



DATE: April 9, 2018

AGENDA ITEM # 5

**TO:** Environmental Commission

**FROM:** J. Logan, Staff Liaison

**SUBJECT:** Receive report on Silicon Valley Clean Energy Authority

**RECOMMENDATION:**

Receive report on Silicon Valley Clean Energy Authority

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**BACKGROUND**

**State and Local Mandates**

State Assembly Bill 32, the Global Warming Solutions Act, was signed into law in 2006 and directed public agencies in California to support the state-wide target of reducing greenhouse gas (GHG) emissions to 1990 levels by 2020. In addition, California adopted ambitious energy and environmental policies to reduce state-wide greenhouse gas (GHG) emissions to 40% of 1990 levels by 2030 and, to provide 33% of electricity demands in 2020 from renewable resources utilizing clean energy technologies and environmental benefits.

To address the reduction of GHG emissions at the local level, the City Council adopted a Los Altos Climate Action Plan (CAP) on December 10, 2013. The CAP is a comprehensive strategy with goals and measurements to reduce GHG emissions within five focus areas: Transportation, Energy, Resource Conservation, Green Community and Municipal Operations. The CAP was adopted with a target of reducing the community's GHG emissions by at least 15% by 2020 and with an overarching plan for how the City can achieve up to a stretch-goal of 17% reduction in the GHG emissions by 2020.

**Community Choice Energy**

One method that has the potential to reduce the GHG emission associated with energy consumption is the establishment of Community Choice Energy (CCE), a system that allows cities, counties and Joint Power Authorities (JPA) to aggregate the purchasing power of an identified customer base within a defined area to secure alternative energy supply contracts with the goal of increasing the percentage of energy from renewable sources. The purchase of alternative energy supplies includes renewable sources such as hydroelectric, wind and geothermal as opposed to non-renewable fossil fuels such as coal, oil and natural gas. The consequences inherent in the use of fossil fuels to generate energy are particularly high carbon dioxide equivalents or GHG emissions which contribute to global warming. The ability to form CCEs has been adopted into law in California and a few other states.

**Council Actions**

City Council convened a study session on Community Choice Aggregation (Energy) on March 10, 2015. The full staff report and video of the Council CCE study session is posted on the City Website at [http://los-altos.granicus.com/GeneratedAgendaViewer.php?view\\_id=4&clip\\_id=911](http://los-altos.granicus.com/GeneratedAgendaViewer.php?view_id=4&clip_id=911)

On April 3, 2015, the City of Sunnyvale sent invitations to Santa Clara County cities to participate in the South Bay Technical Feasibility Study currently composed of and partnered by the Cities of Sunnyvale, Mountain View, Cupertino and Unincorporated Santa Clara County. This partnership is investigating the feasibility of a Community Choice Energy program for the South Bay.

On January 26, 2016, the Environmental Commission presented its Final CCE Report to Council. Council expressed appreciation to the Commission and directed staff to move forward with the necessary steps for membership in Silicon Valley Clean Energy Authority (SVCEA) and the establishment of a CCA program for Los Altos at its February 9, 2016 meeting. At its February 9 and February 23, 2016 meetings, Council finalized the steps for membership in SVCEA and establishment of a CCA for the City. Mayor Bruins was appointed as the SVCEA regular member of the Board of Directors and Councilmember Mordo as the alternate member.

SVCEA held its initial Board of Directors' meeting at the Santa Clara Board of Supervisors chambers on April 13, 2016. The agenda packet and video of the monthly proceedings are available at [http://www.svcleanenergy.org/app\\_pages/view/297](http://www.svcleanenergy.org/app_pages/view/297).

### **Implementation of SVCEA in the Los Altos Community**

The Environmental Commission will review SVCEA monthly agendas, materials and meeting summary notes for purposes of discussion at its Environmental Commission meetings. The results of Commission discussions and recommendations will be provided to Director Bruins. This is in accordance with the Work Plan project to provide resources to Director Bruins on policy and programs guidance. In the event the subcommittee needs to convene for items pertaining to SVCEA, the meeting will be agendaized to the public and will comply with requirements of the Brown Act.

At its November 2016 meeting, Commissioners discussed the GreenPrime opt-up electricity choice for municipal operations and the default GreenStart mix. Estimated cost information for both energy choices were discussed. By consensus, the Commission recommended Council to approve the opt-up GreenPrime choice for municipal operations.

At its January 10, 2017 meeting, Council approved to opt up to the purchase of GreenPrime electricity service for municipal operations. In addition, Council approved a Subordination Agreement required by SVCEA for purposes of banking and finance procedures.

Delivery of GreenPrime electricity service to City municipal operations commenced in April. Residential SVEA service also commenced in April followed by a second phase-in of remaining customers in July 2017. SVCE staff held an informational community meeting on June 21, 2017 at Hillview Community Center, and hosted tables at the Farmers' Market and at the Art & Wine event.

### **SVCEA Structure**

Throughout the summer and fall 2017, meetings of the SVCEA Sustainability Managers' Roundtable, SVCEA staff and managers presented 14 programs focused on reducing Greenhouse Gas Emissions. The Board of Directors meeting included a closed session to discuss the appointment of a new Chief Executive Officer.

In addition to conducting a search for a new Chief Executive Officer, the Board directed staff to compose a proposal focused on the creation of a consumer advisory board to source additional community feedback. The advisory board will consist of representatives from all 12 of the communities within the SVCE service area and will include commercial and residential consumers.

At its December 13, 2017 meeting, the SVCEA Board of Directors confirmed appointment of Mr. Girish Balachandran as the new CEO of the agency. Balachandran will begin employment on February 19, 2018. The Board also confirmed the appointment of 15 representatives from the SVCEA territory to serve on the Customer Program Advisory Group (CPAG). Environmental Commissioner Don Weiden was selected to serve as the City of Los Altos representative to the CPAG. City staff will continue to attend the SVCEA Sustainability Managers' Roundtable to represent the City's interest and will report monthly at the Environmental Commission meetings. Staff will also continue to update and get input from SVCEA Director Bruins.

## **DISCUSSION**

At the September 28, 2017 SVCEA Sustainability Managers Roundtable, SVCEA staff stating it was combining the PIOs and Sustainability Managers into a single group, now termed the Member Agency Working Group (MAWG). SVCEA staff will continue to work with MAWG to source input and gather community information through various workshops and focus groups and will provide a formal accounting of MAWG meetings to the SVCEA Board of Directors.

At the October 26, 2017 meeting, SVCEA updated the MAWG on its recent activity, including the anticipated addition of the City of Milpitas to the SVCE territory. SVCE expects Milpitas to join the service area May 1, 2018. Milpitas will add 25,000 accounts and about 18% to the energy load. Gilee Corral from the City of Cupertino Office of Sustainability gave a presentation about a Community-Based Social Marketing research project they are conducting that explores how to address behaviors related to electrification. Finally, SVCEA staff provided an example of how they plan to apply established program criteria and metrics to new programs. The November 8, 2018 SVCEA Board of Directors meeting has been rescheduled to November 29, 2017.

At the November 30, 2017 MAWG meeting, SVCEA staff reported that the City of Milpitas adopted a resolution effectively electing to join the SVCE territory in May 2018. Applications for the Customer Program Advisory Group closed November 17, 2017. SVCE received and is reviewing 32 applications for the 15-member group which will meet monthly. Elaine Marshall, City of Sunnyvale, presented on Sunnyvale Climate Action Plan (CAP) 2.0, an update to the 2014 CAP. SVCEA staff also updated staff on analysis of program measurement criteria for voluntary incentives and the potential establishment of a model ordinance for mandatory measures that exceed California Title 24 minimum standards (Reach Codes). SVCEA staff will invite a Reach Code consultant to the next SVCEA MAWG meeting to further discuss the process of establishing a model ordinance and possible next steps. There was no scheduled MAWG meeting in December; the group will reconvene in January.

### **SVCEA Estimated/Anticipated SVCE Emission Factor**

After the SVCEA Board of Directors special meeting on 10/24, it was determined that there is a small amount of non-biogenic CO<sub>2</sub>e associated with the renewable biomass-based energy sources in the

forecasted SVCE supply portfolio. Based upon preliminary calculations, SVCEA will maintain its carbon free message, but have removed the 100%. Also, SVCEA is currently evaluating how it might join and/or utilize a voluntary carbon reporting methodology supported by The Climate Registry (TCR) for establishing 2017 emissions factor.

SVCEA Board of Directors established a Customer Program Advisory Group. Vice Chair Weiden was appointed as a member to the group in December 2017. First meeting of CPAG was January 17, 2018.

**2018 Member Agency Working Group (MAWG) meeting recaps** - At the January 25, 2018 MAWG meeting, SVCE presented its new “Understanding your Bill” video as well as a “Bike to the Future” competition, which invites high school students to design and build their own e-bike and compete with other teams in the SVCE service area. SVCE staff is still following the legislative decisions at the State level, especially pending Resolution E-4907, which may delay the enrollment of the City of Milpitas. SVCE provided a recap of the first CPAG meeting, in which the group elected its Chair and Vice Chair. The group will present its program recommendations at the SVCE Board of Directors meeting June 13, 2018. To engage commercial customers, SVCE is hosting Watts for Lunch, a tri-annual roundtable focused on beneficial electrification and grid decarbonization. SVCE is working with DNV-GL to construct inventories for 2015 and 2017 and provided the group a review of the methodology and data sources, Attachment A. Susan Gilbert-Miller presented an update on Santa Clara County’s “Driving to Net Zero” initiative, which will include two workshops reviewing permitting practices and land use considerations for electric vehicle supply equipment (EVSE) deployment. City staff will attend the workshops. Consultant Misti Brucerri and Lindsey Tillisch of PG&E presented on local energy ordinances that encourage or require electrification in new developments.

At the February 22, 2018 MAWG meeting, new SVCE CEO Girish Balachandran introduced himself and shared his background and expertise with the group. The MAWG discussed a potential Climate Protection Grant Program opportunity through BAAQMD and the possibility of SVCE cities participation in the development of the grant proposal, to be submitted by SVCE. Los Altos representatives will attend the grant proposal meetings to provide input. Following adoption of Resolution E-4907, SVCE staff informed the group that Milpitas will officially be joining SVCE on June 1, 2018, as the application was grandfathered in under the new regulations. PG&E released its new rates for 2018, which were greater than expected; rates will increase effective April 1, 2018. SVCE customer rates will remain stagnant and SVCE BOD will consider how to apply its savings at its March 14, 2018 meeting: by passing savings on to customers, increasing contributions to SVCE reserves, or both. Los Altos has one high school team participating in the Bike to the Future competition. SVCE seeks input from cities to support social equity programs, specifically the demographics or existing city interests, and information on how SVCE can work with jurisdictions to advance social equity. GHG metrics and inventory is ongoing with a 2015 benchmark metrics analysis delivery by the end of March 2018.

At the March 22, 2018 MAWG meeting, SVCE staff updated the group on the approval of the new electric generation rates, which are more competitive to PG&E than the previous year and will take effect on April 1, 2018. SVCE estimates that the average residential customer with a monthly electric

bill of \$100 per month will save about \$40 per year with the new rates. SVCE staff also reviewed the draft BAAQMD grant proposal for a subsidized heat pump water heater (HPWH) program. According to SVCE, as the largest consumers of residential natural gas, natural gas water heaters must be replaced with HPWH to move toward a carbon-free society. The program proposes to use grant funding from BAAQMD to pay for HPWHs, while matching funds from SVCE will pay for the subsequent panel upgrade typically needed to power the HPWH. The goal is to incentivize adoption of the HPWH technology by targeting consumers who are planning renovations.

Attachments:

- A. SVCEA Board of Directors April 11, 2018 meeting agenda and selected materials (provided under separate cover)

# ATTACHMENT A



333 W El Camino Real, Ste. 290 | Sunnyvale, CA 94087 | [SVCleanEnergy.org](http://SVCleanEnergy.org) | 1-844-474-SVCE

April 6, 2018

Contact Information:

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Indicate Program Category:

Reduce GHG from Existing Buildings.

Project Summary:

Silicon Valley Clean Energy (SVCE) is proposing a holistic, large-scale program for strategic fuel switching, focused on electric heat pump water heaters (HPWH) in combination with electric service panel upgrades. This program will be conducted in partnership with our 13 member agencies - Campbell, Cupertino, Gilroy, Los Altos, Los Atos Hills, Los Gatos, Milpitas, Monte Sereno, Morgan Hill, Mountain View, Saratoga, Sunnyvale, and unincorporated Santa Clara County. SVCE provides carbon-free electricity to more than 270,000 commercial and residential customers and aims to expand use of clean electricity to decarbonize transportation and the built environment in our service territory.

Electric heat pump water heaters are standard in many countries, with efficiency levels on par with natural gas. Yet in the US, HPWHs are not well-established. Locally, gas-fired water heaters remain standard, with over 200,000 installed in our service area alone. Natural gas used for water heating accounts for approximately 40% of GHG emissions from our residential structures. To begin a large-scale transition from gas to carbon-free electricity for water heating, several critical barriers must be addressed:

- consumer awareness is low
- most local buildings are plumbed for gas, and not wired for HPWHs
- service trucks and warehouses typically inventory gas water heaters
- water heaters often fail without warning and need swift replacement - leaving little time to consider a HPWH or to arrange the necessary electrical work
- few, if any, outbound sales channels promote HPWH or fuel switching
- servicing utilities are often restricted from promoting fuel switching from gas
- plumbing contractors lack HPWH experience, and electrical skills are required
- electrical systems are often undersized and costly to upgrade – presenting a financial barrier to heat pump water and space heating, EV charging, etc

Without real or perceived alternatives in the marketplace, the installed base of fossil-fueled water heaters is continuing to expand.

SVCE's proposed program will create and promote clear, customer-centric messages about the health, environmental and financial benefits of electrification and HPWHs. Prospects will be



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engaged at opportunistic decision points, such as home remodels, solar installs, group buys, housing authority upgrades and new multifamily construction. Program funds will help offset the high initial cost of fuel-switching – including equipment costs and panel upgrades, customer education and contractor channel engagement, and training for building department personnel:

- target of 300 HPWH units and service panel upgrades – existing buildings
- target of 300 HPHW in new construction (SVCE funding only)
- partner with local organizations to establish higher volume opportunities
- host community meetings to educate homeowners and renters
- support training for local permitting and inspection staff
- develop proactive sales channels (solar/HVAC), fitted with complimentary HPWHs at their homes, and a knowledge sharing platform (e.g. app/mobile friendly)
- collaborate with local academic institutions on HPHW impact and market trajectory

By addressing current market barriers in a comprehensive way, SVCE will build a local market for HPWHs and an important new path for residential carbon reduction. In addition, this path provides an electric service ready to accept other forms of home electrification in the future, including EV charging and electric space heating.

Project Timeline:

July 2018	Execute award agreements
August 2018	Align program partners (solar/HVAC), finalize program elements
November 2018	Soft launch, training for permit staff
December 2018	Amend Program elements (as needed), community meetings
January 2019	Official launch
June 2020	Program Evaluation, Measurement & Verification

Two-year Budget Summary:

\$1,000,000 – BAAQMD Request (existing residences)

\$1,500,000 – Potential SVCE Matching Funds (existing residences, new construction)

\$2,500,000 - Total Funds Available

	Per	Qty	
Purchase 200 amp box	\$250	300	\$75,000
Purchase 50 and 80 gal electric HPHW	\$1,300	600	\$780,000
Installation – electrical and plumbing, permit	\$3,350	300	\$1,005,000
Marketing collateral, guide, community workshops			\$60,000
EM&V, Remediation			\$60,000
Staff support – implementation, outreach			\$520,000
Total			\$2,500,000

We look forward to BAAQMD’s support for our mutual goal of decarbonization.

Girish Balachandran, CEO