
STREET LIGHTING PROJECT – UPDATE REPORT

1.0 EXECUTIVE SUMMARY

The lighting stock across Argyll and Bute, like much of Scotland's is old technology which is not energy efficient. Officers have been working with Zero Waste Scotland to develop a street lighting project for upgrading the lighting Assets within Argyll and Bute with more energy efficient lamps. The project will essentially assess the existing lighting stock, develop an energy model and business case to determine the type of lighting solution and delivery model that the council adopts for future energy savings.

The Detailed Business Case (DBC) is being actively progressed and it is intended to bring this forward with a recommendation for a proposed energy efficient lighting solution to the Environment, Development and Infrastructure Committee meeting in November 2015.

In developing the DBC:

- A full and detailed inventory has been prepared based on information held on the WDM system which has been verified by an onsite survey. This information has also been used to identify areas where energy savings could be realised.
- A sample structural condition survey of the council's stock of street lighting has been undertaken to assess the extent of column stock that may be in need of replacement. Columns that are newer than 15 years old have not been included in the survey. A draft report has now been received and is being reviewed.
- An assessment of the most cost effective option in terms of procurement and implementation of the installation of the preferred lighting installation is being undertaken.
- An assessment of the most cost effective method of financing the "spend to save" proposal is being undertaken to provide the necessary information to assess options for the replacement of lighting and allow the business case to be completed for consideration by Members.

The replacement of lighting brings the opportunity to reduce energy costs and to improve the reliability of street lighting, using the energy savings to fund the capital investment necessary for the project. A full business case will be presented to the November Environment Development & Infrastructure Committee.

The council is working with Scottish Futures Trust to ensure that the business case produced takes advantage of the experience of other councils in Scotland.

RECOMMENDATIONS

That Members note the report.

STREET LIGHTING PROJECT – UPDATE REPORT

2.0 INTRODUCTION

- 2.1 This report sets out the progress on developing the street lighting project for upgrading the lighting assets within Argyll and Bute with more energy efficient lamps and the engagement with Zero Waste Scotland and their consultants to assist in developing an energy model and business case to determine the type of lighting solution and delivery model that the council adopts for future energy savings.

3.0 RECOMMENDATIONS

- 3.1 That Members note the report.

4.0 DETAILS

4.1 The Current Position

4.1.1 The council currently owns and maintains some 14,212 illuminated signs and street lights.

4.1.2 Energy costs in regard to street lighting are expected to increase over time. Current analysis of the energy market predicts that electricity prices will increase in line with the Consumer Prices Index (CPI). Due to advances in lighting technology, there is now an opportunity to review street lighting provision with a view to making revenue savings on energy costs.

4.1.3 New legislation will prohibit the manufacture and sale of inefficient technologies, including the control gear used in the majority of the council's street lights. Investment in this apparatus will be necessary as spares will likely no longer be available after 2017.

4.1.4 Scottish Government has provided funding of £43,000 to allow the council to take forward aspects of Scotland's ambitious climate change targets in relation to

streetlighting. The council topped up the allocation to a total of £200,000 as an earmarked reserve confirmed at full council on 25 June 2015. .

4.1.5 This funding is now being used to develop, in partnership with Scottish Futures Trust (SFT), a detailed business case and implementation plan for the replacement of current street lighting with more energy efficient alternatives.

4.1.6 Current spend has included a full inventory of illuminated signs and street lights and a condition survey of a sample of lighting columns. £175k funding remains and it was agreed by the council at its meeting in June to earmark this sum for the project in 2015/16. More detailed budget proposals will be presented to members together with the detailed business case (DBC) later in the year. Future spending proposals will include project management, design and a contribution to implementation costs. The overall funding of the project will be on the basis of “spend to save”.

4.1.7 Existing energy costs are £720k which is expected to double over the next 10 years. Low energy equipment presently shows a possible saving in energy costs of approximately 50% per year.

4.2 **Outline of the Project**

4.2.1 The council has engaged further with Zero Waste Scotland and their consultants, Gillespie Lighting, who have assisted in completing an energy model for alternative lighting options. The DBC is being actively progressed and it is intended to bring this forward with a recommendation for a proposed energy efficient lighting solution to the Environment, Development and Infrastructure Committee meeting in November 2015. A seminar for all Members will be provided which highlights the current and future cost pressures in regard to utilities, the proposed lighting solution to reduce cost and achieve efficiencies in the provision of street lighting, and the detail of how the project is to be financed and implemented.

4.3 **Progress so far**

The key areas progressing are:

4.3.1 A detailed inventory has been collected, detailing the locations and type of lamp and lantern fitted to existing columns to ensure that the asset list on which the project will rely is as accurate as possible.

4.3.2 The council is carrying out a sample column condition survey (with the exception of columns that are newer than 15 years old). The survey data will assist in assessing the current condition of the stock of columns to inform the estimated cost of the project. A draft report has been received and is currently being reviewed. The council's street lighting stock is serviced by cabling infrastructure, the ownership and responsibility of which falls approximately 50% on the council and 50% on external utility companies. Where new columns require to be provided there may be a requirement to renew the cabling infrastructure at the same time.

The 5th core cable networks that provide power to some 50% of the lighting stock are provided and maintained by external utility companies. The council does not own or maintain 5th core cable networks however an estimated 50% of the street lighting

network owned by the council is powered from the 5th core cable network. 5th core cable networks have been installed for some considerable time and in many cases the old networks are prone to failure. Those networks that remain are very old and unreliable and where replacement is required the cost of replacement may be significant.

It is not possible to ascertain the condition of the cabling and predict whether the cabling is likely to fail at any time. However an assessment of the annual cost of such cabling repairs is being considered to assess whether an allowance can be made for this but the actual cost of any cabling repairs and renewals can only be ascertained at the time of failure.

4.3.3 A review of our existing street lighting installations has been carried out to identify areas where energy savings could be realised. This has considered lighting standards (which determine the required level of illumination of lighting dependent on the type of road, usage, and its location), new and more efficient technologies and maintenance savings.

4.3.4 An appraisal of potential options will seek to identify the most cost effective lighting solutions in terms their whole life cost .That includes the initial capital replacement costs, the cost of borrowing, energy and maintenance. The work undertaken to date has indicated that the most cost effective solution will likely be LED lighting.

4.3.5 An assessment of the most cost effective option in terms of procurement and implementation of the installation of the preferred lighting installation is being undertaken. A number of options looking at in-house and external provision for lighting design and installation will be assessed.

4.3.6 An assessment of the most cost effective method of financing the “spend to save” proposal is being undertaken. The existing model for calculating energy costs relies on estimates. This is currently being updated based on the updated inventory to ensure that energy costs are accurately calculated. The assessment will consider the cost of the preferred lighting solution (i.e. LED), the likely cost of implementation over a preferred time period and the cost of financing over a preferred time period against the estimated saving to identify the optimum financing option. SFT have proposed a number of public and private finance options such as the Green Investment Bank and a bank/funding institution created by the UK government. It is expected that PWLB borrowing may be the most cost effective option and the final business case will clarify this.

4.3.7 The Scottish Futures Trust have developed an options appraisal model. Officers are working with Gillespie Lighting and SFT to ensure there is accurate and appropriate information to populate the model which will form the basis of DBC.

4.4 The DBC will identify the expected level of savings in regard to ongoing energy costs and the optimum basis of funding and implementing the preferred lighting solution over time. This is intended to be presented to Members at the Environment, Development and Infrastructure Committee meeting in November 2015. It is considered at this stage that the DBC will show a material saving against projected

spend on street lighting energy consumption. That indication is expected to be confirmed by the DBC. The saving that is eventually delivered as a result of the project will only then be able to be determined once the preferred option in regard to full design, procurement and installation has been completed and is operational.

- 4.5 It is proposed that a Members briefing session be held to brief all Members on the proposals to progress an energy efficient lighting scheme across the council area. The work undertaken to date has indicated that the most cost effective solution will likely be LED lighting. Recent new lighting installations carried out by both the council and Transport Scotland in Argyll and Bute have been LED. The following sites now benefit from LED lighting:

Area	Location	Details	Amount
Mid Argyll	East Bank Road	27w Arc LED Lanterns	x17
Kintyre	Tayinloan Pier	25w Stela LED Lanterns	x10
Kintyre	Clachan Village	32w Phillips LED Lanterns	x19
Kintyre	Glebe Street, Campbeltown	27w Arc LED Lanterns	x7
Kintyre	Kilkerran Road, Campbeltown	27w Arc LED Lanterns	x22
Lorn	Nant Drive, Oban	27w Arc LED Lanterns	x17
Cowal	Innellan Shore Road	TBC (72w)	x35
Cowal	Sandbank Main Road	72w Saturn LED Lanterns	x60
Cowal	Matheson Lane, Innellan	25w Stela LED Lanterns	x15
Cowal	Stadium Footpath	25w Stela LED Lanterns	x10
Lomond	McLeod Drive, Helensburgh	27w Arc LED Lanterns	x11

Several other sites within Argyll and Bute have had LED lights fitted by Transport Scotland (North Connel and Tarbet) and there are further on-going plans for LED refurbishment across their network.

5.0 CONCLUSION

- 5.1 A sample survey of the Council's street lighting columns is being undertaken to assess the extent of stock that may be in need of replacement. This together with the full and detailed inventory already completed will provide the necessary information to assess options for the replacement of lighting and allow a business case to be prepared for consideration by members.
- 5.2 The replacement of lighting brings the opportunity to reduce energy costs and to improve the reliability of street lighting.
- 5.3 The Council is working with SFT to ensure that the business case produced takes advantage of the experience of other Councils in Scotland.

6.0 IMPLICATIONS

6.1	Policy	The project supports the council's carbon reduction policy.
6.2	Financial	Funding is in place for the inventory collection, energy model and business case development. The project implementation would be on a "spend to save" basis with reduced energy cost being used to fund the upgrade.
6.3	Legal	None.
6.4	HR	None
6.5	Equalities	None.
6.6	Risk	Non-delivery will result in increased energy costs and equipment that will not be compatible with new standards.
6.7	Customer Services	None

Executive Director of Development and Infrastructure: Pippa Milne

Policy Lead: Cllr Ellen Morton

June 2015

For further information contact: Jim Smith Head of Roads and Amenity
Walter MacArthur, Fleet & Waste Manager
(01546) 604648