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On Demand.

Connection Station Service Estimates - Update

RMSC 4 Oct 2007



- Background:
 - Per Chapter 6 section 2 taking energy from the grid requires a metering installation that is registered with the IESO.
 - This means an RWM (Registered Wholesale Meter).
 - Ch 9 section 2.1A however states that where the station service is not separately metered by an RWM it shall be estimated by an Engineer.
 - Station service load can be significant in \$ terms.
 - There is no MW limit.

- At present there are 57 facilities with a total of 63 registered station service estimates.
- Facility break down:
 - 50 Transformer Stations (TS)
 - 5 Distribution Stations (DS)
 - 2 Generating stations (GS).
- There are four estimates > 100 kW: max. 258 kW (~\$115,000 in energy costs per year).
- The balance of the estimates vary between 2 kW and 64 kW with an average of 20 kW.
- In energy costs, 20 kW is about \$8,900 annum.

- It was proposed to the Technical Panel that:
 - All connection station service loads ≥ 100 kW must be metered, either by the facility RWM or by its own RWM .
 - All connection station service loads < 100 kW may be estimated.
 - All estimates must be based on the actual readings from a Measurement Canada approved, sealed retail meter.
 - The estimate would be adjusted annually.
 - This would apply to new facilities and legacy facilities.

- The Technical Panel indicated that station service loads should be measured.
- TP Issues:
 - That an RWM is required for loads above 100 kW – concern about the cost of an RWM for such small loads.
 - That the metering data from the proposed retail meter for loads less than 100 kW should be averaged over the year.

- Over 100 kW:
 - The concern raised by the TP was cost, both the capital cost and the ongoing MSP costs.
 - TP suggested considering a retail meter for all station service.
- Under 100 kW:
 - The concern raised was the reduction in settlement accuracy when the energy consumed is based on a single value for the whole year even though it is based on a retail meter.
 - TP suggested considering using interval data for all station service.

- A. Use retail interval meters - MMPs submit interval data periodically.
- B. Use single meters (main or alt) - read periodically by the IESO.
- C. Continue to allow estimates, but use retail meter to form the basis of the estimate.

A. Interval retail meters:

- MMP installs a retail meter to measure connection station service.
- MMP reads the meter periodically and submits the information.
- IESO validates the data.
- Where the meter fails or the IESO does not receive metering data, a high default value is used.
- Advantages:
 - Uses typical Industrial/Commercial metering.
- Disadvantages
 - Registration of the meter is still required.
 - Manual process for the participant and the IESO – more resources.
 - NoD's for high default values.
 - Data weekly to meet SSPC.
 - Who owns the meter and pays for it.
 - High default energy charges.
 - Will require a Market Rule amendment.
 - MTRs issued to MMP asking for good data.

B. Conforming Standalone Meters:

- MMP installs an main or alternate meter from CML.
- The meter is registered with the IESO.
- The IESO reads it daily.
- MTR's issued by the IESO.
- Whenever the meter fails or the IESO does not obtain any metering data, a default value is used until the meter is fixed or communication is restored.
- Similar to the single meter for small generators.
- Advantages:
 - The IESO reads the meter – no data file submission.
- Disadvantages:
 - Not that different from an RWM.
 - Meter has to be registered.
 - Who owns the meter and who pays for it.
 - High default energy charges.
 - Market Rule amendment required.

C. Use Estimate based on Retail Meter:

- Allow estimates based on retail meter readings.
 - Just change the Market Manual, drop the MR amendment.
 - No limit on MW estimated.
 - Must be shown to be an accurate estimate – poor load factors must be adjusted, or not use this method.
- Advantages:
 - Simple, inexpensive.
 - Disadvantages:
 - Since accuracy = $K(1/\text{load factor})$, method does not always produce accurate results.
 - Can be used for large MW estimates.
 - Totalization table changes.
 - Regular checks to confirm estimate is still valid.