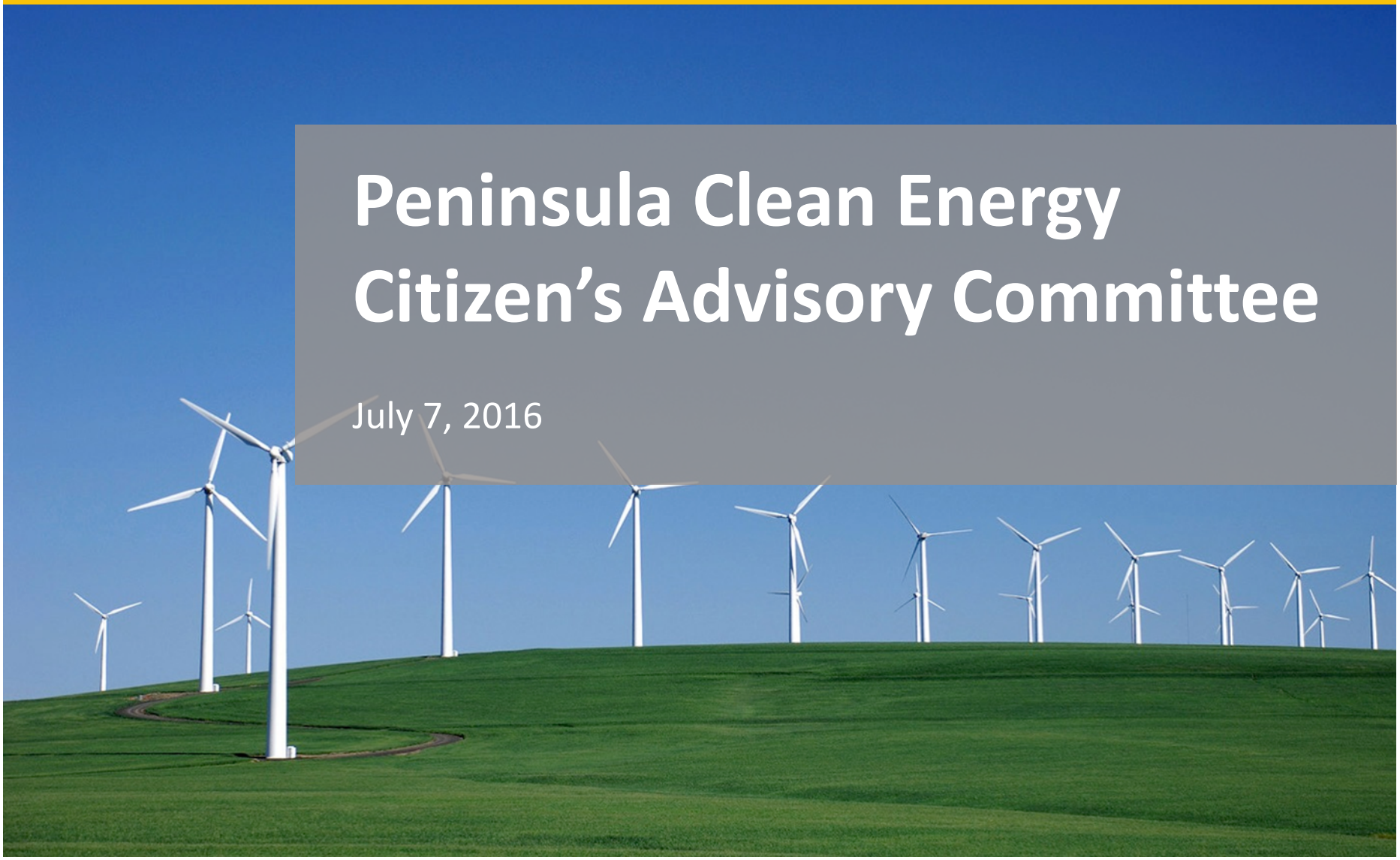


Peninsula Clean Energy Citizen's Advisory Committee

July 7, 2016

PENINSULA CLEAN ENERGY

Agenda

Call to order / Roll call

Administering the Oath of Office

Public Comment

Action to set the agenda and approve consent items

Regular Agenda

1. Updates from County Staff (Discussion)

Regular Agenda

2. Presentation on Renewable Energy vs Greenhouse Free Energy White Paper (Discussion)

Greenhouse Gas-Free Versus Renewable Energy. What's the Difference and Why Does it Matter?

DAVE JAECKEL & AVANA ANDRADE

7/7/2016 | CITIZENS ADVISORY COMMITTEE MEETING

PENINSULA CLEAN ENERGY

Roadmap

1: Overview of Renewable vs. Greenhouse Gas-Free Energy

2: Renewable Energy in California

3: Greenhouse Gas-Free Energy in California

4: Marketing Challenges

5: Next steps

PENINSULA CLEAN ENERGY

1: Overview of Renewable vs. Greenhouse Gas-Free Energy

Renewable Energy - electricity from a source that is not depleted when used, and is not derived from fossil or nuclear fuel.

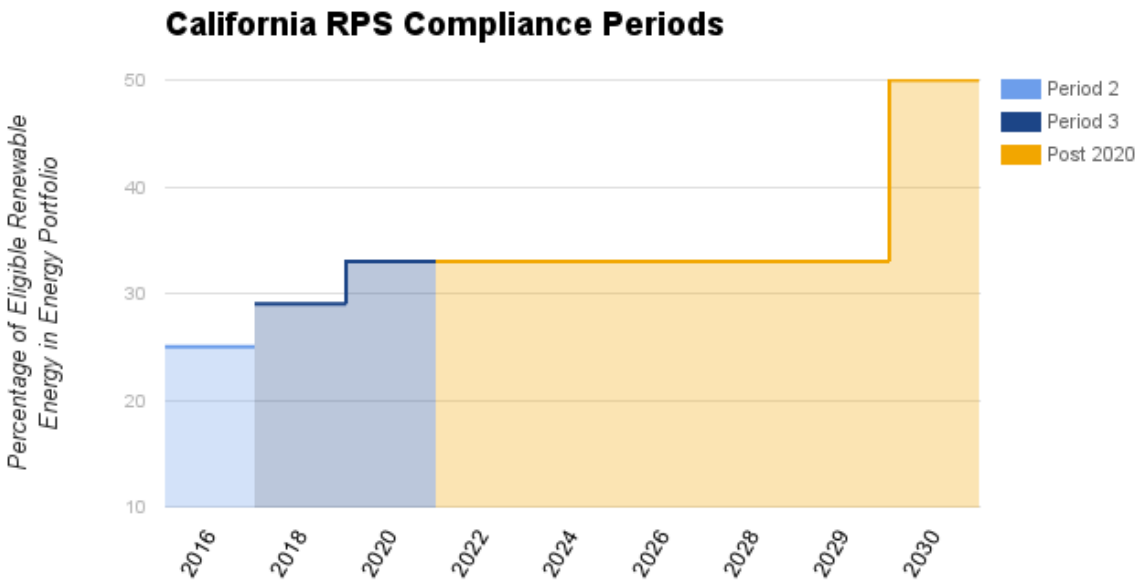
GHG-Free Energy - electricity that does not emit carbon or other greenhouse gases.

Renewable	GHG-Free
Biomass and Waste	Large Hydroelectric
Geothermal	Nuclear
Small Hydroelectric	
Solar	
Wind	

PENINSULA CLEAN ENERGY

2: Renewable Energy in California

California's Renewable Portfolio Standards (RPS) – requires retail sellers of electricity to source a certain percentage of electricity that they generate from renewable sources by fixed dates.

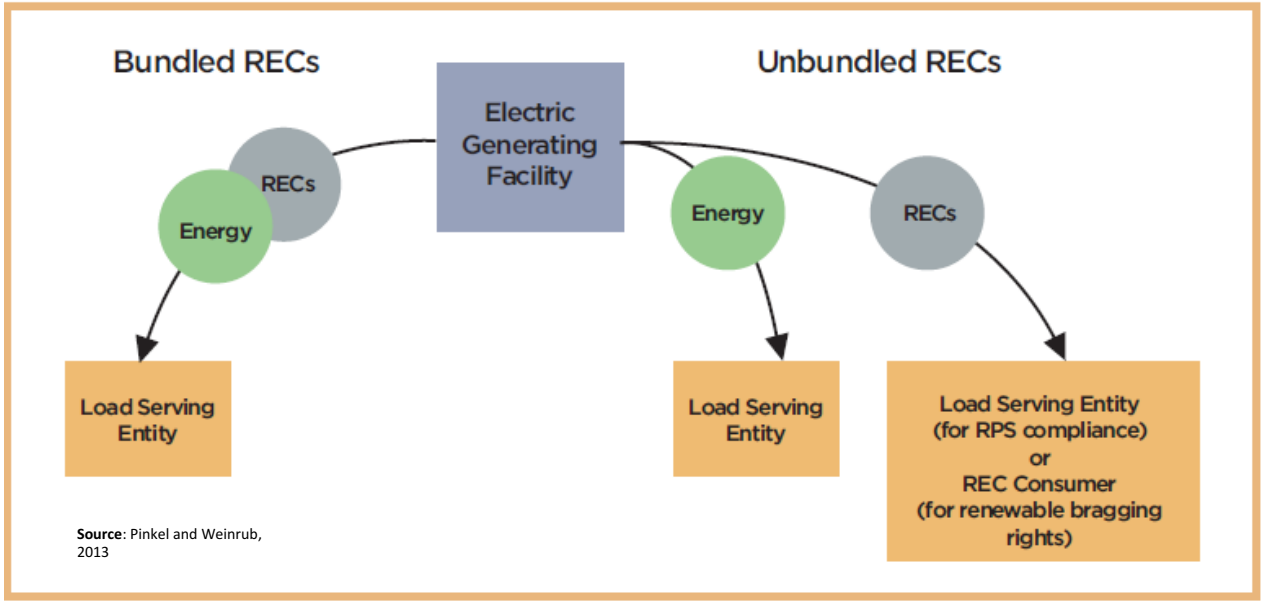


PENINSULA CLEAN ENERGY

2: Renewable Energy in California

Renewable Energy Certificates (RECs)

- Accepted mechanism for verifying “renewable” power.
- Represent attributes (type of generation, facility location, date of service, etc.) of one Megawatt-Hour (MWh) of power.
- Can be either “bundled” with the power they represent and included in the sale, or “unbundled” and sold separately.

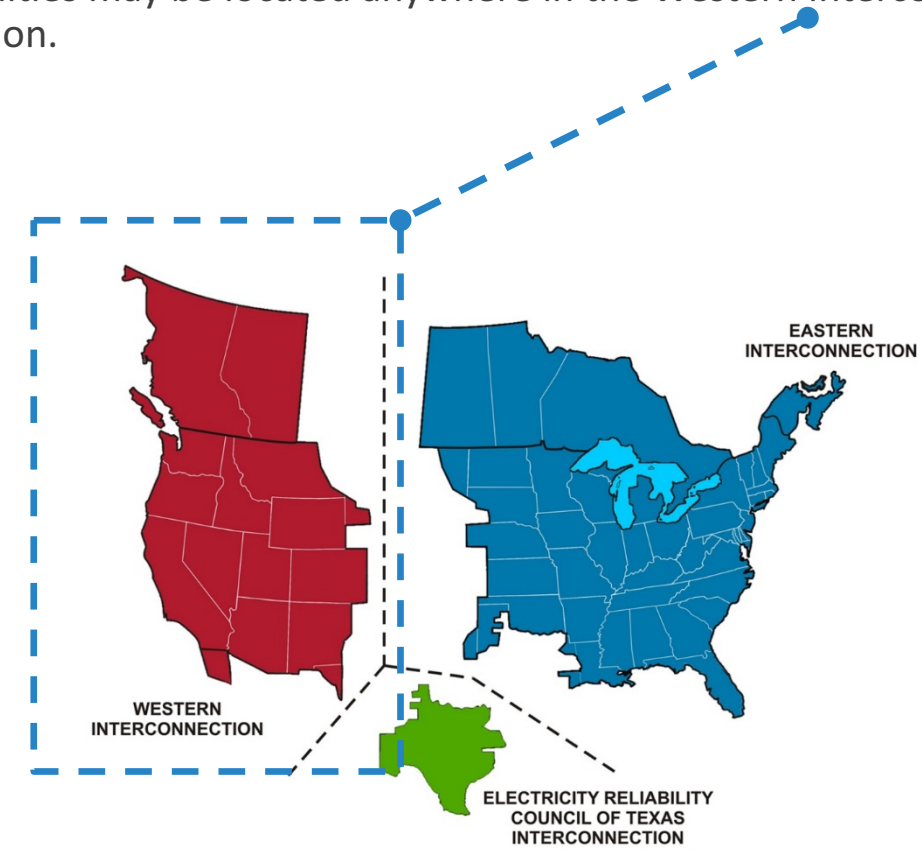


Source: Pinkel and Weinrub, 2013

PENINSULA CLEAN ENERGY

2: Renewable Energy in California

California RPS Portfolio Content Requirements – renewable facilities may be located anywhere in the Western Interconnection region.



Source: Washington Post, 2013

PENINSULA CLEAN ENERGY

2: Renewable Energy in California

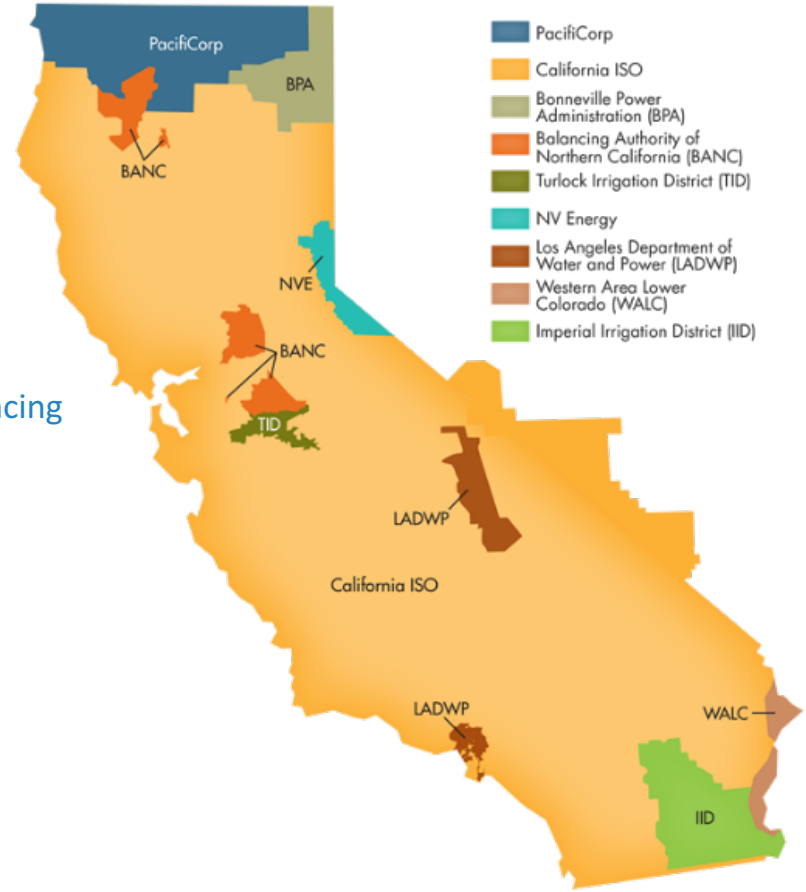
Balancing authorities are entities responsible for operating a transmission control area. They match generation with load and maintain electric frequency on the grid.

PENINSULA CLEAN ENERGY

California RPS Portfolio Content Requirements – all renewable energy procured from contracts after June 1, 2010 are separated into three categories, or "buckets."

- **Category 1 RECs –** Energy and RECs (typically from CA) delivered to a California balancing authority (CBA) without substituting electricity from another source.

California balancing authorities

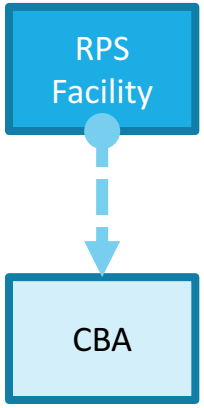


Source: California ISO, 2016

2: Renewable Energy in California

California RPS Portfolio Content Requirements – all renewable energy procured from contracts after June 1, 2010 are separated into three categories, or "buckets." Retailers are required to meet RPS obligations with a minimum percentage of bucket 1 RECs and a maximum percentage of bucket 3 RECs.

- **Category 1 RECs –** Energy and RECs (typically from CA) delivered to a California balancing authority (CBA) without substituting electricity from another source.



PENINSULA CLEAN ENERGY

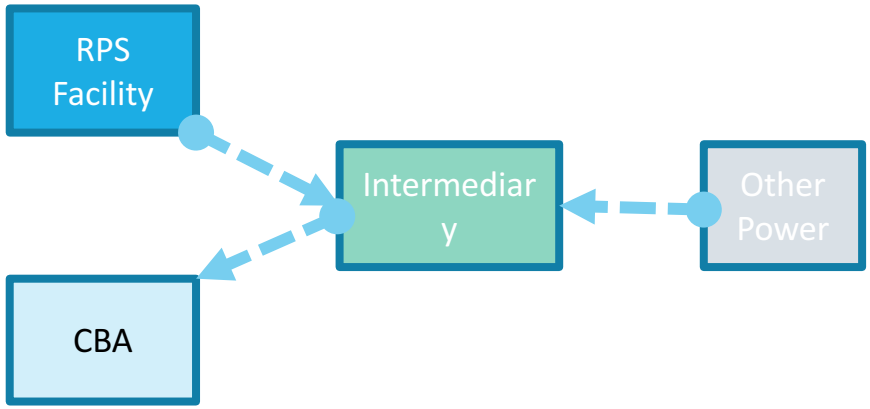
2: Renewable Energy in California

Bucket 2 energy is 'firmed and shaped'

PENINSULA CLEAN ENERGY

California RPS Portfolio Content Requirements – all renewable energy procured from contracts after June 1, 2010 are separated into three categories, or "buckets." Retailers are required to meet RPS obligations with a minimum percentage of bucket 1 RECs and a maximum percentage of bucket 3 RECs.

- **Category 2 RECs –** Energy and RECs (typically from an out-of-state renewable energy project) that cannot be delivered to a CBA without substituting energy from another source (i.e. intermittent wind energy needs to substitute in another energy source to meet demand during times when the wind facility is not generating electricity).



2: Renewable Energy in California

Unbundled RECs do not contain energy in the transaction; rather, they are the rights to energy

PENINSULA CLEAN ENERGY

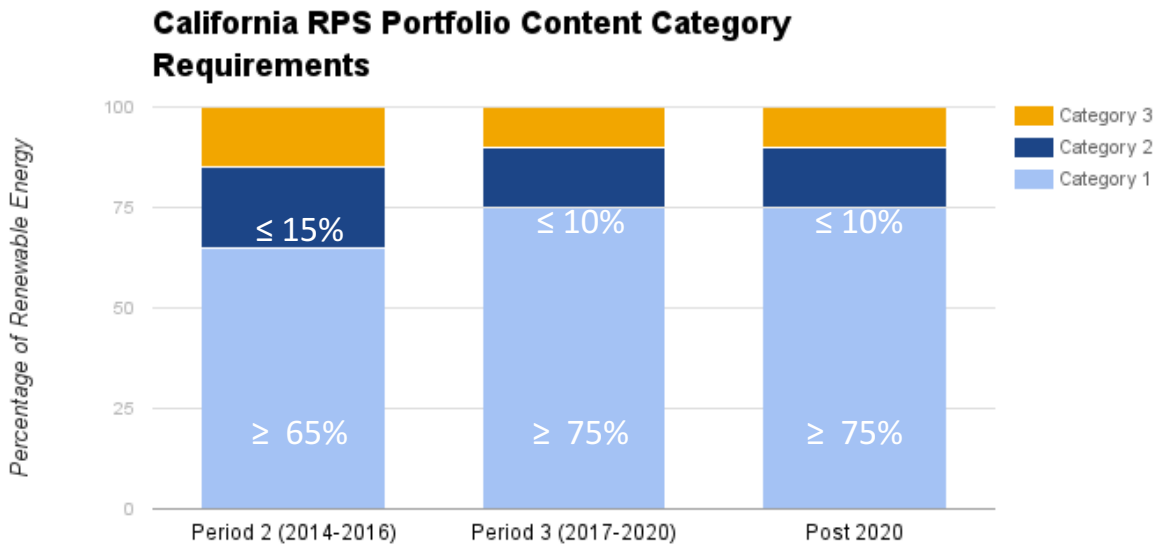
California RPS Portfolio Content Requirements – all renewable energy procured from contracts after June 1, 2010 are separated into three categories, or "buckets." Retailers are required to meet RPS obligations with a minimum percentage of bucket 1 RECs and a maximum percentage of bucket 3 RECs.

- **Category 3 RECs –** Unbundled RECs, or RECs that do not meet Category 1 and 2 conditions.

2: Renewable Energy in California

*Trend toward **increasing** Bucket 1 RECs (CA renewable energy) and **decreasing** unbundled RECs.*

California RPS Portfolio Content Requirements – retailers are required to meet RPS obligations with a minimum percentage of Bucket 1 RECs and a maximum percentage of Bucket 3 RECs over time.

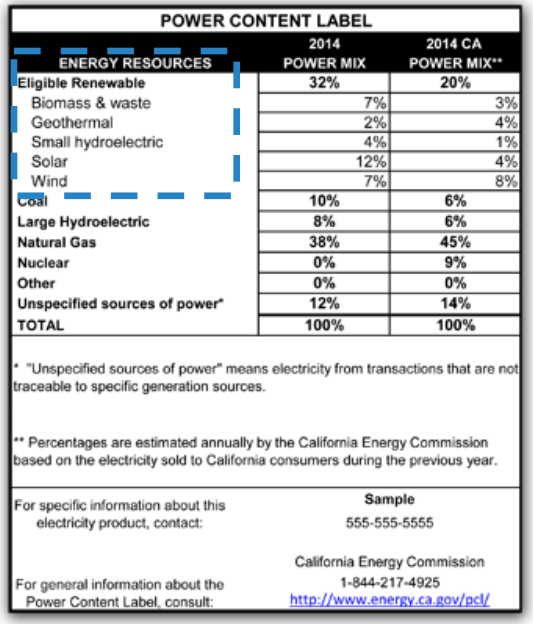


PENINSULA CLEAN ENERGY

2: Renewable Energy in California

Power Content Label – information related to where electricity retailers source their renewable energy – as well as total energy – is found here (distributed in all advertisements that retailers send customers via mail and email).

- "Nutrition label" for electricity.
- However, does not correlate to RPS compliance (RECs retired versus actually energy brought into grid)



POWER CONTENT LABEL

ENERGY RESOURCES	2014 POWER MIX	2014 CA POWER MIX**
Eligible Renewable	**32%**	**20%**
Biomass & waste	7%	3%
Geothermal	2%	4%
Small hydroelectric	4%	1%
Solar	12%	4%
Wind	7%	8%
Coal	**10%**	**6%**
Large Hydroelectric	**8%**	**6%**
Natural Gas	**38%**	**45%**
Nuclear	**0%**	**9%**
Other	**0%**	**0%**
Unspecified sources of power*	**12%**	**14%**
TOTAL	**100%**	**100%**

* "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources.

** Percentages are estimated annually by the California Energy Commission based on the electricity sold to California consumers during the previous year.

For specific information about this electricity product, contact: **Sample** 555-555-5555

For general information about the Power Content Label, consult: California Energy Commission 1-844-217-4925 http://www.energy.ca.gov/pcl/

3: Greenhouse Gas-Free Energy in California

PENINSULA CLEAN ENERGY

GHG-Free Energy – All renewable energy sources and large hydroelectric facilities (PG&E's Diablo Canyon facility is closing).

- GHG emissions for different sources are calculated with a variety of different standards and methodologies. In CA, the California Air Resources Board provides the closest to an industry-accepted standard.
- Retailers use a **GHG emissions factor** to determine the proportionate use of energy sources within their portfolio. An emissions factor goes up when energy delivered to the grid contains GHGs (i.e. coal), and goes down when energy delivered to the grid is derived from GHG-free sources.

3: Greenhouse Gas-Free Energy in California

PENINSULA CLEAN ENERGY

Marin Clean Energy Emissions Factor Summary

2014 Calendar Year	MWh Purchased	% Total	Emission Rate (metric tons CO2e/MWh)	Total Emissions (metric tons)	Emission Rate (lbs CO2e/MWh)	Total Emissions (lbs)
Total Renewable Energy	717,631	57.2%	0.002	8,144	5	3,589,600
RPS – Eligible	717,631	57.2%	0.002	8,144	5	3,589,600
Non-RPS Eligible Renewable	0	0.0%	0.000	0	0	0
Zero Carbon	110,000	8.8%	0.000	0	0	0
System Power	427,163	34.0%	0.428	176,310	944	403,061,611
Totals	1,254,794	100%	0.147	184,454	324	406,651,211

PG&E Emission Factor Summary

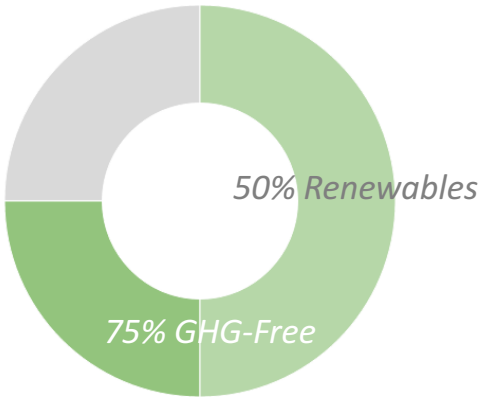
Emission Type	Emission Factor			Source
	Year	Lbs CO_2 /MWh	Metric tons CO_2/MWh	
Historical Emissions	2003	620	0.281	PG&E's third-party-verified GHG inventory submitted to the California Climate Action Registry (CCAR)[2] (2003-2008) or The Climate Registry (TCR) (2009-2013)
	2004	566	0.257	
	2005	489	0.222	
	2006	456	0.207	
	2007	636	0.288	
	2008	641	0.291	
	2009	575	0.261	
	2010	445	0.202	
	2011	393	0.178	
	2012	445	0.202	
	2013	**427**	**0.194**	
2009-2013 Average	2009-2013	457	0.2074	Average of the last five years of historical emissions
CPUC Future Emissions (estimated in 2010 prior to the drought)	2014	412	0.187	CPUC GHG Calculator, which provides an independent forecast of PG&E's emission factors as part of a model on how the electricity sector would reduce emissions under AB 32[3]
	2015	391	0.177	
	2016	370	0.168	
	2017	349	0.158	
	2018	328	0.149	
	2019	307	0.139	
	2020	290	0.131	

4: Marketing Challenges

PENINSULA CLEAN ENERGY

PCE Clean Energy: two products

Eco Plus (Default)

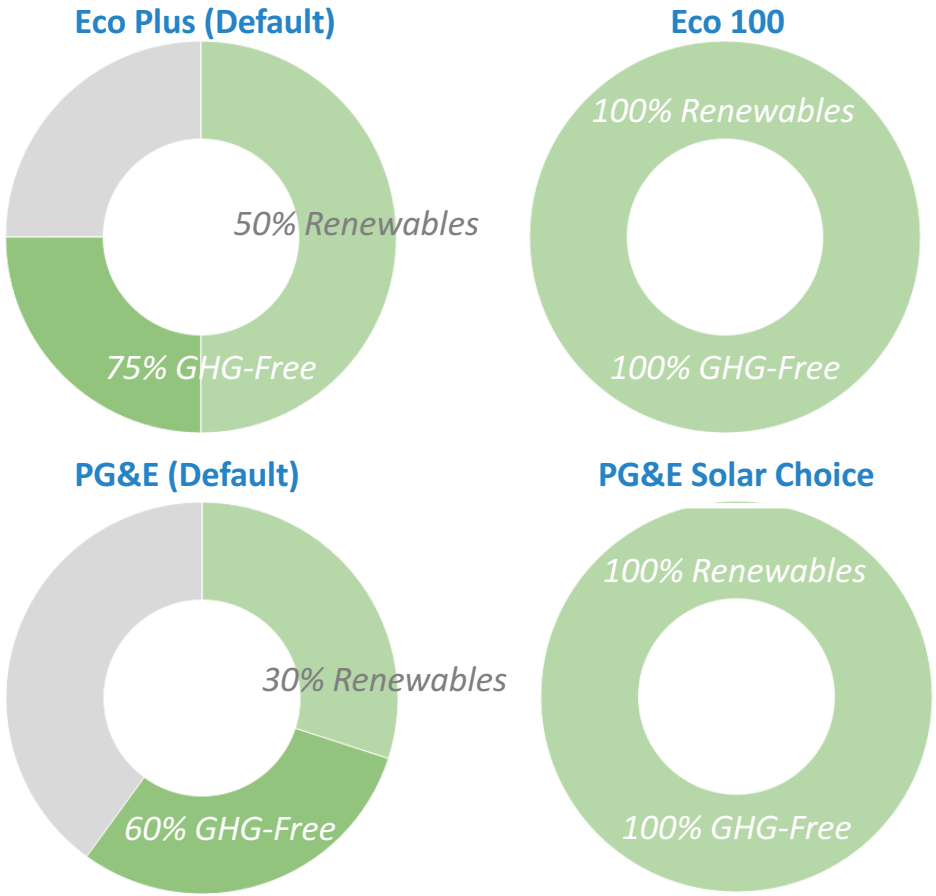


Eco 100

4: Marketing Challenges

PENINSULA CLEAN ENERGY

PCE Clean Energy vs. PG&E



4: Marketing Challenges

PENINSULA CLEAN ENERGY

Pricing: PCE & PG&E

Sample **Residential** Cost Comparison
(Effective June 23, 2016)
Typical Monthly Electric Charges*

Peninsula Clean Energy ECOplus	Peninsula Clean Energy ECO100	PG&E (opt-out)
50% renewable energy**	100% renewable energy**	30% renewable energy**
$44.97 PG&E Electric Delivery	$44.97 PG&E Electric Delivery	$44.97 PG&E Electric Delivery
$30.33 **Electric Generation**	$34.78 Electric Generation	$43.09 PG&E Electric Generation
$10.61 Additional PG&E Fees	$10.61 Additional PG&E Fees	___ Additional PG&E Fees
$85.91 avg. total cost	$93.94 avg. total cost	$88.07 avg. total cost

4: Marketing Challenges

PCE Marketing: focus messaging efforts on either "renewable" or "GHG-free." Challenges and drawbacks to both:

- Marketing PCE as GHG-Free:
  - Higher percentage of default product is GHG-free in comparison to renewable energy.
  - PCE's portfolio contains 15% more GHG-free energy than PG&E's default choice.
  - Future State legislation may standardize greenhouse gas emission accounting (this is currently not standardized) and potentially change the percentage of GHG-free energy that PCE can claim in its energy portfolio.
  - Local Climate Action Plans are based on reducing greenhouse gas emissions.
  - It remains unclear whether local residents more positively perceive the term "GHG-free."

4: Marketing Challenges

PCE Marketing: focus messaging efforts on either "renewable" or "GHG-free." Challenges and drawbacks to both:

- Marketing PCE as Renewable:
  - Focusing on renewable content is consistent with existing State legislation and RPS reporting requirements, possibly leading to less consumer confusion and more stable marketing.
  - PCE's energy portfolio contains 20% more renewable energy than PG&E's default choice.
  - It remains unclear whether local residents more positively perceive the term "renewable" versus "GHG-free" energy.

5: Next steps

PENINSULA CLEAN ENERGY

How should marketing proceed? GHG-free or renewable?

Regular Agenda

3. Discussion on Commercial Outreach Strategies and Partnerships for Marketing (Discussion)

Commercial Marketing

June 7, 2016| Citizens Advisory Committee

PENINSULA CLEAN ENERGY

Commercial Customers

Commercial customers include 'traditional' businesses, as well as schools, special districts, hospitals, transit agencies, etc.

- ✓ Office spaces
- ✓ Restaurants
- ✓ Retail
- ✓ Hospitality
- ✓ Schools – K-12; Community colleges; Universities
- ✓ Special districts—Water agencies; wastewater
- ✓ Hospitals
- ✓ Transit agencies

Messaging

Cleaner electricity at lower rates

- Lower rates: Emphasizing that PCE's default product—ECOplus—costs less than PG&E
- Local benefit: Program revenue reinvested back in San Mateo County
- Cleaner:
  - ECOplus is 50% renewable and 75% carbon free
    - (compared to 30%/60% for PG&E)
  - ECO100 is 100% renewable and carbon free, for only slightly more than what they pay now.
- Automatic enrollment

Keeping messaging clean and simple.

Challenges

- Hard to reach the “decision-maker”—Either the business owner or the property owner
- New program—Lack of education/awareness
- “Green” benefit may have limited appeal, especially if it is perceived to be more expensive
- Skepticism of government programs
- Different rates for different customers – May cause customer confusion

Commercial Outreach Strategies

- ✓ Collateral
- ✓ Website
- ✓ Informational workshops
- ✓ Merchant walks
- ✓ Presentations/Tabling
- ✓ Partnerships

Collateral

Collateral

- Printed + web

- To inform customers:

Pamphlet, FAQ, Copy of enrollment notice, Packet w/branded folders

- For customers to help market PCE:

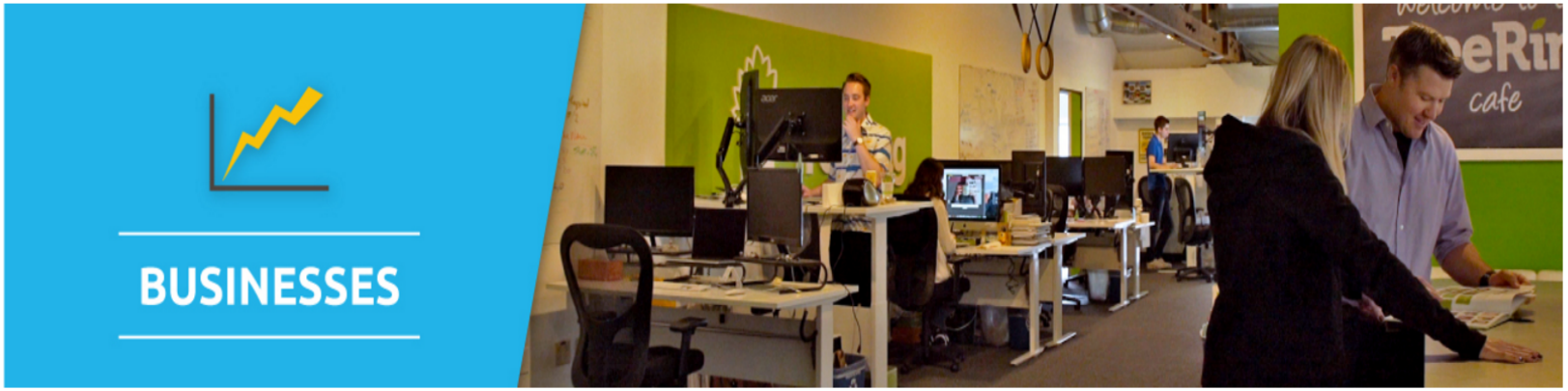
Postcard, poster, web-badge, window cling

Website

EARLY ADOPTER

PENINSULA CLEAN ENERGY

HOME | LEARN MORE | RESIDENTS | BUSINESSES | RATES | ENERGY OPTIONS | RESOURCES



Businesses

Cleaner Energy at Work

If your business is located in San Mateo County, you'll be automatically enrolled with Peninsula Clean Energy (PCE) ECOplus. PCE will help your business meet sustainability goals, and the easiest part is that you won't have to do a thing! PCE is a community choice energy (CCE) program that offers a local option for affordable, renewable energy you can rely on.

The Choice Is Yours

Peninsula Clean Energy offers two product options, each with a different amount of renewable energy.

Stay Connected

With our newsletter, you won't miss a thing!

Sign up to stay connected with Peninsula Clean Energy updates!

* indicates required

Name

Job Title (or "Resident")

Organization (or city of residence)

Email Address *

Workshops

Informational workshops

- 4 workshops + webinars
  - Invitations via chambers/partner newsletters, fliers, links of websites, local press?

- Target audience: Small and medium commercial customers (business owners)

- Goal: Educate local business owners on PCE's benefits and lower rates

- Potential partnerships: Chambers, business organizations, cities

Spread the word: Circulate workshop fliers, invite local business owners, provide PCE staff lists of local businesses, article in your newsletter

Merchant Walks

Merchant walks

- PCE staff and trained volunteers will walk key business corridors and talk to business owners about PCE
  - Host training workshop
  - Provide packet of information - collateral
  - Identify key business corridors

- Target audience: Small and medium commercial customers (business owners)

- Goal: Educate local business owners on PCE's benefits and lower rates

- Potential partnerships: All PCE champions

Spread the word: Volunteer to walk your city/neighborhood, Help us recruit volunteers, Provide list of business corridors, Talk to local business owners

Presentations/Tabling

Presentations/Tabling

- Presentations at business events, business organizations/associations and events targeted at commercial customers
- Continue to table at community events
- 1:1 meetings with large/industrial customers

- Target audience: Small and medium commercial customers (business owners)

- Goal: Increase awareness about and interest in PCE and build brand recognition.

- Potential partnerships: All PCE champions, Cities, Chambers/Business Organizations

Spread the word: Volunteer to table, Notify PCE staff of potential tabling/presentation opportunities (events, board meetings, membership meetings, etc.)

Schools

Schools

- Target audience: K-12 & Universities/community colleges; Private + public
- Goal: Educate local superintendents and CBOs on PCE's benefits and lower rates
- Challenges: Rate sensitivity; Multiple accounts in different locations; Potentially complex rate structures
- Potential partnerships: SMC School Boards Associations, SMC Office of Education, Cities

How you can help:

- Provide PCE staff with a list of business organizations, local businesses and/or business corridors in your area
- Volunteer on a merchant walk in your neighborhood
- Recruit volunteers for merchant walk
- Circulate information for volunteer training and/or business workshops

How you can help:

- Leverage and/or build 1:1 connections with local business owners
- Circulate collateral
- Put an article about PCE in your newsletter
- Notify PCE staff of opportunities to table or provide a presentation

Questions?

Regular Agenda

3. Committee Member Reports

Adjourn

(next meeting August 4th)