

Meter Task Force response to July 27, 2005 BIC charge to define what it is necessary to get NYISO meters in compliance with the Revenue Metering Requirements Manual.

BIC motion:

From motion #4:

**“2. It is further moved that the Billing and Accounting WG along with the Meter TF and NYISO staff, work to develop a transition plan for bringing the Revenue Metering into to compliance with the standards incorporated in the RMR Manual, in accordance with, and consistent with, the NYISO-TO Agreement. A draft plan should be presented to BIC for its consideration within six months.
3. Nothing in this revised motion anticipates a particular schedule of metering changes.”**

The following constitutes the Metering Task Force plan to bring revenue metering into compliance with the Revenue Metering Requirements Manual. This plan is not listed in any order of importance as Meter Task Force members feel each issue is equally important.

- Cost Recovery needs to be addressed:

In looking at installations that do not meet the requirements, cost justification to upgrade will need to be determined. Meter Task Force members do not feel we are the appropriate group to make any determinations. MTF has come up with some rough estimates from their internal discussions with their own company's meter experts. Complete update of a metering point, including upgrading of the CT/PT measurement equipment (Revenue Grade Instrument Transformers), could cost from \$200,000.00 upwards to \$1,000,000.00 (in 2005 dollars) for materials, engineering studies and installation. The broad range for this estimate hinges on various voltage levels and varying complexities at the substations. Note that this estimate does not include costs or loss of revenue associated with taking a facility out of service. For the Revenue Meter itself, we estimate new Interval Meter replacement and installation costs to be at a maximum of \$10,000.00 (in 2005 dollars) per site. This estimate includes materials, engineering and installation. Certainly there may be site complications that could cause that estimate to be much higher.

- Wholesale replacement of non compliant installations is not necessary:

1. NYSEMEC report from May 2004 -

The NYSEMEC cautions the adaptation of the costly wholesale replacement of instrument transformers. Besides being an expensive, and in some cases unnecessary option, the replacement of instrument transformers may provide the least amount of benefit and should be considered as a last resort. Exceptions to this are in extreme

cases where other less expensive options are not applicable (e.g. the use of CCVT's as a source for metering potential).

2. NYISO provided Meter Task Force calculated worst case data assuming a +/- 5% error and for a monthly NYISO market of \$7B) a worst case error of \$3M hardly justifies upgrading (note: must confirm these figures with the MTF at 1/9/2006 meeting).
3. Many Transmission Owner/Meter Authorities already have plans to upgrade a point:
 - i. Plans to overhaul stations include updating the measurement equipment.
 - ii. Alternate methods should be considered in lieu of spending money to upgrade
 - Allow for similar situations using state estimator calculations as is done in the CE super-zone.
 - Calculate Tie/Gen value from other points that already meet the requirement.
 - Redraw subzone with points that meet the requirement.
4. Many of the points identified that do not meet the requirements are at generating stations that rarely run and/or are insignificant in comparison to the market. Again the upgrade of the measurement equipment at generation stations is estimated to not be cost effective and MTF believes generators are paid on what is metered and hence there is a great incentive to make sure their metering is accurate.

- NYISO Scorecard – monitoring/maintaining accuracy:

The RMRM section 5 addresses processes and the MTF believes criteria needs to be defined identifying points that frequently introduce significant errors. Different quantities of data was used in the MTF analysis (list here). From the scorecard the points introducing the largest error will be on the top of the list to be upgraded first.

PTS data, backup metering info. Maintenance and Calibration schedule.

- Recommendations when upgrade is determined to be necessary:
 - i. Can any process be improved?
 - ii. If communication introducing errors correct.
 - iii. Upgrade all meters first that are all meters first that are not considered Revenue Grade Meters with modern Revenue Meters that have Interval Storage and remote communication capability.
 - iv. Upgrade all remaining meters for Gens/Ties that may meet the RMRM requirements, but do not have Interval Storage or Remote Communication capabilities.

- v. Worst performers as defined by data studies of MTF.
- vi. Upgrade Instruments Transformers that are not meeting specs. However, since these upgrades will be the costliest, timeliest, and provide the lowest impact on ISO Billing, plan these upgrades over long-term periods to be incorporated with major overhauls/capitol improvement projects being done at the Sub Station or Generation site.