

2007 Lessons Learned / New Items for 2008

February 27, 2007

The list below is our initial first cut on “Lessons Learned” from the 2007 IRM Study, indicating areas requiring resolution or further improvement. This list also includes new items for consideration in during the 2008 IRM Study. (Item contributors are shown in parentheses.)

2007 Lessons Learned

1. **ICS “Working Schedule” Updates** (*Jeremko*)
Maintain an ongoing (updated monthly) active schedule of updates showing critical path, completed items, and what still needs to be done. Such a schedule can become part of the regular review process and be included in the package of regular meeting materials (Meeting Minutes, Action Items, etc.)
2. **Interpretation / Discussion of A-R1** (*Raymond*)
ICS should ensure that all members recognize that the LOLE of 0.1 days per year is an expected value – and that there needs to be consistency in the interpretation across Electric Reliability Organizations, including NERC and NPCC. If, in its expert opinion, the ICS deems that A-R1 should be modified, then a proposed modification should be sent to the Reliability Rules Subcommittee (RRS) and the Reliability Compliance Monitoring Subcommittee (RCMS) for consideration in accordance with policy.
3. **Increase Iterations (5000 Runs) for Final Basecase** (*Raymond, Jeremko*)
The elevated number of the final IRM Basecase iterations for the Basecase (only) should be done for verification of the stability of the LOLE and the Standard Error. This will benefit those who by personal preference choose to include Monte Carlo-driven confidence limits as part of their sensitivity case assessment.
4. **Megawatt Scaling for IRM-LCR Curves** (*Jeremko*)
Explore the pros / cons of replacing the current percentage scaling with megawatts on the IRM-LCR anchoring curves.
5. **Capturing Decisions in Meeting Minutes** (*Dahl*)
Develop a mechanism to better capture and represent committee decisions and majority / minority viewpoints in the Meeting Minutes. Opinion without response should be attributed to the person expressing the opinion and silence should not be view as concurrence.
6. **IRM Basecase Documentation** (*Mustapha*)
There is need to state the source of the Basecase – and list any data updates and the party which supplied data.
7. **Simplify Presentation** (*Mustapha*)
The methodology for deriving the results for the state and the local areas is not presented in a reader-friendly fashion. There is need to simplify (if possible) for the senior management audience.
8. **NYISO Staff / Resources** (*Vitale*)
ICS remains concerned with the NYISO staffing / resources made available to work on IRM / LCR-related work and capacity modeling. The NYISO really needs to supplement this effort and provide Greg Drake with knowledgeable, reliable backup.

9. **NYISO Interface Transfers Limits** (*Vitale*)
The timing when updating the transmission limits continues to be of concern. At one point, Bill Lamanna conducted the study – however, a change was made by the ICS that may have not been communicated to him (was this in 2005 or 2006?). This impacted study timing and performance. Does this problem also really reflect a NYISO staffing / resource problem?
10. **Study Completeness / Sensitivity Studies** (*Younger*)
The NYISO should complete all its sensitivities before anything is filed at FERC and before it makes any decisions on the total amount of ICAP import capacity or ability to wheel ICAP.
11. **Sensitivity Rationale** (*Mustapha*)
The Sensitivity results seem to have no impact on the final results. There is a need to state the purpose and application of those results.
12. **Upstate-Downstate (U/D) “Superzone” Study** – (*Jeremko, Adamson*)
Determine why and how this project this project was allowed to fall so far behind the original schedule and what can be done to avoid such pitfalls in the future.
13. **New York / New England (NY/NE) Tie Benefits Study** (*Adamson*)
ICS should consider what was learned from this experience and what can be gleaned from the study to enhance the 2008 IRM Study.
14. **Procedure for Determining External Import Rights** (*Franey*)
As suggested by the NY/ME Ties Benefits Study, the NYISO needs to develop a procedure for: 1) determining total external import rights and 2) determining external import rights across an individual interface.
15. **Base Case Assumptions** (*Adamson*)
Review and complete as quickly as possible
16. **Document Modeling Enhancements** (*Mustapha*)
It may be helpful if a section is added on future program / methodology enhancements. This will create an impression within the EC that improvement is a continuing process – and also serve to soften the impact of any future changes in results.
17. **Meaning of Policy 5 “On Average”** (*Villalba*)
This is to develop a clarification of the Policy 5, 3.1 Resource Adequacy Criterion of what the words “on average” mean and how should be interpreted.

New Items for 2008

18. **Resource Adequacy Workshop** (*Adamson*)
See what concerns and questions come from participants that will enhance the study process. e showing completed items and review during each meeting. (Steve Jeremko will develop a suggested format.)
19. **GE Staff Overview of GE-MARS** (*Jeremko*)
As was done in 2006, it is recommended that ICS arrange a similar review session that enables GE staff (Gary Jordan, Glenn Haringa) to review the assumptions, inputs and data screens used in the most current version of GE-MARS.

20. **NYISO-PJM Tie Benefits Study** (*Jeremko*)

At the 02/21/2007 PJM Planning Committee (PC), chair Steve Herling (PJM) mentioned some interest that PJM had in conducting a joint tie benefits study with the NYISO. As in the NY/NE Ties Study, it may be useful and informative to see how they would model their NYCA connection.

21. **“XEFORd” Capacity Modifier** (*Jeremko*)

Effective 01/01/2006, PJM formalized the process of adjusting EFORd by eliminating outages that were deemed “Outside Management Control” (OMC). OMC examples are loss of transmission, natural disasters or the lack of fuel where operator has no control, and certain regulatory issues. This adjusted rate is called the “XEFORd” and is used to modify the FPR (Forecast Pool Requirement) and the IRM (Installed Reserve Margin) PJM reviews all OMC outages to assure proper interpretation and application of this parameter.

Should the ICS consider implementing the XEFORd factor? Here’s some background:

Currently, EFORd is used to calculate IRM and to convert IRM to FPR. And now, XEFORd is used to calculate the UCAP (Unforced Capacity) required to meet the FPR. This difference can result in procuring lower capacity than required.

Here is how the XEFORd is used to modify the FPR:

| | | |
|---|-----------------------|-----------------------|
| 2009 PJM Peak Load Forecast | | 141710 |
| IRM | | 15% |
| ICAP required | | 162967 |
| Pool-wide Avg EFORd | | 6.13% |
| Pool-wide Avg XEFORd (estimated 0.3% reduction) | | 5.83% |
| | Use EFORd | Use XEFORd |
| | <u>For FPR</u> | <u>for FPR</u> |
| EFORd used for FPR | 6.13% | 5.83% |
| FPR | 1.0795 | 1.0830 |
| UCAP provided = Peak Load * FPR | 152977 | 153466 |
| EFORd used for UCAP | 5.83% | 5.83% |
| ICAP provided | 162447 | 162967 |
| ICAP required | 162967 | 162967 |
| ICAP shortage | 519 | 0 |

In this case, there is a 519-MW ICAP system-wide shortage actually exists if using the old EFORd method at the current 15% IRM level.