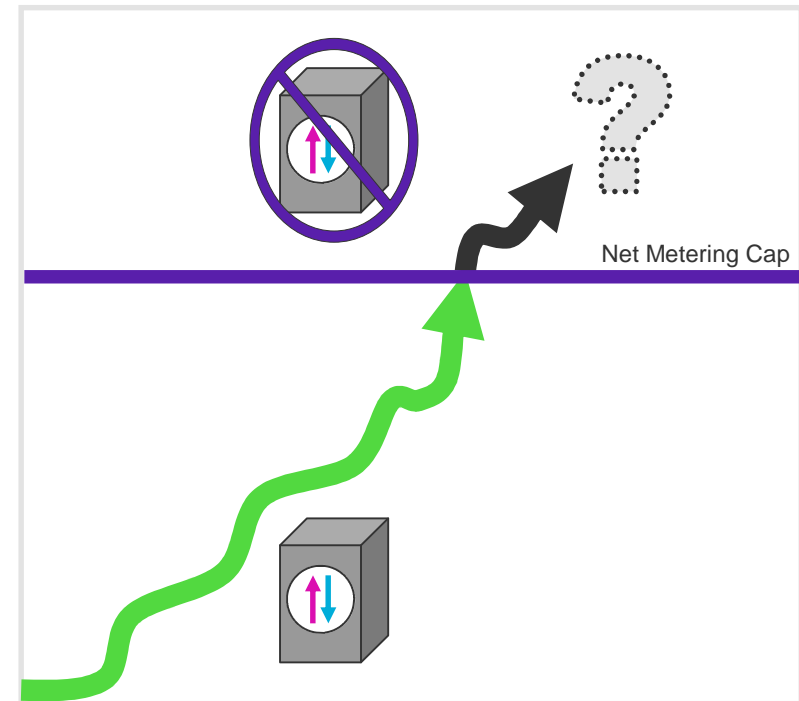


nationalgrid Distributed Generation Metering Alternatives: Beyond the Net Metering Cap

In Massachusetts, a cap has been placed on the aggregate generation capacity that can receive net metering services¹ for all generators that are not exempt from the cap.² In order to ensure that the net metering cap for National Grid is allocated fairly, the Massachusetts Department of Public Utilities (MDPU) requires that all generators receive a cap allocation through the MassACA Net Metering System of Assurance prior to receiving net metering services.

Once the net metering cap has been fully subscribed, customers requesting to receive net metering services will be placed on a waiting list.³ However, even after the net metering cap has been reached, there are alternative options for metering distributed generation. While these alternatives may not provide as much financial compensation as net metering, they do allow customers to energize their generators (and produce RECs and SRECs where applicable).

These alternatives do not prevent customers from receiving net metering services in the future if more cap allocations become available and if they have applied through the MassACA Net Metering System of Assurance. However, all customers must still complete the interconnection process as outlined by the interconnection tariff (MDPU 1219) before energizing their generators.



¹More details about National Grid's net metering services can be found on National Grid's Net Metering web page: http://www.nationalgridus.com/masselectric/home/energyeff/4_net-mtr.asp.

²Only renewable generators (not owned by a Public Entity as defined by the DPU) with an aggregate AC generating capacity of $\leq 10\text{kW}$ on a single-phase service or $\leq 25\text{kW}$ on a three-phase service are considered Exempt Facilities. Refer to DPU order 11-11-A for details.

³Information about the current availability of net metering cap allocations can be found on the MassACA website: <http://www.massaca.org/>.

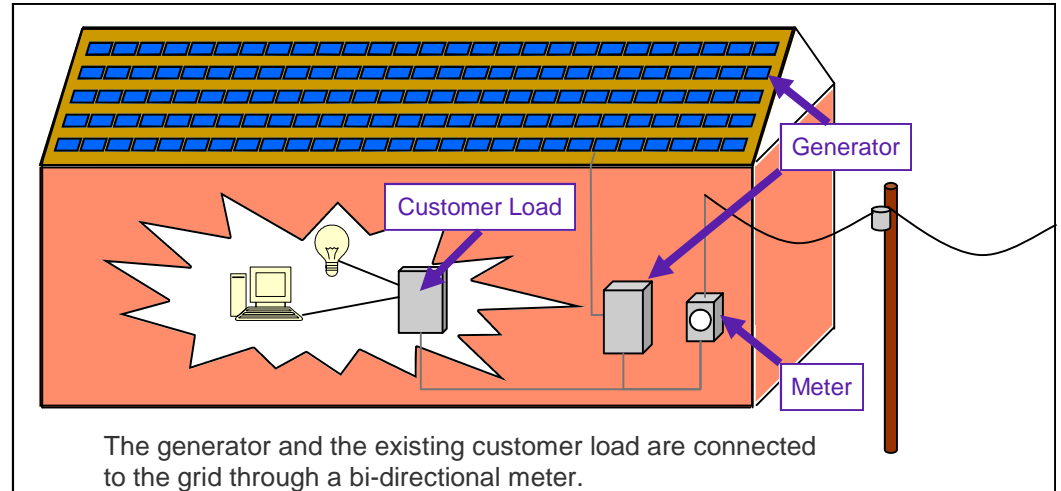
DISCLAIMER: All content and information provided on this document, including links to other National Grid webpages or documents and all of the content and information provided therein, is solely to provide customers, contractors, and other parties with additional useful guidance regarding National Grid's typical metering options for distributed generation and matters related thereto. In all instances, the content and information provided by National Grid is superseded by the applicable laws, rules, regulations, tariffs, and regulatory decisions governing the distributed generation interconnection process and all matters related thereto in the relevant jurisdictions, all as may be amended from time to time. The content and information contained herein is not intended to be all inclusive of every process or action available to users with respect to the metering and interconnection of distributed generation. It is the sole responsibility of users of this document to independently verify the process to interconnect its distributed generation, as well as the status of any changes, pending changes, or updates to the process described herein. National Grid shall not be held liable under any circumstances for any errors, omissions, inaccurate, and/or out-dated content or information provided herein.

Distributed Generation Metering Alternative: No Credit Export

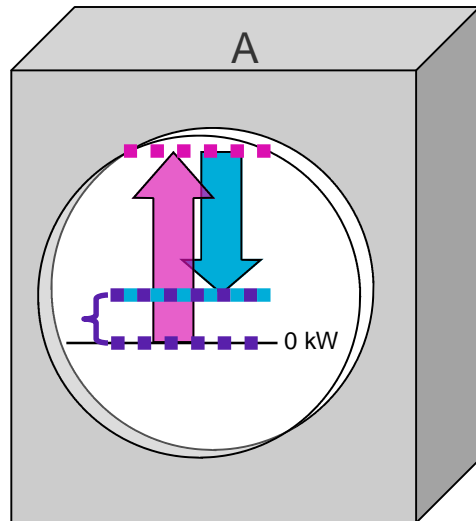
Under the No Credit Export alternative metering setup, the customer does not receive any payments or credits from National Grid for any energy exported through the bi-directional meter onto the grid.

A & B: At times of coincident load and generation (when energy is generated at the same time that energy is used by the customer), the customer's load is reduced, which reduces energy charges on the customer's electric bill.

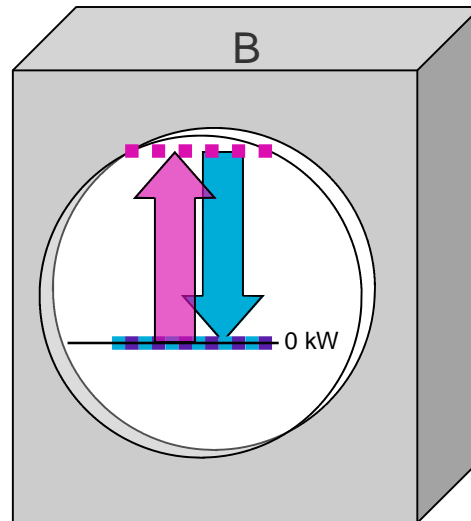
C: At times of excess generation (when more energy is generated than is simultaneously used by the customer), the customer will not receive any credit but the charges on the customer's bill will also not increase. This is different than Net Metering, which would allow the meter to count backwards during excess generation.



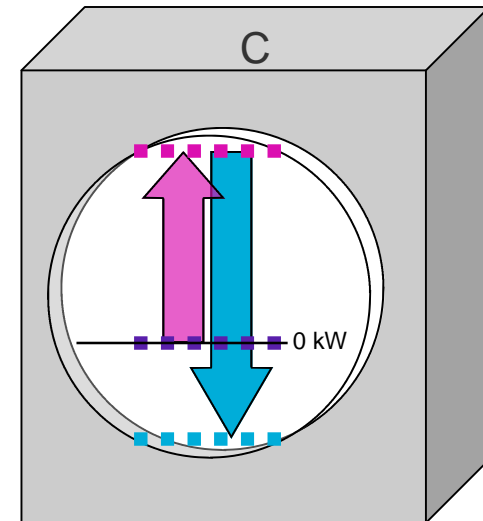
At the end of the billing cycle, the meter is read to determine how much it has counted forward. Then, the customer will be billed at their normal rate (\$/kWh) multiplied by how many kWh the meter has counted during the billing cycle.



A: Customer load is greater than the power generated, so the net usage is positive. The meter will count forward based on the net usage.



B: Customer load is equal to the power generated, so the net usage is zero. The meter will remain still.



C: Customer load is less than the power generated, so the excess power is exported onto the grid. The meter will remain still.

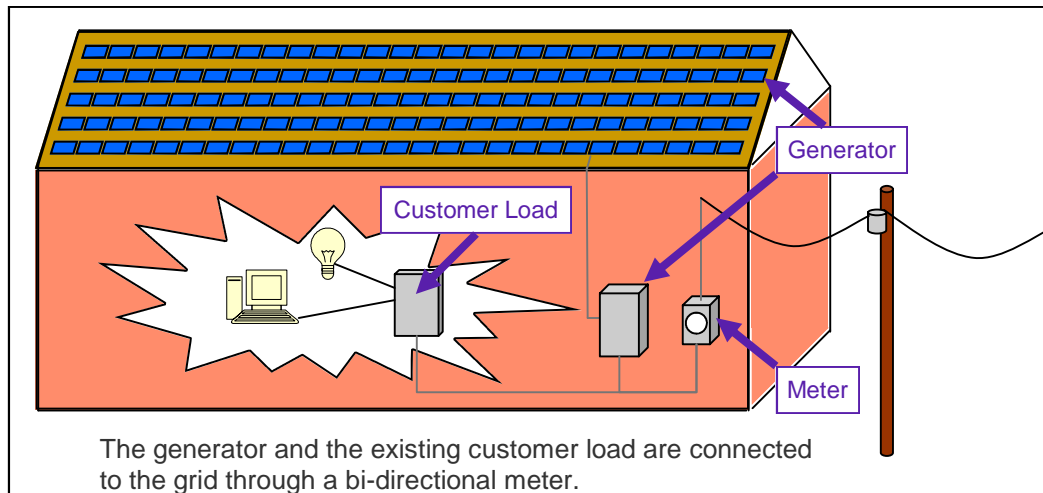
Under the Qualifying Facility (QF) alternative metering setup where the generator is connected behind a meter with existing customer load, the net energy import and export through the meter are assessed on an hourly basis. At the end of each hour, the meter is read to determine how much it has counted forward or backward since the reading for the preceding hour. This is different than Net Metering where net energy export is calculated on a monthly basis and customers are credited on their retail bills.

Net Import Hours

During hours when the meter has counted forward compared to the reading from the preceding hour (more **A** than **B**), the meter will record the net energy imported in kWh (how far it counted forward).

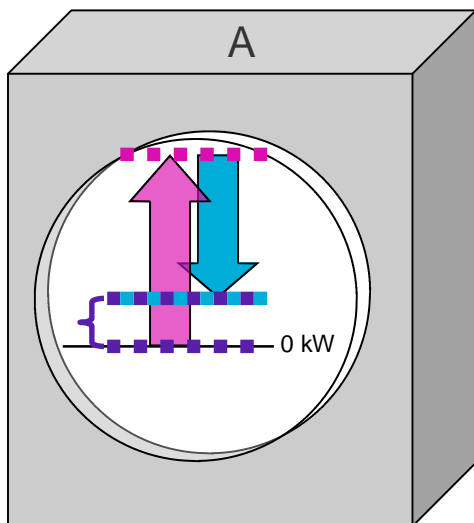
Net Import Charges

At the end of each billing cycle, the customer is billed at their normal rate (\$/kWh) multiplied by the aggregate kWh the meter has forward counted during every hour of net import.



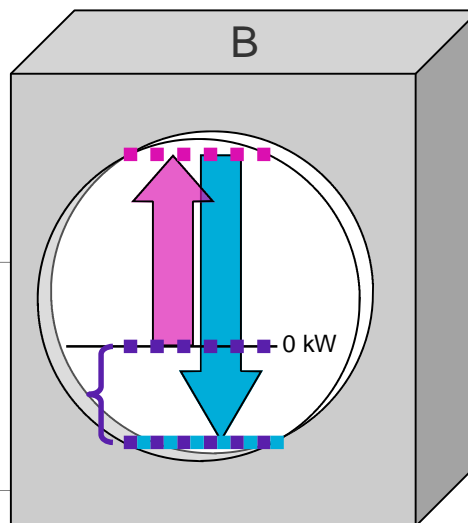
Net Export Hours

During hours when the meter has counted backward compared to the reading from the preceding hour (more **B** than **A**), the meter will record the net energy export in kWh (how far it counted backward). Then, the customer will be credited for the net energy export (kWh) multiplied by the hourly ISO clearing price (\$/kWh) for that particular hour.¹



A: Customer load is greater than the power generated, so the net usage is positive. The meter will count forward based on the net usage.

B: Customer load is less than the power generated, so the excess power is exported onto the grid. The meter will count backward based on the net power export.



Net Export Payments²

At the end of each month, National Grid will issue a report (separate from the retail bill) of the total dollar value of any export credits that have been accrued over the course of the month. At which point, the customer may issue an invoice to National Grid for the dollar value listed in the report. Upon receiving the invoice, National Grid will issue a check to the customer for the invoiced amount.

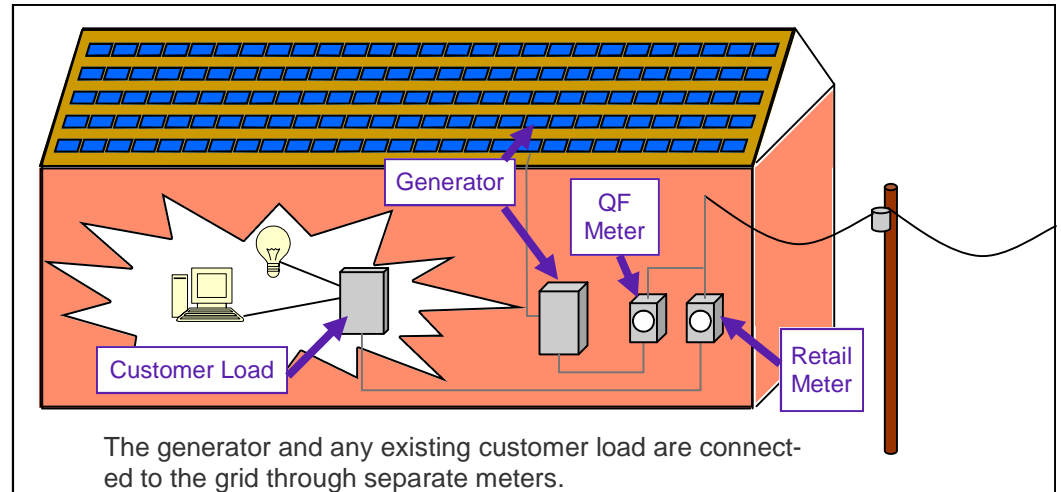
¹Historical ISO clearing prices can be found on the ISO New England website: http://www.iso-ne.com/markets/hst_rpts/hstRpts.do?category=Hourly#anchor1.

²For generators ≤60kW, National Grid may elect to provide export payments as a credit on the retail bill rather than as a separate payment. © 2013 National Grid

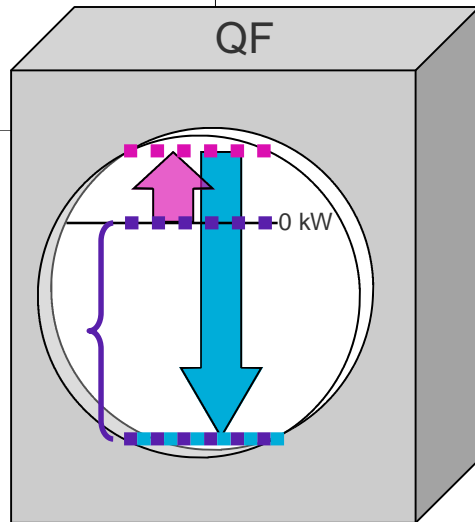
Distributed Generation Metering Alternative: Qualifying Facility (no load)

Under the Qualifying Facility (QF) alternative metering setup where the generator is connected to the grid through a meter with no customer load, the net energy export through the meter may be assessed differently depending on the size of the generator. Generators that are greater than 60kW of aggregate generating capacity will have a phone line installed at the meter, which will allow hourly meter data to be communicated to National Grid.

In this alternative, there may be no existing or planned on-site customer load in which case only a single QF meter is required. If there is existing on-site customer load, the load will be connected to the grid through a separate retail meter in which case the QF generation will not impact the customer's load or retail bill at all.



QF Export: Parasitic load is less than the power generated, so the excess power is exported onto the grid. The meter will count backward based on the net power export.



Net Export for QF generators >60kW

During hours when the generator is active, the meter will count backward compared to the reading from the preceding hour. The meter will record the net energy export in kWh (how far it counted backward). Then, the customer will be credited for the net energy export (kWh) multiplied by the hourly ISO clearing price (\$/kWh) for that particular hour.¹

Net Export for QF generators ≤60kW

Whenever the generator is active, the meter will count backward. At the end of the month, the meter will be read to determine the net energy export in kWh (how far it counted backward) compared to the reading from the preceding month. Then, the customer will be credited for the net energy export (kWh) multiplied by the average hourly ISO clearing price (\$/kWh) for the past month.¹

Net Export Payments

At the end of each month, National Grid will issue a report (separate from the retail bill) of the total dollar value of any export credits that have been accrued over the course of the month. At which point, the customer may issue an invoice to National Grid for the dollar value listed in the report. Upon receiving the invoice, National Grid will issue a check to the customer for the invoiced amount.

¹Historical ISO clearing prices can be found on the ISO New England website: http://www.iso-ne.com/markets/hst_rpts/hstRpts.do?category=Hourly#anchor1.