

**BEFORE THE
STATE OF NEW YORK
PUBLIC SERVICE COMMISSION**

Proceeding on Motion of the Commission To	)	
Implement Large Scale Renewable Program	)	Case 15-E-0302
And a Clean Energy Standard	)	

**COMMENTS OF SHELL ENERGY NORTH AMERICA (US), L.P. AND
SHELL NEW ENERGIES LLC ON WHITE PAPER PROPOSING CLEAN ENERGY
PROCUREMENTS TO IMPLEMENT THE
CLIMATE LEADERSHIP AND COMMUNITY PROTECTION ACT**

Building on the efforts of the New York State Public Service Commission (“Commission”) to develop a Clean Energy Standard (“CES”) program in this and related proceedings, Staff of the Department of Public Service (“Staff”) and the New York State Energy Research and Development Authority (“NYSERDA”) issued a “White Paper” on June 18, 2020 proposing a regulatory structure to address the requirements of the Climate Leadership and Community Protection Act (“CLCPA”) enacted in 2019. The Commission established a schedule for comments on the White Paper that calls for final comments by interested parties to be submitted by August 31, 2020.¹ Shell Energy North America (US), L.P. and Shell New Energies LLC (collectively, “Shell”)² hereby submit these comments in support of the overall approach outlined in the White Paper and offers recommendations on how to better harness wholesale power markets and Renewable Energy Credit (“REC”) markets and integrate offshore wind (“OSW”) projects into the bulk power electric

¹ See NYPSC Case 15-E-0302, *Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard*, “Notice Scheduling Technical Conference and Soliciting Comments” (issued June 30, 2020) (“Notice”). The CES program was implemented in 2016. See NYPSC Case 15-E-0302, *supra*, “Order Adopting a Clean Energy Standard” (dated August 1, 2016) (hereinafter, “CES Order”).

² Both companies are indirect subsidiaries of Royal Dutch Shell PLC.

system as well as expand the use of hydrogen in a way that will help New York State achieve its CLCPA goals faster and more efficiently.³

In line with the nation-leading efforts being undertaken in New York State to combat climate change, Shell has ambitious plans to participate in the development of renewable resources and reduce its carbon footprint. Shell supports the goals of the Paris Agreement to limit the rise in global temperature well below 2°C and, to that end, Shell has set for itself an ambition to become, by 2050 or sooner, a net-zero emissions energy business in step with society.⁴ As part of this ambition, Shell has made, and plans on making, significant investments in renewable technologies.⁵ These investments include onshore renewable development and OSW projects,⁶ solar projects for its own facilities and as part of its power generation business, battery storage projects, including the deployment of battery storage facilities in New York City,⁷ and projects related to electric vehicle deployment and hydrogen for application

³ Credits from land-based renewable projects and offshore projects are referred to herein as RECs and ORECs, respectively.

⁴ See Shell's Ambition To Be A Net-Zero Emissions Energy Business, available at <https://www.shell.com/energy-and-innovation/the-energy-future/shells-ambition-to-be-a-net-zero-emissions-energy-business.html>

⁵ See New Energies: Building A Lower Carbon Power Business, available at <https://www.shell.com/energy-and-innovation/new-energies.html#iframe=L3dIYmFwcHMvMjAxOV9uZXdfZW5lcmdpZXNfaW50ZXJhY3RpdmVfbWFWLw>

⁶ More details regarding Shell's wind project activity can be found in comments it submitted with the Commission in support of NYSDERDA's OSW efforts, including its request for authorization to hold a Phase 1-Round 2 offshore wind solicitation. NYPSC Case 18-E-0071, *In the Matter of Offshore Wind Energy*, Comments of Shell Energy North America (US), L.P. and Shell New Energies In Response To SAPA Notice PSC-07-20-00007-P Supporting Petition Seeking Authorization For 2020 Offshore Wind generation Procurement," filed April 20, 2020 ("Shell OSW Comments"). NYPSC Case 18-E-0071 is referenced herein as the "OSW Proceeding."

⁷ Work in this sector is performed by an affiliate, GI Endurant, LLC dba GI Energy, <https://www.businesswire.com/news/home/20180508005972/en/Shell-Purchases-Majority-Interest-GI-Energy>.

in the transportation and power production sectors. Shell New Energies LLC is engaged in OSW development on the Atlantic Coast through its Mayflower Wind and Atlantic Shores joint ventures. As one of the winning bidders in the Massachusetts OSW auction, the Mayflower project is proceeding with development. Shell appreciates the State's focus on offshore wind development as a core component to jumpstart New York's economy,⁸ has actively participated in the Commission's OSW Proceeding and is interested in providing OSW energy to New York.

In addition, through its marketing and trading arm, Shell Energy North America (US), L.P., Shell has actively supported the development and continued operation of renewable resources by providing long-term power purchase agreements to these resources to help them manage market risk. It is also an active participant in REC markets to help load serving entities ("LSE"), like utilities and ESCOs, meet the renewable components of their CES obligations. Shell Energy is one of the largest natural gas and power marketing firms in North America. Shell brings a wealth of experience and commitment to the development of renewable energy technologies and markets and offers these comments to help New York State achieve its CLCPA mandates.

Progress Toward the State's Goals Will Require a Comprehensive and Flexible Approach

The White Paper highlights the policy changes and other modifications necessary to align the CES with the CLCPA target of 70 percent renewable energy consumption by 2030 ("70 by 30 Target"). The White Paper recommends changes to the Tier 1 REC procurement process, proposes an OREC procurement trajectory for 9 GW of offshore wind generation by 2035,

⁸ See, "Governor Cuomo Announces Largest Combined Solicitations for Renewable Energy Ever Issued in the U.S. to Combat Climate Change," located at <https://www.nyserda.ny.gov/About/Newsroom/2020-Announcements/2020-07-21-Governor-cuomo-announces-largest-combined-solicitations-for-renewable-energy-ever-issued-in-the-us-to-combat-climate-change>.

proposes a new Tier 4 REC for the procurement of environmental attributes associated with the delivery of renewable energy into New York City (Zone J) and proposes extending Tier 1 REC eligibility to renewable facilities that undergo repowering.⁹ The White Paper also discusses the current status of efforts addressing how to establish credits for existing renewable energy facilities and NYSERDA's proposal for a Competitive Tier 2 program to maintain existing non-state-owned, run-of-river hydropower and existing wind generators in the State.¹⁰ As a threshold matter, the White Paper recommends that the Commission consolidate the various and inter-related CES-based initiatives back into one proceeding and issue a comprehensive order to address all renewable energy tiers.¹¹

Shell supports the recommendation that the Commission issue one comprehensive order to address all tiers of the CES program. Given the requirement that LSEs must secure enough renewable energy to meet the 70 by 30 Target and the State must procure a certain amount of supply from specific technologies,¹² a comprehensive approach is required. At a macro level, two features contained in the White Paper will help attract renewable energy investment. First, setting procurement targets for specific technologies and a predefined schedule for solicitations will provide a durable investment signal. The statutory mandate to procure 9 GW of offshore wind by 2035¹³ demonstrates the State's commitment to the sector, for example. Shell supports

⁹ White Paper at 2-3.

¹⁰ *Id.*

¹¹ *Id.* at 6. Along those same lines, the White Paper proposes to supplant the triennial review process established in the CES Order with the biannual review process delineated in the CLCPA. (*Id.* at 29.)

¹² *Id.*

¹³ PSL Section 66-p(5)

this procurement target. As discussed below, given the highly constrained nature of the southeastern New York electric system, Shell believes the State also must establish a comprehensive approach to the siting and interconnection of offshore wind resources to realize this goal. The State's unwavering commitment to offshore wind is a necessary first step to transforming its power generation sector, meeting the 70 by 30 Target and, further, achieving the State's zero carbon emissions target for the electric sector by 2040.

The targeted approach to use Tier 1 and Tier 4 RECs to meet the projected generation shortfall of 24,990 GWh/year by 2030¹⁴ also should help stimulate development. The proposed approach acknowledges the need to establish a procurement processes that proceed as scheduled while also recognizing the need to build flexibility into these processes through the Divergence Test mechanism to achieve the 2030 result.¹⁵ The issues raised in the White Paper, such as technological advances, project attrition and changes in load, warrant a flexible approach. Along with this flexibility, the Commission must ensure transparency in the process for developers and LSEs. The White Paper proposes a biennial review process as required by the CLCPA. While an improvement from the triennial review process established in the CES Order, it may not prove to be frequent enough to inform investment decisions and planning processes. The Commission should also conduct periodic technical conferences, held on an annual or semi-annual basis, where NYSERDA and DPS Staff can present information on the progress of the procurements, update the status of projects and respond to questions from interested parties. Frequent communication regarding the progress of annual procurement targets will allow

¹⁴ White Paper at 22. This translates into annual procurements of 4,500 GWh.

¹⁵ *Id.* at 28.

developers to better assess the viability of their projects and LSEs to plan for future REC procurements.¹⁶ For example, an LSE may want to evaluate its options either to procure market Tier 1 RECs from a developer, procure such RECs from NYSERDA, or make Alternate Compliance Payments (ACP). Information provided at these meetings could help LSEs make more efficient decisions.

The importance of transparency in the procurement process is underscored by the State's progress achieved to date toward meeting its targets. According to the authors of the Triennial Review report addressing the Renewable Energy Standard filed in this case earlier this year (RES Report),

Overall, the initial results of the first two years of the RES show modest progress towards achieving the state's renewable energy goals, but slippage in the upward trend necessary to meet those goals. Relative to both the Order's initial expectations (which call for renewable energy to reach 30.5% of load by 2021) and the state's 2030 goals, renewables will need to increase dramatically over the remaining Years.¹⁷

The RES Report identifies factors that have led projects to lag coming on line and the efforts to facilitate project deployment and build the project pipeline, such as a series of improvements in the New York Independent System Operator, Inc. ("NYISO") interconnection process recently approved by the Federal Energy Regulatory Commission ("FERC") and new rules for project siting developed pursuant to the Renewable Siting Act enacted earlier this year.¹⁸ Progress toward

¹⁶ Such technical conferences could use the NYSERDA reports on its annual solicitations as the basis to develop an agenda and identify areas for presentations or roundtable discussions.

¹⁷ Case 15-E-0302, *supra*, "Renewable Energy Standard Program Impact Evaluation and Clean Energy Standard Triennial Review Final Report," prepared by Sustainable Energy Advantage, LLC for NYSERDA (dated June, 2020) at 47.

¹⁸ See Accelerated Renewable Energy and Growth and Community Benefit Act, c. 58, L. 2020 (hereinafter, "Renewable Siting Act"); see also RES Report at 23.

meeting the goals has thus far not occurred on a linear basis, and, suggests that the program must both be flexible enough to recognize the future pathway may continue to be lumpy, especially as the backlog of projects commence commercial operation, and may need to be significantly accelerated to achieve the 70 by 30 Target.

Shell agrees that factors such as the development of new technologies and changes in market dynamics will impact the options available to the State to meet its goals. Shell also agrees procurement must be completed well in advance of end dates to ensure adequate time for project development.¹⁹ Some degree of flexibility, which the White Paper contemplates for the Tier 1 REC program, will allow the State to develop additional programs and policies to accelerate adoption of a more flexible, clean energy system and better understand the implications of rapidly electrifying and increasing energy efficiency of end-use sectors such as buildings, transportation, and industry.

In the Notice, the Commission sought responses to several questions. One question asked how best to balance a predictable schedule of procurements that will facilitate private sector investment with the flexibility NYSERDA will need to meet the CLCPA's procurement mandates. One of the key concerns from a private investment perspective is the need to identify long-term goals and sustain the commitment to meet them. The CLCPA mandates an overall goal and technology specific goals. Codifying the goals in statute demonstrates the State's commitment to the programs. Shell believes that private investment will be encouraged by the ambitious goals set by the CLCPA. The fact that the State is in the early stages of the program sets the stage

¹⁹ For example, the White Paper proposes the OSW procurements contract for 9 GW of OSW generation by 2035. (See White Paper at 38-39.)

for significant opportunity. Any modest adjustments to published procurement schedules that are required in the future should not dampen interest, provided these changes are justified and are made with sufficient notice.²⁰

The interconnection process, including the NYISO Class Year approach for identifying interconnection requirements, and the permitting process appear to be the main factors that have delayed delivery of NYSERDA contracted-for facilities.²¹ NYISO has made changes to improve the interconnection process and the State has enacted the Renewable Siting Act to streamline the siting process for large scale renewable energy facilities.²² These improvements will help resolve the project backlog and more effectively deliver new projects. Navigating the siting and interconnection issues will remain a challenge, especially for certain technologies. For example, as discussed below, Shell believes that achieving the 9 GW goal of offshore wind resources will require a coordinated approach. In addition, rules that support the deployment of energy storage resources (“ESR”) in the NYISO-administered markets are just being implemented.²³ NYISO is still in the development stages of a market design to accommodate “Co-Located Storage Resources,” as reflected by a series of presentations made this summer and

²⁰ The RES Report notes the design improvements that have helped stimulate investments such as the adoption of Indexed RECs, annual procurements and announcement of targets several years in advance. (See RES Report at 49).

²¹ *Id.* at 23.

²² *Id.* at 23 – 24.

²³ See Docket No. ER20-2113-000, *New York Independent System Operator, Inc.*, “Compliance Filing Establishing an Effective Date for the Energy Storage Resource Participation Model with the Federal Energy Regulatory Commission” (dated August 12, 2020)(providing the requisite two-week notice to stakeholders for implementing FERC Order 841 requirements).

are expected to continue into next year²⁴ which will advance storage and overall renewable goals. Gaps still remain, however, with respect to dual participation of ESRs located on utility distribution systems and rate structures for such facilities.

Staff and NYSERDA propose to meet the CLCPA goals with a portfolio of RECs that are centrally procured by NYSERDA with support from market purchases. Given the significant CLCPA targets to be achieved in an accelerated time frame, and the structure of existing programs, this approach makes sense. The prime objective is to stimulate the development of projects to meet the CLCPA goals. In connection with this, however, the Commission should also consider ways to facilitate REC markets for all program designs that allow private investors to assume as much risk as possible and customers to manage their electric supply costs.

The White Paper contemplates Tier 1 RECs that could combine Indexed RECs and Fixed RECs, Tier 2 RECs that will be competitively procured through periodic NYSERDA solicitations, Tier 3 RECs that support nuclear plants, and a new Tier 4 REC for renewable resources located in or delivered into Zone J. LSEs can procure Tier 1 RECs from either qualified developers or NYSERDA, or LSEs can make ACP payments to satisfy Tier 1 obligations. The White Paper contemplates Tier 4 REC resale by NYSRDA with floor prices that could be based on the cost of Tier 1 RECs and/or the social cost of carbon; the White Paper specifically identifies the social cost of carbon to be developed by the New York State Department of Environmental Conservation as established in the CLCPA. The State will also be implementing an Indexed OREC program for offshore wind

²⁴See, e.g., presentation by NYISO to the Installed Capacity Working Group/Market Implementation Working Group, "Hybrid Storage: Proposed Market design updates and energy market tariff revisions for Co-Located Storage Resources (CSR)," located at https://www.nyiso.com/documents/20142/14757023/Hybrid%20Storage_Market%20Design%20Updates%20%20Energy%20tariff%20ICAPWG%20MIWG%2008.25.20%20draft%20final.pdf/ffb01347-c4bd-24a1-6549-91cda42d8cb3.

resources. Tier 2, Tier 3 and ORECs are centrally procured by NYSERDA and are not resold by NYSERDA, but the White Paper does recommend that NYSERDA be allowed to resell ORECs.²⁵

The Commission and NYSERDA should implement policies that encourage LSEs to procure RECs through liquid REC markets. There are important policy considerations for creating REC markets and considering the long-term implications of the REC structures. Liquid REC markets will allow LSEs to manage costs, especially as the costs of RECs become a larger part of customer bills. This liquidity can be achieved by allowing NYSERDA to resell RECs it procures, including ORECs, through periodic auctions and allowing the instruments to be transferrable.

The RES Report recognized that an illiquid market with Tier 1 REC surpluses could leave NYSERDA with a cash flow shortfall, that as established in the CES Order then requires investor-owned utilities to backstop the ability of NYSERDA to meet its Tier 1 REC payment obligations.²⁶ A program that reduces NYSERDA's need to procure RECs and proactively manage the resale of its RECs will help avoid this type of shortfall. In fact, the RES Report recommends that NYSERDA be allowed to sell Tier 1 RECs at market prices to improve its ability to clear its Tier 1 REC inventory.²⁷

Another issue that NYSERDA and the Commission should consider addressing is the financial exposure associated with NYSERDA becoming a large holder of Indexed RECs. As the RES Report and Commission Indexed REC Order notes,²⁸ Indexed REC procurement should be less

²⁵ White Paper at 41.

²⁶ RES Report at 131.

²⁷ *Id.*

²⁸ See NYPSC Case 15-E-0302, *supra*, Order Modifying Tier 1 Renewable Procurements (issued and effective January 16, 2020).

costly given procurements conducted on this basis do not reflect the risk premiums that have been embedded in Fixed RECs. Indexed RECs also provide developers with more certainty for project development.²⁹ A portfolio of both types of RECs is a sensible strategy. The financial exposure associated with a large volume of Indexed RECs should be managed because payments will fluctuate based on changes in energy and capacity market prices. It is possible that as penetration of renewable resources increases, energy prices could decrease, all else being equal, and payments under Indexed REC instruments will increase. NYSERDA should consider ways to manage this exposure by entering into transactions on a periodic basis that could transfer that risk to third parties. There is precedent in the utility industry for managing exposure in this manner. For example, historically, utilities in New York State could manage commodity market exposure they incurred to serve their natural gas and electricity customers through fuel adjustment clauses.

Fostering a market-based system will require attention to the setting of ACP rules. As the RES Report noted, New York's ACP may be too low to encourage LSEs to procure RECs on the open market.³⁰ This is especially true when there is a shortage of RECs due to delayed progress on project deployment. It is important to consider the dynamics both when there is a shortage of RECs and when a surplus of RECs occurs. A REC shortage creates an incentive for LSEs to rely on ACPs, while a surplus would cause LSEs to procure RECs from the market. NYSERDA can sell RECs with aggressive price floors when there is a shortage; but during a surplus, the REC market will not be strong. A system that allows NYSERDA to make market-based purchases of all tiers of

²⁹ *Id.* at 91.

³⁰ *Id.* at 139.

RECs and resell RECs at market prices can help reduce the potential for extreme supply and price fluctuations, for example, and other solutions to address market liquidity are possible and should be considered. Shell recommends that the Commission hold a technical conference within ninety (90) days after the issuance of an order on the recommendations for CLCPA implementation and direct Staff to examine ways to better harness market-based mechanisms to support the use of RECs as a means of fulfilling the goals of CLCPA.

Lastly, market-based approach would be consistent with the State's effort to boost demand for a voluntary REC market outlet. The State has supported the use of legacy renewable supplies for ESCO compliance and in Community Choice Aggregation ("CCA") programs.³¹ Another way the State could support a market-based approach is through NYSERDA's procurement process. NYSERDA should consider adding a component to the evaluation process for its solicitations that rewards developers for proposing projects that include third-party purchasers, such as ESCOs or CCAs for a portion of output and/or RECs produced by a project they bid into the NYSERDA RFP process. Such an approach could reduce the amount of financial support that NYSERDA would have to provide for a solicitation and afford ESCOs and CCAs an opportunity to secure RECs at a more competitive price.

Concerns about the potential for renewable generation resource curtailments and other interactions within the State's portfolio of renewable generation have led the Commission to ask if reforms should be put in place, such as adopting a procurement policy that would make no payments to a generator for any REC generated in hours and at locations where the applicable

³¹ *Id.* at 121.

LBMP is negative.³² Staff and NYSERDA have appropriately identified this as a concern.³³ Shell does not believe that the recommended solution, however, will address the problem in the long-run. The problem that Staff and NYSERDA identify emerges from the way local transmission constraints are resolved in connection with new project interconnections currently prescribed in the NYISO's tariff. The interconnection process does not require new generators to completely resolve thermal constraints in an area as they are added to the system as long as the new generators or other existing generators can be curtailed, leaving generators in competition to operate based on the economic dispatch model used by NYISO.³⁴ In a world where more and more renewable generators are being added, this will cause more renewable resources to be dispatched down for transmission constraints, making it more challenging for the State to meet its CLCPA consumption-based goals.

Given the financial incentives that renewable generators have to produce energy, the solution proposed by Staff will not provide much relief. The answer should come from engagement with the NYISO stakeholder process. Fortunately, there is time to address this issue through a review of the interconnection rules and market design. Separate and apart from the basis offered to support the negative pricing mechanism in the White Paper which, as demonstrated, will not produce an effective response, a system that allows prices to be negative so long as it has proper energy price formation rules that include scarcity pricing and sends signals

³² Notice at 3.

³³ White Paper at 33.

³⁴ The NYISO's rules worked well for fossil-fired generation where the goal was to introduce more efficient facilities to the system that were able to operate using less fuel and thus with lower variable costs. This structure, however, needs to be updated in a market dominated by renewable resources.

for the dispatch of fast-start resources may be appropriate. If transmission constraints impose too many restrictions on the dispatch and consumption of renewable energy, then the goals of CLCPA will be hard to achieve.

While beyond the scope of this proceeding, Shell believes the application of a carbon pricing mechanism, either by the NYISO or as part of a separate CLCPA program that includes other sectors of the economy, will help the State deliver its renewable energy ambitions. The addition of the Indexed RECs to the NYSERDA portfolio will accommodate the introduction of carbon pricing by allowing the energy market to recognize a carbon price and automatically adjust the payments that must be made to renewable resources via RECs. The economic value of carbon reductions was recognized in the cost-benefit analysis performed to support the targets.³⁵ Notwithstanding the benefits of carbon pricing identified in a recent study, such as reduced customer costs and support for investments in clean energy,³⁶ incorporating a cost of carbon into energy prices will facilitate the ability of LSEs and energy consumers, such as industrial and commercial customers to hedge their energy market costs, something that will be beneficial for the economy of New York State. The Commission should support NYISO's carbon pricing proposal or any other mechanism that will allow all sectors of the economy to reflect the cost of carbon emissions in their energy consumption decisions.

³⁵ See *e.g. id* at 23, where NYSERDA discusses benefits of incremental offshore wind procurements are estimated to include a net benefit of around \$7.7 million of value of avoided carbon emissions.

³⁶ See Analysis Group, "Clean Energy in New York State: The Role and Economics Impacts of a Carbon Price in NYISO's Wholesale Electricity Markets – Summary For Policy Makers and Final Report" (prepared for NYISO, dated October 3, 2019); see also New York Independent System Operator, Inc. Power Trends 2020, at 32, available at <https://www.nyiso.com/documents/20142/2020-Power-Trends-Report.pdf/dd91ce25-11fe-a14f-52c8-f1a9bd9085c2> (referencing study performed by the Analysis Group identifying potential for significant benefits).

Offshore Wind Procurement and Transmission

The White Paper makes several recommendations for offshore wind procurement. The first recommendation supports the CLCPA's goal of 9 GW of offshore wind by 2035 by granting NYSERDA the authority to conduct offshore wind capacity procurements annually without first petitioning the Commission and suggests procurements of between roughly 750 MW and 1,000 MW per year through 2027 may be warranted.³⁷ That said, Staff and NYSERDA also recognize it is critical to afford NYSERDA flexibility in the procurement process to effectively respond to market conditions.³⁸ Alignment with the Bureau of Ocean Energy Management's ("BOEM") lease-area sale schedule, coordination with other states on OSW procurement, availability of federal incentives, and innovation are important considerations for any procurement schedule. Staff and NYSERDA maintain that having the flexibility to adjust based on previous procurements will allow it to ensure overall compliance and value to the consumer. Shell believes that a consistent procurement schedule with the flexibility noted above will improve investment certainty for project developers and associated supply chains. However, NYSERDA should not be permitted to cancel any procurements outright based on past successes in solicitations because "on again/off again" signals deaden investor confidence in the New York markets.

The ability of projects to identify viable and cost-effective interconnection arrangements with the bulk power system will significantly impact the ability of the State to meet the offshore wind targets on a timely basis and attract the desired supply chains for OSW construction and operation. The White Paper addresses the status of efforts to develop a backbone transmission

³⁷ White Paper at 38.

³⁸ *Id.* at 39

system to accommodate multiple projects.³⁹ Staff and NYSERA conclude that the potential for backbone networks or other non-radial solution options remains speculative. They reference the uncertainty around the timing and location of authorizing additional lease areas by the BOEM as a constraint on such an effort. At the same time, the White Paper also notes that onshore transmission upgrades to accommodate 9 GW of offshore wind are being studied. The concurrent work is at least an implicit recognition that the two efforts need to be linked to maximize system efficiency but work on addressing a transmission backbone should not be delayed while BOEM completes its processes to issue the next set of leases. Enough information is known at this time to bound the likely locations for future resources and frame the basis to study transmission backbone considerations.

Limitations on the ability of the onshore electrical system to absorb 9 GW of offshore wind have already been identified as an obstacle to meeting the CLCPA mandates. Shell's comments supporting NYSERDA's request to the Commission to conduct Phase 1-Round 2 solicitation noted that the current transmission system's ability to integrate OSW is limited. Since then, more work has been performed that further highlights the scope and nature of these issues. NYISO SDU studies are showing that existing offshore wind projects may face significant costs and NYISO's CARIS 70 X 30 Report shows constraints that will lead to about 10% renewable curtailments in New York City and Long Island by 2030 given the current system configuration

³⁹ *Id.* at 40.

and the presumed addition of just 6 GW of the 9 GW of OSW generation mandated by the CLCPA.⁴⁰

The benefits of a coordinated approach for the integration of OSW in New York State were identified in a recent study published by the Brattle Group. Brattle found electric grid cost savings of over \$500 million and significantly reduced environmental impacts and project risks in developing a multi-user, planned transmission system for offshore wind in New York.⁴¹ Likewise, the Long Island Power Authority filed a referral with the Commission in the NYPSC case addressing the NYISO's 2018 public policy requirement ("PPR") process identifying the need for significant transmission upgrades "driven by the interconnection of OSW to LIPA's system, *regardless* of the specific locations at which the OSW projects may be connected" and requesting the Commission's 2018 order addressing OSW generation be determined a PPR and considered a public policy transmission need under the NYISO's tariff.⁴²

Broader concerns with respect to integration of offshore wind into the bulk power system on the US East Coast are also starting to surface. With goals of integrating over 20 GW of OSW facilities, FERC has announced a technical conference will be convened "to discuss whether

⁴⁰ See New York Independent System Operator, Inc. "2019 CARIS Report – Congestion Assessment and Resource Integration Study" (dated July 2020) (hereinafter, "2019 CARIS Report"), available at <https://www.nyiso.com/documents/20142/2226108/2019-CARIS-Phase1-Report-Final.pdf/bcf0ab1a-eac2-0cc3-a2d6-6f374309e961?t=1595616909286>; see also New York Independent System Operator, Inc., "Class Year 2019 Studies – Preliminary Deliverability Analysis" (presented to NYISO Transmission Planning Advisory Subcommittee and dated May 4, 2020), available at https://www.nyiso.com/documents/20142/12317352/05ba_CY19%20Preliminary%20DIS%20Slides_TPAS-May42020-Draft.pdf/434f512e-8dbf-9cc8-23d2-e31c2b43ea63.

⁴¹ See Brattle Group, "Offshore Wind Transmission: An Analysis of Options for New York" (prepared for Anbaric, dated August 2020).

⁴² See NYPSC Case 18-E-0623, *In the Matter of New York Independent System Operator, Inc.'s Proposed Public Policy Transmission Needs for Consideration for 2018*, Long Island Power Authority Referral (dated July 30, 2020) at 1-3 (emphasis added).

existing Commission transmission, interconnection, and merchant transmission facility frameworks can accommodate anticipated growth in offshore wind generation in an efficient and effective manner that safeguards open access transmission principles and to consider possible changes or improvements to the current framework should they be needed to accommodate such growth.”⁴³ The technical complexities and costs associated with the radial feed approach are already being highlighted as a concern for the industry.

The sooner that uncertainty concerning interconnection opportunities can be addressed by the Commission, the more confidence OSW developers and supply chain companies will have to invest in the New York market. The viability of specific locations for transmission interconnection is a fundamental driver of competitive proposals for OSW development. An effective program that defines viable onshore interconnection locations, potential costs, the rules for cost allocation and cost recovery and the required at-sea infrastructure will bring confidence to the market that the 9 GW target can be delivered. The White Paper noted the requirement in the recently enacted Renewable Siting Act for the Department of Public Service to undertake a comprehensive study and identify electrical system upgrades necessary to facilitate the achievement of the CLCPA targets.⁴⁴ This study must be available before the end of 2020 and could serve as the basis for a dialogue with the industry concerning the opportunities to design and build a backbone that will allow the State to access 9 GW of OSW resources. A clear, integrated plan to deliver required onshore and offshore transmission and

⁴³ FERC Docket No. AD20-18-000, *Offshore Wind Integration in RTOs/ISOs*, “Notice of Technical Conference,” (issued June 17, 2020) (hereinafter, “FERC OSW Notice”).

⁴⁴ White Paper at 41, citing Renewable Siting Act §19(2).

needed upgrades to the bulk power and distribution systems is essential for the CLCPA's OSW mandates to be met efficiently and cost effectively.

Staff and NYSERDA also recommend that the Commission make it clear that LSEs are free to procure ORECs directly for compliance and need not obtain them from NYSERDA. The White Paper recommends that NYSERDA be given the authority to re-sell ORECs to non-LSE buyers, but at a cost no less than it sells to LSEs. Shell supports this recommendation and recommends that OREC instruments be transferrable to facilitate a market that will allow LSEs and customers to manage their OREC exposure.

Leveraging Hydrogen as a Means of Achieving CLCPA Targets

The White Paper discusses the contribution of hydrogen in the renewable resource mix. Staff and NYSERDA recommend that hydrogen produced from renewable electricity ("green hydrogen") and used as a fuel to produce electricity would be eligible to generate RECs.⁴⁵ Shell supports the recommendation that allows green hydrogen to support New York State's renewable energy portfolio. In fact, the Commission should examine ways hydrogen can take on a larger role in helping the State meet the CLCPA targets. Shell believes that clean hydrogen when combined with electrification has the potential to enable the transition to a climate neutral energy system. Hydrogen is a clean and versatile energy carrier that can be used for many applications and end-use sectors. Future clean hydrogen supplies will emanate from a variety of sources, including electrolysis. Shell urges the Commission to encourage cooperation among partners in the hydrogen value chain to ensure the efficient and cost-effective innovation and commercialization of clean hydrogen production and growth of markets for its end-uses.

⁴⁵ White Paper at 12.

The Commission can help unlock the value of hydrogen by providing policy direction for the production and transportation of hydrogen. Currently, the cost of producing hydrogen with electrolyzers is approximately double that of hydrogen produced with fossil fuels via unabated steam methane reforming. Policy support mechanisms such as those provided by the Commission for other new technologies could help this technology to reach a commercially viable stage. Technical barriers exist that prevent the injection and transportation of hydrogen into the natural gas distribution network. The State should introduce programs to allow for the introduction of hydrogen gas into the distribution network and clarify who can own, operate and offer integration services to customers. The State would need to establish clear rules for the injection of hydrogen into the natural gas system and for connecting electrolyzers to the grid. Overall, hydrogen could be a valuable resource for New York City and Tier 4 RECs could be made available to resources that use clean hydrogen to produce electricity. The State should ensure that future investment in green hydrogen production and its associated REC eligibility, such as through the addition of an electrolyzer to an existing renewable facility, is not encumbered inadvertently by additionality constraints.

Conclusion

Shell generally supports the framework set out in the White Paper as a viable path for achieving the goals of the CLCPA and urges the Commission to consider these Comments to enhance and further the proposals set forth therein. As New York proceeds to take the steps and implement the initiatives necessary to effectively combat climate change, Shell looks forward to continuing to participate in the CES program and the New York markets as a developer, and as a marketer of, and investor in, renewable energy.

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Respectfully submitted,



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