
Report To:	Environment & Regeneration Committee	Date:	1 May 2014
Report By:	Acting Corporate Director Environment, Regeneration & Resources	Report No:	ERC/ENV/IM/13.193
Contact Officer:	Graeme Blackie	Contact No:	4828
Subject:	Street Lighting Strategy - Update		

1.0 PURPOSE

- 1.1 The purpose of this report is to advise Committee on progress in relation to the proposed Street Lighting Strategy.

2.0 SUMMARY

- 2.1 This report sets out progress being made on a strategy to renew and upgrade street lighting in Inverclyde to reduce power consumption and carbon emissions in the longer term.
- 2.2 This report also details collaborative working which is progressing with Renfrewshire Council and East Renfrewshire Council, and supported by the Improvement Service, Resource Efficient Scotland (RES), and Scottish Future Trust (SFT). This joint working/potential collaboration group is focusing on progressing a full condition survey of lighting columns. This is fundamental to the preparation of a fully costed business case, to replace existing conventional yellow light with modern white light alternatives, which includes LED type lanterns. Further reports will be brought to this Committee to update Elected Members on progress on both the development of an outline business case and the extent to which delivery can be shared, through collaborative working with our partner Councils.
- 2.3 The overall Capital spend for 2014/15 is £330,000 which includes an allowance of £44,000 for column conditional surveys as approved by Committee on 6th March 2014. Also reported to Committee on 6th March, it had originally been proposed that around £1.1m of RAMP/Capital investment be directed to street lighting infrastructure renewal in 2014/15; however, on the basis of the need to carry out the column survey work described above, and the ongoing talks with neighbouring councils regarding road shared services this figure has been reduced to reflect the likely spend, with the remaining amount being transferred to subsequent years. Officers believe this will not only deliver a better solution but will also deliver efficiencies arising from economies of scale.

3.0 RECOMMENDATIONS

It is recommended that the Committee:-

- 3.1 note the progress being made on a strategy that will embrace new technologies to replace and upgrade street lighting in Inverclyde.
- 3.2 note the progress being made in collaborative working with our partner Councils, Renfrewshire and East Renfrewshire, in developing a joint strategy to include lighting column condition survey and the development of a business case to replace conventional yellow lamps on street lights with modern white light alternatives, which will include LED type lanterns.

- 3.3 note the potential savings in energy and maintenance costs, and associated reductions in carbon consumption.
- 3.4 note that further reports on the Street Lighting Strategy for Inverclyde and the associated business cases will be reported to future meetings of the Committee.

Ian Moffat
Head of Environmental & Commercial Services

4.0 BACKGROUND

- 4.1 Current practise is to specify white light in all new or replacement installations as opposed to the former orange or yellow light from conventional units. The benefit of using white light is that significant power savings can be achieved, especially where LED lanterns are introduced. White light has typically been provided by fluorescent or equivalent units. Technological changes over the last two years however have resulted in LED lights becoming more efficient and much more cost effective. This report sets out some of the background work officers have been undertaking in the context of these technological advances and the opportunities for Inverclyde. Officers have been working in close collaboration on this project with Renfrewshire Council and East Renfrewshire Council.
- 4.2 Across Inverclyde there are approximately 12,500 street lights consuming 5.2 million kilowatt hours of electricity annually at a cost in 2013/14 of approximately £0.5m per year. Due to the projected rise in electricity prices, this figure may rise to between £0.8m and £1.2m per annum by 2024.
- 4.3 Annual maintenance of street lighting assets is approximately £0.43m per annum. The current total annual revenue costs of street lighting excluding staff are £0.93m per annum.
- 4.4 Maintenance of all existing street lighting assets and the installation of new apparatus are mainly undertaken by private contractors, with the current contract having commenced on 1 January 2014.
- 4.5 Street lighting accounts for approximately 10% of the Council's carbon consumption and consequently has potential to contribute towards the Council's target to reduce carbon by 60 per cent by 2023. Street lighting will become eligible for carbon tax during 2018 and there is potential to reduce these future carbon penalties. Pilot projects into the use of white light using LED lamps as opposed to the current yellow lamps on most of our street lighting have identified that significant power (and carbon) savings of up to 60% can be achieved. The lifespan of LED's is claimed to be in excess of ten years and in some cases twenty years, which would result in a significant reduction in maintenance costs. White light contributes to community safety as colour rendition is greatly improved, assisting object recognition and CCTV images. Public perception of white light to date has generally been positive although there can be some concern with the reduction in back spill which typically illuminates adjacent buildings and gardens.
- 4.6 In Inverclyde, white light has, in recent times, routinely been used for new lighting installations, and white light fully meets with current national standards for design; this has delivered savings of up to 45%. Through 2012/13 it became apparent that LED development and cost reduction was imminent and the officer view was to defer major capital investment in new technology until the market place had settled. It is now considered appropriate to progress a strategy for power/carbon reduction within street lighting, using LED technology. LED lantern replacement is now a viable option compared to the situation in the previous 1 to 2 years.
- 4.7 Resource Efficient Scotland, (RES) agreed to support the Roads and Transportation Project Working Group made up of Inverclyde, East Renfrewshire and Renfrewshire Councils to assist in street lighting condition audits and a business case development for LED retrofit options.
- 4.8 RES will undertake individual scoping studies with Inverclyde, East Renfrewshire and Renfrewshire Councils to ascertain the current status of the existing asset registers, existing condition information, drawings and other relevant data required for individual business cases. As part of this exercise RES directly funded the conditional survey of just under 3,000 columns across Inverclyde, approximately 25% of the lighting column stock. In addition to RES support, the SFT gave all Councils a one off Revenue Grant in 2013 to assist asset surveys of street lighting of which Renfrewshire received £60,000 and Inverclyde received £28,000.

5.0 NEXT STEPS

- 5.1 Renfrewshire Council and Inverclyde Council will use this funding combined with specific allocations from their respective approved capital allocations (£44,000 approval for Inverclyde at the Environment and Regeneration Committee of 6 March 2014) for street lighting to support the condition survey over the majority of our lighting stock and assess the suitability of lighting columns to take LED units in comparison with the current units.
- 5.2 On completion of the asset condition survey, which will be carried out between March and May 2014, an outline business case will identify the number of lighting units which are suitable for conversion to LEDs, the outline costs and potential revenue savings.
- 5.3 East Renfrewshire Council, in consequence of their contractual maintenance arrangements for street lighting, have in recent years collected significant data on asset condition and considered that there was no value in working collaboratively in this aspect of the project.
- 5.4 A potential constraint to the replacement of existing lamps with LED replacements is the condition of street lighting columns, and this is why it is important to get a detailed condition survey prior to developing outline business cases, as the period for the return on the investment is directly affected by the extent of capital invested in column replacement.
- 5.5 Further reports will be brought to Committee once the outlined business case (OBC) is finalised.

6.0 IMPLICATIONS

6.1 Financial Implications:

One off Costs

Cost Centre	Budget Heading	Budget Years	Proposed Spend this Report £000	Virement From	Other Comments
Capital	RAMP	2014/15	44	-	Ref Para 2.3
Roads Lighting Maintenance	- Other Expenditure	2014/15	28		Ref Para 4.8
Capital	RAMP	2014/15	286		Remaining Lighting capital budget

Annually Recurring Costs/ (Savings)

Cost Centre	Budget Heading	With Effect from	Annual Net Impact £000	Virement From (If Applicable)	Other Comments
Street Lighting	Electricity	2016	Tbc		Subject to OBC

Legal

- 6.2 Legal Services have been consulted on the content of this report.

Human Resources

- 6.3 No implications.

Equalities

6.4 No implications.

Repopulation

6.5 The improvement in the condition of the street lighting stock and improved illumination of the road network will assist the encouragement of inward investment.

7.0 CONSULTATIONS

7.1 None.

8.0 LIST OF BACKGROUND PAPERS

8.1 None.