

Exhibit to Agenda Item #2

PUBLIC RATE HEARING

Chief Executive Officer and General Manager's Report and Recommendation on Rates and Services (Volumes 1 & 2) dated June 17, 2021 ("CEO & GM Report"); and the Chief Executive Officer and General Manager's Report and Recommendation on Open Access Transmission Tariff (Volume 1) dated June 17, 2021 ("OATT Report").

Special Board of Directors Meeting

Tuesday, August 31, 2021, scheduled to begin at 5:30 p.m.

Virtual Meeting (online)

Agenda

- Rate process overview
- SMUD's approach – transformational leadership
- Recommended rate changes
 - Small rate increases in 2022 and 2023
 - New Solar and Storage Rate
 - Optional Critical Peak Pricing rate
 - Miscellaneous Rate Changes
- Flexible programs that support the proposed rate changes and zero carbon goal. Can be quickly adapted as market conditions change.
- Public outreach
- Q&A

SMUD's approach: transformational leadership

- Comprehensive approach to minimize rate increases and maximize reliability and environmental benefits for all.
 - Delivers on commitment to keep any rate increases within the rate of inflation through 2030.
- Builds on SMUD's 20+ year support for solar industry.
- Balanced approach to support all technologies and customer investments/choice needed to eliminate carbon emissions.
- Balance of rates and programs: flexible, collaborative and industry-leading approach to transition from solar only to solar and storage, while considering all customers, including low-income and non-solar customers.

2021 Rate Process

May 18

Board Committee Meeting @ 5:30 p.m.
Introduction to the Rate Recommendations & overview of the Solar and Storage Rate

Public outreach process contacts:

- 50+ community organizations
- 1,200+ community & business leaders
- 55 local elected officials
- 300+ community & business partners

June 17

Released the CEO & GM Reports and Recommendations on Rates and Services & Open Access Transmission Tariff

July 8 & July 27

Hosted public rates workshops via Zoom

Aug. 31

- Public rates hearing @5:30 p.m. via Zoom
- Draft rates resolutions introduced

Sept. 16

Final decision on draft rate resolutions at SMUD Board meeting

2+ years
collaboration w/
solar industry

EXTENSIVE PUBLIC OUTREACH THROUGHOUT

May

June

July

August

Sept.

2022 and 2023 Rate Recommendations

Proposed changes to SMUD rates

Rate proposal	Rate increase & effective date	Customer groups impacted
2022 – 2023 rate increases	1.5% effective on 3/1/2022 2.0% effective on 1/1/2023	All customers
Solar and Storage Rate	Effective 1/1/2022	All solar and storage customers approved for interconnection on or after 1/1/2022
Optional Critical Peak Pricing Rate (CPP)	6/1/2022	Optional rate for residential customers 1. Up to 30,000 customers with a SMART thermostat 2. Solar + storage customers 3. Storage only customers
Other Rate Changes <ul style="list-style-type: none"> • Open Access Transmission Tariff (OATT) price update • Delay of commercial rate restructure and new rates nomenclature • Minor language changes to certain tariffs 		

Why are rate increases required?



Wildfire prevention & mitigation



Infrastructure improvements



Clean energy mandates



**Increased operating costs
(materials & labor)**

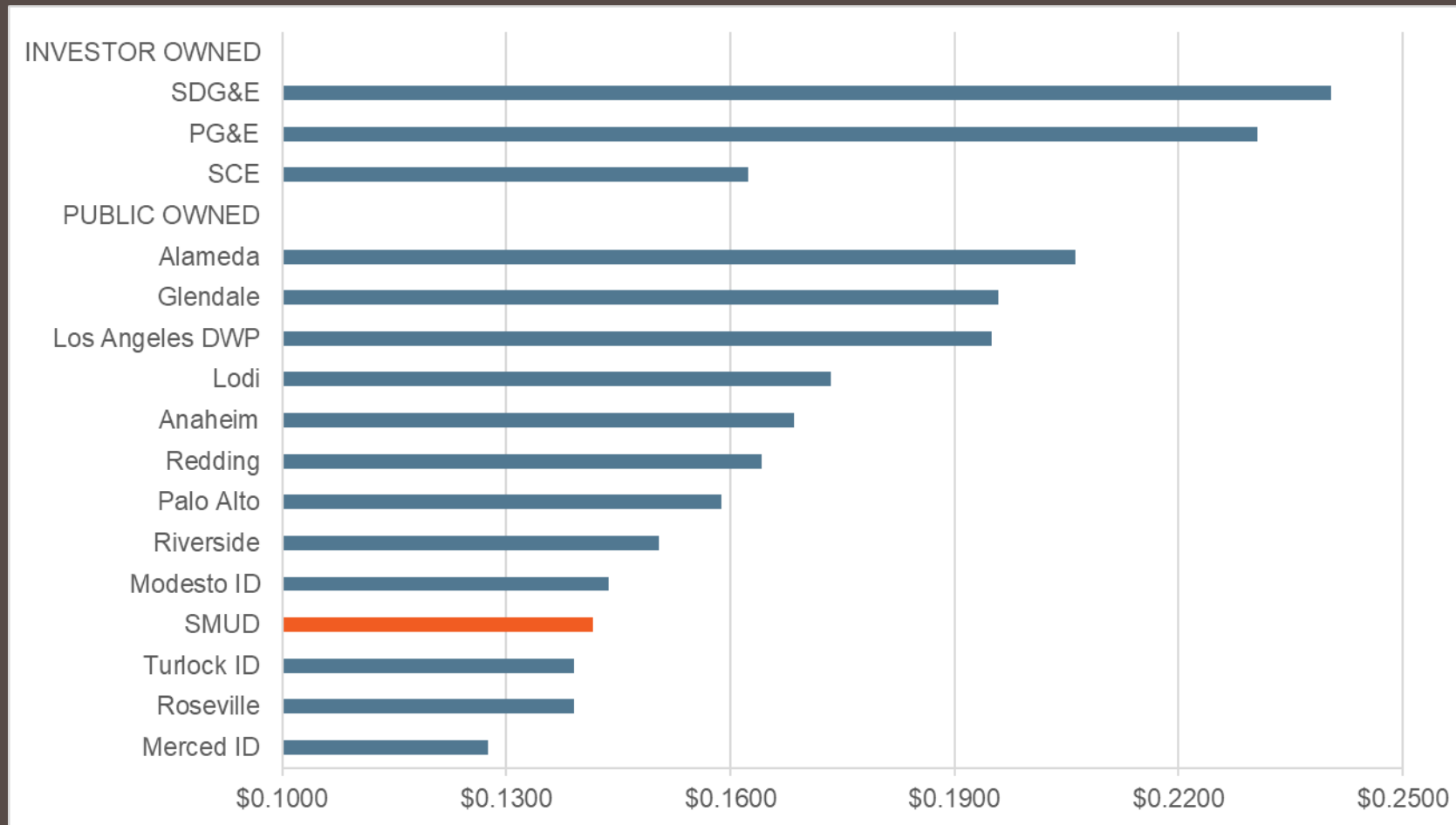
How will the proposed rate increases impact bills?

Sample Monthly Bill Impacts			
Size	Average Monthly Bill	1.5% Rate Impact in 2022	2.0% Rate Impact in 2023
Average residential at 750kWh usage	\$126.44	\$1.91	\$2.57
Small Commercial (20 – 299 kW)	\$2,921	\$44	\$59
Medium Commercial (500 – 999 kW)	\$25,906	\$389	\$526
Large Commercial (>1,000 kW)	\$91,623	\$1,374	\$1,860
Agriculture (Ag & Pumping)	\$351	\$5	\$7

Customers on our low-income Energy Assistance Program Rate (EAPR) & Medical Equipment Discount rate will see slightly different bill impacts than standard rate customers.

Amounts may reflect minor rounding differences

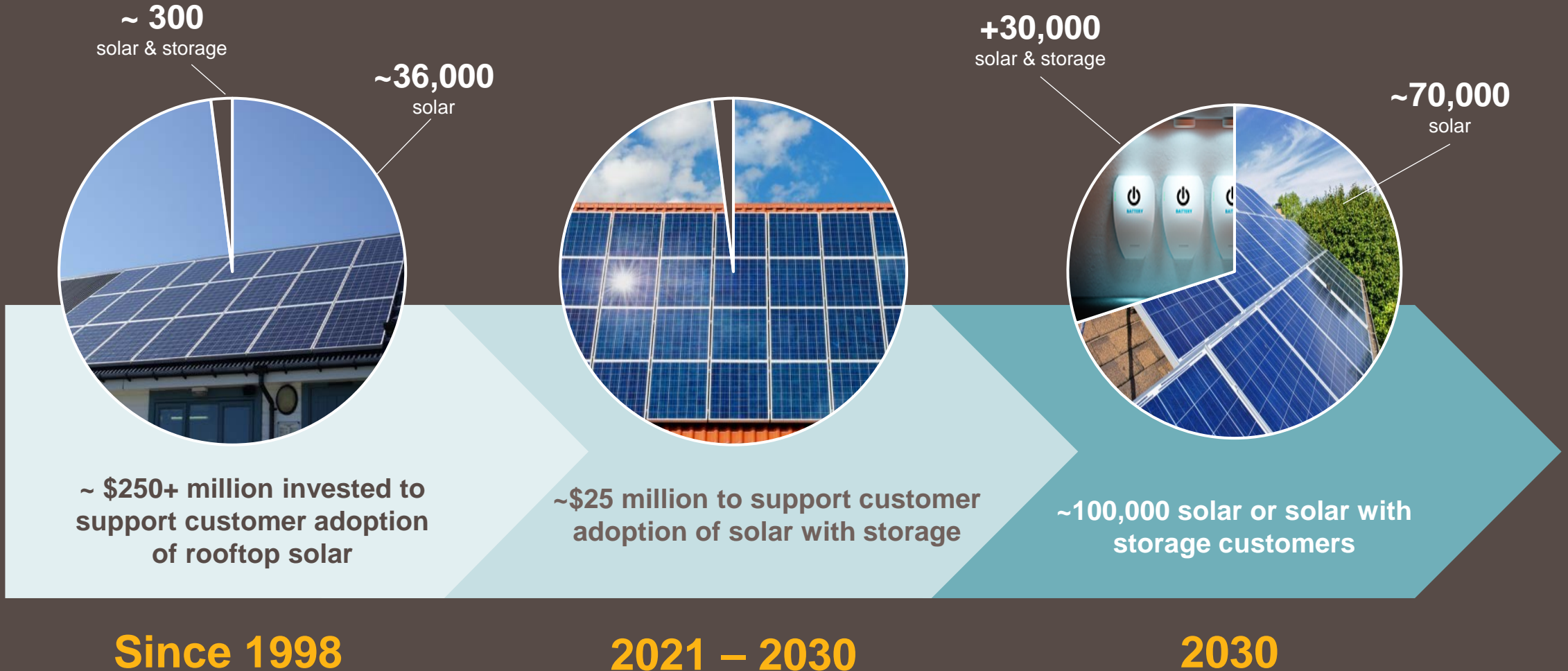
2020 rate comparison (\$/kWh)



Source: EIA 861M 2020 and self-reported annual data from the 2020 EIA 861 annual survey (system average rates)

Solar & Storage Rate and Recommendations

SMUD's support for market transformation



Why is the rate change needed?

Past

SMUD helped transform rooftop solar industry. ✓

Met 1998 NEM state mandate in 2017. ✓

Buying rooftop solar for 2x the proven value of solar. ✓

Cost shift for non-solar & under-resourced customers. ✓

Utilities across the country have or are changing NEM policy. CPUC holding NEM 3.0 proceedings ✓

Proposed rate

Helps solve variability of solar energy to maintain grid reliability. ✓

Proposal far more generous than others, including CPUC NEM 3.0 proceedings. ✓

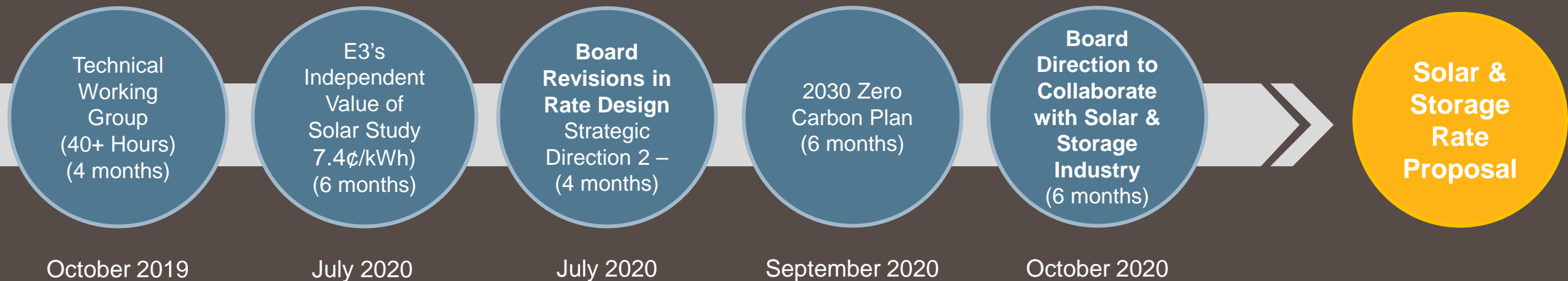
Transform to solar + storage, which is critical to reach zero carbon. ✓

Benefits for non-solar & under-resourced customers. ✓

SMUD will invest \$25 million to support battery storage adoption. ✓

Solar and Storage Rate proposal

Two-year collaborative rate design journey



For 2 years SMUD staff worked with customers, stakeholders, and the solar & storage industry to develop the Solar & Storage Rate.

Collaborative process to develop NEM 1.0 replacement

We invited the following organizations to collaborate with SMUD:

ACR Solar	Solar Rights Alliance
Aztec Solar	STEM
California Energy Storage Association (CESA)	Sunrun
California Solar & Storage Association (CalSSA)	Tesla
Solar Edge	Vote Solar

CEO
invested
hours

40+

7 staff
invested
hours

630+

SMUD's Compromised to Co-Design a Win/Win Rate

SMUD originally proposed:

- Grid Access Charge
- Solar sizing to 100% usage
- No storage incentives
- No Virtual Solar (VNEM)

Solar Industry Proposed:

- No Grid Access Charge
- No solar sizing limits
- No changes to self-consumption
- VNEM

Proposed collaborative and co-designed rate design:

- **No** Grid Access Charge
- Solar sizing to **110%** usage
- **\$25M storage incentives** & no change to self-consumption
- **New VNEM Program** for under resourced community members

Solar and Storage Rate proposal

All existing solar customers will continue to get the current NEM 1.0 rate and its benefits through 2030.

Rate proposal	Rate effective date	Customer groups impacted
Solar and Storage Rate	January 1, 2022	All Solar and Storage customers approved for interconnection on or after 1/1/2022

- Will accelerate storage adoption and transform the market from solar only to solar and storage.
- Will benefit all our customers and help SMUD achieve the 2030 zero carbon goal at a lower cost by partnering with our customers.
- Excess power can be sold back to SMUD for 7.4¢/kWh no matter the time-of-day or season.
- SMUD will reevaluate this value every 4 years (2026 & 2030) and the value will not be revised more than +/- 30%.
- Staff will implement an interconnection fee of \$475 for a majority of new residential solar applications effective January 1, 2022.

Excess power sold back to SMUD for 7.4 ¢/kWh

What makes up the 7.4¢/kWh?

- Recognizes value customers' energy provides to SMUD by reducing the need to generate power from a power plant.
- Avoids the following power generation related costs:
 - Carbon / greenhouse gases
 - Natural gas
 - Capacity (transmission, distribution & generation)



SMUD is recognizing rooftop customers' excess energy provides a **unique indirect benefit of avoiding disturbing** land for a utility size solar plant.

For more details, please see the Changes to Net Energy Metering section in the GM Report.

Rates for current solar customers

Concern 1

NEM 1.0 rate through 2030 for existing solar customers isn't long enough.

Response

Most all NEM 1.0 customer-owned systems will have systems paid back by 12/31/2030.

- 7.4¢/kWh reflects the value of the energy. All solar customers (current and future) will benefit from self consumption at retail rates.
- NEM 1.0 is financially unsustainable.
 - Without changes, 2021-2030 NEM subsidy is ~\$381M.
- With the proposed Solar and Storage Rate, non-solar customers would still pay an extra ~\$91M to extend NEM 1.0 through 2030 for the 36,000+ existing SMUD solar customers.
- Extending NEM 1.0 beyond 2030 would cost non-solar customers an additional ~\$10M per year of extension.
- NEM 1.0 has created a fairness and equity issue.
 - Of the ~36,000 residential solar customers, about 2,000 are in under-resourced communities on EAPR. SMUD has funded 125 systems for low-income customers to date, with 15 more planned for 2021.
- Most all NEM 1.0 customer-owned systems will have systems paid back by 12/31/2030; even those who installed a system in late 2021 will have almost 95% of system paid back due to retail rate compensation.

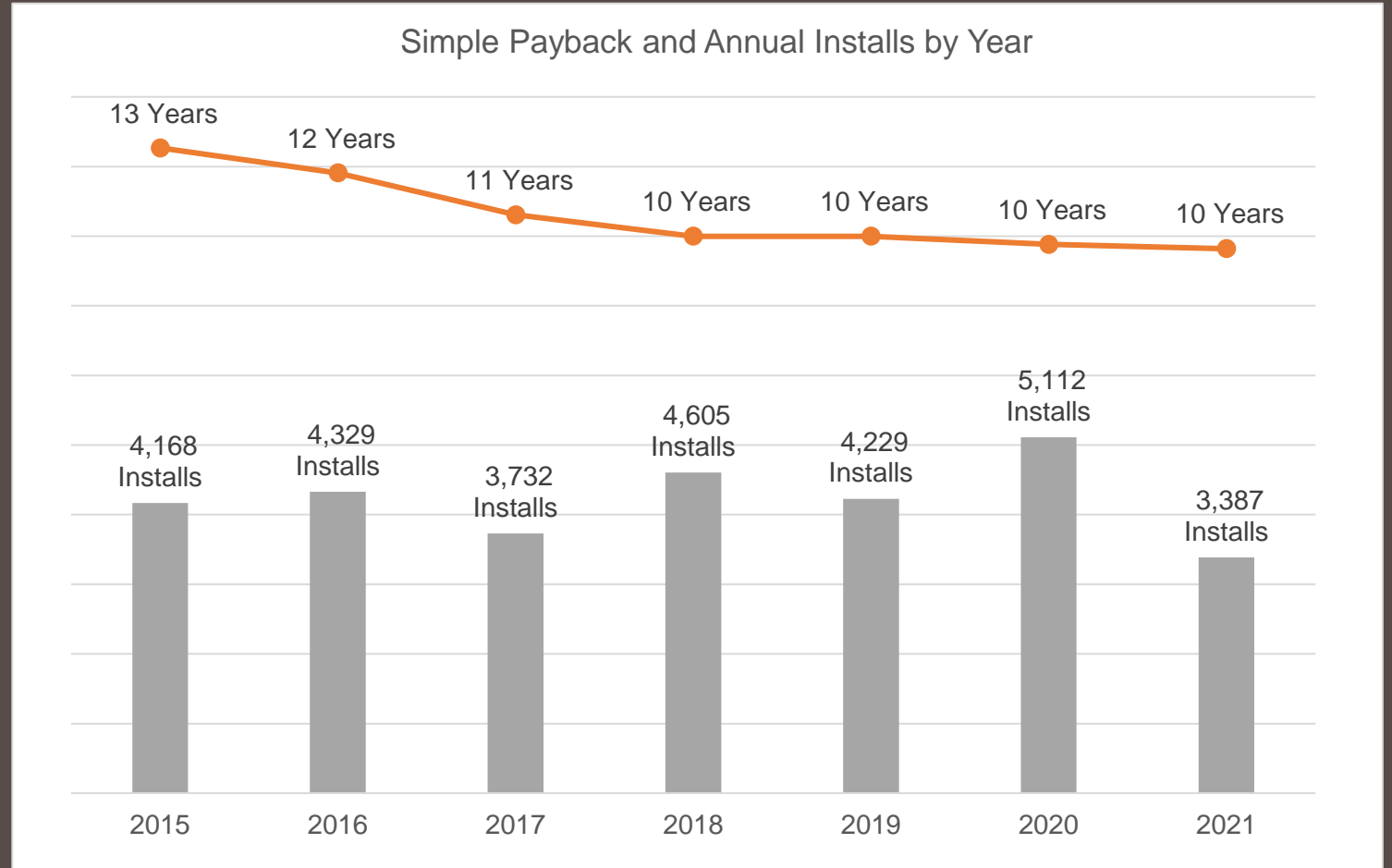
Payback period

Concern 2

Customers won't install solar with a longer payback period.

Response

Thousands of SMUD customers adopted solar with payback periods over 12 years and as solar prices continue to drop, staff anticipates payback periods will shorten.



2021 install values are through August 20, 2021.

New rate and impacts on solar installations

Concern 3

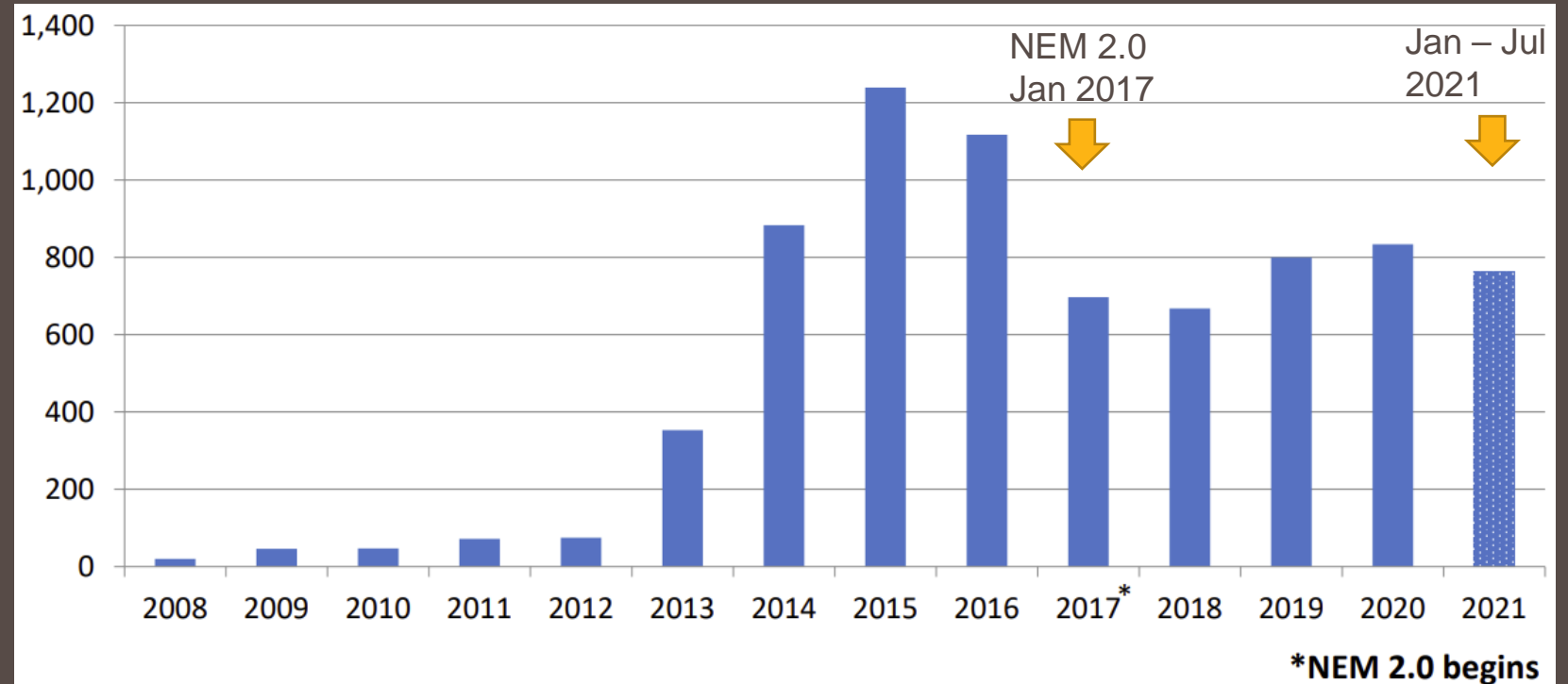
Reducing the rate SMUD pays customers for excess solar will harm the solar industry.

Response

Modesto implemented in 2017 and continues to see steady growth in solar installations.

Modesto Irrigation District

New rate for customers' excess solar energy is 7.6¢/kWh



Number of installations include retrofit and new construction solar. 2021 values are through July 2021.

SMUD will offer several other additional programs to encourage solar and storage adoption.

New rate and impacts on solar installations

Concern 3

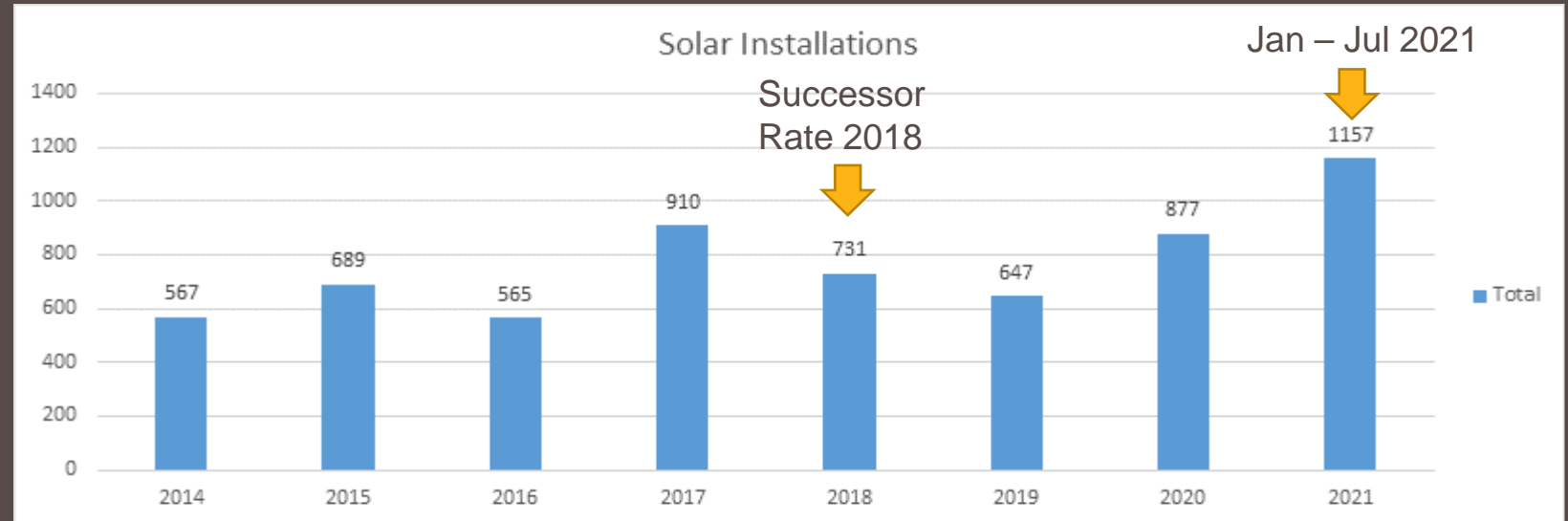
Reducing the rate SMUD pays customers for excess solar will harm the solar industry.

Response

Roseville implemented in 2018 and continues to see robust growth in solar installations.

Roseville Electric

New rate for customers' excess solar energy is 5.98¢/kWh



Number of installations include retrofit and new construction solar.

SMUD will offer several other additional programs to encourage solar and storage adoption.

Storage adoption

Concern 4

Battery storage is not ready for mass adoption.

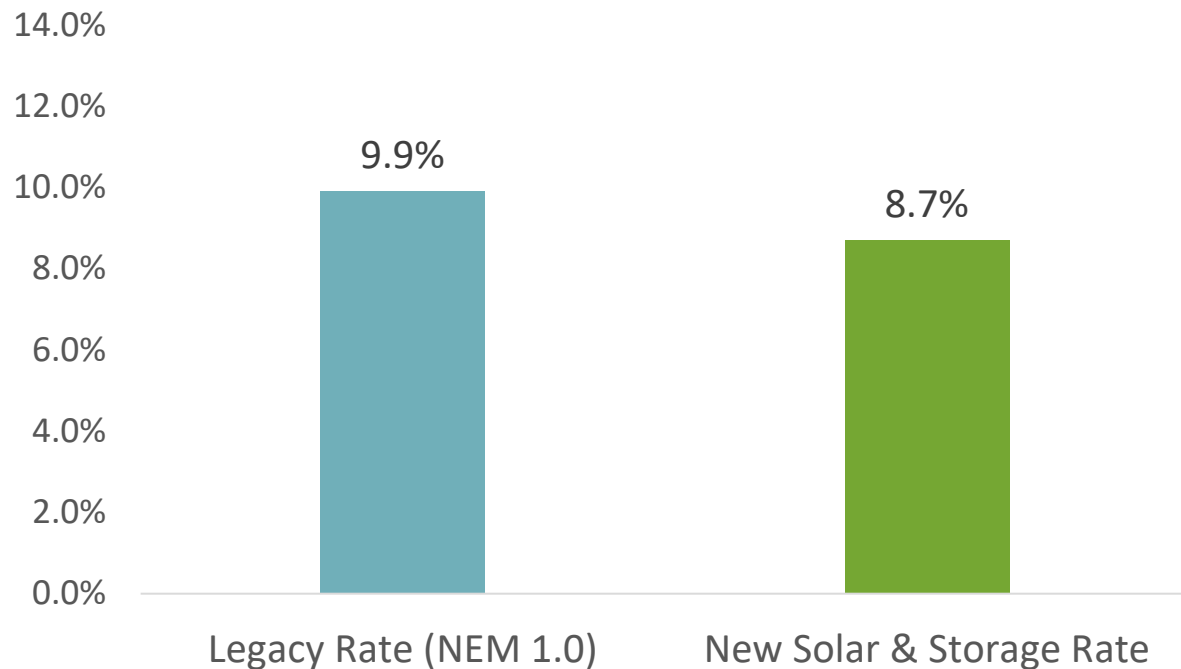
Response

Battery manufacturers are increasing production to keep up with growing global demand.

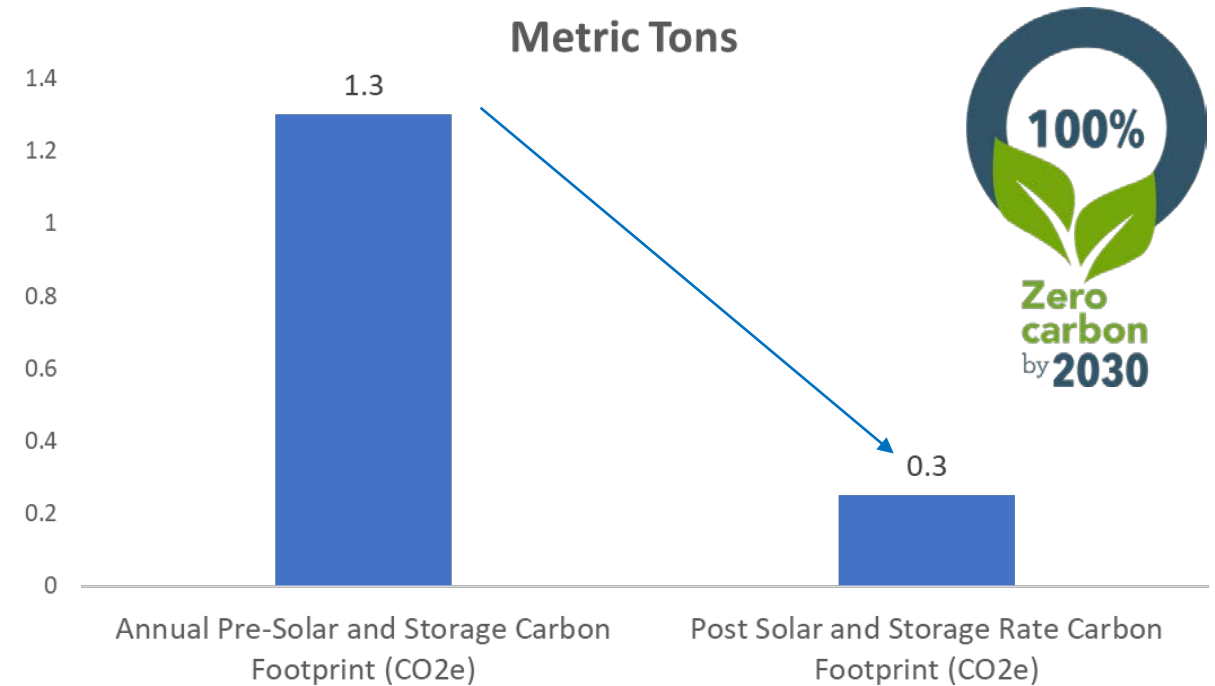
- Tesla has installed 200,000 storage units worldwide.
- Tesla noted on Q2 2021 earnings call that they are targeting production of **one million** Powerwalls per year by the end of 2022.
- Other battery manufacturers are also increasing storage production to keep up with global demand.

New rate provides a good payback and aligns with 2030 Zero Carbon goals

Internal Rate of Return Comparison (Illustrative Customer)



Decrease of 1 Metric Ton (CO₂e) per household for 30,000 customers would be equivalent to removing 7,500 gasoline cars off the road!



Support from experts and other stakeholders

“SMUD has a long history of supporting rooftop solar. As SMUD commences on its 2030 Zero Carbon Plan, SMUD needs to align its net metering policy to get the most out of solar and storage to decarbonize electricity, buildings, and transportation cost-effectively and affordably. To this end, SMUD has engaged in a transparent, stakeholder driven process and developed an innovative net metering tariff.

SMUD’s new tariff encourages coupling solar with storage so that customers can save money, enhance resiliency, and provide benefits to the grid. SMUD’s new net metering policy will also include options for virtual net metering which can bring distributed renewable energy to multi-tenant building customers. SMUD’s proposal generously doesn’t include any fixed charges for solar customers. The record in the California Public Utilities Commission’s on-going net metering proceeding (Rulemaking 20-08 020) indicates that some fixed charges for solar customers may be necessary to avoid undue rate increases for non-solar customers.”

- Mohit Chhabra, Senior Scientist, Climate and Clean Energy Program



Support from experts and other stakeholders

“SMUD’s proposed Solar and Storage Rate is a step in the right direction – it leverages price signals and incentives in a way that enables its goal of achieving a zero-carbon future.”



- Michael Colvin, California Energy Program Director, Environmental Defense Fund

Support from experts and other stakeholders

*"I would like to weigh in in favor of the SMUD 2021-22 Rate Proposal. I think it is an important first step in moving policy on Distributed Energy Resources to focus on compensating the value these resources bring to the grid. **As we battle the climate crisis, there is quite a lot of uncertainty about the value of different low-carbon resources in different locations on the grid. This proposal improves the alignment of financial incentives with the best available knowledge today about the value of DERs. In my view, it probably is still overly optimistic in valuing the contribution of DERs, and in the vision for the size of the DER role in the grid.** However, I do believe that DERs have an important role to play, and our knowledge of the most cost-effective low-carbon grid architecture continues to evolve. At this point in that evolution, the proposed changes are a prudent step in the right direction.*

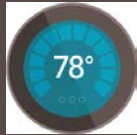




*I would also like to commend the expanded use of Critical Peak Pricing in the proposal. **SMUD has been a leader in this important area, which will be crucial to grid balancing as evening net peak demands grow due to a warming climate and increased solar adoption. CPP is the most proven-effective tool in eliciting demand-side adjustment to help balance the grid when it is under stress.**"*

- Severin Borenstein, E.T. Grether Professor of Business Administration and Public Policy at the Haas School of Business and Faculty Director of the Energy Institute at Haas. He is also Director Emeritus of the University of California Energy Institute (1994 – 2014)

Berkeley
Haas

Optional Critical Peak Pricing and Misc. Rates Changes

Optional residential Critical Peak Pricing (CPP) rate

Who can participate?	<div data-bbox="861 332 996 464"></div> <div data-bbox="759 496 1128 586">Customers with smart thermostats</div> <div data-bbox="1253 311 1503 468"></div> <div data-bbox="1202 496 1556 586">Customers with solar and storage</div> <div data-bbox="1648 318 1895 475"></div> <div data-bbox="1630 496 1923 586">Customers with storage only</div> <div data-bbox="2048 239 2308 472"></div> <div data-bbox="2020 496 2313 586">Customers with solar only</div>
What?	<ul style="list-style-type: none">• In times of extreme grid stress, SMUD declares a Critical Peak Pricing “event.”• SMUD asks customers to conserve energy and use batteries (where applicable).• Opted-in customers pay more during “events” in exchange for a discount on summer Off-Peak and Mid-Peak hours.
When?	<div data-bbox="715 901 851 1036"></div> <ul style="list-style-type: none">• June, July, August, September• 1 to 4 hours per event with advance notice• No more than 50 hours per summer
Why?	<ul style="list-style-type: none">• Conserves energy & reduces stress on grid during peak events, helping make energy available for others.• Reduces need for energy from less environmentally friendly power plants.• Opted-in customers receive discount rate during summer Off-Peak and Mid-Peak hours.

Open Access Transmission Tariff update

This rate does not impact SMUD's residential and commercial retail customers

Price description	Schedule 1 Scheduling, system control and dispatch service	Schedule 2 Reactive supply and voltage control from generation or other sources service
Yearly Delivery (per MW of Reserved Capacity per year)	\$4,340.62	\$964.52
Monthly Delivery (per MW of Reserved Capacity per month)	\$361.72	\$80.38
Weekly Delivery (per MW of Reserved Capacity per week)	\$83.47	\$18.55
Daily Delivery (per MW of Reserved Capacity per day)	\$16.69	\$3.71
Hourly Delivery (per MW of Reserved Capacity per hour)	\$1.0434	\$0.2319

New Programs to Support Storage with Solar

\$25M storage incentive program

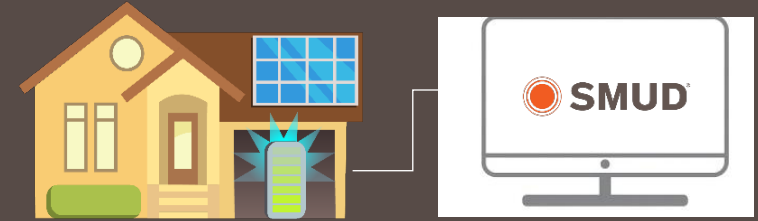
Type



Battery Storage



Battery Storage + Residential Critical Peak Pricing



Battery Storage + Virtual Power Plant Partner

Incentive

Up to \$500

Up to \$1,500

Up to \$2,500

Benefits

- Customer uses stored energy when power is most expensive
- Reduces SMUD's peak load
- Battery provides backup power during an outage

- Battery storage benefits



- Helps SMUD during critical times when energy demand is highest or the grid is stressed

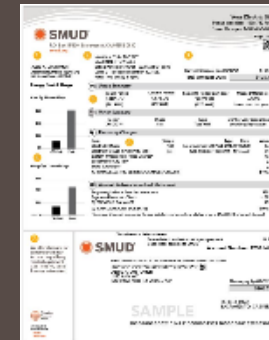
- Battery storage benefits



- SMUD pays an ongoing payment for participating in the program
- VPP partner shares stored energy with other customers when called upon

New Virtual Solar Program (VNEM)

- Virtual Solar Program for under-resourced multi-family dwelling communities effective June 1, 2022.
- SMUD buys all solar and allocates bill credits to individual program participants in that building
- Participant receive a bill credit from on-site solar
 - Eligible customers continue to receive EAPR or MED Rate discounts



Public Outreach Process

Public outreach process: integrated communications campaign

Community engagement

- Community organization & neighborhood association outreach meetings.
- Public workshops.
- Phone calls.
- Emails and information for sharing.



Extensive communication materials & resources

- Printed & digital newsletter articles to residential & commercial customers.
- Press release issued to all local media.
- 3 public notices published
- Fact sheets.



Email, web & digital

- Dedicated pages on SMUD.org and info on main page.
- E-newsletters.
- Social media posts.



Internal communication

- Daily updates, ENNs and a dedicated SharePoint site with employee toolkit including talking points, FAQs, fact sheets and presentation recordings.



Multi-lingual

- Rate materials translated to Spanish and Hmong and continue to be translated to other languages as opportunities are identified.

Public outreach process: direct engagement



Emails to customers, local organizations and to our Listserv subscribers.

256,000+

Community & business leaders received emails, letters and/or phone calls to offer meetings & information.



1,200+



Community & business partners were provided information and fact sheets to share with their constituents, members and networks.

300+

Local elected officials were mailed info packets and offered to meet.



55



Community organizations or neighborhood associations received presentations.

~50

What we've heard from customers and stakeholders

- Proposal is straightforward with minimal impact to majority of community partners' constituents.
- Significantly less feedback than in 2019 rate process which proposed grid access charge for solar customers.
- Changes to Net Energy Metering are overdue.
- Concerns about Solar and Storage Rate from segments of the solar industry and some solar customers.
- Current solar customers prefer proposed Solar and Storage rate than previously proposed grid access charge.
- Questions about mechanics of proposed changes:
 - How will battery storage incentives, Critical Peak Pricing, and Virtual Solar program?
 - How was the 7.4¢/kWh for excess solar calculated? Why isn't it higher? Can it be phased in?
 - Can NEM 1.0 be extended beyond 2030?
- Concerns about proposed rate increases from small # of customers impacted by COVID-19.

What happens next?

Final decision @ SMUD Board meeting - Sept. 16, 2021 @ 5:30 p.m. via Zoom

Need more information?

- Read the CEO & GM's Report on smud.org/RateInfo.
- Email questions or comments to ContactUs@smud.org or call 1-855-736-7655.
- For tips on energy management, visit smud.org.
- For commercial customer service, call 1-877-622-7683.
- For residential customer service, call 1-888-742-7683.



We welcome your
questions and
comments!

Questions?

