

<b>DOCKETED</b>	
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<b>Project Title:</b>	Load Management Standards Implementation
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<b>Document Title:</b>	SMUD LMS Load Flexibility Programs List - October 1, 2024
<b>Description:</b>	N/A
<b>Filer:</b>	Sara Christian
<b>Organization:</b>	SMUD
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<b>Docketed Date:</b>	10/1/2024



October 1, 2024  
Drew Bohan, Executive Director  
California Energy Commission  
715 P Street  
Sacramento, CA 95814

Re: SMUD's Cost-Effective Load Flexibility Programs and Pilots

Dear Mr. Bohan,

In accordance with section 1623.1(b)(3) of the Load Management Standards (LMS) regulation and guidance from California Energy Commission staff entitled *Compliance Assistance for Submitting Cost-Effective Load-Flexibility Programs*, SMUD hereby submits its list of cost-effective load-flexibility programs.<sup>1</sup> SMUD strongly supports the intent and goals of the LMS regulation and is working towards similar goals through our ambitious 2030 Zero Carbon Plan, where we are striving to eliminate all carbon emissions from our power supply by 2030. Reducing peak load through price signals like our time-based rates and load flexibility programs, has proven to be highly effective at reducing system peaks and stress on the grid, limiting the need for new electrical capacity, minimizing carbon emissions, and saving customers money, while providing bill predictability.

Section 1623.1(b)(3) requires that the portfolio of load flexibility programs provide "at least one option for automating response to MIDAS signals for each customer class that the rate-approving body determines such a program will materially reduce peak load." As described in SMUD's Load Management Standard Compliance Plan (LMS Compliance Plan), the attached spreadsheet provides SMUD's portfolio of load flexibility programs, not solely load flexibility programs that allow for automated response to MIDAS signals.<sup>2</sup> The spreadsheet provides details on the following programs or pilots identified in SMUD's LMS Compliance Plan, which are helping SMUD achieve our collective decarbonization goal.

Residential:

- My Energy Optimizer (MEO) Partner+
- My Energy Optimizer (MEO) Partner
- Peak Corps
- Peak Conserve
- Managed Electrical Vehicle Charging

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<sup>1</sup> See *Compliance Assistance for Submitting Cost-Effective Load Flexibility Programs*, 23-LMS-01, TN# 259034 (September 6, 2024).

<sup>2</sup> See *Sacramento Municipal Utility District Comments – SMUD's Load Management Standard (LMS) Compliance Plan (Attachment A)* at Sections 5.2.5.1 and 7.4, 23-LMS-01, TN# 253402 (November 30, 2023).

Non-Residential:

- PowerDirect
- Commercial Virtual Power Plant
- Tailored Curtailment Agreements
- Commercial Vehicle to Grid

SMUD looks forward to continuing to work with the Commission toward our shared goals to reduce peak load. For questions regarding this filing, please contact us at [Pricing@smud.org](mailto:Pricing@smud.org).

Sincerely,

Alcides Hernandez  
Manager, Revenue Strategy

Attachments:

SMUD LMS Load Flexibility Programs List - October 1, 2024

Cc: Scott Martin  
Laura Lewis  
Steve Lins  
Katharine Larson  
Josh Stoops  
Joy Mastache  
Melissa Kwong

Customer Classes Served	Residential and Commercial
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Program Name	Common Name	RIN(s) (SMUD code, MIDAS)	Customer Class(es)	Enrollment Requirements	Interaction with MIDAS	Start Date	Evaluation Criteria	End Date	Description	Reward Structure	Customer Outreach	Cost Effectiveness	Program or Rate Website
<b>Description: Identify the full name of the rate or program.</b>	<b>Description: Indicate the program's common name</b>	<b>Description: Provide all RIN(s) that will be uploaded to MIDAS for the rate or program.</b>	<b>Description: Provide a list of customer classes that will be served by the program.</b>	<b>Description: Provide customer qualification criteria to enroll in the program.</b>	<b>Description: Describe how the program will be integrated with MIDAS.</b>	<b>Description: Identify the program start date.</b>	<b>Description: Describe how the program will be evaluated. (If the program is not being evaluated this can be left blank.)</b>	<b>Description: Identify the program end date, if known.</b>	<b>Description: Provide a general overview of the program.</b>	<b>Description: Describe how participation benefits customers.</b>	<b>Description: Describe how customers will be informed about program availability, how to subscribe, and how to participate in load shifting.</b>	<b>Description: Provide information on the program's cost effectiveness.</b>	<b>Description: Provide a link to the program or rate webpage. If no webpage exists, put N/A.</b>
My Energy Optimizer (MEO) Partner	MEO	RT02, R200 RTC1, RC00 RT02 w/EV, RE00 RTC1 w/EV, RCE0 RT02 w/NEM1, R2N0 RTC1 w/NEM1, RCN0 RT02 w/NEM1 & EV, R2NE RTC1 w/NEM1 & EV, R2NE RTC1 w/SSR, RCS0 RTC1 w/SSR & EV, RCSE	Residential	Qualifying smart thermostat Have Wi-Fi Have central AC or electric heat pump	Yes. Standard TOD rate available through MIDAS. Customers may enroll on the Critica Peak Pricing (CPP) rate and the event signal available through MIDAS.	6/1/2022	Program impacts evaluated after each summer season.	No current end date planned but could transition to a program with more DER devices	Customer agrees to have their thermostat setpoint raised during periods of high demand. Participating customers may also enroll in the CPP rate.	\$25 enrollment incentive (one-time); ongoing annual incentive of \$25 for non-CPP rate participants. Plans to require minimum event-minute participation in future for annual incentive eligibility. Enrollment incentives can increase to \$50 for special recruitment campaigns.	In-app Original Equipment Manufacturer (OEM) prompts, Email, Website, OEM emails.	MEO is currently cost-effective based on Net Present Value (NPV) analysis of reductions and avoided Resource Adequacy (RA) costs; generates ~0.53 kW/participant of RA avoidance. Net benefits of ~\$1.8m over 10 years	<a href="https://www.myenergyoptimizer.org/">https://www.myenergyoptimizer.org/</a> <a href="https://www.smud.org/Rate-Information/Residential-rates/Critical-Peak-Pricing">https://www.smud.org/Rate-Information/Residential-rates/Critical-Peak-Pricing</a>
Peak Corps	ACLM, Peak Corps	RT02, R200 RTC1, RC00 RT02 w/EV, RE00 RTC1 w/EV, RCE0 RT02 w/NEM1, R2N0 RTC1 w/NEM1, RCN0 RT02 w/NEM1 & EV, R2NE RTC1 w/NEM1 & EV, R2NE RTC1 w/SSR, RCS0 RTC1 w/SSR & EV, RCSE	Residential (no Med Rate)	This is a legacy Air Conditioning (AC) Cycling Program through a device.	Standard TOD rate signal for the entire year is available through MIDAS. This is a legacy Air Conditioning (AC) Cycling Program through a device.	Late 1970s	Program value based on annual firm load cost. Periodic field verifications determine the percentage of enrolled customers that have installed & working switches. If an emergency event is called, a more thorough meter evaluation will be done to isolate all active participants.	Planned retirement in 2030	Emergency Only AC cycling program with way radio switches that will run at 100% cycling (60 minutes of each hour) during an Emergency. Will be the last resource called before rolling outtages.	Direct benefit: \$5 event credit per event day. Indirect benefit: grid stability and quicker recovery from emergencies.	Annual Summer Reminder Letter sent to all enrolled participants each May.	The MW resource is worth more annually (~\$900k) than it costs to maintain the program (~\$100k) for up to 1-2 events (~\$400k per event) vs securing firm load elsewhere.	<a href="https://smud.org/peakcorps">https://smud.org/peakcorps</a>
Peak Conserve	Peak Conserve	RT02, R200 RTC1, RC00 RT02 w/EV, RE00 RTC1 w/EV, RCE0 RT02 w/NEM1, R2N0 RTC1 w/NEM1, RCN0 RT02 w/NEM1 & EV, R2NE RTC1 w/NEM1 & EV, R2NE RTC1 w/SSR, RCS0 RTC1 w/SSR & EV, RCSE	Residential (no Med Rate)	Enroll online at smud.org, have an eligible HVAC system (can be determined by Installation Contractor).	Standard TOD rate signal for the entire year is available through MIDAS. This is a new program that uses 2-way switches that can be seen & controlled by SMUD.	2023	Program is being evaluated by a third-party evaluator to determine baselines, demand & energy impacts, cost-effectiveness and customer satisfaction.	No current end date planned	Potential successor for the legacy ACLM/Peak Corps program, using 2-way switches that can be seen & controlled by SMUD. This program runs both economic and emergency events.	\$50 enrollment bonus and up to \$25 as an annual participation bonus.	Current: targeted recruitment, Clean TECH (SGIP) program, word of mouth, etc. Possible: tied in with weatherization installations, SMUD rebates, etc.	Currently being evaluated with long-term program direction TBD in 2025	<a href="https://www.smud.org/Going-Green/Summer-rewards-programs">https://www.smud.org/Going-Green/Summer-rewards-programs</a> <a href="https://smud.org/peakconserve">https://smud.org/peakconserve</a>
Managed Electric Vehicle Charging	EV Managed Charging	RT02 w/EV, RE00 RTC1 w/EV, RCE0 RT02 w/NEM1 & EV, R2NE RTC1 w/NEM1 & EV, R2NE RTC1 w/SSR & EV, RCSE	Residential	Currently, this program is not open to enrollment beyond the pilot group currently participating. Future program (2025) will be available to customers with eligible EVs and/or EVSE.	For the pilot implemenatation, the retail TOD rate signal for the entire year is available through MIDAS. Pilot uses SMUD's Price Application to provide 2030 hourly marginal price signals, with wholesale, distribution and retail optimization components.	Pilot launched summer 2023	Pilot is currently being evaluated by 3rd party evaluator for impacts, customer experience, etc.	Pilot will conclude by end of 2025 or when new scaled program takes its place.	Participating customers' EV charging is directly controlled in order to avoid grid impacts and high price periods and soak up renewables while ensuring customers do not experience decreased utility from their vehicles.	Current Pilot pays customers \$150 upfront and \$20 per quarter ongoing for participating. Scaled program TBD	Pilot is not currently open to new customers	Cost-effectiveness is unknown at this time and is subject to ongoing pilot evaluation activities.	<a href="https://www.smud.org/Going-Green/Electric-Vehicles/Residential/Managed-EV-Charging">https://www.smud.org/Going-Green/Electric-Vehicles/Residential/Managed-EV-Charging</a>
PowerDirect®	PowerDirect®	65 different combinations of Commercial & Industrial (C&I) rate codes	Commercial and Industrial	Must meet the 50kW minimum to enrollment.	TBD	2013	Program is not independently evaluated; however, SMUD systems calculate load impacts of each event.	No current end date planned	PowerDirect® is a C&I Demand Response seasonal program that runs from June 1-Sept 30 from the hours of 2-6 pm. Events are called when there is strain on the electric grid.  Events can last between 1-4 hours with limits on events lasting longer than 2 hours.	Customers receive a one time technology incentive at \$175 per kW and capacity incentive at \$10 per kW paid at the end of the season if the customer meets the 50% realizaiton rate during summer season.	Customer outreach is either through the SMUD account rep (SAA) or the customers aggregator partner (Voltus, Enersponse, etc.).	Cost-effective based on NPV of costs relative to avoided Resource Adequacy costs.	PowerDirect® Automated Demand Response Program (smud.org)
Commercial Virtual Power Plant	TBD	65 different combinations of C&I rate codes	Commercial	Purchase or own a qualifying battery storage system	TBD	Some planning and piloting activities will take place in 2024-2025. Anticipated full-scale program deployment will be in 2026.	TBD	No current end date planned	SMUD will incentivize customer-sited battery system installation and manage battery dispatch through a VPP technology platform in order to avoid bulk and distribution investments	SMUD will offer upfront incentives to offset the installation costs, as well as ongoing incentives, likely on a \$/MW basis but structure TBD.	TBD, likely through Strategic Account Advisors (SAAs) and other personalized, customer-tailored avenues.	TBD. The goal of the program is to provide a load flexibility resource and delay infrastructure upgrade investments when possible.	Not available yet.
My Energy Optimizer Partner+	Residential Battery VPP	RT02, R200 RT02 w/EV, RE00 RTC1 w/SSR, RCS0 RTC1 w/SSR & EV, RCSE RTC1 w/EV, RCE0 RTC1, RC00	Residential	Customers with a Tesla Powerwall and on the Solar & Storage rate	Standard TOU rate signal for the entire year is available through MIDAS.	8/1/2023	Program is being evaluated by a third-party evaluator to determine baselines, demand and energy impacts	No current end date planned	Grid service events are scheduled for the following day at times determined by Energy Trading. The batteries will then prioritize charging the following day via solar to be optimized for when the grid service event will begin.	Customers receive an upfront incentive up to \$500/kWh to enroll with a maximum \$10k. Customers also receive ongoing capacity incentives based on kW capacity of batteries ranging from \$102-\$332 (depending on number of batteries).	SMUD marketing team develops and delivers all tactics. Solar installers will also market the program during the sales and installation process.	TBD, the program is currently going through an Measurement & Valuation process; however, program is designed in part as market transformation for solar customers/installers to transition from PV only market to PV plus storage	<a href="https://www.smud.org/Going-Green/Battery-storage/Homeowner">https://www.smud.org/Going-Green/Battery-storage/Homeowner</a> <a href="https://www.smud.org/Rate-Information/Solar-and-Storage-Rate">https://www.smud.org/Rate-Information/Solar-and-Storage-Rate</a>
Tailored Curtailment Agreement	Very Large Commercial Customers	N/A	Commercial	High-profile customers that want to enter into an agreement with SMUD	N/A	On-going policy	Amount of curtailed load is valued at avoided generation capacity in the market	On-going policy	Very large customers with flexible load agree to curtail load based on terms and conditions of a contract.	Capacity payment based on MW of avoided load reduced based on RA capacity cost	Customer outreach is either through the SMUD account rep (SAA) or customer relationship with SMUD	Cost-effective based on avoided Resource Adequacy costs. Recognizes the benefit of dynamic load shedding with quick dispatch - (10 minutes) Resource available M-F 24hr/Day 12 months. It's the last resource called before rolling outages.	Custom only.
Commercial Vehicle to Grid Pilot	Commercial V2X Pilot	TBD	Commercial	Currently limited to school buses	N/A	In planning stages	Scope of pilot is to test ability to respond to a combination of TOD, CPP, and event-based price signals.	N/A	SMUD is piloting V2X technology on school buses in partnership with a local school district to demonstrate technical and financial viability. Details of the pilot still to be determined.	Final pilot design still being determined	SMUD is working with a local school district to test this concept.	N/A. Initial analysis modeling value with PowerDirect incentive levels shows potential for cost effectiveness. Pilot will include evaluation of cost-effectiveness.	N/A SMUD is working with a local school district.



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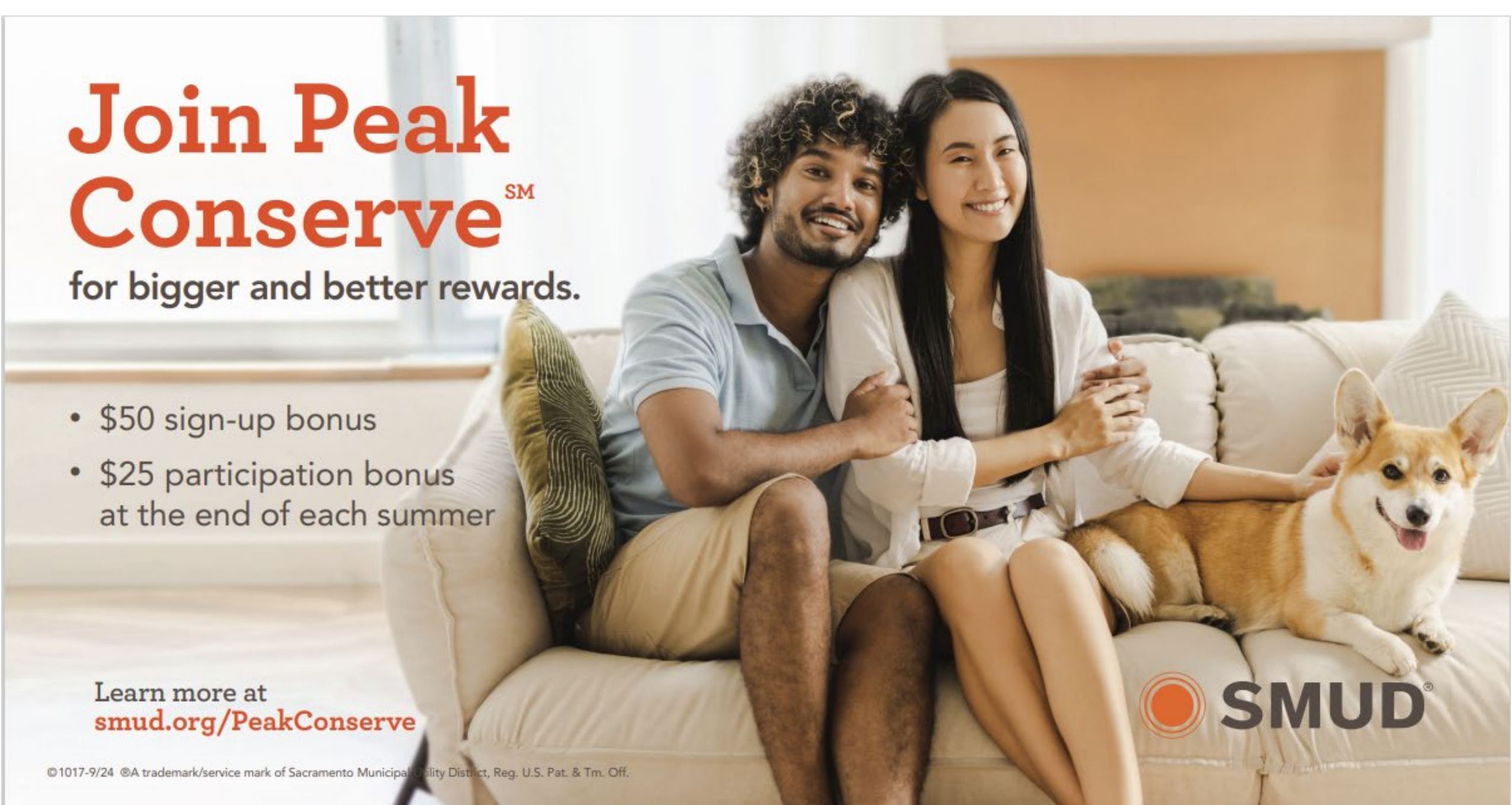
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