CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Memorandum

TO: HONORABLE MAYOR AND CITY COUNCIL

FROM: Lori Mitchell

SUBJECT: SEE BELOW

DATE: September 18, 2019

Approved D-DSyL Date 9/26/19

SUBJECT: CALIFORNIA ELECTRIC VEHICLE INFRASTRUCTURE PROJECT FUNDING

RECOMMENDATION

Adopt a resolution:

(a) Approving the implementation of the California Electric Vehicle Infrastructure Project in San José;

(b) Approving participation of San José Clean Energy in the California Energy Commission's current round of funding of the California Electric Vehicle Infrastructure Project for load-serving entities in San Mateo and Santa Clara counties; and

(c) Authorizing the Director of Community Energy or designee, in consultation with the City Attorney, to negotiate and execute an agreement with the Center for Sustainable Energy to administer San José Clean Energy funds as part of the implementation of the California Electric Vehicle Infrastructure Project in an amount not to exceed $4,000,000 through December 31, 2023, subject to the appropriation of funds.

OUTCOME

Approving the recommendation will allow the City of San José to implement the California Electric Vehicle Infrastructure Project in San José and participate in the current round of California Electric Vehicle Infrastructure Project ("CALeVIP") funding that the California Energy Commission ("CEC") granted to several load-serving entities in San Mateo and Santa Clara counties. Approving the recommendation will also allow the Director of Community Energy to sign an agreement with the Center for Sustainable Energy ("CSE") to formally launch this program. The agreement would require San José Clean Energy ("SJCE") to contribute $4 million over the next 2 to 4 years, as a condition for the CEC to disburse $10 million to SJCE's program under a grant awarded to SJCE and other public entities. The combined funds ($14 million) would be used as incentives for the installation of electric vehicle charging infrastructure in San José.

If approved by Council, SJCE expects to contribute approximately $85,000 in Fiscal Year 2019-2020, $915,000 in Fiscal Year 2020-2021, and $3.0 million in Fiscal Year 2021-2022. The exact monthly outlay of funds to CSE depends on CALeVIP applicant demand, project completions, documentation review, and approval by CSE. The agreement would include not to exceed amounts of its contributions for each fiscal year.

These combined investments are expected to result in approximately 100 new Direct Current Fast Charging ("DCFC") ports and 1,400 new Level 2 charging ports in San José by the end of 2022. For reference, San José currently has 142 DCFC ports and 1,062 Level 2 charging ports.

BACKGROUND

On August 8, 2017, City Council approved an ordinance establishing a Community Choice Aggregation program to be named SJCE and amending Title 26 of the San José Municipal Code to create the Community Energy Department of the City of San José to manage the Community Choice Aggregation. Under the adopted Title 26, SJCE may provide any programs as approved by the City Council.

In February 2018, the City of San José was one of the first U.S. cities to adopt a Paris Agreement-aligned climate action plan, named Climate Smart San José ("Climate Smart"). This is a data driven plan with goals and actions focused on three components: energy, mobility, and water. It details not only ways to reduce the city's carbon footprint but also to improve quality of life for those who live and work in San José.

On May 15, 2019, SJCE provided an update to the Transportation and Environment Committee on the Community Energy Programs planning process. SJCE advised that vehicle electrification was likely to be one of the sectors that will be recommended as a primary area of program focus.

ANALYSIS

CALeVIP Program Introduction

The CALeVIP is a CEC electric vehicle ("EV") charging infrastructure incentive program. The CEC co-funds the program with a participating organization. Typically, the incentives are cost shared with a local government entity, utility, or Community Choice Aggregation. Program implementation and administration is managed by the CSE, which was competitively selected by the CEC.[1] The incentives are focused on:

[1] California Energy Commission Contract number ARV-16-017

- Level 2 Chargers: Requires a dedicated 240-volt circuit, similar to an electric dryer or oven. Charging loads are normally 7 kilowatt ("kW") but can go up to 19.2 kW. Level 2 chargers can charge an EV at roughly 20-40 miles per hour. Level 2 chargers are typically installed at single family homes, multi-family dwellings, or workplaces.

- Direct Current Fast Chargers ("DCFC"): Also called supercharging, provides the fastest available charging times. Higher powered chargers require a 480-volt connection. Charging loads are in the range of 50 to 150 kW. This results in around 100 miles of range in 30 minutes. DCFCs are typically installed at shopping centers, rest stops, gas stations or other shorter stay locations.

Under CALeVIP, these charging stations can be public or private for workplaces, multi-family dwellings, destination centers, and shopping centers, but are not available for single family homes. Incentives will cover a portion of the costs of both the charging station as well as the electrical infrastructure upgrades needed to install the charging stations. Property owners who install chargers that receive incentives through the CALeVIP program are responsible for any ongoing operational expenses for the chargers. CALeVIP funds may only be used for chargers at existing buildings. SJCE is negotiating to allow the incentives to be used for new affordable housing. Incentives are structured as described in the tables below.

Level 2 Incentives
Table 1. Proposed Level 2 Charger Incentive Design.

Rebate Per Connector	Rebate Adders Per EV Charging Connector		
	MUD	DAC	Low Income
$5,000	$1,000	$500	$500

Proposed Level 2 Incentive Design
MUD = Multi-unit Dwelling.
DAC = Disadvantaged Community

DCFC Incentives
Table 2. Proposed DCFC Incentive Design

Proposed DCFC Incentive Design

DCFC Type	Non-Disadvantaged Community/Low Income Rebate	Disadvantaged Community/Low Income Rebate
50 kW+	Up to $50,000 or 75% of the total project cost, whichever is less	Up to $60,000 or 80% of the total project cost, whichever is less
100 kW+	Up to $70,000 or 75% of the total project cost, whichever is less	Up to $80,000 or 80% of the total project cost, whichever is less

San Mateo and Santa Clara County Collaboration

A coalition was formed among San Mateo and Santa Clara County electrical load-serving entities to apply for CEC funding under the CALeVIP program. The coalition included: SJCE, Peninsula Clean Energy, Silicon Valley Clean Energy, City of Palo Alto Utilities, and City of Santa Clara/Silicon Valley Power. CALeVIP is operated on a county-wide level. Therefore, it was important that the majority of load serving entities in the county submitted a joint application to receive matching CEC funding. This was a unique opportunity for Community Choice Aggregations and Publicly Owned Utilities to obtain funding that would benefit both counties. If any of the entities had not participated, the application may have been less compelling to the CEC.

Agreement with Center for Sustainable Energy

CSE is a nonprofit energy organization that provides administration and advisory services.[2] As indicated above, the CEC (a state public agency) selected CSE through a competitive solicitation to implement the CALeVIP program.[3] CSE is the only entity authorized by the CEC to administer any CEC grants under the program.[4] For these reasons, SJCE did not engage in competitive procurement to award a contract to CSE.[5]

Under the standard services agreement with CSE, SJCE would contribute an amount not to exceed $4,000,000 for the design and implementation of an EV charger incentive program through December 31, 2023. This amount would include a fee, payable in several installments, to compensate CSE for services related to the development and administration of the program in a not to exceed amount of $280,000. The scope of work for this project will require CSE to meet

[2] https://energycenter.org/about-us
[3] https://calevip.org/about-calevip
[4] California Energy Commission Contract number ARV-16-017
[5] See San José Municipal Code, Section 4.12.225 (public agencies purchases) and Section 4.12.235 (unique services purchases).

certain deliverables and submit regular reports that would allow SJCE to ensure that SJCE's funding is properly invested and monitor the progress of the program.

City of San José Electric Vehicle Goals

Climate Smart San José set an ambitious target of 61% of passenger vehicles (includes SUVs) or 153,200 vehicles are electric by 2030. The Climate Smart plan identified one of the key challenges in meeting that goal is "creating an EV charging infrastructure" to support 61% EV's in the city. The Climate Smart plan also includes a clear action (2-3-A) "to partner strategically to expand the network of publicly available charging stations".[6]

The standard definition for EV's include both battery electric vehicles and plug-in hybrid electric vehicles. A battery electric vehicle runs fully on power from the battery, while a plug-in hybrid electric vehicle runs on both a gasoline engine and a battery. As of October 2018, the City of San José had approximately 23,170 registered EV's according to the California Department of Motor Vehicles. EV's represent around 2.8% (23,170) of total registered passenger vehicles in San José in 2018. This means that San José will need to increase the number of EV's by 561% to meet the Climate Smart goal of 153,200 EV's by 2030. In the near-term, San José will need 63,100 EV's by 2025 to meet Climate Smart goals for that year. This represents a 171% increase or replacing 39,930 vehicles with EVs by 2025. The CAleVIP incentives and $10.0 million in funding from the CEC will help the City meet these ambitious goals.

City of San José Electric Vehicle Charging Infrastructure

Studies have shown a strong statistical link between EV uptake and charging infrastructure availability.[7] Although correlation does not imply causality, the statistical correlation implies that if San José does not have enough available charging infrastructure, EV uptake will be negatively impacted. Thus, it is important that the City of San José has available and accessible electric vehicle charging infrastructure to meet Climate Smart's ambitious EV goals.

Currently, the City of San José's landscape for charging infrastructure includes 1,062 Level 2 and 142 DCFC planned or installed charging ports. Using research estimates,[8,9] San José will need 5,409 Level 2 charging ports and 258 DCFC ports to service the 63,100 EVs called for in Climate Smart in 2025. This implies the City of San José will need to increase the Level 2 charging ports by 4,347 ports (409%) and increase DCFC ports inventory by 116 ports (82%) in just 5 years to meet Climate Smart goals for 2025. The 1,400 Level 2 charging ports CALeVIP could provide represent 32% of 2025 incremental requirements, while 100 DCFC ports represent 86% of 2025 incremental need. Figure 1 provides more details on the projected charging gaps in 2025.

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[6] "Climate Smart San Jose, A People-Centered Plan for a Low-Carbon City", page 163
[7] International Council on Clean Transportation ("ICCT") EV Charging Best Practices, 04-10-2017
[8] *California Plug-In Electric Vehicle Infrastructure Projections: 2017- 2025*, California Energy Commission staff report, March 2018 (https://www.nrel.gov/docs/fy18osti/70893.pdf)
[9] Quantifying the Electric Vehicle Charging Gap Across U.S Markets, January 2019, ICCT, https://theicct.org/sites/default/files/publications/US_charging_Gap_20190124.pdf

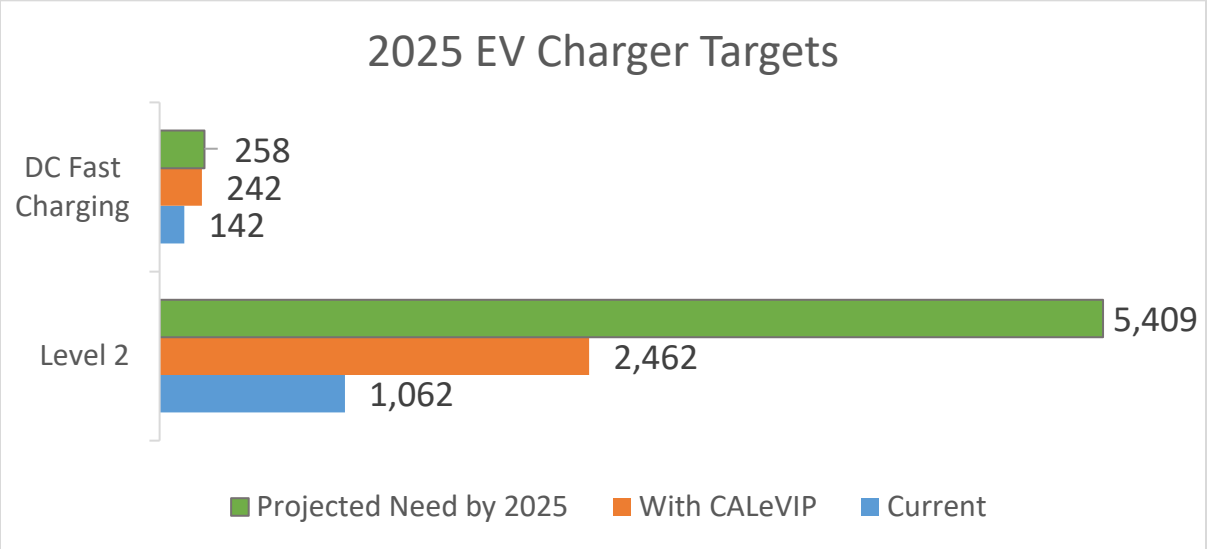

Figure 1. Charging port needs to achieve 2025 Climate Smart EV deployment targets[10,11]

Equity Considerations

The latest analysis of EV adoption and EV charging infrastructure in the City of San José shows spatially that communities in the City with lower household income, also have lower rates of EV adoption and lower access to EV charging stations.[12] Figure 2 shows EV adoption by census tracts.[13] The black grid line layers represent where low income communities are located. The low income and disadvantaged communities were determined by guidelines in AB 1550 and SB 535. In general, the areas in San José with lower rates of EV adoption shown below correspond with the locations of low income and disadvantaged communities.

[10] *California Plug-In Electric Vehicle Infrastructure Projections: 2017- 2025*, California Energy Commission staff report, March 2018 (https://www.nrel.gov/docs/fy18osti/70893.pdf)
[11] Quantifying the Electric Vehicle Charging Gap Across U.S Markets, January 2019, ICCT, https://theicct.org/sites/default/files/publications/US_charging_Gap_20190124.pdf
[12] Dept of Motor Vehicles, California Motor Vehicles Fuel Types by City, October 1, 2018. (https://www.dmv.ca.gov/portal/wcm/connect/1949a1b2-be57-4024-a921-5eb00babea68/MotorVehicleFuelTypes_City_102018.pdf?MOD=AJPERES&CVID=)
[13] Dept of Motor Vehicles, California Motor Vehicles Fuel Types by City, October 1, 2018.

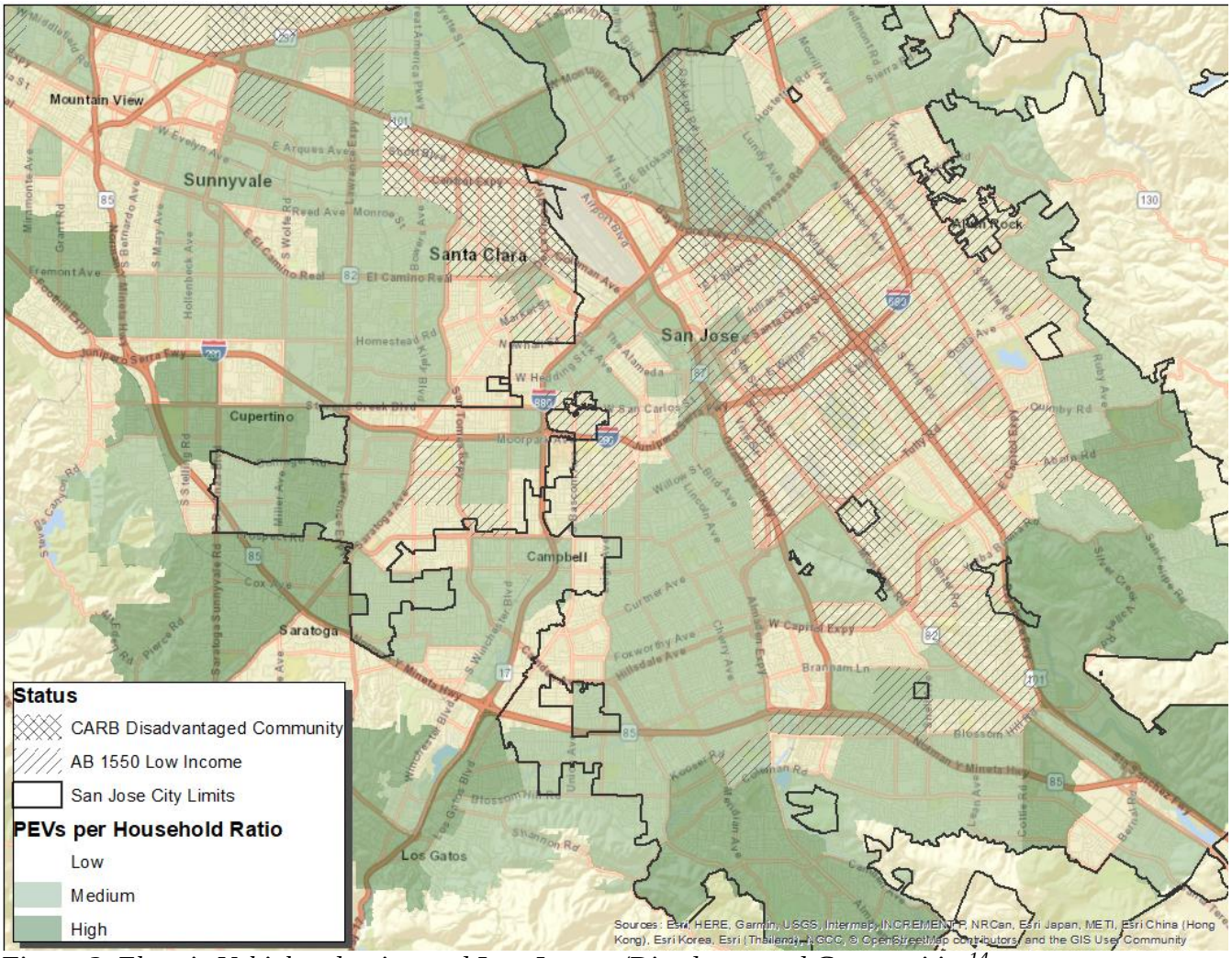

Figure 2. Electric Vehicle adoption and Low Income/Disadvantaged Communities[14]

[14] Dept of Motor Vehicles, California Motor Vehicles Fuel Types by City, October 1, 2018.

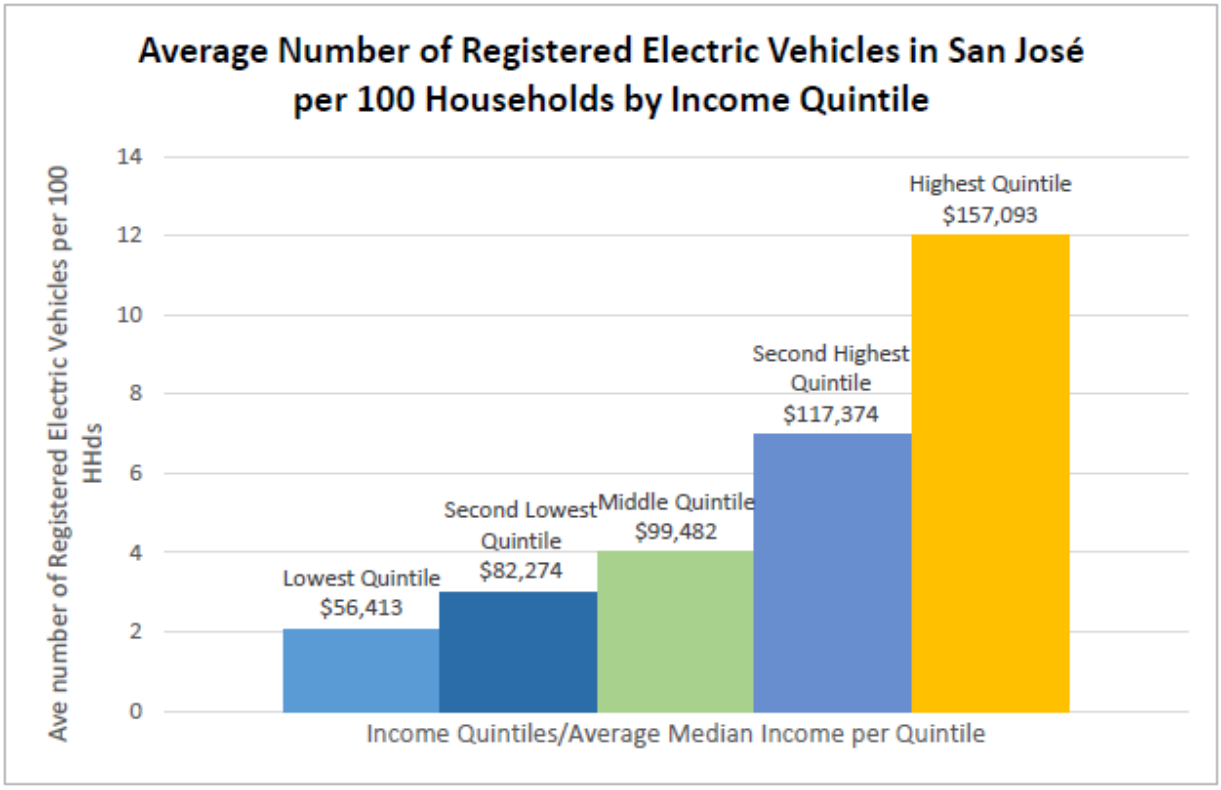

Figure 3. EV adoption by Household Income[15]

Figure 3 highlights the concentration of EV adoption within higher income households in San José. To address these inequities, staff recommends that SJCE's implementation of CALeVIP requires that 25% of total rebates dispersed ($3.5 million) go to communities designated at the top 25% of disadvantaged communities (i.e. the most disadvantaged communities) as defined by the California Environmental Protection Agency through CalEnviroScreen 3.0 tool per SB 535. SJCE also recommends that census tracts and households that are at or below 80 percent of the statewide median income, or at or below the threshold designated as low-income by the California Department of Housing and Community Development's 2016 State Income Limits per AB 1550 be included. If Council approves staff's recommendation, staff will negotiate provisions that include a reference to these proposals in the agreement with CSE.

The census tracts defined either by SB 535 or AB 1550 also show the lowest quantity of EV charging infrastructure installation. Figure 4 shows current Level 2 and DCFC locations based off data on Plugshare.com. In general, it shows a lower penetration of stations in the AB 1550 (orange) and SB 535 (green) communities. Directing 25% of the rebates toward these communities could serve as mechanism to drive up the currently low EV adoption rate in our disadvantaged and low-income communities.

[15] California Department of Motor Vehicles and 2017 American Community Survey

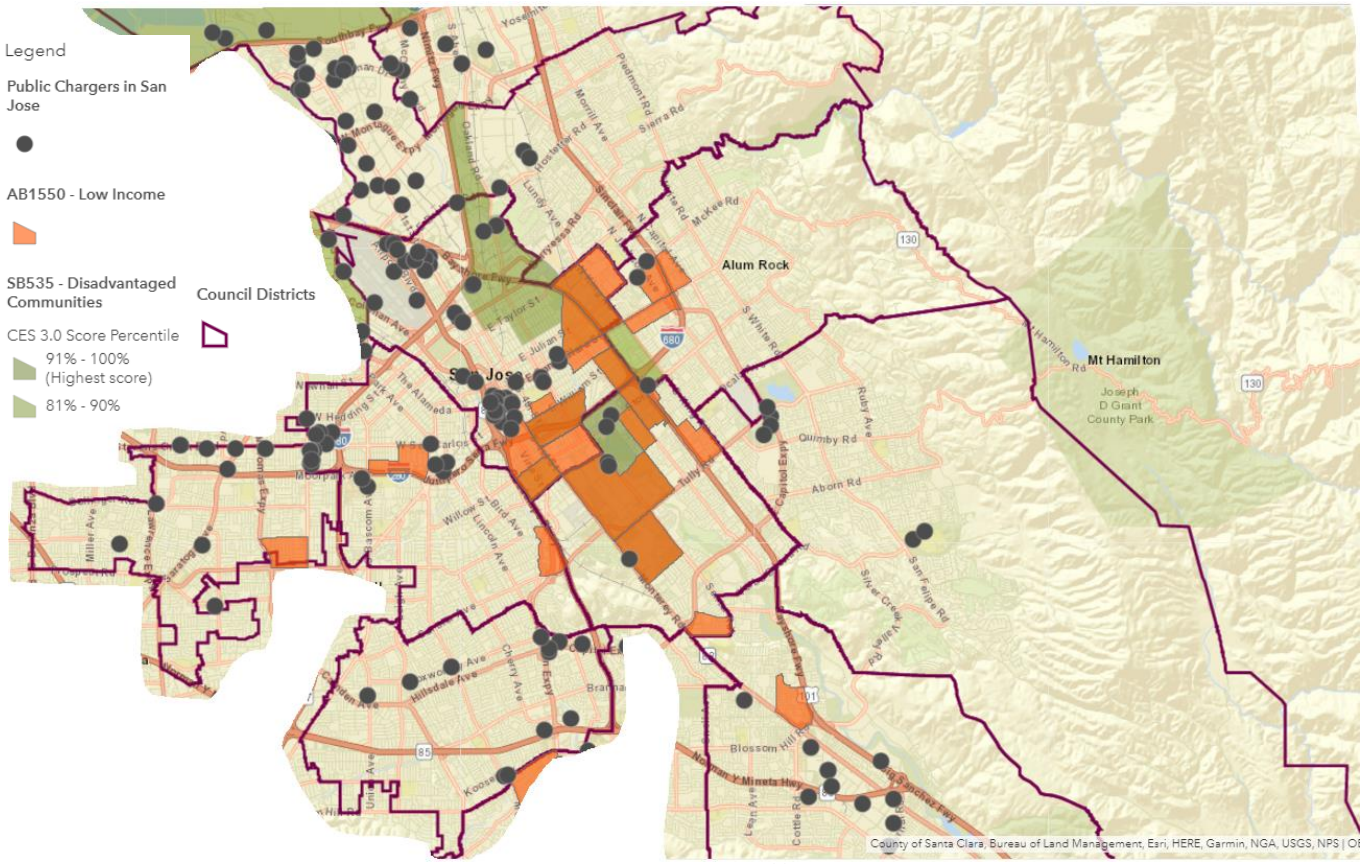

Figure 4. Level 2 and DCFC charger locations in San José[16]

Electric Vehicle Benefits

Greenhouse Gas Emission Reductions

The City of San José's latest Greenhouse Gas Inventory report for 2017 emissions calculated that transportation and mobile sources, which includes passenger vehicles, contributed to 63% of the City of San José's emissions.

By enabling wider electric vehicle adoption through greater charging availability, CALeVIP could be an important factor in providing the 265,100 metric tons of annual CO_2 reductions specified per the Climate Smart model in 2025 through the addition of 39,930 electric vehicles. The reduced annual emissions of 265,100 metric tons associated with roughly 39,930 more electric vehicles represents around 7.4% of the 2017 transportation and mobile source emissions (3,589,159 metrics tons) in San José.

[16] The Shared-Use Mobility Center created this map with data primarily derived from the National Renewable Energy Laboratory's (NREL) Alternative Fuel Data Center. NREL continuously updates this dataset through submissions to a public, online portal and through collaboration with the Clean Cities Initiative, infrastructure equipment providers, original equipment manufacturers, and industry groups. The inventory includes funded sites for non-Tesla, public electric vehicle chargers that will be constructed before 2021 through partnerships with Pacific Gas & Electric and Electrify America.

Health Benefits

Gas powered vehicles produce smog-forming pollutants such as nitrogen oxide, as well as other pollutants harmful to human health including particulate matter, carbon monoxide, and sulfur dioxide.[17] These pollutants lead to lung irritation, weaken the body's defenses against respiratory infections, and pose health risks to young children and asthmatics.[18]

EVs produce clear health benefits by offering zero exhaust emissions at the street level, leading to cleaner and healthier communities, with particular benefits to the most vulnerable who tend to live close to freeways and major roadways. Though electric vehicles still emit particulate matter from road, tire, and brake wear, their overall air pollutants are fewer than gasoline or diesel fueled vehicles.[19]

Economic Benefits

While most EVs tend to have higher upfront costs compared to traditional gas vehicles, the significant rebates and incentives available at both the Federal and state level are bringing many EV models at or close to cost parity with gas vehicles. Depending on the vehicle brand, EV owners can receive up to a $7,500 federal tax credit on a new EV. On a state level, the California Air Resource Board's Clean Vehicle Rebate Project offers adopters of a new EV a $2,500 rebate ($4,500 rebate for income qualified residents). These incentives can bring down the cost of EV adoption by $10,000 to $12,000 per vehicle. The Clean Vehicle Assistance program and Clean Cars for All program offers incentives for used EVs for income-qualified residents.

EVs have lower annual costs when compared to gas powered vehicles.[20] An average EV driver will save around $1,000 per year on fuel costs, based on current residential EV rates from SJCE and latest gas prices from the U.S. Department of Energy. The CALeVIP program could bring potential economic benefits to San José residents from fuel cost savings that total approximately $39.9 million annually. San José residents may also save money through lower annual maintenance costs when driving an EV compared to a gas vehicle. The American Automobile Association ("AAA") estimates that an EV driver can save around $204 per year in maintenance compared to driving a gas vehicle. In total San José residents could save up to $8.2 million annually on maintenance costs by 2025.

[17] U.S. Department of Energy, https://www.energy.gov/eere/electricvehicles/reducing-pollution-electric-vehicles
[18] Union of Concerned Scientists, https://www.ucsusa.org/clean-vehicles/vehicles-air-pollution-and-human-health/cars-trucks-air-pollution
[19] European Environment Agency, https://www.eea.europa.eu/highlights/eea-report-confirms-electric-cars
[20] AAA, https://newsroom.aaa.com/tag/cost-to-own-a-vehicle/

SJCE Benefits

In addition to the other benefits enumerated above, converting more drivers of gas vehicles to EVs is a revenue growth opportunity for SJCE through the increased electrical load. The approximately 13,420 new EVs estimated to be serviced by the new charging infrastructure from CALeVIP is expected to increase SJCE's annual load by approximately 47 GWh and annual revenue by $3.1 million.

Table 3. Impact of CALeVIP program. (Source: DMV, internal estimates)

	Present	After CALeVIP	% Increase projected by 2023 supported by CALeVIP
Total Electric Vehicles	23,170	36,590	58%
Level 2 and DCFC chargers	1,204	2,704	125%
Energy used by EVs (GWh)	81	128	58%

The CALeVIP program requirements stipulate that the installation of networked chargers in public places will shift charging to occur generally during the day when prices are low and when solar capacity is available. This will help SJCE reduce electric supply costs by reducing the amount of EV's that are charging in the evening when electric supply costs are high. It will also help reduce emissions as carbon emitting natural gas generation is typically used in the evening to meet this demand.[21] The estimated additional annual revenue of $3.1 million and net revenues (after power costs of $1.9 million) of approximately $1.2 million will help ensure SJCE is financially stable and can be used to support future programs in San José.

EVALUATION AND FOLLOW-UP

A status update of the CALeVIP implementation (including status on outreach efforts, early applicants, and updated funding timing) will be included as part of SJCE's program roadmap update to the Transportation & Environment Committee in February 2020.

POLICY ALTERNATIVES

Alternative #1: City Council does not approve the implementation of the CALeVIP program and participation of SJCE in CEC's CALeVIP funding. City Council does not approve the authority to negotiate and execute an agreement with CSE and SJCE's cost sharing for the CALeVIP program.
Pros: SJCE does not launch the CALeVIP program or fund $4.0 million in program costs and instead increases funding in SJCE's operating reserve.
Cons: The City of San José loses an opportunity to receive and leverage $10.0 million in CEC funding to support EV charging infrastructure in San José. The other Santa Clara County entities

[21] http://www.caiso.com/TodaysOutlook/Pages/emissions.aspx

with whom the City applied for CALeVIP funding may also lose some or all of the matching funds from the CEC.

Reason for not recommending: Investing in this program now, while earlier than SJCE had planned and in advance of a full program review with Council, is a unique opportunity for the City of San José to receive significant State funding to meet EV charging infrastructure needs. The participation of SJCE is also important to the CEC selection process and the other entities in Santa Clara and San Mateo Counties receiving funding.

PUBLIC OUTREACH

On August 13, 2019, the CEC hosted a workshop on the Santa Clara County CALeVIP project to elicit public input on the proposed funding allocations, rebate amounts and structure, and eligibility requirements. The CEC also enlisted public comments to be submitted either through their website or by mail.

This memorandum will be posted on the City's website for the October 8, 2019 City Council's Agenda website.

COORDINATION

This memorandum has been coordinated with the Department of Transportation, the Environmental Services Department, the City Manager's Budget Office, and City Attorney's Office.

COMMISSION RECOMMENDATION/INPUT

The Clean Energy Community Advisory Commission decided on September 5, 2019 to support the staff recommendations to Council as stated above.

FISCAL/POLICY ALIGNMENT

The recommended actions support the Climate Smart Plan (City Action 2.3-A/2.3-C) and the Envision San José 2040 General Plan (Action TR-1.16 and Appendix C: Greenhouse Gas Reduction Strategy)

COST SUMMARY/IMPLICATIONS

1. AMOUNT OF RECOMMENDATION/COST OF PROJECT:
   Total Program Costs: $4,000,000

2. COST ELEMENTS OF AGREEMENT/CONTRACT:
   Program Incentive Payments: $3,720,000
   Center for Sustainable Energy Service Fees: $280,000 (7% of total funds invested)
   TOTAL AGREEMENT/CONTRACT AMOUNT: $4,000,000

3. FISCAL IMPACT:
   The total estimated fiscal impact is based on the estimated number of customer applications and timing to install charging infrastructure. Projected program expenditures by fiscal year are as follows:

Fiscal Year	**Estimated Expense**	**Payment Description**
2019-2020	$85,000 (not to exceed)	Initial program launch service fees (including marketing and operating costs - May 2020)
2020-2021	$915,000 (not to exceed)	Program incentive payments to customers + Service fees
2021-2022	$3,000,000 (not to exceed)	Program incentive payments to customers + Service fees
2019-2022	**$4,000,000** (not to exceed)	**Total Program Costs**

4. SOURCE OF FUNDING:
   All program costs will be funded in the San José Clean Energy Fund (Fund 501) and most costs will occur after SJCE meets its financial obligations that include a $20,000,000 Operating Reserve per its agreement with Barclays Bank that is anticipated to be achieved by December 2019; and the full repayment of its $10,000,000 commercial paper loan that is anticipated in June 2020.

   In March 2020, when expenses for the CALeVIP program begin to be incurred, SJCE expects to have an operating reserve of $29,100,000. At the conclusion of the program in July 2022, SJCE's reserve levels are projected to grow to an estimated $79,600,000 inclusive of the total projected CALeVIP program costs.

   The $4,000,000 total program expenditure is an investment being made in consideration of SJCE's financial obligations and goals, that include building an Operating Reserve equivalent to 180 days of operations that SJCE anticipates reaching by January 2026. This level of reserves is important to mitigate the impact to customers of energy market factors such price volatility, regulatory risk, and changes to the Power Charge Indifference Adjustment.

BUDGET REFERENCE

The table below identifies the appropriation that will fund the CALeVIP program costs in FY 2019-2020. Program funding in FY 2020-2021 and FY 2021-2022 are subject to the appropriation of funds in those fiscal years.

Fund #	APPN #	Appn. Name	2019-2020 Program Cost	Current Year Appn	2019-2020 Proposed Operating Budget Page	Last Budget Action (Date, Ord. No.)
501	0782	Community Energy Non-Personal/Equipment	$85,000	$8,787,801	X-74	06/18/2019 Ord. No. 30286

CEQA

Not a Project, File No. PP17-008, General Procedure & Policy Making resulting in no changes to the physical environment; and File No. PP17-003, Agreements/Contracts (New or Amended) resulting in no physical changes to the environment.

/s/
LORI MITCHELL
Director, Community Energy Department

For questions please contact Zach Struyk, Deputy Director of Account Management and Marketing of Community Energy, at (408) 535-4868.

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Memorandum

TO: HONORABLE MAYOR AND CITY COUNCIL

FROM: Lori Mitchell

SUBJECT: RESIDENTIAL TRANSITION TO TIME-OF-USE ELECTRIC RATES

DATE: September 18, 2019

Approved D-DSyL Date 9/26/19

RECOMMENDATION

Adopt a resolution approving:

(a) A transition of eligible residential San José Clean Energy customers, on a default, "opt-out" basis, to the existing Time-of-Use electric rate E-TOUC in November 2020; and offer bill protection to customers for one year to ensure that at the end of one year of service on new rates, no participating customer will have paid more on the new rate; and

(b) A rate design allowing San José Clean Energy to match any rate structure from Pacific Gas & Electric Company's standard rates.

OUTCOME

Approving the transition to the residential Time-of-Use ("TOU") rate schedule E-TOUC and offering bill protection is expected to reduce overall electricity usage and GHG emissions, result in customer savings of approximately $2.5 million, reduce San José Clean Energy's ("SJCE") procurement costs, and result in net revenue reduction of $1.5-2.0 million per year for SJCE. It would also allow SJCE to meet the deadline to participate in co-marketing activities to residential customers about the transition with Pacific Gas & Electric Company ("PG&E") in November of 2019.

Approving a rate design to match any rate structure from PG&E's would enable SJCE to retain customers, increase its competitiveness, and maintain its ability to serve customers without interruption as a result of any changes in PG&E's rate design.

BACKGROUND

On August 8, 2017, City Council approved an ordinance establishing a Community Choice Aggregation ("CCA") program to be named SJCE and amending Title 26 of the San José Municipal Code to create the Community Energy Department of the City of San José to manage the CCA.

On August 29, 2017, City Council adopted a resolution adopting SJCE's Implementation Plan and Statement of Intent and directed staff to submit this document to the California Public Utilities Commission ("CPUC"). The Implementation Plan included a rate design that allowed SJCE to generally match the rate structures from PG&E's standard rates to avoid the possibility that customers would see significantly different bill impacts as a result of changes in rate scheduled that would take effect following enrollment in SJCE. On September 18, 2017, the Implementation Plan was submitted to the CPUC. The CPUC certified the plan on December 18, 2017.

On November 7, 2017, City Council approved an ordinance to add Title 26 to the San José Municipal Code that provides procedures for the operation and management of SJCE, as well as a process for setting electricity rates. Under Title 26, SJCE may provide any rate designs or programs as approved by the City Council.

On November 6, 2018, City Council approved SJCE to set rates for the GreenSource product to be one percent below PG&E generation rates, after accounting for the franchise fees and the Power Charge Indifference Adjustment across all rate classes for 2019. The Time of Use E-TOUA, E-TOUB, E-TOUC, and E6 rate schedules were included in these rates.

On April 9, 2019, City Council adopted Ordinance 30233, which modified Section 26.40.020 of Chapter 26.40 of Title 26 of the San José Municipal Code to reduce SJCE's operating costs associated with some bill adjustments, reduce waste related to sending paper notices every time rates are increased or decreased, and improve agility to adjust rates that are pegged to PG&E rates.

ANALYSIS

As San José's new default generation provider, SJCE procures and sells clean, retail electricity to residents and businesses. The formation of SJCE reflects the City's and the community's desire to accelerate greenhouse gas ("GHG") emission reductions and achieve the goals reflected in San José's Climate Smart plan. Pacific Gas and Electric Company ("PG&E") continues to deliver electricity across transmission and distribution lines that PG&E owns, maintains, and operates. PG&E, as an Investor-Owned Utility ("IOU"), is subject to the jurisdiction of and regulated by the CPUC, which approves rates applicable to IOUs' customers.

Electricity Rate Plans

SJCE and PG&E customers are charged for the electricity they consume based on their rate plan. Customers can choose between two main types of rate plans:

- **Tiered rate plans** have multiple pricing levels that are based on how much electricity is used. Customers are allotted a baseline amount of energy ("Tier 1") each month; any usage above that baseline is charged at higher rates. Customers save money by using less

energy regardless of the time of day that they use electricity. Tiered rate plans are the current default, and the E1 residential rate is the most common SJCE and PG&E tiered rate plan.

- **Time-of-use (TOU) rate plans** have varying prices for electricity throughout the day based on the time energy is being consumed. Electricity use is generally the highest during the evening hours also known as "the peak period" or 4 p.m. – 9 p.m. This is also the most expensive time to procure electricity. The goal of TOU rate plans is to better reflect the true cost of procuring energy through price signals to the customer and to incentivize customers to use less energy during high-demand, peak hours. **S**JCE currently offers four TOU residential rate schedules E-TOUA, E-TOUB, E-TOUC, and E6, in addition to electric vehicle rates, E-EV and E-EV2. Staff is not proposing any changes to these rate schedules or any rate increase at this time.

As the billing provider for SJCE customers, PG&E records customer usage data through its meters and maintains rate plan selections. SJCE electric generation rate plans largely mirror PG&E's, but with a one percent rate discount per Council direction on November 8, 2018.[1] SJCE TOU rate plans mirror the daily peak, off-peak, and partial-peak time periods, seasonality (*i.e.,* containing different summer and winter rates), and day type (*i.e.,* weekday or weekend). The structure of the E1 rate plan is such that all "tiering effects" are reflected in the Delivery portion of the rate (PG&E), and the generation portion of the rate (SJCE) is a fixed rate per kilowatt-hour. About 94% of SJCE residential customers are on tiered rate plans, while 6% are on TOU rate plans.

TOU Transition

On July 3, 2015, the CPUC adopted a series of changes to residential rate structures to align rates with the actual cost of providing electricity service.[2] One of these changes requires IOUs to automatically enroll ("transition") most of its residential customers in a TOU electric rate by a certain date. PG&E will transition customers in its territory in phases, beginning in October and November 2020 with Santa Clara County and ending in October 2021 with the central coast.

SJCE and PG&E customers in the City of San José will be transitioned in November 2020, while all other customers in Santa Clara County (all cities and unincorporated areas, excluding Palo Alto and Santa Clara) will be transitioned in October 2020. On their billing date in November 2020 customers will be automatically enrolled in a new, default TOU rate plan (E-TOU-C) with peak pricing from 4:00 p.m. to 9:00 p.m. every day (including weekends). E-TOU-C has different pricing during summer and winter seasons. Current rates for the "summer" months (June – September) are about 22% higher on average than rate for the eight "winter" months (October – May).

[1] SJCE GreenSource rates are one percent below PG&E generation rates, after accounting for the franchise fee surcharges and the Power Charge Indifference Adjustment across all rate classes for 2019.
[2] CPUC Decision D.15-07-001 (adopting residential rate reform).

Customer savings are expected to be approximately $2.5 million annually. It is important to note that customers can "opt out" to their old tiered rate plan or select different TOU rate plans at any time. During a pilot transition in PG&E territory customers reported various reasons for opting out including: 1. concern about higher prices when they "need electricity most"; 2. general skepticism about rate changes; and 3. feeling that it is a "hassle" to worry about when to use electricity.

Approximately 80% of SJCE residential customers that are eligible and will be automatically enrolled in TOU rates. Several groups are excluded from SJCE's and PG&E's TOU transition in San José; including:

- Medical baseline customers – these are customers who use a large amount of electricity for medical reasons and receive a special, lower rate
- Customers eligible for Net Energy Metering ("NEM") grandfathering (i.e. had rooftop solar), which includes those with a Permission to Operate Date before July 31, 2017.
- Customers with inadequate energy usage interval data or with less than one year of data.
- Active severance customers.[3]
- Customers who converted from NEM to non-NEM rates.
- Customers already on a TOU rate plan.
- Customers who have opted out of SJCE and are on a transitional rate ("TBCC").

PG&E is the delivery provider for all CCA customers. Therefore, PG&E will transition nearly all CCA customers to a TOU rate plan for at least the delivery portion of their bill. CCAs are not required to transition their customers to TOU rates for the generation portion of their bill. However, to minimize customer confusion and incentivize energy conservation during the most expensive and most polluting hours of the day, most CCAs are expected to also transition their customers to a TOU rate. This will result in both generation and delivery being charged at a TOU rate with the same pricing signals.

TOU pricing is meant to align more energy usage with off-peak time periods (9:00 p.m. – 4:00 p.m.) when the cost of producing electricity is lower because of the abundance of clean, renewable energy from solar and wind. As more rooftop and utility scale solar generation is integrated into the California grid, power generation increases with sun rise and decreases sharply as the sun sets.

[3] A customer in active severance has not paid their bill and is going through PG&E's course of events required prior to shutting off their gas or electric service.

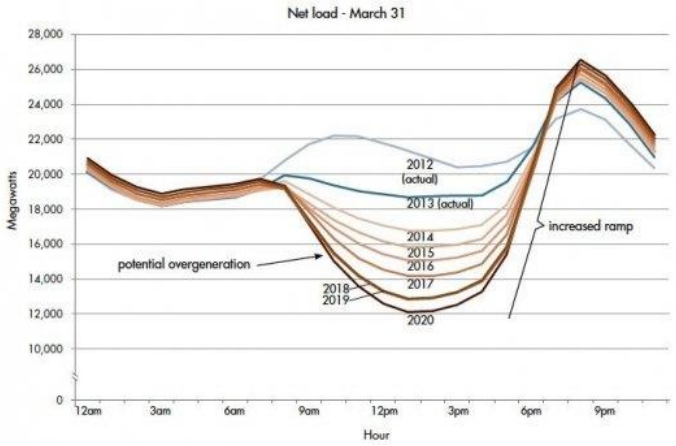

Figure 1: Graph of the "Duck Curve" from Energy.gov[4]

Figure 1 shows net demand for energy on the California grid when accounting for solar production. In 2012, there is a typical load profile of morning and evening demand spikes with a relatively flat daytime period. Since then, California has continued to increase the amount of solar generation, thus decreasing the net demand during the daytime hours, as seen by the increasingly large "belly" of the duck. With such a high portion of demand being met by solar generation during daytime hours, this creates a significant grid management challenge when solar production tails off towards the evening hours and evening usage increases.

To manage the sharp ramp of demand in the evening, the grid relies on running expensive, natural gas peaker plants that contribute to global warming. Setting a price signal with peak rates from 4:00 p.m. to 9:00 p.m. to incentivize energy usage during off-peak hours, in combination with investment in energy storage, will help reduce the sharpness of the ramp, reduce California's greenhouse gas emissions, and aid the transition to a 100% clean energy future.

Customer Notifications

PG&E plans to notify customers that will be transitioned as follows:

- August 2020 (90 days before transition): direct mail letter
- October 2020 (30 days before transition): second direct mail letter and email to customers who have opted into PG&E email notifications
- Between October 2020 and November 2020: outbound calling to some customers on California Alternate Rates for Energy ("CARE") and Family Electric Rate Assistance Program ("FERA") income-based discount programs

SJCE plans to transition its customers in the same schedule as PG&E and direct mail communications will be co-branded with the SJCE logo.

[4] https://www.energy.gov/eere/articles/confronting-duck-curve-how-address-over-generation-solar-energy

Per CPUC direction, and consistent with the TOU pilot discussed below, the co-branded letters and email will present customers with a personalized rate plan comparison showing annual costs for three rate plans: 1. current plan; 2. default TOU plan (peak pricing from 4:00 p.m. - 9:00 p.m. every day); and 3. a second TOU option (peak pricing from 5:00-8:00 p.m. weekdays). ***The letter will also highlight the lowest cost plan based on each customer's last 12 months of electricity usage.*** Customers will have two options: do nothing to move to the default TOU rate plan for both SJCE and PG&E; or take action to stay on their current rate plan or choose a different plan. To do the latter for PG&E and SJCE, customers can visit PG&E's website, call PG&E, or fill out and mail the business reply card attached to the direct mail letters. Customers can change their rate plan at any time.

The letters and email will also indicate that customers can try the default TOU rate risk-free as PG&E and SJCE will offer bill protection for the first 12 months. ***If customers pay more on their first year under the TOU rate plan, at the end of the year PG&E and SJCE, will credit them the difference.***

PG&E tested the effectiveness of these notifications during its TOU pilot. Between May 2017 and February 2018, PG&E ran a TOU pilot with approximately 153,000 randomly selected customers throughout its territory, including approximately 25,500 CCA customers with Marin Clean Energy, Sonoma Clean Power, and Silicon Valley Clean Energy. PG&E found the notifications increased awareness of TOU rate plans, and rate choices. Compared to a baseline audience, awareness of TOU rate plans grew from 60 to 84%, and customer awareness of whether they themselves were on a TOU rate plan increased from 10 to 59%. Customer awareness of rate choices grew from 25 to 59%.[5] Based on these results, PG&E decided to replicate the pilot notifications for the full transition.

Alongside the TOU transitions, the CPUC has directed IOUs to fund a $126 million, three-year mass media campaign implemented by a consultant using the Energy Upgrade California brand. The statewide campaign is meant to be "high-level, emotion-based, and provide Californians with the context for the changing rate structure and a vision to rally around."[6] To give Californians context and a reason to care about TOU, Energy Upgrade California ran a "Keep it Golden" mass media campaign that connects personal energy usage to the future of California.

In PG&E's territory, "Keep it Golden" ran from March to May 2019 and will run again from October 2019 into 2020. This will be followed by a "4 to 9" mass media campaign to illuminate that the time energy is used matters and raise awareness of the 4:00 p.m. to 9:00 p.m. peak time. The action-oriented "4 to 9" campaign will start in October of 2019 and run for five months. The consultant will utilize numerous multilingual print, outdoor, digital, and broadcast advertising channels; employ community-based organizations to aid with outreach and

[5] PG&E presentation on July 23, 2019, "TOU Transition Notifications: SJCE CCA Review"
[6] CPUC Rulemaking 12-06-013, Decision D.17-12-023:
http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M201/K231/201231862.PDF

promotion; recruit TOU educators and influencers; and implement a public relations and media strategy.[7]

Given the budget and extent of these outreach activities, staff are confident public awareness of TOU and its importance will increase. To further build awareness of these issues, staff will create a TOU webpage with FAQs, regularly post about these topics on social media and Nextdoor, and host informational sessions, among other tactics. Staff will also focus outreach on hard to reach customers, such as non-English speakers and low-income residents.

Customer Impacts

In PG&E's TOU pilot, approximately 25% of customers declined to transition.[8] Their top reasons for declining were that they preferred their current rate plan or thought the new TOU rate plan is too expensive. Of the approximately 75% of customers who transitioned to the default TOU rate plan, 88% remained on the rate as of February 2018, 10 months after the transition.[9]

Studies and pilots show most customers save money and energy under TOU rate plans.[10] PG&E's pilot found customers consumed 4.2% less energy during the TOU pilot peak hours of 4:00 to 9:00 p.m. While many customers shifted their electricity usage from peak to off-peak times (for example, by using appliances before 4:00 p.m. or after 9:00 p.m.), PG&E also found an overall trend towards energy conservation, resulting in bill savings. For example, Sonoma Clean Power customers who participated in the pilot reduced their overall energy consumption by 1.72%. While these customers shifted some of their usage to 7:00 a.m. to 2:00 p.m. on weekdays and 9:00 a.m. to noon on weekends, this was offset by usage reductions in other hours.[11]

PG&E performed an analysis of impacts to SJCE customers. Most customers (approximately 77%) would see savings under a TOU rate. Based on interval usage data,[12] PG&E estimates approximately 33,000 customers (23%) would be negatively impacted by the TOU transition, *i.e.*, the default TOU rate plan would be more expensive for them than the tiered rate plan. It is important to note that SJCE plans to offer bill protection for these customers and credit them the cost increase for the first year. Also, customers can opt out to their old tiered rate plan or select different TOU rate plans at any time.

[7] PG&E presentation on July 23, 2019, "TOU Transition Notifications: SJCE CCA Review"
[8] PG&E presentation on August 1, 2019, "CCA TOU Full Transition Check-In"
[9] PG&E presentation on March 21, 2019, "CCA SJCE TOU Full Transition Bill Protection"
[10] Lawrence Berkeley National Lab (2017), *Final Report on Phase 2 Results: 2025 California Demand Response Potential* Study, pg. 5-25. https://www.cpuc.ca.gov/WorkArea/DownloadAsset.aspx?id=6442452698
[11] PG&E presentation on April 17, 2019, "Default Pilot PRELIM Load Impacts: Summer 2018 Results"
[12] PG&E meters capture usage data every 15 minutes.

Figure 2. depicts the annual projected costs and savings for customers. Approximately 77% of customers are projected to save money on a TOU rate plan while approximately 23% are expected to experience increased costs. These customers may take action to stay on their tiered rate plan instead of defaulting to a TOU plan.

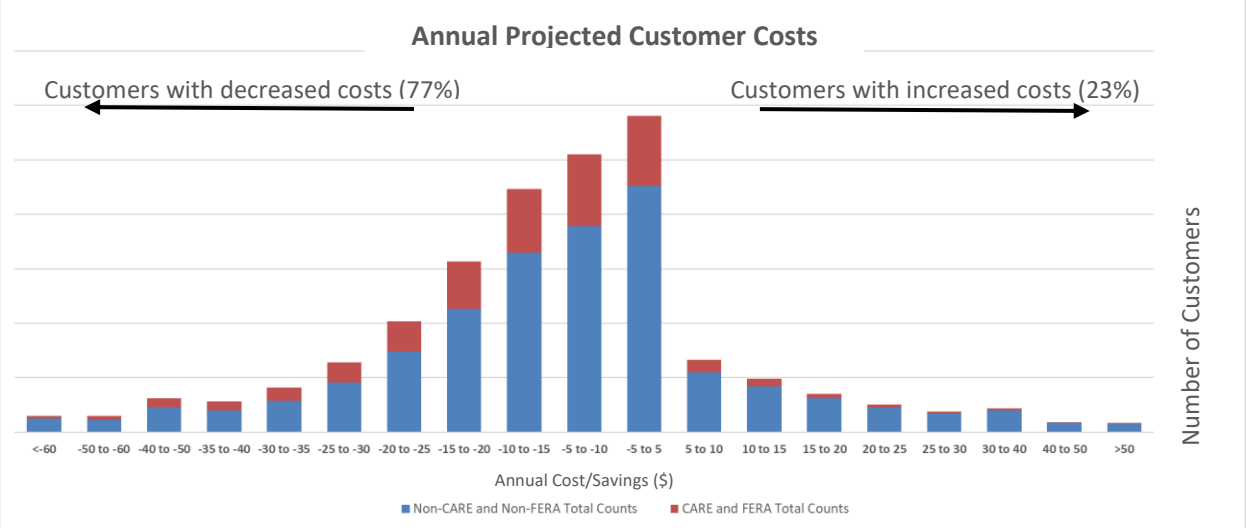

Figure 2: PG&E chart predicting annual customer savings and bill increases under new TOU rates

In PG&E's analysis, nearly 3,000 customers who receive CARE and FERA income-based discounts on their electricity bill will see higher bills under the default TOU rate plan. CARE and FERA customers are considered to be low-income; a family of three qualifies for a CARE discount if their annual household income is under $42,660. To avoid increasing the electricity bills of customers who are already struggling to pay them, staff will perform additional targeted outreach to CARE and FERA customers and encourage them to select their old tiered rate plan. Staff will also regularly promote energy efficiency and load shifting tips to help customers reduce their bills.

Customers lacking the ability to shift their usage outside of 4:00 p.m. to 9:00 p.m. or without access to technologies like smart thermostats and smart appliances may also not benefit from the TOU transition. SJCE is offering 12 months of bill protection to protect customers in these situations. Towards the end of the first 12 months on the TOU rate, customers who would have lower bills on a non-TOU rate schedule will receive notification and be suggested to switch rate schedules.

Rate Design

PG&E changes its rate schedule offerings from time to time, closing rate schedules to new customers, transitioning customers on one rate schedule to a similar but different rate schedule, and creating new rate schedules. Though PG&E is required to give notice about such changes, such notices do not always allow SJCE sufficient time to receive Council approval on a case-by-

case basis to create a similar rate. This can cause confusion and/or additional costs for customers because PG&E's delivery portion and SJCE's Generation portion of bills may conflict for weeks, or even months. Customers are more likely to view such confusion and inconvenience as a reason to opt out of SJCE service.

In the very near term, in response to the CPUC Decision D. 18-08-013, PG&E is launching a suite of new rate schedules (B-rates) for non-residential customers, which are available to customers November 1, 2019 on a voluntary basis and become mandatory (replacing a similar suite of rates, "E-rates") November 1, 2020.[13] The new rate schedules change the more expensive, "peak" hours from the current 12 p.m.–6 p.m. to 4 p.m.–9 p.m. These rates shorten the more expensive "summer" rate period from six months to four months, and increase the rates in the "winter" rate period relative to those in the summer rate period. Some classes of customers are expected to have lower total electricity bills, and some are expected to have higher bills, but overall the new rates are expected to be revenue neutral to both SJCE and PG&E.

Since many customers will benefit from lower electricity bills under the B-rates, customers are expected to migrate to the B-rates beginning November 2019. If SJCE does not have "parallel" B-rates, customers could opt out of SJCE service. Any customer that opts out and returns to PG&E bundled service must wait at least one year before returning to SJCE service. Since non-residential customers account for more than half of SJCE revenue, it is very important to avoid such potential situation. Consistent with the Implementation Plan, SJCE should adjust its rate structure in response to any changes to PG&E's rate design.

EVALUATION AND FOLLOW-UP

No further follow-up with the City Council related to the transition to the TOU rate is anticipated at this time.

Staff will prepare an information memorandum for Council notifying the offering by SJCE of a new rate schedule in response to any changes to PG&E's rate design.

POLICY ALTERNATIVES

TOU Transition

Alternative 1: SJCE does not participate in PG&E's TOU transition

Pros: This may avoid annual net revenue losses of $1.5 million - $2.4 million.
Cons: This may create confusion for customers as they will be charged at TOU rates for electric delivery and a flat rate for electric generation. SJCE would also appear to be unsupportive of

[13] PG&E Advice Letter AL-5626-E. https://www.pge.com/tariffs/assets/pdf/adviceletter/ELEC_5626-E.pdf

statewide efforts to better align rates with the cost of providing energy and reduce fossil fuel usage.
Reason for not recommending: SJCE supports efforts to increase usage of renewable energy and eliminate fossil fuels, as well as efforts to reduce electricity bills. SJCE also recognizes how customer behavior, specifically the timing of their energy usage, can help achieve state clean energy goals.

Rate Design

Alternative 1: City Council does not adopt a resolution authorizing SJCE to match PG&E's rate structure.

Pros: City Council will be able to approve every new rate schedule created by SJCE.
Cons: If customer starts service on a PG&E rate that SJCE does not offer or is delayed in offering, it can cause confusion and/or additional costs for customers, in which they are on conflicting rates for PG&E's delivery portion and SJCE's generation portion of bills for weeks or months. Customers are more likely to view such confusion, potential expense, and inconvenience as a reason to opt out of SJCE service.
Reason for not recommending: Approving the recommendation will allow SJCE to retain customers, increase its competitiveness, and maintain its ability to serve customers smoothly and without interruption.

PUBLIC OUTREACH

This memorandum will be posted on the City's Council Agenda website for the October 8, 2019 Council Meeting.

COORDINATION

This memorandum has been coordinated with the City Attorney's Office and the City Manager's Budget Office.

COMMISSION RECOMMENDATION/INPUT

On September 5, 2019, the Clean Energy Community Advisory Commission recommended that SJCE join the PG&E TOU transition.

COST SUMMARY/IMPLICATIONS

TOU Transition

SJCE could face financial impacts from three sources: bill protection, lost revenue from customer rate savings, and lost revenue from energy conservation.

1. Neutral or increased revenue from bill protection

SJCE can choose to offer bill protection for one year to customers who see increased bills under the default TOU rate. It is important to note that PG&E is also choosing to provide this benefit. The increased bill costs are totaled at the end of the year, and SJCE administers a credit to cover the difference. Staff estimate that bill protection costs will total approximately $570,000. This allows SJCE to remain revenue neutral because the credits are offset by increased payments throughout the prior year.

If these customers continue to stay on the TOU rate plan after the year of bill protection ends, SJCE revenue from them would increase. Assuming constant usage and rates, revenue increases could total approximately $570,000 per year. However, any such revenue increase should not be part of a planned case for several reasons: customers may change rate plans, usage may shift so that they use less electricity during expensive, peak hours; and some customers' usage may be reduced from installing solar, or energy efficiency measures.

2. Lower revenue from customer savings

For SJCE customers that are projected to save with a TOU rate plan, PG&E estimates an average annual savings of $15.77 per customer. To predict the total impact on revenue, staff modeled two scenarios:

	Base case	**Worst case**
Number of customers saving	159,972	183,424
Total annual customer savings	$2,522,119	$2,891,869
SJCE net revenue loss	$2,000,000	$1,800,000
Savings as a percentage of SJCE revenue	Approximately 3.0%	Approximately 3.4%

3. Lower revenue from energy conservation

A 1.72% drop in residential usage would result in approximately $3,000,000 less total revenue for SJCE annually. This is a relatively minor loss that can be covered by operating reserves and SJCE can modify its procurement strategy to further reduce costs. It is important for SJCE to build a sufficient operating reserve to withstand these types of load changes that can occur due to a variety of factors including weather, usage changes, and broader economic changes.

Rate Design

1. Lower revenue from customer opt out

If City Council does not adopt a resolution authorizing SJCE to match PG&E's rate structure, it can cause confusion and/or additional costs for customers, in which they are on conflicting rates for PG&E's delivery portion and SJCE's generation portion of bills for weeks or months. Customers are more likely to view such confusion, potential expense, and inconvenience as a reason to opt out of SJCE service, which would reduce SJCE revenues and net revenues.

CEQA

CEQA: Statutorily Exempt, File No. PP17-005, CEQA Guidelines Section 15273, Rates, Tolls, Fares, and Charges.

/s/
LORI MITCHELL
Director, Community Energy

For questions please contact Zach Struyk, Deputy Director of Account Management and Marketing in Community Energy, at (408) 535-4868.

Attachments
1. PG&E TOU Transition Customer Notifications
2. PG&E Presentations to CCAs

CCA LOGO HERE

<Month Day, Year>

«Customer First Name»«Customer Last Name»
«Mailing Address1»
«Mailing Address2»
«Mailing City», «Mailing State» «Mailing ZIP»

Your electric service will move to a Time-of-Use rate plan in <Month Year>. Learn more about your options below.
Visit: pge.com/TOUchoice
Call: 1-866-743-7945

Account No: <Acct No.+chk dig>
Service Agreement ID: <SAID>
Service Address: <Prem Address 1>

California's electric customers will begin moving to a Time-of-Use rate plan risk-free to support our ongoing commitment to clean energy.

In <Month Year>, your account is scheduled to transition from your current rate plan to the **Time-of-Use (Peak Pricing 4-9 p.m. Every Day)** rate plan, as part of a California statewide initiative to ensure greater power reliability and a better energy future.

- Receive lower electricity pricing during most of the day.
- Electricity prices will be higher for five hours in the late afternoon and early evening (4–9 p.m.) when demand for electricity is generally higher and the cost is greater, called peak times. Small shifts in energy usage can help you save.
- **Try this plan risk-free** with automatic Bill Protection for 12 months. <Some accounts may not be eligible for full Bill Protection.>
- You can also stay on your current rate plan or choose another rate plan that's right for you at any time if you are not satisfied.
- See reverse to learn more about this and other rate plans. If you have an electric vehicle (EV), learn more about specific EV rate plans at pge.com/evrates.

Your Personalized Electric Rate Plan Comparison

This report is based on your last 12 months of electricity usage and assumes no change to how you use energy. Estimates do not include gas.

Your Rate Plan Options	**Current Rate Plan** Tiered (E-1) Two pricing levels based on monthly usage. Price does not vary by hour of the day.	**Transition Rate Plan** Time-of-Use (Peak Pricing 4–9 p.m. Every Day) (E-TOU-C) Higher prices 4-9 p.m. every day. Lower prices at all other times.	**Optional Rate Plan** Time-of-Use (Peak Pricing 5–8 p.m. Weekdays) (E-TOU-D) Higher prices 5-8 p.m. on weekdays. Lower prices at all other times.
Total Electricity Costs*	<$XX/year>	<$XX/year>	<$XX/year>

Your lowest cost rate plan is: <**Lowest cost rate plan)**>

* Estimates assume current PG&E prices and will not match your previous 12 months' bill.

Make your rate plan choice by <Month Day, Year>.

Option 1: Take action to stay on your current rate plan or choose a different rate plan.
Visit **pge.com/TOUchoice,** or call **1-866-743-7945,** or complete and mail back the form below.

Option 2: Take no action and automatically transition to the Time-of-Use (Peak Pricing 4-9 p.m. Every Day) rate plan in <Month Year>.

More about the Time-of-Use (Peak Pricing 4–9 p.m. Every Day) E-TOU-C rate plan

California leads the nation in generating clean, renewable energy from sources such as wind and solar. Time-of-Use rate plans are an easy way for Californians to continue our clean energy leadership by shifting some energy usage to times of day that have a greater reliance on renewable energy while ensuring a more responsible and sustainable energy future for generations to come.

You will receive Bill Protection for up to the first 12 months, so you can **try it risk-free**. If you pay more during your first year on **Time-of-Use (Peak Pricing 4–9 p.m. Every Day) E-TOU-C** than you would have on your current rate plan, you will receive a credit for the difference at the end of the first 12 months. Learn more at **pge.com/billprotection** <and at [**CCA URL**]>.

You have additional rate plan options. See your personalized rate comparison on the front of this page or by visiting pge.com/TOUchoice.

Current Rate Plan:
Tiered
(E-1)

This rate plan:

- Has two pricing levels and a High Usage Surcharge.
- Works best for customers who are unable to shift or reduce their energy usage during certain times of day.

Optional Rate Plan:
Time-of-Use (Peak Pricing 5–8 p.m. Weekdays)
(E-TOU-D)

This rate plan is best if you:

- Can reduce your energy usage from 5 p.m. to 8 p.m. on weekdays.
- Have a high total monthly energy usage.

<All rate plans include electric delivery and generation. PG&E provides delivery and <CCA> provides generation.>

Financial Support Programs

Enroll in California Alternate Rates for Energy (CARE) or Family Electric Rate Assistance (FERA) Program: The CARE and FERA Programs offer a discount on gas and electric rates. Visit **pge.com/care** or **pge.com/fera** to find out if you are eligible and to enroll.

Apply for Medical Baseline: This program reduces energy bills for households with qualifying medical issues and/or equipment. Visit **pge.com/medicalbaseline** to apply.

Apply for Vulnerable Customer status: We help address the needs of our customers whose life or health would be at risk should their electric or gas service be disconnected. Visit **pge.com/vcstatus** to learn more.

Set up third-party notifications: Illness and other hardships make it tough to pay bills. If you worry about a family member or friend's ability to pay, we can notify you when payment is late. PG&E can also notify someone on your behalf. Visit **pge.com/thirdpartynotification** for details.

To find out if you qualify for any of these programs, visit the websites listed above or call 1-866-743-7945.

FPO

Rate Comparison document on Legal paper with bottom perforated

[FRONT/BOTTOM of letter]

To choose a different rate plan or to remain on your current rate plan, complete and return this portion by [MM/10/YYYY].

Your rate plan will automatically transition to the Time-of-Use (Peak Pricing 4-9 p.m. Every Day) Rate Plan in <MONTH YYYY>.

Name: <First Name><Last Name>
Service Address: <Premise address 1>
Service Agreement ID:<SAID>
Account No.: <Account No>
Solar Customer (NEM): <Y/N>

If you would like your rate plan to automatically transition to Time-of-Use (Peak Pricing 4 - 9 p.m. Every Day) in [Month YYYY], NO ACTION IS NEEDED. Otherwise, please make a selection below by marking an X:

☐ Choose rate plan: Time-of-Use (Peak Pricing 5–8 p.m. Weekdays) E-TOU-D

☐ Remain on my current rate plan: Tiered Rate Plan (E-1)

A signature is required Sign Here _____ Date: _____

By submitting this form, I certify that I am the PG&E customer of record for the account of which I am requesting a rate change. I understand that changing the rate plan for this account will affect future bills. In addition, this rate change will take effect starting with the first day of the next billing cycle, after receipt of my request to change my rate schedule.

FPO

[BACK portion of perforated section]

REMINDER: If you would like to make your rate choice online instead, visit pge.com/TOUchoice

By submitting this card, you agree to all of the following:

1. You understand your current electric rate plan will change based on your selection, as indicated on the front of this card.
2. You are the account holder of record.
3. Applicable to stated premise address only.

If the return envelope is lost, please mail in a self-addressed, stamped envelope to:
Pacific Gas & Electric Company P.O. Box 997300 Sacramento, CA 95889-7300

TO MAIL IN THIS RATE PLAN CHOICE CARD, REMEMBER TO:

1. **FILL OUT ALL FIELDS ON THE FRONT SIDE INCLUDING SIGNATURE**
2. **PLACE THE CARD INSIDE ENVELOPE PROVIDED**
3. **INCLUDE YOUR RETURN ADDRESS ON THE OUTER ENVELOPE**
4. **MAIL BY DATE INDICATED ON REVERSE**

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CCA LOGO HERE

<Month Day, Year>

«Customer First Name» «Customer Last Name»
«Mailing Address1»
«Mailing Address2»
«Mailing City», «Mailing State» «Mailing ZIP»

Your electric service will move to a Time-of-Use rate plan in <Month Year>. Learn more about your options below.
Visit: pge.com/TOUchoice
Call: 1-866-743-7945

Account No: <Acct No.+chk dig>
Service Agreement ID: <SAID>
Service Address: <Prem Address 1>

Dear <First Name><Last Name>,

Soon, many of California's energy customers will be moving to a Time-of-Use rate plan, ***risk-free***, that supports the state's ongoing commitment to clean energy. We want to remind you of this change and your options.

Try it risk-free

You can try the **Time-of-Use (Peak Pricing 4–9 p.m. Every Day)** rate plan ***risk-free*** for the first 12 months with automatic Bill Protection.

- If you pay more during your first year on the **Time-of-Use (Peak Pricing 4–9 p.m. Every Day)** rate plan than you would have on your current rate plan, you will receive a credit for the difference at the end of the first 12 months.
- If you decide you are not satisfied on this rate plan, you can switch to another rate plan at any time.
- <Some accounts may not be eligible for full Bill Protection.>

Or, you can choose another rate plan

Every household is unique - and so is the way you use energy. That's why there are new rate plan options for you to choose from. You have the option to:

1. **Do nothing** and automatically transition to the **Time-of-Use (Peak Pricing 4–9 p.m. Every Day)** rate plan so you can try it ***risk-free***, or
2. **Take action to stay on your current rate plan or choose a different rate plan.** When you visit **pge.com/TOUchoice**, you can view a personalized rate review that shows your rate plan options.

Visit **pge.com/TOUchoice** or call **1-866-743-7945** by <Month Day, Year> to make your choice.

Thank you for being a valued customer,

The PG&E <and><CCA Name>
Customer Care Team<s>

What the Time-of-Use (Peak Pricing 4–9 p.m. Every Day) rate plan means for you

When you use electricity is as important as ***how much*** you use.

- Your electric account is scheduled to transition to the **Time-of-Use (Peak Pricing 4–9 p.m. Every Day)** rate plan, **risk-free**, in <Month Year> from your current rate plan.
- You will receive lower electricity pricing during most of the day, when energy demand is lower.
- Electricity prices will be higher for five hours every day in the late afternoon and evening (4–9 p.m.), when demand for electricity is generally higher.
- If you can make small energy use changes, like running the dishwasher or doing laundry during lower-priced times of day, you may be able to benefit from a Time-of-Use rate plan. Learn more ways to save energy at **pge.com/saveenergy< and CCA URL>.**

See reverse side »



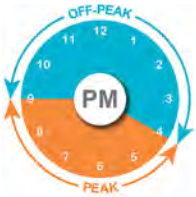
Time-of-Use: The plan for California

California leads the nation in generating clean, renewable energy from sources such as wind and solar. Time-of-Use rate plans are an easy way for Californians to continue our clean energy leadership while ensuring a more responsible and sustainable energy future for generations to come.

Time-of-Use plans offer:

Lower-priced power when demand is less	Greater use of renewable energy	A path to a better and healthier energy future for California

We are committed to our customers, our community, and the environment. Together, we can make a big difference without sacrificing comfort, simply by shifting some usage away from high-demand times—all while receiving safer, cleaner and more reliable energy.



Check the hour before using power

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

$ Lower price (OFF-PEAK) 19 hours each day

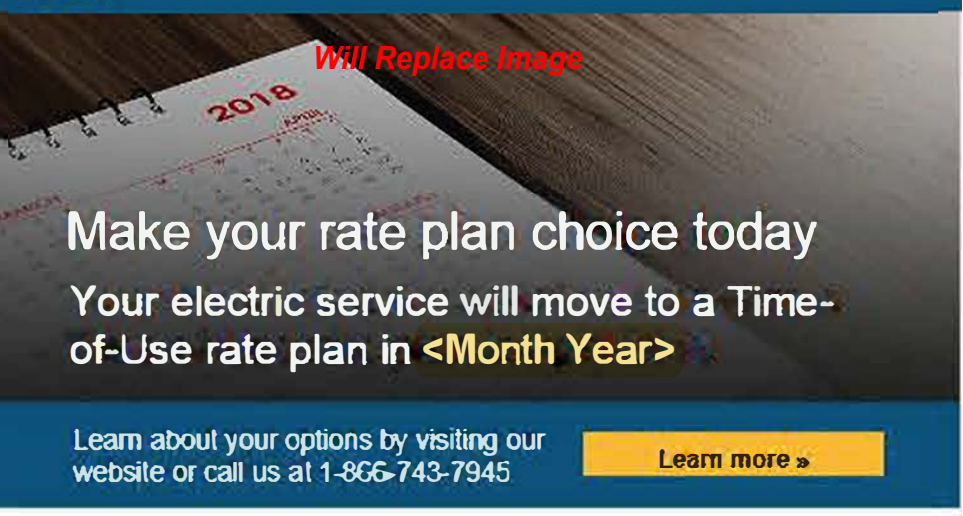
$$ Higher price (PEAK) 5 hours each day

Visit **pge.com/TOUchoice** by <Month Day, Year> to make your rate plan choice.

CCA LOGO HERE

Learn more about your rate plan options now.

30 Day Email



Will Replace Image

Make your rate plan choice today

Your electric service will move to a Time-of-Use rate plan in <Month Year>

Learn about your options by visiting our website or call us at 1-866-743-7945

Learn more »

Dear <First Name> <Last Name>,

Soon, many of California's energy customers will be moving to a Time-of-Use rate plan, *risk-free*, that supports the state's ongoing commitment to clean energy.

Try it risk-free

- The Time-of-Use (Peak Pricing 4–9 p.m. Every Day) rate plan is *risk-free* for the first 12 months with automatic Bill Protection.
- If you pay more during your first year on the Time- of-Use (Peak Pricing 4–9 p.m. Every Day) rate plan than you would have on your current rate plan, you will receive a credit for the difference at the end of the first 12 months.
- Learn more about Bill Protection below.*

Make your rate plan choice by <Month Day, Year>

1. Do nothing and automatically transition, *risk-free*, to the Time-of-Use (Peak Pricing 4–9 p.m. Every Day) rate plan,

   or
2. Take action to stay on your current rate plan or choose a different rate plan. View a personalized rate review here.

Choose your rate plan by <Month Day, Year>

Make your choice »

What the Time-of-Use (Peak Pricing 4–9 p.m. Every Day) rate plan means to you

When you use electricity is as important as *how much* you use.

- Your electric account is scheduled to transition to the Time-of-Use (Peak Pricing 4–9 p.m. Every Day) rate plan, *risk-free*, in <Month Year> from your current rate plan.
- You will receive lower electricity pricing during most of the day, when energy demand is lower.
- Electricity prices will be higher for five hours every day in the late afternoon and evening (4–9 p.m.), when demand for electricity is generally higher.
- If you can make small energy use changes, like running the dishwasher or doing laundry, during lower-priced times of the day, you may be able to benefit from a Time-of-Use rate plan. Learn more ways to save energy here.

Check the hour before using power

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

$ Lower price (OFF-PEAK)
19 hours each day

$$ Higher price (PEAK)
5 hours each day

Choose your rate plan by <Month Day, Year>

Make your choice »

If you need special assistance with your bills, there are programs that can help, like Medical Baseline, Vulnerable Customer status or Third-Party Notification. To find out if you qualify and to apply, call 1-866-743-7945 or visit pge.com to learn more.

*How does Bill Protection work? You can try the Time-of-Use (Peak Pricing 4–9 p.m. Every Day) rate plan *risk-free* for the first 12 months with automatic Bill Protection (Some accounts may not be eligible for full Bill Protection). If you pay more during your first year on the Time-of-Use (Peak Pricing 4–9 p.m. Every Day) rate plan than you would have on your current rate plan, you will receive a credit for the difference at the end of the first 12 months. If you decide you are not satisfied on this rate plan, you can switch to another rate plan at any time. Bill Protection will still apply for the time that you were on the Time-of-Use (Peak Pricing 4–9 p.m. Every Day) rate plan.

Together, Building a Better California

pge.com | Privacy | Disclosure

CRR-TBD

CCA SJCE TOU Full Transition Bill Protection

March 2019

Together, Building a Better California

Assumptions

- All eligible customers choose to participate in the transition
  - View PG&E Dashboard for total pretransition versus post transition population

- Customers excluded from the ***analysis*** *and PG&E proposed to exclude them from the transition*:
  - Customers with more than 3 electric services per account
  - CARE and FERA enrolled in a hot climate zone
  - Medical baseline customers
  - Customers with less than 12 months of interval data
  - Customers not on the tiered rate plan
  - There are other exclusions for full transition that are not included in this analysis due to data limitations (e.g., For the full transition, CARE/FERA ***eligible*** in hot climate zones will be excluded. This analysis only excludes customers enrolled in CARE and FERA)
    - Reduction in population by up to 5% in hot climate zones

- Customers excluded from the ***analysis***, but PG&E proposed to include them in the transition:
  - Customers on a NEM Rate

- PG&E prices effective 1/1/2019

- 2018 usage

- CCA enrollment as of the end of February 2019

	TOU MORE expensive than Tiered Rate	TOU LESS expensive than Tiered Rate
Estimated Annual Generation Bill Difference ($)	$466,870	$1,767,547
Number of Customers Impacted	33,314	112,111
Annual Bill Impact/Customer	$14.01	$15.77

Total TOU-C Generation Revenue: $83,961,378

Appendix

Together, Building
a Better California

Time-of-Use Pilot Dashboard 2017-18

Pacific Gas and Electric Company

Report Date: 3/15/19

Program Goal: Transition first phase of customers to a new Time-of-Use rate plan as part of statewide efforts to create a smarter energy future and healthier environment while keeping customer rates affordable

Key Insights

Summary (2/25/2018)
- 113,991 successfully transitioned; 100,379 customers remain on rate (88.06%)
- 14,773 customers opt-in to the new time-of-use rate plan C

Rate Enrollment
- 179,791 customers currently enrolled in time-of-use rate plan A
- 73,327 customers currently enrolled in time-of-use rate plan B
- 54,832 customers currently enrolled in time-of-use rate plan EV

Bill Protection Dashboard
- As of February, 10,046 customers received bill protection in the amount of $488,899.

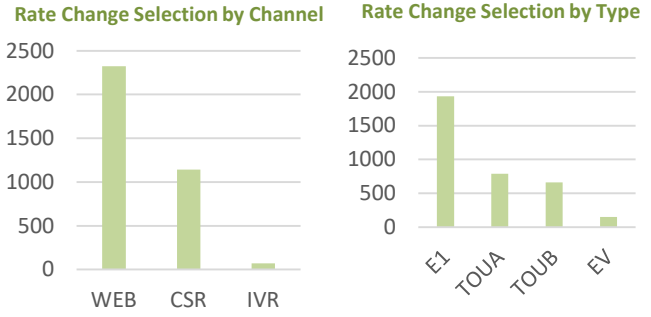
Customer Outreach

End of Bill Protection Letter
- Will be sent to all TOU default customers during the last two weeks of March (approximately 10k per day)
- Informs customers that their bill protection is ending and how they performed while on TOU-C
- Includes customers belonging to three CCAs (SCP, MCE, SVCE)

ME&O Wave 4 Tracking Study Results*
- 90% are moderately or highly satisfied with the PG&E products and services
- 59% aware of TOU rate plans
- 55% know where to get information to manage energy usage
- 70% aware of energy savings tips
- 66% aware of existing rebates
- 56% aware of energy savings programs

*See full detailed results in appendix

Customer Selections

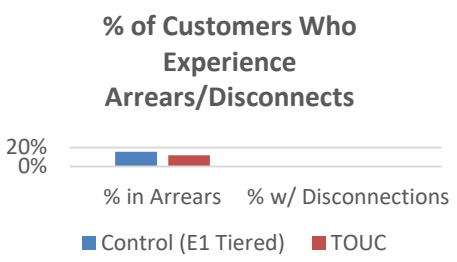


Default Transition Summary

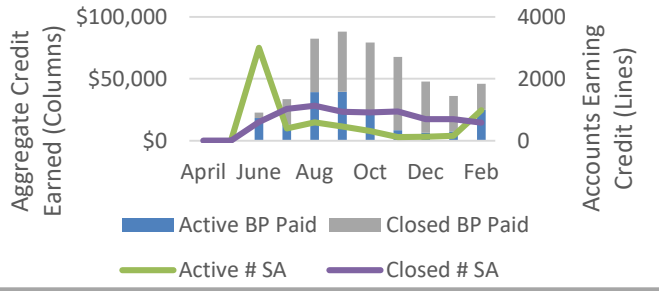
Transitioned Customers – Final Count (5/2/2018)	Customer Count	% of Total
Initial Population	**160,525**	**100.00%**
Ineligible	7,538	4.70%
Declined Transition	38,996	24.29%
Transitioned	113,991	71.01%

	Benefiter	Neutral (+)	Neutral (-)	Mild Non-Benefiter	Non-Benefiter	Extreme Non-Benefiter
Transitioned Population	19,396	24,046	18,298	10,477	37,078	4,696
Ineligible	1,399	1,542	1,220	689	2,278	410
Declined Transition	3,596	4,875	5,795	4,192	16,562	3,976

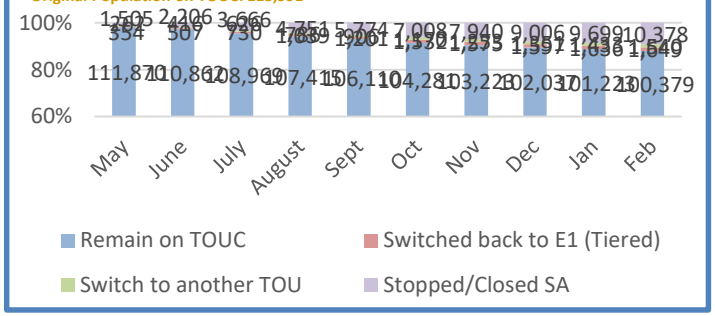
Arrears/Disconnections



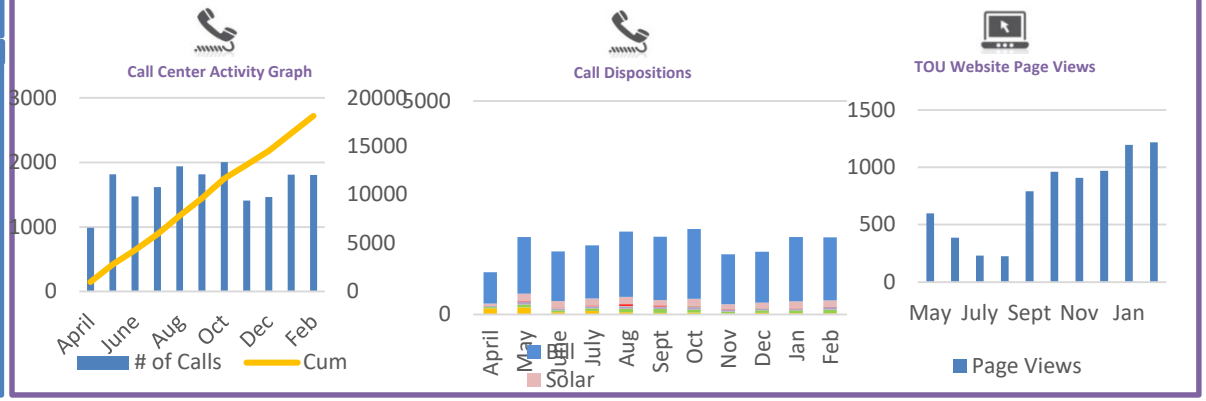
Bill Protection



Current Status



Customer Engagement by Channel

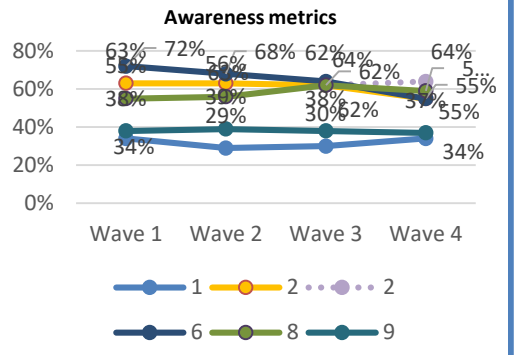


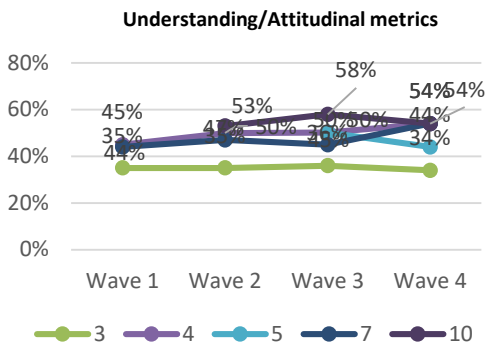
Time-of-Use Pilot Dashboard 2017-18 Appendix

Pacific Gas and Electric Company

Report Date: 1/15/19

ME&O Wave 4 Tracking Results





Metric 1: Customers aware there are rate plans that may help them mitigate energy expenditures *(change of question)*
Metric 2: Customers aware where to get info about assistance offered by PG&E *(dotted line represents phone sample only)*
Metric 6: Customers aware PG&E provides rebates, energy savings programs, DR programs, energy management technologies, and tips *(2 new terms added)*
Metric 8: Customers aware of TOU
Metric 9: Customers aware a choice of rate plans is available so you can decide which rate plan best suits their needs

Metric 3: Customers understand how to manage electric bill using the rate plan that they are currently on
Metric 4: Customers understand reducing electricity will save money, reduce bill, improve reliability, help environment, control bill
Metric 5: Customers understand shifting electricity use will save money, reduce bill, improve reliability, help environment, control bill
Metric 7: Customers think information was useful
Metric 10: Customers are satisfied with product and services offered by PG&E

Additional Metrics

CARE/FERA Enrollment by Rate

Rate (As of 1/8/19)	CARE	FERA
E-1	1,074,750	21,405
E-TOU-A	20,294	879
E-TOU-B	10,650	550

Third Party Notifications (As of 12/31/18): 118 customers
Vulnerable Customers (As of 12/31/18): 2263 customers

Time-of-Use Pilot Dashboard 2017-18 Glossary

Pacific Gas and Electric Company

Report Date: 1/15/19

Key Insights

A summary of the Time-of-Use Pilot progress throughout the recent months, including previous achievements, milestones, and/or highlights

*Bill protection savings chart not included in respective box to align with other two IOUs.

Default Transition Summary

Summary of Pre-transition Time-Of-Use Pilot status

- **Ineligible:** the total number of customers who became ineligible during the notification period (Medical Baseline, customers already on TOU rate plan)
- **Declined:** the total number of customers who declined the transition (through one of PG&E's opt-out channels – Call Center, IVR, Microsite) during the notification period
  to E1 or TOU rate (before 5/1)
- **Transitioned Population:** the total number of customers whose rate plan effectively transitioned on to the new TOU-C rate plan during the transition period (cutoff: 5/1)

Bill Impact Status Classification Definitions (Comparing ETOUC to E1 Tiered rate plan)
Annual Bills that are…

- **Benefiter:** Decrease of > $10 (non-CARE), Decrease of >$5 (CARE)
- **Neutral (+):** Decrease of $0 to 10 (non-CARE), Decrease of $0 to 5 (CARE)
- **Neutral (-):** Increase of $0 to 10 (non-CARE), Increase of $0 to 5 (CARE)
- **Mild Non-Benefiter:** Increase of $10 to $20 (non-CARE), Increase of $5 to $10 (CARE)
- **Non-Benefiter:** Increase of $20 to $100 (non-CARE), Increase of $10 to $50 (CARE)
- **Extreme Non-Benefiter:** Increase of >$100 (non-CARE), Increase of >$50 (CARE)

Current Status

Current Status indicates the number of original transitioned customers (113,991) who (as of date):

- Remain on TOUC
- Switch back to E1 Tiered
- Switch to another TOU (TOUA, TOUB, EV)
- Stopped/Closed service agreement

Customer Outreach

Highlights/results of previous and upcoming communications related to the Time-of-Use pilot will be featured in this box (i.e. survey results, campaigns)

Customer Selections

Rate Change Selection by Channel: the total number of active customers sorted by channel used to switch from TOUC rate plan to a different rate plan (Website, CSR, IVR)

Rate Change Selection by Type: the total number of active customers who switched off from TOUC rate plan to different rate plan sorted by name (E1, TOUA, TOUB, EV)

Arrears/Disconnections

Arrears: the percentage of customers on TOUC on arrearages compared to tiered customers (late on payment)

Disconnections: the percentage of customers on TOUC who experienced a disconnection for non-payment compared to tiered customers

Bill Protection

Total amount of Bill Protection (BP) $ paid out to our customers by month bucketed by "Active" and "Closed" service agreements

Active BP Paid: BP ($) paid to customers who are still active PG&E customers that month
Closed BP Paid: BP ($) paid to customers who stopped/closed their service that month
Active # SA: # of active PG&E customers who received BP that month
Closed # SA: # of closed PG&E customer accounts who received BP that month

*Bill protection savings chart not included to align with other two IOUs, included in Key Insights

Customer Engagement by Channel

Call Center Activity Graph*: Of the Phase 1 population, the total number of calls to the general PG&E contact center after April 16 by month

Call Dispositions*: Of the Phase 1 population, the total number of calls to the general PG&E contact center after April 16 by month broken into various call topics (rate, assistance programs, shutoff/collection, translation, CCA, solar, bill)

*During this period, PG&E tracked calls to the general line from customers with service agreements that had transitioned to the TOU rate plan. To estimate the number of calls related to the TOU transition, PG&E included all of the calls from those transitioned customers that were tagged (per customer service representatives discretion) with an intent that may have been related to "TOU," excluding only those calls that were obviously *not* related to TOU (such as an outage or a digging report).

TOU Website Page Hits: the total number of page views to PG&E's TOUC webpage by month

TOU Transitions Notifications

SJCE
CCA Review
July 23rd 2019

Together, Building
a Better California

Today we will…

1. Review PG&E Default Pilot notifications learnings and first year accomplishments
2. Present 2020-2021 full transition notifications approach
3. CCA review and approval timeline
4. Q&A

PG&E's TOU Full Default Notification Overview

Research and customer reaction point to transition success

After extensive, multi-year pre-research and in market testing, TOU transition customers are responding well to the experience as demonstrated un numerous data points we will review together today.

Because of these results, notification outreach remains relatively unchanged from the Default Pilot.

Time-of-Use Transition Pilot – Notifications Testing

Background

The 2018 transition was designed to test various ways to measure cadence, channel, and message testing in a 13-track customer segmentation that varied delivery of outreach.

TARGET AUDIENCE

- Approximately 153,000 randomly selected customers across PG&E territory
    - Included approximately 25,500 CCA customers (MCE, SCP, SVCE)
- Hot climate CARE customers were excluded

TEST OBJECTIVES

- Test messages for awareness and understanding
- Test cadence of messages
- Compare track results for any significance in outcomes

ME&O TACTICS

- 90, 60, 30 Day notifications; one of the notifications is a rate comparison report of 3 rates
- Sent via Direct Mail, Email, according to track assignment

Notification outreach and transition customer experience was tested during the default Pilot via a complex test schematic

The ~150,000 customers were placed into one of 13 outreach test tracks to gage effectiveness of communication channels, cadence, versioning, etc.

FIGURE 5
NOTIFICATION TESTS FOR 13-TRACK (TRACKS 1-6) SEGMENT 1 PAPER BILLING + PAPERLESS BILLING W/O E-MAIL

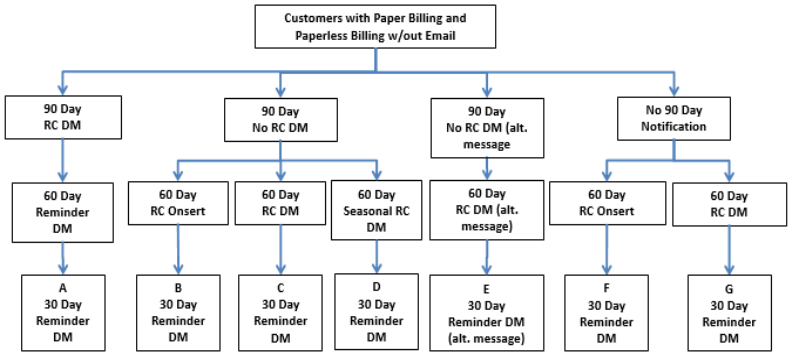
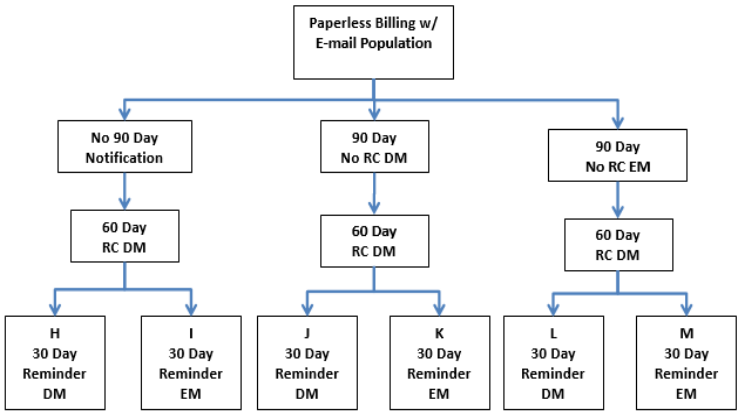


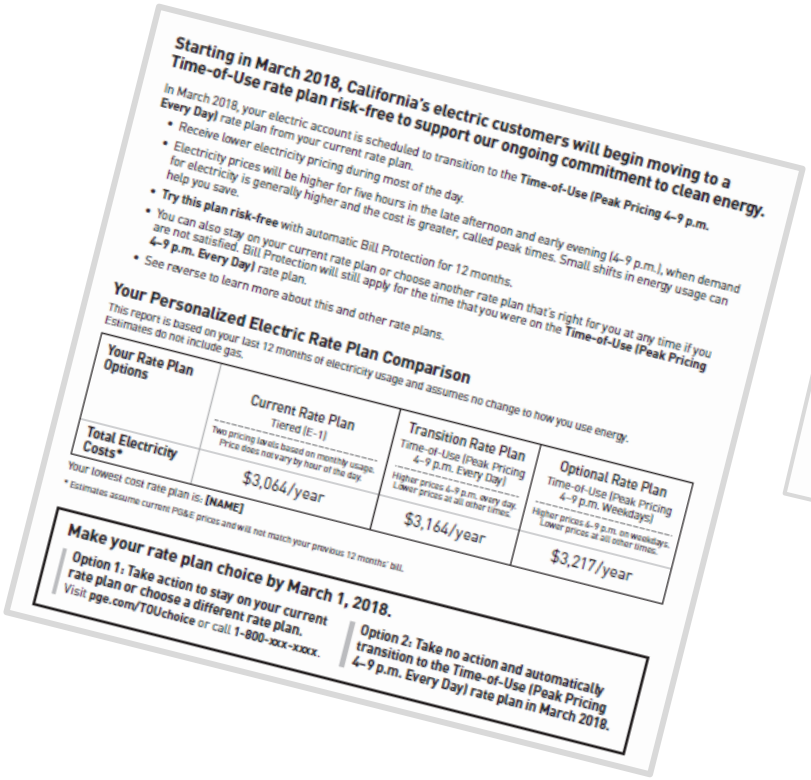
FIGURE 6
DEFAULT NOTIFICATION TESTS FOR 13-TRACK (TRACKS 7-13) SEGMENT 2 PAPERLESS BILLING CUSTOMERS WITH E-MAIL



Default pilot notifications were researched and designed to mitigate potential negative customer reaction, highlight choice

TRY TIME-OF-USE RISK-FREE

YOU CAN CHOOSE ANOTHER RATE PLAN (AT ANY TIME)



Starting in March 2018, California's electric customers will begin moving to a Time-of-Use rate plan risk-free to support our ongoing commitment to clean energy.

In March 2018, your electric account is scheduled to transition to the **Time-of-Use (Peak Pricing 4–9 p.m. Every Day)** rate plan from your current rate plan.

- Receive lower electricity pricing during most of the day.
- Electricity prices will be higher for five hours in the late afternoon and early evening (4–9 p.m.), when demand for electricity is generally higher and the cost is greater, called peak times. Small shifts in energy usage can help you save.
- **Try this plan risk-free** with automatic Bill Protection for 12 months.
- You can also stay on your current rate plan or choose another rate plan that's right for you at any time if you are not satisfied. Bill Protection will still apply for the time that you were on the **Time-of-Use (Peak Pricing 4–9 p.m. Every Day)** rate plan.
- See reverse to learn more about this and other rate plans.

Your Personalized Electric Rate Plan Comparison

This report is based on your last 12 months of electricity usage and assumes no change to how you use energy. Estimates do not include gas.

Your Rate Plan Options	Current Rate Plan Tiered (E-1) Two pricing levels based on monthly usage. Price does not vary by hour of the day.	Transition Rate Plan Time-of-Use (Peak Pricing 4–9 p.m. Every Day) Higher prices 4–9 p.m. every day. Lower prices at all other times.	Optional Rate Plan Time-of-Use (Peak Pricing 4–9 p.m. Weekdays) Higher prices 4–9 p.m. on weekdays. Lower prices at all other times.
Total Electricity Costs*	$3,064/year	$3,164/year	$3,217/year

Your lowest cost rate plan is: **[NAME]**

* Estimates assume current PG&E prices and will not match your previous 12 months' bill.

Make your rate plan choice by March 1, 2018.

Option 1: Take action to stay on your current rate plan or choose a different rate plan. Visit **pge.com/TOUchoice** or call **1-800-xxx-xxxx**.

Option 2: Take no action and automatically transition to the Time-of-Use (Peak Pricing 4–9 p.m. Every Day) rate plan in March 2018.

Pacific Gas and Electric Company
P.O. Box 997300
Sacramento, CA 95899-7300

<Month XX, 2018>

<FIRST NAME> <LAST NAME>
<BILLING_ADDRESS1>
<BILLING_ADDRESS2>
<BILLING_CITY> <BILLING_STATE> <BILLING_PLUS4>
<barcode>

Dear [First Name] [Last Name],

Soon, many of California's energy customers will be moving to a Time-of-Use rate plan, ***risk-free***, that supports the state's ongoing commitment to clean energy. We want to remind you of this change and your options.

Try it risk-free

You can try the **Time-of-Use (Peak Pricing 4–9 p.m. Every Day)** rate plan ***risk-free*** for the first 12 months with automatic Bill Protection. If you pay more during your first year on the **Time-of-Use (Peak Pricing 4–9 p.m. Every Day)** rate plan than you would have on your current rate plan, we will credit you with the difference at the end of the first 12 months. If you decide you are not satisfied on this rate plan, you can switch to another rate plan at any time. Bill Protection will still apply for the time that you were on the **Time-of-Use (Peak Pricing 4–9 p.m. Every Day)** rate plan.

Or, you can choose another rate plan

Every household is unique—and so is the way you use energy. That's why PG&E has new rate plan options for you to choose from. You have the option to:

1. **Do nothing** and automatically transition to the **Time-of-Use (Peak Pricing 4–9 p.m. Every Day)** rate plan so you can try it ***risk-free***, or
2. **Take action to stay on your current rate plan or choose a different rate plan.** When you visit **pge.com/TOUchoice**, you can view a personalized rate review that shows your rate plan options.

Visit **pge.com/TOUchoice** or call **1-866-743-7945** by March 1, 2018 to make your choice.

Thank you for being a valued customer,

The PG&E Customer Care Team

Your PG&E electric service will move to a Time-of-Use rate plan in April 2018. Make your rate plan choice today. Visit: pge.com/TOUchoice Call: 1-866-743-7945

Account No: <<Account ID>>
Service Agreement ID: <<SAID>>
Service Address: <<Service Address 1>>

What the Time-of-Use (Peak Pricing 4–9 p.m. Every Day) rate plan means for you

When you use electricity is as important as ***how much*** you use.

- Your electric account is scheduled to transition to the **Time-of-Use (Peak Pricing 4–9 p.m. Every Day)** rate plan, ***risk-free***, in March 2018 from your current rate plan.
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- If you can make small energy use changes, like running the dishwasher or doing laundry during lower-priced times of day, you may be able to benefit from a Time-of-Use rate plan. Learn more ways to save energy at **pge.com/saveenergy**.

TOU Pilot Customer Research

Multiple rounds of customer research were conducted to optimize communications and the customer experience

Understanding of TOU rate

Communications optimization & effectiveness

Impact on energy consumption behavior

Customer experience with the transition and on TOU

Pre-pilot baseline	Wave 1 post transition	Wave 2 post summer

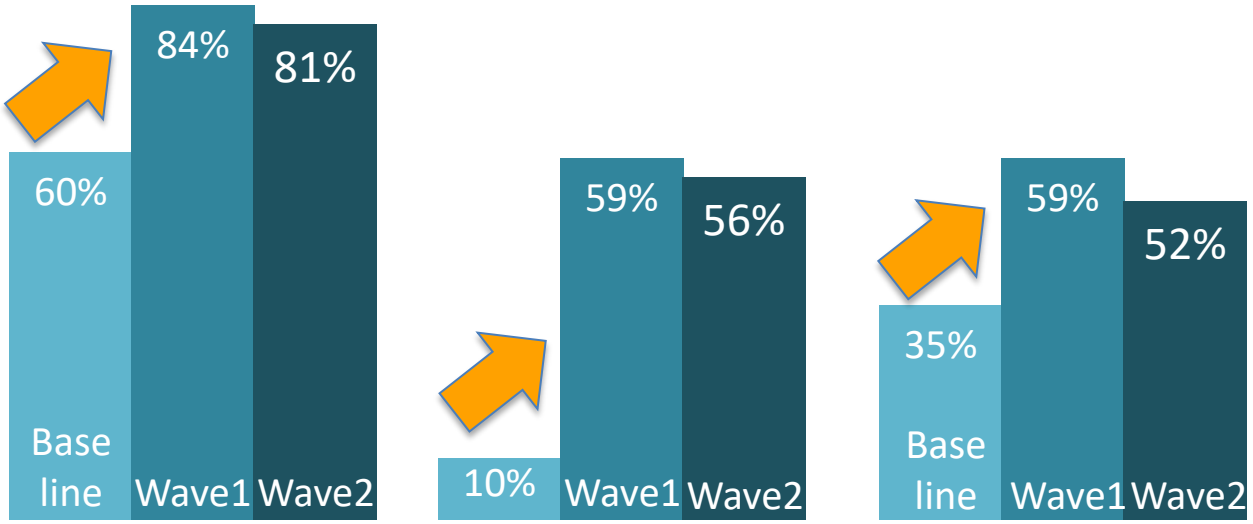
Highlights from transition customers – Year 1

- Satisfaction remained stable
- Continued high levels of awareness
- Understanding of rate details remained intact
- Customers took action to shift and reduce
- ME&O test tracks performed comparably well
- CCA customers responded similarly well throughout the pilot

High customer awareness of the transition, TOU rate plans and choices remained consistent

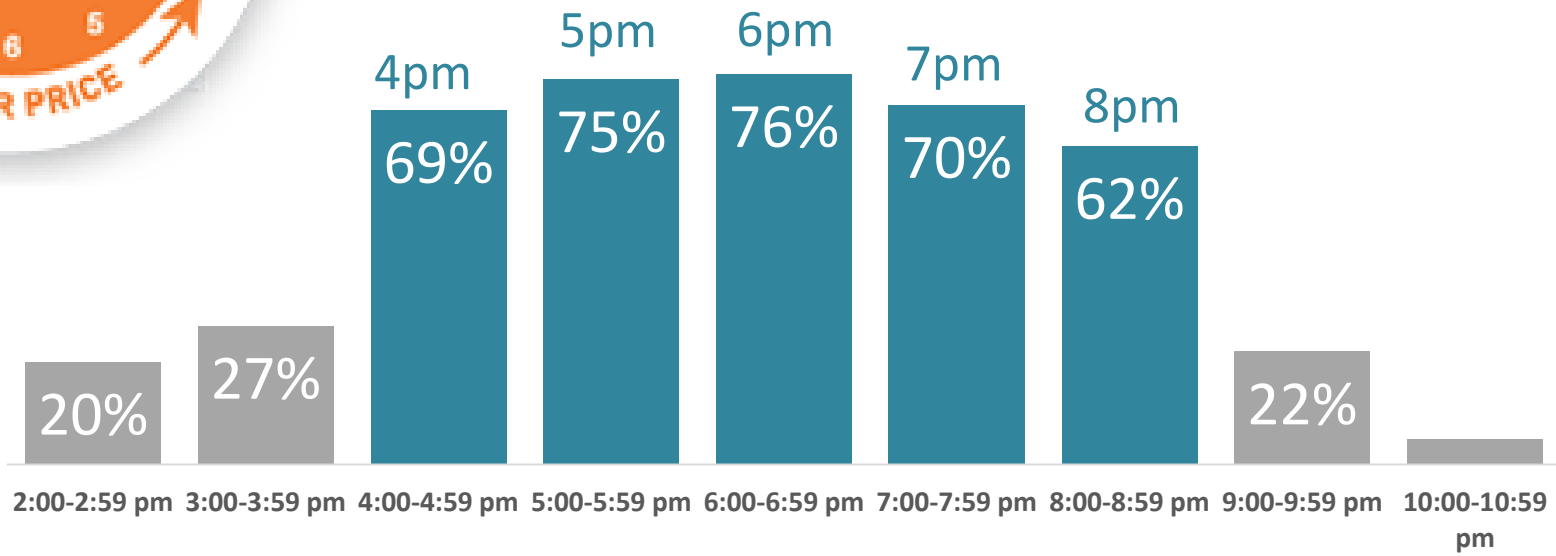
Awareness climbed and remained high in key areas:

Customers aware of:



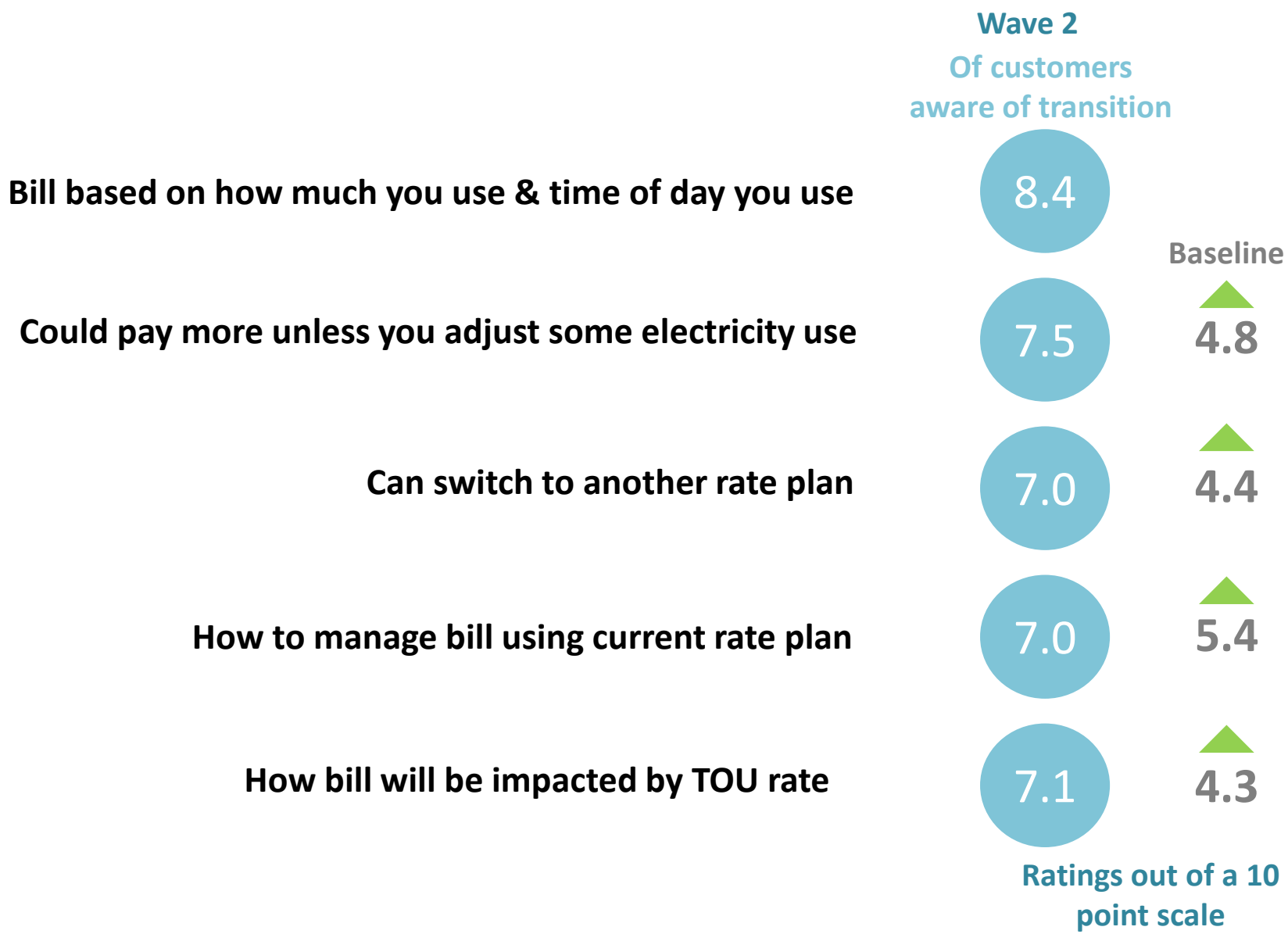
Customers demonstrated high understanding of peak hours

70% overall correctly identified over half of the higher priced peak hours



Graph represents the percent of customers that accurately choose each time period as included in the peak hours in their rate plan.

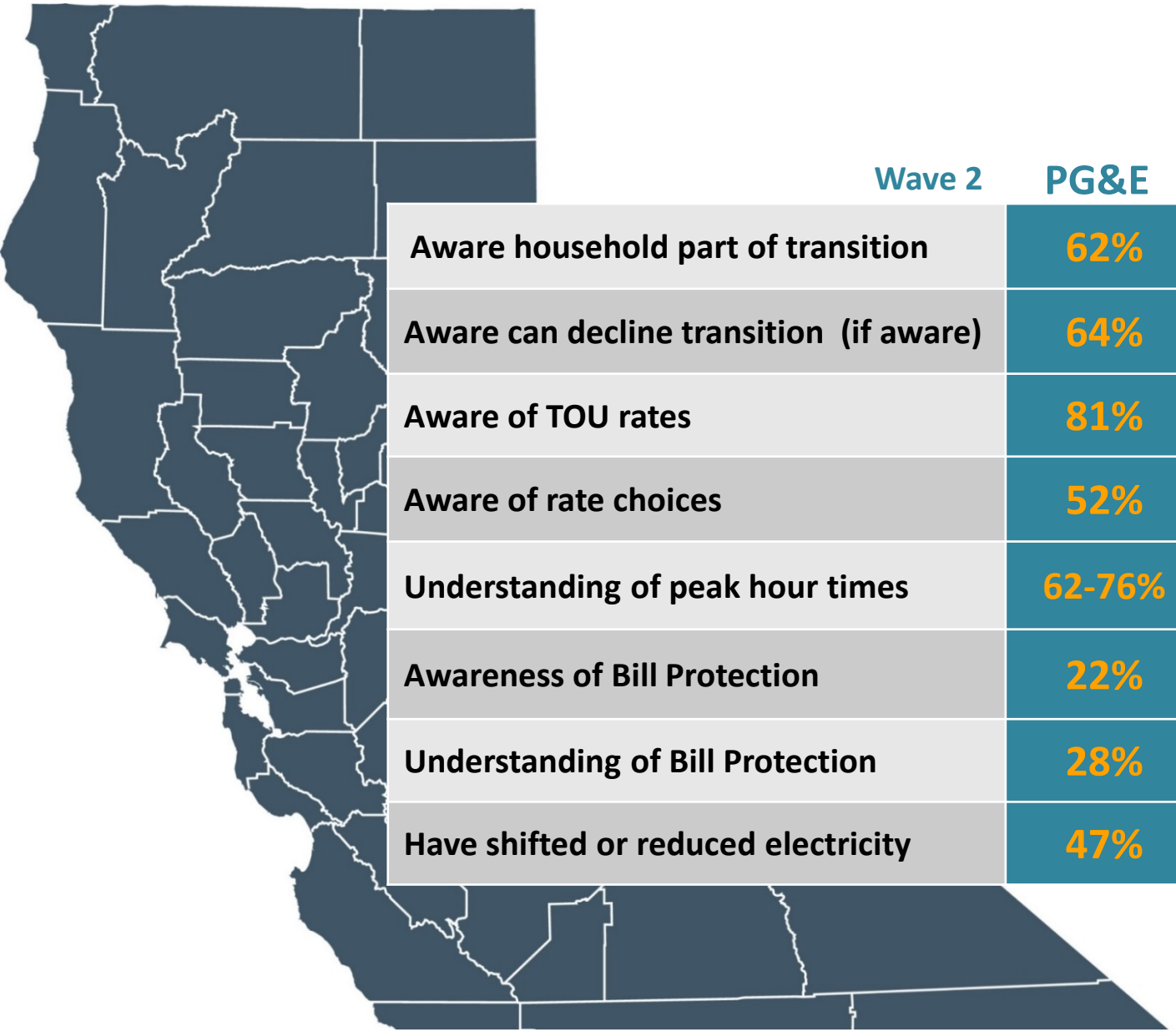
Strong customer understanding of TOU rate details



CCA customers responded similarly well throughout the pilot

- Satisfaction with rate plan remained stable at **6.5**/10
- Continued high levels of awareness and understanding
- CCA customers ***more aware*** of the transition and of choice compared to bundled customers
- **53%** of CCA customers said they are taking actions to shift or reduce (comparable to PG&E bundled customers)

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



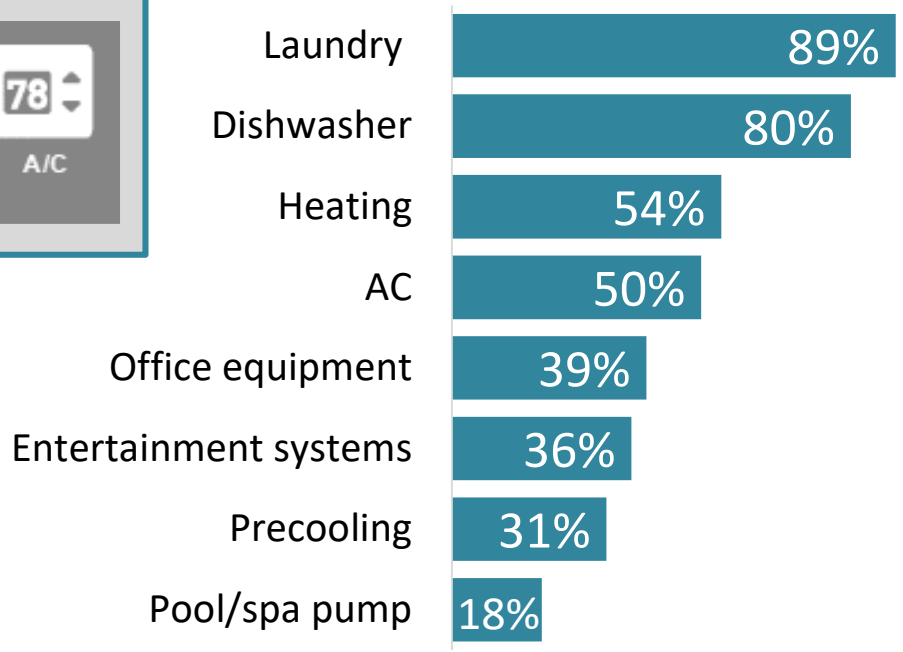
Wave 2	PG&E	SCE	SDG&E
Aware household part of transition	62%	48%	59%
Aware can decline transition (if aware)	64%	60%	69%
Aware of TOU rates	81%	73%	81%
Aware of rate choices	52%	48%	52%
Understanding of peak hour times	62-76%	41-61%	60-72%
Awareness of Bill Protection	22%	17%	23%
Understanding of Bill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

TOU transition customers have shifted and/or reduced usage

47% overall say they have **shifted (35%)** and/or **reduced (24%)**

All who have shifted or reduced

Top actions



First summer peak load shifting

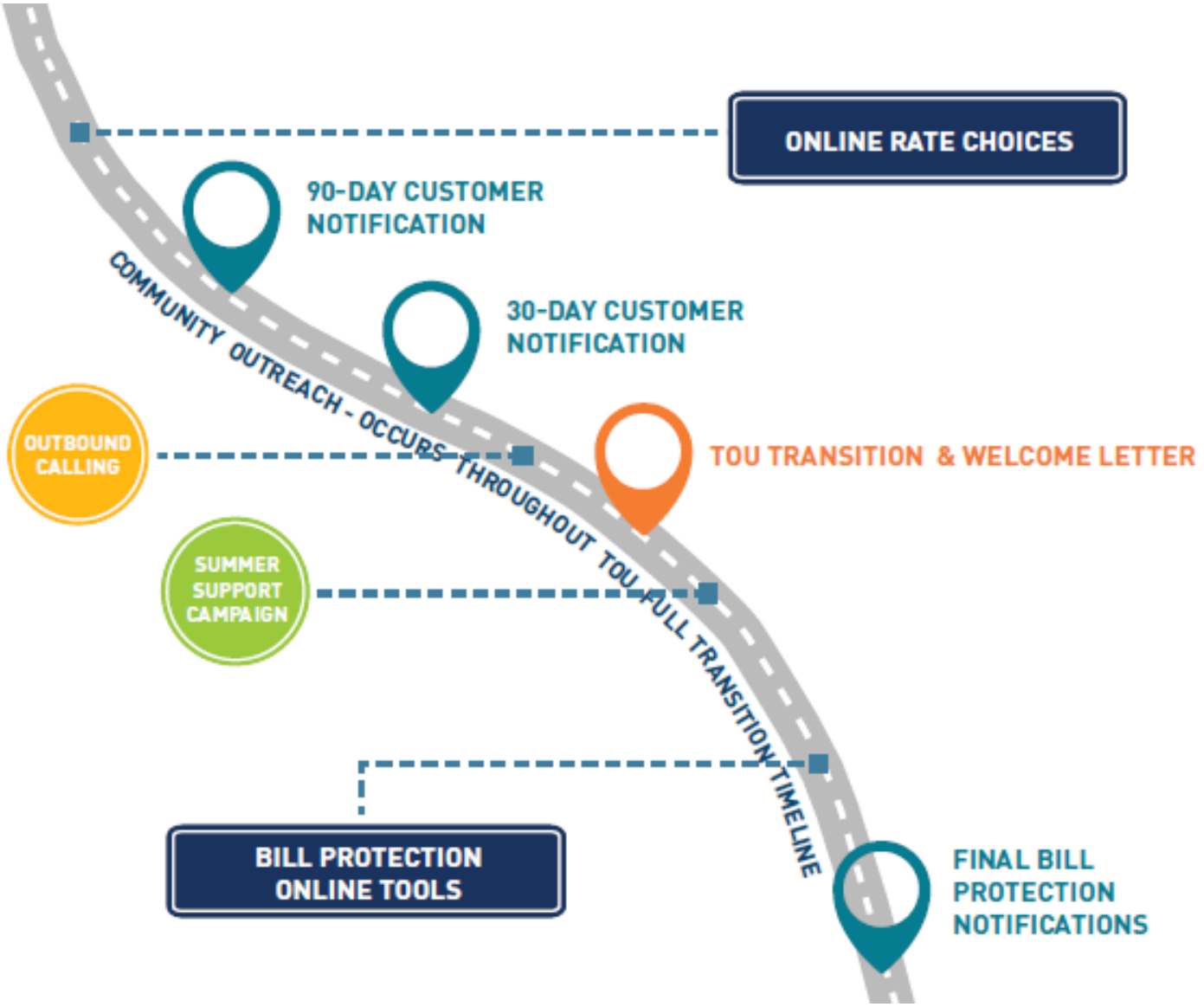
PG&E outperformed other IOUs in overall load drop and in hot and moderate climate zones

Segment	Load Drop % Impact		
	PG&E	SCE	SDG&E
Hot	5.2%	2.0%	3.6%
Moderate	4.3%	1.3%	1.7%
Cool	1.4%	1.5%	1.2%
All	**4.0%**	**1.5%**	**1.5%**

Full Default Notifications Approach

Together, Building
a Better California

Full Transition Notification Roadmap



TOU Full Default Cadence Approach

Main components:

- 90 Day Rate Comparison DM letter
- 30 Day DM letter *and* EM for all valid email customers

Approach provides between 2 – 3 touches

- Supported by awareness from test tracks overall
    - track “G” for paper-billed
    - tracks “H + I” for paperless billed

Additional outbound call for CARE/FERA customers (3rd or 4th touch for these customers)

TOU Transition Notifications – see PDF for review docs

Pacific Gas and Electric Company
P.O. Box 770000
San Francisco, CA 94177-1490

Account No: <<Account ID>>
Service Agreement ID: <<SAID>>
Service Address: <<Service Address 1>>

<FIRST NAME> <LAST NAME>
<BILLING_ADDRESS1>
<BILLING_ADDRESS2>
<BILLING_CITY> <BILLING_STATE> <BILLING_PLUS4>
<barcode>

Starting in March 2018, California's electric customers will begin moving to a Time-of-Use rate plan risk-free to support our ongoing commitment to clean energy.

In March 2018, your electric account is scheduled to transition to the **Time-of-Use (Peak Pricing 4–9 p.m. Every Day)** rate plan from your current rate plan.

- Receive lower electricity pricing during most of the day.
- Electricity prices will be higher for five hours in the late afternoon and early evening (4–9 p.m.), when demand for electricity is generally higher and the cost is greater, called peak times. Small shifts in energy usage can help you save.
- **Try this plan risk-free** with automatic Bill Protection for 12 months.
- You can also stay on your current rate plan or choose another rate plan that's right for you at any time if you are not satisfied. Bill Protection will still apply for the time that you were on the **Time-of-Use (Peak Pricing 4–9 p.m. Every Day)** rate plan.
- See reverse to learn more about this and other rate plans.

Your Personalized Electric Rate Plan Comparison

This report is based on your last 12 months of electricity usage and assumes no change to how you use energy. Estimates do not include gas.

Your Rate Plan Options	Current Rate Plan Tiered (E-1) Two pricing levels based on monthly usage. Price does not vary by hour of the day.	Transition Rate Plan Time-of-Use (Peak Pricing 4–9 p.m. Every Day) Higher prices 4–9 p.m. every day. Lower prices at all other times.	Optional Rate Plan Time-of-Use (Peak Pricing 4–9 p.m. Weekdays) Higher prices 4–9 p.m. on weekdays. Lower prices at all other times.
Total Electricity Costs*	$3,064/year	$3,164/year	$3,217/year

Your lowest cost rate plan is: **[NAME]**

* Estimates assume current PG&E prices and will not match your previous 12 months' bill.

Make your rate plan choice by March 1, 2018.

Option 1: Take action to stay on your current rate plan or choose a different rate plan. Visit **pge.com/TOUchoice** or call **1-800-xxx-xxxx**.

Option 2: Take no action and automatically transition to the Time-of-Use (Peak Pricing 4–9 p.m. Every Day) rate plan in March 2018.

90 Day Rate Comparison

Pacific Gas and Electric Company
P.O. Box 997300
Sacramento, CA 95899-7300

<Month XX, 2018>

<FIRST NAME> <LAST NAME>
<BILLING_ADDRESS1>
<BILLING_ADDRESS2>
<BILLING_CITY> <BILLING_STATE> <BILLING_PLUS4>
<barcode>

Your PG&E electric service will move to a Time-of-Use rate plan in April 2018. Make your rate plan choice today. Visit: pge.com/TOUchoice Call: 1-866-743-7945

Account No: <<Account ID>>
Service Agreement ID: <<SAID>>
Service Address: <<Service Address 1>>

Dear [First Name] [Last Name],

Soon, many of California's energy customers will be moving to a Time-of-Use rate plan, ***risk-free***, that supports the state's ongoing commitment to clean energy. We want to remind you of this change and your options.

Try it risk-free

Y…the **Time-of-Use (Peak Pricing 4–9 p.m. Every Day)** rate …the first 12 months with automatic Bill Protection. …ur first year on the **Time-of-Use (Peak** …te plan than you would have on your …ith the difference at the end of …t satisfied on this rate …me. Bill Protection …Use (Peak

What the Time-of-Use (Peak Pricing 4–9 p.m. Every Day) rate plan means for you

When you use electricity is as important as ***how much*** you use.

- Your electric account is scheduled to transition to the **Time-of-Use (Peak Pricing 4–9 p.m. Every Day)** rate plan, ***risk-free***, in March 2018 from your current rate plan.
- You will receive lower electricity pricing during most of the day, when energy demand is lower.
- Electricity prices will be higher for five hours every day in the late afternoon and evening (4–9 p.m.) when demand for electricity is generally higher.
- If you can make small energy use changes, like running the dishwasher or doing laundry during lower-priced times of day, you may be able to benefit from a Time-of-Use rate plan. Learn more ways to save energy at **pge.com/saveenergy**.

See reverse side »

30 Day Letter (+ Email)

Sample CCA Notifications from Default Pilot

PG&E MCE Clean Energy My community, My choice.

<Month XX, 2017>

<FIRST NAME> <LAST NAME>
<BILLING_ADDRESS1>
<BILLING_ADDRESS2>
<BILLING_CITY> <BILLING_STATE> <BILLING_PLUS4>
<barcode>

Dear [First Name] [Last Name],

Soon, many of California's energy customers will be moving to a Time-of-Use rate plan, that supports the state's ongoing commitment to clean energy. We want to let you know about this change and your options.

Try it for one year

You can try the **Time-of-Use (Peak Pricing 4–9 p.m. Every Day)** rate plan for the first 12 months with automatic Bill Protection.
If you pay more during your first year on the **Time-of-Use (Peak Pricing 4–9 p.m. Every Day)** rate plan than you would have on your current rate plan, we will credit you with the difference at the end of the first 12 months. If you decide you are not satisfied on this rate plan, you can switch to another rate plan at any time. Some accounts may not be eligible for full Bill Protection. Learn more at **mceCleanEnergy.org/time-of-use-everyday/**.

Or, you can choose another rate plan

Every household is unique—and so is the way you use energy. That's why we have new rate plan options for you to choose from. You have the option to:

1. **Do nothing** and automatically transition to the **Time-of-Use (Peak Pricing 4–9 p.m. Every Day)** rate plan so you can try it, or
2. **Take action to stay on your current rate plan or choose a different rate plan.** In approximately one month, we will send you a personalized rate review that shows you your rate plan options. You can also view this information now by visiting **pge.com/TOUchoice**.

Visit **pge.com/TOUchoice** or call **1-866-743-7945** by March 1, 2018 to make your choice.

Thank you for being a valued customer,

The Pacific Gas and Electric Company and Marin Clean Energy Customer Care Teams

Your electric service will move to a Time-of-Use rate plan in March 2018. Learn about your options.
Visit: pge.com/TOUchoice
Call: 1-866-743-7945

Account No: <<Account ID>>
Service Agreement ID: <<SAID>>
Service Address: <<Service Address 1>>

What the Time-of-Use (Peak Pricing 4–9 p.m. Every Day) rate plan means for you

When you use electricity is as important as ***how much*** you use.

- Your electric account is scheduled to transition to the **Time-of-Use (Peak Pricing 4–9 p.m. Every Day)** rate plan in March 2018 from your current rate plan.
- You will receive lower electricity pricing during most of the day, when energy demand is lower.
- Electricity prices will be higher for five hours every day in the late afternoon and evening (4–9 p.m.), when demand for electricity is generally higher.
- If you can make small energy use changes, like running the dishwasher or doing laundry during lower-priced times of day, you may be able to benefit from a Time-of-Use rate plan. Learn more ways to save energy at **pge.com/saveenergy**.

See reverse side »

PG&E Sonoma Clean Power

January 24, 2018

Account No:
Service Agreement ID:
Service Address:

Your PG&E electric service will move to a Time-of-Use rate plan in April 2018. Learn about your options below. Visit: pge.com/TOUchoice
Call: 1-866-743-7945

California's electric customers will begin moving to a Time-of-Use rate plan to support our ongoing commitment to clean energy.

In April 2018, your account is scheduled to transition from your current rate plan to the **Time-of-Use (Peak Pricing 4-9 p.m. Every Day)** rate, as part of a California statewide initiative to ensure greater power reliability and a better energy future.

- Receive lower electricity pricing during most of the day.
- Electricity prices will be higher for five hours in the late afternoon and early evening (4–9 p.m.), when demand for electricity is generally higher and the cost is greater, called peak times. Small shifts in energy usage can help you save.
- Try this plan with Bill Protection for 12 months. You can also stay on your current rate plan or choose another rate plan that's right for you at any time if you are not satisfied. Some accounts may not be eligible for full Bill Protection. Learn more at **sonomacleanpower.org/billprotection.**
- See reverse to learn more about this and other rate plans.

Your Personalized Electric Rate Plan Comparison

This report is based on your last 12 months of electricity usage and assumes no change to how you use energy. Estimates do not include gas.

Your Rate Plan Options	Current Rate Plan Tiered (E-1) Two pricing levels based on monthly usage. Price does not vary by hour of the day.	Transition Rate Plan Time-of-Use (Peak Pricing 4–9 p.m. Every Day) Higher prices 4-9 p.m. every day. Lower prices at all other times.	Optional Rate Plan Time-of-Use (Peak Pricing 3–8 p.m. Weekdays) Higher prices 3-8 p.m. on weekdays. Lower prices at all other times.
Total Electricity Costs*	$465/year	$450/year	$460/year

Your lowest cost rate plan is: **Time-of-Use (Peak Pricing 4–9 p.m. Every Day)**

* Estimates assume current PG&E prices and will not match your previous 12 months' bill.

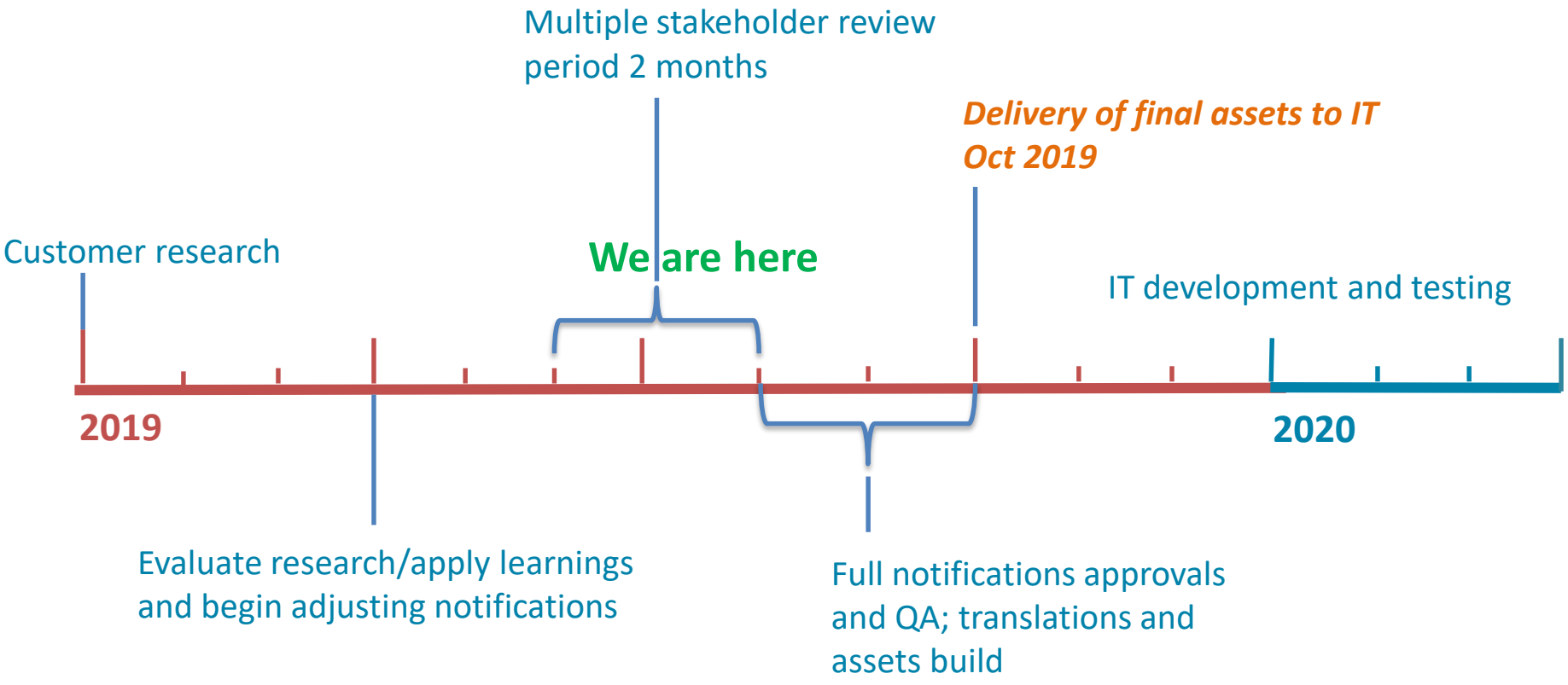
Make your rate plan choice by April 1, 2018.

Option 1: Take action to stay on your current rate plan or choose a different rate plan.
Visit **pge.com/TOUchoice** or call **1-866-743-7945.**

Option 2: Take no action and automatically transition to the Time-of-Use (Peak Pricing 4-9 p.m. Every Day) rate plan in April 2018.

Areas of CCA customization noted

Customer Communication Development Timeline 2019 - 2020

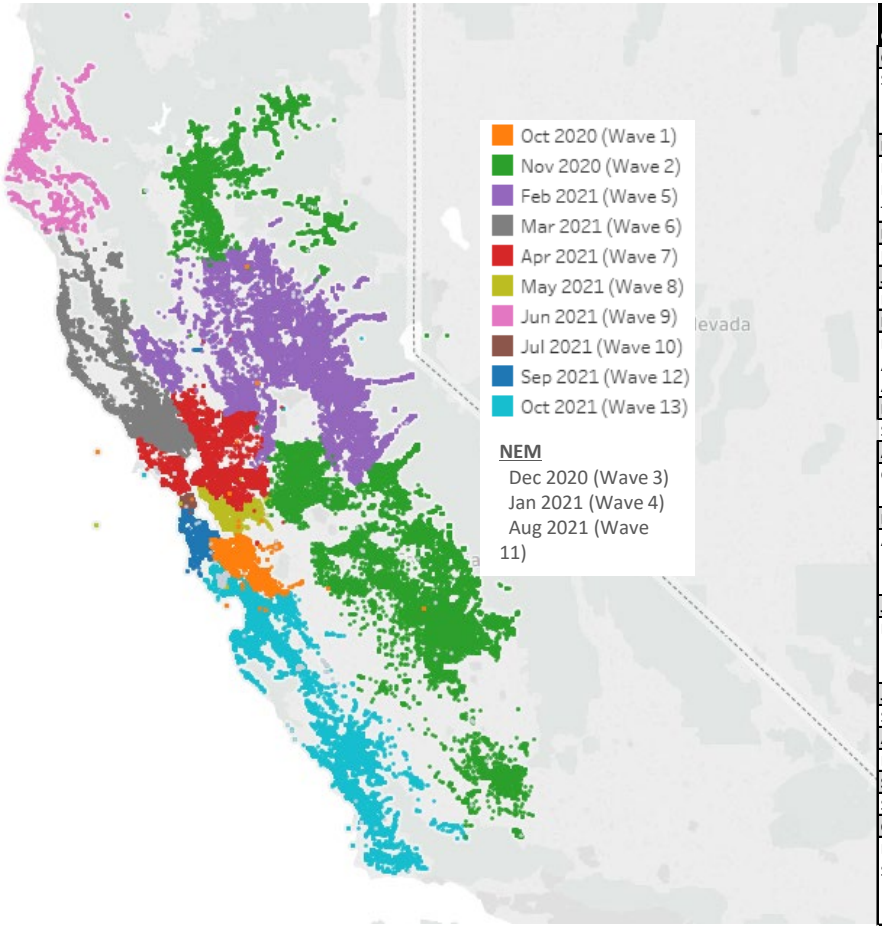


Next Steps

- Take into consideration Default Pilot accomplishments and more than 20 research studies that helped PG&E craft these messages and customer successes
- Help PG&E mitigate notification version challenges
- Review & Approval of Action Required notifications
  - 90 Day DM
  - 30 Day DM & EM
  - BRC Mockup
- Have questions or comments? Let's talk!
- Review & Approval Timeline:
  - Review and Provide Comments **by 12pm July 31st**

Appendix

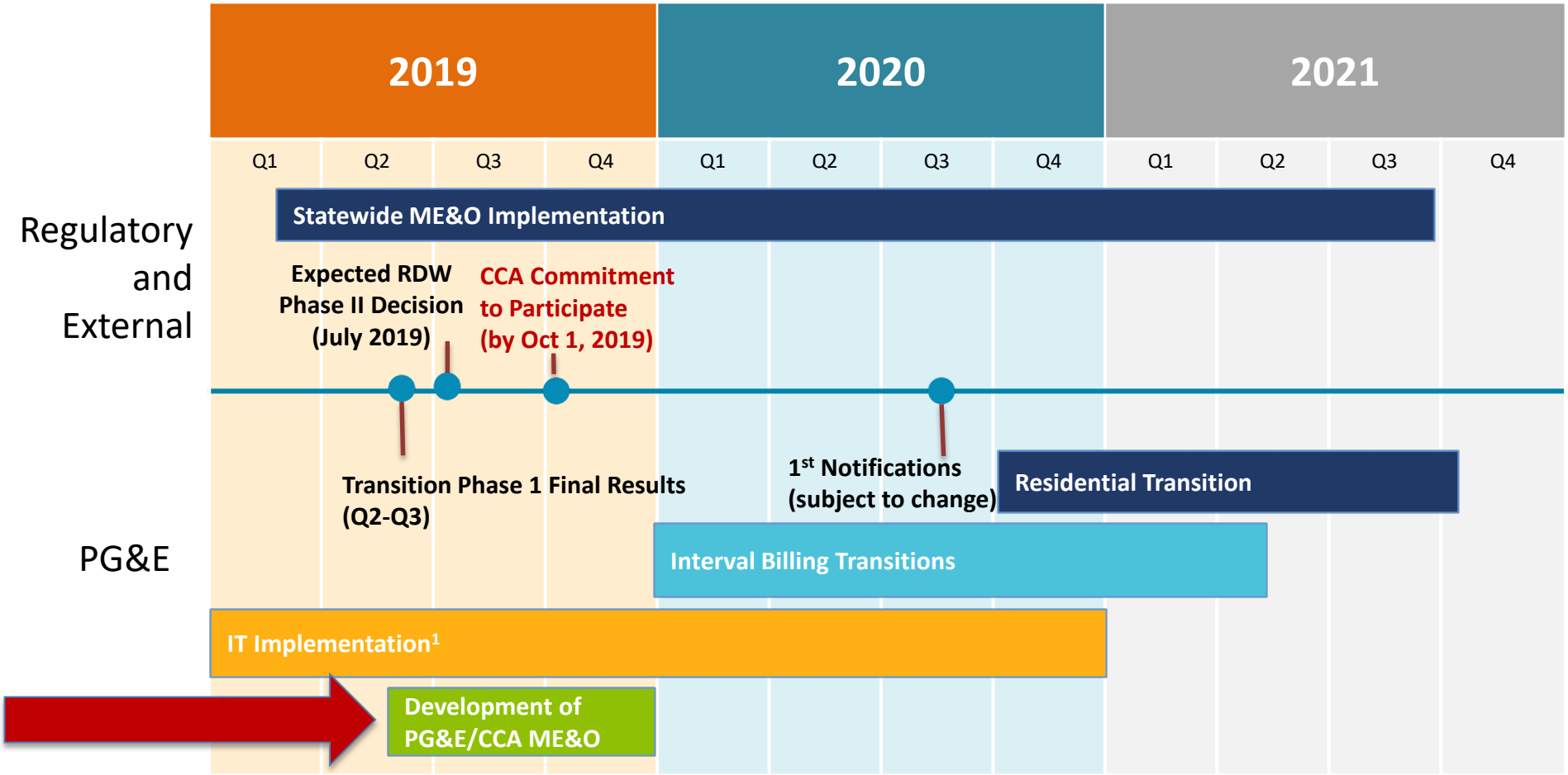
TOU Full Rollout Plan (13 Waves)



Counties	Service Provider Territory Included	Totals
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,	PG&E Bundled	120,000
Amador, Sutter, Yuba, Glenn, Colusa, Sacramento, Sierra,	Pioneer Community Energy (PIO)	40,000
Alpine	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.

Res TOU Phase 2 Transition Timeline: ME&O



Default Pilot PRELIM Load Impacts: Summer 2018 Results 04.17.2018

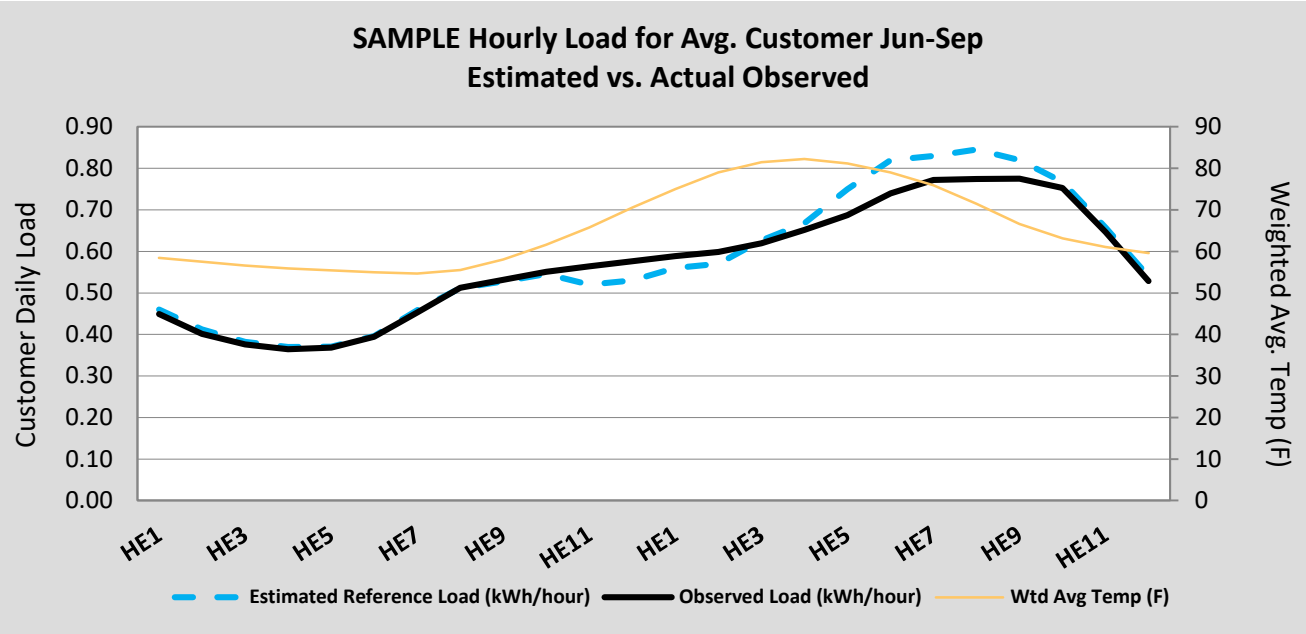
Merlyn Xavier

Together, Building a Better California

Summary

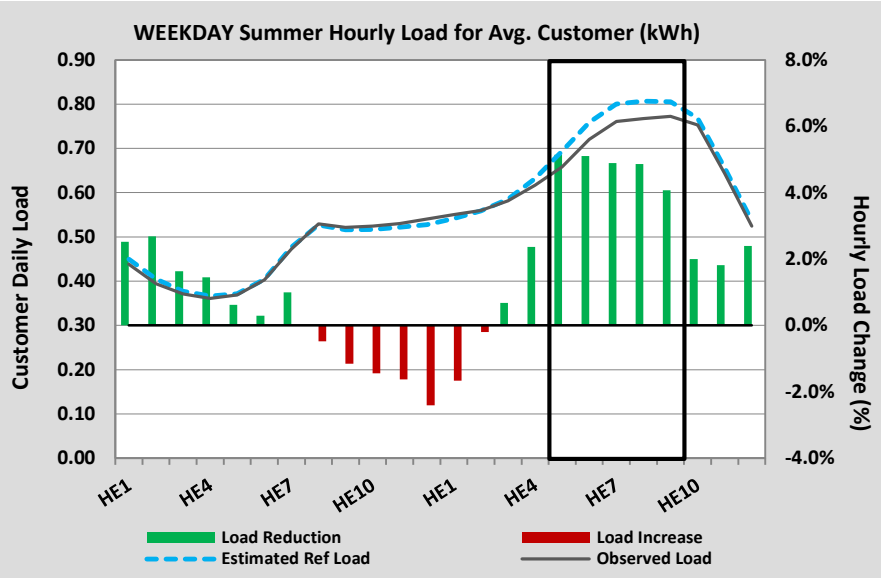
- Statistically and materially significant load reductions seen across all segments during Peak Hours 4-9 PM. Average load reduction is 4.2%/hr/cust
  - Eight segments analyzed (5 PG&E, 2 CCA, 1 NEM)
  - Load Impacts assessed for the first Summer on new rate (Jun through Sep)
  - Peak Load Impacts assessed using standard Demand Response protocol models
- Load Conservation behavior among most segments.
  - Although there is load shifting behavior seen in off-peak hours, story in almost all segments is load conservation (any off-peak hour load shift/increase is offset by peak period reduction gains)
  - For some segments, off-peak usage increase is limited to few hours, while in other cases it is across all off-peak hours
- Impacts smaller than the Opt-In pilot for most segments (and lower than self-enrollments to TOU rates)
- Across all segments
  - Hotter climate regions are associated with higher load impacts
  - Within a climate, CARE customers have lower impacts than non-CARE customers
- The two participating CCA's (+90% moderate) showed reductions similar to PG&E moderate zones

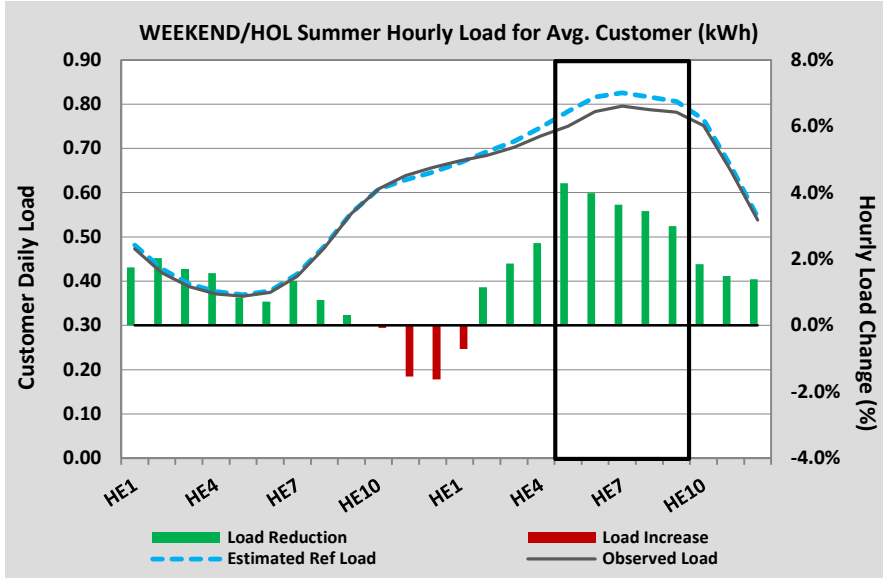
Evaluation Methodology Summary



- Load Impacts estimated by a Difference-in-Difference methodology analyzed as a Randomized Encouragement Design (RED) by an external evaluator (Christensen Associates)
- Key Methodological points:
  - 'Quasi-Experimental' Design – Control group similar in all aspects except TOU rate pilot
  - 'Counterfactual' – Estimated Reference Load (what would have been) is modeled for Default Pilot customers
- RED design allows for customers who decline the transition. An 'intention-to-treat' effect is calculated for the group (load impacts for all Pilot customers), as well as a 'treatment effect-on-the-treated' (load impact for customers on TOU)

Sonoma Clean Power – Hourly Usage



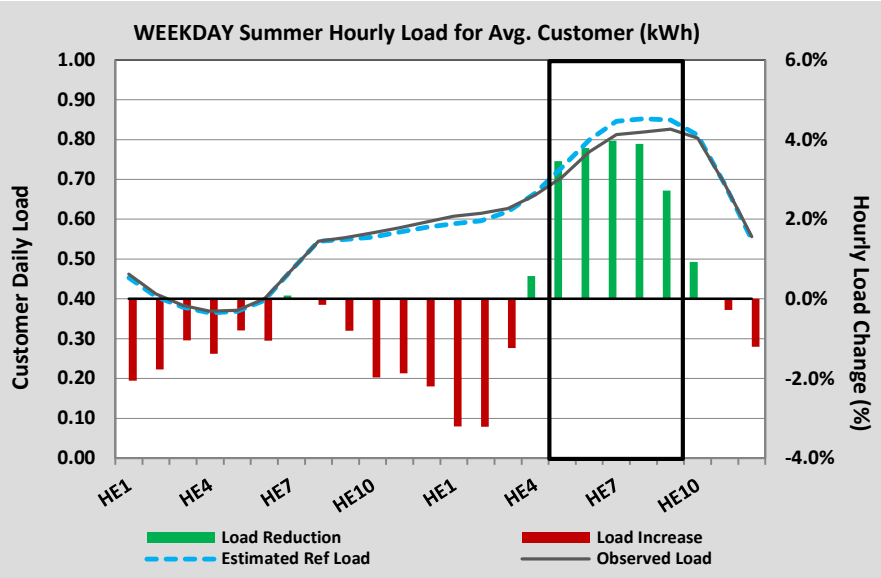


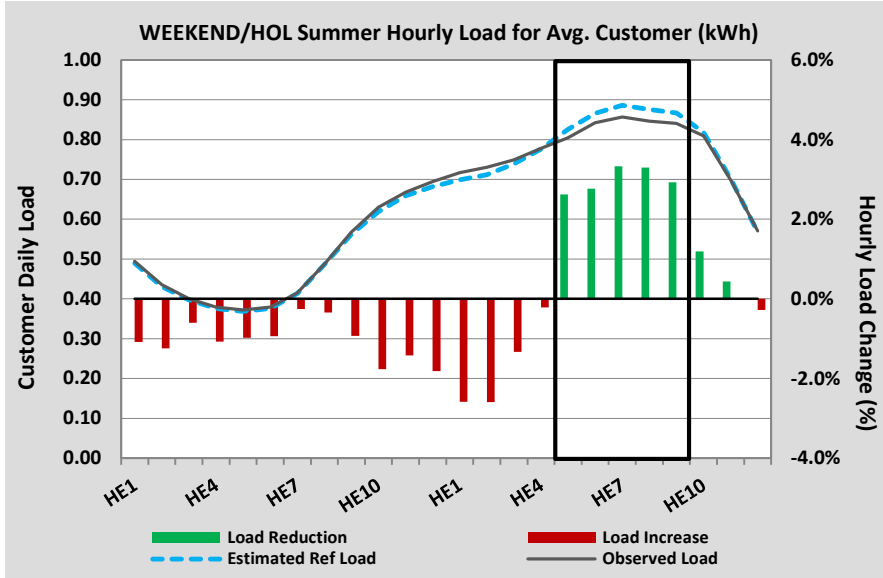
Day Type	By Period	CDD Hours (Base 75)	Estimated Reference Energy Usg	Observed Event Day Energy Usg	Estimated Change in Energy Usg	Average % Load Impact (reduction +)
Weekday	Avg. Peak	11.9	0.773	0.736	0.037	4.80%
	Avg. Off-Peak	18.0	0.513	0.510	0.003	0.55%
	Total Daily	**30.0**	**13.60**	**13.37**	**0.24**	**1.76%**
Weekend/ Holidays	Avg. Peak	9.49	0.809	0.780	0.030	3.67%
	Avg. Off-Peak	17.70	0.556	0.551	0.005	0.88%
	Total Daily	**27.20**	**14.60**	**14.36**	**0.24**	**1.65%**
All Days	Avg. Peak	11.2	0.784	0.750	0.035	4.43%
	Avg. Off-Peak	17.8	0.526	0.522	0.003	0.66%
	Total Daily	**28.9**	**13.92**	**13.68**	**0.24**	**1.72%**

- **Peak Reduction**: For both weekdays and weekends, we see a peak period load reduction (4.8% and 3.7%). This is very obvious. Reduction continues after peak.
- **Load Shifting and Conservation:** Some shifting to pre-peak period but this is offset by reductions in other hours.
  - Load Shift mainly 7 AM- 2 PM on weekdays, 9AM to Noon weekends

Overall trend, over the 24 hours, net conservation (1.72% reduction)

Marin Clean Energy – Hourly Usage





Day Type	By Period	CDD Hours (Base 75)	Estimated Reference Energy Usg	Observed Event Day Energy Usg	Estimated Change in Energy Usg	Average % Load Impact (reduction +)
Weekday	Avg. Peak	12.0	0.815	0.786	0.029	3.56%
	Avg. Off-Peak	16.3	0.534	0.540	-0.006	-1.13%
	Total Daily	**28.4**	**14.23**	**14.20**	**0.03**	**0.22%**
Weekend/ Holidays	Avg. Peak	11.9	0.864	0.838	0.026	2.99%
	Avg. Off-Peak	18.5	0.572	0.578	-0.005	-0.93%
	Total Daily	**30.4**	**15.19**	**15.17**	**0.03**	**0.18%**
All Days	Avg. Peak	12.0	0.831	0.802	0.028	3.38%
	Avg. Off-Peak	17.0	0.546	0.552	-0.006	-1.06%
	Total Daily	**29.0**	**14.53**	**14.50**	**0.03**	**0.21%**

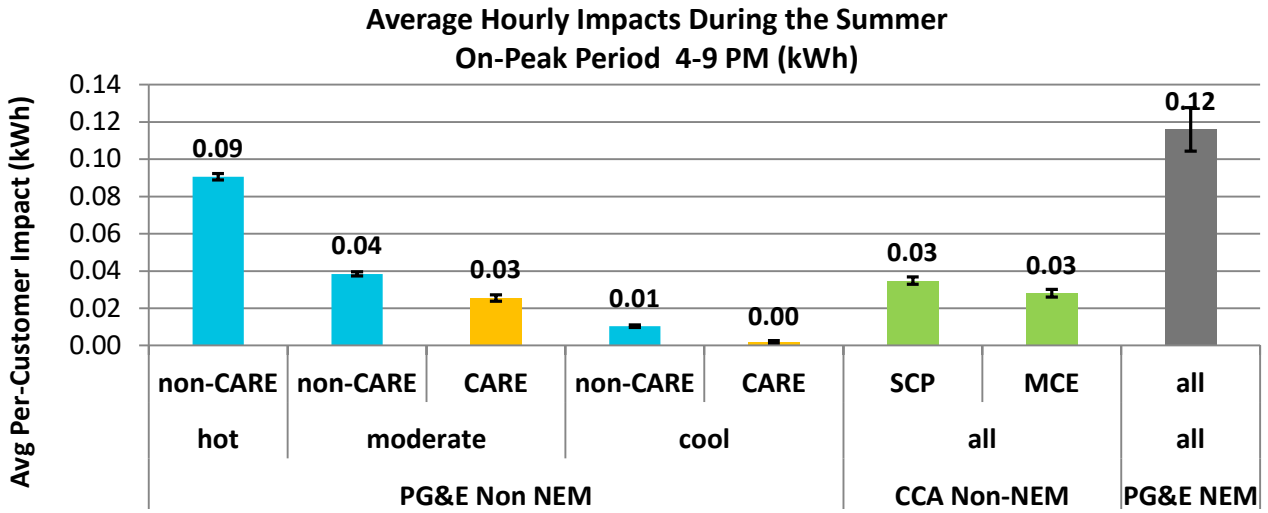
•**Peak Reduction**: For both weekdays and weekends, we see a peak period load reduction (3.6% and 3.0%). Reductions mostly limited to peak hours.

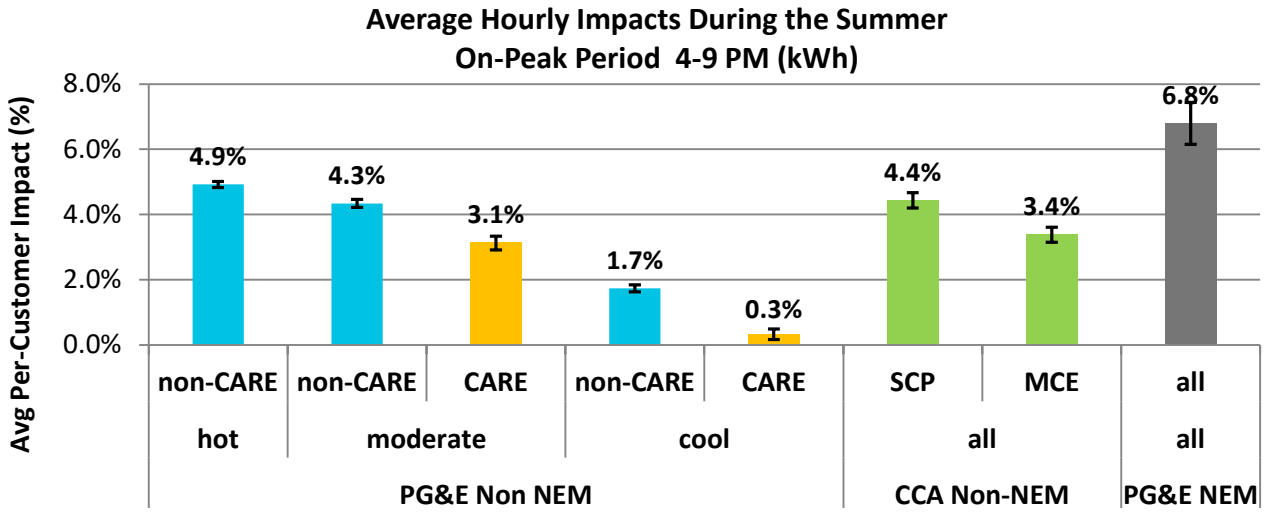
Load Shifting and Conservation: Load shifting to all off-peak hours

- Weekday Load Shift in two batches, Noon to 2 PM, and around midnight

However, these shifts are offset by gains in peak period reductions. Over the 24 hours, net conservation (0.2% reduction; 10th percentile and 90th percentile at 0.01% and 0.40% respectively)

Average Per-Customer Impacts – ALL DAYS



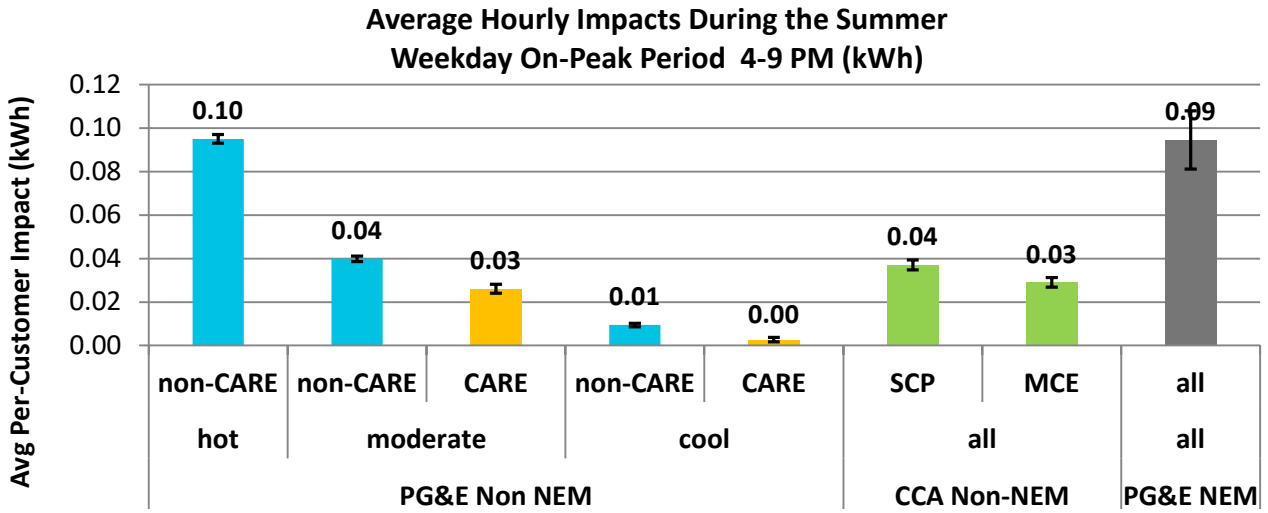


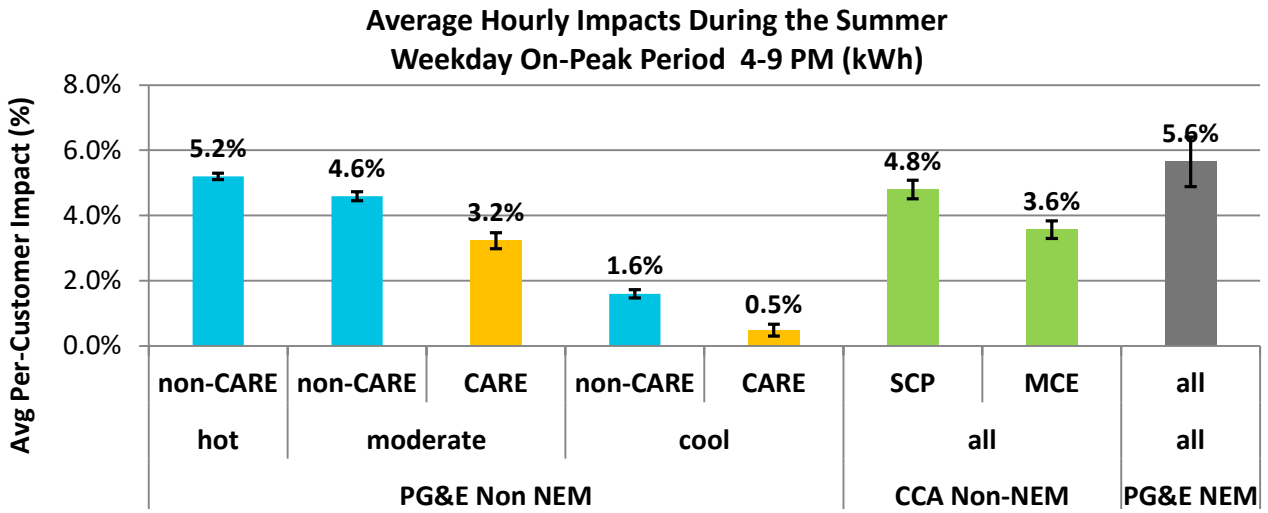
- All segments reduced load during peak period
- Impacts significant at the 99% confidence level for all segments

  NEM segment to be interpreted cautiously due to small sample size
- Hot segments have highest reductions. CCA values similar to PG&E moderate.
- On average, CARE customers have lower load impacts than Non-CARE

[1] All estimates are statistically significant at the 99% level. 90% Confidence Intervals reported above

Average Per-Customer Impacts – WEEKDAY





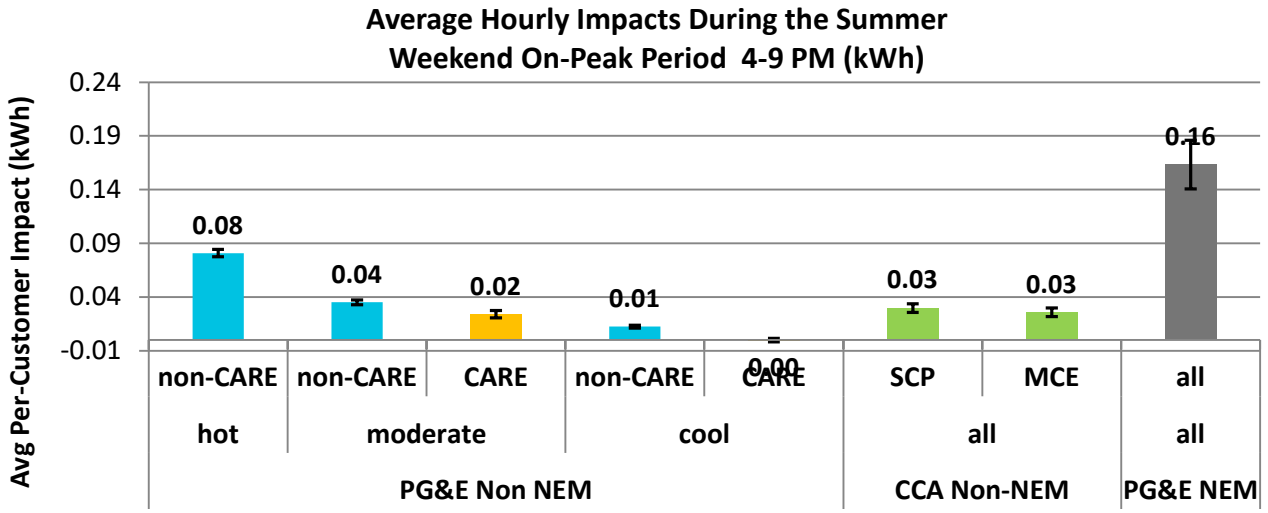
- All segments reduced load during peak
- Impacts significant at the 99% confidence level for all segments

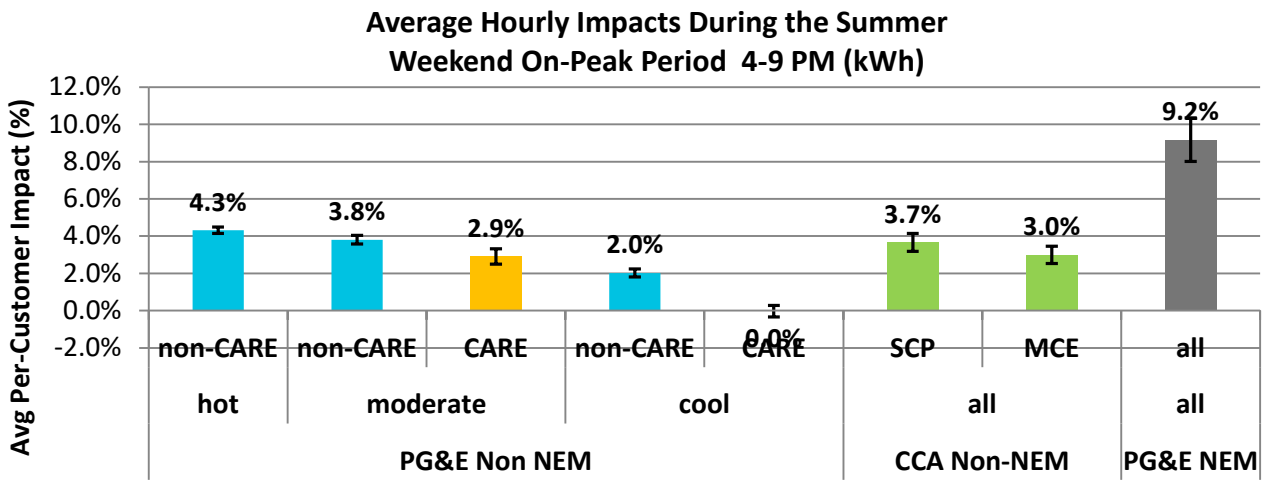
  NEM segment to be interpreted cautiously due to small sample size
- Conservation rather than load shifting

  In some cases net off-peak usage increase, in other cases usage increase in some hours that is offset by decrease in other hours. However over 24 hours, in all cases, usage reduction

[1] All estimates are statistically significant at the 99% level. 90% Confidence Intervals reported above

Average Per-Customer Impacts – WEEKEND





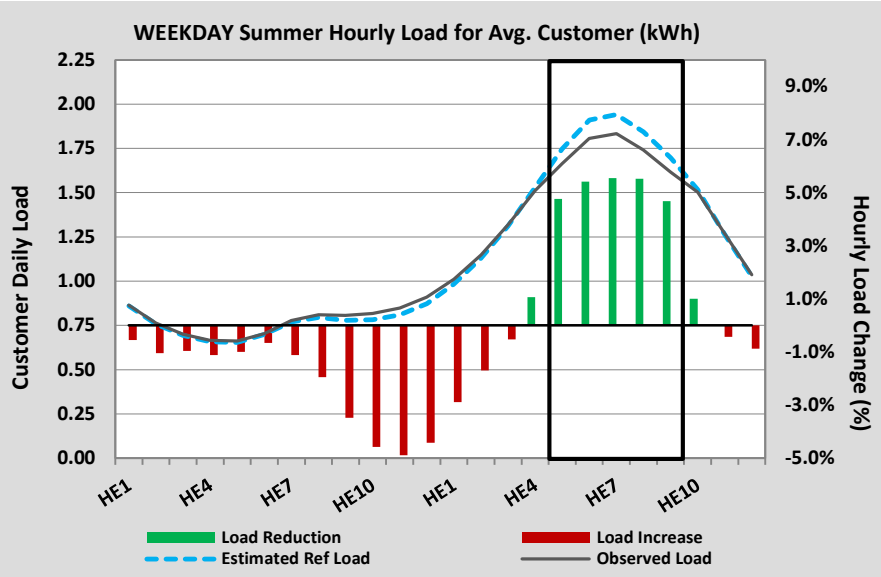
- All segments reduced load during peak except PG&E cool CARE
- Impacts significant at the 99% confidence level for all segments except cool CARE

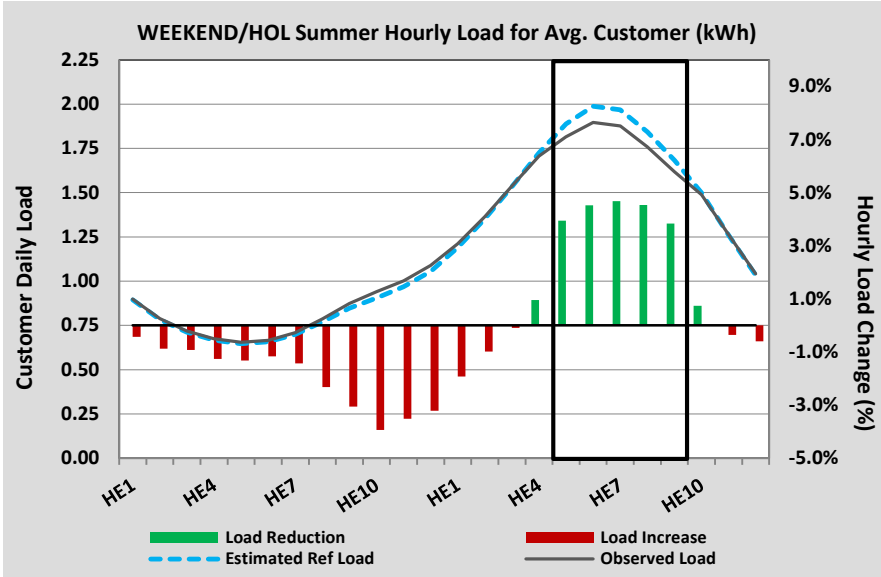
  NEM segment to be interpreted cautiously due to small sample size
- Load impacts are lower than weekdays, but the patterns across segments remain.

[1] The segment 5 estimate is not statistically significant. All estimates are statistically significant at the 99% level. 90% Confidence Intervals reported above

Questions?

PG&E Hot Non-CARE – Hourly Usage



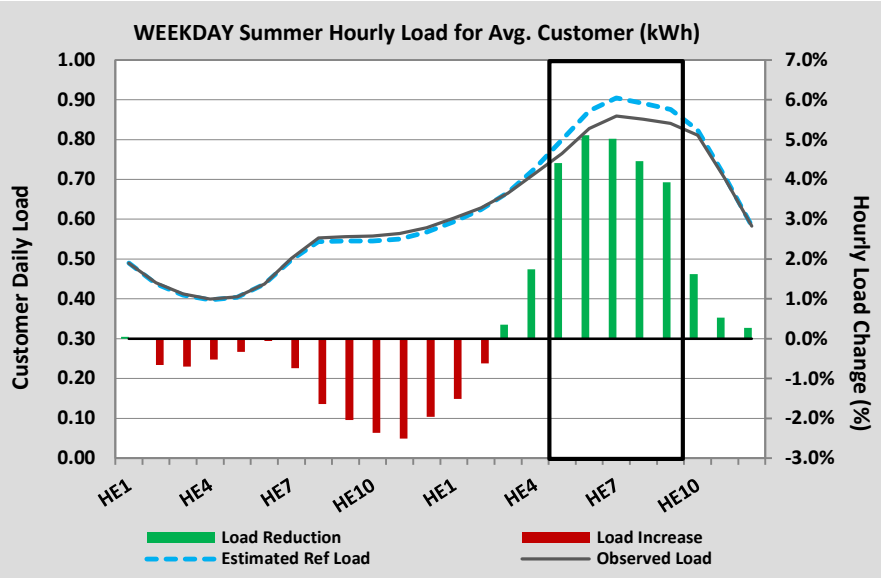


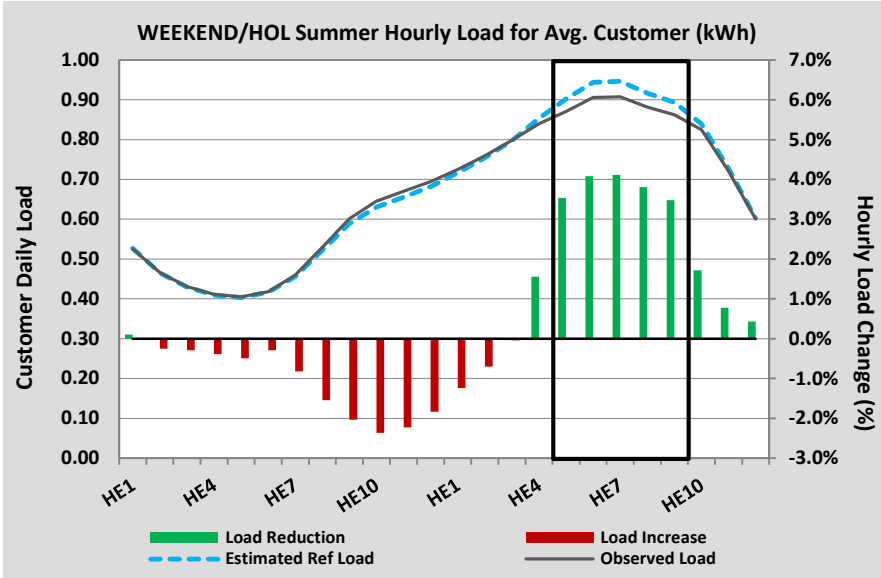
Day Type	By Period	CDD Hours (Base 75)	Estimated Reference Energy Usg	Observed Event Day Energy Usg	Estimated Change in Energy Usg	Average % Load Impact (reduction +)
Weekday	Avg. Peak	66.8	1.827	1.732	0.095	5.20%
	Avg. Off-Peak	65.7	0.942	0.954	-0.013	-1.34%
	Total Daily	**132.5**	**27.03**	**26.79**	**0.24**	**0.87%**
Weekend/ Holidays	Avg. Peak	64.2	1.874	1.793	0.081	4.32%
	Avg. Off-Peak	65.6	1.010	1.022	-0.012	-1.14%
	Total Daily	**129.8**	**28.57**	**28.38**	**0.18**	**0.65%**
All Days	Avg. Peak	66.0	1.842	1.751	0.091	4.92%
	Avg. Off-Peak	65.6	0.963	0.975	-0.012	-1.28%
	Total Daily	**131.6**	**27.51**	**27.29**	**0.22**	**0.80%**

- **Peak Reduction**: For both weekdays and weekends, we see a peak period load reduction (5.2% and 4.3%). This is very obvious. Reduction limited to peak hours.
- **Load Shifting and Conservation:** Load Shifting to all off-peak hours
  - Load Shift mainly 9 AM – Noon

  However, these increases in off-peak offset by gains in peak. Over the 24 hours, net conservation (0.8% reduction; 10th percentile and 90th percentile at 0.72% and 0.87% respectively)

PG&E Moderate Non-CARE – Hourly Usage



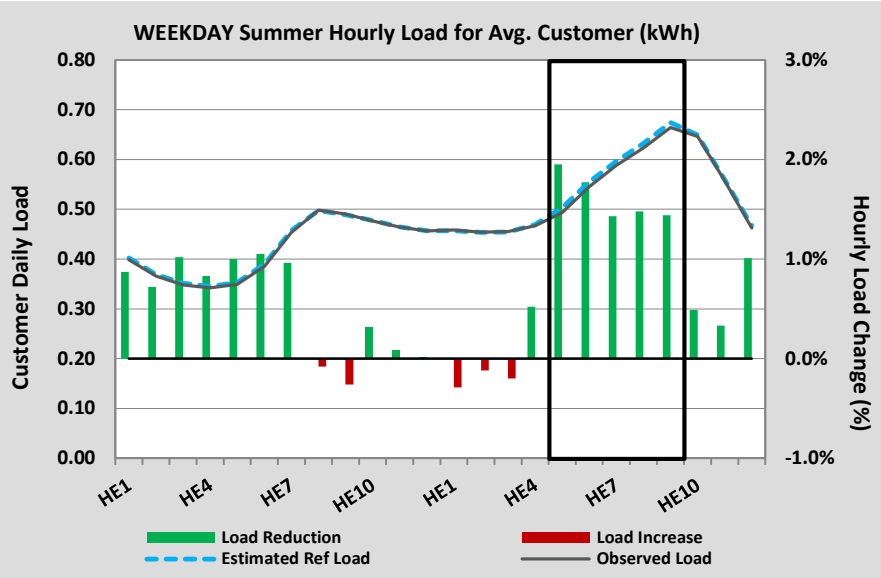


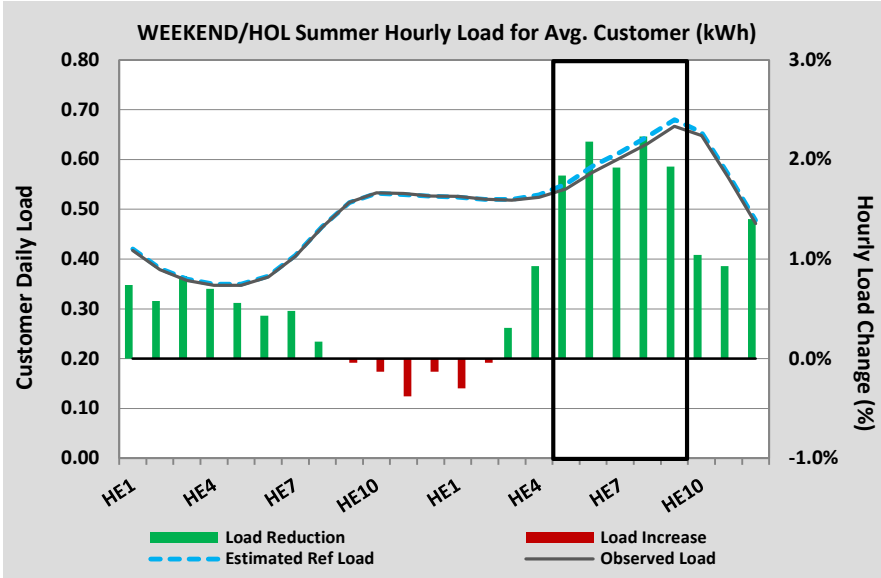
Day Type	By Period	CDD Hours (Base 75)	Estimated Reference Energy Usg	Observed Event Day Energy Usg	Estimated Change in Energy Usg	Average % Load Impact (reduction +)
Weekday	Avg. Peak	18.2	0.869	0.829	0.040	4.59%
	Avg. Off-Peak	27.7	0.556	0.558	-0.003	-0.47%
	Total Daily	**45.9**	**14.90**	**14.75**	**0.15**	**1.00%**
Weekend/ Holidays	Avg. Peak	17.5	0.920	0.885	0.035	3.81%
	Avg. Off-Peak	29.5	0.604	0.607	-0.003	-0.44%
	Total Daily	**47.0**	**16.08**	**15.95**	**0.12**	**0.77%**
All Days	Avg. Peak	18.0	0.885	0.846	0.038	4.34%
	Avg. Off-Peak	28.3	0.571	0.573	-0.003	-0.46%
	Total Daily	**46.2**	**15.27**	**15.12**	**0.14**	**0.93%**

- **Peak Reduction**: For both weekdays and weekends, we see a peak period load reduction (4.6% and 3.8%). Reduction continues after peak.
- **Load Shifting and Conservation:** Load shifting to off-peak hours
  - Load Shift mostly 8 AM to Noon

However, these increases in off-peak offset by gains in peak. Over the 24 hours, some net reduction (0.9% reduction; 10th percentile and 90th percentile at 0.60% and 0.95% respectively)

PG&E Cool Non-CARE – Hourly Usage



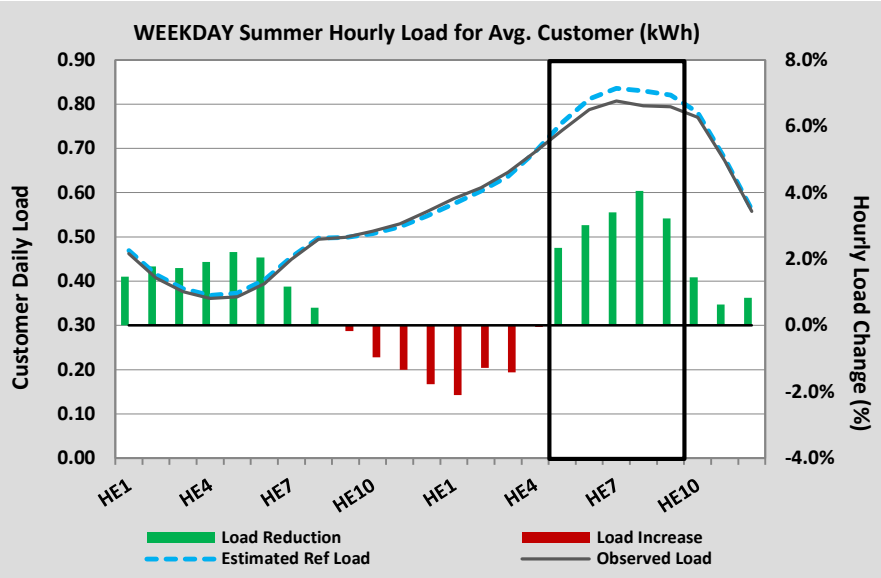


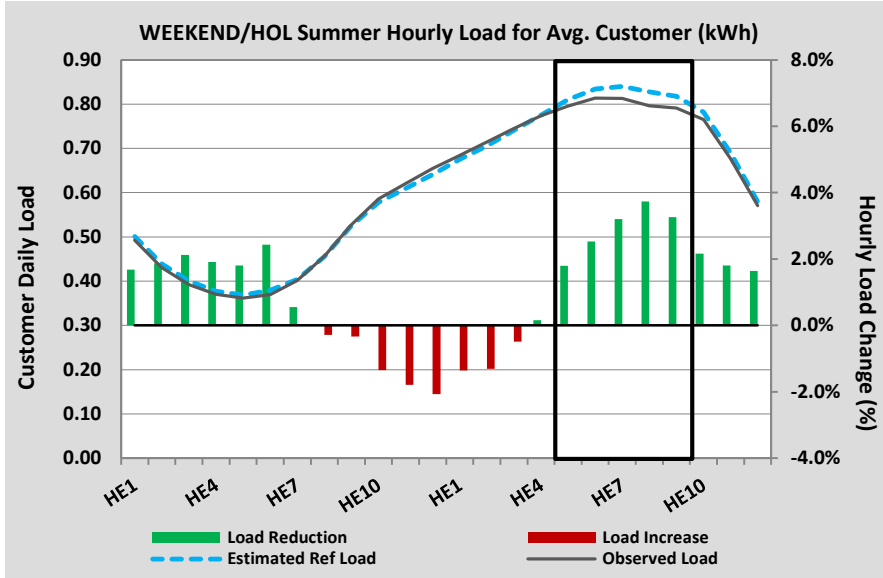
Day Type	By Period	CDD Hours (Base 75)	Estimated Reference Energy Usg	Observed Event Day Energy Usg	Estimated Change in Energy Usg	Average % Load Impact (reduction +)
Weekday	Avg. Peak	0.0	0.592	0.583	0.009	1.60%
	Avg. Off-Peak	0.0	0.451	0.449	0.002	0.40%
	Total Daily	**0.0**	**11.52**	**11.44**	**0.08**	**0.71%**
Weekend/ Holidays	Avg. Peak	0.0	0.616	0.603	0.012	2.02%
	Avg. Off-Peak	0.0	0.473	0.471	0.002	0.41%
	Total Daily	**0.0**	**12.07**	**11.97**	**0.10**	**0.82%**
All Days	Avg. Peak	0.0	0.599	0.589	0.010	1.73%
	Avg. Off-Peak	0.0	0.458	0.456	0.002	0.40%
	Total Daily	**0.0**	**11.69**	**11.61**	**0.09**	**0.74%**

- **Peak Reduction**: For both weekdays and weekends, we see a peak period load reduction (1.6% and 2.0%). Reduction continues after peak.
- **Load Shifting and Conservation:** Net off-peak load reduction. No CDD – average temperature ranges from 55 deg to 63 deg

Over the 24 hours, net conservation (0.7% reduction; 10th percentile and 90th percentile at 0.64% and 0.85% respectively)

PG&E Moderate CARE – Hourly Usage





Day Type	By Period	CDD Hours (Base 75)	Estimated Reference Energy Usg	Observed Event Day Energy Usg	Estimated Change in Energy Usg	Average % Load Impact (reduction +)
Weekday	Avg. Peak	16.8	0.811	0.785	0.026	3.23%
	Avg. Off-Peak	24.6	0.525	0.523	0.001	0.21%
	Total Daily	**41.4**	**14.02**	**13.87**	**0.15**	**1.08%**
Weekend/ Holidays	Avg. Peak	16.3	0.826	0.802	0.024	2.91%
	Avg. Off-Peak	26.6	0.559	0.558	0.002	0.31%
	Total Daily	**42.8**	**14.76**	**14.61**	**0.15**	**1.04%**
All Days	Avg. Peak	16.6	0.816	0.790	0.025	3.13%
	Avg. Off-Peak	25.0	0.535	0.534	0.001	0.24%
	Total Daily	**41.7**	**14.25**	**14.10**	**0.15**	**1.07%**

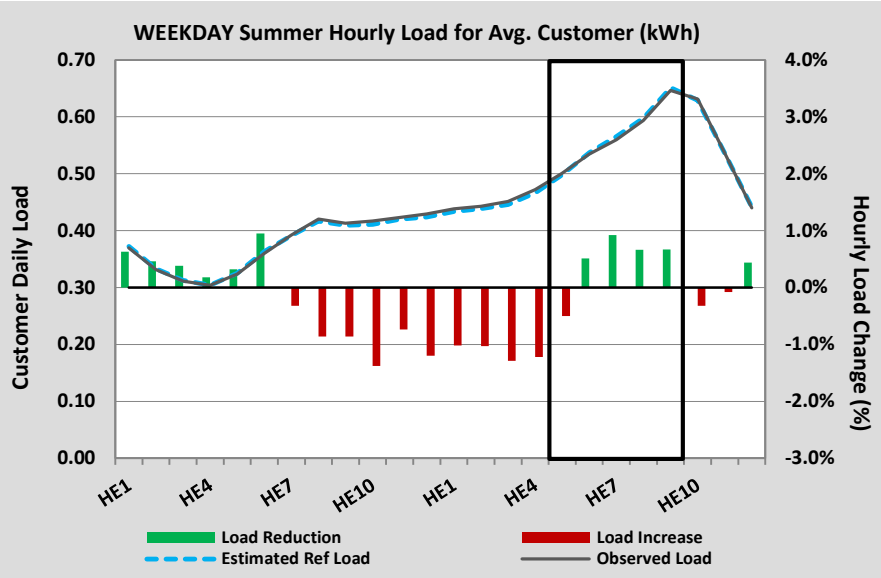
- **Peak Reduction**: For both weekdays and weekends, we see peak period load reduction (3.2% and 2.9%). Reduction continues after peak.

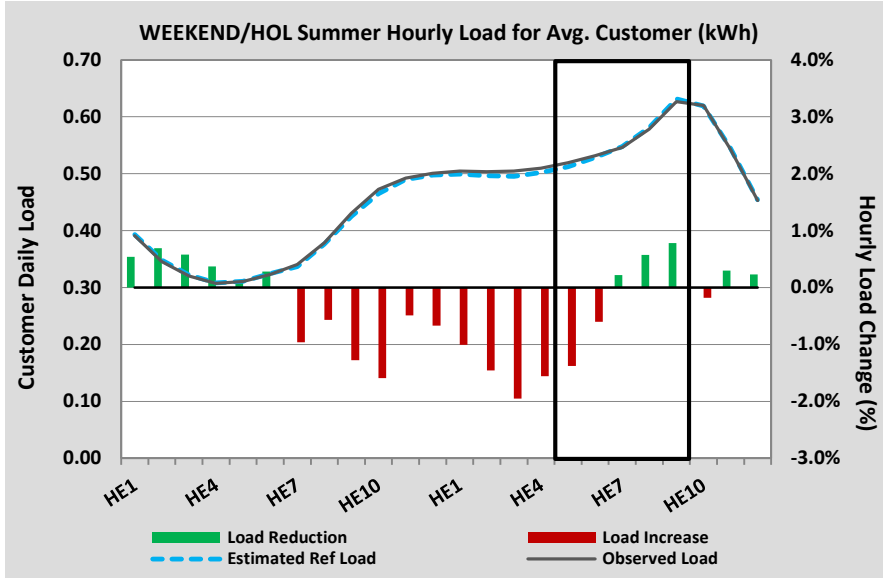
Load Shifting and Conservation: Some shifting to pre-peak period but this is offset by reductions in other hours.

- Load Shift mainly 10 AM- 2 PM on weekdays, 9 AM to 2 PM weekends/hol

Over the 24 hours, net conservation (1.1% reduction; 10th percentile and 90th percentile at 0.88% and 1.25% respectively)

PG&E Cool CARE – Hourly Usage





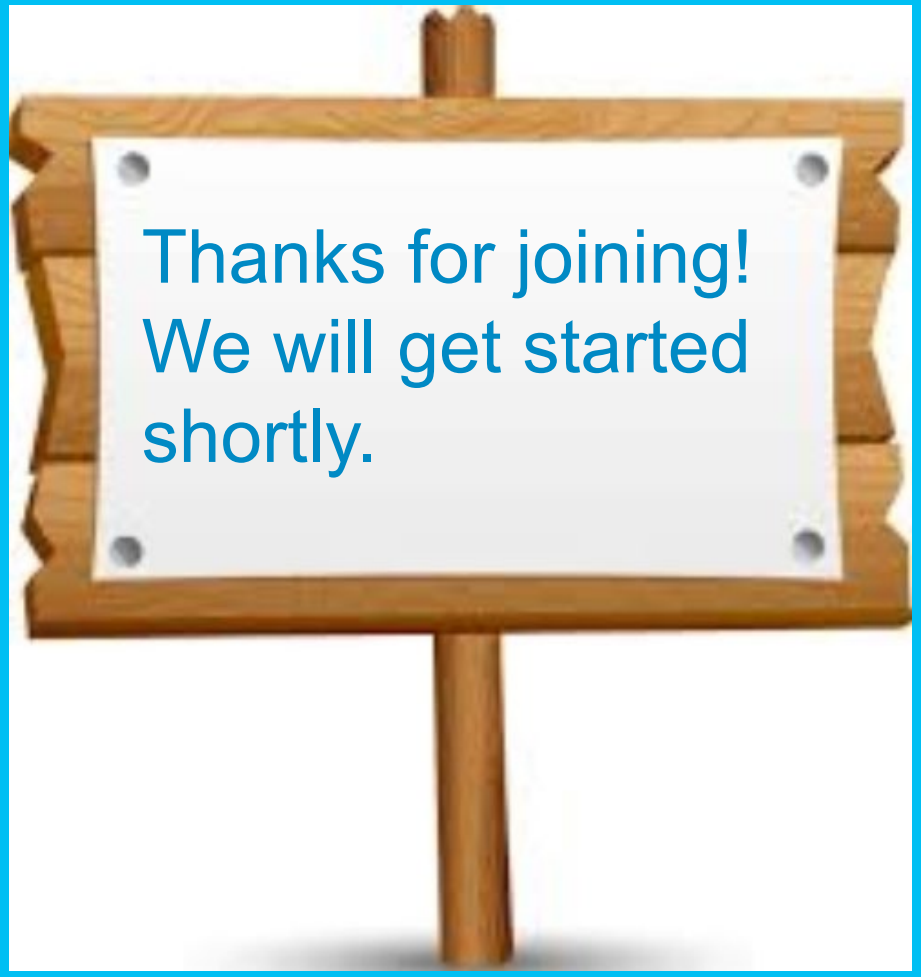
Day Type	By Period	CDD Hours (Base 75)	Estimated Reference Energy Usg	Observed Event Day Energy Usg	Estimated Change in Energy Usg	Average % Load Impact (reduction +)
Weekday	Avg. Peak	0.0	0.570	0.567	0.003	0.48%
	Avg. Off-Peak	0.0	0.414	0.416	-0.002	-0.42%
	Total Daily	**0.0**	**10.72**	**10.74**	**-0.02**	**-0.18%**
Weekend/ Holidays	Avg. Peak	0.0	0.560	0.560	0.000	-0.03%
	Avg. Off-Peak	0.0	0.432	0.434	-0.002	-0.53%
	Total Daily	**0.0**	**11.01**	**11.05**	**-0.04**	**-0.40%**
All Days	Avg. Peak	0.0	0.567	0.565	0.002	0.32%
	Avg. Off-Peak	0.0	0.420	0.422	-0.002	-0.45%
	Total Daily	**0.0**	**10.81**	**10.84**	**-0.03**	**-0.25%**

- **Peak Reduction**: Negligible peak period reduction on weekdays (statistically significant). Weekend/holiday peak impacts are not statistically significant.
- **Load Shifting and Conservation:** Slight increase in usage in off-peak hours. No CDD for – average temperature ranges from 55 deg to 63 deg

Over the 24 hours for all day types net increase (-0.3%; 10th percentile and 90th percentile at -0.41% and -0.09% respectively)

CCA TOU Full Transition Check-In

August 1, 2019



Together, Building a Better California

Pricing Products

Agenda

1. Roll Call
2. TOU Full Transition
    1. Notification Review Update
    2. Transition Exclusions
    3. 90 Day Rate Comparison – Why TOU-B (TOU-D) inclusion?
3. TOU Transition Phase 1
    1. Decline Breakdown
    2. What's Next?
4. Legacy Meter Reporting Update
5. Electric Season & Baseline Change
6. August 15th call – Non-Res Discussion

TOU Transition Notifications Update

- All CCA 1:1 Meetings are complete
- Most CCAs have provided their review comments
- Project Team 1st Round Review – COMPLETE
- Project Team 2nd Round Review - COMPLETE
- Director Review – Scheduled 8/2
- Responses to CCAs by 8/9

Pacific Gas and Electric Company
P.O. Box 997300
Sacramento, CA 95899-7300

<Month XX, 2018>

<FIRST NAME> <LAST NAME>
<BILLING_ADDRESS1>
<BILLING_ADDRESS2>
<BILLING_CITY> <BILLING_STATE> <BILLING_PLUS4>
<barcode>

Dear [First Name] [Last Name],

Soon, many of California's energy customers will be moving to a Time-of-Use rate plan, ***risk-free***, that supports the state's ongoing commitment to clean energy. We want to remind you of this change and your options.

Try it risk-free

You can try the **Time-of-Use (Peak Pricing 4–9 p.m. Every Day)** rate plan ***risk-free*** for the first 12 months with automatic Bill Protection. If you pay more during your first year on the **Time-of-Use (Peak Pricing 4–9 p.m. Every Day)** rate plan than you would have on your current rate plan, we will credit you with the difference at the end of the first 12 months. If you decide you are not satisfied on this rate plan, you can switch to another rate plan at any time. Bill Protection will still apply for the time that you were on the **Time-of-Use (Peak Pricing 4–9 p.m. Every Day)** rate plan.

Or, you can choose another rate plan

Every household is unique—and so is the way you use energy. That's why PG&E has new rate plan options for you to choose from. You have the option to:

1. **Do nothing** and automatically transition to the **Time-of-Use (Peak Pricing 4–9 p.m. Every Day)** rate plan so you can try it ***risk-free***, or
2. **Take action to stay on your current rate plan or choose a different rate plan.** When you visit **pge.com/TOUchoice**, you can view a personalized rate review that shows your rate plan options.

Visit **pge.com/TOUchoice** or call **1-866-743-7945** by March 1, 2018 to make your choice.

Thank you for being a valued customer,

The PG&E Customer Care Team

Your PG&E electric service will move to a Time-of-Use rate plan in April 2018. Make your rate plan choice today. Visit: pge.com/TOUchoice Call: 1-866-743-7945

Account No: <<Account ID>>
Service Agreement ID: <<SAID>>
Service Address: <<Service Address 1>>

What the Time-of-Use (Peak Pricing 4–9 p.m. Every Day) rate plan means for you

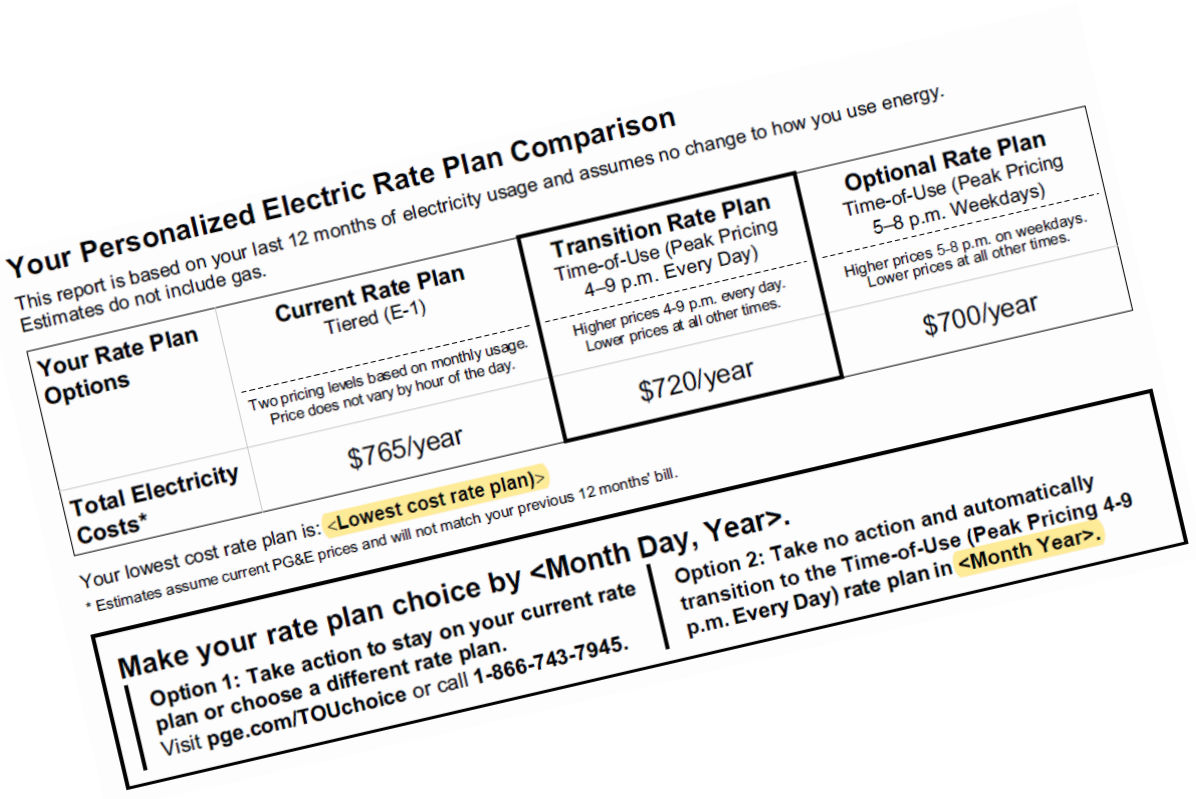
When you use electricity is as important as ***how much*** you use.

- Your electric account is scheduled to transition to the **Time-of-Use (Peak Pricing 4–9 p.m. Every Day)** rate plan, ***risk-free***, in March 2018 from your current rate plan.
- You will receive lower electricity pricing during most of the day, when energy demand is lower.
- Electricity prices will be higher for five hours every day in the late afternoon and evening (4–9 p.m.) when demand for electricity is generally higher.
- If you can make small energy use changes, like running the dishwasher or doing laundry during lower-priced times of day, you may be able to benefit from a Time-of-Use rate plan. Learn more ways to save energy at **pge.com/saveenergy**.

TOU Full Transition – Exclusions

Exclusions
Medical Baseline Customers
Vulnerable Customers
Third Party Notifications
Customers with less than 1 year of interval data
CARE/FERA Customers in hot climate zones
CARE/FERA Eligible customers in hot climate zones
Transitional Bundled Service (Customers on a market or transitional bundled rate – occurs when a CCA customers returns to PG&E for the first 6 months of service with PG&E)
Customers with inadequate interval meter data

TOU Transition – 90 Day Rate Comparison



Your Personalized Electric Rate Plan Comparison

This report is based on your last 12 months of electricity usage and assumes no change to how you use energy.
Estimates do not include gas.

Your Rate Plan Options	Current Rate Plan Tiered (E-1)	Transition Rate Plan Time-of-Use (Peak Pricing 4–9 p.m. Every Day)	Optional Rate Plan Time-of-Use (Peak Pricing 5–8 p.m. Weekdays)
	Two pricing levels based on monthly usage. Price does not vary by hour of the day.	Higher prices 4-9 p.m. every day. Lower prices at all other times.	Higher prices 5-8 p.m. on weekdays. Lower prices at all other times.
Total Electricity Costs*	$765/year	$720/year	$700/year

Your lowest cost rate plan is: <Lowest cost rate plan)>

* Estimates assume current PG&E prices and will not match your previous 12 months' bill.

Make your rate plan choice by <Month Day, Year>.

Option 1: Take action to stay on your current rate plan or choose a different rate plan.
Visit **pge.com/TOUchoice** or call **1-866-743-7945.**

Option 2: Take no action and automatically transition to the Time-of-Use (Peak Pricing 4-9 p.m. Every Day) rate plan in <Month Year>.

- All 90 Day Rate Comparisons will include 3 rate plans
  - Tiered E1
  - ETOU-C (Default)
  - ETOU-D (at time of transition - formerly ETOU-B)
- Provided to showcase customers have options & provide awareness
- Lowest cost rate plan is highlighted

TOU Transition Phase 1 – Transition Decline Breakdown

Default Transition Summary

Transitioned Customers – Final Count (5/2/2018)	Customer Count	% of Total
Initial Population	**160,525**	**100.00%**
Ineligible	7,538	4.70%
Declined Transition	38,996	24.29%
Transitioned	113,991	71.01%

	Benefiter	Neutral (+)	Neutral (-)	Mild Non-Benefiter	Non-Benefiter	Extreme Non-Benefiter
Transitioned Population	19,396	24,046	18,298	10,477	37,078	4,696
Ineligible	1,399	1,542	1,220	689	2,278	410
Declined Transition	3,596	4,875	5,795	4,192	16,562	3,976

Reason for Declining	Count
Can't shift usage	6,224
Different rate is better	3,461
Early opt out	154
New rate selected in ORE	8,417
New rate too expensive	9,106
Other	1,487
Prefer current rate	9,543
Rate too complicated	604
Total	38,996

- Customers had the ability to provide the reason they declined the transition.

TOU Transition – Next Up

- More than 20 research studies completed to date
  - Pre-Pilot Baseline
  - Wave 1 – Post Transition
  - Wave 2 – Post Summer
- What's Next?
  - Wave 3 – Post End of Bill Protection
- Wave 3 Surveys are currently underway
- Results will be available September 2019

Non-Res Legacy Meter Reporting

- Plans are underway to replace legacy meters
  - Plan and timing can be shared - End of Q3
- Reporting will be provided:
  - Meter counts by CCA for each rate plan
- What information would you like regarding this?

Electric Season Change- Background

- Currently there are two different season definitions in PG&E residential rates:
  - ✓ 6 months summer & winter: E-1, E-6, EM, EM TOU, ES, ET and ESR (and the CARE version) and EV.
  - ✓ 4 months summer & 8 months winter: TOU-A, TOU-B, TOU-C, Home Charging (aka EV2)

- 6 months summer/winter seasons contribute to high bill volatility during summer seasons.

- To address the bill volatility issue, a 4 months summer/8 months winter season definition is used on new TOU rates (e.g. TOU-A, TOU-B, TOU-C, Home Charging) introduced in the past few years.

- PG&E 2017 GRC Phase II proceedings addressed this issue for the existing rate schedules that are still on a 6 months summer/winter season.

Electric Season Change

- Effective October 1, 2019, PG&E will implement new *summer and winter* seasons and baseline for all non-TOU rate plans such as E-1, EV and multi-family rate plans (EM, ES, ET and ESR).
  - EV, E-6 and EM TOU will still retain the current season definition as these rates will be eliminated in the foreseeable future.

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Current Baseline Season Structure	Winter				Summer						Winter	
Revised Baseline Season Structure	Winter					Summer				Winter		

- This change will align the seasons for residential tiered rate plans with those for TOU rates (TOU-A, TOU-B, TOU-C, Home Charging)

- Summer and winter daily baseline quantity will change.
  - In general, summer baseline quantity will be slightly higher (and slightly lower for winter).

- On average, customers will not see a difference in annual bills. Customers will see higher winter bills (because of the lower baseline quantities) and lower summer bills.

Baseline Quantity

	SUMMER	WINTER	SUMMER	WINTER
TERRITORY	6/1/2020 Target Daily	10/1/2019 Target Daily	6/1/2020 Target Daily	10/1/2019 Target Daily
Applicable Rate Schedules	E-1, ES, ESR, ET, EV2A, ETOUA, ETOUB, ETOUC (and CARE)		EM (and CARE)	
	ALL-ELECTRIC QUANTITIES (kWh)		ALL-ELECTRIC QUANTITIES (kWh)	
P	16.0	27.4	8.8	14.7
Q	8.9	27.4	7.3	14.7
R	20.9	28.1	9.6	13.6
S	18.7	24.9	9.8	13.1
T	7.5	13.6	5.1	9.0
V	10.9	16.9	6.3	11.2
W	23.6	20.0	11.7	11.8
X	8.9	15.4	7.3	12.9
Y	12.6	25.3	7.1	14.4
Z	7.0	16.5	4.0	9.4
	BASIC QUANTITIES (kWh)		BASIC QUANTITIES (kWh)	
P	14.2	12.0	4.8	5.2
Q	10.3	12.0	5.4	5.2
R	18.6	11.3	7.9	5.2
S	15.8	11.1	6.7	5.2
T	6.8	8.2	3.8	4.5
V	7.5	8.8	4.2	5.0
W	20.2	10.7	8.2	5.3
X	10.3	10.5	5.4	5.9
Y	11.0	12.1	8.0	8.3
Z	6.2	8.1	4.5	5.6

CECAC PROGRAM ROADMAP UPDATE

10/03/19

SAN JOSE CLEAN ENERGY

A Program of the City of San José

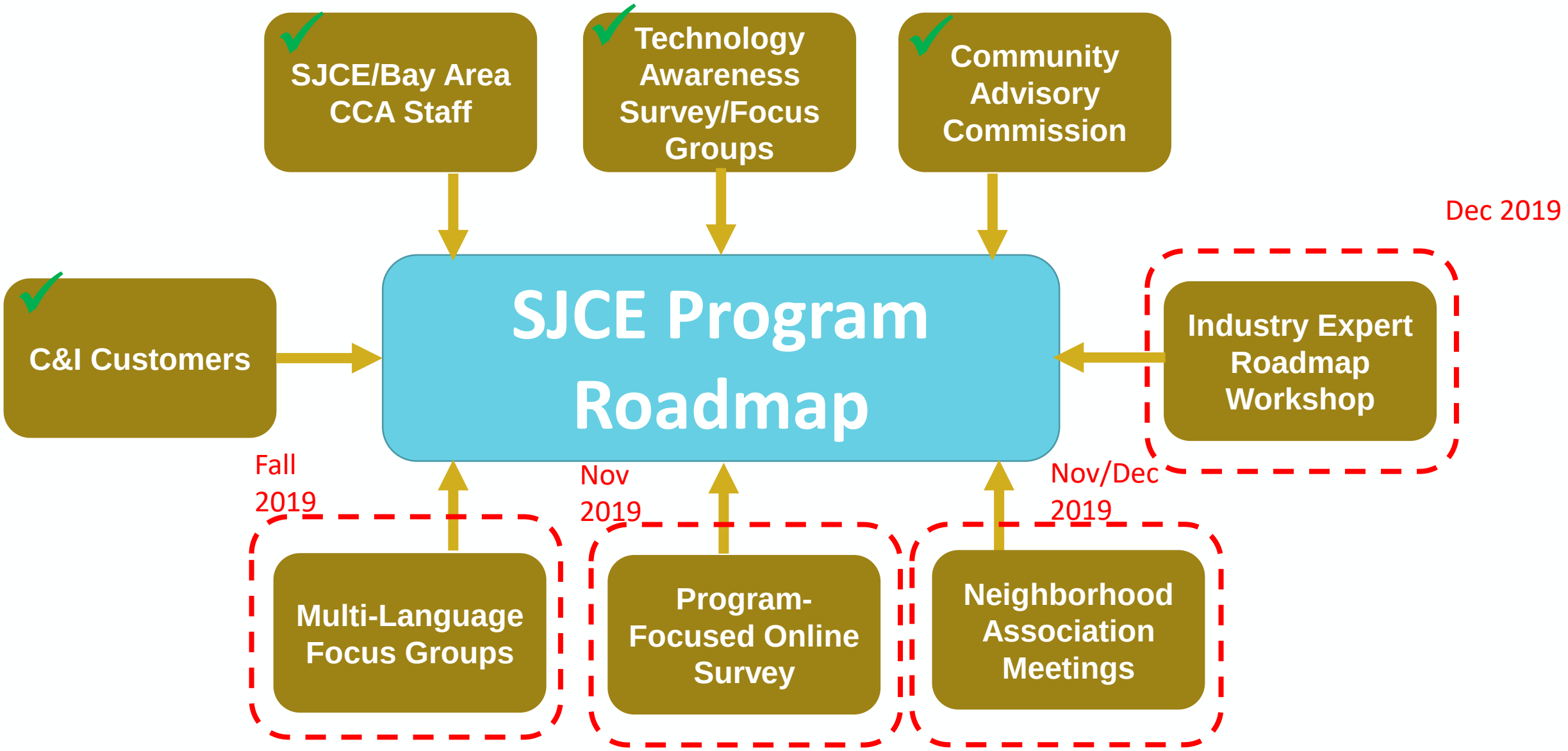
AGENDA

- Community Outreach
- Programmatic Sectors
- Program Selection Process
- Program Roadmap
- Program Scoring
- Upcoming Milestones

PROCESS THUS FAR

COMMUNITY OUTREACH

ROADMAP INPUT PROCESS



PROGRAMMATIC SECTORS

PROGRAMMATIC SECTORS

- Vehicle Electrification
- Building Electrification
- Distributed Energy Resources-Grid Integration
- Rates
- Energy Efficiency

PROGRAM SELECTION PROCESS

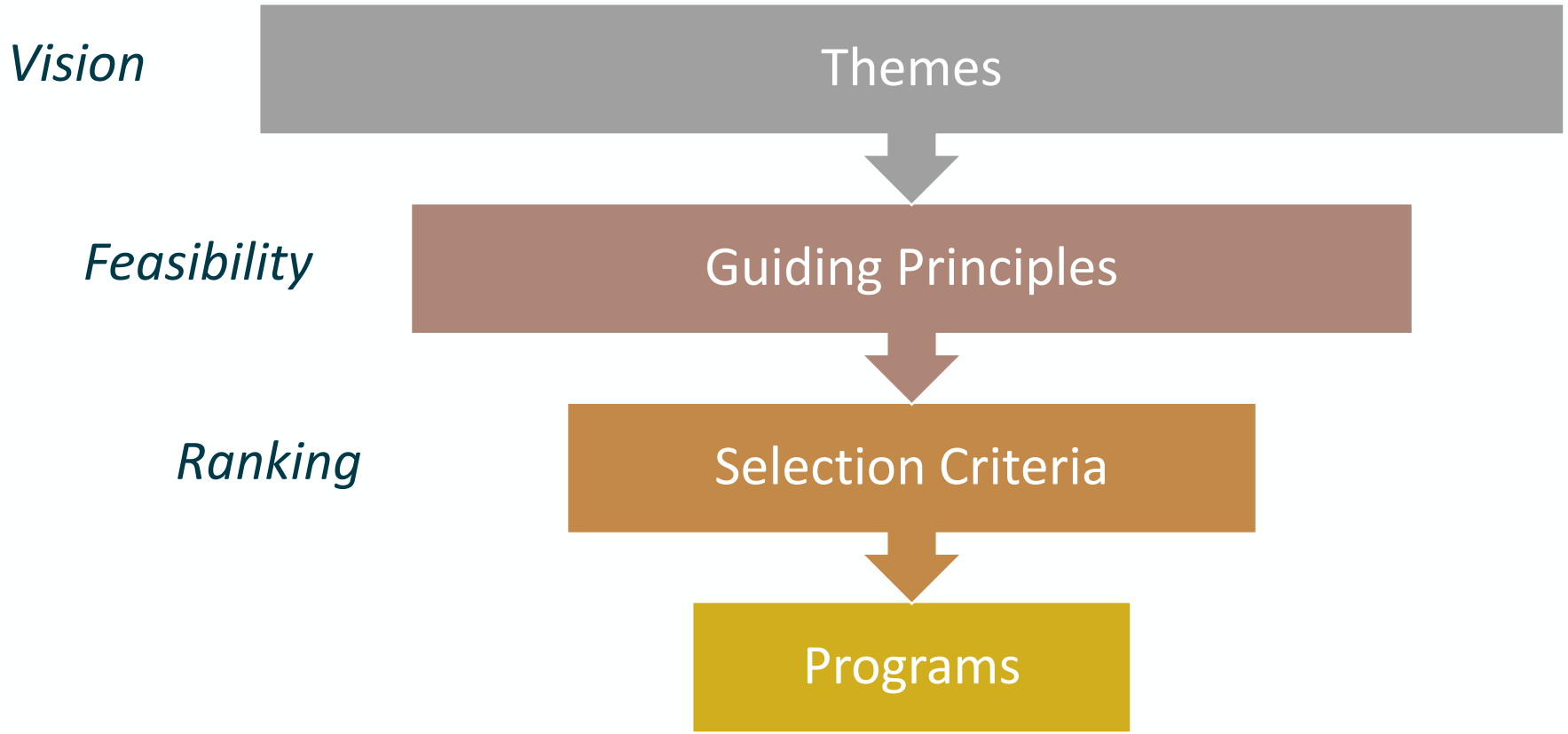
ROADMAP PHILOSOPHY

Momentum Driven

Iterative

Communication of values, principles

SJCE PROGRAM FILTERING PROCESS



SJCE PROGRAMMATIC IDENTITY - VISION

Themes

Clean Energy Equity/Electrify San Jose

- “Programs that match the diversity of our community”
- “Programs for All for a Healthier, Cleaner Future”
- Everyone **benefits**

PROGRAM GUIDING PRINCIPLES- FEASIBILITY

Guiding Principles

- Maximize greenhouse gas reduction opportunities
- Align with Climate Smart San José
- Promote equity, affordability and support disadvantaged communities
- Produce customer and community benefits
- Maintain or improve the financial stability of SJCE

PROGRAM SELECTION CRITERIA- RANKING

Selection Criteria

PROGRAM SELECTION GROUPS

Selection Criteria

Greenhouse Gas Emissions Reductions

- Programs focused on reducing GHG's and that are aligned with Climate Smart

Equity

- Programs where equity is a lead objective

Load Shaping

- Programs that shape, shave, or shift SJCE's electrical load

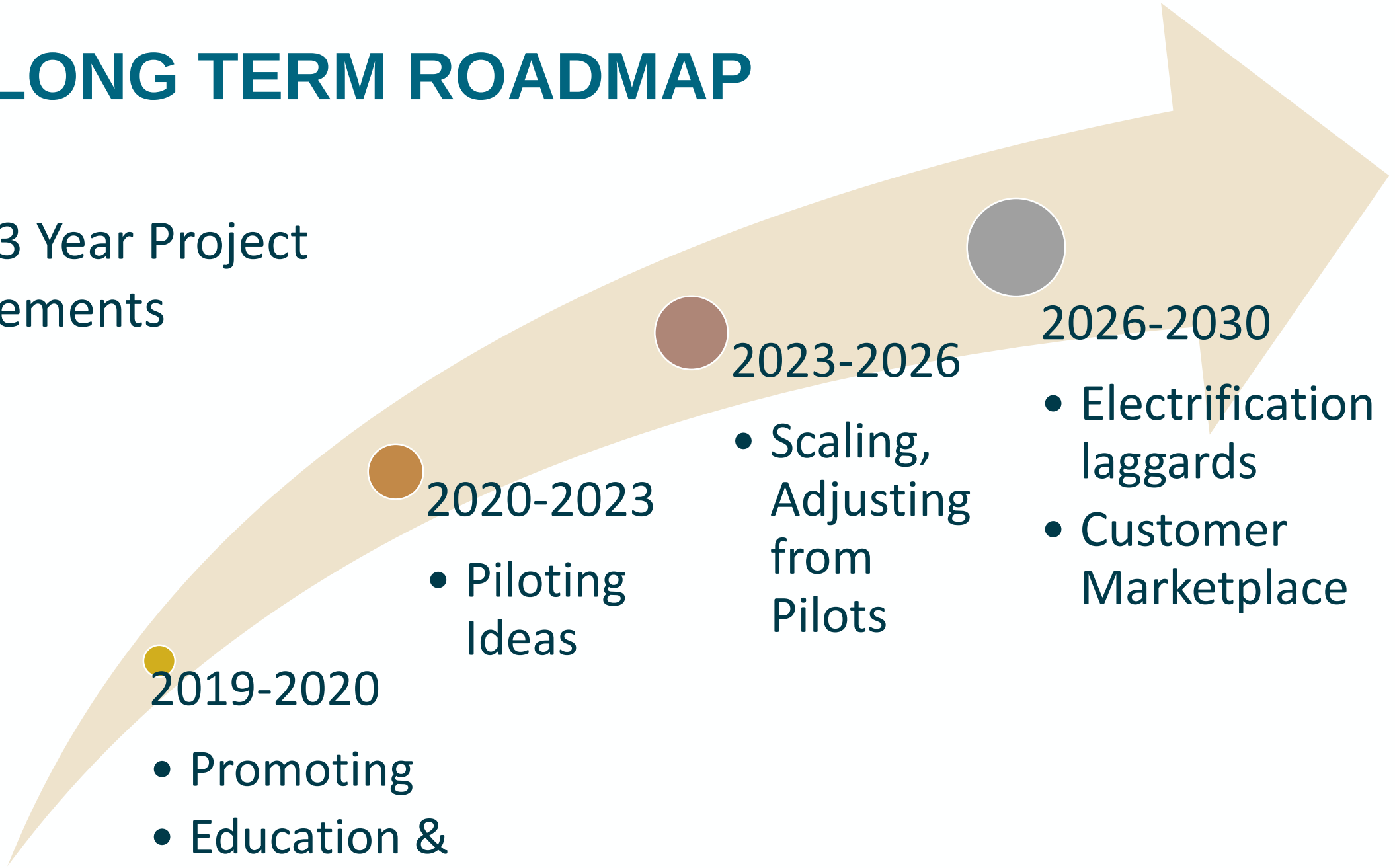
CRITERIA SCORING METHODOLOGY

Criteria	Description	○ Implies..	● Implies..
Emissions Impact	GHG emissions reduction potential both in aggregate and per unit	Zero to minimal CO2e emissions reduced	Highest levels of aggregate or per unit CO2e emissions reduced
Cost Effectiveness	Overall program cost, financial impact to SJCE, and $ spent per CO2e reduced	High program cost and/or high financial loss for SJCE and/or high $ per CO2e reduced	Low program cost and/or low financial loss for SJCE and/or low or negative $ per CO2e reduced
Equity	Portion of program reaching low income, disadvantaged communities	Program does not impact or touch residents living in low income and disadvantaged communities	Program primarily impacts or touches residents living in low income and disadvantaged communities
Customer, Community Benefits	Delivers benefits (lower air pollution) and/or value (saving money) to customers, community at large.	Potential increases costs and/or has little benefits to customers and community	Provides significant savings and/or health/environmental/lifestyle benefits
Risks	What is the risk in not doing it? What is the risk in doing it but not doing it right?	High impact if project executed poorly due to costs, # of customers touched or not done due to large emission reduction opportunity	Minimal impact if project does not go smoothly or is not done
Market Barriers	Addresses market barriers such as cost, awareness, regulation, or access	Does not address barriers to clean energy adoption	Addresses key barriers to adoption for program's clean energy sector

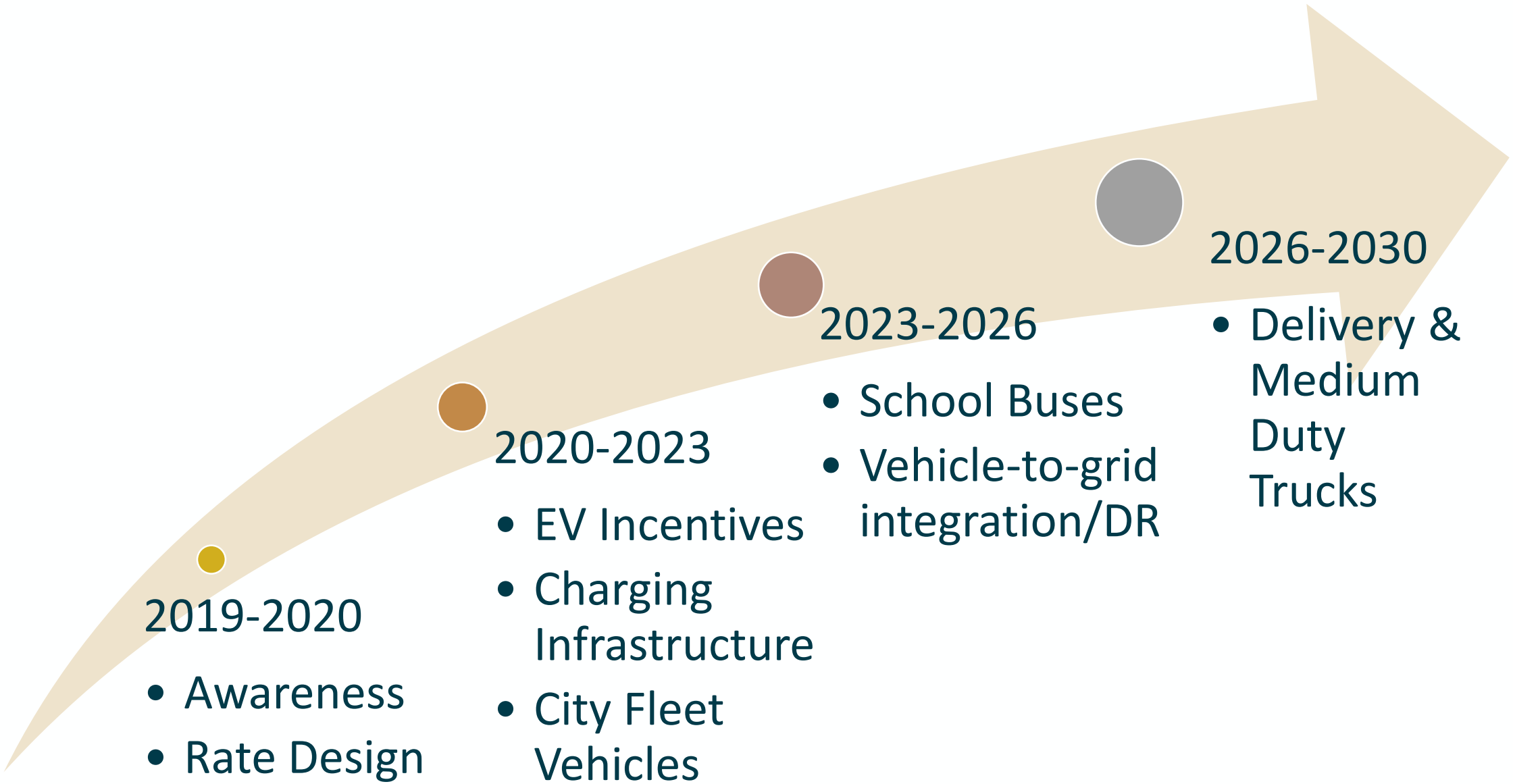
LONG TERM PROGRAM ROADMAP

LONG TERM ROADMAP

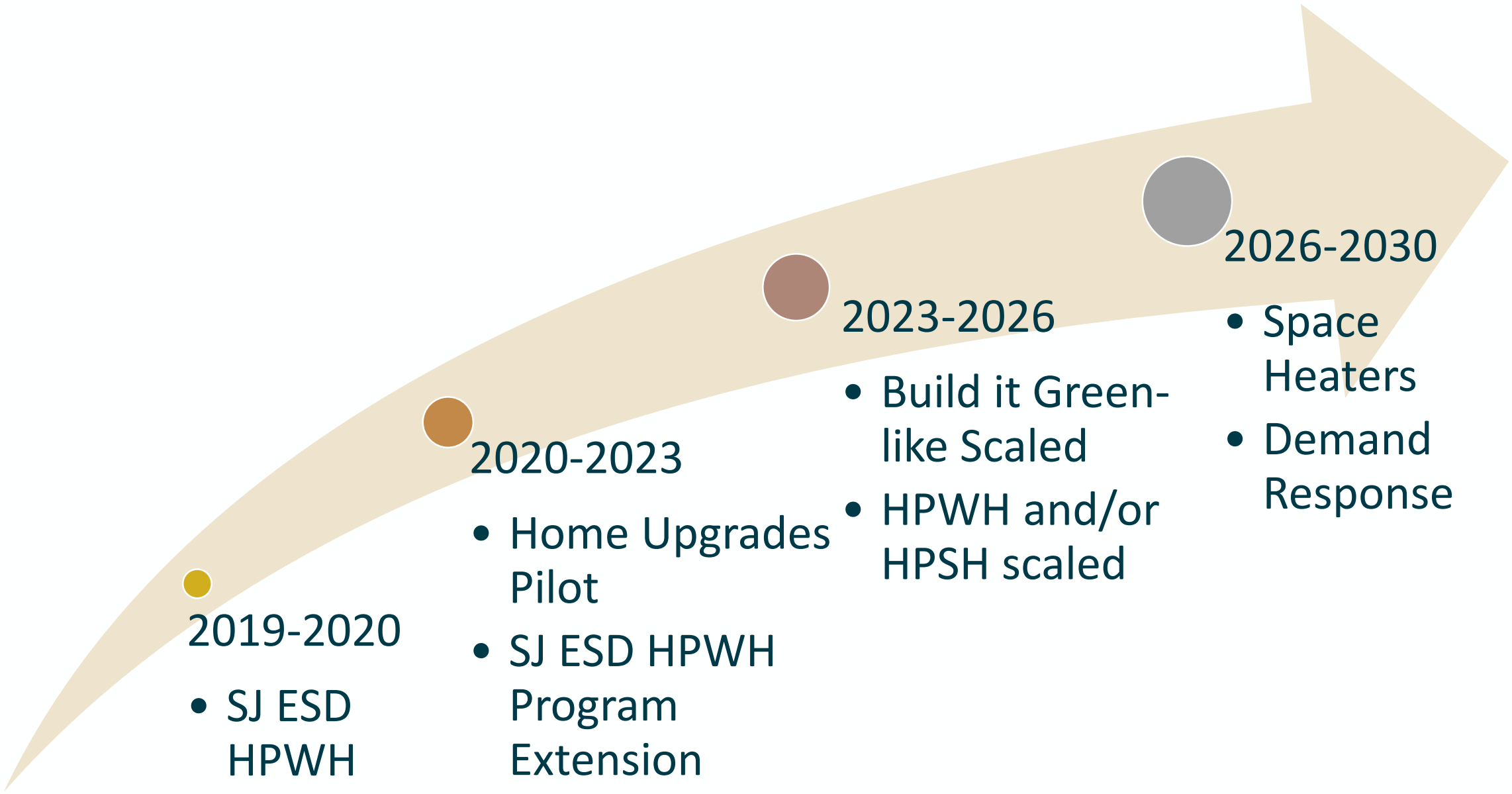
* 2-3 Year Project Increments



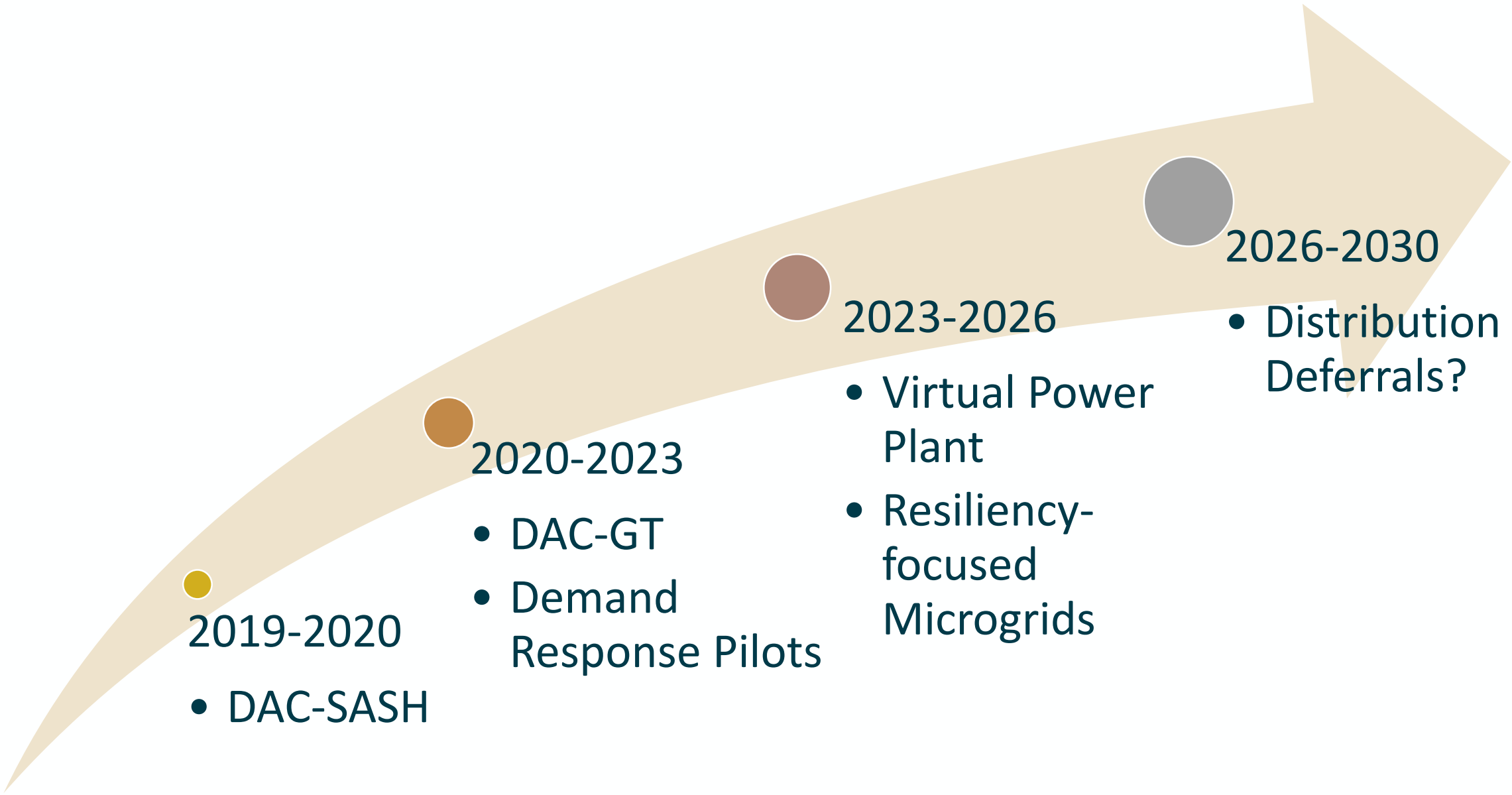
VEHICLE ELECTRIFICATION ROADMAP



BUILDING ELECTRIFICATION ROADMAP



DER/GRID INTEGRATION ROADMAP



PROGRAM SCORING

PROGRAMS SCORED THUS FAR

Vehicle Electrification	Building Electrification	DERs	Rates	Other
• EV Incentives • CALeVIP • Used EV Low Income Incentives • Ride and Drives • MUD Technical Assistance • SJ Fleet Electrification • Electric School Bus Vouchers	• HPWH Incentives • Critical Home Repair Adder • Build-it-Green (BIG) Pilot	• C&I Energy Storage • SASH in Low Income non-DACs • CPUC DAC-Green Tariff • Battery Storage Demand Response Pilot	• CARE+ Rates	• Landscaping Equipment Electrification Pilot • Campus/Park Commercial Lawn Mower Electrification • Disadvantaged Community Grants

PROGRAMS EVALUATED THUS FAR (NO SCORE)

Building Electrification	Distributed Energy Resources	Rates	Energy Efficiency	Other
• Heat Pump Space Heater Incentives	• Virtual Power Plants-DERs Grid Integration • Resiliency Focused Energy Storage	• EV Rates • HPWH Rates • C&I Green Tariff	• CPUC Elect to Administer-Apply to Administer	• Workforce Development • Youth Program Outreach

PROGRAM RANKING – EMISSIONS IMPACT

			Quantitative Impact		Community		Market		
Program Group	Program Sector	Program	Emissions Impact	Cost Effectiveness	Equity	Community, Customer Benefits	Risks	Market Barriers	Scoring
Emissions Impact	Vehicle Electrification	CALeVIP*							67%
Emissions Impact	Vehicle Electrification	School Bus Voucher							67%
Emissions Impact	Building Electrification	HPWH Incentive							67%
Emissions Impact	Vehicle Electrification	Dealer EV Incentives							67%
Emissions Impact	Vehicle Electrification	Ride and Drives							67%
Emissions Impact	Other	Campus/Park Commercial Lawn Mower Electrification							58%
Emissions Impact	Vehicle Electrification	MUD Technical Assistance							54%
Emissions Impact	Other	Landscaping Equipment Electrification Pilot							50%
Emissions Impact	Vehicle Electrification	City of San Jose Fleet Electrification							42%

*Uses existing program administration structure (cost effectiveness benefit)

PROGRAM RANKING – EQUITY

			Quantitative Impact		Community		Market		
Program Group	Program Sector	Program	Emissions Impact	Cost Effectiveness	Equity	Community, Customer Benefits	Risks	Market Barriers	Scoring
Equity	Other	Community Grants	◔	◕	●	●	◑	◕	71%
Equity	DERs	DAC-Green Tariff	◔	●	●	●	◑	◑	71%
Equity	Building Electrification	Build it Green Healthy Homes Pilot*	◔	◕	●	◑	◕	◕	67%
Equity	Vehicle Electrification	Low Income Used EV Program*	◑	◕	●	◑	◑	◕	67%
Equity	Building Electrification	Critical Home Repair Adder	◔	◑	●	◑	◕	◕	63%
Equity	Rates	CARE+ Rates	○	◔	●	●	◑	◔	50%
Equity	DERs	Single-Family Affordable Solar Home (SASH) in Low Income Non-DACs	◔	○	●	◕	◔	◑	46%

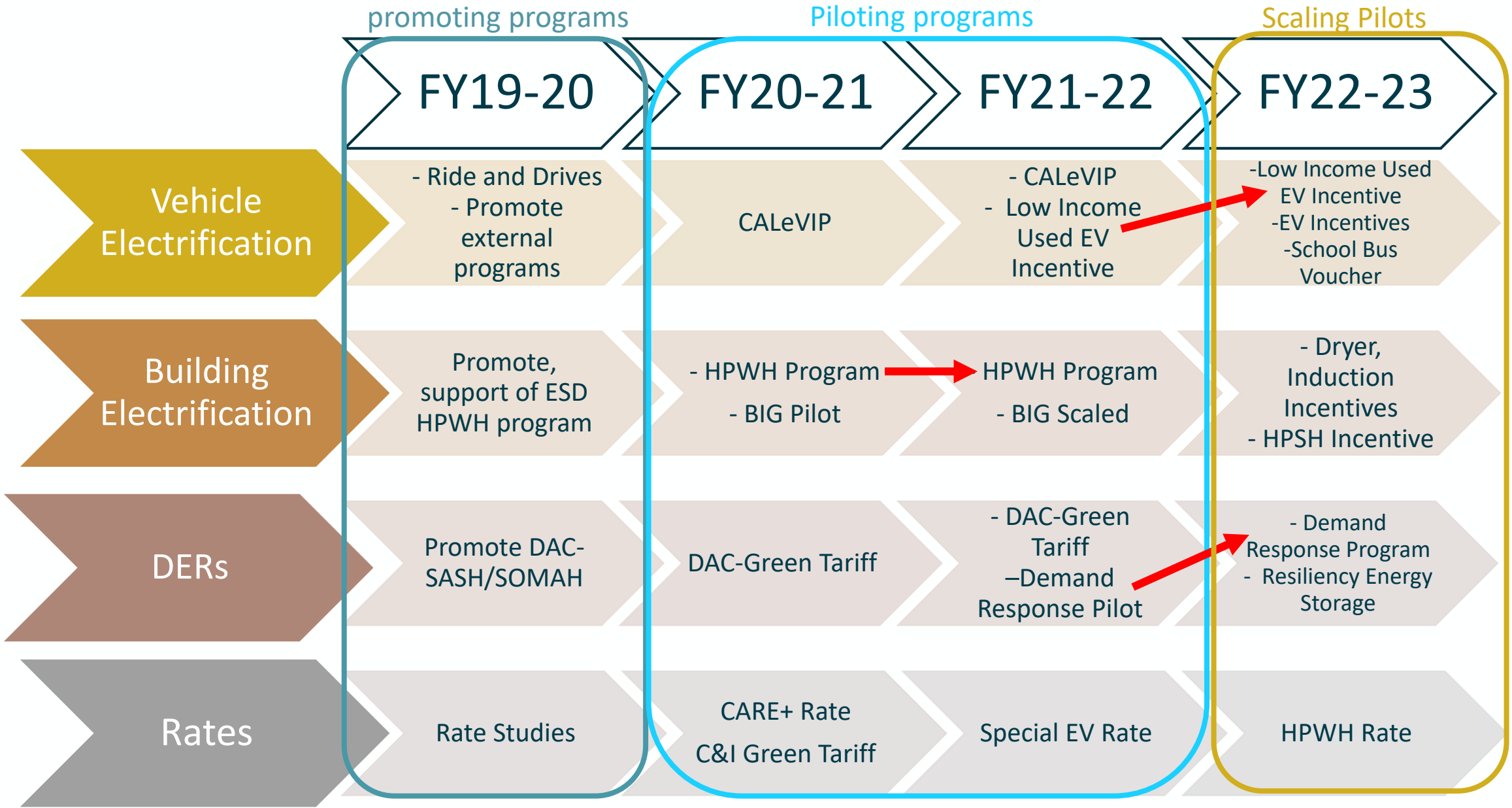
*Uses existing program administration structure (cost effectiveness benefit)

PROGRAM RANKING –LOAD SHAPING

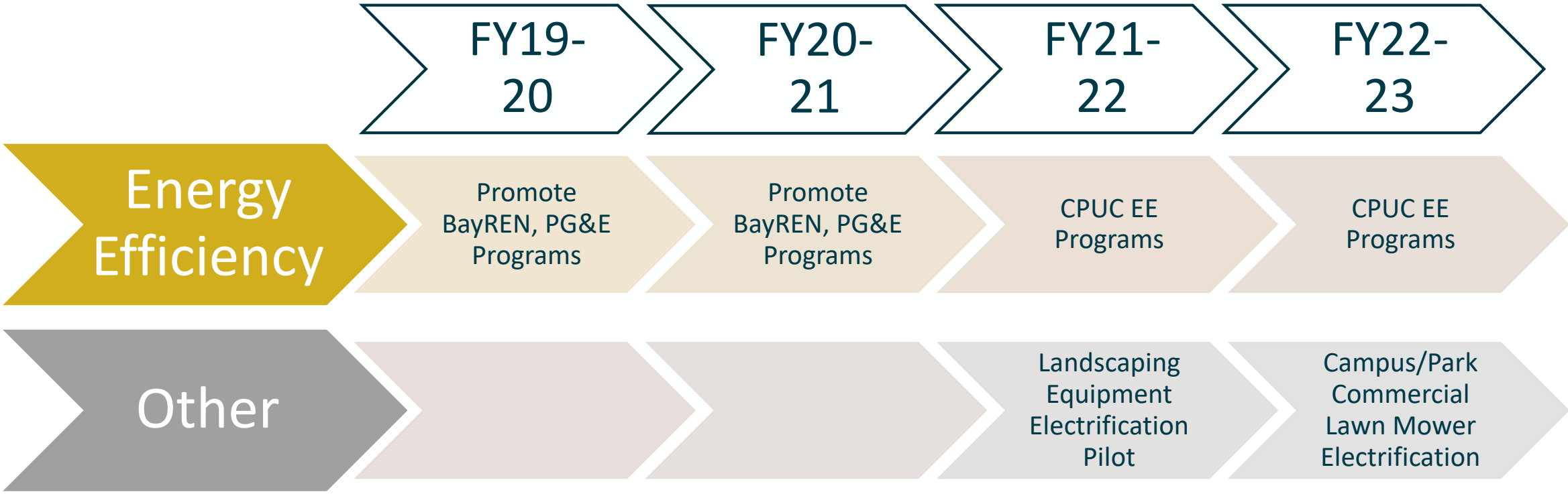
			Quantitative Impact		Community		Market		Scoring
Program Group	Program Sector	Program	Emissions Impact	Cost Effectiveness	Equity	Community, Customer Benefits	Risks	Market Barriers	
Load Shaping	DERs	Demand Response Pilot- Energy Procurement	◕	◕	○	◕	◕	◕	63%
Load Shaping	DERs	C&I Energy Storage Program	◔	○	○	◕	◑	◕	38%

4 YEAR PROGRAM ROADMAP

4 YEAR ROADMAP



4 YEAR ROADMAP



UPCOMING ROADMAP MILESTONES

- October 2019
  - CECAC Program Roadmap Update
- December 2019
  - RMI/WRI Industry Expert Roadmap Workshop
- January 2020
  - CECAC Program Roadmap Update
- February 2020
  - T&E Committee Program Roadmap Memo/Presentation
- Spring 2020
  - City Council Program Roadmap Memo/Presentation

THANK YOU!

PROGRAM DESCRIPTIONS

Program Sector	Program Title	Description
Vehicle Electrification	Dealer EV Incentives	Through select dealers, offer incentive to customers of $2,000 on top of negotiated discount from dealership. Incentive would flow through dealer and would be stackable with other rebates such as CVRP and CVAP.
Vehicle Electrification	Low Income Used EV Incentive	Based off PCE's program, working with third party to offer down payment incentive of $4,000 and financial mentoring for low income qualified residents to purchased a used EV
Vehicle Electrification	Ride and Drives	Host EV Ride and Drives in downtown San Jose, low income community, and corporate campus to educate, promote, and spur EV adoption
Vehicle Electrification	CALeVIP	CEC co-funded EV incentive program offering rebates for level 2 and DCFC installations.
Vehicle Electrification	MUD Technical Assistance	Offer free technical assessment for MUD property owners on upgrades, investments, and incentive opportunities to install EV charging stations.

PROGRAM DESCRIPTIONS

Program Sector	Program Title	Description
Vehicle Electrification	City of San Jose Fleet Electrification	Support Public Works's efforts to electrify 32 light duty vehicles with $10,000 of financial support per vehicle.
Vehicle Electrification	Electric School Bus Voucher	Offer incentive of $50,000 to San Jose School Districts towards purchase of each Electric Bus
Building Electrification	Heat Pump Water Heater Incentive	Mid-stream incentive of $1,200 towards purchase of single family heat pump water heater when transitioning from gas furnace heater.
Building Electrification	Critical Home Repair Adder	Supporting fund of $65,000 per year towards City of San Jose Housing Department's Critical Home Repair program to go towards electrifying water heater or upgrade to electrical panel in low income qualified homes
Building Electrification	Build it Green Pilot	Build it Green managed program leveraging multiple external fund streams for EE, Solar, and Home upgrades to include SJCE funds directed toward electrification in low income qualified homes. SJCE would allocated $175,000 for 1 year pilot

PROGRAM DESCRIPTIONS

Program Sector	Program Title	Description
Distributed Energy Resources	C&I Energy Storage	Negotiate and select preferential terms from Energy Storage firm to then offer to select C&I customers.
Distributed Energy Resources	Single-Family Affordable Solar Home (SASH) in Low Income Non-DACs	Offer similar incentive package as Grid Alternative managed DAC-SASH program to low income qualified San Jose residents not living in DAC as designated by CalEnviroScreen
Distributed Energy Resources	CPUC Disadvantaged Community (DAC)-Green Tariff Program	CPUC funded community solar program offering 20% discount to CARE customers on top of CARE discount. SJCE allocated 1.4 MW from CPUC.
Distributed Energy Resources	Battery Storage Demand Response Pilot	Based off EBCE pilot, work with battery storage aggregators (e.g. Sunrun), to schedule event to offset high wholesale market prices by procurement negotiated price from battery storage aggregators to discharge at set time
Distributed Energy Resources	Resiliency Focused Energy Storage	Energy Storage incentives or rebates for customers effected by Public Safety Power Shutdown events such as medical baseline customers or municipal critical facilities
Other	Campus/Park Commercial Lawn Mower Electrification	Incentive program to campuses and small landscaping business to electrify commercial sized lawn mowers. Offer rebate of $3,500 per electric lawn mower.

PROGRAM DESCRIPTIONS

Program Sector	Program Title	Description
Other	Community Grants	Grants of $12,500 each to community based organizations focused on serving underserved community members to promote clean energy, energy awareness, and energy bill understanding
Other	Landscaping Equipment Electrification Pilot	Single site incentive program to electrify landscaping equipment. Incentive will be through one lump sum covering suite of equipment such as lawn mowers and leaf blowers
Rates	CARE+ Rates	Increased discount to current CARE customers of 5%
Rates	EV Rates	Increased discount on current EV-2A rate
Rates	HPWH Rates	Design rate for single-family homes with Heat Pump Water Heater to incentivize day time charger of HPWH.
Rates	C&I Green Tariff	Also referred to as a “sleeved PPA” but is a special tariff for large commercial and industrial customer through fixed PPA price linking customer directly with renewable energy site. Provides customers with long term, fixed price along with access to Renewable Energy Certificates (RECs)

PROGRAM DESCRIPTIONS

Program Sector	Program Title	Description
Energy Efficiency	CPUC Elect to Administer EE Programs	CPUC Funded (from Public Purpose Program charge), budget based off portion of PG&E's regional program budget, programs must not conflict with IOU or BayREN's programs, 3 year program, must meet cost effectiveness test
Energy Efficiency	CPUC Apply to Administer EE Programs	CPUC Funded (from Public Purpose Program charge), budget based off cost savings, would largely replace IOU EE programs in San Jose, must meet cost effectiveness test, larger budget but administratively more burdensome

PROGRAM IDEAS - QUANTIFIED

Program	Net $ per MT CO2 reduced	Lifetime electrical load impact (MWh)	Lifetime Revenue Potential	Full Program Cost	Program Profit/(Loss)	Customers Impacted	Lifetime Carbon Reductions (MT of CO2e)	% CO2 reduced of CS Plan
HPWH Incentive	$19	$6,682_{10}$	$485,819	$610,500	($124,681)	400	6,480	N/A
EV Incentives	$24	$26,250_{10}$	$1,682,625	$2,282,500	($599,875)	1,000	25,360	1.62%
Ride and Drive Events	$31	978_{10}	$62,678	$90,000	($27,322)	50	1,000	0.06%
Campus Lawn Electrification	$113	808_{10}	$64,606	$365,750	($301,144)	2	2,654	N/A
Critical Repair Program Adder	$157	852_{10}	$61,942	$192,060	($130,118)	78	826	N/A
School Bus Voucher	$168	$4,234_{10}$	$338,688	$1,100,000	($761,312)	1	4,529	TBD
City Fleet Electrification	$195	$1,536_{10}$	$98,458	$336,000	($237,542)	1	1,217	0.10%

PROGRAM IDEAS - QUANTIFIED

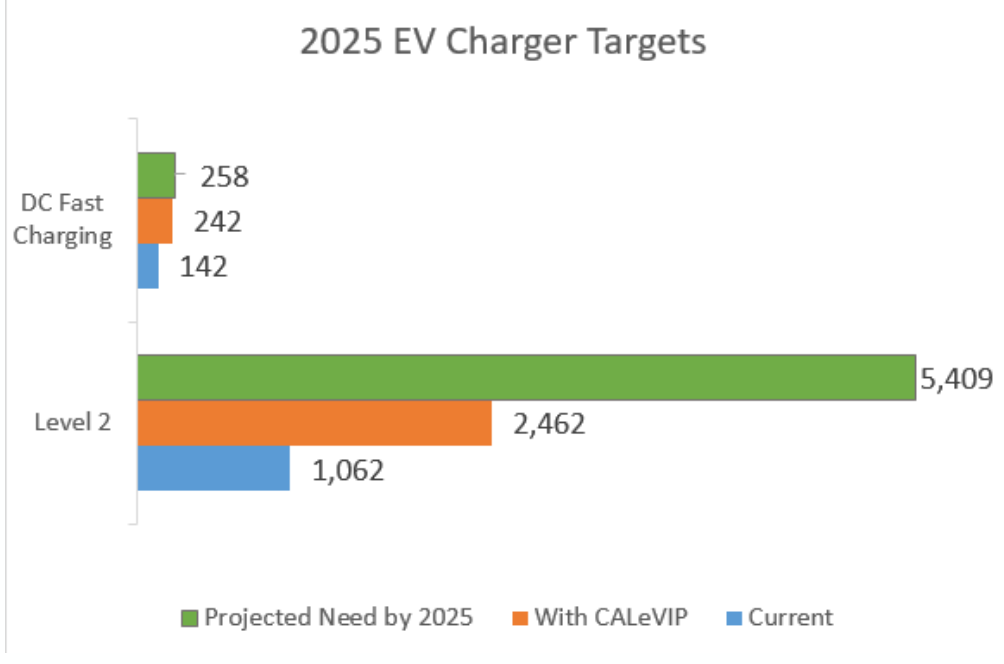
Program	Net $ per MT CO2 reduced	Lifetime electrical load impact (MWh)	Lifetime Revenue Potential	Full Program Cost	Program Profit/(Loss)	Customers Impacted	Lifetime Carbon Reductions (MT of CO2e)	% CO2 reduced of CS Plan
Keller Park Electrification Pilot	$313	191_{10}	$15,252	$60,000	($44,748)	1	143	N/A
Build it Green Pilot	$363	418_{10}	$30,364	$177,500	($147,136)	50	405	N/A
Low Income Used EV Program	$377	978_{5}	$62,678	$440,000	($377,322)	100	1000	0.06%

CALEVIP IMPACT

- EV Adoption

	Present	After CALeVIP	% Increase projected by 2023 supported by CALeVIP
Total Electric Vehicles	23,170	36,590	58%
Level 2 and DCFC chargers	1,204	2,704	125%
Energy used by EVs (GWh)	81	128	58%

- EV Charging Stations in San Jose



METRIC ASSUMPTIONS

Category	Metrics	PG&E	SMUD	EBCE	MBCP	CEC	Climate Smart	SEPA
Vehicle Electrification	MWh per EV per year	3.2		3.5	4.68[1]	3.97		3.5-4.35
	Emission Reductions per EV (Metric ton)	2.8		3.97	3.86		1.78	
	MWh per Electric Bus per year							7.2[2]
	Jobs Per EV Sold			0.04				
	Jobs per Level 2 Charger Installed			0.03	0.03			
HPWH	MWh per HPWH per year		1.86	1.13	1.39			
	Emissions Reductions per HPWH (MT)				1.8			
	Direct jobs per HPWH sold			0.03				
Solar PV	Direct Jobs per install per 5 kw system			0.04				
Battery Storage	Direct jobs per Battery install			0.83				

1: MBCP uses .4 kwh/mile, PG&E 0.28 kwh/mile 2: from Con Edison Paper

PROGRAM SELECTION PROCESS

PROGRAM SELECTION CRITERIA

Quantitative — Emissions Impact

- GHG emissions reduction potential

Quantitative — Cost Effectiveness

- Overall program cost, financial impact to SJCE, and $ spent per CO2e reduced

Community — Equity

- Portion of program reaching low income, disadvantaged communities

Community — Customer and Community Benefits, Value

- Delivers value (economic and non-economic) to customers and community at large.

Market — Risks

- What is the risk in not doing it? What is the risk in doing it but not doing it right?

Market — Market Barriers

- Spurs market transformation toward clean energy

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