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VIA ELECTRONIC FILING

Hon. Michelle L. Phillips, Secretary
New York State Public Service Commission
Three Empire State Plaza
Albany, NY 12223-1350

Re: Case 15-E-0302 – Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and Clean Energy Standard: Order Initiating Process Regarding Zero Emissions Target, Notice Seeking Further Comment (Issued October 20, 2023)

Dear Secretary Phillips:

Young/Sommer LLC is submitting these comments on behalf of Taylor Biomass Energy, LLC (TBELLC) in response to the October 20, 2023 New York State Public Service Commission (PSC) notice (the “October 20, 2023 Notice”) seeking further comment on the PSC’s May 18, 2023 “Order Initiating Process Regarding Zero Emissions Target” (the “May 18, 2023 Order”).

The May 18, 2023 Order responded to a petition filed by the Independent Power Producers of New York, Inc. and others (“Petitioners”) asking the PSC to establish a program to encourage private sector investment in zero emissions energy systems—defined in the petition as systems, other than renewable energy systems, that generate electricity or thermal energy through the use of technologies that do not lead to a net increase in greenhouse gas (GHG) emissions. The 2019 Climate Leadership and Community Protection Act (CLCPA) requires 70% of electricity to be generated from “renewable energy systems” by 2030, with “renewable energy systems” defined to include primarily traditional renewable energy technologies such as solar, wind and geothermal. By 2040, the statute requires only that the statewide electrical demand system be “zero emission,” without defining what “zero emission” means. New York Public Service Law (PSL) §66-p(2). Citing studies by the New York Independent System Operator (NYISO) and others, the Petitioners expressed concerns that “renewable energy systems” alone cannot ensure a reliable energy grid, and that new types of resources were needed to achieve the

CLCPA's zero emission target. While the PSC declined to adopt Petitioners' recommendation to establish a new Clean Energy Standard (CES) tier to encourage development of zero emission sources, they nevertheless sought input from stakeholders on alternatives for addressing the reliability gap by identifying possible "zero emission" technologies that can support reliability once conventional fossil fuel generation is removed from the system. As part of this inquiry, the PSC sought feedback on, among other things, how the term "zero emission" should be defined. The May 18, 2023 Order included 14 questions, many of which were targeted directly or indirectly at what types of technologies should be considered "zero emission." After reviewing the comments received in response to the May 18, 2023 Order, the PSC issued the October 20, 2023 Notice, which contained six additional questions on the "zero emission" and related issues. Young/Sommer is submitting these comments on behalf of TBELLC to address those questions relevant to its proposed waste gasification system, which is described below.

As discussed in its comments submitted in response to the May 18, 2023 Order, TBELLC and Taylor Holding Group, Ltd. (THGLTD), Taylor's real estate and permit holding company, received solid waste and air permits from the New York State Department of Environmental Conservation (DEC) in 2010 to construct a biomass gasification facility (the "Taylor Biomass Facility" or "Facility") at the site of the existing Taylor Construction and Demolition Debris processing facility in the Town of Montgomery, Orange County. The planned Facility will receive construction and demolition (C&D) debris, unadulterated wood waste, and municipal solid waste (MSW), which will be processed in an enclosed facility using an innovative mixed MSW waste separating system that separates recyclable material from biomass. All received waste will be processed and separated in enclosed buildings to capture and remove non-organic material suitable for recycling. The remaining waste (i.e., the biomass feed material) will be transported via an enclosed conveyor system to a biomass fuel storage area located within the Post Collection Separation Structure and then to the gasifier, which will convert the feed material into a gaseous fuel by reacting it at high temperatures in an oxygen-free environment. The gaseous fuel will be routed to a combined cycle power generation system consisting of a combustion turbine generator (CTG) capable of producing approximately 15 megawatts (MW) of power coupled with a steam turbine generator producing between 8 and 10 MW of power. Approximately 3 MW of the electricity generated by the combined cycle system will be used to power the Taylor Biomass Facility while the remainder will be conveyed to the electric grid via an existing Central Hudson Gas and Electric substation located adjacent to the Taylor property.

As set forth in TBELLC's earlier submission, although the gasification process will generate GHG emissions (the vast majority of which are associated with operation of the CTG), these emissions are approximately 66% lower on a carbon dioxide equivalent (CO₂e) basis than those that would otherwise occur if the same amount of MSW were landfilled. The Project is thus consistent with the 2022 Climate Action Council Scoping Plan ("Scoping Plan"), which calls for significantly reducing the landfilling of solid waste to reduce GHG emissions. Furthermore, the sorted biomass fuel for the gasification process is 100% biogenic material. Also, the Taylor Biomass Facility will reduce GHG and other emissions associated with waste transportation by allowing the materials to be handled locally. Finally, the Project will provide between 17 and 20 MW of electricity to the downstate electrical grid in advance of the planned closure of the "peaker" and natural gas-fired power plants contemplated by the Scoping Plan.

The issue raised by the May 18, 2023 Order and October 20, 2023 Notice is what types of technologies beyond traditional “renewable energy systems” as defined in the statute should be considered zero emission for purposes of PSL §66-p. For the reasons set forth in response to the questions below and TBELLC’s previous submission, the PSC must define the term to include all technologies that will result in a net zero GHG emissions.

New York’s history suggests that the State is unlikely to meet the CLCPA’s ambitious target of generating 70% of electricity in the State from renewable energy systems by 2030. Over the years, New York State has adopted a host of initiatives to reduce GHG emissions and/or encourage renewable energy development. Key initiatives focused specifically on electricity generation include, but are not limited to: Regional Greenhouse Gas Initiative (RGGI) (2009) (establishing multi-state GHG emission cap-and-trade program designed to reduce CO₂ emissions from fossil fuel-fired power plants); New York Public Service Law Article 10 (2011) (establishing unified review process for new, repowered or modified major electric generating facilities); New York Reforming the Energy Vision (REV) Initiative (program to identify regulatory, infrastructure, and market-based barriers to realizing New York’s energy goals); Clean Energy Standard (imposing mandatory renewable procurement requirements on the State’s electric utilities); and Accelerated Renewable Energy Growth and Community Benefit Act of 2020 (replacing Article 10 with expedited process for siting renewable energy projects overseen by the newly created Office of Renewable Energy Siting (ORES)). As the table below makes clear, these initiatives have thus far failed to significantly increase the amount of renewable energy generation in New York.

Comparison of Installed Summer Generating Capacity by Fuel Type in New York State in 2012 and 2023 (in MW)¹

Generator Fuel	2012 Capacity	Percent	2023 Capacity	Percent
Gas	6,124	15.7%	4,592	12.4%
Oil	3,309	8.5%	1,995	5.4%
Gas & Oil	14,365	36.9%	19,080	51.3%
Coal	2,370	6.1%		
Nuclear	5,263	13.5%	3,305	8.9%
Pumped Storage	1,407	3.6%		
Hydro	4,279	11.1%	4,265	11.5%
Wind	1,363	3.5%	2,051	5.5%
Solar			154	.4%
Energy Storage			1,407	3.8%
Other	422	1.1%	330	.9%
Total	38,902		37,178	

In 2012, the percentage of electricity supplied by fossil fuels (consisting of natural gas, oil, and coal) was 67.2%. By comparison, the percentage of electricity supplied by fossil fuels

¹ NYISO, *2012 Load and Capacity Data*, Table II-1 (Revised May 2016); NYISO, *2023 Load and Capacity Data*, Table II-1a (2023). Microsoft Word - 2012_GoldBook_V3.doc (nyiso.com) and <https://www.nyiso.com/documents/20142/2226333/2023-Gold-Book-Public.pdf> (last viewed January 3, 2024).

(consisting of oil and natural gas) in 2023 was 69.1%, 1.9 percentage points higher than in 2012. During that same period, the percentage of electricity generated from renewable sources (consisting of hydroelectric, wind, solar, and “other”) increased from 15.7% in 2012 to 18.3% in 2023; however, approximately 63% of the State’s renewable energy capacity in 2023 derived from hydropower. Thus, despite all the State’s past efforts to encourage renewable energy development, as of 2023, renewable energy sources (excluding hydropower) comprised only 2,535 MW (6.8%) of the State’s 37,178 MW electricity generating capacity.

Of equal note, the total electricity generating capacity of the State actually declined from 2012 to 2023 despite the State’s many initiatives to encourage renewable energy development. This decrease is attributable to various factors, including the closure of the Indian Point nuclear power plant. Assuming the goals of the Climate Action Council’s Final Scoping Plan are successful—and significant strides are made in electrifying the State’s transportation and building sectors—the State will need to generate more electricity, not less. To date, however, there is no evidence that State can meet its electricity needs in the foreseeable future by relying solely on “renewable energy systems” as defined in PSL §66-p.

A review of the State’s renewable energy project development history to date illustrates the problem. Only two renewable energy projects approved by the DPS’s Board of Electric Generation Siting and the Environment under the previous Article 10 review process are identified as “operational” on the DPS website. *See* <https://dps.ny.gov/projects-under-review>. Since its formation in 2020, ORES has granted permits to 15 solar and wind projects. *See* <https://ores.ny.gov/permit-applications>. However, as the Commission is well aware, approximately 60% of onshore renewable projects that were awarded contracts have cancelled their agreements with the New York State Energy Research and Development Authority (NYSERDA) in the face of rising costs that make the agreed-upon prices unworkable.² This development resulted in the loss of considerable renewable energy capacity following a similar move by the developers of several major offshore wind projects. Although many developers are expected to submit proposals for the same projects as part of a new NYSERDA solicitation, these developments severely threaten the State’s ability to meet its CLCPA goals by the deadlines specified in the law.

Even assuming New York’s achieves its “renewable energy system” 70x30 goal (which is highly unlikely), New York has not identified how it will achieve systemic reliability in the absence of sources such as fossil fuel-fired power plants that can be easily dispatched to meet energy demands when the wind doesn’t blow and the sun doesn’t shine.

With this background in mind, TBELLC responds to the relevant questions in the October 20, 2023 Notice as follows:

Question 1

PSL §66-p does not expressly indicate whether “zero emissions” refers to greenhouse gas emissions only, or greenhouse gases and also the co-pollutants referred to elsewhere in the

² Marie French, *More renewable projects cancel New York contracts*, PoliticoPro (Dec. 21, 2023) at POLITICO Pro | Article | More renewable projects cancel New York contracts (last viewed Jan. 16, 2024).

CLCPA. Commenters offered different interpretations. Staff asks for further comment on this issue. Does the CLCPA, the PSL, and other relevant sources of authority argue for reading “emissions” in the term “zero emissions” as encompassing all air pollutants, greenhouse gas emissions only, or some other subset of air pollutants?

Response: The term “zero emission” in PSL §66-p is properly read as including only GHGs. The focus of PSL §66-p is on how electricity should be generated in New York. The law requires the PSC to establish a program requiring that 70% of electricity in New York State be generated by “renewable energy systems” by 2030, with “renewable energy systems” defined as “systems that generate electricity or thermal energy through use of the specific technologies” such as solar, wind, and geothermal. Under PSL §66-p, by 2040, “the statewide electrical demand system will be zero emission.” These “targets” may, however, be modified upon consideration of factors such as reliability.

The PSC’s focus under the PSL is—and should be—on achieving the climate change goals of the CLCPA. Their sole concern for the purpose of defining “zero emission” should be GHGs. Issues relating to the regulation of “co-pollutants” should be addressed in the context of the State’s existing air permitting process. As the PSC is aware, DEC has a decades-long program in place to assess the potential impact of projects on air quality that includes both strict air emission standards and a rigorous air permitting program. Air quality also is assessed and regulated under the State Environmental Quality Review Act (SEQRA). These programs ensure that emissions of air pollutants meet all applicable federal and New York State standards and prevent emissions from adversely impacting those living near new and existing air pollution sources.

With respect to disadvantaged communities specifically, DEC already has guidance in place to protect the interests of environmental justice areas. *See* Commissioner Policy CP-29, *Environmental Justice and Permitting* (Mar. 19, 2003). In addition, the CLCPA includes provisions designed to protect such communities from emissions of “co-pollutants”. Among other things, Section 7(3) of the CLCPA requires State agencies, when considering permits and other approvals, to, among other things, “prioritize reductions of greenhouse gas emissions and co-pollutants” in disadvantaged communities. To facilitate compliance with this mandate, DEC has proposed guidance to staff on implementing Section 7(3). DEC Program Policy DEP-23-1, *Permitting and Disadvantaged Communities under the Climate Leadership and Community Protection Act* (Sept. 27, 2023 Draft).

In light of these existing and proposed requirements and guidelines, there is simply no need to consider non-GHG emissions in assessing whether a particular technology should be considered “zero emission” for purposes of PSL §66-p. Any project that necessitates any type of permit or approval from a state or local agency must undergo a SEQRA review that includes air quality impacts from both stationary and mobile sources. Construction of stationary air pollutant sources also must be assessed in relation to the State’s air quality and permitting regulations, which together ensure that the facility’s air emissions do not adversely impact public health or the environment. The specific concerns of disadvantaged communities are addressed under CLCPA §7(3). Considering

emissions of non-GHGs in deciding whether a particular technology is “zero emissions” for purposes of PSL §66-p is simply unnecessary.

Question 2

Multiple commenters discussed the relationship between the term “zero emissions” and the term “net zero emissions,” which appears elsewhere in the CLCPA but not in the provisions to be codified in the PSL. Staff asks whether the Commission must read these terms as distinct, and if so, how the commission should characterize and apply the distinctions between them.

Response: The term “net zero emissions” appears only twice in the CLCPA and is not defined. ECL §75-0103(11) requires the Climate Action Council’s Scoping Plan to address “reduction of emissions beyond eight-five percent, net zero emissions in all sectors of the economy”). In other words, “the Scoping Plan to be developed by the Climate Action Council . . . [was required] to achieve net zero emissions, in addition to reducing emissions 85% by 2050 from the 1990 estimated baseline.” DEC, Part 496 Regulatory Impact Statement, p. 6. Section 75-0103(11) thus establishes a 2050 net zero emissions target in addition to requiring an 85% reduction in statewide GHG emissions from 1990 levels. ECL §75-0109(4)(a), meanwhile, provides that the “department may establish an alternative compliance mechanism to be used by sources subject to greenhouse gas emissions limits to achieve net zero emissions.” This provision allows—but does not require—DEC to establish alternative compliance mechanisms, such as offsets, to achieve the net-zero emission goal.

Under these provisions, the concept of net zero emissions arises in the context of assessing whether the State is achieving the statewide GHG emission limit and/or net zero emission goal of the CLCPA. These provisions are not directed at evaluating the merits of individual projects (including their consistency with the goals of the CLCPA), nor do they instruct DEC or—more importantly, the PSC—on what types of projects should be considered “zero emission” and therefore allowed under PSL §66-p. The term “net zero emissions” as used in the ECL Title 75 is not relevant to the concept of “zero emission” in PSL §66-p(2). The PSC may interpret the concept of “zero emission” under PSL §66-p(2) consistent with its mandate—to promote the transition to renewable energy systems while ensuring “safe and adequate electric service in the state under reasonably foreseeable conditions.”

The PSC recognized it has discretion to interpret the concept of “zero emission” when it made the following observation with respect to biofuels in the May 18, 2023 Order:

[T]he Commission notes that DEC considers the emissions from the combustion of biomass to contribute to gross emissions under the CLCPA [footnote omitted]. This is relevant to, though not necessarily determinative of, whether the use of biomass as fuel for power plants can be considered zero-emissions for the purpose of compliance with PSL §66-p(2), or net-zero for purposes of the CLCPA’s separate net-zero emissions target. Order, p. 14.

In making this observation, the PSC is effectively acknowledging that while DEC may consider only emissions associated with the combustion of biomass (and not offsetting reductions from carbon sequestration) in assessing whether the State is meeting the statewide emission limit, the PSC is not bound by that decision for purposes of deciding whether a biomass power plant can be considered a “zero emission” source under PSL §66-p(2).

Likewise, the PSC should consider alternative waste management strategies—such as TBELLC’s proposed biomass facility—that will result in a “net” reduction in GHG emissions. As set forth above and in TBELLC’s previous submission, managing MSW-based biomass in the proposed gasification facility will reduce GHG emissions on a carbon dioxide equivalent basis by 66% when compared to landfilling a comparable quantity of MSW. At the same time, the process will generate between 20 and 24 MW of electricity, all but 3 MW of which will be supplied to the downstate electrical grid at a time when it is desperately needed to preserve system reliability. This electricity will be generated from biogenic material that is regarded by most states in the United States as “zero carbon” fuel. Finally, diverting MSW to the Facility will preserve New York’s rapidly dwindling landfill space. While the Scoping Plan calls for adopting measures to significantly reduce waste generation with the goal of reducing GHG emissions from landfilling, landfills cannot be wholly eliminated. By diverting MSW from landfills to gasification, the TBELLC project will free up space for wastes that must be landfilled while at the same time reducing overall GHG emissions and generating much-needed electricity downstate.

From a policy perspective, interpreting the term “zero emission” in the PSL to encompass technologies that will result in an overall reduction in GHG emissions is the best means of ensuring that the GHG emission reduction goals of the CLCPA are achieved without crippling the reliability of New York’s electrical grid. As the recent NYISO reports make clear, even if New York succeeds in achieving its 70% by 2030 renewable energy goal, the State will need sources that provide a consistent supply of electricity. Currently, this need is met by nuclear and fossil fuel-fired power plants. As fossil fuel-fired power plants are phased out, the State will need alternatives that are both reliable and consistent with the goals of the CLCPA. Until “GHG emissions-free” options are identified and implemented, New York should encourage development of options—such as the proposed TBELLC Biomass Facility—that achieve net GHG emission reductions when viewed holistically.

Question 3

The Commission’s Initiating Order notes that the Department of Environmental Conservation (DEC), pursuant to regulations it adopted at 6 NYCRR pt. 496 under the Environmental Conservation Law as amended by the CLCPA, has counted the emissions arising from the combustion of biomass for electricity on a gross rather than a net basis. Staff asks for further comment on whether DEC’s emissions accounting regulations constrain or otherwise inform the Commission’s definition of the phrase, “by the year [2040] the statewide electrical demand system will be zero emissions.”

Response: Consistent with the response to Question 2 above, DEC’s decision to count emissions from the combustion of biomass for electricity on a gross rather than net basis, should not constrain or otherwise inform the PSC’s interpretation of the 2040 “zero emission” target under the CLCPA. The “statewide greenhouse gas emissions limit” is intended solely to provide a metric by which to assess the State’s progress in achieving the 40x30 and 85x50 GHG emission reduction goals of the CLCPA. In establishing the metric, DEC adopted a conservative approach with respect to biomass when it determined that it would not consider the climate change benefits of biomass—such as the carbon sequestration benefits of growing trees that are then used for fuel (i.e., the “biogenic” nature of the biomass materials)—in setting the statewide GHG emissions limit. That decision should not affect whether the PSC considers the benefits of biomass in determining whether a particular technology should be considered a “zero emission” technology for purposes of PSL §66-p(2). As noted above, the State cannot hope to simultaneously achieve the GHG emission reduction goals of the CLCPA while preserving the reliability of its electrical grid without pursuing a broad range of technologies. Such technologies should include biomass-based systems that result in a net emission reduction (by carbon sequestration in the case of biomass combustion and landfill diversion, in the case of MSW-based biomass gasification).

Question 4

Defining an emissions limit requires specifying, among other things, which elements of the lifecycle of a given emissions source are to be counted, and the threshold level above which emissions from that source are impermissible or disqualifying. Staff seeks comments on what discretion the CLCPA leaves for the Commission when it specifies each of these parameters.

Response: The CLCPA provides little guidance on precisely how lifecycle GHG emissions are to be considered or on the establishment of threshold levels above which emissions from a source are impermissible or disqualifying. The definition of “statewide greenhouse gas emissions” at ECL §75-0101 includes total annual manmade GHG emissions produced within the state as well as GHGs “produced outside of the state that are associated with the generation of electricity imported into the state and the extraction and transmission of fossil fuels imported into the state.” This definition arguably captures the lifecycle GHG emissions associated with the production of fossil fuels produced outside the State that are imported into the State (presumably for use within the State). Beyond this definition, the CLCPA offers no direction on how to address lifecycle GHG emissions under the Act.

This omission should not deter the PSC from considering the obvious lifecycle GHG costs and benefits of technologies in deciding whether they should be considered “zero emission.” Key factors (i.e., parameters) to consider in assessing GHG emissions are whether the emissions/emission reductions are “real” and “quantifiable.” The review should encompass not only the direct GHG emissions associated with the particular technology but any emissions impacts (increases and decreases) that can reasonably be attributed to implementation of the technology. In the case of the proposed TBELLC Biomass Facility, for example, the analysis should include: (1) GHG emission increases associated with operation of the gasification facility; (2) GHG emission decreases

associated with removing MSW from landfills and managing it at the gasification facility; and (3) the changes in GHG emissions from trucks associated with managing the MSW at the gasification facility rather than landfilling it. As demonstrated in TBELLC’s previous CLCPA consistency submission (included as part of TBELLC’s comments concerning the May 18, 2023 Order), these emission increases/decreases are both real and quantifiable. The analysis shows that the proposed biomass gasification facility will result in a net decrease in GHG emissions associated with the management of MSW and should therefore be considered a “zero emission” technology for purposes of PSL §66-p.

NYSERDA recognized the climate benefits of TBELLC’s gasification technology in December 2018 when it approved TBELLC’s application for Tier 1 renewable energy credits (RECs) after finding that the proposed Facility can be expected to be compliant with the Tier 1 Renewable Energy Standard (RES) eligibility criteria. The provisional certification reflected NYSERDA’s determination that the gasification system—when fueled by eligible biomass and subject to an ongoing feedstock testing plan—constituted “clean” energy. The same rationale justifies a similar determination by the PSC that the gasification technology is “zero emission” under PSC §66-p.

Beyond requiring that emission increases and decreases be “real” and “quantifiable,” it will be difficult for the PSC to establish specific parameters or set thresholds for purposes of deciding which technologies should qualify as zero emission. Each technology will require a different approach to assessing its GHG emission impacts. Rather than attempting to establish parameters and thresholds up front, the PSC should have discretion to decide whether a particular project/facility is zero emission. The information necessary to make that decision will, in most cases, be assembled by DEC as part of the consistency review required under CLCPA §7(2) for projects seeking State approval.

We appreciate the opportunity to comment on this important matter. If you have any questions regarding this submission, please do not hesitate to contact me.

Very truly yours,

Elizabeth M. Morss

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