

Net Billing Tariff (NBT) Impacts on Single Family New Construction



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Acronym List

B/C – Benefit-to-Cost Ratio

CBSC - California Building Standards Commission

CEC - California Energy Commission

CPUC – California Public Utilities Commission

CZ – Climate Zone

GHG - Greenhouse Gas

IOU – Investor-Owned Utility

POU – Publicly Owned Utility

PG&E – Pacific Gas & Electric (utility)

SCE – Southern California Edison (utility)

SCG – Southern California Gas (utility)

SDG&E – San Diego Gas & Electric (utility)

CPAU – City of Palo Alto Utilities

SMUD – Sacramento Municipal Utility District

LADWP – Los Angeles Department of Water and Power

kWh – Kilowatt Hour

NBC – Non-bypassable charge

NBT – Net Billing Tariff (a.k.a. NEM3)

NEM2 – Net Energy Metering tariff (second version)

NPV – Net Present Value

PV - Solar Photovoltaic

TDV - Time Dependent Valuation

Title 24 – California Code of Regulations Title 24, Part 6

TOU – Time of use



Summary of Revisions

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1 Introduction and Background

The California Codes and Standards (C&S) Reach Codes program provides technical support to local governments considering adopting a local ordinance (reach code) intended to support meeting local and/or statewide energy efficiency and greenhouse gas reduction goals. The program facilitates adoption and implementation of the code when requested by local jurisdictions by providing resources such as cost-effectiveness studies, model language, sample findings, and other supporting documentation.

In June 2023, the Statewide Reach Codes Team published the 2022 Cost-Effectiveness Study: Single Family New Construction. This study focused on newly constructed single family residential buildings identifying cost-effective measures and measure packages in all 16 California climate zones. The study documents the estimated costs, benefits, energy impacts and greenhouse gas emission reductions that may result from implementing an ordinance to help residents, local leadership, and other stakeholders make informed policy decisions. The study was conducted for the 2022 Building Energy Efficiency Standards (Title 24, Part 6), effective January 1, 2023.

The Statewide Reach Codes Team is initiating an update to this study to address changes in utility rates since the publication of the prior study while responding to more recent requests from jurisdictions. The updated study will follow a similar structure to the prior one and evaluate various upgrade options including fuel substitution, efficiency, onsite generation, and load shifting measures. It will consider cost-effectiveness based on utility rates and the California Energy Commission's Title 24, Part 6 code metrics: Time Dependent Valuation (TDV)¹ in 2022 and Long-term System Cost (LSC) in 2025.

This document includes some draft results for annual and monthly electricity cost for the 2,100 square foot single family prototype. The old Net Energy Metering 2 (NEM2) tariff is compared to the new Net Billing Tariff (NBT). Only Investor-Owned Utility (IOU) tariffs were used, bill discounts were not considered, and gas utility cost was not calculated. When the cost-effectiveness report included separate calculations for multiple IOUs in a climate zone, the same was done here.

¹ TDV is the Energy Commission's lifecycle cost methodology. While the methodology remains the same, the metrics have been updated and the name has been changed to Long-term System Cost (LSC) for the 2025 Title 24, Part 6 code.

2 Building Prototype

For all climate zones, three variations of the 2,100 square foot single family prototype were evaluated here, and no other prototypes were considered. Those three variations consisted of the base model mixed fuel building, the minimally compliant all-electric model, and the all-electric model with solar photovoltaics (PV) that match 100 percent of the annual energy usage. Table 1 summarizes the basic characteristics of that prototype.

Table 1: Single Family Prototype Characteristics

Characteristic	Single Family One-Story
Existing Conditioned Floor Area	2,100 ft ²
Number of Stories	1
Number of Bedrooms	3
Window-to-Floor Area Ratio	20%

Table 2 summarizes the equipment included in the base case (i.e., mixed fuel) model. Depending on the climate zone, either the space heating/cooling equipment or the water heater is a heat pump. The cooking equipment and clothes dryer are both gas-fired regardless of climate zone. In the all-electric models, all equipment is electric.

Table 2: Base case Characteristics of the Prototype

Characteristic	Single Family
Space Heating/Cooling ^{1,2}	<u>CZs 1-2,5-12,15-16</u> : Natural gas furnace, split AC 80 AFUE, 14 SEER, 11.7 EER <u>CZs 3-4,13-14</u> : Split heat pump – 8.2 HSPF, 14 SEER, 11.7 EER
Water Heater ^{1,2}	<u>CZs 1-2,5-12,15-16</u> : Heat pump water heater (HPWH) UEF = 2.0 located in the garage <u>CZs 3-4,13-14</u> : Natural gas tankless – UEF = 0.81
Hot Water Distribution	Code minimum, all hot water lines insulated <u>CZs 1,16</u> : Basic compact distribution credit
Drain Water Heat Recovery Efficiency	<u>CZ 16</u> : 65%, equal flow to shower & water heater
Cooking	Natural Gas
Clothes Drying	Natural Gas
PV System	Sized as ‘Standard Design PV’ offsetting 100% of electricity use for space cooling, ventilation, lighting, appliance, & other miscellaneous electric loads. Size differs by climate zone and prototype ranging from 2.29 kW to 5.68 kW.

¹ Equipment efficiencies are equal to minimum federal appliance efficiency standards.

² AFUE = annual fuel utilization efficiency. SEER = seasonal energy efficiency ratio. EER = energy efficiency ratio. HSPF = heating seasonal performance factor. UEF = uniform energy factor.

Table 3 shows the capacity of the solar PV system by climate zone in the base case and minimally compliant all-electric models. These are the minimum capacities required by Title 24, Part 6 for residential new construction unless the building is eligible for an exception. The size of the PV systems for the all-electric models that match 100% of the load are not shown but the annual PV generation matches exactly 100% of the annual load.

Table 3: Required Base Package PV Capacities (kW-DC)

Climate Zone	Single Family
CZ01	3.54
CZ02	2.99
CZ03	2.81
CZ04	2.90
CZ05	2.62
CZ06	2.64
CZ07	2.84
CZ08	3.13
CZ09	2.97
CZ10	3.19
CZ11	3.91
CZ12	3.12
CZ13	4.08
CZ14	3.16
CZ15	5.33
CZ16	2.90

3 Building Prototypes, Measure Packages, and Costs

Prior to April 15, 2023, all residential new construction with PV and served by an IOU were required to use the NEM2 tariff along with one of a few main tariff options. In the cost-effectiveness report, E-TOU-C was selected for PG&E customers, TOU-D-4-9 was selected for SCE customers, and TOU-DR1 was selected for SDG&E customers. However, the following additional tariffs were also available prior to April 15, 2023, and were targeted at all-electric buildings: E-ELEC for PG&E customers, TOU-D-PRIME for SCE customers, and EV-TOU-5 for SDG&E customers. In the calculations here, E-TOU-C, TOU-D-4-9, and TOU-DR1 were used in NEM2 calculations for both the base and all-electric cases. E-ELEC, TOU-D-PRIME, and EV-TOU-5 were used in additional NEM2 calculations for the all-electric case only.

As for the NBT calculations, only E-ELEC, TOU-D-PRIME, and EV-TOU-5 were used for both the base and all-electric cases. Per the CPUC's Net Energy Metering: Customer-Sited Renewable Energy Generation webpage,² all residential new construction with PV and served by an IOU must now use the NBT tariff along with those specific main tariffs per IOU.

The results from all rate combinations calculated here are shown in subsequent sections below. In addition to the calculations here, NEM2 annual bill totals for the base case and minimally compliant all-electric models are shown and labeled as 2022.

² <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/net-energy-metering>

4 NBT vs. NEM2

When considering residential new construction, there are three major differences between NEM2 and NBT. In order of importance, they are:

1. The export rate under NBT is much lower than it was under NEM2.
2. NBT customers must use a specific main tariff per IOU that was already available prior to April 15, 2023, but that was not commonly selected by customers.
3. NBT introduces a new feature called “no-netting” which captures grid imports that are hidden within the hourly intervals in which the IOUs report *net* electricity usage to customers.

Aside from requiring the specific main tariffs noted above and adding the no-netting calculation, CPUC did not modify those main tariffs (i.e., non-bypassable charges, fixed customer charges, and minimum bill amounts were not changed).

4.1 Export Rate is Much Lower Under NBT vs. NEM2

Under NEM2, the export rate per time-of-use (TOU) period was equal to the import rate for the same TOU period minus the non-bypassable charge (NBC) portion of the import rate which was rather small. For example, SDG&E’s TOU-DR1 tariff as of early 2023 had an NBC rate of \$0.0324/kWh, a summer peak total *import* rate of \$0.8333/kWh, and a summer peak total *export* rate of \$0.8009/kWh (or \$0.8333/kWh - \$0.0324/kWh). Therefore, the export rate was 96% of the import rate.

Under NBT, SDGE’s EV-TOU-5 tariff must be used as the main tariff, and the summer peak total import rate was \$0.8163/kWh which is similar to TOU-DR1. However, under NBT, the export rate is variable within each TOU period and is much lower on average than the associated import rate. Using the Statewide Reach Codes Team’s all-electric, single family building energy model in Climate Zone 7 (which is SDG&E territory), the average export rate in the summer peak TOU period was \$ 0.1030/kWh which was 12.6% of the import rate.

Under NBT, the export rates are derived from the results of CPUC’s Avoided Cost Calculator which is updated every two years.³ As stated in CPUC’s NBT decision:⁴

“the avoided costs determined in the Avoided Cost Calculator are the utilities’ marginal costs of providing electric service to customers. Those costs can be avoided when the demand for energy decreases because of distributed energy resources, and are, thus, the benefits of using distributed energy resources.”

The Avoided Cost Calculator has hourly estimates of avoided cost per kWh for each IOU and Climate Zone from the present to 2050. For the export rate for each IOU, the decision states that the results across all climate zones per IOU will be averaged. Then, the costs are simplified further in this manner:

“the retail export compensation rate is set at averaged monthly values for each hour, differentiated between weekday and weekend/holiday. For example, the hour of 3:00 p.m. to 4:00 p.m. on weekdays in July 2023 will have the same retail export compensation rate.”

In the calculations below, the 2024 values were used.

4.2 NBT Customers Must Use Specific Main Tariffs per IOU

As stated above, NBT customers must use a specific main tariff per IOU that was already available prior to April 15, 2023. Those tariffs are E-ELEC for PG&E customers, TOU-D-PRIME for SCE customers, and EV-TOU-5 for SDG&E customers. The CPUC selected those tariffs because they have “highly differentiated time-of-use rates” (i.e., the rate

³ <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/energy-efficiency/idsm>

⁴ <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M500/K043/500043682.PDF>

difference between the highest and lowest time-of-use periods is high compared to other existing tariffs). As CPUC states in its NBT decision,

“requiring highly differentiated time-of-use rates will vastly improve the pricing signal to successor tariff customers, encourage electrification, and maximize the value of generation, which meets several guiding principles in this proceeding.”

In the net energy metering rulemaking, the CPUC did not propose any changes to those existing tariffs. However, they noted that the fixed charges within the existing tariffs will be reformed to be based on customer income in the Demand Flexibility Rulemaking.⁵ Furthermore, those changes will be applicable to all customers.

4.3 NBT’s “No-Netting” Feature

Under NEM2 for residential buildings, *net* energy usage per hour was used for billing purposes (i.e., the “netting interval” was one hour). Under NBT, a much shorter data interval is used for billing purposes so that virtually no imports are hidden within any given interval, and this is referred to as “no-netting.” For example, over a period of one hour, say a customer has a building load of 1.5 kWh and their PV generates 2.5 kWh (which yields net exports of 1 kWh), but they import 0.1 kWh and export 1.1 kWh.⁶ This is conceivable because PV generation is variable and not always coincident with building load. Under NEM2, the customer would not be charged for any imports and would receive credit for 1 kWh of exports. Under NBT, the customer would be charged for 0.1 kWh of imports and would receive credit for 1.1 kWh of exports. Since the export rate is lower than the import rate, that yields a smaller credit than no imports and 1 kWh of exports.

Even though sub-hourly interval energy data is used for billing purposes under NBT, residential customers still only have access to net hourly energy usage data. To mitigate this, CPUC directed the IOUs to report adjustment factors for customers to use to estimate the impact of no-netting even though they only have access to hourly net energy usage data.⁷ In the meantime, CPUC stated that a good approximation is to add 6.6% to every hour with net exports and add the same amount to imports for those hours (as opposed to 0) so that the net amount in those hours is unchanged.⁸ Using a similar example as above, say the net exports during a given hour is 1 kWh. That should be changed to 1.066 kWh of exports and 0.066 kWh of imports.

In the results tables below, the annual import and export energy usage totals have the no-netting calculation included for NBT and not included for NEM2.

4.4 Non-bypassable Charges, Fixed Customer Charges, and Minimum Bill Amounts Not Modified by NBT

As noted above, NBT customers must use a specific main tariff per IOU (i.e., E-ELEC for PG&E customers, TOU-D-PRIME for SCE customers, and EV-TOU-5 for SDG&E customers). Furthermore, CPUC did not modify those tariffs within the NEM proceeding. Therefore, features of those tariffs such as the non-bypassable charges (NBC), fixed customer charges, and minimum bill amounts were not changed within the NEM proceeding.

There are still four import rate bill components that make up the NBCs: the public purpose program charge, nuclear decommissioning charge, competition transition charge, and the Wildfire Fund Non-Bypassable Charge. For a given IOU, the NBC rate is the same across all time-of-use periods and is only calculated for the imports, not exports. In the

⁵ <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-costs/demand-response-dr/demand-flexibility-rulemaking>

⁶ This example was derived this blog post by Aurora Solar: <https://aurorasolar.com/blog/explaining-and-modeling-californias-net-billing-tariff-nem-3-0/>.

⁷ See page 134 (PDF page 137) of CPUC’s adopted revised proposed decision from decision D.22-12-056: <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M500/K043/500043682.PDF>.

⁸ See page B1 (PDF page 254) of CPUC’s adopted revised proposed decision from decision D.22-12-056: <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M500/K043/500043682.PDF>.

results table below, the import costs are broken down into portions with and without NBCs. Together, they represent the full import costs. However, the NBCs are also used in a monthly “bill-floor” calculation.

That monthly bill-floor amount is the sum of the monthly NBCs and the fixed monthly customer charge from the tariff, if any. In the tariff, the latter value is listed as dollars per day, so it is multiplied by the number of days in the given month. If the tariff has a minimum daily bill amount, then it is converted to a monthly value to create an *additional* monthly bill-floor amount.

The monthly bill-floor amount(s) are compared to the bill subtotal. The bill subtotal is the sum of the import costs (NBCs and non-NBCs), export credits, baseline credits, high usage charges, and the fixed customer charge. The customer is charged the highest amount of the two bill-floor amounts and the bill subtotal. If the bill was increased due to this comparison, then excess exports are carried over to the next month and do not expire. Also, net surplus generation does not apply to any of these models because annual generation does not exceed any imports for any of the energy models used here.

Please note that according to CPUC’s Net Billing Tariff webpage,⁹ CPUC “established the Net Billing tariff with minor modifications” in Resolution E-5301 on November 30, 2023.¹⁰ One of those modifications concerned the “separate application of generation- and delivery-related bill credits,” and it was not implemented here but will be included in future Statewide Reach Codes Team reports. The import and export credits must be divided into their delivery and generation portions. The generation portion of the export credits only offset the generation portion of the import costs, with any excess credits being carried forward. It is similar on the delivery side except that the monthly bill-floor amount(s) would also apply there. For any given month, this would either yield the same result as calculated here or, more likely, it would result in higher bills.

Furthermore, as noted above, the CPUC has a proceeding underway in which the customer charge for each main tariff will be increased and will vary by income instead of being fixed for everyone.¹¹ The volumetric import rates will be reduced and will not be based on income. These future changes have not yet been estimated here.

⁹ <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/customer-generation/nem-revisit/net-billing-tariff>

¹⁰ <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M521/K257/521257323.PDF>

¹¹ <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-costs/demand-response-dr/demand-flexibility-rulemaking>

5 Results

Annual results are shown below for all scenarios studied here and are grouped by climate zone (and by utility when two utilities were used in one climate zone). Each climate zone table has 10 results: four for the minimally compliant all-electric model (labeled as AE), three for the all-electric model with 100% PV (labeled as AE100PV), and three for the base case mixed fuel model (labeled as Base). The AE and Base models include results from the prior single family cost-effectiveness report and have “2022” in the label. All other results were calculated here using 2023 rates. Each model type (AE, AE100PV, and Base) has at least one NEM2 2023 result and one NBT 2023 result. For each model type, the “% cost increase” column is as compared to the first NEM2 result that is shown for that model type. Table 4 below includes descriptions for each column heading.

The primary finding is that NBT yields higher electric bills as compared to NEM2, but the increase is less for all-electric buildings with minimally compliant PV (i.e., AE model) than for mixed fuel buildings with minimally compliant PV (i.e., the Base model) or all-electric buildings with 100% PV (i.e., AE100PV model). This can be seen when comparing NBT with the required main tariff to NEM2 with the then commonly used main tariff and not changing anything else. For example, in Climate Zone 1, the annual electric bill increased by 170% for the Base model, 234% for the AE100PV model, and 22% for the AE model. This is largely due to the higher quantity of exports in those first two groups of models and the lower export rate in NBT versus NEM2.

Described another way, minimizing exports helps reduce electricity bills for NBT customers. This can be accomplished by shifting electricity usage to hours of PV generation, adding battery storage and strategically charging it, and not oversizing PV systems.

A secondary finding is that the NEM2 annual electric bill results here (labeled as 2023) are often substantially higher than the NEM2 results in the prior single family cost-effectiveness report (labeled as 2022). For example, in Climate Zone 1, the AE NEM2 2023 result is 3% higher than the NEM2 2022 result, and the Base result is 19% higher. This is largely due to rate increases in the main tariffs from 2022 to 2023. There could be additional reasons, but the Reach Codes Team will not investigate this further since NEM2 is no longer available for new construction.

Table 4: Column Headings for Annual Results

Column Heading	Units	Description
CZ, Utility CZ, Tariff, Fuel, NEM Tariff, Year	N/A	California Climate Zone, IOU Climate Zone on the tariff, main tariff, mixed fuel (base) or minimally compliant all-electric or all-electric with 100% PV model, NEM tariff, year (to distinguish results from the single family cost-effectiveness report when available and which are labeled as 2022 instead of 2023)
Net, kWh	kWh/yr	Annual net electricity usage
Import, kWh	kWh/yr	Annual imported energy usage (for NBT, this includes the no-netting calculation)
Export, kWh	kWh/yr	Annual exported energy usage (for NBT, this includes the no-netting calculation)
Import Cost, no NBC	\$/yr	Annual volumetric cost for the non-NBC portion of imports
Import Cost, NBC	\$/yr	Annual volumetric cost for the NBC portion of imports
Export credit	\$/yr	Annual volumetric cost credit for the exports
Baseline credit	\$/yr	Annual baseline credits
Customer charge	\$/yr	Annual customer charges
Unused Export Credits	\$/yr	Unused, rolled-over export credits due to bill floor calculations
Total bill	\$/yr	Annual total bills after considering the bill-floors each month
% Cost Increase	N/A	Percent increase in the annual bill when comparing NEM2 with the previously common main tariff (from the single family cost-effectiveness report if available) to NBT with the required main tariff

Table 5: Climate Zone 1 Annual Results

	Net, kWh	Import, kWh	Export, kWh	Import cost, no NBC	Import cost, NBC	Export credit	Baseline credit	Customer charge	Unused Export Credits	Total bill	% cost increase
CZ, Utility CZ, Tariff, Fuel, NEM Tariff, Year											
01_V_PG&E_E-TOU-C_AE_NEM2_2022	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$2,009	
01_V_PG&E_E-TOU-C_AE_NEM2_2023	6,310	8,152	(1,841)	\$2,886	\$ 247	\$ (690)	\$ (371)	\$ -	\$ -	\$2,073	3%
01_V_PG&E_E-ELEC_AE_NEM2_2023	6,310	8,152	(1,841)	\$2,086	\$ 247	\$ (530)	\$ -	\$ 180	\$ -	\$1,982	-1%
01_V_PG&E_E-ELEC_AE_NBT_2023	6,310	8,273	(1,963)	\$2,121	\$ 251	\$ (91)	\$ -	\$ 180	\$ -	\$2,460	22%
01_V_PG&E_E-TOU-C_AE100PV_NEM2_2023	0	7,378	(7,378)	\$2,603	\$ 224	\$(2,754)	\$ 42	\$ -	\$ 498	\$ 613	
01_V_PG&E_E-ELEC_AE100PV_NEM2_2023	0	7,378	(7,378)	\$1,873	\$ 224	\$(2,115)	\$ -	\$ 180	\$ 941	\$1,103	80%
01_V_PG&E_E-ELEC_AE100PV_NBT_2023	0	7,865	(7,865)	\$2,012	\$ 239	\$(385)	\$ -	\$ 180	\$ -	\$2,045	234%
01_V_PG&E_E-TOU-C_Base_NEM2_2022	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 463	
01_V_PG&E_E-TOU-C_Base_NEM2_2023	1,559	3,823	(2,264)	\$1,376	\$ 116	\$(845)	\$(96)	\$ -	\$ 0	\$ 551	19%
01_V_PG&E_E-ELEC_Base_NBT_2023	1,559	3,973	(2,414)	\$1,064	\$ 121	\$(115)	\$ -	\$ 180	\$ -	\$1,250	170%

Table 6: Climate Zone 2 Annual Results

	Net, kWh	Import, kWh	Export, kWh	Import cost, no NBC	Import cost, NBC	Export credit	Baseline credit	Customer charge	Unused Export Credits	Total bill	% cost increase
CZ, Utility CZ, Tariff, Fuel, NEM Tariff, Year											
02_X_PG&E_E-TOU-C_AE_NEM2_2022	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$1,365	
02_X_PG&E_E-TOU-C_AE_NEM2_2023	4,340	6,144	(1,804)	\$2,183	\$ 186	\$(675)	\$(234)	\$ -	\$ -	\$1,461	7%
02_X_PG&E_E-ELEC_AE_NEM2_2023	4,340	6,144	(1,804)	\$1,596	\$ 186	\$(514)	\$ -	\$ 180	\$ -	\$1,448	6%
02_X_PG&E_E-ELEC_AE_NBT_2023	4,340	6,263	(1,923)	\$1,630	\$ 190	\$(87)	\$ -	\$ 180	\$ -	\$1,913	40%
02_X_PG&E_E-TOU-C_AE100PV_NEM2_2023	(0)	5,650	(5,650)	\$2,003	\$ 171	\$(2,106)	\$ 57	\$ -	\$ 455	\$ 580	
02_X_PG&E_E-ELEC_AE100PV_NEM2_2023	(0)	5,650	(5,650)	\$1,459	\$ 171	\$(1,604)	\$ -	\$ 180	\$ 728	\$ 934	61%
02_X_PG&E_E-ELEC_AE100PV_NBT_2023	(0)	6,023	(6,023)	\$1,565	\$ 183	\$(283)	\$ -	\$ 180	\$ -	\$1,645	183%
02_X_PG&E_E-TOU-C_Base_NEM2_2022	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 352	
02_X_PG&E_E-TOU-C_Base_NEM2_2023	1,246	3,477	(2,232)	\$1,254	\$ 106	\$(832)	\$(91)	\$ -	\$ (0)	\$ 437	24%
02_X_PG&E_E-ELEC_Base_NBT_2023	1,246	3,625	(2,379)	\$ 978	\$ 110	\$(109)	\$ -	\$ 180	\$ -	\$1,158	229%

Table 7: Climate Zone 3 Annual Results

CZ, Utility CZ, Tariff, Fuel, NEM Tariff, Year	Net, kWh	Import, kWh	Export, kWh	Import cost, no NBC	Import cost, NBC	Export credit	Baseline credit	Customer charge	Unused Export Credits	Total bill	% cost increase
03_T_PG&E_E-TOU-C_AE_NEM2_2022	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$1,078	
03_T_PG&E_E-TOU-C_AE_NEM2_2023	3,467	5,234	(1,767)	\$1,872	\$ 159	\$ (657)	\$ (205)	\$ -	\$ -	\$1,169	8%
03_T_PG&E_E-ELEC_AE_NEM2_2023	3,467	5,234	(1,767)	\$1,379	\$ 159	\$ (498)	\$ -	\$ 180	\$ -	\$1,220	13%
03_T_PG&E_E-ELEC_AE_NBT_2023	3,467	5,351	(1,884)	\$1,412	\$ 162	\$ (84)	\$ -	\$ 180	\$ -	\$1,670	55%
03_T_PG&E_E-TOU-C_AE100PV_NEM2_2023	0	4,833	(4,833)	\$1,724	\$ 147	\$ (1,792)	\$ 32	\$ -	\$ 331	\$ 443	
03_T_PG&E_E-ELEC_AE100PV_NEM2_2023	0	4,833	(4,833)	\$1,267	\$ 147	\$ (1,360)	\$ -	\$ 180	\$ 508	\$ 741	67%
03_T_PG&E_E-ELEC_AE100PV_NBT_2023	0	5,152	(5,152)	\$1,356	\$ 156	\$ (241)	\$ -	\$ 180	\$ -	\$1,452	228%
03_T_PG&E_E-TOU-C_Base_NEM2_2022	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 338	
03_T_PG&E_E-TOU-C_Base_NEM2_2023	1,177	3,697	(2,520)	\$1,315	\$ 112	\$ (932)	\$ (34)	\$ -	\$ 0	\$ 461	36%
03_T_PG&E_E-ELEC_Base_NBT_2023	1,177	3,864	(2,687)	\$1,005	\$ 117	\$ (124)	\$ -	\$ 180	\$ -	\$1,179	249%

Table 8: Climate Zone 4 Annual Results

CZ, Utility CZ, Tariff, Fuel, NEM Tariff, Year	Net, kWh	Import, kWh	Export, kWh	Import cost, no NBC	Import cost, NBC	Export credit	Baseline credit	Customer charge	Unused Export Credits	Total bill	% cost increase
04_X_PG&E_E-TOU-C_AE_NEM2_2022	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 915	
04_X_PG&E_E-TOU-C_AE_NEM2_2023	3,019	4,862	(1,843)	\$1,750	\$ 148	\$ (685)	\$ (204)	\$ -	\$ -	\$1,009	10%
04_X_PG&E_E-ELEC_AE_NEM2_2023	3,019	4,862	(1,843)	\$1,309	\$ 148	\$ (515)	\$ -	\$ 180	\$ -	\$1,121	23%
04_X_PG&E_E-ELEC_AE_NBT_2023	3,019	4,983	(1,964)	\$1,343	\$ 151	\$ (83)	\$ -	\$ 180	\$ -	\$1,591	74%
04_X_PG&E_E-TOU-C_AE100PV_NEM2_2023	0	4,525	(4,525)	\$1,625	\$ 137	\$ (1,679)	\$ 10	\$ -	\$ 292	\$ 385	
04_X_PG&E_E-ELEC_AE100PV_NEM2_2023	0	4,525	(4,525)	\$1,211	\$ 137	\$ (1,265)	\$ -	\$ 180	\$ 422	\$ 685	78%
04_X_PG&E_E-ELEC_AE100PV_NBT_2023	0	4,824	(4,824)	\$1,294	\$ 146	\$ (213)	\$ -	\$ 180	\$ -	\$1,407	265%
04_X_PG&E_E-TOU-C_Base_NEM2_2022	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 253	
04_X_PG&E_E-TOU-C_Base_NEM2_2023	918	3,515	(2,596)	\$1,263	\$ 107	\$ (959)	\$ (48)	\$ -	\$ 5	\$ 367	45%
04_X_PG&E_E-ELEC_Base_NBT_2023	918	3,686	(2,768)	\$ 988	\$ 112	\$ (118)	\$ -	\$ 180	\$ -	\$1,162	360%

Table 9: Climate Zone 5 Annual Results

CZ, Utility CZ, Tariff, Fuel, NEM Tariff, Year	Net, kWh	Import, kWh	Export, kWh	Import cost, no NBC	Import cost, NBC	Export credit	Baseline credit	Customer charge	Unused Export Credits	Total bill	% cost increase
05_T_PG&E_E-TOU-C_AE_NEM2_2022	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$1,019	
05_T_PG&E_E-TOU-C_AE_NEM2_2023	3,334	5,016	(1,682)	\$1,797	\$ 152	\$ (623)	\$ (215)	\$ -	\$ -	\$1,111	9%
05_T_PG&E_E-ELEC_AE_NEM2_2023	3,334	5,016	(1,682)	\$1,327	\$ 152	\$ (472)	\$ -	\$ 180	\$ -	\$1,188	17%
05_T_PG&E_E-ELEC_AE_NBT_2023	3,334	5,127	(1,793)	\$1,358	\$ 156	\$ (81)	\$ -	\$ 180	\$ -	\$1,613	58%
05_T_PG&E_E-TOU-C_AE100PV_NEM2_2023	(0)	4,637	(4,637)	\$1,658	\$ 141	\$ (1,713)	\$ 11	\$ -	\$ 255	\$ 351	
05_T_PG&E_E-ELEC_AE100PV_NEM2_2023	(0)	4,637	(4,637)	\$1,221	\$ 141	\$ (1,297)	\$ -	\$ 180	\$ 405	\$ 649	85%
05_T_PG&E_E-ELEC_AE100PV_NBT_2023	(0)	4,943	(4,943)	\$1,306	\$ 150	\$ (231)	\$ -	\$ 180	\$ -	\$1,405	300%
05_T_PG&E_E-TOU-C_Base_NEM2_2022	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 344	
05_T_PG&E_E-TOU-C_Base_NEM2_2023	1,205	3,291	(2,086)	\$1,191	\$ 100	\$ (771)	\$ (93)	\$ -	\$ -	\$ 426	24%
05_T_PG&E_E-ELEC_Base_NBT_2023	1,205	3,429	(2,223)	\$ 929	\$ 104	\$ (102)	\$ -	\$ 180	\$ -	\$1,111	223%

Table 10: Climate Zone 6 Annual Results

CZ, Utility CZ, Tariff, Fuel, NEM Tariff, Year	Net, kWh	Import, kWh	Export, kWh	Import cost, no NBC	Import cost, NBC	Export credit	Baseline credit	Customer charge	Unused Export Credits	Total bill	% cost increase
06_6_SCE_TOU-D-4-9_AE_NEM2_2022	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 721	
06_6_SCE_TOU-D-4-9_AE_NEM2_2023	2,300	4,060	(1,759)	\$1,550	\$ 106	\$ (621)	\$ (220)	\$ 11	\$ -	\$ 826	15%
06_6_SCE_TOU-D-PRIME_AE_NEM2_2023	2,300	4,060	(1,759)	\$1,156	\$ 106	\$ (449)	\$ -	\$ 160	\$ -	\$ 973	35%
06_6_SCE_TOU-D-PRIME_AE_NBT_2023	2,300	4,176	(1,876)	\$1,186	\$ 109	\$ (91)	\$ -	\$ 160	\$ -	\$1,363	89%
06_6_SCE_TOU-D-4-9_AE100PV_NEM2_2023	0	3,797	(3,797)	\$1,448	\$ 99	\$ (1,349)	\$ (0)	\$ 11	\$ 57	\$ 267	
06_6_SCE_TOU-D-PRIME_AE100PV_NEM2_2023	0	3,797	(3,797)	\$1,072	\$ 99	\$ (986)	\$ -	\$ 160	\$ 48	\$ 392	47%
06_6_SCE_TOU-D-PRIME_AE100PV_NBT_2023	0	4,047	(4,047)	\$1,137	\$ 106	\$ (201)	\$ -	\$ 160	\$ -	\$1,202	350%
06_6_SCE_TOU-D-4-9_Base_NEM2_2022	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 337	
06_6_SCE_TOU-D-4-9_Base_NEM2_2023	907	3,089	(2,182)	\$1,176	\$ 81	\$ (772)	\$ (89)	\$ 11	\$ 0	\$ 407	21%
06_6_SCE_TOU-D-PRIME_Base_NBT_2023	907	3,234	(2,326)	\$ 909	\$ 85	\$ (114)	\$ -	\$ 160	\$ -	\$1,039	209%

Table 11: Climate Zone 7 Annual Results

CZ, Utility CZ, Tariff, Fuel, NEM Tariff, Year	Net, kWh	Import, kWh	Export, kWh	Import cost, no NBC	Import cost, NBC	Export credit	Baseline credit	Customer charge	Unused Export Credits	Total bill	% cost increase
07_Coastal_SDG&E_TOU-DR1_AE_NEM2_2022	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 843	
07_Coastal_SDG&E_TOU-DR1_AE_NEM2_2023	2,155	3,917	(1,761)	\$2,059	\$ 127	\$ (925)	\$ (249)	\$ -	\$ -	\$1,012	20%
07_Coastal_SDG&E_EV-TOU-5_AE_NEM2_2023	2,155	3,917	(1,761)	\$1,428	\$ 127	\$ (718)	\$ -	\$ 192	\$ -	\$1,029	22%
07_Coastal_SDG&E_EV-TOU-5_AE_NBT_2023	2,155	4,033	(1,878)	\$1,475	\$ 131	\$ (87)	\$ -	\$ 192	\$ -	\$1,710	103%
07_Coastal_SDG&E_TOU-DR1_AE100PV_NEM2_2023	(0)	3,661	(3,661)	\$1,915	\$ 118	\$ (1,932)	\$ 0	\$ -	\$ 180	\$ 281	
07_Coastal_SDG&E_EV-TOU-5_AE100PV_NEM2_2023	(0)	3,661	(3,661)	\$1,315	\$ 118	\$ (1,491)	\$ -	\$ 192	\$ 258	\$ 392	40%
07_Coastal_SDG&E_EV-TOU-5_AE100PV_NBT_2023	(0)	3,903	(3,903)	\$1,413	\$ 126	\$ (194)	\$ -	\$ 192	\$ -	\$1,537	447%
07_Coastal_SDG&E_TOU-DR1_Base_NEM2_2022	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 311	
07_Coastal_SDG&E_TOU-DR1_Base_NEM2_2023	887	3,075	(2,187)	\$1,599	\$ 99	\$ (1,151)	\$ (104)	\$ -	\$ (0)	\$ 444	43%
07_Coastal_SDG&E_EV-TOU-5_Base_NBT_2023	887	3,219	(2,332)	\$1,164	\$ 104	\$ (111)	\$ -	\$ 192	\$ -	\$1,349	334%

Table 12: Climate Zone 8 Annual Results

CZ, Utility CZ, Tariff, Fuel, NEM Tariff, Year	Net, kWh	Import, kWh	Export, kWh	Import cost, no NBC	Import cost, NBC	Export credit	Baseline credit	Customer charge	Unused Export Credits	Total bill	% cost increase
08_8_SCE_TOU-D-4-9_AE_NEM2_2022	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 697	
08_8_SCE_TOU-D-4-9_AE_NEM2_2023	2,071	4,107	(2,036)	\$1,591	\$ 107	\$ (711)	\$ (202)	\$ 11	\$ -	\$ 797	14%
08_8_SCE_TOU-D-PRIME_AE_NEM2_2023	2,071	4,107	(2,036)	\$1,216	\$ 107	\$ (507)	\$ -	\$ 160	\$ -	\$ 976	40%
08_8_SCE_TOU-D-PRIME_AE_NBT_2023	2,071	4,241	(2,170)	\$1,249	\$ 111	\$ (99)	\$ -	\$ 160	\$ -	\$1,422	104%
08_8_SCE_TOU-D-4-9_AE100PV_NEM2_2023	-	3,860	(3,860)	\$1,491	\$ 101	\$ (1,358)	\$ 0	\$ 11	\$ -	\$ 246	
08_8_SCE_TOU-D-PRIME_AE100PV_NEM2_2023	-	3,860	(3,860)	\$1,130	\$ 101	\$ (979)	\$ -	\$ 160	\$ -	\$ 411	67%
08_8_SCE_TOU-D-PRIME_AE100PV_NBT_2023	-	4,115	(4,115)	\$1,195	\$ 108	\$ (194)	\$ -	\$ 160	\$ -	\$1,269	416%
08_8_SCE_TOU-D-4-9_Base_NEM2_2022	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 354	
08_8_SCE_TOU-D-4-9_Base_NEM2_2023	822	3,288	(2,466)	\$1,269	\$ 86	\$ (863)	\$ (80)	\$ 11	\$ (0)	\$ 424	20%
08_8_SCE_TOU-D-PRIME_Base_NBT_2023	822	3,451	(2,629)	\$1,001	\$ 90	\$ (120)	\$ -	\$ 160	\$ -	\$1,131	219%

Table 13: Climate Zone 9 Annual Results

CZ, Utility CZ, Tariff, Fuel, NEM Tariff, Year	Net, kWh	Import, kWh	Export, kWh	Import cost, no NBC	Import cost, NBC	Export credit	Baseline credit	Customer charge	Unused Export Credits	Total bill	% cost increase
09_9_SCE_TOU-D-4-9_AE_NEM2_2022	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 749	
09_9_SCE_TOU-D-4-9_AE_NEM2_2023	2,273	4,258	(1,985)	\$1,647	\$ 111	\$ (692)	\$ (222)	\$ 11	\$ -	\$ 856	14%
09_9_SCE_TOU-D-PRIME_AE_NEM2_2023	2,273	4,258	(1,985)	\$1,249	\$ 111	\$ (491)	\$ -	\$ 160	\$ -	\$1,029	37%
09_9_SCE_TOU-D-PRIME_AE_NBT_2023	2,273	4,389	(2,116)	\$1,282	\$ 115	\$ (95)	\$ -	\$ 160	\$ -	\$1,461	95%
09_9_SCE_TOU-D-4-9_AE100PV_NEM2_2023	(0)	3,994	(3,994)	\$1,540	\$ 104	\$ (1,401)	\$ 0	\$ 11	\$ (0)	\$ 255	
09_9_SCE_TOU-D-PRIME_AE100PV_NEM2_2023	(0)	3,994	(3,994)	\$1,159	\$ 104	\$ (1,007)	\$ -	\$ 160	\$ -	\$ 415	63%
09_9_SCE_TOU-D-PRIME_AE100PV_NBT_2023	(0)	4,258	(4,258)	\$1,225	\$ 111	\$ (199)	\$ -	\$ 160	\$ -	\$1,298	409%
09_9_SCE_TOU-D-4-9_Base_NEM2_2022	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 364	
09_9_SCE_TOU-D-4-9_Base_NEM2_2023	859	3,284	(2,424)	\$1,269	\$ 86	\$ (846)	\$ (84)	\$ 11	\$ 0	\$ 436	20%
09_9_SCE_TOU-D-PRIME_Base_NBT_2023	859	3,444	(2,584)	\$1,000	\$ 90	\$ (117)	\$ -	\$ 160	\$ -	\$1,133	211%

Table 14: Climate Zone 10 SCE Annual Results

CZ, Utility CZ, Tariff, Fuel, NEM Tariff, Year	Net, kWh	Import, kWh	Export, kWh	Import cost, no NBC	Import cost, NBC	Export credit	Baseline credit	Customer charge	Unused Export Credits	Total bill	% cost increase
10_10_SCE_TOU-D-4-9_AE_NEM2_2022	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 840	
10_10_SCE_TOU-D-4-9_AE_NEM2_2023	2,539	4,646	(2,107)	\$1,799	\$ 121	\$ (732)	\$ (248)	\$ 11	\$ -	\$ 952	13%
10_10_SCE_TOU-D-PRIME_AE_NEM2_2023	2,539	4,646	(2,107)	\$1,361	\$ 121	\$ (519)	\$ -	\$ 160	\$ -	\$1,123	34%
10_10_SCE_TOU-D-PRIME_AE_NBT_2023	2,539	4,785	(2,246)	\$1,395	\$ 125	\$ (97)	\$ -	\$ 160	\$ -	\$1,583	88%
10_10_SCE_TOU-D-4-9_AE100PV_NEM2_2023	(0)	4,334	(4,334)	\$1,672	\$ 113	\$ (1,517)	\$ 0	\$ 11	\$ 23	\$ 302	
10_10_SCE_TOU-D-PRIME_AE100PV_NEM2_2023	(0)	4,334	(4,334)	\$1,250	\$ 113	\$ (1,088)	\$ -	\$ 160	\$ -	\$ 436	44%
10_10_SCE_TOU-D-PRIME_AE100PV_NBT_2023	(0)	4,620	(4,620)	\$1,322	\$ 121	\$ (209)	\$ -	\$ 160	\$ -	\$1,394	361%
10_10_SCE_TOU-D-4-9_Base_NEM2_2022	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 389	
10_10_SCE_TOU-D-4-9_Base_NEM2_2023	879	3,425	(2,546)	\$1,332	\$ 90	\$ (886)	\$ (86)	\$ 11	\$ -	\$ 461	19%
10_10_SCE_TOU-D-PRIME_Base_NBT_2023	879	3,593	(2,714)	\$1,059	\$ 94	\$ (117)	\$ -	\$ 160	\$ -	\$1,195	207%

Table 15: Climate Zone 10 SDG&E Annual Results

CZ, Utility CZ, Tariff, Fuel, NEM Tariff, Year	Net, kWh	Import, kWh	Export, kWh	Import cost, no NBC	Import cost, NBC	Export credit	Baseline credit	Customer charge	Unused Export Credits	Total bill	% cost increase
10_Inland_SDG&E_TOU-DR1_AE_NEM2_2022	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$1,057	
10_Inland_SDG&E_TOU-DR1_AE_NEM2_2023	2,539	4,646	(2,107)	\$2,494	\$ 150	\$(1,088)	\$(294)	\$ -	\$ -	\$1,261	19%
10_Inland_SDG&E_EV-TOU-5_AE_NEM2_2023	2,539	4,646	(2,107)	\$1,740	\$ 150	\$(819)	\$ -	\$ 192	\$ -	\$1,263	20%
10_Inland_SDG&E_EV-TOU-5_AE_NBT_2023	2,539	4,785	(2,246)	\$1,794	\$ 155	\$(89)	\$ -	\$ 192	\$ -	\$2,052	94%
10_Inland_SDG&E_TOU-DR1_AE100PV_NEM2_2023	(0)	4,334	(4,334)	\$2,305	\$ 140	\$(2,249)	\$ 0	\$ -	\$ 159	\$ 356	
10_Inland_SDG&E_EV-TOU-5_AE100PV_NEM2_2023	(0)	4,334	(4,334)	\$1,583	\$ 140	\$(1,699)	\$ -	\$ 192	\$ 213	\$ 429	21%
10_Inland_SDG&E_EV-TOU-5_AE100PV_NBT_2023	(0)	4,620	(4,620)	\$1,695	\$ 150	\$(200)	\$ -	\$ 192	\$ -	\$1,836	416%
10_Inland_SDG&E_TOU-DR1_Base_NEM2_2022	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 286	
10_Inland_SDG&E_TOU-DR1_Base_NEM2_2023	879	3,425	(2,546)	\$1,836	\$ 111	\$(1,316)	\$(103)	\$ -	\$ -	\$ 529	85%
10_Inland_SDG&E_EV-TOU-5_Base_NBT_2023	879	3,593	(2,714)	\$1,393	\$ 116	\$(109)	\$ -	\$ 192	\$ -	\$1,592	458%

Table 16: Climate Zone 11 Annual Results

CZ, Utility CZ, Tariff, Fuel, NEM Tariff, Year	Net, kWh	Import, kWh	Export, kWh	Import cost, no NBC	Import cost, NBC	Export credit	Baseline credit	Customer charge	Unused Export Credits	Total bill	% cost increase
11_R_PG&E_E-TOU-C_AE_NEM2_2022	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$1,159	
11_R_PG&E_E-TOU-C_AE_NEM2_2023	3,763	6,191	(2,428)	\$2,252	\$ 188	\$(887)	\$(294)	\$ -	\$ -	\$1,259	9%
11_R_PG&E_E-ELEC_AE_NEM2_2023	3,763	6,191	(2,428)	\$1,728	\$ 188	\$(648)	\$ -	\$ 180	\$ 29	\$1,477	28%
11_R_PG&E_E-ELEC_AE_NBT_2023	3,763	6,351	(2,588)	\$1,771	\$ 193	\$(100)	\$ -	\$ 180	\$ -	\$2,043	76%
11_R_PG&E_E-TOU-C_AE100PV_NEM2_2023	0	5,771	(5,771)	\$2,089	\$ 175	\$(2,122)	\$(0)	\$ -	\$ 342	\$ 485	
11_R_PG&E_E-ELEC_AE100PV_NEM2_2023	0	5,771	(5,771)	\$1,587	\$ 175	\$(1,568)	\$ -	\$ 180	\$ 482	\$ 856	77%
11_R_PG&E_E-ELEC_AE100PV_NBT_2023	0	6,152	(6,152)	\$1,690	\$ 187	\$(255)	\$ -	\$ 180	\$ -	\$1,801	272%
11_R_PG&E_E-TOU-C_Base_NEM2_2022	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 361	
11_R_PG&E_E-TOU-C_Base_NEM2_2023	1,046	3,937	(2,891)	\$1,463	\$ 119	\$(1,055)	\$(84)	\$ -	\$ -	\$ 443	23%
11_R_PG&E_E-ELEC_Base_NBT_2023	1,046	4,127	(3,082)	\$1,209	\$ 125	\$(121)	\$ -	\$ 180	\$ -	\$1,393	286%

Table 17: Climate Zone 12 Annual Results

CZ, Utility CZ, Tariff, Fuel, NEM Tariff, Year	Net, kWh	Import, kWh	Export, kWh	Import cost, no NBC	Import cost, NBC	Export credit	Baseline credit	Customer charge	Unused Export Credits	Total bill	% cost increase
12_S_PG&E_E-TOU-C_AE_NEM2_2022	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$1,098	
12_S_PG&E_E-TOU-C_AE_NEM2_2023	3,677	5,663	(1,986)	\$2,033	\$ 172	\$(738)	\$(268)	\$ -	\$ -	\$1,198	9%
12_S_PG&E_E-ELEC_AE_NEM2_2023	3,677	5,663	(1,986)	\$1,518	\$ 172	\$(555)	\$ -	\$ 180	\$ 3	\$1,318	20%
12_S_PG&E_E-ELEC_AE_NBT_2023	3,677	5,794	(2,117)	\$1,555	\$ 176	\$(88)	\$ -	\$ 180	\$ -	\$1,822	66%
12_S_PG&E_E-TOU-C_AE100PV_NEM2_2023	(0)	5,265	(5,265)	\$1,884	\$ 160	\$(1,955)	\$ 6	\$ -	\$ 396	\$ 491	
12_S_PG&E_E-ELEC_AE100PV_NEM2_2023	(0)	5,265	(5,265)	\$1,399	\$ 160	\$(1,472)	\$ -	\$ 180	\$ 599	\$ 866	77%
12_S_PG&E_E-ELEC_AE100PV_NBT_2023	(0)	5,612	(5,612)	\$1,497	\$ 170	\$(244)	\$ -	\$ 180	\$ -	\$1,603	227%
12_S_PG&E_E-TOU-C_Base_NEM2_2022	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 325	
12_S_PG&E_E-TOU-C_Base_NEM2_2023	1,097	3,518	(2,421)	\$1,282	\$ 107	\$(898)	\$(81)	\$ -	\$ -	\$ 410	26%
12_S_PG&E_E-ELEC_Base_NBT_2023	1,097	3,678	(2,581)	\$1,023	\$ 112	\$(109)	\$ -	\$ 180	\$ -	\$1,206	271%

Table 18: Climate Zone 13 Annual Results

CZ, Utility CZ, Tariff, Fuel, NEM Tariff, Year	Net, kWh	Import, kWh	Export, kWh	Import cost, no NBC	Import cost, NBC	Export credit	Baseline credit	Customer charge	Unused Export Credits	Total bill	% cost increase
13_W_PG&E_E-TOU-C_AE_NEM2_2022	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 980	
13_W_PG&E_E-TOU-C_AE_NEM2_2023	3,072	5,696	(2,624)	\$2,099	\$ 173	\$(950)	\$(218)	\$ -	\$ -	\$1,103	13%
13_W_PG&E_E-ELEC_AE_NEM2_2023	3,072	5,696	(2,624)	\$1,643	\$ 173	\$(686)	\$ -	\$ 180	\$ 37	\$1,346	37%
13_W_PG&E_E-ELEC_AE_NBT_2023	3,072	5,869	(2,797)	\$1,688	\$ 178	\$(103)	\$ -	\$ 180	\$ -	\$1,943	98%
13_W_PG&E_E-TOU-C_AE100PV_NEM2_2023	(0)	5,326	(5,326)	\$1,953	\$ 162	\$(1,943)	\$ 10	\$ -	\$ 215	\$ 397	
13_W_PG&E_E-ELEC_AE100PV_NEM2_2023	(0)	5,326	(5,326)	\$1,515	\$ 162	\$(1,422)	\$ -	\$ 180	\$ 344	\$ 778	96%
13_W_PG&E_E-ELEC_AE100PV_NBT_2023	(0)	5,677	(5,677)	\$1,609	\$ 172	\$(224)	\$ -	\$ 180	\$ -	\$1,737	338%
13_W_PG&E_E-TOU-C_Base_NEM2_2022	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 397	
13_W_PG&E_E-TOU-C_Base_NEM2_2023	1,094	4,456	(3,363)	\$1,650	\$ 135	\$(1,215)	\$(48)	\$ -	\$ -	\$ 522	32%
13_W_PG&E_E-ELEC_Base_NBT_2023	1,094	4,678	(3,584)	\$1,358	\$ 142	\$(134)	\$ -	\$ 180	\$ -	\$1,546	290%

Table 19: Climate Zone 14 SCE Annual Results

CZ, Utility CZ, Tariff, Fuel, NEM Tariff, Year	Net, kWh	Import, kWh	Export, kWh	Import cost, no NBC	Import cost, NBC	Export credit	Baseline credit	Customer charge	Unused Export Credits	Total bill	% cost increase
14_14_SCE_TOU-D-4-9_AE_NEM2_2022	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$1,228	
14_14_SCE_TOU-D-4-9_AE_NEM2_2023	3,833	5,957	(2,124)	\$2,283	\$ 156	\$ (732)	\$ (348)	\$ 11	\$ -	\$1,370	12%
14_14_SCE_TOU-D-PRIME_AE_NEM2_2023	3,833	5,957	(2,124)	\$1,670	\$ 156	\$ (514)	\$ -	\$ 160	\$ -	\$1,472	20%
14_14_SCE_TOU-D-PRIME_AE_NBT_2023	3,833	6,097	(2,265)	\$1,704	\$ 159	\$ (91)	\$ -	\$ 160	\$ -	\$1,932	57%
14_14_SCE_TOU-D-4-9_AE100PV_NEM2_2023	0	5,506	(5,506)	\$2,099	\$ 144	\$ (1,918)	\$ (0)	\$ 11	\$ 102	\$ 438	
14_14_SCE_TOU-D-PRIME_AE100PV_NEM2_2023	0	5,506	(5,506)	\$1,510	\$ 144	\$ (1,369)	\$ -	\$ 160	\$ 102	\$ 547	25%
14_14_SCE_TOU-D-PRIME_AE100PV_NBT_2023	0	5,870	(5,870)	\$1,601	\$ 153	\$ (257)	\$ -	\$ 160	\$ -	\$1,658	279%
14_14_SCE_TOU-D-4-9_Base_NEM2_2022	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 622	
14_14_SCE_TOU-D-4-9_Base_NEM2_2023	1,662	4,608	(2,946)	\$1,758	\$ 121	\$ (1,015)	\$ (128)	\$ 11	\$ 0	\$ 747	20%
14_14_SCE_TOU-D-PRIME_Base_NBT_2023	1,662	4,803	(3,141)	\$1,302	\$ 126	\$ (128)	\$ -	\$ 160	\$ -	\$1,459	135%

Table 20: Climate Zone 14 SDG&E Annual Results

CZ, Utility CZ, Tariff, Fuel, NEM Tariff, Year	Net, kWh	Import, kWh	Export, kWh	Import cost, no NBC	Import cost, NBC	Export credit	Baseline credit	Customer charge	Unused Export Credits	Total bill	% cost increase
14_Mountain_SDG&E_TOU-DR1_AE_NEM2_2022	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$1,457	
14_Mountain_SDG&E_TOU-DR1_AE_NEM2_2023	3,833	5,957	(2,124)	\$3,177	\$ 193	\$ (1,089)	\$ (449)	\$ -	\$ -	\$1,832	26%
14_Mountain_SDG&E_EV-TOU-5_AE_NEM2_2023	3,833	5,957	(2,124)	\$2,107	\$ 193	\$ (798)	\$ -	\$ 192	\$ -	\$1,694	16%
14_Mountain_SDG&E_EV-TOU-5_AE_NBT_2023	3,833	6,097	(2,265)	\$2,159	\$ 197	\$ (86)	\$ -	\$ 192	\$ -	\$2,463	69%
14_Mountain_SDG&E_TOU-DR1_AE100PV_NEM2_2023	0	5,506	(5,506)	\$2,903	\$ 178	\$ (2,842)	\$ (0)	\$ -	\$ 306	\$ 545	
14_Mountain_SDG&E_EV-TOU-5_AE100PV_NEM2_2023	0	5,506	(5,506)	\$1,877	\$ 178	\$ (2,109)	\$ -	\$ 192	\$ 418	\$ 556	2%
14_Mountain_SDG&E_EV-TOU-5_AE100PV_NBT_2023	0	5,870	(5,870)	\$2,016	\$ 190	\$ (253)	\$ -	\$ 192	\$ -	\$2,145	293%
14_Mountain_SDG&E_TOU-DR1_Base_NEM2_2022	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 290	
14_Mountain_SDG&E_TOU-DR1_Base_NEM2_2023	1,662	4,608	(2,946)	\$2,441	\$ 149	\$ (1,510)	\$ (191)	\$ -	\$ -	\$ 889	207%
14_Mountain_SDG&E_EV-TOU-5_Base_NBT_2023	1,662	4,803	(3,141)	\$1,641	\$ 155	\$ (122)	\$ -	\$ 192	\$ -	\$1,866	544%

Table 21: Climate Zone 15 Annual Results

CZ, Utility CZ, Tariff, Fuel, NEM Tariff, Year	Net, kWh	Import, kWh	Export, kWh	Import cost, no NBC	Import cost, NBC	Export credit	Baseline credit	Customer charge	Unused Export Credits	Total bill	% cost increase
15_15_SCE_TOU-D-4-9_AE_NEM2_2022	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 725	
15_15_SCE_TOU-D-4-9_AE_NEM2_2023	1,432	5,275	(3,843)	\$2,083	\$ 138	\$ (1,304)	\$ (140)	\$ 11	\$ (0)	\$ 788	9%
15_15_SCE_TOU-D-PRIME_AE_NEM2_2023	1,432	5,275	(3,843)	\$1,650	\$ 138	\$ (895)	\$ -	\$ 160	\$ -	\$1,053	45%
15_15_SCE_TOU-D-PRIME_AE_NBT_2023	1,432	5,528	(4,096)	\$1,709	\$ 145	\$ (162)	\$ -	\$ 160	\$ -	\$1,851	155%
15_15_SCE_TOU-D-4-9_AE100PV_NEM2_2023	(0)	5,093	(5,093)	\$2,004	\$ 133	\$ (1,737)	\$ 0	\$ 11	\$ 1	\$ 412	
15_15_SCE_TOU-D-PRIME_AE100PV_NEM2_2023	(0)	5,093	(5,093)	\$1,577	\$ 133	\$ (1,201)	\$ -	\$ 160	\$ -	\$ 669	62%
15_15_SCE_TOU-D-PRIME_AE100PV_NBT_2023	(0)	5,429	(5,429)	\$1,656	\$ 142	\$ (222)	\$ -	\$ 160	\$ -	\$1,736	322%
15_15_SCE_TOU-D-4-9_Base_NEM2_2022	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 486	
15_15_SCE_TOU-D-4-9_Base_NEM2_2023	558	4,792	(4,234)	\$1,884	\$ 125	\$ (1,438)	\$ (54)	\$ 11	\$ 18	\$ 546	12%
15_15_SCE_TOU-D-PRIME_Base_NBT_2023	558	5,071	(4,513)	\$1,545	\$ 133	\$ (180)	\$ -	\$ 160	\$ -	\$1,658	241%

Table 22: Climate Zone 16 Annual Results

CZ, Utility CZ, Tariff, Fuel, NEM Tariff, Year	Net, kWh	Import, kWh	Export, kWh	Import cost, no NBC	Import cost, NBC	Export credit	Baseline credit	Customer charge	Unused Export Credits	Total bill	% cost increase
16_Y_PG&E_E-TOU-C_AE_NEM2_2022	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$1,607	
16_Y_PG&E_E-TOU-C_AE_NEM2_2023	5,370	7,168	(1,798)	\$2,546	\$ 217	\$ (667)	\$ (376)	\$ -	\$ -	\$1,720	7%
16_Y_PG&E_E-ELEC_AE_NEM2_2023	5,370	7,168	(1,798)	\$1,872	\$ 217	\$ (499)	\$ -	\$ 180	\$ -	\$1,770	10%
16_Y_PG&E_E-ELEC_AE_NBT_2023	5,370	7,287	(1,917)	\$1,905	\$ 221	\$ (83)	\$ -	\$ 180	\$ -	\$2,222	38%
16_Y_PG&E_E-TOU-C_AE100PV_NEM2_2023	-	6,612	(6,612)	\$2,340	\$ 201	\$ (2,455)	\$ 1	\$ -	\$ 578	\$ 665	
16_Y_PG&E_E-ELEC_AE100PV_NEM2_2023	-	6,612	(6,612)	\$1,708	\$ 201	\$ (1,849)	\$ -	\$ 180	\$ 820	\$1,060	59%
16_Y_PG&E_E-ELEC_AE100PV_NBT_2023	-	7,048	(7,048)	\$1,830	\$ 214	\$ (325)	\$ -	\$ 180	\$ -	\$1,898	185%
16_Y_PG&E_E-TOU-C_Base_NEM2_2022	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 353	
16_Y_PG&E_E-TOU-C_Base_NEM2_2023	1,273	3,593	(2,319)	\$1,294	\$ 109	\$ (864)	\$ (101)	\$ -	\$ (0)	\$ 438	24%
16_Y_PG&E_E-ELEC_Base_NBT_2023	1,273	3,746	(2,472)	\$1,011	\$ 114	\$ (114)	\$ -	\$ 180	\$ -	\$1,190	237%

6 Appendices

Monthly results are shown below for Climate Zone 7 as an example.

Table 23 below includes descriptions for each column heading.

Table 23: Column Headings for Monthly Results

Column Heading	Units	Description
Month	#	Month
Net, kWh	kWh/yr	Monthly net electricity usage
Import, kWh	kWh/yr	Monthly imported energy usage (for NBT, this includes the no-netting calculation)
Export, kWh	kWh/yr	Monthly exported energy usage (for NBT, this includes the no-netting calculation)
Import cost, no NBC	\$/yr	Monthly volumetric cost for the non-NBC portion of imports
Import cost, NBC	\$/yr	Monthly volumetric cost for the NBC portion of imports
Export credit	\$/yr	Monthly volumetric cost credit for the exports
Baseline credit	\$/yr	Monthly baseline credits
Min. bill	\$/yr	Monthly minimum bill amount
Rollover Export Credit	\$/yr	Monthly rollover export credits
Export Credit Used	\$/yr	Monthly export credit used
Cumul. Export Credit Available	\$/yr	Cumulative export credit available at beginning of the month
Customer charge	\$/yr	Monthly customer charges
Bill floor cost	\$/yr	Monthly cost due to bill floor calculations
Total bill	\$/yr	Monthly total bills after considering the bill-floors each month

Table 24: Climate Zone 7, All-Electric, TOU-DR1, NEM2 Monthly Results

Month	Net, kWh	Import, kWh	Export, kWh	Import	Import	Export credit	Baseline credit	Min. Bill	Rollover	Export	Cumul.	Customer charge	Bill	Total bill
				cost, no NBC	cost, NBC				Export credit	Export Credit Used	Export Credit Available		floor cost	
1	271	399	(127)	\$ 213	\$ 13	\$ (66)	\$ (32)	\$ 12	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 128
2	350	445	(96)	\$ 236	\$ 14	\$ (50)	\$ (38)	\$ 11	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 163
3	162	320	(157)	\$ 170	\$ 10	\$ (82)	\$ (19)	\$ 12	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 80
4	133	286	(153)	\$ 151	\$ 9	\$ (80)	\$ (16)	\$ 11	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 64
5	96	269	(173)	\$ 142	\$ 9	\$ (93)	\$ (11)	\$ 12	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 47
6	63	257	(194)	\$ 127	\$ 8	\$ (104)	\$ (7)	\$ 11	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 24
7	110	273	(163)	\$ 137	\$ 9	\$ (89)	\$ (13)	\$ 12	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 43
8	111	281	(170)	\$ 144	\$ 9	\$ (89)	\$ (13)	\$ 12	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 51
9	135	294	(159)	\$ 152	\$ 10	\$ (83)	\$ (16)	\$ 11	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 63
10	189	332	(143)	\$ 175	\$ 11	\$ (72)	\$ (22)	\$ 12	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 92
11	211	333	(121)	\$ 180	\$ 11	\$ (63)	\$ (25)	\$ 11	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 104
12	325	429	(104)	\$ 231	\$ 14	\$ (54)	\$ (38)	\$ 12	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 153
Total	2,155	3,917	(1,761)	\$2,059	\$ 127	\$ (925)	\$ (249)		\$ -	\$ -		\$ -	\$ -	\$1,012

Table 25: Climate Zone 7, All-Electric, EV-TOU-5, NEM2 Monthly Results

Month	Net, kWh	Import, kWh	Export, kWh	Import	Import	Export credit	Baseline credit	Min. Bill	Rollover	Export	Cumul.	Customer charge	Bill	Total bill
				cost, no NBC	cost, NBC				Export credit	Export Credit Used	Export Credit Available		floor cost	
1	271	399	(127)	\$ 132	\$ 13	\$ (47)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 114
2	350	445	(96)	\$ 140	\$ 14	\$ (35)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15	\$ -	\$ 134
3	162	320	(157)	\$ 105	\$ 10	\$ (46)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 86
4	133	286	(153)	\$ 91	\$ 9	\$ (46)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 70
5	96	269	(173)	\$ 87	\$ 9	\$ (69)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 42
6	63	257	(194)	\$ 103	\$ 8	\$ (94)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 33
7	110	273	(163)	\$ 113	\$ 9	\$ (82)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 56
8	111	281	(170)	\$ 120	\$ 9	\$ (79)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 67
9	135	294	(159)	\$ 127	\$ 10	\$ (75)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 78
10	189	332	(143)	\$ 148	\$ 11	\$ (63)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 112
11	211	333	(121)	\$ 116	\$ 11	\$ (43)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 100
12	325	429	(104)	\$ 146	\$ 14	\$ (38)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 138
Total	2,155	3,917	(1,761)	\$1,428	\$ 127	\$ (718)	\$ -		\$ -	\$ -		\$ 192	\$ -	\$1,029

Table 26: Climate Zone 7, All-Electric, EV-TOU-5, NBT Monthly Results

Month	Net, kWh	Import, kWh	Export, kWh	Import	Import	Export credit	Baseline credit	Min. Bill	Rollover	Export	Cumul.	Customer charge	Bill	Total bill
				cost, no NBC	cost, NBC				Export credit	Export Credit Used	Export Credit Available		floor cost	
1	271	407	(136)	\$ 135	\$ 13	\$ (8)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 157
2	350	452	(102)	\$ 142	\$ 15	\$ (4)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15	\$ -	\$ 168
3	162	330	(168)	\$ 108	\$ 11	\$ (4)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 130
4	133	296	(163)	\$ 95	\$ 10	\$ (1)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 119
5	96	280	(185)	\$ 91	\$ 9	\$ (3)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 114
6	63	270	(207)	\$ 109	\$ 9	\$ (9)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 124
7	110	284	(174)	\$ 118	\$ 9	\$ (9)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 135
8	111	292	(182)	\$ 125	\$ 9	\$ (20)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 131
9	135	304	(170)	\$ 132	\$ 10	\$ (8)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 149
10	189	341	(152)	\$ 152	\$ 11	\$ (9)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 171
11	211	341	(129)	\$ 119	\$ 11	\$ (6)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 140
12	325	436	(111)	\$ 149	\$ 14	\$ (7)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 172
Total	2,155	4,033	(1,878)	\$1,475	\$ 131	\$ (87)	\$ -		\$ -	\$ -		\$ 192	\$ -	\$1,710

Table 27: Climate Zone 7, All-Electric 100% PV, TOU-DR1, NEM2 Monthly Results

Month	Net kWh	Import kWh	Export kWh	Import cost, no NBC	Import cost, NBC	Export credit	Baseline credit	Min. Bill	Rollover Export Credit	Export Credit Used	Cumul. Export Credit Available	Customer charge	Bill floor cost	Total bill
1	108.6	381.71	-273.1	203.75	12.352	-142.22	-12.731	11.78	0	0	0	0	0	61.156
2	212.4	424.44	-212.1	224.56	13.735	-110.94	-24.896	10.64	0	0	0	0	0	102.46
3	-27.25	300.23	-327.5	160	9.7155	-171.62	3.1952	11.78	-10.494	0	-10.49445	0	10.494	11.78
4	-55.32	264.15	-319.5	139.67	8.5479	-168.54	6.4859	11.4	-25.244	0	-35.73803	0	25.244	11.4
5	-101.5	245.29	-346.8	129.5	7.9376	-185.72	11.899	11.78	-48.158	0	-83.89634	0	48.158	11.78
6	-138.9	238.69	-377.6	116.22	7.7241	-203.91	16.286	11.4	-75.081	0	-158.9778	0	75.081	11.4
7	-87.83	246.17	-334	121.18	7.966	-183.84	10.297	11.78	-56.168	0	-215.1463	0	56.168	11.78
8	-91.58	255.27	-346.9	128.98	8.2606	-184.26	10.737	11.78	-48.068	0	-263.2139	0	48.068	11.78
9	-57.72	271.15	-328.9	138.17	8.7744	-172.19	6.767	11.4	-29.88	0	-293.0936	0	29.88	11.4
10	12.05	310.34	-298.3	161.95	10.042	-151.23	-1.4131	11.78	0	-7.5705	-293.0936	0	0	11.78
11	48.88	317.85	-269	172.19	10.286	-139.3	-5.7307	11.4	0	-26.051	-285.523	0	0	11.4
12	178.2	406.13	-227.9	218.55	13.142	-118.38	-20.896	11.78	0	-79.277	-259.4725	0	0	13.142
Total	(0)	3,661	(3,661)	\$1,915	\$ 118	\$(1,932)	\$ 0		\$ (293)	\$ (113)		\$ -	\$ 293	\$ 281

Table 28: Climate Zone 7, All-Electric 100% PV, EV-TOU-5, NEM2 Monthly Results

Month	Net kWh	Import kWh	Export kWh	Import cost, no NBC	Import cost, NBC	Export credit	Baseline credit	Min. Bill	Rollover Export Credit	Export Credit Used	Cumul. Export Credit Available	Customer charge	Bill floor cost	Total bill
1	109	382	(273)	\$ 125	\$ 12	\$ (101)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 52
2	212	424	(212)	\$ 132	\$ 14	\$ (78)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15	\$ -	\$ 82
3	(27)	300	(327)	\$ 99	\$ 10	\$ (94)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 31
4	(55)	264	(319)	\$ 85	\$ 9	\$ (96)	\$ -	\$ -	\$ (11)	\$ -	\$ (11)	\$ 16	\$ 11	\$ 24
5	(101)	245	(347)	\$ 78	\$ 8	\$ (139)	\$ -	\$ -	\$ (61)	\$ -	\$ (72)	\$ 16	\$ 61	\$ 24
6	(139)	239	(378)	\$ 93	\$ 8	\$ (184)	\$ -	\$ -	\$ (91)	\$ -	\$ (162)	\$ 16	\$ 91	\$ 24
7	(88)	246	(334)	\$ 99	\$ 8	\$ (168)	\$ -	\$ -	\$ (70)	\$ -	\$ (232)	\$ 16	\$ 70	\$ 24
8	(92)	255	(347)	\$ 106	\$ 8	\$ (164)	\$ -	\$ -	\$ (58)	\$ -	\$ (290)	\$ 16	\$ 58	\$ 25
9	(58)	271	(329)	\$ 114	\$ 9	\$ (155)	\$ -	\$ -	\$ (40)	\$ -	\$ (330)	\$ 16	\$ 40	\$ 25
10	12	310	(298)	\$ 136	\$ 10	\$ (134)	\$ -	\$ -	\$ -	\$ (2)	\$ (330)	\$ 16	\$ -	\$ 26
11	49	318	(269)	\$ 111	\$ 10	\$ (96)	\$ -	\$ -	\$ -	\$ (15)	\$ (328)	\$ 16	\$ -	\$ 26
12	178	406	(228)	\$ 138	\$ 13	\$ (83)	\$ -	\$ -	\$ -	\$ (55)	\$ (313)	\$ 16	\$ -	\$ 29
Total	(0)	3,661	(3,661)	\$1,315	\$ 118	\$(1,491)	\$ -		\$ (330)	\$ (72)		\$ 192	\$ 330	\$ 392

Table 29: Climate Zone 7, All-Electric 100% PV, EV-TOU-5, NBT Monthly Results

Month	Net kWh	Import kWh	Export kWh	Import cost, no NBC	Import cost, NBC	Export credit	Baseline credit	Min. Bill	Rollover Export Credit	Export Credit Used	Cumul. Export Credit Available	Customer charge	Bill floor cost	Total bill
1	109	400	(291)	\$ 132	\$ 13	\$ (16)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 144
2	212	438	(226)	\$ 137	\$ 14	\$ (8)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15	\$ -	\$ 157
3	(27)	322	(349)	\$ 105	\$ 10	\$ (9)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 122
4	(55)	285	(341)	\$ 91	\$ 9	\$ (3)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 113
5	(101)	268	(370)	\$ 87	\$ 9	\$ (6)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 106
6	(139)	264	(403)	\$ 105	\$ 9	\$ (19)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 110
7	(88)	268	(356)	\$ 110	\$ 9	\$ (19)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 116
8	(92)	278	(370)	\$ 117	\$ 9	\$ (43)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 99
9	(58)	293	(351)	\$ 124	\$ 9	\$ (20)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 130
10	12	330	(318)	\$ 145	\$ 11	\$ (22)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 149
11	49	336	(287)	\$ 117	\$ 11	\$ (13)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 130
12	178	421	(243)	\$ 144	\$ 14	\$ (14)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 159
Total	(0)	3,903	(3,903)	\$1,413	\$ 126	\$(194)	\$ -		\$ -	\$ -		\$ 192	\$ -	\$1,537

Table 30: Climate Zone 7, Base, TOU-DR1, NEM2 Monthly Results

Month	Net, kWh	Import, kWh	Export, kWh	Import cost, no		Export credit	Baseline credit	Min. Bill	Rollover Export Credit	Export Credit Used	Cumul. Export Credit		Customer charge	Bill floor cost	Total bill
				NBC	NBC						Available	charge			
1	138	298	(160)	\$ 160	\$ 10	\$ (83)	\$ (16)	\$ 12	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 70	
2	151	274	(122)	\$ 146	\$ 9	\$ (64)	\$ (18)	\$ 11	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 73	
3	66	264	(198)	\$ 140	\$ 9	\$ (104)	\$ (8)	\$ 12	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 37	
4	38	234	(196)	\$ 123	\$ 8	\$ (103)	\$ (4)	\$ 11	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 23	
5	14	221	(207)	\$ 116	\$ 7	\$ (111)	\$ (2)	\$ 12	\$ (1)	\$ -	\$ (1)	\$ -	\$ 1	\$ 12	
6	(19)	211	(231)	\$ 101	\$ 7	\$ (124)	\$ 2	\$ 11	\$ (26)	\$ -	\$ (27)	\$ -	\$ 26	\$ 11	
7	22	224	(202)	\$ 111	\$ 7	\$ (111)	\$ (3)	\$ 12	\$ (8)	\$ -	\$ (34)	\$ -	\$ 8	\$ 12	
8	26	234	(208)	\$ 118	\$ 8	\$ (109)	\$ (3)	\$ 12	\$ -	\$ (1)	\$ (34)	\$ -	\$ -	\$ 12	
9	57	250	(193)	\$ 127	\$ 8	\$ (101)	\$ (7)	\$ 11	\$ -	\$ (16)	\$ (33)	\$ -	\$ -	\$ 11	
10	98	275	(177)	\$ 141	\$ 9	\$ (90)	\$ (11)	\$ 12	\$ -	\$ (17)	\$ (17)	\$ -	\$ -	\$ 32	
11	114	273	(159)	\$ 147	\$ 9	\$ (82)	\$ (13)	\$ 11	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 60	
12	183	316	(133)	\$ 170	\$ 10	\$ (69)	\$ (21)	\$ 12	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 90	
Total	887	3,075	(2,187)	\$1,599	\$ 99	\$ (1,151)	\$ (104)		\$ (34)	\$ (34)		\$ -	\$ 34	\$ 444	

Table 31: Climate Zone 7, Base, EV-TOU-5, NBT Monthly Results

Month	Net, kWh	Import, kWh	Export, kWh	Import cost, no		Export credit	Baseline credit	Min. Bill	Rollover Export Credit	Export Credit Used	Cumul. Export Credit		Customer charge	Bill floor cost	Total bill
				NBC	NBC						Available	charge			
1	138	308	(171)	\$ 104	\$ 10	\$ (10)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 121	
2	151	282	(130)	\$ 94	\$ 9	\$ (5)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15	\$ -	\$ 113	
3	66	277	(211)	\$ 88	\$ 9	\$ (6)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 108	
4	38	247	(209)	\$ 77	\$ 8	\$ (2)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 99	
5	14	235	(221)	\$ 74	\$ 8	\$ (3)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 95	
6	(19)	226	(246)	\$ 88	\$ 7	\$ (11)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 99	
7	22	238	(216)	\$ 97	\$ 8	\$ (12)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 109	
8	26	247	(221)	\$ 103	\$ 8	\$ (24)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 103	
9	57	263	(206)	\$ 111	\$ 9	\$ (10)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 125	
10	98	287	(189)	\$ 122	\$ 9	\$ (13)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 135	
11	114	284	(169)	\$ 96	\$ 9	\$ (8)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 113	
12	183	325	(142)	\$ 110	\$ 11	\$ (8)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 129	
Total	887	3,219	(2,332)	\$1,164	\$ 104	\$ (111)	\$ -		\$ -	\$ -		\$ 192	\$ -	\$1,349	

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The adoption of reach codes can differentiate jurisdictions as efficiency leaders and help accelerate the adoption of new equipment, technologies, code compliance, and energy savings strategies.

As part of the Statewide Codes & Standards Program, the Reach Codes Subprogram is a resource available to any local jurisdiction located throughout the state of California.

Our experts develop robust toolkits as well as provide specific technical assistance to local jurisdictions (cities and counties) considering adopting energy reach codes. These include cost-effectiveness research and analysis, model ordinance language and other code development and implementation tools, and specific technical assistance throughout the code adoption process.

If you are interested in finding out more about local energy reach codes, the Reach Codes Team stands ready to assist jurisdictions at any stage of a reach code project.



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