



SVCE Update Presentation Sunnyvale Sustainability Commission

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January 16, 2018



Overview

- Motivation and Goals
- SVCE Service Launch
- The Path Forward
- Q&A

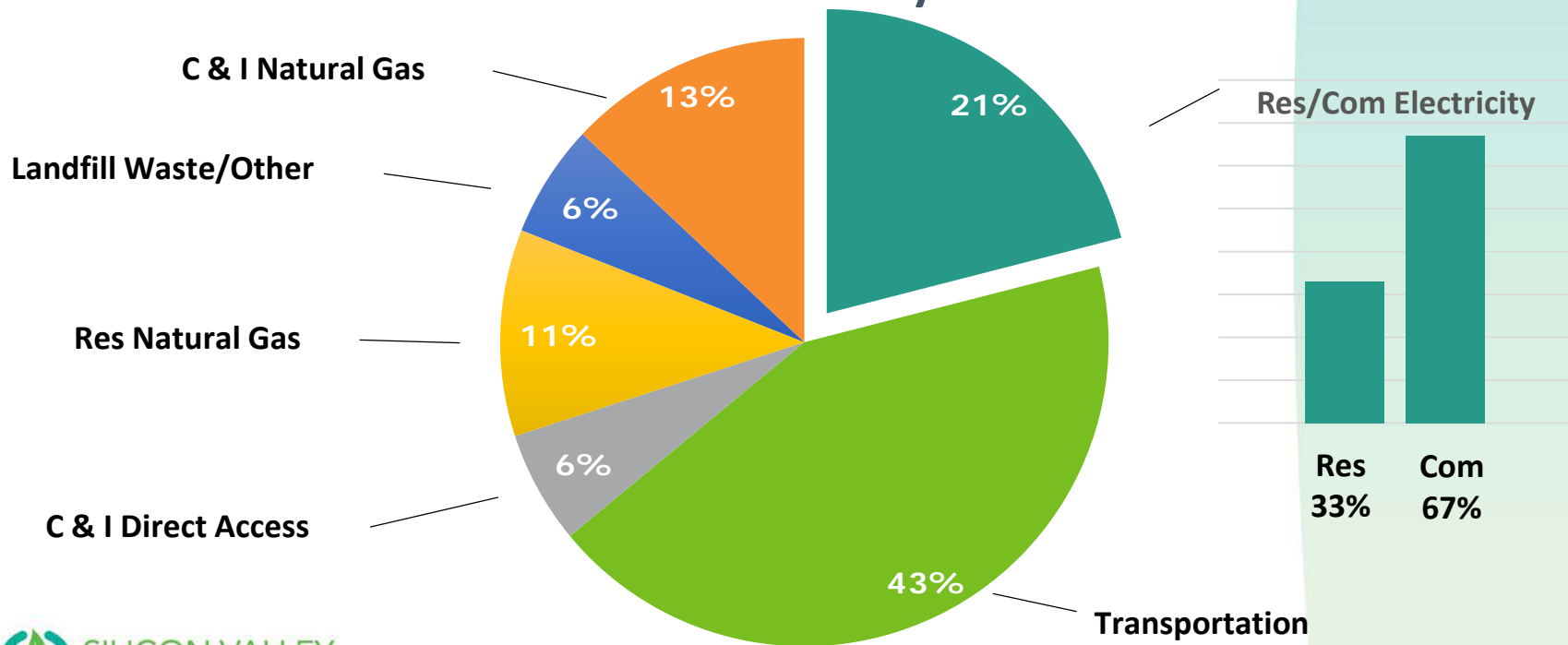


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Motivation and Goals

Local CAP Development . . .

2015 Carbon Emissions by Source*



Community Choice Energy - Origins



- Operating in six states; AB 117 Authorizes in California (Migden, 2002)
- Participating communities join by ordinance, form JPA
- Marin Clean Energy launches in 2010, Sonoma Clean Power in 2014

Will CCE work in Silicon Valley?

- New option for electricity customers to access clean, competitively-priced renewable electricity – but how clean, and at what cost?
- Help local communities
 - take **a big and immediate step** to reduce carbon emissions
 - support **clean energy investment, innovation and transformation**



SVCE Formation Timeline

Planning & Feasibility	Technical Study	Agency Launch	Service Launch
2014	2015	2016	2017



Rob Rennie, Chair
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Daniel Harney, Vice Chair
City of Gilroy

Liz Gibbons
City of Campbell

Rod Sinks
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Howard Miller
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City of Sunnyvale

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SVCE Mission

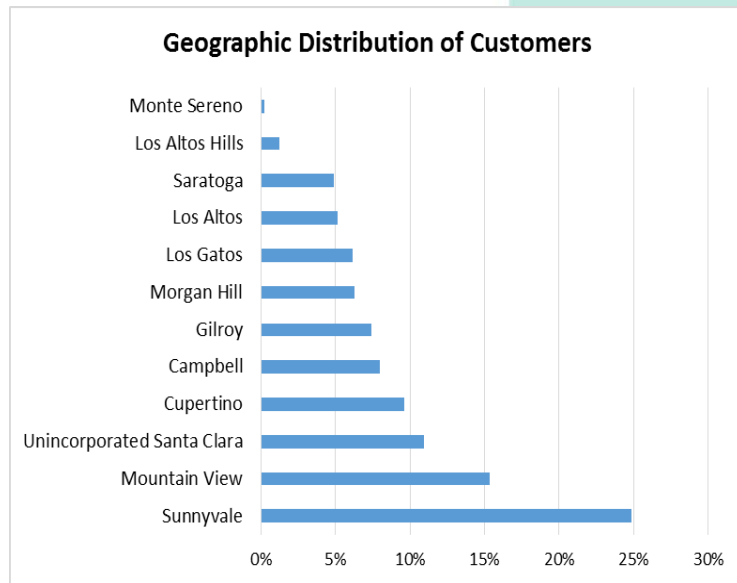
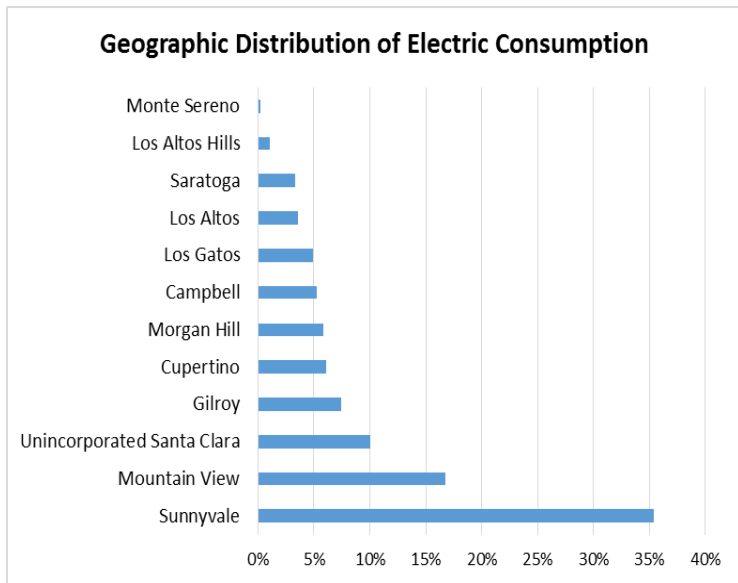


- Provide the SVCE community with carbon-free, affordable and reliable electricity, and innovative programs to reduce dependence on fossil fuels

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SVCE Service Launch

SVCE Market Composition



- 64% of SVCE's electric load is commercial and industrial customers
- Total load of 3,600GWh across 248,000 customer accounts

Electricity Choices



GreenStart

Default option, 1% below comparable PG&E generation rates

- Carbon Free
 - 50% renewable wind + solar
 - 50% non-polluting hydropower





GreenPrime

Voluntary option, \$0.008/kilowatt premium to GreenStart

- 100% renewable wind + solar
 - \$3-\$4/month for typical resident
 - Green-e certified
 - Strong municipal subscription

Power Sources




- Supply contracts from sources connected on the Western Grid
- Hydro, Type 1 and 2 renewables
- Examples:
 - Hydropower from Washington
 - Solar from Central California
 - Wind from Oregon
- Annual 'Power Content Label' and documents percentage of each supply used the previous year

Electric Power Generation Mix*		PG&E Solar Choice		
			GreenStart	GreenPrime
Specific Purchases	Percent of Total Retail Sales (kWh)			
Renewable	33%	100%	50%	100%
• Biomass & Biowaste	4%	0%	15%	0%
• Geothermal	5%	0%	0%	0%
• Eligible Hydroelectric	3%	0%	0%	0%
• Solar Electric	13%	100%	5%	20%
• Wind	8%	0%	30%	80%
Coal	0%	0%	0%	0%
Large Hydroelectric	12%	0%	50%	0%
Natural Gas	17%	0%	0%	0%
Nuclear	24%	0%	0%	0%
Other	0%	0%	0%	0%
Unspecified Sources of Power**	13%	0%	0%	0%
TOTAL	100%	100%	100%	100%



Commercial Rate Comparison

2017 Commercial Electric Rate Comparison, E-19S*

				
			GreenStart	GreenPrime
Generation Rate (\$/kWh)	\$0.09439	\$0.09248	\$0.07391	\$0.08191
PG&E Delivery Rate (\$/kWh)	\$0.07846	\$0.07846	\$0.07846	\$0.07846
PG&E PCIA/FF (\$/kWh)	N/A	\$0.01889	\$0.01953	\$0.01953
Total Electricity Cost (\$/kWh)	\$0.17285	\$0.18983	\$0.17190	\$0.17990
Average Monthly Bill (\$)	\$45,495.24	\$49,965.72	\$45,246.17	\$47,351.87

*This compares electricity costs for an average large commercial customer in the SVCE/PG&E service area with an average monthly demand of 619 kW and an average monthly usage of 263,213 kilowatt-hours (kWh). This is based on a representative 12-month billing history for all customers on E-19S rate schedules for PG&E's and SVCE's published rates as of April 1, 2017.

2017 Enrollments

Phase 1 – April >

- Small/Medium Commercial, Municipal
- Residential (20%)
- 'Early Enrollment' Large Commercial/Industrial
- NEM - Feb-April True-ups

Phase 2 – July >

- Residential (80%)
- Large Commercial/Industrial
- Agricultural
- NEM – May/July True-ups

Phase 3 – October >

- NEM – August/October True-ups

Phase 4 – Jan (2018) >

- NEM – November/January (2018) True-Ups

Statistics

2017 IN REVIEW

by the numbers

This was the year of carbon-free electricity and choice for a majority of Santa Clara County communities. The launch of Silicon Valley Clean Energy in April was a significant milestone. As enrollments completed this year, our region eliminated approximately a quarter of carbon emissions from electricity use. Here's a recap of this tremendous achievement, by the numbers:



TOTAL CUSTOMERS

Residential and commercial electricity
accounts

242,184



PARTICIPATION RATE

Eligible customers enrolled

97%



LOAD SERVED

Amount of power delivered to
customers*

2,100 GWh



POUNDS OF AVOIDED CO2

Amount of carbon emissions
eliminated from power supply

1.2 billion



ON BILL SAVINGS

Amount of money saved by all
SVCE customers*

\$2 Million



OUTREACH EVENTS

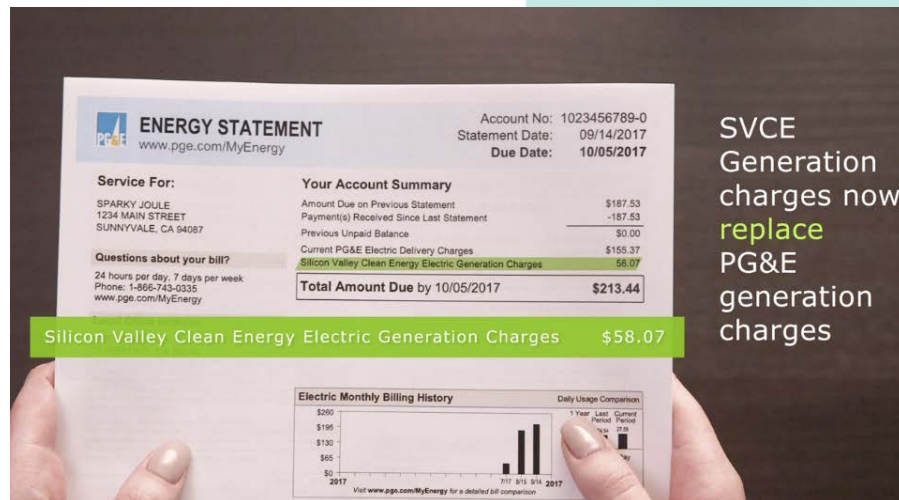
Presentations, meetings and tabling
in the community

86



2017 Financial Performance

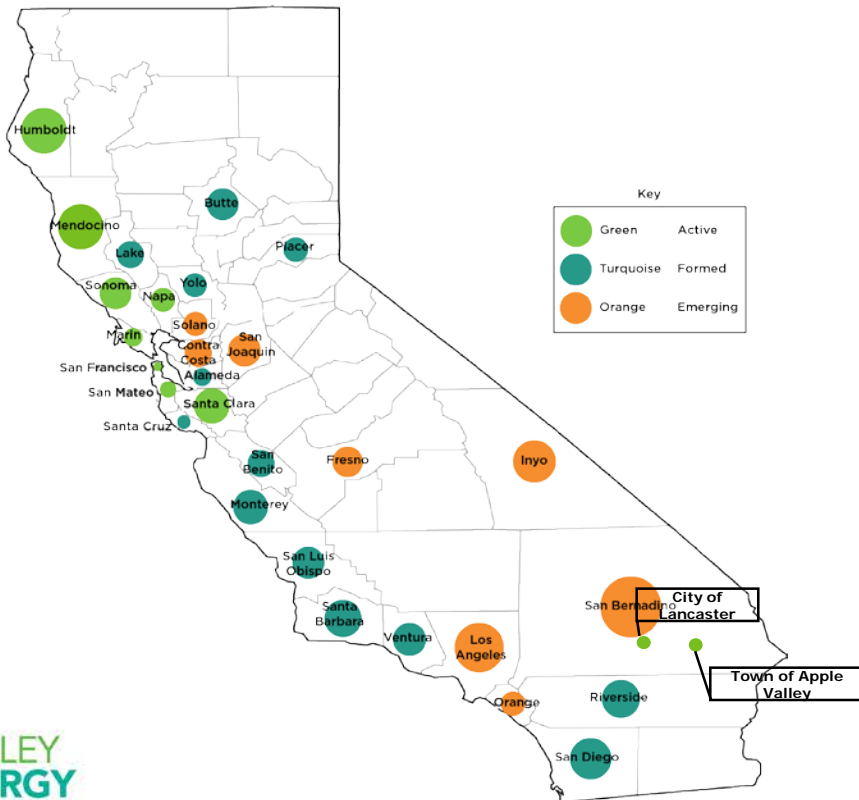
- ~\$140M in revenue
- Muni start-up funding being paid back
- Strong operating reserve contributions
- 2018 program funding of \$5M
- Updates to 2018 SVCE rates likely April 1, 2018



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The Path Forward

Expansion of Community Choice



Ongoing Regulatory Activity

Procurement

- Integrated Resource Planning (IRP), Resource Adequacy (RA), Renewable Portfolio Standard (RPS)

Non-Bypassable Charges (NBCs)

- Power Charge Indifference Adjustment (PCIA), Tree Mortality NBC, Diablo Canyon closure

CCA Formation, Expansion, and Governance

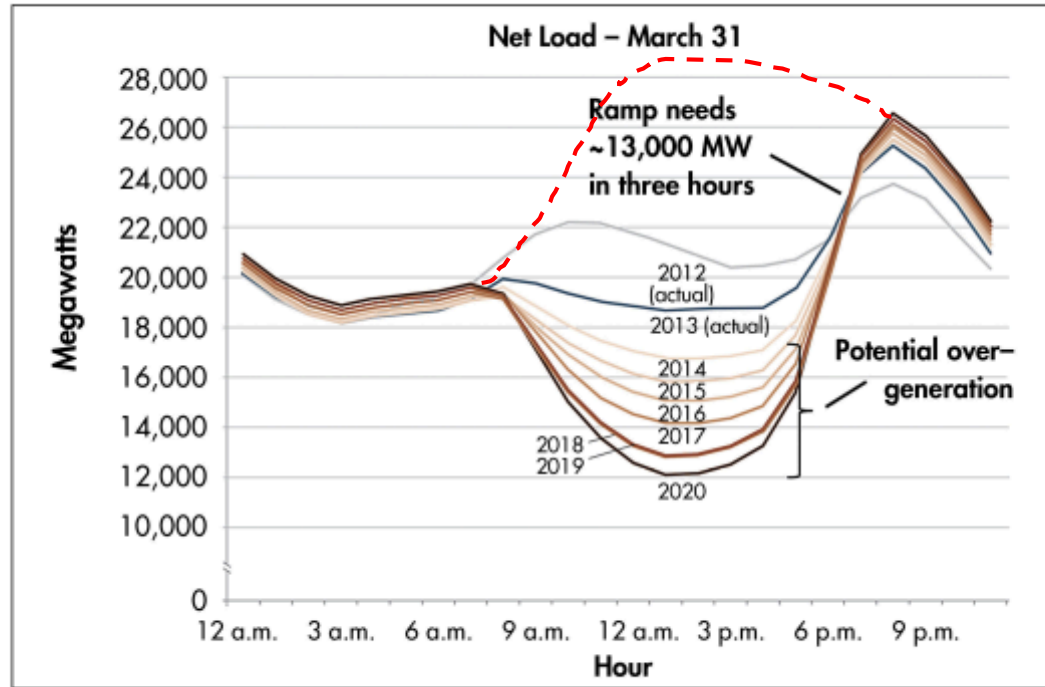
- Draft Resolution E-4907, CCA Bond Methodology, AB 1110

Programs

- Transportation Electrification, Storage, Energy Efficiency Business Plans, Low Carbon Fuel Standard

'Duck Curve' - Challenge and Opportunity

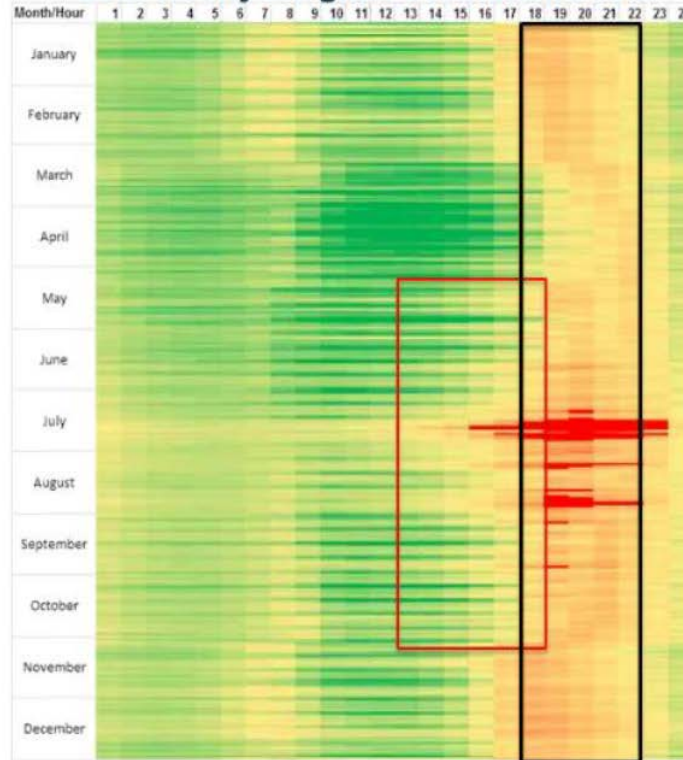
Figure 1: Net load on the CAISO system



Source: CAISO

Impact on Wholesale Prices

2017 Hourly Marginal Generation Costs



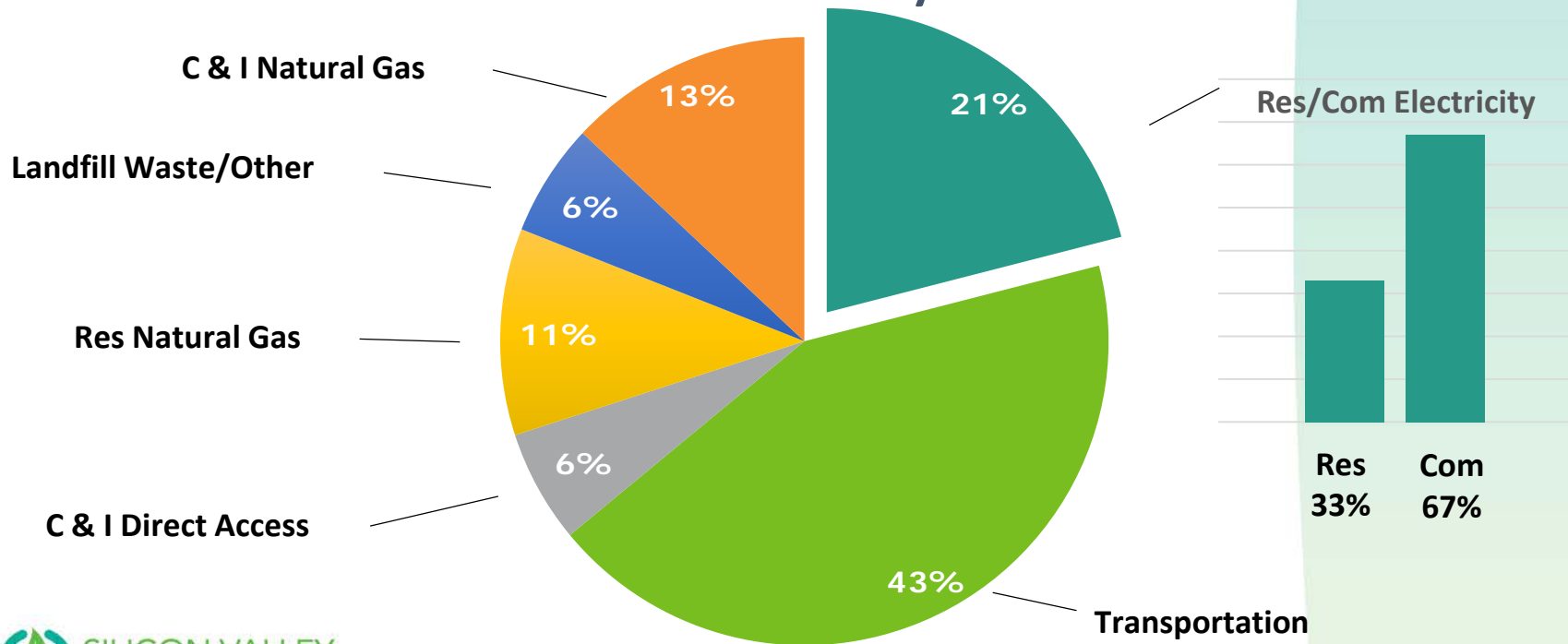
-  Current Summer Non-Residential Peak
-  Proposed Year Round Non-Residential Peak*

*Under consideration at CPUC

Detailed description of PG&E's GRC Marginal Energy Cost Model is in Chapter 2 testimony in Exhibit PG&E-9, Vol 1, available by searching for GRC Phase II Testimony from PG&E filed on 12/02/16 at <https://www.siliconvalleycleanenergy.com/regulation/search>

~80% of Emissions Remain . . .

2015 Carbon Emissions by Source*

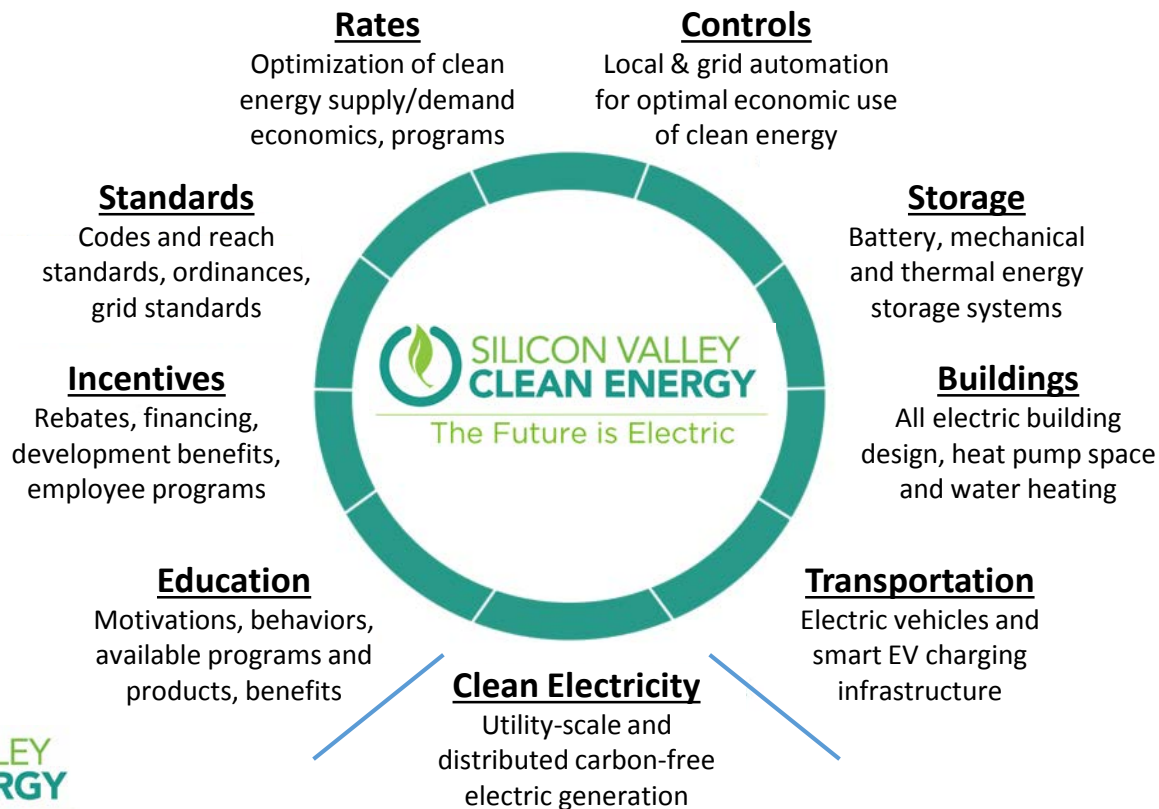




The Future is Electric

Carbon-Free Energy
Plentiful, Affordable and Healthy

From Fossil Fuels to Clean Energy ...



Evolving the SVCE Energy Supply

Developer	Project Name	Source	Generating Capacity (MW)	Storage technology	Storage Capacity (MW)	Storage Duration (Hours)	Location	Term (years)
Recurrent Energy Development Holdings, LLC	RE Slate	Solar PV	150	Lithium Ion Battery	45	4	Kings Cnty, CA	15
EDF Renewable Energy	BAR13 Solar	Solar PV	128	Lithium Ion Battery	40	4	Kern Cnty, CA	20
Pattern Development	Corona	Wind	200	n/a	n/a	n/a	New Mexico	15
NRG Renew, LLC	District 5 Wind*	Wind	43	n/a	n/a	n/a	Alameda Cnty, CA	15

*See Note under Timeline as NRG chose NOT to submit required documents by 11/27/17 deadline.

- Long-term procurements focused on Category 1 renewables aligned with SVCE load curve
- Solar + storage, wind at competitive rates

Key Activities for 2018 . . .

- Program Development
 - Citizens Program Advisory Group (CPAG)
 - Commercial/Industrial Interest Group
- Service Launch for Milpitas
- Renewables + Storage Supply Contracts
- Regulatory/Legislative
- Regional GHG Metrics

Learn more:



SVCleanEnergy.org



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