



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

Docket No. DE 16-576

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities
Development of New Alternative Net Metering Tariffs and/or Other Regulatory Mechanisms and
Tariffs for Customer-Generators

**DIRECT TESTIMONY
OF
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October 24, 2016

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1 **I. Introduction and Qualifications**

2 **Q. Please state your full name, business address and position.**

3 A. My name is Heather M. Tebbetts and my business address is 15 Buttrick Road,
4 Londonderry, NH 03053. I am a Utility Analyst for Liberty Utilities Service Corp.
5 (“Liberty”) which provides services to Liberty Utilities (Granite State Electric) Corp.
6 (“Liberty Utilities” or “the Company”) and in this capacity, am responsible for providing
7 rate-related services for the Company.

8 **Q. Please describe your educational background and training.**

9 A. I graduated from Franklin Pierce University in 2004 with a Bachelor of Science degree in
10 Finance. I received a Master’s of Business Administration from Southern New
11 Hampshire University in 2007.

12 **Q. Please describe your professional background.**

13 A. In October of 2014, I joined Liberty as a Utility Analyst. Prior to my employment at
14 Liberty, I was employed by Public Service Company of New Hampshire (“PSNH”) as a
15 Senior Analyst in NH Revenue Requirements from 2010 to 2014. Prior to my position in
16 NH Revenue Requirements, I was a Staff Accountant in PSNH’s Property Tax group
17 from 2007 to 2010, and a Customer Service Representative III in PSNH’s Customer
18 Service Department from 2004 to 2007.

19 **Q. Have you previously testified before the New Hampshire Public Utilities
20 Commission (“the Commission”)?**

21 A. Yes, I have testified on numerous occasions before the Commission.

1 **II. Purpose of Testimony**

2 **Q. What is the purpose of your testimony?**

3 A. The purpose of my testimony is to present Liberty Utilities' proposal for alternative net
4 metering tariffs for customer-generators. Briefly, Liberty Utilities' proposal is for all new
5 net metering customers to be billed and credited largely the same as customers with large
6 installations (100 kilowatts or greater) are treated today. That is, using bidirectional
7 meters, the Company's monthly bill will include the customer charge, a charge for all
8 electricity imported, charges for all the usual rate components on the imported electricity,
9 less a credit for the value of all electricity exported at the energy service rate (unless the
10 customer is not taking energy service from the Company, in which case the credit will be
11 calculated using the Commission-approved avoided cost calculation).

12 In 2016, the Legislature passed House Bill 1116, which revised parts of RSA 362-A to
13 increase the cap under which the current net energy metering rules apply, and to direct the
14 New Hampshire Public Utilities Commission (the Commission) to develop alternative net
15 energy metering tariffs for those customer-generators operating after their utility has met
16 its cap.

17 The statute directed the Commission to approve or adopt such alternative tariffs within
18 ten months of the effective date of the revision, or by March 2, 2017.

19 Per the Order of Notice in this docket, the Commission will be guided by the legislative
20 purposes stated in HB 1116:

1 Purpose Statement. To meet the objectives of electric industry
2 restructuring pursuant to RSA 374-F, including the overall goal of
3 developing competitive markets and customer choice to reduce
4 costs for all customers, and the purposes of RSA 362-A and RSA
5 362-F to promote energy independence and local renewable energy
6 resources, the general court finds that it is in the public interest to
7 continue to provide reasonable opportunities for electric customers
8 to invest in and interconnect customer-generator facilities and
9 receive fair compensation for such locally produced power while
10 ensuring costs and benefits are fairly and transparently allocated
11 among all customers. The general court continues to promote a
12 balanced energy policy that supports economic growth and
13 promotes energy diversity, independence, reliability, efficiency,
14 regulatory predictability, environmental benefits, a fair allocation
15 of costs and benefits, and a modern and flexible electric grid that
16 provides benefits for all ratepayers.
17

18 To assist the Commission in considering these factors, and in support of the Company's
19 proposal, this testimony will discuss the following: 1) costs and benefits of customer-
20 generator facilities; 2) avoidance of unjust and unreasonable cost shifting; 3) rate effects
21 on all customers; 4) alternative rate structures, including time-based tariffs; 5) whether
22 there should be a limitation on the amount of generating capacity eligible for such tariffs;
23 6) the size of facilities eligible to receive net metering tariffs; 7) timely recovery of lost
24 revenue by the utility using an automatic rate adjustment mechanism; and 8) electric
25 distribution utilities' administrative processes required to implement such tariffs and
26 related regulatory mechanisms.

27 **III. Costs and Benefits of Customer-Generator Facilities**

28 **Q. Please describe the long-term benefits of customer-generator facilities.**

29 The goal of electric distribution system planning is to provide adequate capacity for safe,
30 reliable, and economic service to customers, with minimal impact on the environment.

31 As part of this planning process the Company conducts a comprehensive review of "non-

1 wire” alternatives, and more traditional wire alternatives when new infrastructure is
2 required to meet system needs, as circumstances permit. Through this planning process,
3 the Company has found that customer-sited distributed generation facilities can provide a
4 long-term benefit to the equipment on the distribution system. As small customer-sited
5 generation facilities, such as rooftop solar, come online, they can provide some relief to
6 equipment on the electric distribution system, such as transformers and substations,
7 because the load behind the meter is offset by the generator. The offset to load lessens
8 the burden on the distribution system equipment, which in theory should extend the life
9 of that equipment. The short-term benefits to the distribution system of rooftop solar are
10 not known because the Company has no way of monitoring when the customer-sited
11 systems are generating.

12 The long-term benefits on the distribution system of rooftop solar are analogous to tires
13 on a car. A tire manufacturer warrants that the tires will perform safely for an
14 approximate number of miles, which warranty is based on average use. Assuming tires
15 with a 40,000 mile rating or warranty, depending on many factors such as driver habits,
16 climate, road conditions, and maintenance, tires at the 40,000 mile mark may have
17 sufficient tread to continue use for another 5,000 miles. This longer life is not known
18 when there were 10,000 or 20,000 miles on the tires, but only when the tires approached
19 the 40,000 mile expected life, because the particular driver’s driving habits prolonged the
20 life of the tires.

21 The effects of rooftop solar on the distribution system are similar. Using a transformer
22 with an expected 15-year life as an example, the effect of rooftop solar cannot be known

1 at year five or ten. It is only when the transformer does not need to be replaced at 15
2 years could it become known that the reduced load burden on the equipment resulting
3 from behind-the-meter generation caused the opportunity to delay replacing the
4 transformer until after its fifteen year life.

5 Although rooftop solar may increase the life of a piece of distribution system equipment
6 as described in the simple example above, there are many factors that make the benefit
7 difficult to quantify. Any benefits will depend on, among other things, the size of the
8 generating facilities installed in that particular area, the relative timeframes over which
9 they were installed, whether load has decreased in the area for other reasons, energy
10 efficiency, and a change in the number of customers.

11 To properly analyze the impact and potential benefits of distributed generation to the
12 distribution system, one would have to conduct a long-term evaluation of comparable
13 circuits – ones with customer-sited generation interconnected and others without. This
14 long-term analysis could show whether the presence of distributed generation reduces the
15 usage of distribution system equipment and therefore prolongs its life, resulting in a
16 benefit to all customers. Such an analysis has not been conducted given the lack of data
17 and relatively short timeframe that significant customer-sited distributed generation has
18 been interconnected with the Company's distribution system.

1 **IV. Avoidance of Unjust and Unreasonable Cost Shifting**

2 **Q. Please describe the current state of net metering.**

3 For customers with systems 100 kW and smaller, customers are compensated for the kWh
4 generated based on the following components of a bill: energy service, transmission,
5 stranded costs, distribution, electricity consumption tax and the system benefits charge. If
6 the customer's generation exceeds the customer's use, the customer is only required to
7 pay the customer charge.

8 Customers with net metered installations have a meter that records a "net" value at each
9 reading, with the "net" being the difference between electricity delivered to the location
10 and electricity exported to the distribution system from that location between meter
11 readings. The value may be positive, signaling that the customer will be billed for use; or
12 the value may be negative, signaling that the net export from that location will be applied
13 to a "bank" for future use by the customer. For the months which the customer has net
14 positive usage and does not have value in the bank, the customer is billed for that usage.
15 For the months which the customer has net positive usage and has value in the bank, the
16 bank value is applied to the usage (e.g., 200 kWh usage and 500 kWh banked, customer
17 is only billed the customer charge, and the new bank is 300kWh because the 200 kWh
18 were taken out of the bank and applied to the monthly bill).

19 Customers with systems greater than 100 kW are billed in accordance with Puc 903.02(g)
20 and receive a credit for their excess generation at the energy service rate.

1 **Q. Is there any cost shifting under the current billing methodology?**

2 A. Yes, and there is cost shifting for both large and small installations because large
3 installations offset their load and other customers must pick up the tab. The cost shifting
4 for small installations is obviously greater.

5 **Q. Please describe the cost shifting associated with the distribution component.**

6 A. The Company builds its distribution system to meet peak demand. Customers who do not
7 pay a distribution charge do not fully contribute to costs associated with building the
8 distribution system to meet peak demand, which typically does not occur when a solar
9 installation is generating its peak output. For example, the ISO-New England (ISO-NE)
10 system peak in 2015 occurred on July 29 at 5:00 p.m. To compare, our residential
11 customer class peaked on February 15, 2015 at 6:00 p.m. Based on the 2015 Farmer's
12 Almanac, the sun set in the Northern states at 5:36 p.m. The customer class for which
13 Liberty has the majority of distributed energy systems does not peak at the same time as
14 the ISO-NE peak, nor does it peak when the sun is shining. Customers receive the benefit
15 of banking kWh in the summer to use in the winter months when their customer class
16 peaks, yet they are not running their system at the peak time because the sun has already
17 set.

18 Customers are most likely importing electricity (unless they have a battery storage) at that
19 time to meet their energy requirements during the peak hour in February and thus taking
20 advantage of the Company's investment to supply power at that peak time, when the
21 customer's generating output is lower than their use.

1 **Q. Please describe the cost shifting associated with transmission costs.**

2 A. An electric utility such as Liberty Utilities that does not own transmission facilities is
3 allocated its share of costs incurred by the various transmission owners in accordance
4 with certain ISO-NE tariffs. These transmission charges are a pass-through to customers.
5 The Company calculates total transmission costs incurred and nets the total revenues
6 received from customers through the retail transmission charge against that number to
7 reconcile the retail transmission rate annually. The difference is either charged or
8 refunded to customers. Because net metering customers 100 kW and smaller avoid
9 paying for all the transmission charges allocated to Liberty Utilities to the extent of their
10 generated kWh, those charges are shifted to all other customers through the reconciliation
11 calculation.

12 **Q. Please describe the cost shifting associated with stranded costs.**

13 A. Liberty Utilities' stranded cost charge collects contract termination charges billed by New
14 England Power Company ("NEP"), pursuant to agreements approved as part of the
15 Company's electric restructuring settlement in Docket No. DR 98-012. The stranded cost
16 charge is adjusted annually to reflect the contract termination charge NEP bills to the
17 Company along with, for each of the Company's rate classes, a full reconciliation of the
18 annual costs and revenues and any over or under recoveries occurring during prior
19 periods. As with the charges imposed on the Company for transmission costs, net
20 metering customers with facilities 100 kW and smaller are not paying the full stranded
21 cost charge, because their generated kWh offsets their usage, and those costs are shifted
22 to all other customers as part of the reconciliation calculation.

1 **Q. Please describe any cost shifting associated with the System Benefits Charge.**

2 A. There are two components to the System Benefits Charge (SBC): the Electric Assistance
3 Program (EAP) and the Energy Efficiency programs. Customers with systems 100 kW
4 and smaller do not contribute to the SBC to the extent that their generated kWh offsets
5 some, or all, of their usage. As a result, the EAP fund, which is used to support the
6 discount that income-eligible customers receive on their electric bill, receives a lower
7 amount of funding than it otherwise would. This is not a desirable outcome because, as
8 stated in the New Hampshire Electric Assistance Program Process Evaluation for
9 Program Years 2013 – 2016 at page 13, the funding available did not meet the needs of
10 New Hampshire residents:

11 EAP met some level of need, within the limits of the available
12 Systems Benefit Charge funds The Advisory Board and the Public
13 Utilities Commission have thoughtfully distributed the funds raised
14 for the Electric Assistance Program, attending to the policy choices
15 inherent in setting benefit levels across the income tiers. Others
16 could have made different and equally valid choices about benefit
17 levels, wait lists, and usage caps. Those made by the Advisory
18 Board and the Commission have been appropriate in OEP's view.
19 On the other hand, the fact that more than 72% of the New
20 Hampshire residents with incomes below 200% of the federal
21 poverty level receive no direct benefit from EAP suggests that EAP
22 has not really met the level of need.

23 The SBC also funds energy efficiency programs. With the NHSaves programs, New
24 Hampshire utility customers can buy energy efficiency products at a discount or receive
25 rebates to help with the cost of larger installations, such as weatherization of their home
26 or business. Customers participating in net metering do not contribute to the funding of
27 these energy efficiency programs to the extent of their generated kWh, yet they can take
28 advantage of the programs by purchasing an LED lightbulb at a discount or by receiving a

1 rebate for installing energy efficiency measures. These customers can thus receive the
2 benefits of these programs without fully contributing to their funding.

3 **V. Alternative Rate Structure Proposal**

4 **Q. What is Liberty Utilities proposing as an alternative rate structure?**

5 A. Liberty Utilities is proposing that all new customers participating in net energy metering
6 will be billed and credited largely the same way that customers with installations of 100
7 kilowatts or greater are billed today, as follows:

- 8 • Customers with net metered installations will have a bidirectional meter that
9 records the value of the kWh imported over the month, and the value of kWh
10 exported over the month. Puc 903.02(c)(1).
- 11 • Customers will have a revenue grade generation meter that records the amount of
12 generation the system is producing.
- 13 • The customers will not bank any kWh (this is the primary difference between
14 Liberty Utilities' proposal and the current net energy metering structure).
- 15 • In addition to the customer charge, the Company will bill the customer for the
16 following rate components on the imported kWh: transmission, stranded costs,
17 distribution, system benefits charge, electricity consumption charge, and energy
18 service charge (all rate components).
- 19 • For the kWh exported, the customer will be credited the value of the energy
20 service rate component each month at the prevailing energy service rate.
- 21 • Liberty Utilities will calculate the credit as follows:

1 (exported kWh) x (energy service rate) = dollar credit to the
2 bill

- 3 • Liberty Utilities will apply this dollar credit each month that the customer
4 exported kWh.

5 For example, for months that the customer exports energy, their bill may look like the
6 following:

<u>Liberty's Proposal</u>	<u>Current Structure</u>
Import kWh 625	Import kWh Unknown
Billed Usage ¹ \$ 93.36	Export kWh Unknown
Export kWh 100	Net at end of each month ¹ 525
Energy Service Rate ² \$0.06868	Total Bill \$ 79.70
Credit \$ 6.87	
Total Bill \$ 86.49	

¹The Company bills on the net and does not measure the imports/exports.

¹Includes customer charge

²Small Customer Group as of 8/1/2016

7
8 Customers who are not taking energy service from the utility will receive a credit equal to
9 a Commission-approved avoided cost calculation.

10 **Q. Does 18 C.F.R. §§ 292.304, “Rates for purchases,” address avoided costs?**

11 A. Yes. Pursuant to the Public Utility Policies Act of 1978 (PURPA), consumers with
12 qualifying facilities are allowed to sell back to the utility any power they have generated
13 and not consumed. PURPA provides that the rates for such utility purchases:

14 (1) shall be just and reasonable to the electric consumers of the electric utility and
15 in the public interest, and

1 (2) shall not discriminate against qualifying cogenerators or qualifying small
2 power producers.

3 16 U.S.C. §824a-3(b). The statute further states that the electric utilities cannot be
4 compelled to pay more than the “incremental cost of alternative electric energy,” *id.*,
5 which is defined as, “the cost to the electric utility of the electric energy which, but for the
6 purchase from such ... small power producer, such utility would ... purchase from
7 another source,” 16 U.S.C. §824a-3(d).

8 Liberty Utilities agrees that customers who generate more power than they consume
9 should be compensated for that energy.

10 **Q. What is a qualifying facility?**

11 A. PURPA created a class of facilities that generate power which receive different rate and
12 regulatory treatment than other generating facilities. There are two types of facilities, 1)
13 qualifying small power production facilities, and 2) qualifying cogeneration facilities.

14 A small power production facility is a generating facility of 80 MW or less whose
15 primary energy source is renewable (hydro, wind, or solar), biomass, waste, or geothermal
16 resources. There are some limited exceptions to the 80 MW size limit that apply to
17 certain facilities certified prior to 1995 and designated under section 3(17)(E) of the
18 Federal Power Act (16 U.S.C. § 796(17)(E)), which have no size limitation. In order to
19 be considered a qualifying small power production facility, a facility must meet all of the

1 requirements of 18 C.F.R. §§ 292.203(a), 292.203(c) and 292.204 for size and fuel use,
2 and be certified as a QF pursuant to 18 C.F.R. § 292.207.¹

3 **Q. Please describe the requirements of 18 C.F.R. § 292.203 for facilities that are less**
4 **than 1 MW.**

5 A. This docket is directed at installations of 1 MW or less as addressed in RSA 362.A:9.
6 The general requirements for qualification under 18 C.F.R. §§ 292.203 provide that for a
7 small power production facility to qualify as a QF:

- 8 • The primary energy source of the facility must be biomass, waste, renewable
9 resources, geothermal resources, or any combination thereof, and 75 percent or
10 more of the total energy input must be from these sources;
- 11 • Any facility with a net power production capacity of 1 MW or less is exempt from
12 filing a notice of self-certification with the Commission

13 With this description of requirements, the Company believes that any customer with
14 generation behind the meter is a qualifying facility. The existence of New Hampshire's
15 net metering statute provides a structure over and above the Federal requirement for
16 minimum compensation.

1 <https://www.ferc.gov/industries/electric/gen-info/qual-fac/what-is.asp>

1 **Q. Has the Commission ruled on what rates are just and reasonable for qualifying**
2 **facilities?**

3 A. Yes. In Order No. 25,920 (July 1, 2016) in Docket No. DE 14-238, Determination
4 Regarding PSNH's Generation Assets, the Commission stated:

5 "Section III.C. of the 2015 Settlement Agreement specifies the
6 ongoing post-divestiture avoided cost rate to be provided for
7 independent power producers (IPPs), a matter discussed in greater
8 detail in a later section of this Order. Under this section, "avoided
9 cost rates for purchases of IPP power pursuant to PURPA² and
10 LEEPA³ shall be equal to the market price for sales into the ISO-
11 NE power exchange, adjusted for line losses, wheeling costs, and
12 administrative costs."⁴

13 The Commission's analysis and conclusion provided that the "Settlement Agreement may
14 be approved without modification as just and reasonable and in public interest."⁵

15 **Q. Why isn't Liberty Utilities proposing to pay all customers avoided cost, instead of**
16 **just those customers who are taking energy service from a third party supplier?**

17 A. As noted earlier in the testimony, the Company acknowledges a long-term value provided
18 by customer-owned generation, although that value has not been quantified. In
19 recognition of that value, customers who receive energy service from the Company
20 should receive at least some of the benefit of the value that their generation provides. By
21 compensating those customers at the energy service rate for excess generation, rather than
22 at avoided cost, some portion of that value is provided to the customer.

2 Public Utility Regulatory Policies Act. 16 C.F.R §824a.

3 Limited Electrical Energy Producers Act, RSA Chapter 362-A.

4 Commission Order No. 25,920 Page 76

5 Commission Order No. 25,920 Page 90

1 For customers who receive generation service from a third party supplier, the
2 Commission's current rules do not provide for any payment to them for excess
3 generation. By compensating those customers at avoided cost, they will be provided with
4 at least some value for their excess generation.

5 **Q. Did the Company consider time-based tariffs?**

6 A. Yes. There are various types of time-based tariffs such as peak, off peak, critical peak
7 periods, and real-time pricing. Because the Company does not offer a time-based tariff
8 through its energy service charge, the Company did not propose a time-based tariff for
9 payment of excess generation.

10 **VI. Rate Effects on All Customers**

11 **Q. Is there cost shifting in the current net metering structure?**

12 A. Yes. With the current structure, net metered customers with installations 100 kW and
13 smaller do not contribute to the recovery of costs associated with the previously
14 mentioned bill components because their generated kWh offsets some or their entire load.
15 As noted earlier in the testimony, there are costs that the utility must pay such as
16 transmission costs to ISO-NE for which all other customers end up footing the bill. This
17 creates higher rates for all other customers because the Company's kWh sales and
18 revenue are reduced due to recovery of fixed costs over fewer kWh of billed
19 consumption.

1 **Q. Does Liberty's proposal avoid cost shifting for all other customers?**

2 A. Not entirely. The following components make up the energy service charge on a
3 customer's bill:

- 4 • Base energy service rate – the winning bid price adjusted for line losses;
- 5 • Energy Service Reconciliation Adjustment Factor – the (over)/under collections
6 from the previous period for base energy service rates and (over)/under collection
7 of RPS;
- 8 • Energy Service Cost Reclassification Adjustment Factor – reconciles the
9 Company's administrative cost of providing energy service; and
- 10 • Renewable Portfolio Standard (RPS) – obligation of the Company to meet New
11 Hampshire RPS statute requirements.

12 A customer who receives a credit for net metering under the Company's proposal would
13 not pay for these energy service rate components in totality. The reconciling components
14 calculations would be spread over the forecasted energy service kWh sales for the next
15 period.

16 **Q. If cost shifting is not completely avoided, why is Liberty Utilities proposing this
17 structure?**

18 A. Under the current practice, cost shifting occurs as a result of customers' ability to bank
19 excess kWh generation and use that excess generation to offset a future bill. Effectively,
20 customer generators today receive the full retail rate for all their generation. The
21 Company's proposal will reduce that cost shifting by eliminating the ability to bank

1 energy and apply that banked energy to future consumption, and by reducing the price
2 paid for excess generation in a particular month to the level of the energy service rate
3 (rather than the full retail rate). Therefore, the cost shifting will be significantly lessened,
4 but those customers with installations will still receive a direct benefit on their monthly
5 bill for the installation. While the Company's proposal does not result in the elimination
6 of all cost shifting, the Legislature did not require the Commission to consider the
7 complete elimination of all cost shifting, but to consider "avoidance of **unjust** and
8 **unreasonable** cost shifting." (Emphasis added.)

9 **Q. Are there other benefits to making the aforementioned rates non-bypassable for net**
10 **metering customers?**

11 A. Yes. The most significant is the system benefits charge. This rate is comprised of low
12 income program funding and energy efficiency funding. As noted earlier in testimony,
13 net metered customers under the current structure do not pay the system benefits charge
14 for every kWh they avoid due to generation. With the need becoming greater each year
15 and less kWh being billed, the funding for the low income program is less than it could be
16 if net metered customers were not able to bypass paying for the program.

17 For energy efficiency, the same issue occurs: customers with net metering installations
18 are not fully funding energy efficiency programs, but may apply for rebates and loans.
19 With the new Energy Efficiency Resource Standard (EERS) starting in 2018, and a bridge
20 year between the CORE energy efficiency programs currently administered by the utilities
21 and the EERS, all customers, including those participating in net metering, will have the
22 benefit of more funding for greater opportunities to install energy efficiency in their

1 homes and businesses. If net metering customers avoid paying into energy efficiency
2 programs, at least to the extent of their generated kWh, then they should not be able to
3 take full advantage of rebates and loans. That is virtually impossible though, because
4 when a customer goes to a retail store to purchase an item supported by the energy
5 efficiency programs like LED light bulbs, the rebate in many stores is already reflected in
6 the price. There is no way to prevent a customer participating in net metering that is not
7 paying into the energy efficiency programs from receiving even the slightest benefits of
8 the programs.

9 **VII. Size Limitations of Systems**

10 **Q. Should there be a limitation on the amount of generating capacity eligible for net**
11 **metering?**

12 A. No. The Company believes that the Legislature's intent was to allow the current system
13 of compensating net metering customers to govern until the new 100 MW cap was met,
14 but to have no cap for net metering installed under the new regime. The Legislature left
15 to the Commission the development of new net metering tariffs. The Company
16 recommends that the availability of the tariff not to be capped. The absence of a cap
17 provides certainty that will support orderly development of net metered installations.
18 Customers will not face uncertainty with respect to billing when deciding whether or not
19 to go forward with their net metered installations.

1 **VIII. Size of Facilities Eligible to Receive Net Metering Benefits**

2 **Q. Does Liberty Utilities believe there should be size limits to eligible facilities?**

3 A. The statutorily-imposed 1 MW size limit for a single net metering facility of RSA 362-
4 A:9 of 1 MW remains. Liberty does not believe that there should be other size limits
5 considering that the Company's proposal applies uniformly to all net metering facilities of
6 less than 1 MW.

7 **IX. Timely Recovery of Lost Revenue by the Utility**

8 **Q. Please describe the process Liberty is proposing to recover lost revenues due to net
9 metering installations.**

10 A. Liberty will forecast the kWh sales reduction expected for the upcoming year based on
11 the installations in service from the prior year, and will multiply it by the utility's average
12 distribution rates. This forecasted lost revenue amount will then be divided by total
13 forecasted annual delivery sales, resulting in a lost revenue rate component that will be
14 billed to all customers. The following year, any (over)/under recovery of lost revenue
15 will be incorporated into the subsequent year's lost revenue rate calculation.

16 **Q. How will the Company measure the reduction in kWh from each customer?**

17 A. Each customer in the net metering program will have a bidirectional meter and a
18 generation meter. Currently, Liberty's net metering customers only have a true net meter,
19 by which the meter is read during the month and there is either a positive or negative
20 reading. The use of a generation meter will allow the Company to record the amount of
21 generation at the source and using a bidirectional meter will allow the Company to track
22 what the customer has imported and exported for kWh.

1 Each customer has a different size installation. Liberty keeps track of these installations
2 and will measure the generation of each system based on the meter annually. Lost kWh
3 sales will be calculated as follows:

$$4 \quad (\text{Generation Produced}) - (\text{Annual Exports}) = \text{Total Lost Sales}$$

5 The difference between the kWh produced and the exported kWh will be the amount of
6 sales used to calculate lost revenues annually.

7 **Q. How often will the Company file to reconcile the lost revenues?**

8 A. The Company will annually file the lost revenues associated with DG installations. The
9 filing will include an update to the number of installed systems, their size and a
10 calculation of lost revenues associated with those systems.

11 **Q. How will the Company recover lost revenues in the first year, since the Company**
12 **has not measured generation, imports or exports in the past?**

13 A. For customers that have installations under the new net metering tariff, the Company will
14 estimate lost revenues based on each customer's system size and the amount exported by
15 each customer in the previous year. In the following year, Liberty will reconcile these
16 amounts with actual data from the meters.

17 In accordance with Puc 903.02(o) and 903.02(p), the Company will include a
18 reconciliation for installations placed in service prior to the new net metering tariff, as
19 part of the reconciliation approved in this docket. The Company will estimate the

1 generation based on the system size and the amount of exports in the prior year from
2 internal billing reports.

3 **Q. How will the Company recover payments for excess generation?**

4 A. The Company will track the excess generation payments to customers during the period
5 that the energy service is reconciled, currently August through July. Liberty will include
6 a schedule that provides the total payments for each month to be reconciled in the
7 following period.

8 **X. Administrative Processes Required to Implement**

9 **Q. Please describe the current capabilities of the Company's billing system with
10 regards to net energy metering.**

11 A. The Company's billing system, Cogsdale, is programmed to administer net energy
12 metering in its current form. The system is not able to accommodate group net metering.
13 Currently, group net metering is billed manually and any other structure of net metering
14 at this time cannot be automated without extensive programming changes.

15 **Q. Please describe the changes needed to allow the billing system to accommodate
16 another structure of net energy metering.**

17 A. The Company requested from its internal IT programmers and Cogsdale a quote to
18 determine the costs associated with making any changes to the programming of net
19 metering. The cost of making changes to allow billing under the Company's proposal is
20 approximately \$314,000. This quote includes design, development, testing, and training
21 of the billing analysts.

1 **Q. How long will it take to implement the programming and billing changes?**

2 A. Once the Company receives a final order in this proceeding, it will start the process of
3 programming the new net metering design. It will take approximately six to eight months
4 for the design, development, testing, installation of meters, and training of the billing
5 analysts. For customers coming online in the interim, they will continue to be billed
6 under the current net metering structure.

7 **Q. Would the Company need to make changes to its billing system if the approved
8 proposal is different than the structure approved today, regardless of what that
9 structure looks like?**

10 A. Yes. Cogsdale can only bill the existing net metering structure. Unless the
11 Commission's order provides for continuation of net metering in the same manner as it is
12 structured today, the Company will incur costs to program its billing system to bill
13 something different.

14 **Q. Does the Company know how much an alternative to its proposal will cost to change
15 the billing system?**

16 A. No. The Company received a quote based on its proposal, as Liberty does not know what
17 other parties will file for proposals, nor does it know what the Commission will
18 ultimately approve. Therefore, it is impossible to put forth a meaningful estimate for
19 other unknown models.

1 **XI. Conclusion**

2 **Q. What is Liberty Utilities asking the Commission to approve?**

3 A. Liberty Utilities is asking the Commission to approve a net metering design that is easy to
4 administer and easy for customers and renewable developers to understand. The
5 Company believes that its proposal addresses the issues required for consideration by the
6 Legislature. The Company's proposal balances the needs and interest of customers with
7 net metered distributed generation and those without installations. The framework allows
8 for the ease of understanding and administration by customers, developers and
9 electricians and utilities.

10 **Q. Does this conclude your testimony?**

11 A. Yes, it does.