

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

**DOCKET NO. DE 16-576**

Electric Distribution Utilities

Joint Closing Statement of Public Service Company of New Hampshire d/b/a Eversource Energy, Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities, and Unitil Energy Systems, Inc.

April 13, 2017

**A. Introduction**

In Order No. 25,980 (January 24, 2017), the Commission concluded that this docket was opened “in response to a legislative directive to develop net metering tariffs, which is fundamentally a rate setting function,” and that “In this docket, we are completing a legislative function at the direction of, and with guidance from, the legislature.” *Id.* at 8-9. Accordingly, given the legislative function at work, it is proper to examine the instruction the Legislature gave to the Commission through the provisions of HB 1116. As now contained in RSA 362-A:9, XVI, the Legislature’s directive was that:

No later than 3 weeks after the effective date of this paragraph, **the commission shall 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.

(Emphasis added). Thus, the specific directive to the Commission was to adopt a new tariff applicable to customer-generators. It is not the decree of the Legislature to consider a swath of issues that may, arguably, be related to distributed energy resources broadly. The joint utility and consumer coalition (“UCC”) proposal addresses the issues defined by the Legislature in a fair and appropriate manner, and should be approved over any other proposal that goes beyond

the Legislature's order. It is in light of this statutory directive that Public Service Company of New Hampshire d/b/a Eversource Energy, Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities, and Unitil Energy Systems, Inc. (the "Utilities") offer these comments.

Before addressing specific issues, the Utilities note that the different settlement proposals under consideration are largely similar, and it is only in a few respects that there is significant disagreement. Accordingly, the Utilities direct their comments to those specific issues, as well as one additional issue identified by the Chair.

## **B. Distribution Credit**

In the UCC proposal, the credit to customer-generators that could be related to distribution system expenditures was proposed to be zero in light of the lack of evidence in the proceeding that distributed generation ("DG") actually avoided distribution system expenses. A review of the evidence in the case supports this conclusion. No member of the non-UCC coalition (or anyone else), at any point, identified any costs of the distribution system that were, in fact, avoided or deferred as a result of DG installations. The only substantive analysis – that offered by Mr. Beach – was based upon reviews and meta-studies,<sup>1</sup> but at no point did he present evidence that any distribution construction, in the real world, was avoided by the construction or operation of DG. Similarly, Mr. Chernick described a set of theoretical, or potential, extensions to the life of distribution equipment from the existence of DG, but provided no evidence that such extensions had actually occurred for any utility anywhere.<sup>2</sup>

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<sup>1</sup> Exhibit 19, Beach Initial Testimony, Exhibit RTB-1 at 20.

<sup>2</sup> Furthermore, the rejoinder that the lack of distribution system spending could not be shown because one cannot prove what does not occur holds no sway here. If a transformer has a typical service life, but that is extended by the existence of customer generation, such life extension could be shown; if a distribution project, such as a substation or large transformer change, was proposed but then canceled because customer generation made the proposed changes unnecessary, that could be shown. No such "beneficial" impact on any utility distribution system was shown through competent evidence from any party.

The closest any non-UCC party was to providing any evidence that customer-generators may have a beneficial impact on the electric distribution system was the reference to the Brooklyn Queens Demand Management project in New York in Mr. Bean's testimony.<sup>3</sup> However, a review of the information about that referenced program shows that the benefits come almost entirely from energy efficiency and demand response measures, not DG. In short, there is no evidence in the record of this docket from which the Commission may conclude that there is any benefit to the utility distribution system for which DG owners should be compensated. Whether such benefits may be shown through future studies or pilots is not clear. What is clear, however, is that there is no present evidence of benefits to the utility distribution system that should be included in a new tariff.

In contrast to the lack of any indications that utilities are actually able to avoid distribution system related costs as a result of the existence of customer-generators, there was evidence of real-world, actual costs imposed upon the distribution system by DG. Mr. Beach described the "technical issues" besetting Hawaiian distribution grids due to solar generation,<sup>4</sup> and Mr. Chernick described how Hawaii has lowered the rate for exported power to deal with reverse power flows.<sup>5</sup> To the extent that one might argue that such costs will only be incurred at higher levels of penetration, such a concern is irrelevant to the point. There is evidence of real costs to the system, and only speculation about real benefits. Moreover, waiting until such issues arise in New Hampshire rather than proactively addressing a known problem is illogical.

At times, parties contended that the value of DG to the distribution system could not be zero.<sup>6</sup> Such argument, however, is not supported by any evidence in the docket demonstrating

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<sup>3</sup> Exhibit 21, Bean Initial Testimony at 10.

<sup>4</sup> Exhibit 19, Beach Initial Testimony, Exhibit RTB-1 at 41, f. 31.

<sup>5</sup> Exhibit 22, Chernick Initial Testimony at 6.

<sup>6</sup> Transcript, Day 1 Morning, at 52.

that the number ought to be anything higher. There is simply no quantification by those seeking the credit about what the value truly is. In fact, the Acadia and CLF witnesses agreed that the credits today are not cost-based, and that the 75 percent credit that they supported was arbitrary – i.e., not based on an assessment of any value.<sup>7</sup> In other words – if DG offsets some portion of distribution costs, what portion is it and what value is properly assignable to that portion? The non-UCC parties do not say, and, prior to the settlement filing, contended, again without evidence, that it was the entire cost.<sup>8</sup>

The Utilities acknowledge, as Eversource did in its initial testimony, that some aggregation of DG resources could, potentially, “eliminate or delay the need for circuit upgrades to accommodate growth in customer peak demand.”<sup>9</sup> However, to do so would require both a growth in demand that needed to be addressed, and DG resources that could meet a series of criteria to address that demand, including that they provide the level of reliability and predictability required to ensure continued safe and adequate operation of the electric distribution system for all customers at all times. There is no evidence in the record of this case that such criteria have been met. Accordingly, there is no basis to compensate DG resources for distribution related costs. The UCC parties believe that the total level of compensation provided in their proposal – the retail default energy service rate in addition to the total transmission charge – adequately compensates DG resources and the need for additional funds attributable to distribution system charges is not justified.

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<sup>7</sup> Tr., Day 3 Morning, at 48-49.

<sup>8</sup> In fact, parties have claimed that the evidence in the case shows that DG customers provide net benefits to the system – that is that they actually provide value greater than the cost of the service they consume. Transcript, Day 1 Morning at 40-41. Yet, entirely counter to that conclusion, the non-UCC settlement proposes a reduction in the distribution credit and those settling parties made clear that their determination about the reduction is not based on any analysis of actual distribution system effects. Thus, that settlement position is not merely a compromise among the parties to their agreement who hold differing views, but is, instead, a proposal entirely divorced from the views of every party to that agreement.

<sup>9</sup> Exhibit 14, Initial Testimony of Labrecque and Johnson at 23

Moreover, in the non-UCC settlement, the testimony in support of that agreement states that the settling group “continues to stand by its testimony in this case” which, it claims, “presented a comprehensive benefit-cost methodology for valuing customer-sited DG resources.”<sup>10</sup> That testimony continues that “[t]hese analyses concluded that solar DG is a cost-effective resource for all of the utilities, as the benefits equal or exceed the costs in the Total Resource Cost and Societal tests,” and that “that there is no significant cost shift to non-participating ratepayers.”<sup>11</sup> Finally, it concludes that its “compromise proposal with lower distribution credits than assumed in our benefit-cost analyses, plus monetary crediting and possible additional cost-based fees on DG customers, will provide additional benefits to non-participating ratepayers flowing from customer generators.”<sup>12</sup> Thus, the reasonableness of the that proposal, which results in very little change in the overall credit to be provided to new net-metered customers depends entirely on whether its “comprehensive benefit-cost methodology for valuing customer-sited DG resources” is itself reasonable. The uncontested evidence in this docket shows that the benefit-cost study methodology and results relied on by the non-UCC group is unreasonable, and incapable of supporting a net metering credit at or near the current levels.

The problems with this benefit-cost study, performed by TASC witness Mr. Beach, are many. Unutil witness Dr. Overcast testified that the benefit-cost analyses used by Mr. Beach “were developed to determine the cost effectiveness of various options in the context of an Integrated Resource Planning evaluation, to compare non-utility solutions to utility solutions used to address future resource adequacy.”<sup>13</sup> Such analyses “do not address the actual avoided

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<sup>10</sup> Exhibit 1 at 6.

<sup>11</sup> *Id.*

<sup>12</sup> *Id.*

<sup>13</sup> Exhibit 39, Overcast Rebuttal at 15

costs that represent the benefits of DG to the utility system.”<sup>14</sup> Rooftop solar DG is not the least cost alternative to address utility energy and capacity requirements. Mr. Brown testified that “rooftop solar is the most expensive form of commonly deployed renewable generation in the U.S. today. The latest annual update of Lazard’s Levelized Cost of Energy Analysis continues to show this, with a levelized cost for rooftop solar ranging from \$138-\$222 per MWh, higher than all other energy sources analyzed (with the exception of a diesel reciprocating engine), including fuel cell, solar thermal, utility-scale solar, geothermal, biomass, and wind.”<sup>15</sup>

Dr. Overcast explains that the underlying assumptions used to develop the benefit-cost analyses rely on assumptions that are false:

- The analyses assume that there is no technological change over the forecast period;
- They assume that the relative prices of inputs do not change over time;
- They ignore the growing penetration of DG and DER resources that will reduce future costs based on current technologies, as less efficient units fall out of the merit order dispatch in favor of more efficient generation operating at lower avoided costs. As DG penetration increases, the marginal unit becomes more efficient, thereby reducing avoided costs.
- The studies ignore that impact of ambient temperature variations on solar capacity values and therefor overstate their solar production estimates.
- Mr. Beach’s study employs the utility’s weighted average cost of capital as the discount rate to estimate the net present value of future energy costs. But since

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<sup>14</sup> *Id.*

<sup>15</sup> Exhibit 41, Brown Rebuttal at 41.

we are determining the benefits for customers, the customer discount rate, which is higher than the utility discount rate, should be used.<sup>16</sup>

As Unitil witness Mr. Meissner testified, Mr. Beach's Total Resource Cost analysis is not performed in a manner consistent with Commission approved methodology for this test.<sup>17</sup> Mr. Beach selected methodologies and benefits developed in other studies and jurisdictions and selected those that were most advantageous, including anything that reduces costs and ignoring those that would reduce benefits. For example, with regard to participant benefits, he ignored sources of compensation such as subsidies and policy incentives (e.g., RECs), but on the cost side reduced the cost of solar PV by the 30% Investment Tax Credit and \$0.5/watt state incentive.<sup>18</sup> Mr. Beach also included both DRIPE and "Avoided Fuel Price Uncertainty" in his direct benefits, while these are not incorporated in the benefit-cost analysis for other energy efficiency or demand-side resources in New Hampshire. It is worth noting that the Arizona Corporation Commission, in a recent decision which adopted a Value of DG Methodology, concluded that it was not appropriate to include fuel hedging costs in the valuation methodology as evidenced by residential contracts that extend out only a few years at most in states with retail electric competition.<sup>19</sup>

Mr. Beach also developed his own methodologies for calculating avoided capacity costs, without considering the "intermittent" nature of the generation. Unitil witness Mr. Brown notes that note that rooftop solar is a double contingency intermittent energy source in that it not only depends on the presence of the sun, but also on how much of the energy being produced is

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<sup>16</sup> Exhibit 39, Overcast Rebuttal at 16.

<sup>17</sup> Exhibit 40, Meissner Rebuttal at 3-4.

<sup>18</sup> Exhibit 40, Meissner Rebuttal at 5.

<sup>19</sup> Arizona Corporation Commission, Docket No. E-00000J-I4-0023, Decision No. 75859, at p. 150.

consumed on premises by the solar host and is never exported into the system.<sup>20</sup> Dr. Overcast points out that Mr. Beach double counts the cost of “criteria pollutants” by adding them as a separate line item where the costs are already included in the LMP price.<sup>21</sup> In brief, the evidence in this docket shows that the benefit-cost study methodology relied on to support the non-UCC agreement is unreasonable, and therefore it should not be used to support the continuation of net metering at the current levels.

### **C. Netting Interval**

Much was made of the issues relating to the netting interval at the hearing, but in all, such discussions served more to confuse rather than clarify the matter. In brief, the entire issue may be described thus: there is no functional difference between the two proposals regarding netting of the commodity, transmission, and non-bypassable charge components of the rate. Both proposals include “instantaneous netting” of the non-bypassable charges, and because all commodity and transmission credits are equal to the charges on imports, “instantaneous netting” and “monthly netting” have the same mathematical result. Accordingly, to the extent there could be any argument that “instantaneous netting” causes concern, such arguments are limited to the distribution charge, and then only if the compensation is not equal to zero or full retail. For the reasons stated above, the Utilities believe that the evidence does not support a distribution related credit greater than zero which, if implemented, would make the netting interval irrelevant.

If, however, the Commission were to conclude that some distribution credit is due, having monthly netting as proposed by the non-UCC parties would be out of step with New Hampshire law and would result in a reduction that is so small it may hardly be called a change at all. With respect to the law, RSA 362-A:9, IV provides:

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<sup>20</sup> Exhibit 42, Brown Rebuttal at 10, fn. 11.

<sup>21</sup> Exhibit 39, Overcast Rebuttal at 29.



IV. (a) For facilities with a total peak generating capacity of not more than 100 kilowatts, when billing a customer-generator under a net energy metering tariff that is not time-based, the utility shall apply the customer's net energy usage when calculating all charges that are based on kilowatt hour usage. Customer net energy usage shall equal the kilowatt hours supplied to the customer over the electric distribution system minus the kilowatt hours generated by the customer-generator **and fed into the electric distribution system** over a billing period.

(Emphasis added). Therefore, the credit to a customer is to be based upon the "kilowatt hours generated by the customer-generator and fed into the electric distribution system over a billing period." This language indicates that the energy fed into the distribution system, whenever that might occur over the billing period, is to be used to establish the credit to the customer-generator. The UCC proposal is directly in line with this statutory requirement. The competing proposal for "monthly netting" is not.

With respect to the size of the credit, as made clear in Mr. Below's testimony,<sup>22</sup> generally a customer-generator would only export a tiny fraction of their generation, perhaps less than 10 percent, when netted over the course of a month.<sup>23</sup> No party challenged that conclusion, and it is supported by the statements of Mr. Beach in his testimony and his rebuttal, where he used similar numbers.<sup>24</sup> Through a discussion between Staff's consultant and the Chair,<sup>25</sup> it was clear that the change proposed by the non-UCC group – a decrease of 25 percent of the distribution charge applied to only 10 percent of a customer's bill – would result in a number so insignificant as to be essentially no change to the credit at all. It challenges plausibility to suggest that the legislature required this docket, and that the parties engaged in this effort, to result in a change so minimal as to be unnoticeable.

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<sup>22</sup> Transcript, Day 3 Morning at 135-36; Transcript, Day 3 Afternoon at 25-26.

<sup>23</sup> This is despite the fact that all parties agree that a customer-generator is continuously shifting between importing and exporting energy in response to changes in load, cloud cover, and numerous other factors and the utility must have a system capable of responding to each and every shift in load and production, either in or out, at all times of the day and night.

<sup>24</sup> Exhibit 19, Beach Initial Testimony, Exhibit RTB-1 at 19; Exhibit 45 Beach Rebuttal Testimony at 33

<sup>25</sup> Transcript, Day 3 Afternoon at 112-114.

The non-UCC settling parties referred to their proposed changes as incremental and gradual.<sup>26</sup> The Utilities argue that the changes are even less than incremental. Taking the model provided to the Commission by the non-UCC settling parties as accurate,<sup>27</sup> the change in compensation between a small customer who becomes net metered today, and one who would become net metered under their proposal, the value proposition changes by, at most, about four dollars per month.<sup>28</sup> Adopting the non-UCC settlement proposal will mean that a customer will continue to offset the vast majority of his or her use at the full retail rate and experience a maximum impact that equates to less than \$1,000 on a \$20,000 asset and even then only over the course of 20 years, assuming everything else stays constant. As the Commission knows, however, weather changes, public policy changes, energy prices change, and technological advancements occur. Also a customer installing solar today is purchasing a system with a lower underlying average cost than in prior years,<sup>29</sup> meaning that in the future customers should be paying less upfront for a system, unless installers have increased margins over prior years. The change proposed here by the non-UCC settling parties would be so slight that it would be more than offset by nearly any other factor affecting the customer's home or generation system. By contrast, the UCC settlement proposal would result in a change of approximately 14 percent as shown in Exhibit 6, the UCC technical statement.

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<sup>26</sup> The non-UCC parties also contended that their proposal, in contrast to the UCC proposal, has a clear destination. Transcript, Day 1 Morning at 39. However, the destinations of both proposals are essentially the same – a new tariff based upon information obtained in through studies and pilots and implemented around the beginning of 2021. It is unclear why the non-UCC parties seek to have the Commission conclude there is some meaningful difference between the goals of the two settlement proposals before it.

<sup>27</sup> As noted in the discussion with Mr. Phelps regarding his calculations relating to Eversource's customers, Transcript, Day 1 Morning at 88-89, the model was not accurate when provided to the Commission in, at a minimum, two significant places. For purposes of this discussion, the Utilities will assume that it is otherwise accurate if only to demonstrate an "apples-to-apples" comparison.

<sup>28</sup> For Unitil it would be only about \$1.63 per month for a residential customer.

<sup>29</sup> Transcript, Day 1 Morning at 98.

While the non-UCC parties chose to paint this as a substantial increase in the bill of a net metered customer, that argument rests upon a fallacy. A customer who is net metered today is grandfathered through 2040, and no party has suggested that such grandfathering not occur. Therefore, those customers will not experience any increase in their bills as a result of any proposal in the docket. For any customers who enter the net metering program after the deadline to do so, whenever that may be set, they will enter the program knowing that their compensation will change once utility billing systems are capable of billing the new rates. Therefore, they will, or should if properly educated by their installer, enter the program knowing what their rates will be. Accordingly, comparing the bills of a net metered customer today and a one under the new program as though the current customer will be switched to a new program is both an inaccurate comparison and factually incorrect. The UCC proposal, which adopts a netting interval and compensation rate resulting in a change of approximately 14 percent, is reasonable and appropriate and continues to allow customers a reasonable opportunity to invest in DG.

During the hearing, some parties contended that it would be impossible to either understand or respond to the signals sent by the UCC's netting interval. They did not, however, convincingly explain why. As a first matter, the non-UCC panel testified that a similar netting interval has been adopted and is being implemented elsewhere.<sup>30,31</sup> Additionally, the non-UCC settlement would require the same "instantaneous netting" interval for non-bypassable charges. Therefore, the argument that this is something the DG community cannot adapt to is belied by their own testimony.

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<sup>30</sup> Transcript, Day 1 Afternoon at 50.

<sup>31</sup> Notably, the non-UCC members argued in this context that it was inappropriate to compare New Hampshire to other states, like Arizona, Transcript, Day 1 Morning at 91, but in another context argued that comparisons to other states, like Nevada, were apt, Exhibit 1 Supplemental Testimony at 11. The vacillation by these parties makes it difficult to understand what evidence they consider relevant or material, and, the Utilities contend, raises concerns about the quality of the evidence they present.

Furthermore, while the non-UCC parties were quick to blame the utilities for not providing information that might enable greater information about customers' usage, those parties have provided the Commission with no evidence of the information that they gather today, or that they could gather, to respond to any netting interval. Many of these parties are large and sophisticated entities with national reach, and yet provided no meaningful information about how, or if, they look at customers' usage patterns, appliances and equipment, ability to or interest in changing equipment or behaviors, or any other matters, prior to selling them an expensive DG system. They have not provided the Commission with data on the generation from the systems they have installed in New Hampshire or nearby states, and they have not indicated that they would be willing to spend any time or effort to collect or disseminate such data. They have simply said that they cannot do that kind of analysis and have asked the Commission to conclude that it is the fault of the utilities. As noted by Mr. Meissner, the utilities provided the data they had.<sup>32</sup> It is not the fault of the utilities that these parties have not tried to educate themselves and their customers about the true value to the customer or the grid of net metering.

Additionally, as the Commission is aware, a significant number of DG systems in New Hampshire make use of a PPA and are not purchased outright by a customer. None of the non-UCC parties could offer any information whatsoever as to how the rates for those PPAs are set, nor how they would change in response to the adoption of any proposal in this docket. They do not appear to understand the impacts on the customer from the products they sell. For their own ease, these parties would have the Commission believe that full retail net metering, or something very close to it, is the only business model that works and the only one that should be used. Such a claim is simply not credible.

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<sup>32</sup> Transcript, Day 2 Morning at 54.

#### **D. Data Collection and Pilot Programs**

During closing remarks, and during the Commission's questioning of the Staff's witness,<sup>33</sup> the Commission made clear that it desired additional clarity around the requirements for, or expectations of, various data collection efforts and pilot programs. The Utilities contend that the broad parameters set out in the UCC proposal provide an appropriate framework around which to build an order relating to those programs. While the proposal does not set out each and every detail of the studies, it does provide sufficient detail such that the Commission may avoid inviting additional litigation.

With respect to the locational value study, the UCC study has identified a model for a study that would form the basis for any new study in New Hampshire. While there would be room for adjusting the study to suit the need of New Hampshire, the framework is already there. With respect to the value of DER study, the UCC proposal sets out a series of items that would need to be included in that study. Though there would be adjustments needed, again, the basic framework is there. On that issue, the Utilities make clear that one item that is essential in any such study is the cost of the DG to the installer and the customer. Without that information it is impossible to know whether a customer would have a reasonable opportunity to invest in and interconnect customer-generator facilities and receive fair compensation for such locally produced power while ensuring costs and benefits are fairly and transparently allocated among all customers as required in HB 1116. Likewise, without that information it is impossible to know whether the cost reductions that are occurring for DG, and particularly for solar, are ever being passed to customers, or whether the cost reductions are merely serving to buoy the bottom line of the entities selling these products and services.

#### **E. Conclusion**

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<sup>33</sup> Transcript, Day 3 Afternoon at 115-118.

The UCC proposal is reasonable and appropriate and in line with the direction of the Legislature. While any proposal or tariff could, and should, be revised over time as additional information is available, the settlement proposal put forth by the UCC parties is an appropriate step in the right direction for DG in New Hampshire. Accordingly, the Commission should adopt and implement the UCC settlement proposal as being just, reasonable, and in the public interest as determined by the Legislature.