

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

Docket No. DE 16-576

**Development of New Alternative Net Metering Tariffs and/or Other Regulatory
Mechanisms and Tariffs for Customer-Generators**

**Comments of Eversource on Commission Staff's May 8, 2018 Recommendation on Value of
DER Study Scope and Timeline Report**

Consistent with the Commission's May 17, 2018 secretarial letter in this docket, Public Service Company of New Hampshire d/b/a Eversource Energy ("Eversource") provides the enclosed comments in response to the Value of Distributed Energy Resources Study Scope and Timeline Report (the "Report") submitted by the Staff on May 8, 2018 to guide a future consultant on the conduct of a value of distributed energy resources ("VDER") study. These comments are intended to supplement and expand upon those offered by Eversource during the June 29, 2018 public comment hearing relating to the Report.

1. On page 5, Tables 1 and 2, the Report notes that "In a number of instances, the working group participants reached consensus as to the recommended approach." Eversource concurs that, in prior working group sessions and in prior written comments, Eversource has expressed general agreement with Staff and other parties on certain items that would be considered in-scope for the VDER study. However, Eversource notes that "consensus" on what items should be considered in-scope was not intended to express "consensus as to the recommended approach". Many of the in-scope items may yet be the subject of debate or dispute depending upon the methodology used by the selected consultant and upon results of the VDER study itself. Eversource did not, and does not, consider any "consensus" on the in-scope items to mean that any future comment on, or disagreement with, the study or the results is foreclosed.

2. On page 4, Section II, under "Study Purpose" the Staff notes that "The VDER study analysis will provide detailed information regarding costs avoided by net-metered DG under general conditions, as well as at specific times and at particular locations, and will evaluate respective benefits and costs from the perspective of the electric distribution utilities, customer-generators participating in NEM, and non-participating electric ratepayers." To assure that the analysis will, in fact, provide appropriate information on "costs avoided by net-metered DG under general conditions" it will be necessary to understand what the "baseline" analysis is in the context of the study. Eversource proposes that there be a requirement for the VDER study to be clear and explicit about what the baseline costs and benefits are (i.e. what scenario(s) the calculated VDER

is derived from or compared against) so that all parties can understand the context for the results of the VDER study.

3. With respect to page 6, Table 2, item 2 regarding the desire to maximize the use of energy efficiency study methodology, and in particular the use of the AESC study, Eversource suggests that the VDER vendor be allowed to offer alternative methodologies when appropriate, or at a minimum, be required to evaluate and document how the AESC is or is not appropriate for the evaluation of intermittent sources of generation, i.e. net metered solar and hydro-electric (the primary focus of this effort). The AESC is a long-standing methodology used to create a framework for evaluating the cost-effectiveness of energy efficiency programs. There may be aspects of the AESC study that are not appropriate for the VDER study.

4. With respect to pages 7-8, Table 2, items 1-5, the Report suggests that future projections and/or forecasts should play a role in the evaluation of the following in-scope elements: Energy, Capacity (FCM), Ancillary Services, RPS compliance, RNS and LNS charges, and RGGI prices. Eversource notes that for each of these items current and historical pricing data exists and that data should serve as the basis for evaluating these items. Attempting to forecast the future prices of these items will involve considerable effort, uncertainty, and cost, and will inevitably lead to enhanced dispute and debate over the results. Moreover, it is not clear what purpose would be served by the substantial effort it would take to make these future projections. Eversource is hopeful that projections that are subject to extreme uncertainty will not serve as the basis for future tariff design. To the extent that market price projections play a role in evaluating the future value of DER, Eversource suggests that projections of the declining cost of solar equipment should also play a role in evaluating the future cost of installing DER.

5. Page 6, Table 1, item 2 "Methodology". Eversource believes it is important to evaluate DER from both the Load Reducer Value ("LRV") and Market Resource Value ("MRV") perspectives. While rooftop and other small-scale resources might best be considered from the load reduction perspective, larger-scale PV (i.e. large Group Hosts) and most hydro-electric resources are appropriately studied from the MRV perspective as ISO-NE market participants. This VDER study effort is an opportunity to review the economic impacts of registering net metered assets in the ISO-NE markets.

6. Page 7, Table 2, item 1 "Energy". In addition to forward projections, page 5 of the Report refers to the use of 3-5 years of historical data. This item in Table 2 does not mention the use of historical data. Eversource supports the use of current and historical data as noted in comments provided above.

7. Page 8, Table 2, item 3 “Ancillary Services and Load Obligation Charges”. This category is a good example of the important difference between LRV and MRV analyses. Small-scale load reducers will reduce the allocation of ISO-NE regional ancillary service charges to NH-based load serving entities. Large-scale resources (ones registered in the ISO-NE markets) will not create a reduced allocation. This is also an example of the complex issue of “avoided costs” versus “avoided charges”. A non-dispatchable, intermittent solar or hydro-electric resource is not capable of participating in any current ISO-NE ancillary service market. As such, those resources are not compensated for these services. The VDER study should consider whether the value of a distributed energy resource should be based on avoiding the allocation of ancillary service charges or, rather, on the value of the ancillary service(s) it can provide. Eversource believes the true valuation of DER should only include avoided *costs*, not avoided *charges* that are shifted to others since those charges are not actually avoided.

8. Page 10, Table 2, item 12 “Hedging / Wholesale Risk Premium”. This item presents another example of “avoided charges” versus value created. Retail and default service suppliers include a risk premium in their offer prices to insulate them from various elements of risk involved with assembling and utilizing a portfolio of energy sources to serve an obligation at a fixed price. A net metered customer with rooftop solar will decrease its energy consumption and, therefore, will not be required to pay a supplier for that energy (at the price that includes the risk premium). However, any collection of customers (whether served by a retail supplier or the default service provider) that includes a growing number of solar net metered customers, has a greater risk than a collection of non-solar customers. Solar is a volatile resource and results in widely varying customer load profiles. From month to month, day to day, and hour to hour, solar customer load profiles look very different from the relatively predictable profiles of non-solar customers. As the portion of solar customers in a supplier’s portfolio increases, the supplier will likely need to charge higher risk premiums to account for its inability to create a perfect or near-perfect hedge to serve the load at a fixed price with an acceptable level of risk. Eversource believes this element of value should be excluded from the study, or at a minimum, it should also include a consideration that increased penetration of solar may result in higher risk premiums to all customers, including non-solar customers.

9. Page 12, Table 2, item 16 “Externality Benefits”. The Report states “Staff recommends that avoided environmental externalities not already included in energy prices be analyzed as a study sensitivity”. Staff points to various items to consider in these sensitivities, e.g. non-embedded CO₂, NO_x, and SO₂; EPA social cost of carbon, etc.

Order 26,029, which is quoted in the “Description” column of the same item, stressed that the VDER study may include “demonstrable and quantifiable” net benefits as well as the mitigation of “double-counting”. Including these items in the VDER study, even as a sensitivity, may be inconsistent with the guidance in the order.

Eversource highlights the position taken by NARUC on pages 135-36 of its Manual on DER Rate Design and Compensation:

Also, if environmental credits and benefits (such as environmental costs, avoided CO₂, and avoided pollutants) are separately tracked through issuance of RECs through a recognized tracking mechanism, one should remove them from the VOR list, or else those same benefits or avoided costs would be double counted. Determinations of value should attempt to reflect the actual, market value of a trait as identified and valued by that jurisdiction. In this instance, a value for carbon avoidance should be based on market value, and should avoid alternative, non-market-based values.

In New Hampshire, the RPS program enacted by the legislature has resulted in a REC market that recognizes the environmental attributes associated with various clean energy resources. New Hampshire also participates in RGGI, which establishes a price signal for carbon reduction. The compliance cost of NO_x and SO₂ emission allowances are already embedded in ISO-NE energy market prices. Any reflection of externality benefits in this VDER study should be guided by the Commission's admonition in Order 26,029 and the guidance from NARUC noted above.

10. Page 13, Table 2, item 17 "Distribution Grid Support Services". These types of support services will be an important component of future grid modernization activities. However, the benefits of these services may not be fully realized without the related costs of other grid modernization infrastructure. Table 2, item 14 refers to the possibility of future capital and operating costs due to DG deployment. Any consideration of the future value of DER grid support services must factor in the grid infrastructure costs associated with achieving this level of coordination between customers, the utility, developers, and the dispersed fleet of DER.

11. Page 14, Table 2, item 19 "Customer Installed Net Cost". Order 26,029 (page 61) states that "New Hampshire-specific or industry estimates of customer installed system costs are appropriate and should be included in the study". Page 4 of the Report states that "the study will assess the relative benefits **and costs** of net-metered DG from the perspectives of the utility system as a whole, **participating NEM customer-generators**, and other electric utility ratepayers". [emphasis added]. Page 4 of the Report also states "that participant cost valuation criteria in particular may be used to evaluate how NEM crediting and compensation may affect reasonable opportunities to invest in DG and receive fair compensation, as contemplated by HB 1116". Eversource is in full agreement with the Report on this aspect of the proposed study scope. Given the steady and significant decrease in the installed cost of solar equipment, this study is a timely opportunity to evaluate the installed cost of customer-sited systems, net of available incentives, using a variety of metrics (e.g. Levelized Cost of Electricity, or investment Payback Period in year). Such information will be useful when investigating the next generation of net metering tariffs.

12. During the public hearing on June 29, the Staff noted the Commission's recent Order No. 26,124 (April 30, 2018) regarding non-wires alternatives. In that Order, at page 15, the Commission stated:

We find that a distribution-level locational DG valuation study would be more useful and cost-effective, and we therefore direct the parties in the working group process to evaluate alternative study designs and methodologies to address the potential locational value of DG on the utility distribution system. Such locational value may result from capital investment avoidance or deferral, and operating expense reduction or deferral, such as through equipment life extension or lower maintenance and labor costs. The analysis of those issues might be addressed either through a separate study or within the scope of the Value of DER study, depending on which approach is determined to be most effective and efficient.

The Staff indicated that parties should address the Commission's question whether a locational value study should be included in the scope of this VDER study. In Eversource's judgment, a locational value study should be conducted separately and should not be included in the VDER study. Such a study will likely involve numerous assumptions and analyses that differ from those of a more general VDER study. Moreover, a locational value study may also require a different vendor with different, and more specific, knowledge and experience in conducting such studies. Thus, keeping the two separate will likely be more efficient in the longer term.