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Public Policy Transmission Planning
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Proposed Transmission Needs Driven by Public Policy Requirements

LS Power Grid New York, LLC (“LS Power”) is pleased to provide these comments in response to the New York Independent System Operator’s (“NYISO”) August 3, 2020 Request for Proposed Transmission Needs Being Driven by Public Policy Requirements for the 2020-2021 Transmission Planning Cycle.

New York State is experiencing tremendous change in how electricity is generated, transmitted and consumed. The Public Policy Transmission Need process is a critical tool to aid in planning a transmission grid that will keep up with these changes, and ensure safe, reliable, and economic service. In the comments below, LS Power identifies certain Public Policy Requirements driving the need for transmission and proposes criteria for the evaluation of solutions.

Public Policy Requirement: CLCPA Targets and the AREGCA Bulk Power Plan

The 2019 Climate Leadership and Community Protection Act (“CLCPA”) identifies specific goals for New York State including:

- achieving 70% renewable generation on an energy basis by the year 2030 (the “70 x 30 Target”)
- procurement of 9,000 MW of off-shore wind by 2035 (“OSW 2035 Target”); and
- achieving 100% net emissions-free electricity by 2040 (“100 x 40 Target”).

The 2020 Accelerated Renewable Energy Growth and Community Benefit Act (“AREGCA”) provides that a bulk power study be completed to identify transmission necessary to meet the CLCPA Targets. The AREGCA provides that a bulk transmission investment plan (“Bulk Power Plan”) be developed based on the bulk power study, and that any identified bulk transmission investment not identified as a priority project for designation to the New York Power Authority¹ be referred to NYISO as a Public Policy Transmission Need.

¹ A petition to establish criteria for Priority Projects and requesting a specific project be declared a priority project was filed on July, 2, 2020, see Case No. 20-E-0197: *Proceeding on Motion of the Commission to Implement Transmission Planning Pursuant to the Accelerated Renewable Energy Growth and Community Benefit Act*, Petition Requesting Adoption of

The 70 x 30 Target and the OSW 2035 Target are Public Policy Requirements that require transmission improvements in order to fully integrate the identified resources, and which would constitute one or more Public Policy Transmission Needs under the NYISO Open Access Transmission Tariff (“OATT”) as discussed below. The 100 x 40 Target is a Public Policy Requirement that will require transmission improvements, but the planning for the transition from the 70 x 30 Target to the 100 x 40 Target should begin late in the 2020s, and therefore the 100 x 40 Target does not represent a Public Policy Requirement for the 2020-2021 Transmission Planning Cycle.

70 x 30 Target

In 2009, 22% of New York’s load was served by renewable energy.² In 2019, 28% of New York’s in-state energy production was renewable energy.³ This means over the ten years from 2009 to 2019, the increase in renewable energy’s share of overall energy was 6%, or less 1% per year. The pace of renewable energy development and integration from 2020 to 2030 will need to be more than four times as fast, nearly 4% per year, in order to achieve 70% by 2030. In other words, approximately 4% of the State’s electricity supply on an energy basis, or approximately 6 GWh per year every year for 11 years, will need to shift from fossil resources to renewable resources. These new renewable resources will often be located in areas without sufficient transmission capacity to integrate them into the overall electricity grid, and into the wholesale energy market. The daunting task of rapid change in the electricity supply requires the integration of a significant amount of new energy resources, made more complicated by the uncertainty regarding the precise size and location of new future resources. Transmission planning has several tools for dealing with uncertainty, and New York State has a headstart on this transmission planning with several recent studies that have begun to identify the implications of meeting the 70 x 30 Target.

In the 2019 Congestion Assessment and Resource Integration Study Report (“2019 CARIS Study”),⁴ NYISO performed an analysis of two scenarios as an initial assessment of the impact of transmission constraints on an energy mix with 70% renewables. The 2019 CARIS Study 70 x 30 analysis studied two scenarios with 7.5 GW of behind the meter solar, 6.1 GW of off-shore wind, 6.5-8.7 GW of land-based wind, and 10.8-15.2 GW of utility scale solar in 2030.⁵ To address uncertainty regarding the potential location of new resources, the NYISO analysis was informed by the interconnection queue, which provides evidence of where new resources are likely to be built. The analysis identified pockets of renewable generation, similar to the successful “Competitive Renewable Energy Zone” (“CREZ”)

Criteria for Guiding Evaluation of Whether a Bulk Transmission Investment Should Be Designated as a Priority Transmission Project, and for Designation of Certain Transmission Investments in Northern New York as a Priority Transmission Project (Jul. 2, 2020). A petition requesting a second specific project be declared a priority project was filed on July 13, 2020, see Case No. 20-E-0197: *Proceeding on Motion of the Commission to Implement Transmission Planning Pursuant to the Accelerated Renewable Energy Growth and Community Benefit Act*, Petition Requesting Designation of Certain Transmission Investments in Western New York as a Priority Transmission Project or in the Alternative Requesting the Public Service Commission to Direct the Construction of the Project Components by the Affected Utilities (Jul. 13, 2020). Together the “Priority Project Petitions”

² Power Trends 2010, at 16.

³ Power Trends 2020, at 29. Calculated as 4,454 GWh Wind, 30,131 GWh Hydro, 2,700 GWh Other Renewables, 134,537 total.

⁴ 2019 CARIS Report: Congestion Assessment and Resource Integration Study, NYISO, July 2020.

⁵ 2019 CARIS Study at 79.

analysis performed in support of renewable generation in Texas. The CARIS 2019 Study was a “first look” that identified several key implications for the system of meeting the 70 x 30 Target, including that

- “[T]he existing transmission grid would be overwhelmed by the significant renewable capacity additions...The results support the conclusion that additional transmission expansion, at both bulk and local levels, will be necessary to efficiently deliver renewable power to New York consumers.”⁶
- “Both scenarios resulted in the observation that significant transmission constraints exist when adding the necessary volume of renewable generation to achieve the 70% target.”⁷; and
- “Subsequent studies, such as the 2020 Reliability Needs Assessment and the Climate Change Impact and Resilience Study, will build upon the findings of this 70x30 Scenario. To inform policymakers, investors and other stakeholders as implementation unfolds, these forward-looking studies will provide further assessment of the CLCPA focusing on other aspects such as transmission security and resource adequacy analysis.”⁸

Similar to the NYISO analysis, The Brattle Group performed a study of “New York’s Evolution to a Zero Emission Power System” which studied the New York system through 2040, including analysis of a 2030 system including 70% renewable energy. The Brattle Group study also identified a significant amount of renewable energy curtailment in 2030 without transmission system investment, which will hinder the ability to meet the 70 x 30 Target.

In recent comments to the PSC, NYISO estimates 5-6 years from the PSC’s declaration of a Public Policy Transmission Need to the in-service date of a transmission project.⁹ Assuming this is the case, the Public Service Commission could identify a series of Public Policy Transmission Needs from 2021-2024, with each targeting transmission improvements necessary for delivery of renewable resources with in service dates from 2026-2030, providing incremental transmission improvements necessary to meet the 70 x 30 Target. The 2019 CARIS Study identified multiple upstate areas of renewable energy supply that would be constrained. In addition, as discussed below, integration of off-shore wind will require on-shore transmission improvements, including to meet the 70 x 30 Target. Therefore, a series of Public Policy Transmission Needs from 2021-2024 could each focus on one or more constraints to renewable energy integration within the state, including for off-shore wind and be implemented in time to satisfy the 70 x 30 Target.

Consistent with the discussion above, AREGCA reinforces the fact that CLCPA targets constitute Public Policy Requirements that establish transmission needs. The Bulk Power Plan should include sequencing of Public Policy Transmission Needs to meet identified transmission system constraints

⁶ 2019 CARIS Study at 109.

⁷ Ibid.

⁸ Ibid at 110.

⁹ CASE 20-E-0197 - Proceeding on Motion of the Commission to Implement Transmission Planning Pursuant to the Accelerated Renewable Energy Growth and Community Benefit Act, *Comments Of The New York Independent System Operator, Inc. On Petition Requesting Adoption Of Criteria For Guiding Evaluation Whether A Bulk Transmission Investment Should Be Designated As A Priority Transmission Project* (Sep. 14, 2020), at 11.

required to efficiently meet the CLCPA Targets, since construction of new transmission system capacity will be necessary to fulfill the Public Policy Requirement.

Criteria for the evaluation of these Public Policy Transmission Needs should include the metrics in the NYISO Tariff Section 31.4.8, with a focus on the cost per MW (31.4.8.1.3) and any cost containment (31.4.8.2). In addition, to the extent the Public Policy Transmission Need includes consideration of use of existing rights-of-way, the criteria should prohibit NYISO from considering ownership of rights-of-way in the evaluation and require the incumbent utility to make existing rights-of-way available to all bidders as discussed below.

OSW 2035 Target

New York State is establishing an offshore wind industry. NYISERDA has entered into several contracts as a result of the Offshore Wind Phase 1 Order¹⁰ and is conducting additional procurement under the Offshore Wind Phase 2 Order.¹¹ The Offshore Wind Phase 1 Order and Offshore Wind Phase 2 Order both adopt an approach that require generators to be responsible for the cost and construction of all offshore transmission interconnection facilities and the cost of onshore transmission required to interconnect and integrate generation into the NYISO grid, with a recommendation of continued study of transmission options for future procurement.

There are many benefits of having competitive procurement of offshore wind transmission. First, there will be cost savings from regulated ownership of offshore transmission facilities due to lower financing and other costs. In addition, there will be cost savings from sharing of offshore transmission facilities between multiple generators. There could be additional ratepayer benefits from integrated offshore transmission facilities with multiple interconnection points, compared to radial interconnections dedicated to a single resource area. There will be synergies from integrated facilities, with lower losses and higher overall deliverability than multiple radial lines. In addition, competitive procurement would be the best method to apply competitive pressure on cost and also the best method to identify innovative approaches that could result in the lowest net cost to ratepayers. Finally, there are reduced environmental impacts by reducing the number of cables required through environmentally sensitive marine areas, and through limited access areas. Many of these benefits are identified in a recent study completed by the New York Power Authority.¹² For these reasons, the best path forward for offshore wind transmission facilities for Phase 2 would be competitive procurement of offshore transmission. Competitive procurement of offshore transmission should be conducted under the NYISO Public Policy Transmission Need process.

In addition to transmission for offshore wind, there will likely be on-shore transmission improvements necessary for offshore wind generation integration.¹³ The current shotgun approach is not designed to

¹⁰ Case No. 18-E-0071: *In the Matter of Offshore Wind Energy*, Order Establishing Offshore Wind Standard and Framework for Phase 1 Procurement (Jul. 12, 2018)

¹¹ Case No. 18-E-0071: *In the Matter of Offshore Wind Energy*, Order Authorizing Offshore Wind Solicitation in 2020 (Apr. 23, 2020)

¹² Offshore Wind - A European Perspective (Aug. 2019) available at: <https://www.nypa.gov/-/media/nypa/documents/document-library/news/offshore-wind.pdf>

¹³The 2019 Class Year Facilities Study identifies hundreds of millions of dollars of transmission facilities required as a result of interconnection requests to many of the substations where offshore wind requests have been made in the queue.

identify the most efficient and cost effective overall approach to connecting and integrating off-shore wind resources, including consideration of on-shore transmission improvements. It is not economically efficient for the offshore wind generator to include these costs in its price, resulting in higher costs for consumers. On the other hand, the Public Policy Transmission Needs process is designed with that objective in mind, to identify the most efficient and cost effective transmission solution for a given problem. A Public Policy Transmission Needs process for overall interconnection and integration of off-shore wind resources could save ratepayers hundreds of millions of dollars in transmission costs compared to the current approach.

Preparing the downstate grid to accept offshore wind could delay the integration of offshore wind. A “make-ready” approach would help resolve this problem, and help integrate the thousands of megawatts of new resources required to meet the OSW 2035 Target. An offshore transmission integration Public Policy Transmission Needs should specify a minimum amount of offshore wind that would be integrated by a proposal. The evaluation criteria should include the metrics in the NYISO Tariff Section 31.4.8, with a focus on the cost per MW of offshore wind integrated (31.4.8.1.3), any cost containment (31.4.8.2), and reduction in curtailment and associated production cost savings and LBMP savings (31.4.8.1.10). In addition, to the extent the Public Policy Transmission Need includes consideration of use of existing rights-of-way, the criteria should prohibit NYISO from considering ownership of rights-of-way in the evaluation and require the incumbent utility to make existing rights-of-way available to all bidders as discussed below.

Inter-regional Transmission

Inter-regional transmission is another transmission need that arises from the Public Policy Requirements of the CLCPA. The 2019 CARIS Study identifies 21.7%-25.5% of renewable energy generated in New York State being exported to IESO, ISONE, and PJM.¹⁴ This suggests a need for additional inter-regional transmission capacity as to facilitate an increase exports of renewable energy during surplus hours, reducing curtailment. A second benefit of additional inter-regional transmission capacity is an increase in reliability in the event of sudden and unexpected losses of intermittent resources or to accommodate demand during the evening solar ramp down. Achieving the CLCPA Targets drives a need for increased inter-regional transmission.

Increasing Inter-Regional Transmission should be identified as a Public Policy Transmission Need. The Commission should direct NYISO to identify how increased inter-regional transmission can help achieve the CLCPA Targets and contribute to a reliable grid, and provide an opportunity for utilities and developers to propose inter-regional transmission projects to help meet CLCPA Targets.

The evaluation criteria for a Public Policy Transmission Need related to increased inter-regional transmission would be the lowest cost per MW of incremental import capacity (31.4.8.1.3), for projects that meet a threshold of a minimum level of incremental import capability, as well as any cost containment (31.4.8.2). To the extent the Public Policy Transmission Need includes consideration of use of existing rights-of-way, the criteria should prohibit NYISO from considering ownership of rights-

¹⁴ 2019 CARIS Study at 81. For example, Base Case IESO Net Imports, ISONE Net Imports, and PJM Net Imports total -2.9 GW-0.5 GW+12.2 GW=8.8 GW. In the ScenarioLoad Relaxed case net imports are -5.6-7.8-5.5=-18.8 GW (net export), a change of -27.6 GW total net import from the Base Case, representing a net export. This 27.6 GW represents 25.5% of the total renewable generation of 108.7 GW.

of-way in the evaluation and require the incumbent utility to make existing rights-of-way available to all bidders as discussed below.

Generation Retirements

The flipside of the new renewable resource additions is the retirement of existing generation resources. Some fossil generation has already been identified as retiring in the near term due to the peaker rule,¹⁵ and additional fossil generation will be at risk as a result of the 70 x 30 Target. Beyond the retirement of Indian Point, other nuclear generation had been identified at risk prior to the establishment of the Zero-Emissions Credit (“ZEC”), which expire in 2029. As part of the 2020 Reliability Needs Assessment, NYISO studied various scenarios of generation retirements. At a level of 2,801 MW of generation retirement (with 1,804 MW in Zone J), only 10% of the existing generation in the state, resulted in a Loss of Load Expectancy (“LOLE”) of 0.11, higher than the standard of 0.10. While the Reliability Needs Assessment provides valuable information in planning for scenarios, the inclusion rules prohibit NYISO from adequately planning for generation retirements, since a deactivation notice is required prior to removing a facility from the base case. The relatively short-lead time of generation retirement requests will push these needs into the short-term planning process. While it is not known which specific resources will retire, planning for future generation retirements can be accomplished through the Public Policy Transmission Planning Process. In fact, retirement of existing generation due to the CLCPA goals represents a Public Policy Requirement that results in a transmission need, and the Public Policy Transmission Planning Process can be a valuable tool in planning to prepare for generation retirements. The evaluation criteria for such a Public Policy Transmission Need would be the resolution of identified reliability violations at the least cost.

Use of Existing Rights-of-Way as an Evaluation Criteria

Ownership of exiting rights-of-way must not be an evaluation criteria to the extent a Public Policy Transmission Need identifies minimizing new rights-of-way, replacing aging infrastructure, or maximizing use of existing rights-of-way. In such cases, the Public Service Commission should make a finding similar to that in the AC Transmission Order, that incumbent utilities make existing rights-of-way available to all bidders on an equal basis.

New York State has expressed a clear interest in maximizing use of existing rights-of-way, which could unduly favor incumbent owners of existing rights-of-way. In order to preserve competition in such situations, the precedent in New York is to remove ownership of rights-of-way from the evaluation process to ensure a level playing field. In the AC Transmission Order, the Public Service Commission recognized that considering control of right-of-way would limit competition.¹⁶ The Commission also found that “The utility company owner is the steward of the property held for the benefit of its ratepayers, ...”¹⁷ To provide for competition, the Commission required a) utility rights-of-way be available on equal terms to all bidders and b) control of utility rights-of-way not be a selection criteria.¹⁸

¹⁵ See 2020 RNA Reliability Needs Assessment - Comprehensive System Planning Process DRAFT

¹⁶ AC Transmission Order at 59.

¹⁷ Ibid at 60.

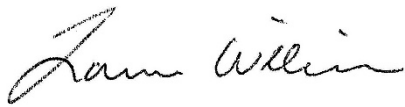
¹⁸ Ibid.

As with the AC Transmission Project, potential future Public Policy Transmission Needs could be identified as largely within existing utility right-of-way. In fact, this was the case for the recent petitions by the New York Power Authority for Priority Projects.¹⁹ Control of rights-of-way for the benefit of the public should not give an incumbent utility an unfair advantage in a competitive process. Without action from the Commission, it is likely that NYISO would heavily discount any proposals from potential bidders that do not control existing right-of-way due to questions of feasibility and risk. This is reflected in NYISO's recent Petition for Declaratory Order at the Federal Energy Regulatory Commission claiming an incumbent right-of-first refusal for certain elements of competitive bids.²⁰ This would minimize the potential for non-incumbent bidders to offer value in developing creative solutions, controlling costs, identifying cost savings, and providing risk mitigation, and would not necessarily result in the identification of the most efficient or cost effective project. In order for the NYISO selection process to result in the most efficient or cost effective proposal, the PSC should clarify that the AC Transmission Order finding regarding right-of-way is applicable to a future Public Policy Transmission Need, and that the NYISO shall not use control of existing right-of-way as a selection criteria in its evaluation process.

Conclusion

LS Power respectfully requests that the NYISO include these identified Public Policy Requirements in its submittal to the New York Public Service Commission. LS Power requests that the Public Service Commission establish Public Policy Transmission Needs as identified above, and clarify that the AC Transmission Order finding regarding right-of-way is applicable to a future Public Policy Transmission Need.

Sincerely,



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Senior Vice President

¹⁹ See the Priority Project Petitions.

²⁰ FERC Docket EL20-65 *New York Independent System Operator, Inc.*, Petition for Declaratory Order (Aug. 18, 2020).