

# Reducing Lighting Electricity Consumption and Costs For:

**amazon.co.uk**

**Reference:** 030723-1301  
**Client:** Amazon.co.uk  
**Type Of Building:** Distribution Centre

## A Case Study

### Introduction

Founded in 1994 Amazon is now one of the world's best known online stores. It's vision to become the earth's most customer centric company; to build a place where people can come to find and discover anything they might want to buy online, has certainly paid off. The company now has assets of more than \$3.6 billion.

Amazon's Milton Keynes operation has a foot print in excess of 500,000 sq.ft and with usable floor space increased further by the use of internal mezzanine flooring, and pick towers, the building is large by any standard.

### Existing Lighting

The open floor spaces are lit via a combination of high and low bay discharge lighting, with the mezzanine areas lit by high frequency fluorescent lighting.

The existing lighting scheme is extensively zoned and uses manual controls located at the main entrance to the warehouse. However automating this existing control infrastructure would not generate large energy savings, because Amazon operates 24hrs/day and the building has no usable natural daylight, meaning the lighting cannot be switched off.

**Type of Lights:** High & Low Bay Fittings  
**Electrical Load of Lighting:** 332.7KW

### The Solution

After carrying out a comprehensive technical survey of the lighting, the discharge lighting was identified as being ideal for the implementation of ECO-MAX optimisers which would reduce the electricity consumption of the existing lighting by approximately 25%. GWE supplied and installed eleven ECO-MAX-FDIM centralised lighting control systems.

### Enhanced Capital Allowance (ECA), Scheme

Because of GW Energy's inclusion on the Carbon Trust's Energy Technology List, (ETL), ECO-MAX optimisers can be configured to qualify for the Enhanced Capital Allowance, (ECA).

The ECA scheme provides companies with a welcome cash flow boost in the financial year that the investment is made. Visit [www.eca.gov.uk](http://www.eca.gov.uk) for more information.

### Carbon Trust Interest Free Loans

SME's that implement ECO-MAX optimisers may also qualify for a Carbon Trust Energy-Efficiency Loan.

The repayments for these loans, which are interest free and without arrangement fees, are structured to be less than the energy saving made, allowing companies to benefit immediately from an improved cash flow. Visit [www.carbontrust.co.uk](http://www.carbontrust.co.uk) for further information.



### Energy & Financial Summary of Project

<b>Current Annual Lighting Energy Cost</b> Exclusive of VAT	£175,075.00	
<b>Reduction in Energy Consumption</b>	23.5%	
<b>KWhrs Saved per Annum</b>	683,093	
<b>Reduction in Energy Cost, per Annum</b> Exclusive of VAT	£41,143.00	
<b>Total Cost of Equipment</b>	£48,859.49	
<b>Payback Period in Months, without ECA</b>	Supply Only 14.3	Installed 17.2
<b>Reduction in Carbon Emissions</b>	293.7 tonnes p.a	

### Lease Purchase

For larger companies that fail to meet the criteria of the Energy-Efficiency loan scheme, but would also prefer to see the financial benefits of the ECO-MAX transferred almost immediately into an improved cash flow, then lease purchase may be a better option, as the cash flow for many companies can be positive in just a few months, (contact GWE for further information).

References, written testimonials, or site visits can be provided / arranged by contacting GW Energy directly.

