5.2 Energy metering

Metering facilities should be provide to allow the energy performance of the building to be recorded. This monitoring will provide an understanding of the use in energy within the building as well as providing scope for future improvements. RE-R2: Energy Monitoring & Reporting has the following requirements:

1. All meters provided are to be clearly labeled and easily accessible
2. 90% of estimated annual energy consumption of each fuel type to be monitored. For office, retail and multi-residential buildings, the equipment and systems described in Table 5.2a should be submetered
3. Separate meters to be provided for plant exceeding the loads shown in Table 5.2b
4. Written commitment from building owner to supply all energy monitoring data if requested by Estidama
5. Capability to provide hourly, daily, weekly, monthly and annual energy consumption for each end-use and compare consumption for the different time frames

Landlord and Tenant areas to be separately metered as well as any on site energy generating systems. All metering requirements are to be documented within the tenant guidelines as part of IDP-R2 Tenant Fit-Out Design & Construction Guide.

For Tenant spaces, the following metering categories are to be followed:

• Non-Residential: tenant area metering requirements for office;

• Residential (spaces used primarily for living and/or sleeping): tenant area metering requirements for multi-residential.

Schools are assumed to be solely landlord controlled and therefore there are no additional requirements for tenant areas.

Table 5.2a

	Landlord Areas	Tenant Areas		
Building End-Use		Office	Retail	Multi-Resi
Cooling	✓	✓	✓	✓
Dehumidification	✓	✓	✓	
Service water heating	✓	✓	✓	✓
Motor Control Centres (fans)	✓	✓	✓	
Motor Control Centres (pumps)	✓	✓	✓	
Lighting	✓	✓	✓	✓*
Receptacle and process loads	✓	✓	✓	✓*
Other major energy consuming plant (swimming pools, kitchens, server room, lifts and escalators etc)	✓	✓	✓	

* Multi-Residential buildings: lighting and receptacle and process loads in tenant areas may be metered together.

Table 5.2b

Plant Description	Load kW
Cooling installations comprising one or more units feeding a common distribution circuit	20
Motor control centres providing power to HVAC equipment	10
Final electrical distribution boards (power/lighting)	10

Guidance

GIL 65: Metering Energy Use in New Non-Domestic Buildings
CIBSE TM39 2009: Building Energy Metering