



## 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

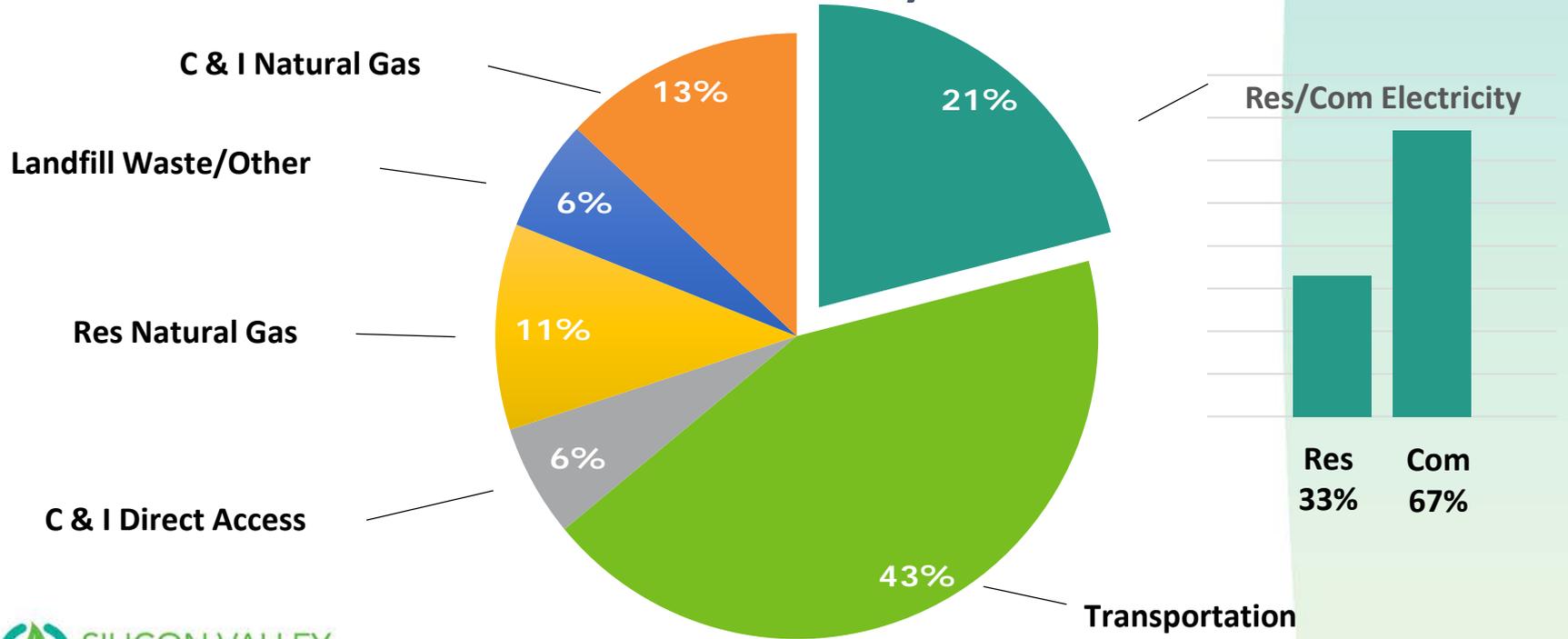


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# Motivation and Goals

# 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



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Daniel Harney, Vice Chair  
City of Gilroy

Liz Gibbons  
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Dave Cortese  
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# SVCE Mission

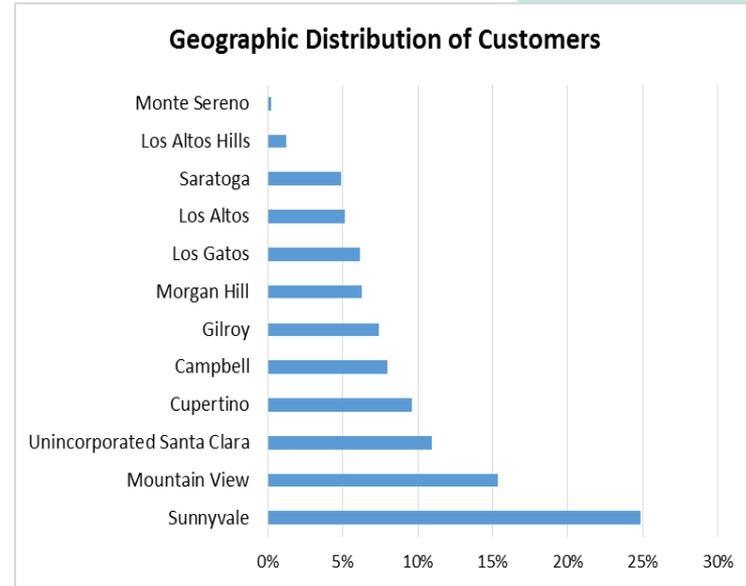
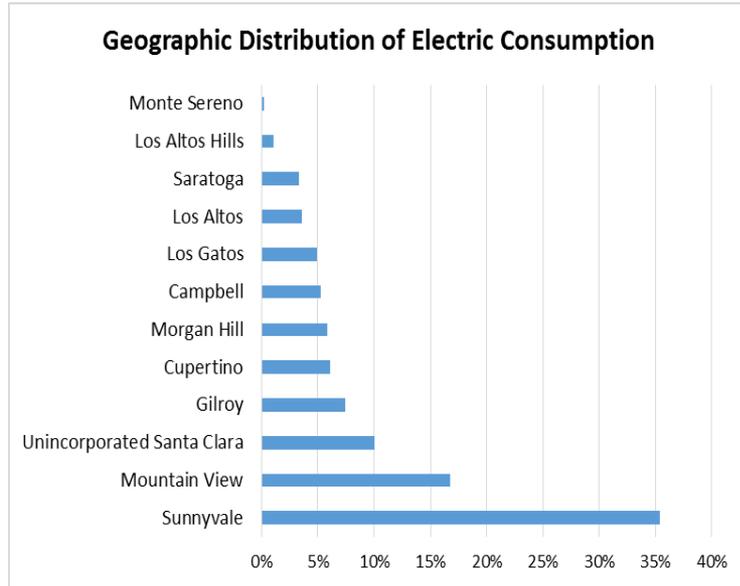


- Provide the SVCE community with carbon-free, affordable and reliable electricity, and innovative programs to reduce dependence on fossil fuels

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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		SVCE	
	PG&E	PG&E Solar Choice	GreenStart	GreenPrime
Specific Purchases	Percent of Total Retail Sales (kWh)			
<b>Renewable</b>	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%
<b>Coal</b>	0%	0%	0%	0%
<b>Large Hydroelectric</b>	12%	0%	50%	0%
<b>Natural Gas</b>	17%	0%	0%	0%
<b>Nuclear</b>	24%	0%	0%	0%
<b>Other</b>	0%	0%	0%	0%
<b>Unspecified Sources of Power**</b>	13%	0%	0%	0%
<b>TOTAL</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



# Commercial Rate Comparison

## 2017 Commercial Electric Rate Comparison, E-19S\*

		PG&E Solar Choice		
			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

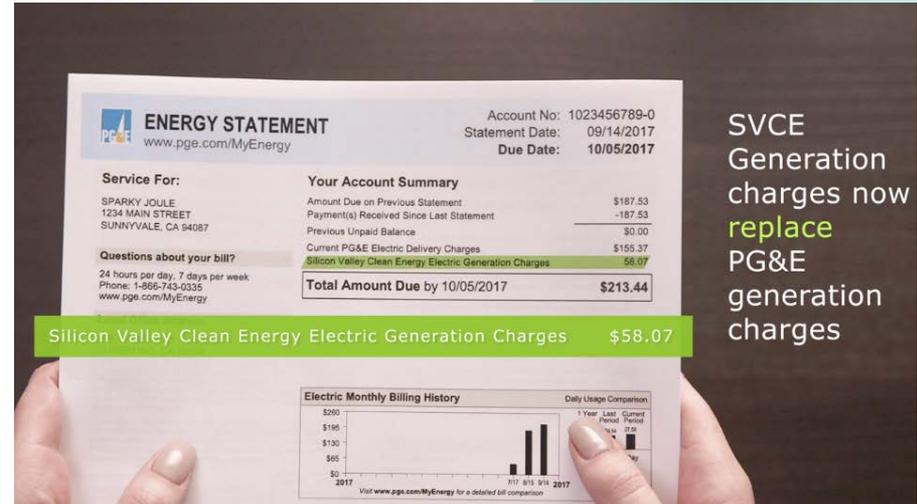
Presentations, meetings and tabling in the community

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# 2017 Financial Performance

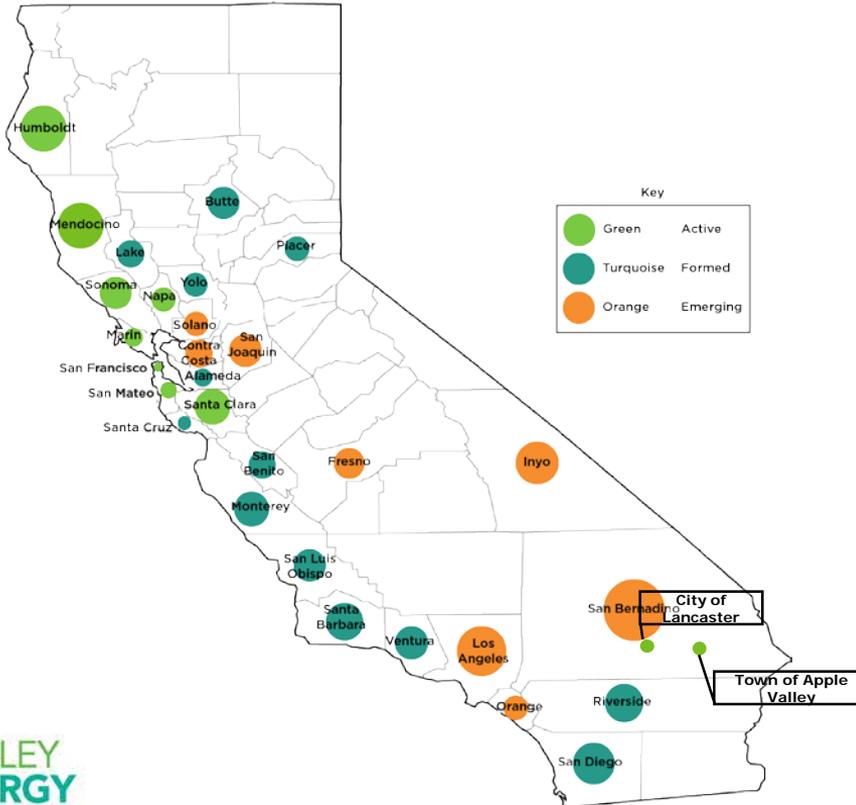
- ~\$140M in revenue
- Muni start-up funding being paid back
- Strong operating reserve contributions
- 2018 program funding of \$5M
- Updates to 2018 SVCE rates likely April 1, 2018



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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

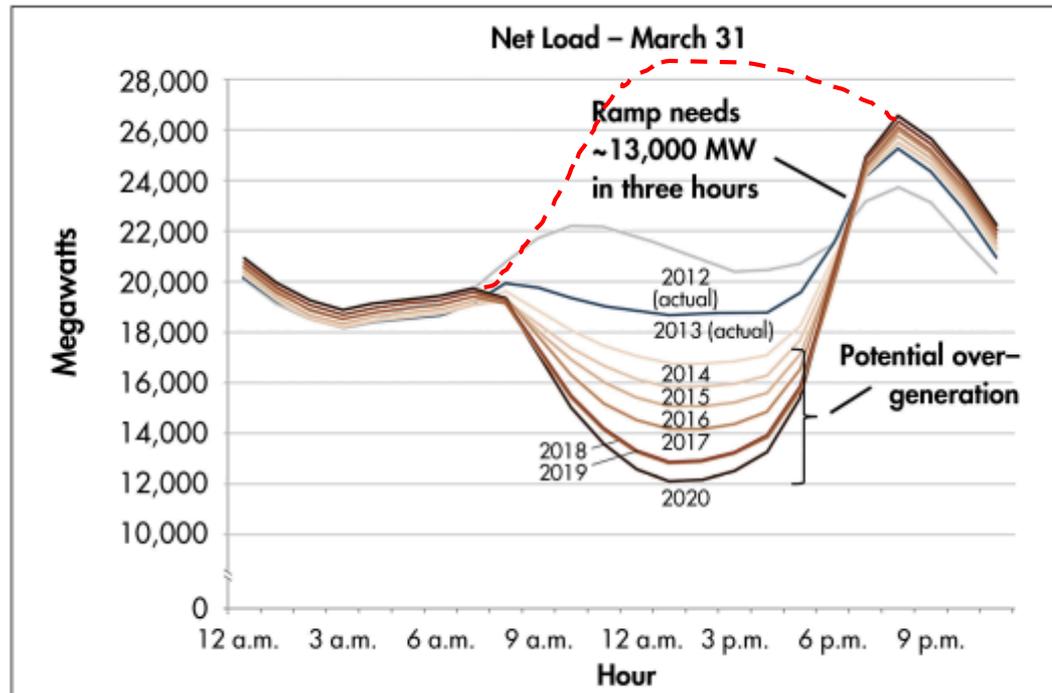
- Draft Resolution E-4907, CCA Bond Methodology, AB 1110

## Programs

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

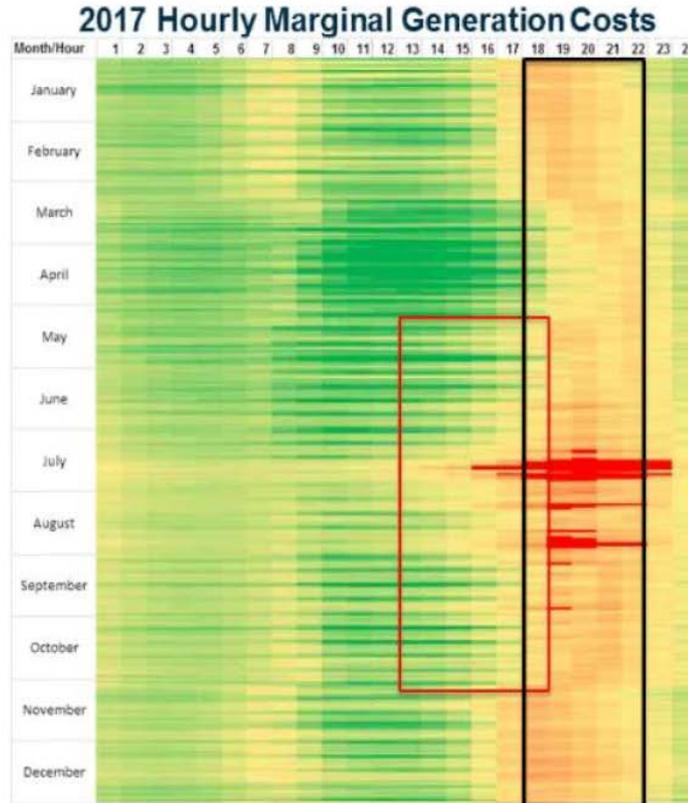
# 'Duck Curve' - Challenge and Opportunity

Figure 1: Net load on the CAISO system



Source: CAISO

# Impact on Wholesale Prices



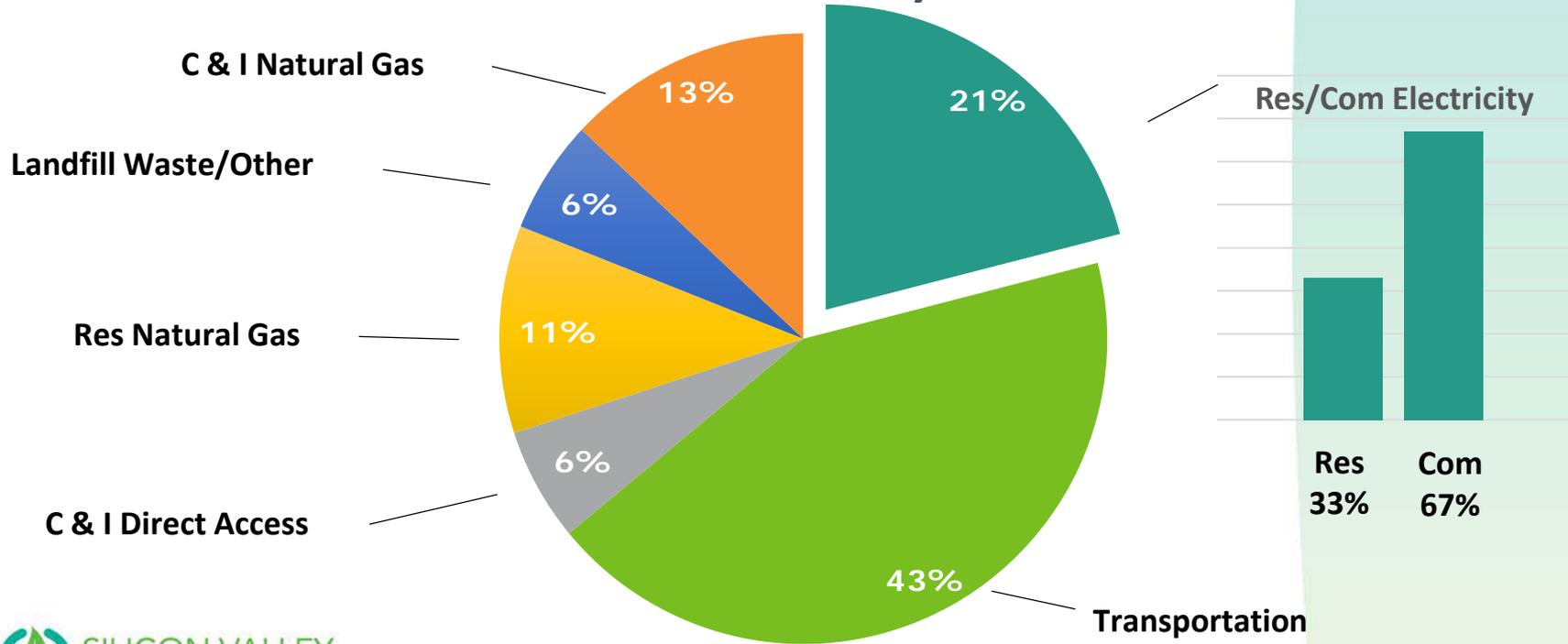
-  Current Summer Non-Residential Peak
-  Proposed Year Round Non-Residential Peak\*

\*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 <http://www.scmpinstitute.net/Regulation/research>

# ~80% of Emissions Remain . . .

## 2015 Carbon Emissions by Source\*

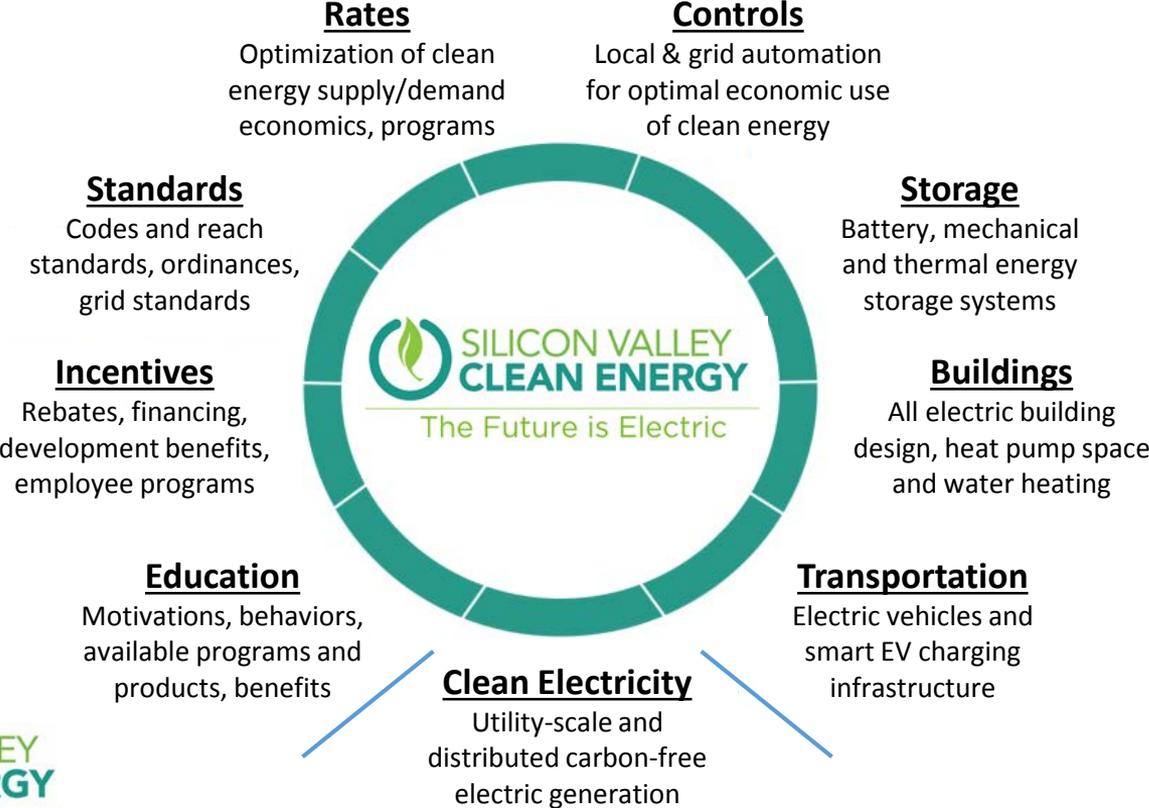




The Future is Electric

**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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