## STATE OF NEW YORK PUBLIC SERVICE COMMISSION

In the Matter of the Value of Distributed Energy Resources Working Group Regarding Value Stack

Matter 17-01276 Case 15-E-0751

#### **Value Stack Working Group Comments**

Clean Energy Parties: Solar Energy Industries Association, the Alliance for Clean Energy
New York, the Coalition for Community Solar Access, the Natural Resources Defense
Council, the Pace Energy and Climate Center, and Vote Solar.

Dated: May 7, 2018

# Comments to New York State Department of Public Service Value Stack Working Group Presentation Comments

Matter 17-01276

Case 15-E-0751

May 7, 2018

I.	INTRODUCTION	3
II.	SUMMARY	4
III.	COMMENTS ON JOINT UTILITIES' PRESENTATION	6
	A. Compensation at Marginal Cost	6
	B. LSRV Compensation Period	8
	C. Relationship Between LSRV and NWS	11
	D. Wholesale Market Integration	12
IV.	COMMENTS ON NYC SOLAR BUSINESS ALLIANCE'S PRESENTATION	13
V.	CLEAN ENERGY PARTIES' PRESENTATION, TITLED, "DISTRIBUTION VALUE IS	SSUES AND
CO	NCEPTS" DATED APRIL 6, 2018	13
	A. Responses to Questions on CEP Presentation from April 6 Working Group	14
VI	CONCLUSION	15

#### I. INTRODUCTION

The following comments are submitted by the Solar Energy Industries Association, the Alliance for Clean Energy New York, the Coalition for Community Solar Access, the Natural Resources Defense Council, the Pace Energy and Climate Center, and Vote Solar (collectively the "Clean Energy Parties" or "CEP"). The Clean Energy Parties appreciate the opportunity to provide these comments on the presentations from the March 6, 2018 and April 6, 2018 stakeholder meetings regarding Value of Distributed Resources (VDER) Value Stack methodologies and compensation mechanisms. On March 6, two presentations were made: the Joint Utilities presentation titled "Longer Term Compensation for DER and Expedited Eligibility for Value Stack Resources" and the NYC Solar Business Alliance titled "VDER & the NYC Solar Market: Design & Implementation Recommendations for Future Growth & Stability." On April 6, the Clean Energy Parties gave a presentation titled "Distribution Value Issues and Concepts."

If designed well, compensation provided through the Value Stack has the potential to encourage the high level of DER development that will be required to successfully transition to a clean, distributed grid and achieve New York's energy policy goals. By accurately reflecting the value provided by DERs, including locational-specific benefits, the Value Stack will both encourage the development of DERs and maximize the benefits provided by DERs to all utility customers. To ensure that these goals are attained, significant effort is required to develop a tariff that both accurately compensates resources and provides a price signal that is simple and stable enough to enable DERs to obtain financing.

The Clean Energy Parties are comprised of a substantial portion of the clean energy organizations active in New York. Our perspective is informed by on-the-ground experience developing distributed energy projects under the current incarnation of the Value Stack tariff. This document seeks to highlight concerns that we have regarding certain approaches to compensating resources for providing value to the grid. These comments were prepared with the assistance of Synapse Energy Economics, Inc.

#### II. SUMMARY

The Clean Energy Parties are concerned with several aspects of the Joint Utilities' presentation. In particular:

- We strongly disagree with the Joint Utilities' recommendation that the locational system relief value (LSRV) should not be set at the full marginal cost, since utility investments might not be deferred and procurement through non-wires solicitations (NWS) would be more cost-effective. This recommendation is flawed for the following reasons:
  - The Commission's March 9, 2017 Order made clear that the purpose of VDER is to "accurately reflect and properly reward DER's actual value to the electric system." Setting the LSRV below the marginal cost would fail to accurately compensate DERs.
  - Under-compensating DERs would stunt DER development in precisely the areas where DERs are most needed.
  - Even where a utility investment is not fully deferred or avoided, DERs still
    provide value by reducing the magnitude of the investment required.
  - ODERs provide a host of additional benefits that traditional utility infrastructure does not, such as increasing resiliency, diversifying the market for distribution solutions, spurring innovation, enhancing fuel diversity, increasing the use of customer-sited renewables, and providing real-option value.<sup>3</sup>
- The Joint Utilities recommend that DERs only receive the LSRV compensation for five years at a time, because "ten years is longer than most utility planning/investment decisions." This is problematic for several reasons:
  - The ability to withdraw the LSRV after only five years would make it extremely difficult to finance DER projects and further bias distribution procurement in favor of utility infrastructure. The Clean Energy Parties contend that DERs should not be subject to less favorable treatment than traditional infrastructure

<sup>&</sup>lt;sup>1</sup> Joint Utilities' presentation on March 6, 2018, slide 2.

<sup>&</sup>lt;sup>2</sup> March 9 Order at 3.

<sup>&</sup>lt;sup>3</sup> Through the procurement of multiple, smaller projects, the resources to meet a future system need can be procured gradually over time, reducing the risk of under- or over-procuring resources due to forecast error. In contrast, utility resources are usually large and lumpy, and therefore susceptible to the risk of being oversized to meet future needs that never materialize, or undersized and then requiring a patchwork of expensive, suboptimal solutions.

- investments which allow the utilities to fully recover the costs of distribution infrastructure, even if utility load forecasts are later adjusted downward.
- The utility's proposal to shorten the LSRV period is a symptom of inadequate forecasting methods. Instead of asking that DER developers take on all forecast risk, we point to the need for the utilities to improve their forecasting capabilities. As the utilities adopt more sophisticated planning methods, such as probabilistic approaches, the uncertainty associated with longer-term projections will be mitigated.
- Under the Joint Utilities' proposal, the initiation of a non-wires solicitation would end LSRV compensation. A DER would have the option to (1) compete in the non-wires solicitation (with the risk that the DER would not be selected), or (2) commit to meeting the NWS performance requirements and receive an NWS payment equal to the present value of the remaining LSRV commitments.<sup>4</sup>
  - o The Clean Energy Parties are concerned that this proposal would add a high level of risk to DER projects' compensation that could destroy project financeability. Instead, we recommend that LSRV should be eligible to continue receiving LSRV for the full ten years under the original terms. These projects should have the option of participating in an NWS, but they should not be required to do so or be penalized for failing to participate. Once an NWS is announced, future DER projects would be ineligible for compensation under the LSRV, unless the NWS (or subsequent utility investment) fails to fully address the identified concern.
- The Joint Utilities propose that DER resources that can participate in the NYISO markets (e.g., those over 100 kW) do so.
  - Implementing such a requirement would be burdensome, as participating in the wholesale markets is a costly and complicated endeavor, requiring substantial time, legal, and consulting resources.

The Clean Energy Parties appreciated the opportunity to present to the working group on April 6, 2018, and we will file supplemental comments to expand on several of the concepts advanced in our presentation. Once again, the CEP strongly suggest that the categories of issues raised in our presentation be considered as workstreams for the Value Stack Working Group in the continued development of the Phase 2 tariff. In these comments, we wish to respond to two questions asked by other stakeholders:

<sup>&</sup>lt;sup>4</sup> Joint Utility Presentation, March 6, 2018, slide 6.

- In response to a question regarding whether DERs can claim reliability benefits if performance needs to be assessed over a larger number of hours than only the top 10 hours, we emphasize that reliability is not provided by any single resource—be it DER or utility infrastructure. There are failure rates associated with both utility infrastructure of all kinds, as well as DERs. Instead, it is the aggregate performance of the resources and infrastructure on the system that, combined with appropriate forecasting and planning assumptions, ensures reliability. In addition to providing capacity, DERs can also provide enhanced reliability and voltage support when coupled with smart inverters. These benefits should be recognized and DERs should receive compensation for the value associated with these services.
- The Clean Energy Parties emphasize that our proposal would not result in providing compensation for the same avoided cost more than once. Under the CEP proposal, each DER "vintage" would receive compensation based on the most recent marginal cost of service study (or planning study). A vintage would remain open and available to new DERs until the next study is released, the vintage is fully subscribed for that area, or a non-wires alternative solicitation is released. Future vintages would include the load-reducing impacts of existing DERs as part of the baseline, and therefore only compensate new DERs for their incremental (above-baseline) benefit, while continuing to compensate DERs that were online before the reforecast for the value they continue to provide by continuing to operate and reduce load.

#### III. COMMENTS ON JOINT UTILITIES' PRESENTATION

The Clean Energy Parties have several concerns regarding proposals contained in the Joint Utilities' presentation titled "Longer Term Compensation for DER and Expedited Eligibility for Value Stack Resources." These concerns primarily stem from the potential introduction of additional risk into the LSRV compensation mechanism, and the dampening effect this could have on the development of DERs.

#### A. Compensation at Marginal Cost

In determining the LSRV value, the Joint Utilities assert that "Setting the LSRV at the full marginal cost overcompensates DER," arguing that (1) LSRV can be paid to DERs when utility investments are not deferred; and, (2) NWS only occurs when a DER is more cost-effective than traditional investment, whereas the current LSRV transfers the full marginal

benefit to DER.<sup>5</sup> The Clean Energy Parties disagree with the Joint Utilities' proposal to compensate DERs at less than avoided costs for the reasons explained below.

At a fundamental level, the Joint Utilities' argument distracts from the purpose of the Value Stack, which is to accurately compensate DERs for the benefits provided to the grid. The Commission's March 9 Order made clear that the purpose of VDER is to "accurately reflect and properly reward DER's actual value to the electric system," and the VDER Phase 1 Implementation Order explicitly rejected the JU's "sharing" proposal. When investing in their own distribution infrastructure to address projected needs, the utilities are allowed to recover the full cost—plus a return—on the infrastructure that is required. Were DERs to be provided compensation that is less than the compensation the utilities receive for meeting the same need through a "sharing" mechanism or other device, it is less likely that sufficient DER resources will be developed to meet the resource need, and more likely that a traditional utility investment will be required. This is not a level playing field for DERs.

While it is not surprising that the utilities would promote an approach that would inherently advantage their investments over those of third-party DER providers, we submit that this position should be clearly rejected as antithetical to the very purposes of REV. Rather, the Commission should reaffirm that the appropriate basis on which to set DER compensation is the avoided cost of traditional utility infrastructure (including the return on equity that utilities are allowed to earn on such investments). Doing so would place utility investments and DERs on a more level playing field.

On a more practical level, the Joint Utilities' arguments neglect four additional points. First, even if DERs do not fully defer a system need, their presence would still provide benefits to the system by reducing the system need, and thereby reducing the size of the infrastructure required. For example, the installation of a DER as a result of the LSRV signal could result in a

<sup>&</sup>lt;sup>5</sup> Joint Utilities' presentation on March 6, 2018, slide 2.

<sup>&</sup>lt;sup>6</sup> March 9 Order at 3.

<sup>&</sup>lt;sup>7</sup> VDER Phase 1 Implementation Order at 13 ("Reducing DRV or LSRV value to share savings is inconsistent with the MCOS and VDER pricing approach. The Commission agrees with CEP that decreasing the compensation provided below the value that DERs are actually providing could lead to a suboptimal level of DER deployment.").

utility only having to install a 7.5 MVA substation transformer instead of a 10 MVA transformer, which would provide substantial cost savings.

Second, under-paying DERs would likely stunt DER growth in the area of need, resulting in suboptimal DER deployment that would fail to avoid or defer the utility investment, and all but guaranteeing that the utility investment will be needed. While this may be beneficial to utility shareholders, it would work at cross purposes with the State's clear vision for a more dynamic, distributed, and resilient distribution system. Under VDER Phase 1 rules, the quantity of DERs that could receive the LSRV is already capped at the capacity needed, which effectively prevents utilities from paying for DER capacity through the LSRV when that capacity is not needed.

Third, investments in DERs provides a host of additional benefits that traditional utility infrastructure does not, such as increasing resiliency, diversifying the market for distribution solutions, spurring innovation, enhancing fuel diversity, increasing the use of customer-sited renewables, and real-option value.<sup>8</sup> If DERs are compensated less than the value they provide in avoiding traditional utility infrastructure, then there will be less development of DERs, and New York's energy policy goals will be more difficult to achieve.

Fourth, although the CEP support the continued solicitation of non-wires alternatives, it does not appear practical for the utilities to procure all needed distribution relief solely through NWS. NWS are time-limited solicitations that require preparation on the part of the utility and DER providers, whereas as a tariff can offer a complementary, more flexible, and less administratively burdensome mechanism for attracting DER investment to areas of need. These programs can and should co-exist, as the CEP presentation on April 6 explained in detail.

#### **B. LSRV Compensation Period**

As outlined on slide 6, the Joint Utilities propose that DERs only receive LSRV for five years at a time, arguing that "ten years is longer than most utility planning/investment decisions."

Page 8

<sup>&</sup>lt;sup>8</sup> Through the procurement of multiple, smaller projects, the resources to meet a future system need can be procured gradually over time, reducing the risk of under- or over-procuring resources due to forecast error. In contrast, utility resources are usually large and lumpy, and therefore susceptible to the risk of being oversized to meet future needs that never materialize, or undersized and then requiring a patchwork of expensive, suboptimal solutions.

This is problematic for several reasons. First, the fact that the LSRV is currently only set for ten years already complicates financing for assets that are 25-30 year assets; if the utilities were able to withdraw the LSRV after five years, DER projects would be even more difficult to finance, which would further bias distribution procurement in favor of utility infrastructure and against DERs. At a basic level, DER investments should not be subject to less favorable treatment than utility infrastructure spending. Just as the utilities are allowed to fully recover the expenses associated with distribution infrastructure they prudently procure regardless of whether that infrastructure is ultimately needed, so too should DER developers be allowed to receive full compensation for responding to a utility projection of needed investment, even if that signal is later found to have been in error.

We also note that maintaining the LSRV payment for resources that have already been installed does not mean that the total megawatts of capacity need cannot be revised in the interim. Indeed, a key benefit of DERs is that they allow smaller quantities of resources to be installed over time, rather than requiring investment in a large, single resource at once that may ultimately prove to be oversized. This is a prime example of the real-option value that DERs provide.

Moreover, the utilities' argument for shortening the LSRV period—that their current planning processes generally focus on nearer-term concerns—is a symptom of the larger problem of inadequate system forecasting. The utilities' asserted inability to forecast distribution needs more than five years out is a reminder of the need to improve the MCOS forecasting methodologies; it should not be used as a justification for effectively assuming that DERs provide no ongoing distribution value after year five. In effect, by proposing that the LSRV time period be shortened to five years (presumably with a possibility of an extension following subsequent utility forecasts), the Joint Utilities are essentially asking that DER developers take on the complex task of forecasting the value that the DER project will provide over the life of the asset. This is because customers and investors who provide capital for the installation of DERs will necessarily have to forecast the value they will receive from LSRV after the five-year term.

In other words, the JU proposal would shift responsibility for longer-term distribution forecasting from the utility to the DER provider or customer. As the Commission has noted

previously, the utilities "have the most in-depth knowledge of their systems and have access to the planning and operational data necessary" to perform locational analyses of avoided distribution costs. Further, the utilities have "unilateral access to the primary data and knowledge of the portions of their systems where load relief would be more or less beneficial, they are gatekeepers of this information." Although the Clean Energy Parties recognize that there is necessarily some uncertainty associated with the utilities' forecasts, it is not appropriate to shift responsibility for making accurate forecasts and system plans onto DER customers and developers, since DER customers and developers do not have access to the data and analytical programs that the utilities do. Rather, it is entirely appropriate to align the forecast risk with the entity that is in control of the data and the forecast methodology by requiring the utilities to accept the risk that they made an inaccurate forecast. The correct approach to dealing with the current, short-term nature of many utility forecasts is to improve those forecasts by extending the time over which such forecasts are conducted—not to lower DER compensation for load relief and other values they could provide after five years.

Second, it is the Clean Energy Parties' understanding that the Joint Utilities are improving their distribution system planning capabilities. As the Joint Utilities adopt more sophisticated planning methods, such as probabilistic approaches, the uncertainty associated with longer-term projections will be mitigated. For example, Central Hudson's probabilistic approach produces numerous simulations of load growth ten years into the future, and then assigns an avoided cost value based on the probability that load will require infrastructure upgrades. Such methodologies appropriately balance the risk of forecasting error with the ability to provide long-term price signals and are well-suited to dealing with the distributed and probabilistic nature of DERs.

For these reasons, the Clean Energy Parties recommend that DER compensation not be reduced because of inadequate forecasts, but rather that the utilities be required to improve their

<sup>&</sup>lt;sup>9</sup> Order on Net Energy Metering Transition, Phase One of Value of Distributed Energy Resources, and Related Matters, Case 15-E-0751, March 9, 2017, page 112.

<sup>&</sup>lt;sup>10</sup> CHG&E Initial DSIP, Appendix D, pages 22.

planning capabilities. In the interim, DER compensation should not be reduced because of the utilities' inability or unwillingness to conduct longer-term forecasts of their distribution systems.

#### C. Relationship Between LSRV and NWS

The relationship between the LSRV and a non-wires solicitation is an important issue, and the Clean Energy Parties agree that projects should not be eligible to receive both streams of compensation. However, the Joint Utilities' proposal would be more restrictive than simply ensuring that projects only receive one of the two forms of compensation. Under the Joint Utilities' proposal, the initiation of a non-wires solicitation would end LSRV compensation. A DER would have the option to (1) compete in the non-wires solicitation (with the risk that the DER would not be selected), or (2) commit to meeting the NWS performance requirements and receive an NWS payment equal to the present value of the remaining LSRV commitments.<sup>11</sup>

The Clean Energy Parties are concerned with this proposal, as it would add a high level of risk to DER projects' compensation that could destroy project financeability. Customers and financiers considering an investment in a DER project that could have its LSRV compensation put at risk due to an NWS for which it might be outbid, and for which the performance criteria are not known in advance, will heavily discount any expected value from the LSRV. If customers and investors cannot count on the LSRV to be there for a financeable period of time, they will not deploy DERs in response to the LSRV signal, and any DER deployments that happen to occur in LSRV zones will be largely the result of chance, rather than from conscious responses to a signal from the tariff. Thus, this proposal would effectively neuter the LSRV signal, rendering it ineffective.

In addition, NWS solicitations are very difficult for many DER customers to participate in—the principal challenges being that the existence or non-existence of a solicitation in a particular area is entirely within the utility's control, meaning that DER developers and customers often have little to no ability to predict when or where such solicitations will take place, and therefore limited ability to actually prepare for and respond to such solicitations. Such

<sup>&</sup>lt;sup>11</sup> Joint Utility Presentation, March 6, 2018, slide 6.

solicitations also significantly increase the risk that projects will be developed in anticipation of a solicitation but will be ultimately be unable to secure an NWS award, potentially rendering the often significant investments in project development wasted and raising development soft costs across the state. Allowing the LSRV to exist alongside a potential NWS will inherently increase customers' and developers' confidence in the market, driving up DER development and providing more volume for any future NWS.

To avoid introducing this risk, the Clean Energy Parties contend that projects receiving LSRV should be eligible to continue receiving LSRV for the full ten years under the original terms (that is, performance during system peak hours). These DERs should have the option of participating in an NWS if they wish, but they should not be required to do so and should not be penalized for failing to participate.

The CEP propose that once an NWS is announced in an LSRV zone, future projects seeking to receive the VDER stack should be ineligible for the LSRV until the results of the NWS are known. If the NWS results in sufficient DER procurement to address the entire distribution concern, future projects would not receive the LSRV. However, if the NWS fails to fully address the identified concern, the LSRV should continue to be available until such time as the utility needs to procure any remaining distribution infrastructure required to maintain reliability. In addition, if this approach is adopted, we caution that the Commission and staff will need to closely monitor utility NWS announcements to ensure that these announcements are connected to real, near-term NWS solicitations and are not used to erect arbitrary barriers to the continued availability of LSRV compensation. We note that if the Commission were to adopt this proposal, it would be prudent to allow DER projects that are far along in the development process a reasonable period of time after the announcement of a NWS (perhaps 30 business days) to make a 25 percent interconnection payment in order to preserve an LSRV allocation.

#### D. Wholesale Market Integration

The Joint Utilities propose that DER resources that can participate in the NYISO markets (e.g., those over 100 kW) do so. The Clean Energy Parties caution that participation in the wholesale markets is a costly and complicated endeavor. DERs can already participate in the ISO market today, but there are important reasons why few DERs have taken this route to date.

Specifically, market participation requires substantial time, as well as substantial legal and consulting resources. The current ISO rules are complicated and highly burdensome relative to the size of the opportunity for most DERs, and requiring small DERs to participate directly in wholesale markets would be an extreme and dangerous departure from the State's current energy policy. (It is also possible that adopting such a wholesale market participation requirement would violate both the Public Utility Regulatory Policies Act and the Federal Power Act.) Requiring DERs to participate in the wholesale markets would also cede the Commission's control over REV and DER deployment policy to the NYISO and the FERC, which are unlikely (and in many cases unable) to take into account the numerous public interests that the Commission is uniquely positioned to consider and address. We cannot emphasize enough the chilling effect that such a proposal would have on DER deployment in New York, and therefore recommend that the Commission decline to adopt such a proposal.

#### IV. COMMENTS ON NYC SOLAR BUSINESS ALLIANCE'S PRESENTATION

The presentation by the New York City Solar Business Alliance (NYC SBA) on March 6 provided a helpful, grounded perspective regarding implementation of the Value Stack. In particular, NYC SBA highlighted the challenges associated with securing financing for projects when compensation is too complex and variable. The Clean Energy Parties fully concur with NYC SBA's admonition that maintaining project bankability and reducing complexity are critical to ensuring that the Value Stack tariff achieves its purpose of spurring the growth of cost-effective distributed energy resources.

### V. CLEAN ENERGY PARTIES' PRESENTATION, TITLED "DISTRIBUTION VALUE ISSUES AND CONCEPTS," DATED APRIL 6, 2018

The CEP appreciated the opportunity to present to the working group on April 6, 2018, and appreciated the discussion and engagement from other stakeholders. The CEP intend to file supplemental comments to expand on several of the concepts advanced in our presentation and to provide a fuller respond to some of the questions raised at the April 6 meeting. Once again, the

CEP strongly suggest that the categories of issues raised in our April 6 presentation be considered as workstreams for the Value Stack Working Group in the continued development of the Phase 2 tariff. We take this opportunity to provide responses to two questions that were asked by other stakeholders at the April 6 meeting.

#### A. Responses to Questions on CEP Presentation from April 6 Working Group

If DERs need performance to be assessed over a larger number of hours, how can they claim reliability benefits?

Like DERs, there are equipment failure rates and availability assumptions associated with all kinds of utility infrastructure. Reliability is not provided by any single resource—be it a DER or utility infrastructure. Reliability is provided by a combination of accurate demand forecasting combined with sufficient investment in redundant solutions to deal with potential reliability events. When the appropriate forecasting and planning assumptions are made, DERs can provide equivalent redundancy and load relief to utility infrastructure, often at lower cost. DERs can also provide enhanced reliability and voltage support when coupled with smart inverters. For example, a study by the National Renewable Energy Laboratory (NREL), the California Independent System Operator, and First Solar found that utility-scale solar coupled with smart inverters was able to provide frequency regulation services on par with or even exceeding the services provided by a natural gas fired peaker plant. DERs with smart inverters can provide similar services for the distribution system and should receive compensation for the value these services provide.

Won't this proposal result in providing compensation for the same avoided cost more than once?

No. The Clean Energy Parties propose that each DER "vintage" would receive compensation based on the capacity and value of all of the traditional asset needs for a given location that are identified by the most recent VDER MCOS study. A vintage would remain open

<sup>&</sup>lt;sup>12</sup> NREL 2017. Demonstration of Essential Reliability Services by a 300 MW Solar Photovoltaic Power Plant. https://www.nrel.gov/docs/fy17osti/67799.pdf.

and available to new DERs until the next VDER MCOS study is released, the vintage is fully subscribed for that area, or a non-wires alternative solicitation is released. Future vintages would include the load-reducing impacts of existing DERs as part of the baseline, and therefore only compensate new DERs for their incremental (above-baseline) benefit, while continuing to compensate DERs that were online before the reforecast for the value they continue to provide by continuing to operate and reduce load.

#### VI. CONCLUSION

The Clean Energy Parties appreciate the opportunity to engage in these important stakeholder discussions and to provide comments regarding the presentations made to date. These comments seek to ensure that the full value provided by DERs is accurately captured and reflected in Value Stack compensation, and that the price signal provided to the clean energy market is stable and simple enough to allow projects to be developed.

The Clean Energy Parties will file supplemental comments to expand on several of the concepts advanced in our presentation on April 6. We recommend that the categories of issues raised in our April 6 presentation be considered as workstreams for the Value Stack Working Group in the continued development of the Phase 2 tariff.