

STATE OF NEW HAMPSHIRE  
BEFORE THE  
PUBLIC UTILITIES COMMISSION



Docket No. DE 16-576

DEVELOPMENT OF NEW ALTERNATIVE NET METERING TARIFFS and/or  
OTHER REGULATORY MECHANISM and TARIFFS FOR CUSTOMER GENERATORS

PREFILED REBUTTAL TESTIMONY OF  
NATHAN PHELPS  
ON BEHALF OF  
NEW HAMPSHIRE SUSTAINABLE ENERGY ASSOCIATION

**DECEMBER 21, 2016**

## I. INTRODUCTION

1 **Q1. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A1. My name is Nathan Phelps. My address is 745 Atlantic Ave., 7<sup>th</sup> Floor, Boston,  
3 Massachusetts 02111.

4 **Q2. HAVE YOU PREVIOUSLY TESTIFIED IN THIS PROCEEDING?**

5 A2. Yes. On October 24, 2016, I filed Direct Testimony on behalf of New Hampshire  
6 Sustainable Energy Association (“NHSEA”) in this case addressing (1) the costs and  
7 benefits of distributed generation (“DG”), and (2) the possibility of cost shifts between  
8 DG customers (a.k.a. participants) and non-DG customers (a.k.a. non-participants).

## II. PURPOSE OF TESTIMONY AND SUMMARY OF RECOMMENDATIONS

9 **Q3. WHAT DOES YOUR REBUTTAL TESTIMONY ADDRESS?**

10 A3. My rebuttal testimony addresses the direct testimony filed by Public Service Company of  
11 New Hampshire d/b/a Eversource Energy (“Eversource” or “the Company”) in the  
12 immediate docket.

13 **Q4. HAVE YOU REVIEWED THE DIRECT TESTIMONY OF EVERSOURCE IN  
14 THIS PROCEEDING?**

15 A4. Yes, I have reviewed the joint testimony of Richard C. Labrecque and Russel D. Johnson  
16 (“Joint Testimony”), and the testimony of Edward A. Davis.

1 **Q5. HAVE YOU REVIEWED THE DISCOVERY ASSOCIATED WITH THE**  
2 **AFOREMENTIONED TESTIMONY?**

3 A5. Yes, I have.

4 **Q6. DOES THE EVERSOURCE TESTIMONY CHANGE YOUR CONCLUSIONS IN**  
5 **YOUR DIRECT TESTIMONY?**

6 A6. No, the Company's testimony does not change the conclusions I set forth in my Direct  
7 Testimony.

8 **Q7. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?**

9 A7. I address several of the points raised by the Company in testimony. Specifically, I  
10 address: (1) cost shifting; (2) whether net metering is consistent with the Public Utility  
11 Regulatory Policy Act ("PURPA"); and (3) Eversource's recommendations for changes  
12 to net metering.

13 **Q8. WHAT ARE YOUR RECOMMENDATIONS?**

14 A8. I recommend that the New Hampshire Public Utilities Commission ("Commission")  
15 reject Eversource's assertions of a cost shift. In addition, I demonstrate that net metering  
16 is consistent with PURPA. Finally, I recommend that the Commission reject  
17 Eversource's proposal.

### III. COST SHIFTING

1 **Q9. EVERSOURCE FOCUSES THEIR TESTIMONY ON THE AVOIDANCE OF**  
2 **UNJUST AND UNREASONABLE COST SHIFTING. IS THIS THE ONLY**  
3 **CONSIDERATION IN HB 1116, “AN ACT RELATIVE TO NET METERING,”**  
4 **(31 N.H. LAWS 2016)?**

5 A9. No. Although Eversource gives the impression in testimony that the Commission must  
6 only avoid unjust and unreasonable cost shifting,<sup>1</sup> HB 1116 actually listed eight criteria  
7 for the Commission to consider. Specifically, HB 1116 states that “[i]n developing such  
8 alternative tariffs and any limitations in their availability, the Commission shall consider:

- 9 • the costs and benefits of customer-generator facilities;
- 10 • an avoidance of unjust and unreasonable cost shifting;
- 11 • rate effects on all customers;
- 12 • alternative rate structures, including time based tariffs pursuant to paragraph VIII;
- 13 • whether there should be a limitation on the amount of generating capacity eligible  
14 for such tariffs;
- 15 • the size of facilities eligible to receive net metering tariffs;
- 16 • timely recovery of lost revenue by the utility using an automatic rate adjustment  
17 mechanism; and
- 18 • electric distribution utilities’ administrative processes required to implement such  
19 tariffs and related regulatory mechanisms.

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<sup>1</sup> For instance, the Joint Testimony states that “the Legislature specifically instructed the Commission to avoid unjust and unreasonable cost shifting caused by net energy metering customers” (Joint Testimony at 3).

1 So while the Commission must *consider* each of the criteria, the New Hampshire General  
2 Court did not place a requirement that any individual criteria must be met outside of the  
3 other criteria. In short, the Commission must balance each of the criteria.

4 **Q10. ACCORDING TO EVERSOURCE, THERE IS AN INHERENT COST SHIFT IN**  
5 **THE EXISTING NET METERING TARIFF (JOINT TESTIMONY AT 3). DO**  
6 **YOU AGREE?**

7 A10. I do not agree. As I testified, “[u]sing the societal cost test, participating ratepayers  
8 clearly provide net benefits to non-participating ratepayers and New Hampshire society”  
9 (Direct Testimony of Nathan Phelps at 28). Furthermore, I testified that “a potential cost  
10 shift from non-participants to participants currently exists; this cost-shift is a sharing of  
11 the net benefits that result from DG” (Direct Testimony of Nathan Phelps at 30).

12 **Q11. WHY DOES EVERSOURCE THINK THERE IS AN INHERENT COST SHIFT?**

13 A11. According to Eversource, cost shifting occurs as a result of reduced revenue collection  
14 and higher-than-appropriate compensation.

15 **Q12. WHY DOES EVERSOURCE THINK THERE IS A COST SHIFT AS THE**  
16 **RESULT OF REDUCED REVENUE COLLECTION?**

17 A12. Eversource is looking primarily at costs from a very narrow perspective. Essentially, the  
18 Company is myopically looking at the costs – and to a small extent, a couple of the  
19 benefits – that relate to Eversource. Specifically, the Company looks at the reduced

1 collection of distribution and transmission revenue, and concludes that participating  
2 ratepayers (*i.e.* customers with DG) are not paying the cost to serve them.

3 **Q13. DO YOU AGREE WITH EVERSOURCE'S POSITION?**

4 A13. I do not, for the following reasons: (1) the Company's argument is theoretical, and not  
5 based on evidence; (2) Eversource misconstrues the implications of reduced revenue  
6 collection; and (3) the Company ignores the totality of benefits of DG.

7 **Q14. PLEASE EXPLAIN HOW EVERSOURCE'S ARGUMENT IS THEORETICAL,**  
8 **AND NOT BASED ON EVIDENCE.**

9 A14. The Company's argument that there is a cost shift is primarily based on the assertion that  
10 net metering customers "are materially different from a 'normal' customer" (Joint  
11 Testimony at 8; Response to Data Request Staff 2-3). In order to support this assertion,  
12 Eversource provides illustrative information comparing a net metering customer to an  
13 average customer. However, the Company fails to provide any evidence of where net  
14 metering customers fall in the distribution of customer billed usage for each rate class, or  
15 any cost of service analyses.

16 Although Eversource contends that "[e]ach rate class is designed in a manner such that all  
17 members of a rate class have similar characteristics" (Joint Testimony at 13), this is only  
18 true on the most basic level (*e.g.* residences v. businesses). In actuality, a rate class  
19 includes customers with many different consumption profiles. For instance, the  
20 residential rate class includes everything from studio apartments to very large residencies.  
21 Even though Eversource asserts that net metering customers are materially different from

1 “normal” customers, the Company has provided no evidence to substantiate this  
2 statement. Eversource has provided no information that demonstrates where the billed  
3 usage patterns of net metering customers fall on the spectrum of all customer billed usage  
4 patterns, nor any cost of service analyses that compare participants to non-participants.  
5 Simply put, there is no evidence that net metering customers are different from non-net  
6 metered customers.

7 **Q15. SINCE NET METERING CUSTOMERS BUY LESS ELECTRICITY FROM THE**  
8 **DISTRIBUTION COMPANY, DOES THAT NOT MAKE THEM DIFFERENT**  
9 **FROM NON-NET METERED CUSTOMERS?**

10 A15. Not necessarily. Customers use less electricity for a variety of reasons, including  
11 (1) energy efficiency, (2) energy conservation, (3) weather conditions, (4) economic  
12 conditions, and (5) changing living conditions (*i.e.* children moving out of their parents’  
13 house). By Eversource’s logic, every customer that reduces their energy usage causes a  
14 cost shift.

15 **Q16. HOW DOES EVERSOURCE MISCONSTRUE THE IMPLICATIONS OF**  
16 **REDUCED DISTRIBUTION REVENUE COLLECTION?**

17 A16. The Company states that they would have to petition the Commission to raise rates for all  
18 customers as a result of net metering (Joint Testimony at 13). Although Eversource  
19 makes this process sound akin to decoupling, in actuality such a petition would take the  
20 form of a general rate case. Obviously, the Commission would evaluate many factors in a  
21 general rate case, not just revenue shortfalls, including the cost to serve customers. There

1 is no guarantee that the Company would be allowed to raise rates as a result of net  
2 metering.

3 **Q17. COULD EVERSOURCE COLLECT LOST REVENUE IN A RECONCILING**  
4 **MECHANISM?**

5 A17. Yes, but as of yet Eversource has refrained from proposing to collect lost revenue  
6 (Response to Data Request Staff 2-9). If the Company does petition for lost revenue  
7 collection in the future, the petition will need to be adjudicated. The outcome of such an  
8 adjudication is unknown at this point in time.

9 **Q18. HOW DOES EVERSOURCE MISCONSTRUE THE IMPLICATIONS OF**  
10 **REDUCED TRANSMISSION REVENUE COLLECTION?**

11 A18. Unlike distribution revenue, transmission revenue is reconciled. As such, a decrease in  
12 transmission revenue *for any reason*, will result in an upward adjustment in the following  
13 period. However, the total amount that New Hampshire ratepayers need to pay for  
14 transmission costs will fluctuate. The total costs of transmission for the ISO-NE region  
15 are allocated to each state based on demand requirements. DG lowers the demand  
16 requirements for New Hampshire, and thereby lowers the total transmission costs that are  
17 allocated to New Hampshire ratepayers. The actual reduction in transmission costs that  
18 are allocated to New Hampshire ratepayers depends on (1) the installed capacity of DG,  
19 (2) the coincidence of the DG with the demand requirements, and (3) the demand of each  
20 state in New England.



1 **Q19. HOW DOES EVERSOURCE IGNORE THE TOTALITY OF BENEFITS OF DG?**

2 A19. When Eversource looks at the costs of DG without consideration of (most) of the benefits  
3 of DG, the Company ignores the ways in which all customers benefit from DG. I cover  
4 the many benefits of DG in my direct testimony on pages 10 through 13. For instance,  
5 DG suppresses the wholesale price of electricity for everyone in the New Hampshire load  
6 zone. In this regard, the benefits of DG manifest themselves on portions of the electricity  
7 bills of customers that Eversource completely ignores.

8  
9 If Eversource is correct – and there is a lack of evidence to support the Company’s claim  
10 – that there is a net cost of DG on the distribution and transmission portions of  
11 customers’ bills, such an outcome does not automatically mean that there is a net cost  
12 overall. By focusing narrowly on the distribution and transmission portions of customers’  
13 bills, Eversource has lost perspective on the total impact of DG. To use a common  
14 expression, Eversource does not see the forest for the trees.

15 **Q20. WHY DOES EVERSOURCE THINK THERE IS A COST SHIFT AS THE**  
16 **RESULT OF HIGHER-THAN-APPROPRIATE COMPENSATION FOR DG?**

17 A20. Fundamentally, Eversource’s argument is premised on the incorrect assertion that net  
18 metered facilities provide energy and capacity “that are identical to those provided by  
19 large, central station generation resources” (Joint Testimony at 15-16). I disagree. DG is  
20 by definition distributed. The geographic distribution of DG is completely different than  
21 centralized power. Most importantly, the use of the energy infrastructure needed for end-  
22 use is drastically different. The many differences between DG and central generation

1 result in the substantial benefits of DG. Even though customers cannot tell the difference  
2 between electrons of electricity generated by DG compared to central generation, the  
3 location and source of the DG make net metering facilities fundamentally different from  
4 central generation.

5 **Q21. IF DG IS DIFFERENT FROM CENTRAL GENERATION, DOES IT MAKE**  
6 **SENSE TO COMPENSATE DG IN THE SAME MANNER AS CENTRAL**  
7 **GENERATION?**

8 A21. No, it does not make sense to compensate DG in the same manner as central generation.  
9 Even resources at the wholesale energy level are compensated differently depending on a  
10 variety of factors, including location. Net metering is a retail program because DG is used  
11 by retail customers at end-use retail sites. Net metering is not a wholesale energy product.

12 **Q22. DID EVERSOURCE CALCULATE THE COST SHIFT ASSOCIATED WITH**  
13 **NET METERING?**

14 A22. Eversource conducted an analysis.

15 **Q23. DO YOU AGREE WITH EVERSOURCE'S COST SHIFT ANALYSIS?**

16 A23. I do not. According to the Company, there is a cost shift of over \$5.2 million dollars per  
17 year. However, \$4.3 million of this alleged cost shift is from over-market payments. As I  
18 just discussed, compensating DG at rates above wholesale is not inappropriate because of  
19 the different attributes of DG when compared to central generation. Accordingly, the \$4.3  
20 million figure should be rejected, because it doesn't represent a cost shift.

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Furthermore, Eversource states that the estimated cost shift “includes \$947 thousand dollars (sic) from lost revenues that support the delivery system” (Joint Testimony at 18). First, this is factually untrue using the Company’s own analysis. According to Exhibit RCL/RDJ-1 at 6, the lost revenues associated with the delivery system are \$568,629. Second, Eversource uses the term “lost revenues” as synonymous with cost shift. However, the Company doesn’t actually lose any revenue associated with reconciling mechanisms; the only revenue that the Company actually loses is associated with the base distribution rate. As such, the \$568,629 would need to be adjusted downward in order to accommodate only lost revenues associated with the base distribution rate.

Nonetheless, as I explained in my direct testimony, cost shifting must be considered in the context of the total impact of DG. Unfortunately, Eversource did exactly what I warned against in my direct testimony, and looked at a potential cost shift on just one portion of an electricity bill, and thereby ignored the benefits that accrue to everyone on the other parts of an electricity bill and the benefits that accrue to everyone that are not included on an electricity bill.

For all of the above reasons, Eversource’s cost shift calculation is flawed and should be rejected.

**IV. NET METERING IS CONSISTENT WITH PURPA**

1 **Q24. ACCORDING TO EVERSOURCE, NET METERING BEGAN IN THE 1970'S AS**  
2 **A RESULT OF RISING ENERGY PRICES. IS THIS CORRECT?**

3 A24. No, it is not. Net metering – at least as an official policy – began in the 1980's. Arizona  
4 and Massachusetts were the first two states to develop state-wide net metering programs.  
5 On July 23, 1981, the Massachusetts Department of Public Utilities issued order D.P.U.  
6 535 which provided for net metering for qualifying facilities (“QFs”) of 30 kilowatts  
7 (“kW”) or less.<sup>2</sup> On July 27, 1981, Arizona Corporation Commission Decision No. 52345  
8 allowed net metering for QFs of 100 kW or less.<sup>3</sup> Subsequent to these decisions, many  
9 states have adopted net metering through regulations or statutes.

10 **Q25. WERE THE ARIZONA AND MASSACHUSETTS PROGRAMS IMPLEMENTED**  
11 **AS A RESULT OF PURPA?**

12 A25. Yes. Net metering exists as a result of the implementation of PURPA. For instance, in  
13 Massachusetts the Department of Public Utilities found that the avoided cost for small

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<sup>2</sup> *Regulations Promulgated by the Department of Public Utilities, to establish rules by which a rate or rates may be calculated for sale of electrical energy by small power producers or cogenerators to electric utility companies under the Department's ratemaking jurisdiction; and other rules determined necessary to carry out the purposes of the Public Utility Regulatory Policies Act (“PURPA”), Title II, Sections 201 and 210. These regulations are promulgated pursuant to 18 C.F.R. 292 and are in accordance with G.L. c. 30A, §2, D.P.U. 535, at 7-8 (1981). Henceforth referenced as D.P.U. 535.*

<sup>3</sup> Yih-huei Wan, National Renewable Energy Laboratory, *Topical Issues Brief: Net Metering Programs* (1996), at 9.

1 QFs was equal to the retail rate, and therefore net energy billing method (as it was called  
2 in the order) was appropriate.<sup>4</sup>

3 **Q26. ACCORDING TO THE COMPANY, THE NET METERING FRAMEWORK**  
4 **VIOLATES PURPA (JOINT TESTIMONY AT 17, 21). IS THIS TRUE?**

5 A26. No. As just discussed, the genesis of net metering came out of the implementation of  
6 PURPA. The relevant public utility commissions set the avoided cost at the retail rate for  
7 the small facilities. In states where net metering was established via statute, even though  
8 there is no regulatory precedent on setting the avoided cost at the retail rate, the  
9 implication is the same.

10 **Q27. HAS THE FEDERAL ENERGY REGULATORY COMMISSION (“FERC”)**  
11 **REVIEWED NET METERING?**

12 A27. Yes. FERC has upheld that net metering is consistent with federal law in *MidAmerican*  
13 *Energy*, 94 FERC 61,340 (2001); and *Sun Edison LLC*, 129 FERC 61,146 (2009).

## V. EVERSOURCE PROPOSAL

14 **Q28. HAVE YOU REVIEWED THE PROPOSAL DISCUSSED BY WITNESS DAVIS?**

15 A28. Yes, I have.

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<sup>4</sup> D.P.U. 535-Rules at 11.

1 **Q29. PLEASE DESCRIBE THE PROPOSAL.**

2 A29. Although Mr. Davis does not frame the Eversource proposal this way, the Company is  
3 proposing to create a new rate class for all DG customers.<sup>5</sup> Under the Eversource  
4 proposal, DG customers would be placed on a three-part rate, which includes a customer  
5 charge, a non-coincident peak demand charge, and an energy charge (Direct Testimony  
6 of Davis at 3, 7; Response to Data Request EFCA 3-14; Response to Data Request  
7 OCA 2-5; Response to Data Request Staff 2-38; Response to Data Requests TASC 3-5  
8 and 3-11). In addition to the three-part rate, the Company proposes monthly netting only  
9 for default service, and net metering credits calculated at PURPA avoided cost (Direct  
10 Testimony of Davis at 3, 5-6; Response to Data Request NHSEA 3-32; Response to Data  
11 Request TASC 3-5).

12 **Q30. WHAT IS YOUR RECOMMENDATION FOR EVERSOURCE'S PROPOSAL?**

13 A30. The Commission should reject the Company's proposal as unsubstantiated. As I  
14 described earlier, Eversource asserts that there is a fundamental difference between DG  
15 customers and non-DG customers, but the Company fails to provide any non-theoretical  
16 evidence. Thorough evaluation of the proposal is premature without factual evidence.  
17 The Commission should reject Eversource's proposal in this proceeding, and require any  
18 such future proposal to be supported by evidence.

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<sup>5</sup> The Company does, however, acknowledge that "In a future rate case, the Company expects to treat full and partial requirements customers as separate costing classes in a cost of service study" (Response to Data Request TASC 3-10).

1 **Q31. DOES NHSEA ADDRESS DEMAND CHARGES IN THIS PROCEEDING?**

2 A31. Yes. Witness Bride addresses demand charges in both direct testimony and rebuttal  
3 testimony. (Direct Testimony of James D. Bride at 23-24; Rebuttal Testimony of James  
4 D. Bride at 10-13)

5 **Q32. AS PART OF THE COMPANY'S ANALYSIS, DID EVERSOURCE CONSIDER**  
6 **THE IMPACTS OF ITS PROPOSAL ON GROUP NET METERING AND DG**  
7 **DEVELOPMENT IN GENERAL?**

8 A32. No. According to the Company, "Eversource did not undertake to evaluate or offer  
9 testimony about how its proposal may, or may not, affect the development of group net  
10 metering projects in New Hampshire" (Response to Data Request Staff 2-46).

11 **Q33. WHAT IS GROUP NET METERING?**

12 A33. Group net metering is a highly equitable program that allows all customers to avail  
13 themselves of the benefits of DG regardless of their living situation (*e.g.* renters, and  
14 condominium owners), financial situation (*e.g.* the ability to pay for the upfront costs of  
15 solar), or location (*e.g.* shaded roof). Logistically, a company organizes customers (or a  
16 group of customers organize themselves) in order to share the benefits of a Group net  
17 metering project. The group net metering project serves as a proxy to each participating  
18 group net metering customer installing their own DG. When the group net metering  
19 project generates electricity, the distribution company creates net metering credits based  
20 on the electricity, and then allocates the net metering credits to participating group net

1 metering customers. Group net metering democratizes DG, and allows all ratepayers to  
2 participate in net metering.

3 **Q34. WHAT ARE THE IMPLICATIONS OF EVERSOURCE'S PROPOSAL ON**  
4 **GROUP NET METERING?**

5 A34. Eversource's proposal would cripple group net metering. As explained earlier, the  
6 Company proposes to reduce net metering credit calculations to PURPA avoided cost.  
7 Since group net metering inherently *only* involves allocating net metering credits (as  
8 opposed to using electricity on-site before the creation of net metering credits) to  
9 participating group net metering customers, the direct benefits to participating group net  
10 metering customers is severely reduced.

11 **Q35. PLEASE DESCRIBE THE CHANGE IN NET METERING CREDIT**  
12 **CALCULATIONS FOR GROUP NET METERING.**

13 A35. Currently, the net metering credit calculation is based on the default energy service rate  
14 for projects over 100 kW, which currently for Eversource is \$0.10950/kWh. Eversource  
15 proposes to reduce the compensation to the PURPA avoided cost rate, which is currently  
16 \$0.02892/kWh for non-solar DG, and \$0.03099/kWh for solar DG.<sup>6</sup> For all group net  
17 metering projects, Eversource is proposing more than a 70 percent reduction in the value  
18 of net metering credits. Since group net metering is entirely dependent on net metering  
19 credits for net metering compensation, the Company's proposed change would drastically  
20 reduce – if not eliminate – the viability of group net metering in New Hampshire.

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<sup>6</sup> There is also a capacity avoided cost of \$3.112/kW-month.



1 **Q36. DID EVERSOURCE CREATE A MODEL OF THE IMPACTS OF ITS**  
2 **PROPOSAL ON A THEORETICAL PROJECT?**

3 A36. Yes. The Company provided a model as part of testimony (Joint Testimony at 28-29;  
4 Exhibit RCL/RDJ-2).

5 **Q37. DID YOU REVIEW THE MODEL?**

6 A37. Yes, I did.

7 **Q38. DID YOU FIND ANY FLAWS WITH THE MODEL?**

8 A38. Yes. According to Eversource, the average PV system costs \$3,530 per kW (Joint  
9 Testimony at 28-29; Exhibit RCL/RDJ-2). According to the Company:

10 Eversource extracted data related to 201 residential systems in the  
11 Eversource territory and determined the average installed cost for each  
12 system. The 201 data points were sorted from highest price to lowest  
13 price. The \$3530 value is the average price of the 50 projects in the third  
14 quartile. (Response to Data Request Staff 2-26).

15 After review of the spreadsheet provided as part of the Response to Data Request  
16 Staff 2-26, the Company did not perform the analysis as described. The Company did  
17 have a data set of 201 residential systems, but the data set was sorted by installed date,  
18 rather than installed cost. As a result, the Company's average price of the 50 projects in  
19 the third quartile was actually an average price of projects installed between May 20,  
20 2016 and June 21, 2016. If the data set was sorted as described, the average installed  
21 price in the Eversource service territory for projects in the third quartile was \$3,877 per  
22 kW.

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1 Furthermore, in the Company’s model, the average system size is 5.70 kW. However, the  
2 average system size of projects in the third quartile installed in the Eversource service  
3 territory using the aforementioned data set is 7.58 kW. The difference in size creates a  
4 disconnect in the model. Since larger systems are generally cheaper per kW,<sup>7</sup> the cost of  
5 \$3,877 per kW would need to be adjusted upward in order to account for the smaller  
6 system size.

7 **Q39. DO YOU HAVE ANY OTHER CONCERNS ABOUT EVERSOURCE’S MODEL?**

8 A39. Yes. The model includes five assumptions: (1) system size; (2) cost (\$/kW); (3) eligibility  
9 for full state rebate; (4) capacity factor; and (5) renewable energy certificate (“REC”)  
10 value (\$/REC). Each of these assumptions impacts the model, and should be evaluated if  
11 the Commission finds a model to be useful. In addition, I note that the model does not  
12 account for the time value of money.

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14 Furthermore, I agree with Eversource that “each net metering project is evaluated based  
15 on a number of factors including the desires and needs of individual developers or  
16 customers” (Response to Data Request Staff 2-46). While economics almost certainly  
17 plays a key role in the development of DG, other customer motivations – such as  
18 simplicity – also play a role. Accordingly, the Commission should not rely strictly on any

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<sup>7</sup> Although not uniformly true, larger PV systems are cheaper because the soft costs (*e.g.* non-hardware costs) are spread over a larger capacity, and increased buying power (*e.g.* cheaper hardware costs).

1 model when considering proposals in the immediate docket, but should also consider the  
2 traditional ratemaking principles made famous by Bonbright.<sup>8</sup>

## VI. CONCLUSION AND RECOMMENDATIONS

### 3 **Q40. PLEASE SUMMARIZE YOUR RECOMMENDATIONS.**

4 A40. After review of Eversource's testimony, I recommend that the Commission reject  
5 Eversource's assertions of a cost shift. Eversource's position is flawed because  
6 (1) Eversource's argument is theoretical, and not based on evidence; (2) Eversource  
7 misconstrues the implications of reduced revenue collection; and (3) Eversource ignores  
8 the totality of benefits of DG.

9 I also recommend that the Commission reject Eversource's false conclusion that net  
10 metering is inconsistent with PURPA. In fact, net metering traces its origins to PURPA.

11 Finally, I recommend that the Commission reject Eversource's proposal as  
12 unsubstantiated and require any such future proposal to be supported by evidence.  
13 Eversource asserts that there is a fundamental difference between DG customers and non-  
14 DG customers, but the Company fails to provide any non-theoretical evidence.

### 15 **Q41. DOES THIS CONCLUDE YOUR TESTIMONY?**

16 A41. Yes, it does.

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<sup>8</sup> James C. Bonbright, Principles of Public Utility Rates (1st ed. 1961).