Net Zero Carbon Case Studies

LED lighting

LED lighting to save over 100 tonnes of CO_2

Electricity North West has a range of lighting systems that vary in age and efficiency across our non-operational sites. This presents a great opportunity for us to install LED lighting across our offices and depots which will greatly reduce energy consumption and costs. Lighting on our properties typically accounts for 20-50% of the overall energy usage at each site.

We have therefore chosen to install LED lighting at all of these sites.

LED lights use much less energy than standard halogen light bulbs and benefit from a life span of up to 80,000 hours which reduces maintenance costs and from a safety perspective will reduce the amount of time engineers are required to work at height.

The following table provides details for each site including the benefits in reduced energy consumption, associated costs and carbon reduction and estimated pay back for the LED replacement project.

Investment costs will be reduced by economies of scale. It is anticipated that the investment of £360,000 will be paid back in just over five years and will save 107.62 tonnes CO_2e every year.

Site	Retrofit costs	Estimated annual lighting energy reduction (kWh)	Estimated annual CO_2 savings (tonne CO_2e)	Simple payback (years)
Barrow	£3,344	3,761	0.96	5.70
Blackburn	£57,620	63,554	16.24	5.81
Kendal	£81,363	82,493	21.09	6.32
Manchester	£30,838	28,142	7.19	7.02
Preston	£101,671	97,126	24.83	6.71
Salford	£51,656	43,212	11.04	7.66
Stockport	£28,381	42,401	10.84	4.29
Workington	£47,081	60,341	15.42	5.00
TOTAL	**£401,954**	**421,030**	**107.62**	**6.12**
Bulk discount	-£56,954			
Project management	£15,000			
TOTAL	**£360,000**			