VPhase Typical Energy Savings.

The voltage supplied to your home or business needs to vary to ensure that the distribution network works effectively, offering the best supply to all users at all times. Across Europe the agreed statutory range for voltages is based on 230V +/-10% (207V to 253V). In the UK our voltages have historically been higher and whilst actual levels will vary during the day they typically average at around 245V.

The majority of appliances operate more efficiently at lower voltage (but still within the European statutory range). Voltage Optimisation is the control of voltage supplied to appliances to a set level (usually 220V). Presented below are example energy savings achieved in VPhase testing and based upon 245V to 220V voltage reduction.

- **Appliances with motors and pumps**

"A rated freezer"	17% energy saving
"A rated refrigerator"	16% energy saving
3 speed central heating pump	15% to 18% energy saving

- **Lighting**

CFL lighting	11% energy saving
Incandescent bulb	15% energy saving
Low voltage halogen spot lights	15% energy saving

- **Consumer electronics**

Results for consumer electronics vary widely, examples are given below:

DAB radio	5% energy saving
DECT cordless phone base station	30% energy saving
ADSL modem and wireless router	5% energy saving
Personal Computer	4% energy saving
Hi-Fi	13% energy saving

- **Electric heating**

Closed loop (thermostatically controlled) heating will make no energy savings through the application of voltage optimisation. Reducing the voltage applied to an ohmic heating element will reduce the heat output from that element and the power drawn by that element however the element will remain on longer to achieve the same heating effect (and therefore consume the same amount of energy).

- **Whole house saving**

There are many variables to determine the overall energy savings, however savings of £80 a year off electricity bills have been demonstrated. If this were achieved in every house within the UK this would be the equivalent CO_2 reduction of taking 2.3 million cars off the road every year.