Community Choice Aggregation

A Local Energy Model to Green the Grid, Provide Customer Choice and Boost Local Economies

April 16, 2015

City of Brisbane

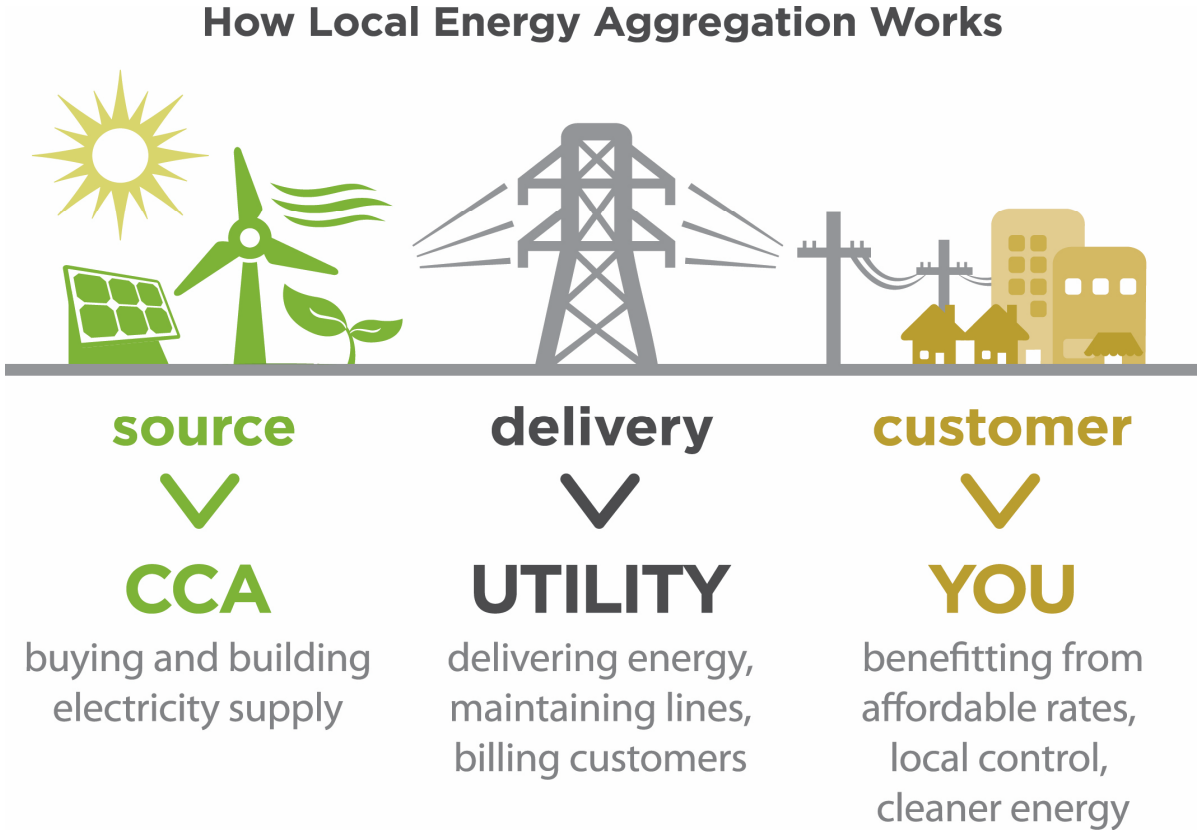
Presented by: Seth Baruch, Carbonomics Inc.

LEAN ENERGY U.S.
Local Energy Aggregation Network

How Does It Work?

CCA leverages the market power of group purchasing and local control.

CCA allows communities to pool their electricity demand in order to purchase and potentially develop power on behalf of local residents, businesses, and municipal facilities.



Why is CCA So Powerful?



- Responsive to *local* environmental and economic goals
- Offers consumers a choice where none currently exists
- Revenue supported, not taxpayer subsidized
- Stable, often cheaper, electricity rates
- Allows for rapid switch to cleaner power supply and significant GHG reductions
- Provides funding source for energy efficiency and innovative energy programs like energy storage and EV charging stations

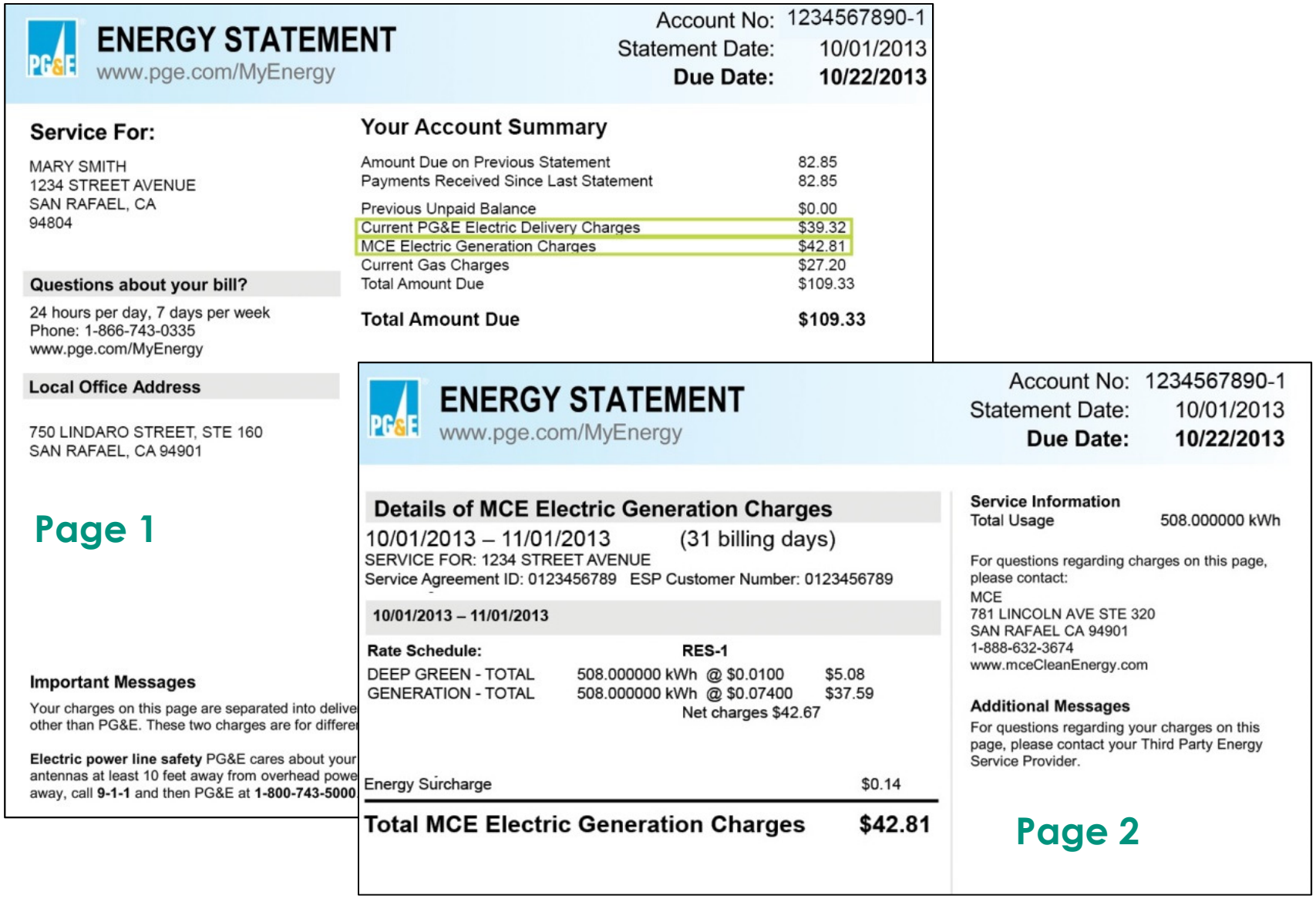
Basic Program Features

"CCA: The Biggest Change You'll Never Notice"

- Formation of Joint Powers Agency in San Mateo County: Local governments participate by passing an ordinance
- Utility (PG&E) continues to provide consolidated billing, customer service, line maintenance
- CCA electric generation charges (including exit fee) appear as new line items on the customer bill; all other charges remain the same
- CCA becomes default electric provider. Customers receive a *minimum* 4 opt-out notices over 120 days and *can return to PG&E service any time*.
- CPUC certifies CCA Plan; oversees utility/ CCA relationship and other requirements.



Sample Energy Bill – Marin Clean Energy



ENERGY STATEMENT
www.pge.com/MyEnergy

Account No: 1234567890-1
Statement Date: 10/01/2013
Due Date: 10/22/2013

Service For:

MARY SMITH
1234 STREET AVENUE
SAN RAFAEL, CA
94804

Questions about your bill?

24 hours per day, 7 days per week
Phone: 1-866-743-0335
www.pge.com/MyEnergy

Local Office Address

750 LINDARO STREET, STE 160
SAN RAFAEL, CA 94901

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Important Messages

Your charges on this page are separated into delive
other than PG&E. These two charges are for differe

Electric power line safety PG&E cares about your
antennas at least 10 feet away from overhead powe
away, call **9-1-1** and then PG&E at **1-800-743-5000**

Your Account Summary

Amount Due on Previous Statement	82.85
Payments Received Since Last Statement	82.85
Previous Unpaid Balance	$0.00
Current PG&E Electric Delivery Charges	$39.32
MCE Electric Generation Charges	$42.81
Current Gas Charges	$27.20
Total Amount Due	$109.33
Total Amount Due	**$109.33**

ENERGY STATEMENT
www.pge.com/MyEnergy

Account No: 1234567890-1
Statement Date: 10/01/2013
Due Date: 10/22/2013

Details of MCE Electric Generation Charges

10/01/2013 – 11/01/2013 (31 billing days)
SERVICE FOR: 1234 STREET AVENUE
Service Agreement ID: 0123456789 ESP Customer Number: 0123456789

10/01/2013 – 11/01/2013

Rate Schedule:	**RES-1**	
DEEP GREEN - TOTAL	508.000000 kWh @ $0.0100	$5.08
GENERATION - TOTAL	508.000000 kWh @ $0.07400	$37.59
	Net charges $42.67	
Energy Surcharge		$0.14
Total MCE Electric Generation Charges		**$42.81**

Service Information
Total Usage 508.000000 kWh

For questions regarding charges on this page, please contact:
MCE
781 LINCOLN AVE STE 320
SAN RAFAEL CA 94901
1-888-632-3674
www.mceCleanEnergy.com

Additional Messages

For questions regarding your charges on this page, please contact your Third Party Energy Service Provider.

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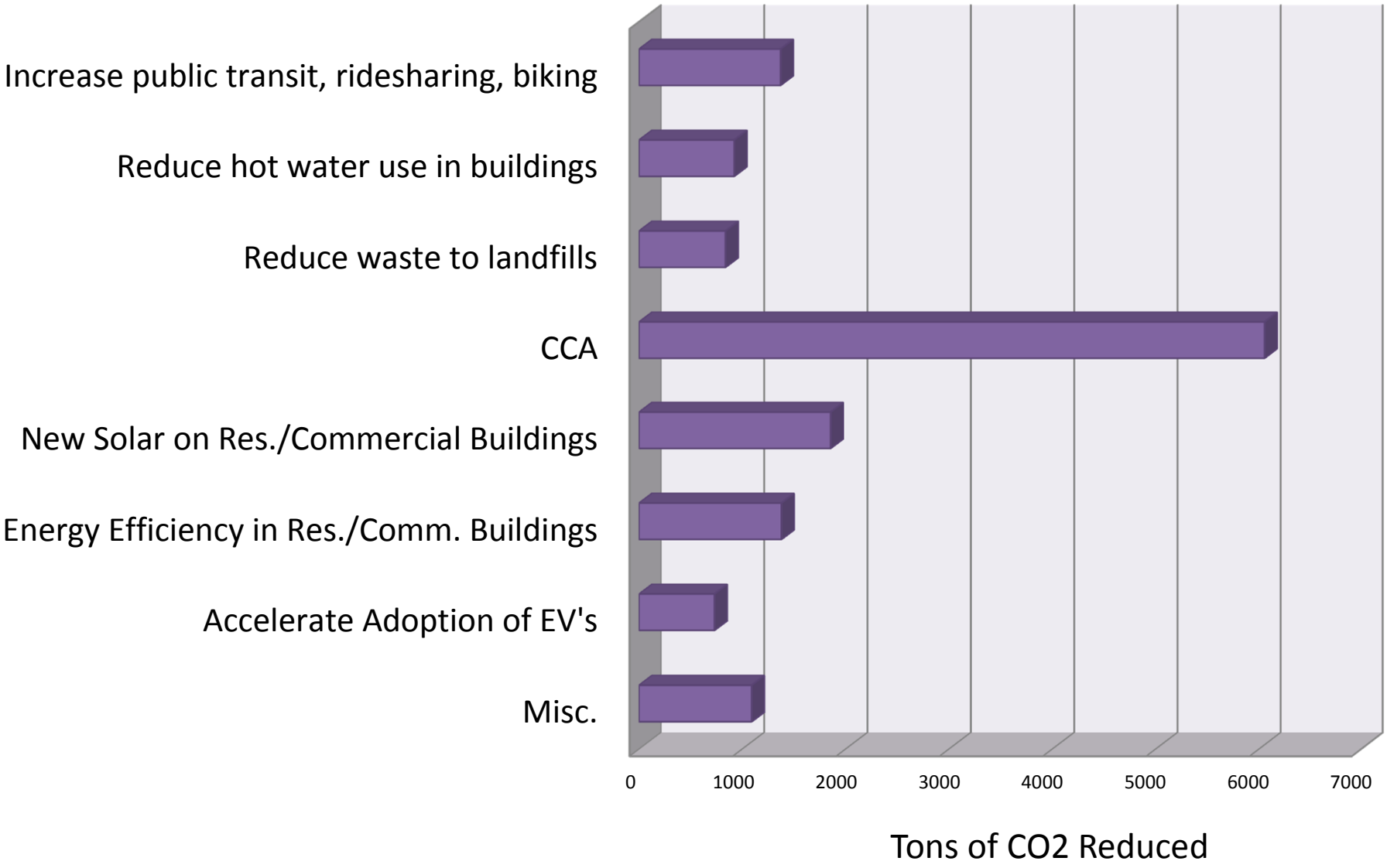
CCA Supercharges GHG Reductions

Excerpt from Town of San Anselmo's CAP (2010)



Case Study – Marin Clean Energy



- May 2010: service starts for Phase I customers
- Service area includes Marin County, unincorporated Napa County, and the cities of Benicia, El Cerrito, Richmond and San Pablo
- 17-Member Board of Directors
- 177 MW new renewable energy in development for MCE customers, including 20 MW of local solar (enough clean power for 85,000 homes)
- 131 million pounds of GHG reductions to date (2010-2013 reporting periods)
- 1,800 jobs created/supported by MCE; most in construction sector

2015 MCE Residential Cost Comparison

508 kWh E-1/Res-1	PG&E 22%	MCE Light Green 50%	MCE Deep Green 100%	MCE Local Solar 100%
Delivery	$44.37	$44.37	$44.37	$44.37
Generation	$49.50	$40.13	$45.21	$72.14
PG&E Fees	-	$6.27	$6.27	$6.27
Total Cost	**$93.87**	**$90.77**	**$95.85**	**$122.78**

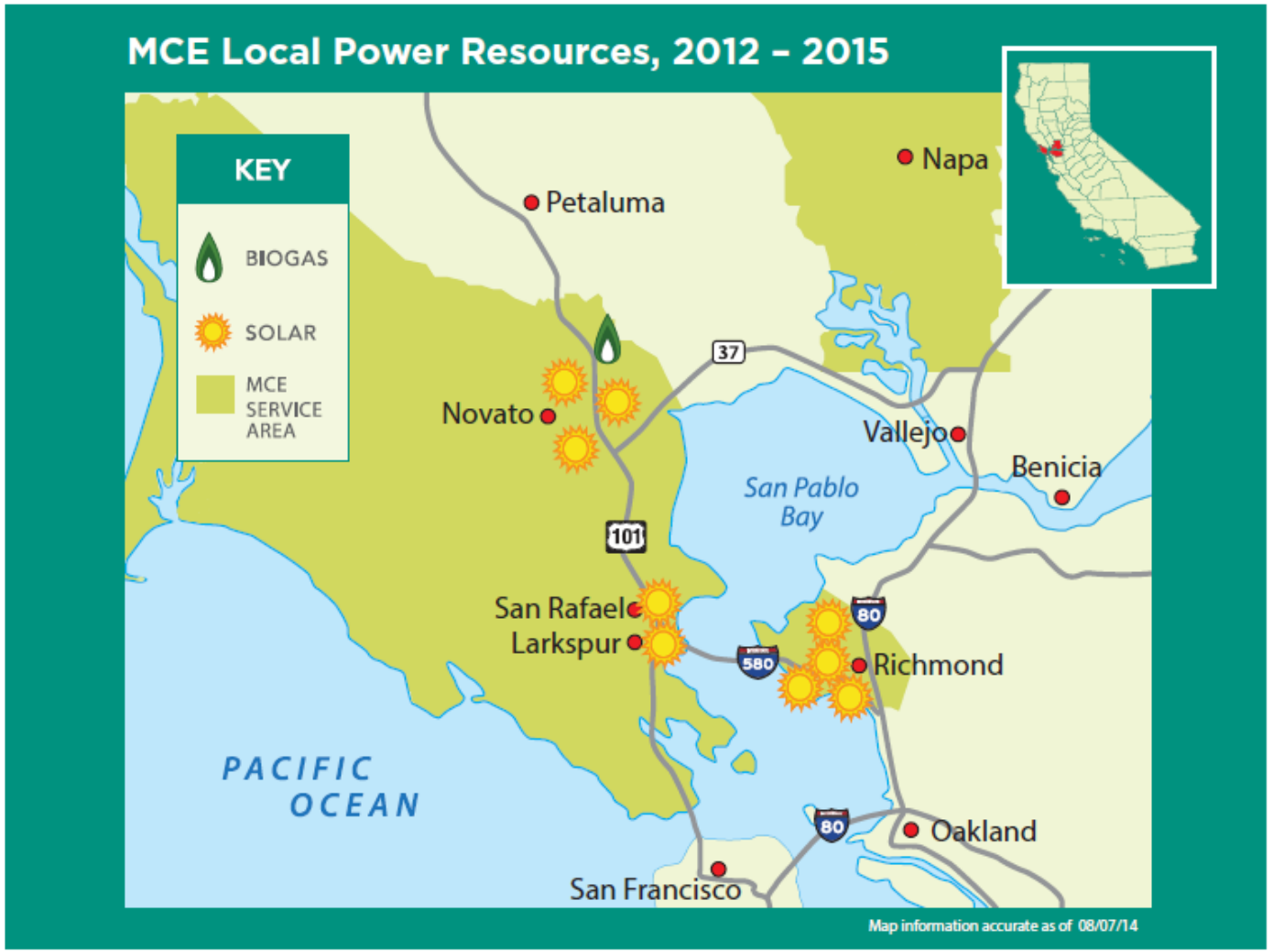
- Delivery rates stay the same
- Generation rates vary by service option
- PG&E adds exit fees on CCA customer bills
- Even with exit fees, total cost for Light Green is less than PG&E

2015 MCE Commercial Cost Comparison

1,405 kWh A-1/Com-1	PG&E 22%	MCE Light Green 50%	MCE Deep Green 100%	MCE Local Solar 100%
Delivery	$154.70	$154.70	$154.70	$154.70
Generation	$142.54	$111.00	$125.05	$199.51
PG&E Fees	-	$15.45	$15.45	$15.45
Total Cost	**$297.24**	**$281.15**	**$295.20**	**$369.66**

- Delivery rates stay the same
- Generation rates vary by service option
- PG&E adds exit fees on CCA customer bills
- Even with exit fees, total cost for Light Green *and* Dark Green is less than PG&E

CCA Facilitates Local Renewable Power



Sonoma Clean Power



- May/December 2014: service starts for 22,000 commercial customers; December roll out to 140,000 residential customers
- SCP has 11% opt out rate so far, and projects about 15% over time.
- SCP customers are saving $6M in first year of program
- 100% renewable product sourced from Calpine/local geo- thermal plant
- 70MWs plus 12.5 MW new solar project with County water agency for solar on floating docks in irrigation holding pond

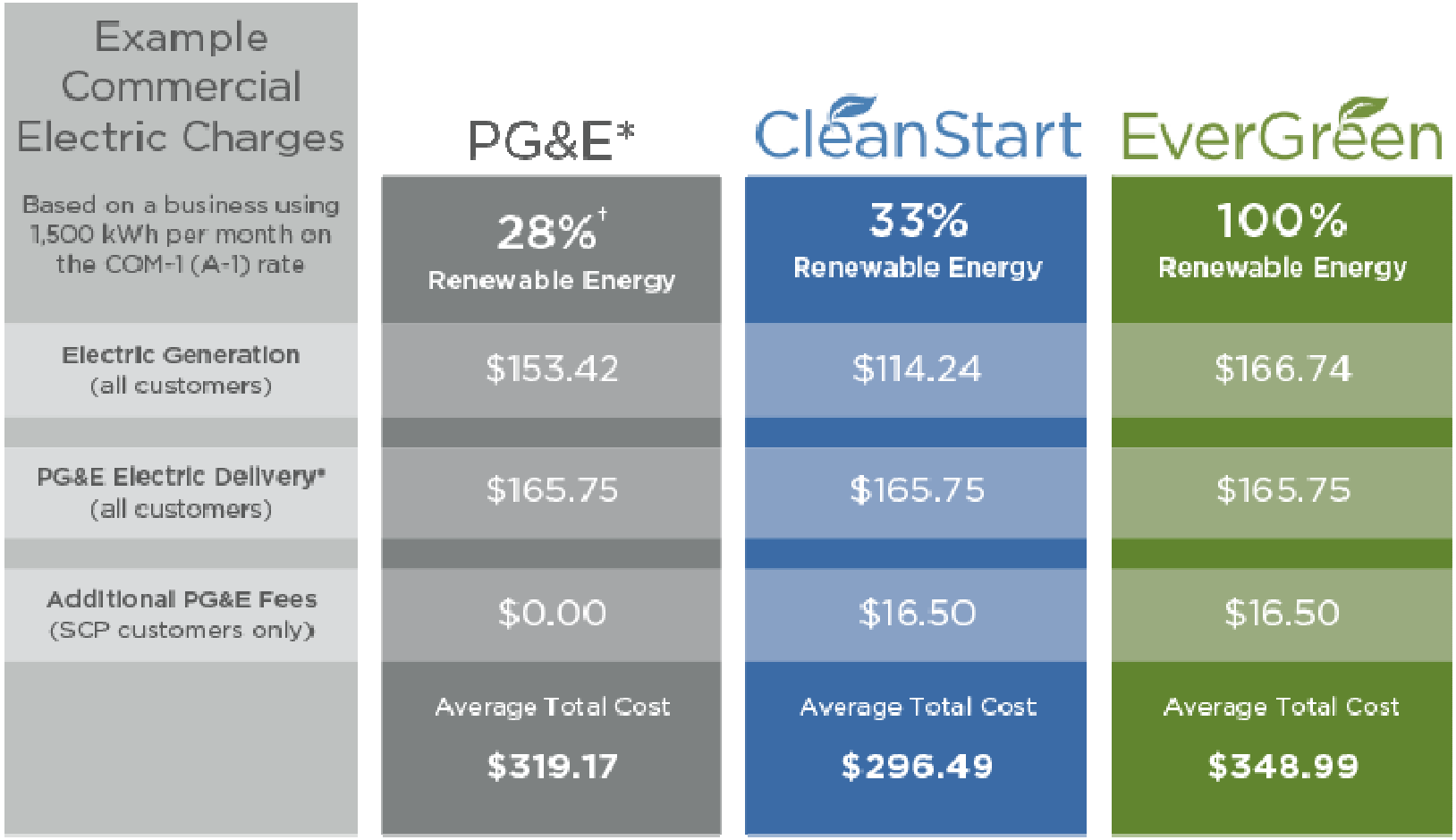
2015 Residential Cost Comparison



Example Residential Electric Charges Based on a home using 500 kWh per month on the RES-1 (E-1) rate	PG&E*	CleanStart	EverGreen
	28%† Renewable Energy	33% Renewable Energy	100% Renewable Energy
Electric Generation (all customers)	$48.73	$35.50	$53.00
PG&E Electric Delivery* (all customers)	$58.85	$58.85	$58.85
Additional PG&E Fees (SCP customers only)	$0.00	$6.17	$6.17
	Average Total Cost **$107.57**	Average Total Cost **$100.52**	Average Total Cost **$118.02**

*PG&E fees are calculated by Sonoma Clean Power using rate data provided by PG&E effective on January 1, 2015.

2015 Commercial Cost Comparison



Example Commercial Electric Charges Based on a business using 1,500 kWh per month on the COM-1 (A-1) rate	PG&E*	CleanStart	EverGreen
	28%† Renewable Energy	33% Renewable Energy	100% Renewable Energy
Electric Generation (all customers)	$153.42	$114.24	$166.74
PG&E Electric Delivery* (all customers)	$165.75	$165.75	$165.75
Additional PG&E Fees (SCP customers only)	$0.00	$16.50	$16.50
	Average Total Cost **$319.17**	Average Total Cost **$296.49**	Average Total Cost **$348.99**

*PG&E fees are calculated by Sonoma Clean Power using rate data provided by PG&E effective on January 1, 2015.

CCA: What are the Risks…

And how are they mitigated?



Rate Competition/Market Fluctuation: Power market expertise and well crafted power RFPs are essential; Long and short term contracts; Diversified supply portfolio, power asset ownership and "value add" programs.



Customer Opt-Out: Competitive rates are a must; Articulate additional consumer and community benefits;
Opt-outs in CA typically in 10%-20% range.



Political: Align CCA to local policy objectives; Appeal to both progressive and conservative minds by making the environmental AND business case; Robust community engagement is essential



Regulatory/Legislative: PUC decisions may adversely affect CCA, and proposed bills (eg: AB 2145) can change the original statute; Participate in the regulatory and legislative process.

CCA in San Mateo County

- Countywide Technical Study (all 20 cities participating)
- Residential, Business, and City Outreach
- Countywide Advisory Committee
  - First meeting May 28, 2015
- Back to Board of Supervisors in late August



CCA Technical Study: What Will We Learn?

- Overall size of the program (megawatt hours and peak demand levels)
- Forecasted demand into the future
- Resource availability and other compliance issues
- Ability to be rate competitive given short and medium term market conditions
- Development of different power supply scenarios and their impact on GHGs, jobs created, etc.
- Robust risk analysis

Next Steps in San Mateo County

- Countywide Technical Study (all 20 cities participating)
  - Underway in May/June
- Business/Commercial Outreach
- Countywide Steering Committee
  - First meeting in May
- Back to Board of Supervisors in late August, 2015



NOW is the time to take control of your local energy future.

CCA is the path forward.

For More Information…

County of San Mateo, Office of Sustainability

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LEAN Energy US

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sbaruch@carbonomicsonline.com