

The Powercom Smart Load Balance system was prepared in response to the need for an application of new centralised load control systems that operate through the centralised switching of load control meter/relays installed in users' premises, taking advantage of Powercom's AMM system capability.

Centralised load control systems, often referred to as "ripple-control" systems, will deploy a range of Powercom technologies. Both Dynamic Power Line Communication and radio communications are used in the implementation of a centralised load control system. The document lines out the minimum performance abilities of the Powercom system, and gives guidance for specifying, installing, commissioning and operating such systems.

Powercom system solution is motivated on the basis on efficient usage of existing resources related to maximum demand. The system might be used to defer capital expenditure where localised network capacity constraints are apparent.

In the light of national power system capacity constraints, the system is a tool for demand side management, in particular to defer the bringing back of the switched-off load when there is a constraint on the capacity of the national power system to meet demand.

Powercom Load Management System is a part of a total "Smart Grid" solution which includes Smart Meters, Real Time Data Monitoring & Collecting, Revenue Collection and Tamper Detection, Demand Response Shifting, Customer Value Added Service, and Energy Forecasting. Powercom vision is supplying a total "End to End" solution for its customers, fulfilling their wide requirements.

The centralized control of loads in residential and commercial areas is one of the technical options for cost-effective electrical load management.

Powercom centralized load control system implements applications for the remote control of various categories of load, as:

- Hot water storage heaters (geysers)
- Air Conditioning Systems
- Street Lighting
- Under-floor heating systems
- Fixed appliances such as swimming pool pumps, and
- Municipal load control – pumping water/sewerage

Includes applications for

- Tariff-driven load shift (TOU – time of use)



# Smart Steps to Smart Grid

## LOAD CONTROL AND ENERGY CONSERVATION

- Active load control (management of overload in local areas)
- Energy trading, and
- Control of load to customers on an interruptible tariff

The system can be installed by an energy service company or by other contractors under contract to a licensee. The load control system is only a single application within the scope of Powercom "PowerTrack" Advanced Meter Management. A key of Smart Load control deployment must involve the installation of Powercom Smart Metering and Smart Grid applications.

Powercom load control system can be extended into Energy Conservation and Energy Saving plans using Smart Home Application for intelligent Energy usage by the customer (Document SHA001-01)

This specification provides the technical/operational offering of Powercom centralized load control system. These are primarily to reduce load during times of peak demand, or as a tariff management tool, or in emergency situations. This specification also specifies the requirements for the installation and commissioning of smart load control meters/relays (APM01) in customers' premises, and gives guidance on the selection, installation, commissioning, operation and maintenance of such systems.

Powercom application involves bi-directional broadcast system that use feedback from metered bulk supply points to control demand.

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