

# NYSRC Installed Capacity Subcommittee

Meeting #151

September 4th, 2013

10:00 a.m. – 3:00 p.m.

Meeting Minutes

## Attendees

	Present	Tel
Members / Alternates:		
Mr. Curt Dahl (LIPA), <b>EC Vice Chairman</b> .....	<input type="checkbox"/>	<input type="checkbox"/>
Ms. Polina Adelson (LIPA) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Mr. Yuri Fishman (LIPA) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Ms. Kathune Zannat (LIPA) .....	<input type="checkbox"/>	<input 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), <b>Secretary</b> .....	<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 checked="" type="checkbox"/>	<input 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 type="checkbox"/>
Mr. Richard Brophy (NYSEG-RGE) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Mr. Robert Boyle (NYPA), <b>Chairman</b> .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Mr. Andrea Fossa (NYPA) .....	<input type="checkbox"/>	<input 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 type="checkbox"/>	.....	<input type="checkbox"/>
Mr. Al Adamson (Consultant).....	<input checked="" 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 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 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 type="checkbox"/>	.....	<input checked="" type="checkbox"/>
Ms. Kathy Slusher (SUNY) .....	<input type="checkbox"/>	.....	<input type="checkbox"/>
Mr. Rick Roby (Dynergy).....	<input type="checkbox"/>	.....	<input type="checkbox"/>
Mr. Shaun Johnson (NRG) .....	<input type="checkbox"/>	.....	<input type="checkbox"/>

**1. Lower Hudson Valley Locational Capacity Requirement – IRM Report**

ICS members discussed at length about whether to include a brief write-up of the NYISO recommended LHV LCR methodology in the IRM report/Policy 5.

Mark Younger (Hudson Energy Economics) inquired if there is intent to calculate LHV LCR using the NYISO recommended LHV LCR methodology as utilized previously to determine the indicative LHV LCR. Chairman Bob Boyle (NYPA) stated yes.

Al Adamson (NYSRC – Consultant) said that since LHV LCR does not affect the IRM, this may not have relevance for inclusion in the IRM report. He was also concerned since the LCRs are determined after the Executive Committee has already approved the IRM report.

Syed Ahmed (National Grid) questioned why we would include a write-up in the IRM report since once the IRM report is approved and issued, external readers

will falsely assume that the ICS has approved the LHV LCR methodology. ICS members previously agreed only that the NYISO prescribed methodology does not impact the reliability. He emphasized that the IRM report, and its approved IRM, has direct market impact. He does not want any information that does not directly affect the IRM be included in the report to avoid confusing market participants, since the Reliability Council does not set the LCRs.

Erin Hogan (NYSERDA) also felt that it may be more prudent that this year's IRM report does not include a new methodology that is subject to additional review and possible modification. She recommended that next year this group can revisit the methodology for inclusion in the report. She stated, in agreement with Mr. Ahmed, that including a write-up in Policy 5 does not have any value added benefits for the Reliability Council.

Mr. Younger said that currently there is nothing written about the methodology and there are no plans for the NYISO to modify the methodology. Therefore, he suggested that a couple of paragraphs to describe the methodology may be needed.

Chairman Boyle said that a write-up in Policy 5 may not be needed. However, since the IRM report describes zones J and K LCRs, LHV LCR value may need to be indicated in the report. Without a description of how LHV LCR is determined, the derivation of the value would be unclear. Mr. Adamson suggested that perhaps a small write-up can be added to the LCR section of the report that describes the caveats and the value, but not include the value in the executive summary section of the report.

Dana Walters (NYISO) mentioned that LCR is not under the jurisdiction of the Reliability Council. He said that perhaps Policy 5 should remove the LCR determination process as the NYISO has publicly posted the LCR process for J, K, and LHV. He believed that Policy 5 does not need to explicitly state the LCR process and this would be consistent with the new capacity zone's methodology exclusion.

Mr. Younger felt that it is important that the IRM report reference the LHV LCR value. Chairman Boyle said that by including the value in the report, we are obligated to describe how that value is determined.

Ms. Hogan suggested that perhaps the Executive Council should make the final determination using options as suggested by the ICS. Ms. Hogan recapped that the options include a written high level description of the methodology, a reference to the NYISO website about the calculation, and/or include the actual LHVLCR value.

Gregory Chu (Con Edison) stated in that if we are to include a LCR value in the report, reader will assume that the ICS has vetted and supported the methodology. He recommended that if a write-up is warranted, the language should be to reference the NYISO documentation of the methodology, without stating the LCR value. The LHV LCR value does not add value to the IRM report. When asked about the justification of including J and K LCR report, Mr. Chu replied that J and K are needed due to the existing Unified Methodology and those values are needed to determine the proper IRM using tangent 45, unlike the LHV LCR value.

Mr. Adamson concluded that there is a general agreement on excluding language describing the methodology in Policy 5. ICS members disagreed, however, on the need of including the LHV LCR value in the IRM report. Chairman Boyle will inform the EC of the discussion that took place at this ICS meeting.

## **2. PJM Demand Response**

Jim Scheiderich (Energy Curtailment Specialists) stated that the previous assumption that PJM would not activate their demand response to support a need in NYCA was inaccurate, as described in an email response from PJM, forwarded by Mr. Scheiderich on 8/27/2013 to the group.

The second issue was the multiple steps needed in MARS model to properly account for stepwise DR implementation. Mr. Scheiderich was not certain on the status of the required modeling change. Gregory Drake (NYISO) responded that they are still exploring the options with GE about how to implement this accurately. This will not be modeled in this year's IRM study, but more details will be available in the white paper.

### **3. Preliminary Base Case Tangent 45 Study Results + EFORd Variance Update**

Mr. Drake reported that all of the updates have been included in the formation of the preliminary base case. Quality assurance reviews are under way by all parties and the NYISO has already received review summaries.

Mr. Drake informed the group that due to complex overlapping events for 6 units, there were significant differences between market EFORd and software computed EFORd. The NYISO is currently recalculating the transition rates by hand to correct the deviations and these units are expected to have an impact (lowering effect) on both IRM and LCR values. Mr. Drake stated that the lesson learned is that the NYISO needs to perform the deviation check earlier next year to avoid delays if corrections are identified.

Chairman Boyle asked Yuri Fishman (LIPA) if he has supplied the NYISO with his quality assurance findings. Mr. Fishman said that he will supply something to the NYISO next week. Mr. Adamson asked if Mr. Fishman has performed a tangent 45 evaluation of the preliminary base case curve. Mr. Fishman had a question instead for the NYISO since there was a huge change for the zone K LCR when the parametric results and the preliminary base case results are compared. Frank Ciani (NYISO) and Mr. Drake said that the old parametric results for the LCRs of the last three cases were not updated in the forwarded document previously.

Mr. Drake said that the correct LCR values for the last 3 parametric study cases for zones J and K were:

87.02% 107.36%

87.08% 107.44%

86.31% 106.43%

Mr. Drake said that the preliminary base case results for IRM and LCR are 17.1%, 85.9% for NYC LCR, and 106.2% for LI LCR.

Mr. Younger inquired about the amount of variance due to EFORd deviation. Mr. Drake said they found 290 MW of variance. A total of 9 units constituted 232 MW of variance. The 6 units being hand calculated would contribute to an increase in 50% of 232 MW being introduced back into the model. Chairman Boyle wondered if these would change the results significantly. Mr. Drake said he does not know at this time.

Mr. Chu asked if the preliminary tangent 45 results came from a model with the quality assurance changes implemented. Mr. Drake said no, so there may be additional changes to the IRM and LCR numbers.

Mr. Younger asked about the turn-around time of the EFORd calculations. Mr. Drake said it will take weeks to complete the hand calculations.

Mr. Younger asked for clarification on the "hand calculation". Mr. Drake explained that the overlapping events needed to be properly accounted for. The software was unable to perform the transition rate calculations on these complex events. There is actually nothing wrong with the data. The event data, Dr. Kai Jiang explained, need to be aligned as time-series events to be properly transformed into transition rates. The APA methodology uses events data, and overlapping events must be arranged sequentially for the calculation.

Chairman Boyle didn't understand why the NYISO need to go back and hand calculate 5 years of data, when last year was probably the primary cause of the deviation. Dr. Jiang said that if the units were the same from the last year, then only 1 year's data needs to be hand calculated.

Mr. Chu asked that since the original Con Edison concern about the software unable to pick up complex events on its own surfaced in the review, the NYISO should make modifications in the software to properly account for these complex events. The next time another unit encounter the same type of series of events, the software would have no problem calculating the transition rates without additional intervention. Mr. Drake said that the new rules would be incorporated into the software. Chairman Boyle asked if Mr. Drake can bring those new rules to the group, and Mr. Drake agreed. **(AI 151-1)**

Mr. Younger asked that the NYISO would bring back the IRM and LCR results (point pairs) after the EFORD correction has been implemented. **(AI 151-2)**

Mr. Chu asked if the NYISO will be able to finish the hand calculation in time and Mr. Drake said they will complete the correction by the next ICS meeting.

#### **4. Parametric IRM Impact Comparison**

Mr. Adamson reviewed the parametric IRM impact table for the report. He listed all the parameters that led to an IRM increase (such as retirements, outage rate updates, new maintenance, etc). The second part of the table listed parameters that led to an IRM decrease (new load shape, lower external loads, lower LFU, etc). The parameters cancelled each other out (+2.9% versus -2.9%) and the IRM stayed at 17.1%. The table also listed all of the reasons for each of the parametric impacts.

#### **5. Proposed Sensitivity Cases**

Mr. Ahmed asked about case 9: retirement scenario. Mr. Ciani said that the units being considered in this sensitivity case are the ones that had retirement intent but were unable to retire due to local reliability needs. One of the units is Trigen Syracuse, which was left in the preliminary base case, but now the unit is allowed to retire so it would be one of the units under this scenario. Mr. Ahmed would like



to get a list of the units being considered under this sensitivity case. **(AI 151-3)**  
He suggested that we remove Cayuga under this sensitivity.

## **6. Overhead Transmission Outage Rates Sensitivity Case**

Frank Vitale (NYSRC- Consultant) went back and looked for past study papers on this topic. He found a 1993 paper comparing outages from 1965-1985. He was unable to find anything else that can provide some insights. Mr. Vitale said he found another paper, by Dr. Roy Billington, that talked about the complexity of modeling transmission system due to circuit interactions. He also looked up TADS (transmission availability data system) data for per circuit mile outage rates, table 3.1-1. He stated there's simply not enough data out there available.

Mr. Adamson said that he perused the book Reliability Evaluation of Power Systems by Dr. Billington and Dr. Ron Allan. He discovered that the "composite reliability", which included transmission reliability with generation reliability, is a region that is vastly complex and not very well explored.

Mr. Adamson said that in order to perform a sensitivity case study, we need to keep the model simple, probably selecting an interface with minimal elements and consider only on and off states. Mr. Ahmed said that it is important to not study a hypothetical sensitivity case. Rather, we need to pick one interface, and fully represent the asset type that makes up the interface.

Mr. Chu stated that if we are to model interface with simple states, we absolutely cannot choose UPNY/SENY interface for this sensitivity case because we can't model only on and off states for the lines within this interface (consists of at least 7 transmission lines) due to possible combination of line outages that are needed to accurately model the interface behavior. Mr. Younger disagreed and said that UPNY/SENY should still be chosen and we would only look at individual lines going out one at a time. Mr. Chu and Mr. Ahmed disagreed with Mr. Younger since combination outage scenarios need to be captured within the transition matrix for the sensitivity case in order to model this properly, even it if just a sensitivity case, or else the results would be misleading and wrong.

Chairman Boyle said that the group should work together on this topic and arrive at a consensus in 3-months time to avoid interfering with the current IRM study cycle. John Adams (NYISO) said that the EC has decided that this sensitivity case would not be performed in this year's study because it is too preliminary. The group would come back with the agreed upon assumptions on this sensitivity case. **(AI 151-4)**

## **7. Assumption Matrix Revisited**

Mr. Ciani said there were two small updates in V11. 12.5 MW of solar was added to the matrix. Trigen-Syracuse was restored in the preliminary base case.

A redline version with some additional changes like NYBA to NYCA will be forwarded to the EC. The EC has approved the preliminary assumption matrix (V8). They will approve the final version of assumption matrix in October (V12/13).

## **8. Milestones**

Mr. Drake said that the first week of October the fall load forecast will be available. Arthur Maniaci (NYISO) is invited to the next ICS meeting to present the forecast. **(AI 151-5)**

## **9. ICS Meeting Schedule for 2014**

Mr. Adamson asked for suggestion on the timing of 2 specific ICS meetings for next year. The EC will meet on January 10<sup>th</sup>. Normally January ICS meeting is a conference call. Chairman Boyle suggested that January 6<sup>th</sup> would be best.

The EC will also meet on July 11<sup>th</sup>. Due to the July 4<sup>th</sup> holiday, Chairman Boyle suggested that ICS should meet on June 25<sup>th</sup>.

Secretary: Gregory Chu

*(Con Edison)*

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Next meetings:

Meeting 152, Wednesday, October 2<sup>nd</sup> at NYISO HQ

Meeting 153, Tuesday, October 29<sup>th</sup> at NYISO HQ

Meeting 154, Monday, December 2<sup>nd</sup> Teleconference

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