

August 30, 2016

Hon. Kathleen H. Burgess  
Secretary to the Commission  
New York State Public Service Commission  
Empire State Plaza, Agency Building 3  
Albany, NY 12223-1350

**Re: CASE 15-E-0302 - Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard.**

**CASE 16-E-0270 - Petition of Constellation Energy Nuclear Group LLC; R.E. Ginna Nuclear Power Plant, LLC; and Nine Mile Point Nuclear Station, LLC to Initiate a Proceeding to Establish the Facility Costs for the R.E. Ginna and Nine Mile Point Nuclear Power Plants.**

Dear Secretary Burgess:

Pursuant to Section 3.7 of the New York State Public Service Commission's ("Commission") Rules and Regulations, H.Q. Energy Services (U.S.) Inc. hereby files a "Petition for Rehearing of H.Q. Energy Services (U.S.) Inc." of the Commission's order issued on August 1, 2016 in the above-referenced cases.

Respectfully submitted,

Carlos Gutierrez

CG/sn

Enclosure

cc: Active Parties (via email)

BEFORE THE  
STATE OF NEW YORK  
PUBLIC SERVICE COMMISSION

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Proceeding on Motion of the Commission to  
Implement a Large-Scale Renewable Program  
and a Clean Energy Standard

CASE 15-E-0302

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Petition of Constellation Energy Nuclear  
Group LLC; R.E. Ginna Nuclear Power Plant,  
LLC; and Nine Mile Point Nuclear Station,  
LLC to Initiate a Proceeding to Establish the  
Facility Costs for the R.E. Ginna and Nine  
Mile Point Nuclear Power Plants.

CASE 16-E-0270

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**PETITION FOR REHEARING  
OF H.Q. ENERGY SERVICES (U.S.) INC.**

I. PRELIMINARY STATEMENT

Pursuant to Section 3.7 of the New York State Public Service Commission's ("Commission's") Rules and Regulations (16 NYCRR 3.7), H.Q. Energy Services (U.S.) Inc. ("HQUS"), the power marketing subsidiary of Hydro-Québec ("HQ") in the United States, hereby petitions for rehearing of the Commission's "Order Adopting a Clean Energy Standard," issued August 1, 2016 in the above-captioned cases.<sup>1</sup>

HQ is one of the largest suppliers of clean energy in North America, producing approximately 200 million MWhs per year system-wide and, historically, supplying approximately 7-10 million MWhs each year to the wholesale electric market in New York. HQ projects export capability in the range of 25-30 million MWhs per year for the foreseeable future,

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<sup>1</sup> Case 15-E-0302 – Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard; and Case 16-E-0270 – Petition of Constellation Energy Nuclear Group LLC; R.E. Ginna Nuclear Power Plant, LLC; and Nine Mile Point Nuclear Station, LLC to Initiate a Proceeding to Establish the Facility Costs for the R.E. Ginna and Nine Mile Point Nuclear Power Plants, Order Adopting a Clean Energy Standard (issued August 1, 2016) ("CES Order").

and new transmission projects are proposed that could bring even larger amounts of clean power into the State. HQ generates more than 99% of its electricity from water, in particular large-scale hydro generation, including impoundment. Hydropower resources, both impoundment and run-of-river, are among the cleanest generation resources available, and impoundment, in particular, can be operated to provide either baseload or dispatchable energy supply. As a dispatchable resource, one that can be dynamically scheduled, hydropower from Québec can help to integrate intermittent generation such as wind and solar in a cost-effective manner, potentially making firm power available to apply to installed capacity reserve margin requirements, while also preserving the environmental characteristics of the supply portfolio.

The Commission adopted a series of initiatives in the CES Order to increase the amount of renewable generation serving retail electric customers in New York, including the adoption of objectives from the State Energy Plan (“SEP”)<sup>2</sup> calling for 50% of New York’s electricity to be delivered by renewable energy resources by 2030. As a preliminary step, the Commission established a baseline of renewables currently serving consumers in New York that would be supplemented under the CES Order by new and incremental renewables to reach the 50% goal. New initiatives in the CES Order include: (i) the promotion of cost-effective energy efficiency programs; (ii) consumer-initiated green energy purchases or investments; (iii) a program to maximize the value potential of off-shore wind; (iv) obligations imposed on load serving entities (“LSEs”) to secure Renewable Energy Credits (“RECs”) from so-called Tier 1 renewable energy sources generated in or delivered into New York; (v) obligations imposed on delivery customers to maintain the contributions of older, small renewable facilities; and (vi) the creation of a Zero-

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<sup>2</sup> Case 15-E-0302, Clean Energy Standard, Order Expanding Scope of Proceeding and Seeking Comments (issued January 21, 2016); Letter from Governor Andrew M. Cuomo to Audrey Zibelman, CEO, New York State Department of Public Service, December 2, 2015 available at [https://www.governor.ny.gov/sites/governor.ny.gov/files/atoms/files/Renewable\\_Energy\\_Letter.pdf](https://www.governor.ny.gov/sites/governor.ny.gov/files/atoms/files/Renewable_Energy_Letter.pdf); The Energy to Lead, 2015 New York State Energy Plan available at <http://energyplan.ny.gov/Plans/2015>.

Emissions Credit (“ZEC”) requirement that LSEs provide financial support to keep certain nuclear facilities in operation.<sup>3</sup>

For reasons unexplained, the CES Order excludes significant amounts of hydroelectric power, including incremental hydroelectric power relying on new storage impoundment, from inclusion in the CES Tier 1 solicitation and REC process. Additionally, the Commission established a baseline calculation of renewable generation that accorded no economic value to attributes associated with such generation and that will hamper New York’s ability to remain competitive with other states in retaining these resources in New York. Finally, the Commission made no provision for inclusion in the CES Tier 1 of incremental renewables delivered over new or expanded transmission line projects that could bring large amounts of renewables into New York. The effect of the CES Order as it now stands is to exclude substantial sources of existing and future hydropower from Québec from CES eligibility, thereby impeding New York from securing available, high volume, clean, and cost-effective renewable energy sources in order to help meet its CES goals.

Due to numerous procedural and substantive infirmities in the CES Order, including determinations that were arbitrary and capricious and unduly discriminatory, HQUS hereby requests that the Commission grant rehearing of the CES Order, revising it to: (a) remove the “no new storage impoundment” requirement for hydroelectric resources (i.e., upgrades and low-impact run-of-river facilities) now eligible for participation in Tier 1 of the CES; and (b) permit new large hydroelectric facilities not qualifying as eligible upgrades or low-impact run-of-river, including facilities relying on storage impoundment, to participate as Tier 1 resources.

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<sup>3</sup> The Commission states that “[w]hile all suppliers are not subject to the Commission’s jurisdiction, the Commission is looking to all suppliers, including NYPA, LIPA and all others, to participate by satisfying their requisite share of responsibility.” CES Order at 8.

HQUS also requests that the CES Order be revised on rehearing to include existing baseline large-scale hydro generation, including impoundment, as a resource eligible to receive value or some form of compensation for environmental attributes that New York receives<sup>4</sup>. Finally, HQUS requests that the Commission permit incremental hydroelectric power, regardless of its date of commencement of operation, to participate as a Tier 1 resource if such incremental power is delivered over new or expanded transmission and/or interconnection facilities to the extent such incremental hydroelectric power is not captured by the other requested modifications to Tier 1 of the CES requested in this Petition.

## II. BACKGROUND

The CES Order is a continuation of a series of Commission and State actions to increase the use of renewable electric generation and to achieve carbon reduction goals by 2030. In 2004, the Commission adopted a Renewable Portfolio Standard (“RPS”) designed to achieve total renewable generation of 25% by 2013,<sup>5</sup> expanding the goal in 2010 to 30% by 2015.<sup>6</sup> In 2008, the Commission adopted an Energy Efficiency Portfolio Standard<sup>7</sup> and New York and eight other Northeastern and Mid-Atlantic states adopted a rule to establish the Regional Greenhouse Gas Initiative (“RGGI”), designed to set a cap on total carbon dioxide emissions from electric generating facilities within the region.<sup>8</sup>

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<sup>4</sup> HQUS is not advocating for a particular form of compensation to recognize the value of environmental attributes related to renewable generation reflected in the baseline. Appropriate compensation can take several forms, including long-term contracts for the procurement of attributes, and HQUS can collaborate with other interested stakeholders to offer alternatives for the Commission’s consideration.

<sup>5</sup> Case 03-E-0188, Retail Renewable Portfolio Standard, Order Regarding Retail Renewable Portfolio Standard (issues September 24, 2004) (“RPS Order”).

<sup>6</sup> Case 03-E-0188, Retail Renewable Portfolio Standard, Order Establishing New RPS Goal and Resolving Tier 1 Issued (issues January 8, 2010).

<sup>7</sup> Case 07-M-0548, Energy Efficiency Portfolio Standard, Order Establishing Energy Efficiency Portfolio Standard and Approving Programs (issued June 23, 2008).

<sup>8</sup> 6 NYCRR Part 242, CO<sub>2</sub> Budget Trading Program, 21 NYCRR Part 507, CO<sub>2</sub> Auction Allowance Program.

In early 2015, the Commission directed a reassessment of New York’s approach for encouraging the expansion of large scale renewable energy generation,<sup>9</sup> and on June 1, 2015, the Secretary issued a notice instituting this proceeding. On June 25, 2015, the State Energy Planning Board adopted the SEP calling for an increase in the electricity to be generated by renewable sources serving New York to 50% by the year 2030. On January 21, 2016, the Commission expanded the scope of the instant proceeding to implement the 50% renewables by 2030 goal, and to address maintenance of certain nuclear plants.<sup>10</sup>

The CES Order adopts standards that implement the SEP “50 by 30” goal. In particular, the CES Order identifies a baseline of existing renewable energy currently serving New York of approximately 41.3 million MWhs, leaving approximately 29.1 million MWhs of incremental renewable energy to be acquired to achieve the 50% goal by 2030. The CES Order then defines eligibility for this incremental (Tier 1) renewable generation that will be needed by 2030 and mandates that LSEs acquire their proportionate share of the RECs associated with these Tier 1 facilities,<sup>11</sup> or, in the alternative, make Alternative Compliance Payments.

In the CES Order, the Commission designates eligible hydroelectric resources for inclusion in Tier 1 (i.e., upgrades and low-impact run-of-river), but prohibits such facilities to use “new storage impoundment” in order to retain eligibility.<sup>12</sup> No other hydroelectric facility resources are deemed eligible as Tier 1 resources, including large-scale hydroelectric with

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<sup>9</sup> Case 14-M-0101, Reforming the Energy Vision, Order Adopting Regulatory Policy Framework and Implementation Plan, at 83 (issued February 26, 2015).

<sup>10</sup> Case 15-E-0302, Clean Energy Standard, Order Expanding Scope of Proceeding and Seeking Comments (issued January 21, 2016). The Commission again expanded the proceeding in February to consider an expedited program to maintain the viability of certain nuclear plants. Case 15-E-0302, *supra*, Order Further Expanding Scope of Proceeding and Seeking Comments (issued February 24, 2016).

<sup>11</sup> Applicable percentage increments are set forth in the CES Order through the year 2021, with subsequent year goals to be determined at a later time. CES Order at 14.

<sup>12</sup> CES Order of Appendix A.

storage impoundment, despite the inclusion of such large-scale hydroelectric generation in the Commission's calculation of the 41.3 million MWhs of baseline renewable generation.

The Commission also assumes, illogically, that New York will retain all of the existing, clean hydroelectric energy currently consumed in the State as part of the baseline, including the approximately 7-10 million MWhs provided every year by HQ and HQUS, without any compensation to HQUS for the renewable value of that power. Failing to provide appropriate economic valuation to baseline generation will render New York uncompetitive in comparison to other markets. Additionally, the Commission assumes mistakenly that New York can meet its incremental renewable goal, maintain system reliability, and maximize cost efficiencies without any new large-scale hydro generation, including impoundment, in the mix. HQUS believes that both assumptions are without a rational basis and that, unless they are changed to include large-scale hydro generation, including impoundment, they will impede the attainment of the 50 by 30 goal at the lowest reasonable cost to New York consumers.

Lastly, the Commission also fails to account for the numerous benefits of incremental renewable power delivered over new or expanded transmission and interconnection infrastructure. Such new facilities, in addition to providing the core capability of making more renewable power available for delivery in New York, will also enhance regional transmission grid stability in New York and bolster the transmission interface between NYISO and other regions. Without recognition for the incremental renewable supply these projects can provide, it is unlikely these projects will come into service, thereby depriving New York of the aforementioned benefits. HQUS urges the Commission to adopt policies on rehearing that will maintain existing renewable supplies, attract abundant incremental clean power into New York,

and eschew the policies currently set forth in the CES Order that would harm New York's competitive position for securing such renewable power.

### III. ARGUMENT

A. The Commission's decision to exclude new storage impoundment hydroelectric power in the CES eligibility is unsupported by record evidence, is arbitrary and capricious, is not the result of reasoned decision-making, and is unduly discriminatory.

1. *The same definitions of renewables should apply to the baseline as the Commission applies to the incremental amounts to be procured under the CES.*

For years, HQUS has been selling into New York between 7-10 million MWhs per year of clean hydropower produced primarily from storage impoundment in Québec. This energy is included in the Commission's calculation in the CES Order of the 41.3 million MWhs of baseline renewables that are already consumed in New York and are assumed to continue to flow in the future. Yet, the Commission has established Tier 1 eligibility criteria for hydroelectric facilities that are limited to upgrades and low-impact run-of-river that in each case do not involve "new storage impoundment." In defense of its position, the Commission states, without further examination or supporting evidence, that "[t]he resolution in [the 2004 RPS] proceeding, that no new storage impoundment will be permitted for any eligible hydroelectric facility, remains reasonable and is not changed."<sup>13</sup> The Commission also points to "an increasing awareness of the climate change impacts of methane and concern over methane releases from large hydro impoundments . . ."<sup>14</sup> As discussed in more detail below, there is nothing in the record that supports or discusses this "concern." Regardless of this "concern" or its 2004 RPS Order, however, the Commission has counted storage impoundment hydropower as a renewable in its baseline calculations. To count it as a renewable in the baseline, but then to disqualify it, in the

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<sup>13</sup> CES Order at 106.

<sup>14</sup> *Id.*

same rulemaking, as an eligible new renewable source, is an arbitrary and capricious, unduly discriminatory decision that is not founded on reasoned decision-making.

2. *The Commission erroneously concluded without substantiation that the 2004 RPS Order determination regarding the exclusion of large impoundment hydro is still reasonable.*

In discussing the eligibility requirements for Tier 1, the Commission noted that the Tier 1 eligibility rules “will mirror the eligibility rules currently used for the Main Tier of the RPS, with the exception that the former 30 MW limit on low-impact run-of-river hydroelectric facilities is eliminated.”<sup>15</sup> The Commission also relied on the RPS Order to support its conclusion to exclude large impoundment hydroelectric from Tier I. Specifically, with regard to the RPS Order and as noted above, the Commission stated:

Several parties argued that there should be no restrictions at all on the eligibility of large scale hydro facilities. This issue was extensively debated in the creation of the RPS, with many parties opposing the environmental impacts of large impoundments, including methane emissions. The resolution in that [RPS] proceeding, *that no new storage impoundment will be permitted for any eligible hydroelectricity facility remains reasonable and is not changed.*<sup>16</sup>

The Commission’s observation that its 2004 determination remains “reasonable” constitutes an unsubstantiated conclusion for several reasons. First, evidence presented in a 2004 proceeding, which was not introduced into the instant proceeding, cannot and should not be referenced to support a rulemaking in this proceeding, twelve years later. The Commission failed to engage in any analysis of the rationale in 2004 to exclude large impoundment hydroelectric and whether that rationale is still valid and applicable to current circumstances. Second, neither the principal documents considered by the Commission in the RPS proceeding, nor the RPS Order contain any discussion whatsoever of methane emissions being an

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<sup>15</sup> CES Order at 105.

<sup>16</sup> CES Order at 105-106 (emphasis added).

environmental impact of large impoundment hydro as stated by the Commission in the CES Order.<sup>17</sup>

Indeed, the Recommended Decision by ALJ Eleanor Stein issued June 3, 2004 (the “RPS RD”) provides no rationale for the Commission’s prohibition against new storage impoundments, let alone a rationale based on methane emissions. Additionally, the Final Generic Environmental Impact Statement issued on August 26<sup>th</sup>, 2004 (“FGEIS”), which notes that the “vast majority of incremental hydroelectric development to fulfill the RPS is projected to come from Canadian imports”,<sup>18</sup> refers to the environmental impacts of hydroelectric plants but does not isolate large impoundments for unique treatment and does not mention methane emission impacts at all. Finally, the RPS Order provides no rationale for the exclusion of large impoundment hydro other than a general reference to minimize the “environmental impacts associated with the development of hydroelectric facilities”<sup>19</sup>, which impacts did not include methane emissions.

In conclusion, the Commission’s reliance on the record supporting the RPS Order for the exclusion of storage impoundment hydroelectric from Tier I, primarily on the basis of perceived adverse methane emissions, is misplaced and constitutes arbitrary rulemaking. The RPS documents and record provide no reasoned support for the exclusion of large hydro impoundment and no mention of the methane-emission environmental impact of such hydroelectric facilities.

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<sup>17</sup> CES Order at 106.

<sup>18</sup> FGEIS at 66.

<sup>19</sup> RPS Order at 34.

3. *The Commission's concerns about methane emissions produced by large-scale hydro generation, including impoundment, are unfounded and unsupported by any record evidence, particularly with respect to such facilities located in Québec and other northern areas.*

The Commission, in four short sentences in the CES Order, summarily disqualified large-scale hydro generation, including impoundment, from the definition of eligible Tier 1 resources. As noted above, this renewable resource has been a significant source of clean power in New York for decades. The Commission's disqualification was purportedly based on "an increasing awareness of the climate change impacts of methane . . . releases from large hydro impoundments, particularly new ones in which flooded vegetation would be decomposing and releasing methane."<sup>20</sup> First, the Commission assumes that methane emissions are an issue in the case of Quebec hydropower, without having reviewed the science associated with greenhouse gas emissions. Second, the purported "increasing awareness" is not supported by any evidence cited in this record or, as cited above, in the RPS proceeding. It is not supported by any discussion of widely-published or universally-accepted facts, studies, analyses, or other evidence that may be extraneous to this record. In fact, it is not supported by anything; it is merely a statement made in a complete vacuum, and, thus, is an arbitrary and capricious conclusion that should not be upheld on rehearing.

The Commission has the obligation to engage in reasoned decision-making, with a rational basis supporting its determinations, and if its rulemaking lacks such foundations, the Commission will be deemed to have acted in an arbitrary and capricious manner.<sup>21</sup> The Commission cannot and should not categorically disqualify a large and important renewable

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<sup>20</sup> CES Order at 106.

<sup>21</sup> *See Matter of Pell v. Bd. of Educ.*, 34 N.Y.2d 221, 231 (1974) (noting that in reviewing an agency decision, a court can apply the arbitrary and capricious test, which chiefly "relates to whether a particular action should have been taken or is justified . . . and whether the administration action is without foundation in fact, and noting that arbitrary agency action is without sound basis in reason and is generally without regard to the facts) (citation omitted).

power source from the CES program based on nothing more than a stated “awareness” and unexplained “concern” about potential methane emissions. Here, the Commission has not referenced or tested the validity of any particular study. It has not measured or discussed the extent or duration of alleged methane emissions from storage impoundment hydroelectric generation. It has not analyzed whether these alleged emissions are significant enough to cause the complete disqualification of an otherwise clean, efficient, and cost-effective source of electric power. It has not examined how the alleged emissions compare to the life-cycle environmental impacts of, for example, wind turbines or solar panels manufactured in other countries and transported to New York.

On the contrary, the Commission has received, and presumably reviewed, evidence submitted by HQUS during the comment period that hydropower developed in Québec has a greenhouse gas emission profile similar to wind power (CES eligible) and less than photovoltaic solar (CES eligible) on a lifecycle basis.<sup>22</sup> In the CES Order, the Commission ignored said evidence, neither examining nor explaining the circumstances under which alleged methane emissions are created nor addressing whether such emissions may be avoided in whole or in part at facilities, such as those owned and operated by HQ, located in far northern regions of North America.

Underscoring the Commission’s lack of reasoned decision-making in connection with its new storage impoundment exclusion is the SEQRA Finding Statement (dated August 1, 2016) attached as Appendix G to the CES Order (the “SEQRA Finding”). The SEQRA Finding reflects a general statement regarding the “prominent environmental impacts” of

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<sup>22</sup> Hydro-Québec, Environnement et développement durable; CIRAIG; Tirado-Seco, 2014, Comparaison des filières de production d’électricité et des bouquets d’énergie électrique, 50 p., annexes. (Study comparing electricity generation options and electricity mixes, available only in French on Hydro-Québec’s website).

“store-and-release hydropower projects” without specifying those impacts.<sup>23</sup> Moreover, there is no reference in the SEQRA Finding to methane emissions associated with hydroelectric power generation, let alone with respect to large impoundment hydroelectric generation.

Interestingly, the SEQRA Finding notes with respect to dam construction that:

[t]he environmental impact of upgrading existing hydroelectric projects or adding energy production facilities and equipment to existing [non-producing dams] is anticipated to be relatively small in comparison to the impacts already incurred and as compared to the benefits of more renewable energy generation.<sup>24</sup>

Inexplicably, the Commission failed to engage in the same balancing of environmental impacts versus benefits in connection with hydroelectric generation involving new storage impoundment.

In fact, the Commission has not discussed these issues at all, creating a potentially fatal gap in its efforts to provide a workable implementation plan for the SEP. HQUS submits that excluding new storage impoundment hydroelectric facilities from CES eligibility is based on an inaccurate characterization of their environmental performance, unsupported assumptions, and the failure of the Commission to make life-cycle comparisons with other renewable power sources. The Commission should grant rehearing and remove the “no new storage impoundment” requirement from the eligible Tier 1 hydroelectric sources (i.e., upgrades and low-impact run-of-river facilities), and expand the Tier 1 eligibility criteria for hydroelectric facilities to include new, large scale hydroelectric facilities, including such facilities with storage impoundments. Otherwise, the Commission will have discouraged and possibly precluded large amounts of available, clean power from contributing toward New York’s CES goals.

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<sup>23</sup> SEQRA Finding at 33.

<sup>24</sup> SEQRA Finding at 34.

- B. The Commission's decision to include HQUS's ongoing hydroelectric sales into New York in the baseline CES determination for achievement of the 50 by 30 renewable goal, but not to make them eligible for attribute valuation is arbitrary and capricious, is not the product of reasoned decision-making, and is unduly discriminatory.

The structure of the CES implementation plan builds on the foundation that energy from large-scale hydro generation, including impoundment, must be included as a renewable for the purpose of establishing a baseline, which baseline must then be supplemented by incremental renewable generation. Specifically, the Commission has calculated that a total of approximately 70.5 million MWhs per year of renewable generation from all sources will be needed by 2030 to meet the 50% renewable goal.<sup>25</sup> Of that 70.4 million MWhs, approximately 41.3 million MWhs per year will come from existing renewable sources. As noted above, HQ supplies approximately 7-10 million MWhs per year of the existing renewable baseline, which totals about 10-14% of the total renewables that New York will need to meet its 2030 goal. HQ's contribution to New York's renewable goals is not insignificant. The CES Order recognizes and assumes that all of the existing renewable hydro power that HQUS currently sells into New York will continue to flow unabated into the State until 2030. The CES Order does not even contemplate a scenario where all or part of that power is diverted to those markets that provide appropriate incentives for low carbon power, or the impacts of that diversion on New York. However, unless New York recognizes the attribute value of HQ's clean hydro power, the Commission's baseline assumptions may prove flawed.

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<sup>25</sup> CES Order at 84.

1. *In order to maintain the same amounts of large-scale hydro generation, including impoundment, that are contained in the CES Order baseline, New York should take steps to remain competitive with other northeastern markets.*

Historically, HQUS's decisions to sell energy have been determined primarily by short-term wholesale electricity prices, in which HQUS looks to maximize sales into regions with the highest energy and capacity prices. However, recent state and provincial policy initiatives, as described below, could fundamentally alter this dynamic, through new incentive programs to secure HQ hydro supplies on a long-term basis. For example, Eastern Canada and New England are currently taking steps to both secure and increase the quantity of hydro supplies in their region to achieve market and policy objectives, such as: meeting RPS obligations cost effectively, increasing fuel diversity, reducing price volatility driven by a growing dependence on natural gas, compliance with state and federal emissions reduction targets, and ensuring reliability during major nuclear refurbishments and retirements. The incentives provided through these efforts will be a major determinant as to which markets HQ exports are committed to in the future.

For the record, the following efforts are underway to procure incremental clean energy resources to cost effectively meet renewable and clean energy goals:

- The Clean Energy RFP<sup>26</sup> was issued November 12, 2015 among Connecticut, Massachusetts, and Rhode Island to solicit proposals for qualified renewable resources and transmission projects providing for the delivery of qualified renewable resources. HQUS submitted two projects into this solicitation, which, if selected, will commit HQUS to delivering up to 9 million MWhs per year of energy into New England for up to 20 years. These bids include an innovative project to combine wind and hydro delivered over new transmission as a firm block of clean energy, made possible through a long-term contract.
- In Massachusetts, legislation has been passed into law requiring utilities to solicit for 9.45 million MWhs of long-term contracts for hydropower and Class I energy

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<sup>26</sup> Notice of Request for Proposals from Private Developers for Clean Energy and Transmission (Nov. 12, 2015).

supplies,<sup>27</sup> in order for Massachusetts to meet aggressive greenhouse gas emissions reduction targets required in the Global Warming Solutions Act.<sup>28</sup>

- In Canada, provincial markets are looking toward incremental deliveries from HQ to meet clean energy goals and aid in market transitions. The capability of HQ resources to deliver clean and controllable energy makes HQ supplies suitable for replacing low emitting baseload nuclear generation during refurbishments, and replacing conventional thermal generation retirements.
- HQ hydro resources can qualify in renewable energy programs in surrounding markets. Within the various state RPS programs in New England, hydro resources from HQ are currently eligible in Vermont<sup>29</sup> and eligible to count towards RPS compliance as a backstop in Connecticut, with hydro procured by utilities under long-term contracts eligible to count towards RPS compliance if certain trigger events occur related to regional REC shortages.<sup>30</sup>

New York is geographically positioned to access abundant renewable resources from neighboring control areas. Because the CES Order set targets well above what the state could reasonably achieve using only in-state generation, it will be required to compete with these surrounding regions for both baseline and incremental new renewable supplies not secured under long-term contract. New York will need to provide hydropower resources sufficient incentives to ensure that it remains competitive in attracting renewable resources into the State. The CES Order ignores these market dynamics and fails to recognize the clean, renewable value afforded by HQ power. Unless the CES Order is revised on rehearing to compensate existing hydroelectric resources reflected in the baseline, including large scale hydroelectric generation with impoundment, for the environmental value of those resources, the Commission risks losing much of that baseline to other, more competitive states.

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<sup>27</sup> An Act to promote energy diversity, Bill H.4568, 2016 Sess. (Mass. 2016), <https://malegislature.gov/Bills/189/House/H4568>.

<sup>28</sup> Global Warming Solutions Act of 2008, 2008 Mass. Acts. 298.

<sup>29</sup> Vermont Act No. 56 (2015), an act relating to establishing a renewable energy standard program.

<sup>30</sup> 2013 Connecticut Public Act 13-303, an act concerning Connecticut's clean energy goals.

2. *The Commission has arbitrarily and capriciously failed to address diminution of the renewables included in its baseline calculations caused by its failure to provide competitive value for the environmental attributes of large-scale hydro generation, including impoundment.*

In its CES Order, the Commission implicitly assumed that the renewables in its baseline will continue to flow into New York without competitive compensation. As noted above, this assumption is arbitrary and capricious and not the product of reasoned decision-making. The Commission's solution to simply adjust the baseline if reductions occur in the future<sup>31</sup> is equally flawed. This is not a remedy or a reasonable response. A revision in the baseline presumably downward, will create a larger gap of renewables that must be incrementally replaced and will not result in the actual procurement of that generation. Nowhere in the CES Order does the Commission acknowledge this gap in its implementation plan and nowhere does it adopt a remedy that explains how additional incremental renewable supply will be identified and procured if the baseline supplies diminish.

3. *HQ sales included in the existing baseline, as calculated by the Commission in the CES Order, are sales of energy only and do not include the environmental attributes associated with that energy. Environmental attributes are separate from the sale of energy and can be sold elsewhere, even if the energy itself continues to flow into New York.*

FERC has held that environmental attributes, unbundled from the wholesale sale of energy and capacity, are not FERC-jurisdictional and can be sold in separate, unregulated transactions.<sup>32</sup> HQUS has not sold to any New York customer, and is not obligated in the future to sell, any environmental attributes that are or may in the future be associated with its baseline energy sales into the State. It therefore remains free to keep the attributes to meet its own compliance requirements or sell the attributes associated with its baseline sales into New York to

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<sup>31</sup> "If any of the renewable resources currently counted in the baseline sell RECs into other markets at some point in the future, the Commission may adjust the baseline in the future, accordingly," CES Order at 85, n. 64.

<sup>32</sup> *Hughes v. Talen Energy Mktg., LLC*, 136 S. Ct. 1288 (2106); see also *WSPP, Inc.*, 139 FERC ¶ 61,061 (2012); *Morgantown Energy Assocs.*, 139 FERC ¶ 61,066 (2102).

buyers in other markets. The attributes (as defined and adopted by other regions) will then be credited to those buyers and retired in the region(s) in which the buyers are located. HQ will need to remove any transferred hydro attributes from the HQ system mix in its internal accounting before these attributes can be counted by another control area and will similarly need to separately account for energy and attributes where they are sold separately into different states or regions (in order to prevent double counting).

The important feature of this process is that New York will not automatically receive the renewable credits associated with energy consumed within the State unless HQ specifically sells such volumes bundled with their environmental attributes. If New York is not able to buy the clean energy attributes associated with its energy purchases from HQ and HQUS, New York will not be able to claim credit for the attributes in its CES program, even if the energy itself keeps flowing.<sup>33</sup> By eliminating HQ's current energy sales reflected in the baseline from eligibility to receive an appropriate form of compensation, the Commission has arbitrarily and capriciously failed to consider the adverse impact on its baseline calculations and, thus, on the State's ability to achieve success in meeting the CES 50 by 30 goal.

- C. The Commission's refusal to treat incremental large-scale hydro generation, including impoundment, regardless of vintage, delivered over new transmission lines as a Tier 1 renewable resource is arbitrary and capricious, unduly discriminatory, and not the result of reasoned decision-making.

The targets outlined in the CES Order will, by all accounts, require significant quantities of incremental renewable energy delivered into New York, supplied from resources within the

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<sup>33</sup> The Commission's failure to recognize the economic value of clean energy attributes related to baseline renewable generation may also lead to confusion and disputes as states grapple with the proper recognition of environmental attributes in an effort to prevent double-counting. *See, e.g.*, Conn. Public Utilities Regulation Authority Docket No. 15-01-03, Declaratory Ruling Regarding Conn. Gen. Stat. § 16-1(a)(20), as amended by PA 13-303, Concerning the Possible Double Counting of RECs, issued March 25, 2015. The Commission's recognition of baseline generation but not the economic value of attributes related to baseline generation may impede efforts by HQ to derive economic value in markets in which regulators may view a geographic separation of recognition of generation and attribute as an impermissible double count.

State and imported from external control areas. While near-term goals may be met with existing infrastructure, interties between New York and adjacent regions may not be sufficient to physically deliver cost competitive renewable energy supplies needed to meet more aggressive goals in future years. Therefore, HQUS has argued that renewable resources, particularly large-scale hydro generation, including impoundment, delivered over new or expanded transmission projects into New York from adjacent control areas should be eligible as a Tier 1 resource.

Renewable energy delivered over new or expanded transmission may represent an avenue for New York to access incremental renewable supplies, procured in a cost effective manner compared to other Tier 1 resources. Incremental supply over new or expanded transmission also provides a number of additional power system benefits, such as improved system reliability, reduced congestion, and increased fuel diversity. The record contains comments from the New York Independent System Operator (“NYISO”) expressing concerns that:

(i) additional transmission capability [will be] necessary to reliably transport energy from renewable resources developed in remote areas, mainly western and northern New York [as well as Ontario and Quebec], to New York’s southeast load centers, (ii) additional energy and ancillary service requirements [will be] necessary to maintain system reliability with the level of intermittent resource penetration required by the CES, and (iii) the State’s resource adequacy requirements resulting from the significant additional intermittent resource penetration required by the CES [is estimated to increase from the current reserve margin of 17.5% to between 40-45%, but could be mitigated through long-term commitments of Canadian hydroelectric imports with historically high performance factors].<sup>34</sup>

In its CES Order, the Commission, in summary fashion, dismissed these potentially serious and costly concerns of the system operator, noting that they reflected the status quo and did not incorporate future advances in technology and system operations.<sup>35</sup> The Commission opined, with no supporting analysis, that:

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<sup>34</sup> Case 15-E-0302. Supplemental Comments of the New York Independent System Operator, Inc., at 2 (citing further discussion at 10-11 (dated July 8, 2016).

<sup>35</sup> CES Order at 73-76.

The NYISO's filing represents a status quo outlook that fails to take into account a *likely* shift in system characteristics and generation location, the ongoing SRP process, the opportunities to deploy new fast-acting resources like storage and the overall system and operations of modernization that will address many of the expressed concerns . . . Similarly, the NYISO's simple declaration that reserve margins may need to increase overlooks the operational characteristics and benefits of a modernizing grid. New York and other states are experiencing a tremendous growth in entrepreneurial innovation and customer participation toward a grid that both incorporates storage technologies and is characterized by increasing levels of dynamic load management . . ."<sup>36</sup> (emphasis added)

In responding in this manner, the Commission arbitrarily and capriciously ignored the analysis of the entity charged with maintaining the reliability of the bulk power system in New York, choosing instead to base its decision on hypothetical new technology and customer initiatives that may or may not occur and may or may not solve the serious concerns expressed by the NYISO.

HQUS does not discount the potential for advancement through new technology or the contributions consumers can make toward efficiencies and cost effective solutions to energy needs. There should be a place in the CES for experimentation and innovation. However, expectations that hypothetical, near-term advances beginning in 2017 through 2030 will resolve all of the issues raised by the NYISO puts at risk not only the success of the CES, but also the reliability of New York's bulk power system, without any regard for the cost or analysis of the real capability of what can be accomplished in the next 13 years. HQUS urges the Commission to reconsider, on rehearing, the need for and value created by new or expanded transmission projects to make additional large hydro resources available to meet the CES goals.

The scale of new or expanded transmission projects can make a substantial contribution toward New York's annual targets, as a new 1,000 MW DC transmission line is capable of delivering over 8.7 million MWhs of renewable energy each year, or almost 33% of the required 29.1 million MWhs of incremental renewable supply needed in New York. In the case of

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<sup>36</sup> *Id.* at 74 (emphasis added).

Québec, new or expanded transmission could allow for a mix of incremental hydro and wind to be delivered into New York. There is abundant, cost competitive wind potential that could be unlocked using new transmission interconnections with New York, and integrated with HQ hydro to deliver a firm and reliable block of renewable energy. Such projects will only be accessible to New York if large-scale hydro generation, including impoundment, is adequately recognized and compensated within the CES program. On rehearing, the Commission should address this potential and allow for solicitations conducted through the CES that award long-term support for incremental renewables delivered over new or expanded transmission. Through this approach, incremental renewable supply paired with transmission can effectively compete with Tier 1 generation through a competitive solicitation which selects the best projects, eliminating unnecessary costs and risks to ratepayers.

- D. The Commission's decision to exclude hydroelectric generation involving new storage impoundment and large scale hydroelectric generation from eligibility as renewable power is contrary to the public policy goals of New York and the Commission's obligation to ensure reliability and cost-effective electric service to consumers within the State.

Meeting the 50% CES goal will require New York to procure several times the renewable generation that was procured through RPS solicitations during the period 2011 to 2015,"<sup>37</sup> and an inclusive approach that utilizes all clean technologies. However, the CES Order excludes from CES eligibility generation using impoundments, which is a clean, cost-effective and potentially system-enhancing form of energy. In addition to being arbitrary and capricious and unduly discriminatory, as argued above, this decision leaves New York without a credible means to cost effectively meet its goals and, hence, is contrary to public policy.

If historic HQ hydro supplies cannot be secured by New York (due to overly restrictive eligibility requirements and/or insufficient incentives to keep these supplies in New York), the

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<sup>37</sup> CES Order at 16.

State will backslide from current renewable levels. In turn, the State will first have to replace this volume of renewable energy before any progress can be made towards the 50% by 2030 objective. HQ historically supplies approximately 7-10 Million MWhs of clean hydropower energy into New York each year. To put this into perspective, these deliveries are more than the total quantity procured under the main tier RPS solicitations conducted over the past 10 years. Thus it is critical for New York to secure the hydro historically supplied by HQ.

1. *New York's ability to meet CES goals by 2030 is put at risk without the inclusion of compensation to retain existing baseline renewables and without the inclusion of large-scale hydro generation, including impoundment, as an eligible Tier 1 resource.*

Large-scale hydro generation, including impoundment, from HQ is one of the most cost-effective and scalable renewable resources. Impoundment hydro can operate as either a baseload or dispatchable resource, which can be used to help firm and integrate intermittent renewables. As compared to dispatchable gas generation, impoundment hydro is the preferred environmental choice. It also addresses many of the concerns outlined by the NYISO in its July 8, 2016 supplemental comments, as summarized above. Notably, the impact on New York's resource adequacy requirements from the significant addition of intermittent resource penetration can be substantially mitigated by combining these intermittent resources with HQ's dispatchable hydropower.

As discussed in detail above, New York will face the possibility of losing an annual 7-10 million MWhs related to HQ historical deliveries into New York if there is no compensation to HQ for the renewable attributes of its hydropower. Due to incentives in other states, HQ is likely to shift sales from New York to other markets with more favorable treatment of large-scale hydro, and New York cannot count HQ imports in its renewable baseline without receiving the underlying attributes.

In today's market and with the initiatives being taken by New England states to incentivize large scale hydro projects, wholesale energy and capacity revenues for future hydropower sales from Québec to New York are not sufficient to attract incremental deliveries over either new or existing interfaces. With the elimination of incentives for hydropower sales in the CES Order, New York is left without a funding mechanism to enable new projects to deliver incremental hydro energy into the State.

As a result of the exclusions in the CES Order, New York has discouraged adding incremental hydro power through new or expanded transmission interfaces and effectively precluded the development of new projects delivering incremental hydro supply to New York to serve its renewable goals, potentially making such goals unattainable. Additionally, the CES Order weakens New York's ability to maintain the baseline of HQ renewables at historic levels, further putting at risk the CES goals which the instant rulemaking was designed to implement. Exclusion of renewable projects based on unsupported assumptions and misplaced conclusions will only increase costs to ratepayers by not allowing the procurement of what would otherwise be the most cost effective and desirable resource.

#### IV. CONCLUSION

For the reasons set forth herein, the Commission should grant rehearing of the CES Order and revise it to: (i) remove the "no new storage impoundment" requirement for hydroelectric resources (i.e., upgrades and low-impact run-of-river facilities) now eligible for participation in Tier 1 of the CES; (ii) permit new large hydroelectric facilities not qualifying as eligible upgrades or low-impact run-of-river, including facilities relying on storage impoundment, to participate as Tier 1 resources; (iii) include existing baseline sales of large-scale hydro generation as a resource eligible to receive value or some form of appropriate compensation for environmental attributes that New York receives; and (iv) include large-scale hydro generation,

including impoundment, of any vintage (not captured in request (i) or (ii) above) that is delivered over new or expanded transmission lines, as Tier 1 resources.

Respectfully submitted,

Nicholas A. Giannasca  
Carlos E. Gutierrez  
Davis Wright Tremaine LLP  
1251 Avenue of the Americas  
New York, New York 10020  
(212) 603-6406  
nicholasgiannasca@dwt.com  
cgutierrez@dwt.com

*Attorneys for H.Q. Energy Services (U.S.) Inc.*

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