



DATE: October 12, 2015

AGENDA ITEM #2

**TO:** Environmental Commission

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

**SUBJECT:** Community Choice Energy

**RECOMMENDATION:**

Receive report on Community Choice Energy

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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 20% of 1990 levels by 2050 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.

In the 2005 Los Altos GHG Community Inventory baseline, residential and commercial electricity account for 18% of Los Altos community-wide GHG emissions. Reducing the GHG intensity of the electricity currently flowing through the PG&E grid by incorporating more energy from renewable sources is an effective way to directly reduce community GHG emissions. If by establishment of a CCE, Los Altos purchased electricity that was 25% cleaner than PG&E-provided grid electricity, the use of renewal-source energy could potentially reduce overall city emissions by up to 4.5%. If 100% renewable/clean energy were purchased, Los Altos emissions could be reduced by up to 18% and could attain the 2020 stretch goal of 17% reduction in GHG. As such, implementing a CCE has the potential to rapidly reduce community GHGs more so than any other measure currently identified in the Climate Action Plan.

It is noted that the GHG reductions by 2020 are only the first step in the State's GHG reduction goals. The state is proposing additional targets for 2030 and 2050. The initiative of establishing community choices to purchase energy produced by renewal sources is quickly becoming a viable option to achieve GHG reductions. Currently operating Community Choice Energy Programs can demonstrate savings to residents on energy bills and the attainment of sufficient GHG reductions to propel communities to reach short and long-term state goals for clean energy.

In July 2013, the City of Los Altos Environmental Commission explored the concept of GHG reductions that could be achieved by Community Choice Energy and is continuing to hear presentations on the topic and take action for recommendations to Council.

### **Council Actions**

City Council convened a study session on Community Choice Aggregation (Energy) on March 10, 2015 and directed the following action:

*Action: Council members directed staff to submit an energy load data request to PG&E and directed the Environmental Commission to further investigate Community Choice Aggregation (Energy) business models and specific goals to be achieved for the City through a Community Choice Aggregation alternative.*

The energy load data request to PG&E along with the required and executed Non-Disclosure Agreement was emailed on March 11, 2015. Copies of the communications and documents were provided to City Council on April 8, 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)

## **DISCUSSION**

### **South Bay CCE Informational Session**

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 which is planned to initiate this summer. Three staff members from the City of Los Altos attended the information session held on April 9, 2015 in the City of Sunnyvale. Also in attendance via phone webinar were Mayor Jan Pepper, and Environmental Commission CCE Subcommittee members Chair Gary Hedden and Commissioner Don Bray. The CCE Subcommittee provided an update on the CCE informational session they attended to the Environmental Commission.

### **CCE Subcommittee Activities**

In accordance with direction given to the Environmental Commission by Council at the March 10, 2015 Study Session, the CCE Subcommittee convened meetings on March 12 and April 7, 2015 with Mayor Pepper and Staff Liaison J. Logan to formulate next steps to recommend at the April 13, 2015 Environmental Commission meeting and create a discussion document for the Environmental Commission to consider goals and the approach recommended by the CCE Subcommittee. The CCE Subcommittee recommended: 1) joining the South Bay Technical Feasibility Study; 2) convening a community stakeholder committee to guide the recommended study and to frame the CCE Goals and Options; and 3) formulating recommendations to Council for its April 28, 2015 meeting. The CCE Subcommittee lead this discussion at the April 13, 2015 Environmental Commission meeting and the Environmental Commission concurred with the recommendations.

At its April 28, 2015 meeting, Council received a staff report proposing CCE Goals and an Approach Plan to formulate and recommend a CCE business model. The April 13, 2015 Environmental Commission's direction and recommendations were incorporated into the staff report to Council. It was also recommended for the City to join the South Bay Technical Feasibility Study and a letter was sent on April 29, 2015 authorizing the use of electrical load data for the Study.

The Subcommittee met to review direction from the April 28, 2015 Council meeting and then presented a report to the Environmental Commission at its May 7, 2015 meeting. The Subcommittee received direction to move forward with the Study Approach Plan and report back to the Commission at its June 8, 2015 meeting.

### **Subcommittee activities in May and June**

Between the May and July Environmental Commission meetings, the Subcommittee met weekly and convened phone conferences to discuss a list of predetermined questions and discussion points with: 1) the Mayor and the City Manager of Windsor, CA; 2) Peter Rumble, CEO California Clean Power; 3) Geof Syphers, CEO Sonoma Clean Power; Former Mayor of Cotati; and 4) met with two PG&E representatives regarding its green power and solar options. In addition, the Subcommittee convened many phone calls and sent emails to CCE resources and experts in order to better understand and define discussion points for interaction with speakers at its June 8, 2015 meeting. Peter Rumble, CEO California Clean Power, delivered a presentation at the June 8, 2015 Environmental Commission meeting. Members of the Subcommittee and the Staff Liaison attended the 2015 Energy Summit at Stanford University on June 25, 2015.

A Regular meeting of the Environmental Commission was held on July 13, 2015 and was immediately followed by a Study Session on CCE. Melody Tovar, Regulatory Programs Divisions Manager, City of Sunnyvale Environmental Services Department delivered a presentation on the Silicon Valley CCE Partnership. Members of the community provided comments and discussion followed. Subsequently the Subcommittee met on July 24, 2015 to review the results of the Study Session and plan its report on CCE Goals, the Study Approach Plan and progress updates for the August 10, 2015 Environmental Commission meeting and for the CCE Interim Report to Council on August 25, 2015.

On August 25, 2015 the Environmental Commission presented a CCE Interim Report to Council and included an update on the progress of the Silicon Valley CCE Partnership. The CCE subcommittee held a phone conference with Melody Tovar, Regulatory Programs Divisions Manager, City of Sunnyvale Environmental Services Department on the current time-lines and status of the community outreach efforts, JPA formation and use of media and social networks to

engage the community in CCE formation efforts. The subcommittee will present its report to the Commission at the October 12, 2015 meeting.

**Attachments:**

- A. *PG&E Support for Community-Scale Renewable Energy, September 2015* – presentation slides
- B. Silicon Valley CCE Partnership upcoming events, September 28, 2015 – December 31, 2015 – website page

# PG&E's Support for Community-Scale Renewable Energy

Amy Dao  
Community Energy Manager

September 2015



 **Agenda**

- **Introduction**
- **PG&E's Solar Choice Program**
- **PG&E'S 2015 Electric Distribution Resources Plan**
- **PG&E Supports Community Renewables with Data Access Options**
- **Questions?**

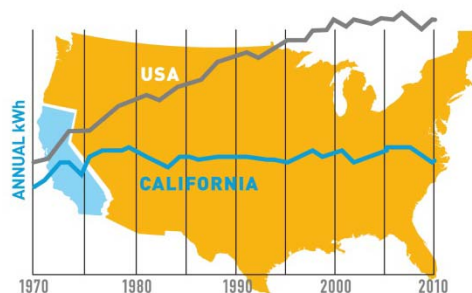
# Introduction





# CA legacy of environmentally driven energy policy

*Per capita energy use nearly flat over 30+ years*



*State Energy Action Plan:  
“Loading Order” of **preferred resources***

- 1 Energy efficiency
- 2 Demand response
- 3 Renewables and clean distributed generation
- 4 Cleanest available fossil-fired generation

***33% RPS by 2020** bill signed by Governor Brown in 2011*



***50% RPS by 2030** bill passed in legislature in Sept 2015*







## CA a clear leader in roof-top solar PV and large scale renewables

**TOP 10 SOLAR STATES**  
COUNTDOWN

**1 California**

California installed more solar in 2014 than the entire country did from 1970-2011.

4316 MW installed in 2014, enough to power 1,049,000 homes.

**SEIA** Solar Energy Industries Association®  
40 YEARS

Learn more: [SEIA.org/smi](http://SEIA.org/smi)

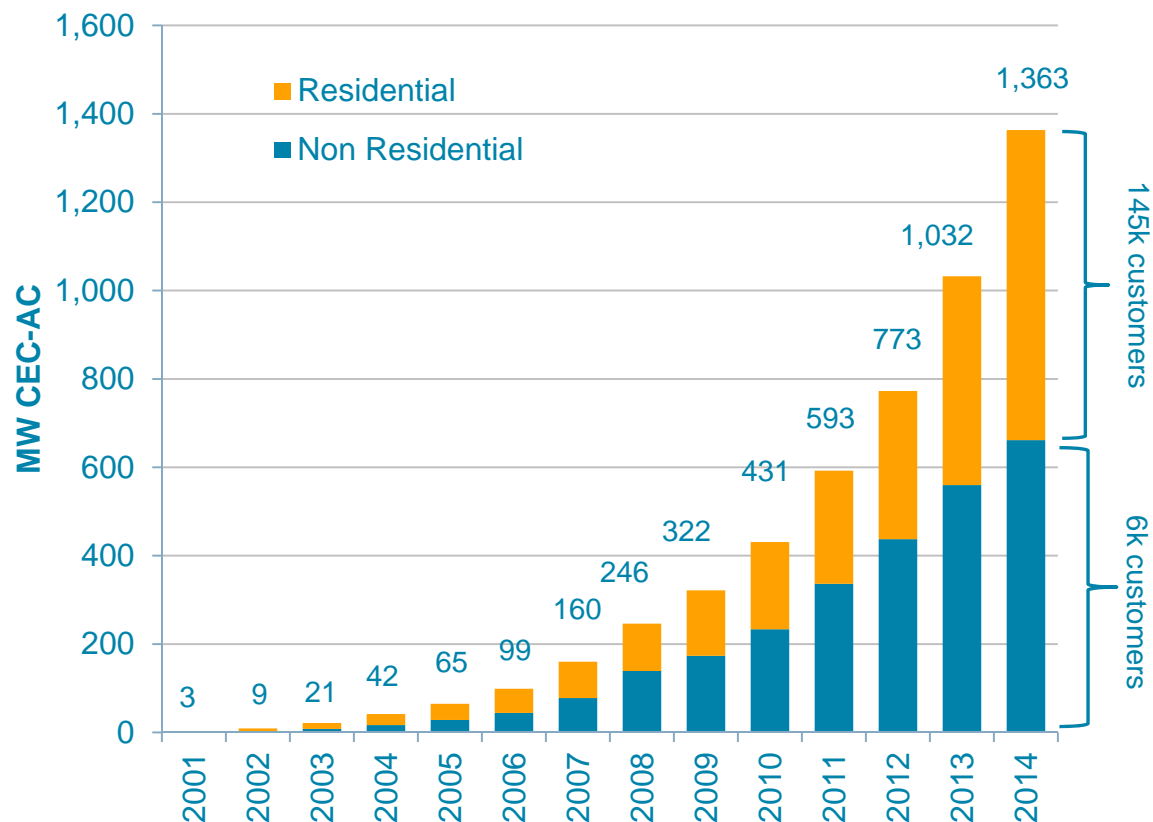
*Opportunity remains in pursuing community-scale renewable energy projects, which benefit from economies of scale and are sited close to load*



## CA a clear leader in roof-top solar PV and large scale renewables

- PG&E has more solar than any other utility in the U.S.
- 25% of U.S. rooftop solar in PG&E service area
- 175,000+ solar customers
- Industry-leading interconnection times
- New solar customer interconnection every 11 minutes

### Cumulative DG Solar Capacity



***Opportunity remains in pursuing community-scale renewable energy projects, which benefit from economies of scale and are sited close to load***

# Community Solar Choice Plans





# Why Offer a Shared Renewables Program?

## Providing Choice for Customers

- 6 PG&E studies over the past 7 years have consistently shown that customers want more renewable energy options.
- Approximately **49% of residential customers**, including renters and those with unsuitable roof space, lack access to rooftop solar today.<sup>1</sup>



## PG&E's Solar Choice Plans will allow customers a way to purchase 100% solar power that...

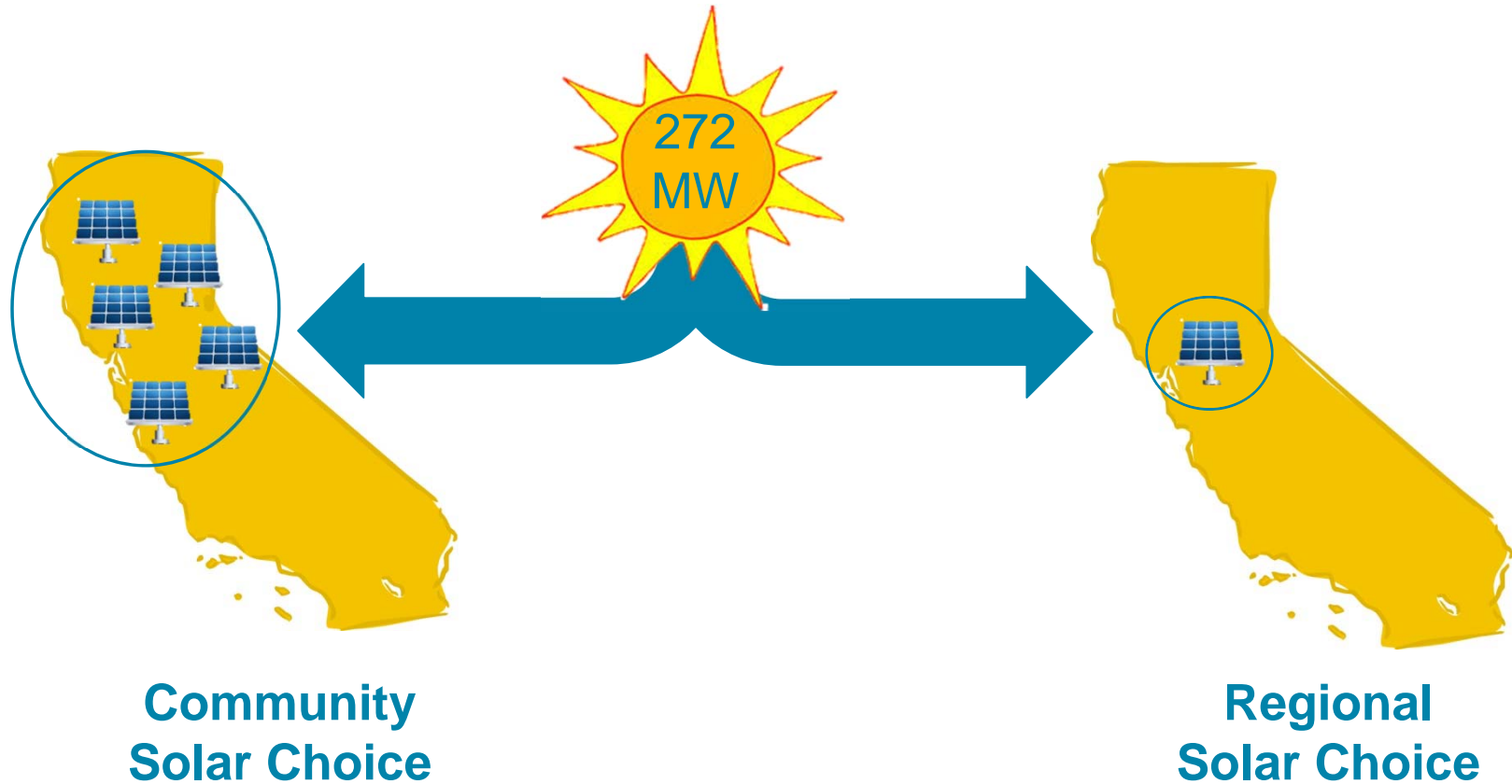
- Ensures new incremental solar will be developed
- Requires minimal effort on the part of the customer
- Has no cost-shift to non-participants

<sup>1</sup>April 2015 NREL Report, "Shared Solar: Current Landscape, Market Potential, and the Impact of Federal Securities Regulation".



## Two Options

**PG&E bundled electric** customers will be able to purchase electricity from new solar projects within PG&E's service area in one of two ways:





# Comparing Plans

Community Solar Choice		Regional Solar Choice
Pool of Solar Projects	Energy Source	Single Solar Project
.5 to 20 MW	Project Size	.5 to 3 MW
PG&E Service Area	Project Location	PG&E Service Area*
50 or 100% of usage	Enrollment Level	Customer-Developer arrangement of choice, up to 120% of annual usage
PG&E Bill	Transaction	Customer-Developer Agreement, PG&E Bill

\* "Community Interest" needed to initiate the project must come from customers in the same county or within 10 miles of the project location.





## Community Solar Choice Plan Pricing

Customers may enroll for 50% or 100% of their electric usage and **remain on their regular rate schedule** (e.g. E-1, E-19, E-20, etc.)

In addition to regular charges, customers are assessed the following charge on enrolled kWh every month:

Component	Illustrative Pricing	Basis
Solar Charge	~10 cent/kWh	Weighted average price of delivering solar resources, from 0.5 to 20 MW
Program Charge	~ 1cents/kWh	CPUC-mandated charges to ensure non-participants are held indifferent <sup>1</sup>
Power Charge Indifferent Adjustment	~1-2 cents/kWh	PCIA is set to ensure stranded generation costs are not shifted to non-participating customers
Generation Credit	(~8-9 cents)/kWh	Avoided costs of PG&E's standard generation (based on class average generation rate)
<b>Estimated Net 2016 Cost</b>	<b>~2-4 cents/kWh<sup>2</sup></b>	<b>Net cost per kWh</b>

<sup>1</sup>Resource Adequacy, Marketing, Admin, CAISO and WREGIS fees, less solar value adjustments.

<sup>2</sup>Varies by customer class. Final rates pending CPUC approval and will change over time.



# Regional Solar Choice Features

## Customer-Developer Agreement (CDA)

- Customers can contract for a share of the project's output (e.g., customers pay \$X for X kW).

## PG&E Tariff

- Participating customers receive a PG&E bill credit aligning with the output of the subscribed portion of the Regional Solar Choice project.

## Power Purchase Agreement (PPA)

- PG&E PPA with Developer to off-take all energy output (kWh) from the system and pay the developer for unsubscribed energy only.
- “Community Interest” is required to obtain PPA, where local customers\* commit to enroll in 30% of project capacity or expressions of interest equaling 51% subscription rate.



\*Local customers must be within same county or 10 miles of the Regional Solar Choice project.





## Regional Solar Choice Plan Pricing

The developer and customer are free to design their own CDA transaction structure.

**Customers remain on their regular rate schedule** (e.g. E-1, E-19, E-20, etc.) In addition to regular charges, once projects are operational (approx. 2 years from PPA signing), customers are assessed the following credit on the **kWh output** associated with their subscription every month.

Component	Illustrative Pricing	Basis
Program Charge	~ 1 cents/kWh	CPUC-mandated charges to ensure non-participants are held indifferent <sup>1</sup>
Power Charge Indifferent Adjustment	~1-2 cents/kWh	PCIA is set to ensure stranded generation costs are not shifted to non-participating customers
Generation Credit	(~8-9 cents)/kWh	Avoided costs of PG&E's standard generation (based on class average generation rate)
<b>Estimated Net 2016 Credit</b>	<b>~(5-7 cents)/kWh<sup>2</sup></b>	<b>Net credit per kWh</b>

<sup>1</sup> Resource Adequacy, Marketing, Admin, CAISO and WREGIS fees, less solar value adjustments.

<sup>2</sup> Varies by customer class. Final rates pending CPUC approval and will change over time.

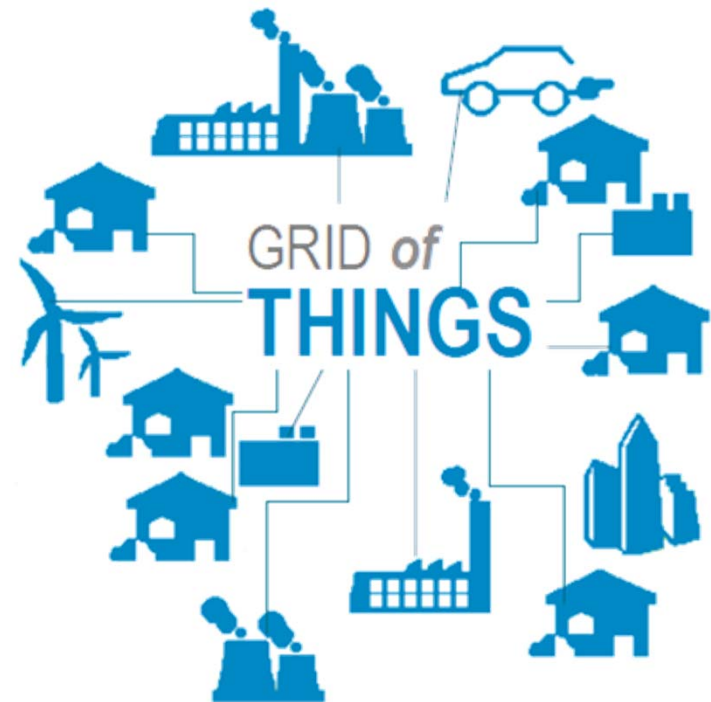
# PG&E's 2015 Electric Distribution Resources Plan (DRP)





## PG&E's DRP Paves the Way for Greater Community-Scale RE Integration

- DRP will enable significant DER integration and supports California's Clean Energy Vision
- PG&E's initial DRP serves as the technical foundation for integrating DERs focusing on:
  - Interconnection and integration efficiency
  - Transparent locational benefits and costs evaluation
  - Development of short & long-term scenarios of capacity and resource needs
  - Effectively managing overlapping initiatives
  - Fair and transparent processes for DER deployment and integration



# PG&E Supports Community Renewables with Data Access Options



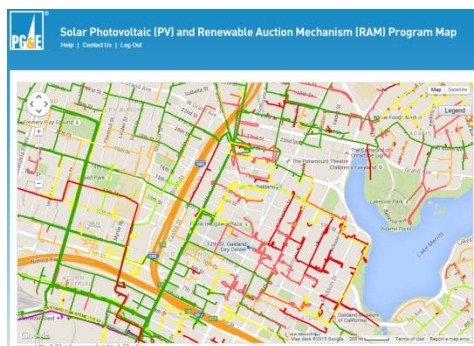


# Data Access and Sharing



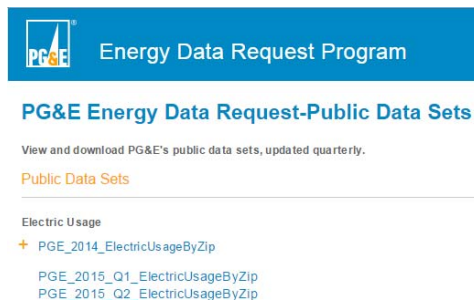
## Share my Data

<http://www.pge.com/en/myhome/addservices/haremydata/index.page>



## Solar PV and Renewable Auction Mechanism (RAM) Program Map

<http://www.pge.com/en/b2b/energysupply/wholesaleelectric suppliersolicitation/PVRFO/pvmap/index.page>



## Public Data Sets

[https://pge-energydatarequest.com/public\\_datasets](https://pge-energydatarequest.com/public_datasets)

# Thank You

Amy Dao  
Community Energy Manager  
[amy.dao@pge.com](mailto:amy.dao@pge.com)





## Ready for the Green Light?

**Join one of our community meetings to learn more.**

The Silicon Valley Community Choice Energy Partnership (SVCCEP) is hosting a series of community meetings to introduce residents to the benefits of Community Choice Energy.

Community Choice Energy allows city and county governments to pool the electricity demand of their communities to buy greener sources of electricity on behalf of residents and businesses in their jurisdictions. Shifting to greener energy sources through a Community Choice Energy program is one of the most impactful actions Silicon Valley communities can take to lower carbon emissions. In addition, a Community Choice Energy program can provide competitive electricity rate options, further incent residents and businesses towards photovoltaic solar, and stimulate the local green economy. Community Choice Energy has been successful for customers and beneficial for the environment in communities that have implemented these programs in California, such as Marin and Sonoma counties.

The community is encouraged to learn more about the potential benefits of Community Choice Energy at one of six community meetings being held in the South Bay during the month of October.

- October 7** | Cupertino, 6:30 – 8:00 pm, Community Hall
- October 8** | Mountain View, 6:30 – 8:00 pm, Council Chambers
- October 14** | Campbell, 6:30 – 8:00 pm, Roosevelt Redwood Room
- October 15** | Sunnyvale, 6:30 – 8:00 pm, Community Ctr, Community Room
- October 22** | Gilroy, 6:30 – 8:00 pm, Council Chambers
- October 29** | San Martin, 6:30 – 8:00 pm, Lion's Club

Additional meetings are scheduled throughout the South Bay. For the full schedule of meetings and locations or for more information about the Silicon Valley Community Choice Energy Partnership, go to <http://www.svcleanenergy.org/events/upcoming>

**[www.SVCleanEnergy.org](http://www.SVCleanEnergy.org)**



we're coming to you!



# ready for the green light?

SILICON VALLEY COMMUNITY CHOICE ENERGY PARTNERSHIP

The Silicon Valley Community Choice Energy Partnership is developing a new way to provide cleaner, greener electricity for participating residents and businesses. It's the easiest way to reduce your carbon footprint!

## Come to our community meeting to learn:

- how cleaner, greener electricity is generated and delivered
- how customers will have a choice among electricity providers
- how other communities have benefited from similar programs

come learn more and  
tell us what you think

**Cupertino**

October 7

**Campbell**

October 14

**Gilroy**

October 22

**Mountain View**

October 8

**Sunnyvale**

October 15

**San Martin**

October 29

Visit [SVCleanEnergy.org](http://SVCleanEnergy.org) for  
meeting times and locations.

Sponsored by the Cities of Cupertino, Mountain View, and Sunnyvale and the  
County of Santa Clara. Also including the communities of Campbell, Gilroy,  
Los Altos, Los Altos Hills, Los Gatos, Monte Sereno, Morgan Hill, and Saratoga