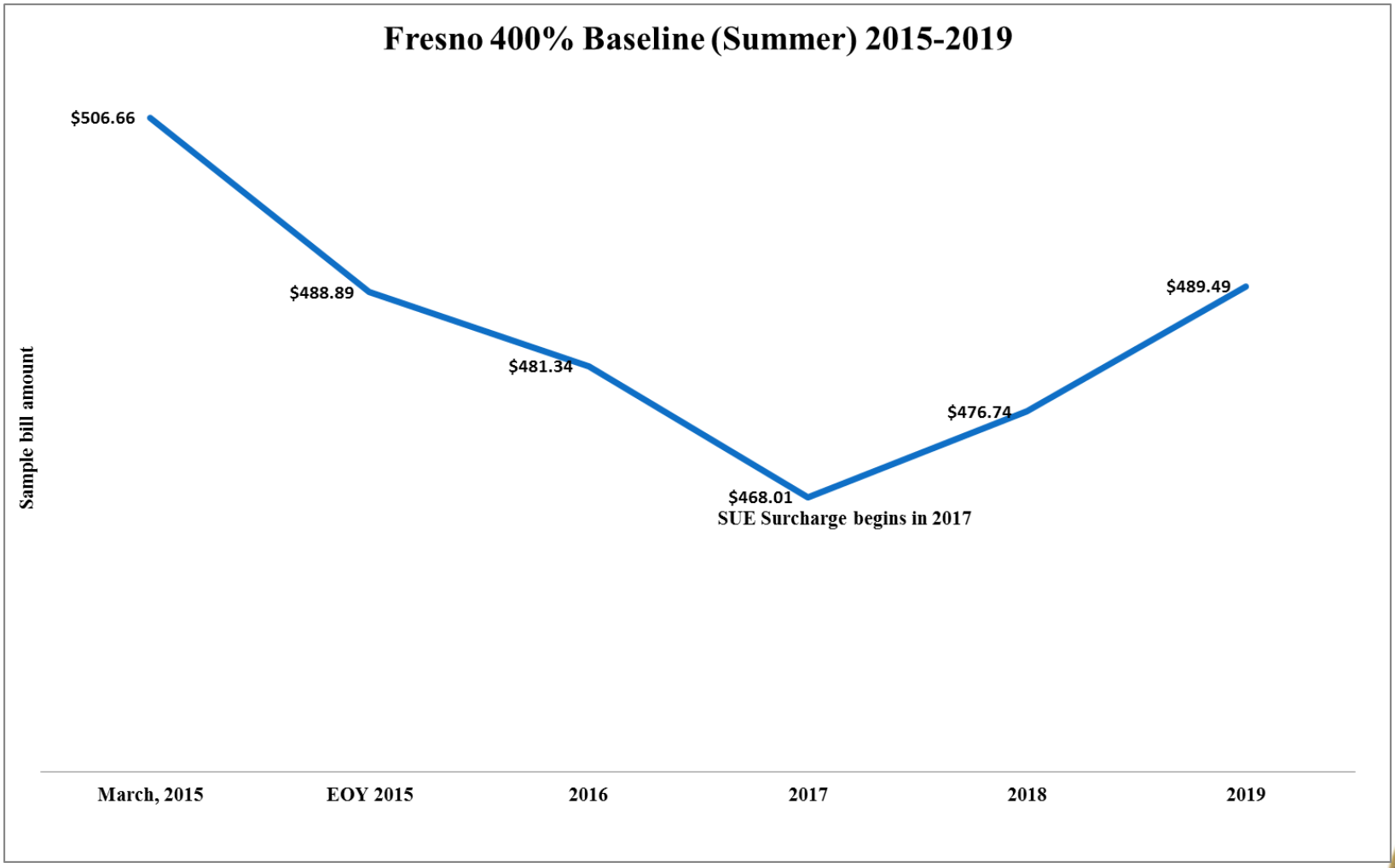
Questions?

The future may look different for Time-of-Use

Growing need for flexibility starting 2015

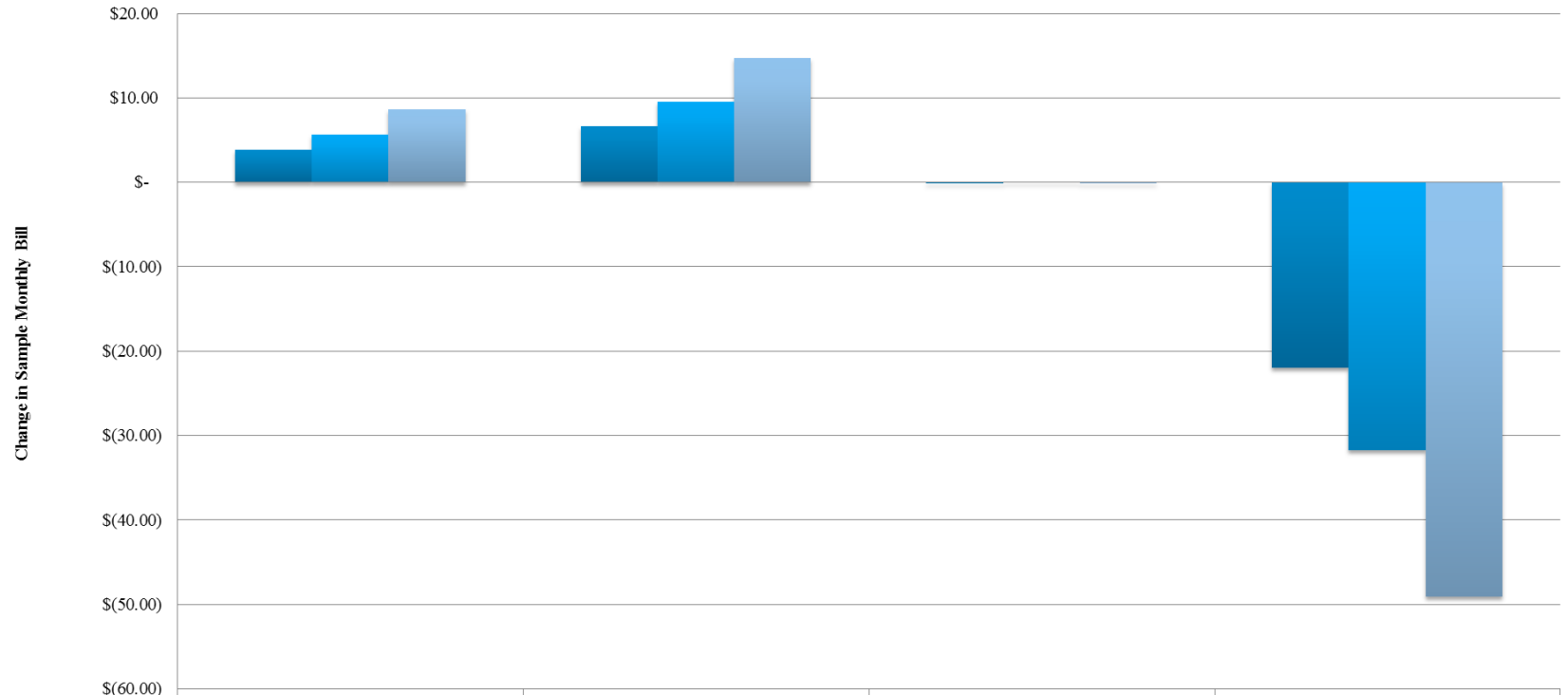


Super User Energy (SUE) Surcharge



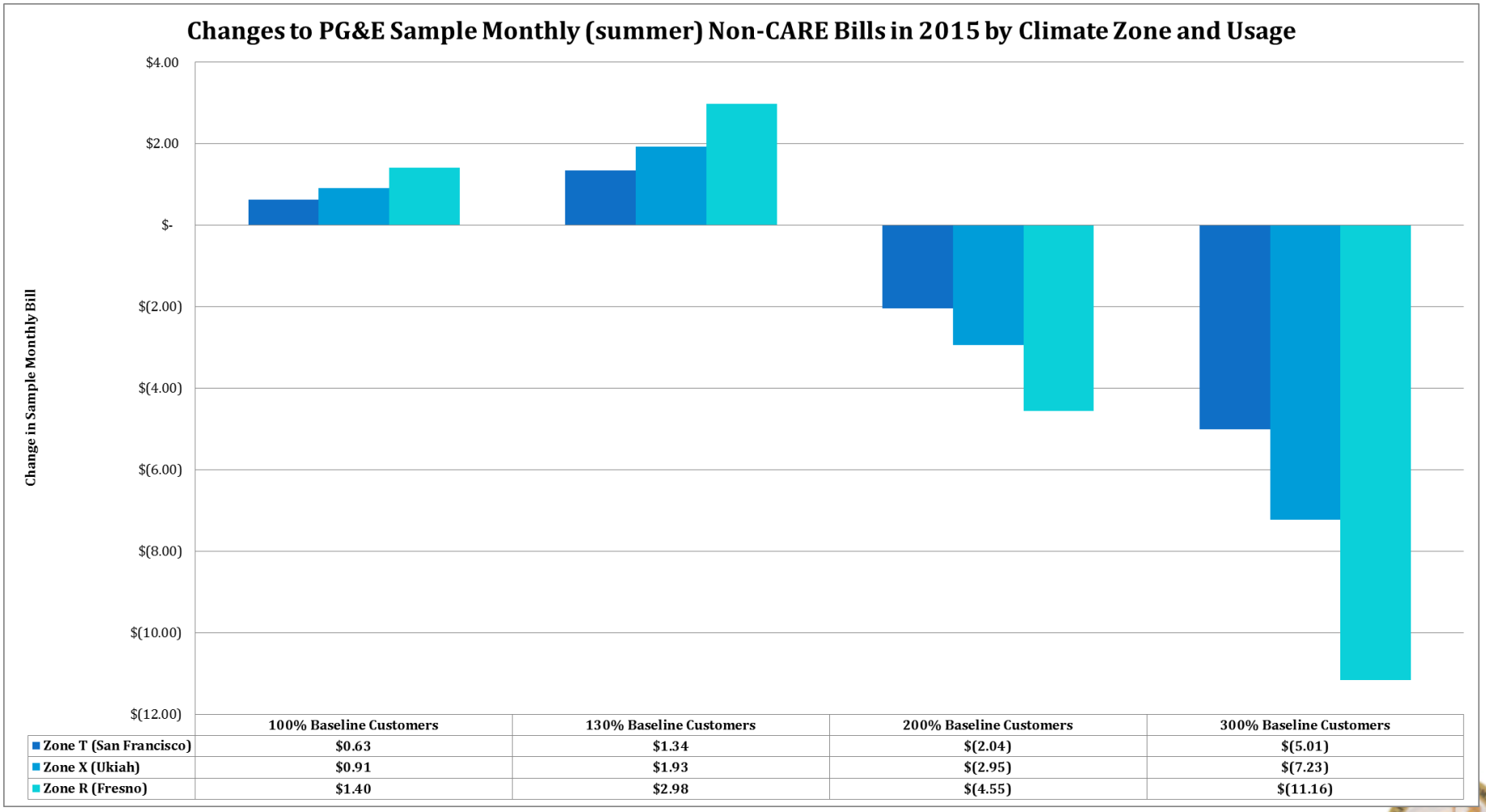
Changes to rates between 2015 and 2019

Changes to PG&E Sample Monthly (summer) Non-CARE Bills between March 2015 and 2019 by Climate Zone and Usage



	100% Baseline Customers	130% Baseline Customers	200% Baseline Customers	300% Baseline Customers
Zone T (San Francisco)	$3.88	$6.60	($0.00)	$(22.02)
Zone X (Ukiah)	$5.60	$9.52	$0.00	$(31.78)
Zone R (Fresno)	$8.64	$14.70	($0.00)	$(49.08)

Changes to rates in 2015



	100% Baseline Customers	130% Baseline Customers	200% Baseline Customers	300% Baseline Customers
Zone T (San Francisco)	$0.63	$1.34	$(2.04)	$(5.01)
Zone X (Ukiah)	$0.91	$1.93	$(2.95)	$(7.23)
Zone R (Fresno)	$1.40	$2.98	$(4.55)	$(11.16)