

a forum to clear the air

Oct. 29, 2024

Powering forward
Together.



Agenda

- **Meet our presenters**
- **Road to zero: Join the Charge!**
- **Progress toward our 2030 goals**
- **Maximizing customer & community benefits**
- **Q & A**



Rhonda Staley-Brooks
Director, Community
Relations Outreach &
Support



Sara Elsevier
Manager of Resource
Planning, Zero Carbon
Energy Solutions

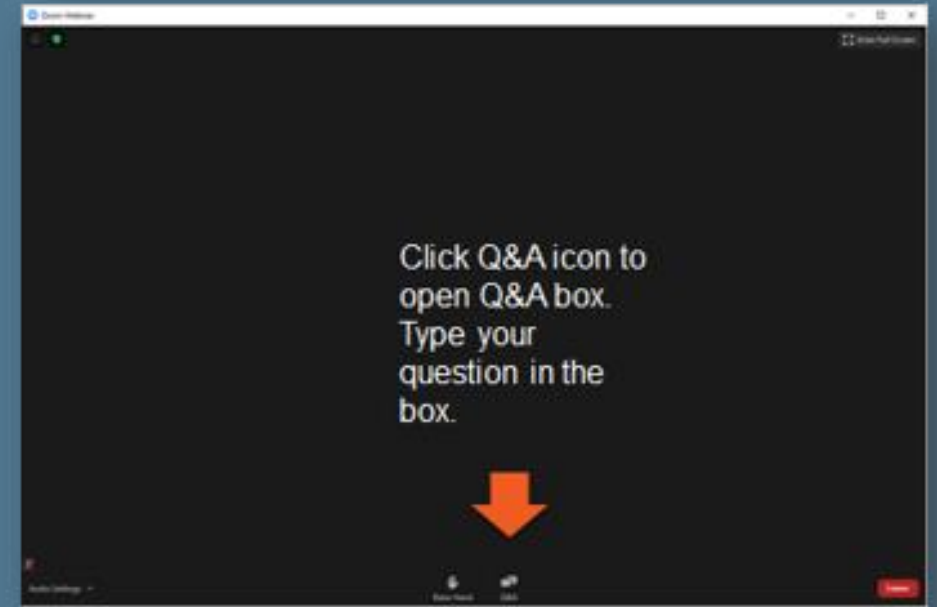


Misty Mersich
Manager of Program
Delivery, Zero Carbon
Energy Solutions

Questions can be submitted in the chat.

We'll take questions at the end of tonight's presentation.

Although we may not have time to answer all questions, we'll respond to as many as possible via chat and live responses.





Are you ready to Join the Charge?

CleanPowerCity.org



POLL:

Have you signed up to Join the Charge?

- YES!
- Not yet - send me the link!
- No, I want to learn more first.



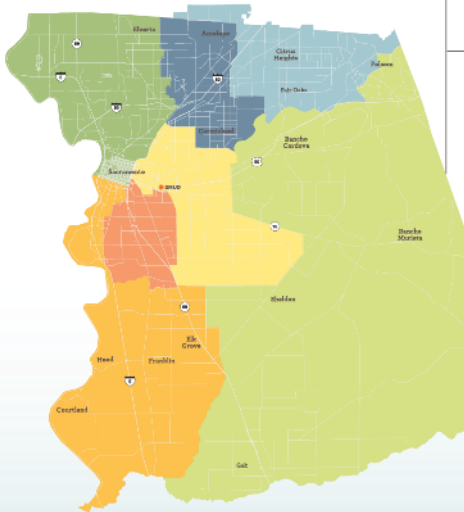


Progress toward our 2030 goals

About SMUD

SMUD is your community-owned, not-for-profit electric service.

6th largest
community-owned
in the U.S.



75+
Years
Est. 1946

Power mix
that's on average
about
50%
carbon-free



The most
ambitious goal
of any large
utility in the
United States

~**645,000** Customers

~**2,300** Employees



7 member
Elected
Board of Directors

SMUD's rates are among the lowest in California,
and on average more than **50% lower** than those of neighboring PG&E.



Where we're headed



Repurpose natural gas generation

Replace 2 power plants with renewable and storage resources and retool remaining 3 to minimize emissions.



Expand proven clean technology

Grow SMUD's renewable and battery storage by 3.5x. Support customer's resources via solar and battery storage.

~\$2 billion investment



Pilot & scale new technology and business models

Increase education and demand flexibility, spread adoption of customer-owned virtual power plants & invest in grid-scale technology.



Pursue grants, partnerships and limit rate impacts



Maximize community benefits

Stay affordable and reliable, improve air quality and overall community health while supporting under-resourced communities.

~\$2.5 billion investment

Goal:

Eliminate CO₂ from SMUD's power supply

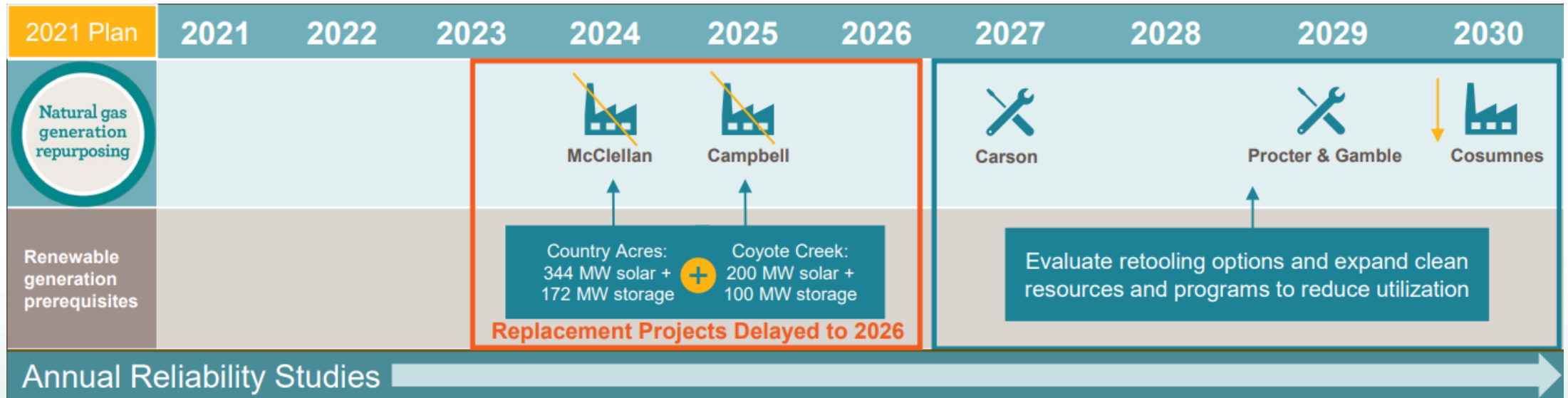
Zero carbon by 2030

Create thousands of new regional clean tech jobs



Natural gas generation replacement & repurposing plan update

Reduce and eliminate greenhouse gas (GHG) emissions while maintaining **reliable service and affordable electricity** for customers.



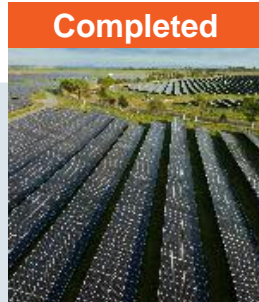


Progress so far

**SMUD
Board's
Climate
Declaration**

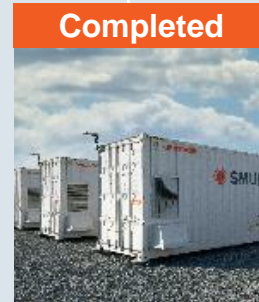


**2030 Zero
Carbon Plan**



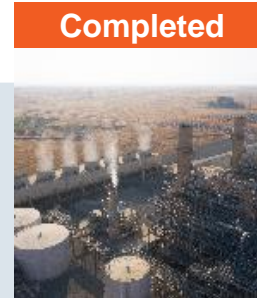
Completed

**Solar:
Drew/NTUA**



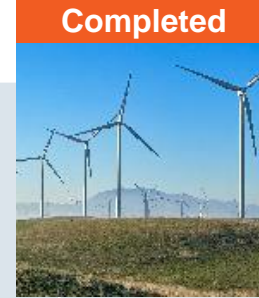
Completed

**Lithium-ion
battery storage**



Completed

**Geothermal:
Calpine**



Completed

**Wind: Solano
Wind Phase 4**



In progress

**Iron-flow long-duration
energy storage:
Demonstration w/ESS**

2020

2021

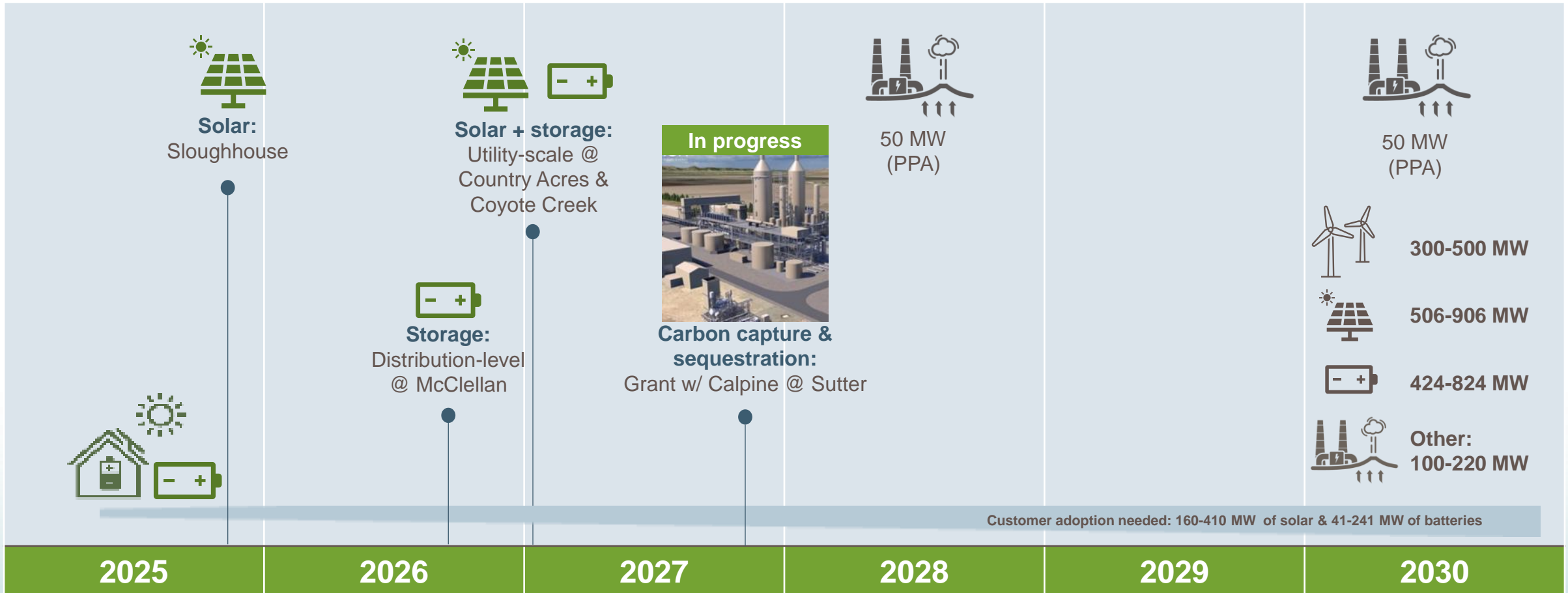
2022

2023

2024



In 6 years





Significant funding secured

\$50 million

DOE GRIP Grant for deploying next generation smart meters



\$270 million

\$10 million

CEC grant for demonstrating long-duration battery storage viability

\$337K+

CEC apprenticeship training program

\$10 million

CEC grant for transportation electrification

\$250K

DOE reimbursement for hydro power generation

\$200K

CEC grant for R&D efforts

\$3 million

Congresswoman Matsui earmark for neighborhood electrification

\$80K

American Public Power Association grant for workforce development



DOE funding in partnership with Calpine Corporation for carbon capture & sequestration



Partnerships drive community impact



Affordability



**Equitable
access**



**Community
engagement**



Maximizing customer & community benefits



Zero Carbon customer program portfolios



Building electrification & energy efficiency

Helping customers reduce carbon emissions in their homes and businesses by using electricity more efficiently and switching from gas to electric equipment.



Transportation electrification

Incentives, information and special prices to help customers buy and charge EVs for homes and businesses.



Distributed energy resources/ load flexibility

Programs and choices to help build Virtual Power Plants (VPP) that can manage and shift electricity use when energy is needed or when there's extra energy available.



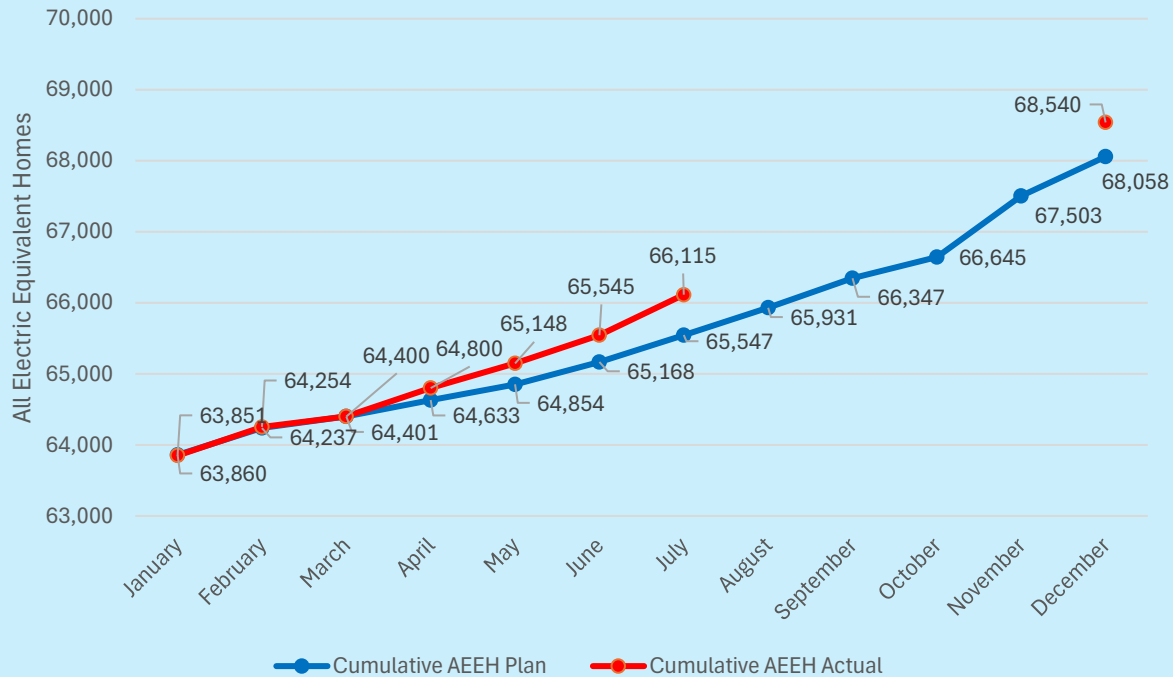
Green pricing

Letting customers have choice to sign up for a higher level of renewable or carbon-free electricity that fits their personal or business goals, beyond our regular electricity rates.

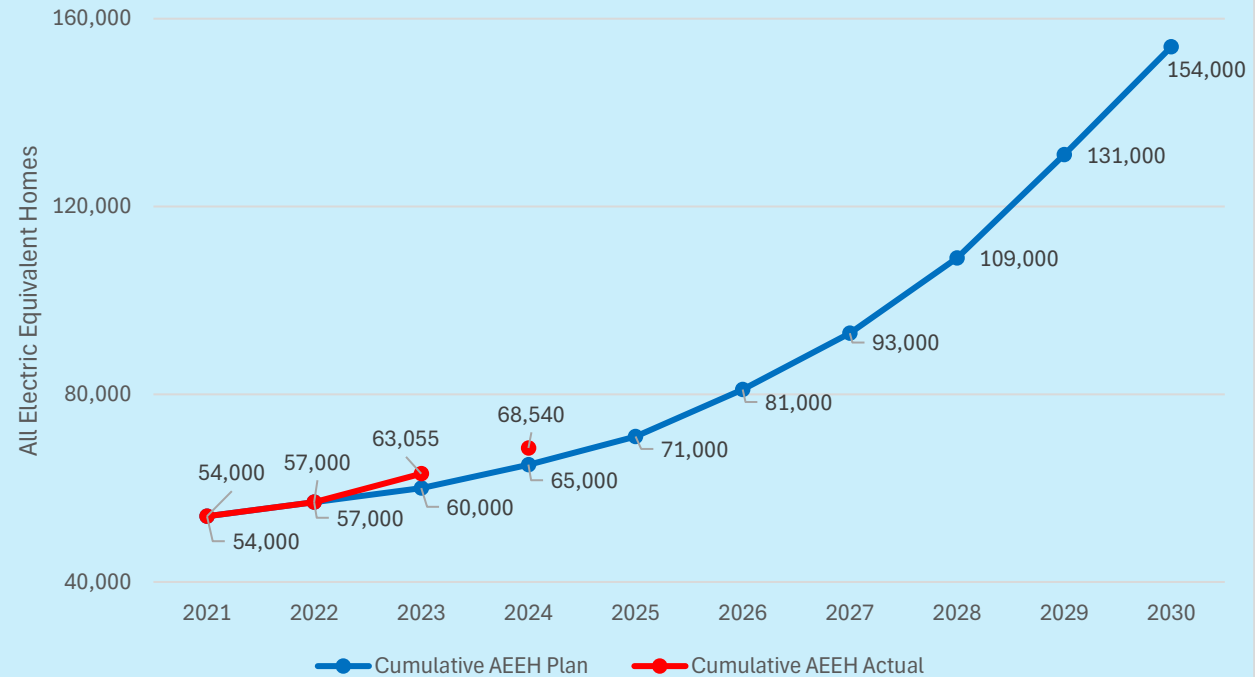


Building electrification & energy efficiency

2024 All Electric Equivalent Homes



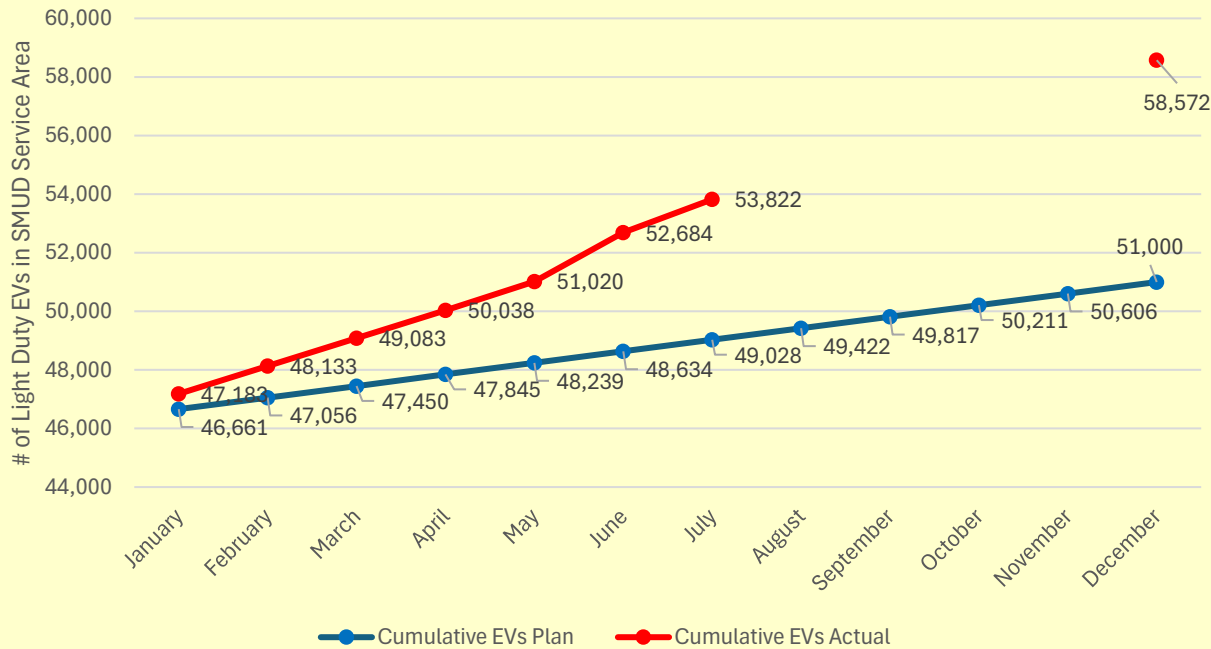
All Electric Equivalent Homes by 2030



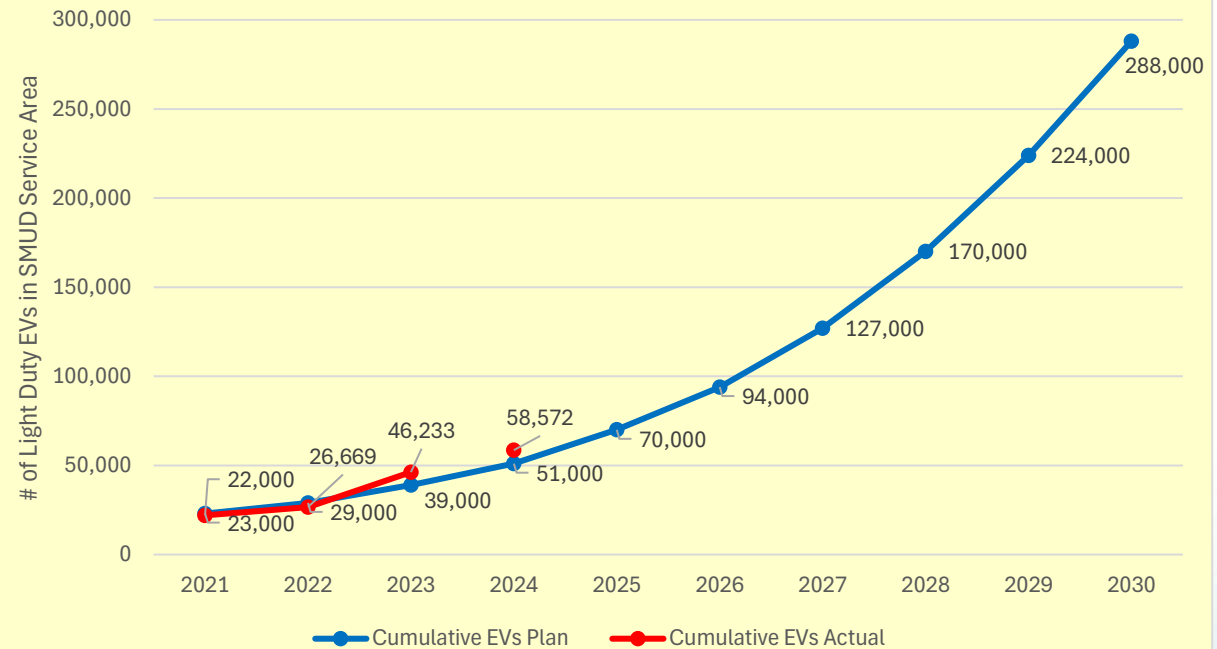


Transportation electrification

2024 Light Duty Electric Vehicles



Light Duty Electric Vehicles by 2030





Transportation electrification

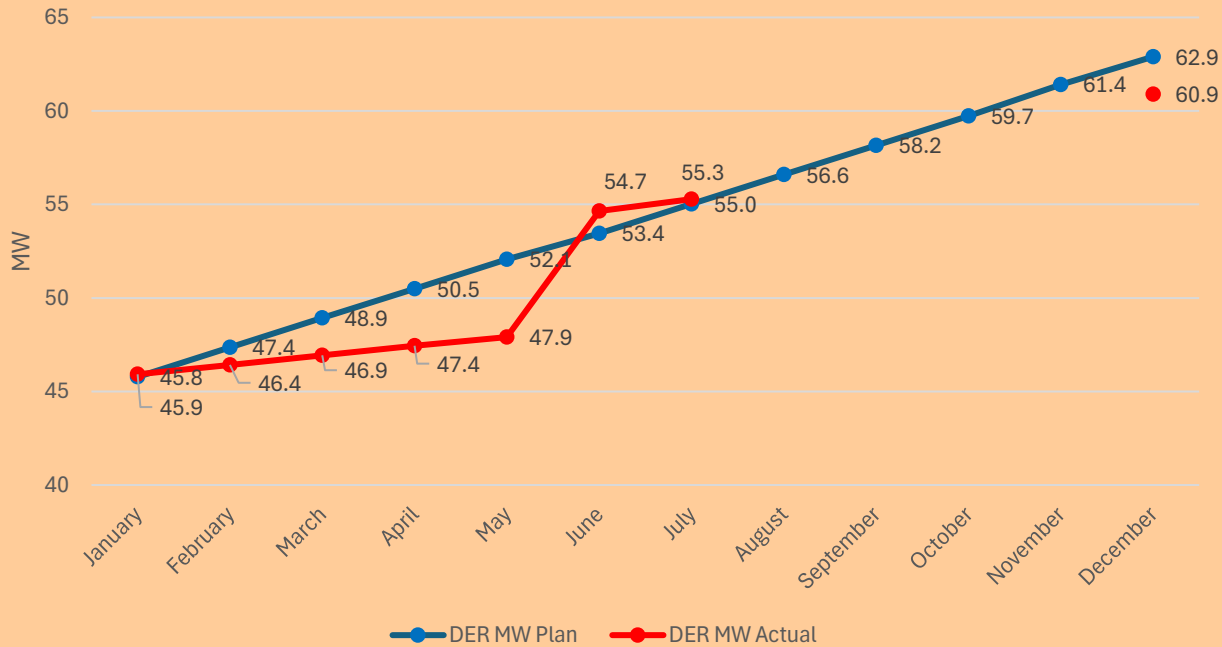
Project example: Multifamily EV charging & electrification



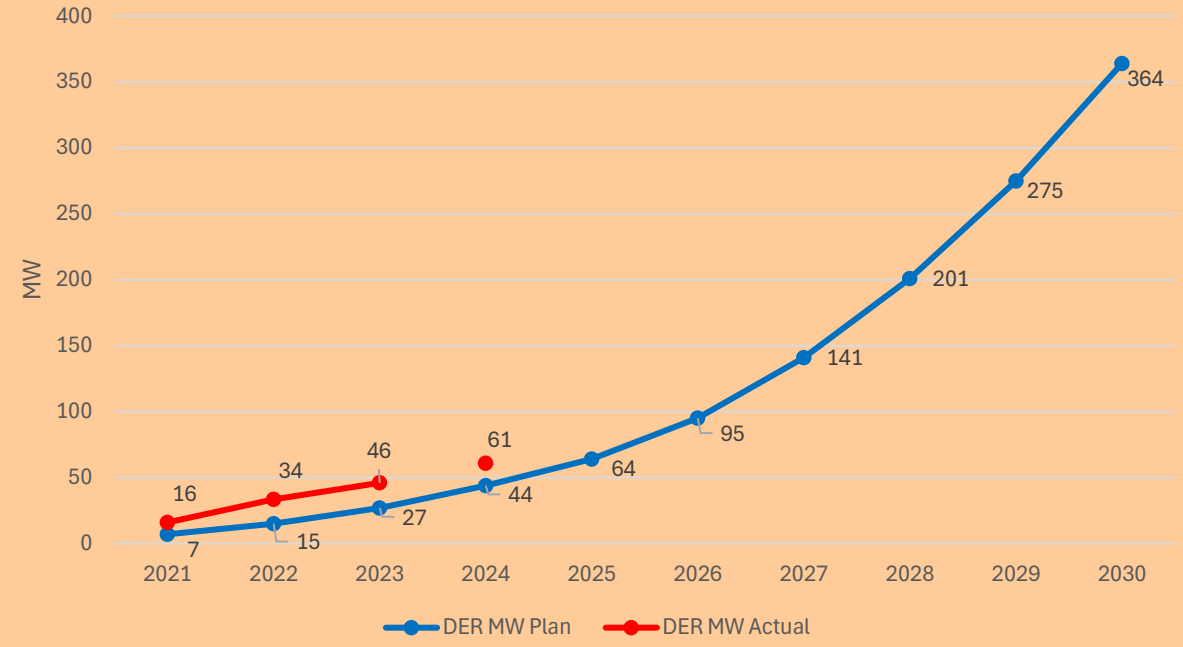


Distributed energy resources/load flexibility

2024 Distributed Energy Resources Cumulative MW



Distributed Energy Resources MW by 2030

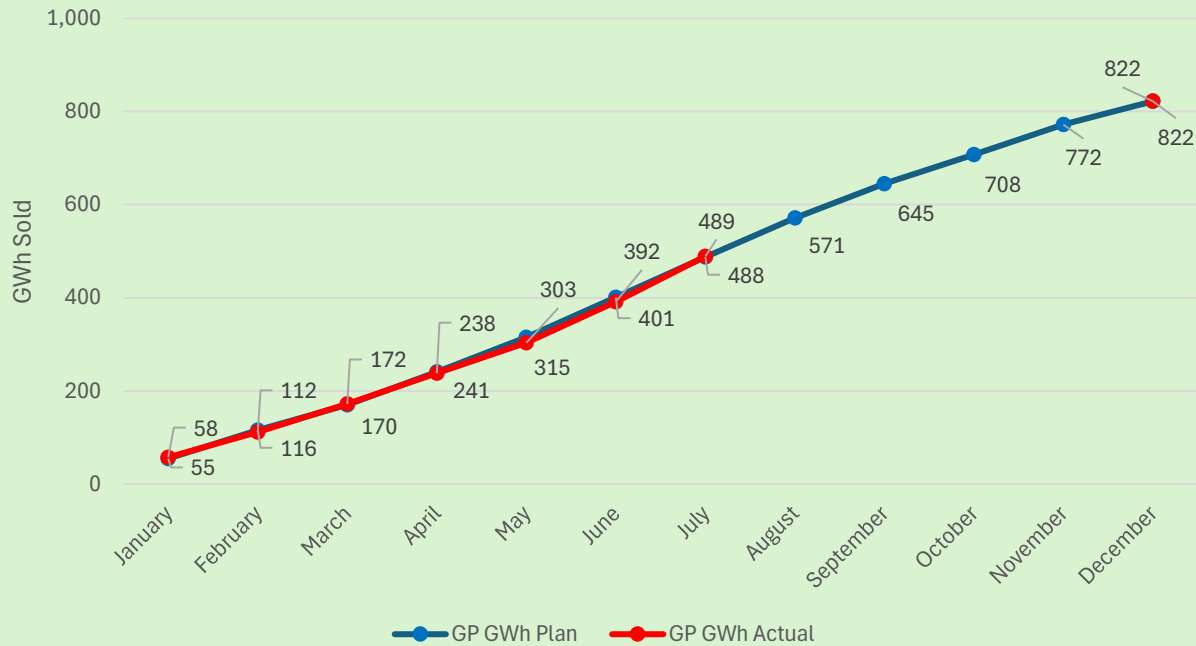




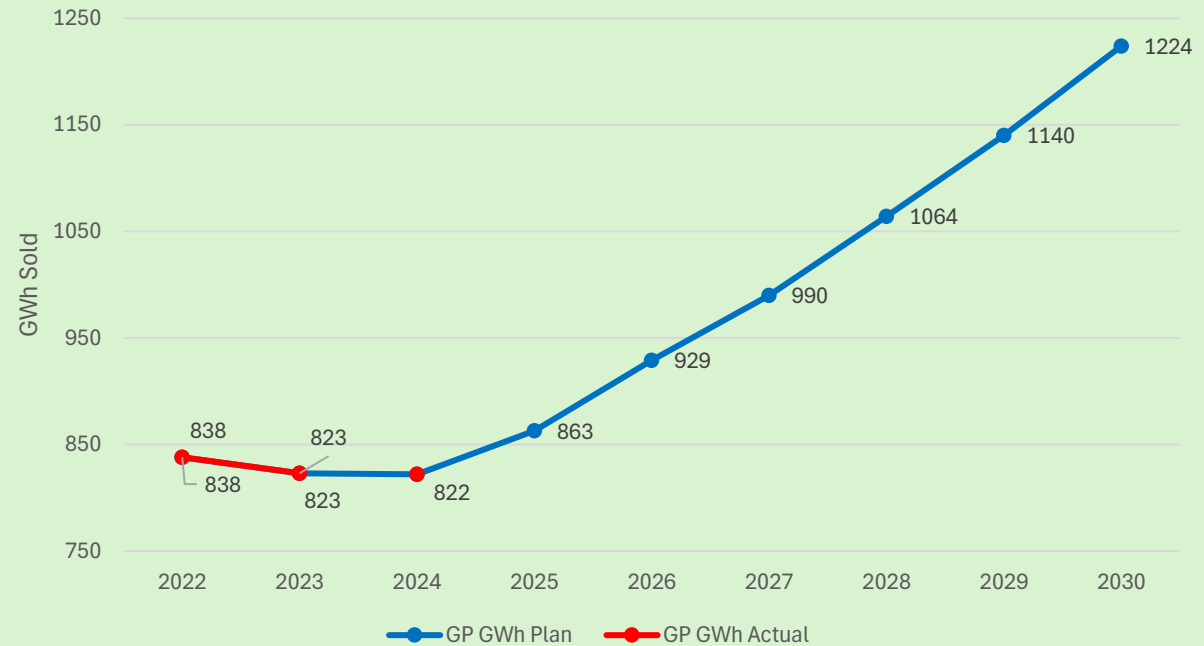
Green pricing programs

Key metrics & milestones

2024 Green Pricing GWh

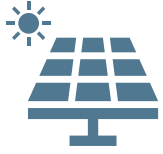


Green Pricing GWh by 2030

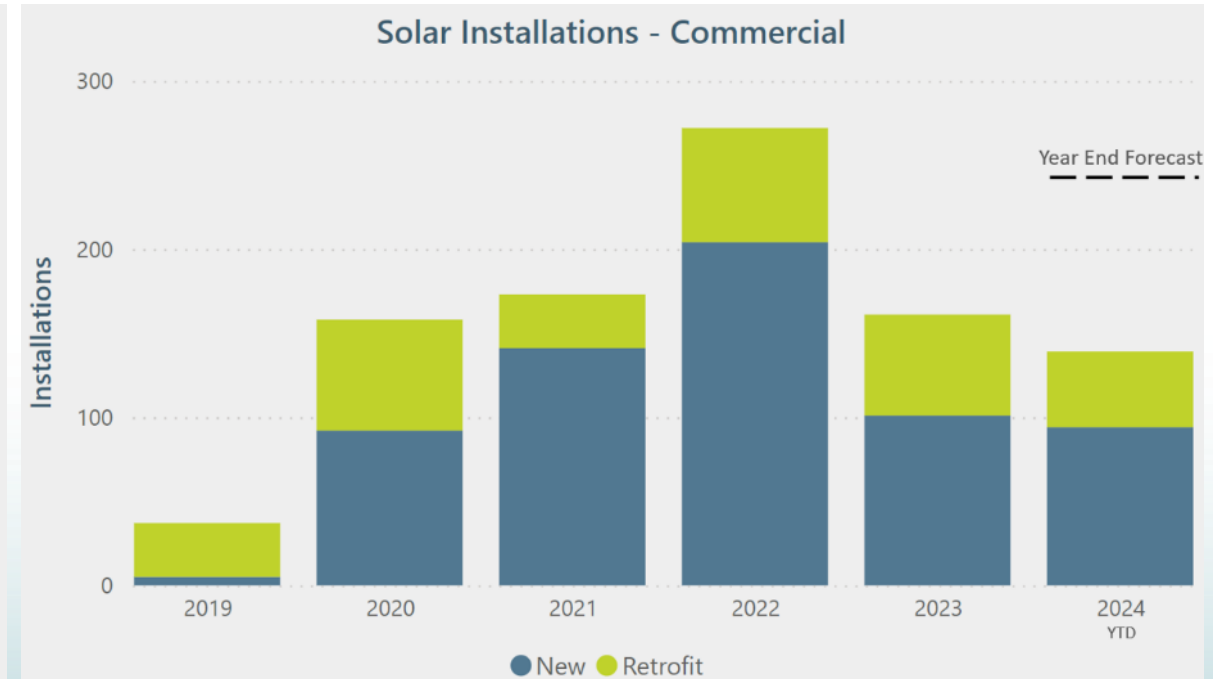
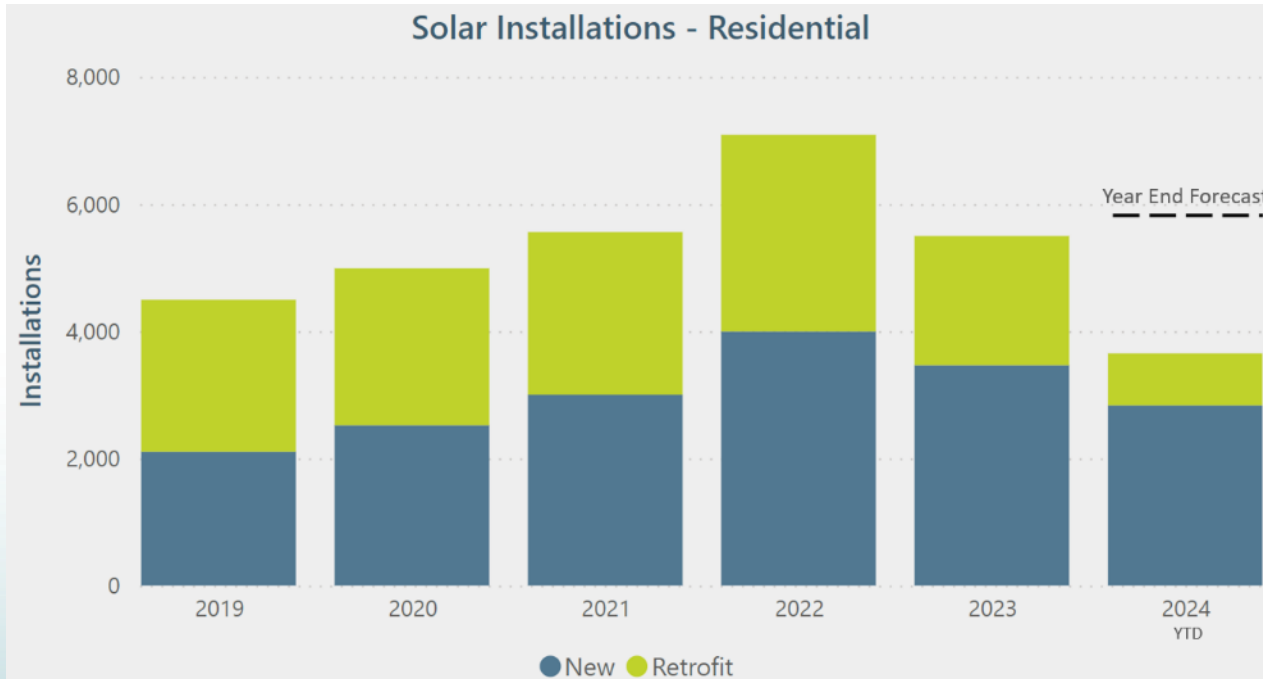
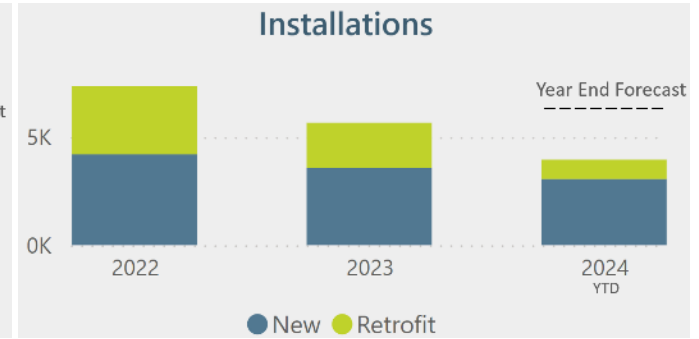
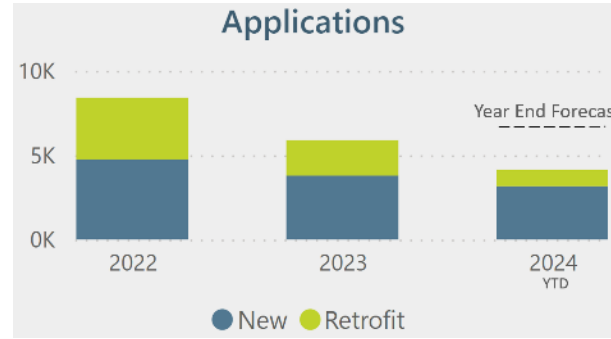


Residential Customer Solar

2024 progress



2023 & 2024 Solar Applications & Installations January through September 4					
	2023	2024	Variance		
			#	%	
Applications	3,702	4,476	774	21%	↑
Installations	3,893	4,019	126	3%	↑



Our largest electrification rebates & incentives



Heat pump water heaters

up to \$2,500



HVAC

up to \$3,000



Battery Storage

up to \$10,000



EV charging

up to \$1,000



View all residential customer incentives

smud.org/Rebates



Business customer incentives

smud.org/MyAdvisor



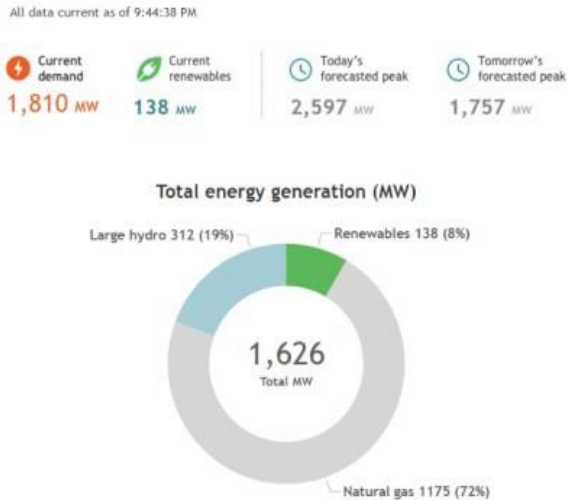
Multi-family rebate program



Follow along with our progress

Data-driven dashboards

Energy outlook dashboard



smud.org/EnergyOutlook

Emission & zero carbon progress dashboard

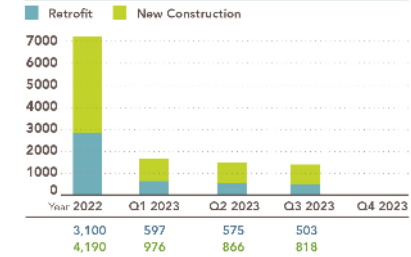
Quarterly generation and emissions from gas plants

2023 Planned GHG = 2.6 million metric tons

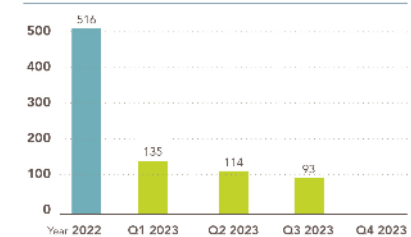


	Q1 2023	Q2 2023	Q3 2023	Q4 2023
Thermal plant contract	153k MT CO2e	33k MT CO2e	175k MT CO2e	--
Cosumnes Power Plant	138k MT CO2e	168k MT CO2e	388k MT CO2e	--
Cogens and peaker plants	208k MT CO2e	103k MT CO2e	169k MT CO2e	--
Total	499k MT CO2e	304k MT CO2e	732k MT CO2e	

Solar installations (Residential + commercial)



Battery storage installations (Residential + commercial)



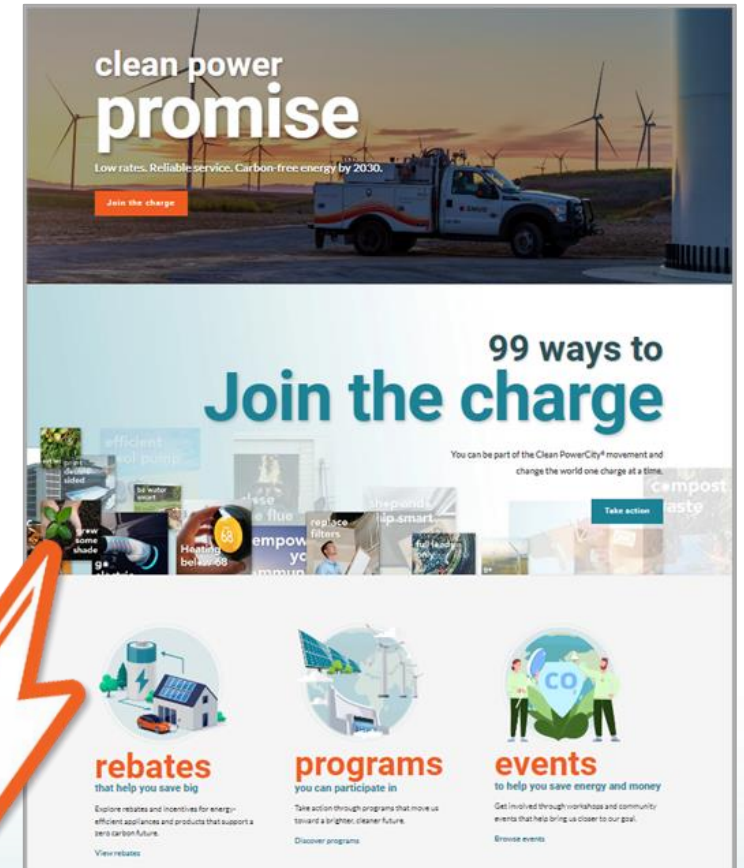
smud.org/2030Progress



CleanPowerCity.org

Show your support to create a healthier environment and cleaner air:

- Discover rebates & incentives.
- Get **99 tips** on being energy smart and reducing your emissions.
- Find local events to get involved in.
- Check out our Road to Zero blog.



Welcome to the Q&A

Questions can be submitted in the chat.

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