Community Choice Aggregation (CCA) Workshop

January 29, 2018

Outline

- CCA Overview
- Update on Schedule
- Financial Outlook
- Priorities
- Procurement Plans
- Reserves Strategies
- Net Energy Metering

What is a CCA?

SOURCE	DELIVERY	CUSTOMER
CCE Operator	**Investor Owned Utility**	**You**
buys and builds cleaner energy supplies	delivers energy, repairs lines	choice, cleaner energy, local control and competitive rates

Community Choice Aggregation is a local, not-for-profit governmental program that buys and may generate electrical power on behalf of its residents, businesses, and governmental entities.

CALPINE ENERGY SOLUTIONS · TEA The Energy Authority

History of CCA

- 2002 - AB 117
  - Customers automatically enrolled in program
  - Can "opt-out" and remain with the IOU
- 2011 – SB 790
  - Established the IOU Code of Conduct
- 2012 – 1st CCA Launch
  - Marin Clean Energy (MCE)

Current Schedule

Task	Date
Finalize Implementation Plan and Submit to Council for Approval; File with CPUC	November 2017
Billing System Testing with SDG&E	January – May 2018
Create Terms & Conditions and setup Call Center	January - March 2018
CPUC Certifies Implementation Plan	February 2018
Complete Initial Power Procurement	February/March 2018
Finalize Program Budget, NEM Tariff and Approve Rates	March 2018
Send First Enrollment Notices	April 2018
Send Second Enrollment Notices	May 2018
Program Launch	June 2018

- Community Engagement/Outreach to occur throughout the process
- Council/Board to be engaged in public meetings to determine program structure, rates, local programs, etc.

Financial Update

- SDG&E Published New Rates in January
- Rates were significantly ↑ from 2017

➔ Currently forecast greater financial flexibility for new CCA

SDGE

San Diego Gas & Electric Company
San Diego, California

Revised Cal. P.U.C. Sheet No. 29903-E
Canceling Revised Cal. P.U.C. Sheet No. 29682-E

SCHEDULE DR Sheet 1

RESIDENTIAL SERVICE
(Includes Rates for DR-LI)

APPLICABILITY

Applicable to domestic service for lighting, heating, cooking, water heating, and power, or combination thereof, in single family dwellings, flats, and apartments, separately metered by the utility; to service used in common for residential purposes by tenants in multi-family dwellings under Special Condition 8; to any approved combination of residential and nonresidential service on the same meter; and to incidental farm service under Special Condition 7.

This schedule is also applicable to customers qualifying for the California Alternate Rates for Energy (CARE) Program and/or Medical Baseline, residing in single-family accommodations, separately metered by the Utility, and may include Non-profit Group Living Facilities and Qualified Agricultural Employee Housing Facilities, if such facilities qualify to receive service under the terms and conditions of Schedule E-CARE. The rates for CARE and Medical Baseline customers are identified in the rates tables below as DR-LI and DR-MB rates, respectively.

Customers on this schedule may also qualify for a semi-annual California Climate Credit $(33.50) per Schedule GHG-ARR.

TERRITORY

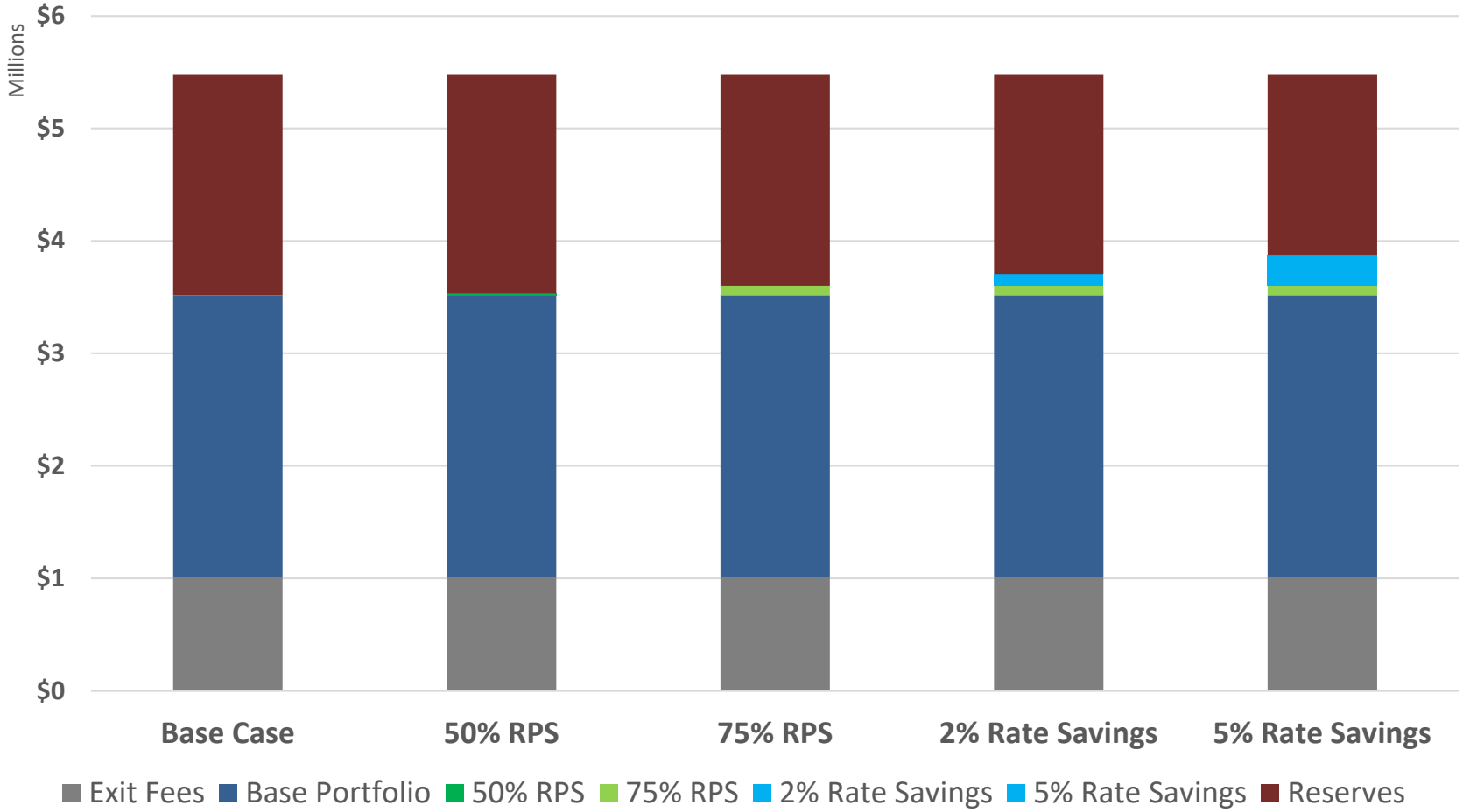
Within the entire territory served by the Utility.

RATES

Total Rates:

Description - DR Rates	UDC Total Rate		DWR-BC Rate	EECC Rate + DWR Credit		Total Rate	
Summer:							
Up to 130% of Baseline Energy ($/kWh)	0.09311	I	0.00549	0.17244	R	0.27104	I
131% - 400% of Baseline ($/kWh)	0.29722	I	0.00549	0.17244	R	0.47515	I
Above 400% of Baseline ($/kWh)	0.37568	I	0.00549	0.17244	R	0.55361	I
Winter:							
Up to 130% of Baseline Energy ($/kWh)	0.15406	I	0.00549	0.07075	R	0.23030	I

2018 Scenario Expenditures



Current 2018 Headroom Projection*

Rate/Cost	$/MWh	$
SDG&E Gen Rate	$139.67	$5,476,527
PCIA + FF	$25.78	$1,010,880
50% RPS Portfolio	$65.08	$2,551,896
5% Rate Discount	$6.91	$270,884
+25% RPS	$1.65	$64,637
Reserves	**$40.25**	**$1,578,230**

**Likely to change due to market price & load variability*

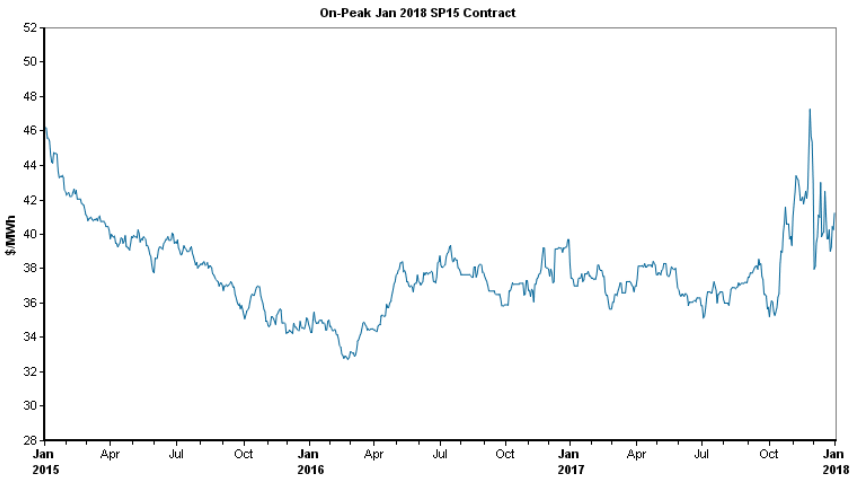
Financial Risks

Exit Fee Uncertainty

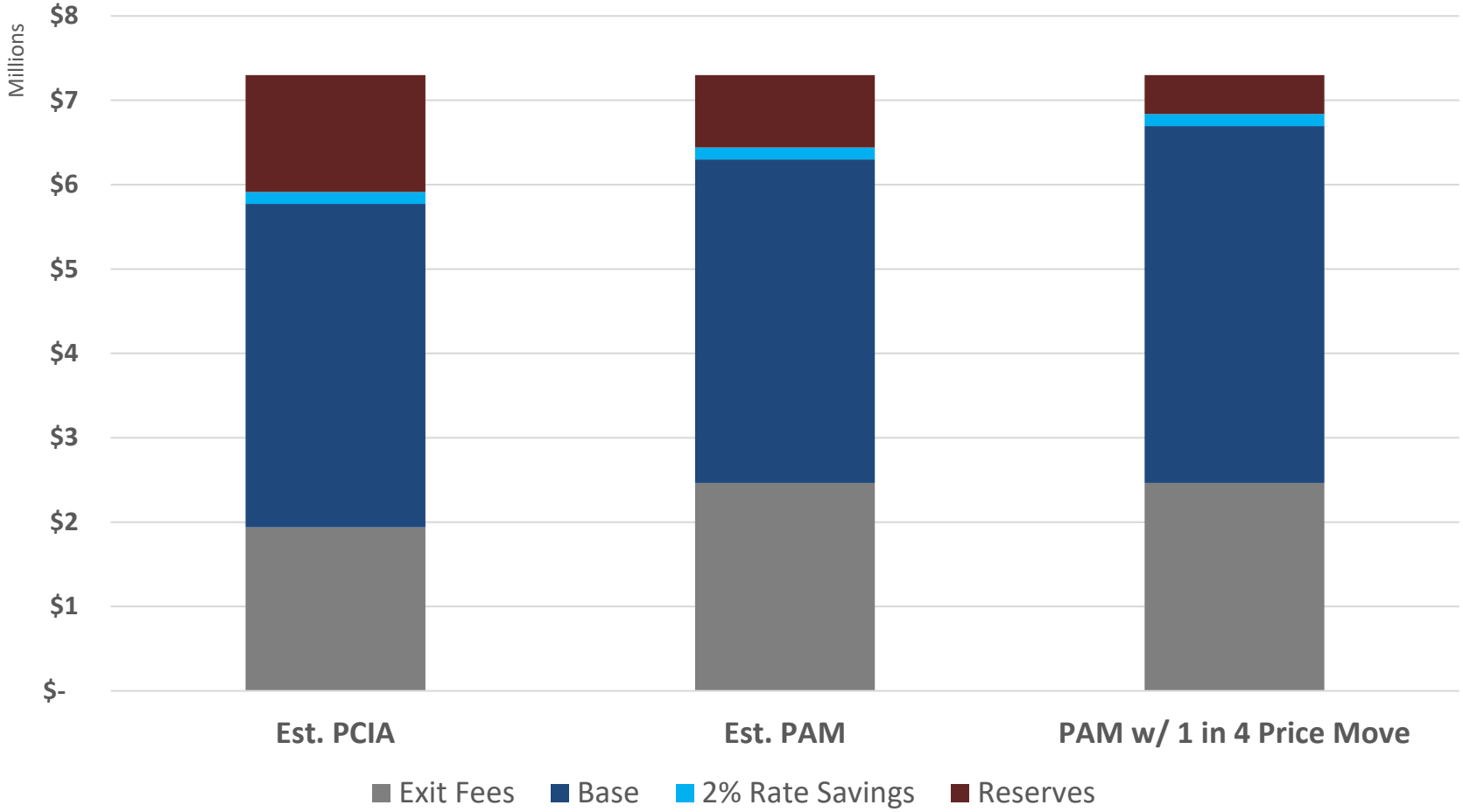
- Regulatory Process at CPUC
- Utilities have proposed Portfolio Allocation Mechanism (PAM)
- Would Allocate Costs and Some Attributes of Utility Portfolios to CCAs
- Would Result in ↑ in effective Exit Fees paid by CCA Customers

Energy Markets are Volatile

- Can Lead to Large Swings in CCA Costs



2019 Scenario Expenditures



Program Decisions

Green
- Renewable Content
- Low GHG Supply

Rates
- Overall Discount
- NEM Credit

Reserves
- Buffer for Uncertainty
- Capital for Future Investment

Portfolio Management Process

Objectives

Reassess Annually

Financial Situation

Community Input

Policies

Energy Risk Management

- Decision Making Authority
- Limits on What, When, Who

Operations

Procurement

Monitor Performance & Industry

Actively Adjust

Energy Risk Management Policy

- Document policy goals guiding procurement
  - Maintain rate competitiveness with SDG&E
  - Target to build financial reserves during early years of the program
- Document the framework by which Solana Beach will:
  - Identify and quantify risks
  - Develop and execute procurement strategies
  - Create a framework of controls and oversight
  - Monitor, measure and report on risk

Portfolio Management Process

Annually

- Decide on portfolio strategy

Monthly

- Review current status
- Adjust as Needed

Quarterly

- Meet with Staff
- Update Council

Procurement

Product	Hub	Strip	Begin ...	End Date	+/-	Sell	B Qty	Bid	Offer	O Qty	Bo
Peak Futures (25 MW)	SP15 DA	Feb18	1Feb18	28Feb18	+		25	34.50	35.00	25	
Peak Futures (25 MW)	SP15 DA	Mar18	1Mar18	31Mar18	+		25	27.75	29.75	25	
Peak Futures (25 MW)	SP15 DA	Apr18	1Apr18	30Apr18	+		25	23.75	25.00	25	
Peak Futures (25 MW)	SP15 DA	May18	1May18	31May18	+		25	24.00	26.50	25	
Peak Futures (25 MW)	SP15 DA	Jun18	1Jun18	30Jun18	+		25	32.50	33.75	25	
Peak Futures (25 MW)	SP15 DA	Jul18	1Jul18	31Jul18			25	38.00	42.00	25	
Peak Futures (25 MW)	SP15 DA	Aug18	1Aug18	31Aug18			25	39.00	42.50	25	
Peak Futures (25 MW)	SP15 DA	Sep18	1Sep18	30Sep18			25	37.50			
Peak Futures (25 MW)	SP15 DA	Q2 18	1Apr18	30Jun18	+		25	26.50	28.00	25	
Peak Futures (25 MW)	SP15 DA	Q3 18	1Jul18	30Sep18	+		25	39.00	39.75	25	
Peak Futures (25 MW)	SP15 DA	Q4 18	1Oct18	31Dec18	+		25	35.00	37.00	25	
Peak Futures (25 MW)	SP15 DA	Q1 19	1Jan19	31Mar19	+		25	34.50	36.00	25	
Peak Futures (25 MW)	SP15 DA	Q2 19	1Apr19	30Jun19	+		25	25.50	27.00	25	
Peak Futures (25 MW)	SP15 DA	Q3 19	1Jul19	30Sep19	+		25	38.25	38.50	25	
Peak Futures (25 MW)	SP15 DA	Q4 19	1Oct19	31Dec19			25	34.00	36.75	25	
Peak Futures (25 MW)	SP15 DA	Cal 19	1Jan19	31Dec19			25	34.00	34.15	25	
Off-Peak Futures (25 MW)	SP15 DA Off-Peak	Feb18	1Feb18	28Feb18	+		25	28.00	31.00	25	
Peak Futures (25 MW)	SP15 DA Off-Peak	Mar18	1Mar18	31Mar18	+		25	24.75	26.25	25	

Long-term

- 10-20 Year Long-term Contracts
- 2020-2021 Require 65% of Renewables

Forward Procurement

- 1 month – 5 Years
- Fixed Priced Energy to Reduce Price Risk
- Renewables & Capacity

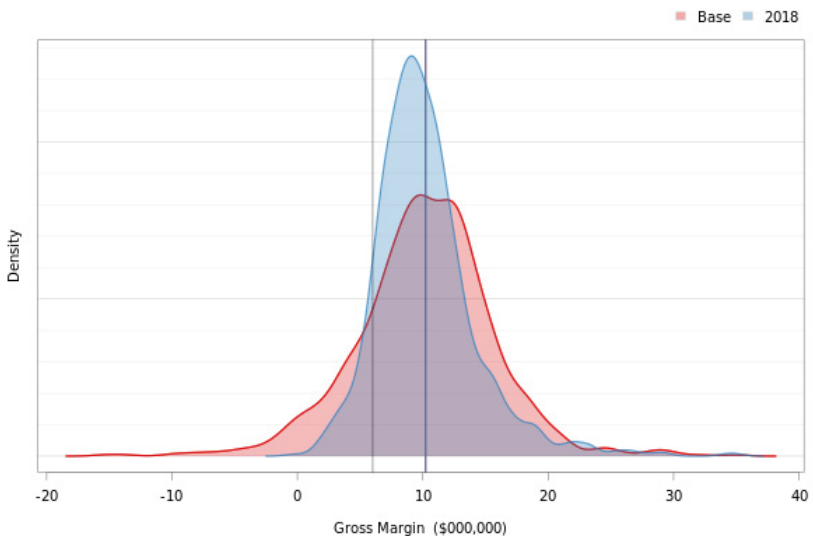
Short-term

- Next Day → 5 minutes
- Must Procure day-ahead and same-day Energy from CAISO

Managing with Uncertainty

- Energy Costs and Revenues are Inherently Uncertain
  - Market Prices
  - Changing Regulations
  - Weather
- Requires Techniques to Measure and Manage Uncertainty
  - Measure with Stochastic Models
  - Manage by Hedging*

Mean	10.219	10.219
SD	5.521	4.055
At-Risk	9.251	5.329
ES	12.605	6.736
P(Bgt)	0.819	0.903



*Hedging is a *financial* transaction – all *physical* supply is procured from CAISO in DA/RT markets

Reserves Strategy

Building ***Financial Reserves*** Serves Multiple Functions:

- Provide ***financial buffer*** to protect rate payers from unexpected cost increases due to regulatory changes and market prices
- Provide ***collateral*** to get better pricing for long-term supply contracts
- Serve as ***capital*** for local program investments like Energy Efficiency, EV Charging Stations, local Solar

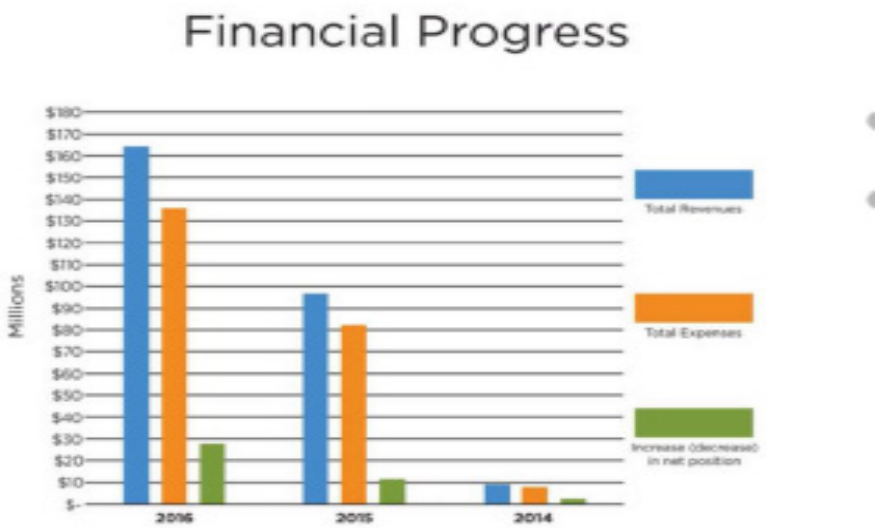
Operating Income - MCE

MCE's results of operations are summarized as follows for the fiscal year ended March 31:

	2017	2016	2015
Operating revenues	$ 181,166,489	$ 151,664,778	$ 100,654,696
Interest income	105,271	12,179	3,716
Total income	181,271,760	151,676,957	100,658,412
Operating expenses	166,110,598	135,257,348	96,835,644
Interest and related expenses	32,515	144,858	124,485
Total expenses	166,143,113	135,402,206	96,960,129
Change in net position	15,128,647	16,274,751	3,698,283
Beginning net position	29,531,070	13,256,319	9,558,036
Ending net position	$ 44,659,717	$ 29,531,070	$ 13,256,319

- MCE retained revenues ~10% in 2016 and 2017 accumulating $45M in reserves

Operating Income - SCP



Cash and cash equivalents	$ 27,631,167		
Accounts receivable, net	15,627,826	Accrued cost of electricity	$ 19,841,081
Accrued revenue	9,324,908	Other liabilities	1,289,208
Other assets	9,035,128	Net position	40,478,760

- SCP retained revenues >10% in 2015 and 2016 accumulating $40M in reserves

Operating Income – LCE

	Business-Type Activities Enterprise Funds		
	Lancaster Power Authority	Lancaster Choice Energy	Total
OPERATING REVENUES:			
Sales and service charges	$ 3,512,716	$ 23,437,682	$ 26,950,398
TOTAL OPERATING REVENUES	3,512,716	23,437,682	26,950,398
OPERATING EXPENSES:			
Purchased power	-	16,595,067	16,595,067
Administration and general	253,830	3,588,928	3,842,758
Depreciation expense	939,471	-	939,471
TOTAL OPERATING EXPENSES	1,193,301	20,183,995	21,377,296
OPERATING INCOME	2,319,415	3,253,687	5,573,102

- LCE retained revenues >10% in fiscal year ending June, 2016

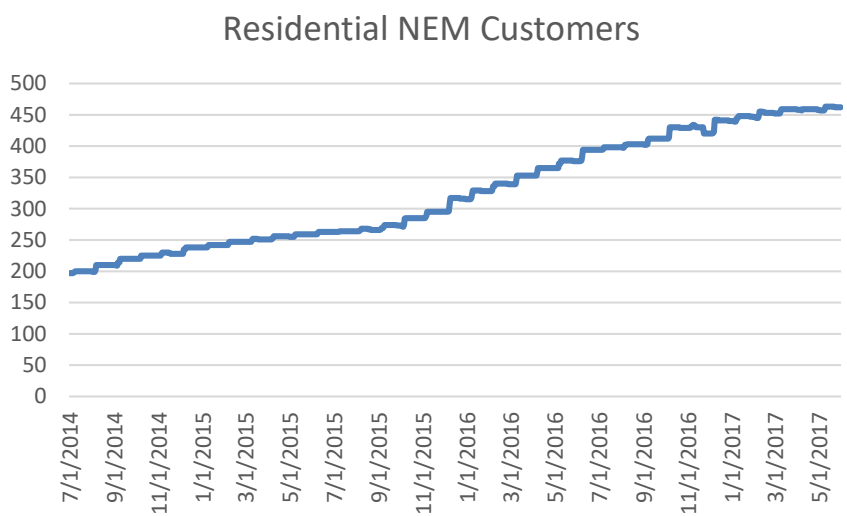
CCA NEM Examples

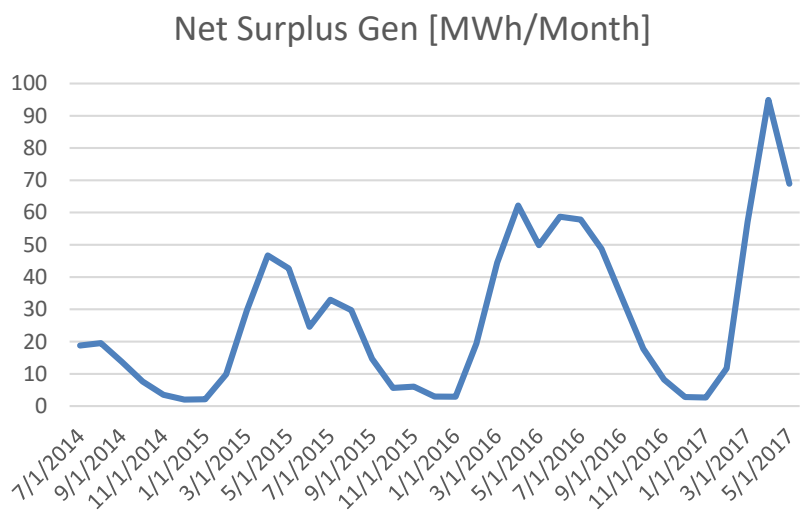
Most CCA's Provide a $0.01/kWh additional credit above retail rates as well as for surplus.

Some CCA's provide credits at retail rates as well as for surplus

SDGE provides credit at retail rate, but compensates surplus at wholesale rates

NEM





- As of 5/2017 ~ 10% of Residential Customers are NEM Customers
- @ $0.01/kWh premium over retail rates, cost ~6k/year currently

Year	Total KWh	Avg MW	Total Cost
2014	65,158	0.01	$ 652
2015	247,757	0.03	$ 2,478
2016	406,040	0.05	$ 4,060
2017 (Proj)	564,870	0.06	$ 5,649

Summary

- 2018 is a Good Time to start a CCA in SDGE
  - SDGE Rates are high → Better financial conditions
  - First mover → Not competing for supply
- Implement Robust Program
  - Build Reserves to Cushion Against Uncertainty
  - Greener and Cheaper than SDGE
  - Better NEM Program than SDGE
- On-track for June, 2018 Start!

Data Management & Call Center

- Calpine Energy Solutions, headquartered in downtown San Diego, will be our operations partner. The CCA Team is comprised of over 100 professionals with disciplines ranging from billing technology to analytics to customer service.

Company President Jim Wood in Calpine's Operations Center

CCA Division Leadership Team

Drake Welch
VP-Customer Care,
Executive Management

Paula White
Manager-CCA Operations,
Operational Management

Tony Choi
Director-CCA Services,
Client Relationship
Management

Santiago Chuck
CCA Account Manager
Client Support

Paul Soco
Manager-CCA Implementation,
Implementation Management

Sam Schmidt
Director -Application Support,
Technical Management

Data Management & Call Center

- Key services performed by Calpine:
  1. Electronic data exchange with SDG&E
  2. Calculation of Solana Beach customer charges, billing customers through SDG&E invoice and tracking payments
  3. CRM with all customer account information available for Solana Beach staff and contact center
  4. Contact center, including web forms and interactive voice response, to field customer requests and provide service
  5. Calculation and submission of Solana Beach electric load to grid operator (CAISO)
- Calpine has been providing these same services to every operating CCA in the State since 2010 and now supports 11 active CCAs serving 1.3+ million meters.