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BANC SB100 Update

BANC MEMBER UPDATES

by Jon Olson
Director of Energy Trading & Contracts
Sacramento Municipal Utility District

8/22/23



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Modesto Irrigation District | City of Redding | City of Roseville | Sacramento Municipal Utility District | City of Shasta Lake | Trinity Public Utility District

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Balancing Authority of Northern California (BANC)

What is BANC?

- Joint Powers Agency formed by its members
- Provides Balancing Authority Area (BAA) services to its members and contracted parties and Planning Coordinator (PC) services to members requesting the service
- Serves as the EIM Entity to facilitate CAISO EIM participation for those within the BANC BAA
- ~5000 MW Peak Load BAA
 - 16th largest in West; 3rd largest in CA

Who is BANC

Group of N. CA POU's

- Members
 - Modesto Irrigation District
 - City of Redding
 - City of Roseville
 - Sacramento Municipal Utility District
 - Trinity Public Utilities District
 - City of Shasta Lake
- Contract Relationships
 - WAPA – SNR: 230kV system
 - Transmission Agency of Northern California (TANC): 500kV California-Oregon Transmission Project (COTP)



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BANC Member SB100 Updates

- City of Redding
- Roseville Electric
- Sacramento Municipal Utility District (SMUD)



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CITY OF REDDING PLANS FOR ACHIEVING SB100 COMPLIANCE

August 21, 2023



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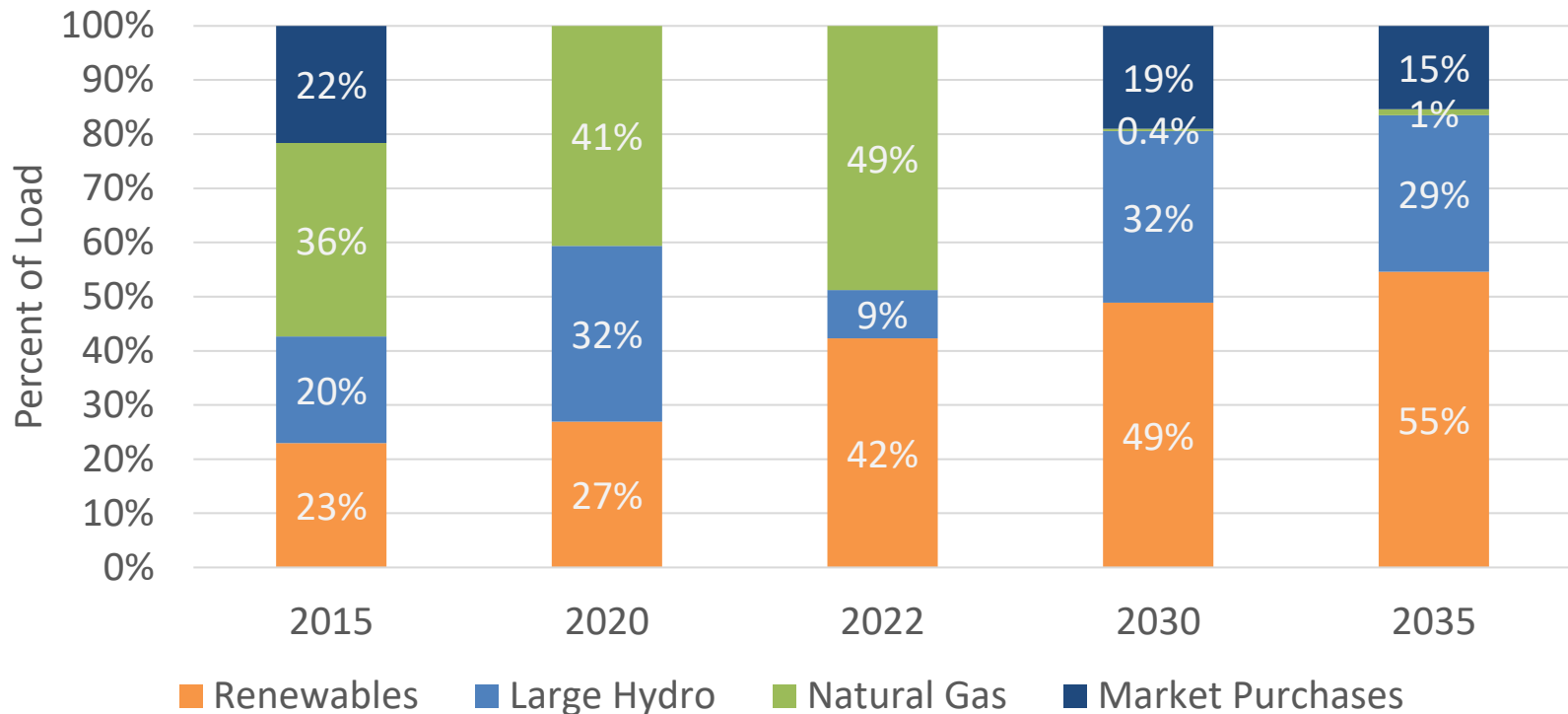
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City of Redding's Resource Mix



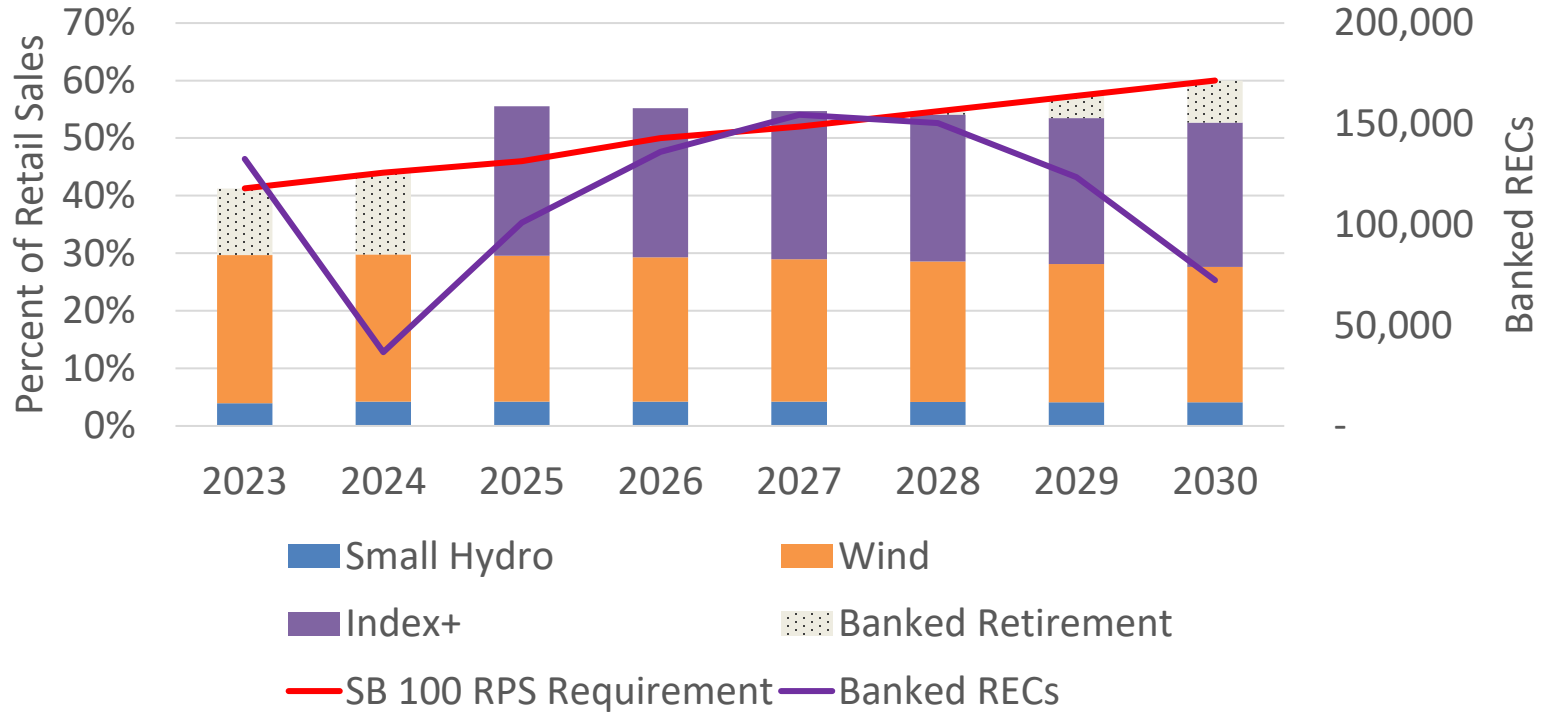
Renewable contribution to resource mix does not measure compliance with SB100 RPS requirement, which is evaluated by other methods

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City of Redding's SB100 RPS Compliance Forecast



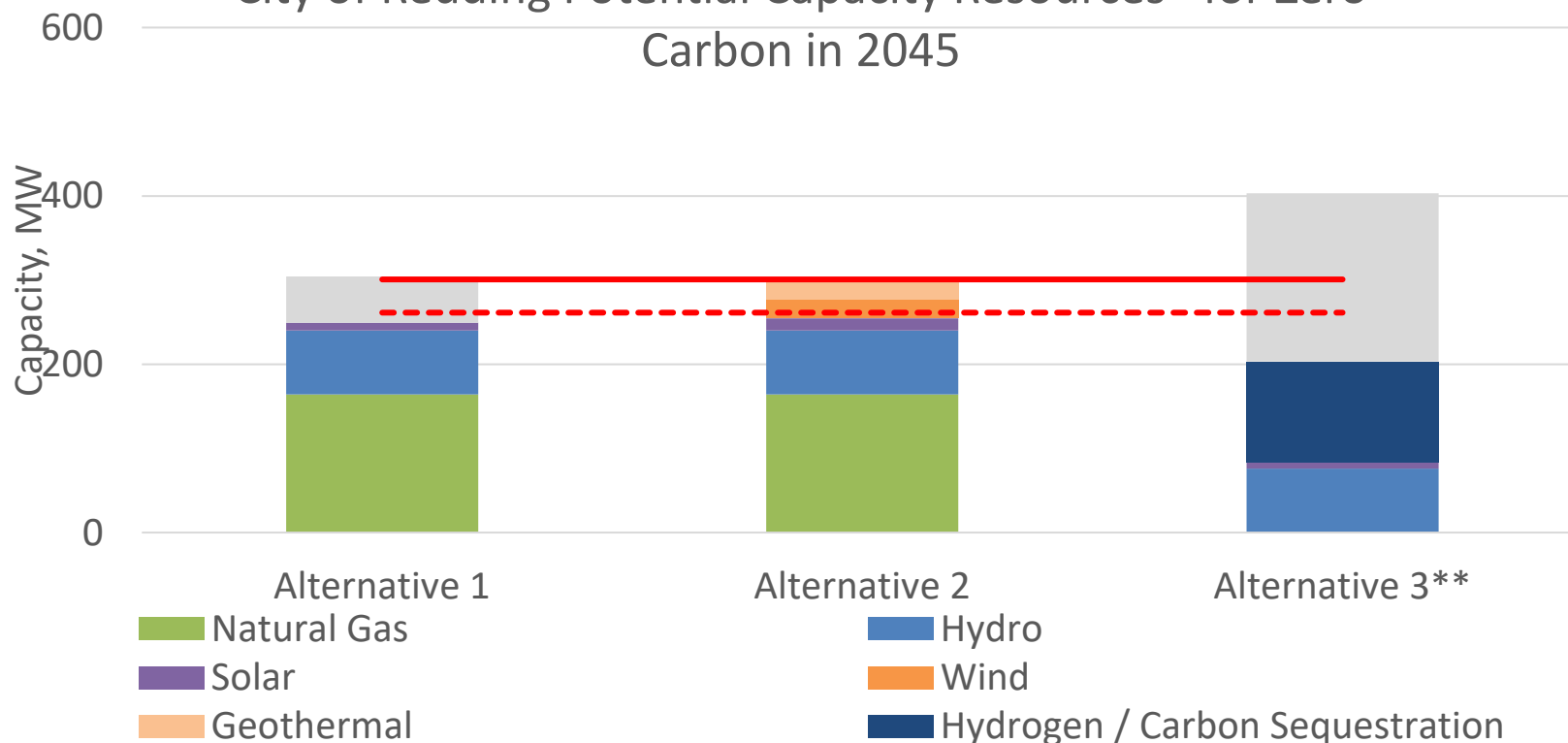
Banked RECs assume 121,352 excess procurement RECs from previous compliance periods. COR is currently working with the CEC on the status of these RECs.

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City of Redding Potential Capacity Resources* for Zero Carbon in 2045



**These alternatives are being explored the City of Redding's 2024 IRP*

***The removal of Redding's natural gas plant requires large over-procurement of battery storage to maintain system reliability*

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Meet 60% Renewable by 2030 and Carbon-Free by 2045

- City of Redding is currently resourced to meet 60% renewables by 2030
- City of Redding is currently studying resource options for a zero-carbon portfolio in 2045



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Caveats and Challenges

- The City of Redding is currently working with the CEC on the eligibility of RECs from excess procurement in previous compliance periods. These RECs are vital to COR's RPS compliance forecast. The ineligibility of these RECs will likely trigger alternative compliance measures for Compliance Period 4.
- Many renewable and carbon-free projects that the City of Redding has investigated have experienced delays, cost increases, or cancellations making future resource procurement an arduous process.
- Eliminating all carbon-emitting resources from the City of Redding's portfolio will lead to substantial cost increases from resource procurement and internal system upgrades. Removing the City's Natural Gas Plant results in large over-procurements of capacity resources to maintain system reliability.



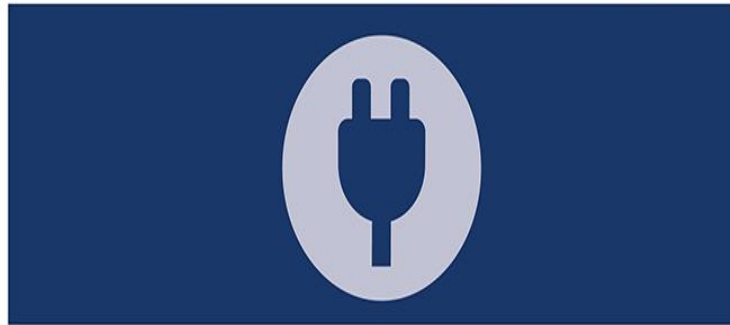
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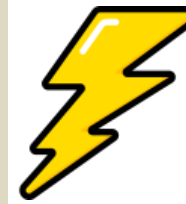


City of Roseville SB100 Update

ROSEVILLE ELECTRIC

110 Years

66,000 Customers
59,000 Residential
7,000 Commercial
200 Employees



370 MW

1,190 GWh/yr



Territory **43 mi²**
Distribution **900 mi**
Underground **91%**



5 Elected Council Members
7 Commissioners

**ELECTRICITY RATES ARE AMONG THE
LOWEST IN CA**



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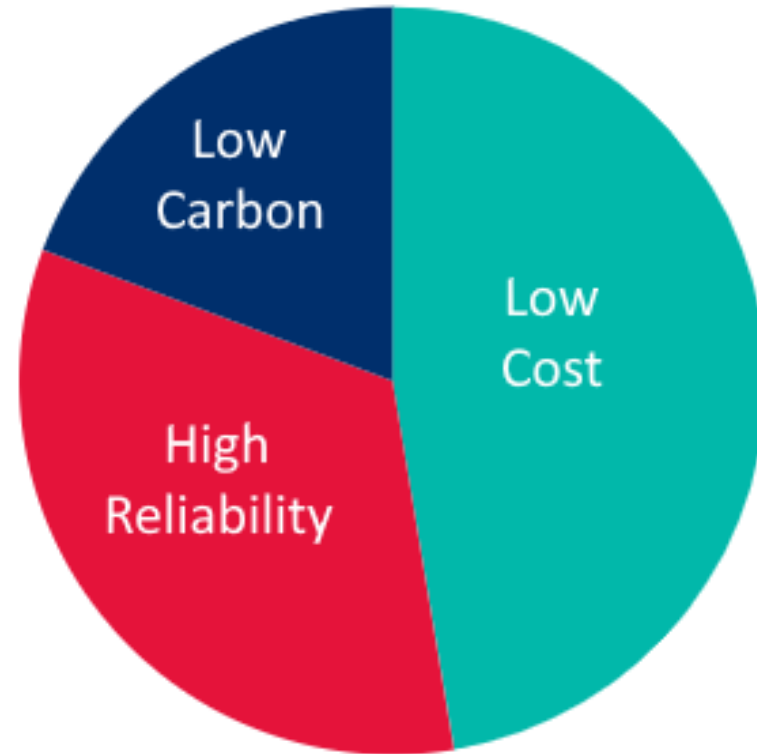
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Roseville 2023 IRP Customer Priorities

1. **Affordability**

2. **Reliability**

3. **Exceed carbon
reduction targets**



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Roseville IRP 2023 – Preferred Plan

■ Existing Resources

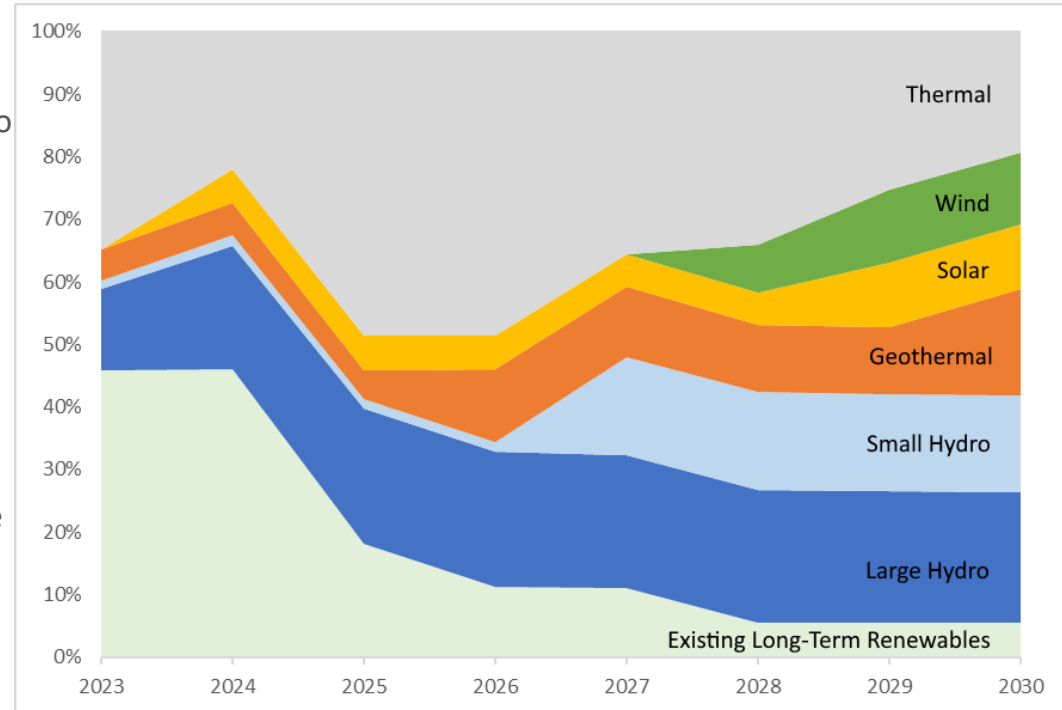
- Maintain existing large hydro and renewable projects
- Extend life of aging thermal resources to ensure reliability

■ New Resources

- Pursue BANC connected resources to directly serve load including renewable and carbon reducing/sequestration
- Seek diverse renewable technologies to reduce oversupply and need for storage

■ Partnerships

- Focus on joint action projects with municipal partners
- Continue to support the State with the Roseville SRRP peakers



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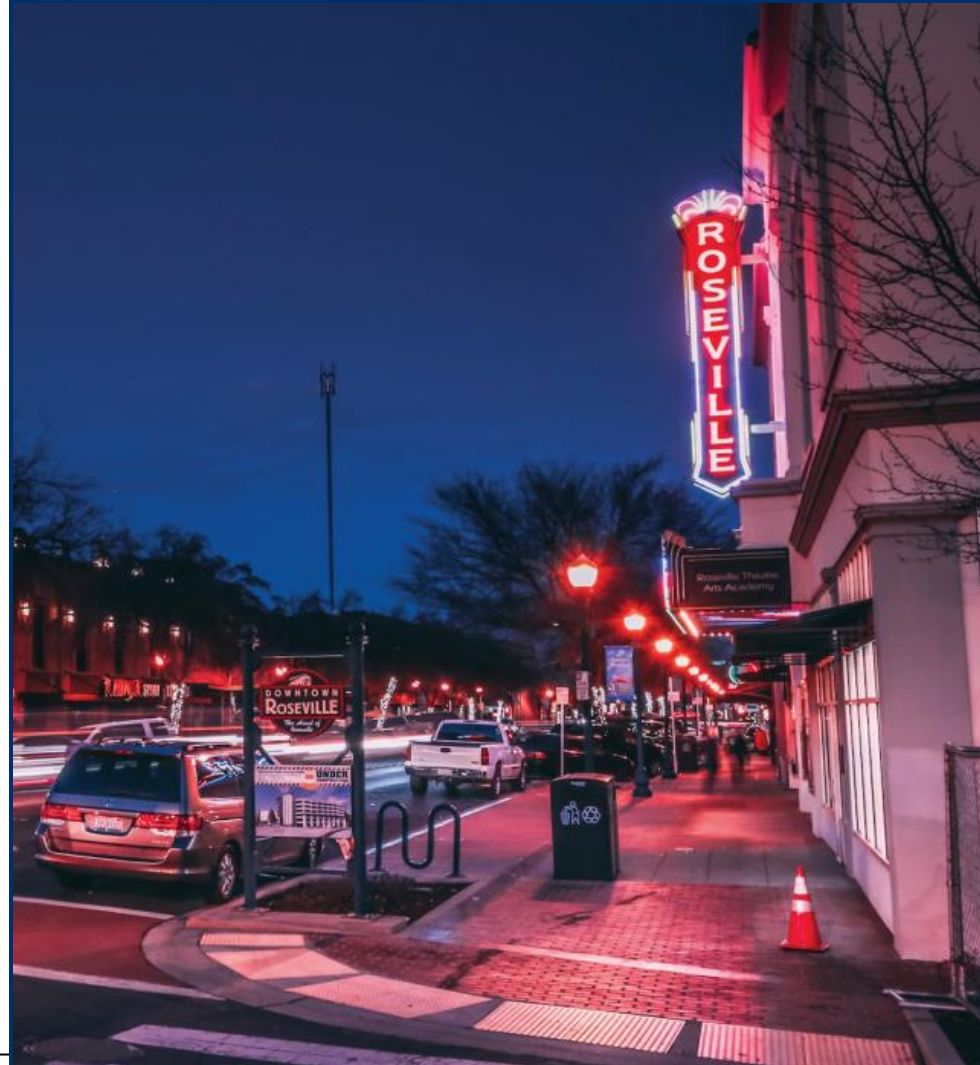
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SB100 Compliance Status

Fully compliant through end of 2025

Actively soliciting long-term and short-term projects for future compliance periods

Market is challenging given supply chain and interconnection issues



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SMUD's Road to Zero Carbon

Powering forward.
Together.





2030 Zero Carbon Plan Overview

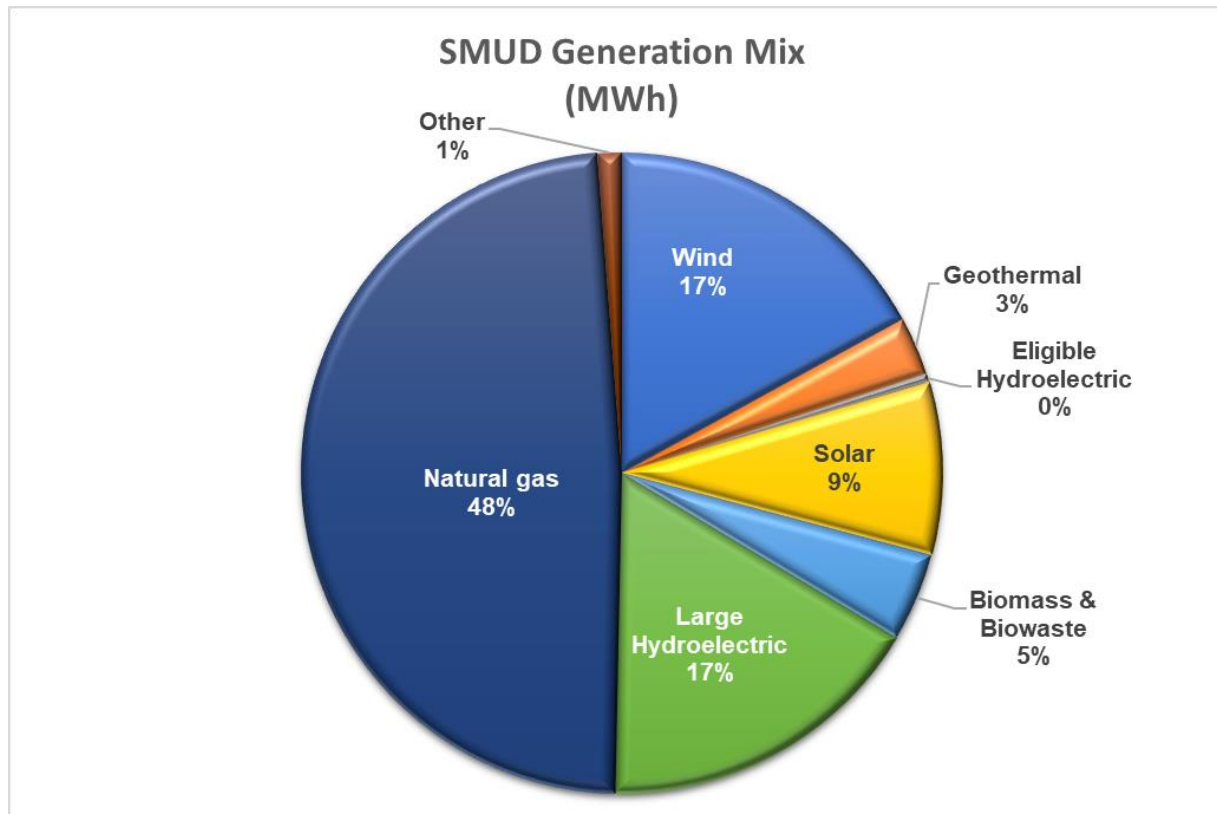
Affordable, Reliable, and Equitable



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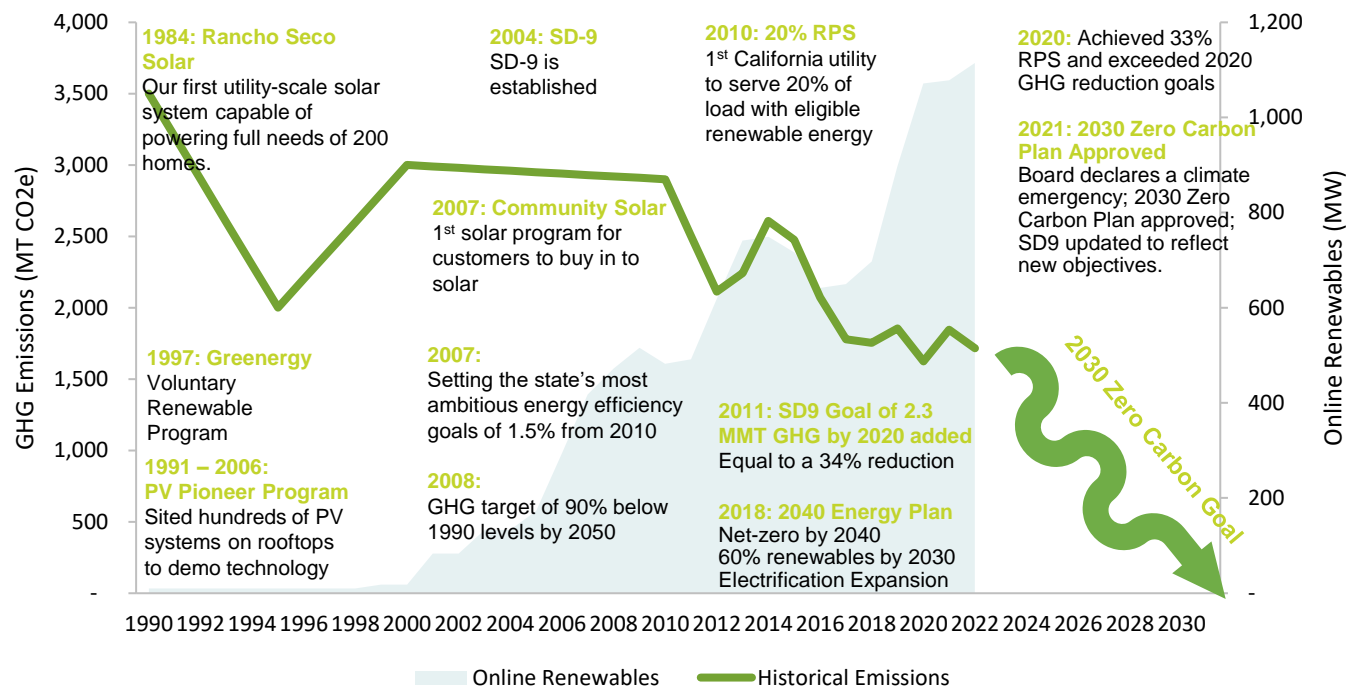
Where are we today...50-60% carbon free*



**2021 was a low hydro year, in a normal hydro year we normally get about 22% large hydro*

Resource Planning Goals Past/Present/Future

2030 Zero Carbon Goal – Eliminate All GHG Emissions from SMUD's Energy Supply by 2030



Ensure Affordable, Reliable and Equitable Service

2022 Update

Key efforts:

- Expanded renewables and storage and developed future projects
- Continued exploration and development of new tech and business models
- On track to meet state renewable goals
- Kicked off our Community Impact Strategy
- Supported growth of distributed resources

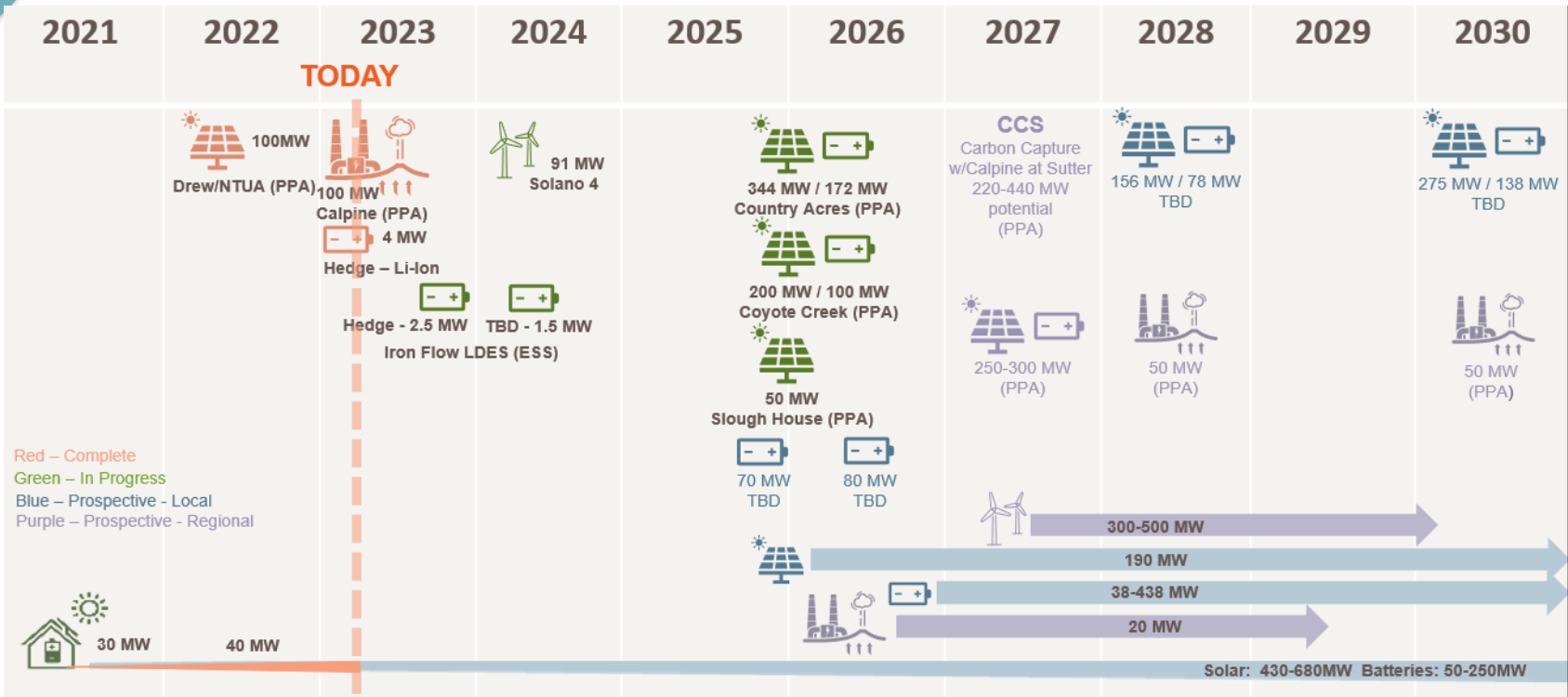
Challenges:

- Cosumnes Power Plant Unplanned Outage
- Continued Drought Conditions
- Renewable Project delays and unplanned outages



2022 accomplishments / 2023 priorities

Proven Clean Tech



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Conclusions, Caveats, Challenges

- Major investments by all BANC members in renewable resources and storage.
- Balancing key considerations of Decarbonization
 - Reliability – Affordability - Equity
- Market is currently in a state of disruption
 - Supply chain issues
 - Long lead times on project development
 - Long interconnection queues




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