

Connection Station Service

7 March 2007



- **Recap:**
 - 40 Registered station service estimates.
 - Two estimates above 100 kW: 232kW and 257 kW.
 - The balance of the estimates vary between 3 kW and 60 kW with an average of approx. 20 kW.
 - Station service estimates are mostly used at Transformer Stations (TS).
 - GS station service loads can be as high as 50 MW.

- It is the IESO's position that station service loads must be metered by an RWM.
- The energy consumed by the station service must either be measured by the facility RWM or separately metered by its own RWM.
- However, the IESO may consider using an estimate for station service loads less than 100 kW provided the estimate is based on an MC approved, sealed, retail meter.
- This would apply to new facilities and legacy facilities.
- This would not require a Market Rule amendment, but it would require an addition to a Market Manual.

- To find out whether a periodically read retail meter can be as accurate as a Chapter 6 hourly interval meter, the IESO compared the difference (variance) in accuracy between the two.
- Looking at a 6 month period (2006), the IESO calculated the value of the energy consumed for all existing Chapter 6 station service installations in the market.
- It then calculated the value of the energy consumed by using an average monthly kWh and the hourly MCP. This would simulate a retail meter read monthly.
- The sample consisted of 44 station service installations all with compliant Ch 6 meters, mostly GS but some TS.

- **The results:**
 - The overall variance was + 0.6% in favour of the participants.
 - The average absolute variance was 5.3%.
 - The highest variance was + 33% in favour of the participant.
 - 40% of participants had variances in favour of the market, with the remaining 60% in favour of the participant.
 - 1/3 of the installations exceeded a $\pm 5\%$ variance.
 - Large station service loads can vary by as much as \$1/4 m p.a. either way.
 - For station service loads under 100 kW, the \$ variance was negligible – the sum of all these station service errors was \$800 over the 6 month period.

- **Conclusion:**

- The study showed unacceptable \$ variances for large station service loads.
- For the relatively small TS station service loads, the variance was acceptable.
- There is also the issue of station service rebate where generators get a rebate for the uplift on their station service energy when they are a net injector. The rebate is based on a 5 minute interval and a flat-lined average kWh will not allow the IESO to accurately calculate the station service rebate.

- **Recommendation:**

- All station service loads > 100 kW must be an RWM Ch 6 fully compliant metering installations.
- Station Service loads < 100 kW can be estimated, based on a sealed, retail meter with a periodic true-up, except where a station service rebate applies.