

WORK PLAN FOR DELIVERABILITY ANALYSIS

April 18, 2005	Stakeholder meeting to review Work Plan and to identify issues related to study scope, models, assumptions and methodology
May 1, 2005	NYISO filing of Work Plan with Commission
May/June 2005	NYISO revision of study scope, assumptions and methodologies based upon stakeholder comments. Revisions to include consideration of both Zonal Resource Adequacy Analysis as well as the Intra-zonal Load Flow Analysis. Studies to be coordinated with the NYISO's Comprehensive Reliability Planning Process as well as with the IRM analysis conducted by the New York State Reliability Council.
July 1, 2005	NYISO submits status report to Commission
July/September 2005	NYISO to present interim study results and conduct stakeholder briefings and discussions to review interim study results. NYISO may revise analysis as needed in response to stakeholder comments.
October 1, 2005	NYISO submits status report to Commission
October/November 2005	NYISO to finalize study assumptions and prepare draft outline of methodology for circulation to stakeholders. NYISO to revise based upon stakeholder comments. Base Cases to be finalized and distributed to appropriate Stakeholders.
December 1, 2005	NYISO submits status report to Commission which will include recent Stakeholder Comments and modified Work Plan, Study Assumptions, and Detailed Methodology Writeup
December/January 2006	NYISO to finalize study and prepare draft report for circulation to stakeholders. NYISO to revise and finalize study report based upon stakeholder comments
February 3, 2006	NYISO to submit status report and final study report to Commission
February/March 2006	NYISO to prepare draft compliance filing with Stakeholder input
April 6, 2006	NYISO and TOs to submit compliance filing to Commission

STUDY ASSUMPTIONS

BASE CASE: 2005

- Based upon 2005 NYSRC IRM Base Case
- Update for:
 - Load forecast
 - Generation unit changes
 - EFORd outage rates
 - Reflect all interface transfer limits in load flow analysis model (See Below)

PLANNING CASE: 2009

- Based upon planning case from 2005 analysis
- Modify future resource additions to match load growth plus 20% in each super zone
- Select units based upon interconnection queue position
 - Use “Catch-up Class” units first
- Add retirements from CRPP Base Case
- M-29
 - Model in-service if SRIS is complete when study assumptions are finalized, OR
 - Model M-29 in-service as a scenario

BASE CASE ASSUMPTIONS

- Use emergency criteria, consistent with IRM MARS analysis
- Monitor Lower Voltage facilities
 - Monitor 69kv and above on LI
 - Monitor 115kv and above statewide
 - Monitor for contingencies on the 138kv and above on LI; and 230KV and above statewide
 - Identified violations on lower voltage facilities are the responsibility of the local TOs to address through their respective procedures
- Observe NPCC/NYSRC Criteria Contingencies
 - Single contingency used under emergency conditions
 - Do not model stuck breaker or tower contingencies
 - Refer to NYSRC Reliability Rules: Section B -R.1.b.2
- Use STE ratings
 - Consistent with emergency criteria
 - Refer to NYSRC Reliability Rules: Section B -R.1.b.2
- Consideration of voltage/stability limits
 - To be reflected in transfer limit proxies in load flow analysis
 - Voltage constraints will be translated to a MW interface transfer limit for monitoring pre-contingency flows in the analysis
 - Voltage based transfer limits identified from other studies will be reviewed and implemented.
 - The present limits in the MARS analysis that reflect voltage or stability limits will also be evaluated.

- **Transfer limits used in 2005 IRM analysis will be used for all interfaces**
- **Generator Outage Rates**
 - Utilize the same ICAP/UCAP outage rate translation used in the 2004 deliverability study
 - Update EFORD outage rates
- **Use of PARs**
 - PAR adjustments should be allowed to mitigate potential constraints
 - Need to analyze the impact on other interfaces to ensure that there is no double accounting of transfer capability
- **“Shift Factor” Methodology**
 - Recognize the probabilistic nature of forced outage rates and the impact on capacity requirements
 - The following alternative methodologies (presented at the June 22, 2005 IITF meeting) will be used to conduct the study:
 - Alternate 1: Resource Accounting Screen with intra-zonal power flow
 - Alternate 2: Power Flow Methodology with screening step (similar to PJM deliverability test)
 - Alternate 3: IRM and Locational Capacity Studies related to power flow analysis
 - Alternate 4: Combined Generation and Load Approach
 - Alternate 5: Extension of Alternate 4, Needed Capacity Delivery Test

ADDITIONAL SCENARIOS

Scenario A:

- Utilize the same assumptions as the Base Case, except for the following:
 - Monitor for stuck breaker and tower contingencies
 - Use LTE ratings

Scenario B:

- Utilize the preliminary transfer limits developed for the 2006 IRM analysis
- Reflect the impact of the Con Ed series reactor at Sprainbrook

Scenario C:

Utilize the list of generating unit additions and retirements from the (to be determined at meeting)

- a) List of Additions and Retirements in the 2005 CRPP for the Initial 2005 ATRA, Year 2010, or
- b) List of Additions and Retirements in the 2005 Facilities Study/Cost Allocation (Final Catch up Class), or
- c) List of Additions and Retirements from the 2004 ATRA

Sensitivities:

- 1) Evaluate the sensitivity of the results for Methods 3 and 4 to the lowering of the 15.9% Load Proxy used to represent outages and uncertainties
- 2) Evaluate the sensitivity of the results for Methods 3 and 4 to different shift factor development methods, namely:
 - a) Modify shift factor calculation from generation to load to generation to generation;
 - b) Modify shift factor calculation from shifting within a zone to shifting outside of the zone.