

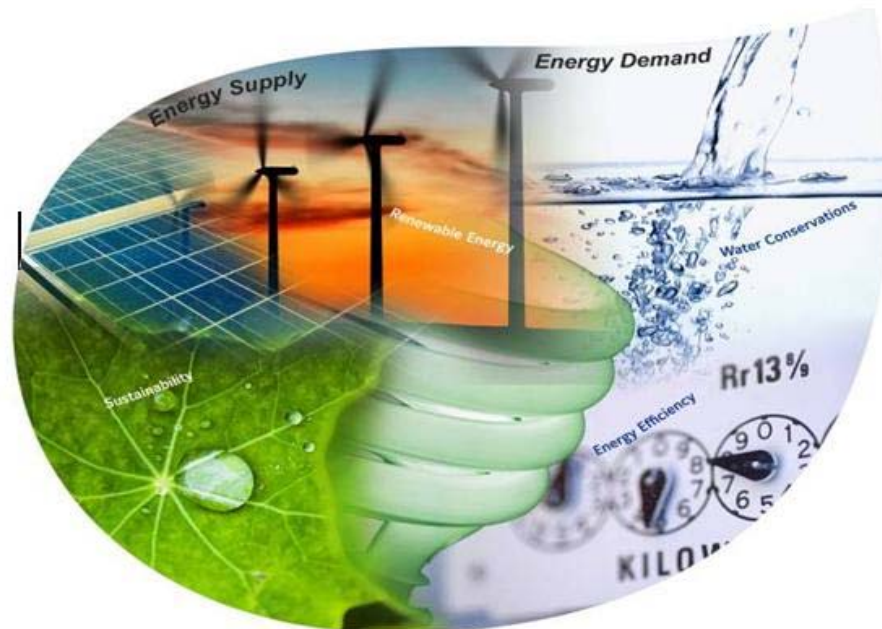


Sub Metering – A BMCS Perspective

*Building Control and Metering Systems differ.
The appropriate application of the two makes all difference!*

Agenda

- What outcome am I trying to achieve from metering?
- What do I require to achieve this outcome?
- How do I specify what I require?
- Questions?



What am I trying to achieve?

■ Power Analysis

- Power quality monitoring and analysis
- Authority meter comparison
- Applications where power quality is critical e.g. Data centres, laboratory / research

■ Revenue Generation

- Generation of invoices for usage
- Are any other energy sources required e.g. Water, Gas, A/C ?
- Is a tenant portal required for invoice data ?

■ Building Efficiency and Tuning

- Am I primarily wanting to achieve a NABERS / Greenstar result ?
- Is the data for building tuning ?
- Is there a requirement to provide Energy display / Foyer displays ?
- Is there a requirement for a tenant portal for requesting / logging after hours activity ?

Horses for Courses !

	Dedicated Metering Package	BMCS
■ Power Analysis		
➤ Power quality monitoring and analysis	✓✓✓	X
➤ Authority meter comparison		
➤ Critical applications		
■ Revenue Generation		
➤ Generation of invoices for usage	✓✓	✓✓
➤ Are any other energy sources required		
➤ Is a tenant portal required for invoice data ?		
■ Building Efficiency and Tuning		
➤ NABERS / Greenstar		
➤ Is the data for building tuning ?	X	✓✓✓
➤ Energy display / Foyer displays ?		
➤ Tenant portal for requesting / logging after hours activity ?		

Recent Experiences / Lesson Learnt

- Clear documentation & demarcation up front can solve a lot of issues down the track
- Clearly understanding the outcomes required in the initial design is critical
- Interfacing between systems can still be difficult
- Consistency between trade package documentation has been an issue
- Consider the building infrastructure – network cabling, power supply availability



How do I Specify?

- Demarcation – typical example for a commercial building

Scope	Supply By	Installed by	Interface Cabling	Interface
Light & Power Meters	Electrical	Electrical	Electrical	Metering system
Mechanical Electrical Meters	Electrical	Mech Elec	Mech Elec	Metering System
Thermal energy	BMCS	Mech	BMCS	BMCS
Water Meters	Hydraulics	Hydraulics	BMCS	BMCS
Gas Meters	Hydraulics	Hydraulics	BMCS	BMCS
Metering package	Electrical	Electrical	BMCS	HLI to BMCS
Energy Rating tool	BMCS	BMCS	n/a	n/a

A photograph of a person walking across a green field under a vast blue sky. The person is in the lower right corner, walking away from the viewer. The sky is a deep blue with a large, faint, circular cloud formation in the upper center. The horizon is a straight line separating the green field from the sky.

Thank You