CALSSA NEM-3 Proposal

March 23, 2021

CALIFORNIA SOLAR + STORAGE ASSOCIATION
smart local energy

Underlying Realities

Storage will come on the back of solar. We can't kill the state's capacity for solar deployment and then hope to get distributed storage later.

Limited battery supply is the biggest barrier to developing storage quickly. Also, codes and standards need to be updated, and know-how from contractors and local building officials will take time to develop.

Putting all of our GHG eggs in the utility-scale basket would be a bad plan. It is already weighted in that direction. Pulling back on consumer solar and storage may make our targets unachievable. Siting and building new transmission lines will be extremely difficult and expensive.

Access to Solar

Barriers to installing solar on apartment buildings have restricted access to solar for low- and moderate-income customers.

Multifamily solar has grown and should be allowed to continue to grow.

Practical improvements to VNEM can make a big difference.

CARE customers with solar should receive NEM credits that have the same value as NEM credits for non-CARE customers.

CALSSA Proposal

- NEM compensation tied to rates
  - Ramps down as a percentage of rates over five steps
- Capacity-based glidepath estimated at 8 years
- No monthly fee
- Low-income continues at NEM-2 rates
- VNEM for low- and moderate-income renters continues at NEM-2 rates
- Fixes to VNEM
- No change for commercial

CALSSA Proposed Export Step-Downs

Export Step-Down								
	PG&E		SCE		SDG&E		All IOUs	
	Solar	Solar + Storage	Solar	Solar + Storage	Solar	Solar + Storage	CARE/ FERA	LMI Multifamily Renters
Step 1	90%	100%	95%	100%	90%	95%	100%	100%
Step 2	80%	95%	90%	100%	80%	90%	100%	100%
Step 3	70%	90%	85%	100%	70%	85%	100%	100%
Step 4	60%	85%	80%	100%	60%	75%	100%	100%
Step 5	50%	80%	75%	100%	45%	65%	100%	100%

Step-Down Thresholds						
	Cumulative Residential MW on NEM-3					
	PG&E		SCE		SDG&E	
	Solar	Storage	Solar	Storage	Solar	Storage
Step 1	770	150	520	100	300	60
Step 2	1540	460	1040	310	600	180
Step 3	2310	920	1560	620	900	360
Step 4	3080	1540	2080	1040	1200	600
Step 5	Continues until further review					

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Sizing Information from Lookback Study

VERDANT

TABLE 1-1: RESIDENTIAL AVERAGE ANNUAL LOAD STATISTICS

Customer Type	Metric	PG&E Residential	SCE Residential	SDG&E Residential
NEM 2.0	Avg. Pre-Interconnection Electricity Consumption (kWh)	8,425	10,513	7,824
	Avg. Post-Interconnection Net Consumption (kWh)	1,249	N/A	416
	Change in consumption after interconnection (kWh)	2,520		2,252
	Avg. Post-Interconnection Electricity Consumption[6] (kWh)	10,945		10,076
	Avg. System Size (kW_{DC})	5.9	6.9	5.6
	Avg. PV Annual Generation[7] (kWh)	9,696	N/A	9,661
	% Pre-Interconnection Consumption Supplied by PV	115%		123%
	% Post-Interconnection Consumption Supplied by PV	89%		96%

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Solar + Storage Profile

				PGE						SCE								
Date	S	HE	M	PV Generation	Load	Storage Charge	BTM	Exports	Utility Avoided Cost	PV Generation	Load	Storage Charge	BTM	Exports	Utility Avoided Cost	PV Generation	Load	Storage Charge
9-Jun-20	S	23	06	-	2.20	-	-	-	$ 0.141	-	1.50	-	-	-	$ 0.142	-	1.77	-
9-Jun-20	S	24	06	-	2.07	-	-	-	$ 0.132	-	1.32	-	-	-	$ 0.133	-	1.42	-
10-Jun-20	S	1	06	-	1.35	-	-	-	$ 0.127	-	0.89	-	-	-	$ 0.127	-	0.97	-
10-Jun-20	S	2	06	-	1.12	-	-	-	$ 0.127	-	0.85	-	-	-	$ 0.128	-	0.85	-
10-Jun-20	S	3	06	-	1.13	-	-	-	$ 0.125	-	0.80	-	-	-	$ 0.125	-	0.80	-
10-Jun-20	S	4	06	-	0.97	-	-	-	$ 0.129	-	0.80	-	-	-	$ 0.129	-	0.75	-
10-Jun-20	S	5	06	-	0.93	-	-	-	$ 0.132	-	0.81	-	-	-	$ 0.132	-	0.75	-
10-Jun-20	S	6	06	0.13	0.76	0.13	-	-	$ 0.134	0.20	0.92	0.20	-	-	$ 0.134	0.10	0.78	0.10
10-Jun-20	S	7	06	0.76	0.83	0.89	-	-	$ 0.127	0.62	0.96	0.83	-	-	$ 0.124	0.88	0.88	0.98
10-Jun-20	S	8	06	1.94	0.93	2.83	-	-	$ 0.123	0.74	1.06	1.56	-	-	$ 0.119	1.93	0.93	2.91
10-Jun-20	S	9	06	2.67	0.99	5.50	-	-	$ 0.131	1.09	1.06	2.66	-	-	$ 0.125	2.87	0.96	5.78
10-Jun-20	S	10	06	3.45	0.95	8.95	-	-	$ 0.130	1.83	1.24	4.48	-	-	$ 0.122	3.56	0.98	9.34
10-Jun-20	S	11	06	3.72	0.89	10.80	0.89	0.97	$ 0.139	3.04	1.37	7.53	-	-	$ 0.128	4.07	0.99	10.80
10-Jun-20	S	12	06	4.36	0.98	10.80	0.98	3.38	$ 0.145	3.51	1.32	10.80	0.24	-	$ 0.127	4.25	1.06	10.80
10-Jun-20	S	13	06	4.34	1.08	10.80	1.08	3.26	$ 0.158	5.21	1.44	10.80	1.44	3.76	$ 0.131	4.20	1.18	10.80
10-Jun-20	S	14	06	4.14	1.42	10.80	1.42	2.71	$ 0.193	4.84	1.67	10.80	1.67	3.17	$ 0.138	3.85	1.29	10.80
10-Jun-20	S	15	06	3.65	1.59	10.80	1.59	2.06	$ 0.245	4.20	1.81	10.80	1.81	2.39	$ 0.142	3.29	1.45	10.80
10-Jun-20	S	16	06	2.96	1.73	10.80	1.73	1.23	$ 0.332	3.23	2.10	10.80	2.10	1.13	$ 0.144	2.51	1.58	10.80
10-Jun-20	S	17	06	1.99	2.01	10.77	2.01	-	$ 0.433	1.03	2.12	9.59	2.12	-	$ 0.153	1.49	1.66	10.62
10-Jun-20	S	18	06	0.93	2.06	9.51	2.06	-	$ 0.525	0.60	2.22	7.79	2.22	-	$ 0.191	0.49	1.71	9.26
10-Jun-20	S	19	06	0.21	2.25	7.25	2.25	-	$ 0.547	0.12	2.09	5.61	2.09	-	$ 0.240	0.06	1.68	7.46
10-Jun-20	S	20	06	-	2.17	4.84	2.17	-	$ 0.435	-	1.96	3.44	1.96	-	$ 0.231	-	1.60	5.68
10-Jun-20	S	21	06	-	2.18	2.42	2.18	-	$ 0.298	-	1.73	1.51	1.73	-	$ 0.219	-	1.67	3.82
10-Jun-20	S	22	06	-	2.06	2.42	-	-	$ 0.208	-	1.48	1.51	-	-	$ 0.197	-	1.54	3.82
10-Jun-20	S	23	06	-	1.74	2.42	-	-	$ 0.154	-	1.27	1.51	-	-	$ 0.157	-	1.31	3.82
10-Jun-20	S	24	06	-	1.48	2.42	-	-	$ 0.135	-	1.00	1.51	-	-	$ 0.136	-	1.12	3.82
11-Jun-20	S	1	06	-	1.22	2.42	-	-	$ 0.124	-	1.01	1.51	-	-	$ 0.124	-	1.08	3.82

Solar Profile

				PGE						SCE								
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10-Jun-20	S	5	06	-	0.93	-	-	-	$ 0.132	-	0.81	-	-	-	$ 0.132	-	0.75	-
10-Jun-20	S	6	06	0.13	0.76	-	0.13	-	$ 0.134	0.20	0.92	-	0.20	-	$ 0.134	0.10	0.78	-
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11-Jun-20	S	1	06	-	1.22	-	-	-	$ 0.124	-	1.01	-	-	-	$ 0.124	-	1.08	-

Annual Averages of Hourly Values

		PG&E	SCE	SDG&E
CALSSA Proposal	Solar-Weighted Average	0.135	0.165	0.141
	S+S-Weighted Average	0.187	0.236	0.211
IOU Proposal	Solar-Weighted Average	0.061	0.063	0.063
	S+S-Weighted Average	0.070	0.073	0.073

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25-Year Levelized Avoided Costs Averaged by TOU Period

		PG&E Using E-TOU-C TOU Periods	PG&E Using EV2 TOU Periods	SCE	SDG&E
Summer	On-Peak	0.361	0.361	0.653	0.429
	Mid-Peak		0.367	0.340	0.233
	Off-Peak	0.191	0.145	0.212	0.154
Winter	On-Peak	0.202	0.202	0.226	0.212
	Mid-Peak		0.177	0.181	0.168
	Off-Peak	0.153	0.146	0.137	0.146
Solar-Weighted Average		0.184	0.175	0.191	0.201
S+S Weighted Average		0.209	0.210	0.235	0.235

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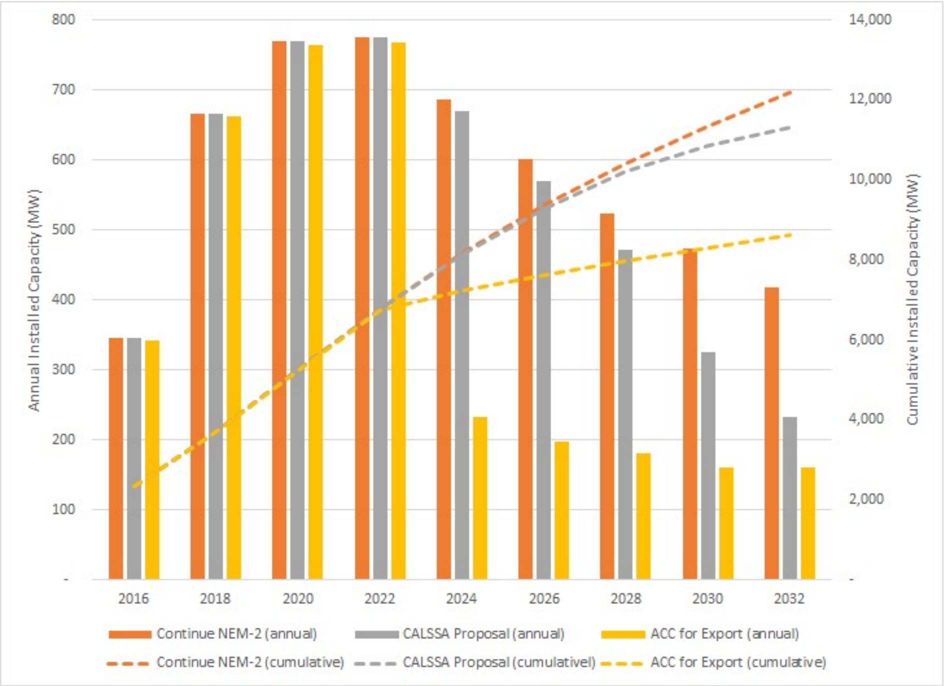
Payback Periods Under CALSSA Proposal

Payback Period						
	PG&E		SCE		SDG&E	
	Solar	Solar + Storage	Solar	Solar + Storage	Solar	Solar + Storage
Step 1	7.1	11.1	6.4	10.5	6.1	8.0
Step 2	9.3	13.0	8.0	12.3	7.9	9.4
Step 3	8.7	10.8	7.2	10.1	7.3	8.0
Step 4	8.1	9.5	6.5	8.7	6.9	7.1
Step 5	7.7	7.2	5.9	7.5	6.8	6.4

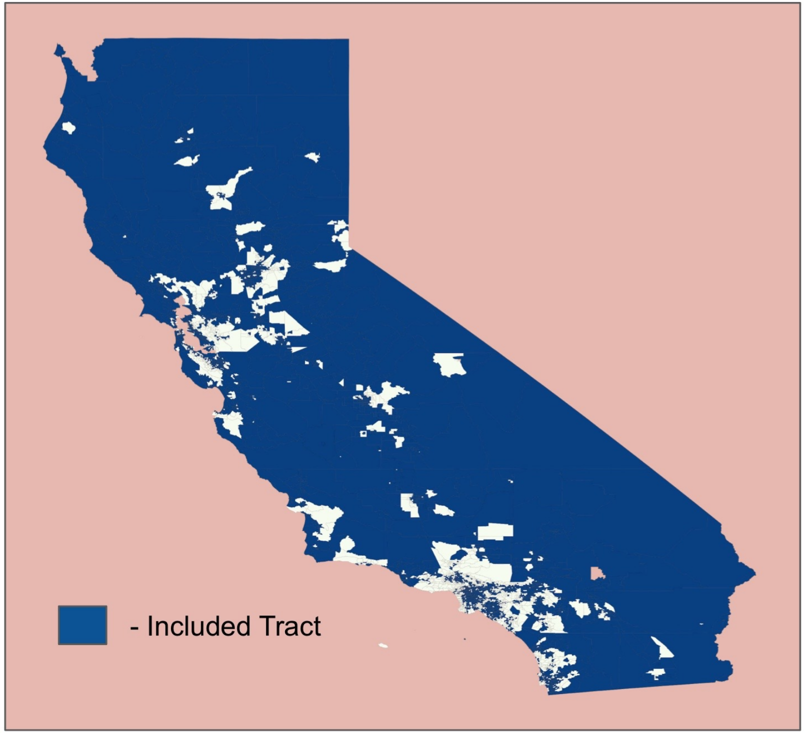
NREL dGen Modeling



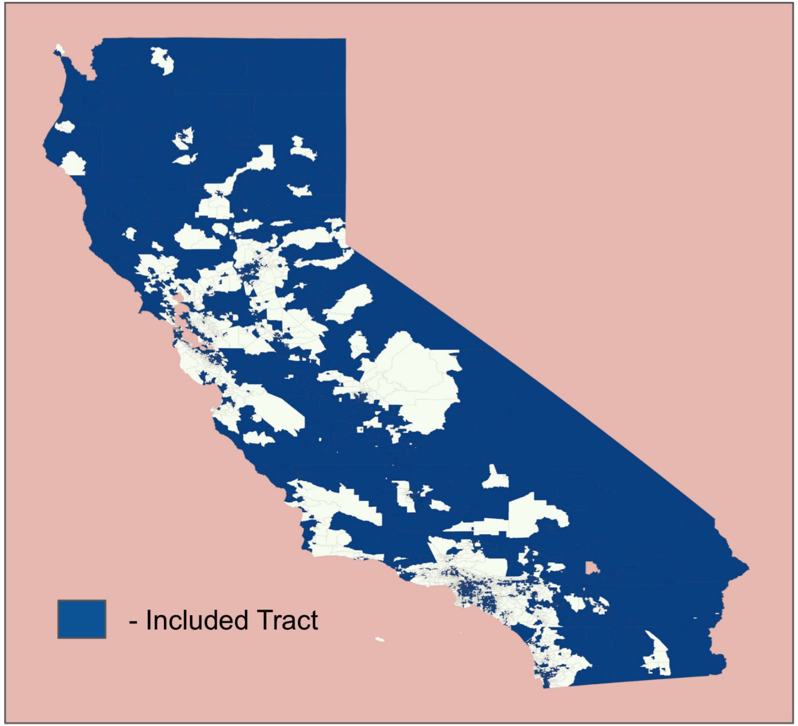
Low-Income Proposals

- No step-down for residential customers with income below 80% of Area Median Income (NEM credits at full retail rates, minus non-bypassable charges, equivalent to the structure under the NEM-2 tariff)
- Customers on CARE and FERA rates receive NEM credits at non-CARE rates
- No step-down for multifamily rental properties in census tracts with income below 120% of Area Median Income

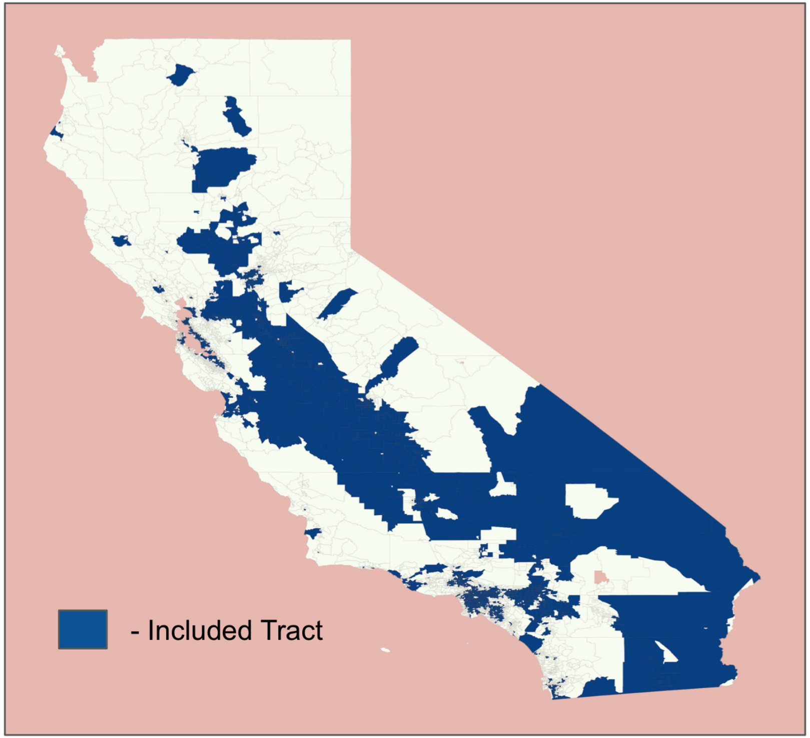
VNEM Without Step-Down for 120% of Area Median Income



VNEM Without Step-Down for 100% of Area Median Income



VNEM Without Step-Down for Top 50% Disadvantaged Communities



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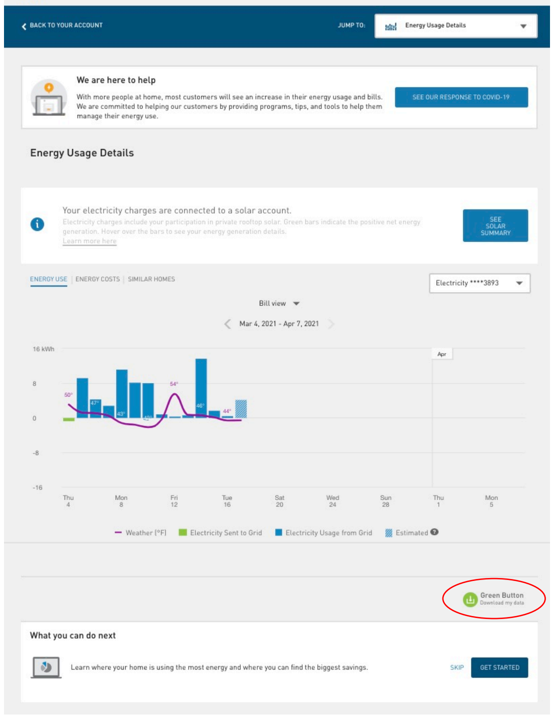
Make Interval Data Downloadable by Approved Contractors



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Pay Outstanding Amount Each Month

Summary of NEM Charges

Bill Period End Date	Net Peak Usage (kWh)	Net Part Peak Usage (kWh)	Net Off Peak Usage (kWh)	Net Usage (kWh)	Estimated NEM Charges Before Taxes	Estimated NEM Charges After Taxes
03/03/2020	0	70	180	249	$32.52	$34.32
04/01/2020	0	58	152	211	27.33	28.84
05/03/2020	-3	32	106	136	17.96	18.95
06/02/2020	-64	15	200	151	22.06	23.25
07/01/2020	-94	-4	187	89	11.59	12.23
07/30/2020	-114	-13	183	56	5.88	6.21
TOTAL	-275	158	1008	892	$117.34	$123.80

Estimated tax amount, if applicable, is displayed in the box below. Differences in net usage occur due to rounding.

Electric Charges

Bill Period End Date	Minimum Delivery Charges
03/03/2020	$9.86
04/01/2020	9.53
05/03/2020	10.52
06/02/2020	9.86
07/01/2020	9.53
07/30/2020	9.53
TOTAL	$58.83

How Your True-Up is Calculated

Your YTD Total NEM Charges represent the balance of your net usage since the start of your True-Up period. Charges are calculated each month but are not billed until the end of the True-Up period.

Your Summary of NEM Charges will be reset to zero at True-Up.

The Minimum Delivery Charge is assessed monthly and credited at true-up if the total NEM Charges Before Taxes are greater than your cumulative Minimum Delivery Charges.

This is your YTD balance. Your total NEM balance will be reconciled on your True-Up statement **(01/2021)**.

Total NEM Charges Before Taxes	$117.34
Total Electric Minimum Delivery Charges	-58.83
Estimated Taxes	6.46
YTD Estimated NEM Charges At True-Up	**$64.97**

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Thank You!

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