

NYSRC Installed Capacity Subcommittee

Meeting #150

July 30th, 2013

10:00 a.m. – 3:00 p.m.

Meeting Minutes

Attendees

	Present	Tel
Members / Alternates:		
Mr. Curt Dahl (LIPA), EC Vice Chairman	<input type="checkbox"/>	<input type="checkbox"/>
Ms. Polina Adelson (LIPA)	<input type="checkbox"/>	<input type="checkbox"/>
Mr. Yuri Fishman (LIPA)	<input type="checkbox"/>	<input type="checkbox"/>
Ms. Kathune Zannat (LIPA)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Mr. Rich Wright (CHG&E)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Mr. Luting Pan (Con Edison)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Mr. Gregory Chu (Con Edison), Secretary	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Mr. Kelvin Chu (Con Edison)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Mr. Syed Ahmed (National Grid)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Mr. Bart Franey (National Grid)	<input type="checkbox"/>	<input type="checkbox"/>
Mrs. Patricia Caletka (NYSEG-RGE)	<input type="checkbox"/>	<input type="checkbox"/>
Mr. Edward Gilroy (NYSEG-RGE)	<input type="checkbox"/>	<input type="checkbox"/>
Mr. John Tigue (NYSEG-RGE)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Mr. Richard Brophy (NYSEG-RGE)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Mr. Robert Boyle (NYPA), Chairman	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Mr. Andrea Fossa (NYPA)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Mr. Bradley Kranz (NRG Energy, Inc.)	<input type="checkbox"/>	<input type="checkbox"/>
Mr. Chris LaRoe (IPPNY)	<input type="checkbox"/>	<input type="checkbox"/>
Mr. Mark Younger (Hudson Energy Economics, LLC.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Mr. Mark Cordeiro (Municipal Power Agency)	<input type="checkbox"/>	<input type="checkbox"/>
Mr. Michael Mager (Couch White, LLP)	<input type="checkbox"/>	<input type="checkbox"/>
Advisers/Non-member Participants:		
Mr. John Adams (NYISO)	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Mr. Peter Carney (NYISO)	<input type="checkbox"/>	<input type="checkbox"/>
Mr. Frank Ciani (NYISO).....	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Mr. Dave Lawrence (NYISO)	<input type="checkbox"/>	<input type="checkbox"/>
Mr. Greg Drake (NYISO).....	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Mr. Bill Lamanna (NYISO)	<input type="checkbox"/>	<input type="checkbox"/>
Mrs. Kathy Whitaker (NYISO)	<input type="checkbox"/>	<input type="checkbox"/>
Ms. Mariann Wilczek (NYISO)	<input type="checkbox"/>	<input type="checkbox"/>
Mr. Steve Lemme (NYISO)	<input type="checkbox"/>	<input type="checkbox"/>
Ms. Erin Hogan (NYSERDA)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Mr. Ed Schrom (NYPSC)	<input type="checkbox"/>	<input type="checkbox"/>
Mr. Nicholas Occhionero (NYPSC)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Mr. Al Adamson (Consultant).....	<input type="checkbox"/>	<input type="checkbox"/>
Mr. Frank Vitale (Consultant)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Mr. Arthur Maniaci (NYISO)	<input type="checkbox"/>	<input type="checkbox"/>
Mr. Scott Leuthauser (Consultant for H.Q. Services)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Mr. Henry Chao (NYISO).....	<input type="checkbox"/>	<input type="checkbox"/>
Mr. Howard Tarler (NYISO)	<input type="checkbox"/>	<input type="checkbox"/>
Mr. Wes Yeomans (NYISO).....	<input type="checkbox"/>	<input type="checkbox"/>
Mr. Paul Gioia (NYSRC)	<input type="checkbox"/>	<input type="checkbox"/>
Mr. Dana Walters (NYISO)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Ms. Donna Pratt (NYISO)	<input type="checkbox"/>	<input type="checkbox"/>
Mr. David Allen (NYISO).....	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Dr. Kai Jiang (NYISO).....	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Mr. Mark Walling (GE)	<input type="checkbox"/>	<input type="checkbox"/>
Mr. Gary Jordan (GE)	<input type="checkbox"/>	<input type="checkbox"/>
Mr. Glenn Haake (NYPA).....	<input type="checkbox"/>	<input type="checkbox"/>

Guests Present:

Mr. Charlie Shafer (AES)	<input type="checkbox"/>	<input type="checkbox"/>
Mr. Dean Ellis (Dynergy).....	<input type="checkbox"/>	<input type="checkbox"/>
Mr. Jim D'andrea (Transcanada)	<input type="checkbox"/>	<input type="checkbox"/>
Mr. Alan Ackerman (Customized Energy Solutions).....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Dr. Roy Shanker	<input type="checkbox"/>	<input type="checkbox"/>

Mr. Phil Fedora (NPCC).....	<input type="checkbox"/>	<input type="checkbox"/>
Mr. Arvind Jaggi (NYISO)	<input type="checkbox"/>	<input type="checkbox"/>
Mr. Frank Francis (Brookfield).....	<input type="checkbox"/>	<input type="checkbox"/>
Mr. Tom Patrit (EPS)	<input type="checkbox"/>	<input type="checkbox"/>
Mr. Ruben Brown (The E Cubed Co.)	<input type="checkbox"/>	<input type="checkbox"/>
Mr. John Dalwin.....	<input type="checkbox"/>	<input type="checkbox"/>
Mr. Richard Quimby.....	<input type="checkbox"/>	<input type="checkbox"/>
Mr. Randy Wyett (NYISO).....	<input type="checkbox"/>	<input type="checkbox"/>
Mr. John Dowling (Luthin Associates).....	<input type="checkbox"/>	<input type="checkbox"/>
Mr. Timothy G. Lundin (Customized Energy Solutions).....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Mr. Norman Mah (Con Edison)	<input type="checkbox"/>	<input type="checkbox"/>
Mr. Matt Renninger (Energy Curtailment Specialist)	<input type="checkbox"/>	<input type="checkbox"/>
Mr. Jim Scheiderich (Energy Curtailment Specialist).....	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Ms. Kathy Slusher (SUNY)	<input type="checkbox"/>	<input type="checkbox"/>
Mr. Rick Roby (Dynergy).....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Mr. Shaun Johnson (NRG)	<input type="checkbox"/>	<input type="checkbox"/>

1. Assumptions Matrix

Gregory Drake (NYISO) said that there were some changes to the matrix, which was then approved by the Executive Committee.

He mentioned that under retirements, Trigen Syracuse was put back into the model because the NYISO is still performing local reliability studies on this unit before they can grant permission for mothball/retirement.

Mr. Drake said that Indian Point 3 is taking a maintenance outage now during the summer. Frank Vitale (NYSRC- consultant) reviewed his finding of the summer maintenance to be modeled this year. He mentioned he excluded weekends, holidays, and low load days from his analysis. He mentioned historically summer maintenance has exhibited a downward trend over the past couple of years. Mr. Vitale said that an average of 15 MW outage was the result of his analysis. Chairman Bob Boyle (NYPA) asked for the low load days criteria. Mr. Vitale stated 27,000 MW or less he would consider a low load day. Mark Younger

(Hudson Energy Economics) suggested that the group should determine the load cut-off criteria. Mr. Younger also suggested that since 15 MW was the average considering all days, yet the amount of MW was NOT from all days, he recommended that Mr. Vitale recalculate the average MW using only the number of days from his original criteria. Mr. Vitale later determined that the average MW for 24 highest load days from his criteria was 28 MW and 18.6 MW using 36 highest load days, instead of 15 MW average over 45 days.

Chairman Boyle was originally uncomfortable with using only 15 MW of maintenance and suggested staying with 50 MW from last year, since only a few years ago summer maintenance was 150 MW. Gregory Chu (Con Edison) pointed out that perhaps we should use 40 MW instead of 50 MW to reflect a downward trend of maintenance outages. Members agreed on 40 MW for summer maintenance.

Erin Hogan (NYSERDA) explained that the delay in awarding projects under the most recent RPS solicitation may result in project postponements or cancellations. Only one of the selected projects had an in-service date of before June 1, 2014. However, this project does not have a signed contract so its in-service date could be delayed or cancelled. Given these uncertainties and its small capacity (15 MW), she suggested that no new wind projects be modeled for the preliminary base case. More definitive information should be available by the October timeframe for the final base case.

Mr. Drake also mentioned that Marble River Wind did not have CRIS rights and thus would be removed from the model.

Mr. Drake said that LIPA mentioned there may be approximately 12.5 MW of new solar.

Mr. Chu pointed out that the phrase in the matrix for HTP's UDR may need to be updated to reflect the current situation of the line/project.

Mr. Drake said that based on the conversation with the Executive Committee, Special Case Resources has been changed to low (+) IRM impact due to low

performance factor of these resources. Overall SCR performance went from approximately 81% to 63.4%.

2. Chateauguay/ Overhead Transmission Line Forced Outage Rate

Mr. Younger pointed out that based on the data the NYISO provided about the number of outages and outage durations for the Chateauguay transmission line, we should be modeling the 1.1% outage. Mr. Chu commented that we do not know if these are planned or forced outages. Mr. Younger responded that the NYISO was supposed to find out and get back to the group. Mr. Drake said that they do not know whether these are planned or forced. Mr. Younger suggested that most outages are not planned during the summer. Mr. Drake did not agree with this assumption, as Hydro Quebec can ask for maintenance outage and it can be granted even during summer.

Syed Ahmed (National Grid) explained that an interface in MARS may consist a lot of different transmission lines. Mr. Ahmed mentioned that modeling these interfaces will be very difficult, as each interface can have a large number of states to properly account for all of the combination outages that could occur in real life.

Mr. Ahmed also cautioned that the determination of transfer limits takes into consideration NPCC N-1 criteria. By modeling forced outage rate on interfaces, the transfer limits should be reinstated to the original interface limit (higher limit), since that deterministic N-1 limit has already factored in the loss of an element. He believed that by using current limits PLUS outage rate we would be double counting the derates.

Mr. Younger disagreed. He said that the NYISO needs to run the system under N-1 criteria. Therefore, the loss of a transmission line due to a forced outage would be independent of the operating criteria.

Jim Scheiderich (Energy Curtailment Specialist) stated that we need to look into the Chateauguy outage information to determine the proper amount outage to model.

Scott Leuthauser (HQUS) said that if we are to model Chateauguy outages, we would also need to model all internal interfaces. He also did not agree with Mr. Ahmed about the double counting of modeling N-1 limits and outages together. Emergency post contingency limits are not quite N-1, Mr. Leuthauser said.

Henry Chao (NYISO) stated that there are 2 elements for the Chateauguy line, one is generator outage, the other is back to back DC line outage. Mr. Chao said that if the generator is out, 700 MW can still flow through the line. He further emphasized that line ratings were already modeled with emergency ratings.

Mr. Scheiderich cautioned that due to differences and complexity of DC versus AC lines, and a lack of historical data on failure and repair detail, we may want to focus on those aspects rather than jumping into using 1.1% outage rate to model right away.

Mr. Younger said that we are not looking to model made up data. He said that we should be using the actual outage rate presented before.

Chairman Boyle asked the NYISO to look into if Chateauguy outages were approved outages, as opposed to forced outages. Mr. Drake suggested that the transmission owners should provide some insight instead.

John Adams (NYISO) mentioned that overhead line outages have really short repair time, as opposed to cables that take considerable more time to restore. This was the primary reason why overhead transmission line outages were not modeled. Furthermore, the NYISO does not have actual outage data across all the interfaces to provide accurate modeling.

Chairman Boyle has asked Mr. Younger to provide a write-up about this topic. **(AI 150-1)**

Mr. Ahmed stated that we should track if anyone else in the nation even models overhead line outages. Chairman Boyle said there's no reason why we can't be in the forefront trying to model something new.

Ms. Hogan cautioned that we should be aware of the differences between regions when we use NERC's data, since regional diversity may have a huge impact on the outages. She pointed out that, for example, New York does not routinely have tornados.

3. Parametric Study

Frank Ciani (NYISO) reported that out of 15-16 possible parameters, topology, external areas, wind shapes, and load shapes will still need to be studied. The NYISO does have some results but those require internal review prior to dissemination. Chairman Boyle asked if the NYISO foresee any delays to provide the results on the August 7th teleconference call. Mr. Ciani did not see any issues.

Chairman Boyle reiterated that the NYISO should voice their concern when the milestone is discussed. Due to the delay of parametric study, the group is struggling to meet the deadlines of the IRM study. The NYISO has promised, however, that we would be back on schedule by the end of August,

4. Quality Assurance

Mr. Ciani mentioned that the NYISO will provide the full preliminary base case to GE by August 16th. Mark Walling (GE) mentioned that he has already started the quality assurance process on the partial model and has provided some comments. Upon receiving the full base case, GE would then mask the confidential information in the model and supply the masked database to the transmission owners, Con Edison and LIPA. **(AI 150-2)**

5. Proposed Sensitivity Cases

Mr. Drake said that the first 7 cases are standard cases we study every year.

The environmental impact scenario is not necessary this year.

The retirement scenario would include units that are mothballed but still kept in the model due to pending studies. Trigen Syracuse would be retired, for example, in this case.

Mr. Chu asked if Astoria GT 10 and 11 would be included in the base case, since they have submitted intend to withdraw their mothball request. The NYISO will bring them back because they were retired in the last year's model.

The SCR scenario of limiting calls to 5 calls per month per zone will be performed since there are major changes in the model, such as multiple year load shape, that may warrant a need to see the effect of SCR call limits.

For the PJM EOP study, Mr. Younger recommended that the NYISO must set it up so that 1 MW deficit does not activate all 8000 MW of demand response. Mr. Walling said that he can always increase the number of EOP steps in the program (change the dimension array in MARS) to accurately mimic actual demand response implementation.

Increasing EOP steps was also suggested to be implemented for the SCR sensitivity case. Or in lieu of changing the program, combine all the other EOP steps into a single EOP step, to free up steps for modeling different levels of SCRs.

Mr. Scheiderich said that in reality, external areas would help NYCA in the time of need. By excluding external assistance, we would not be mimicking actual system behavior. Mr. Younger said that by rule, NYCA would not activate its own demand response to support external areas and vice versa. His concern is that any excess demand response MWs left over from PJM's own need may flow back to assist NYCA if it was modeled without steps. He cautioned that there may be a need to model PJM with much more details to ensure demand

response is allocated in the actual locations. Mr. Younger was comfortable with PJM's demand response being split up into their respective zones, and into 10 steps.

In the end, Mr. Drake said that the NYISO needs to come back with a proposal to model this accurately. **(AI 150-3)**

6. Transmission Availability Data System

Mr. Younger presented NERC's report "State of Reliability" and stated that on page 11, automatic sustained outage rates for AC circuits and Transformers were shown as 0.12% and 0.5% respectively.

Mr. Chu wondered if Table 6.8 on page 49 would be more relevant to use for the outages, which is summer 2012 monthly transmission system unavailability % due to automatic outages. Mr. Younger doesn't have a problem, but since this is only 2012 summer data, he's not sure if this amount of data is enough. Mr. Chu asked if there are some older version of this table for 2011 and 2010 report. Mr. Younger will check.

Mr. Chao asked if we know the duration of the outages based on the report. Mr. Chu said that without actual data, it makes modeling the state transitions very difficult since the amount of time (duration) the interface goes from one state to another needs to be specified. Mr. Chu asked Mr. Walling if MARS is capable of having both type of interfaces that uses state transition rate tables and forced outage rate in a single database. Mr. Walling said no. Therefore, state transition rate table will be required if we are to model outage rates on internal interfaces, since cable interfaces are already being modeled with state transition rates.

Mr. Chao suggested that the group can try to study a couple of critical interfaces first. Mr. Younger suggested the outage occurrence to be once every 3 years, and each outage takes 24 hours to restore. Mr. Ahmed asked that we should model seasonality as well, since performance is different seasonally. Mr. Chu said that outage rates/transition rates in MARS doesn't take into account seasonality, unfortunately.

Chairman Boyle suggested UPNY/SENY, Cental East, and Chateauguay as possible candidates. Mr. Drake suggested a four-states set up for the interfaces. Mr. Ahmed reiterated that the transfer limits need to be restored to the normal rating before applying transition rates.

The NYISO will be working with Mr. Younger to figure out how to model this accurately as a sensitivity case.

Secretary: Gregory Chu

(Con Edison)

Next meetings:

Meeting 151, Wednesday, September 4th at NYISO HQ

Meeting 152, Wednesday, October 2nd at NYISO HQ

Meeting 153, Tuesday, October 29th at NYISO HQ

Meeting 154, Monday, December 2nd Teleconference
