10-28-01 Email to Doug Deay (Select's CSR)

This email was to open a ticket for a response from the ISO on various issues as contained in the email below:

I try a little specificity for this Issue:

From what I understand NMPC claims that the ISO is allocating "uncounted for losses" in a manner that puts more to NM than they consider fair. In turn NM is increasing LSE Mwhs reported to the ISO to cover this allocation by about 3.8% above their retail tariffs. (NOTE: NM included a spread sheet - note Farella email quote below - that showed "Unaccounted for Load by month and zone; one month Feb '00 was 3.8% under presumably resulting in NM's upping of LSE requirements. Other months show all sorts of variation. Please also note that the Farella email indicates overage in Zone B and the opposite in Zone A - based on the allocation to ALL NM LSEs this is a net of 5 Mws/hour (for those two zones being allocated)

This has made it a cost issue for Select acting as an LSE in NMPC area.

My request is as follows:

1 I do not understand what these "unaccounted for losses" are; unaccounted for "load" makes somewhat more sense. To my knowledge the ISO charged all deliveries the cost of Losses for POI to POW at what is a marginal rate. Since FERC only allows collection at "average" losses, the ISO rebates $'s to make sure it only collects enough to cover average losses. This difference is rebated on a per Mwh basis via RS1. It is a large sum - something like $20M per month as I recall.

Given the above, I would like detail info on these "unaccounted for losses"; how they are calculated and allocated, including Tariff or Manual references as appropriate. I would also like to know if this process is one stemming from the original MST that the TOs put together.

2 It is Select's understanding that NM has requested ISO review of this matter and correction of the allocation. See the text of J Farella (NMPC) email to John Hickey and Al Hargrave on 10-3-01 that L Klosowski forwarded to NM's LSEs below:

"As we discussed in the Metered Data Subworking group on 9/24, NMPC is seeing a disparity in loss allocation between NMPC West and NMPC Genesee. We also know that RG&E has a negative unaccounted meaning that their loss allocation may be too great. This disparity is causing a large assignment of unaccounted to LSE's in the NMPC Genesee Subzone. In accordance with the NMPC retail tariff the unaccounted energy is spread pro rata among all LSE's. This has caused ESCo's to approach NMPC for an explanation and resolution of this problem.

NMPC has performed reviews internally that lead us to believe there may be a problem with the static percentages which the NYISO uses to assign transmission losses to the NMPC West, Genesee and RG&E Genesee subzones. This problem also exists in NMPC Mohawk Valley but to a lesser extent. We have found that our average unaccounted in the NMPC Genesee subzone is ~+35MW per hour (adding to the retail load). The average unaccounted in the NMPC West subzone is ~-40MW per hour (subtracting from our retail load). Unaccounted in the RG&E subzone is ~-20MW per hour.

We would like to resolve this problem as soon as possible. We would like to request the following:

1 That the NYISO review the basis for the static loss allocation percentages and evaluate whether a change is required. This would include a review to insure that the percentages are based on the most up to date subzone definitions.

2 That the NYISO forward to NMPC the list of elements (and their corresponding subzone assignment) that contribute to the B-Matrix.

3 That the NYISO explain the basis under which the static allocations were assigned.

I have tried to contact Al via phone this week and have not been able to contact him, I have left a couple of messages.

Thanks
Joe"

Since this issue impacts market participants besides NM, I believe it is fair to disclose the status of NM's request as well as any non-confidential info the ISO may be able to share with others.

3 In review of the situation, the ISO should detail how it handles the modeling of the system for losses via the B-matrix and the Zone definitions. My last understanding was that the state was modeled as 9 areas for loss calculations - 3 for NM and 6 for the other TOs, and that is mapped to the 11 LBMP Zones (maybe this is where the Unaccounted for Losses or Load arises). I do not recall any technical explanation of this process even back in the days of the TIE meetings and the Process Flow Diagrams...

Jim

10-30-01 Email to Ric Gonzales

The following email to Ric Gonzales went to one of Joe Farella's issues - #'s 2 requesting the input to the B-matrix modeling (see underlined section below) and to what might be done regarding the loss allocation currently done via fixed zonal percentages.

Ric,

I was on the call today concerning two issues for the Metered Data WG: ConEd's use of an SE program to drive zonal load calcs and for the discussion on loss allocation.

You apparently have an action item to provide the "list of elements" that contribute to the B-Matrix. I offered to contact you as I feel the request is readily satisfied and in no way represents confidential info.

What I told the group was that what they wanted was the load flow history report that gives the tie lines and metered end data. If I recall this is a few pages long. Since the load flow serves as input to the B-matrix program, ties that are defined in it also drive what com es out as a B-matrix. While I'm thinking of it, if there is a generation summary that should be included as well as they create entries in the B-matrices as well.

These summaries would allow Participants to compare the boundaries in the B-matrix areas (9 of them to my recall) with the LBMP zone boundaries.

Since I already have your rapt attention I would like to offer a list of solutions to the fixed % loss allocations the ISO is now using and that were reported as being fixed values since day 1 of ISO ops. I am assuming that no one has modifies the 9 area model that the NYPP was using pre-ISO...

1 Do nothing - not a good option as LSEs - including Select, are not happy about our retail results due to, at a minimum, this allocation issue.

2 Update the factors on some schedule - monthly at a minimum; daily would be better. This is a low impact solution.

3 Since you already use the B-matrices to calculate the total system losses (I assume the total is the sum of all the areas), why not use the area B-matrices to calc the losses on the fly for each zone for each hour. My recall is that at least several of the B-matrix areas map close if not identical to the LBMP Zones e.g. Zone A and NM West.

The two places that you would have issues would be Zone G incorporating both CH and O&R which I if I also recall correctly had separate B-matrices. The O&R losses would go to the ConEd super zone and CH losses would relate to the remainder of G. The other is NM Central area which includes Zones D, C and E. Since NYSEG had its own B-matrix area, losses calculated could be subbed out of the Zone C loads. Zone D and C would still require an allocation between the two.

4 Changes the B-matrix model to exactly match the 11 LBMP zones...an effort but it would reduce any residual issues.

5 Use the State Estimator to drive this process but we have no idea when its full capabilities will be available.

Jim

11-1-01 Email to ISO Staff Making a Variety of Requests Regarding Losses Benchmarking

This email went to benchmarking the B-Matrix models that are used by SCD for RT purposes; subsequently, I came to understand that SCUC calculates losses in some different manner…thus I have not asked all the pertinent questions as yet.

I am not sure where to address this issue at the NYISO and it may well be that I want to take this to BIC and to the S&P WG. I would appreciate a reasonably quick response from the ISO regarding the direction it is going or should take.

In a prior email to Customer Relations I had asked several questions regarding the ISO's allocation of loss Mwh to the zones in NY via fixed %s. NMPC has also raised this issue. I also asked for a detailed description of the process for determining what are the average losses and how the ISO calculates the incremental to average difference plus $ the rebate from marginal to average losses each month. Since this is a large number (in July 2001 the Loss Residuals were over $20M), it is important that the Participants understand the ISO methods and procedures.

Summary of Email Requests to ISO Regarding Loss Issues

After the Metered Data Subgroup meeting this week I sent another email to Ric Gonzales suggesting a way for him to take care of an Action Item he has with that group regarding B-Matrix inputs. I also suggested several ways the ISO may address this fixed loss allocation percentage issue.

Now I have an additional request:

This issue was broached some time ago by NMEM and I have had separate concerns raised by our analysis people regarding the magnitude of the incremental losses. For example, in Feb 2000, the DAM on-peak losses between Zone A and Zone J was nearly 20% and averages around 17%.

These numbers appear to be high, perhaps correct but high enough to warrant concern. I am asking the ISO to do the following:

1 Either benchmark base case B-matrices against the input base case load flow model or provide such benchmarking results if the ISO previously performed such benchmarking.

By benchmarking I mean creating change case load flows that move 100 Mws from Z to J and see what the % losses are and then pushing the same number through the B-matrices to see what the result is. While there are deviations to be expected, the B-matices should track the load flow fairly well. This data should be summarized and provide to all Participants.

2 Conduct a review of the inputs to the B-matrices used in your models. In some cases, inputs such as tie flows are calculated values, and I am not even sure if this process is used by SCUC or if another process is used (we need to know about the DAM) while at other points - say with SCD, I would surmise that each time SCD runs the starting conditions would reflect RT flows and generation values and as the LP proceeds, numerous iterations are performed requiring multiple uses of the B (and maybe Inter-Area) Matrices where the changes in flow and generation from the prior iteration are input to the matrices and change conditions are calculated.

My concern is to make sure there are no incorrect inputs to the process especially regarding tie flows as a reversed sign can have significant, persistent effects on the resulting losses (this I know from personal experience). This review I believe is necessary in addition to benchmarking as the benchmarking likely would be or has been done off-line where the inputs may have been manually handled.

I recognize the effort of some of the requests above however I will point out that NY has made the inclusion of losses in its model as one of the Best Practices within the RTO discussions. I also believe that by including the losses into the prices that the correct signals are sent to the market place (especially if the 20% losses are in fact correct...). So if we are to utilize such an apporach then we have to be sure it is as correct and accurate as possible.

Jim