

City of Santa Clara

Powering YOUR Future

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June 6, 2018

Agenda

- **Introductions**
- **Who we are**
- **What we do**
- **Why we are here**
- **Integrated Resource Plan**
- **Our Energy Mix**
- **Powering YOUR Future**
- **Powering What MOVES you**
- **Customer Participation**



Who We Are...

- Publically Owned Utility (POU)
- Established in 1896
- Governed by the Santa Clara City Council
- 55,000+ customers
- 19 square miles
- 586 MW peak
- 7 City owned generating plants
- 540 miles of distribution lines
- 145 mile fiber optic backbone
- 19,000 poles and street lights
- 5,700 transformers and other devices



Mission

We are dedicated to our community, customers, and employees. We provide safe, reliable, affordable, and sustainable energy services with exceptional customer focus.

Vision

Innovating creative energy solutions for a resilient and sustainable community.

Values

- **Reliability:** Maintaining the consistent and dependable operation of our assets to deliver electricity to our customers.
- **Safety:** Ensuring the safety of the public and our employees when conducting utility operations.
- **Customer Focus:** Promoting the needs and interests of our customers, with a commitment to providing high value utility service.
- **Accountability:** Holding each other accountable for our actions and responsible for achieving collective results.
- **Trust:** Maintaining public and employee trust.
- **Ethics:** Demonstrating the highest levels of integrity and principled conduct.
- **Collaboration:** Supporting teamwork within our organization and partnerships with our customers, the City of Santa Clara, and suppliers.

Values cont'd

- **Sustainability:** Championing environmental stewardship and supporting responsible economic development in our community.
- **Innovation:** Seeking and valuing new ideas that will help deliver on our Mission and Vision and meet the challenges of tomorrow.
- **Continuous Improvement:** Engaging employees to strive for operational excellence.
- **Diversity:** Recognizing and respecting a variety of perspectives, experiences, and approaches in our organization and community.
- **Communication:** Providing timely communication and outreach to employees, customers, the City of Santa Clara, and other key stakeholders.
- **Risk Awareness:** Understanding the balance between risk and reward when pursuing SVP's goals and objectives.

What does SVP do?

- Provide electricity to our customers in Santa Clara
 - Generate electric energy
 - Bring energy to Santa Clara
 - Distribute energy to customers
 - Provide Energy Efficiency, Solar and Green Power programs
- Other Services
 - Street lighting
 - 24 hour non-public safety dispatch
 - Traffic signal maintenance
 - SVP MeterConnect Wi-Fi
 - Lease dark fiber optics (Commercial)

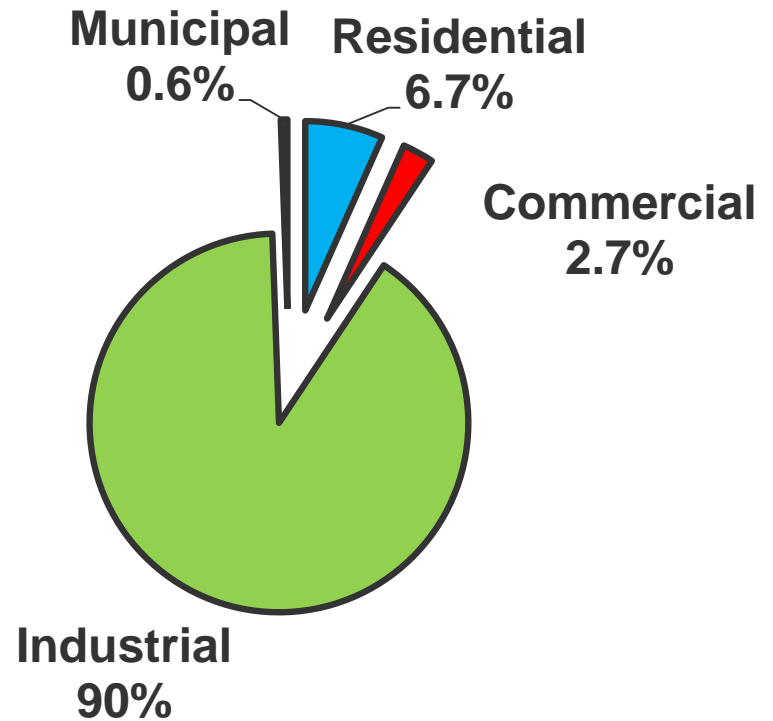


What Makes Us

Customer Count by Type

Residential	55,101
Commercial	6,184
Industrial	1,660
Government	187
Unmetered	363

KWh Sales by Type



Why we are here...

- Changing Landscape in California
 - Green House Gas (GHG) Reduction Goals
 - 40% Reduction of 1990 levels by 2030
 - Renewable Energy Goals
 - 50% Eligible Renewables by 2030
 - Energy Efficiency/Energy Storage/Distributed Resources
 - Integrated Resource Plan
 - Required by the State Q1 2019
 - Multiple State Clean Mandates
 - SB1368, SB1, SB1037, SBX 1-2, SB32, SB350



Changes in Business Environment

- Climate Change
 - Legislative and regulatory initiatives
 - Increased renewable portfolio requirements
 - Green House Gas Emissions requirements including Cap and Trade
- Technology changes
 - Distributed generation such as fuel cells and solar installations
 - Energy storage
 - Information technology and communications
 - Advanced metering and data availability
 - Communications and sensor technology
 - Internet of things
- Cyber and physical security threats



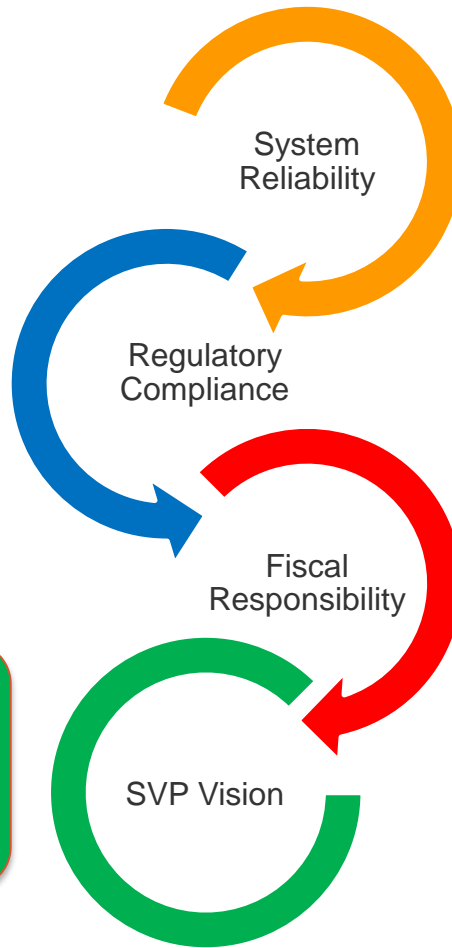
Integrated Resource Plan (IRP)

- What is the IRP?
 - Senate Bill 350 (de Leon, Chapter 547, Statutes of 2015) (SB 350) requires publicly owned utilities (POUs) to adopt Integrated Resource Plans by January 1, 2019, submit them to the California Energy Commission (CEC), and update them at least once every five years thereafter.
 - The IRP is a formal planning document to be adopted by the City Council that details:
 - Resource Needs – Planning for the future
 - Policy Goals – Green House Gas (GHG) reduction, renewables, etc.
 - Physical and Operational Constraints
 - General Priorities/Resource choices

IRP Core Objectives

- Complying with changing regulations in California
- Meeting mandates of SB350 – going beyond?

- Community Values
- Exceptional service
- Environmental Sustainability

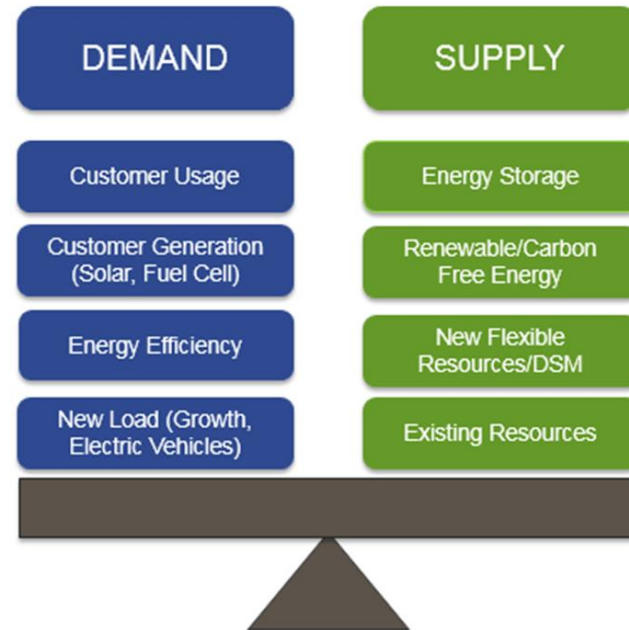


- Ensuring Reliable Power
- Minimize outages & service interruptions

- Limit future cost increases
- Balance costs and benefits

Resources – The Balancing Act

- Meeting Growth
 - Electric Vehicle
 - Electrification of everything?
 - Load Growth
- Planning Horizon
 - Flexible Resources
 - Customer Generation
 - Energy Efficiency
 - The Rapid Pace of Innovation



Existing Resources



LEGEND

- Wind
- Solar
- Geothermal
- Hydroelectric
- Landfill
- Natural Gas

SVP Jointly Owned Transmission Projects

- California-Oregon Transmission Project
- Tesla-Midway Transmission Service

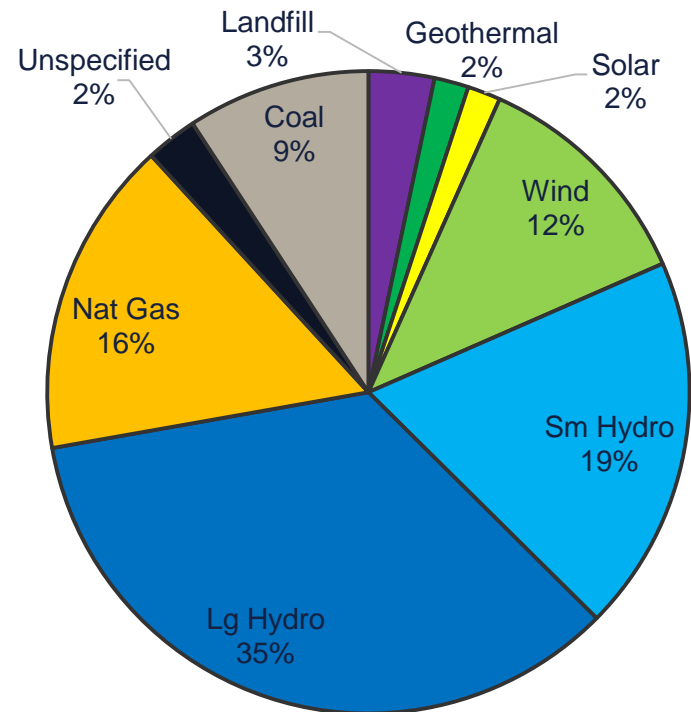
Existing/Future Resources

- Existing Resources – Capacity
 - Hydroelectric – 417 MW
 - Solar – 21 MW
 - Wind – 122 MW
 - Landfill Gas - 11 MW
 - Geothermal - 52 MW
 - Natural Gas - 307 MW
- Coming On-Line 2019/2020
 - Solar -40 MW (to potentially 65+ MW)
 - Wind - 250 MW
- **1220 MW Combined Capacity**

2017 Power Mix

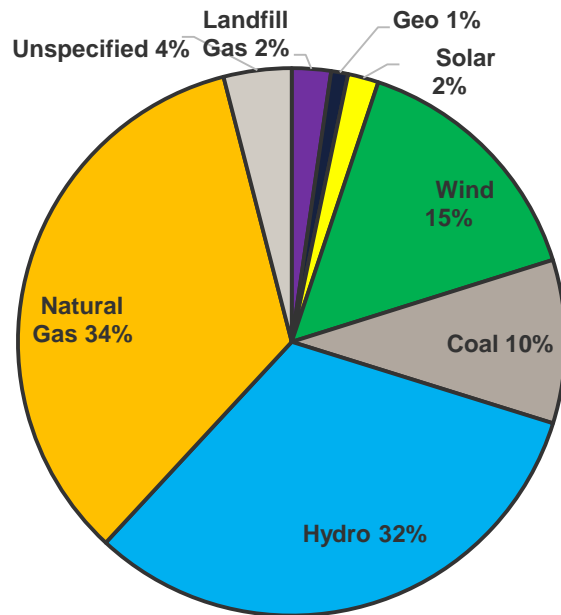
72% GHG Free

38 % eligible renewable

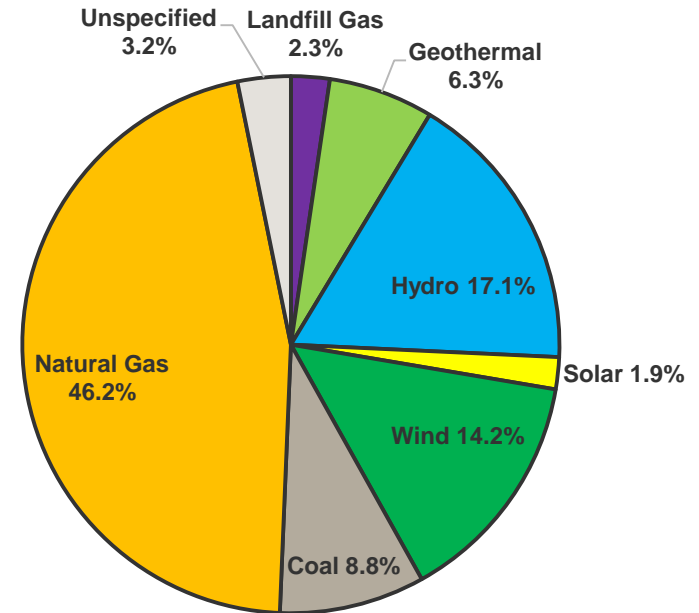


What a difference a year (or two) makes

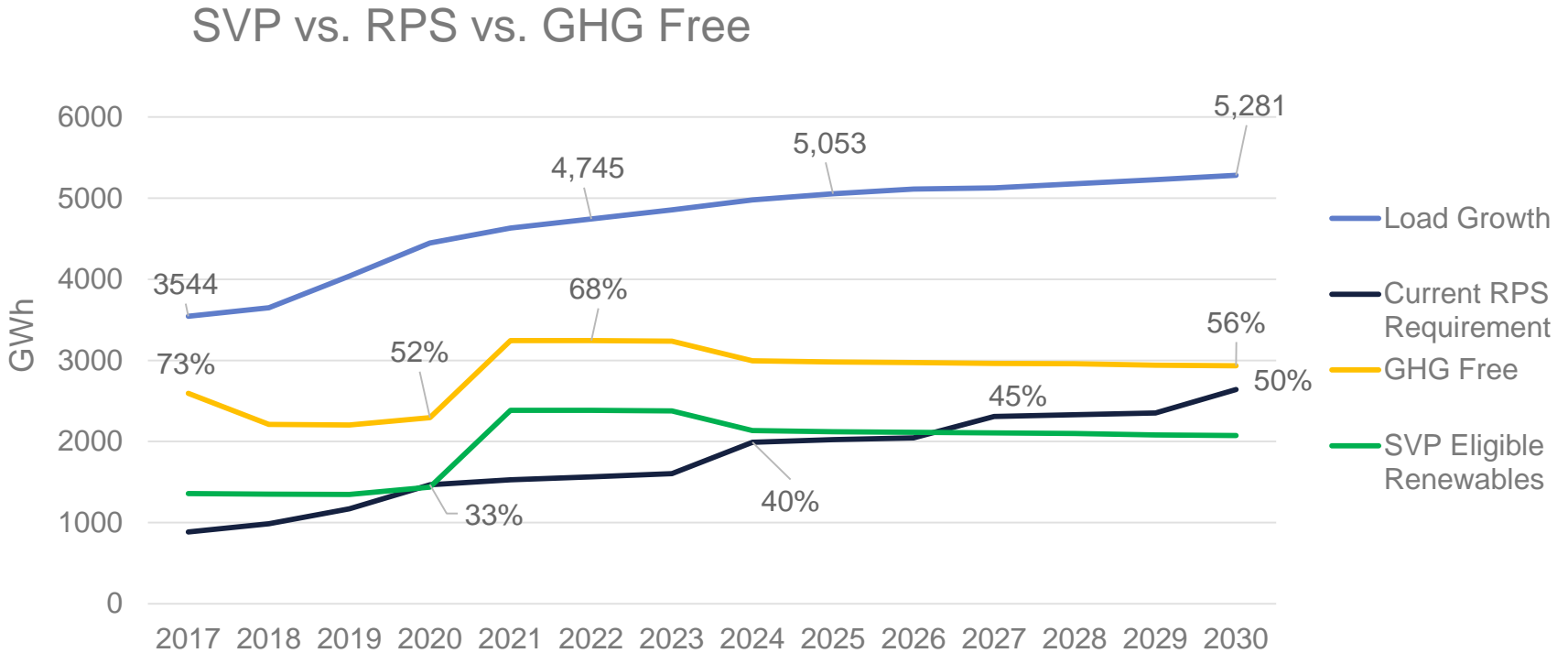
2016 – 52% GHG Free
28% eligible renewable



2015 – 42% GHG Free
28.6% eligible renewable



SVP Growth vs. GHG Free vs. Renewable Requirements



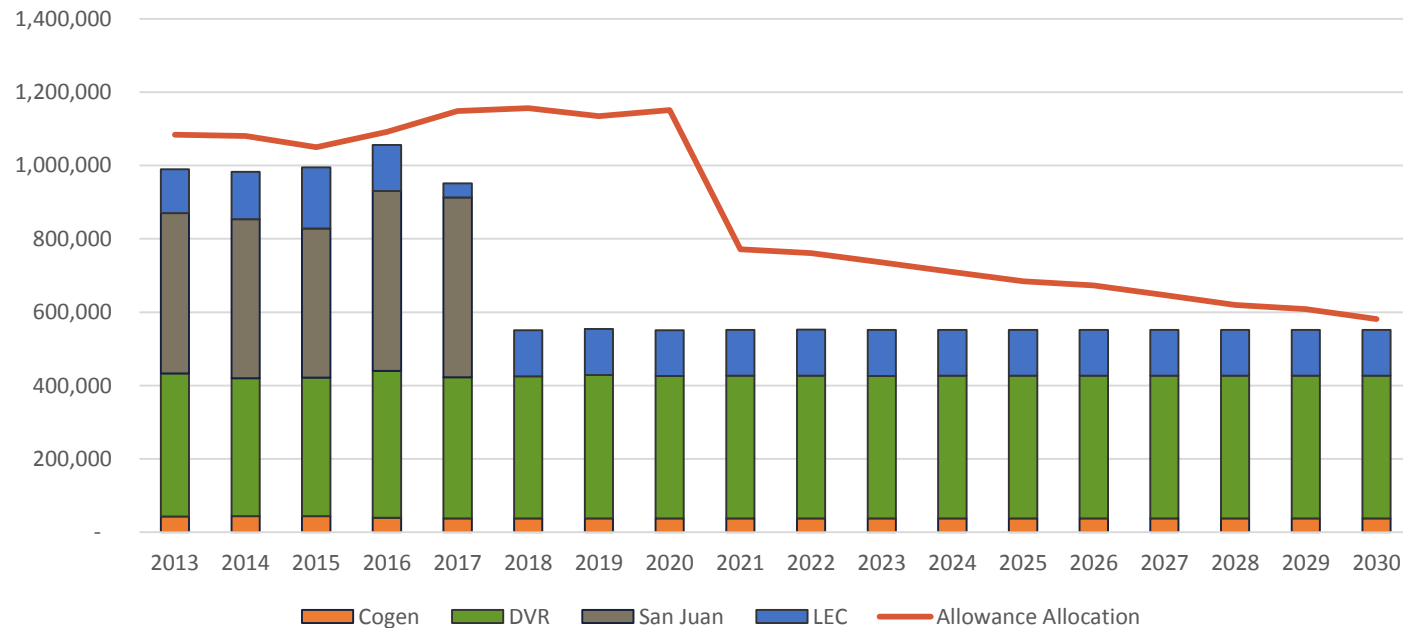
GHG Reduction

- State Goals
 - Still defining – Even though we are to reduce to 1990 levels – no one knows what the target will be.
- Cap-and-Trade –
 - SVP purchase of allowances 2014 to date-\$49 million
 - SVP Revenue 2014 to date - \$69 million
 - SVP uses the Revenue to buy down the costs of additional renewables – minimize rate increase
- What SVP has done to date – we are at our 2030 goal
 - Divest from Coal (51MW)– December 31, 2017
 - Closure of Graphic Packaging (27.7 MW)– SVP procured output
 - Addition of new Renewables – 250 MW wind and 40 MW solar to be on-line 2019/2020

SVP and Allowance Allocation

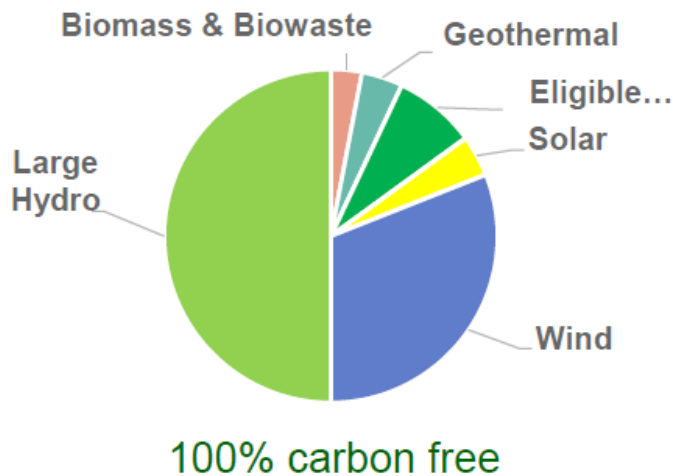
- SVP has successfully participated in the Cap-And-Trade Auctions
- On target to reach 40% reduction of 1990 GHG emissions

Allowance Allocation vs. Emissions



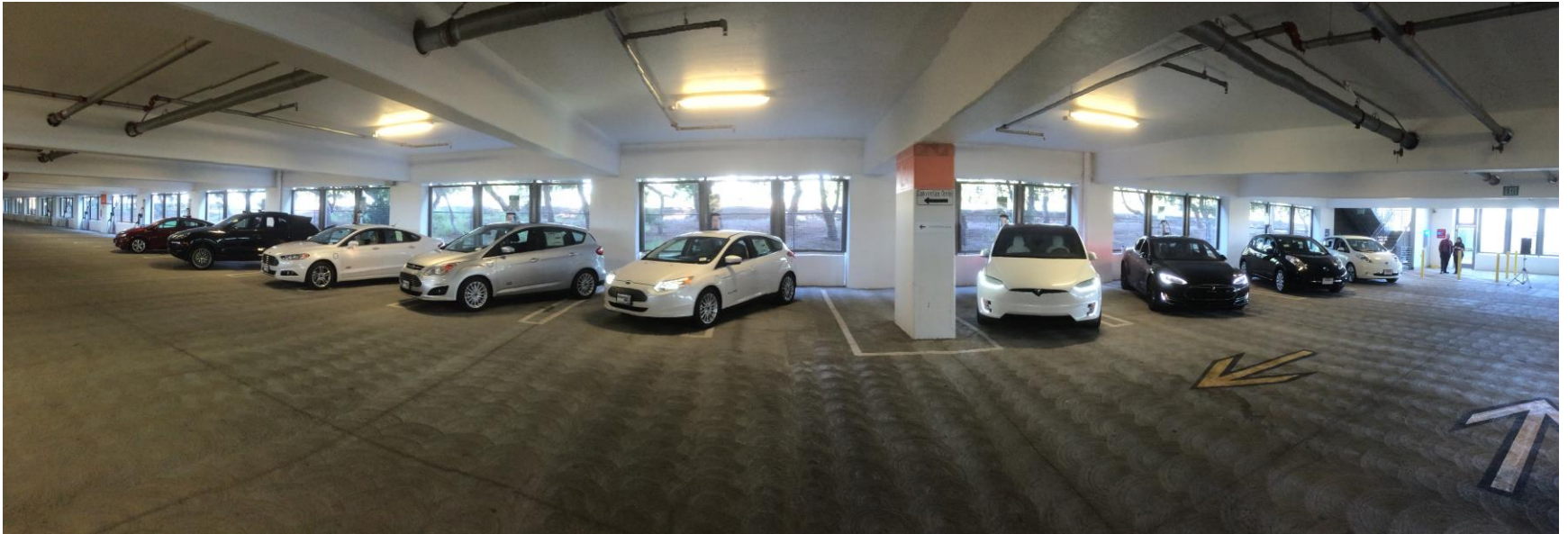
Residential GHG Free – beginning 2018

- Consider providing new green and renewable programs
 - 100% carbon free energy for residents programs
 - Community solar



RESIDENTIAL POWER CONTENT 2018 <i>(sample)</i>	
Specific Purchases	Percent of Total Retail Sales (MWh)
Renewable	50%
Biomass & Biowaste	3%
Geothermal	4%
Eligible hydroelectric	8%
Solar	4%
Wind	31%
Coal	0%
Large hydroelectric	50%
Natural Gas	0%
Nuclear	0%
Other	0%
Total	100%

Electric Vehicles (EV)



City of Santa Clara's Tasman Street Garage

Powering What MOVES You

- EV Readiness Blue Print
- Community/Infrastructure Readiness - What do you need? Cost?
 - Today 2,000 EVs, CEC conservative estimate for 2030 19,000+
- Over 400 Public Charging spaces and growing
- Adding EVs to the City Fleet
 - City Cars (Bolts, Volts)
 - SVP hybrid bucket truck
- City has installed
 - 49 at Tasman Garage
 - 7 at City Hall
 - 8 at the Libraries
 - 6 at the Convention Center



How You Can Participate?

- Feedback
 - Open Government Survey - <https://www.opentownhall.com/6342>
 - E-mail feedback to info@siliconvalleypower.com
 - Take one today
- Website
 - Silicon Valley Power website - www.siliconvalleypower.com
 - We are on social media too! 
 - E-Notify - <http://santaclaraca.gov/government/connect-with-us/enotify-sign-up>
- Future Workshop
 - August 27 – Northside Library, 6:30 pm – 7:30 pm



Thank you,
Questions?

