

DISCUSSION

Customer Education and Outreach

Transitioning to a new rate schedule will require customer education and outreach to enhance customer understanding and acceptance of a new rate option, while considering the bill impacts associated with this transition.

Outreach began in January 2020, when customers currently receiving the EV discount were alerted that the discount may be replaced by an EV-TOU rate and they were invited to learn more at the February 24, 2020, Board meeting. At this meeting, the Board expressed the need for AMP staff to take further action to educate customers on the design and bill impacts of a TOU rate. To follow up on the Board's directive, AMP staff took several actions to provide resources related to EV adoption and the proposed TOU rate.

In April 2020, AMP launched a number of new EV pages on AMP's website. These new resources provide customers with information ranging from benefits of owning an EV to how to choose, charge, and purchase an EV. The site contains a calculator to learn about how much money one can save by switching from a gas vehicle to an EV, as well as a shopping guide for both battery EVs and plug-in hybrid EVs. Additionally, the website includes a list of incentives available for EV and charger purchases, as well as a charger locator.

On September 16, 2020, AMP staff hosted a Zoom webinar for current EV customers. The webinar covered the specifics of AMP's proposed TOU rate, the potential bill impacts and savings potentials, and the tools that AMP customers can utilize to assess their own usage to determine if the TOU rate will benefit them. Over 50 AMP customers with EVs attended the webinar and eight AMP staff members served as panelists on the webinar and partook in the question and answer section. The webinar was recorded and is available on AMP's website.

One of the tools covered in the webinar is AMP's new TOU Rate Comparison tool, which was added to the EV portion of AMP's website prior to the webinar. The comparison tool allows customers to simulate the costs of their EV charging load under the proposed TOU rate and at the current tier three energy rate. During the webinar, staff also showed customers how to navigate through AMP's Customer Portal where they can assess their monthly, daily, and hourly electricity consumption to inform their decision regarding the proposed TOU rate.

Customer service representatives will receive training on EV-TOU rates and how to engage customers with the calculator. Additionally, EV-TOU rates will be incorporated into overall EV messaging and future EV workshops and presentations. Staff may also evaluate technologies that may ease the task of load shifting for EVs and other appliances for potential customer rebates.

Enrollment Details

Staff's proposed opt-in EV-TOU rate will be available to customers starting July 1, 2021, as a successor to the EV-X discount, which is scheduled to end on June 30, 2021, or when a TOU rate is implemented.

Participation in the EV-TOU rate is optional and would replace a customer's current tiered D1 or multi-family residential service (D2) rate. A customer should allow at least 30 days for application processing and may only switch rate schedules once in any 12-month period. If, within six months of rate schedule launch, a customer who enrolled in the EV-TOU rate notifies AMP of their desire to return to their previous rate schedule (D1 or D2), AMP will execute the change.

The complexity of implementing a TOU rate for Net Energy Metering (NEM) customers will add significant administrative burden. Therefore, EV-TOU rate will not be available in conjunction with the NEM rate plan. It is highly unlikely that the proposed TOU rate would present savings opportunities for NEM customers because the photovoltaic (PV) system output will likely be generating credits at the off-peak rate reducing the benefit of the NEM contract. If a NEM customer wishes to enroll in the EV-TOU rate, they may opt in under the condition that they switch to the ERG billing rate for their solar compensation. AMP staff does not recommend this option from a bill savings perspective.

Additionally, commercial and municipal customers will not be able to enroll in the EV-TOU rate schedule at this time. Commercial customers are currently incentivized to avoid charging EVs during peak demand periods through demand charges. As of September 30, 2020, only two commercial customers were enrolled in the EV-X discount. A commercial EV-TOU could prove to be beneficial at a later date and the ERP team will continue to evaluate future opportunities for a commercial TOU rate.

NEXT STEPS

Upon Board approval, staff will implement Schedule EV-TOU starting July 1, 2021, unless directed to implement the rate earlier. Earlier adoption would be limited by the administrative time required to finalize the enrollment procedures and meet the billing system requirements and would result in the EV discount discontinuing on the day prior to the TOU rate implementation date. Once implemented, staff will provide regular updates to the Board about the adoption and financial impacts of the EV-TOU rate based on actual data.

FINANCIAL IMPACT

AMP staff analyzed the impacts of the proposed EV-TOU rate using a model developed by AMP's consultant, Nathan Inc., and determined it to be revenue neutral to the utility.

LINK TO STRATEGIC PLAN AND METRICS

AMP Strategic Plan:

1. Issue: Sustainability, Strategy 1 – Support transportation electrification
2. Issue: Business Resiliency, Strategy 2 – Improve rate design to reflect Strategic Plan

EXHIBITS

- A. Resolution – Approving Electric Vehicle Time-of-Use Rate Schedule
- B. Schedule EV-TOU
- C. PowerPoint Presentation

CITY OF ALAMEDA
PUBLIC UTILITIES BOARD

RESOLUTION NO. _____

**APPROVING AND ADOPTING SCHEDULE EV-TOU, AN OPTIONAL TIME-OF-USE
RATE SCHEDULE FOR RESIDENTIAL ELECTRIC VEHICLE CUSTOMERS**

WHEREAS, the Public Utilities Board (Board) has adopted Alameda Municipal Power's (AMP) Strategic Plan that aims to support opportunities in the area of electrification of transportation; and

WHEREAS, on May 20, 2019, the Board was presented a Transportation Electrification Customer Program Implementation Proposal, which focused on four different areas: raising awareness; incentives to reduce fixed costs; incentives to reduce operating costs; and promoting infrastructure; and

WHEREAS, on July 15, 2019, the Board was presented with a Time-of-Use (TOU) rate analysis for residential Electric Vehicle (EV) customers to provide an opportunity for customers to save on their electrical bill; and

WHEREAS, the Board has conceptually approved the development of a TOU rate that is designed to be revenue neutral, provides an opportunity for EV owners to reduce their electric bills, and promotes load shifting habits to avoid increasing Alameda's peak demand; and

WHEREAS, on December 16, 2019, the Board approved an end date to the Experimental Electric Vehicle Charging Discount (Supplemental Schedule EV-X) in order to transition to an EV-TOU rate for EV customers; and

WHEREAS, on February 24, 2020, the Board was presented with a motion to approve the EV-TOU rate for EV customers for implementation on July 1, 2020, however the Board postponed rate approval and directed AMP staff to perform additional customer education and outreach including a customer webinar and a bill calculator; and

WHEREAS, on September 16, 2020, AMP staff hosted a webinar where current EV customers could learn about the proposed EV-TOU rate, how they may be able to save under the TOU rate, and how to assess their own usage with the new EV TOU rate calculator; and

WHEREAS, AMP staff is recommending a new optional residential TOU rate that encourages lower cost energy use patterns and optimization of existing infrastructure while meeting AMP's revenue requirements and providing opportunities for EV customers to save on their electric bill ; and

NOW, THEREFORE, BE IT RESOLVED by the Public Utilities Board of the City of Alameda that the proposed Schedule EV-TOU, an Optional Time-Of-Use Rate for Residential

ELECTRIC RATE SCHEDULES



SCHEDULE EV-TOU OPTIONAL ELECTRIC VEHICLE TIME-OF-USE RATE

PURPOSE

The Electric Vehicle (EV) Time of Use (TOU) program is an optional rate schedule available for EV drivers currently on Rate Schedules D1 and D2. The purpose of this rate schedule is to encourage customers to shift consumption from higher-cost time periods to lower-cost time periods and thereby provide an opportunity to save on their electric bill.

APPLICABILITY

This schedule is available to residential customers who own an Electric Vehicles (EV). Participation requires the installation of a Smart Meter capable of measuring hourly usage data. At this time, customers are not required to install a separate meter to measure EV hourly usage but this may change in future. The customer must agree to and abide by the terms and conditions outlined below.

Participation under this schedule is voluntary and is subject to Alameda Municipal Power's (AMP's) sole discretion.

RATES

Schedule EV-TOU shall calculate bill charges as follows:

Monthly Charges:		
	Current D1 Customers	Current D2 Customers
Off-Peak (\$/kWh) Weekdays: 12:00 a.m. - 5:00 p.m., 9:00 p.m. – 12:00 a.m.	\$0.132	\$0.132
Weekends & Holidays*: All Hours		
On-Peak (\$/kWh) Weekdays: 5:00 p.m. - 9:00 p.m.	\$0.50	\$0.50
Customer Charge	Refer to D1 Rate Schedule	Refer to D2 Rate Schedule

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**-Holidays include all 10 dates on AMP's observed holiday calendar. For FY21, these include (in chronological order): Holidays include all 10 dates on Alameda Municipal Power's observed holiday calendar. For fiscal year 2022, these include (in chronological order): Independence Day (7/5/2021); Labor Day (9/6/2021); Veteran's Day (11/11/2021); Thanksgiving Day (11/25/2021); Day after Thanksgiving (11/26/2021); Christmas Day (12/25/2021); New Year's Day (1/1/2022); Martin Luther King Jr. Day (1/17/22); Presidents' Day (2/21/2022); and Memorial Day (5/30/2022)Independence Day (7/3/2020); Labor Day (9/7/2020); Veteran's Day (11/11/2020); Thanksgiving Day (11/26/2020); Day after

ADOPTED: XXXX
RESOLUTION NO. xxxx
Effective: July 1, 2020¹

ELECTRIC RATE SCHEDULES



Thanksgiving (11/27/2020); Christmas Day (12/25/2020); New Year's Day (1/1/2021); MLK Day (1/18/21); President's Day (2/15/2021); and Memorial Day (5/31/2021).

STATE TAXES

Applicable state and local taxes (refer to Rider UUT for current tax rates) and the energy adjustment charge (refer to Rider EAC) will be added to the above charges.

DEFINITIONS AND SPECIAL CONDITIONS

1. PROOF OF REGISTRATION

Customers are required to provide proof of registration of the vehicle(s) when applying for service and when requalifying under this schedule. The customer agrees to immediately notify AMP in the event that they are no longer operating the electric vehicle(s).

2. ENROLLMENT

Schedule EV-TOU will be available to customers starting July 1, 2021⁹. AMP will start accepting applications for enrollment on May 1, 2020¹. A customer shall apply for a rate schedule change at least thirty (30) days in advance of their intended change in rate schedule.

If, within six (6) months of rate schedule launch, a customer who enrolled in the Schedule EV-TOU notifies AMP of their desire to return to their previous rate schedule (D1 or D2), AMP will execute the change. After 6-months of rate schedule launch, customers may only switch rate schedules (either into the EV-TOU or out of the EV-TOU) once in any twelve (12) month period.

3. RATE SCHEDULE

Participation under the Schedule EV-TOU will replace the customer's current D1 or D2 rate schedule until the customer chooses to terminate participation in the EV-TOU rate, upon which time the customer will return to their default rate schedule.

4. NET ENERGY METERING EXEMPTION

Customers who are currently enrolled in the Net Energy Metering (NEM) plan are not eligible for participation in the EV-TOU rate.

5. METERING

A separate electric meter for electric vehicle charging is not required for service under this schedule. However, AMP may request that a separate meter be installed in future.

6. RULES and REGULATIONS

Other conditions, as specified in AMP's Rules and Regulations shall apply to this electric rate schedule.

7. BILLING PERIOD

ADOPTED: XXXX
RESOLUTION NO. xxxx
Effective: July 1, 2020¹

ELECTRIC RATE SCHEDULES



The meters will be read on the customary incremental period of the Advanced Metering Infrastructure (AMI) meter and the results of the readings shall be accumulated for the monthly billing period.

ADOPTED: XXXX
RESOLUTION NO. xxxx
Effective: July 1, 20201

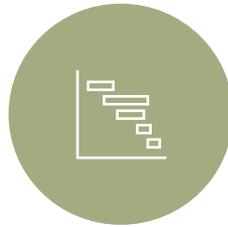
Residential Optional Electric Vehicle Time-of-Use Rate

November 16, 2020

Overview



REVISITING TOU
AT AMP



TOU BENEFITS



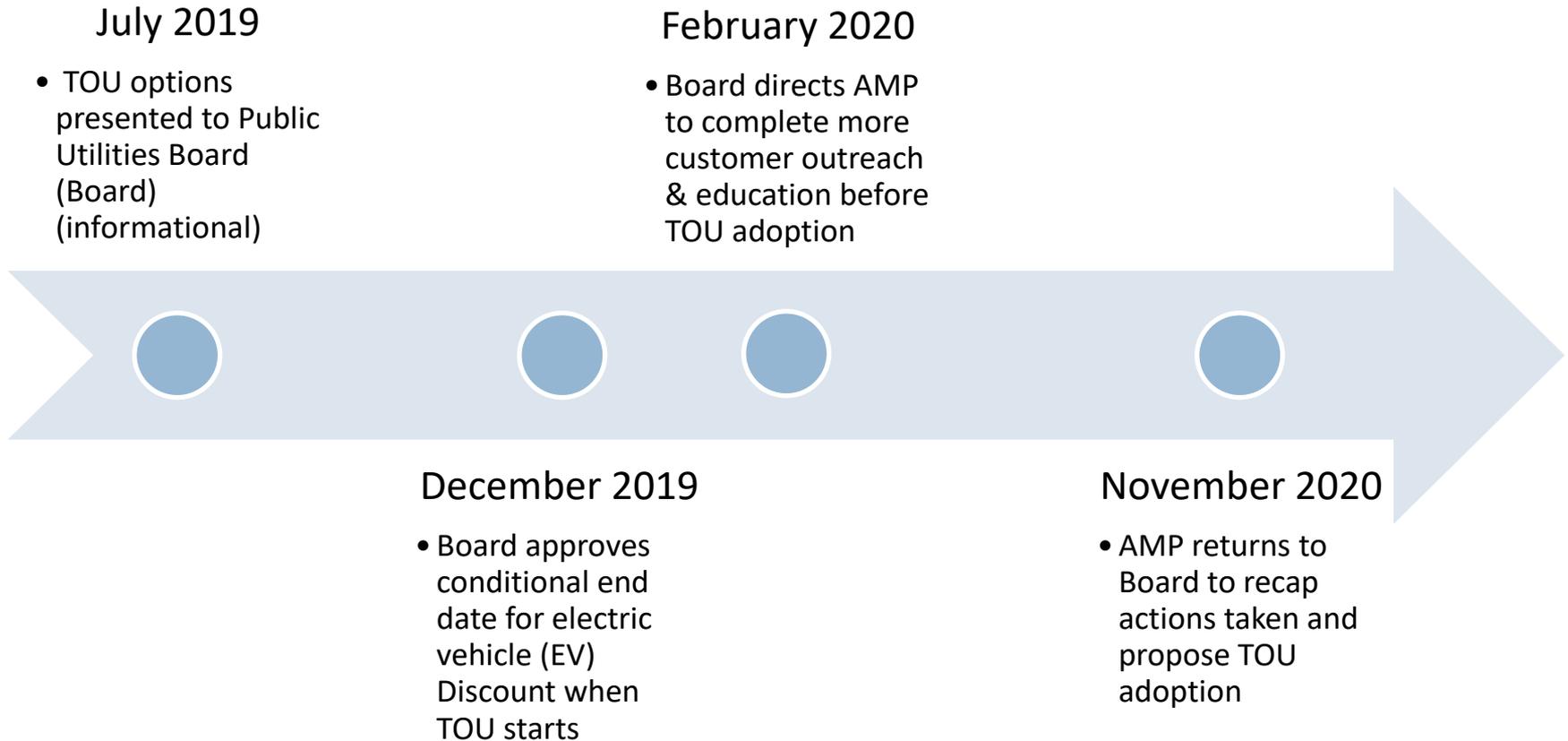
RATE DETAILS &
PARTICIPATION
REQUIREMENTS



RECOMMENDATION &
NEXT STEPS

REVISITING TIME-OF-USE (TOU)

AMP's TOU PUB Timeline



TOU Webinar

- AMP hosted an educational webinar on September 16th
- Over 50 EV-X customers in attendance
- Q&A session
- Webinar available online

YouTube Search

Time-of-Use Bills by Usage

Customer Type	High Usage
Summer Monthly Usage	700
Tiered Energy Charge	\$142
TOU Energy Charge	\$139
TOU Energy Charge with Behavior Change	\$123
TOU Monthly Savings – Summer	\$142 - \$123 = \$19
TOU Monthly Savings – Winter	\$18 <i>Winter 800 kWh</i>

Household Size

Top Shift Uses

TOU Savings? **Very Likely**

ALAMEDA MUNICIPAL POWER 15

21:26 / 49:32

EV Resources on AMP's Website

- AMP's EV online resources
- Categories:
 - EV Benefits
 - Savings/Commute Calculator
 - Battery EV/Plug-in Hybrid EV Models
 - AMP Events & Incentives
 - CA & US Incentives
 - Rate Comparison
 - Charger Finder
 - EV Facts

Electric Vehicles

EV BENEFITS **SAVINGS CALCULATOR** COMMUTE SAVINGS BEV MODELS PHEV MODELS AMP EVENTS & INCENTIVES CA & U.S. INCENTIVES RATE COMPARISON CHARGER FINDER EV FACTS

Calculate Your Savings Potential When You Switch to a Battery Electric Vehicle

How far does **\$3.25** drive your car?

Consider whether you plan to charge at home or in public and select the rate that best applies*

- At home: (electric bill less than \$49/mo.): \$0.22/kWh
- At home: (electric bill more than \$49/mo.): \$0.27/kWh
- Using public charger (sample rate): \$0.30/kWh

EV gets you this many more miles for the price you pay for a gallon of gas.

13 mi



Local gas price/gallon	Estimated MPG of gas vehicle	RESET ALL	Estimated mile/kWh for EV	Utility kWh rate*
\$ 3.25	24		3.07	\$.27
	Model Year		Model Year	
	Gas Vehicle Brand		Electric Vehicle Brand	
	Vehicle Model		Vehicle Model	

How much should it cost to drive **15,000** miles per year?

TOU Rate Comparison Calculator

- TOU Calculator added to AMP's EV online resources
- Dynamic comparisons related to EV charging

EV Charging Cost on Time-of-Use (TOU) Rate Plan

This chart has been pre-configured to demonstrate an optimized plan for EV charging.

MON-FRI TOU Rate



All Hours on Weekends & Holidays



ADJUST USAGE

EV Charging Cost \$39.92

10.80 Kilowatt hours per day

EV Charging Cost at Tier 3 Rate (Current Rates)

D1/D2 Residential Tier 3 Rate



EV Charging Cost \$82.25

10.80 Kilowatt hours per day

TOU BENEFITS

Benefits of TOU

Customer Benefits

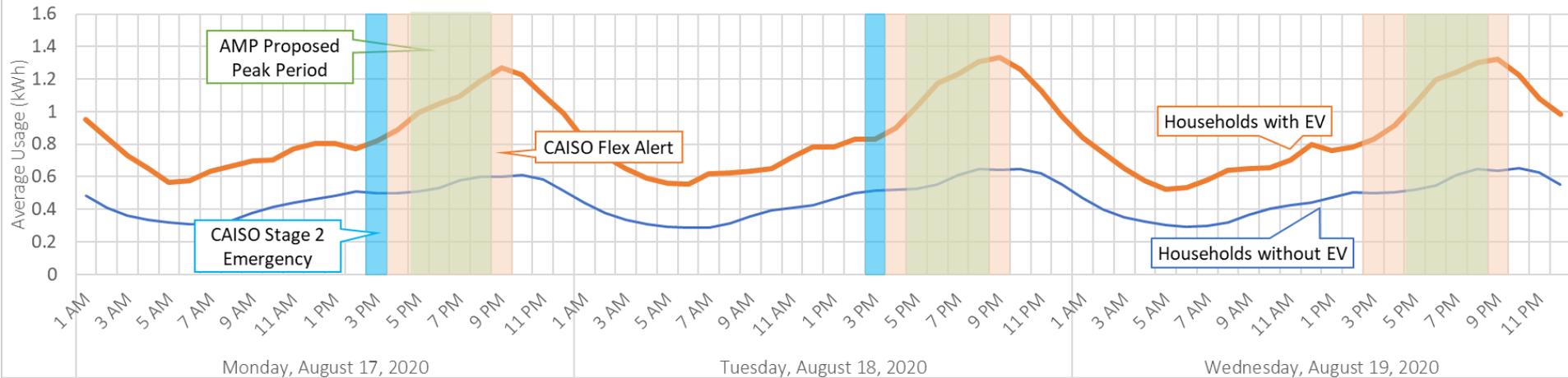
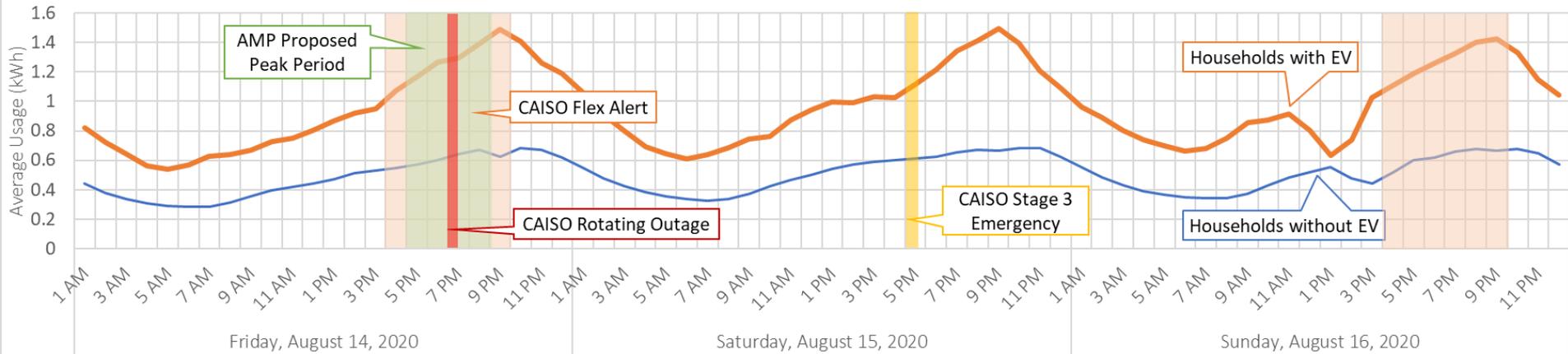
- Opportunity for bill savings
 - Increases with usage
 - Additional EV purchase
- Simple rate structure
- Increased bill control

AMP's Benefits

- Support transportation electrification
- Cost savings
 - Less on-peak energy
 - Deferred distribution investments

TOU for Demand Management

Average Usage During August Heat Wave Events



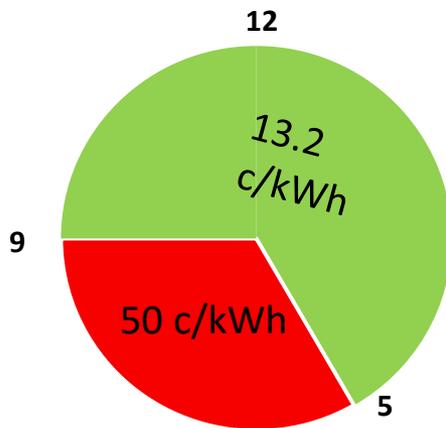
RATE PROPOSAL

Proposed Optional EV-TOU Rate

Weekday (AM)/Weekend (AM and PM)



Weekday (PM)

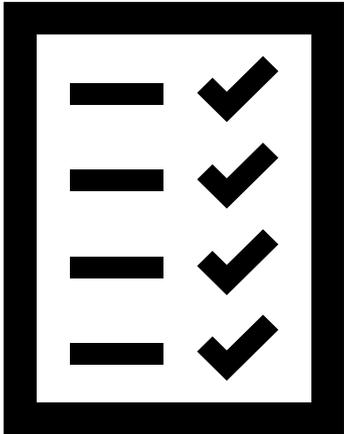


Monthly Charges:

	Current D1 Customers	Current D2 Customers
Off-Peak (\$/kWh)		
Weekdays: 12:00 a.m. - 5:00 p.m., 9:00 p.m. – 12:00 a.m. Weekends & Holidays: All Hours	\$0.132	\$0.132
On-Peak (\$/kWh)		
Weekdays: 5:00 p.m. - 9:00 p.m.	\$0.50	\$0.50
Customer Charge	\$17.30	\$6.75

*D-1: Residential Service; D-2: Multi-Family Residential Service; kWh=kilowatt hours

Rate Details and Participation



- Enrollment is optional (Opt-in)
- Enrollment begins May 1, 2021 for July 1, 2021 start date
- Residential customers only
- EV Discount discontinued on June 30, 2021
- Customer may change rate schedules once every 12-months (6-month initial enrollment waived)
- Rolling applications start in the next billing period
- Energy resource generation (ERG) eligible
- Net energy metering (NEM) may switch to ERG

Staff Recommendation

- Approve and adopt *Schedule EV-TOU*, an optional time-of-use rate for residential electric vehicle customers

Next Steps

- Upon Board approval staff will implement *Schedule EV-TOU* over the following timeline:
 - Enrollment beginning: May 1, 2021
 - EV Discount ends: June 30, 2021
 - Start date upon approval: July 1, 2021
- Expedited implementation of this timeline may be possible with following considerations:
 - Billing system/Administrative time constraints
 - EV discount would end earlier

Questions?

Contact Information

Stephen Mariani
Energy Resource Analyst
mariani@alamedamp.com