



America's Premier Competitive Power Company  
... Creating Power for a Sustainable Future

A satellite view of the Earth at night, showing the illuminated continents of North and South America against the dark background of space.

## 2023 United States Energy Association Building Understanding and Improving Community Engagement

Sutter Community Engagement - CCS

December 4, 2023

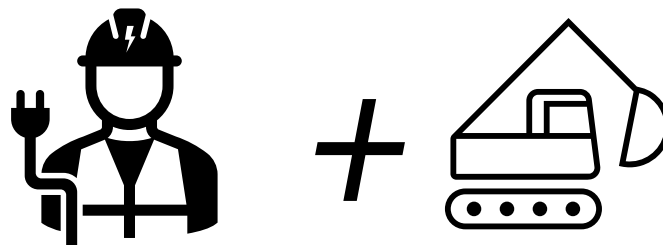


Calpine was founded in San Jose, California nearly 40 years ago  
on principles of sustainability

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## POWER GENERATION

Over 26,000 MW of natural gas, geothermal, battery storage & solar; best-in-class maintenance program



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## INFRASTRUCTURE DEVELOPMENT

Calpine has 11 CCS project identified for full scale development with 4 active FEED studies currently progressing in CA and Texas





# Why community engagement is important for a CCUS project?

As California's energy transition happens, it's important CCUS projects engage with the community.

Thoughtful collaboration and listening can lead to positive outcomes for both the project and the community.

## Know Your Audience



### The Sutter Community



Agricultural powerhouse  
Punjabi and Hispanic influences  
Trade-focused Education  
Proximity to Sacramento  
World's Smallest Mountain  
Range: Sutter Buttes

An aerial photograph of a city, likely Sacramento, California, showing a wide river with a bridge crossing it. The city is densely packed with buildings and green spaces. The sky is clear and blue.

# The Northern California Community

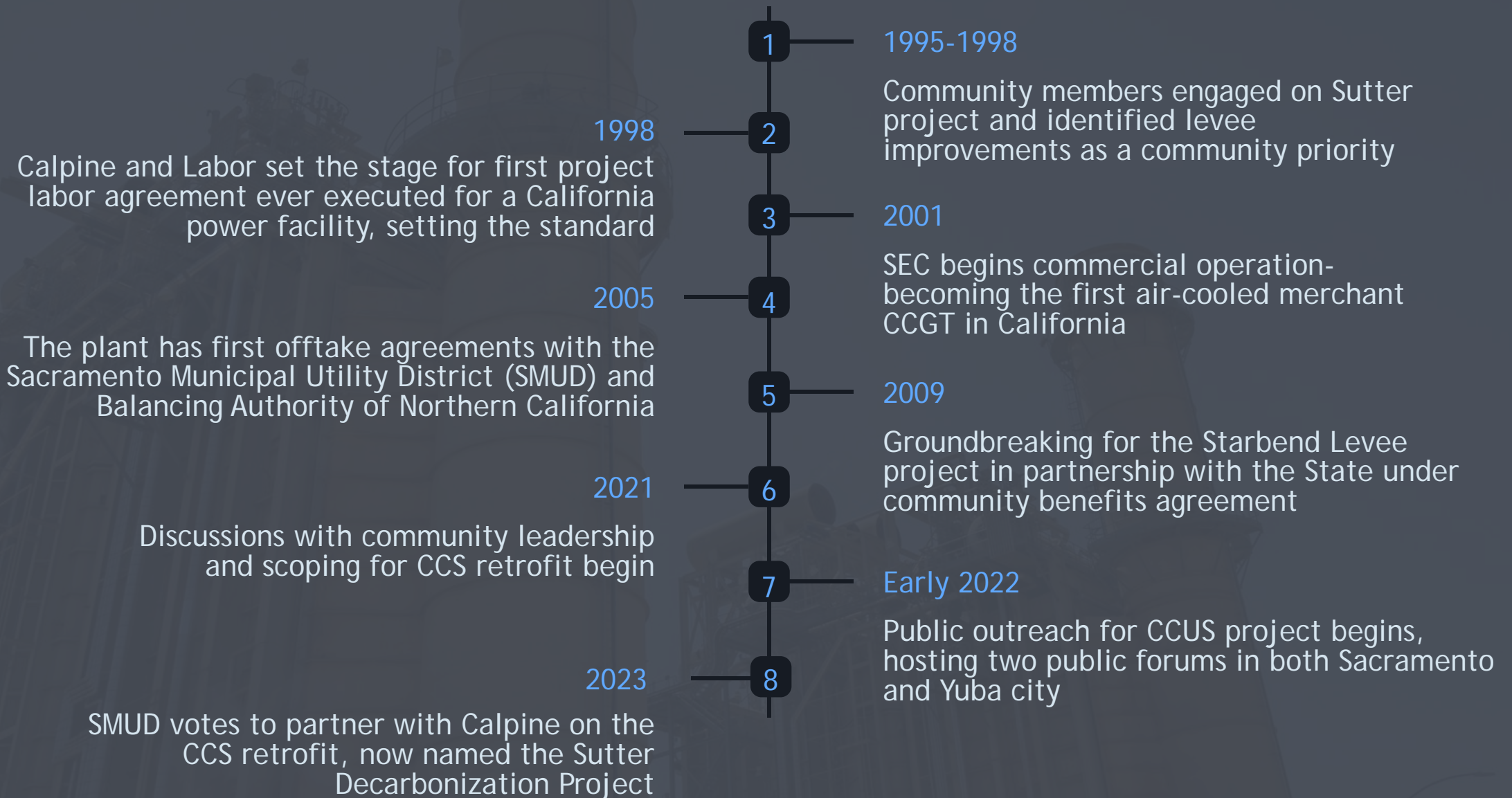
This is a Northern California project - Calpine is committed to building a clean energy workforce and providing clean electricity to a large community of Californians.

Our regional partners on this journey include, but are not limited to:

- Sacramento Municipal Utility District
- California State Building Trades Council
- Los Medanos College
- Yuba College
- Lawrence Livermore National Laboratory
- University of California, Davis
- Stanford University



# Sutter Energy Center: Built on a History of Community and Labor Engagement



# CCS Success: Built on a History of Community and Labor Engagement



## Education and Training

- Expanded relationships with minority-serving institutions
- Career fairs, apprenticeships, and information-sharing with Yuba College, Los Medanos College, and UC Davis.
- Expanded internship program for both STEM and non-STEM careers



## Labor

- Negotiating a Project Labor Agreement (PLA) to cover project construction
- Calpine to offer learning and development opportunities for job promotion and professional development
- Continue to sponsor co-op programs with students from local community colleges



## Stakeholder Engagement

- More than 45 stakeholder meetings held to date
- Meetings with community groups kicked off in September 2022, more than 6 months prior to permit filing
- Two public CCS workshops held in May 2023
- Community feedback directly impacts engineering design, broader project design and implementation



## Community Economic Impact

- Jobs creation for construction and operations
- Community Benefits Agreement (similar to SEC's initial development)
- Local businesses utilized for construction and operations
- Maintenance/operations budgets spent in Sutter County
- Local non-profit charitable contributions





# Challenges to Community Engagement for CCUS

Different audiences have different concerns.

What our partners assumed the community valued most:

- Equity
- Air pollution control
- Business growth

While Calpine still prioritizes these issues, the articulated community concerns instead focused on:

- Noise
- Water
- Impact to traffic
- Economic impact, including taxes
- Carbon storage permanence
- Job creation







# Integrating Community Feedback

## Water Use

Water is a critical resource in the community; the site will continue to be fully air-cooled

## Non-STEM Internships

In addition to traditional apprenticeships, local educational institutions requested non-STEM internships to expand opportunity

## Continued Meetings

We continue to host public small group meetings, as well as one-on-one meetings to address ongoing concerns in the community

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## Seismicity

Community feedback led to more extensive community outreach and education with storage partner

## Community Liaison

An on-the-ground community member identifies and raises concerns before they become problems

# Connecting with the Community: Addressing Concerns

Calpine has integrated a variety of means to facilitate communication with the community.

California-focused website

- Addresses local audience
- FAQ guide
- Project updates

Calpine coordinated with partners SMUD, ION Clean Energy, and 1PointFive to create materials and messaging focusing on:

- Pipeline information
- Safety
- Noise concerns
- Water Impact
- Carbon Storage
- Project timeline

Following up with one-on-one meetings with trusted members of the community, this outreach resulted in addressing safety questions around storage and seismic concerns. This includes a dedicated 800 number and email to gather community feedback.



**1POINTFIVE** MAKE A DIFFERENCE.

**CARBON INNOVATION**

1PointFive is addressing climate change by partnering with industries to help reduce their carbon dioxide (CO<sub>2</sub>) emissions. By safely and securely storing CO<sub>2</sub> in deep underground formations, we can help curb global temperature rise to 1.5°C by 2050.

**THE OPPORTUNITY**

Securing and providing clean, reliable power and addressing climate change are two of the most urgent challenges of our lifetime. By partnering with Calpine, we can substantially reduce CO<sub>2</sub> emissions from the Sutter Energy Center. We bring over 50 years of expertise safely, securely and permanently storing approximately 20 million metric tons of CO<sub>2</sub> annually.

**CARBON CAPTURE AND STORAGE (CCS)**

Geologic sequestration is a proven method of storing CO<sub>2</sub>. CCS involves injecting underground into rock formations for permanent storage. By capturing and storing CO<sub>2</sub>, we can protect the climate, the planet, and future generations.

Geologic sequestration has been used for decades. Studies of real-world applications by leading experts prove that CCS is a powerful tool for capturing and securely storing CO<sub>2</sub>.

Our carbon storage projects are designed and engineered to protect underground water sources and ensure safe, secure and permanent CO<sub>2</sub> storage. In addition, California and the Environmental Protection Agency (EPA) will review, approve, and regulate the project planning and operation.

**FIRST STEPS**

The project's first phase is to collect rock and water samples from the deep subsurface formations beneath the project site. Then, technical experts will analyze and evaluate the suitability of the rock formation to safely, securely and permanently store CO<sub>2</sub>.

**COMMUNITY SAFETY**

ded over 40 years ago on the principles of sustainability, Calpine has focused on our commitment to clean energy production. We partnered with the U.S. Department of Energy (DOE) on several projects designed to advance transformative and innovative thermal and carbon capture and storage (CCUS) systems that allow us to produce safe, reliable, low-carbon power.

**SUSTAINING COMMUNITY**

**Forty years ago, Calpine was founded on principles of sustainability.** Our forthcoming application for funding from the U.S. Department of Energy (DOE) is designed to advance transformative and innovative CCS systems, allowing our plants to supply the electric grid with low-carbon power 24 hours a day, seven days a week.

Advancing these technologies promises to **bring down the cost of reliable, clean energy** while protecting existing, local jobs and creating new jobs in the operation and management of clean energy generation.

Our approach reflects Calpine's ongoing commitment to **advancing climate goals and leading the way to a clean energy future for all.**

**Is Carbon Storage Safe?**  
All industry and manufacturing activity requires safety precautions; carbon dioxide is stored beneath specialized wells (called EPA Class VII) that have strict safety guidelines.

**What is the process for setting up storage?**  
Wells are subject to strict permitting guidelines from the EPA and regulations require that all operators establish emergency remediation plans, detailed post-injection site care plans, and provide multiple opportunities for public input.

**Is Calpine speaking with the community?**  
Yes. Outreach with the public began in September 2022, more than six months prior to the filing for permits. We are working with community stakeholders, leaders, and neighbors to ensure our projects are built and operated in a way that addresses unique local concerns while delivering reliable, clean energy.

**Is there a 10-mile buffer distance between all Carbon Capture Infrastructure and disadvantaged communities?**

As identified by CalEnviroScreen 4.0, the two nearest disadvantaged communities are both more than 10 miles away from the facility. This includes the entire chain of infrastructure from capture to transport to storage.





# Building and Maintaining Relationships with the Community

## 1 Be honest and transparent

Honesty and transparency is necessary to build and maintain trust

## 2 Stay engaged and responsive

Regular communication and involvement is needed to maintain relationships

## 3 Be proactive and take initiative

Identify and address CCUS-related community concerns or issues before they become major problems.

## 4 Acknowledge this will take work and time

Community engagement requires extensive research, interfacing, and staffing. Ensure you have the resources early in the development process. Rural energy communities have been proven to be susceptible to research fatigue. As a result, indicators may seem lower than expected.

## 5 A community liaison can help you understand sentiment

Having a resource on the ground can help proactively address minor issues before they become larger, gain perspective into local issues, and help understand what is important to the community.



# What the Community is Saying...

Karm Bains  
Chair, Sutter County Board  
of Supervisors

"I have 100% confidence in Calpine and this project. Calpine has been operating in Sutter county for over 20 years. They have proven to be a great community partner."

Heidi Sanborn  
SMUD Board President, Director

"I look forward to our close working relationship with Calpine to make sure this goes as smoothly as it possibly can with all the smart people in the room that have helped bring this to us."

Mark Mulliner  
State Building & Construction Trades Council of California

"It is our obligation to work with Calpine and support these companies, because they are making the commitment to utilize our members."





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Thank You!

Sutter Decarbonization Project – Community Engagement