



Executive Committee Meeting

August 14, 2023

Agenda

- Call to Order / Roll Call
- Public Comment (for items not on the Agenda)
- Action to set the Agenda
 - Public Comment
- Regular Agenda
- Committee Members Reports
- Adjourn

Chair Report

Item 1



CEO Report

Item 2



Open Positions

Currently posted:

- Chief Operating Officer
- Chief Financial Officer/Director of Finance and Administration
- Los Banos Community Relations Associate Manager/Manager
- Energy Programs Analyst or Senior Analyst
- Regulatory Specialist/Analyst



Surplus Funds Committee Update

- Committee met on August 9th and made good progress
- Organized potential allocations around 4 funding categories
 1. Increase reserves/days cash on hand
 2. Increase customer savings through additional rate discount or rebate
 3. Additional funding for customer programs (resi/commerical/municipal)
 4. Funding for PCE sponsored local power projects
 - Also discussed potential for schools support

Next steps

- Meeting #3 right after Labor Day
- Consolidate committee ideas and continue discussions

Board Survey - Feedback



Energy Programs Overview



Strategic Objectives

Organizational Priority: *Contribute to our region reaching its goal to be 100% greenhouse gas-free by 2035*

Community Energy Programs: *Implement robust energy programs that reduce greenhouse gas emissions, align energy supply and demand, and provide benefits across the community.*

- A. Decarbonization Programs:** Develop market momentum for electric transportation and initiate the transition to clean energy buildings
- B. Distributed Energy Resources:** Support decarbonization and local power development
- C. Community Benefits:** Deliver tangible benefits throughout our diverse communities
- D. Innovation and Scale:** Leverage leadership, innovation and regulatory action for scaled impact

2035 Analysis: PCE GHG Reduction Scope

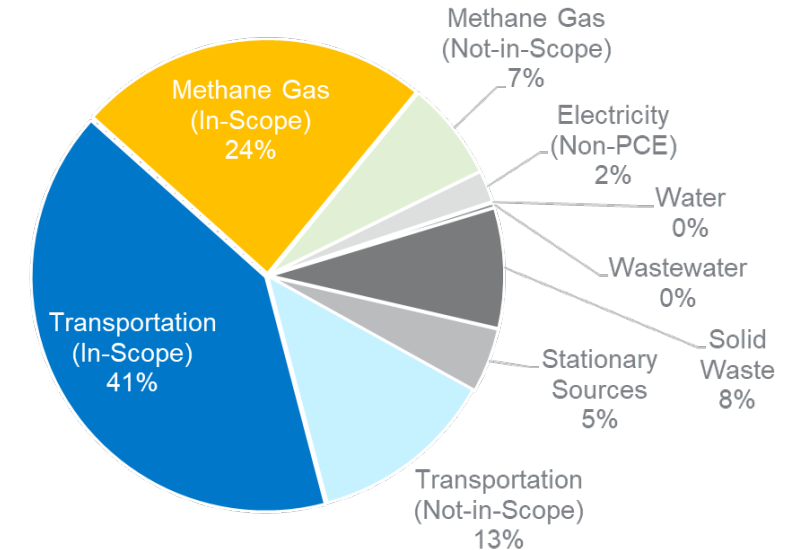
- **Primary Scope**

- Transportation
 - private passenger, local gov & small commercial fleets,
 - ride-hailing, alternative mobility
- Buildings
 - residential (single family & small multifamily),
 - Office (incl. local gov.), small commercial

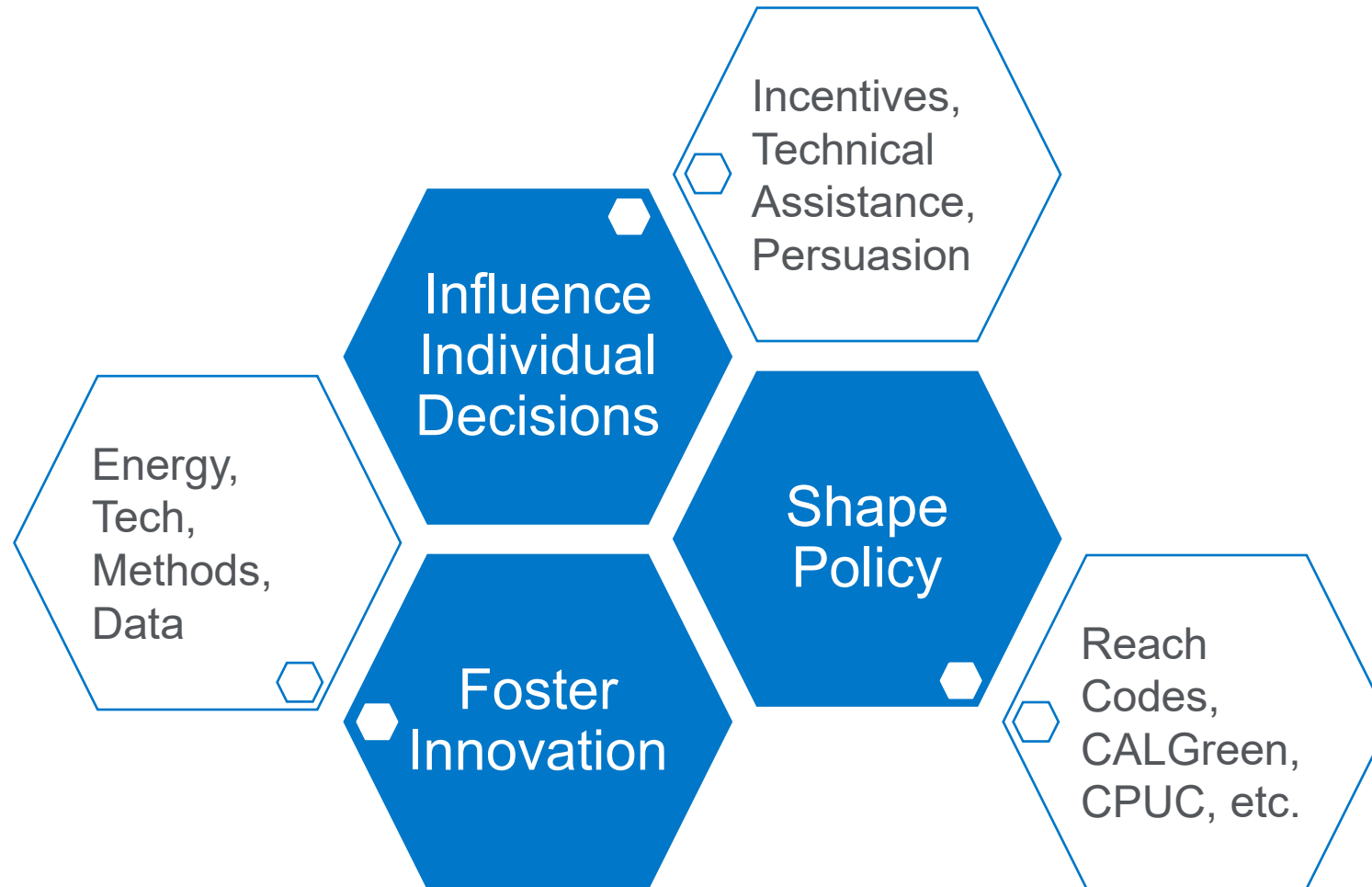
- **Not in scope, or limited*** (others lead)

- Transportation: heavy-duty vehicles, off-road
- Buildings: industrial, **large commercial***, **large multifamily***
- Non-energy: land-use, compost, stationary sources, landfills
- Out of territory: SF airport
- Embedded carbon, climate adaptation, sequestration/restoration

San Mateo Countywide Greenhouse Gas Emissions,



How We Effect Change



Programs Portfolio

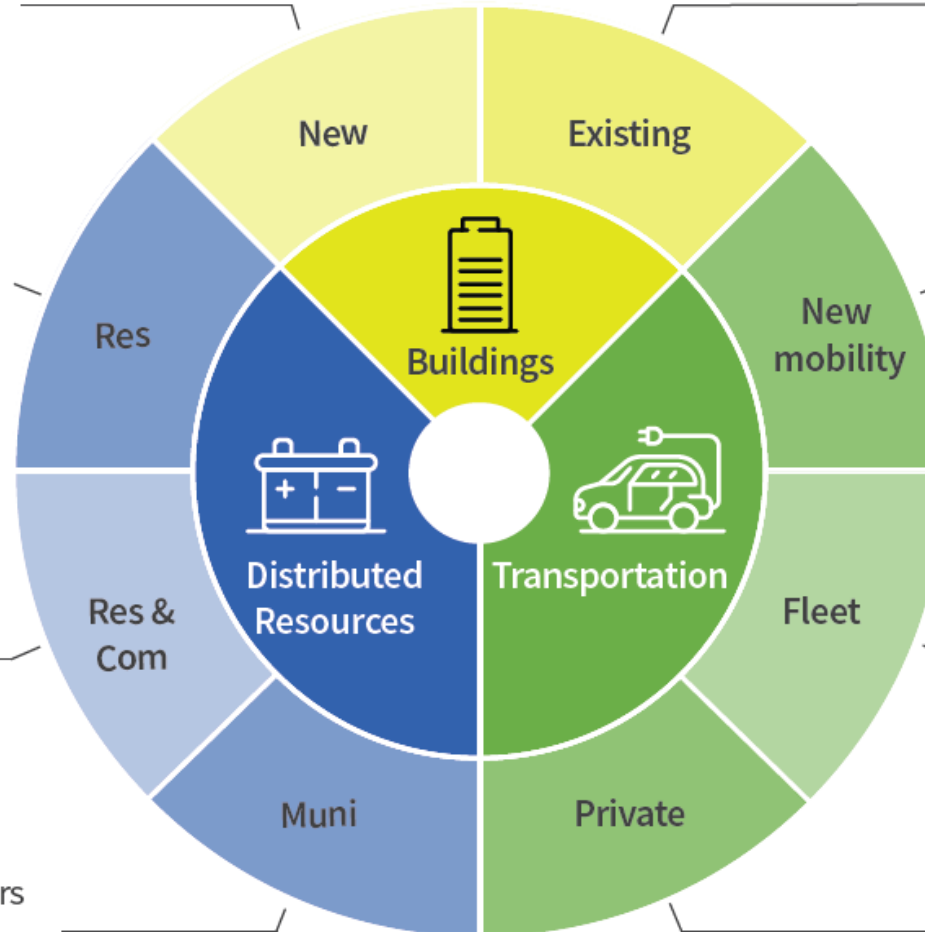


Reach codes
Technical asst.

Solar + storage

Virtual power
plant

Resilience centers
Solar + storage



Appliance incentives
Income-qualified homes*
Marketing & training

E-bikes*

Muni fleets

EV incentives⁺
EV charging incentives⁺
& technical asst.
Marketing & training



* Low-income program + Includes low-income benefits

Achievements to-date #1

1. Appliances & Zero Percent Loans: over 1,000 installs

- Good early market adoption, est. ~5% of annual installs
- Loans very popular with contractors & customers, >\$2M reserved since Oct.
- 12,000 MT CO2 over 10 years



2. Electric Vehicle Charging: 500 ports to-date

- Innovation in “right-sized” charging, \$4,400 ave per port (compared to PG&E \$18k)
- 2/3rds in multifamily, highest need segment
- 3,600 charge ports in pipeline



3. Solar on Public Facilities

- Round 1: 12 sites, 1.7 MW solar, CYQ1 2024, \$17M lifetime savings
- Round 2: ~30-40 sites, 5-6+ MW, RFP forthcoming



Achievements #2 – Underserved Communities

1. EV Rebates: 346 vehicles

- \$3.6 million in savings over 10 years
- 18,000 MT CO2 over 10 years

2. Home Upgrade: 190 homes

- Home repairs plus electrification
- Target: ~300 homes

3. E-bikes for All: 650+ bikes

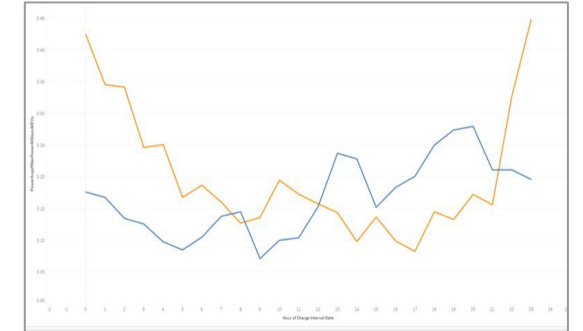
- “Getting exercise and saves on gas!”
- >20% report ebike is primary mode of transport



Innovation Pilots

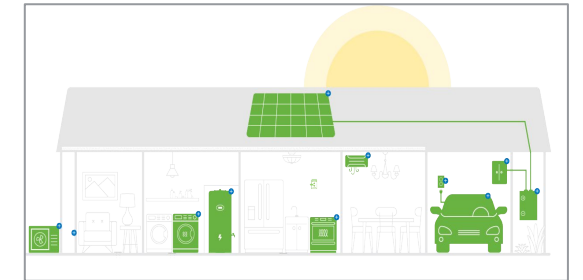
1. EV Managed Charging

- Support grid: shift charging out of evening peak
- Major opportunity: 7 kWh/EV, current: 40,000, future: 600,000+
- Through the vehicles: telematics based



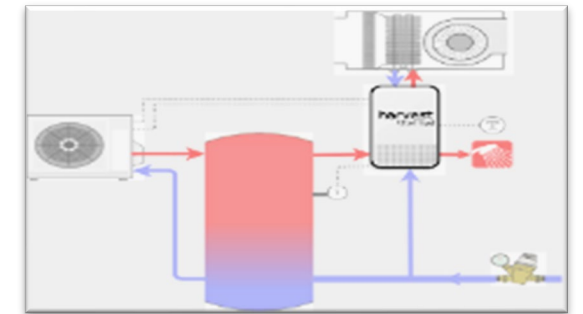
2. Electrification Guidelines @100A & 120V HPWH

- Advanced design guidelines (electrification without panel upgrades)
- Lower install costs



3. Advanced home system pilot (Harvest Thermal)

- Major innovation, combined space & water heating, “grid aware”
- 4 of 4 installs completed, data collection in progress
- Average install cost \$22-23,000
- 70-90% reduction in home emissions



Where we need to go



Customer-first

- Personal & custom



Data-driven

- Targeted insights

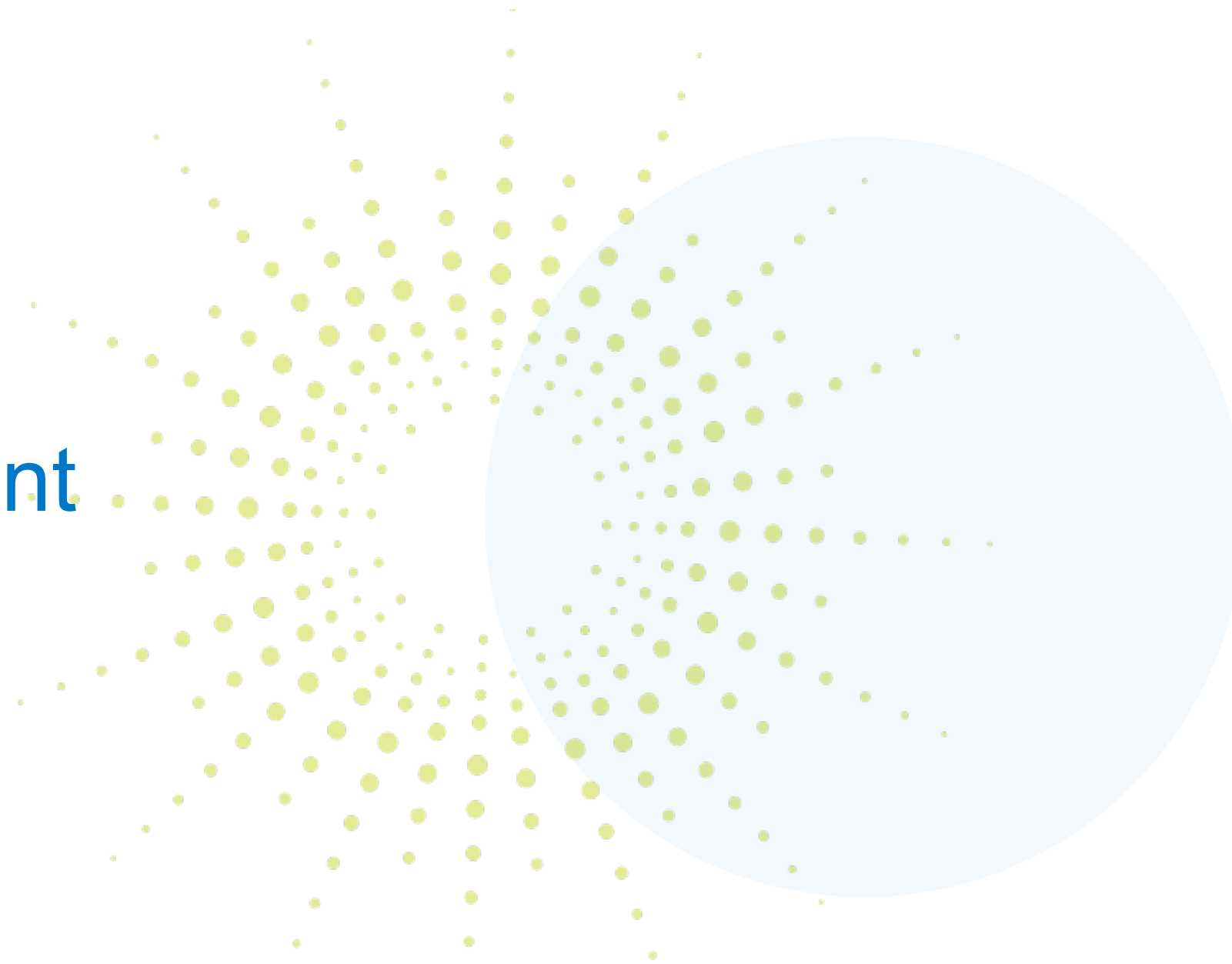


Scalable

- Online marketplaces & tools

New Development

2035 Decarbonization Plans





2035 Analysis: Recommendations



1. Flexible Incentives

- All measures, incl. prewiring and panels
- Broader building segments
- Integrated load shaping & solar+storage options

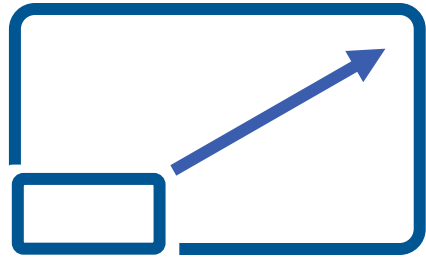
2. High touch support

- Advanced “right-sizing” design
- One-stop shop, hotline assist, turnkey option
- Procurement aggregation to lower costs
- Greater contractor support

3. Links to Finance

- Specific linkages by customer segment

Vision Building Electrification v2



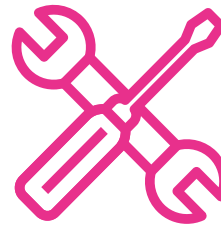
Scale to Whole Home



Increase Homes Impacted per Year



One-Stop Shop Services



Live Technical Assistance



Turnkey Services

Residential Electrification – “BE v2”



“I want to choose”
(DIY or self-managed)



“Just get it done” &
“It’s an emergency”



“I cannot afford this”
(low income)

Retail Partners

Brick & mortar presence

Dev supply chain

Bulk buy

One-Stop Website

Appliance marketplace

Contractor network

Info & education
Why, how, rebates, etc.

Energy calculator

Concierge

Program navigation

Project planning

Technical guidance

Turnkey install option

Appliance install

Bulk buy

Emergency loaner

Workforce development

Whole home pre-wiring

Pilot tech

Finance Options

PCE financing

Third-party financing

Load Shaping

PV + Storage

Rebates

CPUC
FLEXmarket

PCE rebates

BayREN
rebates

IRA
rebates

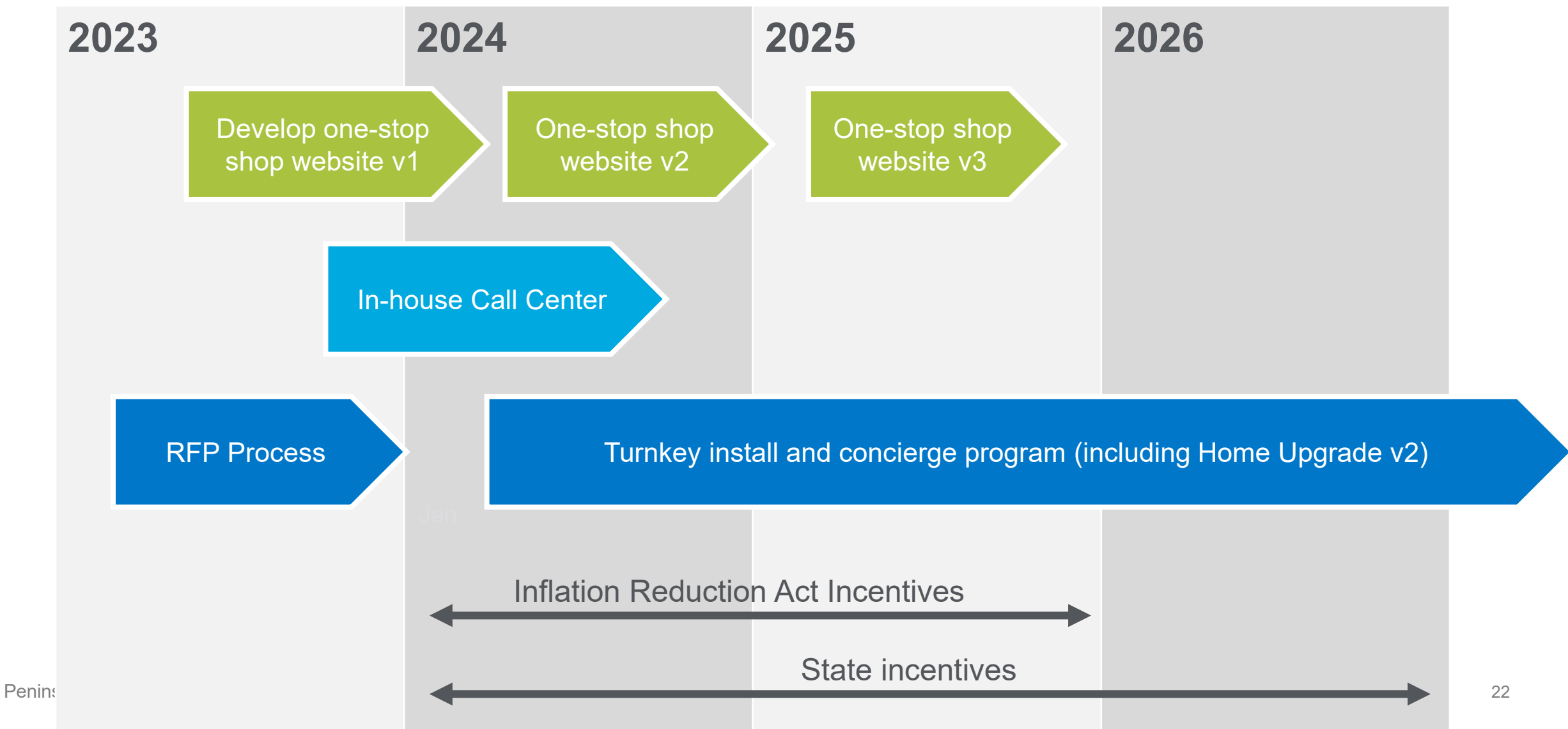
CEC
rebates

Call Center

- **Current Calpine Call Center is very limited**
 - Only supports account inquiries and change
 - Every program has its own communication silo
- **To be proposed: In-house call center**
 - Answer all inbound 800-line customer calls
 - Answer info@ and programs@ email
- **Robust customer service**
 - Account status and billing (incl. NEM)
 - General advice on rate schedules, how to change
 - Program navigation, eligibility, incentive amounts
 - Incentive stacking information
 - Rebate status
 - Program recommendations (addl. svcs)
 - Referral to concierge and turnkey services



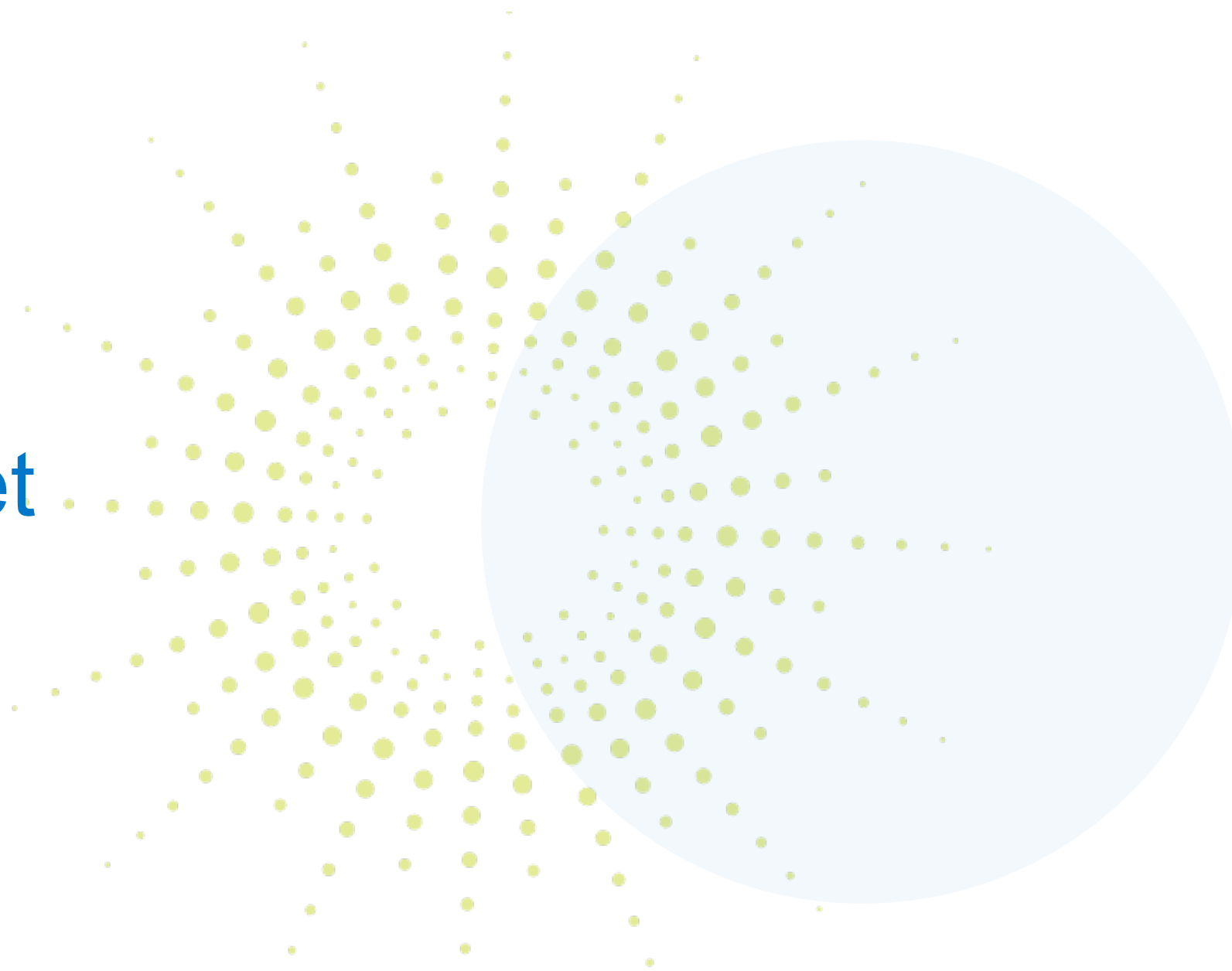
Building Electrification v2: Timeline



Additional Plans for 2024 (in approved budget)

- **Solar and storage on public buildings:** implement 2nd round
- **EV managed charging:** from pilot to general program
- **Residential solar and storage:** replace existing program
- **Local government electrification:** new program

Programs Budget



Approved Budget & 5-Year Forecast

	FY24 Budget	FY25	FY26	FY27	FY28	5 Year Budget
Building Codes	276,000	250,000	250,000	250,000	250,000	1,276,000
Buildings	5,750,000	12,500,000	13,500,000	17,500,000	20,000,000	69,250,000
Transportation	6,030,000	7,960,000	10,251,000	10,323,600	10,403,460	44,968,060
Distributed Resources	500,000	1,060,000	1,360,000	1,860,000	1,860,000	6,640,000
Pilots & Grants	95,000	395,000	395,000	395,000	395,000	1,675,000
Totals	\$12,651,000	\$22,165,000	\$25,756,000	\$ 30,328,600	\$ 32,908,460	\$123,809,060
Capital Programs (net)						
On-Bill Finance	2,820,000	2,050,000	1,480,000	910,000	340,000	
Public Solar	7,200,000	36,575,000	(18,423,000)	(3,420,000)	(3,415,000)	

*FLEXmarket revenues not shown

Programs Budget Outcomes (partial)

	Units Installed to Date	FY24-28 Total Budget	New Units	GHG Saved, New Units (MT)	Customer savings/yr
EVs	353	\$5,600,000	1,600	8,800	\$2,100,000
EV charging	470	\$34,000,000	9,000	103,000	\$6,000,000
eBikes	600	\$1,800,000	1,800	1,400	\$700,000
Appliances	2,600	\$28,500,000	14,000	15,000	\$3,200,000
Low-Inc Home Upgrade	227	\$36,000,000	4,000	3,000	\$300,000
Public Solar	in-progress	Capital budget	6+ MW	n/a	\$2,600,000
Building Codes	21 adopted	\$1,276,000	TBD		

- 20-30% of funds targeted for low-income
- Low-income specific programs: ebikes, Home Upgrade
- Programs providing low-income support: EV charging, electric vehicle incentives

Local Government Building Electrification Program (GovBE)

Executive Committee – August 14, 2023

Recommendation

Program

Local government building electrification projects

Request

- Recommendation to Board for program approval
 - Including \$5-10m Revolving Loan fund

Budget Status

- Incentives included in approved FY24 budget, est. \$500k - \$2m per year

Agenda

1. Local Governments context
2. Need for flexible incentives
3. Funding concepts
4. Proposed program
5. Cost examples
6. Timeline
7. Request

Goals to decarbonize government buildings

Municipal Green Building Policy and Electrification

City facilities will follow the CALGreen Code and consider having new municipal buildings certified for LEED Silver or Gold status or equivalent. The new Community Center will be built to green building standards; however, at this point it is unknown what level of LEED standard will be achieved. The City is also looking at opportunities for including PV solar panels for the new Community Center.

In order to lead by example, all new construction projects by the City will be all-electric based on adopted Reach Codes and will strive to be zero net energy via on-site solar. The Community Center currently under design is committed to these goals.

Excerpt from Millbrae 2020 Climate Action Plan



Local governments struggle to fund electrification



San Mateo Animal Shelter



Menlo Park Burgess Pool



Merced County Library, Los Banos



San Carlos Youth Center

Diverse portfolios need flexible incentives

Governments have the most varied portfolios imaginable

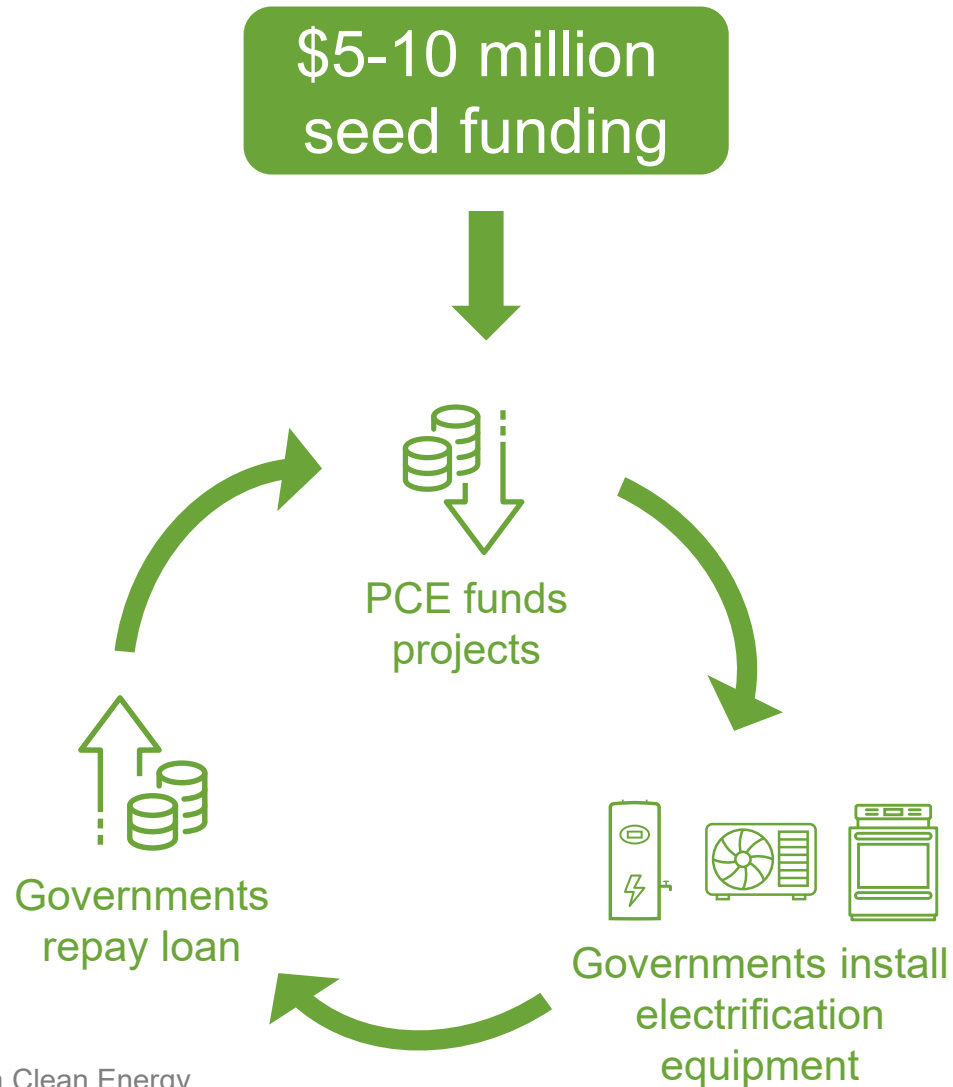
City hall
Government offices
Police stations
Fire stations
Animal shelters
Human health and services
Forensics labs
Community pools

Recreation centers
Youth centers
Locations for weddings
911 dispatch center
Juvenile hall
Prisons
Libraries
Lifeguard stations

Baseball fields
Tennis and pickleball courts
Corps yard
Airport
Parks and Recreation
Courthouse
Registrar of voters
Daycare center

A one-size-fits-all incentive does not work for
diverse portfolios with different building
systems types and thermal demands

Electrification Revolving Loan Fund



Why local governments need access to loans:

- Budgets are limited
- Individual projects are the wrong size for one-off traditional finance/construction contracts, such as Power Purchase Agreements
- California Energy Commission loan is too restrictive
- Gas replacement programs in the capital improvement pipeline are typically under-funded to enable electrification

Incentive Program

Why local governments need access to incentives:

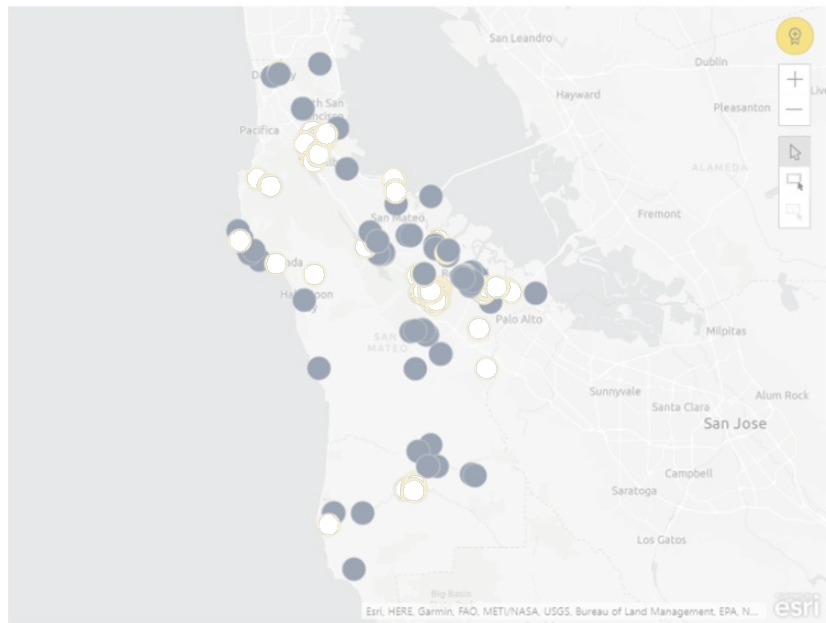
- Electrification does not always have a payback
- Governments cannot take out unlimited loans
- Cities have noted a need for a mix of both loan and incentive options



A worker carefully places an old gas-fired, roof-top HVAC unit onto a truck bed at the Peninsula Conservation Center in Palo Alto on Jan. 25, 2023. Photo by Magali Gauthier.

Examples of GHG savings and incentive sizes

- Flexible incentive based on gas usage, at an amount similar to residential incentives or **\$16/therm**.
- Each 1,000 therms of gas saved per year translates to ~5 MT CO₂e/yr



County Building Example	GHG Savings (MT CO ₂ e/yr)	Maximum Incentive Size
Superintendent of Schools	172	\$517,952
County office building	104	\$313,952
Registrar of Voters	52	\$155,952
Corp Yard	52	\$155,392
Craft Shop	48	\$143,696
Daycare Center	47	\$140,432
EPA Gov Center	45	\$136,800
Human Services	42	\$125,808
Medical Clinic	37	\$112,096
Vocational Rehab	36	\$109,648
Parks and rec	32	\$97,936
Women's Correctional	24	\$73,248
Probation office	17	\$50,000
Central library	16	\$49,696
Homeless Shelter	14	\$42,224
Youth Crisis Center	13	\$39,664
Law Library	13	\$39,520
Courthouse	12	\$36,832
Fire Station Trailer	12	\$36,368
County Gov Center	11	\$32,592
Corp Yard	11	\$32,064
Horse Stables	9	\$27,008
Animal Shelter	9	\$26,080
Lathrop House	5	\$15,296
Weights and Measures	4	\$13,456
Parks and rec	3	\$10,448
Sheriff Commuter House	3	\$8,368
Probation office	2	\$5,632
Parks and rec	2	\$5,184
Airport Hanger	1	\$3,520
Sheriff's Substation	1	\$1,840

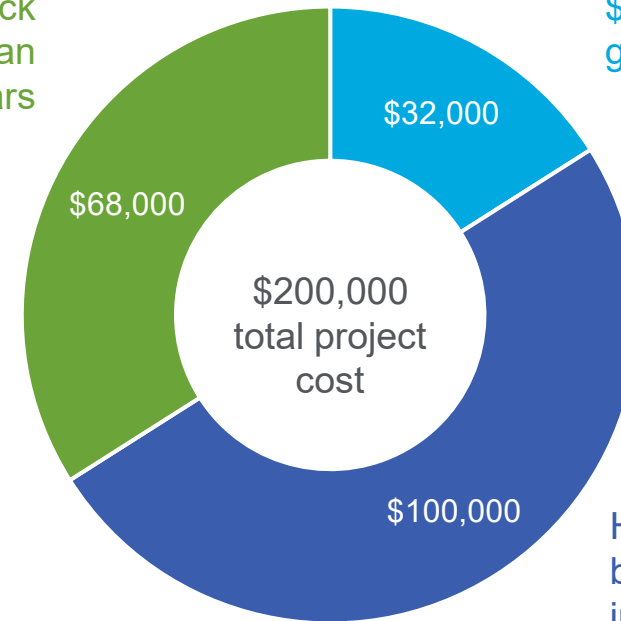
Hypothetical project cost-share

Example community center electrification project:

- Eight rooftop packaged gas units replaced with heat pumps
- Heat pump water heater installed
- Total project cost of \$200,000
- 11 Metric Tons CO₂e saved per year



\$68,000 loan paid back
to Peninsula Clean
Energy over 7 years



\$32,000 incentive based on
greenhouse gas savings

Half of project cost covered
by existing city capital
improvement budget

Proposed Program Summary

Revolving loan fund

- 7-year loan term
- 0-2% interest rate
- \$5-10 million seed funding
- Cap of \$600k per project (can be combined with incentive)
- Requires 25% cost-share by non-PCE funds.

Incentive program

- \$1 million/yr in current budget (\$750k for FY24)
- Up to \$16 per therm per year methane gas reduction
- \$600k cap per project
- Requires 25% cost-share by non-PCE funds
- Prioritize projects based on:
 - Urgency (gas equipment aging out)
 - Shovel-readiness
 - Total therm savings
 - "Showcase project" or high community visibility / benefit
- Allow backup gas to remain in some cases dual-fuel projects for sites with electrical capacity issues. Require 75%+ GHG reduction.
- Inclusion in FlexMarket could allow CPUC reimbursement

Benefits

1. Energy cost savings for local governments

- Government buildings typically see cost savings from electrification.
- Pools will save up to \$30,000 per year in energy costs
- Adding on-site PV plus battery increases cost savings

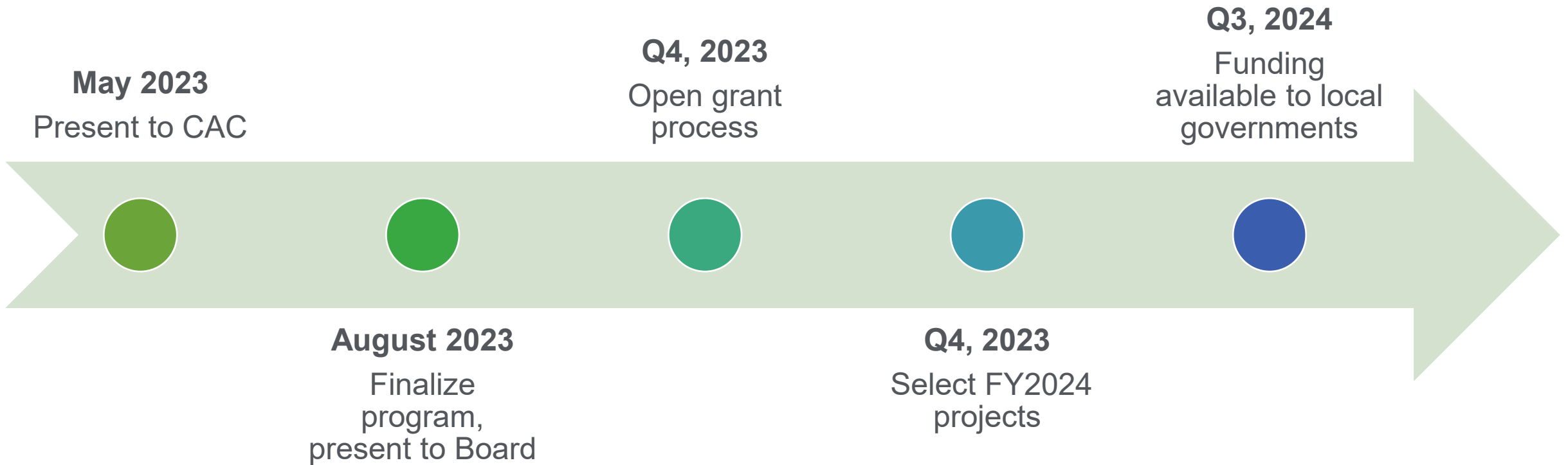
2. Funding building improvements

- Funding request estimated to help 30-90 projects over 10 years
- Help with deferred maintenance of systems
- Electrification at difficult buildings

3. Emissions savings

- 500-3,000 MT per year
- A municipal pool heater has similar emission to 100 homes (100+ MT/yr)
- A small recreation center is similar to electrifying 4 homes (6 MT/yr)

Possible Timeline



Recommendation

Program

Local government building electrification projects

Request

- Recommendation to Board for program approval
 - Including \$5-10m Revolving Loan fund

Budget Status

- Incentives included in approved FY24 budget, est. \$500k - \$2m per year

Net Billing Tariff (NBT) Update

Leslie Brown
Executive Committee
August 14th, 2023

Discussion Overview

- Brief recap of NEM 2.0 sunset and NBT transition
- Major differences between NEM and NBT
- Customers impacted by NBT
- What are other CCA's doing?
- PCE policy considerations

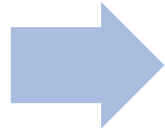
What is NBT?

- New solar interconnection policy for systems applying after April 14, 2023
 - NEM 3.0 => Net Billing Tariff (NBT) => Solar Billing Plan
- Per the CPUC the new policy changes are intended to:
- Credit excess solar generation at its grid value (vs retail)
 - Charge NBT customers for grid electricity based on high differential TOU tariffs and encourage solar + storage installations (encourage shifting exports to later in the day)
 - Promote equitable access and benefits of solar for low-income customers
 - Support sustainable growth of solar in CA

NEM Evolution – CPUC Policy Objectives

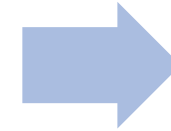
NEM 1.0
1995 – 2017

- Promote proliferation of rooftop solar by crediting customers at full retail rate
- Diversify energy resource mix
- Tariffs favor mid-day solar production



NEM 2.0
2017 – Apr. 14, 2023

- Given significant participation in NEM, align compensation closer to cost through TOU rates, and requirements to pay non-bypassable charges



NBT
April 15, 2023 - present

- Reform program to better align compensation for customer-sited solar with net benefits provided to grid
- Preserve sustainable growth of behind-the-meter renewable generation

NEM => NBT Evolution

	NEM 1.0 1996-2017	NEM 2.0 2017-Apr.14, 2023	NBT Apr. 15, 2023 - present
Rate Schedule	Any	TOU rates (4-9 pm peak rates)	TOU Electrification Rates (E-ELEC for PG&E)
Value of solar used concurrently on-site	Offsets imports, so equivalent to retail rate	Unchanged	Unchanged
Value of solar exported to grid	Full retail rate	Retail rate minus non-bypassable charges and one-time interconnection fee	Avoided Cost Calculation (ACC) price per interval – no more retail credit
Net Surplus Compensation (NSC) payment at true-up	Net exports times NSC rate	Unchanged	Net exports time NSC rate, minus ACC export value already granted
Non-bypassable charges calculation basis	Net imports only	Net imports within each interval	All imports (separately metered)
Billing and true-up period	Annual billing, annual true-up (both charges and credits roll over for 12 months)	Unchanged	Monthly billing and payment; annual true-up (credits roll over for 12 months)

Example: NBT Export Value in PG&E Territory (no storage)

PG&E E-TOU-C rate	Gen Value	T&D Value	Total Value
NEM 1.0	14.6 c/kWh	26.8 c/kWh	41.3 c/kWh
NEM 2.0	14.6 c/kWh	23.6 c/kWh	38.1 c/kWh
NBT	2.9 c/kWh	0.5 c/kWh	3.3 c/kWh
NBT Reduction in Value	-80%	-98%	-92%

- Why such a significant reduction on NBT?
 - ✓ Retail rates include things like peak T&D strain costs and RA costs
 - ✓ Avoided Cost Calculation values are much lower

- How to retain value under NBT?
 - ✓ Reducing exports is critical to retain value
 - ✓ Smaller installs or storage

*Analysis by Justin Kudo-MCE

Example Monthly Energy Export Credit Table

[illegible]

No Immediate Changes for Most NEM Customers

- Existing NEM customers have 20 years from their original interconnection date before new policy applies
 - Changes and/or upgrades to an existing solar system can trigger an early transition to new program
- Processes for transitioning customers are still being developed
 - PG&E is proposing to transition NEM 1.0 customers whose original interconnection agreements have expired on their next true-up following IT system updates and formal Solar Billing Plan launch (December 2023)
 - We estimate that there are ~250 current PCE customers (~1% of all PCE NEM customers) that are eligible for NBT transition through December 2024

What are other CCA's planning?

- CPA (Clean Power Alliance) is the only CCA so far that has formally adopted an NBT policy.
 - Planning to follow the ACC compensation rates for generation but will evaluate separate programmatic opportunities to provide additional incentives for battery storage
- Informally other CCA's are likely planning to make similar decisions.
 - Follow the state plan for ACC compensation while looking for additional opportunities to support energy storage as well as low-income customer access

PCE Policy Considerations

- PCE will need to determine compensation rates for excess solar generation for NBT customers and staff is still developing our recommendation
 - Alternatives to the ACC would be difficult to implement
 - ACC values will still apply to T&D exports regardless of CCA Generation export rates
 - Deviating from the ACC for Generation exports will likely cause confusion amongst solar installers and customers
- More to come over the next couple of months as staff refines recommendations

Committee Members' Reports

Item 5