

Comments on Distributed Energy Resources

Introduction

The NYISO conducted a conference on December 13, 2013 on Distributed Energy Resources (DERs) in which Con Edison participated as a panelist. The NYISO is now requesting additional comments concerning the scope of work of a new consultant study on DERs and, its potential impact. Consolidated Edison Company of New York, Orange & Rockland Utilities, Central Hudson Gas & Electric and National Grid (the “Companies”) are submitting these comments in response to the NYISO request.

The current penetration of DERs in downstate New York, the Con Edison delivery area, is around 33 MW of solar and 127 MW of Combined Heat and Power (CHP) generation for a total of 160 MW of DERs. This does not include back-up generation, which is roughly estimated at 1.5 GW in the New York City area. Except for one installation, all of the solar and CHP generation is currently connected to the distribution system (primary or secondary).

While the future growth of DERs in New York can be expected to be driven by consumer choices and demands and, state policies influencing it, other factors such as the conditions of the energy marketplace, wholesale market policies and economic incentives, and technological evolution could also impact the trajectory. The Companies welcome this study as it is being conducted at a time of both technological changes related to DERs and potential policy changes at the state level that could ultimately impact the bulk system operations and markets. The Companies encourage the NYISO to align this study work with the current NYS PSC effort.

Scope of the Study

The NYISO has identified that the objectives of the study will include the following:

1. Categorization of DER technologies
2. DER uses and configurations
3. Regulatory and market-based drivers for DER adopters
4. Current and potential DER market penetrations in New York
5. Treatment of DERs in other ISOs/RTOs

The NYISO has also identified the scope of the report would include the following:

1. Behind-the-Meter Applications and Customer Motivations
2. State of DERs including technology assessment, market penetration and potential, and environmental requirements
3. Retail Rates, Regulations and Incentives for Distributed Energy Resources
4. Comparative Analysis & Identification of Potential Best Practices in ISO/RTO Treatment of DERs, including market and business rules, metering configurations, telemetry requirements and measurement and verification

The Companies recommend that the study additionally investigate the following:

1. Amount of and impact of growth of DERs on customer energy consumption patterns, and the relationship of such changes on long-term capacity forecasts and, short-term energy forecasts.
2. Amount of and impact of growth of DERs on costs and incentives for bulk generation including competitive merchant generation and policy-driven bulk renewable generation such as wind.
3. Suitability of specific types of DERs for specific geographic locations within New York and specific customer classes within each sub-region.
4. Identify types of ancillary service that require direct communication and controls from the NYISO and the types of ancillary services that can be operated independently from the NYISO.

Best Practices

The NYISO has requested comments on best practices, including from other regions, which NYISO can consider through the study. The Companies note the following areas as worthy of consideration:

1. Policies that facilitate a high level of DR participation in ancillary services programs as has been achieved at PJM in the synchronized reserves and regulation markets. DR resources that are seamlessly integrated with automated technical infrastructure are able to provide cost-effective ancillary services, when the grid requires such services.
2. Policies to facilitate the development of a price-responsive demand market, as has been initiated at PJM, by allowing DERs to participate in the wholesale market by responding to wholesale price signals, and thus providing such resources the ability to manage their load cost-effectively.
3. Policies that ensure that the standards and rules that enable larger intermittent or energy limited resources to participate in the wholesale markets will also permit DERs intending to participate in the NYISO markets when it is appropriate to do so.
4. Policies that avoid adoption of rules that could potentially impede or contravene state efforts.
5. Policies concerning compensation that are commensurate with the measurable total system benefit of a resource such as reliability, black start capability, capital expenditure deferral, balancing these impacts with the costs of the resource.
6. Policies that identify the optimal level of operational visibility of DERs (to the transmission system operator) necessary to preserve the bulk system reliability and, facilitate the bulk planning process.
7. Policies that ensure that DERs participating in the wholesale markets adhere to all applicable environmental laws at federal, state and, local levels.
8. Policies regarding communication with DERs that participate at both the bulk and retail level programs to ensure that operational directions from different operator entities do not provide contradictory signals.
9. Policies and technical solutions that address bulk-level technical issues that arise from increased penetration of DERs on the distribution system. Experiences from other regions suggest potential issues such as reverse power flows and reactive power problems that could impact transmission grid stability.
10. Policies that address the integration of these resources into the long term planning process and how they are addressed in long term plan.