

**STATE OF NEW YORK  
PUBLIC SERVICE COMMISSION**

In the Matter of the Value of Distributed  
Energy Resources

Case 15-E-0751

**PETITION OF INTERESTED HYDROELECTRIC PARTIES ELIGIBILITY FOR  
ENVIRONMENTAL VALUE COMPENSATION FOR PRE-2015 RESOURCES UNDER  
THE VALUE OF DISTRIBUTED ENERGY RESOURCES TARIFF**

**I. Executive Summary**

The Interested Hydroelectric Parties (“Hydro Parties”<sup>1</sup> or “Petitioners”) respectfully request that the Public Service Commission (“Commission”) expand eligibility for Environmental Value (“E-Value”) compensation under the Value of Distributed Energy Resources (“VDER”) tariff to legacy distributed energy resources (*i.e.*, otherwise eligible resources that entered operation prior to January 1, 2015). Eligible resources would have to otherwise be eligible for VDER compensation and meet the Climate Leadership and Community Protection Act’s (“CLCPA”) definition of “renewable energy systems,” as codified in Public Service Law § 66-p(1)(b).<sup>2</sup> Such a program will empower New York electric customers to drive much-needed just compensation to existing distributed renewables. This will support energy equity and sustainability for all, increase participation in New York’s renewable energy programs, and retain the attributes of these critical renewable resources within New York.

Circumstances have changed dramatically since September 2018, warranting a review of the Commission’s determination that legacy renewable distributed energy systems would not be eligible to receive the E-Value. The economic viability of independent hydroelectric resources has become more precarious in the intervening years, leading to reduced production and even attrition. Exports have also increased, reaching 641,165 megawatt hours (“MWh”) of non-New York Power Authority hydro in 2021,<sup>3</sup> with 126.4 megawatts (“MWs”) qualifying for MA Class-II. Total contributions to New York from baseline hydroelectric resources has already declined

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<sup>1</sup> The Hydro Parties are Albany Engineering, Azure Mountain Power, Black Brook Hydro, Boralex, Brookfield Renewable, Central Rivers Power LLC, Dichotomy Power LLC, Eagle Creek Renewable Energy, ECOsponsible, Energy Ottawa NY, Gravity Renewables, Kruger Energy, MCM Development, Natural Power Group, Northern Power & Light, Inc, and Sandy Hollow Power Company.

<sup>2</sup> The CLCPA defines renewable energy systems as “systems that generate electricity or thermal energy through use of the following technologies: solar thermal, photovoltaics, on land and offshore wind, hydroelectric, geothermal electric, geothermal ground source heat, tidal energy, wave energy, ocean thermal, and fuel cells which do not utilize a fossil fuel resource in the process of generating electricity.” PSL § 66-p(1)(b); *see also* Case 15-E-0302, *Order Adopting Modifications to the Clean Energy Standard* (Oct. 15, 2020) (“CES 2.0 Order”), at 15.

<sup>3</sup> NYGATS “CES Baseline Bundled REC Exports” Report

8.2% from 2017-2020.<sup>4</sup> This loss has severely impacted progress towards the Clean Energy Standard (“CES”) and CLCPA goals,<sup>5</sup> confining the net increase in renewable MWh from 2014-2020 to just 0.2%.<sup>6</sup> A decrease in statewide load over the same period has made these resources even more important, as the percent of the system mix that they represent has grown from 22.5% to 23.8% even as actual production is in decline.

There is no question that pre-2015 distributed energy resources (“DERs”) provide environmental value to New York, as they are included in the accounting of the renewable system mix. When lost, they must be replaced by other renewable generation, most likely new Tier 1 resources. The Commission declined to adopt a “Tier 2” Program under the CES in 2016, preferring to wait and see if these “baseline” resources needed support to remain in New York. The Commission’s subsequent determination that pre-2015 resources would not receive E-Value payments under VDER was based, in part, on the absence of a parallel competitive CES Tier 2 program aimed at retaining these assets.

All of these circumstances have now changed. The CLCPA’s enactment, subsequent Commission Orders and Governor Hochul’s recent State-of-the-State announcements show the State’s ever more ambitious energy and climate policies, setting a target of achieving 70 percent renewable energy consumption by 2030 and a zero-emission grid by 2040. These targets do not distinguish between resources that are constructed before and after January 1, 2015. With the enactment of the CLCPA, the Commission reported that it has observed the increasing export and attrition of legacy hydro resources since 2016, and that absent State support “the Commission expects this trend to continue, potentially putting New York at risk of not reaching the 70 by 30 target.”<sup>7</sup> The Commission adopted NYSERDA’s recommendation for a competitive Tier 2 program to retain legacy resources in 2020, with a budget of \$200 million and a direction to solicit “the majority” of RECs from eligible pre-2015 resources.<sup>8</sup> Though the Commission has now directed action to retain legacy resources, the Tier 2 Program has struggled to meet its objectives. NYSERDA contracted for just 60,366 MWh/year in its first two solicitations, both issued in 2021, while exports increased by 157,202 MWh in the same year.

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<sup>4</sup> NYSERDA Clean Energy Standard Progress Report, 2017 and 2020 Compliance Years.

<sup>5</sup> The Commission aligned the CES goals to those of the CLCPA in its October 2020. *See generally* CES 2.0 Order, *supra* note 1.

<sup>6</sup> This figure refers to the actual increase in MWh of renewable electricity, rather than the increase in the percentage of New York State load served by renewables. The latter figure, which results primarily from reduction in total load, would be 2.1%. NYSERDA, *Clean Energy Standard Annual Progress Report: 2020 Compliance Year* (Jan. 2022), at 21, Table 1 (“Summary of New York System Mix”).

<sup>7</sup> *See* CES 2.0 Order, *supra* note 1 (“[I]n accordance with the CES Framework Order, the Commission has monitored the issue of energy exports and can report that several factors have changed since issuance of that order in 2016. For example, low energy prices have compelled existing renewable resources to seek financial support in other markets. According to data collected in NYGATS, exports of baseline renewable generation have increased from 2016 to 2019 by approximately 50 percent ... the Commission expects this trend to continue, potentially putting New York at risk of not reaching the 70 by 30 Target.”)

<sup>8</sup> CES 2.0 Order, *supra* note 1, at 63 (“Requiring NYSERDA to solicit a majority of generation over the duration of the program, absent mandating a specific level of generation per solicitation, provides an additional feature of competition, as does authorizing NYSERDA to set a confidential maximum bid price.”).

In contrast to its treatment of Tier 1, the Commission has not yet leveraged the VDER program to accomplish the goal of retaining the legacy resources targeted by Tier 2. Participation in VDER by pre-2015 resources offers New York ratepayers a cost-effective tool to retain these assets. The success of DER solar has exceeded expectations, while Tier 1 continues to lag behind its targets. The growth of CDG hydro from 2018-2020 demonstrated strong interest among legacy renewable project owners and customers, particularly in areas such as the Adirondacks where hydro is prevalent and solar development is challenging. However, the expiration of the Market Transition Credit (“MTC”) and Community Credit (“CC”) under VDER have halted the progress of this market segment. Additional value in the Value Stack is needed to restart the growth of DER hydro, keeping these resources in operation and retaining the attributes of their renewable energy for New York State. E-Value compensation would provide a much-needed supplement to the Tier 2 Program without the need for new funding allocations or increasing ratepayer costs.

The cost of supporting these existing, small-scale, community-based distributed hydroelectric resources would be minimal when compared to the State’s support for new distributed renewables. Unlike distributed solar, there is no need for – and we are not requesting – a dedicated development incentive such as the NY-Sun program. Instead, in this petition we simply ask the Commission to appropriately recognize the environmental benefits that pre-2015 DERs provide and review its prior policy in such respect to ensure that such resources remain in the state’s renewable energy baseline. Such a policy would be in keeping with the underlying principle of the VDER tariff to compensate distributed resources for the benefits they provide to the grid. Solar and other participants in VDER support the extension of E-Value compensation to these resources.<sup>9</sup>

The recent reduction in LSE Tier 1 Compliance Obligations due to undersupply<sup>10</sup> demonstrates the need to retain and encourage DERs of all vintages and opens additional space to do this within the original schedule of the 70 by 30 goal. NYSERDA has also recently indicated the need to exercise the Utility backstop mechanism<sup>11</sup> to fund a shortfall in CES cost recovery. Securing the pre-2015 baseline, and the availability of additional RECs through VDER, would reduce the need for such calls by lowering Tier 1 compliance obligations.

By utilizing VDER as the mechanism to provide additional value for hydro, the Commission puts the ratepayers themselves in control since VDER’s value is monetized through the purchase and sale of bill credits to community members, either through the Remote Crediting or CDG programs. Public awareness is growing about aging hydroelectric infrastructure, increasingly volatile weather, and even the economic crisis caused by low electricity prices. VDER has the power to enable communities to drive additional revenue to the very facilities which they rely on for flood control and access to public waterways. Together, these factors will drive value only where it is needed most, restricting participation to smaller facilities with close

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<sup>9</sup> Case 21-E-0629, *Clean Energy Parties Comments on 10GW Distributed Solar Roadmap Solar Roadmap* (March 7, 2022), at 6, footnote 9.

<sup>10</sup> Case 15-E-0302, *Order Modifying Clean Energy Standard Load Serving Entity Compliance Obligations and Establishing the 2024 Obligation* (Mar. 16, 2022).

<sup>11</sup> Case 15-E-0302, *NYSERDA Combined CES Annual Financial Status Report December 2021* (Mar. 31, 2022).

community ties facing low wholesale rates, while also ensuring that the additional value will be shared with customers and communities. It is critical to understand this contrast between VDER and compensation under the CES: in extending E-Value compensation to pre-2015 DERs, the Commission does not grant environmental compensation to hydro facilities. It simply enables ratepayers themselves to do so, if they choose, by subscribing to receive VDER bill credits generated by the legacy DER.

The Petitioners intend the extension of E-Value to pre-2015 resources to integrate seamlessly into the structure of VDER and the CES, without increasing costs to utilities or ratepayers. The E-Value is fixed for the 25-year life of the VDER tariff and equal to “the higher of the latest Tier 1 Renewable Energy Certificate (“REC”) procurement price published by NYSERDA or the Social Cost of Carbon” net of the expected Regional Greenhouse Gas Initiative allowance values as calculated by Department of Public Service (“DPS”) Staff . Currently, the E-Value is \$0.03103 per kilowatt hour. Details on cost recovery and interaction with other existing programs are provided in the Implementation section. The Petitioners propose that the program be funded under the Competitive Tier 2 Program, of which NYSERDA has thus far contracted \$479,000 out of a budget of \$200 million. Expanded participation in VDER programs by pre-2015 resources under this structure is estimated to serve up to 34,000 residential customers and retain 210 gigawatt hours (“GWh”) per year of renewable hydroelectricity – 0.55% of New York State’s renewables – at a total cost of just \$6.3 million per year.

## **II. Background**

### **A. VDER’s E-Value and Legacy DERs**

Public Service Law 66-j established the ability for Customer-Generators to inject electricity from qualifying DERs into the distribution grid and receive credit on their utility bill in return.<sup>12</sup> The list of qualifying resources includes solar, wind, hydro, and other renewables, without reference to vintage. Prior to the adoption of VDER, all Customer-Generators received equal compensation for injections on a kWh-for-kWh basis under Net Energy Metering.

In 2017, the Commission adopted VDER to succeed net energy metering (“NEM”) as the method for valuing grid injections for DERs. In designing VDER, the Commission established the principle that DERs should receive monetary bill credits based on the actual value associated with their net hourly injections of electricity, efficiently driving DER development in ways that generate the most benefit to ratepayers. To this end, the original VDER Order established the “value stack” – a set of dollar-per-kilowatt-hour values that would be compensated under VDER, which includes the E-Value. The E-Value is designed to compensate DERs for the environmental benefit of their delivered electricity and is “the higher of the latest Tier 1 REC procurement price published by NYSERDA or the Social Cost of Carbon” net of the expected Regional Greenhouse Gas Initiative allowance values as calculated by Department of Public Service (“DPS”) Staff.<sup>13</sup>

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<sup>12</sup> Consolidated Laws of New York, Article 4, Chapter 48, Section 66-j.

<sup>13</sup> Case 15-E-0751, *Order on Net Energy Metering Transition, Phase One of Value of Distributed Energy Resources, and Related Matters* (Mar. 9, 2017) (“VDER Phase One Order”), at 15.

The VDER Phase Two Order states that “Environmental Value [is] based on the Renewable Energy Credit (REC) compliance cost offset by each kWh injected.”<sup>14</sup> Under the CES and CLCPA, NYSEDA certifies electric resources under different tiers and requires load serving entities (“LSEs”) to purchase and retire RECs and Zero Emission Credits (“ZECs”) in proportion to their load to drive the New York State energy mix toward its decarbonization goals. LSEs receive RECs from Customer-Generators in exchange for the E-Value, and these RECs can be used to satisfy LSE compliance obligations related to those resource types. The 2016 Staff Whitepaper on the Clean Energy Standard included a Tier 2 program<sup>15</sup> which would have required LSEs to purchase RECs from pre-2015 resources as a means of maintaining their contributions. However, Tier 2 was not adopted by the Commission<sup>16</sup> at that time. For this reason, when the VDER Phase One Order was released the following year, Customer-Generators utilizing pre-2015 resources did not produce RECs that offset CES compliance obligations, and therefore did not qualify for the E-Value. Currently, only resources which meet the eligibility requirements for Tier 1 are eligible to receive an E-Value. This rule excluded, *inter alia*, legacy resources despite the fact that these resources contribute to the State’s renewable and zero-carbon generation mix. This created a divergence in the compensation for injections based not on their value to the grid, the climate, or even the CES’s renewable energy goal, but on which side of an arbitrary date a given resource was constructed.

Recognizing this gap, the 2017 VDER Phase One Order stated that “Environmental Value provided by technologies that do not produce Tier 1 RECs will be part of Phase Two of this proceeding.”<sup>17</sup> However, this has not yet been addressed with regard to pre-2015 hydroelectric resources. In its February 2018<sup>18</sup> and September 2018<sup>19</sup> orders, the Commission expanded VDER eligibility to projects sized up to five MWs, including those that would be eligible for Tier 1 RECs under New York’s CES but for their vintage date, *i.e.*, projects of the same Tier 1-eligible technologies built before January 1, 2015. However, this Order stated that “consistent with existing rules for VDER crediting” such resources would not be eligible for E-Value in the VDER value stack.<sup>20</sup> No further rationale was provided.

Under VDER Phase One, the MTC and later CC values under the Community Distributed Generation (“CDG”) program amounted to a modest premium over wholesale electricity rates. Eleven pre-2015 hydro facilities entered the DER Interconnection Queue to take advantage of

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<sup>14</sup> Case 15-E-0751, *Order Regarding Value Stack Compensation* (Apr. 18, 2019) (“VDER Phase Two Order”), at 4.

<sup>15</sup> Case 15-E-0302, *Staff Whitepaper on Clean Energy Standard* (Jan. 25, 2016), at 22-24.

<sup>16</sup> Case 15-E-0302, *Order Adopting a Clean Energy Standard* (Aug. 1, 2016).

<sup>17</sup> VDER Phase One Order, *supra* note 12, at 104.

<sup>18</sup> Case 15-E-0751, *Order on Phase One Value of Distributed Energy Resources Project Size Cap and Related Matters* (Feb. 22, 2018), at 14-15.

<sup>19</sup> See Case 15-E-0751, *Order on Value Stack Eligibility Expansion and Other Matters* (Sept. 12, 2018).

<sup>20</sup> *Id.* at 13. The DPS Staff Whitepaper that preceded the *Order on Value Stack Eligibility Expansion and Other Matters* likewise did not put forward additional justification for excluding E-Value eligibility from legacy DERs, stating only that such exclusion was consistent with existing rules for VDER crediting. See Case 15-E-0751, *Staff Proposal on Value Stack Eligibility Expansion* (May 22, 2018), at 6.

this<sup>21</sup> and four have successfully enrolled customers and begun crediting.<sup>22</sup> However, the MTC Value and CC value, limited to a fixed number of MW capacity and allocated on a first-come first-served basis, have been fully allocated in all Commission-jurisdictional utility territories, including National Grid, which hosts most of the eligible pre-2015 resources.<sup>23</sup> Absent these values, compensation for pre-2015 DERs is not significantly greater than wholesale compensation and cannot support the additional costs involved in DER operation, much less offer a greater net revenue to facilities or savings to customers. Critically, the fixed MTC and CC values also offered a degree of revenue certainty which is necessary for investing in DER operations and entering into long-term contracts with customers. Six of the projects failed to qualify before the expiration of the CC in 2019, and none of these have progressed into customer subscription. Absent additional value in the Value Stack, Community Hydro will likely not grow beyond the projects that reached maturity under the MTC and CC.

#### B. Post-CLCPA CES Procurements Now Recognize the Need to Support Pre-2015 Resources

In 2019, New York enacted the CLCPA, which established new and more ambitious decarbonization targets than had existed under the CES. The CLCPA directed the Commission to establish a program to ensure (1) sufficient amounts of renewable energy resources to serve at least 70% of load in 2030, and (2) that there are zero emissions in 2040 associated with electrical demand.<sup>24</sup>

Following a White Paper issued jointly by NYSERDA and DPS Staff,<sup>25</sup> the Commission issued an Order implementing such a program and modifying the CES to achieve the CLCPA's 70 by 2030 Target ("CES 2.0 Order"). The White Paper assumed contributions from CLCPA-eligible, in-service resources of 39,013 GWh/year (excluding distributed solar), without accounting for any attrition or degradation of generation by 2030.<sup>26</sup> This figure was estimated to be 25.7% of 2030 load. The White Paper used this baseline figure to determine how many additional Tier 1 REC procurements would be needed to reach the 70 by 2030 goal.<sup>27</sup> The Order

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<sup>21</sup> New York Department of Public Service, *SIR Inventory Information - Utility Interconnection Queue Data* (Aug. 2021), <https://www3.dps.ny.gov/W/PSCWeb.nsf/All/286D2C179E9A5A8385257FBBF003F1F7E>.

<sup>22</sup> Those four projects are Azure Mountain Power, Salisbury Mills, Sissonville Hydro, and Wallkill Hydro.

<sup>23</sup> See Case 15-E-0751, *National Grid's Community Credit Availability Notification* (Jan. 6, 2020).

<sup>24</sup> See Chapter 106 of the Laws of 2019 (codified, in part, in Public Service Law (PSL) §66-p).

<sup>25</sup> Case 15-E-0302, *White Paper on Clean Energy Standard Procurements to Implement New York's Climate Leadership and Community Protection Act* (June 18, 2020).

<sup>26</sup> *Id.* at 21.

<sup>27</sup> *Id.* at 21, 23. Table 1 set forth 70 by 30 Target Contributions from Commitments to date of 63,317 GWh/year. "Subtracting the 63,317 GWh total in Table 1 from the 2030 target of 106,174 GWh yields 42,858 GWh. That is the incremental quantity of renewable energy that must be deployed through the Offshore Wind and RES Standards collectively." *Id.* at 21; see also CES 2.0 Order, *supra* note 1, at 22 ("The White Paper further estimates that approximately 63,317 GWh of renewable energy are already either in operation, under contract, or separately required by statute. Therefore, subtracting that figure from the 106,174 GWh total yields 42,858 GWh, which is the incremental quantity of renewable energy that must be obtained through new RES and offshore wind solicitations in order to meet the 70 by 30 Target.").

further noted that its “procurement targets will be updated and adjusted over the course of the next decade” such that more Tier 1 procurements could be ordered if significant baseline generation retired or was exported out of state.<sup>28</sup>

Unlike the original 2016 CES Order, the CES 2.0 Order established a program aimed at the retention of pre-2015 resources. The Commission observed that “low energy prices have compelled existing renewable resources to seek financial support in other markets”, “exports of baseline renewable generation have increased from 2016 to 2019 by approximately 50 percent,” and that it “expects this trend to continue, potentially putting New York at risk of not reaching the 70 by 30 Target.”<sup>29</sup> Accordingly, the Commission established the Competitive Tier 2 Program “to secure the continued availability of existing renewable energy resources.”<sup>30</sup> Under the program, NYSERDA issues three annual solicitations for baseline resources, and recovers the cost of such resources from LSEs, analogous to Tier 1. Despite this program, however, the contributions to New York’s system mix from baseline resources have continued to decline. In the first year of the Competitive Tier 2 Program, NYSERDA awarded 13.9 MWs of contracts, while 126 MWs of hydro qualified for Massachusetts’s Class II program.

C. VDER has yet to Recognize the Change in CES/CLCPA Policy toward Existing Resources

The VDER Program “is intended to encourage the location, design, and operation of DER in a manner that maximizes benefits to the customer, the electric system, and society, while also ensuring the development of the clean generation needed to meet the necessary and aggressive goals embodied in the CES.”<sup>31</sup>

While there is now environmental compensation available to pre-2015 resources through the Tier 2 program, the same has not been established under VDER. The VDER Phase 2 Order states that “Environmental Value (is) based on the Renewable Energy Credit (REC) compliance cost offset by each kWh injected.”<sup>32</sup> In adopting the Tier 2 Program, the Commission also created a compliance obligation for LSEs to fund it. Unlike Tier 1, LSEs currently do not have an option to offset their Tier 2 compliance obligations with RECs generated by DERs. Moreover, resources compensated under VDER are ineligible for most NYSERDA CES solicitations, including Tier 2. This creates a gap in compensation, and uncertainty around the disposition of RECs from these resources. Extension of the E-Value would rationalize VDER with the CLCPA, secure the RECs from legacy DERs, and expand the reach of the Competitive Tier 2 program.

This solution not only fills a void within the structure of the CLCPA, it would advance the goals of the Reforming the Energy Vision (“REV”), the CES, and the CLCPA by

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<sup>28</sup> CES 2.0 Order, *supra* note 1, at 26-27 (allowing NYSERDA to adjust annual procurement targets based on its annual review of the latest market data by means of the divergence test).

<sup>29</sup> *Id.* at 61.

<sup>30</sup> *Id.*

<sup>31</sup> NYSERDA Clean Energy Standard Progress Report, 2020.

<sup>32</sup> VDER Phase 2 Order, *supra* note 14, at 4.

empowering New Yorkers to make a consumer choice that delivers much-needed value to local renewable power producers, investing in their community and local ecology as well as the global climate. Customer-facing programs under NY-Sun have provided a much-needed supplement to NYSERDA's Tier 1 solicitations, contributing over 3,300 MW of new distributed solar capacity through 2021.<sup>33</sup> The long-term value of VDER will ensure that these resources continue producing renewable power. Restoring a degree of parity to different resource types will support market diversity in DER, bolstering its credibility, expanding participation among customers, and increasing the base of support among ratepayers for New York's clean energy goals.

### **III. E-Value Compensation will Retain Legacy CLCPA-eligible Distributed Hydroelectric Resources That May Otherwise Retire or Export Their Generation**

Distributed CLCPA-eligible legacy resources provide substantial environmental benefits to New York, contributing approximately 840 GWhs of renewable energy annually,<sup>34</sup> an amount equal to 0.6% of all electricity consumed in the New York Control Area ("NYCA") in 2020.<sup>35</sup> By comparison, the net increase in renewable electricity in New York from 2014 to 2020 was 280 GWh, or 0.2%. Over the same period, contributions from legacy renewables declined 949 GWh, or 3.1%,<sup>36</sup> seriously hampering New York's progress towards 70% by 2030. Hydrology cannot account for this, as 2020 was considered a "Normal" hydrology year in New York, near the 85-year average according to the United States Geological Survey's WaterWatch database. Exceptionally high hydrology in 2019 temporarily obscured this trend.<sup>37</sup>

The decline is instead due to decreased production, project attrition, and exports. As the 2020 Clean Energy Standard Triennial Review notes:

Insufficient market revenues can negatively impact a power plant owner's spending on maintenance, capital projects (upgrades, refurbishments, overhauls) or major repairs, degrading its performance and availability. In the longer term, insufficient revenues can render continued operation uneconomic, if owners do not expect revenues to cover management and administration costs and provide a reasonable return. Energy and capacity revenues have fallen sharply since the 2014 period during which the baseline production was calculated. Due to scale diseconomies,

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<sup>33</sup> Case 21-E-0629, *New York's 10 GW Distributed Solar Roadmap: Policy Options for Continued Growth in Distributed Solar* (Dec. 17, 2021), at 12 ("Presently, 93.5 percent of the 6 GW by 2025 target consists of either completed projects or projects in the NY-Sun pipeline, with 3,322 MW completed.").

<sup>34</sup> 2021 NYISO Gold Book reports 133 facilities under five MWs in size with a combined nameplate of 239.7 MWs. A resource average capacity factor of 40% was used to estimate total output.

<sup>35</sup> NYSERDA, *Clean Energy Standard Annual Progress Report: 2020 Compliance Year* (Jan. 2022).

<sup>36</sup> This figure refers to the actual increase in MWh of renewable electricity, rather than the increase in the percentage of New York load served by renewables. The latter figure, which results primarily from reduction in total load, would be 2.1%. NYSERDA, *Clean Energy Standard Annual Progress Report: 2020 Compliance Year* (Jan. 2022), at 21, Table 1 ("Summary of New York System Mix").

<sup>37</sup> 2020 was considered "Normal" in New York, being the 42nd-highest hydrology in the years since 1930. 2019 was "Much Above Normal", the 6<sup>th</sup> highest over the same period in New York, while the Western Great Lakes States (MN, WI, MI, IL, OH, IN) experienced record streamflows in 2019, the highest hydrology since 1930. See United States Geological Survey, "WaterWatch" Database, <https://waterwatch.usgs.gov>.



the smallest hydroelectric projects would generally be expected to be under the greatest revenue pressure....<sup>38</sup>

From the passage of PSL 66-j until the expiration of the Community Credit, DER compensation provided a pathway to long-term sustainability for the most economically challenged small hydro generators. Restoring compensation under VDER by allowing legacy renewable resources to receive the E-Value would send an accurate market signal to deploy DERs where they are needed and decommission them when they are not.

#### *A. Lower Market Revenues*

The vast majority of distributed hydroelectric generation<sup>39</sup> receives variable market rates for energy and capacity, either through the NYISO-administered wholesale markets or utility Buyback Rate contracts. In either case, the effective rate is the relevant Locational Based Marginal Price, which has been in decline since 2008, when it was \$89/MWh, to a record low of \$25.70 in 2020.<sup>40</sup> Thus, where perhaps energy revenues would have covered ongoing costs in the past, and thereby allowing distributed hydroelectric to continue in operation, current rates are not sustainable. Capacity revenues have similarly declined in the “Rest of State” region, where most distributed hydroelectric generation is located

#### *B. Higher Operational Costs*

At the same time, operational costs have not similarly declined – remaining at around \$60 to \$70/MWh. The Federal Energy Regulatory Commission (“FERC”) grants licenses to hydroelectric facilities based on an analysis of the public benefits the facility provides. As part of its Economic Benefits analysis within this process, FERC analyzes the facility operational cost per unit of output. Since 2016, FERC has granted new licenses to four legacy hydroelectric facilities under five MWs in size in New York. The average operational cost of these four as estimated by FERC was \$0.06628/kWh<sup>41</sup> (\$66.28/MWh). The below table illustrates the available compensation for hydro compared to the approximate level of need. As shown, VDER briefly offered compensation at a comparable level, however this has fallen sharply with the expiration of the Community Credit. A VDER Value Stack which includes the E-Value is shown for illustrative purposes, along with the Competitive Tier 2 and Maintenance Tier.

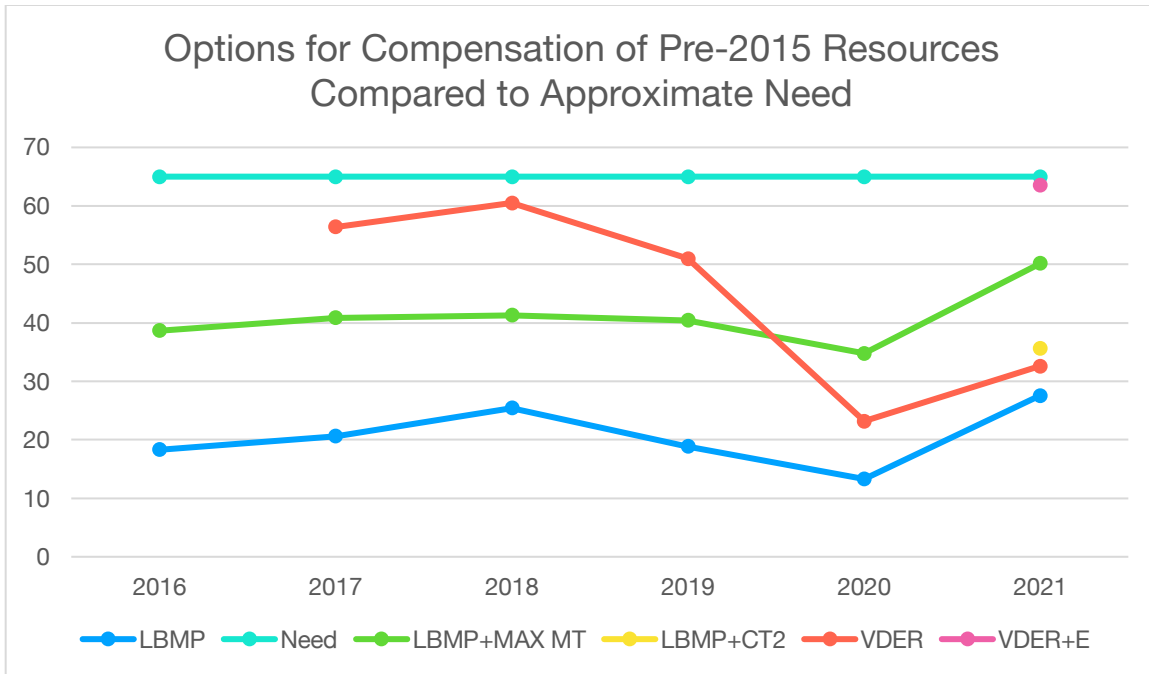
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<sup>38</sup> Section 10.1 “Market Conditions Impacting the Availability of Legacy Supply” RES Program Impact Evaluation, Sustainable Energy Advantage (June 1, 2020).

<sup>39</sup> A limited number of hydroelectric facilities may still have pre-deregulation, PURPA-based development contracts that offer compensation above current wholesale market rates, but these projects would be unlikely opt in to VDER’s significantly lower compensation model. Thus, their costs and revenues are not relevant to the instant Petition and there is little risk of these projects receiving a windfall through VDER.

<sup>40</sup> Potomac Economics, *2008 State of the Market Report New York ISO*, at ii; *2021 NYISO Power Trends 2021*, at 21.

<sup>41</sup> FERC Order(s) Issuing Subsequent License(s): P-2593, Beaver Falls, \$64.09/MWh; P-2788 Colliersville, \$65.72/MWh; P-2394 Upper Mechanicville, \$74.94; P-2837 Granby, \$60.35.



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It may seem natural to assume that as long as a resource continues producing power, it is not in economic need. With regard to hydro, however, this is a flawed assumption. With few input costs, hydros may continue operating regardless of declining daily energy prices in hopes of a turnaround, often for years. This leads to deferred maintenance, further obscuring the true cost of operations and often reducing productivity as well. Capital improvements become impossible, particularly for smaller operators. Facility retirement is triggered not by a given threshold in market price, but by the sudden appearance of unavoidable costs, such as a failure of equipment or civil infrastructure.<sup>43</sup>

The danger posed by this situation was emphasized by the 2018 New York State Comptroller’s Report on Dam Safety, which stated that \$360 million is needed to repair high-hazard dams in New York.<sup>44</sup> The potential consequences of failing to address this need are starkly illustrated by the 2020 failure of the Edenville and Sanford Dams in Michigan, which led to the evacuation of 11,000 people and an estimated \$250 million in property damage.<sup>45</sup> The owner, Boyce Hydro, had its license revoked by FERC in 2018 for failing to make capital

<sup>42</sup> LBMP Values reflect average hourly LBMP from NYISO for Zones D and E, where most eligible hydro is located. All other values include LBMP plus different REC compensation options: Competitive Tier 2, Maintenance Tier (maximum possible), VDER. VDER estimates include ICAP and DRV and reflect average VDER models produced by NP&L for hydro projects in Zones D and E. Values are approximate. VDER with E Value is included for illustrative purposes. Need is estimated at \$65/MWh.

<sup>43</sup> These trends were underscored by the 2020 RES Program Impact Evaluation prepared for NYSERDA by Sustainable Energy Advantage, at 112.

<sup>44</sup> New York State Comptroller Thomas P DiNapoli, *Dam Safety: understanding and Managing the Risks* (June 2018).

<sup>45</sup> Associated Press, *Thousands Evacuated as River Dams Break in Central Michigan* (May 20, 2020).

infrastructure improvements which they could not afford. FERC has initiated similar proceedings for dam owners in New York under similar circumstances.

The regulatory and reputational consequences of abandoning a facility and failing to live up to public benefit obligations are a primary reason why dam owners may continue operating an uneconomic facility. It has been suggested that “local non-energy benefits” like the safety and security of nearby residents should not be subsidized by all New York ratepayers. But measures necessary to protect the human and animal environment are recognized as part of the operational costs of all energy facilities. For hydro, these responsibilities, and their value, are paramount. New York must be careful not to prolong a dangerous situation by effectively leveraging these responsibilities against dam owners to continue extracting uncompensated renewable power.

#### **IV. The Tier 2 E-Value Would Contribute to CLCPA Goals**

##### **A. Environmental Benefits and Avoidance of Tier 1 REC Purchases**

Legacy distributed hydroelectric resources contribute approximately 840 GWhs of renewable energy annually to New York. By displacing more carbon-intensive generation from the grid, these injections decrease the greenhouse gas emissions associated with New York’s electricity sector.

As already shown, the failure to compensate these environmental benefits has already led to significant export and lost production, increasing the cost of achieving the CLCPA’s renewable energy and zero-emission targets by offsetting most of the gains of Tier 1. Absent further support this trend is likely to continue, necessitating the procurement of still more Tier 1 RECs. It is also likely that these marginal purchases would come at a higher cost, since NYSERDA would have already contracted with developers able to offer lower priced RECs. The cost of such higher-priced, marginal REC purchases would ultimately be borne by the State’s ratepayers.

The production of existing hydro resources also comes with no present carbon cost from engineering, procurement, and construction. Such carbon costs are not included in VDER’s calculus of environmental benefits, but the fact is that maintaining existing zero-carbon resources is the lowest-carbon solution for meeting New York’s portfolio goals. In terms of net emissions, the fact that these resources already exist makes them more valuable, not less.

##### **B. Distributed Hydro Provides Critical Benefits to the Upstate Electric Grid**

A common supporting narrative for DERs holds that small-scale distributed generators are needed to transition away from the previous model of fossil-intensive, central-station grid design, and provide grid resiliency in remote areas. While true, this fails to recognize that in upstate New York, the very first local electric distribution systems were built around small-scale hydro generators, prior to utility consolidation and the adoption of the “central-station” model. Small hydro is and has always been the backbone of the rural electric grid.

The VDER Value Stack aims to provide compensation for the value of DER injections to offset utility distribution costs, in the form of the DRV and LSRV. While pre-2015 DERs

entering VDER compensation do qualify for these values, the method by which they are calculated does not fully account for the value of existing pre-2015 distribution level assets.

This is important to note, as a deeper analysis into avoided distribution costs is currently being explored to supplement the existing E-Value. Both the previous methods of calculating DRV/LSRV and the proposed Allocated Cost of Service (“ACOS”) methodologies are based on the Utility’s Marginal Cost of Service (“MCOS”) studies, which are concerned with offsetting the costs of system expansion, without considering the value existing DERs are already providing. An accurate measurement of system costs offset by pre-2015 DERs may be warranted in the future. However, for now the recognition of this unquantified value may serve as additional justification for extending E-Value compensation to them, particularly if the E-Value is expanded.

It is well known that the transition to renewable energy will require resource diversity, and this is true in DER. The continual addition of DER resources with the same generation profile creates a situation of diminishing returns for the electric grid. The resource-average generation profiles of hydro and solar are complimentary on both a 24-hour basis, with hydro providing day-and-night baseload power while solar produces during high-use hours, and a seasonal one, with hydro’s most consistent production occurring in the winter and spring while solar peaks in summer.

C. Promote Energy Equity by Empowering Locals to Support Critical Energy Infrastructure

The CLCPA and REV emphasize the importance of empowering communities to make their own sustainability choices that integrate with the unique character of their community. Hydroelectric dams are central to the lives of millions of New Yorkers, maintaining the water level of lakes and ponds, providing public water access, flood control, and impounding municipal water supplies. Small towns throughout Upstate were founded around water power resources, even before electrical distribution, and the industries they powered provided employment to local residents.

Therefore, robust compensation under VDER program is the perfect solution to the small hydro problem, as it empowers the very local residents who benefit from civil infrastructure to be the agents of economic viability. Re-establishing economic relationships between communities and their resources localizes value and creates accountability. For example, in Cranberry Lake in the Western Adirondacks, an uncured deficiency in civil infrastructure threatens the license of the uneconomic small hydroelectric dam which maintains the lake level. With the E-Value, local residents could restore economic prosperity to the facility through the CDG program, securing critical civil infrastructure, localizing energy revenues, and lowering local electric bills.

D. CDG Hydro Will Benefit Disadvantaged Communities

Many hydroelectric generators are located in economically disadvantaged Upstate communities. Often there is a shared history of waterpower industries like paper and textiles that have since closed, and communities that have struggled to recover. A cursory review of NYSERDA’s Disadvantaged Communities Map identifies several areas with threatened or

closed hydroelectric resources. In Potsdam, two municipally-owned hydro dams are an economic burden to the community.<sup>46</sup> The City of Watertown is currently contemplating what to do with a municipally-owned dam once the development contract expires,<sup>47</sup> while another facility in the same city recently shut down. Baldwinsville, Hoosick Falls, and Malone, New York all host small hydro plants which have ceased production in the past ten years. Similar situations occur throughout Upstate. When resources are locally owned, nearly all the economic benefits of their revitalization would be localized. If they cannot be made economically viable, the cost of maintaining the infrastructure will ultimately fall on local residents.

#### A. Tier 2 E-Value Under VDER will Expand the Reach of the Tier 2 Program

A stated goal of the Competitive Tier 2 Program is to prevent New York from losing the contributions of small hydroelectric facilities due to facility retirement.<sup>48</sup> The program is unlikely to achieve this goal through competitive procurement alone.

While DER compensation is designed to benefit smaller facilities which require higher revenues, the competitive, bid-based Tier 1 and Competitive Tier 2 Programs do the opposite. The Tier 2 program is structured to ensure that facilities “based on need”<sup>49</sup> and awards bids to the lowest bidders. There are no limits on capacity. Designed to keep program costs down, this structure rewards resources which are in the least economic need, and excludes those of higher needs. Of the three facilities which received contracts in the first solicitation, the weighted average REC contract price was \$7.95/MWh.<sup>50</sup>

A REC payment of \$8 on top of the LBMP and capacity payments will not provide the \$60 to \$70/MWh which smaller hydro facilities need, as illustrated above. It is therefore appropriate to extend funds allocated under the Competitive Tier 2 Program to smaller resources in greater need through VDER. This is consistent with the principles of VDER, as the Commission has referenced the greater economic needs of smaller customer-facing facilities in establishing VDER compensation at a higher level than CES Tier 1.<sup>51</sup>

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<sup>46</sup> See New York Financial Restructuring Board for Local Governments, *2018 Village of Potsdam Comprehensive Review Report*, at 16 (“The Village’s Hydro Electric Fund currently operates at an annual deficit of approximately \$130,000 and relies on annual transfers from the General Fund to stay balanced. The deficit is attributed to operational costs, payment of debt service, and lower than expected revenues...”).

<sup>47</sup> Craig Fox, *Watertown hydroelectric task force’s work could be finished this summer*, NNY360.COM (Jan. 20, 2022) (“For about a year, the task force, led by former Mayor Joseph M. Butler Jr., has been meeting to talk about preparing for when the agreement ends and the city could lose as much as \$6 million.”).

<sup>48</sup> CES 2.0 Order, *supra* note 1, at 60.

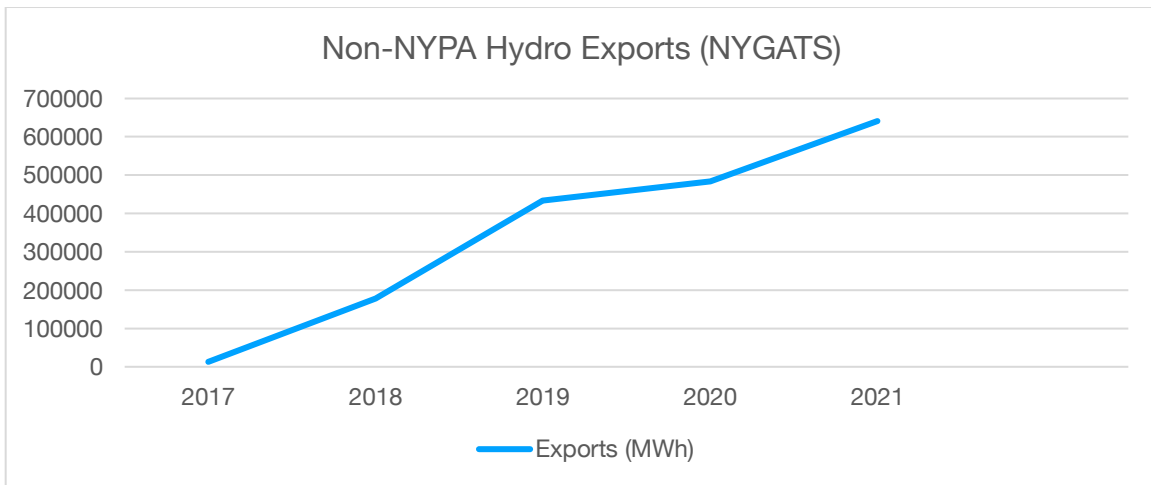
<sup>49</sup> Case 15-E-0302, *Petition Regarding Clean Energy Standard Competitive Tier 2 Program for Baseline Renewable Generation* NYSERDA (January 27, 2020) at 4.

<sup>50</sup> “Large Scale Renewable Projects Reported by NYSERDA: Beginning 2004” Dataset, OpenData NY (accessed Oct. 2021); <https://data.ny.gov/Energy-Environment/Large-scale-Renewable-Projects-Reported-by-NYSERDA/dprp-55ye/data>.

<sup>51</sup> Case 15-E-0751, *Order on Phase One Value of Distributed Energy Resources Project Size Cap and Related Matters* (Feb. 22, 2018), at 10 (“Commission and NYSERDA experience with the procurement of large scale clean generation resources demonstrates that projects between 2 MW and 5 MW rarely participate in those procurement

## B. E-Value Compensation through VDER will Prevent REC Exports

In adopting the Competitive Tier 2 Program, the Commission noted that “low energy prices have compelled existing renewable resources to seek financial support in other markets”<sup>52</sup> and that “absent an appropriate compensation mechanism, there remains a high risk that existing resources located in New York will sell their energy and associated environmental attributes in neighboring states.”<sup>53</sup> However, the Competitive Tier 2 has failed to offer contracts which offer a viable alternative. In its first two solicitations, NYSERDA has contracted for just 60,366 MWh out of a target volume of approximately 3.2 million,<sup>54</sup> while exports have continued to increase.



NYSERDA received approximately 40 bids<sup>55</sup> in its first solicitation, but awarded only three contracts, at an average price of \$7.95. This shows that NYSERDA’s Confidential Bid Price Cap was approximately \$8, well below industry needs and expectations. This is clearly insufficient to prevent exports. The Massachusetts Class II Obligation under the Massachusetts Renewable Portfolio Standard provides opportunities for New York-sited hydro under 7.5 MWs in capacity. With the 2021 Massachusetts Class II Alternative Compliance Payment at \$29.75,<sup>56</sup> the value of these contracts to qualifying facilities will exceed the Competitive Tier 2 Auction Price, even accounting for transmission fees.

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and wholesale market programs, likely both due to their complexity and because greater economies of scale available for even larger projects make it difficult for projects between 2 MW and 5 MW to compete.”).

<sup>52</sup> CES 2.0 Order, *supra* note 1, at 61.

<sup>53</sup> *Id.*

<sup>54</sup> The Competitive Tier 2 Program seeks to retain “the majority of generation from eligible resources.” CES 2.0 Order, *supra* note 1. The figure given was estimated by combining (1) the 2020 generation of independent hydro from the NYISO Gold Book (3,973 GWh) (2) an estimation of the production from “Load Modifier” hydros at 40% Capacity Factor (161 GWh) (3) the annual bid quantity of off-contract wind projects from NYSERDA LSR Contract database (2,058 GWh) (Total: 6,192) and multiplying by 51%.

<sup>55</sup> Petitioners conducted an informal survey of independent hydro producers to estimate participation in the first solicitation.

<sup>56</sup> <https://www.mass.gov/service-details/annual-compliance-information-for-retail-electric-suppliers>.

The most recent annual compliance review reports that in 2018, hydro RECs from New York accounted for 23.3% of all Massachusetts Class II RECs, a total of 232,655 MWh, nearly double the amount from 2016.<sup>57</sup> Over the same period, the Massachusetts Department of Energy Resources reported a drop in Alternative Compliance Payment revenues from \$10.9 million to \$4.8 million, attributing this to the increase in participation from New York hydroelectric resources.<sup>58</sup> Thirty-two New York hydroelectric facilities totaling 126.35 MWs qualified for Massachusetts Class II in 2021,<sup>59</sup> of which 77.45 MW are sub-5 MW facilities.

The average Competitive Tier 2 contract price of approximately \$8/REC is insufficient to retain pre-2015 hydro from either export or attrition. However, with the eligibility of the E-Value, VDER compensation would offer these resources a viable alternative that would retain their attributes in New York, even accounting for the additional costs and local benefit expenses of DER operation. This would provide a much-needed supplement to the success of Tier 2.

In its Petition to establish the Competitive Tier 2 program, NYSERDA observed that the development of any future program to support legacy renewables should “consider the outcome of the Competitive Tier 2 procurement program and conditions in external markets.”<sup>60</sup> Such consideration can only support the need for additional policy support.

### C. VDER Hydro Benefits Ratepayers, Low-Income Residents, and Communities

Hydro resources receiving VDER compensation are unique in that the facility itself is already there, and in most cases there are deep ties between the hydro owner and the community. This makes VDER hydro uniquely perceptive and responsive to customer needs. NP&L partners with local social services organizations to offer 25% discounts to low-income residents, the highest in New York, despite not qualifying for the NY-Sun Low-Income Adder. Both NP&L and Natural Power Group provide live local phone support, accept paper checks, donate to local causes, and principals from both businesses serve on local boards such as the Chamber of Commerce. These are “Main Street” businesses, and every dollar that goes to them stays within the community.

This closeness with the community leads to other services and benefits. NP&L has saved customers far more money by explaining the nature of Supply Services than through discounted VDER credits. NP&L also aids customers in beneficial electrification by providing information about heat pumps and electric vehicles.

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<sup>57</sup> Massachusetts Department of Energy Resources, *2018 Annual Compliance Report – Renewable energy Portfolio Standard (RPS) Alternative energy Portfolio Standard (APS) Clean Energy Standard (CES)* (June 9, 2021).

<sup>58</sup> *Id.* at 23.

<sup>59</sup> Massachusetts Department of Energy Resources, *RPS Class II Renewable Generation Units* (updated Sept. 21, 2021).

<sup>60</sup> Case 15-E-0302, *Petition Regarding the Clean Energy Standard – Competitive Tier 2 Program for Baseline Renewable Generation* (Jan. 27, 2020), at 4.

#### D. Serving a Diverse State Requires Diverse Resources – CDG Hydro Expands Participation in CLCPA Programs

All VDER programs are customer-facing, requiring consumer action as a necessary component of project success. CDG was designed to extend to all New Yorkers the opportunity to benefit from DERs. Serving a diverse population in a diverse state requires diverse resources.

In order to serve all New Yorkers, it is necessary to provide options that conform to the local ecology, climate, and priorities for land use. In the Adirondacks, for example, solar development is particularly difficult, while the mountainous, forested landscape with heavy precipitation and snowpack is ideal for hydro. It is true that Adirondack residents have the opportunity to subscribe to solar fields hundreds of miles away in the valleys surrounding the park, but many will be more interested to connect with a project that is closer to them and integrated with their own environment.

Moreover, in any marketplace, consumers need to know that there are choices to be made in order to have consumer interest at all. The dominance of a single technology, solar, may be a barrier to consumer uptake. The presence of existing resources in the DER marketplace also lends credibility to the marketplace itself. The intangibility of electricity as a commodity and the obscurity of the underlying market mechanisms make customer communication challenging for DER providers. The presence of existing and trusted local businesses in the same marketplace helps to bolster the credibility of all participating projects.

NP&L has seen this at work. In 2020, NP&L was seeking customers for Azure Mountain Power at the same time that a local solar array was enrolling its customers in Saranac Lake, New York. With a combined need of approximately 300 customers in a village of 5700 residents, the two projects coordinated to spread the word about CDG as a new opportunity to connect with local power producers. Both enrollment efforts were highly successful.

#### **V. The Tier 2 E-Value Will Fill a Gap in Compensation Without Creating “Windfall” Revenues**

##### **A. Complementing the Maintenance Tier**

Originally developed under the Renewable Portfolio Standard (RPS), the Maintenance Tier program under the CES offers facilities up to 10 MW in size the opportunity to qualify for a need-based, three-year REC contract with NYSERDA. Applicants must share operational costs and revenue data with DPS, and contracts are offered at a price based on the level of economic need determined by DPS Staff, capped at the Tier 1 REC price.<sup>61</sup> However, unlike Tier 1, the Maintenance Tier does not offer index-REC contracts or long-term support. The Maintenance Tier may be the ideal program for some struggling generators, however, having been in effect throughout the decline of New York small hydro documented here, it is clearly not able to provide adequate support to all of them.

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<sup>61</sup> Case 15-E-0302, *Order Adopting a Clean Energy Standard* (Aug. 1, 2016).



Currently, Customer-Generator projects compensated under VDER that do not receive E-Value may be eligible to seek compensation under the Maintenance Tier as well,<sup>62</sup> which may offer a pathway to environmental value compensation for pre-2015 DERs. However, this is cumbersome and somewhat inappropriate, as well as ineffective. In no other circumstance is a single resource eligible to participate in both VDER compensation and NYSERDA REC procurements at the same time. Since the March 2018 Baseline Order, the Maintenance Tier only offers three-year contracts,<sup>63</sup> which cannot provide the revenue certainty necessary to enter into consumer contracts or undertake the necessary investments in operations and customer acquisition needed to move from NYISO / Buyback compensation to VDER. A DER in such circumstances would need to re-apply for the Maintenance Tier every three years in order to maintain its value proposition to customers. Subjecting the fulfillment of contracts between CDG Hosts and Satellite Customers to subsequent Commission action is a circumstance VDER is careful to avoid, which is why compensation for E-Value is fixed for the 25-year project life.

As previously shown, Maintenance Tier compensation also does not reach the \$.065/kWh level of compensation needed for smaller facilities. Maintenance Tier awards are capped at the Tier 1 REC price, on the principle that New York should not pay more to retain existing resources than it does to build new ones. However, the production of Tier 1 RECs is well behind schedule, calling into question whether the Tier 1 price is accurate with regard to the cost of actually building new facilities. Perhaps a “bird in the hand” approach to existing generation is warranted. E-Value compensation under VDER would offer slightly higher compensation, as well as longer-term revenue certainty. Incorporating environmental compensation through VDER is simpler, more consistent, and more effective.

#### B. Additional Compensation Under VDER Will Benefit Facilities that Need it Most

The existing parameters of VDER ensure that a Tier 2 E-Value will primarily benefit smaller facilities most in need of support. Experience supports this. Before VDER, 22 small hydro facilities entered NEM crediting. The average capacity of these was 670kW,<sup>64</sup> and nearly all undertook substantial upgrade and modernization projects. Since 2017, 11 hydroelectric projects totaling 15 MW (average 1.4 MW) have entered the interconnection queue for the purpose of pursuing CDG. Four of the five participating companies are independent owner-operators, small New York-based family companies.<sup>65</sup> Two of the facilities which have successfully started crediting, Azure Mountain Power and Walkkill Hydro, have since performed important upgrades that would not have been possible without the support enabled by customers through the CDG program.

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<sup>62</sup> Case 15-E-0302, *Order Adopting Measures for the Retention of Existing Renewable Baseline Resources* (Mar. 16, 2018), at 29.

<sup>63</sup> *Id.*

<sup>64</sup> New York Department of Public Service, *SIR Inventory Information - Utility Interconnection Queue Data* (Aug. 2021), [www3.dps.ny.gov](http://www3.dps.ny.gov).

<sup>65</sup> Those four companies are Azure Mountain Power, Natural Power Group, Oakvale Hydro, and Sandy Hollow Power Company.

C. Compensation Under VDER will Not Supplant or Supplement Existing Above-Market Contracts

Some hydros still have longstanding PURPA contracts with the utility which pay substantially above-market rates. The RECs from these projects accrue to the utility.<sup>66</sup> Based on pre-Deregulation “Avoided Cost” projections from the 1980s and 1990s, these contracts are extremely lucrative, ensuring that no facility would give one up to move to VDER. The SIR-DER Process requires the establishment of a new exclusive contract with the utility, ensuring that double-compensation cannot occur. The move to DER compensation also requires the termination of participation in the NYISO market, ensuring that any non-utility power purchase agreements would likewise be forfeited.<sup>67</sup>

D. Available Compensation in the Voluntary REC Market is Inadequate and Inconsistent

The CES 2.0 Order suggested that legacy hydroelectric generation could be supported by voluntary REC purchases, either from ESCOs offering green products, corporate buyers, or CCAs.<sup>68</sup> To date, however, voluntary RECs have exerted only a negligible impact on sustaining legacy DERs. The ESCO Reset Order now requires that any “Renewable” Supply product sold in New York must be backed by NY-EDP RECs.<sup>69</sup> This has bolstered the market for New York hydro RECs. However, while the Commission has authority to determine what products ESCOs may sell in New York, it does not, and cannot, prevent end-users from purchasing national RECs directly or regulate the green claims corporations make based on them. Although the price of NY-EDP RECs has risen sharply in the past year, its long-term future is far from certain. It is important that this market be sustained, however, it is not bankable, and even with 2021 prices around \$10/MWh it cannot support legacy DERs with a revenue need of \$65/MWh. New York also offers ESCOs the option to make Voluntary Compliance Payments to NYSERDA in lieu of procuring actual RECs for their green products,<sup>70</sup> ensuring that voluntary hydro REC prices will not rise above the Tier 1 Alternative Compliance Payment.<sup>71</sup>

Community Choice Aggregation (“CCA”) has been cited many times as a potential market for New York-based hydro RECs. However, CCAs have stated that they do not have the

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<sup>66</sup> See Case 08-E-1048, *Declaratory Ruling that Environmental Attributes are Bundled with Energy for Environmental Disclosure Purposes* (Apr. 19, 2009).

<sup>67</sup> See SIR, Appendix A, New York State Standardized Contract for Interconnection of New Distributed Generation Units and/or Energy Storage Systems with Capacity of 5 MW or Less Connected in Parallel with Utility Distribution Systems.

<sup>68</sup> CES 2.0 Order, *supra* note 1, at 4.

<sup>69</sup> Case 98-M-1343, *Order Adopting Changes to the Retail Access Energy Market and Establishing Further Process* (Dec. 12, 2019), at 79.

<sup>70</sup> *Id.*

<sup>71</sup> *Id.* at 78. The price of alternative compliance, set at the Tier 1 ACP, was conveyed to Retail Suppliers via email by DPS Staff in February 2022.

appetite to purchase RECs even at \$10/MWh<sup>72</sup> as municipal leaders are unwilling to significantly raise local electric bills. Unfortunately, the issue is exacerbated in the Upstate regions where most hydro is located. Low energy prices mean that any additional cost for RECs has a more significant impact on the overall price of electricity.

Opt-Out frameworks for CCAs to offer CDG subscriptions are currently being explored.<sup>73</sup> Incorporating E-Value compensation for pre-2015 resources into the Value Stack would give Upstate communities the opportunity to benefit from local hydro resources through CDG at a savings, while still delivering additional revenue to facilities.

## VI. Estimated Program Impacts

New York currently has approximately 133 distributed hydroelectric resources totaling 239 MWs of capacity.<sup>74</sup> However, the total number of facilities which would be likely to participate in VDER will be restricted by site-specific constraints, the presence of existing contracts, and various other factors. A conservative estimate of 25% participation of those which qualify based on capacity is reasonable. In this case, the proposed Baseline E-Value would retain approximately 210 GWh/year of renewable hydroelectricity, equal to 0.5% of New York's renewable electricity reported in 2020,<sup>75</sup> and serve up to 34,000 residential customers. The same contributions from distributed solar generation would cost approximately \$50 million in NY-Sun funding, in addition to E-Value.<sup>76</sup>

Total E-Value compensation for these resources based on the current SCC-determined E-value would be \$6.3 million per year.<sup>77</sup> Through avoidance of utility compliance, this cost could

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<sup>72</sup> Case 14-M-0224, *Department of Public Service Staff Whitepaper on Community Choice Aggregation Programs* (Apr. 14, 2021) (“CCA Administrators have notified Staff of the recent rise in Renewable Energy Certificates (REC) market prices which has caused a significant issue for CCAs to be able to offer their participants a green supply product or renew an existing green supply contract.”). In April 2021, voluntary New York Hydro RECs were trading at approximately \$10.

<sup>73</sup> Case 19-M-0463, *Department of Public Service Staff Straw Proposal on Opt-Out Community Distributed Generation* (Mar 29, 2022).

<sup>74</sup> NYISO Gold Book 2021. A certain amount of research and data processing is required to determine this number, as often single units below 5MW may be listed separately but contained in a facility with a nameplate of over 5MW. This can make the eligible pool seem larger than it is. The given figure does not include these units.

<sup>75</sup> Calculation uses a resource-average capacity factor of 40%.

<sup>76</sup> The 10 GW Solar Roadmap states that “the overall cost of the proposed program expansion is approximately \$0.37/Watt averaged across the proposed 3,440 MW of incremental capacity.” Case 21-E-0629, *New York's 10GW Distributed Solar Roadmap: Policy Options for Continued Growth in Distributed Solar* (Dec. 17, 2021), at 70. Assuming a capacity factor of 20%, it would take 120 MW of distributed solar to produce 210 GWh/year. 120,000,000 Watts \* \$0.37/Watt = \$50,320,000.

<sup>77</sup> 210,000 MWh multiplied by current SCC of \$30.02/MWh, which is expected to be higher than the Tier 2 resale Price, estimated at \$15.50/MWh.

be recovered from funds currently allocated to the Competitive Tier 2 Program, which has so far contracted for only \$479,000<sup>78</sup> out of an approved budget of \$200 million.

## VII. Program Implementation

### A. Eligibility

The Petitioners propose that the expansion of eligibility for E-Value be restricted to projects which meet eligibility requirements for both VDER and the Competitive Tier 2 Program, being non-state-owned renewable resources as defined by PSL 66-j, developed prior to 2015, under five MWs in size, and interconnected to distribution utility systems. Facilities will qualify for the E-Value in effect at the time the project pays 25% of any interconnection upgrade costs under the SIR and files the Standardized Interconnection Contract with the utility. Projects which are already passed their qualification date as of the Commission's issuance of notice in the VDER proceeding would qualify for the current E-Value. Extending eligibility to projects which have already qualified is important to secure the RECs from these projects, bring all project compensation under VDER rather than splitting it across other NYSERDA and voluntary market opportunities, and in recognition that several projects began the interconnection process in expectation of receiving the Community Credit but qualified after it expired and have failed to move forward since.

The Petitioners intend that the E-Value be an alternative environmental value compensation, rather than additional to any existing CES or PSL 66-j compensation a facility might receive for environmental value. Therefore, projects currently receiving compensation under NEM,<sup>79</sup> the Competitive Tier 2, or the Maintenance Tier<sup>80</sup> would be ineligible until the expiration of those contracts.

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<sup>78</sup> "Large Scale Renewable Projects Reported by NYSERDA: Beginning 2004" Dataset, OpenData NY, accessed October 2021 <https://data.ny.gov/Energy-Environment/Large-scale-Renewable-Projects-Reported-by-NYSERDA/dprp-55ye/data>.

<sup>79</sup> Net energy metering projects do not receive specific compensation for environmental attributes. However, the Phase One VDER MTC was calculated by subtracting the injection-based Value Stack values, including the E-Value, from the NEM rate. This suggests that the Commission views environmental compensation as being embedded within the NEM rate. Post-2015 NEM-compensated projects do not additionally qualify for the Tier 1 E-Value. Providing E-Value compensation to pre-2015 resources taking NEM compensation would be inconsistent.

<sup>80</sup> Case 15-E-0751, *Order on Phase One Value of Distributed Energy Resources Projects Size Cap and Related Matters* (Feb. 22, 2018) ("Projects receiving compensation for renewable attributes through the Renewable Portfolio Standard, including the Maintenance Tier, or through Tier 2 of the CES are permitted to opt-in and receive elements of the Value Stack other than the Environmental Value.").

## B. Value

The E Value is referenced to the Tier 1 REC Price, and on its qualification date each project secures E-Value compensation for the full VDER contract term at the most recent Tier 1 price published by NYSERDA or the Social Cost of Carbon net of RGGI, whichever is higher.<sup>81</sup>

## C. Cost Recovery

Utilities which pay the E-Value receive RECs in exchange, and these RECs may be used to satisfy CES Compliance Obligations related to Tier 1. LSEs in New York, including utilities, are also required to fund the Tier 2 Program through a similar compliance obligation. It is natural to apply the expenditures made by utilities for RECs from pre-2015 resources towards Tier 2 Compliance costs.

Unlike Tier 1, however, NYSERDA has arranged alternative methods of cost recovery for Tier 2 by offering RECs for sale to ESCOs for voluntary green products through an annual REC Resale. The current Tier 2 Program is also short term, expiring in 2026. It seems likely that it may be expanded and extended, given the program's lack of success in retaining RECs from pre-2015 resources. Efforts to accomplish this are currently underway in the Legislature.

Nevertheless, because of the uncertainty of future Tier 2 Compliance Costs, Petitioners propose that the RECs procured from pre-2015 resources through VDER be eligible to offset Utility Compliance Obligations for either Tier 2 or Tier 1. This is consistent with the recognition that these resources will otherwise retire or export, ultimately raising the number of Tier 1 RECs LSEs would be required to buy. While this has previously been considered hypothetical, the export and attrition of hydro RECs, and the limiting effect on progress towards the 70 by 30 goal, is now well-documented. The Commission has recognized this and observed that there is every reason to expect the trend will continue.<sup>82</sup>

Further, a scarcity of Tier 1 RECs has meant that a large part of utility compliance -- over \$83 million in 2020<sup>83</sup> -- has been made up of ACP payments, which have no effect at all on renewable energy.<sup>84</sup> In recognition that the availability of Tier 1 RECs is well behind schedule, the Commission has recently lowered LSE compliance obligations.<sup>85</sup> This emphasizes both the need to protect baseline resources, and the fact that doing so through VDER would not increase

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<sup>81</sup> VDER Phase One Order, *supra* note 13, at 106, footnote 42 (E-Value “resources shall receive the higher of the Tier 1 REC price or the Social Cost of Carbon, net of the expected Regional Greenhouse Gas Initiative (RGGI) allowance values, as calculated by Staff per the BCA Framework Order.”).

<sup>82</sup> CES 2.0 Order, *supra* note 1, at 60-62.

<sup>83</sup> The 2020 Clean Energy Standard Progress Report shows ACP Volumes of 3,435,622. The ACP in 2020 was \$24.30.

<sup>84</sup> ACP Payments have made up 32% and 60% of LSE Compliance in 2019 and 2020 respectively. See Case 15-E-0302, *Order Modifying Clean Energy Standard Load Serving Entity Compliance Obligations and Establishing the 2024 Obligation* (Mar. 16, 2022), at 4.

<sup>85</sup> *Id.*

ratepayer costs beyond what has been anticipated since the beginning of the CES. Even with the reduction, it is expected that ACPs will still make up a significant portion of utility compliance, at the new and higher rate of \$35 per MWh.<sup>86</sup> Payment of the E-Value to pre-2015 resources would be both less expensive and more impactful than payment of the ACP.

In the event that pre-2015 RECs are used to offset Tier 1 compliance obligations, NYSERDA could simply re-allocate funds from the Tier 2 budget to the Tier 1 budget to make up for any shortfall in cost recovery.

### **VIII. Conclusion**

The Petitioners appreciate the opportunity to put forward this Petition for the extension of E-Value to pre-2015 resources participating in VDER programs. We are confident that the implementation of the proposed program would create substantial benefits for pre-2015 DERs and the Customer-Generators utilizing them, justly compensating them for the value they provide to the power grid and the 70 by 30 goal, contributing to the growth of a robust DER marketplace, and enlisting more New Yorkers in direct action to support our shared CLCPA goals. All of this can be accomplished utilizing previously allocated funds and without raising costs to utilities or non-participating ratepayers.

Respectfully submitted,

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<sup>86</sup> Case 15-E-0302, NYSERDA, *Filing Regarding Renewable Energy Standard 2022 Alternative Compliance Payment (ACP) Prices* (Jan. 31, 2022).

/s/  
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