

Metering and Billing Algorithm for Combining Netmetering Eligible Generation & Non-Netmetering Eligible Generation in NJ *

Introduction

The attached procedure is intended to provide a mechanism to allow non-netmetering eligible generation to be combined with netmetering eligible generation in keeping with the position articulated in the document entitled: Developing Protocols for Managing Applications to Interconnect a NJ Class I Renewable energy source and a Non-renewable energy source, issued 10/28/13, which stated:

“Based upon a plain language reading of the law and rules, Staff believes that while the intent of net metering is to offset retail electricity supplied by the EDC/supplier/provider, electricity generated from fossil-fueled DG or energy from the grid that has been stored should not be added to and increase the amount of electricity credited as originating from a NJ Class I RE source.”

In keeping with that principle, the metering scheme and associated computations allow mixed generation to be located behind a single metered interconnection point and differentiating between the netmetering eligible energy the non-netmetering eligible energy, and compensating each appropriately.

The addition of any generation behind a common delivery point, that operates coincident to the renewable generation, will increase the amount of energy exported through the common delivery point. Any such energy if not derived from a Class 1 renewable source should only be compensated at the wholesale value of that energy to the EDC and not at the full retail value afforded to Class 1 renewables.

The metering and computations are based on simply reducing the amount energy (kWh) exported over an interval (Hr or Mon) by the non-netmetering eligible energy produced over the same interval. If the remainder is positive, it is then eligible to offset energy consumed in that interval and/or banking in accordance with the netmetering regulations. The balance of the energy exported over the same interval, if any, is eligible for compensation under the EDC's power purchase provisions.

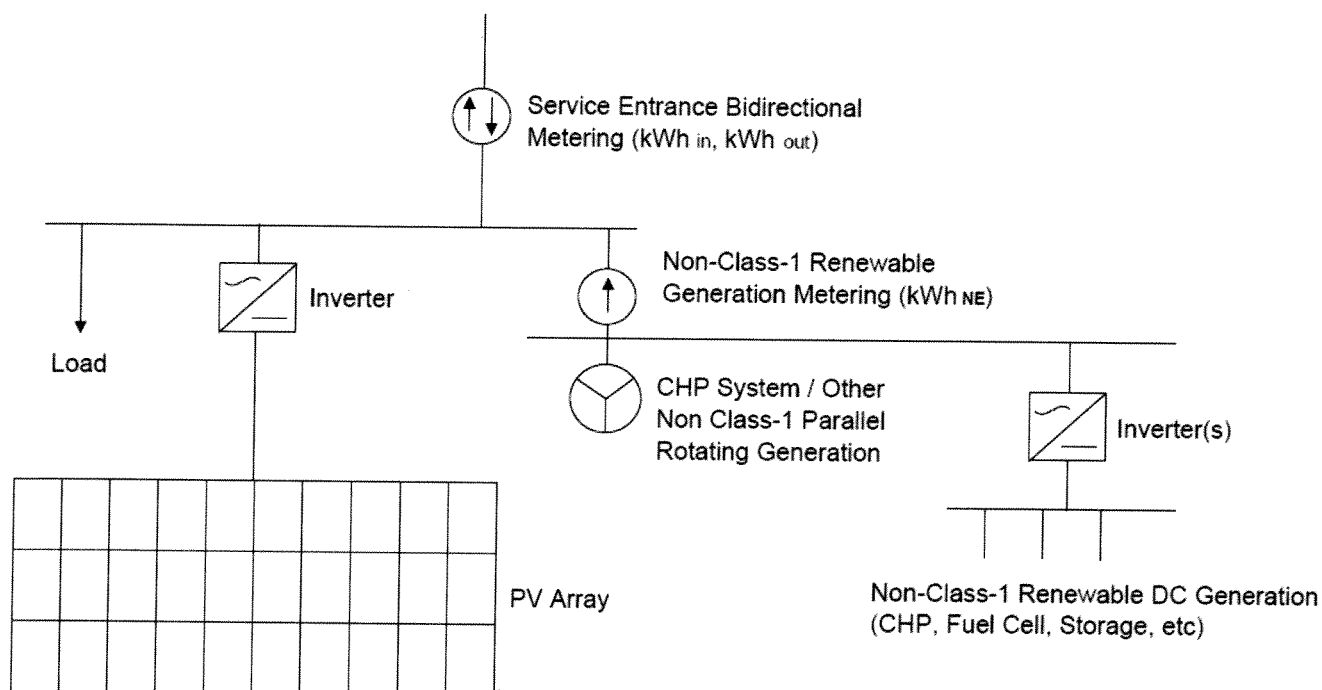
Non-Netmetering Eligible Generation Meter

Customer must install a meter base for the non-eligible generation meter next to the bidirectional service entrance meter and pay for the installation of the EDC owned non eligible generation meter (See Figure 1 for electrical location of kWh_{NE} meter).

Generation may be netted on a monthly basis or an hourly basis at the option of the customer. Where the customer is served at a tariff rate that does not require interval metering, the customer may elect to upgrade the service entrance meter and the non eligible generation meter to interval meters, both at the customer's expense. Where interval metering is utilized, communications to each meter is required.

* Note: Not available where connected to the transmission or sub transmission system (including 34.5) or where wholesale sales are to other than the host EDC.

Figure 1 - Mixed Generation Connection/Metering Online



Energy Allocation Calculations

Meaning of kWh subscripents:

kWh_{in} and kWh_{out} refers to energy metered to and from the customer at the service entrance respectively either hourly or monthly (Additional subscript (hr) or (mo)).

kWh_{Net} refers to NM eligible net energy delivered to or received from the customer either hourly or monthly.

kWh_{NE} refers to energy produced by non-netmetering eligible generation.

kWh_{wholesale} refers to energy delivered to the EDC not eligible for treatment under the netmetering regulations.

Energy Allocation Algorithm Options

A Small customers with no interval metering – Requires straight kWh meter on non-netmetering eligible generation.

1) $kWh_{out\ Eligible(mo)} = \text{the greater of: } (kWh_{out(mo)} - kWh_{NE(mo)}) \text{ or } 0$

$kWh_{Net(mo)} = kWh_{in(mo)} - kWh_{out\ Eligible(mo)}$

If $kWh_{Net (mo)} > 0$ then bill at tariff. If $kWh_{Net (mo)} < 0$, bill 0 and bank $kWh_{Net (mo)}$

$$kWh_{wholesale (mo)} = kWh_{out (mo)} - kWh_{Net (mo)}$$

$$Pmt/Credit_{wholesale (mo)} = kWh_{wholesale (mo)} \times \text{Tariff Rate}$$

2) Install 2 interval meters at Customer cost & Follow B

B Large Customers with interval metering - Requires interval kWh meter on non-netmetering eligible generation

For each hour, the Customer must be either a consumer or producer, not both. (For $kWh_{Net (hr)}$ - Negative values indicate net producer / Positive values indicate net consumer)

$$kWh_{out NM eligible(hr)} = \text{the greater of: } (kWh_{out (hr)} - kWh_{NE (hr)}) \text{ or } 0 \text{ (zero)}$$

$$kWh_{Net (hr)} = kWh_{in (hr)} - kWh_{out NM eligible(hr)}$$

If $kWh_{Net (hr)} > 0$, then bill at retail tariff rate

If $kWh_{Net (hr)} < \text{or} = 0$, bill 0 and bank $kWh_{Net (hr)}$

$$kWh_{Bank (mo)} = \sum \text{all banked hrs } (kWh_{Net (hr)})$$

$$kWh_{wholesale (hr)} = kWh_{out (hr)} - kWh_{out NM eligible(hr)}$$

$kWh_{wholesale (mo)}$ = The sum of all wholesale hours in the month

$$Pmt/Credit_{wholesale (mo)} = \sum \text{all wholesale hrs } (kWh_{wholesale (hr)} \times \text{tariff purchase rate})$$

