



OPTIMIZED ENERGY



ECO-MAX-COMMERCIAL EMC100i x 2 BUPA Care Services



£3,854 annual energy savings achieved by the ECO-MAX, with a **payback of 3 years**

Project Summary

Bupa were concerned about the suitability of their load profile for whole-site VO. The primary concern was that of “risk”, avoiding any adverse effect on the operation of sensitive medical equipment was paramount. The secondary concern was the extent of the energy saving to be gained, as a large proportion of the electrical equipment in use was electronics based so which delivers little or no energy saving from VO.

After carrying out an extensive survey of two separate sites we confirmed that Bupa’s concerns were rightly justified. We identified that the sites energy consumption was equally split across the admin/building services block and the residential wings. Only the energy consumption of the admin block could be significantly reduced by the implementation of VO.

It therefore made more sense both operationally and commercially to opt for a localised VO approach. It totally removed any operation “risk” issues; it reduced the cost of the project whilst delivering a similar level of saving to the whole site approach.

Energy savings have been monitored and are exactly as predicted in our business case prior to installation.

Load Profile:

Sites electrical supply 143KVa						
Type of Load	% of Building Consumption	Voltage Dependency	Voltage Reduction	Potential Saving From VO	Nett Saving On Bill	Contribution Towards Nett Saving
Admin, Laundry & Kitchen	27.2%	70%	8%	11.2%	3.0%	46.4%
Boiler House	18.6%	70%	8%	11.2%	2.1%	31.7%
Car park & Walkways	1.1%	70%	8%	11.2%	0.1%	1.9%
Residential Wings	45.8%	10%	8%	1.6%	0.7%	11.2%
Other	7.2%	50%	8%	8.0%	0.6%	8.8%
Total					6.6%	100%

Localised Vs Whole Site Approach

Localised Equipment Cost			
Rating KVa	Qty	Cost Each	Total Cost
90	2	£ 5,848	£ 11,696
Total			£ 11,696

Whole Site Equipment Cost			
Rating KVa	Qty	Cost Each	Total Cost
143	2	£ 8,663	£ 17,326
Total			£ 17,326

Benefits of the localised approach

- No risk
- Easier installation
- Reduced capital cost
- Equivalent level of energy saving

Energy & Financial Summary of Project

Annual energy saving	38,543 KWh
Reduction in electricity cost, per annum	£3,854
Total Project cost	£11,696
Payback period	36 months
Reduction in CO ² emissions, per annum	21 tonnes

