Reply Comments on Petition Seeking Approval of Two Contracts

On November 30, 2021, Department of Public Service Staff and NYSERDA filed a petition seeking approval of two contracts (the “Contracts”) for the purchase of Tier 4 RECs by NYSERDA from Clean Path New York and Champlain Hudson Power Express/Hydro Quebec US (the “Petition”). In the above-referenced proceeding, Boralex Inc. (Boralex) hereby offers these comments for consideration by the Public Service Commission (the “Commission”).

INTRODUCTION

Boralex is an independent power producer that develops, builds, and operates renewable energy generation and energy storage facilities in Canada, France, the United Kingdom and the United States. With an installed capacity of 2.5 GW, Boralex is a leader in the Canadian market and France’s largest independent producer of onshore wind power. Boralex is recognized for its solid experience in optimizing its asset base in four power generation types — wind, hydroelectric, storage and solar. Boralex ensures sustained growth by leveraging the expertise and diversification developed over the past 30 years.

In New York, Boralex currently operates seven hydropower facilities totaling 82 MW. For the past 20 years Boralex has operated those resources from our South Glens Falls office. Our development and operations teams are firmly established in New York State, and in 2019, four of our solar projects totaling 180 MW were selected for New York State Energy Research Development Authority’s (NYSERDA) 2019 Renewable Energy Standard Solicitation for the purchase of New York Tier 1 Eligible Renewable Energy Certificates (RECs).

Boralex understands that the decisions we make today help shape our shared energy future. We are equally committed to our role as a responsible and ethical neighbor, employer, taxpayer and steward of the environment. We engage with stakeholders early, often, and broadly in informed discussions to ensure that our projects are consistent with local interests. We grow the economies of the communities where we operate by creating community investments and purchasing goods and services locally.

New York has a nation-leading clean energy agenda that will aggressively put New York State on a path to achieve 70% of the state’s electricity from renewable energy by 2030
and reduce greenhouse gas emissions 85% below 1990 levels by 2050, Boralex is pleased to provide the following comment to help contribute to this clean energy transition.

SUMMARY

We believe that the Petition created a compelling case to warrant a major commitment by the State sufficient to support both the CHPE and CPNY Contracts using conservative assumptions, and that if more reasonable assumptions are used, then the case will be very compelling indeed. We support the Petition in recommending that both projects be approved by the Commission for the following reasons:

- **CPNY and CHPE will help stabilize energy costs for New York consumers.** The State, and the world more broadly, is entering into a highly uncertainty period regarding inflation expectations, especially with respect to fossil fuel commodity prices. The CHPE and CPNY contracts would have offered substantial ratepayer protection during this past January on the order of $119.2 million\(^1\) in that month alone, highlighting the significant hedge value that these long-term fixed priced contracts afford New York’s ratepayers. In addition, these contracts were priced before inflation really took hold. New York should seize this opportunity now because prices for new renewables will almost certainly be higher now than when these projects were bid.

- **CPNY and CHPE will meaningfully reduce reliance on New York City fossil fuel fleet, causing old, inefficient and highly polluting generators to retire, improving air quality.**

- **Selecting both CHPE and CPNY will meaningfully increase the chance that at least one project will succeed.** The Commission approving these contracts is only the first step in these projects becoming reality. In simple terms, selecting both projects at very minimum doubles the chances of success.

- **A less conservative benefit analysis will show ratepayer savings and increased Net Benefit.** If the Commission considers the Petition in light of our comments set forth below, we believe it will find that if both Projects are selected the Bill Impact Analysis will result in a *reduction* in ratepayer bills and the Benefit Cost Analysis will show significant net benefits for the State in excess of the net benefits set forth in the Petition.

**Bill Impact Analysis Summary:** While we agree that any state program of this magnitude must carefully calculate the costs and benefits, we believe that the ratepayer impacts are overstated, and if an approach more consistent with the BCA Framework Order were to be taken on the following key assumptions, then the ratepayer impact analysis would show a net ratepayer benefit:

\(^1\) Average day-ahead Zone J wholesale electricity costs for January 2022 of $138/MWh (nyiso.com) plus REC Costs equal to 2022 RES Tier 1 ACP of $35/MWh (nyserda.ny.gov), less levelized strike price of the $97.06/MWh (average of published $94.20 and $92.86 (Petition page 26)), *multiplied* by delivered energy quantity of 1.5 TWh (1/12th of the 18 TWh total Bid Quantity (Petition p. 31)).
• Include the avoided REC costs in the Bill Impact Analysis for both achievement of the 70x30 objective and the 100x40 objective
• Take into account the reduction in Zone J capacity costs as a result of the Tier 4 program into the Bill Impact Analysis
• Calculate the Levelized Lifetime Bill Impact with and without price effects, and not just the year 1 impact, and then, after taking into account the hedging feature of the Indexed RECs, make a judgment as the timing and level of future market adjustments
• Discount the Low Commodity Case as it combines and conflates the effects of low commodity prices with price effects resulting from the Tier 4 program in a manner that is inconsistent with the principles of the BCA Framework

Benefit Cost Analysis Summary: We believe that the Benefit Cost Analysis in the Petition is not fully consistent with the principles contained in the BCA Framework Order and undercounts the societal benefits of the Tier 4 program. As a result, we believe that the Commission should:

• Consider the ratepayer impact analysis in the eventuality that the State relies on Tier 4 to achieve its 70x30 and 100x40 CLCPA objectives
• Consider the full benefits of the carbon reduction and air quality benefits from the Tier 4 program over the entire 25-year contract term
• Consistently apply generator margins in the calculation of System Resource Value and Resource Investment
• Consider the considerable value to the State of the Tier 4 investment for the full life of the investment, and not just during the Tier 4 contract period

Undoubtedly at times the benefits of a substantial project can be so encompassing that it is hard to capture their true value. Unfortunately, advocates for the status quo have selectively focused on sections of the Cost Analysis to advance their arguments against action. Many more voices see the compelling positive net societal benefits CPNY and CHPE. The Commission should review the following suggestions regarding the Benefit Cost Analysis and the Ratepayer Impact Analysis and determine that the Projects are undeniably in the Public Interest.

THE TIER 4 CONTRACTS WILL STABILIZE STATE ENERGY PRICES IN AN UNCERTAIN ENVIRONMENT

The CHPE and CPNY contracts are fixed price obligations of the Tier 4 proponents which isolate ratepayers from future supply chain issues and costs, construction cost difficulties, increases in interest rates, increases in the cost of natural gas and other commodities and increases in the cost of operations and maintenance. It is one of the few tools that the State has available to hedge the cost of energy and capacity in an affordable manner that is consistent with the CLCPA objectives.
To take an example: if both CHPE and CPNY projects were operating in January 2022, then we estimate that New York ratepayer would have saved $119.2 million\(^2\) in that month alone, not including any price suppression effects resulting from the increased supply, and not including the capacity value of CPNY (both of which would increase the savings further). While we acknowledge that January’s wholesale electricity prices were high by historical standards, it is not inconceivable that there will be similar instances in the future given general inflationary pressures and price volatility, especially fossil fuel volatility.

As a related note, the Cost Benefit Analysis and Ratepayer Impact Analysis in the Petition both consider a 2% general inflation rate. If today’s considerably higher inflation persists, then the price stabilizing effect will be amplified.

We suggest that the Commission consider the price stabilizing effects of Tier 4, which in our view only further supports the case to proceed with both the CHPE and CPNY contracts.

**CPNY AND CHPE WILL CAUSE FOSSIL RETIREMENTS, IMPROVING AIR QUALITY**

Certain reply comments have recommended that the Commission significantly modify the Tier 4 program to prioritize the retirements of specific fossil generating units by presumably awarding Tier 4 contracts only to proponents who have interests in existing fossil fuel facilities and if the Commission does not do so, projects that existing fossil generators will not retire. In our view, this approach (a) is not necessary, since if the Petition’s energy and capacity forecasts in Figures 2 and 3 are realized (which are predicated on resource adequacy being met), then generators need not be paid to retire: prices will decrease due to the additional supply from Tier 4, and the most inefficient, old and polluting facilities will be the first to retire, (b) creates a potentially perverse conflict of interest, in that a Tier 4 proponent with existing fossil fuel interests could constantly weigh performing under the Tier 4 contracts (and retiring its fossil fuel assets) against its interest in continuing to operate the fossil generator and maybe tempted to benefit significantly from delaying the in-service date of the Tier 4 project.\(^3\)

In addition, we expect that the grid interconnection resources, land and other development assets related to these retired generators will continue to have significant value if repurposed, and that these assets can be put to good use to help achieve the requirements of the CLCPA (including through upcoming offshore wind and other programs), without the specific award of a Tier 4 contract.

**FIRM ENERGY DELIVERIES AND WINTER CAPACITY**

We noted that some reply commentators also mentioned that the CHPE project has not provided capacity in the winter months, and as a result, they posit that the CHPE project will not provide the same benefits as in-state Tier 4 projects that bid with winter capacity. We believe that these statements are counterfactual for the following reasons:


\(^3\) This is especially the case if the Tier 4 proponent owns other fossil assets in addition to the asset that has a retirement commitment under Tier 4 since the price suppression effects from Tier 4 on energy and capacity prices are material.
• As noted in the Petition, it is unclear whether the NYSIO market rules will permit or limit instate HVDC projects to participate in the Zone J Capacity Market on substantially equivalent terms as other resources.\(^4\) It is therefore not clear whether and to which extent instate HVDC projects can provide capacity to Zone J as in-city resources.

• CHPE annual Bid Quantity is 10.4 TWh on a line that has a capacity of 10.95 TWh, which means that if it runs at full capacity during the summer it will need still need to run at \textbf{90\% of capacity during the winter} to meet its Bid Quantity.

• In addition, CHPE has committed to delivering at least 40\% of its annual Bid Quantity during the winter season, which implies that it will be delivering energy at full capacity during the winter for a minimum of 75\% of the time.

• In addition, under the indexed REC structure,\(^5\) CHPE will have very strong economic incentives to bring to bear Hydro Quebec’s significant resources to deliver energy to Zone J during hours of high demand and high prices which includes (a) its existing 40,000 MW fleet, (b) increasing its world-class, low cost onshore wind production capability which peaks in the winter, (c) adding existing hydro capacity (without new impoundments, by for example adding generators to existing dams) and (d) importing energy from its Ontario, New England, New Brunswick and New York neighbors (including similar if not the same resources that bidders who were not awarded Tier 4 contracts would rely on in providing winter capacity) into Quebec through existing transmission lines and delivering such energy into New York City through CHPE, achieving the same result as bidders who were not awarded Tier 4 contracts: delivering energy to New York City when it needs it.

**SELECTING BOTH PROJECTS WILL INCREASE THE CHANCES OF SUCCESS OF AT LEAST ONE PROJECT ACHIEVING COMMERCIAL OPERATION**

Some reply comments expressed a preference for the Commission to only select one of the two Projects. We believe that selecting both projects would dramatically increase the chance that at least one project will be constructed, since NYSERDA entering contracts with the Tier 4 proponents is only the first step in these projects becoming reality.

Both projects must still finalize their development, procure their equipment and construction resources, achieve their final investment decision, and be constructed. New York has witnessed too many “can’t miss” and “needed” projects not come to fruition.

Reducing fossil fuel generation downstate is an intractable problem and requires an “all of the above” solution. We strongly support both projects because it allows the state to take concrete action to achieve abatement of 78 million metric tons of carbon (instead of the 37 to 49 million metric tons if it selected only one project is selected) and a material increase in air quality downstate at a high level of certainty for what in the Petition's

\(^4\) Petition p. 37.

\(^5\) While the Indexed REC structure does reflect market prices, the reference energy price is a monthly all-hours price, which preserves the incentive for proponents to deliver energy during the highest priced hours (e.g., at times of high demand).
analysis is a very similar Net Benefit. In simple terms, selecting both projects doubles the chances of success of achieving the Net Benefits.\(^6\)

**THE PETITION’S RATEPAYER IMPACT ANALYSIS OVERSTATES THE RATE IMPACT**

Boralex strongly supports the position of New York City, CPNY, New York Energy Consumer Council, Hydro Quebec, REBNY and others that the Commission should consider a few items not captured in the Bill Impact Analysis. For example, CPNY states “The ratepayer impact analysis included in the Petition appears only to assess increased CES surcharges to fund the Tier 4 Program. It does not consider ratepayer costs that will be avoided because of the CPNY Project, which, when added to the offsetting factors discussed in the Petition (i.e., sales of Tier 4 RECs to the City of New York and other voluntary purchasers), will offset the costs of the Tier 4 Program and result in net ratepayer savings.”\(^7\)

Specifically, the Commission should consider three areas when reviewing the Petition’s Bill Impact Analysis: (1) taking into account avoided REC costs for the near and long terms, (2) considering price impacts in a manner consistent with the BCA Order, and (3) recognizing that the low Commodity Case combines and conflates the effects of low commodity prices with price effects resulting from the Tier 4 program in a manner that is inconsistent with the principles of the BCA Framework.

**The Analysis Does not Consider Avoided REC Costs**

In several ways, the ratepayer impacts from CPNY and CHPE are overstated, because the analysis fails to capture substantial avoided costs. The calculation of the Ratepayer Impacts should be revisited to include the avoided cost associated with the Contracts.

Specifically, CPNY and CHPE will avoid ratepayer-funded payments to other resources, to meet the Climate Leadership and Community Protection Act (CLCPA)\(^8\) commitments.

It is appropriate to include the avoided cost as a benefit of CPNY and CHPE. This approach to avoided costs is consistent with the Public Service Commission’s evaluation of Offshore Wind, and is consistent with the CES Modification Order in light of the Climate Action Council Draft Scoping Plan conclusions.

The Benefit Cost Analysis calculates the System Resource Value by modeling Tier 4 as incremental to the 70x30 renewable energy goal.\(^9\) However, it does not follow that the avoided REC costs should not be accounted for in the Bill Impact Analysis, for two

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\(^6\) Even in the case that both projects succeed, the only ‘downside’ is that the Net Benefit would be marginally less but the State will have made significant progress in achieving its CLCPA obligations, which, given how intractable the problem of finding a solution to the downstate fossil fuel reliance is, we would categorize as a clear win.

\(^7\) *Case 15-E-0302, Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and Clean Energy Standard Comments Clean Path New York, February 7, 2022* p. 16

\(^8\) Chapter 106 of the Laws of 2019

\(^9\) Petition, appendix C, section 3.3
reasons: (1) there is significant likelihood that but for Tier 4, additional RECs will need to be procured, and (2) the Contracts will, in fact, reduce Tier 1 purchases.

But for Tier 4, Additional RECs Will Likely Need to Be Procured

In the CES Modification Order of October 15, 2020 (the “CES Modification Order”), the Commission established a separate tier, independent of both Tier 1 and the Offshore Wind Standard, because it is necessary to comply with the CLCPA. When considering ratepayer impacts it is helpful to look at these programs collectively in their efforts to achieve the goals of the CLCPA. Specifically, the CLCPA contains two statutory specific goals 1) 70% of statewide electricity come from renewable energy sources by 2030 (70X30) 2) by 2040, that the State achieve a zero-emissions electricity system (100X40). It is proper, and consistent with the OSW Policy Option Paper, that when evaluating the Ratepayer Impacts of Tier 4 to take into account the avoided REC costs, because but for Tier 4 additional RECs will need to be purchased by ratepayers, to achieve the objectives of the CLCPA.

Pursuant to the Clean Energy Standard (CES) New York has established the Renewable Energy Standard (RES) specifically with Tier 1 RECs as the primary procurement mechanisms to meet the 70X30 objective. The CES Modification Order directed NYSERDA to increase procurement for Tier 1 to 4,500 gigawatt hours annually over the 2021 to 2026 period, to meet the 70X30 objective. Additionally, the CLPA requires the Commission to undertake a biennial review of the CES Program, so that the PSC can adjust Program requirements as necessary (to meet 70X30 and 100X40).

The recently released Climate Action Council Draft Scoping Plan 10 has identified electricity demand growth of 65% to 80% by 2050. The electric demand growth will be dependent on the scale and timing of electrification and whether there are other clean alternatives for the transportation and building sectors. The level of electrification will impact the amount of renewable electric generating capacity needed to meet the 70x30 and 100x40 requirements.

After analyzing the projected electricity demand growth, the Climate Action Council Draft Scoping Plan states “The State should continue to evaluate and adjust policies and procurement targets as necessary in order to achieve the Climate Act requirements and goals and deploy renewable energy systems”11. Appendix G of the Draft Scoping Plan is very clear “to achieve 70% renewable electricity by 2030, New York must continue to increase its Clean Energy Standard procurements for large-scale renewables”12. The Commission in the CES Modification Order foresaw this need for flexibility and noted that

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11 Draft Scoping Plan p. 159
“if load exceeds current projections, the State could end up needing the full contemplated schedule of Tier 1 procurements in addition to procurements under Tier 4.”\textsuperscript{13}

This eventuality may become more pronounced if construction and equipment price keep increasing, resulting in additional attrition in other RES tiers.

The CES White Paper justified a complementary Tier 4 program, because but for the Tier 4 program, existing CES programs might not be sufficient to meet the objectives of the CLCPA. The CES Modification White Paper noted:

> “New York City (Zone J) consumed 52,003 GWh in 2019, roughly a third of the statewide total of 155,832 GWh. At the same time, nearly all of the roughly 22,500 GWh of electricity generated within New York City was from fossil fuel-fired generation. Without displacing a substantial portion of the fossil fuel fired generation currently operating within Zone J, the statewide 70 by 30 Target will be difficult to achieve. The location of fossil-fueled generation of this magnitude in the most densely populated area of the State only accentuates the need for change.”\textsuperscript{14}

Consistent with the Offshore Wind Policy Paper,\textsuperscript{15} the Climate Action Council Draft Scoping Plan, the CES Modification White Paper and the CES Modification Order, the Ratepayer Impact Analysis should be amended to consider the avoided REC costs, because, as expressed in the Draft Scoping Plan and contained in the CES Modification Order, if not for Tier 4, additional REC will need to be purchased by ratepayers.

**The Contracts will, in fact, reduce Tier 1 purchases**

Tier 4 contracts contain provisions that allow projects with Tier 1 contracts to also sell their RECs under the Tier 4 program. During the times when those projects sell RECs under the Tier 4 program, NYSERDA will not be buying them under the Tier 1 program. As a result, at least some of the purchases under the Tier 4 program directly reduce the Tier 1 purchases which is a direct avoided cost.

**The Commission should consider including the avoided REC costs in the Bill Impact analysis in order for the state to meet both the 70x30 and 100x40 goals.**

**Price Impacts Analysis is not Consistent with BCA Framework Order**

In BCA Framework Order the Commission makes clear that prince impacts / price suppressions should be “properly reflected in the bill impact calculation”, that such

\textsuperscript{13} [CES Modification ORDER PG 27].  
\textsuperscript{14} White Paper p.10  
\textsuperscript{15} In the Offshore Wind Policy Option Paper, when projecting the ratepayer impacts, the paper mitigated the cost of Tier 1 RECs. The Commission Order adopting the OSW Obligation justified the adoption of the policy in part by accepting the Offshore Wind Policy Option Paper's calculations on ratepayer impact.
The analysis should be conducted by “showing separately the impact both with and without the wholesale market price effect”, and then judgment would be exercised to evaluate “if the disappearance of the price impact as the market adjusts has a disproportionate effect on the bill impact analysis overall”.16

The Petition evaluated bill impact with and without price effects. However, it did so only for the first year, it only evaluated price effects of the wholesale energy prices (and not the capacity prices), and it did not provide guidance to the Commission of how the market might adjust over time and whether such market adjustment would have a disproportionate effect on the bill impact analysis overall.

We believe that it would have been more instructive for the Commission if the Petition calculated the Levelized Lifetime Bill Impact with and without price effects, including energy and capacity, and then offered commentary as to whether the price impact as the market adjusts has a disproportionate effect on the bill impact analysis overall, which would have allowed the Commission to exercise judgement consistent with the BCA Framework Order.

In exercising its judgment, the Commission may want to take into consideration the hedging feature of the Indexed REC contracts. Specifically, the REC purchase program costs automatically decrease if commodity prices increase. In other words, if the price effects dissipate over time, the program costs will automatically reduce, muting the consequences of imperfect foresight with respect to the timing and level of future market adjustments.

We anticipate that the Levelized Lifetime Bill Impact with price effects would have shown significant ratepayer savings, and that NYSERDA, through the case analysis it conducted (cases without Tier 4 and with Tier 4), would have been in a position to provide commentary as to how the energy markets may adjust over time. While not all the information has been with respect to these cases have been provided, Figure 2 (Zone J Energy Price Forecasts) seems to suggest that the energy market would come back towards equilibrium in 2040, and that the Zone J capacity price effects are not only durable but increase over time. If this is indeed the case, then the Levelized Lifetime Bill Impact with price effects may be a much more realistic scenario than the Levelized Lifetime Bill Impact without price effects, and that the price impact as the market adjusts may not have a disproportionate effect on the bill impact analysis overall.

The Commission should consider the Levelized Lifetime Bill Impact without and without price effects, and not just the year 1 impact, and them make a judgment as the timing and level of future market adjustments, taking into account the hedging feature of the Indexed RECs.

16 BCA Framework Order, page 21. While we agree with the Petition that in the BCA Order the Commission references the first-year approach, it only did so as a means to describe the different potential options that were included in the BCA Whitepaper, and it did not endorse this option.
Avoided Capacity Costs Should be Included in the Analysis

The Petition reports that the modeling efforts in respect of capacity price effects “were assessed to be insufficiently robust for inclusion and were disregarded in the analysis, with only energy price effects included”.\textsuperscript{17} We agree that capacity market modeling is difficult and that small changes to assumptions can yield relatively large changes to the results. However, it should not follow that the capacity benefit of Tier 4 should not be considered at all in the Bill Impact Analysis. The Tier 4 program will reduce the need to build incremental in-city emission free capacity in Zone J. As a result, the Bill Impact analysis should reflect the avoided cost of building emission free capacity in Zone J that will not need to be built if the Projects proceed by reducing the program costs by this avoided cost.

We believe that the importance of this point is significantly understated in the analysis as it is intrinsically linked to the retirement of existing generators. For example, Figure 3 (Zone J Capacity Price Forecasts) of the Petition indicates a sharp reduction of capacity prices in Zone J as a result of the Tier 4 program. This reduction will not only save ratepayers significant costs, it will result in retirements of the oldest, most inefficient and polluting fossil fired generators in the City, whether or not those generators are connected to a specific Tier 4 project.

The Commission should account for the reduction in Zone J capacity prices as result of the Tier 4 program in the Bill Impact Analysis, and in its overall analysis of to which degree Tier 4 will cause the retirement of existing fossil generators.

Price Effects in the Low Commodity Case Should be Discounted

NYSERDA presents the Bill Impacts for “High Commodity Prices” and “Low Commodity Prices”. The Low Commodity Price case reflects the average of (a) Wood Mackenzie’s view of Zone J energy prices, and (b) the energy prices resulting from the Tier 4 reference case that includes both CHPE and CPNY (the “Tier 4 Combined Analysis”). The Low Commodity Case therefore takes into consideration two inputs: (a) Wood Mackenzie’s view, and (b) the energy prices resulting from the Tier 4 Combined Analysis case, which is the case where the Tier 4 program materially suppresses energy prices in the short term. In other words, the “Low Commodity Price” case is showing a combined effect of (a) Wood Mackenzie’s analysis yielding lower energy prices than CARIS 2019 and (b) the price suppression effects of the Tier 4 program on Zone J Energy prices. This approach led to significant Lifetime Program Cost and Bill Impact in the Low Commodity Price Scenario because the low energy costs (which were due, in part to the price suppression effects of the Tier 4 program), lead to high REC prices. However, in that case, ratepayers would have enjoyed significant savings due to a material reduction in the statewide energy spend (which the Petition calculated to be between $18.6 billion and $19 billion in the Benefit Cost Analysis). These significant savings were not considered in the Low Commodity Case, and the $18.6 billion to $19 billion savings (as were calculated by the System Resource Value) would have more than offset the $12.2 billion Lifetime Program Cost in the CPNY + CHPE case. In other words, the Bill Impact Analysis took into account

\textsuperscript{17} Petition, Appendix C, page 14
price suppression in the program cost metric used in the numerator of the Bill Impact Calculation but did not include price suppression in the denominator. This is not consistent with the BCA Framework principle that the analysis should “avoid combining or conflating different benefits and costs.”

The Commission should discount the Low Commodity Case as it combines and conflates the effects of low commodity prices with price effects resulting from the Tier 4 program in a manner that is inconsistent with the principles of the BCA Framework.

BENEFIT COST ANALYSIS

Pointing to the results of NYSERDA’s Benefit Cost Analysis, the Independent Power Producers of New York (IPPNY), state “a combination of proposals is not sufficiently compelling to warrant such a major commitment from the State.”18 IPPNY’s conclusion is stark contrast to NYSERDA’s conclusion, in which the Benefit Cost Analysis proves that New York State would achieve substantial net societal benefits from both projects:

“Across a wide range of scenarios, the CPNY and CHPE projects both individually and combined present net societal benefits, allowing for a high level of confidence in the overall conclusion that the societal benefits from the recommended Projects exceed costs and that the Projects thus pass the benefit cost test.”19

While we agree with NYSERDA that they have demonstrated that these projects pass the benefit cost test, NYSREDA in conducing the test adopted certain assumptions that in our view are overly conservative, and which materially undercounted the societal benefits of the Tier 4 projects.

These assumptions included: (1) modeling Tier 4 as incremental to New York’s 70x30 objective; (2) discounting the air and carbon benefits from Tier 4 during the 2030 to 2040 time period; (3) not including generator margins for energy and capacity in the System Resource Value, but including them in Resource Investment; and (4) not attributing any value of these resources to New York state after the Tier 4 contract life.

We believe that each of these four elements would materially increase the results of the Benefit Cost Analysis.

BCA Framework Order

In 2015, the Commission directed the DPS Staff to develop and issue a Benefit Cost Analysis Whitepaper for considering and evaluating proposals made within the scope of the Reforming the Energy Vision (REV) proceeding and related proceedings. Interest in the proceeding was high, with widely divergent, and extensive variety of alternatives, modifications, suggestions, and criticisms directed to the Staff Whitepaper. In January of

19Case 15-E-0302, Regarding Agreements for Procurement of Tier 4 Renewable Energy Certificates Appendix C p16 November 3, 2021
2016, the Commission adopted the Order Establishing the Benefit Cost Analysis Framework. The purpose of the BCA Framework was clear: to “enable(s) the careful comparison of the value of the benefits obtained through a potential project or action against the costs incurred in effectuating that project or action, generally considered through the systematic quantification of the net present value of the project or action under consideration.”

The BCA Framework Order establishes that:

“The BCA analysis should: 1) be based on transparent assumptions and methodologies; list all benefits and costs including those that are localized and more granular; 2) avoid combining or conflating different benefits and costs; 3) assess portfolios rather than individual measures or investments (allowing for consideration of potential synergies and economies among measures); 4) address the full lifetime of the investment while reflecting sensitivities on key assumptions; and 5) compare benefits and costs to traditional alternatives instead of valuing them in isolation.”

1. The Benefit Cost Analysis Did Not Determine the full Net Benefit to the State if New York has to Rely on Tier 4 to Meet New York’s 70x30 Goals

The Benefit Cost Analysis assumes that the Tier 4 program is incremental to New York’s 70x30 objective. As discussed in above, there is a significantly likelihood that New York may need to rely on the Tier 4 program to achieve its 70x30 objective.

In the eventuality that New York does need to rely on the Tier 4 program to achieve the 70x30 objective, the System Resource Value calculated in the Petition likely undercounts the benefits of Tier 4 because: (1) renewables displace the highest cost non-renewable resources first and therefore the assumption that Tier 4 is incremental to the 70x30 objective likely resulted in a lower electricity system cost benefit than would be the case in a non-incremental case and (2) the air and carbon benefits is likely to be higher in a non-incremental case since the marginal emission benefit decreases as more renewables are added to the system.

Since the Commission left open the possibility in the CES Modification Order that the Tier 4 program may be required to achieve the 70x30 objective, we believe it would be prudent for the Benefit Cost Analysis to be supplemented with a non-incremental scenario to allow the Commission to assess the full range of the possible societal benefits of the Tier 4 program. This would be consistent with the BCA Framework principles of listing all benefits and conducting reflecting sensitivities on key assumptions.

The Commission should consider the ratepayer impact analysis in the case that the State relies on Tier 4 to achieve its CLCPA objectives.

\[20\text{BCA Order p.2}\]

\[21\text{BCA Order p.2}\]
2. **Discounting the air and carbon benefits from Tier 4 during the 2030 to 2040 time period**

As the petition states, the Benefit Cost Analysis “does not quantify carbon reduction benefits for the full 25-year Tier 4 contract period or for the lifetime of the Projects beyond the contract period”. Since this does not satisfy the BCA Framework principles, we believe that the commission should include the carbon and air benefits of these projects for the full lifetime of the projects.

**The Commission should consider the full benefits of the carbon reduction and air quality benefits from the Tier 4 program over the entire 25-year contract term.**

3. **The Benefit Cost Analysis Inconsistently Applies Generator Margins in the Calculation of the System Resource Value and the Resource Investment**

To determine the Net Benefit, the Petition subtracted the Resource Investment from the sum of the benefits (System Resource Value, Carbon Value and Air Quality Value).

The System Resource Value was calculated as the “difference between a simulation of electricity system costs in a scenario without the Tier 4 Project, minus those in a scenario with the Tier 4 Project.” Specifically, the market expansion model was used to determine fixed costs (investment capital and fixed operating and maintenance costs), and the market dispatch model was used to determine variable operating and fuel costs for both of the non-Tier 4 and Tier 4 cases, with the sum of these elements being the total resource cost calculation. Consistent with the BCA Framework Order, this societal cost test does not include price suppression effects as it does not calculate the energy and capacity revenues that generators receive but rather is based on the calculated costs of the system. Based on the description in the petition, this benefit analysis appears not to have included any energy and capacity margins that generators would receive, which is not consistent with the how the cost component of the Benefit Cost Analysis was calculated.

Importantly, the Resource Investment was calculated by multiplying each Project’s levelized Strike Price per MWh by the projected generation (Bid Quantity) for each of the 25 years of the Tier 4 contract period. The Resource Investment therefore includes the margin that the Tier 4 proponents would receive above their costs.

Since the Net Benefit compares the System Resource Value and the Resource Investment, it understates the benefit of Tier 4 since the former does not include energy and capacity margins, where the latter does include the margins of the Tier 4 proponents. This approach therefore combines or conflates different benefits of costs and is not consistent with the CES Modification Order that the Benefit Cost Analysis be conducted in accordance with the principles contained in the BCA Order and should be remedied.

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22 Petition, C.4.
23 Petition page 2.
24 Petition C.3.5.
The Commission should consistently apply generator margins in the calculation of System Resource Value and Resource Investment.

4. *The Petition Does Not Account for Any Benefit of the Tier 4 Resources after the Life of the Tier 4 program.*

Committing to both CHPE and CPNY will have long term benefits greater than the life of the Tier 4 Programs. They each represent substantive infrastructure projects that will alter in a positive way, New York’s energy grid for generations. Together they represent historic investment into New York.

New York City and New York State have been defined by large infrastructure commitments. The construction of the Erie Canal, begun in 1817 under New York Gov. DeWitt Clinton. Critics dubbed the $7-million canal “Clinton’s Ditch” but the waterway carried created a cheap route for shipping lumber, wheat and flour, and spurred a canal-building boom. Like the Canal, New York City’s water supply infrastructure began in 1837, with little understanding of its eventual impact. Now for over 150 years, pristine water has flown from upstate reservoirs into New York City. The Erie Canal and the New York City water supply system have spurred the positive growth of State and City and their returns could not properly be judged on a short-term horizon.

Energy infrastructure like water and transportation infrastructure have very long-term returns. Over the past 20 years there have been dozens of studies showing that a robust regional and interregional transmission grid is key to the high penetration of renewable generation. The studies note that transmission can improve grid resiliency by transferring excess renewable generation from one region to cover shortfalls in another. The studies point to the obvious transmission and proper energy markets lead to efficiencies and price stabilization for numerous years.

Investing in CHPE and CPNY will have obvious short-term benefits, but in the long term like the Erie Canal and the NYC Water System, they will help New Yorkers to meet their needs for years into the future. Upon the completion of the contracts each project will be additive to New York’s grid providing access to clean energy and increasing the regional interconnection.

**The Commission should consider the considerable value to the State of the Tier 4 investment for the full life of the investment, and not just the Tier 4 contract period.**

**CONCLUSION**

New York has made substantial progress to addressing the electric sector goals that are contained in the CLCPA. The Commission, DPS Staff and NYSERDA should be commended for the establishment of a nation leading Large Scale Renewable procurement program. That program will be the foundational support for New York State’s efforts to address the goals outlined in the CLCPA.
We believe that the Petition created a compelling case to warrant a major commitment by the State sufficient to support both the CHPE and CPNY Contracts using conservative assumptions, and that if more reasonable assumptions are used, then the case will be very compelling indeed. We support the Petition in recommending that both Projects be approved by the Commission for the reasons set forth above.