March 12, 2018

Kathleen H. Burgess  
Secretary  
State of New York  
Public Service Commission  
Three Empire State Plaza  
Albany, NY 12223

Re: Case 18-E-0018 – In the Matter of Proposed Amendments to the New York State Standardized Interconnection Requirements (SIRs) for Small Distributed Generators; and  
Case 15-E-0751 – In the Matter of the Value of Distributed Energy Resources  
Joint Utilities’ Appendix G SIR Redline – AMENDED COVER LETTER

Dear Secretary Burgess:


Generally, the Joint Utilities sought to add clarity to what results in a pass or fail of each screen, which is beneficial to all parties. For consistency, the screens replaced DG with DER [Distributed Energy Resources] to include the evaluation of energy storage systems in all screens, rather than specifying the inclusion of energy storage on some screens.

With the minor edits provided, the Joint Utilities conceptually support Staff’s SIR Modifications to the Preliminary Screens (Screens A-F). More specifically regarding Screen F, Staff proposed the following screen: “Is the feeder available at the medium voltage PCC, divided by the rating of the individual DER greater than 25 [PCC stiffness ratio]? Is the feeder available short circuit capacity at the substation divided by the capacity all aggregate
DER on the feeder, greater than 25 [substation stiffness ratio]? The Joint Utilities support this screen, and oppose the change proposed at the January 31, 2018 ITWG meeting. The proposed change multiplies the stiffness ratio by the Z/R ratio and instead screens for a result greater than 50. The Joint Utilities oppose this change for the following reasons:

1. It is impossible to apply at the substation level. The resistive component of the impedance quickly increases with distance from the substation, particularly with an overhead conductor. In addition, the modification does not account for the impact of the specific DER location, making it an inaccurate predictor of the impacts on the utility system of a high penetration of facilities located away from the substation.

2. Because the short circuit capacity is calculated based on system impedance, it is already related to the Z/R ratio such that multiplying the Z/R ratio by the stiffness factor is redundant and provides no additional benefit.

3. As in the SIR Modifications, this screen cannot be automated, but it can be readily calculated. Adding a Z/R ratio that is not as easily obtained will delay the screening process.

4. The Joint Utilities have not found an application of the Z/R ratio in other jurisdictions, but note that Duke Energy and NERC apply the stiffness ratios. In fact, their application of the stiffness ratios is more conservative than the SIR Modifications.

Regarding the Supplemental Screens (Screens G-I), the Joint Utilities recommend changes to the SIR Modifications. As to Screen G, the Joint Utilities expanded it to include thermal limitations of all impacted equipment.

Turning to Screen H, the Joint Utilities expanded the screen to incorporate steady state voltage excursions supported by the IEEE 1547 and ANSI C84.1 Standards. These requirements seek to mitigate potential power quality impacts to all customers on a feeder as well as voltage regulating equipment. Voltage changes larger than half of the bandwidth of the voltage regulating device may result in excessive regulator tap movement.

Finally, turning to Screen I, the Joint Utilities modified this screen to include specific screening steps for clarity to all parties, and to incorporate effective grounding requirements. Effective grounding mitigates excessive voltages on unfaulted phases due to single line to ground faults. This excessive voltage can cause damage to utility equipment, such as lightning arrestors, as well as customer equipment. Additionally, limiting the ability of the DER to act as a ground source when it is not generating or discharging helps ensure there will not be a material reduction in the reach of protective device equipment. A reduction in

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1 Cases 18-E-0018 et al., In the Matter of Proposed Amendments to the New York State Standardized Interconnection Requirements (SIRs) for Small Distributed Generators, Staff Proposed Standardized Interconnections Requirements (filed December 20, 2017).
3 Id.
reach could cause a fault to remain undetected, which is a significant safety and reliability concern.

Please contact me if there are any questions. Thank you for your consideration.

Very truly yours,

/ls/ Susan Vercheak

Susan Vercheak

Enclosure