CHAPTER 3 - COMMISSIONING AND MANAGEMENT

503.03 ELECTRICITY METERING

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INTENT

To measure and track energy consumption for the building and its major energy consuming systems for effective energy management and cost allocation.

REQUIREMENT

For all new buildings, meters must be installed to measure and record electricity demand and consumption of the facility as a whole. It must also provide accurate records of consumption and must be complying with DEWA specifications. All meters should be approved by DEWA.

1. For all buildings having a cooling load of at least 1 MW or gross floor area of 5,000 m2 or greater, additional electrical sub-metering (of tariff class accuracy) must be installed to record demand and consumption data for each major energy-consuming system in the building. At a minimum, all major energy consuming systems with a load of 100 kW or greater must be sub-metered.
2. The building operator shall be responsible for recording the details of the energy consumption for the building and for ensuring that major electricity uses are sub-metered. Records must be kept for 5 years.
3. Each individual tenancy in the building must have a sub-meter installed when a building tariff meter is not present. These sub-meters should only be for demand management and electricity cost allocation purposes.
4. Where a Building Management System (BMS) or Central Control and Monitoring System (CCMS) is installed, metering must be connected to allow real-time profiling and management of energy consumption.
5. Virtual meters using run-hours are not acceptable as sub-meters.

SIGNIFICANCE

It is difficult to monitor the energy consumption as a whole, for the buildings with multiple tenants. This data would be vital in determining building's overall energy performance. It will also potentially enable tenants in multi-occupancy buildings to be charged for electricity on the basis of their actual consumption, which will give them an incentive to use electricity more efficiently.

The whole building energy metering allows the owner to analyse and track the energy consumption pattern over the period of time. This monitoring is helpful in identifying areas where improvements are required. It will also assist in planning and implementing energy saving measures.