

# NYISO Summer 2003 Short Circuit Assessment Update

**NYISO Operations  
September 4, 2003**

# Historical Timeline

- **First official NYISO Statewide Short Circuit Representation completed in November 2002**
  - *Representative of “as found system” through Summer 2002*
- **Guideline for Fault Current Assessment approved 3/03**
- **Summer 2003 Case completed in April 2003**
  - *Representative of system through October 31, 2003*
- **Summer Assessment commenced in May 2003**
  - *First draft report submitted to affected facility owners*
  - *Draft report discussed at Operating Committee - July 10*
  - *Reviewed in detail and revised by SOAS - July 16*
  - *Approved by Operating Committee – August 14*

# 2003 Short Circuit Assessment

- **No additional analysis performed**
- **Extensive discussion of recommendations and conclusions with the SOAS**
- **Significant changes to recommendations**
  - *Minimize market impact*
  - *Clarify interim monitoring of fault current levels*
  - *Provide guidance to NYISO staff developing fault current mitigation procedure*

# Day-Ahead “mitigation process”

- **Specific recommendation for transmission configuration removed by consensus:**
  - *System protection issues*
  - *Possible adverse impact on SCUC process*
- **SCUC run with normal assumptions of transmission availability (no network changes for fault current mitigation)**
- **NYISO staff determine fault duty levels based on the SCUC**
- **Notify affected facility owners**
  - *Indicate over-duty conditions*
  - *Owners advise NYISO of any local mitigations*

# Monitoring peak load conditions

- **Staff evaluate results of HAM**
  - *Identify possible over-duty conditions*
  - *Notify facility owner(s)*
- **Coordinate with neighboring Areas to monitor status of generation**
- **Monitor status of Y49 series reactor in accordance with joint ConEd/NYPA/LIPA procedure, and other local TO mitigation actions**

# Fault Current Mitigation Procedure

- **NYISO staff to develop a procedure to address fault current issues and mitigate potential over-duty conditions**
  - *Generation and transmission additions prior to installation of the ConEdison Fault Current Management Plan*
  - *“De-commit” generation after SCUC for fault duty limitations*
  
- **Use Day-Ahead Margin Preservation to respect financial commitment**

# Draft

## Fault Current Mitigation Procedure

- **Minimize de-committed energy/reserve obligations while accounting for specific unit contribution to short circuit over-duty location**
  1. Identify whether a specific over-duty condition exists, then
  2. Develop a ranked list of units for each over-duty location and select candidate units
    - ▶ Ranking : [s.c. contribution x operating cost] / [operating schedule]
  3. Review candidate unit(s) with local Transmission Operator to ensure local reliability requirements are met

# Draft

## Fault Current Mitigation Procedure

- **Minimize de-committed energy/reserve obligations while accounting for specific unit contribution to short circuit over-duty location**
  - ***Day-Ahead Market:***
    - ▶ Use of Out-of-Merit derate classification for ISO/Local Security to preserve financial commitment for DAM unit schedules
  - ***Hour-Ahead Market:***
    - ▶ Use of Out-of-Merit derate classification for ISO/Local Security to result in not honoring HAM unit schedules
    - ▶ Provide appropriate notification to unit owner