



Air Quality and Climate Progress in the Sacramento Region - *and Opportunities for More*

SMUD Board of Directors

September 8, 2026

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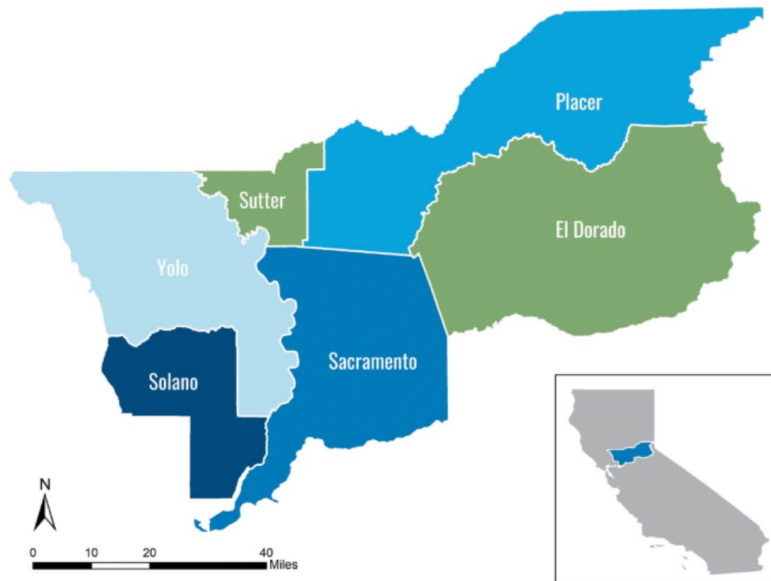
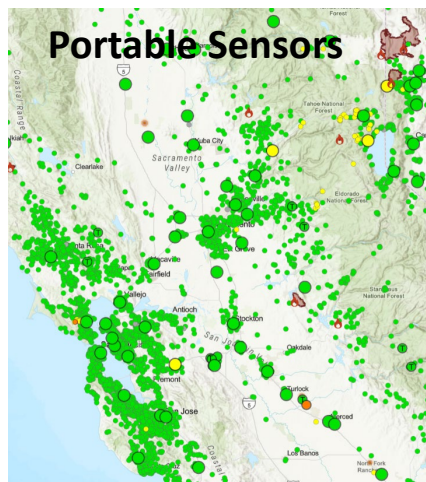
Executive Director and Air Pollution Control Officer

Framing the Conversation

- Air quality is better than it has been in 25 years
- But progress isn't reaching every community equally
- Tackling major pollution sources is essential to the next wave of improvements
- Transportation is a critical opportunity to reduce both air and climate pollution
- Every source of pollution matters
- The air–climate nexus can accelerate clean-energy solutions for all communities across the region Sacramento
- SMUD–Air Quality District partnership: a model for action

Multi-County Region of Air Quality Monitoring and Planning

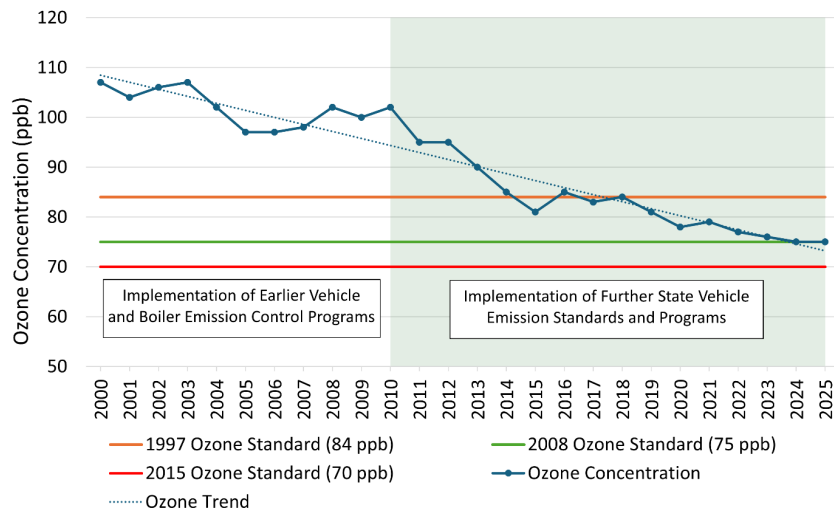
SACRAMENTO FEDERAL NONATTAINMENT AREA (SFNA) MAP



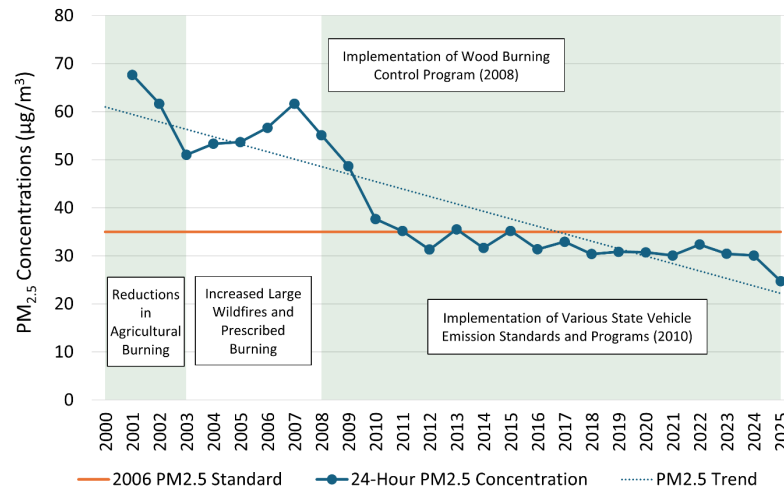
Remarkable job Sacramento!

Lowest levels of air pollution in 25 years

Sacramento Region Ozone Concentrations



Sacramento Region Daily PM_{2.5} Concentrations



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...But more progress is needed

- There's more to air quality progress than regional air pollution trends
- Climate crisis (*are we at point of no return?*)
- AB 617 Community Air Protection Program:
 - California law (2017) focusing on reducing air pollution exposure burden in communities most impacted

AB 617 ELEMENTS • Focus on Community Action



Community emissions reduction programs



Accelerated retrofit of pollution controls on industrial facilities



Community-level air quality monitoring



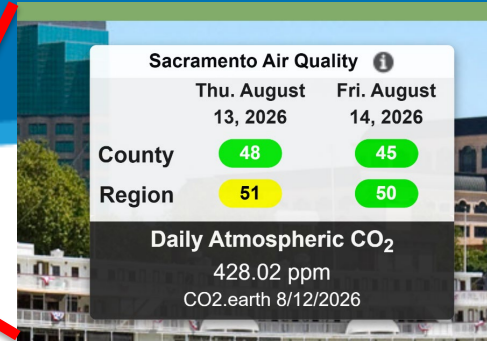
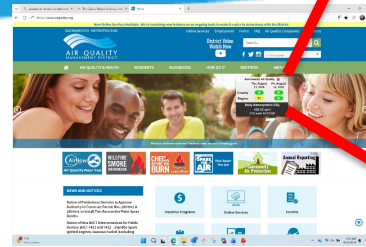
Enhanced emissions reporting



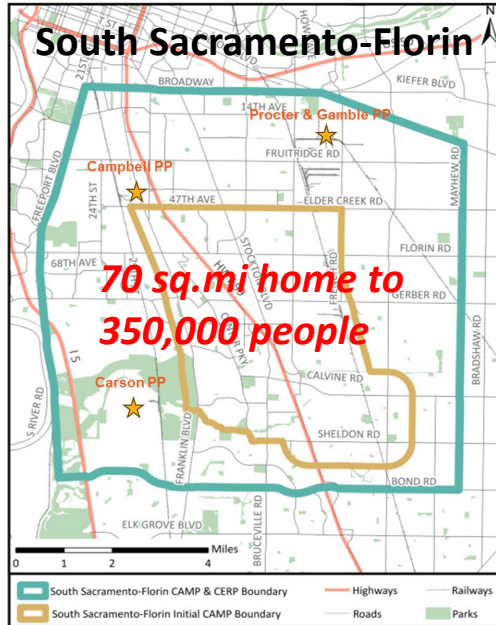
Increased penalty provisions



Grants to local community groups



SMUD – Air Quality District Partnership for South Sacramento-Florin/our AB 617 community



Education, Outreach, Community Engagement



SMUD Powerplant Tour, April 15 & 17, 2026

SMUD – Air Quality District Commitments Under AB 617

Electrification Strategies for the Community

CERP Electrification Strategies	
	Commercial and Residential Lawn and Garden Incentive Program
	Electrification of Household Appliances*  
	Electric Fireplace Insert
	Zero Emission Vehicle Infrastructure
	Enhanced Clean Cars 4 All Program
	E-bike Voucher
	Commercial Vehicle Replacement Program

* Partnership with SMUD's Program

California Clean Air Day – Oct. 7th, Electrification Awareness Event



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AIR QUALITY
MANAGEMENT DISTRICT

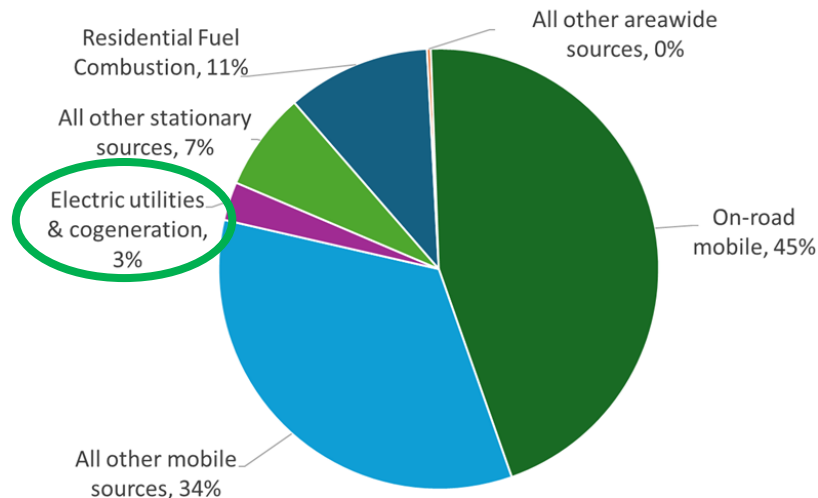


What are SMUD's Power Plants' Contributions?

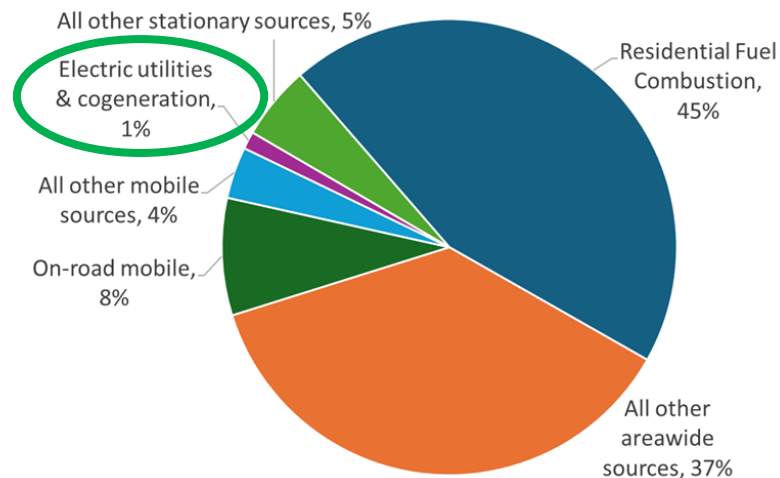


NO_x and PM_{2.5} Inventories: Sacramento County - Pollutants

Annual NO_x Inventory (21.4 tons per day) - 2025



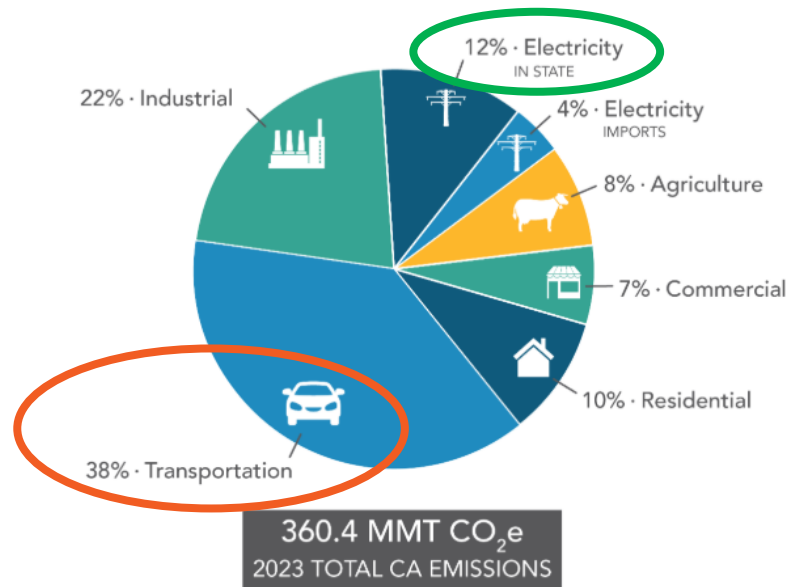
Annual PM_{2.5} Inventory (10.7 tons per day) - 2025



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State (CARB) – Greenhouse Gas (GHG) Emissions

2023 GHG Emissions by Main Economic Sector

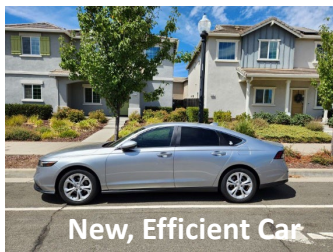


**Importance of
Electrification**

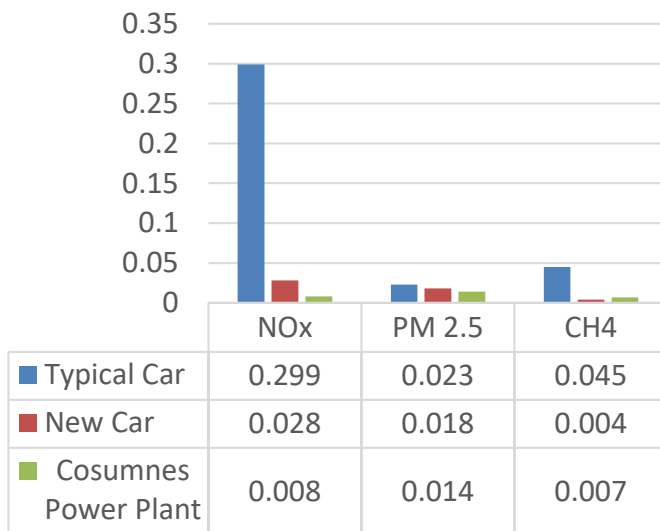
**Co-benefits of
emission reductions**

Comparing Fossil Fuel Combustion Emissions

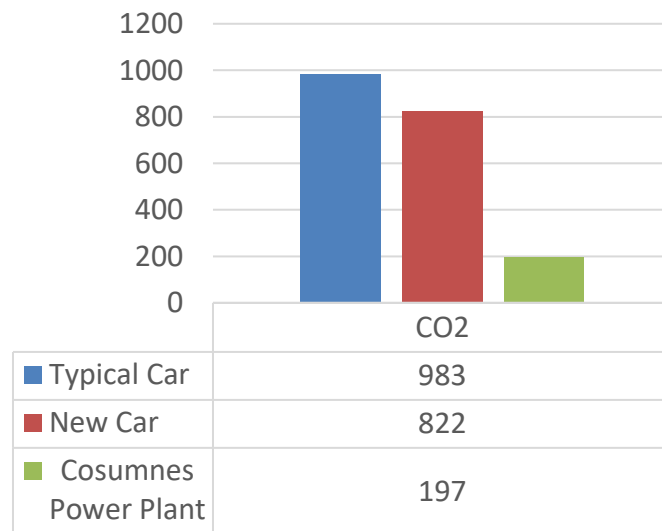
Putting Things in Perspective



Pollution per Unit Energy
(g/kWh)



CO₂ per Unit Energy
(g/kWh)



Note: Typical Car is the average model-year (2013) car of the California on-road fleet.
New, Efficient Car is a 2026 model-year car.

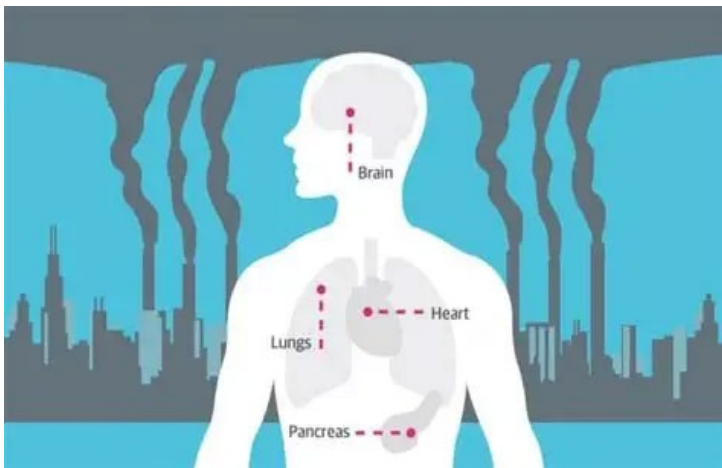
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The Tight Nexus Between Air and Climate Pollution

Conventional Pollutants

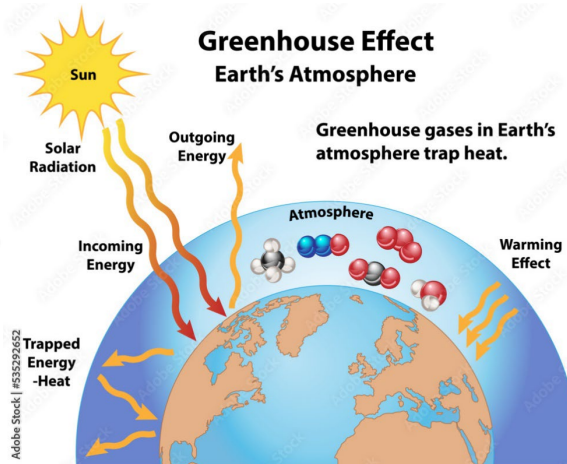
Short-term/Long-term Health Impacts



Ozone (O_3), Particulate Matter (PM), Carbon Monoxide (CO), Nitrogen Dioxide (NO_2), Lead (Pb), Sulfur Dioxide (SO_2), Others

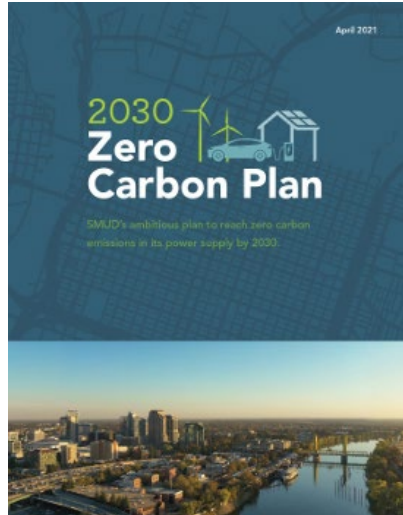
Greenhouse Gases

Short-term/Long-term Global Impacts



Carbon Dioxide (CO_2), Methane (CH_4), Nitrous Oxide (N_2O), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), Others

A World of Possibilities: *Potential Air Quality Benefits of Emerging Clean Energy Innovations*



Linear
Generators

- Edgeconnex data center



Thermal
Batteries

- Rondo



Sodium Ion
Batteries

- Peak Energy

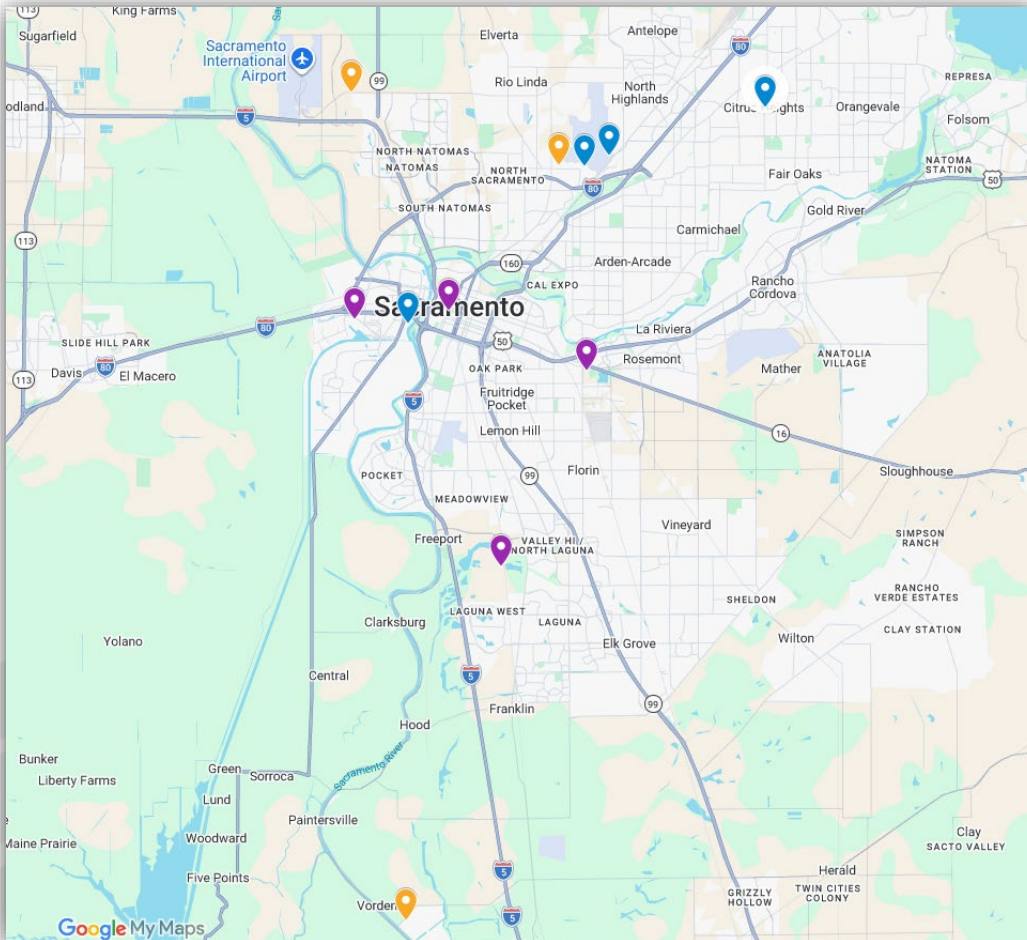


Hydrogen Fuel
Cells

- Sac Sewer

Hydrogen Production, Fueling, and Other Projects

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Hydrogen Production & Fueling

- Avina
- Pacific Clean Fuels & Sovereign Entities
- EcoMotiv LLC.

Hydrogen Fueling

- Iwatani
- FirstElement Fuel
- Sacramento Regional Transit

Hydrogen Projects

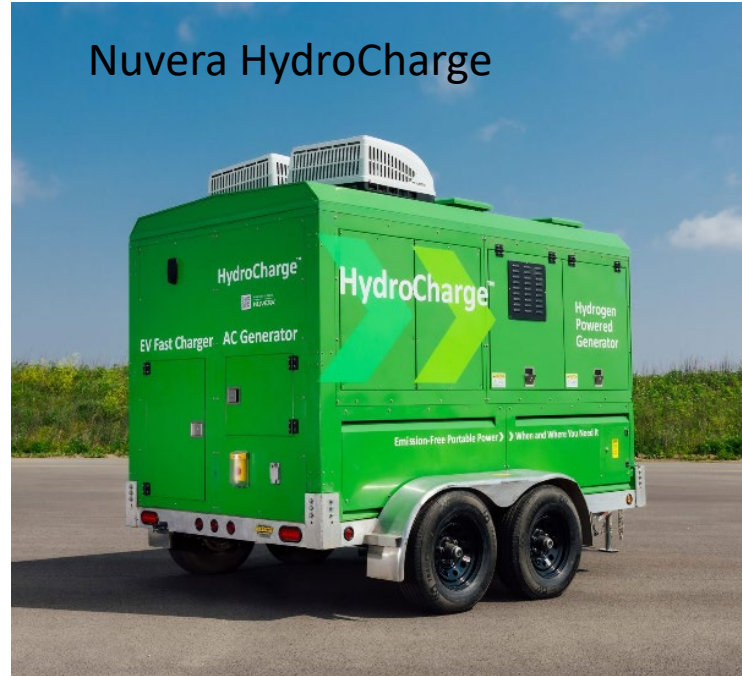
- Sierra Northern Railway
- HyWatts
- Sacramento Sewer District
- Nuvera

Clean Public Events

Power That Shows Up Without Pollution or Noise



- Power food trucks, lights, sound systems, and EV shuttles
- Eliminate emissions and noise
- Raise awareness



Low rates, reliable
service, and clean
energy



Clean air and
protection of
public health