

September 28, 2018

New York Independent System Operator 10 Krey Boulevard Rensselaer, NY 12144 ATT: Public Policy Planning Mailbox

RE: Proposed Transmission Needs Driven by Public Policy (NYISO Notice of August 1, 2018)

PowerBridge, LLC respectfully urges NYISO to solicit and evaluate transmission solutions in response to the New York State Clean Energy Standard ("CES") as adopted by the New York Public Service Commission in its Order of August 1, 2016. Facilitating the development of high-capacity transmission in order to bring meaningful quantities of renewable energy in upstate New York to downstate load is certainly one of the most realistic and practical ways of assuring the achievement of the CES "50 by 30" goal within the desired time frame.

The amount of new renewable generation capacity in upstate New York needed to meet the CES mandate has been estimated to be more than 6,000 MW. The total need for renewables is far beyond concurrent (and laudable) efforts to promote small-scale and distributed energy resources, along with offshore wind.

Moreover, building significant new upstate renewable capacity by itself does not address the CES requirement in the absence of new transmission that can bring clean power to downstate load at a reasonable cost. The UPNY-SENY interface, already congested, will become much more so without new transmission. Even with the eventual completion of currently planned AC transmission upgrades – designed to address *current* levels of congestion – the addition of thousands of megawatts of new renewables will, at best, mean no net improvement in congestion or its associated costs.

Based on previous comments by other stakeholders in New York over the past two years, PowerBridge expects that we will not be alone in urging the NYISO to find the need for new transmission to address the CES. However, in doing so, we offer the unique perspective of an independent developer and owner of major transmission lines in New York with first-hand successful experience in the practical realities of permitting, obtaining necessary property rights, financing, engineering, constructing, and operating these facilities. Our first project, Neptune Regional Transmission System, is a High Voltage Direct Current ("HVDC") 660-MW undersea/underground transmission cable that has supplied more than 20 percent of Long Island's electricity needs for more than 11 years. Our second project, Hudson Transmission, is a similar 660-MW HVDC cable system, completed in 2013, that serves New York City customers of the New York Power Authority. Both projects were completed ahead of schedule and within budget for a combined cost of approximately \$1.5 billion. More recently, through our affiliate West Point Partners, LLC, we have proposed a 1000-MW HVDC undersea and underground transmission cable – West Point Transmission -- that would run approximately 80 miles between a major substation south of Albany to Buchanan, New York in close proximity to the Indian Point Energy site that is scheduled for closure. Much of the key permit-related work for West Point has been completed. The West Point cable has the potential to be a major component in a comprehensive plan to meet the CES target while alleviating UPNY-SENY congestion.

Previous comments by others on the subject of transmission needs to meet clean energy goals have urged the NYISO to adopt such evaluation criteria as: 1) Cost-effectiveness, including the benefits of bids that offer to cap or otherwise contain costs; 2) a level playing field for incumbent transmission owners and non-incumbent transmission developers that mitigates the inherent advantages that incumbents might enjoy; 3) ability to optimize and enhance both the short-term and long-term development of renewable generation. PowerBridge agrees with and urges the NYISO to include these criteria in its bid evaluations.

In addition, we urge the NYISO to consider solutions, such as High Voltage Direct Current ("HVDC") transmission, that may offer important ancillary benefits to the grid. In recent years, HVDC technology has advanced significantly in terms of such features as controllability, voltage support, and black start capability. Such benefits traditionally can be difficult to quantify and value, and therefore may have been discounted. Yet they are widely recognized to be valuable, even if their precise value is elusive; to the extent a transmission solution offers such benefits, they should be assigned some form of credit in the evaluation.

Finally, our experience with Neptune and Hudson tells us that successfully developing major transmission infrastructure requires many years, many millions of dollars, and an abundance of patience and perseverance – and all of this is required before construction can even begin. It is perhaps tempting to think of the year 2030 as being in the far distant future, but in transmission development years, it is essentially equivalent to tomorrow. Achieving the goal of "50 by 30" in New York requires a clear and predictable process to be launched quickly, with little if any margin for further delay. Further, we would urge the NYISO to consider the practical feasibility of any proposed transmission solutions in terms of their realistic ability to obtain necessary approvals, minimize inevitable opposition, attract investors and debt providers on terms that are ultimately favorable to ratepayers, and actually construct the facilities on budget and on schedule.

PowerBridge appreciates the opportunity to offer these comments and would welcome the prospect of being part of the solution in the effort to meet New York's clean energy goals.

Sincerely,

Christopher Hocker Vice President, Planning PowerBridge, LLC