



VCEA Community Advisory Committee

January 29, 2018
Davis Senior Center

Customers on NEM

Class	Number of Customers	% Surplus Generators
Residential	5,133 – Total <ul style="list-style-type: none">• 253 on Low Income or Medical Rate• 3,551 on Flat Rates• 1,534 on TOU Rates	15%
Small Commercial	157	26%
Medium Commercial	12	8%
Large Commercial	5	60%
Agricultural	48	48%
Total	5,306	18%

A Sample NEM True-Up

	kWh		
	Usage	Generation	Net
January	682	218	464
February	567	445	122
March	566	537	29
April	460	761	(301)
May	472	673	(201)
June	570	494	76
July	672	516	156
August	582	491	91
September	630	480	150
October	628	414	214
November	638	298	340
December	872	242	630
	Net Usage		1,770

Price		
Peak Price	Off-Peak Price	Generation Adder
\$ 0.06458	\$ 0.05256	\$ 0.01
\$ 0.06458	\$ 0.05256	\$ 0.01
\$ 0.06458	\$ 0.05256	\$ 0.01
\$ 0.06458	\$ 0.05256	\$ 0.01
\$ 0.19113	\$ 0.04031	\$ 0.01
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Bill			
Usage	Generation	Credit	Net
\$ 35.85	\$ (14.08)	\$ (2.18)	\$ 19.59
\$ 29.80	\$ (28.74)	\$ (4.45)	\$ (3.39)
\$ 29.75	\$ (34.68)	\$ (5.37)	\$ (10.30)
\$ 24.18	\$ (49.15)	\$ (7.61)	\$ (32.58)
\$ 19.03	\$ (128.63)	\$ (6.73)	\$ (116.33)
\$ 22.98	\$ (94.42)	\$ (4.94)	\$ (76.38)
\$ 27.09	\$ (98.62)	\$ (5.16)	\$ (76.69)
\$ 23.46	\$ (93.84)	\$ (4.91)	\$ (75.29)
\$ 25.40	\$ (91.74)	\$ (4.80)	\$ (71.15)
\$ 25.31	\$ (79.13)	\$ (4.14)	\$ (57.95)
\$ 33.53	\$ (19.24)	\$ (2.98)	\$ 11.31
\$ 45.83	\$ (15.63)	\$ (2.42)	\$ 27.78
	Annual		\$ (461.39)

Current PG&E policy would not pay out, since there was no net generation
 Several CCAs would pay out the \$461 accumulated credits

CCA NEM Policy Comparison

CCA	Excess Gen - Monthly	Excess Generation - Annual	True-Up	Cash Out Limit
Peninsula Clean Energy	Retail plus \$0.01	Accumulated Credits	April	>\$100 can elect cash out
Marin Clean Energy	Retail plus deep green (currently \$0.01)	Accumulated Credits	April	>\$100 can elect cash out
Sonoma Clean Power	Retail plus \$0.01	Accumulated Credits	May	>\$100 can elect cash out \$5,000 cap on payout
Silicon Valley Clean Energy	Retail GreenPrime if enrolled	Accumulated Credits	April	>\$100 can elect cash out \$5,000 cap on payout
Lancaster Choice Energy	Retail	Accumulated Credits Credit not applied if annual net generation is less than zero.	October	None – Always cashed out
Clean Power SF	Retail	\$0.0693 – average retail rate \$0.0893 – average SuperGreen rate	April	None
PG&E	Retail	Wholesale, plus adder if given RECs	Annual based on enrollment	None

Considerations for NEM Policy

- Not harming existing NEM customers
- Providing continued incentive for rooftop solar
- Ensuring customer understanding of program
- Managing impact to agency budget and overall power portfolio
- Alignment with other NEM programs

Administrative Policy Decisions

Recommendation	Rationale
Initial enrollment monthly	Minimize cash-flow impacts to customers.
True-up in April	Minimize cash movement between CCAs and customers. Reduce administrative burden – cost and chance for errors.
Cash out only customers with more than \$100 in credits who elect to be cashed out	Minimize customers receiving unexpected checks. Minimize customer interactions required.
Settle monthly	Eliminate year-end sticker shock. Minimize bill confusion.

Tradeoffs of NEM Compensation

Considerations for compensating at or above wholesale

- The generation has wholesale value based on the load shape
- Despite difficulty in recognizing value of RECs, solar has non-monetized environmental value
- If a site is good for solar, the marginal cost to add production should be low. This opportunity should not be lost due to lack of price incentive.
- There is value involving the community and customers in energy

Considerations for compensating below retail

- Compensation at retail is more expensive than other renewable products. Excess costs are borne by non-solar customers.
- Spread between wholesale and retail covers costs associated with; Balancing load across time/seasons, Providing Price Certainty, Community Engagement, Customer Service and Billing, Policy Advocacy, Regulatory Compliance
- It is not typically cost-effective to capture the value of the RECs. If captured, they are PCC-3

NEM Options

1. Economic

- Compensate monthly at retail plus program, if elected
- Settle annually at wholesale plus \$0.005

2. Incentivize Solar to Meet Load

- Compensate monthly at retail plus \$0.01
- Settle annually at credit value, up to \$2,500, and wholesale thereafter
 - If credit >\$2,500, settle at \$2,500 or wholesale plus adder, whichever is more.

3. Incentivize Solar, Including Surplus Generation

- Compensate monthly at retail plus \$0.01
- Settle annually at credit value, no limit

NEM Option Comparison

Consideration	1	2	3	Notes
Not harming existing NEM customers	✓✓✓	✓✓✓	✓✓✓	All options meet existing policy
Providing continued incentive for rooftop solar	✓✓	✓✓✓	✓✓✓	Options 2 and 3 significantly increase the incentive for rooftop solar.
Ensuring customer understanding of program	✓	✓✓✓	✓✓✓	Option 2 will be more complex, but for only a small subset of commercial customers.
Managing impact to agency budget and overall power portfolio	✓✓✓	✓✓	✓	Option 3 could erode financial position over time.
Alignment with other NEM programs	✓	✓✓	✓✓✓	Option 1 is less incentive than other CCAs. Option 2 treats net surplus differently than other CCAs.

Cost and Distributive Impacts

Option	Costs	Customer Impacts
1	<ul style="list-style-type: none"> • \$0.005/kWh of net surplus generation • \$47k/yr. more than matching PG&E 	Benefits only net surplus generators
2	<ul style="list-style-type: none"> • \$0.01/kWh for non-surplus generators • Various \$/kWh depending on retail rate for surplus generators • \$828k/yr. more than matching PG&E (depends on wholesale price) 	<p>Small benefit for large generators</p> <p>Medium benefit for most customers</p> <p>Large benefit for small over-generation</p>
3	<ul style="list-style-type: none"> • \$2.2M/yr. more than matching PG&E (depends on wholesale price) 	<p>Large benefit for net surplus generators</p> <p>Medium benefit for most customers</p>

Cost and Distributive Impacts

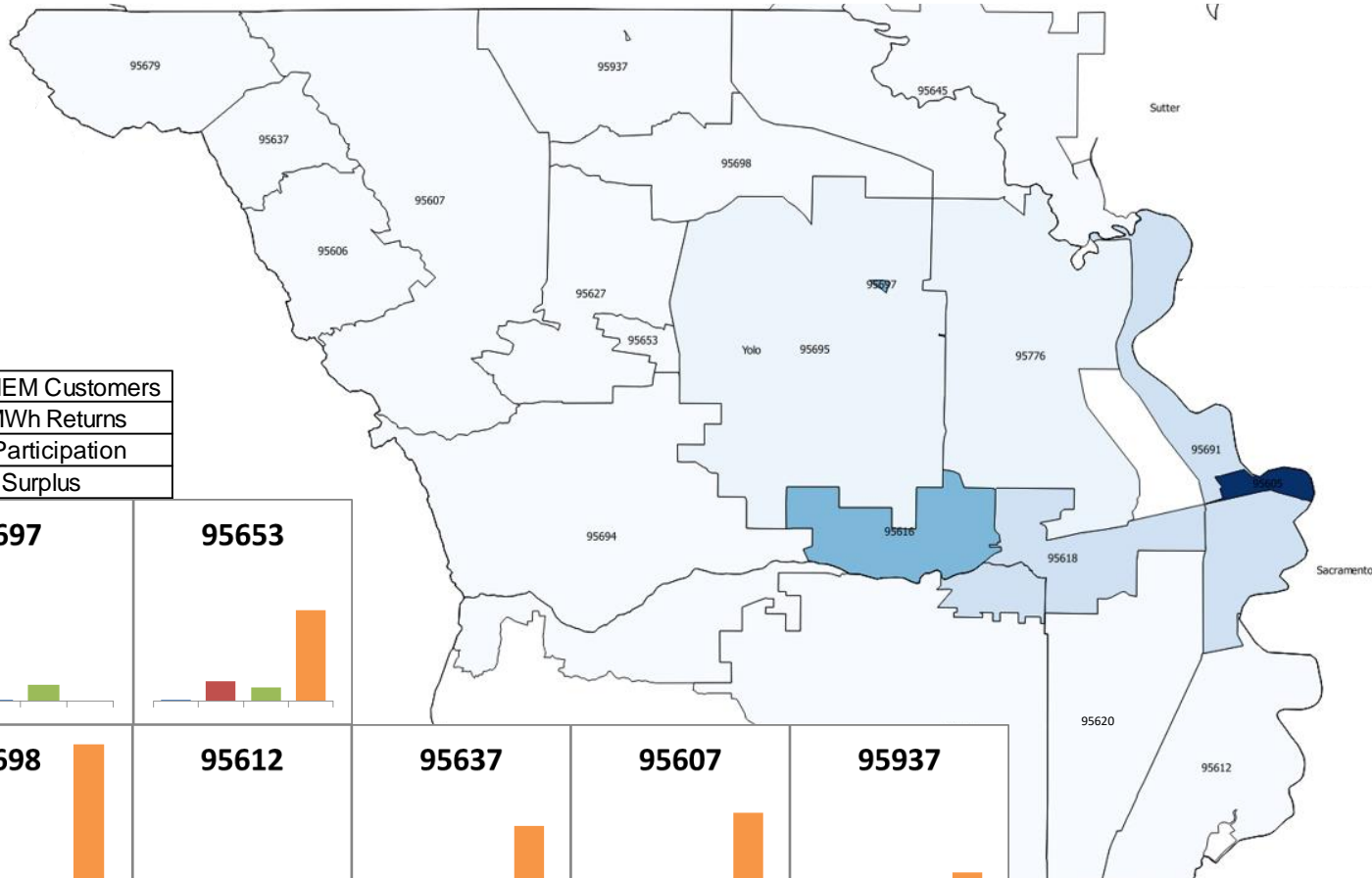
	Total Gain		Options		
	From	To	1	2	3
# Impacted Customers	\$ 1,000	and up	10	133	161
	\$ 500	\$ 1,000	4	237	226
	\$ 100	\$ 500	39	1,065	1,048
	\$ -	\$ 100	764	3,879	3,879
	No impact	\$ -	4,539	42	42
Average Impact	\$ 1,000	and up	\$ 2,709	\$ 1,938	\$ 9,915
	\$ 500	\$ 1,000	\$ 584	\$ 669	\$ 668
	\$ 100	\$ 500	\$ 270	\$ 277	\$ 275
	\$ -	\$ 100	\$ 9	\$ 30	\$ 30
	No impact	\$ -	4539	42	42
Total Cost			\$ 46,706	\$ 828,494	\$ 2,152,028

Option 1 benefits a few customers by a small amount.

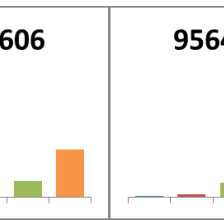
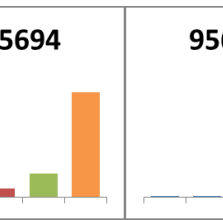
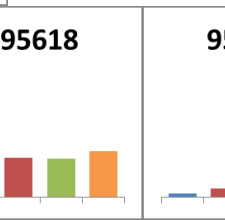
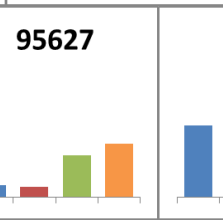
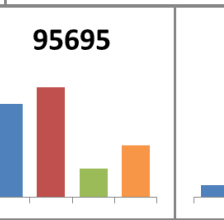
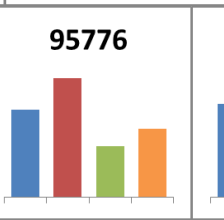
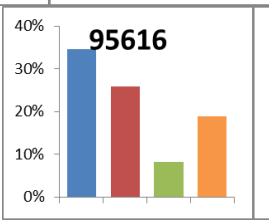
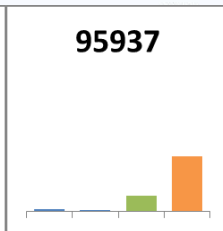
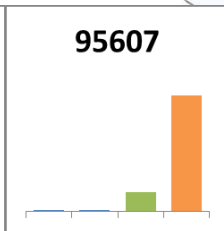
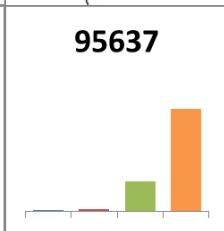
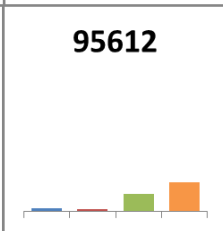
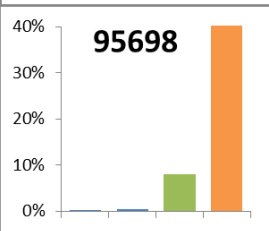
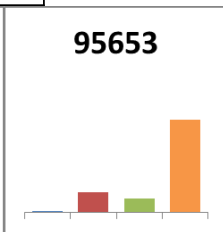
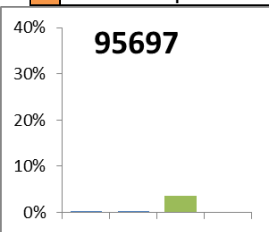
Option 2 benefits nearly all customers by a small amount.

Option 3 primarily benefits large surplus generators, as compared to option 2.

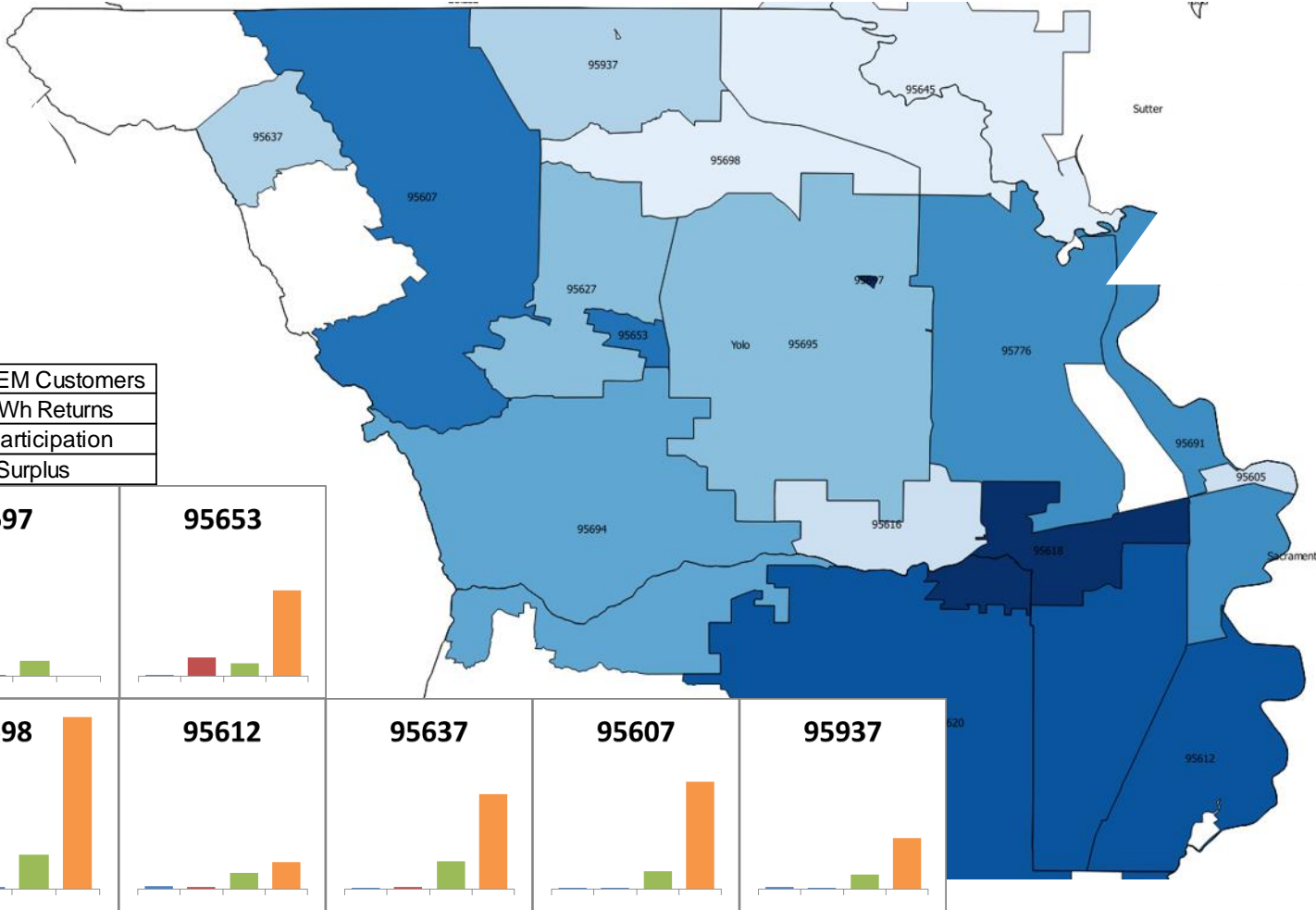
Impacts by Location – Population Density



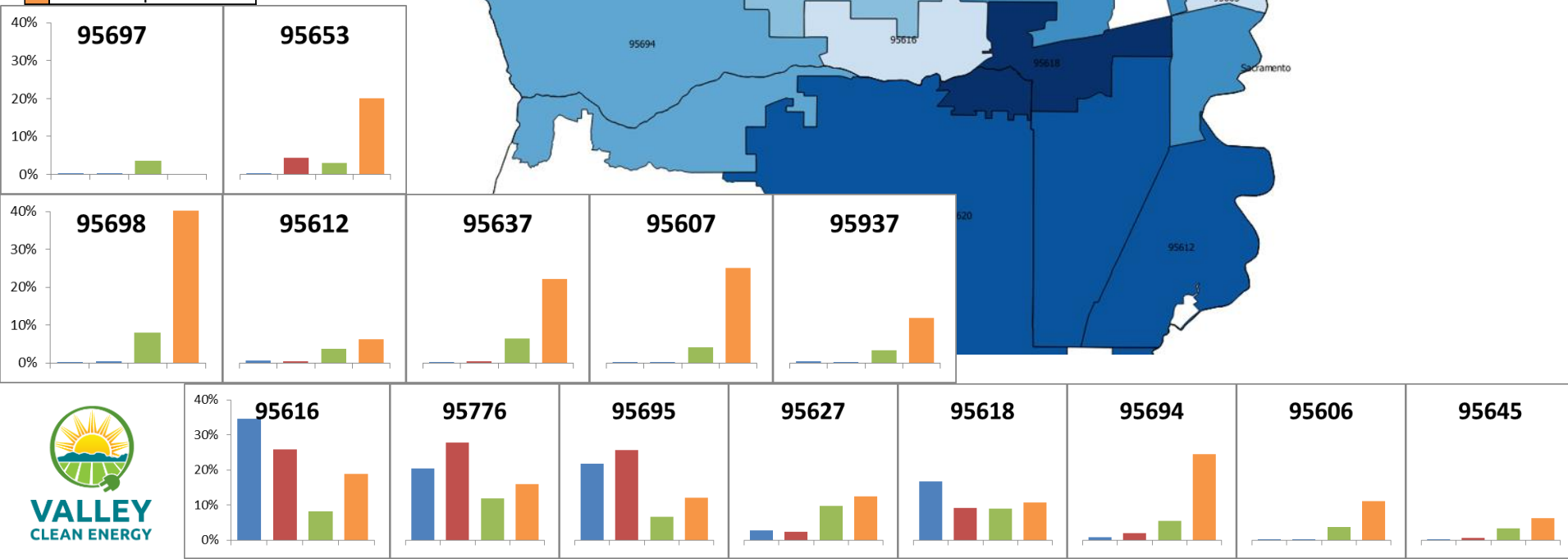
■	% of NEM Customers
■	% of MWh Returns
■	NEM Participation
■	% Net Surplus



Impacts by Location – Median Income



■ % of NEM Customers
■ % of MWh Returns
■ NEM Participation
■ % Net Surplus



Optional Low Income Program

- It is technically feasible to implement a program where NEM customers have the option to contribute their \$0.01/kWh generation bonus to a low income energy efficiency fund.
- Various aspects of program design and communication would need to be developed, as well as configuration of the billing engine. Thus, this program would not be available at launch.

Recommendation

- Develop NEM Policy document in accordance with Option 2
- Coordinate with CirclePoint on communication of NEM policy
 - Details would likely be included in pre-enrollment mailers set to NEM customers.