



Peninsula Clean Energy Board of Directors Regular Meeting

February 22, 2024

Agenda

- Call to Order / Roll Call
- Public Comment (for items not on the Agenda)
 - Please note, send any chats to Board Clerk, Nelly Wogberg
- Action to set the Agenda and Approve Consent Items 1-2
 - Consent - Public Comment
- Regular Agenda
- Adjournment

Chair Report (Discussion)

CEO Report (Discussion)

CEO Report

- PCE Rate Freeze - Feedback and Communications
- Minutes - Backlog and Shift to Action Minutes
- Upcoming:
 - Policy 16 Board and Committee Amendments; JPA Agreement Clean Up
 - CEO/Council Briefings scheduled thus far. More to come
 - February 15 – Brisbane April 23 – San Bruno
 - March 6 – Los Banos May 13- San Carlos
 - March 11 – Hillsborough May 15 – Atherton
 - April 1 - Burlingame August 27 - San Mateo County

CEO Report: Cal-CCA Activities

Cal-CCA Lobby Day on February 21 was a huge success!

CCA delegation of over 70 people

Key issues: Reliability/RA Concerns, Affordability/Rates, and Grid Upgrade Delays

PCE team – Shawn, Shalini and Marc met with the following Legislators:

- **Governor's staff**
- Senate Pro Tem **Mike McGuire**
- Vice Chair Senate Energy **Brian Dahle**
- Chief Energy Consultant, Senate Energy Cmte, **Nidia Bautista**
- Energy Consultant for Assembly Speaker Rivas, **Chase Hopkins**

Local Legislators:

Senator **Josh Becker**

Staff for Asm **Mark Berman**

Staff for Senator **Anna Caballero**

Asm. **Esmelda Soria**

Asm. **Diane Papan**

Next Up:

- ✓ Shawn will speak at the Cal-CCA Partners Briefing on March 7
- ✓ Shawn will speak at the Cal-CCA New Legislator Briefing on March 14
- ✓ Cal-CCA Annual Conference – April 16-18 in San Jose; please let us know if you would like to attend

Legislative Update

- Sen. Mike McGuire (D-Healdsburg) became Senate Pro Tem on February 5 and subsequently appointed:
 - Senator Monique Limon (D-Santa Barbara) to the Senate Committee on Energy, Utilities, and Communications
 - Senator Catherine Blakespear (D-San Diego) to the Senate Budget Subcommittee on Resources, Environmental Protection, and Energy
- Assembly Speaker Robert Rivas expanded two committees and appointed:
 - Assemblymember Rick Zbur (D-West Hollywood) to the Assembly Committee on Utilities and Energy
 - Assemblymember Cottie Petrie-Norris (D-Irvine) to the Budget Subcommittee on Climate Crisis, Resources, Energy, and Transportation
- 2,124 bills were introduced in the state Legislature by the February 16 deadline
- Growing state budget deficit



Staffing Update:

Welcome!

- Cyndi Lopez-Spencer our Senior HR Specialist
- Jana Kopyciok-Lande our Associate Director, Innovation and Strategy starting March 1st
- Ross Fisher our Associate Manager, DER Programs starting March 18th

Promotions!

- Kirsten Andrews-Schwind - Associate Director, Community Relations & Climate Equity
- Hailey Wu - Manager, Financial Planning & Analysis
- Carlos Moreno - Senior Analyst, Energy Programs
- Michael Arnaldo - Senior Specialist, Digital Marketing



Currently Posted Positions

Please help us spread the word!



- Associate Programs Manager, EV Charging (Energy Programs)
- Sr Specialist / Associate Programs Manager, Building Electrification
- Risk Manager

Upcoming Meetings

- Audit and Finance Committee:
 - Next meeting on March 11 at 8:30 a.m.
- Executive Committee:
 - Monday, March 11 at 10:00 a.m.
- Citizens Advisory Committee:
 - Thursday, March 14 at 6:30 p.m.
- Board of Directors:
 - Thursday, March 28 at 6:30 pm



CAC Report (Discussion)



Single-Family Turnkey Electrification Installation Service

Board of Directors
February 22, 2024



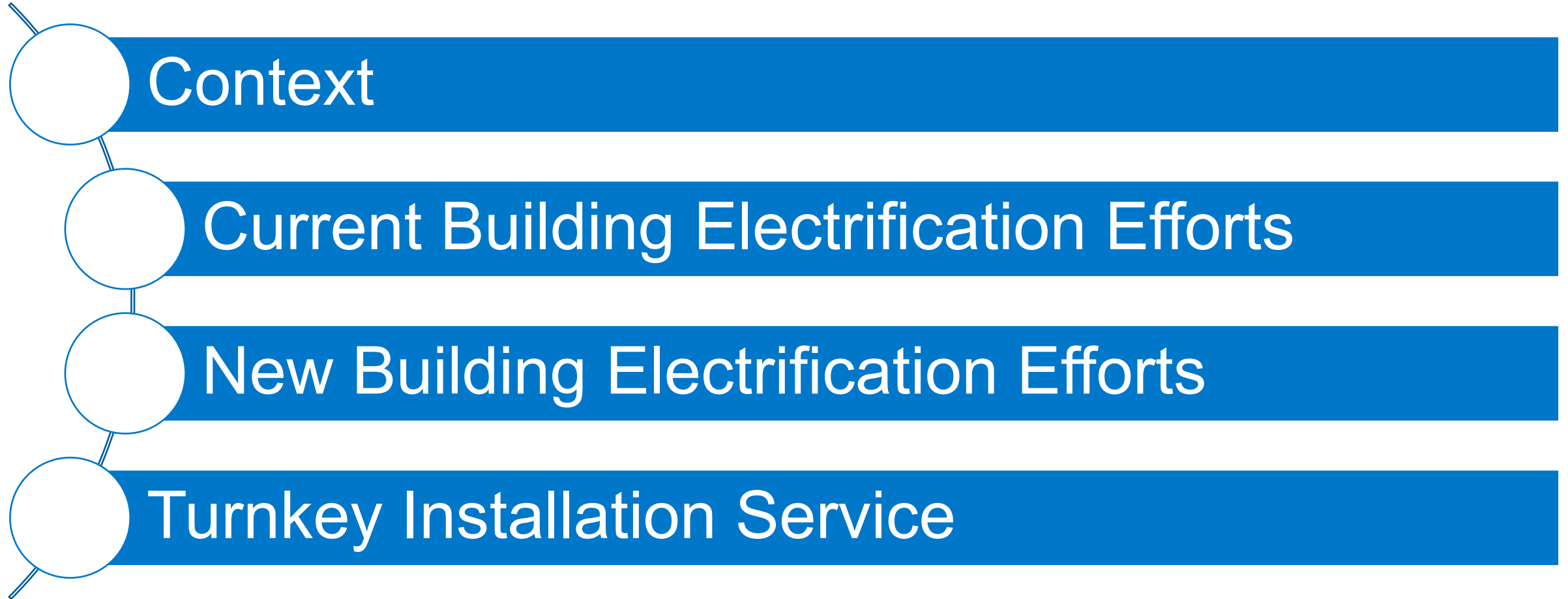
Request Summary

Program: Turnkey Electrification Installation Service

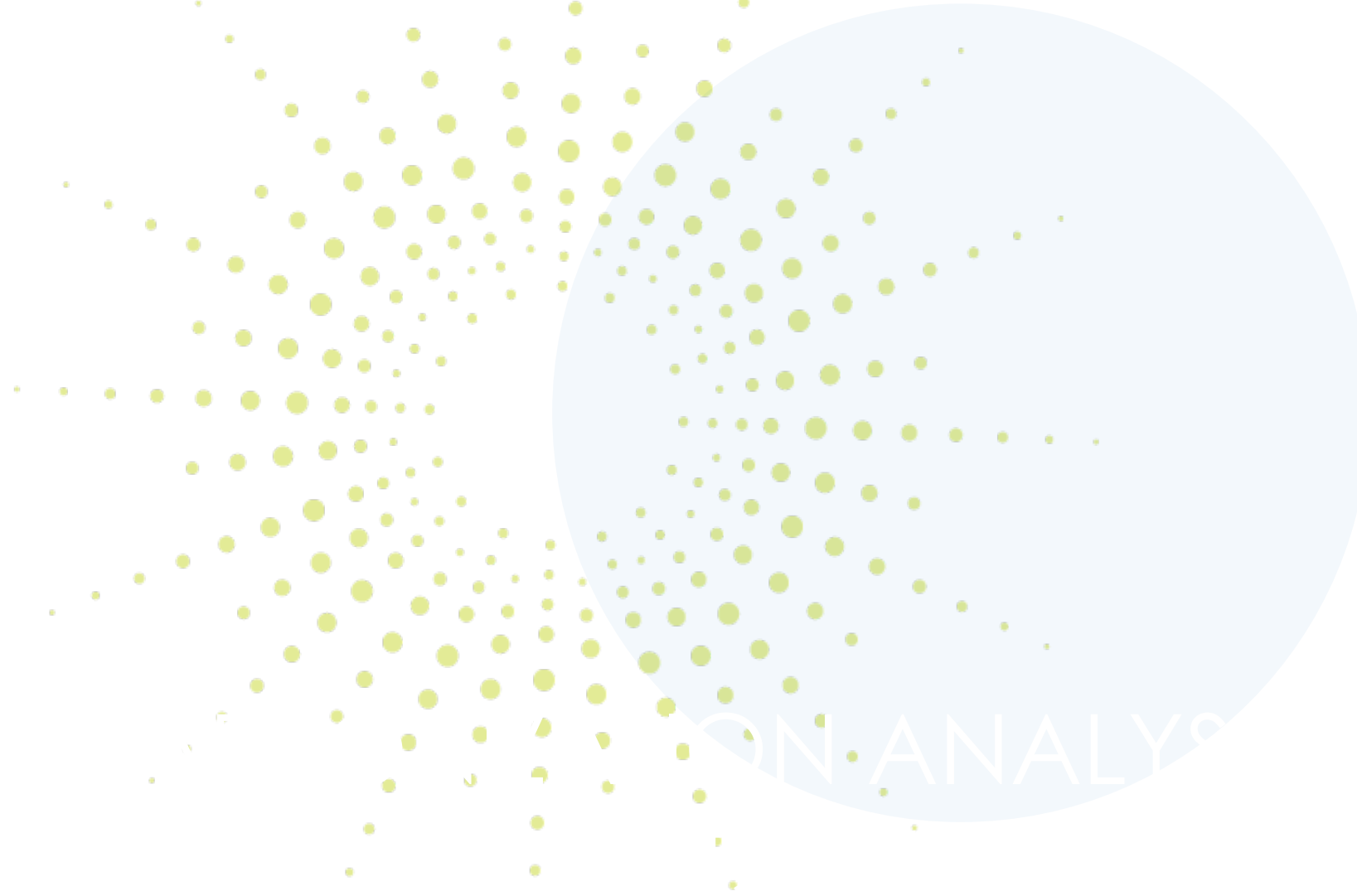
Recommendation: Delegate authority to the CEO to execute a 3-year contract with Franklin Energy for the implementation of the turnkey electrification installation service for single-family homes

Amount: Not-to-exceed \$26M over 3 years; \$24M of which are PCE funds

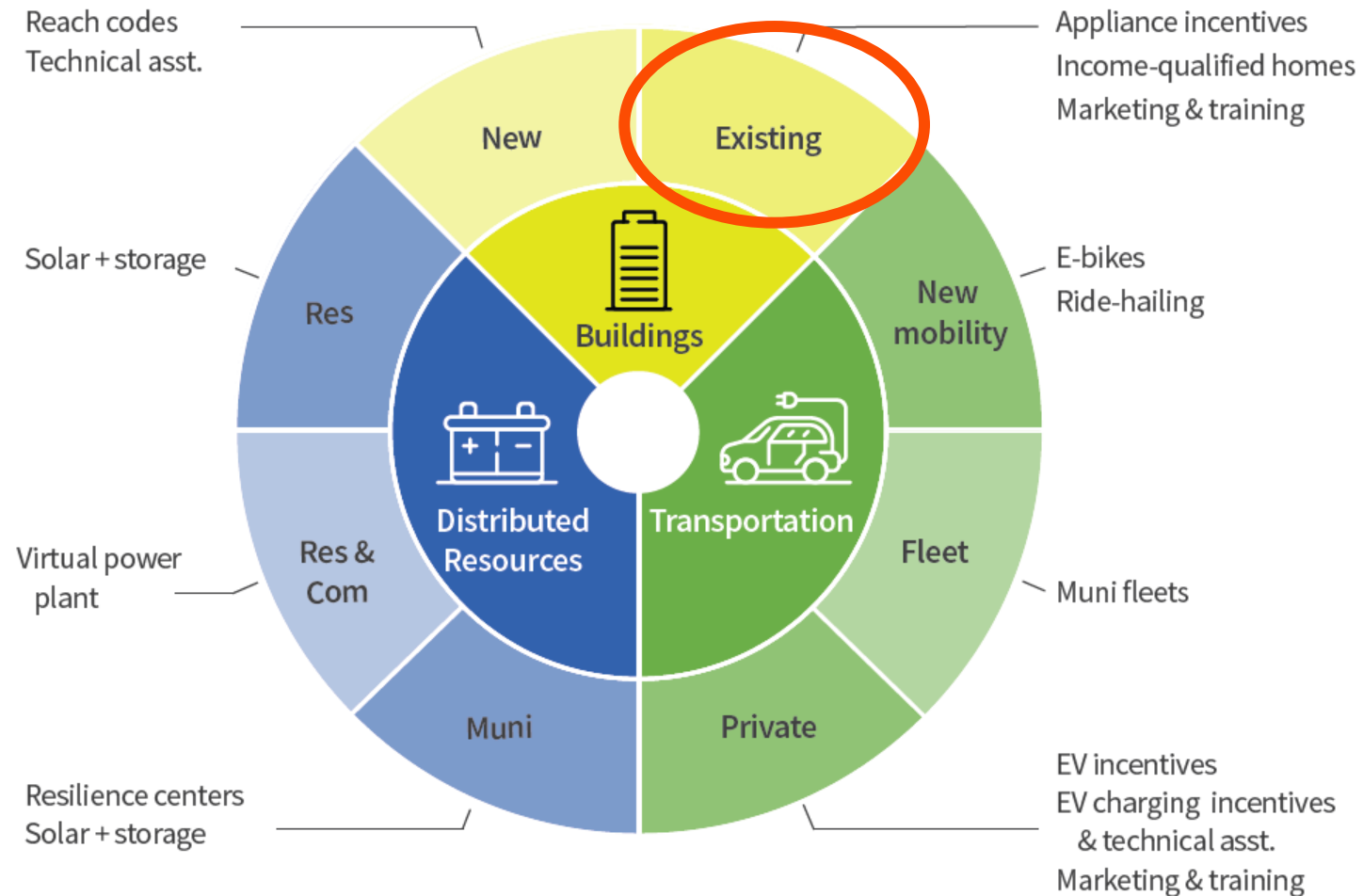
Presentation Overview



Context



Programs Portfolio

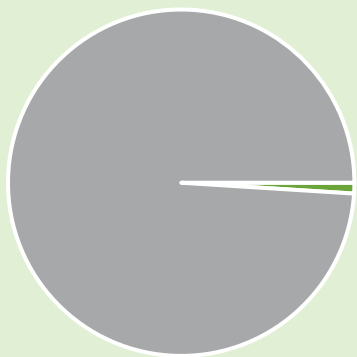


2035: Buildings Electrification



- 2035 Decarbonization Feasibility Assessment and Plan shows we need to rapidly scale building electrification.
- PCE is best positioned to affect change in small residential sector.
- Following program components needed to succeed:
 1. Flexible Incentives
 2. High touch support
 3. Links to Finance

State of the Building Electrification Market



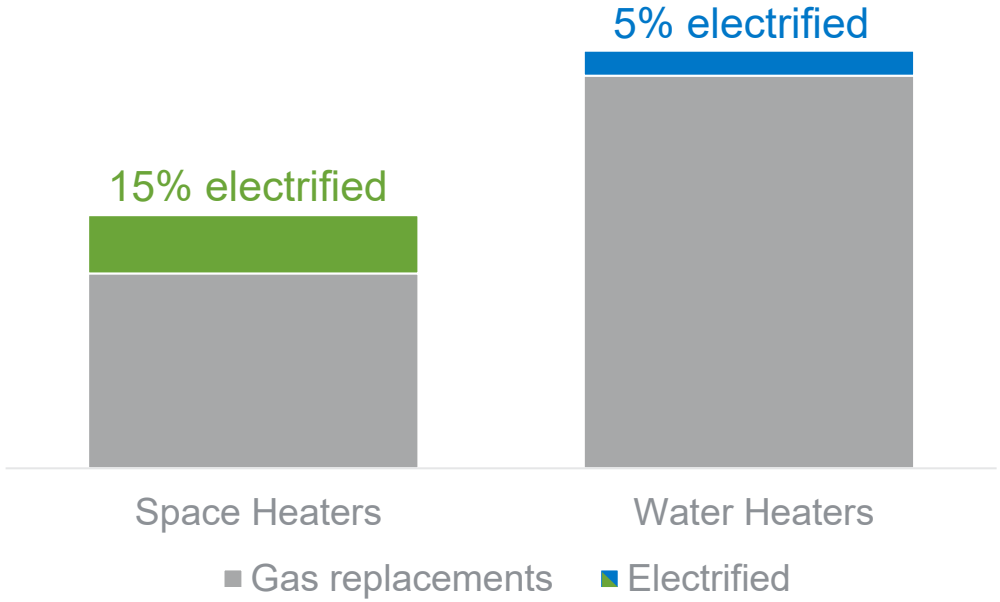
Only 1% of homes in PCE service territory are estimated to have taken any major home electrification step

Annual small residential gas replacements

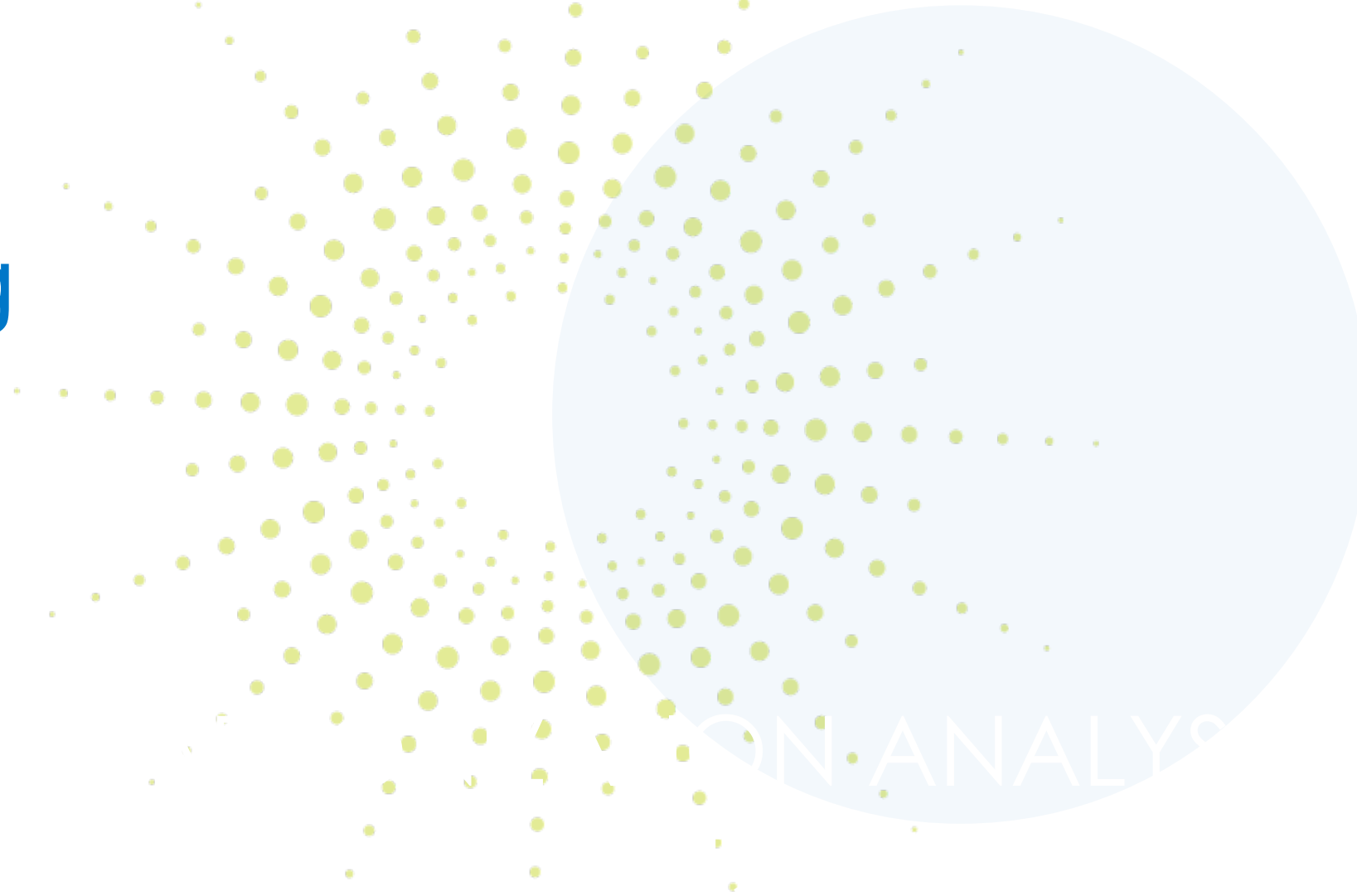
12,000 water heaters

7,000 space heaters

Electrification rebates as a percentage of replacements in 2023



Current Building Electrification



ON ANALYSIS

What We Have



Rebates for heat pump water heaters & heat pump HVAC



0% loans up to \$10k for heat pump water heaters & heat pump HVAC



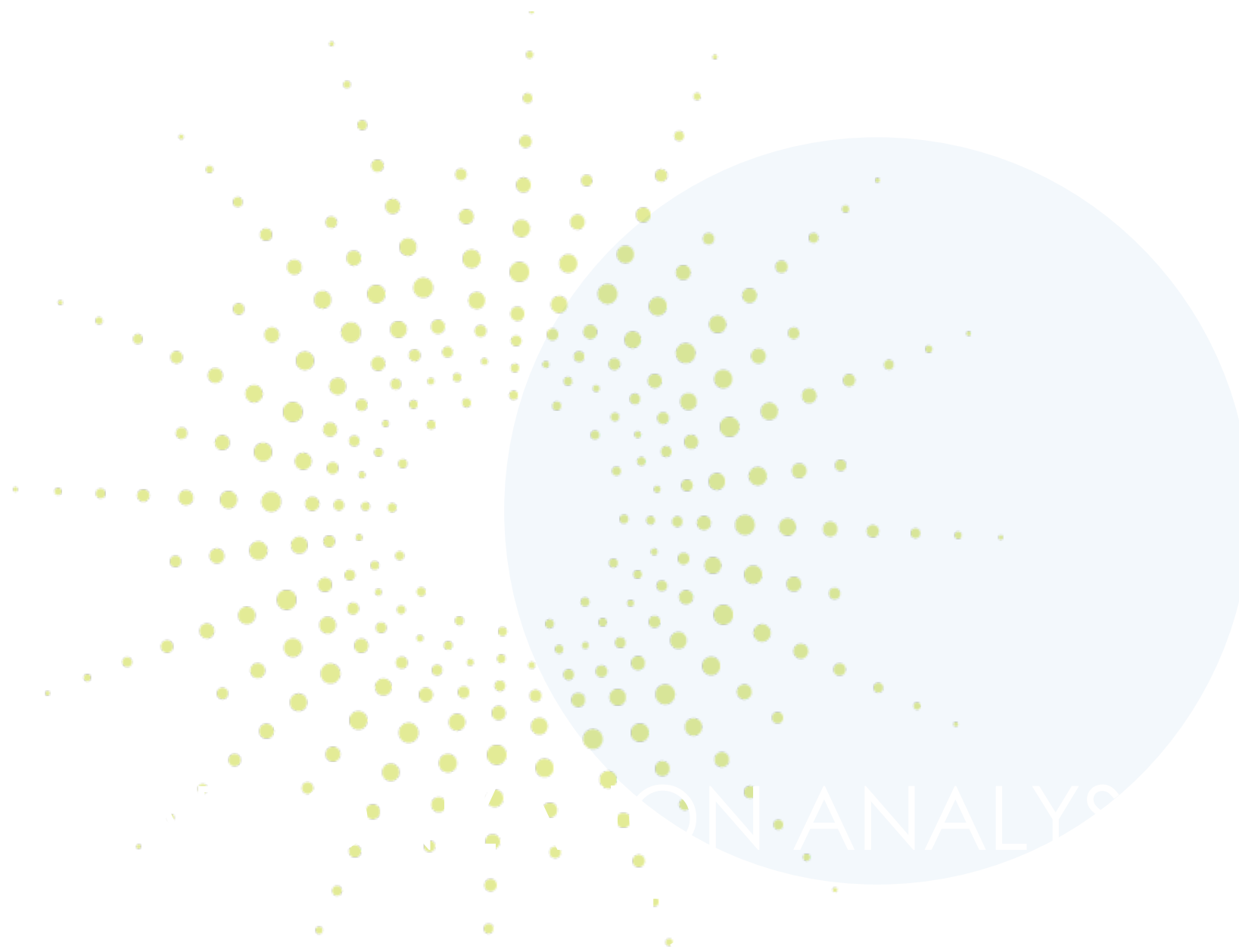
Home Upgrade program: no-cost electrification & minor home repairs for income-qualified homeowners

Participants	Count
Rebate & loan program	1,862
Home Upgrade program	281
Appliances installed (all programs)	Count
Heat pump water heater	1,114
Heat pump HVAC	1,096
Induction cooktop/range	75
Electric dryer	73
Total GHG emissions avoided	1,660 MT CO₂e

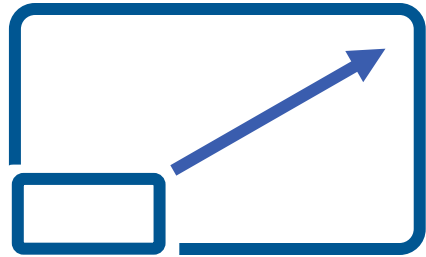
What We Still Need

- Current program provides incentives but minimal guidance/support
- Updated services needs to address barriers customers face:
 - Emergency replacements
 - Lack of clear information
 - Difficulty selecting contractors and equipment
 - Limited time and money
 - Technically complicated installations

Future Building Electrification



Vision Building Electrification v2



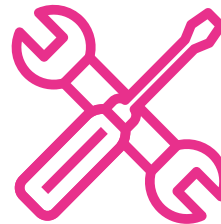
Scale to Whole Home



Increase Homes Impacted per Year



One-Stop Shop Services

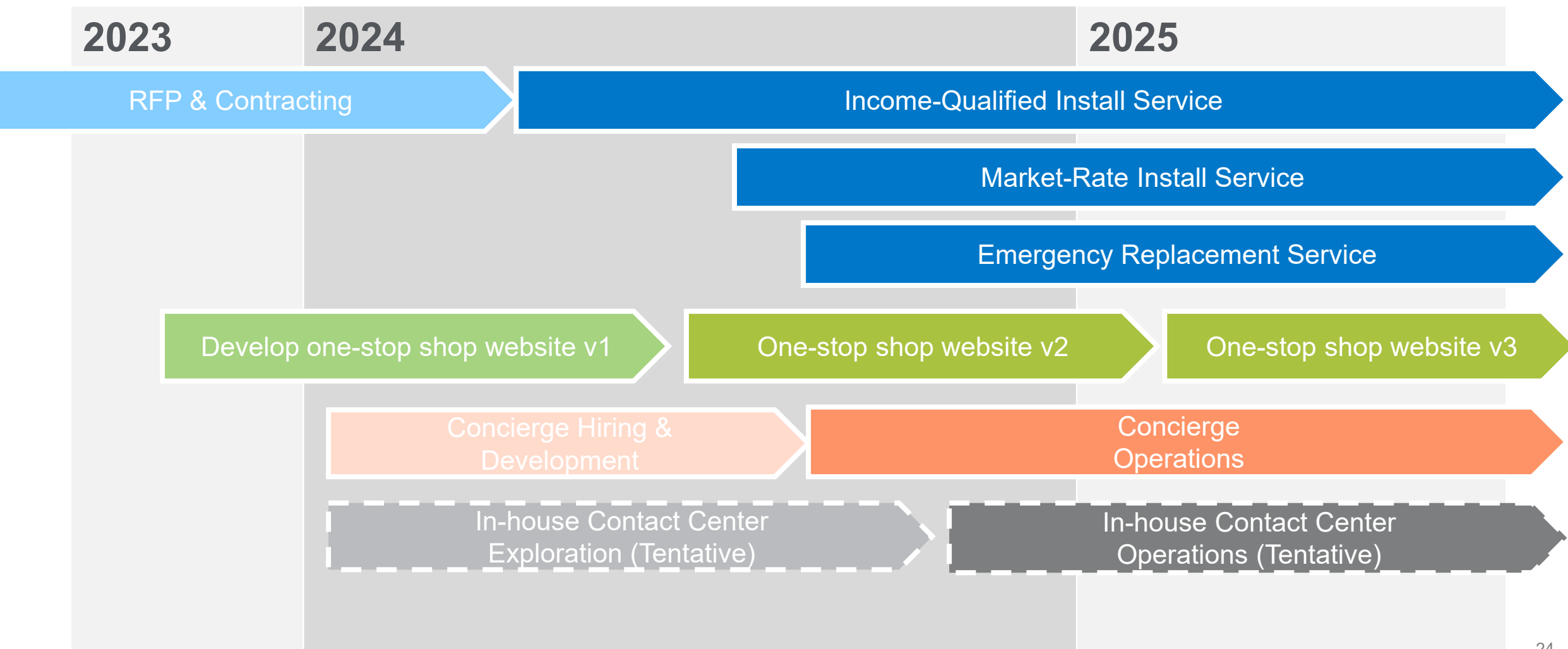


Concierge Services



Turnkey Installation Services

Building Electrification v2: Timeline



Turnkey Installation Service

A decorative background featuring a large, light blue circle on the right side. To the left of the circle is a dense cluster of small yellow dots of varying sizes, some of which overlap the circle. The dots are scattered in a way that suggests a starburst or a cloud of particles.

Service Overview & Contract

ON ANALYS

RFP For Turnkey Installation Services

Select experienced consultant + installation contractors team to implement three suites of installation services:

Income-Qualified No-Cost Electrification

No-cost whole-home electrification for low-income residents (Home Upgrade v2)

Market-Rate Low-Cost Electrification

Low-cost installation services to non-income-qualified residents (NEW)

Emergency Water Heater Replacements

Rapid replacement of failing gas water heaters with heat pump water heaters (NEW)

RFP Detail



Process

- Joint RFP with SVCE; they intend launch the same services
- Released in August, proposals due October, selection in December



Results

- Received 5 proposals
- 2 shortlisted for interviews & follow up questions
- **Selected Franklin Energy as the awardee**

About Franklin Energy and Team

- **Franklin Energy**

- Large (~1,000 employees) nation-guide energy consulting firm, very active in CA
- Experience in with electrification and energy efficiency, and working in San Mateo County

- **Contractors**

- **Enso**: works on MCE program with Franklin. Will focus on income-qualified installs.
- **Fuse Service**: large Bay Area contractor experienced in electrification. Will focus on market-rate installs & emergency replacements.
- **Electrify My Home**: electrification-focused contractor. Will focus on market-rate installs.

- **Others**

- **Xerohome**: energy modeling software to help develop home scopes and target customers



Program Labor Requirements

- Prevailing wage to all installation contractors
- Franklin is responsible for ensuring compliance
- PCE will have the ability to audit records

Average Electrification Costs Per Home

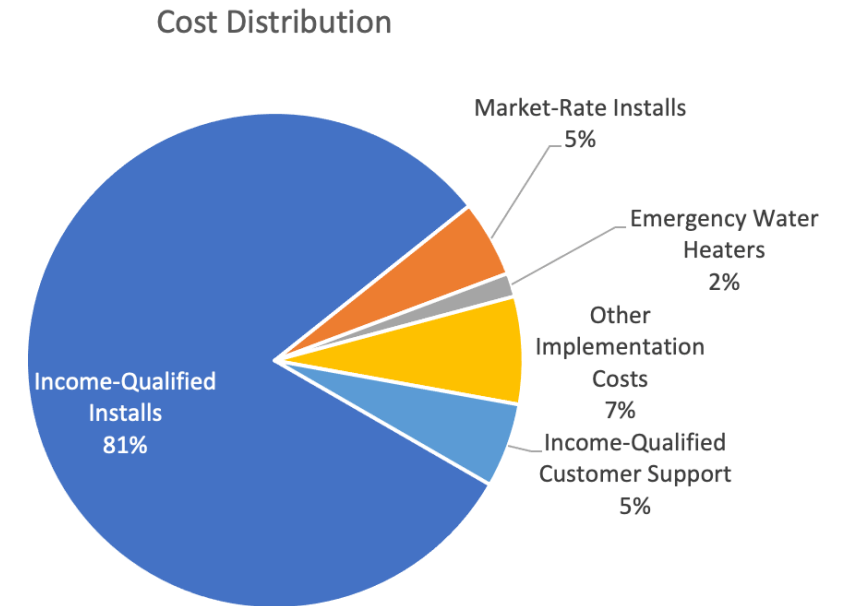
Average cost per whole-home electrification for a typical home, per Franklin contract pricing.

Measure	Cost
Heat pump water heater (65 gallon, 240V)	\$6,350
Heat pump HVAC (ducted, inverter-driven, 2 ton)	\$12,300
Electric induction range	\$2,450
Electric clothes dryer	\$2,000
Level 1 EV-ready circuit	\$1,200
4 Circuits	\$4,800
Sub-panel	\$1,600
Permits & HERs test	\$1,000
Total	\$31,700
Panel replacement, if required	\$6,850

- Contract contains detailed measures table with costs, i.e. multiple configurations for water heaters, HVAC, etc.
- Some income-qualified homes will also receive minor home repairs, light energy efficiency & resiliency measures.

Contract Budget Distribution

	3-Yr Budget	Min. # of homes
Income-Qualified Installs	\$21,050,000	575
Market-Rate Installs	\$1,300,000	175
Emergency Water Heater Installs	\$400,000	127
Implementation Costs	\$3,250,000	
Total Contract Budget	\$26,000,000	
PCE Funds	\$24,000,000	
Menlo Park Funds	\$2,000,000	



- Counts for income-qualified assume all homes are fully electrified; count is likely to be greater.
- Actual expenditures will be based on program uptake; market-rate and emergency water heaters are especially variable.
- Implementation costs refer to all non-installation costs including customer support, contractor oversight, admin and reporting tasks. Costs account for efficiencies/savings of joint program with SVCE.
- Menlo Park funds are entirely for Income-Qualified Installs (and associated implementation costs).

Contract Budget Detail

		FY23-24	FY24-25	FY25-26	FY26-27	3-Yr Total	GHG estimated
Income-Qualified Installs	Count	15	150	180	180	525	3,087 MT CO2e
	Budget	\$530,000	\$5,300,000	\$6,700,000	\$7,030,000	\$19,290,000	
Market-Rate Installs	Count	0	30	45	100	175	823 MT CO2e
	Budget		\$185,000	\$260,000	\$615,000	\$1,300,000	
Emergency Water Heater Installs	Count	0	20	40	67	127	238 MT CO2e
	Budget		\$60,000	\$120,000	\$190,000	\$400,000	
Implementation Costs	Budget	\$190,000	\$685,000	\$955,000	\$1,180,000	\$3,010,000	
Total PCE Budget		\$720,000	\$6,230,000	\$8,035,000	\$9,015,000	\$24,000,000	
Total Menlo Park Budget		\$200,000	\$1,800,000	N/A	N/A	\$2,000,000	
Total Contract Not To Exceed Amount						\$26,000,000	4,148 MT CO2e

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Study Session – Project Ownership

February 22, 2024

Board of Directors Meeting

Agenda

Purpose

Background

- Ownership – Large Centralized Projects
- Ownership – Local/Distributed Projects

PCE Context

- PCE Ownership Considerations
- PCE Ownership – Pros
- PCE Ownership – Cons
- Ownership v. Long-term Contracting
- Ownership Cases #1-4

Summary & Recommended Next Steps

Purpose

- To level-set our understanding on ownership
- To evaluate the pros and cons of ownership
- To explore different ownership scenarios
- To seek alignment on future PCE ownership efforts

To Own or Not to Own?

- What to own?
- Where to own?
- How to own?
- Why ownership?
- Why not ownership?
- Is ownership better than PPAs?
- Any ownership opportunities available?

Utility Ownership – Large Centralized Projects

Project Types: Coal, Gas, Nuclear, Large Hydro, Transmission
Characteristics:

		PCE
• Large Scale (>100MW)	Higher Cost & Risk	-
• Conventional	Not Renewable	-
• Long Operating Lives	Financial Upside	+
• Joint Ownership	Risk Sharing	+
• “Anchor Tenant”	\$\$ and Operating Agent	-
• O&M and Fuel Management	Requires Expertise	-
• Major Replacements	Planned or Unforeseen	-
• Tax-exempt Financing	Available to CCAs	+

Not Applicable or No
Ownership Opportunity

Solar/Wind
?

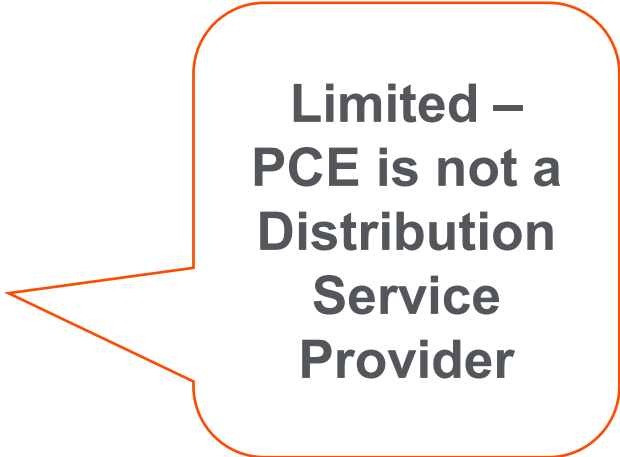
Utility Ownership – Local/Distributed Projects

Project Types: Gas Peaker, Storage, Solar, Microgrid

Objectives/Functions:

- Maintain local reliability
- Improve grid resilience
- Other distribution level benefits

- **Provide customer benefits**
- Create local jobs
- Demonstrate innovation/leadership



**Limited –
PCE is not a
Distribution
Service
Provider**

PCE Ownership Considerations – Where, What, How

- **Location:** Within service territory or anywhere in CA?
- **Technology Type:** Solar, Geothermal, Battery Storage, Long-duration Storage, New Technologies?
- **Ownership Structure:** Sole v. Joint ownership?
- **Configuration:**
- **Bonding Capacity?**

	Function	Size	Location	Value
Behind the Meter (BTM)	Serving Customer's Load	<5MW	Within service Territory	Primarily Customer Benefits
Front of the Meter (FTM)	Serving the Grid	>5MW	Anywhere in CA	Market Revenue, RA

PCE Ownership (Why?) – The PROs

Major Economic Factors:

- **Tax-Exempt Financing**
 - Lower Cost of Capital
 - Has always been a tool for local-governments to fund capital projects
- **IRA Direct Pay – PCE can receive Tax Credits directly**
 - Not available prior to IRA
 - Developers also benefit from Tax Credits, pass-through via PPA Prices (not fully transparent)
- **Extended Value**
 - Upside (if any) after the financing term



Enough
Values to
Justify
Ownership
?

Other Potential Benefits:

- **Diversify supply risks with some resources owned**
- **Have more control: operational, technology modification**
- **PCE credibility and visibility**

PCE Ownership (Why Not?) – The CONs

1. Development Risks: permitting, interconnection, supply chain, etc.
 - *Can we do it better or most cost-effectively than the developers?*
 - *Sunk Cost if project fails*
2. Performance Risks: equipment failure, system outage, weather
 - *Can we live with limited protection on performance?*
3. Liability & Reputational Risks: safety, fire, security, insurance requirements
 - *Can we afford to have a project failure or accident?*
4. Additional PCE Staffing and Resources Needed:
Development work / Long term O&M / Financing / New compliance reporting
 - *Do we have the expertise? Or do we outsource & manage contractors?*
5. Decommissioning Responsibility:
 - *What do we do with the project after its useful life? How much it's going to cost?*
6. Finance and Tax Credit Risk:
Debt impact on Rating / High Rates / Tax Benefit Uncertainties
 - *Are we comfortable with taking on financing risks?*

Comparing Ownership v. Long-Term Contracts

COMMON VALUES

- Energy
- Resource Adequacy
- Environmental Attributes (REC)
- Meet Compliance
- Arbitrage (battery)
- Shaping (battery)
- Additionality
- Job Creation

	Ownership	Long Term Contracts
Tax Exempt Financing	Yes	Available through Pre-pay
ITC/PTC	100% Captured	May not be 100%
Extended Value	Yes	No
Development Costs/Risk	Yes	On Developer
Performance Risk	Yes	On Developer
Liability Risk	Higher	Limited / None
Staffing & G&A Costs	Higher	Lower
Finance Cost & Risks	Yes	No
O&M Expenses	Yes	No
Decommissioning	Yes	No

Ownership results in Cost Saving if:

Green Box (\$\$ costs/risks) - **Red Circle** (\$\$ economic values) < Total Contract Cost \$\$

Ownership Cases #1, 2, 3

	Case #1 – Large-Scale Renewable & Storage	Case #2 – Joint Ownership through CC Power	Case #3 – Customer-sited Installations (GovPV)
Size	>20MW	>20MW	< 5MW
Location/Configuration	In State / FTM	In State / FTM	In PCE Territory / BTM
Ownership	Sole	Joint & Build-Transfer Agmt.	Sole
Technology	Solar, Wind, Storage	Hybrid, Long-duration Storage	Solar & Storage
Ownership Analysis	<p><i>Only major benefit is access to tax-exempt financing;</i></p> <p><i>High development, performance and liability risks;</i></p> <p><i>Requires substantial staff and resources to own and operate throughout project life cycle;</i></p> <p><i>Limited intangible benefits</i></p>	<p><i>Risk sharing opportunities</i></p> <p><i>Economy of Scale</i></p> <p><i>Turnkey at COD – removes development risk</i></p> <p><i>Other potential values depending on the project technology</i></p>	<p><i>Relatively low development, performance and liability risks</i></p> <p><i>Relatively low resource and staffing requirement</i></p> <p><i>High and visible customer and community benefits</i></p> <p><i>High repayment certainty from credible off-takers</i></p>
Recommendation	<p>Not to Own (consider Prepay as an alternative)</p>	<p>Maybe (depends on project type and economics)</p>	<p>Yes (low-risk ownership model that provides local benefits)</p>

Ownership Case #4 – Local Projects with Unique Advantages

	Case # 4
Size	5-10 MW
Location	In PCE Territory
Configuration	BTM and/or FTM
Ownership	Sole
Technology	Storage, Solar, Microgrid, New Technologies

Recommendation: Maybe

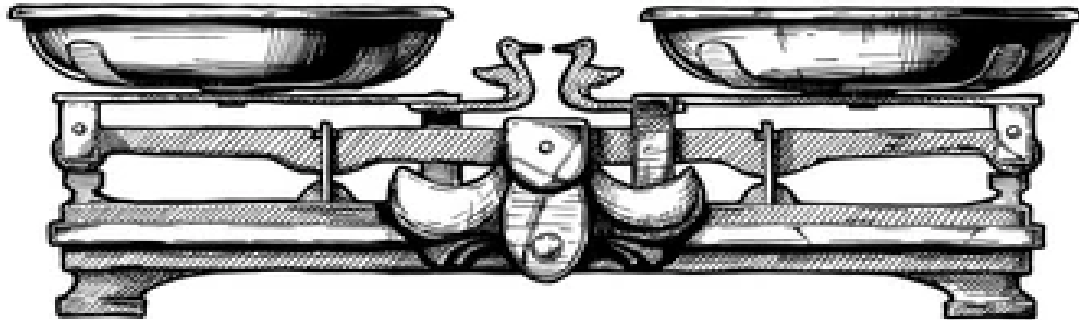
Evaluate values, savings and risks on a case-by-case basis

- Grant Funding – *Reduces Cost*
- No Cost Land Lease - *Reduces Cost*
- CEQA-exempt sites – *Reduces development cost/risk/timeline*
- Expedited Interconnection – *Reduces development cost/risk/timeline*
- Branding opportunity – *Projects that demonstrate PCE innovation & leadership*
- Significant Local Benefits
- Ideally, a combination of the above!

Summary and Recommended Next Steps

Tax-Exempt Financing
+
Incremental ITC Direct Pay
+
Any Extended Value
+
Intangible Benefits

All COSTS and RISKS
associated with ownership,
including additional
STAFFING and
RESOURCES required



Ownership Scale

Next Steps:

- Continue to deploy GovPV ownership;
- Assess joint ownership structure through California Community Power;
- Explore other local ownership opportunities, if any, and review economics;
- Consider Prepay opportunities to take advantage of tax-exempt financing.

Adjournment