



## CASE STUDY OF POWER CONSUMPTION FOR ESB AND CORK COUNTY IRELAND PROVES 30.77% SAVINGS IN STREET LIGHTING



### ABSTRACT

An independent study for ESB and the Cork County Council identified 30% savings in electricity costs when the LEC A was installed and tested on a street lighting circuit. ESB supplies electricity and maintains for Cork County street lighting. An independent consulting company performed the controlled measurement testing of power consumption and recorded the findings. Results concluded a 30.77% savings on electricity costs could be achieved\*.

### POSSIBLE SAVINGS



County Cork covers an area of 7,459 square kilometers (2,880 square miles) with over 7,500 miles of public roads. The current annual cost of public lighting is €3.4 million. With a 30% reduction in this cost, the city can possibly save over €1 million in public lighting costs.

\*Full report is available upon request.

### STUDY PARAMATERS

The Study consisted of the controlled measurement of Power Consumption on a street lighting circuit consisting of 24 street lights on photocell triggers. The LEC was connected within the junction box, and the measurement device (Amprobe PQ55A) was connected to the LEC.

### METHOD

The study consisted of 2 distinct periods of one week. The “Initial Period” measured the normal usage over the period of one week. The “Controlled Usage Period” was the power consumption when using the LEC unit. Over these two weeks, the lights were on an average of 8.5 hours per night, and measurement readings were taken every 5 minutes.

### CONCLUSIONS

The study revealed that the average weekly usage of power was 300.51KWh without the LEC, and 209.80KWh with the LEC. Overall savings generated equals 30.77% of KWh.

	Hourly KW	Yearly KWh
Initial Period	5.2	22713.6
Controlled Usage Period	3.6	15724.8
Saving	1.6	6988.8
Saving %	<b>30%</b>	<b>30.77%</b>