

NEM Paired Storage Billing FAQ



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What is NEM Paired Storage (NEMPS)?

- Net Energy Metering Paired Storage (NEMPS) is a special provision in Schedule NEM and Schedule NEM2 to add Battery Storage to a NEM-eligible facility.
- NEMPS is a rate adder, not an otherwise applicable rate schedule (OAS).

Brief Description on the Difference Between NEM and NEMPS

- With NEM, all exports from your generator that are sent back to the PG&E grid receive retail (NEM) credits.
- With NEMPS, since a storage device is present, only the exports that are attributed to renewable portion of the system (e.g. the solar portion) receive NEM credit.





Receiving Detail of Bills (DOB)

- In addition to the Monthly Energy Statements (“Blue” Bill) that you receive from PG&E, all NEM-PS customers will receive a “Detail of Bill” (DOB) that provides in-depth information regarding how your bill was calculated.
- Some tables on the DOB will differ depending on if there is an NGOM present or not

 Pacific Gas and Electric Company	PACIFIC GAS AND ELECTRIC COMPANY ELECTRIC DETAIL OF BILL Service Dates: February 25,2019 to March 24,2019	  
SOLAR,JOHN 123 SOLAR ST SOLAR, CA. 11111	NEM-PAIRED STORAGE ACCOUNT	Rate Schedule: ETOUAXB/NEM-PS Account ID: 1234567890 Service ID: 1234567111
PAGE 1		
<p>This is your first Detail of Bill (DOB) for your Net Energy Metering with Paired Storage (NEM-PS).</p> <p>The DOB reflects your monthly billing and Net Energy Metering (NEM) energy charges/credits. Any charges due are reflected on your monthly Energy Statement (provided separately). Any payments you have made towards your energy charges are reflected on your monthly Energy Statement.</p> <p>Your energy charges are reconciled and due at the end of your True-Up period (Feb 2020). Any unpaid energy charges, taxes and fees will be due at that time.</p> <p>At True-Up, your True-Up History Summary charges and usage are reset to zero starting with your next billing cycle.</p>		



Receiving Detail of Bills (DOB)

BILLING SUMMARY

Minimum Charges

\$9.86

Total Current Month's Electric Charges Due

\$9.86

All residential solar customers pay Minimum Delivery Charges. These are due monthly and appear on the energy Statement.

SUMMARY OF CURRENT MONTH'S ENERGY CHARGES/CREDITS

Current Unbilled Generation Charge is: \$62.05
 Current Unbilled Generation Credits: Solar: \$-45.88
 Current Unbilled Non-Generation Credit/Charge is: \$28.70

The sum of "Current Unbilled" amounts represent your current month's energy charge or credit:
 $(\$62.05) + (\$-45.88) + (\$28.70) = \mathbf{\$44.87}$

Total Unbilled Generation Charge is: \$266.46
 Total Unbilled Generation Rate Component Credits: Solar: \$-197.89
 Total Unbilled Non-Generation Credits/Charges is: \$70.92

The sum of "Total Unbilled" amounts represent your year to date energy charge or credit, and includes the current month:
 $(\$266.46) + (\$-197.89) + (\$70.92) = \mathbf{\$139.49}$

*Current Unbilled Non-Bypassable Charges: \$13.98
 Total Unbilled Non-Bypassable Charges: \$43.98

Note: Non-Bypassable charges are handled differently from generation credits/charges because they cannot be reduced by solar credits, but they must also be paid.

*The State Mandated Non-Bypassable Charge (NBC) is calculated based on your energy usage and is relevant to determine the True-Up amount. This amount is included within the Energy Charges however, cannot be offset by credits from exports. This charge includes the following fees: Public Purpose Programs, Nuclear Decommissioning, DWR Bond Charge and Competition Transition Charge.

TRUE-UP HISTORY SUMMARY

BILLING MONTH	BILL TO DATE	RATE SCHEDULE	TOTAL USAGE	E84 BL CHG	E24 EC TAX	TOTAL CHARGES	NON-BYPASSABLE CHARGES*	KWH CONSUMED	KWH PRODUCED	SOLAR EXCESS KWH
Nov 2018	10/30/18	ETOUBXB	132	\$44.83	\$0.04	\$44.87	\$13.98	661	-529	-529
Oct 2018	09/30/18	ETOUBXB	-52	\$25.00	\$-0.01	\$24.99	\$14.12	669	-721	-721
Sep 2018	08/29/18	ETOUBXB	142	\$69.59	\$0.04	\$69.63	\$15.88	751	-609	-609
TOTALS			222	\$139.42	\$0.07	\$139.49	\$43.98	2,081	-1,859	-1,859

The Current and Total charges can also be found on page two in the True-Up History Summary.

IMPORTANT: Customers are advised to monthly review both their *Total Unbilled Non-Generation Credits/Charges* and their *Total Unbilled Non-Bypassable Charges*. These charges are reconciled at the Annual True-Up, so any positive values would be due at that time.



Receiving Detail of Bills (DOB)—First Page (V.2)

- Depending on your energy service provider, the first page may be slightly different. However, all the calculations are the same:
 - The customer is responsible for paying \$10.49
 - “Current” Amounts: \$6.38
 - “Total” Amounts (Year-to-Date): \$-17.19
 - **Reminder:** These charges, including the Non-Bypassable Charges are reconciled at the Annual True-Up, so any positive values would be due at that time.

BILLING SUMMARY

Minimum Charges	\$9.85
Electric Utility User Tax	0.64
Total Current Month's Electric Charges Due	\$10.49

SUMMARY OF CURRENT MONTH'S ENERGY CHARGES/CREDITS

Current Unbilled Non-Generation Credit/Charge is: \$6.38

Total Unbilled Non-Generation Credits/Charges is: \$-17.19

*Current Unbilled Non-Bypassable Charges: \$6.64

Total Unbilled Non-Bypassable Charges: \$30.20

*The State Mandated Non-Bypassable Charge (NBC) is calculated based on your energy usage and is relevant to determine the True-Up amount. This amount is included within the Energy Charges however, cannot be offset by credits from exports. This charge includes the following fees: Public Purpose Programs, Nuclear Decommissioning, DWR Bond Charge and Competition Transition Charge.



Determining eligible NEM credits (Background)

- Battery Storage energy exports do not get NEM credits for energy which was originally charged from the grid.
- Battery Storage systems sized greater than 10 kilo-watts (kW) (AC Nameplate) require the installation of a “Net Generation Output Meter” (NGOM) ahead of renewable portion of the generator (e.g. solar inverter) in addition to your existing PG&E electric meter. The comparison between the NGOM meter and the existing PG&E electric meter help calculate how much of the energy a NEMPS customer exports to the grid should receive NEM credits.
- For Battery Storage systems that are sized up to 10kW, PG&E offers an alternative estimation method in lieu of installing an expensive NGOM. The estimation methodology will determine the total possible production of the renewable portion of the system. It is calculated using the CSI [EPBB calculator](#) (CSI Standard PVI calculator) with high efficiency PV Panels and Inverter in the customer’s climate zone.



Bill Example (Estimation Methodology)

PAIRED STORAGE: MAXIMUM EXPORT ESTIMATION

GEN TYPE	GRID ELECTRICITY USAGE	EXPORTED TO THE GRID	ESTIMATED PV GENERATION	GENERATION ELIGIBLE FOR CREDIT	BILLED USAGE (kWh)
SOLAR	2,000	-800	-519	-519	1,481

Generation Eligible for Credit = The lesser of Exported to the Grid amount and Estimated PV Generation

Billed Usage (kWh) = Grid Electricity Usage - Generation Eligible for Credit

Estimated PV Generation = For systems that are not required to have a generation meter, PG&E uses estimated generation based on a statewide methodology. To learn more go to www.pge.com/storage

- To understand how much of the exports received NEM credits that could be used to offset power drawn from the PG&E grid, locate the table titled “PAIRED STORAGE: MAXIMUM EXPORT ESTIMATION” as shown above
- Using this example, reading from left-to-right, the NEM-PS system had the following result:
 1. “EXPORTED TO THE GRID”: The NEM-PS exported a total of -800 kilo-watt-hours (kWh) to the PG&E grid. Note: the value is purposely negative for summing purposes.
 2. “ESTIMATED PV GENERATION”: Via the EPBB calculator, the NEM-PS system could only export a maximum of -519kWh of renewable energy. Note: the estimation uses very high efficiency PV panels and inverter.
 3. “GENERATION ELIGIBLE FOR CREDIT”: Although the PG&E meter shows exports of -800kWh, only -519kWh are eligible to receive NEM credits.
 4. “BILLED USAGE (kWh)”: The eligible NEM Credits are added with the value located in the “GRID ELECTRICITY USAGE” column to offset usage, resulting in a reduced charge
 - $(-519 + 2,000 = 1,481)$



Bill Example (NGOM Installed)

METERED EXPORT CALCULATION					
GEN TYPE	GRID ELECTRICITY USAGE	EXPORTED TO THE GRID	METERED GENERATION	GENERATION ELIGIBLE FOR CREDIT	BILLED USAGE (kWh)
SOLAR	300,000	-30,000	-10,000	-10,000	290,000

Generation Eligible for Credit = The lesser of Exported to the Grid amounts and Metered Generation
Billed Usage (kWh) = Grid Electricity Usage - Generation Eligible for Credit

- To understand how much of the exports received NEM credits that could be used to offset power drawn from the PG&E grid, locate the table titled “METERED EXPORT CALCULATION” as shown above
- Using this example, reading from left-to-right, the NEM-PS system had the following result:
 1. “EXPORTED TO THE GRID”: The NEM-PS exported a total of -30,000 kilo-watt-hours (kWh) to the PG&E grid.
 2. “METER GENERATION”: Unlike with the estimation methodology, the NGOM captures the total exports from the renewable portion of NEM-PS system. In other words, the -10,000kWh is the actual amount of renewable generation exported **before** it first offsets the customer’s own energy needs, not after.
 3. “GENERATION ELIGIBLE FOR CREDIT”: Although the PG&E meter shows exports of -30,000kWh, only -10,000kWh are eligible to receive NEM credits.
 4. “BILLED USAGE (kWh)”: The eligible NEM Credits are added with the value located in the “GRID ELECTRICITY USAGE” column to offset usage, resulting in a reduced charge
 - $(-10,000 + 300,000 = 290,000)$



Resources

- For more information about the estimation methodology, visit the following links:
 - NEM 1 ([Schedule NEM](#)) Tariff, Special Condition section titled “Estimation Methodology For Small NEM Paired Storage”
 - NEM 2 ([Schedule NEM2](#)) Tariff, Special Condition section titled “Estimation Methodology For Small NEM Paired Storage”