

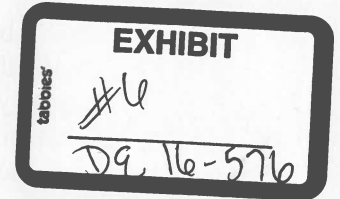
THE STATE OF NEW HAMPSHIRE
BEFORE THE
NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION

DOCKET NO. DE 16-576

Electric Distribution Utilities

Technical Statement of
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March 10, 2017



A. Purpose of Technical Statement

This technical statement is intended to support, describe and explain the various provisions of the Settlement Agreement (“Settlement”) among Public Service Company of New Hampshire d/b/a Eversource Energy (“Eversource”), Unitol Energy Systems, Inc. (“Unitol”), Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities (“Liberty”), the Office of the Consumer Advocate (“OCA”), the New England Ratepayers Association (“NERA”), Standard Power of America, Inc. (“Standard Power”), and Consumer Energy Alliance (“CEA”) (collectively referred to as the “Settling Parties”) and filed in Docket No. DE 16-576 on March 10, 2017. This statement will describe the terms of the settlement and, where appropriate, explain the intent of the Settling Parties. The Settling Parties note that the Settlement being discussed is among parties with differing interests. The terms of the Settlement represent a compromise of various positions with the intent of producing a just and reasonable result in furtherance of the legislative intent underlying this proceeding. A table summarizing the terms of the Settlement is attached to this statement as Attachment A.

B. Background

In response to New Hampshire House Bill 1116 (“HB 1116”) (Chapter 31 of the 2016 N.H. Laws), now codified within RSA chapter 362-A, the Commission opened this proceeding by Order of Notice dated May 19, 2016, “to develop new alternative net metering tariffs.” HB 1116 provided specifically that the Commission, “initiate a proceeding to develop new alternative net metering tariffs, which may include other regulatory mechanisms and tariffs for customer-generators, and determine whether and to what extent such tariffs should be limited in their availability within each electric distribution utility’s service territory.” RSA 362-A:9, XVI. As guidance in developing the required tariffs, the General Court determined that the Commission was to consider:

the costs and benefits of customer-generator facilities; an avoidance of unjust and unreasonable cost shifting; rate effects on all customers; alternative rate structures, including time based tariffs pursuant to paragraph VIII; whether there

should be a limitation on the amount of generating capacity eligible for such tariffs; the size of facilities eligible to receive net metering tariffs; timely recovery of lost revenue by the utility using an automatic rate adjustment mechanism; and electric distribution utilities' administrative processes required to implement such tariffs and related regulatory mechanisms.

RSA 362-A:9, XVI. Additionally, the Commission was given authority to approve time and/or size limited pilots of alternative tariffs. Following an extensive process at the Commission, the Settling Parties believe that the Settlement filed contemporaneously herewith addresses the factors set out by the Legislature and results in a new net metering tariff that is just, reasonable and in the public interest.

C. Terms of the Settlement Agreement

1. Proposed Start Date

The proposed start date of June 30, 2017 was intended to provide a clear line of demarcation so that customers and project developers will know and understand which tariff structure would apply to their net metered facility. While there is a clear line between the existing and the new tariff, the Settling Parties have acknowledged that should the Commission approve this Settlement, the utilities will require time to modify their billing and data management systems to be able to accurately bill customers taking service under the new net metering tariff. Accordingly, they have made provisions for moving customers to the new tariff once the utilities have completed the necessary changes.

2. Interconnection Fees, Customer Charge and Rate Design

The Settling Parties are not recommending any changes to the interconnection fees (or interconnection process), the customer charge, or rate design for any of the utilities. The Settlement does not, however, prohibit a utility from seeking to change any of its rates, charges or rate design pursuant to the provisions of RSA 378:1, et seq.

3. Lost Revenue Recovery

The Settling Parties acknowledge that the continuation of net metering as provided for in this Settlement will result in some measure of lost distribution revenue on the part of the utilities. Accordingly, in recognition of the Commission's recent approval, pursuant to RSA 362-A:9, VII and N.H. Code Admin. Rules Puc 903.02(o), of a lost revenue recovery mechanism for Unitil in docket DE 15-147, the Settling Parties have determined to adopt and incorporate within the Settlement this same methodology. The Settling Parties also acknowledge that the approved method depends upon estimates and projections that may, over time, require refinement. Accordingly, the Settling Parties have set out a reasonable time for the use of this methodology coinciding with the collection of additional data (described in Sections 12 and 13 of the Settlement) that would enable the lost revenue recovery mechanism to become more accurate. When such data has been collected, the lost revenue recovery mechanism may be reassessed to determine whether, or how, it should be amended.

Each utility will make an annual filing to recover the lost revenue allowed under this mechanism. That filing will also allow for the recovery of the costs of providing and installing customer-requested production meters, and the costs of data collection and pilot programs as described later

4. Charges Paid By, and Credits Paid To, Net Metered Customers

The Settlement describes the various charges that will be assessed to net metered customers taking service under the new tariff. Large projects, those over 100 kilowatts (“KW”) and up to and including 1 megawatt (“MW”), would continue to pay all charges for imported electricity, and receive a credit for exported electricity at the default energy service rate, consistent with Puc 903.02(g). The only change for large projects under the new tariff will be the addition of a requirement that 20 percent of the actual or estimated generation from the large project on an annual basis must be consumed on-site and behind the meter for the project to qualify for standard net metering. Large projects that do not meet this requirement must make alternate arrangements, which could include becoming a large group host, or selling excess power as a qualifying facility (“QF”).

Small projects, those no greater than 100 KW, will experience a change both in the charges assessed to them and in the credits they receive. With respect to the charges and credits assessed, and consistent with the testimony of many parties in the docket, small projects will no longer receive credit for the so-called “non-by-passable” charges. Those charges include: Stranded Cost Charge, System Benefit Charge, Electricity Consumption Tax (“ECT”), Storm Recovery Adjustment, any other rate element deemed to be non-by-passable by statute, regulation, or order, and for Unitil only, the non-transmission portion of its External Delivery Charge (EDC). Pursuant to RSA 83-E:2 and Rev 2602.01, the ECT was already subject to assessment on gross consumption, rather than net. The Settlement expands the assessment of charges on gross consumption to all non-by-passable charges. In that these are charges that do not relate to any service provided by a net metered facility, and that, as a matter of public policy, are to be borne by all customers, it is appropriate not to include them in the credit.

Additionally, small projects will no longer be provided a credit attributable to distribution charges. The Settling Parties acknowledge that there have been some arguments on the matter, but believe that there is insufficient evidence at this time to demonstrate that small net metered projects offset, delay, or decrease distribution related expenditures. Accordingly, and as part of the overall compromise that the Settlement represents, the Settling Parties determined that it was reasonable to discontinue the distribution credit on exports at this time, and to study the matter through additional data collection and analysis. A result of the removal of the distribution charge from the export credit amount is to decrease the amount of distribution cost that is shifted from net metered customers to non-net metered customers. Although the Settling Parties are leaving a significant portion of a PV system’s output eligible for distribution credits, through self consumption, this step forward on exports will, in turn, decrease the amount that would otherwise need to be recovered through the lost revenue recovery mechanism described earlier..

Small projects will, should the settlement be approved, receive a credit equal to the default service charge of the relevant utility plus a credit equal to the volumetric transmission charge. With respect to the default service charge, there were arguments in the docket that the energy produced by a net metered customer should be credited at the same rate as other wholesale energy – the Locational Marginal Price or LMP. For purposes of this Settlement, the Settling Parties have agreed, instead, to use the default service rate on the basis that the value of the energy being credited is, in essence, offsetting retail energy purchases that would otherwise be made. The Settling Parties acknowledge that this credit is, for purposes of this settlement, a reasonable estimate of the energy value, but that a different value could be set in the future.

With respect to net metered customers who desire to use a competitive electric power supplier to obtain their energy, those customers would not receive a credit equal to the default service charge. Given that the rates for competitively supplied energy can and do change regularly, and that a competitive supplier may choose, on a customer-by-customer basis, which customers will be billed by the utility and which will not, the administrative burden on the utilities to track those rates for purposes of providing credits to net metered customers would be substantial. Accordingly, rather than provide a credit at the default service rate, net metered customers taking competitive supply would receive a credit equal to the most recently available avoided cost rate as calculated annually by the Commission plus a credit equal to the volumetric transmission charge.

Additionally, the settlement agreement specifies that that the default service and avoided cost portions of the credit would be reconciled through the default service charges of the utilities.

With regard to the transmission charge, some evidence had been presented that the energy produced by net metered customers may offset some amount of regional transmission tariff charges. Therefore, for purposes of this Settlement, the Settling Parties agreed that a credit was appropriate. While the amount of the credit may be refined in the future, the Settling Parties agree that the credit of the full volumetric transmission charge is an appropriate amount for the credit. This amount would be reconciled through the relevant utility's transmission charge.

In the end, the payment structure for large projects would remain unchanged by this Settlement while the payment structure for small projects will change from the current credit of the full retail bill minus the ECT, to the full retail bill minus non-by-passable and distribution charges. A representative calculation of the credits under the existing and proposed net metering tariffs is provided as Attachment B to this statement. The Settling Parties believe that this change to the crediting for energy produced by small projects appropriately recognizes the costs and benefits of customer-generator facilities and continues to provide “reasonable opportunities for electric customers to invest in and interconnect customer-generator facilities and receive fair compensation” as contemplated in HB 1116.

5. Renewable Energy Certificates (“RECs”)

Various parties to the docket noted that customers with small projects often do not avail themselves of the opportunity to sell the RECs produced by their renewable net metered systems,

primarily because the expense and burden of doing so is not justified by the amount of revenue to be obtained. Accordingly, through this Settlement the Settling Parties have attempted to provide some means for customers to more readily obtain the value of the RECs they produce. The utilities will facilitate one or more methods of lowering the burden on customers by offering to purchase RECs, act as the independent monitor for REC production, and/or by soliciting a third party aggregator to begin aggregating and selling the RECs and crediting the value back to customers. The precise details of achieving these goals will be established following Commission approval of the Settlement, and the Settling Parties agree that the specific methods for achieving those goals need not be specified for the Commission to approve the Settlement.

6. Metering

For purposes of the new tariff, all net metered customers, regardless of utility service territory, will have bidirectional metering to register the energy flowing from the utility grid to the customer and from the customer out to the utility grid. The charges billed to the customer will be assessed on the energy taken by the customer from the grid and the credits will be applied to the amount exported.

If a customer wishes, at the time of interconnection the customer may request that the utility provide a production meter to register the amount of energy produced by the net metered system. In that instance, the meter would be provided by the utility at no cost to the customer, and the utility will make the production data available to the customer to allow the customer to participate in a program to monetize the RECs produced by the system. In this way customers will not only have additional information about their systems, but will also be able to more efficiently participate in any REC program. A customer requesting a utility-owned production meter will need to provide and install an appropriate meter socket in a physical location acceptable to the utility.

7. Data Collection and Pilots

Recognizing that more complete data may lead to more precise and accurate future rates, the Settling Parties have agreed on series of data collection efforts and pilot programs that would help inform the Commission and other stakeholders on potential future net metering issues. Specifically, the Settling parties have agreed to a locational value study that is intended to determine the value or potential value of adding distributed energy resources to portions of the utility distribution network that may be experiencing constrained conditions. Additionally, there will be a review of the potential for large projects to avoid transmission related costs and whether there is some level of compensation that should be provided to those projects for such avoidance. Also, the Settling Parties agree that the Commission should commence a proceeding intended to gather information about the actual value of various distributed energy resources in relation to their actual costs, rather than attempt to rely upon assumptions, estimates, or projections.

The Settling Parties believe that gathering and disseminating this information will provide a more complete base of information to determine the value that may be provided by

distributed energy resources in relation to the various costs that they may impose upon utility systems.

With respect to pilot programs, the Settling Parties understand that the success of any pilot program may be determined by its design, and by defining the goals and objectives of the specific program. Accordingly, rather than attempt to specify the design of pilot programs in the Settlement, the Settling Parties recommend that a task force be assembled to determine the design of, and desired outcomes for, a series of pilot programs. In this way, there will be increased confidence in the conduct of the programs and the results they generate.

The specific pilot programs to be designed will relate to pilots that would better enable non-host low and moderate income customers to participate in solar net metered projects through monetary on-bill credits, and time of use (“TOU”) pilots for each of the utilities that are intended to determine the interest in, and effectiveness of, TOU rates for net metered customers. There would also be an optional pilot relating to large projects following the completion of the data collection efforts relating to them. Once the pilots and data collection efforts have concluded, which should be no later than the end of 2020, the Settling Parties have agreed to petition the Commission to review results and information generated by those efforts with the intent of better informing future DER tariffs and rate design.

The State of New Hampshire Before the New Hampshire Public Utilities Commission
 Docket No. DE 16-576
 Attachment A

Small Projects
 <=100 Kw

Large Projects
 >100 Kw

Start Date	Projects placed in the queue after the final order in DE 16-576 will be moved to the alternative tariff once the utilities are able to bill under the new tariff. Customers will be billed under the tariff in effect March 2, 2017 until such time. The approved alternative tariff will be adopted after June 30, 2017.	same
Application Fee	No change. Utilities may file for an application fee based on demonstrated costs (Per Docket No. DE 15-271)	same
Customer Charge	No change; Utilities may file for a supplemental charge to DG customers based on demonstrated incremental customer-related costs for metering, billing, and interconnection.	same
Rate Design (for imported kw & kwh)	No change (use prevailing rates; as may be amended from time to time)	same
Lost Revenue Recovery	Order No. 25,991 in Docket No. DE 15-147 will guide the lost revenue recovery mechanism calculation.	same
Stranded Cost charge System Benefit charge ECT Storm Recovery Adjustment Non-T portion of EDC (Unitil)	Bill on imported kwh; no credit for exported kWh	same
Commodity (for exported kwh)	1) Retail Default Energy Charge for customers taking default service 2) Customers taking third party supply- Customer will receive supply rate for imported kWh, will be credited avoided cost rate as calculated annually by the Commission	On-site customer must consume, on an annual basis, 20% of generation or become a group host.
Distribution (for exported kwh)	No credit for exports	Same
Transmission (for exported kwh)	100% of volumetric Transmission charge of rate class	No credit for exports
RECs	1) Customer owns RECs. No utility obligation to buy. 2) Utilities agree to work with parties on solicitation for a third party administrator / aggregator. 3) The utilities, or their designee, shall be the independent monitor. 4) Utilities can facilitate customer education on topic and promote program	Same
Credits (\$ or KWH)	1) On-bill monetary credit 2) Customer can convert bill credit to cash on move out or once per year (each April, provided credit > \$100) 3) The credits provided to customers for default service and avoided cost at the end of the year will be recovered through the default service charge. Transmission costs will be reconciled within the rate reconciliation done by each utility annually.	Same
Banking	1) No need to bank kWh 2) No need for annual true-up or conversion of kWh	Same
Grandfathering	Installations will be grandfathered until 2040	Same
Data Collection & Studies	1) Locational value study 2) Timely cost recovery of all study efforts 3) review appropriate compensation for avoided RNS/LNS transmission costs allocation 4) NH PUC will open a proceeding to conduct a study V-DER, with opportunity for public comment prior to the study being conducted.	same

	Small Projects <=100 Kw	Large Projects >100 Kw
Data Collection & Studies	5) utilities will provide data on annual loads for net metered accounts for 1 or more years for the period prior to becoming net metered, and after becoming net metered 6) studies will be completed no later than 12/31/20	
Pilots – creation to be guided by a task force and filed for approval with the Commission.	1) Low income community solar – to be reviewed by task force 2) TOU 4) Timely cost recovery of all pilot efforts 5) All potential pilots will have a statistically valid number of participants 6) Following pilots and data collection, parties recommend a proceeding be opened to review results and inform future DER tariffs and rate design.	1)TOU 2)RNS & LNS opt-in program for Transmission, based on actual avoided marginal costs
Metering	1) Customer-generators will have bidirectional meters with an import and export channel. Customers will be billed on all imports. Customers will receive credit on exports measured by the bidirectional meter for transmission and default service at the full rate. 2) All customers interconnecting under the alternative tariff have the option to request a revenue grade utility production meter. The utilities will own the meters and provide the customers their data so they may participate in aggregation of RECs. 3) If a customer wants to install their own revenue grade interval production meter, the customer will be responsible for their RECs and the utilities will estimate the production for lost revenue purposes. 4) Those customers with utility-owned production meters will have the option to participate in the REC program noted in the "RECs" section. 5) The customer will not be required to pay for the meter when they interconnect. 6) The utilities will file for cost recovery of the costs associated with the production meters and associated data management when they file for lost revenues annually.	Same.

Net Metering

Current Tariff vs. Settlement Proposal

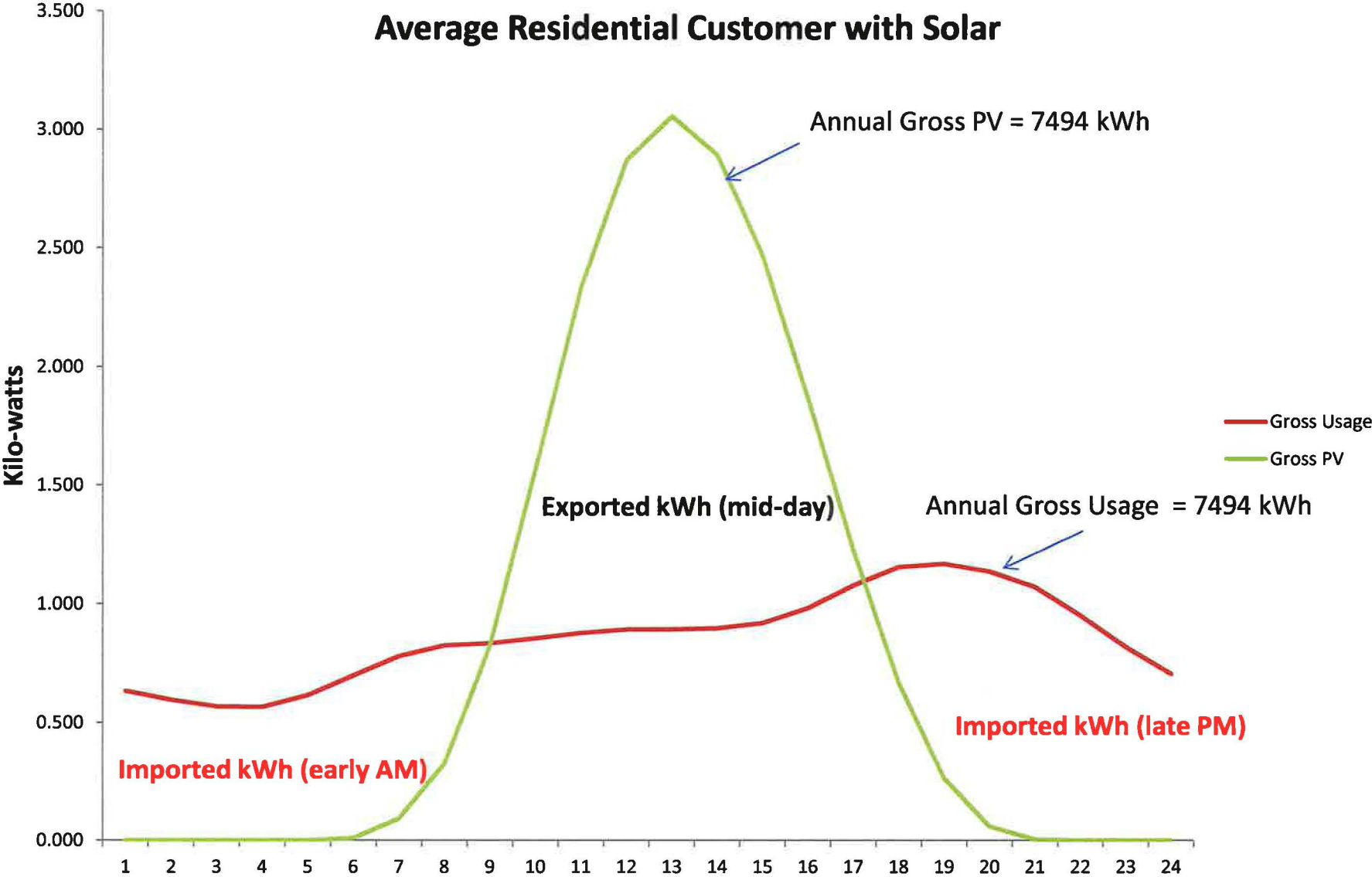
- Chart illustrates a typical Residential Profile (average of all 12 months)
- Assumes customer has installed a PV project designed to produce 100% of the annual customer usage (kWh)
- Chart illustrates the typical profile of the PV project (average of all 12 months)
- PV production data from NHSEA discovery response (from sample of actual NH projects)

Eversource Residential Rate R

- Current tariff values all solar production at the full retail rate (see column “Import” below for rate structure as of Jan 1, 2017)
- Settlement Proposal changes the value of all excess solar production to be the sum of the Default Energy Service rate and the Transmission rate (see column “Export” below)

Eversource Rate R		<u>Import</u>	<u>Export</u>
Customer Charge	\$	12.89	N/A
Default Energy Service	\$	0.11170	\$ 0.11170
Distribution Charge	\$	0.04207	\$ -
Transmission	\$	0.02390	\$ 0.02390
Stranded Cost Recovery	\$	0.00032	\$ -
System Benefits Charge	\$	0.00356	\$ -
Electricity Consumption Tax	\$	0.00055	\$ -
Total (per kWh)	\$	0.18210	\$ 0.13560
Total (per kWh excl. Tax)	\$	0.18155	

Average Residential Customer with Solar



Annual Summary of KWH

- Customer Gross Usage (prior to solar) = 7494 kWh
- Gross PV Production = 7494 kWh
- Imported kWh = 4283 kWh
 - Customer usage has decreased by 3211 kWh (from 7494 to 4283)
 - 43% of Gross PV production (3211 kWh) was consumed by the customer
- Exported kWh = 4283 kWh
 - 57% of Gross PV production (4283 kWh) was surplus and exported through the meter
- “Net” usage for the year (Imports minus Exports) = ZERO

Example of Customer Bill Impacts (Eversource Residential, Default Service customer)

	<u>Import Charges</u>	<u>Export Credits</u>	<u>Net Payment</u>
Bill (prior to solar)			
Annual KWH	7,494	N/A	7,494
Total Charges	\$ 1,519.34	N/A	\$ 1,519.34
Bill (with solar)			
Current Tariff			
Annual KWH	4,283	4,283	-
Total Charges (using Net kWh)	\$ 934.61	\$ 777.58	\$ 157.04
Proposed Settlement			
Annual KWH	4,283	4,283	-
Total Charges/Credits	\$ 934.61	\$ 580.77	\$ 353.84
Bill reduction (current tariff)			\$ 1,362.30
Bill reduction (proposed settlement)			\$ 1,165.50
Decrease in Value of Solar			\$ 196.80
Relative Difference (%)			14%