

Energy Saving Innovation & Electricity Regulation

HOME INSTALLATION

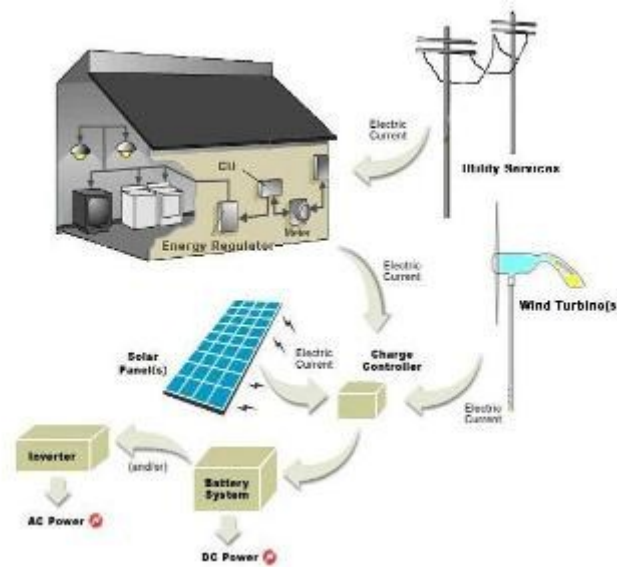
This requires that a unit be installed at the consumer unit of a property by a qualified professional. These are major installations capable of providing up to a 25% reduction in overall electrical running costs.

STAND ALONE UNITS

These are easy to use and portable regulating units that can provide savings suitable for charging laptop and mobile phone batteries.

BESPOKE UNITS

These are custom design units that can be optimized to a particular application. For example, warehouse lighting, street furniture equipment or any suitable electrical/electronic circuit in order to realise energy savings.



The above diagram illustrates one of the many suitable applications for this type of equipment.

The energy regulator outlined here is designed to provide a means of running an AC electrical load at the lower end of its CE energy rating without fluctuation and without dissipating energy reductions as heat. Instead, this device provides an accessible current suitable for use charging a battery and or other suitably rated equipment (e.g. an inverter). By using this device, 'in circuit', a reduction in energy powering electrical circuits is realised accompanied by a saved amount of useable energy at voltage and current.

What is Electricity Regulation?

This innovation relates to an electrical/ electronic equipment designed to regulate an electricity supply to enable energy savings to be made.

How does it do it?

Traditionally, electrical power providers supply alternating current (AC) electricity at a voltage within a predetermined range of voltages. The upper and lower bounds of this range will vary, for a particular area, depending on local laws and regulations. Within Europe the Harmonised Voltage Range (EHVR) is 207 V to 253 V (230V +/- 10%) which encompasses all the national and regional variations.

The EHVR enables power generating

company's greater freedom in the voltage at which they supply electricity to consumers. In practice, the actual voltage at which power is supplied fluctuates depending on the instantaneous supply and demand, and varies from region to region. In Europe, the electrical supply is unregulated in this way. By regulating the power supply to electrical equipment the running cost of electrical equipment may be reduced and also the maintenance required for this equipment may be reduced. This innovation provides a means of running electrical equipment at the lower end of a supply voltage range so to reduce the running cost of this equipment. Importantly, it then provides, (in addition to the saving made), an accessible current that may be used, for example, to charge a battery and it differs greatly to existing technologies in this way.