Monterey Bay Community Power

COMMUNITY ADVISORY COUNCIL MEETING

September 20, 2018

CEO'S REPORT

Receive report by CEO Tom Habashi.

SUPPORT MBCP FY 2018-2019 PROGRAMS PROPOSAL FOR ENERGY PROGRAMS AND CONSULTING SUPPORT

Receive report by Director of Communications & External Affairs, JR Killigrew, and Energy Programs Manager, Beth Trenchard.

JPA Goals

- Maximize GHG Reductions
- Competitive, Stable Rates
- Local Energy Projects & Programs

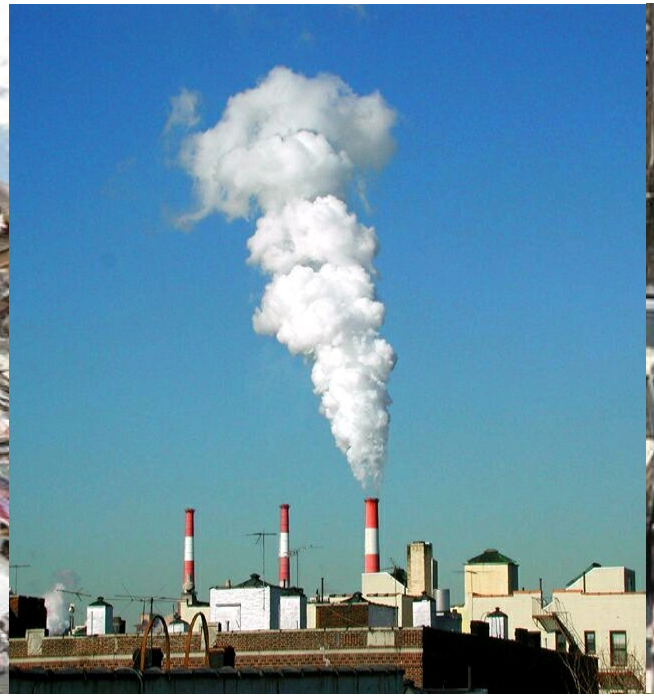
Program Vision Statement:

Our vision is to deploy innovative energy programs that carry out the Agency's goals equitably and effectively to MBCP customers through electrification of the transportation and building sectors as well as catalyze local development and distributed energy resources.

HOW CAN LOCAL GOVERNMENTS FIGHT CLIMATE CHANGE?

Solid Waste

Energy Use

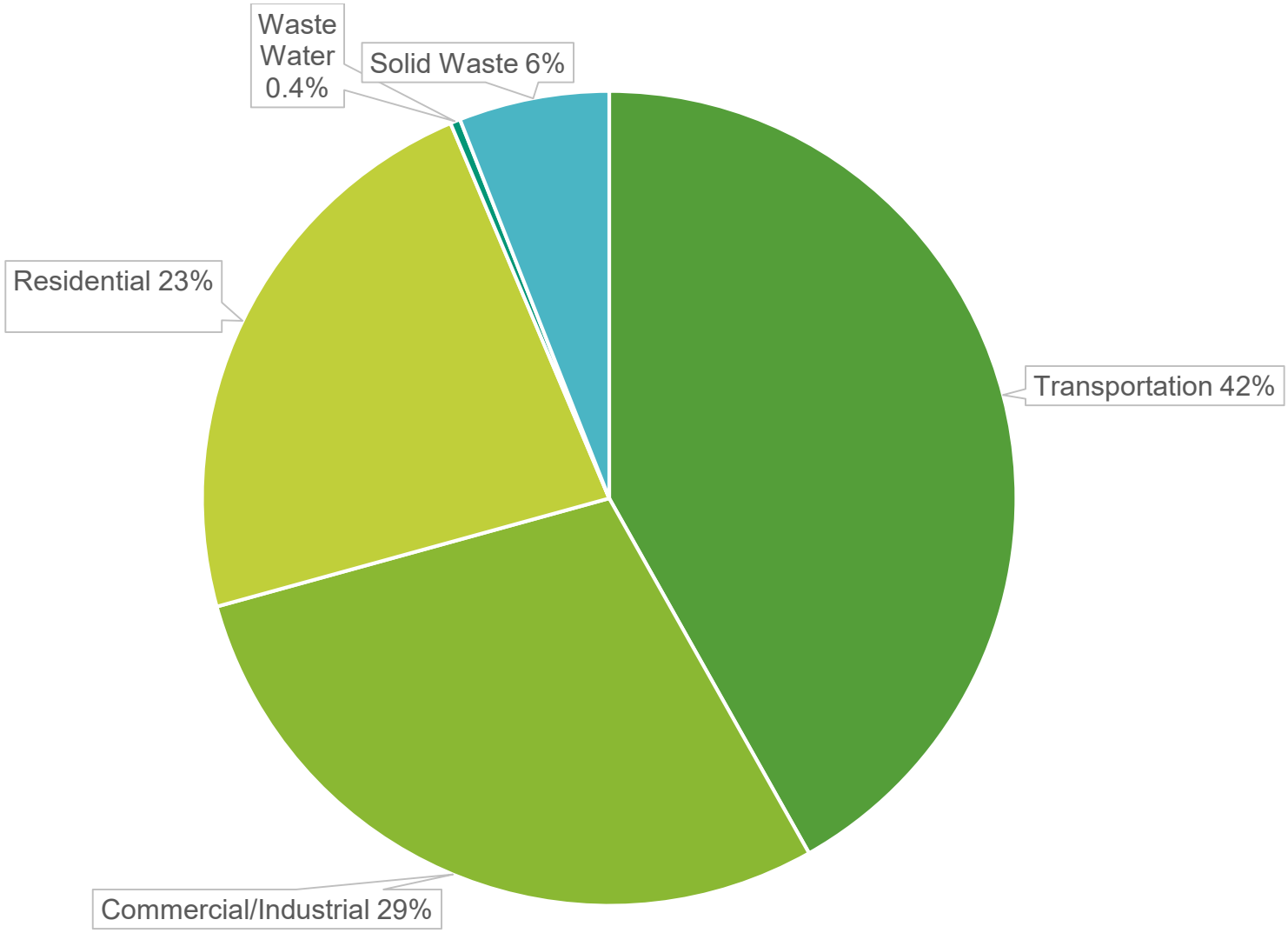


Transportation

Local government policies affect many major sources of greenhouse gas emissions

AGENDA ITEM #X: ENERGY PROGRAM REVIEW

2015 GHG INVENTORIES BY SEGMENT

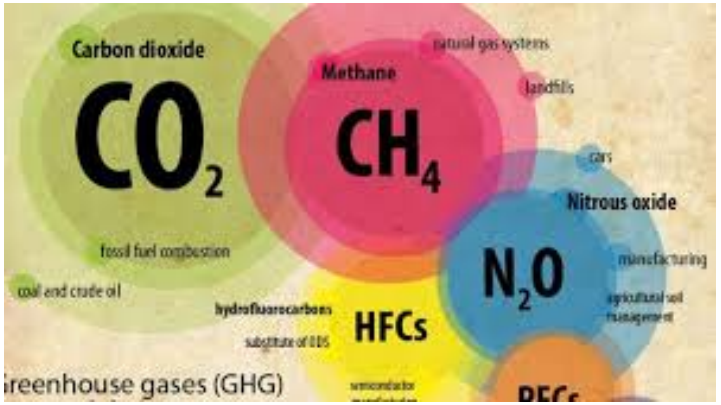


WHY IS A GHG INVENTORY IMPORTANT?

You can't effectively reduce what you don't Measure!

Monitoring GHG emissions can:

- Inform Climate Action Planning
- Enable focused and effective policymaking
- Demonstrate accountability and leadership
- Illustrate opportunities for emissions reductions
- Track GHG emissions performance over time
- Motivate community action
- Recognize GHG emissions performance relative to similar communities



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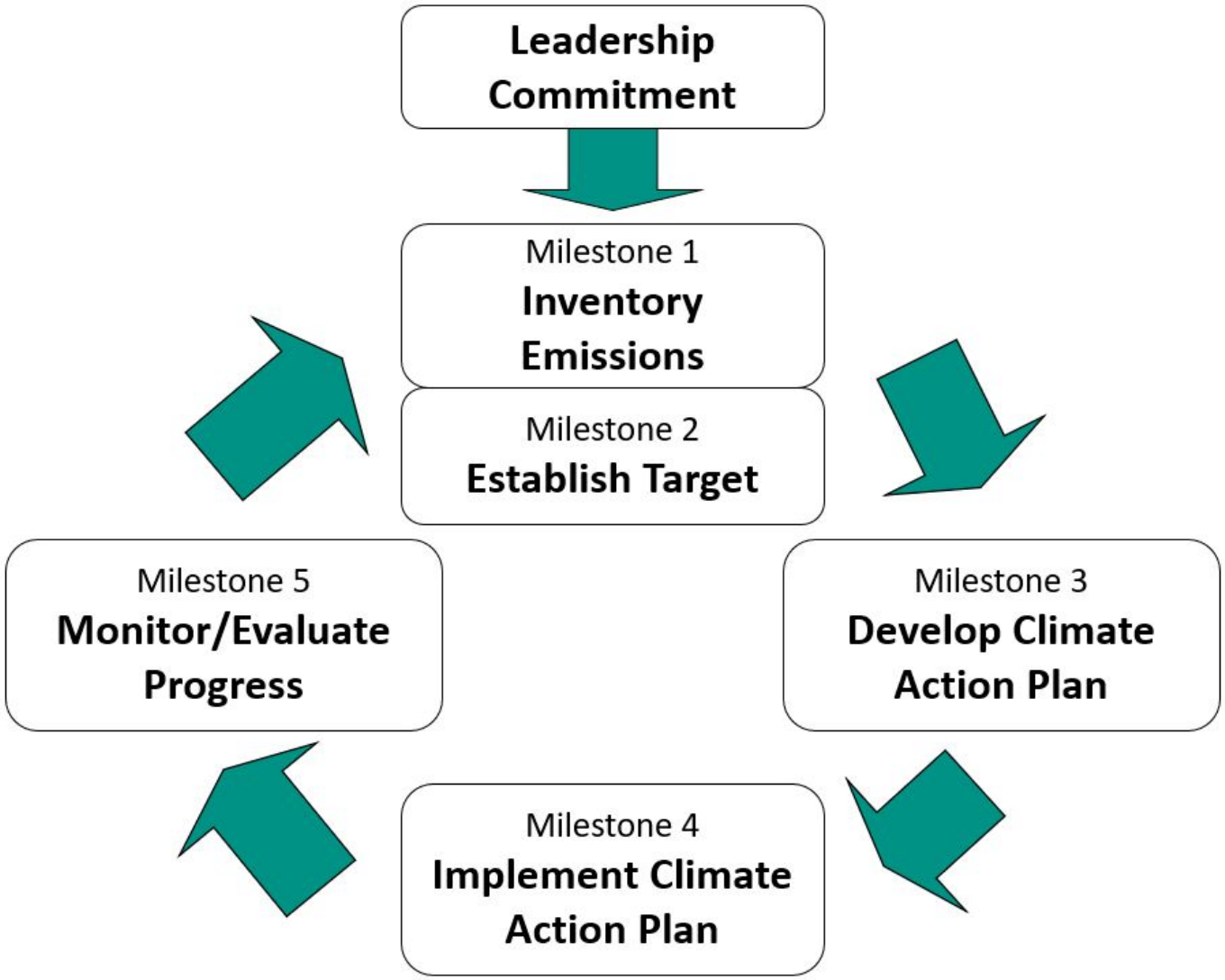
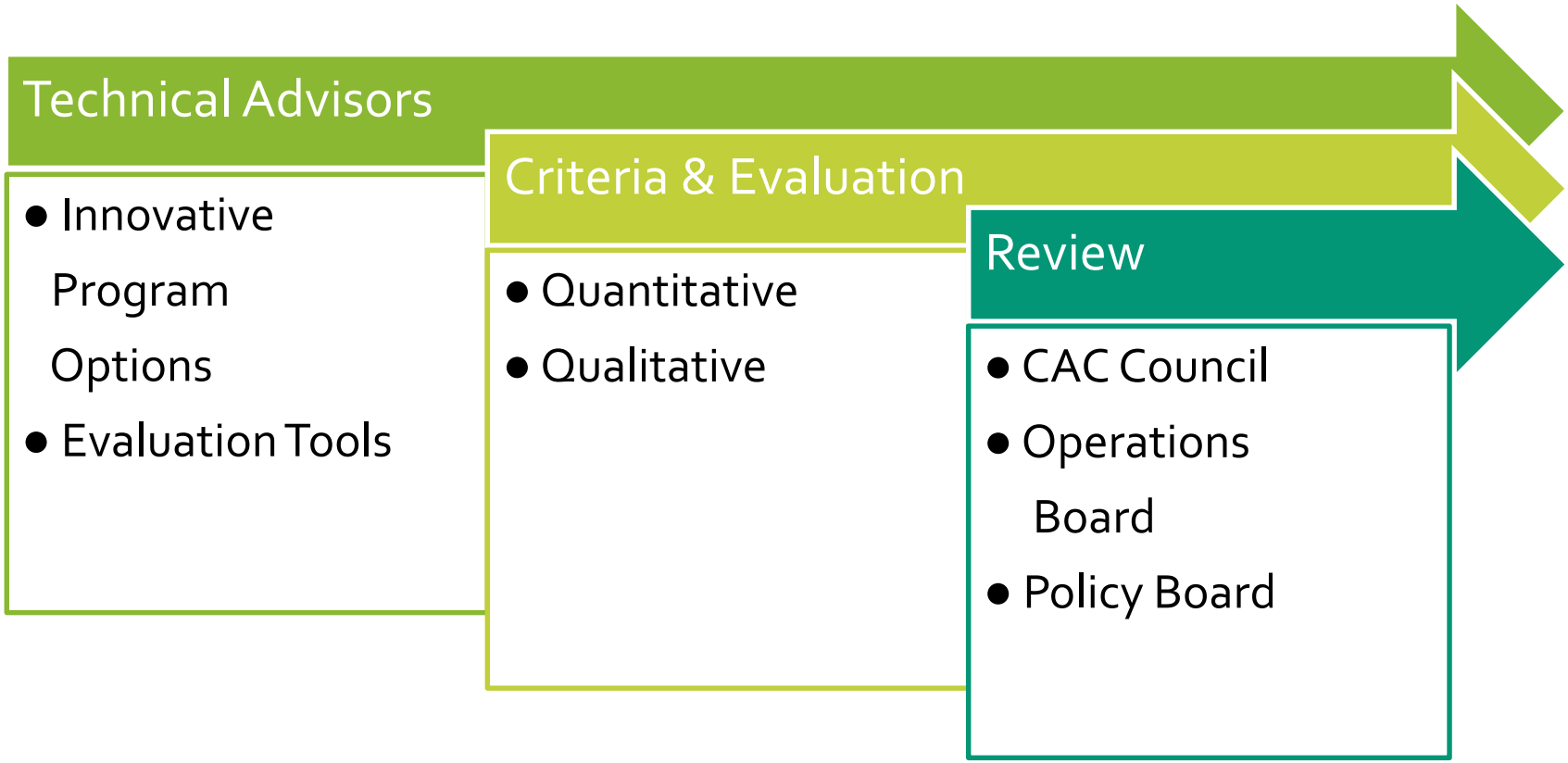
TYPES OF GHG INVENTORIES

- **Government Operations Inventory**
- Emissions from municipal operations i.e. cities/town/counties
- Subset of the community inventory, but calculated separately

- **Community Inventory**
- Emissions from municipal operations i.e. cities/town/counties
- Subset of the community inventory, but calculated separately

CLIMATE ACTION PLANNING PROCESS





Program Design Philosophy

- Start small, learn, improve, grow.
- Prioritize. Lay program foundation to build upon.
- Customer centric program execution.

Program Evaluation Criteria*

Quantitative

- GHG Emission Reductions
- Program Cost
- Local Jobs
- MBCP Financial Benefit

Qualitative

- Customer Benefit
- Social Equity
- Demand Response
- Complementary Funding
- Community Emergency Preparedness
- MBCP Brand Awareness

** Program metrics defining success will be established prior to program implementation*

Program Timing & Spending Considerations

- [ ] Barriers to Program Participation
- [ ] Customer Strategy Underway
- [ ] Customer Evaluating Technology
- [ ] Prioritize Limited Resources
- [ ] Program design & implementation planning take time.
- [ ] Program participation, and program budget, grows over time
- [ ] Plan for Unexpected Program Opportunities

Programs Considered

Transportation Electrification	Building Electrification	Other
• Passenger Vehicles • School, Transit Buses • eBikes,eScooters • TNC (Uber, Lyft, etc.) • EV Sharing • Level II, DCFC Stations • Charging Station Building Ordinance	• Equipment/Installation Rebates • Educational Programs • Tariff On-Bill Financing	• Energy Efficiency • Local Renewable Development • Storage • Demand Response • Additional Customer Rebates for Underserved • Public Benefits Funds • Complementary Funding Opportunities • Consultant Support

Proposed FY 2018-19 Initiatives: $1,292,000

- Electric Vehicle (EV) discount off MSRP for entire community, additional EV incentives for underserved community & public agencies **($825K)**
- CALeVIP Infrastructure Program for Level II & Direct-Current Fast Chargers (DCFC) **($70K)**
- Single-Family and Multi-Unit Dwelling (MUD) Low Income Installations (MBgreen+) **($100K)**
- Electrification Strategic Plan **($150K)**
- Agriculture Sector Technology Needs Assessment **($50K)**
- Marketing Materials and Outreach Strategy **($97K)**

ELECTRIC VEHICLE (EV) INCENTIVE PROGRAM
FY 2018-19: $825K

Objective

- Increase light-duty EV ownership to 15% market share (90,000) from 1% (less than 4K EVs) by 2030. MBCP directly incents 2,000 EV purchases through EV incentive program.
  - *Accomplish objective by reducing cost of EV ownership to be on par with comparable fuel-driven vehicle through negotiated bulk discount and MBCP provided incentives to the underserved community and public agencies.* *Note: incentive value will be revised based on negotiated bulk discounts & existing EV pricing.*

Program Description

- Negotiate bulk discount rate off MSRP ($0 cost to MBCP)
  - *SCP average bulk discount~$10k;Leaf=$13.5k*
- Provide financial incentives for income qualifying customers ($5k new EV, $2.5k used EV) and public agencies ($3k new EV, $1.5k used); remaining community: $0
- Other discounts available:underserved community: $5k-$5.5k; public agencies: $3k; remaining community: $10.5k
- Total discount off MSRP: underserved community: 57-59%; public agencies:46%; remaining community:59%.
- Outside vendor administers financial incentive program
- Timing: as soon as logistically possible

Electric Vehicle (EV) Incentive Program: New EVs

	All Customers	Under Served Customers		Public Agencies (Government agencies, schools, nonprofits)
Avg 2018 Nissan Leaf MSRP	$35,000	$35,000	*w/CVAP*	$35,000
Bulk Discount	$10,000	$10,000		$10,000
MBCP EV Incentive	-	$5,000		$3,000
CVRP Discount	$2,500	$4,500	*$5,000*	$2,500
Clean Fuel Rebate (PG&E)	$500	$500		$500
Tax Credit*	$7,500	-		-
Net Cost	$14,500	$15,000	*$14,500*	$19,000
% Decrease	*59%*	*57%*	*59%*	*46%*

**Federal Internal Revenue Service tax credit is for $2,500 - $7,500 depending upon the size of the vehicle and its battery capacity*

Toyota Yaris (ICE) *~ $15,000 - $18,000*

	EV/Year	ICE/Year	EV Savings/Year
Fuel & Maintenance*	$1,300	$2,600	~ $1,300/Year

** https://www.peninsulacleanenergy.com/wp-content/uploads/2018/08/evinfographic-1.png*

Electric Vehicle (EV) Incentive Program: Used EVs

New CVAP grant includes some used EVs, Financing

	All Customers	Under Served Customers	*w/CVAP*	Public Agencies (Government agencies, schools, nonprofits)
Avg 2016 Nissan Leaf MSRP	$12,000	$12,000		$12,000
Bulk Discount	-	-		-
MBCP EV Incentive	-	$2,500		$1,500
CVRP Discount	-	-	*$5,000*	-
Clean Fuel Rebate (PG&E)	-	-		-
Tax Credit	-	-		-
Net Cost	$12,000	$9,500	*$4,500*	$10,500
% Discount off MSRP	-	*21%*	*63%*	*13%*
2016 Toyota Yaris (ICE)	*~ $10,000*			

	EV/Year	ICE/Year	EV Savings/Year
Fuel & Maintenance*	$1,300	$2,600	~ $1,300/Year

** https://www.peninsulacleanenergy.com/wp-content/uploads/2018/08/evinfographic-1.png*

ELECTRIC VEHICLE (EV) INCENTIVE PROGRAM

Pro's

- Fuels **EV public awareness and acceptance**
- **~62,000 MT GHG reduction** by 2030 (highest of any evaluated program)
- **Incremental revenue** from increased load partially offsets program costs (NPV cost, 15 year period = $1.8M)
- Local retail **jobs**
- **Access** for disadvantaged community & public agencies; benefits entire community
- Opportunity to use SCP's operational plan, **simplifying implementation**

Con's

- Potential **low participation** rate in first year of program
- Market share projections by 2030 below 15% market share target.
- Impossible to know how many customers would have purchased an EV without the incentive.
- MBCP incentives will go to some **customers that later move out** of the service area.

CALEVIP – LEVEL II AND DCFC STATION PROGRAM
FY 2018-19: $70K

Objective

- Increase access to charging stations to support EV growth.

Program Description

- The CEC selected tri-county to invest $6M in charging station infrastructure through CALeVIP
- Combined MBCP, MBARD, CEC funding est. $11M-$12M
- Customer receives ~ 50-100% funding for charging equipment + installation
- Level II Stations target worksite, multi-unit dwellings (MUD) sites
- DCFC Stations target corridor and "quick-stop" destination locations
- 3(4)-agencies: coordinated outreach, marketing, funding application & receipt
- CSE: Program design & administration
- Timing: July 2019 Implementation

CALEVIP – LEVEL II AND DCFC STATION PROGRAM

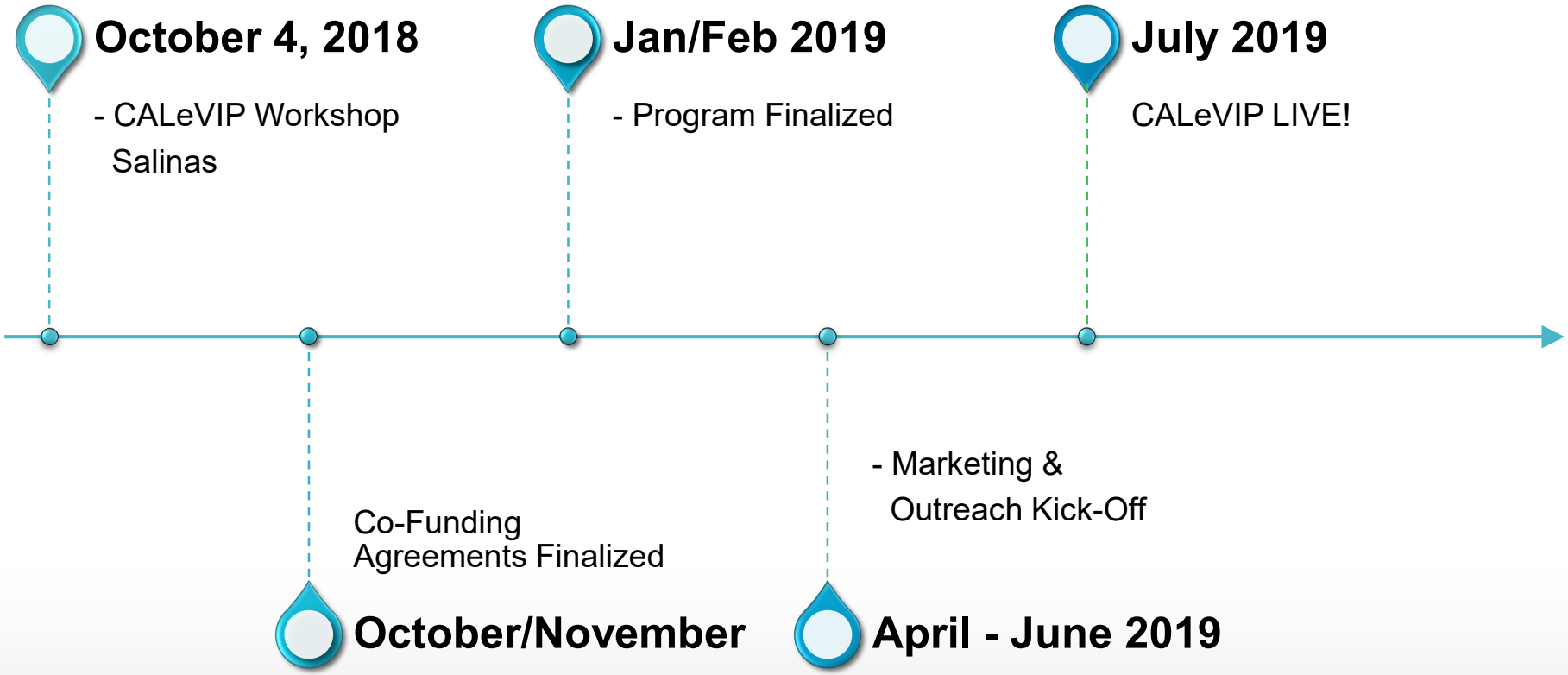
Pro's

- Investment in EV infrastructure increases EV adoption, further **reducing GHG emissions & increasing load**
- ~40 full-time equivalent, (one-time) jobs (primarily electricians)
- Future **demand response** potential
- Leverage **CEC, CSE's and MBARD's expertise**
- **Scalability**
- Level II charging station installations at **multi-unit dwellings provides access** to population currently not able to easily own an EV
- Overtime, charging behavior must shift to daytime when clean, solar energy is abundant. **Worksite charging station access is critical.**

Con's

- Difficult to quantify program's benefit
- Customer charging behavior, technology will change overtime. Equipment siting, pay structure critical. **Risk of stranded assets.**

Proposed CALeVIP Timeline



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GO LOCAL RENEWABLE ENERGY PROGRAM

Objective

- Increase local renewable generation, storage and promote economic vitality.

Program Description

- 24 unique responses to Request for Offer (RFO) received
- 5-20 year terms; installed capacity 1 to 3 MWs
- Premium over utility cost captured in programs budget
- Staff is reviewing offers and expects to shortlist and begin negotiation with one or more developers in late October.

GO LOCAL RENEWABLE ENERGY PROGRAM

Pro's

- Local renewable development
- Provides ~ 61 one time local jobs, perhaps some ongoing jobs
- Demand response opportunity for projects with storage
- Potentially, novel financing opportunities

Con's

- Standalone solar generation reduces load and contributes to the duck curve
- Premium cost reduces available program dollars and results in more expensive rates.

Affordable Housing Energy Programs

FY 2018-19: $100K

Objective

- Reduce electricity costs for underserved community
- Provide charging station access to low income community living in MUDs
- Provide storage and charging station installation learning opportunity to MBCP staff.

Program Description

- Solar Developer RFO installs solar for low income single family homes.
- Solar RFO installs solar, storage and Level II charging station at MUDs
- Leverage SASH, SOMAH funding; difference made up with MBgreen+ and, if needed, program dollars
- Developer manages outreach, design and construction; MBCP provide public relations support.
- Timing: late FY 2018-19

ENERGY PROGRAMS FOR AFFORDABLE HOUSING

Pro's

- Significant financial benefit to underserved community
- Identifies affordable housing MUD owners to install charging stations.
- Demand response potential for projects with storage and charging stations.
- Storage and charging station installations on a small scale provide valuable program experience for staff.

Con's

- Standalone solar generation reduces load and contributes to the duck curve
- Each MUD is unique & costs associated with adding solar, storage & charging stations will vary
- Minimal jobs if developer provides job training opportunities with volunteers

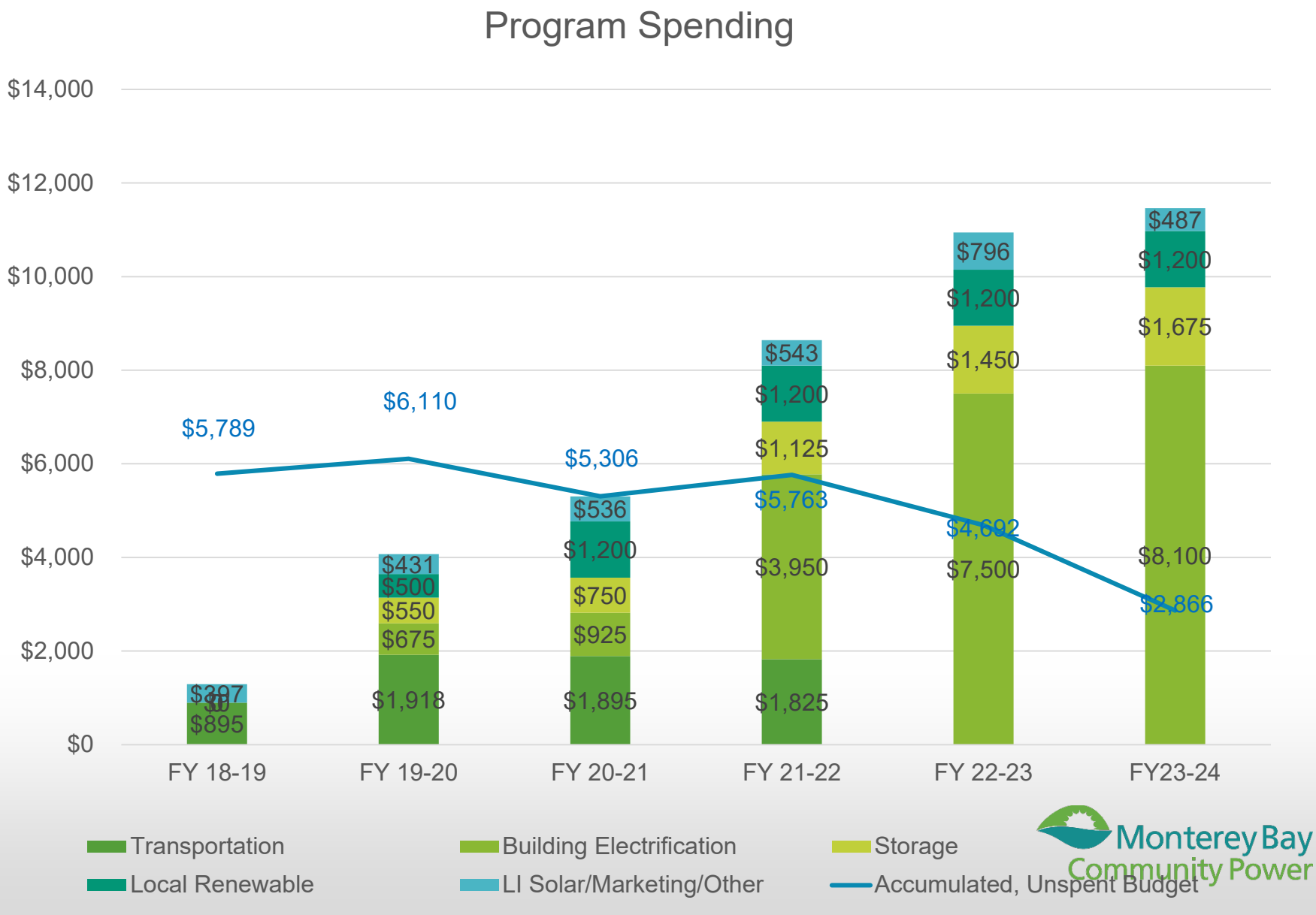
ELECTRIFICATION STRATEGIC PLAN & NEEDS ASSESSMENT

Objective

- Develop long-term electrification plan by customer segment, that builds achievable electrification goals, including community emergency preparedness, and the benefits and costs of achieving these goals.

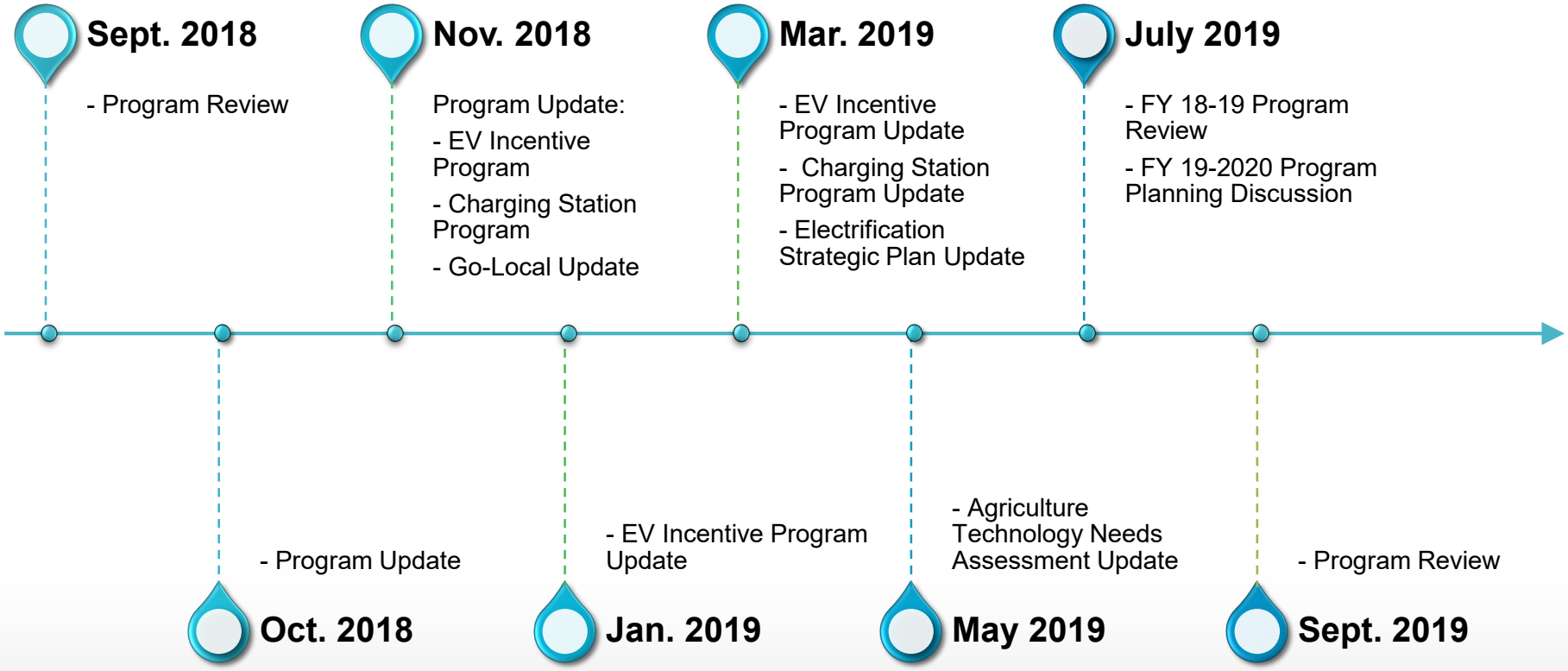
Program Description

- **Transportation Analysis**: GHG emissions by vehicle type; adoption & load scenarios; various demand response programming.
- **Building Segment**: GHG emissions for NG & other combustibles by segments; forecast built environment electrification scenarios; costs/benefit analysis.
- **Storage**: Forecast storage requirements to meet behind and in front of the meter opportunities; analyze scenarios:cost-effectiveness, rate stability, demand response.
- **Local Energy Development & Access to Electricity**: needs assessment; alternate renewable sources (like biogas); storage &DER resources; identify current/future areas of inadequate infrastructure & electricity access.
- **Community emergency preparedness plan** through network of DERs, microgrids and partnerships with local agencies.


Program Spending
$14,000
$12,000
$10,000
$8,000
$6,000
$4,000
$2,000
$0
FY 18-19
FY 19-20
FY 20-21
FY 21-22
FY 22-23
FY23-24
$5,789
$6,110
$5,306
$5,763
$4,692
$2,866
$397
$0
$895
$431
$500
$550
$675
$1,918
$536
$1,200
$750
$925
$1,895
$543
$1,200
$1,125
$3,950
$1,825
$796
$1,200
$1,450
$7,500
$487
$1,200
$1,675
$8,100
Transportation
Building Electrification
Storage
Local Renewable
LI Solar/Marketing/Other
Accumulated, Unspent Budget

Proposed Program Timeline

* Council review first, Board(s) review follows



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Summary

FY 2018-19

- Transportation Electrification: EV Incentives + Charging Stations
- Local Renewable Energy: Go-Local, Affordable Housing Solar
- Electrification & Customer/Technology Needs Assessment

Adding in FY 2019-20

- Building Electrification Pilot
- Storage Pilot
- Additional Rebates for Qualified Customers Evaluation
- Demand Response Evaluation
- Public Surcharge Evaluation

Growing in Following Years

- Building Electrification
- Storage
- Demand Response
- Community Solar?
- External Funding
- Additional support for Underserved Community

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Discussion & Questions

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FY 2018-19 Programs

Evaluated FY 2018-2019 Programs

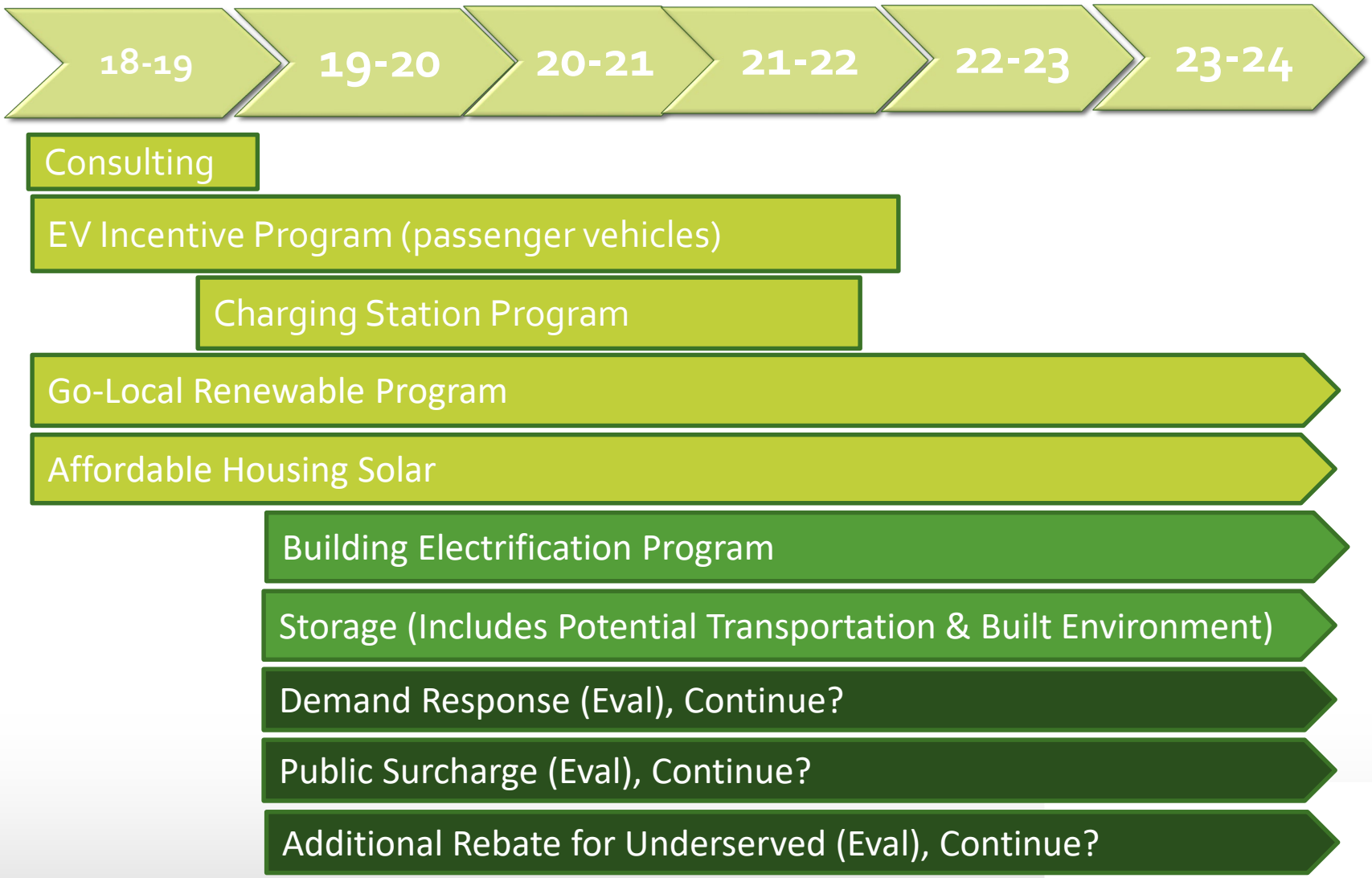
Quantitative Metrics	GHG MT ↓ Program Life	Cost/GHG ↓ /MT	Estimated MBCP Program Cost	Net MBCP Program Cost	Total Program Jobs	~ Net Cost /Job
EV Incentive Program *4 year program, $825k/year*	62,000	$53	$3,300,000	$1,800,000	62	~$30,000
Charging Station Program *3 Year Program, $1.1M/year*	52,000	$58	$3,230,000	$1,750,000	39	~$45,000
Go-Local Renewable Program* *5-20 Year Program, ~$1.2M premium/year*	0	$0	$23,000,000	$23,000,000	61	~$375,000
Solar/MBgreen+ *5-Year Program, grows to $250k by Year 5*	0	$0	$1,000,000	?	?	?

**Pending Review*

Qualitative Metrics	Social Equity	Demand Response	Complementary Funding	Community Preparedness	MBCP Brand Awareness	Customer Benefit
EV Incentive Program	√	√	√	-	√	√
Charging Station Program	√	√	√	-	√	√
Go-Local Renewable Program	-	√*	-	√*	√	-
Solar/MBgreen+	√	√*	√	√*	√	√

* *Assumes storage is included*

Program Map


18-19
19-20
20-21
21-22
22-23
23-24
Consulting
EV Incentive Program (passenger vehicles)
Charging Station Program
Go-Local Renewable Program
Affordable Housing Solar
Building Electrification Program
Storage (Includes Potential Transportation & Built Environment)
Demand Response (Eval), Continue?
Public Surcharge (Eval), Continue?
Additional Rebate for Underserved (Eval), Continue?