

A photograph of several wind turbines on rolling green hills under a blue sky with light clouds. The turbines are white with three blades each. The hills are covered in green grass, and a dirt road winds through the landscape. In the background, a city is visible in a valley.

Watts For Lunch? C&I Decarbonization!

September 5, 2024

Mission: Reduce dependence on fossil fuels by providing carbon free, affordable, and reliable electricity and innovative programs for the SVCE community.





The Community Choice Energy Agency for 13 Santa Clara County communities

Providing clean electricity and innovative programs to fight climate change



Campbell | Cupertino | Gilroy | Los Altos | Los Altos Hills



Los Gatos | Milpitas | Monte Sereno | Morgan Hill



Mountain View | Santa Clara County | Saratoga | Sunnyvale

How It Works



SOURCE



SVCE

buying and
building energy
supplies



DELIVERY



PG&E

delivering energy,
repairing lines
serving customers



CUSTOMER



YOU

benefitting from
cleaner energy,
local control

What We Do



Benefit our community by reinvesting locally

SVCE returns value to our customers through competitive rates, clean energy programs, projects, scholarships, grants, and improved access and education.



Fighting climate change by accelerating the transition away from polluting fossil fuels

Encourage the advancement of electric technologies through programs and policies that make transportation and buildings cleaner and safer for our future.



Advancing California's transition to a clean grid

Supplying clean electricity by buying and building renewable energy and storage projects.



Why Watts for Lunch?

- Interactive SVCE updates
- Understanding customer priorities
- Local peer networking
- A forum for learning/idea sharing
 - best practices
 - new technology, services
 - programs and incentives





Today's Agenda

AGENDA:

- | | |
|----------|---|
| 11:00 am | SVCE Intro and Welcome |
| 11:10 am | Christina Raby, City of Sunnyvale, Net-Zero, All-electric Facilities Intro |
| 11:20 am | Attendee Intros |
| 11:30 am | Joey Lande, Energy Services Principal, Silicon Valley Clean Energy
"Strategic Energy Management Decarbonization Audits" |
| 11:40 am | Ben Matek, Decarbonization Program Manager, CLEAResult
"SVCE's C&I Decarbonization S.E.M. Program" <ul style="list-style-type: none">- Program overview and benefits- SEM Activity & Group Discussion |
| 12:30 pm | Lunch is served |
| 1:20 pm | Peyton Parks, Energy Services Principal, Silicon Valley Clean Energy
"EcoInvest Volume Pricing and Capital Investment SEM" |
| 1:30 pm | Kaley Dodson, Energy Services Specialist, Silicon Valley Clean Energy
"PG&E's Emergency Load Reduction Program" |
| 1:35 pm | Don Bray, Director of Strategic Initiatives, Silicon Valley Clean Energy
"RTP and Demand Flexibility" |
| 1:45 pm | Wrap Up, Adjourn to Networking |



Watts for Lunch

September 5, 2024

Christina Raby

Interim Environmental Programs Manager +
Environmental Engineering Coordinator





Agenda

- Civic Center Modernization
- Solar + Battery
- Lighting & HVAC
- Other Green Features
- Floor Fun Facts

Anticipated to be...

LEED PLATINUM ZERO NET ENERGY CITY HALL

- Opened March 2023, Ribbon Cutting Sep. 2023, Grand Opening April 2024
- Commissioning by end of Sep. 2024
- 117,107 square feet
- ~400 employees



Civic Center Modernization

- 20-year multiphase 26-acre campus modernization
- Phase 1:
 - City Hall (\$114 million)
 - Public Safety Operations Center
 - Demolition and creation of open space
- Phase 2:
 - Library



SOLAR

- Over 1,600 solar panels (*Canadian Solar BiHiKu and HiKu*)
 - 848 mono facial (363 West and 485 East)
 - 805 bi-facial (498 West and 307 East)
 - Originally 1,749 solar panels but 96 were removed due to product being discontinued
- Expected to generate over 1 million kWh annually
- ~ 73% peak electrical demand reduction



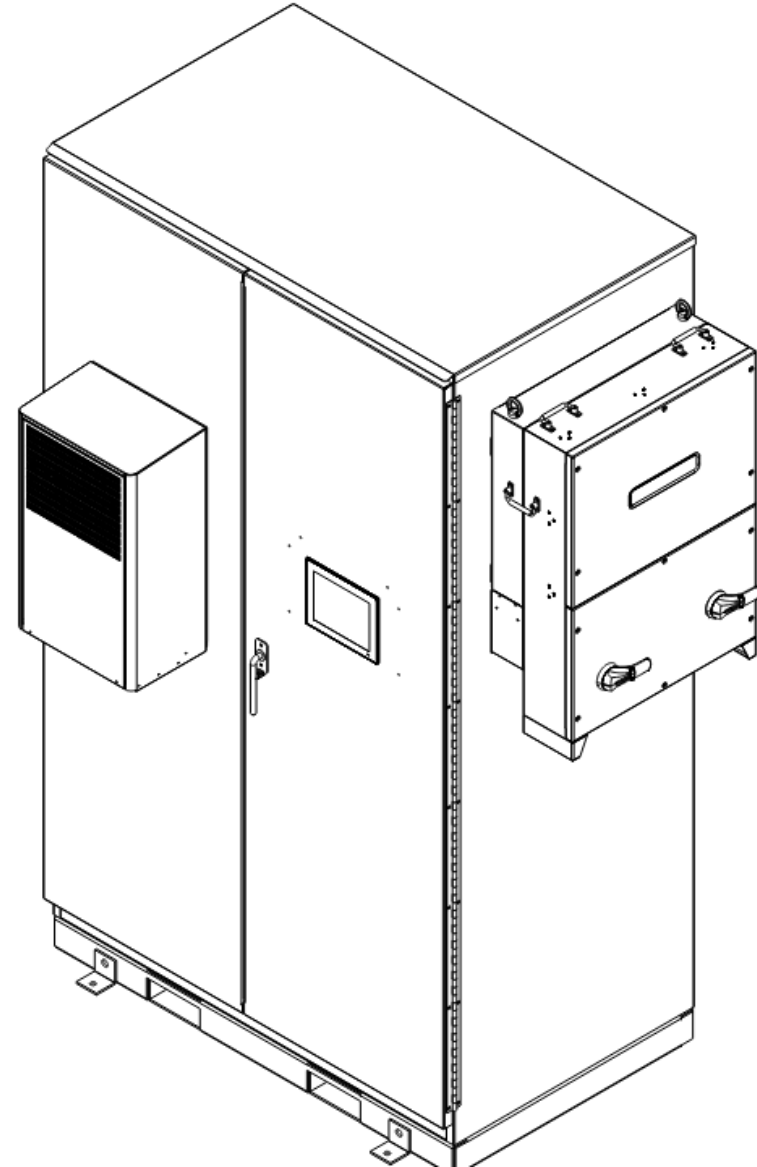
SOLAR Installation

- 17 months to install
- 5,117 hours and 15 staff
- ~500 crane operation hours



BATTERY

- Capacity: 330 kWh
- Installed December 2023
- Designed for 3 hours of whole building full function
 - First two floors for 6 hours
- Microgrid controls receive input/sends output from PV, batteries, and electrical grid





LIGHTING & HVAC

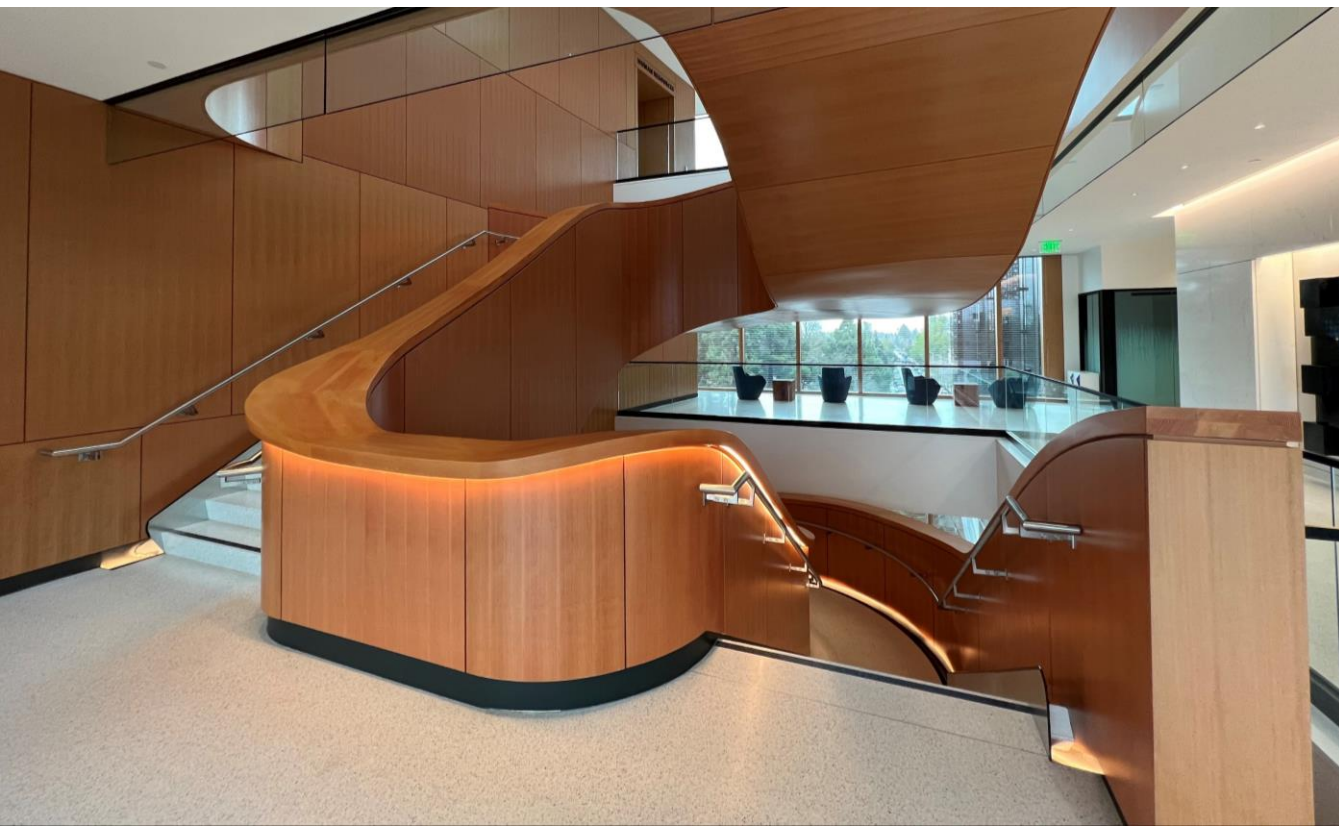
- Building Management System has set range, self regulates
- Building designed to allow maximum natural light in
- Automatic shading reduces glare and heating from sun
- H/C is controlled at a zone level on each floor

Other Green Features

- Preserved most of existing trees + increasing trees by 30%
- Reclaimed wood furniture
- Open Space: increased by 6 acres currently
- 13 EV Charging stations in garage
- Advanced air filtration
- Staff bike lockers, public bike rack
- Drought tolerant landscaping
- Permeable paving

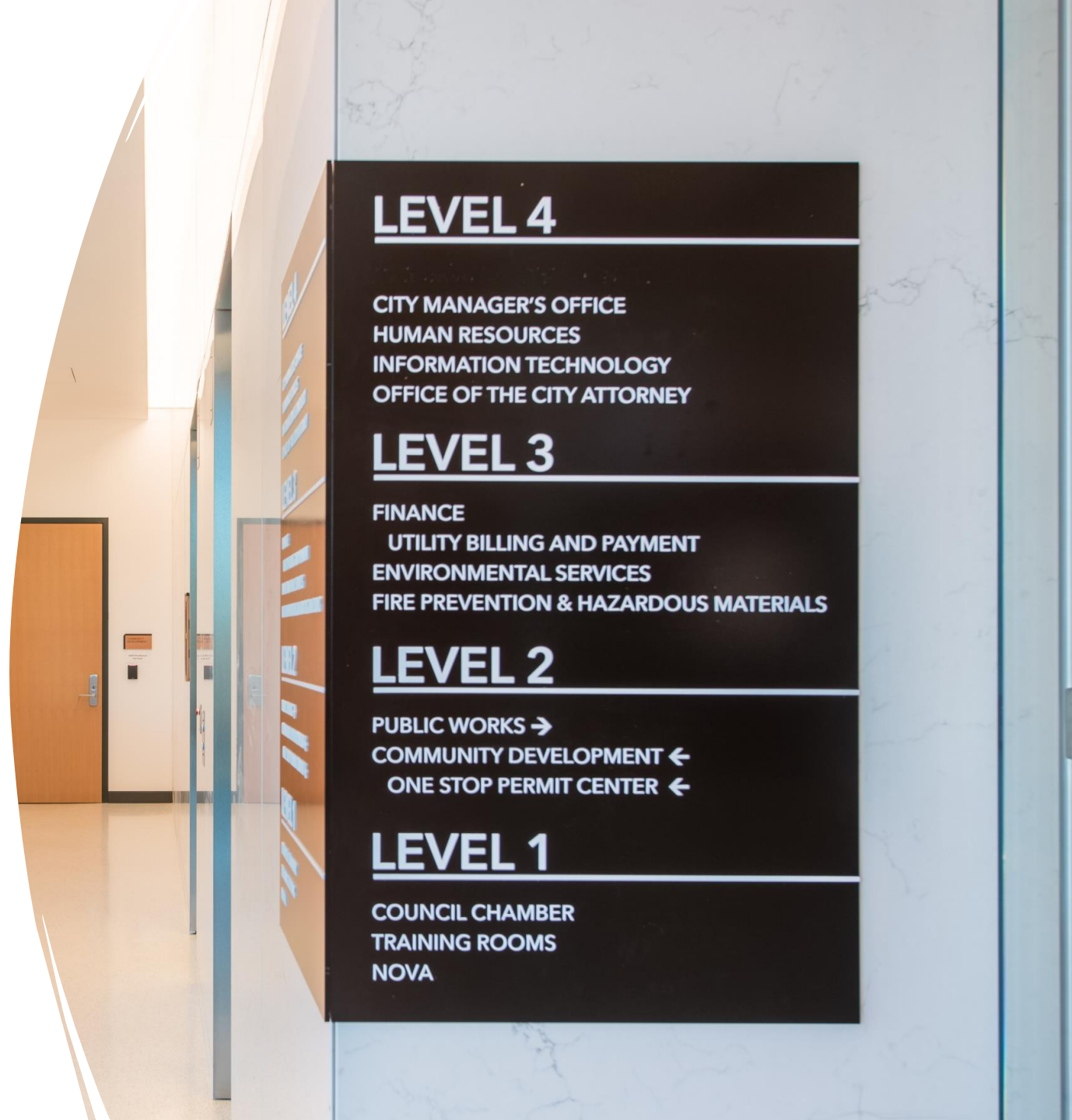


Treehouse Design



Floor Fun Facts

- Council Chambers doubled in capacity
- Art pieces on each floor (use QR codes)
- Conference rooms named after trees
- Gym on 3rd floor



LEVEL 4

CITY MANAGER'S OFFICE
HUMAN RESOURCES
INFORMATION TECHNOLOGY
OFFICE OF THE CITY ATTORNEY

LEVEL 3

FINANCE
UTILITY BILLING AND PAYMENT
ENVIRONMENTAL SERVICES
FIRE PREVENTION & HAZARDOUS MATERIALS

LEVEL 2

PUBLIC WORKS →
COMMUNITY DEVELOPMENT ←
ONE STOP PERMIT CENTER ←

LEVEL 1

COUNCIL CHAMBER
TRAINING ROOMS
NOVA



Thank you!

Please feel free to take a self-guided tour today!

Contact: craby@sunnyvale.ca.gov

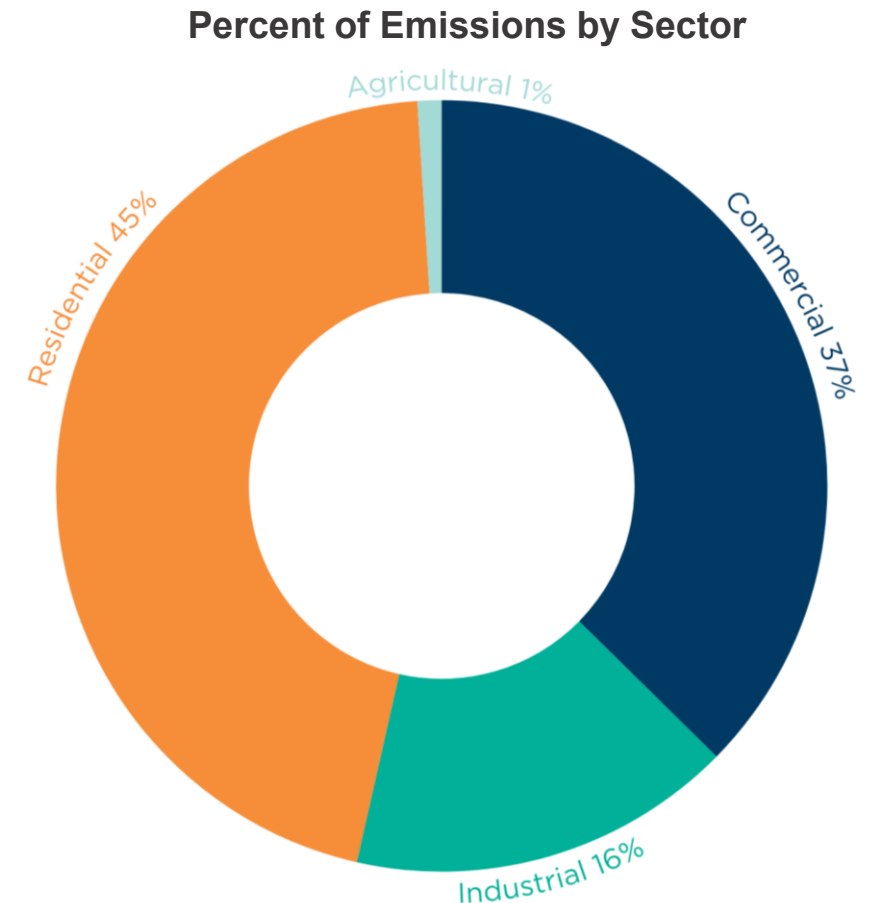
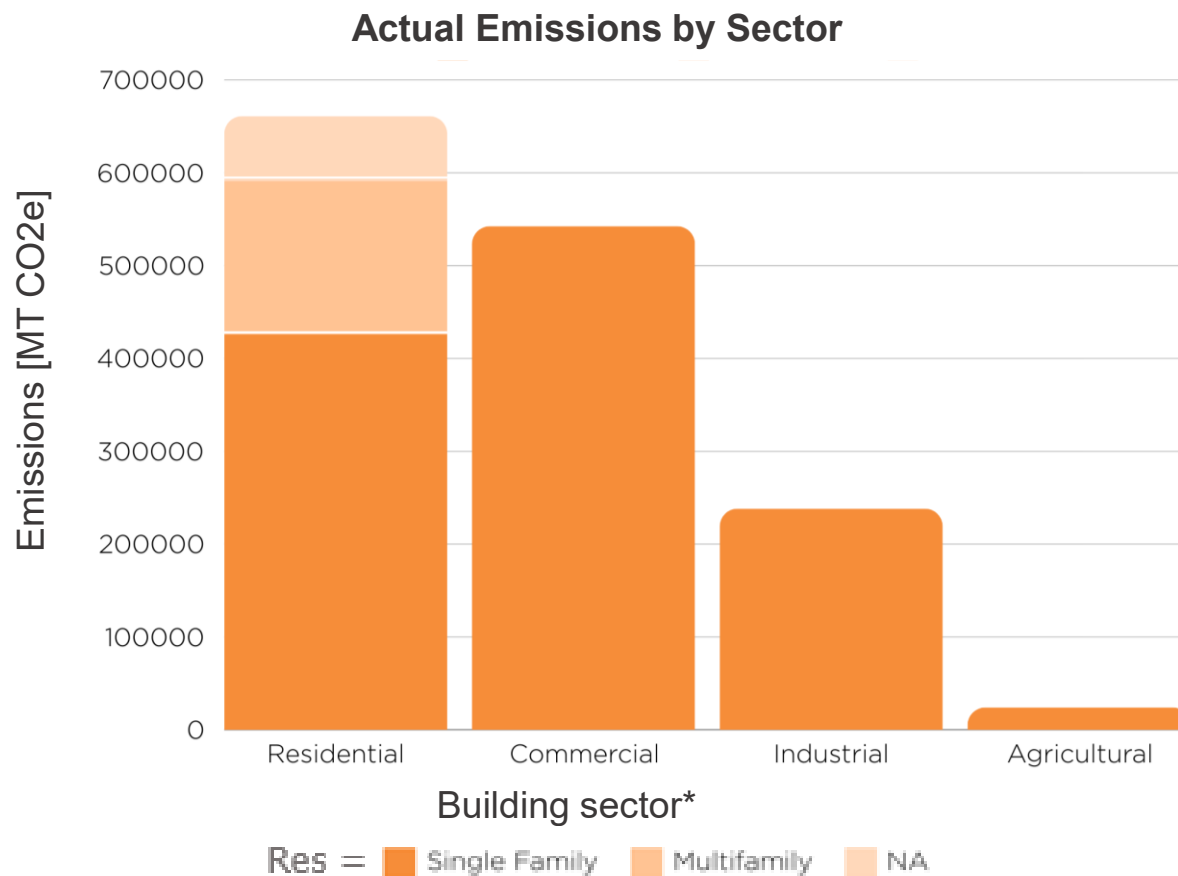
A background image of a wind farm on rolling green hills under a teal sky. Several wind turbines are visible, with their shadows cast long on the grass. A white horizontal line is positioned above the text.

Meet our Team & Each Other!



SVCE service area emissions by building sector

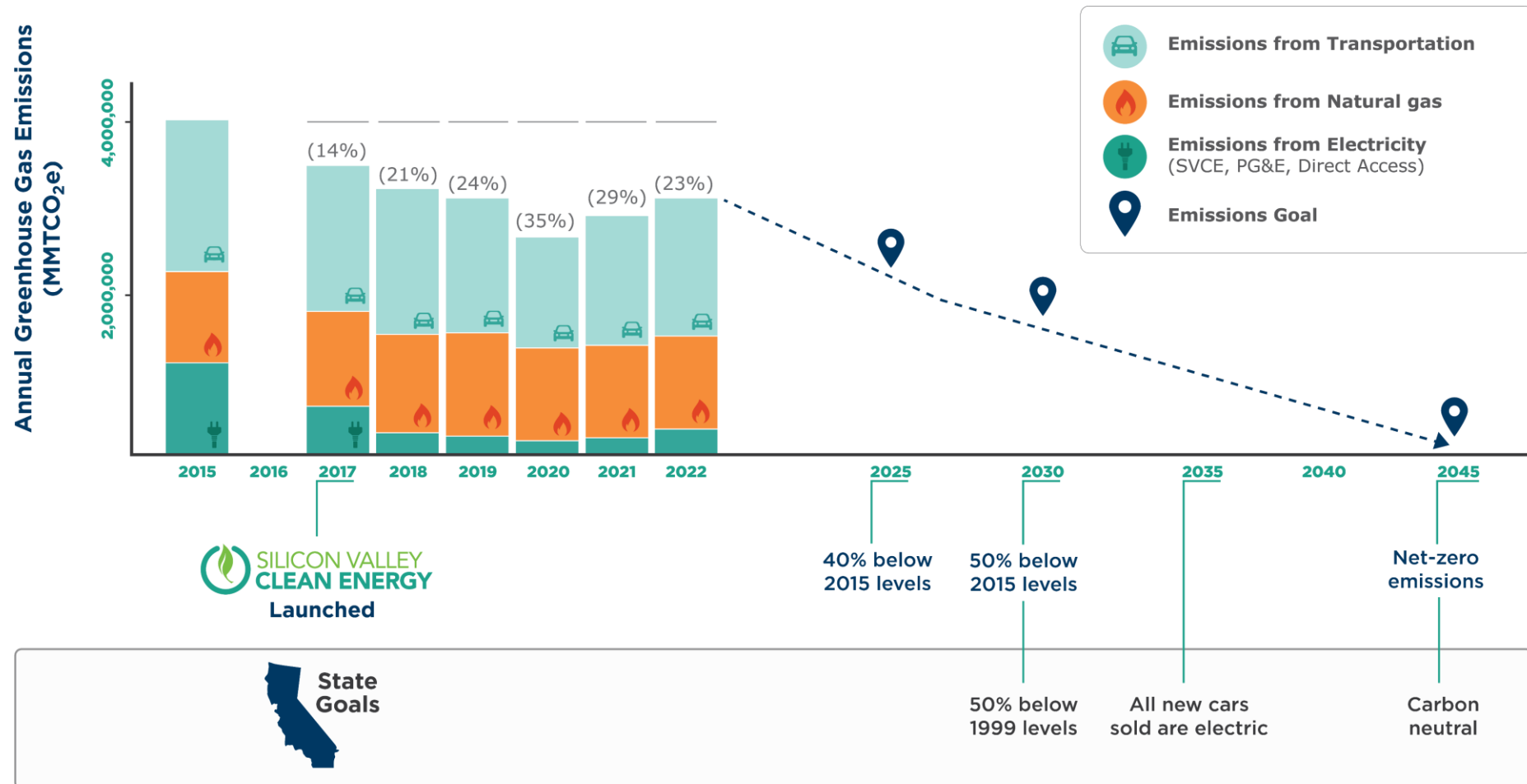
About 45% percent of emissions come for residential buildings and 55% from non-residential buildings





SVCE GHG Reduction Targets

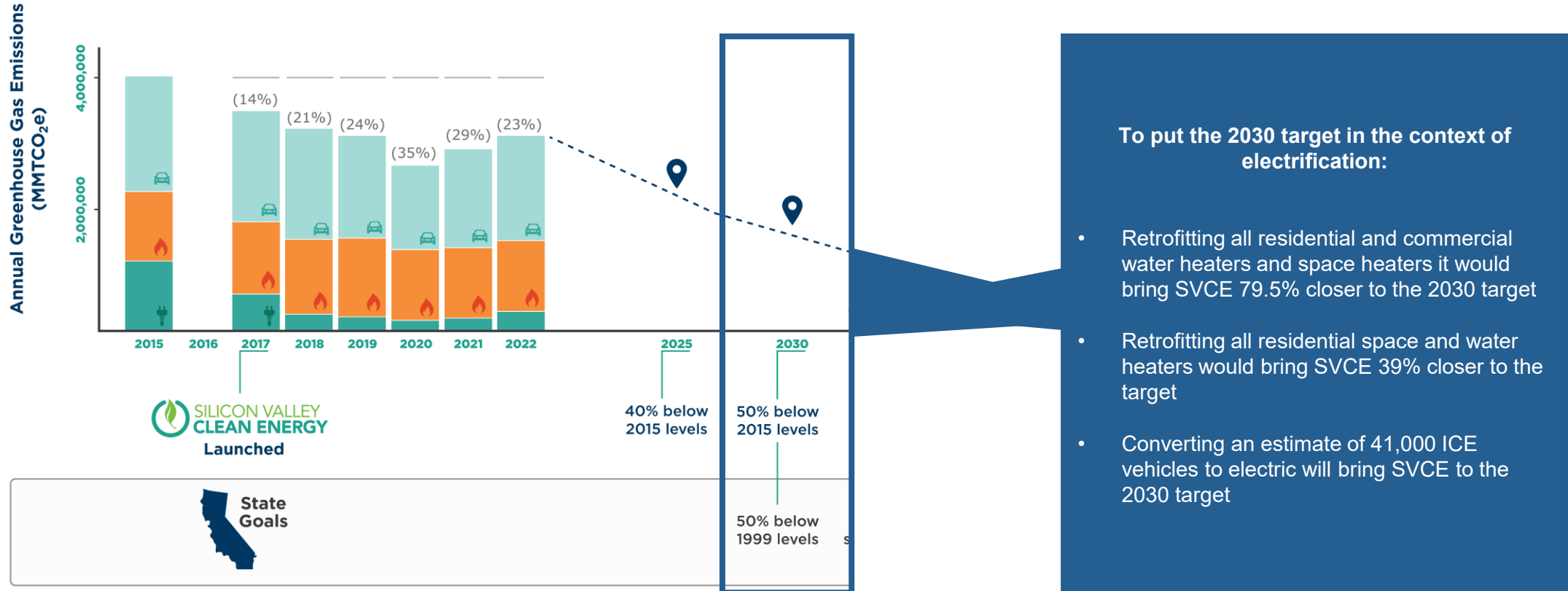
23% reduction in regional energy and transportation-related emissions since 2015





Reaching the 2030 Target

Need to reduce emissions by 1.1 Million MTCO₂e to reach 50% below 2015 levels





We are aligned – let's get to work!

SVCE Strategic Plan

- Enact and maintain service offerings for SVCE customers that deliver measurable economic and environmental benefit
- Implement commercial building decarbonization program
- Expand clean energy services with commercial, industrial and institutional customers

Your Carbon Goals...



Carbon Reduction

By 2030, reduce Scope 1 and 2 absolute carbon emissions by **36%** from a 2020 baseline.

Carbon plan and decarbonization efforts

In 2023, we created a carbon plan to estimate our future carbon growth and decarbonization from the various efficiency projects in place. The starting point for this plan is a systematic mapping of the carbon inputs and outputs of our business operations.

Our carbon plan outlines three key pillars for decarbonization:

- **Greener transportation logistics expansion**
Pursuing reduction in logistics costs, which in turn results in lower carbon emissions.
- **Energy management**
Enhancing energy management and implementing renewable energy solutions.

2030 Goals

Goal

100% of electricity at Applied globally comes from renewable sources by 2030

Progress*

Goal validated by SBTi
70% of electricity at Applied globally, including 100% in the U.S., comes from renewable sources

50% reduction in Scope 1 and Scope 2 CO₂e emissions by 2030 from 2019 baseline

Goal validated by SBTi
Scope 1 and Scope 2 (market-based) emissions decreased by 4% from FY22; 2% increase from our 2019 baseline

Achieve carbon neutrality for our entire carbon footprint by 2030 — reducing related emissions by 75 percent compared with 2015.⁶



Commercial and Industrial Decarbonization Program

Your Guides

Agenda

- Program elements and benefits of participation
- Group activities: Self Assessment, Barriers, Sharing
- Discuss next steps

Your Guides

Keri Macklin

Vice President, SEM & Carbon Consulting

Ann Marie Mastrippolito

Program Director, California C&I Operations

Ben Matek

Program Manager

Farris Sukkar

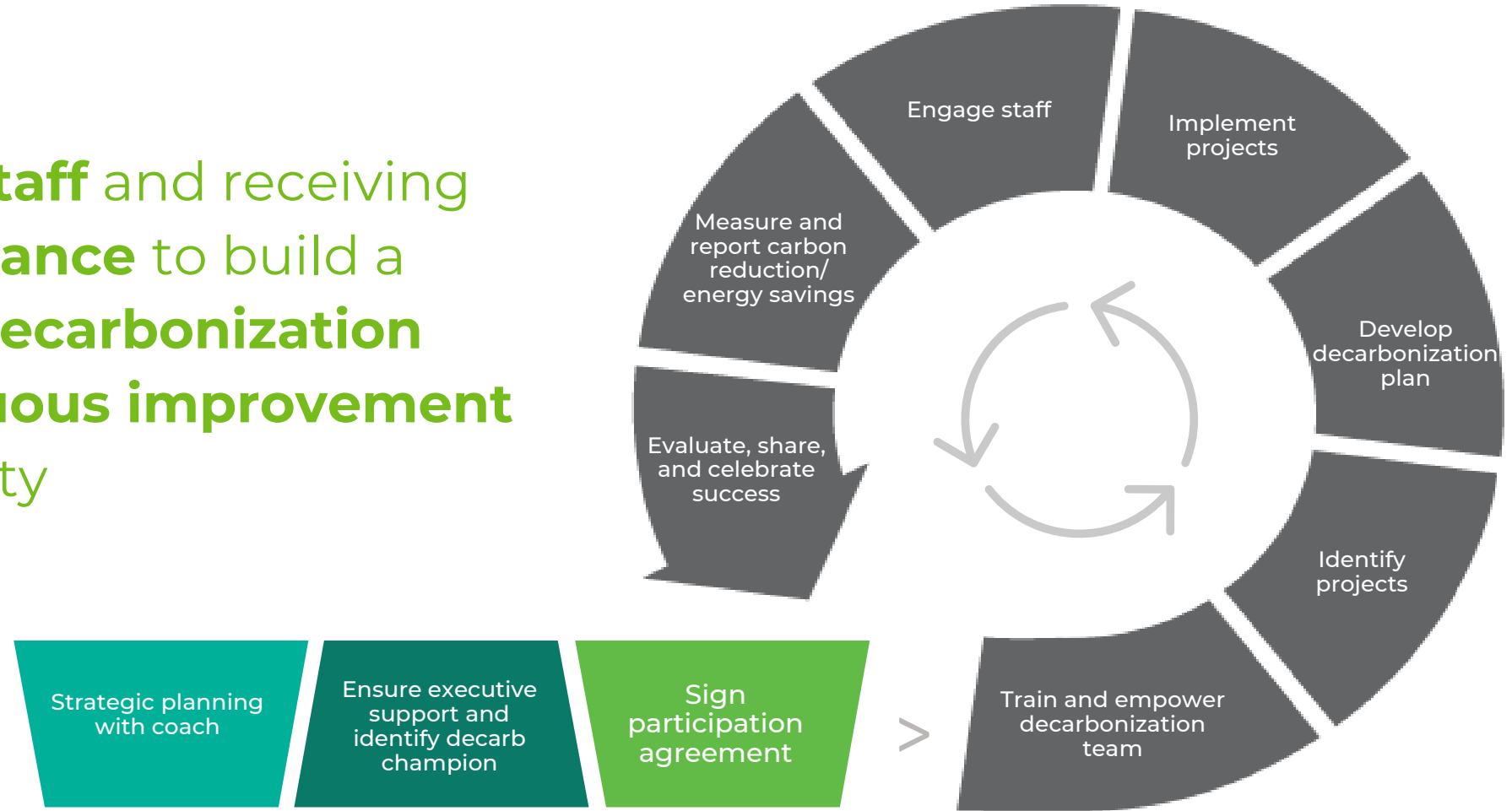
Senior Decarbonization Consultant

Jada Higgins

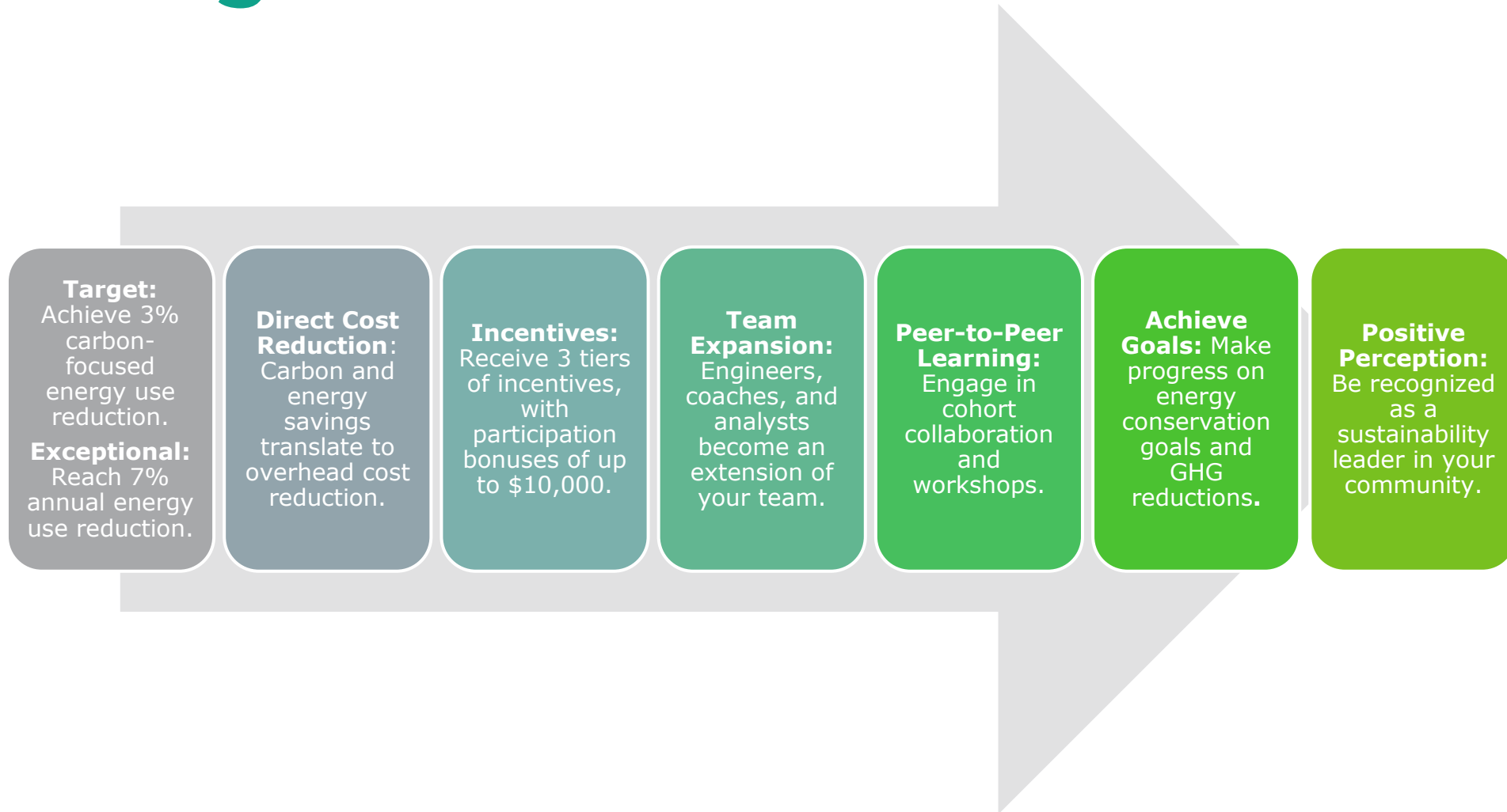
Decarbonization Associate

What Is Strategic Decarbonization Management?

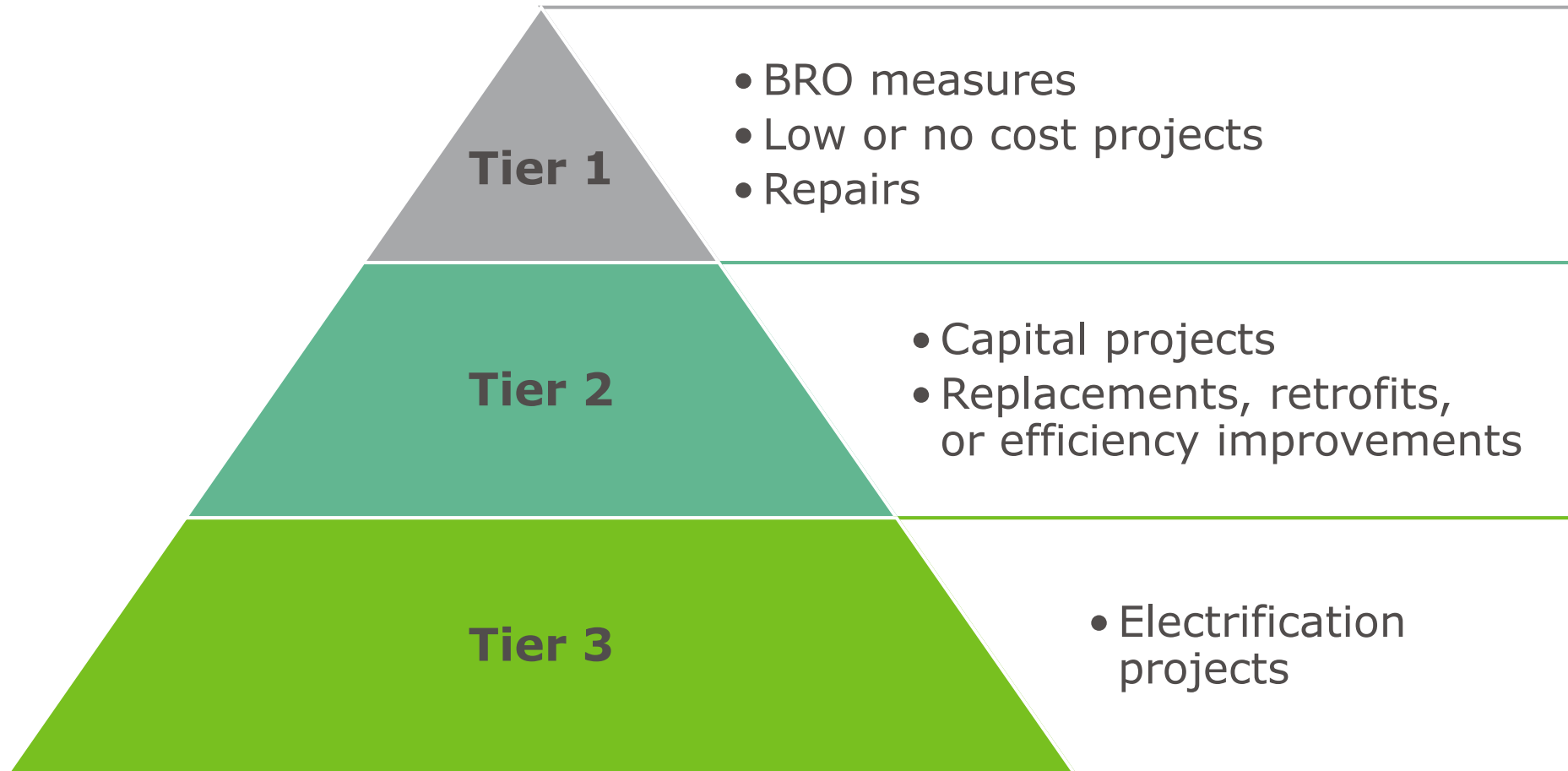
Engaging staff and receiving **expert guidance** to build a **culture of decarbonization** and **continuous improvement** in your facility



Program Benefits



How It Works



Incentives

Carbon Reduction Savings Incentives

Measure	Unit	Rate
Tier 1	Metric Tons of CO ₂ e	\$150/MT
Tier 2	Metric Tons of CO ₂ e	\$250/MT
Tier 3*	Metric Tons of CO ₂ e	\$1,750/MT

*Tier 3: Funding is capped at 50% of the total project cost. Projects are funded on a first-come, first-served basis, subject to funding availability.

Milestone Incentives — Earn up to **\$10,000** by joining our program and saving energy!

Milestone	Quantity	Payment
Joining SVCE Decarbonization Program	1 time	\$2,000
Ongoing program activities and workshops	Up to 8	\$1,000

Self Assessment

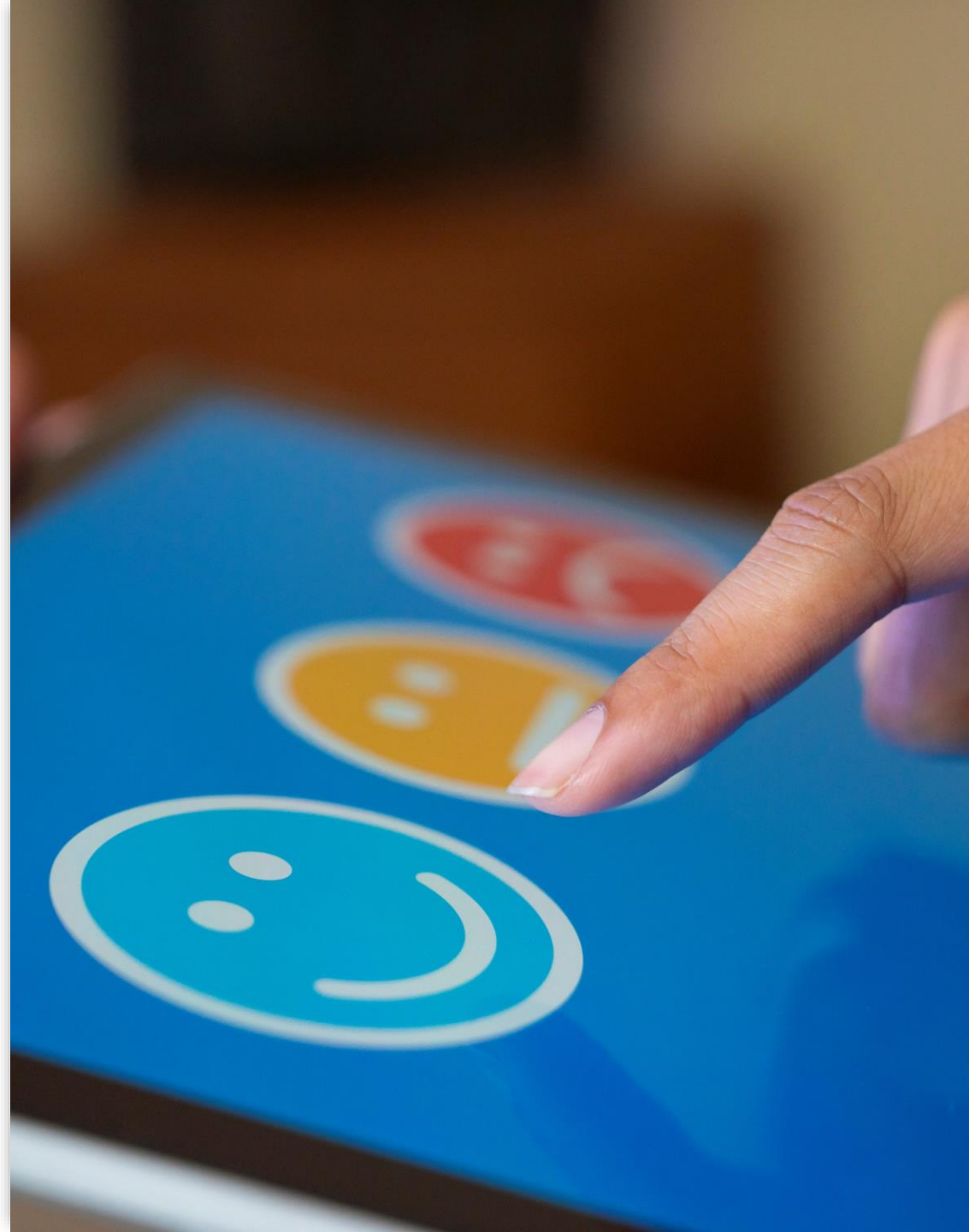
- **Evaluate**

Team up with members of your organization and complete assessment

- **Identify**

Name one dream decarbonization project you'd like to complete at your site

Note: Assessments are confidential and will not be collected or shared



Group Idea Sharing

1. Get in groups based on your candy
2. Using your assigned program element, brainstorm:
 - Why is this element important in the decarbonization journey
 - Barriers to succeeding in this element
 - Solutions (what *can* you change that needs to change?)
 - Select a spokesperson for report out



Program Elements

Executive
Sponsorship and
Commitment

Project
Identification

Project
Implementation

Decarbonization
Plan

Measuring
Success

Report Out

Share your group's ideas from assigned element

1. Your element
2. Why it's important
3. Barriers to success
4. Solutions



Take the Next Step

- Attain executive support and **sign participation agreement**
- Agreement contains confidentiality clauses protecting your information
- Can sign a separate NDA if requested
- No penalty for early withdrawal or non-participation (other than not receiving incentives)
- No cost to you!

Thank You!

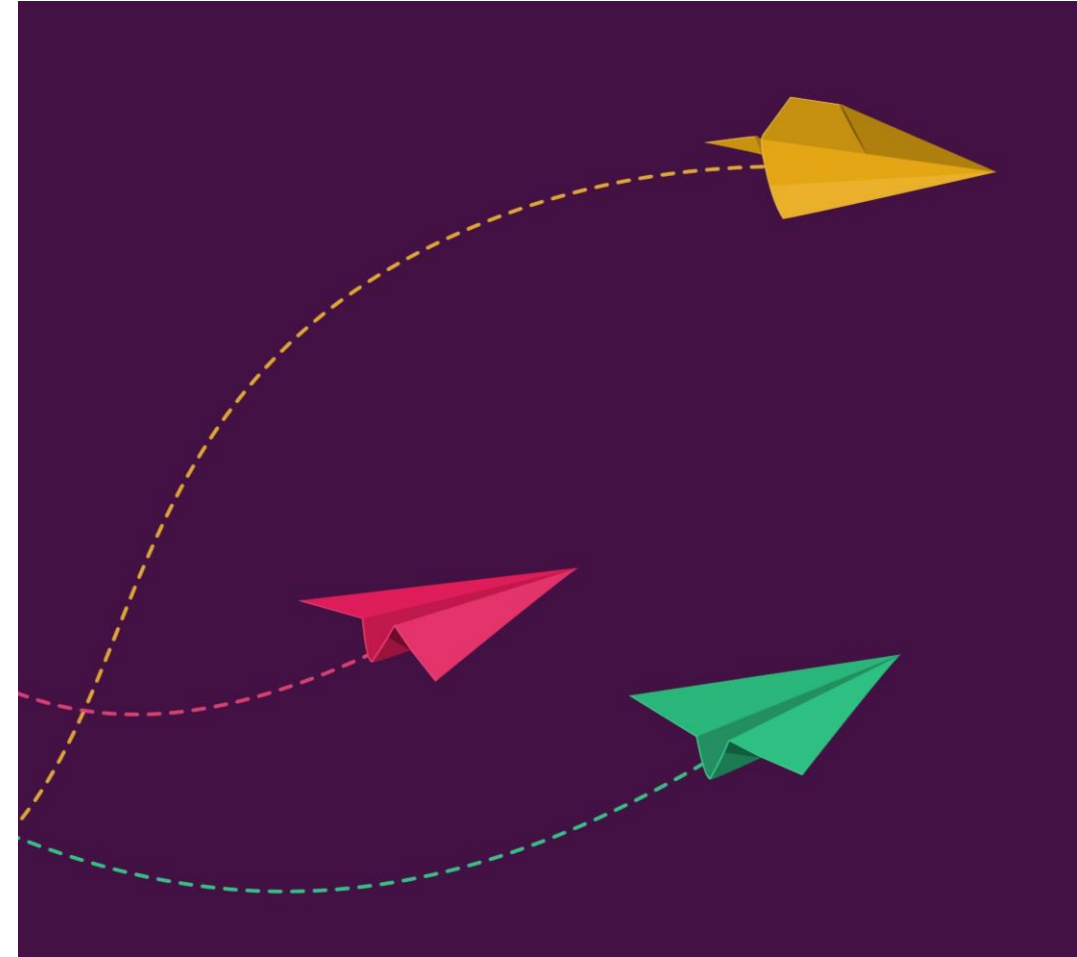
For more information or to enroll, please contact:

Ben Matek

Ben.Matek@clearesult.com

Joey Lande

Joseph.Lande@svcleanenergy.org



A photograph of a wind farm with several turbines on rolling green hills. The image is overlaid with a semi-transparent blue filter. The word "Lunchtime" is written in white, bold, sans-serif font, preceded by a short white horizontal line.

Lunchtime



Commit to clean energy and earn decarb project funding!

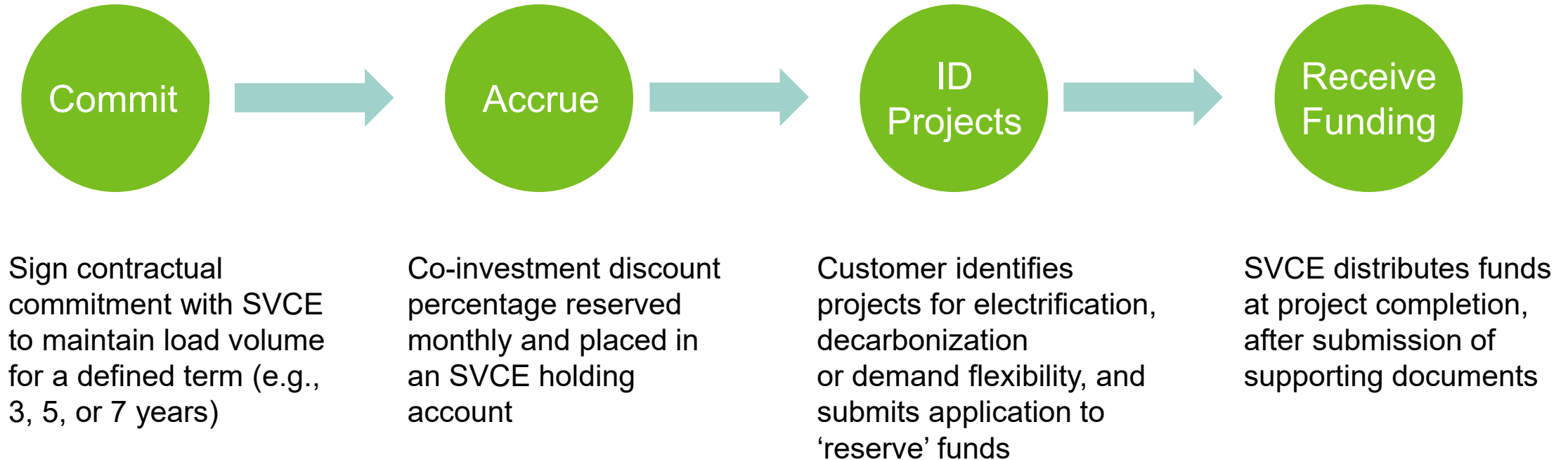
Program Purpose:

- Encourage and reward longer-term commitments to buying clean electricity and reducing carbon emissions
- Promote local electrification and decarbonization projects that benefit our customers and the surrounding community



How It Works

Opportunity to apply percentage of total SVCE generation bill toward decarbonization, electrification, or demand flexibility projects at local Customer facilities





EcoInvestment Example Terms (B20P)

(Illustrative Only)

	Term and Discount Options		
Term of Commitment	3 Years (e.g. 2024-2026)	5 Years (2024-2028)	7 Years (2024-2030)
EcoInvestment Discount Percentage	1.0%	2.0%	3.0%
Average Annual Co-Investment Amount*	\$57k/year \$399k Term Savings	\$114k/year \$798k Term Savings	\$171k/year \$1.2M Term Savings

*Actual co-investment amounts will vary with Customer's total load and SVCE then-current generation rates.



Funding Levels & Stipulations

Funding Levels

- 1:1 matching funding for voluntary programs e.g. EV charging, storage, advanced controls, etc.
- 100% funding for innovative pilot programs

Stipulations

- 1-3 months to develop agreement, but co-investment funds can begin accruing with a non-binding Letter of Intent
- Funds may be accrued YOY, but not held more than one year beyond commitment term
- Funds must be used for voluntary projects, vs. projects required by current building codes or other regulations



Benefits to participation in both programs:

- Project identification is taken care of through C&I Decarb
- Incentives stack to cover up to total project costs



Emergency Load Reduction Program



Emergency Load Reduction Program

Join us to help prevent power outages this summer.

- If called upon during an emergency event, **PG&E pays \$2/kWh to reduce load**
 - Generation from BUGs can be eligible in extreme grid emergencies
- No risk of any financial penalty if you do not shed load during called events

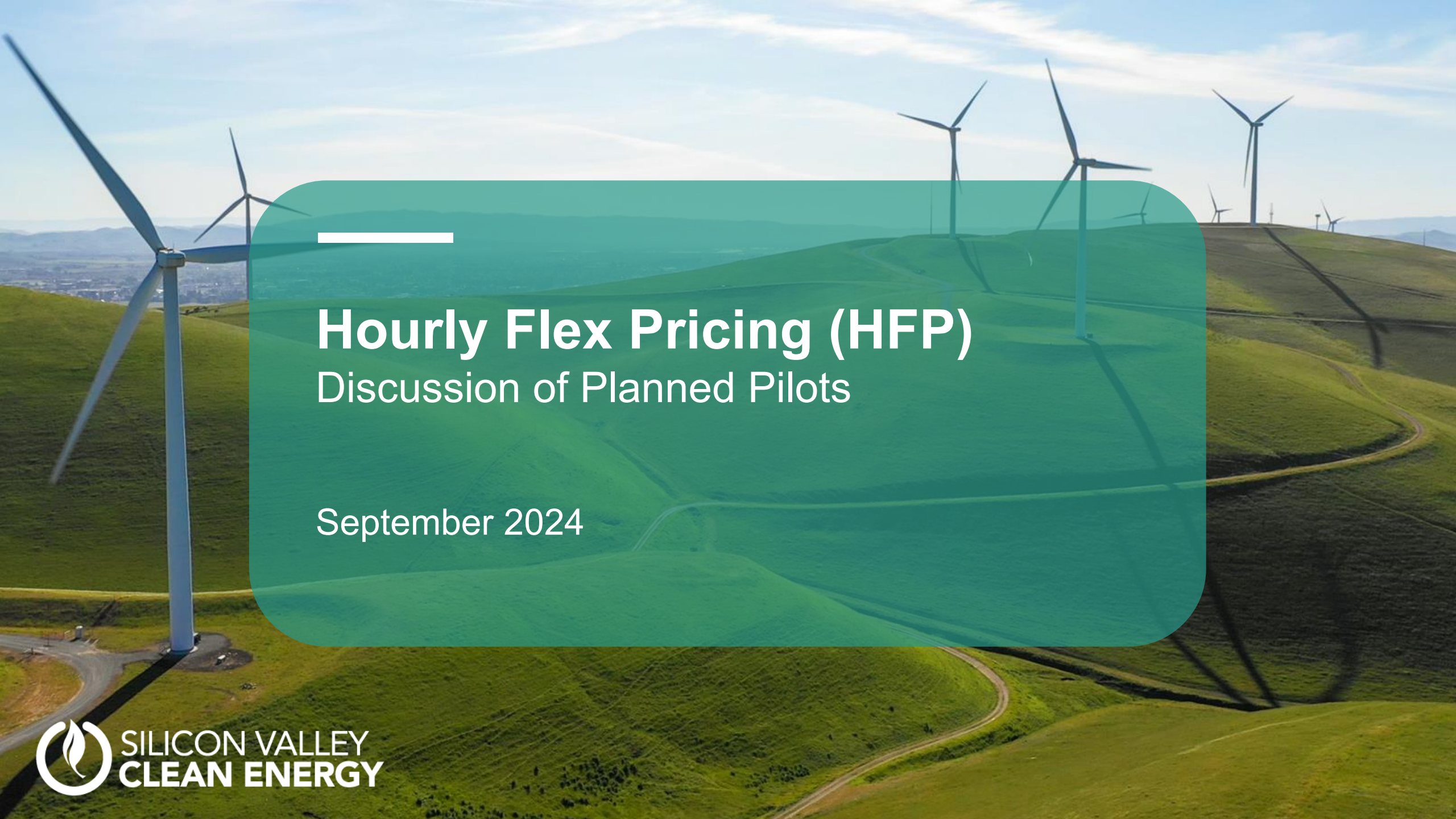


Emergency Load Reduction Program

We encourage participation in this state program rewarding those who help during emergencies!



- Enrollment is easy via PG&E's website
- Eligibility requirements:
 - Able to reduce load by at least 1 kW during an emergency event
 - Not currently enrolled in any other demand response program (with the exception of PG&E's Base Interruptible Program)



Hourly Flex Pricing (HFP)

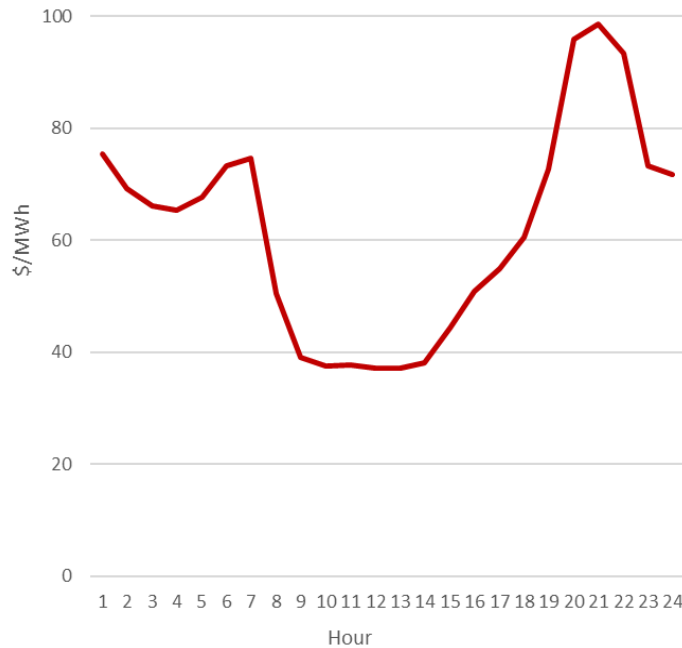
Discussion of Planned Pilots

September 2024



Dynamic hourly rates are planned for commercial customer pilots starting in 2025.

Sample CAISO Hourly Energy Prices
(Summer Months)

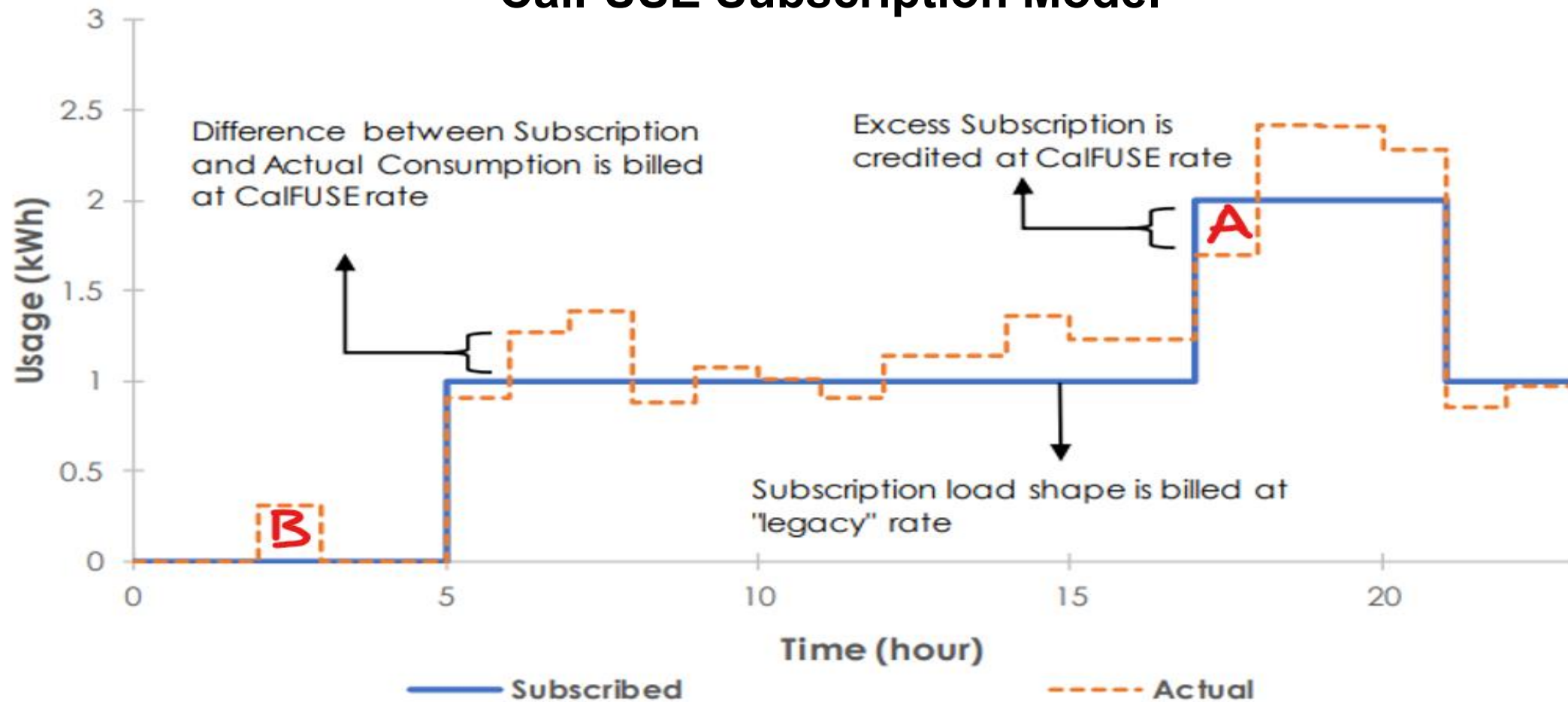


- At the direction of the CPUC
- Pilot effectiveness of dynamic price signals for incentivizing usage when power is most available, clean, and lowest-cost
- Critical for long-term grid reliability, affordability
- Pilots planned for 2025-2027 timeframe
- PG&E is the local program lead; SVCE plans to offer accompanying dynamic hourly generation rates
- Technology/automation from 3rd-party service providers
- Planned commercial rate pilots include:
 - B6, B10, B19, B20, BEV1, BEV2



The pilots will apply the HFP rate to usage that varies from the customer's historic load and load shape.

CalFUSE Subscription Model





Summary of TOU vs Dynamic Hourly Generation Rates

	TOU	HFP Pilot
Time Interval	Peak, Part Peak, Off Peak	Hourly, 24 hours/day
Access	Known in advance; Changes ~ once/year	3pm prior day
Rate Composition	Marginal + fixed cost to provide generation; determined through GRC	+ Marginal Energy Cost (CAISO DAH) + Marginal Generation Capacity Cost + Subscription Methodology: captures nonmarginal costs; smooths rate variability
Monthly/Annual Activity	Monthly bill: TOU X Usage	1. Monthly bill: TOU X Usage 2. Monthly rider notifying customer of savings/(incremental cost) based on change from historical Usage @ Hourly Rate 3. Cumulative savings to customer, annually

PG&E will provide more information about the HFP pilots, such as enrollment guidance for customers, potential partners, and other interested parties on [PGE.com](https://www.pge.com)

Customer enrollment planned to commence November 1, 2024





Thank You!