

DATE: August 13, 2018

AGENDA ITEM # 3

TO: Environmental Commission

FROM: J. Logan, Staff Liaison

SUBJECT: Receive Report on Silicon Valley Clean Energy Authority (SVCEA)

RECOMMENDATION:

Receive updates on SVCEA Board of Directors and standing committee meetings; Provide direction/input on priority programs for MAWG

BACKGROUND

State and Local Mandates
Community Choice Energy
Council Actions
Implementation of SVCEA in the Los Altos Community
SVCEA Structure

For a full review of the topics above, please access the following link https://www.losaltosca.gov/sites/default/files/fileattachments/environmental_commission/meeting/43111/5. sycea 2018.pdf

DISCUSSION

2018 Customer Program Advisory Group (CPAG) meeting recap:

SVCEA Board of Directors established a Customer Program Advisory Group. Vice Chair Weiden was appointed as a member to the group in December 2017. The first meeting of CPAG was January 17, 2018. Vice Chair and CPAG member Don Weiden will provide an update.

2018 Member Agency Working Group (MAWG) meeting recap:

At the April 26, 2018 MAWG meeting, SVCE staff reminded the group of its engagement opportunities, Watts for Lunch on May 2, 2018 and Bike to the Future on May 5, 2018. A representative from DNV-GL consultants provided a status update on the GHG Emissions and Clean Energy Asset Inventory it is conducting for SVCE to establish standard, baseline metrics and to support member districts with GHG reporting and goals. The GHG Inventory Approach and Methodology is complete and was shared with the group in January 2018. Now, DNV-GL is calculating the Community GHG emissions for 2015 and 2017, conducting a clean energy asset baseline study, and a target market assessment. The Clean Energy Asset categories under review by DNV-GL include Energy Generation, Energy Usage, and Transportation. The target market assessment will focus on buildings, energy consumption by end use, and transportation. DNV-GL is

awaiting 2017 electricity and natural gas data usage from 2017 and is submitting a request to the California DMV for data on EVs. Members of the CPAG attended the MAWG meeting to provide the group with a progress update; they shared their process of identifying SVCE program benefits and program ideas. Finally, SVCE staff reviewed the BAAQMD HPWH grant proposal, providing highlights of the potential program and requesting jurisdictions submit letters of support to include with the grant packet by the May 11, 2018 deadline.

At the May 24, 2018 MAWG meeting, the group discussed the upcoming Watts for Lunch Commercial and Industry Roundtable in September, which will discuss energy storage and will likely be held at Google- details TBD. SVCE staff informed the group that the BAAQMD proposal was submitted and that they are exploring potential partnerships will other applicants in order to amplify the program. SVCE staff also reviewed their regulatory efforts in Sacramento on May 16, 2018 to address the CPUC's California Customer Choice Project draft paper, referred to as the "Green Book". The "Green Book's" intent is to initiate a policy conversation with a wide range of stakeholders about the future of California's electricity market. SVCE Directors provided a letter to the California Legislature outlining the role of CCAs, such as SVCE, and the process by which they are progressing toward affordable, reliable, and decarbonized energy. SVCE staff also informed MAWG members that SVCE would be issuing grants to local entities to increase awareness of SVCE staff in hard to reach demographics. SVCE requested assistance by MAWG members to identify underserved communities or potential partners for reaching these groups. DNV-GL provided another review of the draft GHG Inventory elements, requesting formatting suggestions. DNV-GL also announced it was successful in obtaining the DMV vehicle registration data and will be including that information in the final workbooks. Finally, SVCE staff requested that the MAWG begin discussing the process for collecting individual jurisdiction program priorities in July and explore how the MAWG can better synchronize Climate Action Plan activities and follow up strategies.

At the June 28, 2018 MAWG meeting, the MAWG continued its review of the GHG inventory and energy assets elements that DNV-GL will be presenting to the SVCEA BOD at its July 11, 2018 meeting. The Chair of the CPAG gave the group an overview of the program priorities presented to the BOD at the June 2018 meeting. SVCE staff provided program status updates to the group, including news that SVCE's carbon emissions factor is 0.25 lbs CO2/MWh, as compared to approximately 300 lbs with PG&E, 500 lbs for the average California grid average and more than 1,000 lbs for the U.S. grid average. SVCEA will be issuing \$75,000 to local organizations to lead awareness campaigns within difficult to reach demographics. The City of Sunnyvale has begun conversations with SVCE to develop a program that increases EV charging signage to overcome the perception of inadequate public EV charging infrastructure. Finally, SVCE staff provided the jurisdictions with a Priorities Matrix, Attachment B, to help guide cities in identifying priority programs that SVCE can help synchronize and support. The focus of these priorities should be on Built Environment, Transportation, and Grid Innovation, relevant to SVCE. Once each jurisdiction has identified their priority programs, SVCE staff will consolidate the programs and prioritize based on greatest interest and look for opportunities to synchronize the efforts and provide support. Staff requests the Commission's input on developing this list at the July 9, 2018 Environmental Commission meeting to provide to the SVCE MAWG at its July 26, 2018 meeting.

At the July 26, 2018 MAWG meeting, the group reviewed priority programs contributed by each member jurisdiction. The programs focused on SVCE priorities, such as Built Environment, Transportation, and Grid Innovation. The programs identified by the Environmental Commission

and submitted to the MAWG are included as Attachment A. Attachment B is a compilation of all programs submitted by the MAWG with a ranking, as voted upon by member agencies. Nearly 50 ideas were contributed by the MAWG and each member jurisdiction selected their top 8-10 ideas. The top ranked programs were:

- All electric building codes
- Identifying barrier to electrification within municipal codes
- EV readiness plan
- EV charging for multi-unit dwellings
- Heat pumps for existing buildings
- Residential energy coaching
- Hydrogen fuel cell powered by organic waste

SVCE staff will review the program ideas, assess feasibility, and begin building out complete programs. Staff will present and vet developed program proposals through MAWG at a future date. Please note, the SVCEA BOD August 8, 2018 meeting was cancelled.

Staff will provide update on the monthly MAWG meetings; Chair will provide update on the CPAG meetings. Monthly SVCEA Board of Directors' meeting agenda and selected materials will be reviewed and discussed.

Attachments:

- A. City of Los Altos SVCE MAWG Program Priorities Matrix
- B. Comprehensive MAWG Program Priorities Matrix with Ranking



Los Altos Priorities

Rank	Title	Objective	Market Segment (SF, MF, SMB, C&I, Other)	Quantitative Goals by 2020	Qualitative Goals by 2020	Already w/in CAP Y/N	Beyond 2020
1	Regional/SVCE Jurisdiction required allelectric building standards	Adopt policy that requires all-electric building standards for all new construction with exemptions for parcels with limited solar access or other physical constraints	All			Y- CAP action reads adopt net- zero electricity building standards	Retro-fit older construction
2	-Regional/SVCE jurisdiction requirement for EV pre-wiring/EVSE in all residential projects -Regional/SVCE jurisdictional requirement for EVSE in nonresidential projects	-Adopt regional policy that requires EV prewiring and EVSE for all new multifamily residential development - Adopt regional policy that requires EVSE in all commercial development	-MF - SMB, C&I	-Decrease # of units within MF from 17 to 10; Increase % EVSE - Decrease square footage requirement to 5,000 ft2	-Default pre- wiring/installation in all new MF and SF construction - Encourage EVSE installation for all SMB, C&I development	-Y- CAP action reads amend GBO to include EV pre-wiring requirements and encourage EVSE installation in residential development - Y- CAP action reads amend GBO to require EV charging stations in nonresidential projects 10,000 ft2 or greater and encourage EV charging stations in projects under 10,000ft2	-Required for any MF development regardless of size; retrofit older construction -Required for all new commercial dev; retrofit older construction

3	Outreach and educational materials for energy conservation and renewable energy	Provide outreach and educational materials	SF, MF	Pamphlets/ materials developed for each/ all amenities /		Υ	
	programs targeted at outdoor amenities			appliances / equipment			
4	Regional partnership/ PPA for energy storage	Participate in regional partnership or PPA to provide reduced-cost energy storage systems to residents and businesses	SF; MF; C&I SMB	ециіріпені	Research needed to determine energy storage requirements as they relate to safety	Y- Refined to specify energy storage in place of PV systems	
6	Education program	Develop energy efficiency outreach and education programs for renter-occupied households	SF; MF	Creation of handouts/ resources/ education program		Υ	
7	Energy self-audit	Develop an energy self-audit checklist and work with community partners to distribute to prospective property owners and other interested parties and to provide	SF; MF; SMB	Creation of checklist; Distribution plan		Y	

technical			
assistance			

Title	Votes	Objective - Short	Objective -Long	Market Segment	Sector	Tech	Solution
Identify and remove Barriers to Electrification in Municipal Policies	5	Audit policies, ordinances, and regulations hindering electrifying everything and improve/remove those hinderances.	Audit of Municipal policies, ordinances and regulations, to identify and fix/remove barriers to Electrify Everything! Similar to the process many cities went through to streamline solar with SolSmart program and assistance from NREL.	SF, MF, C&I	Municipal	Electrification	Policy
All Electric building code	5	Mandatory All Electric buildings for New Construction ordinance in 2022 Title 24 code cycle	Work on a cost effectiveness study and lead an effort to write a code that can be implemented in the cities to be adopted in the 2022 code cycle.	SF, MF, C&I	New Construction	Electrification	Code
Community-wide EV Readiness and Infrastructure Plan	5	Support cities in developing community-wide EV readiness and infrastructure plans, as done by Bellevue WA and Sacramento CA	Support cities in developing community-wide EV readiness and infrastructure plans, as done by Bellevue WA and Sacramento CA	Other – Transportation	Mobility	EV	Study
Residential Energy Coaches	4	Coaching and referral services for residents to connect with all the energy programs & rebates available to them. Establish one-stop shop for info within Silicon Valley.	Coaching and referral services for residents to connect with all the energy programs & rebates available to them. Establish one-stop shop for info within Silicon Valley & train staff as energy coaches	SF, MF	Residential	Electrification	Coaching
Hydrogen from organics	4	Demonstrate that organic waste can be turned into hydrogen that can be stored and accessed to address duck curve	Demonstrate that organic waste can be turned into hydrogen that can be stored and accessed to address duck curve	C&I	Waste	Hydrogen	Generation
Heat Pump Retrofits for Existing Buildings	4	Work with homeowners or property owners of existing homes to retrofit space and water heating systems.	Work with homeowners or property owners of existing homes to retrofit space and water heating systems.	SF, MF	Residential	Heat Pump	Rebate
EV Charging for Multi Unit Dwelling	4				MUD	EV	Charging
Establish Municipal Building EE Retrofit Fund	3	Establish revolving loan fund to support municipal building electrification with a portion of the replenished funds accruing toward the implementing city.	SVCE to create an Energy Efficiency Funding pool for municipal buildings electrification upgrades projects, from a percentage of the collective amount of money that the cities give to SVCE in paying their electricity bills. :) Develop fund parameters that support continual replenishment of energy efficiency funding pool (e.g. 80% of cost savings resulting from project implementation are returned to fund for 5 years after which additional savings accrue to project's implementing City.)	Municipal	Municipal	EE	Financing
Electrify city service fleets	3	Reduce GHGs from service fleets (waste, municipal, fire, police) via electrification incentives.	Reduce GHGs from service fleets (waste, municipal, fire, police) via electrification incentives.	Municipal operations	Municipal	EV	Fleet
Building Fuel Switching – Existing Buildings	3	Encourage residents and businesses to retrofit to all- electric buildings		All	All	Electrification	Awareness
Mobility as a Service Trip Planning app	3	Develop app, as done by Palo Alto, that integrates mobility options available to people in handy interface	Develop app, as done by Palo Alto, that integrates mobility options available to people in handy interface	Other – Transportation	Mobility	Data	Dashboard
Energy Use Public Dashboards in All Primary City Buildings	2	Install energy use dashboards in City Hall and primary municipal buildings (public-facing and high energy use)- (with the SVCE logo on it of course!)	Install energy use dashboards in City Hall and primary municipal buildings (public-facing and high energy use)- (with the SVCE logo on it of course!);	Municipal	Municipal	Data	Dashboard
EV pre-wiring / EVSE in all residential projects	2	-Adopt regional policy that requires EV pre-wiring and EVSE for all new multi-family residential development	-Adopt regional policy that requires EV pre-wiring and EVSE for all new multi-family residential development	-MF	New Construction	EV	Code
Neutralize additional cost of Heat Pumps	2	Encourage switch to heat pumps for new homes and remodels via incentives to offset additional upfront cost.	Encourage switch to heat pumps for new homes and remodels via incentives to offset additional upfront cost.	Residential SF	New Construction	Heat Pump	Rebate

EV benefits for city staff	2	Promote use of EVs by city employees via free charging and/or purchase incentives.	Promote use of EVs by city employees via free charging and/or purchase incentives.	Municipal operations	Municipal	EV	Rebate
Municipal Electric Vehicle Fleet	2	Support development of City light-duty electric vehicle fleet.	Support development of City light-duty electric vehicle fleet.	Other – Transportation	Municipal	EV	Fleet
Municipal Building Decarbonization Retrofit Electrification Study	1	Develop prioritization plan and budget for equipment replacement, building retrofits, and energy audits.	Conduct an building decarbonization/electrification study on municipal buildings to identify appliances and building systems that could be converted to electricity, and develop prioritization plan for equipment replacement / building retrofits;. Establish budget priority for Energy Audit update in next five years	Municipal	Municipal	Electrification	Study
Electric Appliance rebates	1	Incentives for Induction stoves, and other all electric appliances.	Incentives for Induction stoves, and other all electric appliances.		Residential	Appliance	Rebate
Home Energy Score	1	Work with real estate community to promote a Home Energy Score at time of sale to disclose energy use and efficiency when homes are sold.	Work with real estate community to promote a Home Energy Score at time of sale to disclose energy use and efficiency when homes are sold. Could start as voluntary program.	SF, MF	Residential	Data	Dashboard
Install EV Charging Stations	1	Develop Alternative Vehicle Fueling Infrastructure (AVFI) to facilitate on/off-street applications. Increase EV charging stations for municipal fleets.	Develop Alternative Vehicle Fueling Infrastructure (AVFI) standards and plan to define prospective locations and siting criteria (e.g., design guidelines, standard drawings, specifications) to facilitate on-street and off-street applications. Install additional electric vehicle charging stations for municipal fleet use; as share of electric vehicles in fleet increases, ensure adequate access to charging stations for municipal vehicles through additional installations or controlled access	Municipal	Municipal	EV	Charging
Bulk Purchase of EV Fleet Vehicles	1	Explore joint procurement options for Fleet Vehicles with Municipal area jurisdictions.	Explore joint procurement options for Fleet Vehicles with Municipal area jurisdictions.	Municipal	Municipal	EV	Bulk Buy
Alternative Fuel Vehicle Charging / Refueling Infrastructure	1	Develop Alternative Vehicle Fueling Infrastructure (AVFI) to facilitate on/off-street applications for EV and CNG. Increase EV charging stations for municipal fleets.	Develop Alternative Fuel Infrastructure Siting Plan focused on strategic development of EV charging stations and municipal CNG fueling stations based upon demand analyses and feasibility studies; EV station siting plans will identify appropriate locations for Level 1 (slow charge), Level 2 (fast charge), and Level 3 and DC (rapid charge) charging stations in community and will analyze different models for charging station ownership/management (i.e., public vs. private sector)	MF, SMB, C&I	All	EV	Study
EV Charging Station Pre-wiring Requirements	1	Continue to enforce pre-wiring for at-home/business electric vehicle charging ports in new construction per City's existing ordinance and evaluate additional building code and zoning code revisions recommended through Driving to Net Zero Project	Continue to enforce pre-wiring for at-home/business electric vehicle charging ports in new construction per City's existing ordinance and evaluate additional building code and zoning code revisions recommended through Driving to Net Zero Project	SF, MF, SMB, C&I	All	EV	Code
Install Energy Management Systems	1	Identify additional opportunities for office system EMS to automate control and monitoring of office equipment (e.g., computers, monitors, printers), including strategy for advanced power strips and lighting controls in City buildings	Work with energy analytics firm and City IT department to identify additional opportunities for office system EMS to automate control and monitoring of office equipment (e.g., computers, monitors, printers), beyond those already installed, including strategy for advanced power strip purchases and use in City buildings. Work with energy analytics firm to review existing advanced lighting controls/monitoring systems (e.g., automatic dimmers), ensure proper operation, and identify opportunities for additional installations in Municipal City buildings/facilities	Municipal	Municipal	Data	Dashboard

Promote storage for existing PV homes	1	Harmonize grid operations by retrofitting residential PV systems with the grid via targeted education.	Harmonize existing residential PV systems with the grid via targeted education.	Residential SF	Residential	Storage	Awareness
Retrofit at resale ordinance with master PACE	1	Require the updating and retrofitting of existing homes to meet energy sustainability goals	Require the updating and retrofitting of existing homes to meet energy sustainability goals	SF, MF	Residential	GHG	Financing
Energy Efficiency and Conservation – Existing Buildings	1	Encourage residents and businesses to maximize energy efficiency and conservation in buildings	Encourage residents and businesses to maximize energy efficiency and conservation in buildings	All	All	GHG	Awareness
EV charging stations	1	Create partnership with EV charger software companies to site EV chargers and develop robust and reliable datasets of charger locations across SVCE territory	Create partnership with EV charger software companies to site EV chargers and develop robust and reliable datasets of charger locations across SVCE territory	Other – Transportation	Mobility	EV	Charging
Strong Blocks Program for Public Engagement	1	Develop community-building program at the block level to encourage carbon emissions reductions and climate resilience.	Develop community-building program at the block level to encourage carbon emissions reductions and climate resilience.	SF, MF	Residential	GHG	Awareness
Advanced metering and analytics	0	Work with Utility to facilitate aggressive implementation of residential energy analytics program.	Work with Utility to facilitate aggressive implementation of energy analytics program within our city. In Home wireless device that shows real time data of energy usage and cost at time of use, and estimated energy bill.	SF, MF, SMB, C&I	All	Data	Dashboard
C&I aggregation program	0	Develop market aggregation for interested C&I properties and aggregate them to attract ESCOs or ESAs	Develop business energy performance contracting market aggregation program that identifies interested commercial and industrial properties and aggregates them into markets of sufficient scale to attract energy service companies (ESCOs) or energy service agreement (ESA) providers	C&I	C&I	GHG	Financing
Residential energy conservation	0	Partner with Housing Division to design a low- to moderate-income targeted energy and water conservation pilot program	Partner with Housing Division to design a low- to moderate-income targeted energy and water conservation pilot program	SF, MF	Residential	EE	Rebate
Energy Assurance & Resiliency Plan	0	Develop a long-term community-wide energy conservation plan that considers future opportunities to influence building energy efficiency through additional or enhanced building regulations	Develop a long-term community-wide energy conservation plan that considers future opportunities to influence building energy efficiency through additional or enhanced building regulations		New Construction	GHG	Study
Solar PV development	0	Conduct outreach program to educate residents and businesses about solar, including financing, PPA, and other benefits.	Conduct outreach program to educate residents and businesses about potential benefits of solar service providers' power purchase agreements (PPA). Provide general information on City website describing various solar PV financing / installation options (e.g., PPA, community shared solar, outright purchase)	SF, MF, SMB, C&I	All	PV	Awareness
Solar Empowerment Zones	0	Conduct analysis to identify market potential for large scale PV and outreach campaign targeted to potential partners.	Conduct analysis to identify areas within City most suited for large-scale photovoltaic system development (e.g., excellent solar access; large, flat rooftop or parking lot expanses; minimal number of property owners); identify potential barriers (e.g., regulatory, ownership, structural / technical) to photovoltaic system development in these areas; Conduct focused outreach to land owners and tenants regarding photovoltaic system development opportunities; partner with PACE program, PG&E, or Municipal renewable energy funders as appropriate on outreach campaign	C&I ?	All	PV	Study
Solar reach code / building regs	0	Mandatory Solar on Commercial New Construction.	Mandatory Solar on Commercial New Construction.		New Construction	PV	Code

Electrification of New Construction	0	Facilitate development of ordinance or incentives for adoption of technologies to electrify new construction.	Facilitate development of ordinance or incentives for adoption of technologies to electrify new construction.	C&I	New Construction	Electrification	Code
Annual GHG Inventories	0	Increase staff to enable more frequent GHG inventories	Increase staff to enable more frequent GHG inventories	All	Municipal	GHG	Study
Alternative Fuel Vehicles	0	Encourage adoption of alternative fuel vehicles	Encourage adoption of alternative fuel vehicles	All	Mobility	EV	Awareness
Community Outreach	0	Significantly increase community outreach and involvement overall	Significantly increase community outreach and involvement overall	All	All	GHG	Awareness
Green Building Policies – New Construction	0	Adopt policies related to (1) solar PV on non-residential properties, and (2) lower-carbon buildings overall	Adopt policies related to (1) solar PV on non-residential properties, and (2) lower-carbon buildings overall	All	New Construction	Electrification	Code
Transportation Options	0	Make it as easy as possible for people to get around without a single occupancy passenger vehicle	Make it as easy as possible for people to get around without a single occupancy passenger vehicle	City-wide	Mobility	Data	Dashboard
Targeted Energy Consulting	0	Reduce GHGs from [large energy users] via dedicated outreach, rates, etc.	Reduce GHGs from [large energy users] via dedicated outreach, rates, etc.	Commercial	All	GHG	Coaching
Energy self-audit	0	Develop an energy self-audit checklist to distribute to prospective property owners and provide technical assistance	Develop an energy self-audit checklist and work with community partners to distribute to prospective property owners and other interested parties and to provide technical assistance	SF; MF; SMB	Residential	Data	Dashboard
Education program	0	Develop energy efficiency outreach and education programs for renter-occupied households	Develop energy efficiency outreach and education programs for renter-occupied households	SF; MF	MUD	EE	Awareness
Regional partnership / PPA for energy storage	0	Participate in regional partnership or PPA to provide reduced-cost energy storage systems to residents and businesses	Participate in regional partnership or PPA to provide reduced-cost energy storage systems to residents and businesses	SF; MF; C&I SMB	All	Storage	Financing
Energy conservation and renewable energy awareness materials	0	Provide outreach and educational materials distributed at events promoting energy conservation and renewable energy.	Provide outreach and educational materials	SF, MF	All		Awareness
EVSE in nonresidential projects	0	- Adopt regional policy that requires EVSE in all commercial development	- Adopt regional policy that requires EVSE in all commercial development	- SMB, C&I	New Construction	EV	Code
All-electric building Code	0	Adopt policy that requires all-electric building standards for all new construction with exemptions for parcels with limited solar access or other physical constraints	Adopt policy that requires all-electric building standards for all new construction with exemptions for parcels with limited solar access or other physical constraints	All	New Construction	Electrification	Code
Expand & Electrify City Bike Fleet, Training and Promotion	0	Continue to pursue implementation of Electric municipal bike fleet in instances where vehicle trips can safely and easily be replaced with trips via bicycle	Continue to pursue implementation of Electric municipal bike fleet in instances where vehicle trips can safely and easily be replaced with trips via bicycle;	Municipal	Mobility	eBike	Awareness
Solar Thermal or Heat Pump Installations on City Facilities	0	Annually review hot water usage at City buildings and facilities to identify additional cost-effective opportunities for solar thermal installations or heat pumps;	Annually review hot water usage at City buildings and facilities to identify additional cost-effective opportunities for solar thermal installations or heat pumps;	Municipal	Municipal	Heat Pump	Rebate
Solar or heat pump hot water development	0	Identify businesses and multi-family residential building owners with high hot water use, and provide targeted outreach for solar Thermal or Heat Pumps.	Work with PG&E to identify businesses and multi-family residential building owners with high hot water use, and provide targeted outreach with promotional materials for participation in CSI-Thermal Program or Heat Pumps.	MF, SMB, C&I	All	Heat Pump	Study