

Community Choice Aggregation In California

City of San Diego
Sustainable Energy Advisory Board
June 8, 2017



About EPIC

Research Center

- University of San Diego
- Launched in 2005

Mission

- Conduct Research and Analysis
- Educate Decision Makers and Students

Funding

- Endowment
- Grants and Contracts

What is Community Choice Aggregation?

Comparison of Electric Supply Structures

	Investor-Owned Utility (IOU)
SUPPLY	IOU Generates and Purchases Electricity
DELIVERY	IOU Maintains Transmission and Distribution Grid
BILLING	IOU Provides Billing and Customer Service
RATE SETTING	CPUC Sets Rates
CUSTOMERS AFFECTED	All

Comparison of Electric Supply Structures

	Investor-Owned Utility (IOU)	Direct Access
SUPPLY	IOU Generates and Purchases Electricity	Customer Purchases Directly from Energy Service Provider
DELIVERY	IOU Maintains Transmission and Distribution Grid	IOU Maintains Transmission and Distribution Grid
BILLING	IOU Provides Billing and Customer Service	IOU Provides Billing and Customer Service
RATE SETTING	CPUC Sets Rates	CPUC Sets Rates
CUSTOMERS AFFECTED	All	Opt-In

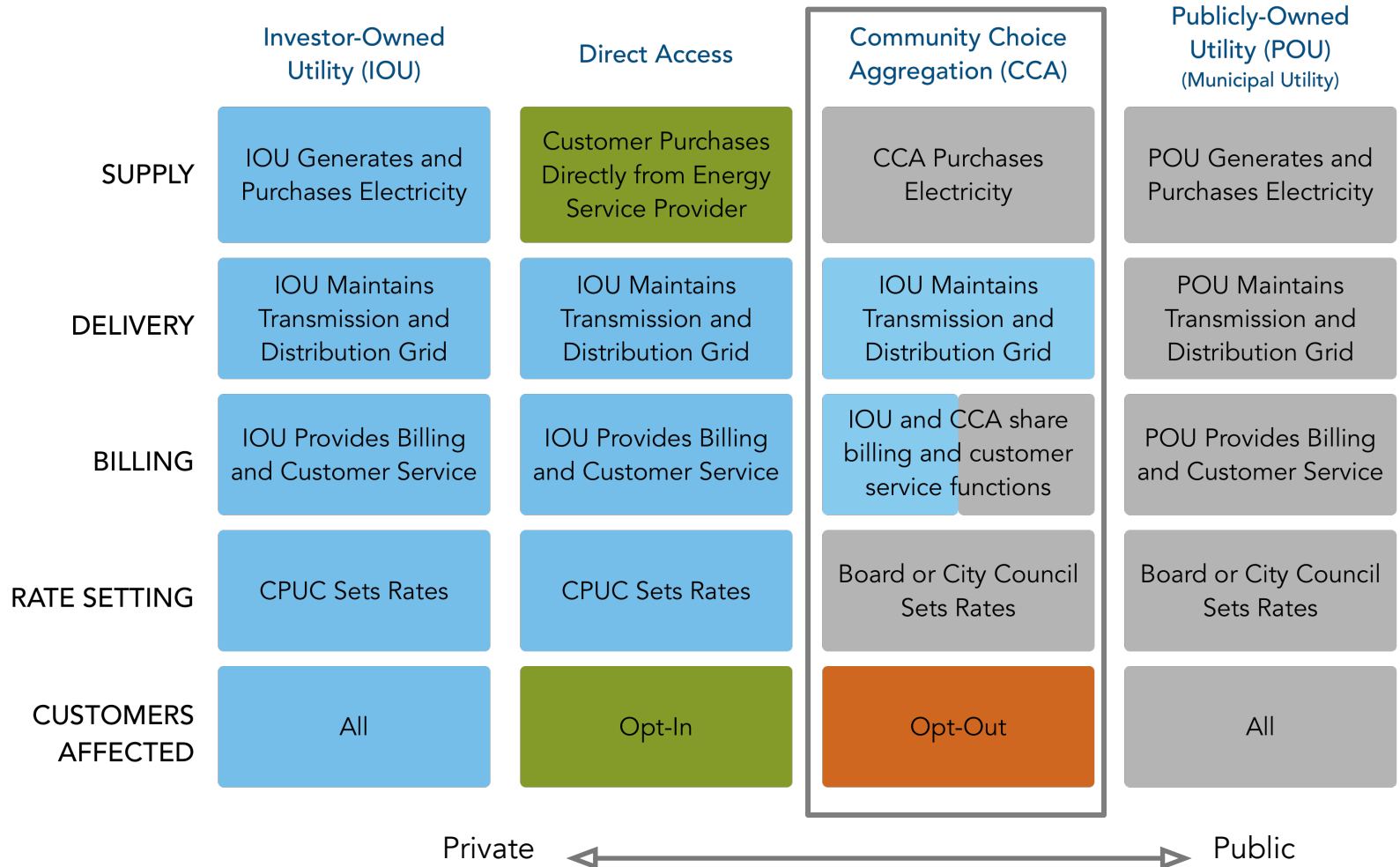
Comparison of Electric Supply Structures

	Investor-Owned Utility (IOU)	Direct Access	Publicly-Owned Utility (POU) (Municipal Utility)
SUPPLY	IOU Generates and Purchases Electricity	Customer Purchases Directly from Energy Service Provider	POU Generates and Purchases Electricity
DELIVERY	IOU Maintains Transmission and Distribution Grid	IOU Maintains Transmission and Distribution Grid	POU Maintains Transmission and Distribution Grid
BILLING	IOU Provides Billing and Customer Service	IOU Provides Billing and Customer Service	POU Provides Billing and Customer Service
RATE SETTING	CPUC Sets Rates	CPUC Sets Rates	Board or City Council Sets Rates
CUSTOMERS AFFECTED	All	Opt-In	All

Comparison of Electric Supply Structures

	Investor-Owned Utility (IOU)	Direct Access	Community Choice Aggregation (CCA)	Publicly-Owned Utility (POU) (Municipal Utility)
SUPPLY	IOU Generates and Purchases Electricity	Customer Purchases Directly from Energy Service Provider	CCA Purchases Electricity	POU Generates and Purchases Electricity
DELIVERY	IOU Maintains Transmission and Distribution Grid	IOU Maintains Transmission and Distribution Grid	IOU Maintains Transmission and Distribution Grid	POU Maintains Transmission and Distribution Grid
BILLING	IOU Provides Billing and Customer Service	IOU Provides Billing and Customer Service	IOU and CCA share billing and customer service functions	POU Provides Billing and Customer Service
RATE SETTING	CPUC Sets Rates	CPUC Sets Rates	Board or City Council Sets Rates	Board or City Council Sets Rates
CUSTOMERS AFFECTED	All	Opt-In	Opt-Out	All

Comparison of Electric Supply Structures



CCA Background

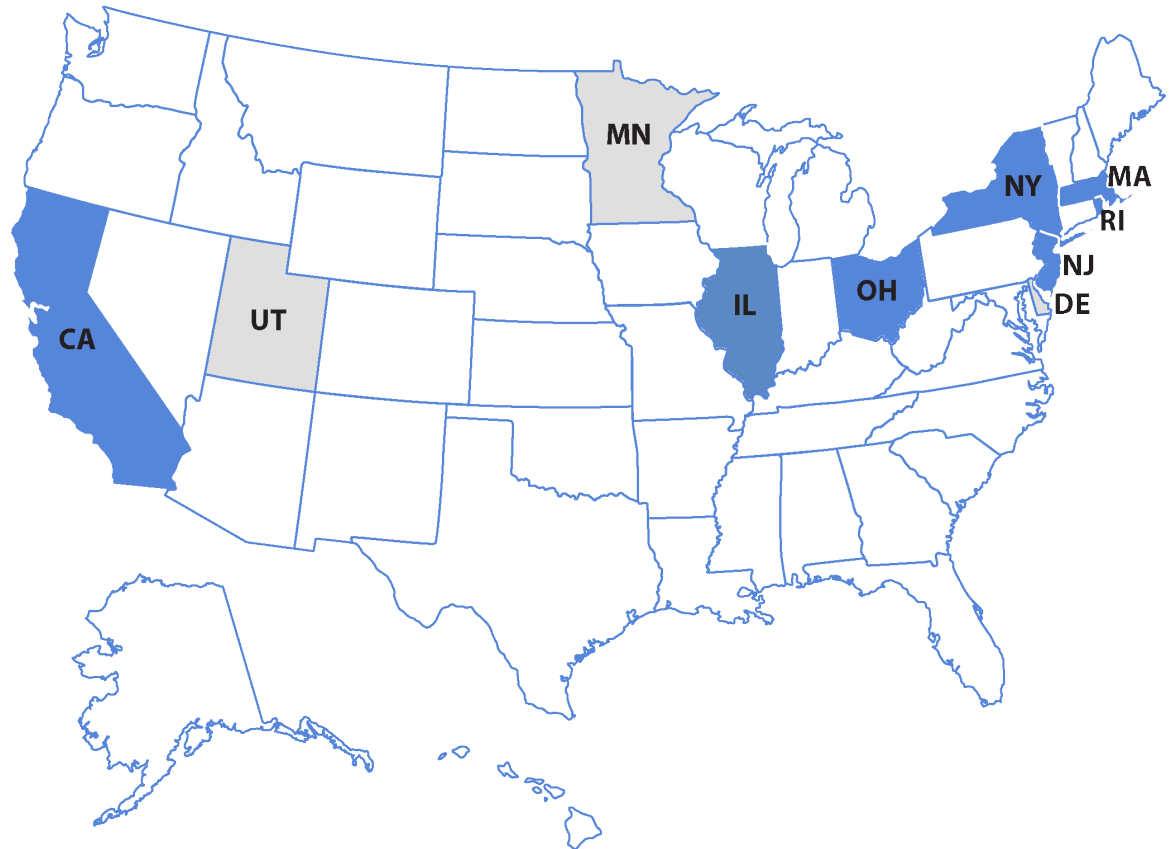
Community Choice Aggregation in the US

Legal in 7 States:

- California
- Illinois
- Massachusetts
- New Jersey
- Ohio
- Rhode island
- New York

Under Consideration in:

- Utah
- Delaware
- Minnesota



Source: Lean Energy U.S.

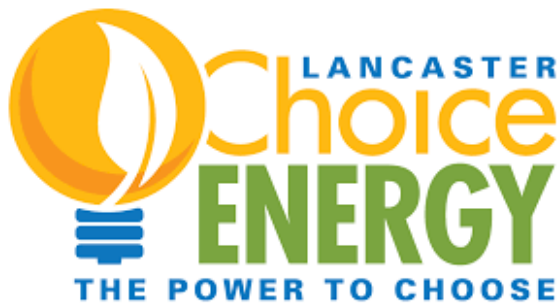
Community Choice Aggregation in CA



2010



2013

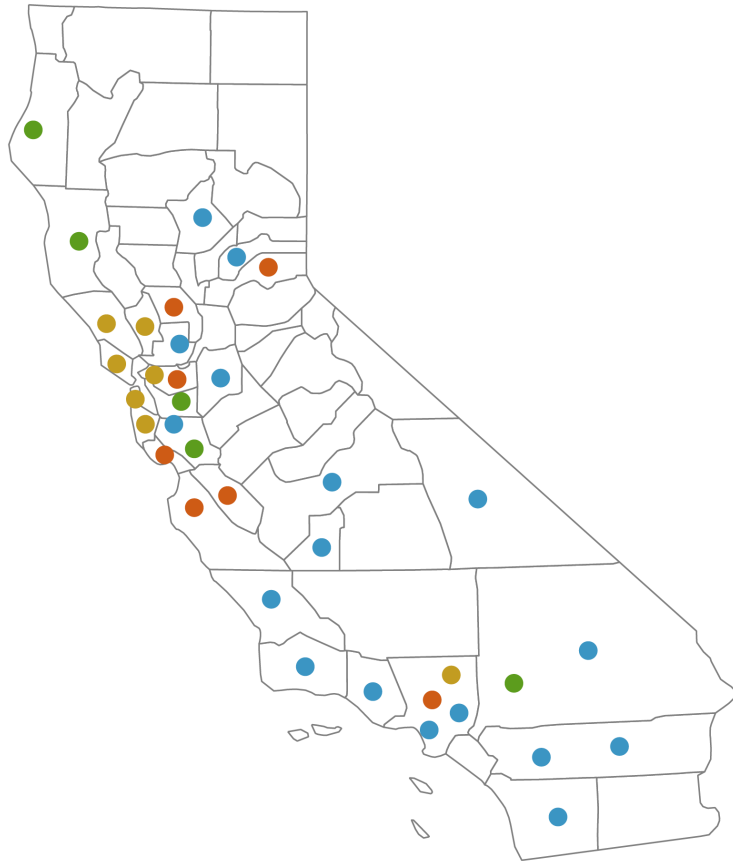


2015



2016

Community Choice Aggregation in CA



● Operational CCA/CCEs

MCE Clean Energy (*includes Marin and Napa Counties, parts of Contra Costa and Solano Counties*)
 Sonoma Clean Power
 Lancaster Choice Energy
 Clean Power San Francisco
 Peninsula Clean Energy (*San Mateo County*)

● 2017 Launch

East Bay Community Energy (*Alameda County*)
 Mendocino County (*as member of Sonoma Clean Power*)
 Redwood Coast Energy Authority (*Humboldt County*)
 Silicon Valley Clean Energy (*Santa Clara County*)
 Town of Apple Valley

● 2018 Launch (anticipated)

Contra Costa County
 Monterey Bay Community Power (*Monterey, Santa Cruz and San Benito Counties*)
 Los Angeles County (*Phase 1*)
 Placer County
 Valley Clean Energy Alliance (*Yolo County and City of Davis*)

● Exploring / In Process

Butte County
 City of Hermosa Beach
 City of Pico Rivera
 City of San Jacinto
 City of San Jose
 Fresno County
 Inyo County
 Kings County
 Nevada County
 Riverside County
 San Bernardino County
 San Diego County
 San Joaquin County
 San Luis Obispo County*
 Santa Barbara County*
 Solano County
 Ventura County*

*Central Coast Tri-County

Community Choice Aggregation Models

Joint Power Authority

- Form new or join existing JPA
- Governed by Board of Directors
- Marin Clean Energy
- Sonoma Clean Power

Enterprise

- Operates as an internal department
- Governed by City Council
- Lancaster Choice Energy

Third Party Operation

- Hire third party to provide turnkey service
- Works with above structures

Community Choice Aggregation in CA

Opt Out Program

- All accounts are automatically enrolled
- Can opt-out
 - Can opt out anytime
 - No fee if in 1st 60 days
 - After 60 days, one time admin fee
- Can opt back in
 - Within first 60 days can opt back in
 - If not, waiting period of 1 year

Regulatory Role of the CPUC

CPUC Has Light Regulatory Touch

- Permits CCA to Enroll New Customers
- CCA Registers with CPUC & Submit Implementation Plan
- Dispute Resolution
- Other Requirements
 - Universal access
 - Reliability
 - Equitable treatment of all customer classes

Regulatory Role of the CPUC

Power Charge Indifference Adjustment (PCIA)

- Charge paid by customers that receive electricity from supplier other than IOU
 - Direct Access
 - Community Choice Aggregation
- Purpose
 - Ensure that costs that the IOU incurred in the past to serve customers now taking service from DA or CCA do not unfairly affect remaining utility customers.
 - Intended to keep bundled customers financial “indifferent” to the departure of DA or CCA customers.

Portfolio Allocation Mechanism (PAM)

- Proposed by investor-owned utilities

CCA Subject to Certain State Regulations

Renewable Portfolio Standard

- CCA must procure a certain percentage of renewable energy
 - 33% by 2020
 - 50% by 2030

Resource Adequacy

- CCA must procure enough energy to serve customers and provide a contingency reserve of 15%

Energy Storage

- CCA must procure energy storage as required by AB 2514 and subsequent legislation

Electric Rates

CCAs Set Electric Rates

- Internal analysis by staff and/or consultants
- Approved by board or city council
- Subject to applicable CPUC regulations
- PCIA is an important factor
- Other factors
 - Operational costs
 - Amount of electricity procured
 - Term of contract
 - Type of resource
 - Level of market purchases

CCA Electric Rates in CA - Residential

Sample **Residential** Cost Comparison

Typical Monthly Electric Charges*

PG&E (Opt Out)	MCE Light Green	MCE Deep Green
30% <small>renewable energy**</small>	52% <small>renewable energy**</small>	100% <small>renewable energy**</small>
\$54.25 PG&E Electric Delivery	\$54.25 PG&E Electric Delivery	\$54.25 PG&E Electric Delivery
\$43.78 Electric Generation	\$30.26 Electric Generation	\$34.71 Electric Generation
– Additional PG&E Fees	\$13.25 Additional PG&E Fees	\$13.25 Additional PG&E Fees
\$98⁰³ <small>avg. total cost</small>	\$97⁷⁶ <small>avg. total cost</small>	\$102²¹ <small>avg. total cost</small>
OPT FOR 30% RENEWABLE	ENROLL IN 52% RENEWABLE	ENROLL IN 100% RENEWABLE

*Based on a typical usage of 445 kWh at current PG&E rates and MCE rates effective as of April 1, 2017 under the E-1 rate schedule. Actual differences may vary depending on usage, rate schedule, and other factors. Estimate provided is an average of seasonal rates.

**Renewable energy content as reported in the [Annual Report to the California Energy Commission Power Source Disclosure Program](#) in June 2016.

CCA Electric Rates in CA - Residential

Sample **Commercial** Cost Comparison

Typical Monthly Electric Charges*

PG&E (Opt Out)	MCE Light Green	MCE Deep Green
30% <small>renewable energy**</small>	52% <small>renewable energy**</small>	100% <small>renewable energy**</small>
\$163.06 PG&E Electric Delivery	\$163.06 PG&E Electric Delivery	\$163.06 PG&E Electric Delivery
\$121.03 Electric Generation	\$92.75 Electric Generation	\$105.20 Electric Generation
– Additional PG&E Fees	\$28.19 Additional PG&E Fees	\$28.19 Additional PG&E Fees
\$284⁰⁹ <small>avg. total cost</small>	\$284⁰⁰ <small>avg. total cost</small>	\$296⁴⁵ <small>avg. total cost</small>
OPT FOR 30% RENEWABLE	ENROLL IN 52% RENEWABLE	ENROLL IN 100% RENEWABLE

*The above comparison is based on a typical usage of 1,245 kWh at current PG&E rates and MCE rates effective as of April 1, 2017 under the A-1 rate schedule. Costs shown are an average of summer and winter rates. Actual differences may vary depending on usage, rate schedule, and other factors.

**Renewable energy content as reported in the Annual Report to the California Energy Commission Power Source Disclosure Program in June 2016.

CCA Electric Rates in CA - Residential

Example Residential Electric Charges	PG&E	CleanStart	EverGreen
Based on a home using 510 kWh per month on the E-1 rate			
	30% Renewable Energy	36% Renewable Energy	100% Renewable Energy
Electric Generation (all customers)	\$49.33	\$36.21	\$54.06
PG&E Electric Delivery (all customers)	\$71.03	\$71.03	\$71.03
Additional PG&E Fees (SCP customers only)	\$0.00	\$12.16	\$12.16
Average Total Cost	\$120.39	\$119.43	\$137.29

Effective starting March 24, 2016.

Renewable energy is based on 2015 data, provided in the "Annual Report to the California Energy Commission: Power Source Disclosure Program," excluding voluntary unbundled renewable energy credits. PG&E data is subject to an independent audit and verification that will not be completed until October 1, 2016. The Power Content comparison, linked at left, contains a detailed breakdown of 2015 data for PG&E and SCP.

CCA Electric Rates in CA - Residential

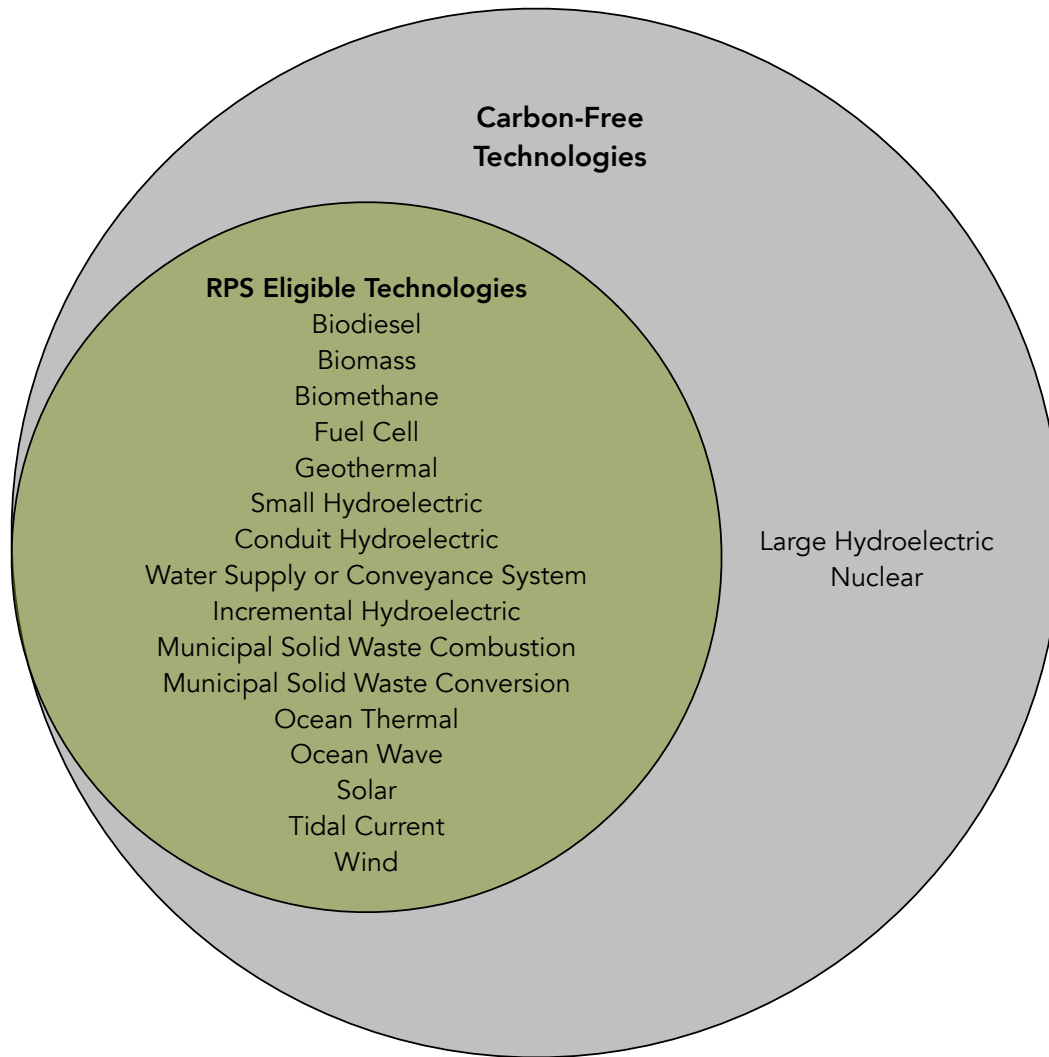
Example Commercial Electric Charges	PG&E	CleanStart	EverGreen
Based on a business using 1,372 kWh per month on the A-1 rate			
	30% Renewable Energy	36% Renewable Energy	100% Renewable Energy
Electric Generation (all customers)	\$133.23	\$104.75	\$152.77
PG&E Electric Delivery (all customers)	\$177.69	\$177.69	\$177.69
Additional PG&E Fees (SCP customers only)	\$0.00	\$25.44	\$25.44
Average Total Cost	\$310.98	\$307.93	\$355.96

Effective starting March 24, 2016.

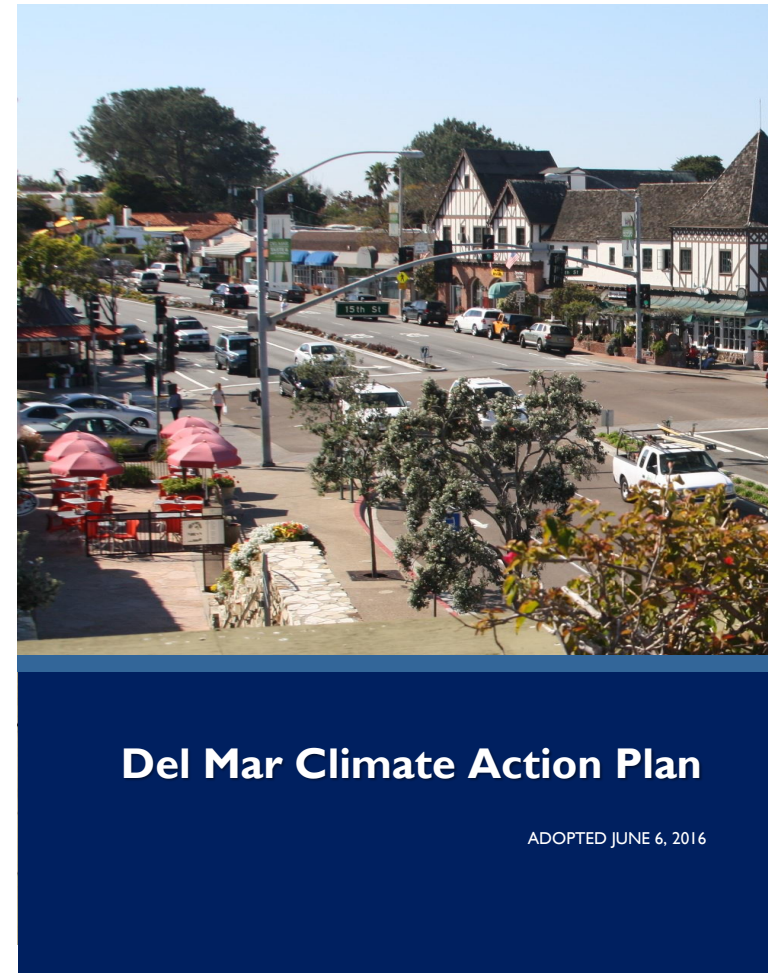
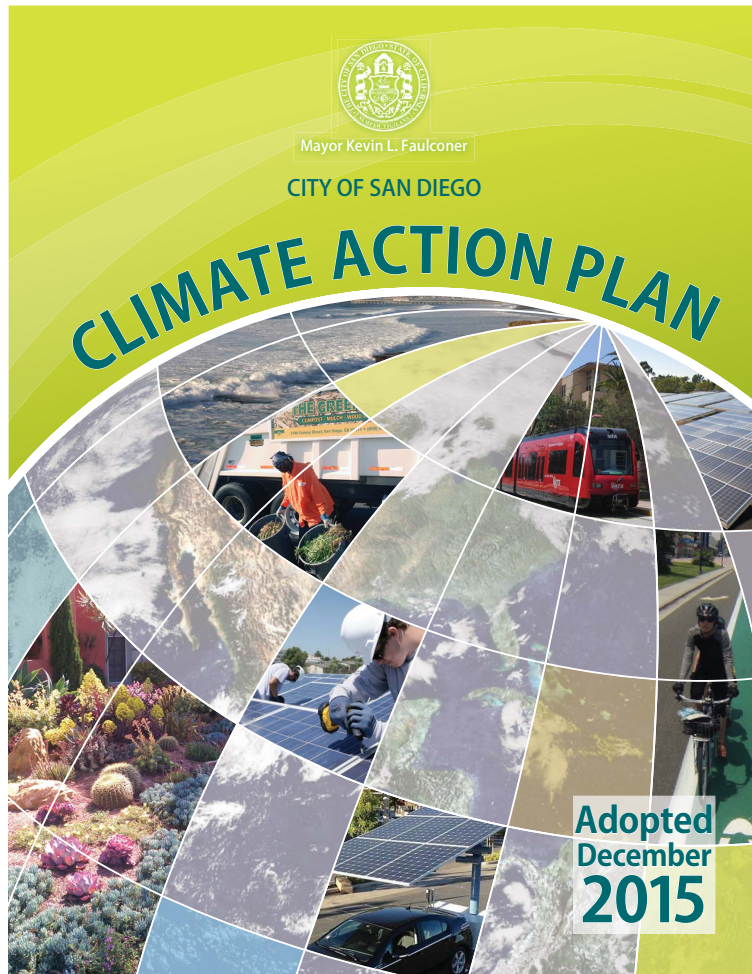
Renewable energy is based on 2015 data, provided in the "Annual Report to the California Energy Commission: Power Source Disclosure Program," excluding voluntary unbundled renewable energy credits. PG&E data is subject to an independent audit and verification that will not be completed until October 1, 2016. The Power Content comparison, linked at left, contains a detailed breakdown of 2015 data for PG&E and SCP.

Clean Energy

Renewable vs. Carbon Free



Climate Action Plans



Other Resources/Events

CPUC En Banc Hearing

- February 2017
- Video of event available
- Excellent overview of issues and perspectives

CPUC and CEC En Banc on Customer Choice

- Friday, May 19, 2017, 8:45 a.m. - 5 p.m.
- CalEPA Building, 1001 I St., Sacramento
- www.cpuc.ca.gov/retailchoiceenbanc

Scott Anders
scottanders@sandiego.edu
619-260-4589

