



## Interconnection Technical Working Group

March 8<sup>th</sup>, 2016

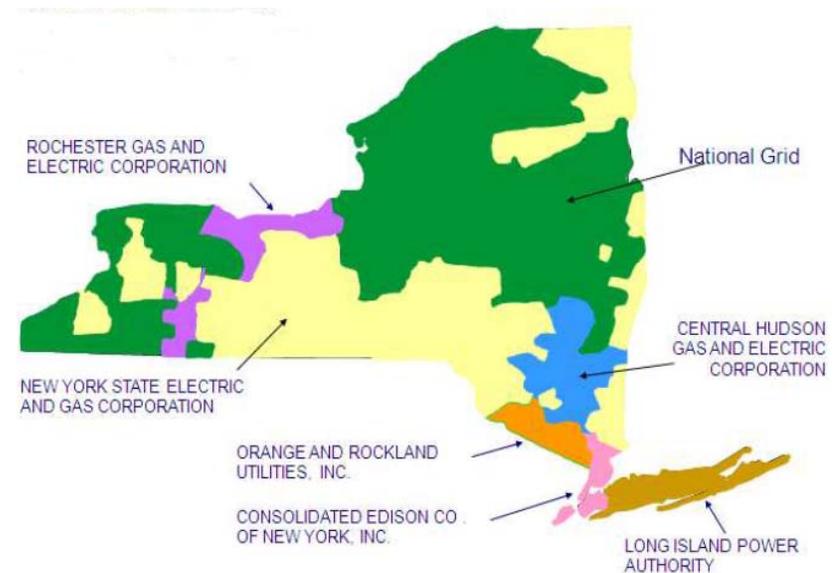
THE JOINT UTILITIES OF NEW YORK





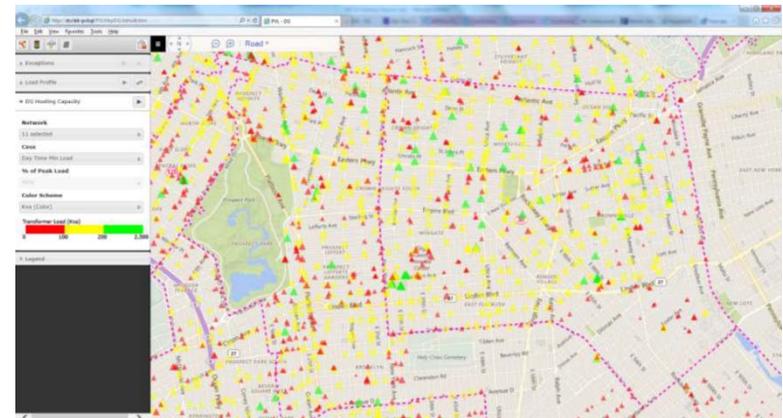
# TWG Collaboration and Common Goals

- Built-in advantages of maintaining a collaborative approach
- Shared customers and clients
- Shared interest in enhancing the efficiency of the interconnection process
- Common goal of streamlining interconnection process while ensuring safety and reliability



# Alignment with DSIP

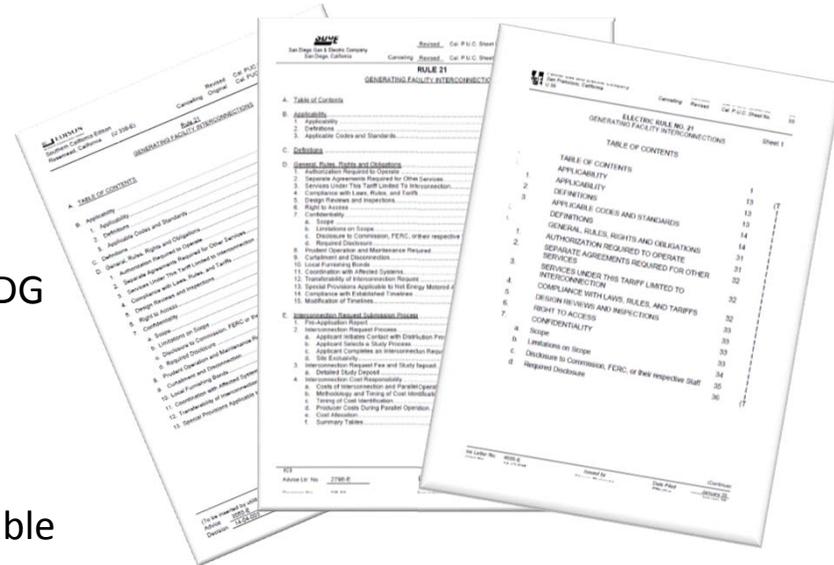
- The DSIP Guidance calls for the Supplemental DSIP filings to **address automated interconnection** consistently across the state
  - Identify steps with line of sight to longer term goals like automation
  - Opportunities to make progress on key issues
  - Data availability/accuracy
  
- The DSIP Guidance requires the **initial utility activities** related to **hosting capacity** to be defined in the Initial DSIP and a **standard approach** applicable to all the utilities to be included in Supplemental DSIP
  - Alignment of methodology and goals
  - Stakeholder input will be critical





# Queue Management

- Enhancing queue management:
  - ✓ Cost Estimates & Cost Allocation
  - ✓ Queue Position Assignment
  - ✓ Pre-Application Report
  
- High Priority for Utilities
  - ✓ Central Hudson received 524 MW of CDG applications October 1 – March 1 vs. a system peak of 1200 MW
  - ✓ Other utilities in similar position
  - ✓ GOAL: ensure as many systems as feasible are constructed
  
- Best Practices from California (Rule 21)
  - Queue position accuracy and transparency
  - Site exclusivity to mitigate queue hogging





# Pre-Application Reports

- Staff SIR states that the applicant may request a pre-application report provided by the utility
  - Pre-application process provides insight to customers/developers who are uncertain whether they will move forward with interconnection
  - It could be beneficial to give customers/developers **the flexibility to bypass** this step if they have confidence that they will proceed through to interconnection.
  - Pre-application reports should provide insightful information regarding the feasibility of DG projects, rather than raw data without context.
  - Determination of hosting capacity is an element of the Distribution System Implementation Plan (“DSIP”) process to ensure as much consistency as possible among the Joint Utilities, and not of the DG interconnection process.





# Screening Processes

- **A more robust screening processes could be valuable after simplified screens are tested in New York State**
- Indications from California practices
  - The California Rule 21 Tariff provides **intensive screening processes**:
    - Initial review screens (Screen A-M)
    - Supplemental review screens (Screen N-P)
    - Detailed study screens (Screen Q &R)
  - For large projects eligible for fast track (up to 3MW), complex screens can delay projects that fail the screens and must re-apply under the Detailed Study process

Screen Status	PG&E	SCE
Fast Track projects that failed initial screen	82%	46%
Out of projects that fail, those that failed the 15% screen	92%	85%
Of those that failed the 15% screen, the percentage that later failed supplemental review using the 100% of minimum load screen	56%	79%

CA PV interconnection queue data from PG&E and SCE illustrates *the difficulty of passing the Initial Fast Track Screens*. IREC, 2014: <http://www.irecusa.org/2014/08/the-proof-of-the-interconnection-reform-is-in-the-data/>





# Technical Issues: Monitoring & Smart Inverters

## ➤ Monitoring

- Proposed: operational data from inverters for systems > 200 kW.
  - 200 kW threshold aligns with NYSERDA
- Facilitate the integration of more DERs & Prepare for the next steps on smart inverters capabilities and asset control

## ➤ Smart Inverters Capabilities/ Control

- UL 1741 and IEEE 1547 are being updated based on California's requirements of Establishing and Enabling Key Autonomous Inverter Functions
- Careful planning today can help avoid costly upgrades
  - For example, the \$20 billion in PV inverter retrofits Germany faced in 2014
- Cyber security concerns must be effectively addressed

Source: <http://www.smartgridtoday.com/public/EPRI-Germany-faces-20-billion-in-inverter-upgrades.cfm>



# Technical Issues: Protection

## ➤ Substation Backfeeding and Protection

- Each utility has unique system configurations, even within their own service territories
  - For example, Y-Y vs. Delta – Y transformers or network vs. radial systems
- This results in unique protection requirements and limitations.

## ➤ DTT/ Anti-islanding

- Available tools include Sandia’s Suggested Guidelines for Assessment of DG Unintentional Islanding Risk
- Incomplete device libraries present challenges for implementing

## ➤ Voltage Flicker



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