
June 25, 2025
progress
to clear
the air
zero carbon by 2030
SMUD®

Agenda

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

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Rhonda Staley-Brooks
Director, Community Relations Outreach & Support

Joshua Langdon
Director of Power Generation, Zero Carbon Energy Solutions

Obadiah Bartholomy
Manager of Distributed Energy Strategy, Zero Carbon Energy Solutions

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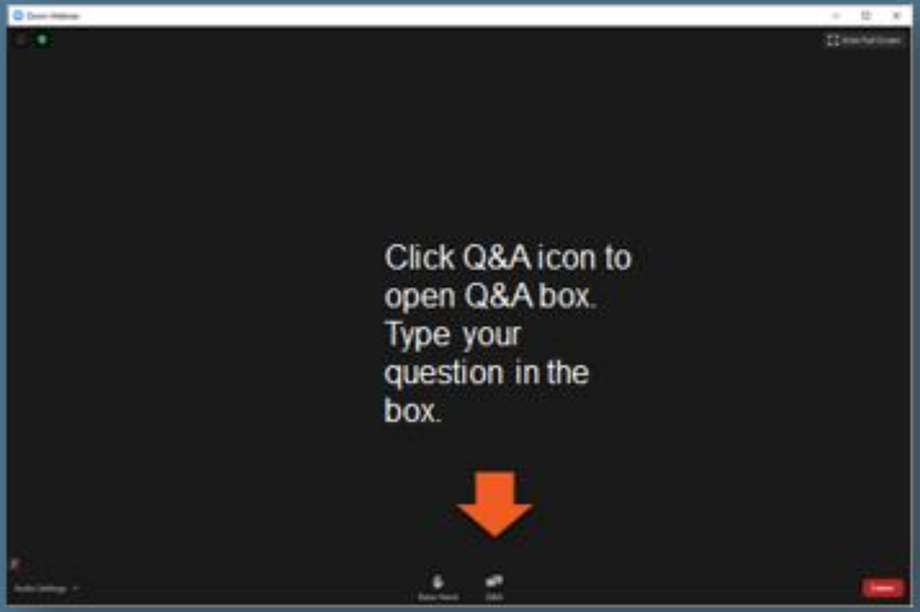
Questions can be submitted in the chat.

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.



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We power business

smud.org/Business

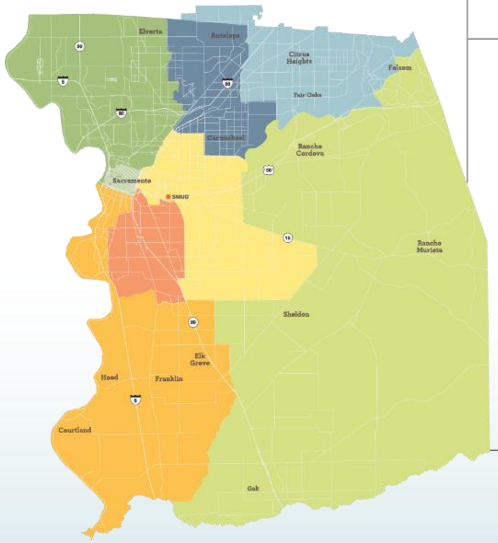
POLL:
Have you signed up to Join the Charge?

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

About SMUD

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

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



75+ Years

Est. 1946

2023 Power mix

about

78%* **carbon-free**

Zero carbon by 2030

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.

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Partnerships drive community impact

Affordability

Equitable access

Community engagement

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Progress toward our 2030 Zero Carbon goals

Guardrails: Affordability & Reliability

The 2030 Zero Carbon Plan was designed to be a flexible pathway, without compromising on our guardrails of **affordability** & **reliability.**

100%

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.

Up to 90% reduction

Remaining 10%+

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.

Goal:

CO_2

Eliminate CO_2 from SMUD's power supply

100%

Zero carbon by 2030

Create thousands of new regional clean tech jobs

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Significant funding secured

$50 million

DOE GRIP Grant for deploying next generation smart meters

$25 million

CEC reliability & resilience grant to improve infrastructure on the downtown

$10 million

CEC grant for transportation electrification

$3 million

Congresswoman Matsui earmark for neighborhood electrification

$337K+

CEC apprenticeship training program

$250K

DOE reimbursement for hydro power generation

$200K

CEC grant for R&D efforts

$80K

American Public Power Association grant for workforce development

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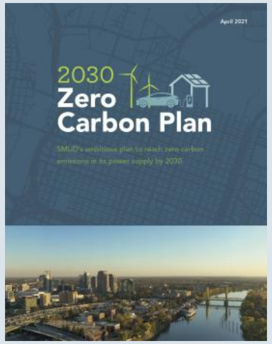
Progress so far – Utility Scale Generation Projects

2020	2021	2022	2023	2024	2025
SMUD Board's Climate Declaration	**2030 Zero Carbon Plan**	Completed: **100 MW:** Drew Solar Completed: **4 MW:** Hedge Lithium-ion Battery storage	Completed: **100 MW:** Calpine Geysers geothermal	Completed: **85 MW:** Solano Wind Phase 4	Commissioning: **50 MW:** Sloughhouse solar PPA Approved: **100 MW:** Hatchet Ridge Wind

Completed

100 MW:
Drew Solar

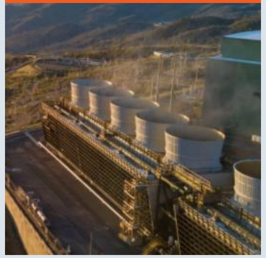


2030 Zero Carbon Plan

Completed

4 MW:
Hedge Lithium-ion Battery storage

Completed



100 MW:
Calpine Geysers geothermal

Completed

85 MW:
Solano Wind Phase 4

Commissioning

50 MW:
Sloughhouse solar

PPA Approved

100 MW:
Hatchet Ridge Wind

~2,600 MW more targeted by 2030

- Local Solar
- Local Battery
- Regional Wind
- Regional Solar
- Geothermal
- CCS

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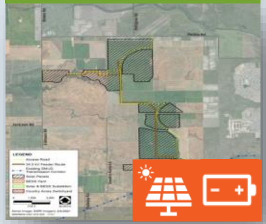
5 years Plan - Utility Scale Generation Projects

PPA Approved

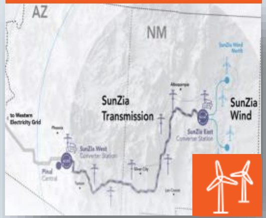
46 MW Solar
Terra-Gen Edsan

Under Construction



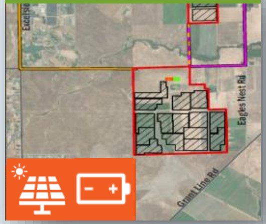
344MW Solar +
172MW x 4hr Battery:
Country Acres

PPA Approved



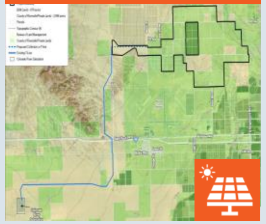
150 MW Wind:
Sunzia

In progress



75 MW Solar +
37 MW x 4hr Battery:
Oveja Ranch

PPA Approved

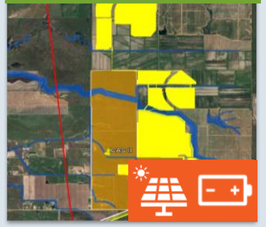


70 MW Solar:
Grace

PPA Approved

160 MW x 4hr Battery:
Dry Creek

Under Development



156 MW Solar +
156 MW x 4hr Battery:
Curry Creek

In progress

CCS:
Calpine @ Sutter

Customer adoption needed: 160-410 MW of solar & 41-241 MW of batteries

2026 – 2030+

Additional resources under evaluation:

- ~100 MW
- ~300 MW
- ~200 MW
- Other: ~400 MW

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New technology: Sutter Carbon Capture & Sequestration

- Up to 1.75 million metric tons of GHG stored annually.
- Calpine's Los Medanos Energy Center (LMEC) CCS demonstration project has showed success in capturing GHG >95%.
- SMUD's interest is to potentially purchase clean energy under a power purchase agreement (PPA).
- Calpine is working to complete the Front-End Engineering Design (FEED) study to inform PPA pricing.
- **Next Steps:** SMUD to discuss a potential PPA with the Board by mid 2026 (project online in 2029).

Sutter Decarbonization Project

CCS Demonstration

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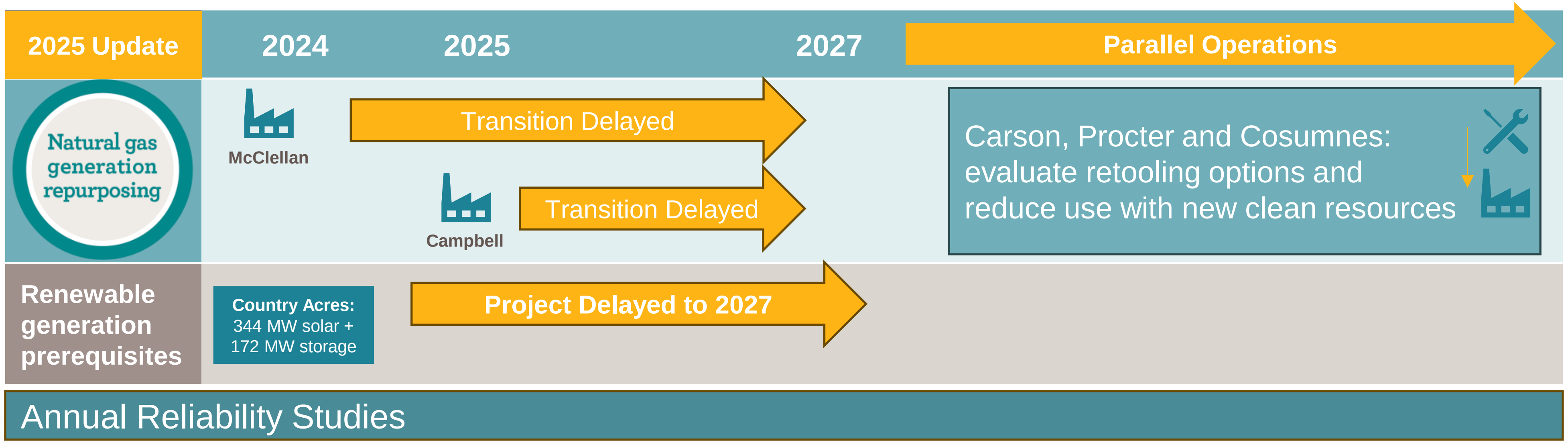
Natural gas generation replacement & repurposing plan update

McClellan and Campbell replacement resources delayed, shifting the original schedule out.



- Updated reliability studies confirmed the Country Acres project can replace McClellan and Campbell.
- Once Country Acres is online, parallel availability of thermals will be needed to ensure a reliable transition.

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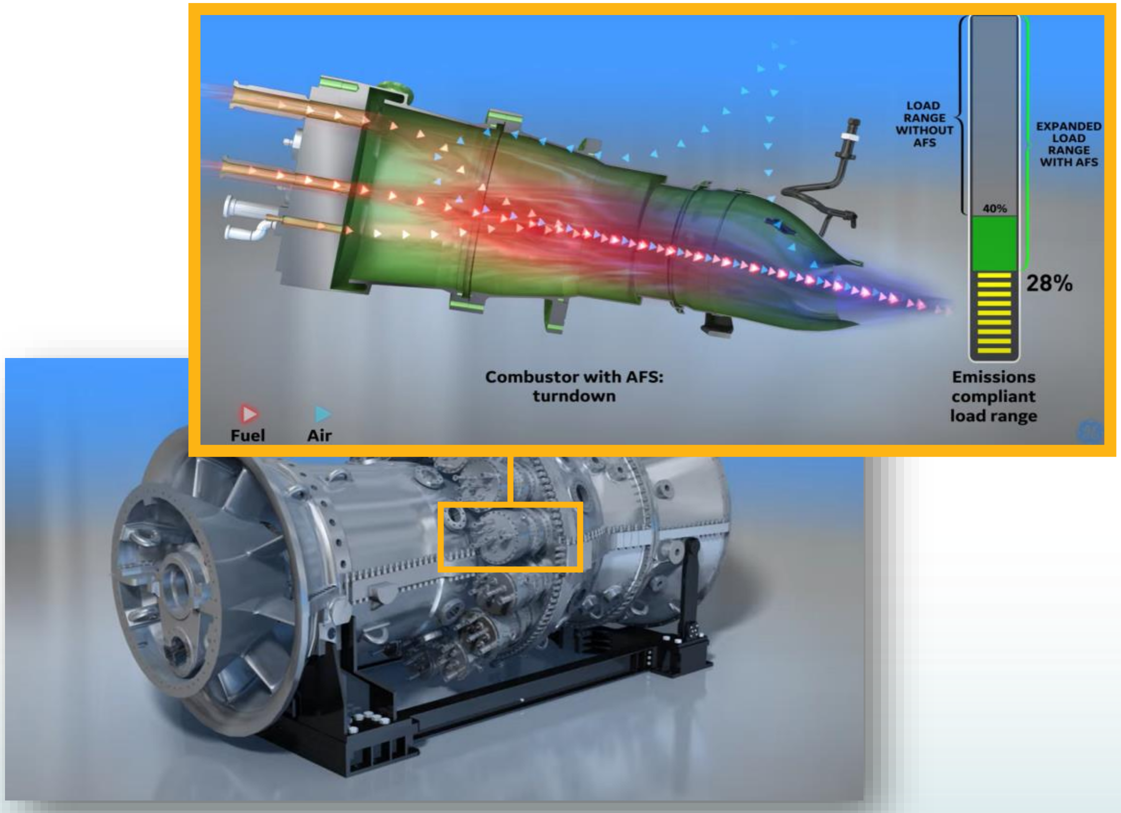
Turndown project: Cosumnes Power Plant (CPP) Retooling

This project will allow CPP to reduce MW output while keeping both gas turbines online, resulting in up to ~100 MT in GHG reduction.

- Operational flexibility gained by operating CPP at a lower minimum capacity when generation isn't needed.
- Up to 27% reduction in GHG at CPP, ~100k MT.
- Up to an estimated $7 million/year savings in fuel.
- Completion date: Q4 2025.



Maximizing customer & community benefits

Powering forward.
Together.

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.

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.

Transportation electrification

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

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.

Our largest electrification rebates & incentives

Heat pump water heaters

up to $2,500

HVAC

up to $2,500

Battery Storage

up to $10,000

+ earned financial incentives for SMUD partnership

EV charging

up to $1,000

+ a discount rate & Managed Charging Incentives

View all residential customer incentives

smud.org/Rebates

Business customer incentives

smud.org/MyAdvisor

Multi-family rebate program

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Go green with SMUD's voluntary Green Programs

Residential Greenergy

Customers can purchase renewable and carbon free energy for their homes for as low as $3 per month.

Residential SolarShares

Gives benefits of clean, solar energy to customers while SMUD maintains the infrastructure.

Commercial Greenergy

Businesses choose different tiers based on the % of their energy usage that will come from renewable sources (from 50% usage, up to 100%).

Neighborhood SolarShares

Builders of new homes can secure Sacramento-based solar from SMUD to meet the solar mandate in the California. **Program fully subscribed*

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More savings opportunities

MyEnergy Optimizer

- Works with your smart thermostat.
- Shifts energy use out of times when demand is at its highest.
- **$50** Prepaid Mastercard®, + **$25** for each summer you participate.

MyEnergy Optimizer Partner+

- For solar + storage systems.
- Battery reduces energy usage when demand is highest and clean energy resources are scarce.
- One-time enrollment incentive up to **$10,000** per household **+ quarterly incentives** for Tesla.

Managed EV Charging

- Smart technology to optimize EV charging.
- Ford, GM, BMW & Tesla.
- One-time, initial incentive and a quarterly reward payment.

Income-qualified offerings

- Bill discounts.
- Medical Discount Rate.
- Billing & financial assistance.
- Free energy audits.
- Programs to help customers make weatherization & energy-efficiency improvements.

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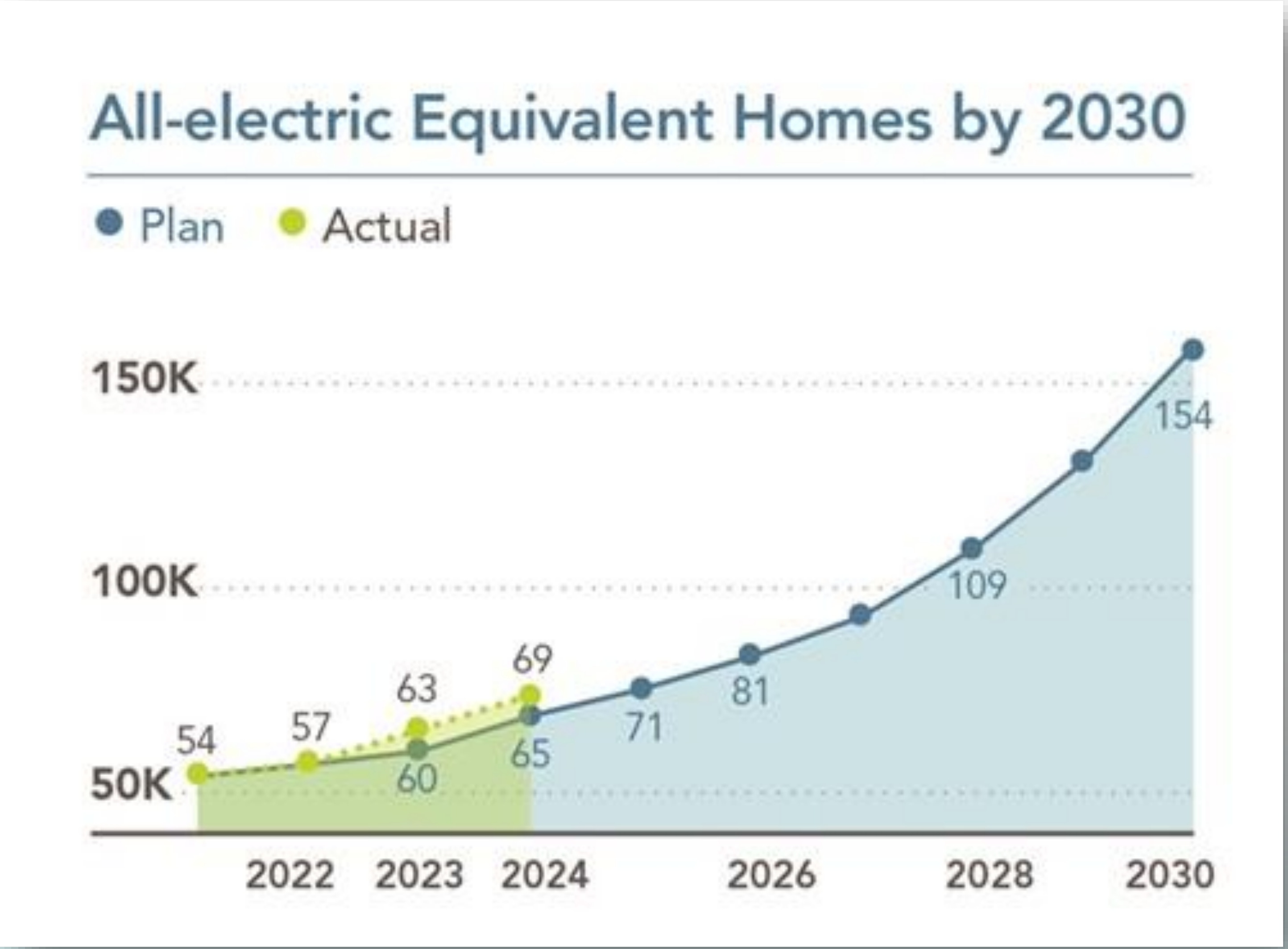
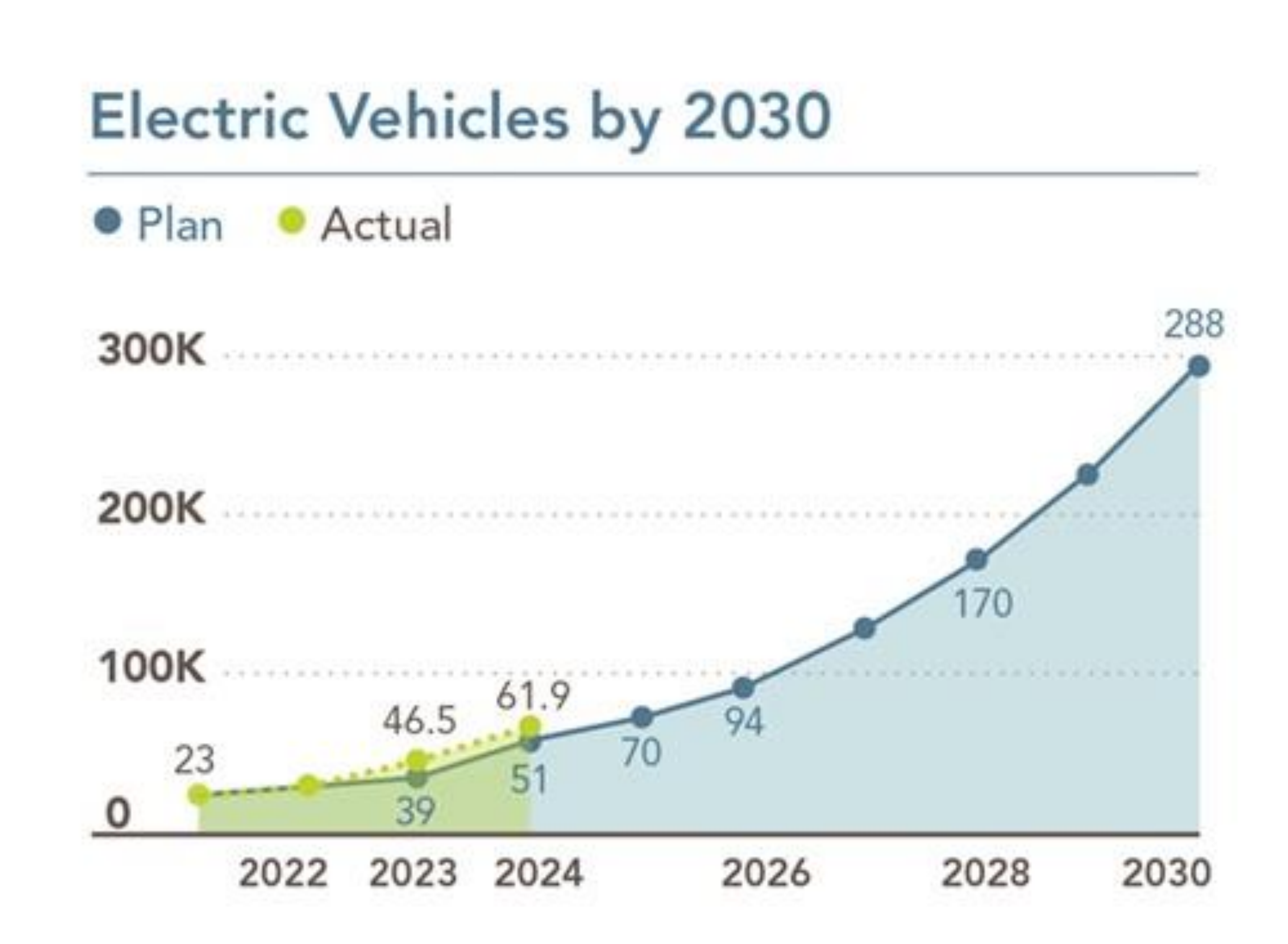
Building electrification & energy efficiency



Transportation electrification



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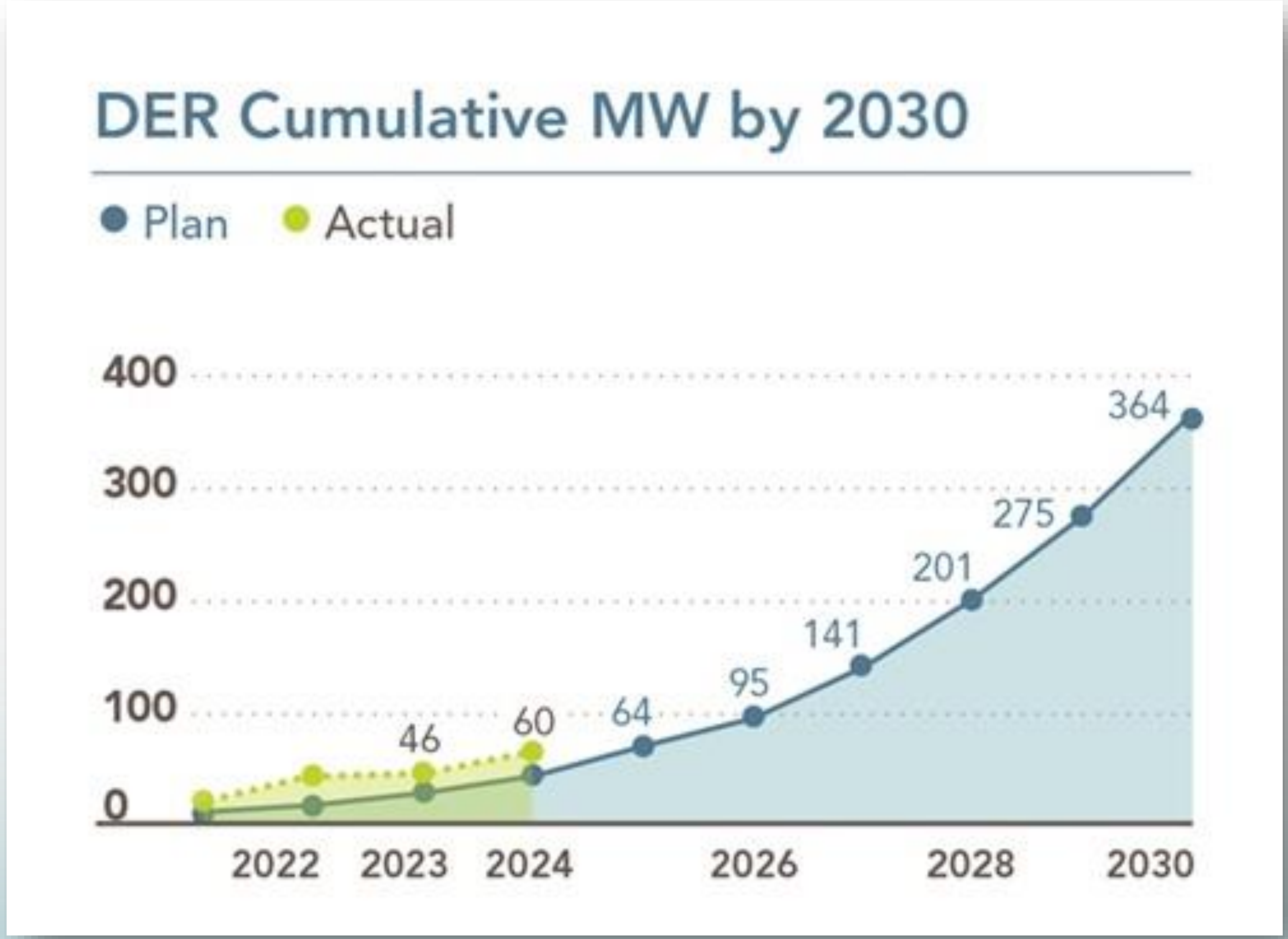
Distributed energy resources/load flexibility



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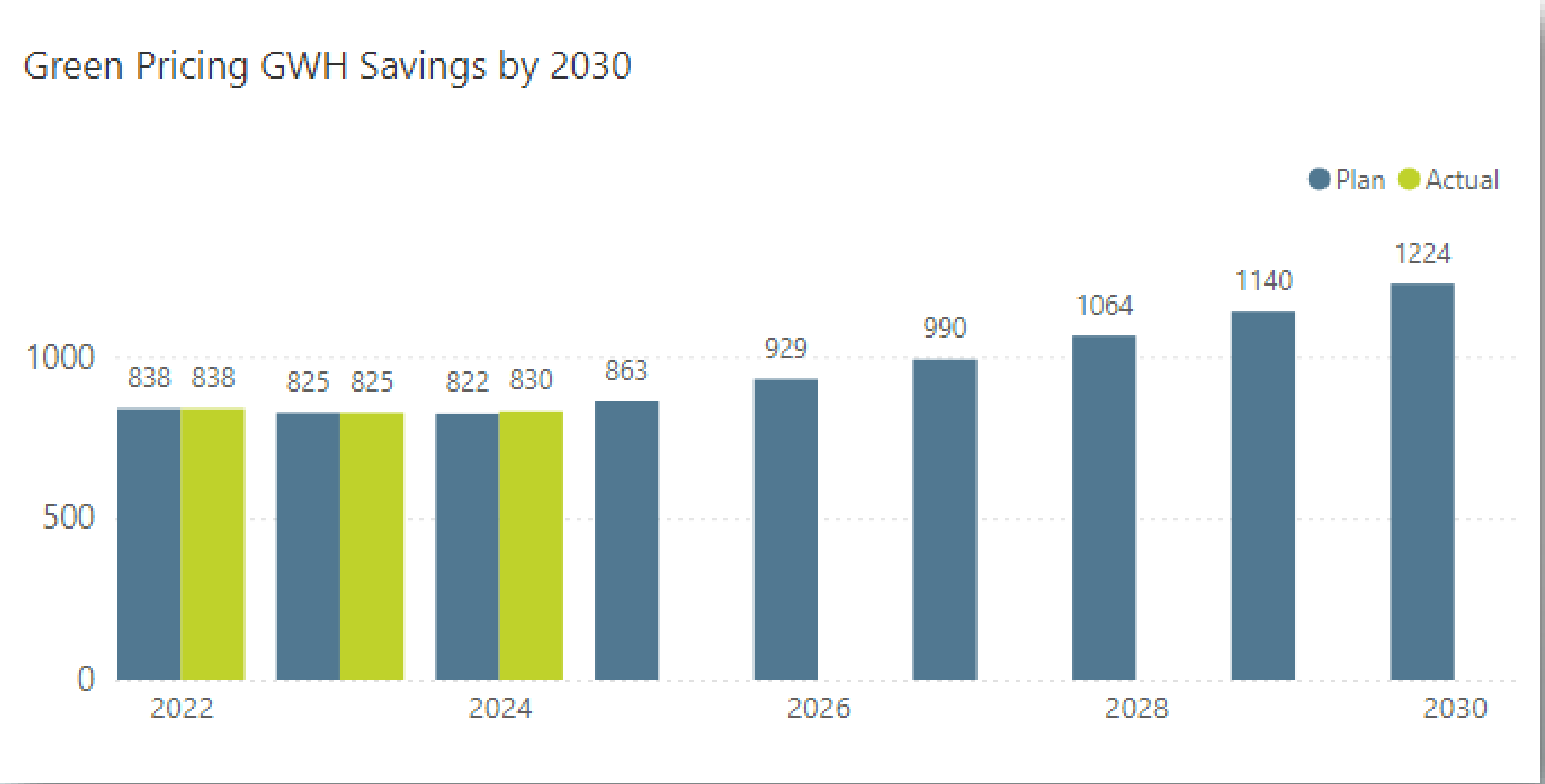
Green pricing programs

Key metrics & milestones



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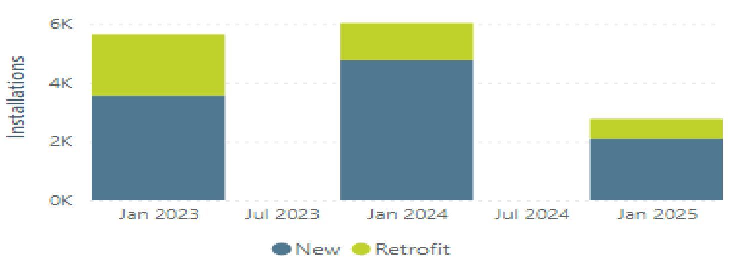
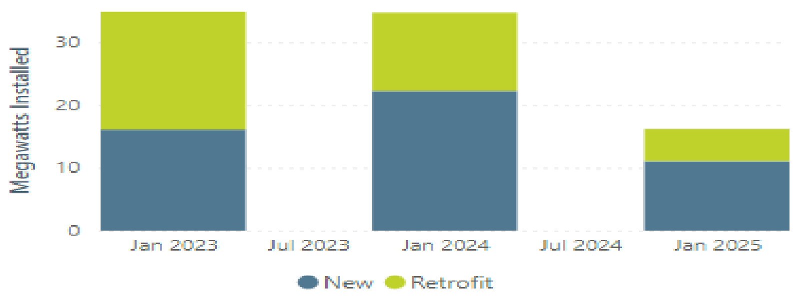
Residential Customer Solar

2024 progress





YTD Installations

2024	2025	Difference #	Difference %
2,664	2,773	↑ 109	↑ 4%

Installations by Year

Construction Type	2023	2024	2025
New	3,562	4,779	2,103
Retrofit	2,092	1,253	670
Total	**5,654**	**6,032**	**2,773**

YTD MW Installed

2024	2025	Difference #	Difference %
15.02	16.16	↑ 1.14	↑ 8%

MW Installed by Year

Construction Type	2023	2024	2025
New	16.07	22.26	11.05
Retrofit	18.76	12.43	5.11
Total	**34.83**	**34.70**	**16.16**

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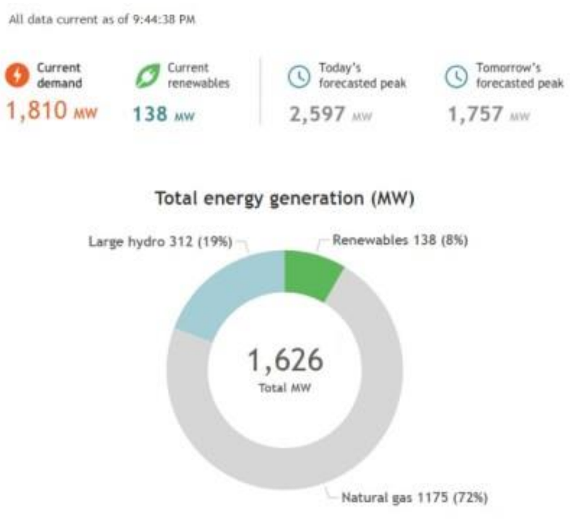
Follow along with our progress

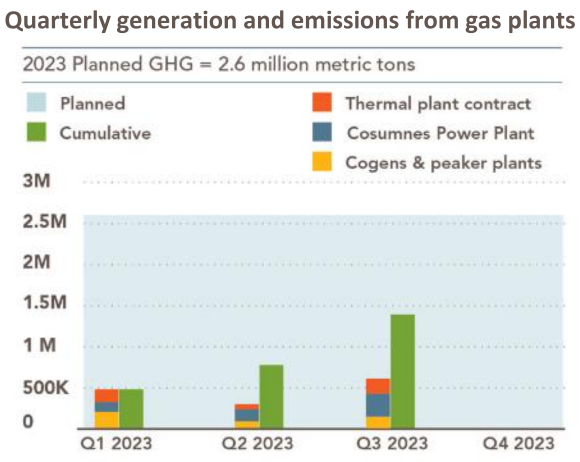
Data-driven dashboards

Energy outlook dashboard

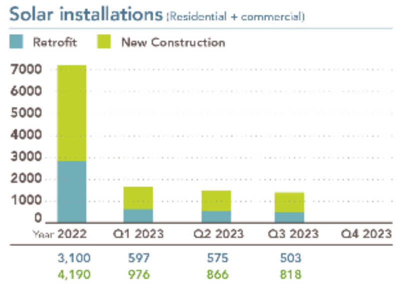


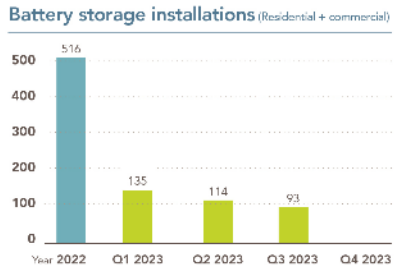
smud.org/EnergyOutlook

Emission & zero carbon progress dashboard



	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 CO02e	169k MT CO2e	--
Total	**499k MT CO02e**	**304k MT CO2e**	**732k MT CO2e**	



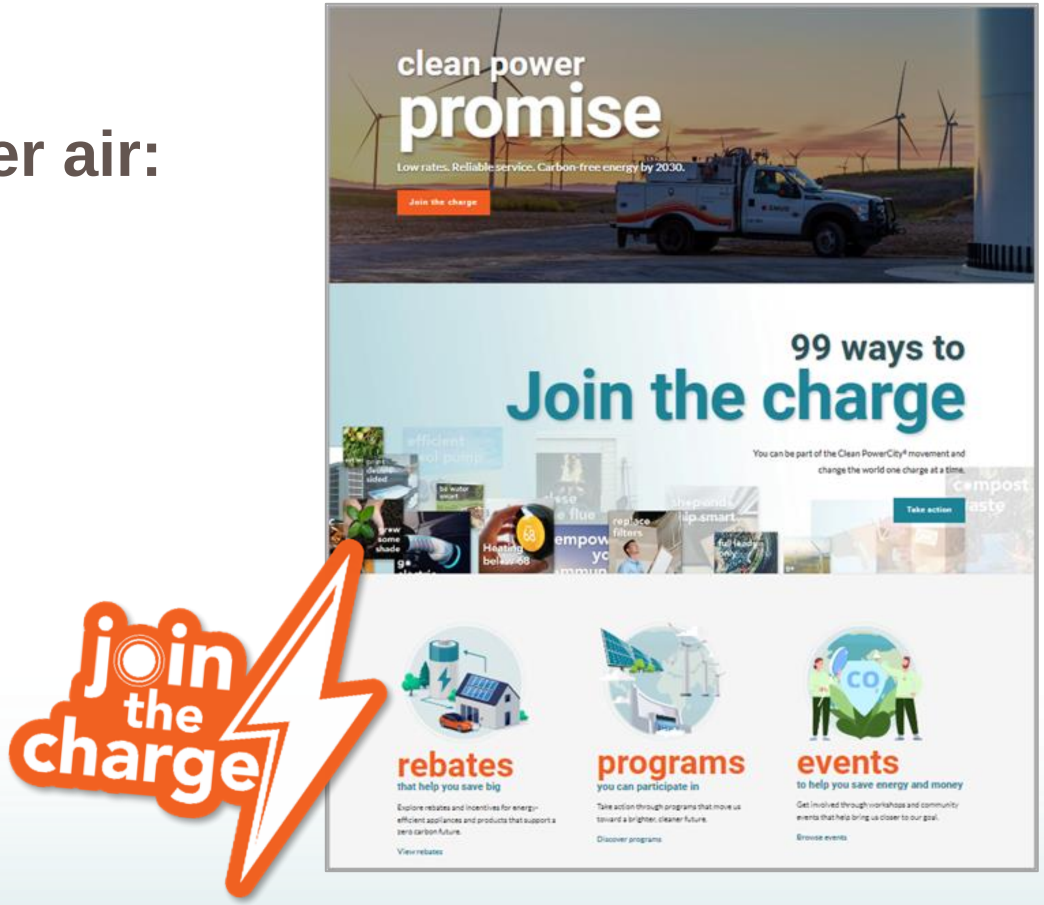


smud.org/2030Progress

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.



@mysmud @SMUDUpdates @mysmud @smud @smud

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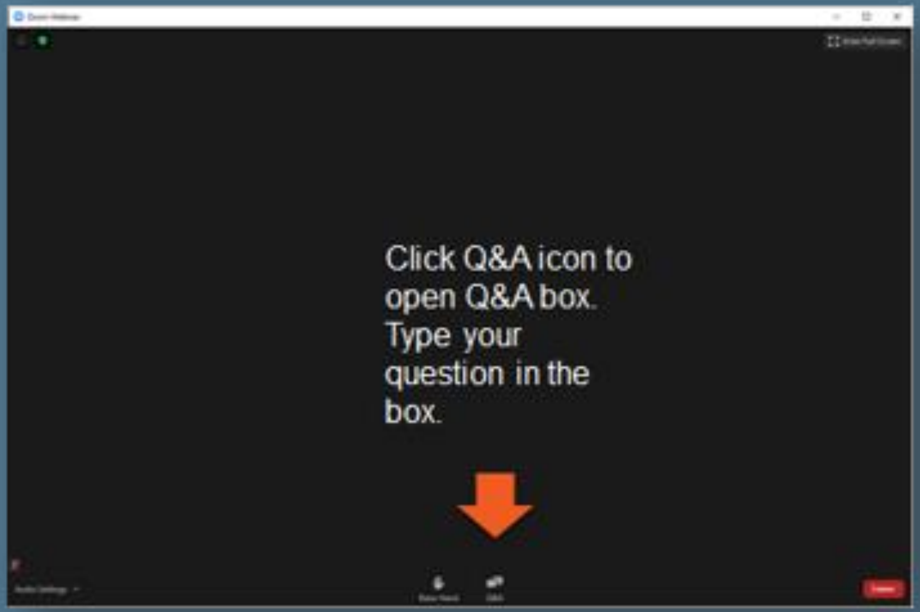

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