

MEETING:	ENVIRONMENT SCRUTINY COMMITTEE
DATE:	19 APRIL 2010
TITLE OF REPORT:	REDUCING ENERGY CONSUMPTION - STREET LIGHTING – FURTHER UPDATE
PORTFOLIO AREA:	HIGHWAYS & TRANSPORTATION

CLASSIFICATION: Open

Wards Affected

County-wide

Purpose

To update the Committee on the progress made by the highway service in reducing the energy consumed and carbon dioxide generated through street lighting.

Recommendation

THAT subject to any comments the Committee wish to make the report be noted.

Key Points Summary

- Our street lighting energy is provided from a green source at a rate of approximately 9.5p a unit from April 2010 (Green tariff premium now 0.062p).
- Work continues on the implementation and evaluation of a range of energy reduction options.
- Over 10 tonnes reduction in Co2 has been achieved to date since last report, mainly as a result of trial applications, the scope for further improvement is considerable and will be pursued, informed by the results of our trials.

Alternative Options

- 1 None.

Reasons for Recommendations

- 2 This report provides an update to members on the progress made by the highway

service in reducing the energy consumed and carbon dioxide generated through street lighting.

Introduction and Background

- 3 At their meeting on the 15 September 2008 the Environment Scrutiny Committee raised the following question 'In view of light pollution, rising electricity costs and the need to meet carbon emissions targets (NI185) it was asked whether street lights could be turned off e.g. after midnight, light levels reduced or low energy light bulbs used?' They acknowledged that 'the suggestion would have to be balanced against other social expectations e.g. personal security and crime levels.' and the Committee requested a report to the next meeting.
- 4 A report titled, 'Reducing Energy Consumption - Street Lighting', was presented to the Scrutiny Committee on the 24 November 2008.
- 5 A report titled, 'Reducing Energy Consumption - Street Lighting - Update', was presented to the Scrutiny Committee on the 8 June 2009.
- 6 This report is intended to update the members of the Scrutiny Committee on the progress made by the Highway Service in regard to this issue since the June 2009 meeting.

Key Considerations

Energy Source

- 7 Our street lighting energy continues to be provided from a green source at a rate of approximately 9.5p a unit from April 2010 (Green tariff premium now 0.062p).

Potential options for reducing usage

- 8 As part of our last report we detailed the range of possible options, with an initial view on the potential level of advantage/disadvantage to Herefordshire, by way of a reminder these options are summarised in the table below:

<u>Option</u>	<u>Potential advantage/disadvantage</u>	<u>Potential timescale</u>
Dimming - This involves installing a device which allows light levels to be varied in relation to the Average Daily Traffic Flow.	Highly beneficial at selected sites. Costs are more feasible with quantity which means larger programmed schemes = better returns on energy saving & reductions in Co2.	Medium term could be introduced as part of selected highway lighting improvements.
Trimming - This is simply a reduction in the number of hours a lamp is lit.	Moderately beneficial, provides a reasonable compromise solution of switching lights off.	Short to medium term
24 hour burners - Generally only	Limited benefits,	Short term.

<p>closed subways require continuous lighting therefore any signs or bollards which are currently lit for 24 hours can be fitted with photo electric cells, this will effectively half their energy requirements.</p>		
<p>De-illuminate signs – The Traffic Signs Regulations and General Directions (TSRDG, 2002) details requirements for lighting road signs. Some signs will be illuminated that are no longer required to be. These lights can be switched off.</p>	<p>Limited benefit as the majority of energy is consumed by street lights as opposed to signs. But should not be discounted.</p>	<p>Short to medium term, new inventory system being implemented from April 2010.</p>
<p>Bollards - Take advantage of the relaxation to de-illuminate bollards or fit solar powered LED bollards. Approval from the Department for Transport is required in some instances but many bollards, for example plain faced bollards no longer require illumination.</p>	<p>Limited benefit as the majority of energy is consumed by street lights as opposed to signs. But should not be discounted.</p>	<p>Short to medium term, new inventory system being implemented from April 2010.</p>
<p>LEDs –</p> <p>Development in LEDs is still ongoing and but whilst cost effective street lighting units are in reality still not available there are many opportunities to utilise both the energy, but more so the maintenance savings, that LED's offer. Cost effective LED signs and bollards are now available and should there be a requirement for illumination.</p>	<p>Limited benefits</p> <p>Ongoing review to this type of retrofit work.</p>	<p>Short to medium term, new inventory system being implemented from April 2010</p>

Electronic control – Conventional control gear can significantly increase the total circuit wattage for a lamp. Electronic control gear offers energy savings and can extend the life of the lamp.	High.	Short to medium term, being pursued as part of the street lighting priority schemes. New inventory system & policy being implemented from April 2010.
White light – Take advantage of reduction of lighting levels in residential areas by using 'white light' sources.	Medium.	Short to Medium term, introduced as part of the programme of street lighting maintenance/improvement works.
Part night lighting – Consideration in rural areas may be given to part night lighting, whereby lighting is switched off in residential areas from around midnight to 6:00am (Winter time)	Highly beneficial in carefully selected areas. Risk assessments to be undertaken.	Short to medium term, if pursued as part of the street lighting maintenance cycle. Parish trials have been set up & await feedback.
Switching lights off – As explored by Powys County Council, Buckinghamshire County Council and other UK authorities.	Potentially highly beneficial in carefully selected areas.	Longer term, if introduced (safety element & high disconnection costs).

Current Progress on Energy Reduction Options in Herefordshire

- 9 The progress that has been made by the Street Lighting Team is summarised in Appendix 1:

Community Impact

- 10 Over 10 tonnes reduction in Co2 has been achieved to date. Also improvements to lighting standards delivered in Hereford (residential schemes carried out on the Hillside / Newtown Farm/ Redhill estates plus footway upgrades at Churchill Gardens / St Martins / Hurdman Walk / Union Walk) & parishes such as in Pembridge. As can be seen from the table above the scope for further improvement is considerable and this will be pursued, informed by the results of our trials.

Financial Implications

- 11 None as a result of this report. However the further implementation of any of the options identified may have positive and/or negative implications which will need to be considered when deciding whether to proceed.

Legal Implications

12 None as a result of this report.

Risk Management

13 The risk associated with the delivery of the street lighting service are being managed as part of the risk management arrangements embedded within the 'MAC' contract with Amey Herefordshire.

Consultees

14 None.

Appendices

15 None

Background Papers

- The Environment Scrutiny report titled, 'Reducing Energy Consumption - Street Lighting', as presented to the Scrutiny Committee on the 24 November 2008 and available via the Council's web site.
- The Environment Scrutiny report titled, 'Reducing Energy Consumption - Street Lighting - Update', as presented to the Scrutiny Committee on the 8^t June 2009 and available via the Council's web site.