

NYSRC Installed Capacity Subcommittee

Meeting #66

July 7, 2006

9:30 a.m. – 4:00 p.m.

NYSERDA: 17 Columbia Circle Board Room

Meeting Minutes

Attendees

Members/Alternates Present:

Mr. Curt Dahl (LIPA), Chairman
Mr. Bart Franey (National Grid)
Mr. Madison Milhous (KeySpan Ravenswood)
Mr. Mark Younger (Slater Consulting)
Mr. Steve Jeremko (NYSEG-RGE)
Mr. Carlos Villalba (Con Edison), Secretary
Mr. Rich Wright (CHG&E) - Telephone

Advisers / Non-Voting Participants Present:

Mr. Greg Drake (NYISO)
Mr. Frank Vitale (Consultant)
Mr. John Pade (NYISO)
Mr. Ed Schrom (NYSDPS) – Telephone
Mr. Steven Keller (NYDPS)
Mr. Cenk Yildirim (NYISO)

Guests Present:

Mr. Harry Joscher (PSEG Power LLC) – Telephone
Mr. Amanvir Chahal (NYISO)

1 Review and Approval of Meeting Minutes

1.1 May 3, 2006 ICS Meeting (#64)

The group reviewed and commented on the draft meeting minutes from meeting #64. The draft was approved as final.

1.2 June 7, 2006 ICS Meeting (#65)

The group reviewed, commented, and made some editorial changes. Next meeting the group will review the changes.

2 Review of Previous Outstanding Assignments

2.1 Closed

2.2 New

66-1. Collapse all EOPs and use only summer months and find out if LOLE is the same, around 0.1 days/year. Assigned to Greg Drake.

66-2. Con Edison and NYISO to automate the IRM/LCR curve calculation. Assigned to Greg Drake and Carlos Villalba.

66-3. Update the average EFORd for SRCs and EDRPs. Assigned to Greg Drake.

2.3 Update of Previous Assignments

62-4. GE, NYISO, and ICS to review Athens nomogram and investigate the SPS run-back scheme. Mr. Franey stated that the Athens nomogram is an example of downstate leaning on the transmission for reliability. Carlos Villalba disagreed, saying that Athens helps upstate when the IRM is 18%.

3 Lessons Learned from 2006-07 IRM Study.

3.1 Lesson #1

3.2 Lesson 1 - Schedule

Mr. Pade reported that with the new DSS system data, updated forecast for the IRM but would not be the same for the ICAP obligations. Mr. Franey stated that the benefit is that the LCR and the IRM will have the same forecast, but not the same as that used for ICAP obligations. After October 1st everyone will know what their loads were for the summer, but they won't know the Municipalities' loads and the associated load segregation. Mr. Pade stated that even in the worst case scenario, the difference will only be .5%. Con Edison will be given the CECONY forecast by October 1st. and if available the Company will give all of its load information by October 1st.

3.3 Lesson 2 – Sensitivity Analysis

Steve Jeremko and Bart Franey reported that it is possible to do the runs using 6 months worth of iterations around the summer and collapsing all the EOP steps into one step. This saves significant computer time and resources without significantly detracting from the accuracy of the runs' results.

3.4 Lesson 3- Defining Tan 45 Anchor Point

Mr. Dahl reported that there was a 0.8% difference between an IRM calculated using a square function (17.5%) and the IRM using a fifth degree polynomial (18.3%). Mr. Franey said that he has observed an S-shape curve that does not follow the IRM/LCR curve in its entirety when using high degree polynomials. Mr. Franey added that in order to use higher than second degree polynomials to obtain the IRM/LCR curve it will be necessary to have more points on the curve. Carlos Villalba asked if a logarithmic approximation has been

used to which Mr. Dahl responded that the program that was used to calculate the polynomial coefficients checks for best fit among many types of equations.

Mr. Dahl noted that regardless of the anchoring methodology used, engineering judgment also needs to be exercised based on sensitivity analysis, error analysis, and NYCA's electric system topology.

Mr. Younger pointed out that even if the IRM/LCR is determined using a square function, there is no assurance that the tangent 45 of the two curves will lie on the same IRM. Consequently, Mr. Dahl indicated that this theory needs to be verified.

The ICS members reached consensus not to use the fifth degree polynomial to anchor the IRM.

3.5 Lesson 4 – Intermittent

Mr. Younger reported that the small generators participating in the NYISO's SCR program are limited to 5 to 6 hrs of operation, thus averaging 2 1/2 to 3 calls per year. Once information on the quantity of SCRs provided by small generators is available, Mr. Drake will separate the SCRs that are generators from the SCRs that are loads and limit the generators to three calls per month for July and August. Mr. Younger added that these small generators have a limit of 500 operating hours during a black out and 30 hrs during system emergencies.

Mr. Franey then proposed not to segregate generators and loads from the EDRP program since EDRP is a voluntary program and these generators are de-rated during these call-ups. Additionally, there is a very small number of generators in this category.

Mr. Younger suggested that the maximum amount of SCRs and EDRPs in J and K should not be greater than 371 MW based on their last response.

Ultimately, Mr. Pade reported that GE has not yet evaluated the modeling of hydro and wind type units.

3.6 Lesson 5 – UDRs

An action item was created for this lesson to model the UDRs with a curtailable contract between the dummy area and the receiving area (i.e. Area-K). Modeling UDRs with this technique the receiving area will use the benefits first before the rest of the system.

Mr. Drake reported that last year when a contract was modeled the LOLE was lower when using the contract. By ... ask

3.7 Lesson 6 – Manpower computer run

An action item for this lesson was created by the NYISO to work together with Con Edison to automate the calculation of the IRM/LCR curves.

3.8 Lesson 7 – FF Equiv

The ICS members will wait for the MARS results using the new executable files.

4 MARS Executable and Preliminary Results

Mr. Pade presented the new curves to the ICS members using the new GE executable files and indicated that the Tan 45 resulted in an IRM of 17.5%.

The group then discussed whether or not to present these results to the EC. During the discussion Mr. Dahl debated the validity of the results since the NYISO had not yet benchmarked the model. Mr. Villalba questioned the magnitude of the change since the only difference was the addition of some EOPs.

5 2007-08 IRM Study Assumptions Matrix

5.1 Analysis of the 2005 Load Shape for Consideration in the 2007-08 IRM Study.

Cenk Yildirim from the NYISO presented relevant statistics of the actual 2005 load curve of the profile and the duration of the top peak hours. Mr. Yildirim also compared 2005 load curve to the 2002 load curve and the 1993-2005 average load curve. While the 2005 load curve was closer to the 1993-2005 average, the 2002 remained more conservative. Mr. Yildirim also pointed out that the 2005 load curve for Area K had more peak days above the average than the 2002 load curve. All members agreed to use the most conservative load shape. In this case, the 2002 load shape is more conservative over all, and it follows the recommendation of the NYISO.

Next, Mr. Pade explained the changes in the load uncertainty model and indicated that there were no changes from last year except for Areas I, J, and K. Mr. Villalba stated that Con Edison intends to change its load forecast uncertainty model to one that better captures the differences between Zones I and J.

5.2 New Capacity

Mr. Dahl informed the group that the Neptune project would not be completed by summer 2007. He therefore suggested that it would be prudent to model the project as a sensitivity instead of as part of the base case. The line could be modeled as a free flowing tie and/or as the CSC line was modeled. The Neptune project is expected to be completed by July or August 2007.

Mr. Villalba proposed that the Neptune line be modeled as a free flow line beginning August 2007 in GE-MARS. Consequently, Mark Younger advised Mr. Dahl that the project's UDRs should be filed with the NYISO by August of 2006. Given these options Mr. Dahl will get back to the group regarding the appropriate modeling technique to use for the Neptune project.

5.3 Combine Cycle Derate

Greg Drake reported to the group that the DMNC derate is now negligible.

Mr. Drake also reported the enhancements on the modeling of the Combine Cycle units. Next, Mr. Drake explained how is modeling all the NYCA Combine Cycle units to account for ambient derate. The ICS model is applying the GE 7FA ambient temperature performance curve to the CT portion of these units obtained from the EIA data.

5.4 Network Updates

Bill Lamanna reported that the voltage dependent interface limits have not been completed because of NYISO resource limitations, changes in the load forecast, newly identified issues with the PJM, and coordination in the regional planning process.

Mr. Lamanna agreed with a Con Edison proposal to modify the modeling technique used for Athens. Originally the proposal was to place the Athens units in a separate dummy zone, but Mr. Lamanna expanded the proposed modeling technique to include two Gilboa units that like Athens have a high load factor of around 29% on the Leeds-Pleasant Valley (L-PV) lines. Mr. Lamanna reported additional observations on other generator's load factors affecting the UPNY-SENY interface and the L-PV line.

Ultimately, Mr. Lamanna explained to the ICS members his intentions to model the RECO load as part of the NYCA system and not PJM. RECO area is a 475 MW radial load from NYCA with only 6 MW of generation. This load affects the PJM tie to Branchburg and the UPNY/SENY interface. Mr. Lamanna indicated that he will get back to the ICS committee regarding the RECO load and a final determination.

5.5 Emergency Operating Procedures

Mark Younger expressed his interest on finding the difference in LOLE when moving SCRs that have limited calls to the end of the EOP list. Various ICS members agreed with MR. Younger and proposed to test his theory.

In reference to voltage reduction, the ICS member suggested to compare actual versus target with Greg Campoli.

The NYISO reported that the public appeals increased from 13 MW to 108 MW mostly in Long Island. Mr. Younger asked if this additional capacity is not being double counted in the SCRs and/or the load forecast.

5.6 External Capacity

Mr. Drake indicated that the External Capacity increased from 2755 MW to 3085 MW after adding the 330 MW of CSC. However since New England capacity prices for next year are in the \$3 range, the NYISO expects that NYCA will lose around 200 MW of capacity from New England. Thus NE external capacity is set to 530 MW and the 200 MW lost in New England were allocated to Hydro Quebec resulting in a maximum of 1200 MW of external capacity. The group agreed on reviewing these changes during the next meeting.

6 Next Meeting

August 2, 2006 Meeting # 67

Secretary: Carlos Villalba