DISTRIBUTED AND TRANSMISSION-LEVEL PROJECT QUEUES: THE NEED FOR CROSS-QUEUE COORDINATION RULES

Improvements in interconnection policies and significant expansion of the NY-Sun program since 2014 have led to explosive growth in the development of distributed generation (DG) projects of 5 MW-AC and below in New York, with annual DG installations growing by 111.3% from 2014 to 2018\(^1\), and an associated pipeline of 2.7 GW-AC of DG projects 1 MW-AC or larger in various stages of development as of July 2019\(^2\).

In parallel with the growth of the DG project pipeline, NYSERDA has conducted three solicitation rounds pertaining to large-scale renewables (LSR) projects (typically 20 MW-AC and higher in terms of capacity), with the most recent solicitation taking place in 2019. As a result of this, there has been an analogous build-up of LSR projects on the “transmission side” of the queue in various stages of maturity, with the solar PV pipeline alone standing at 8.7 GW-AC as of September 2019. Given the interdependence and shared constraints of the distribution and transmission systems, LSR projects, DG projects connecting through the SIR, and DG projects interconnecting through the non-SIR tariff are likely to affect each others’ transmission and distribution upgrades.

The simultaneous build-up of project pipelines at both the distribution and transmission level raises the need for fair, clear and orderly coordination rules regarding several aspects which have not been addressed, which include:

1. Firmness/maturity requirements for inclusion in Coordinated Electrical System Interconnection Review (CESIR) studies for DG projects and System Reliability Impact Study (SRIS) for LSR projects;
2. Rules for allocating substation/transformer capacity across DG and transmission-level projects;
3. Rules for allocating substation/transformer upgrade costs across DG and transmission-level projects;
4. Communication guidelines and timelines for cross-queue coordination regarding items 1-3;


\(^2\) Ibid.
5. Jurisdictional issues regarding the authorization, implementation and enforcement of such rules;
6. Treatment of existing DG projects wishing to participate in wholesale markets.

Current queue inventory data for both DG and transmission-level (“NYISO”) projects suggests that this concern is not an abstract one, but an accident waiting to happen: As of October 2019, there were at least 16 substations associated with both DG projects over 1 MW-AC and large-scale projects under development in New York State. Given hosting capacity and transmission constraints in New York’s grid, such instances are only likely to increase over time.

The absence of clear cross-queue coordination rules leaves both distributed and transmission-level projects open to the risk of significant increase in interconnection-related cycle times, which, if systemic, would pose a risk to the state’s legally mandated goals as regards both distributed solar PV deployment (6 GW by 2025) as well as decarbonization goals for the electric sector (100% carbon-free by 2040) and overall economy (85% carbon-free by 2050).

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3 SIR Inventory Information (Ibid) and NYISO Interconnection Queue Data. 
https://www.nyiso.com/documents/20142/1407078/NYISO-Interconnection-Queue.xlsx/c0fe9a9b-7011-ab05-0f51-fd4ad0ef33f0