SILICON VALLEY CLEAN ENERGY

Building Decarb Joint Action Plan

Board of Directors
November 13, 2020

Staff Proposal

Adopt the Building Decarbonization Joint Action Plan (abbv. “Plan”) and program briefs & approve $6M budget allocation for implementation over the coming 3-year period

SILICON VALLEY CLEAN ENERGY

Outline

1. Background
2. Building Decarb Joint Action Plan
3. Implementation

SILICON VALLEY CLEAN ENERGY

Outline

1. **Background**
2. Building Decarb Joint Action Plan
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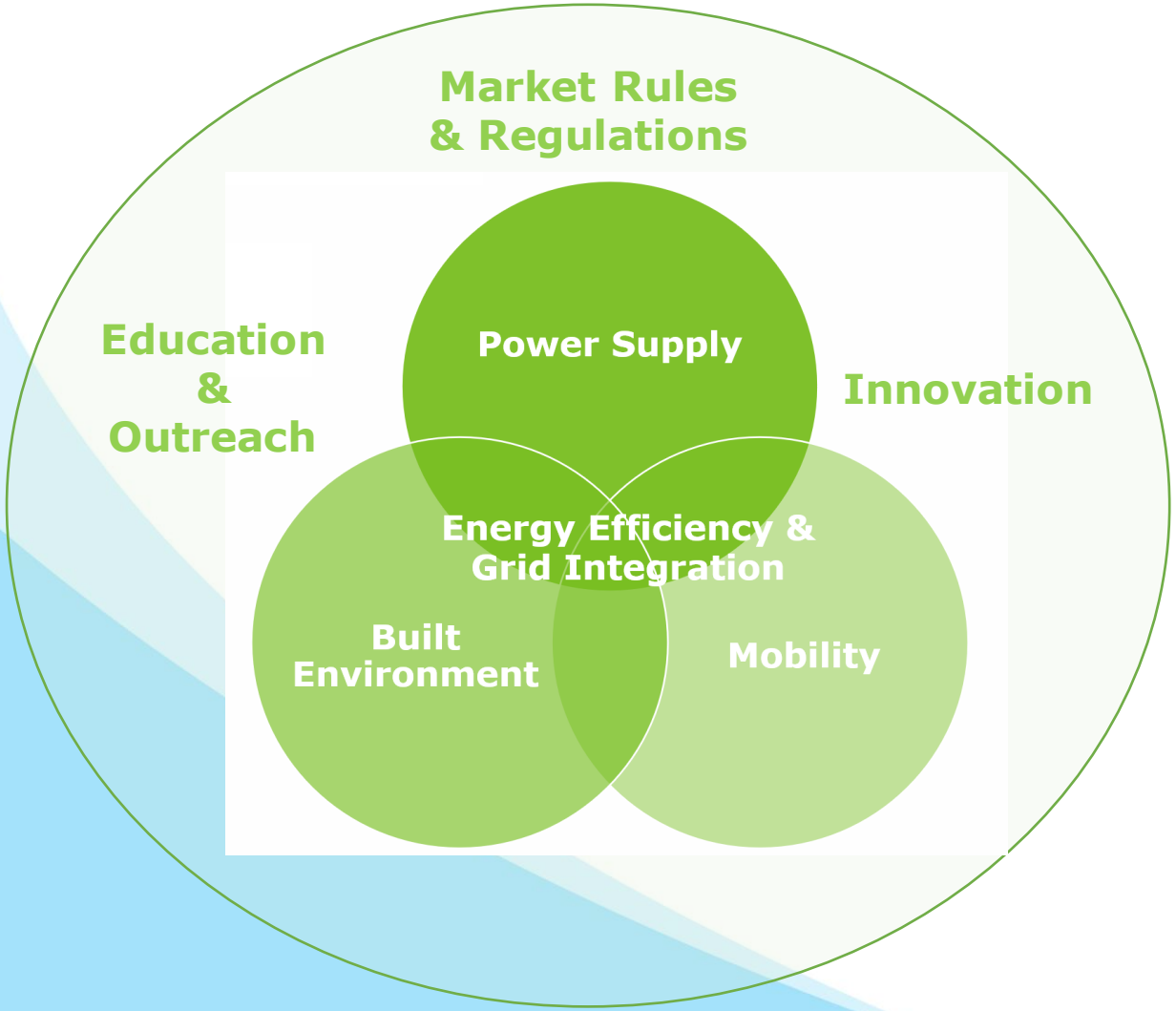
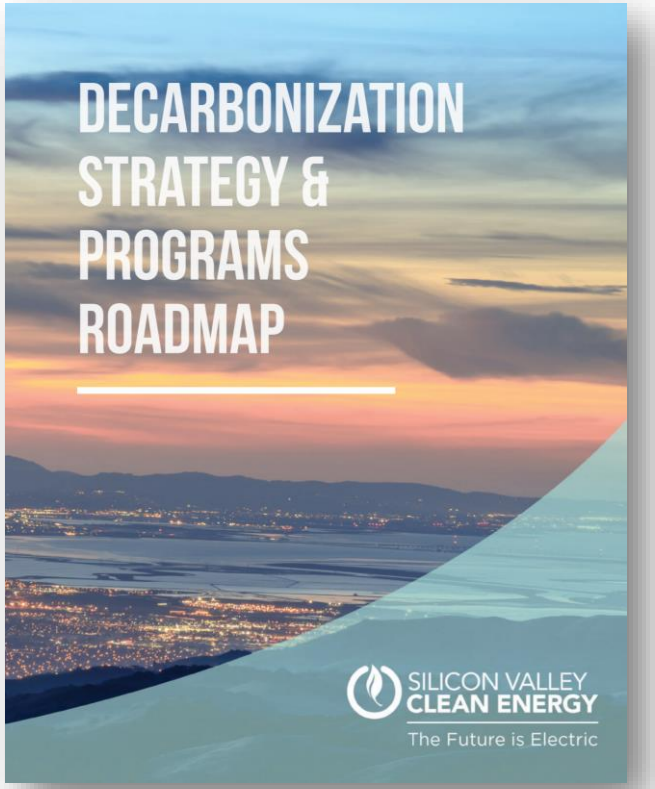
SILICON VALLEY CLEAN ENERGY

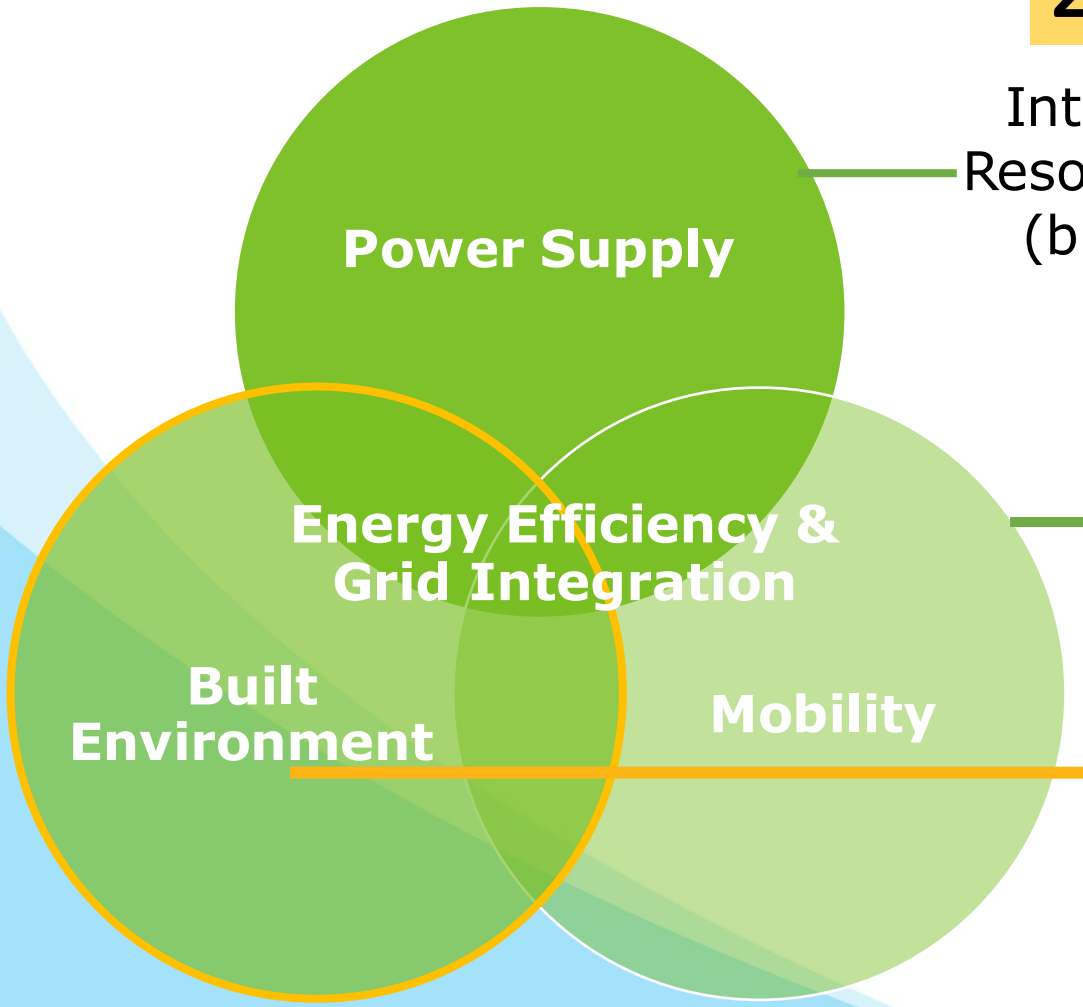
Overarching Approach





Decarb Strategy & Programs Roadmap (2018)

Board has approved Sector-Specific Plans



2018	2019	2020

Integrated Resource Plan (biennial) ✓ ✓

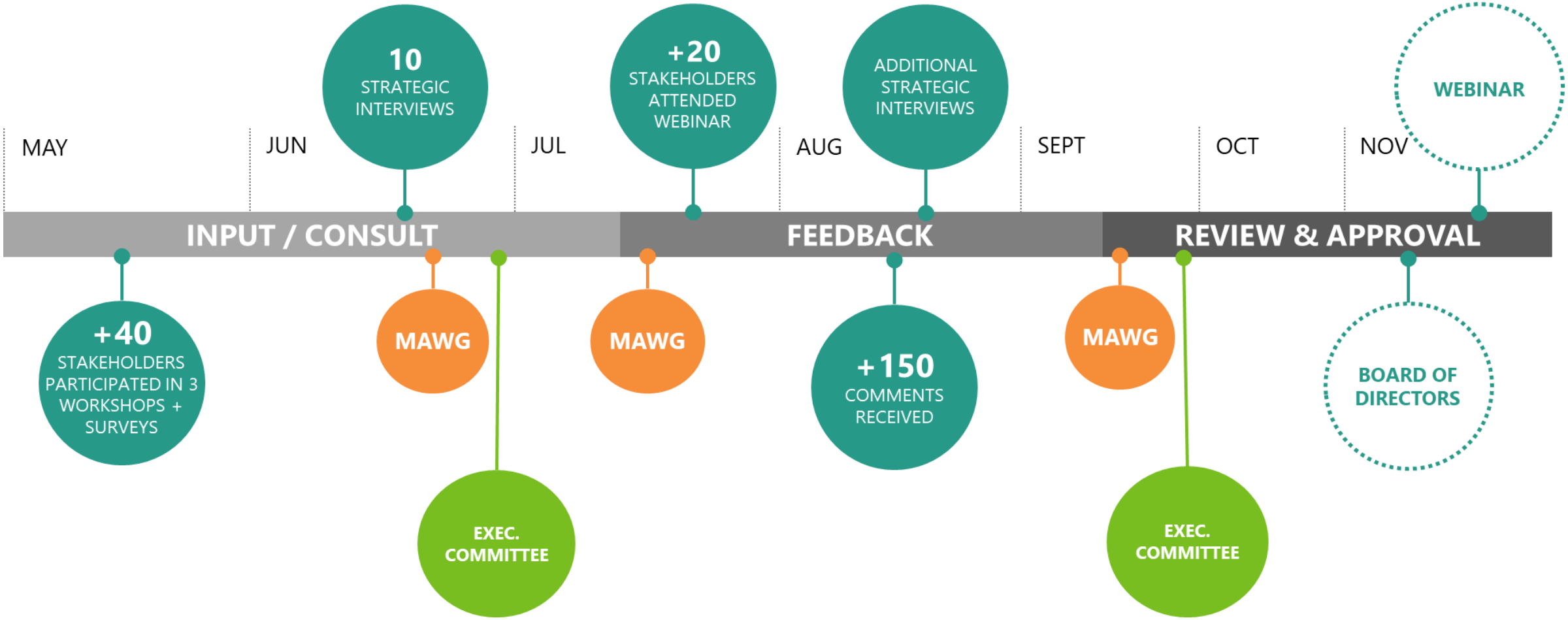
EV Infrastructure Joint Action Plan (2019) ✓

Building Decarb Joint Action Plan (In Dev.) ○

Summary of Process

- Feb 2020: BOD approved development of Plan as program priority
- Mar 2020: BOD approved Integral Group (IG) contract for support
- Apr–Jun: IG & staff carried out the following to develop draft:
  - Background research & analysis ("Buildings Baseline Study")
  - Stakeholder surveys
  - 3 virtual workshops (attendee list in appendix)
  - 1:1 strategic interviews with key stakeholders
- Jul-Aug: Draft plan released for stakeholder input
  - Additional stakeholder surveys
  - Additional strategic interviews
- Aug-Sep: IG & staff synthesized input & updated draft

Timeline of Stakeholder Feedback



Note: Updates to BOD included in monthly CEO report & quarterly programs update

Outline

1. Background
2. **Building Decarb Joint Action Plan**
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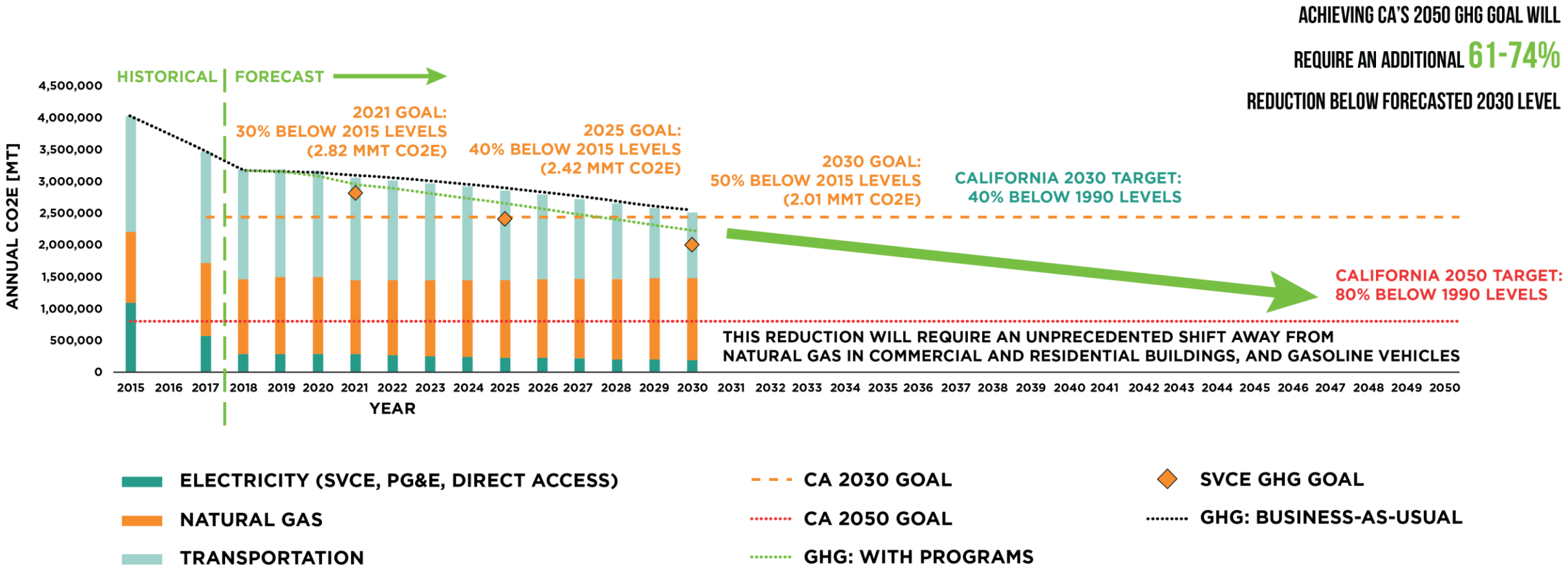
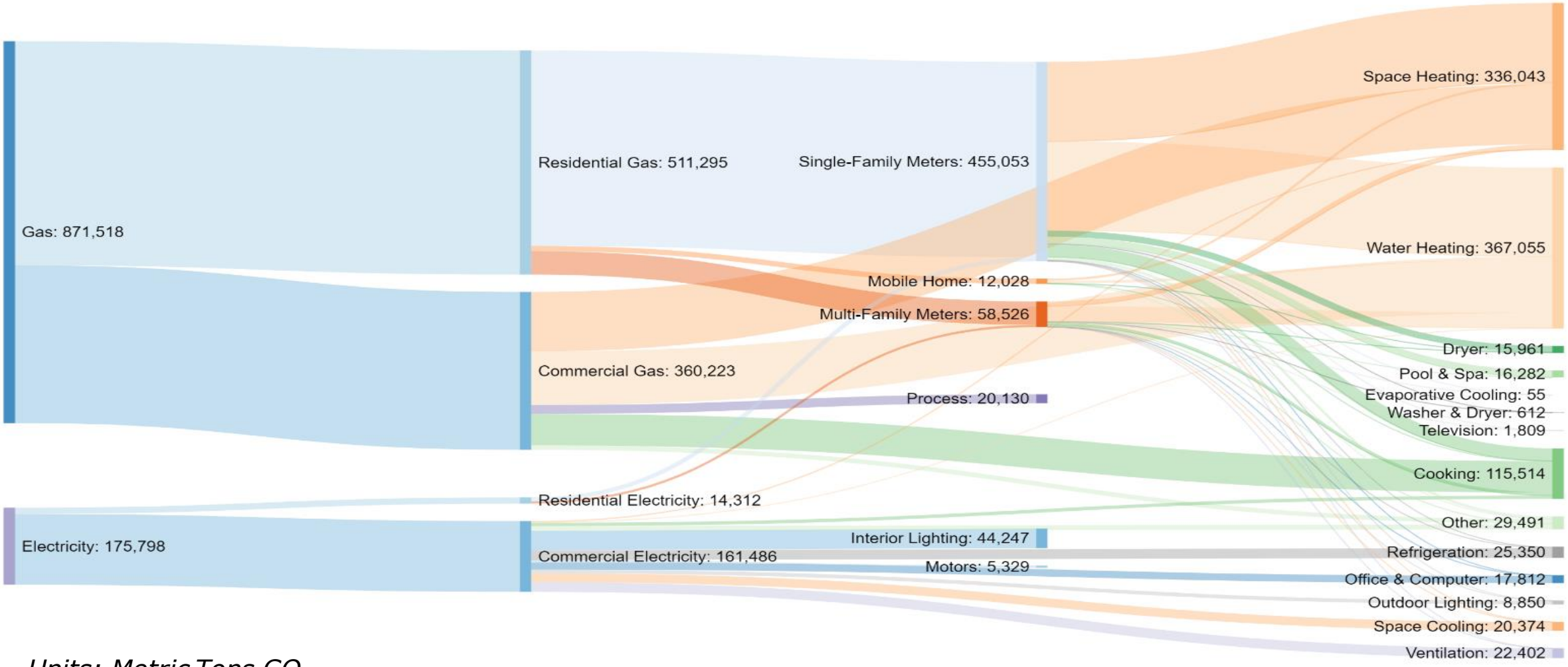
Community GHG Reduction Goals



SVCE's 2018 Decarb Strategy & Programs Roadmap

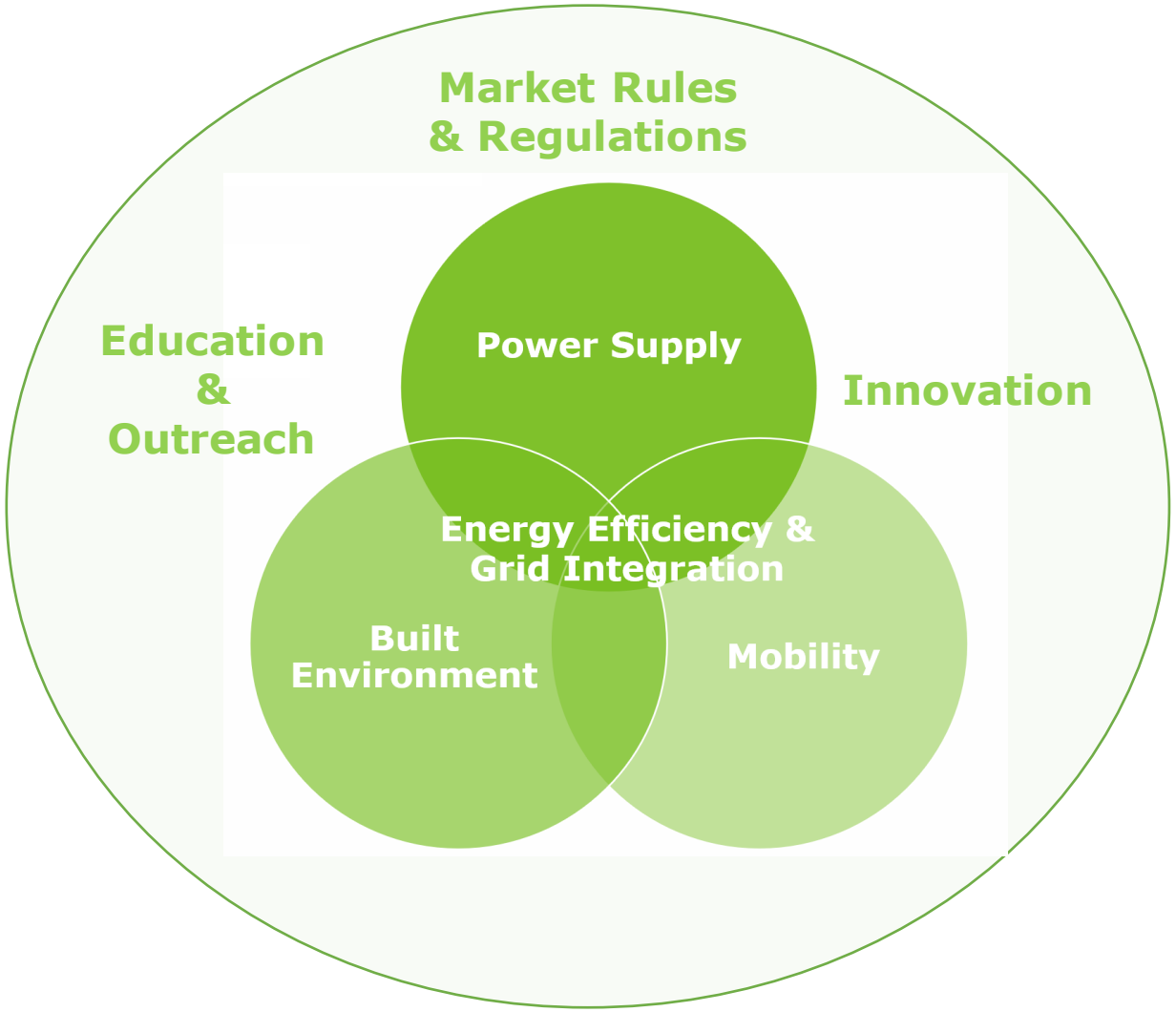
SVCE Community Building Stock Emissions from Fuel Source to End Use



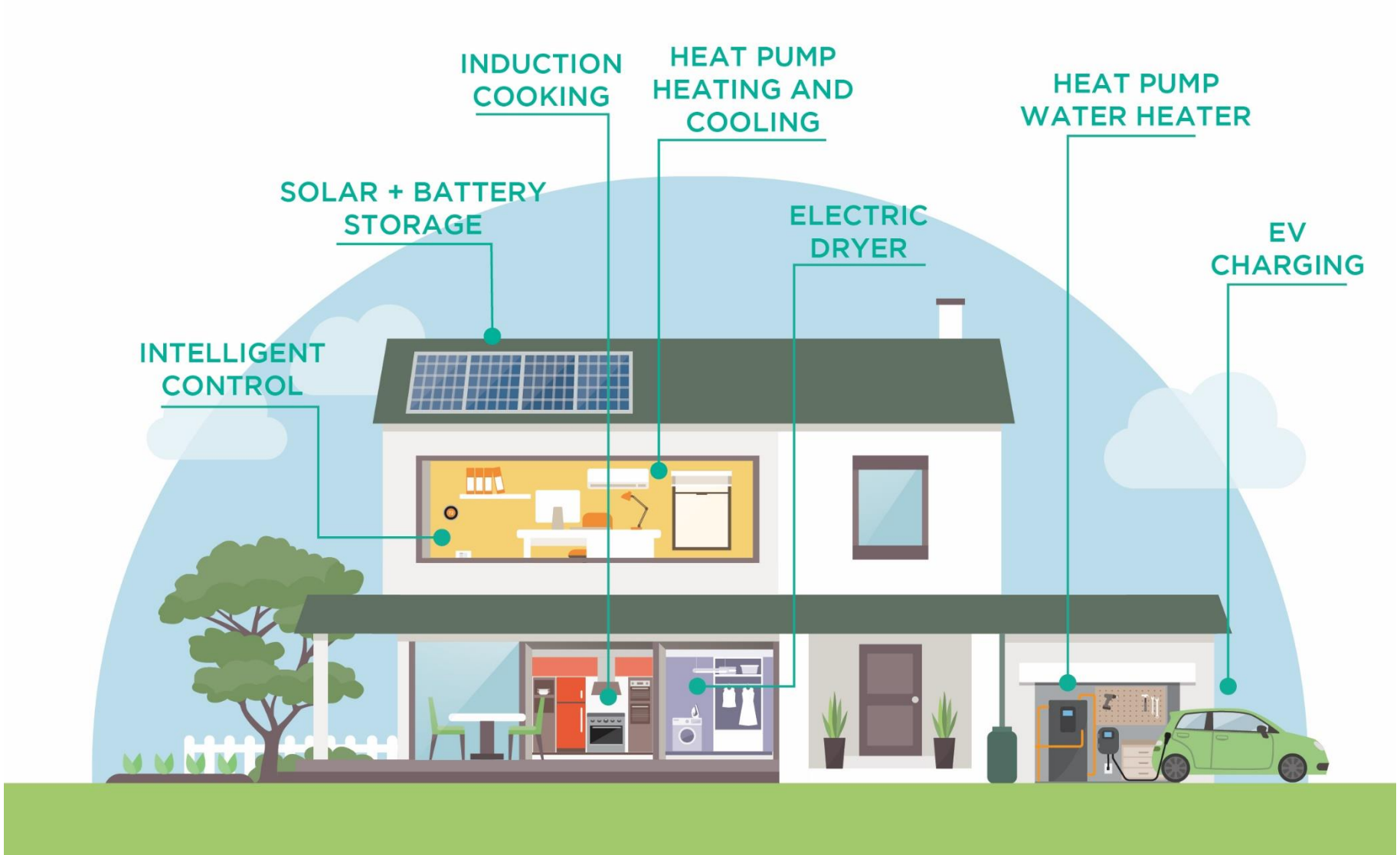
Units: Metric Tons CO_2

Overarching Approach

- Procure & maintain a sustainable, affordable and carbon-free **power supply**
- Electrify the **built environment** and **mobility**
- Promote **energy efficiency** & successful **grid integration**



The All-Electric "FutureFit" Home



Key Barriers to Electrification

Low Awareness & Interest

Low Perceived Customer Value

Low Perceived Contractor & Builder Value

Low Availability

Misaligned Policy

Barrier identification influenced by the Building Decarbonization Coalition's "Building Decarbonization Roadmap"

Suite of Interventions

Retail Products & Services

Education & Outreach

Public Policy

Market Transformation

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Actions Developed Using Decarb Roadmap Strategic Framework

What will we do?

- Retail Products & Services
- Education & Outreach
- Public Policy
- Market Transformation

Which priorities will guide us?

- Customer & Community Value
- Emissions Impact
- Scalable and Transferable
- Equity in Service
- Core Role for SVCE

How will we do it?

- Innovation
- Data
- Partnerships

SVCE & Member Agency Roles

SPHERES OF CONTROL

SVCE

- Clean Energy Supply
- Electricity Generation Rates
- Grid Integration
- Regional Coordination
- Financing & Incentives
- Innovation
- Public education

Member Agencies

- Local Codes, Standards & Policies
- Permitting
- Land Use Planning
- Municipal Buildings
- Public education

SPHERE OF INFLUENCE

Other Stakeholders

- State Codes, Standards and Policies
- Regional Codes, Standards & Policies
- State & Regional Customer Programs
- Electric Grid Service, Rates & Modernization
- Industry Associations & Coalitions
- Environmental NGOs
- Manufacturers
- Labor & Workforce Associations
- Other CCAs, Local Governments, and Utilities

Building Decarb Plan

New Construction

Accelerate transition to all-electric new construction

Existing Buildings

Convert existing buildings to all-electric

Market Development

Cultivate regional ecosystem for advancing building decarbonization goals

Building Decarb Plan

New Construction

***NC1**: Reach Code Initiative 2.0*

Existing Buildings

***EB1**: Feasibility Assessment for Natural Gas Phase Out by 2045*

***EB2**: Local Policy Options to Decarbonize Existing Buildings*

***EB3**: FutureFit Homes & Buildings*

***EB4**: Accessible Financing*

Market Development

***MD1**: Regional Coordination*

Building Decarb Plan

New Construction

Activity Type	*Barriers Addressed*	*Cornerstone Action*
Public Policy	Misaligned Policy	*NC1: Reach Code Initiative 2.0* Evaluate the initial Reach Code Initiative and develop a second wave of Reach Code support that includes all new construction types as well as renovations.

Building Decarb Plan

Existing Buildings

Activity Type	*Barriers Addressed*	*Cornerstone Actions*
Public Policy	Misaligned Policy	*EB1: Feasibility Assessment for Natural Gas Phase Out by 2045* Carry out technical, economic and legal feasibility assessment of pathways to phasing out natural gas service by 2045. *EB2: Local Policy Options to Decarbonize Existing Buildings* Support member agencies in evaluating feasible pathways to regulate existing building emissions and help develop model policy approaches.

Building Decarb Plan

Existing Buildings

Activity Type	*Barriers Addressed*	*Cornerstone Actions*
Retail Products & Services	Low Perceived Customer Value Low Perceived Contractor & Builder Value Low Availability	*EB3: FutureFit Homes & Buildings* Provide comprehensive assistance to SVCE customers in navigating and accessing non-SVCE led energy programs and identify and address incentive gaps and layering opportunities. *EB4: Accessible Financing* Assess feasibility of financing mechanisms to unlock equitable financing, particularly for low-income communities.

Building Decarb Plan

Market Development

Activity Type	*Barriers Addressed*	*Cornerstone Actions*
Market Transformation	Low Perceived Customer Value Low Perceived Contractor & Builder Value Low Availability	*MD1: Regional Coordination* Initiate regular regional stakeholders meetings to coordinate program alignment; streamline access to incentive funds; identify strategies to lower costs; inform messaging and communication needs; and assess barriers and opportunities to workforce development.

Existing & Supportive Actions

Activity Type	*Existing & Supportive Actions*
Retail Products & Services	• *Virtual Power Plant Initiative* • *Retail Rates Assessment* • *Electrical Distribution & Panel Capacity Assessment*
Education & Outreach	• *eHub (formerly "Customer Resource Center")* • *Regional Positive Messaging Campaign* • *SVCE's "Watts for Lunch"*
Public Policy	• *State Policy Coordination & Advocacy* • *Regional Policy Coordination* • *Streamlining Community-Wide Electrification*
Market Transformation	• *FutureFit Fundamentals Contractor Training* • *Innovation Partners & Innovation Onramp* • *Research & Development Support*

Outline

1. Background
2. Building Decarb Joint Action Plan
3. **Implementation**

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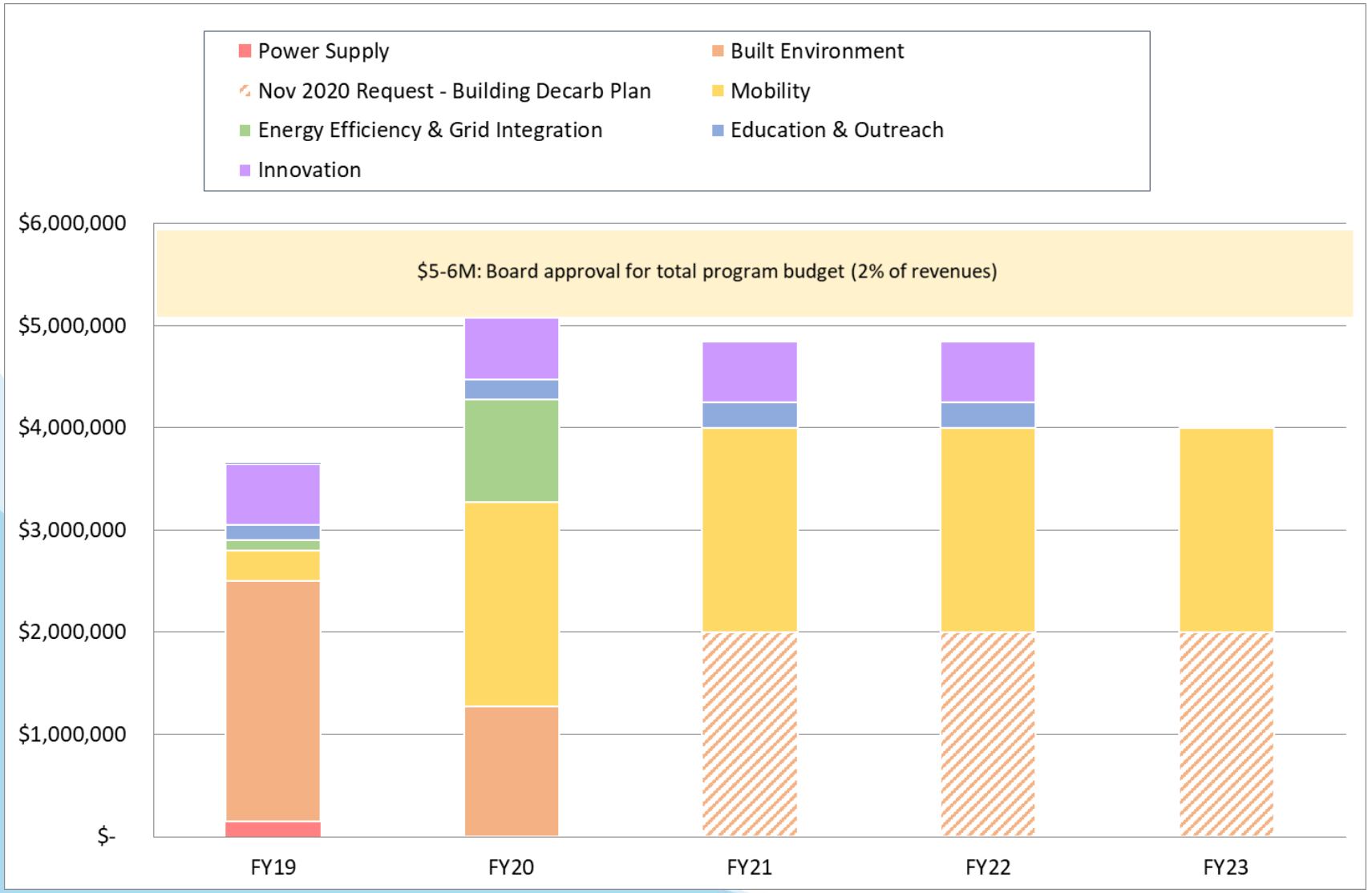
Budget Allocation & Tentative Timeline for Implementation

- $6M budget allocation request: $2M/year for FY21-FY23
- Tentative timeline for phased program deployment:

Deployment Phase	Cornerstone Actions
Phase 1 (2021)	• Reach Code 2.0 (NC) • FutureFit Homes & Buildings (EB) • Regional Coordination (MD)
Phase 2 (2022)	• Feasibility Assessment for Natural Gas Phase Out by 2045 (EB) • Local Policy to Decarbonize Existing Buildings (EB) • Accessible Financing (EB)

Budget Allocation Request



Annual programs budget: Target levels
$2M (40%) – Mobility
$2M (40%) – Built environment
$1M+ (10%) – Innovation, energy efficiency & grid integration, education & outreach
Total: $5M+ annual budget

Staff Proposal

Adopt the Building Decarbonization Joint Action Plan (abbv. “Plan”) and program briefs & approve $6M budget allocation for implementation over the coming 3-year period

SILICON VALLEY CLEAN ENERGY

Appendix

Attendees – Virtual Workshops in May 2020

Workshop 1: Policy

Carbon-Free Mountain View

EHDD Architecture

BAAQMD

Santa Clara County

Sonoma County Regional Climate Protection Authority [RCPA]

City of Cupertino

City of Los Altos

City of Morgan Hill

City of Mountain View

City of Sunnyvale

Workshop 2: SVCE-Led Programs

SMUD

Infinera

East Bay Community Energy

Ardenna Energy

City of Palo Alto

Rocky Mountain Institute

Carbon Free Mountain View

California Energy Commission

Peter Turnbull and Associates

Peninsula Clean Energy

Electric Power Research Institute

Workshop 3: Overview

MidPen Housing Corporation

Google

SummerHill

Carbon Free Silicon Valley

PG&E

Joint Venture Silicon Valley

City of Sunnyvale

CalCCA

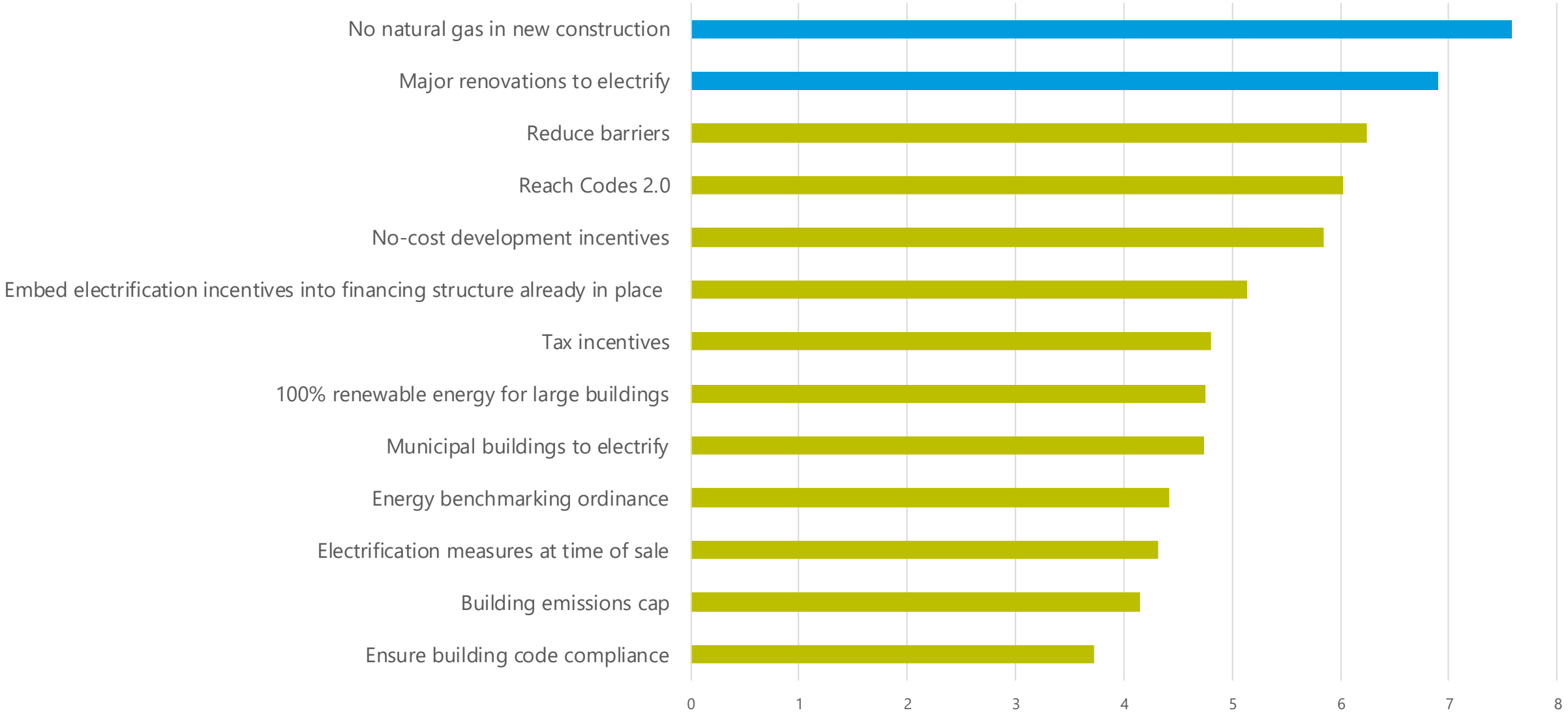
Building Decarb Coalition

CPUC

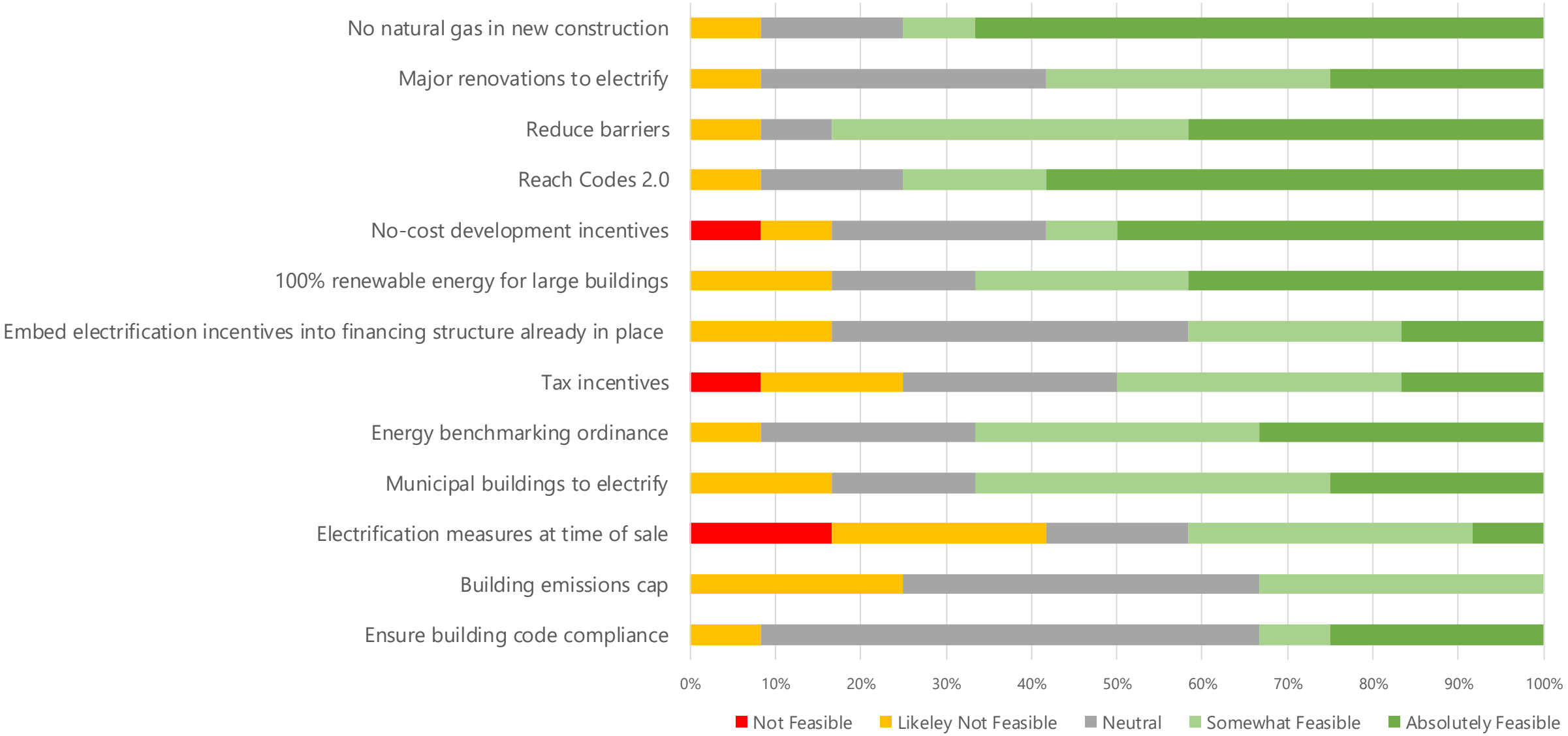
Carbon Free Silicon Valley

UA393

Example Initial Survey Results – Prioritizing Decarb Policies



Example Initial Survey Results – Feasibility of Policy Strategies



Example Initial Survey Results – Additional Strategies Suggested

Research End of Gas Flow by 2035 ordinance

Develop combined washer/dryer lending program

Make climate action and building decarb a Council/BOS priority applied by jurisdiction staff across all actions

County-issued Green Bond to finance electrification retrofits of local government or private sector facilities

Align and amplify SVCE programs/messaging with City programs/messaging and vice versa

Engage with financing company like Redaptive or Carbon Lighthouse and/or build relationship with local credit unions to offer low or no-cost financing for electrification

Work with PG&E on gas pipe replacement avoidance districts

Eliminate the sale of tankless gas water heaters

Member Agency policies that could help with market readiness for electrification?

Encourage the design of grid adaptive buildings that help alleviate duck curve

Time-of-sale gas usage disclosure report

Utility Users Tax on natural gas

"BE Ready" program requiring panel upgrades whenever major electrical work happens

Technical support and market building for projects that directly benefit the community and consumer

Energy efficiency in general

Promote community solar projects

Stakeholder Feedback on Draft

Based on review of 150+ comments:

- **Reorganized structure** to emphasize scale of challenge, clarify organization of actions, and incorporate visuals
- **Distilled cornerstone actions**, emphasizing partnerships and related external activities
- **Clarified roles of SVCE and MAWG** in context of state and regional action
- Incorporated section on **tracking and evaluation**

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Position Request – Senior Government Affairs Manager

Board of Directors Meeting
November 13, 2020

Position Discussed & Supported in Strategic Planning and Budget

Background - Senior Government Affairs Manager

- Position was discussed at September Board Meeting and supported by the Board but not included in FY 2020 -2021 budget
- Community Engagement and Outreach (Strategic Plan Focus Area)
  - **SP Goal #11**: Engage a full range of public, private,and non-profit stakeholders to leverage our decarbonization efforts
  - **SP Goal #15**: Engage regulators, legislators and local electeds in developing policies that support CCAs
  - **SP Goal #17:** Influence policy makers by building and leveraging local electeds, diverse stakeholders, and regional agencies

Senior Government Affairs Manager

- **Duties**
  - Focus on building relationships at the state and local level
  - Engage and collaborate with elected officials on policies that further SVCE mission and goals
  - Develop responses on key state and local policies that impact SVCE
  - Represent SVCE at state, regional and local hearings, meetings and other public forums
  - Build coalitions of stakeholders with similar goals to amplify SVCE's influence and messaging
- **Fiscal Impact:**
  - $148,865 to $204,276

Recommendation & Next Steps

- **Recommendation**
  - Staff recommends that the Board approve Resolution 2020-34 amending the Silicon Valley Clean Energy ("SVCE") positions chart, job classifications and salary schedule to add the Senior Government Affairs Manager position

- **Next Steps, if approved:**
  - Advertise and Recruit – December/January 2021
  - Shortlist – January 2021
  - Interview – January/February 2021
  - Onboarding – February/March 2021

THANK YOU

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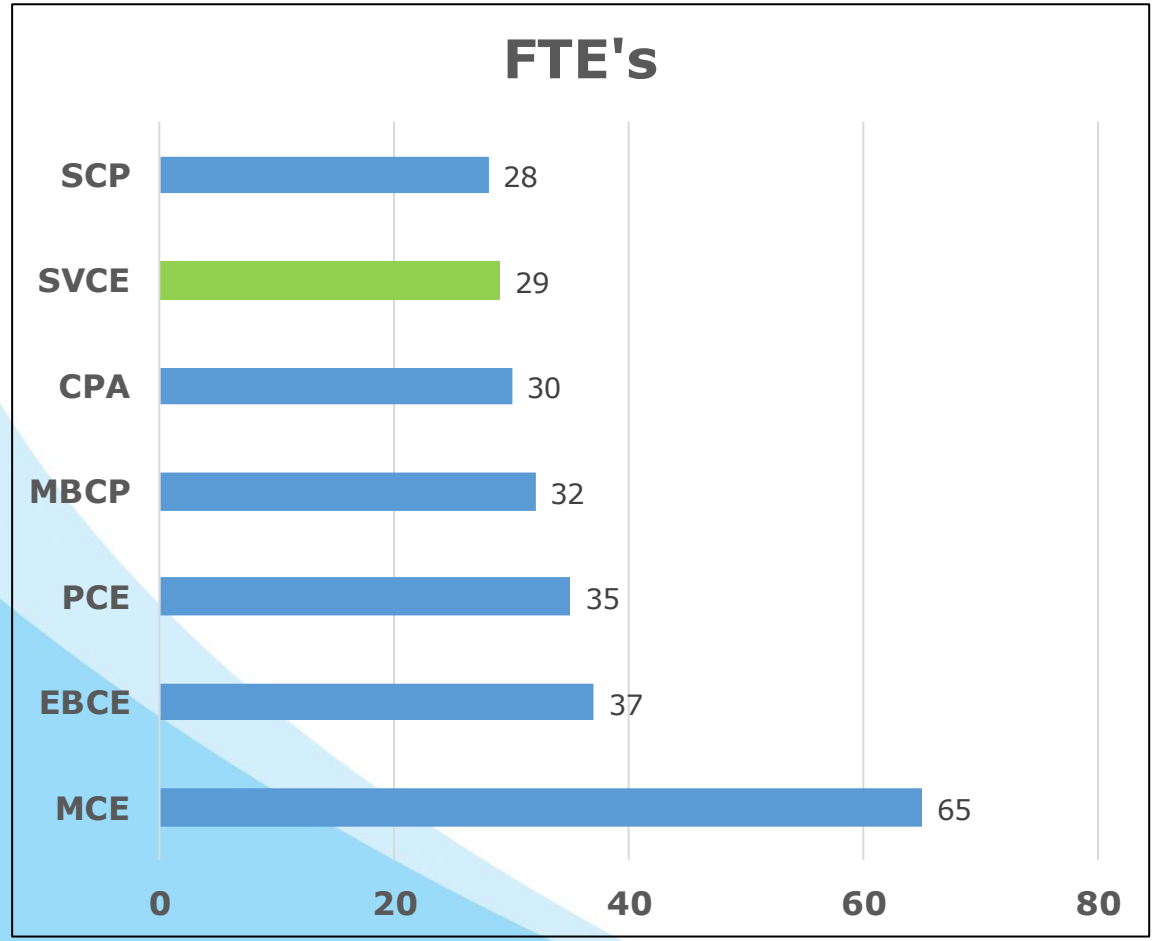
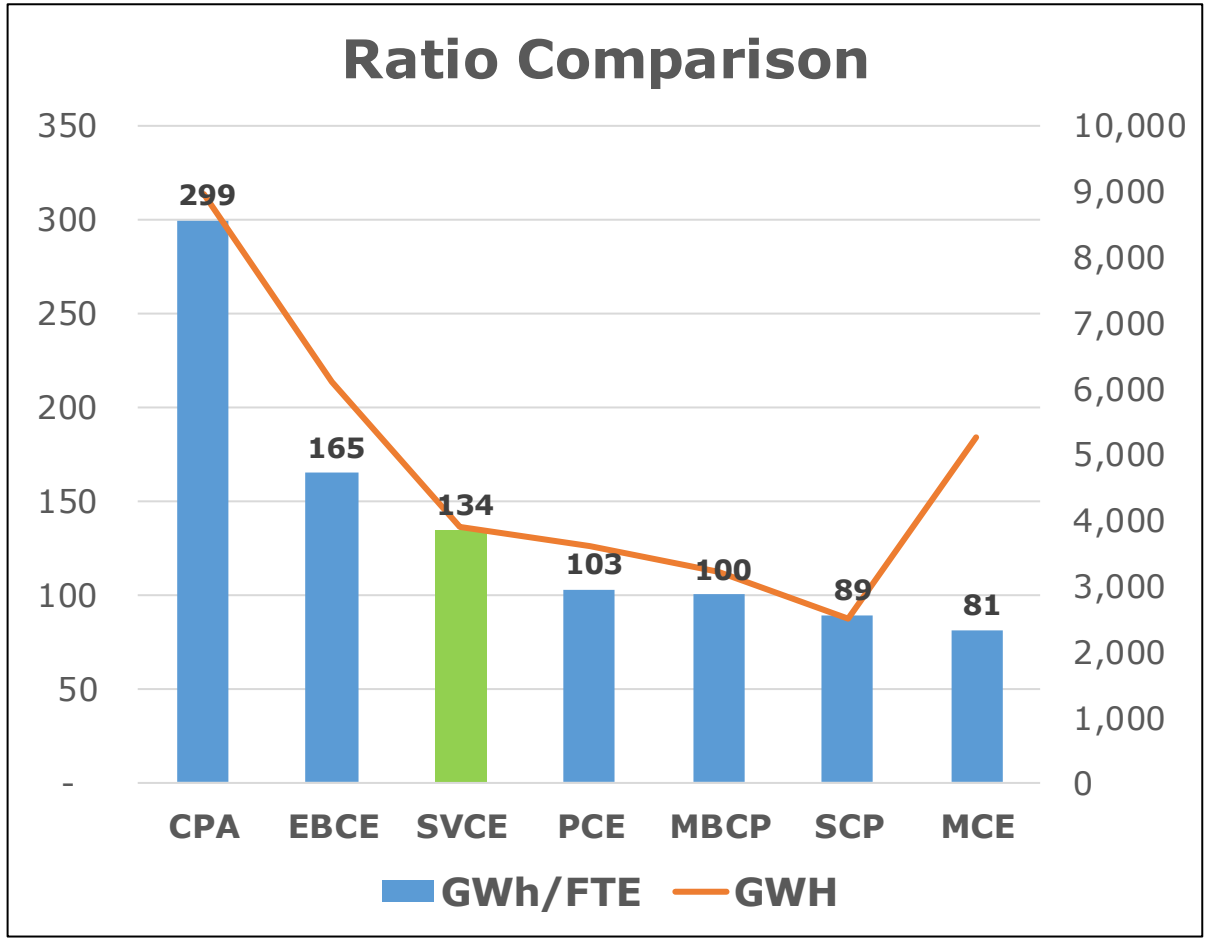
FTE COMPARE





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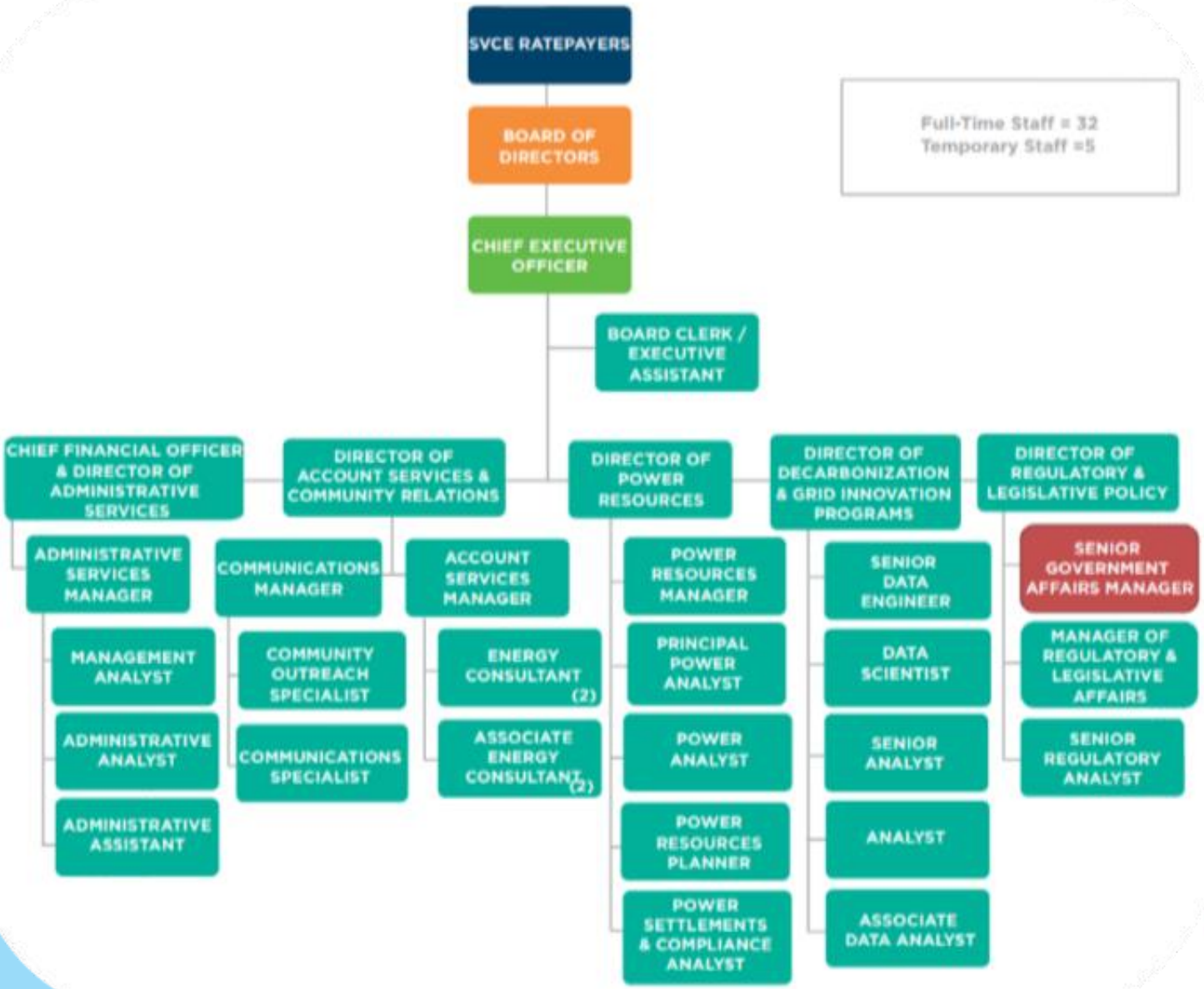
Organization Chart



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California Community Power ("CC Power) - Super JPA Follow-Up

SVCE Board Meeting
November 13, 2020

9 CCA's participating

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission

CleanPowerSF
Same Service • Cleaner Energy

Central Coast Community Energy

EAST BAY COMMUNITY ENERGY

MCE | My community. My choice.

PENINSULA CLEAN ENERGY

REDWOOD COAST EnergyAuthority

SAN JOSE CLEAN ENERGY

SILICON VALLEY CLEAN ENERGY

Sonoma Clean Power

Business Need for CC Power – Enhances SVCE's Options

- Economies of Scale
- Enhanced Negotiating Power
- Shared Risk – execution, development and performance
- Potential for Shared Financing
- Strategic value demonstrating CCA self-procurement & reliability contributions
- Legislators and regulators favor large scale procurement

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Previous Discussions

6/13/18 – Board Meeting CEO Report

6/26/18 – Executive Committee Meeting - Regular Item: "Super JPA" – Proposed New JPA for Increased Collaboration Between CCAs

6/26/20 – Executive Committee: CEO Report

8/28/20 – Executive Committee: CEO Report

10/14/20 – Board Meeting: Long-Duration Storage and Super JPA Formation Update

10/23/20 – Executive Committee: Super JPA Formation

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CC Power Highlights

- Enabling Agreement – allows for CCAs to potentially participate in projects – ***no obligation***

- CC Power intended to be the direct party to any contract with storage or project developers

Debts, Liabilities and Obligations

- State Law and the JPA Agreement provide that Members of CC Power shall not be responsible for the debts, liabilities and obligations of CC Power. Same liability firewall that applies in the SVCE Joint Powers Agreement
- General and administrative costs of CC Power shared on an equal basis by the Members regardless of size unless the cost allocation formula is changed by a two-thirds vote of the entire Board
- The Board by a majority vote of those in attendance shall establish the projects to be implemented by CC Power but only those Members who **voluntarily** decide to join the project shall be responsible for its costs or obligations which shall be determined by each project agreement
  - To be approved by SVCE Board

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Membership and Management of CC Power

- Membership made up of CCA's and other public agencies determined to be eligible under a Board adopted policy
- Governed by Board of Directors made up of one Director per Member
- Directors will be CEO or General Manager of Member or their designees
- Decisions made by
  - majority vote of the Board in attendance unless the Agreement requires 2/3rds vote of entire Board such as amendment to Agreement, involuntary termination of a Member or termination of JPA Agreement
    - If an Agreement amendment involves the purpose or powers of CC Power, membership, limitations on liability or termination of CC Power, 2/3rds of Members must also approve

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Withdrawal from CC Power

- No prior notice of withdrawal is required
- Withdrawal process:
  - Withdrawing party submits resolution from its governing body providing notice of withdrawal
  - Any debts, liabilities or obligations of CC Power specifically assumed by the withdrawing party must first be satisfied
  - Upon satisfaction of the preceding condition, the CC Power Board of Directors **shall** approve the withdrawal
- Withdrawal from CC Power does not affect the withdrawing Member's obligations under any Project Agreements. The withdrawal from the Project Agreement will be governed by the Project Agreement

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1st CC Power Project

Long Duration Energy Storage (LDES)

1. California Climate Goals
2. CPUC IRP requirements
3. Previous and upcoming legislative pressure
4. Rolling blackouts

ATION

gtm: Solar | Grid Edge | Storage | Wind | Trending | Podcasts | White Papers | Webinars

ENERGY STORAGE

The First Major Long-Duration Storage Procurement Has Arrived

California's community-choice aggregators are moving ahead of the traditional utilities.

JULIAN SPECTOR | OCTOBER 16, 2020

Solar Power World

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California Community Choice Aggregators issue joint request for up to 500 MW of long-duration energy storage

By Kelsey Misbrener | October 16, 2020

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California CCAs issue RFO for up to 500 MWs of long-duration storage

By Renewable Energy World Content Team | 10.16.20

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IN THIS LIST

- Calif. aggregators seek 500 MW of long-duration energy storage
- Q2: U.S. Solar and Wind Power by the Numbers
- Essential Energy Insights - September 17, 2020
- Essential Energy Insights

16 Oct, 2020

Calif. aggregators seek 500 MW of long-duration energy storage

Striving to keep California's power system well balanced while transitioning to larger volumes of variable wind and solar resources, a coalition of local government-run energy suppliers in the central and northern parts of the state on Oct. 16 issued a joint request for proposals for 500 MW of long-duration energy storage.

CC Power & LDES Procurement Timeline

☑ June 2020

Initiate CC Power Formation Agreement

☑ October 2020

Finalize CC Power Agreement

Issue LDES RFO

☐ Dec. - February 2021

CC Power Member Board Approvals

Evaluate RFO Proposals

☐ March - September 2021

Negotiate/Execute LDES Project(s)

CCA Board Approvals for Project Participation Agreement

Next Steps For CC Power Formation

6/26/20 – Executive Committee: CEO Report ☑

8/28/20 – Executive Committee: CEO Report ☑

10/14/20 – Board Meeting: Long-Duration Storage and CC Power Formation Update ☑

10/23/20 – Executive Committee: CC Power Formation ☑

Feedback from Board today

Finance Committee on Nov 30, if needed

Present for approval, December 11 Board meeting

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THANK YOU

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Backup

Super JPA Joint Procurement

Long Duration Energy Storage

Questions from SVCE Board Members

- Why a super JPA vs a Joint Agreement?
- What are other potential projects for the Super JPA?
- How are participation levels determined?
- How is voting determined?
- Who will be managing the LDES project?
- How is the super JPA viewed by the state?
- How is risk and reward balanced?

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Business Need for Long-Duration Energy Storage (LDES) & Joint Procurement Super-JPA

Long Duration Energy Storage

- California Climate Goals require a clean electric grid & large-scale procurement of renewable power
- Keeping the lights on with high penetrations of renewable power requires energy storage
- CPUC has IRP requirements for Long Duration Energy Storage (LDES)
- Bills in 2020 session have included LDES
- Rolling blackouts result in more interest in storage

Joint Procurement Super JPA

- CCAs are proactive in purchasing cleaner power and are also focused on affordability & reliability
- LDES investments may be too large for any one CCA to successfully complete
- LDES is technically complex and has associated financial risk
- Joint procurement de-risks technology and financial risk

9 CCAs - by the numbers

CCA considering Super JPA	Annual Load 2019 (GWh)	Est Peak Load (MW)	Customer Accounts
Central Coast Community Energy	3,094	679	275,750
Clean Power SF	2,706	460	380,000
East Bay Community Energy	5,819	990	533,000
Marin Clean Energy	5,275	505	470,000
Peninsula Clean Energy	3,600	733	293,000
Redwood Coast Energy	699	125	62,000
San Jose Clean Energy	3,286	1,081	332,500
Silicon Valley Clean Energy	3,898	800	270,000
Sonoma Clean Power	2,360	417	227,000
Total	**30,737**	**5,790**	**2,843,250**

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Super JPA Highlights

- **Objective:** Develop a cost-effective, risk-minimized, CCA-controlled structure to develop or acquire necessary resources exceeding the procurement needs of a single CCA.
- **Structure:** Joint Powers Authority composed of CCAs; Enabling Agreement with Opt-in Project Participation
- **Target Projects:** Stand-alone storage and renewable resources exceeding individual CCA demand
  - Long Duration Storage – first project
- **JPA Timeline:** Form JPA by end of 2020 and not later than early 2021

Long Duration Energy Storage ("LDES")

- LDES are energy storage technologies with 8-hour minimum discharge duration
- Technologies – lithium ion, chemical flow batteries, gravity, pumped hydro, compressed air, etc.
- Can be grid-charged – not renewable
- Used to integrate renewables onto the grid and support reliability

CPUC's Integrated Resource Plan (IRP) - LDES needed to meet GHG reduction goals

LDES Procurement Goals

- Target up to 500 MW of LDS from one or more projects with on-line date no later than 2026
  - Notional value $2 billion
- Assess Project Viability, Uncertainty & Risk
- LDS should not be procured for compliance alone – *must have market and/or strategic value and be* ***cost-effective***
    - Cost, Energy value, Resource Adequacy, Ancillary Services

LDES Procurement Efforts

- June 2020
  - Multi-CCA Request for Information (RFI)
  - 13 CCAs participated
  - Over 58 projects submitted
- Sept. – October 2020
  - Stakeholder Outreach – CPUC, CAISO & Legislature
- October 2020
  - Multi-CCA (8) Request for Offers/Proposal

JPA & LDES Procurement Timeline