

# NYSRC Installed Capacity Subcommittee

Meeting #175

September 2nd, 2015

10:00 a.m. – 2:00 p.m.

Meeting Minutes

## Attendees

	Present	Tel
Members / Alternates:		
Ms. Khatune Zannat (PSEG-LI) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Mr. Rich Wright (CHG&E) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Mr. Gregory Chu (Con Edison), <b>ICS Vice Chair/Secretary</b> .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Mr. Sanderson Chery (Con Edison) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Mr. Richard Brophy (NYSEG-RGE) .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Ms. Patricia Caletka (NYSEG-RGE) .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Mr. Syed Ahmed (National Grid) .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Mr. Mark Younger (Hudson Energy Economics, LLC.) .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Mr. Bob Boyle (NYPA) .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Advisers/Non-member Participants:		
Ms. Erin Hogan (DOS), <b>ICS Chair</b> .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Mr. Greg Drake (NYISO) .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Mr. Frank Ciani (NYISO).....	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Mr. Dana Walters (NYISO) .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Mr. Josh Boles (NYISO).....	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Dr. Kai Jiang (NYISO).....	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Mr. Bill Lamanna (NYISO) .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Ms. Vijay Ganugula (NYISO) .....	<input type="checkbox"/>	<input type="checkbox"/>
Dr. Kelvin Chu (GE) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Mr. Al Adamson (Consultant).....	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Mr. John Adams (Consultant) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Mr. Scott Leuthauser (Consultant for H.Q. Services) .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Ms. Kelli Joseph (NRG) ..... .....   
Mr. James Scheiderich (ECS)..... .....

Guests Present:

Mr. Alan Ackerman (CES)..... .....

**1. Preliminary Base Case Assumption Matrix Update**

Gregory Drake (NYISO) said there were no updates to the matrix since it was last approved by the Executive Committee. Al Adamson (NYSRC – Consultant) reminded Mr. Drake that they should provide the “Final Base Case Assumption Matrix” at the next meeting, with redline on items that have changed from the preliminary BC assumption matrix. **(AI 175-1)**

**2. PJM Model Update**

Mr. Drake (NYISO) referred to the presentation from IEEE PES 2015-*Probabilistic Methods in Resource Adequacy* at PJM about PJM’s LOLE criteria. He mentioned that on pg. 13, PJM’s CETO method ensured capacity adequacy at 0.1. However, PJM also considered transmission LOLE risk of 0.04. In total, PJM expect to maintain 0.14 total LOLE (Resource and Transmission Adequacy). This showed, and Mr. Adamson pointed out, a difference between how the PJM and the NYISO achieved reliability criteria since NYSRC considered transmission limitation in its derivation of 0.1. PJM in fact does not with this revelation. Dr. Kai Jiang (NYISO) explained that since PJM used PRISM modeling that could not model transmission constraints, they are unable to obtain resource adequacy LOLE that embed transmission limitation directly within the model.

Dana Walters (NYISO) stated that we are not in a position to determine if PJM is determining their adequacy correctly. Instead, this information tells us that we should model PJM in our MARS model to 0.14 LOLE to ensure consistency.

ICS Chair Emeritus Bob Boyle (NYPA) wondered if we were to segregate transmission constraint, would we get the same type of results (additive) or a multiplicative effect instead. Mr. Drake said he does not know. Scott Leuthauser (HQUS) said that in order to determine that we can remove NYCA transmission constraints in order to determine how much of the NYCA 0.1 LOLE is attributed to transmission.

Syed Ahmed (National Grid) said that New England modeled single area and then applied tie lines afterwards, similar to PJM. Dr. Ahmed also said that Policy 5 said that external areas cannot be better than NYCA. Mr. Drake said external areas should be no better than their own criteria.

ICS members in the end agreed with PJM being modeled to no better than 0.14 LOLE for the base case.

### **3. Parametric Study Results**

Mr. Drake (NYISO) said there were about 4 cases remaining. The NYISO was not comfortable with the abnormal results seen in a couple of these. They are looking into the cases and were not able to present anything here at the meeting. He also mentioned that 2 cases they were focusing on were the wind shape case and the external area (PJM).

Mr. Boyle was worried about previous parametric cases once the error has been identified. Mr. Drake said not every case will need to be re-run.

Mark Younger (Hudson Energy Economics) wondered if the errors are due to individual parameter representation or something else more fundamental within the model. Mr. Drake thinks that perhaps updating the study year may make, for example wind shape, inappropriate adjustments by the model. Peak of the year may move as well. But the NYISO has not been able to identify the errors just yet.

Mr. Younger asked when the parametric results and a resulting tangent 45 will be available. Mr. Drake said he doesn't know yet since it may be an iterative process after identifying parametric problems and rectifying them, then assumptions may be changed for the tangent 45 analysis. Chair Hogan said that we should expect parametric results first, and tangent 45 should be available the following week. She said that due to a shorter/less complex list of sensitivity cases needed for this year's study, we should not fall behind schedule too much.

Mr. Drake said that we should consider running 8760 mode due to modern equipment shortening computation time. In the past, running daily mode versus 8760 mode yielded very little differences. This year, it seemed that the differences between the modes are larger. Chair Hogan is concerned that this is adding a new variable to the mix of our problems. Mr. Walters said that due to missing events not captured by the daily mode, GE is wondering if the parametric problems are due to the short coming of the daily mode. Mr. Boyle asked about the magnitude of the changes between the modes. Mr. Drake said in the past they've noticed 0.002 days/year. Last year he said 0.005 was identified last year. The NYISO saw 0.05 this year, which was significant. Vice Chair Gregory Chu (Con Edison) cautioned that he ran the model in the 8760 mode before and the resulting HLOLE and DLOLE output was suspicious. He has asked GE before to look into this and thus it may be dangerous to run that mode not knowing if the code itself may add to the problem.

Chair Hogan recommended a call on 9/9 2pm for parametric follow-up. **(AI 175-2)**  
9/16 8:30am will be the tangent 45 meeting. **(AI 175-3)**

#### **4. Sensitivity Cases**

Chair Hogan said that the first 5 cases are the typical cases we perform every year.

ICS members agreed with case 6, where SCR are modeled with 0.855 SCR derate.

Josh Boles (NYISO) said that some of the forward capacity sales to ISO-NE have materialized for the first time. He said that although June and July capacity sale have increased from the year before, August and September had a drop off in sales. Mr. Boles stated that last year's average was 115 MW, this year's average is 225 (not including October). Mr. Adamson wondered if capacity sales would be curtailed during emergency conditions. Mr. Boles said that unless there's a transmission issue, the sales will not be curtailed. Mr. Boyle asked the committed forward sale for 2016-2017, Mr. Boles said it was less than 1000 MW and he believed it is around 800 MW. Mr. Boyle said we should use that if we are to come up with the ratios instead of the 1000 MW. Dr. Ahmed wondered if we should just drop the May and use the rest of the summer values in the model instead of trying to use an average. Mr. Walter suggested that perhaps we can run two sensitivities, one at 300 MW and one at 600 MW. Vice Chair Chu suggested that we should just model the difference between the two averages. He stressed that the difference between the two averages would show the impact of the capacity market change that led to more capacity being sold out of state.

Chair Hogan agreed with running 2 different sensitivity cases. Mr. Boyle suggested Mr. Chu's recommendation of the difference of the 2 averages as the low case, and maybe 2 times that as the high case. Mr. Younger suggested 3 times as the upper limit instead. Mr. Chu and Dr. Ahmed wondered about the rationale behind 3 times. Mr. Younger considered 2 times a bit low and he felt the real amount could be more and we should capture that higher end. Kelli Joseph (NRG) agreed with Mr. Younger and suggested we be cognizant of the market behavior for next year. Mr. Walters cautioned that we should not use 3 times as a hard wired factor, but rather ensure we capture enough MW for the high end. Dr. Ahmed at the end does not agree with 3 times.

Members also discussed how the contract/missing capacity will be modeled. The capacity will be modeled with standard sensitivity method. Mr. Boles said that we can deviate a little from the standard because we KNOW the exact units that have sold their capacity and therefore know the outage rates for those units. He said we can just model derates for those units specifically. Dr. Jiang suggested that replacement MW to bring the model back to 0.1 can be added to either upstate, downstate, or all zones based the location of the units that sold out.

ICS members agreed with the delta of the 2 averages (approx. 135 MW) from June to September as the low case, 3 times as the high case (approx. 405 MW), exclusive of existing federal contract.

The GE wind shape model will be available the week following this meeting. Chair Hogan suggested that the NYISO should prioritize other cases.

Dr. Ahmed was wondering if the NYISO can provide J and K LCR for sensitivity case 10 (IP 2 & 3 retired). Mr. Drake said that it is not possible because replacement MW is hard to determine. He did say it is possible to show LOLE for J and K, although it is possible misconstrue the meaning of these zonal LOLE. We can obtain the information as a FYI for now, but can consider if this is needed in the report. Vice Chair Chu questioned that if zonal LOLE is even necessary for the EC to make determination on the IRM as a whole, since there are no criteria for zonal LOLE. Mr. Younger said that the NYISO should just bring the information, not in writing, and we as a group can determine if we need put that in the report and/or give that information to the EC. **(AI 175-4)**

## **5. Quality Assurance Reviews**

Mr. Drake said that the MIF was given to GE, Con Edison, and PSEG-LI. GE has not found anything significant on the preliminary MIF. They are helping with identifying parametric problems.

Vice Chair Chu said once Con Edison has completed the entire review a list of discovery will be forwarded to the NYISO.

Kathune Zannat (PSEG-LI) said that they found export limit on Y49Y50 had to be updated for the base case. She also asked if Huntley should be retired for the base case. This should be discussed at the next meeting for final base case inclusion. She also asked if we would see GE's QA report at this meeting. Mr. Drake said GE has not provided materials to show to ICS members.

Secretary: Gregory Chu

*(Con Edison)*

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Next meetings:

Meeting 176, Tuesday, September 29<sup>th</sup> at NYISO HQ

Meeting 177, Tuesday, October 27<sup>th</sup> at NYISO HQ

Meeting 178, Monday, November 30<sup>th</sup> at NYISO HQ

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