



SOUTH
KESTEVEN
DISTRICT
COUNCIL



Environment Overview and Scrutiny Committee

23rd November 2022

Report of Councillor Mark Whittington,
Cabinet Member for Waste and Climate
Change

Project update on upgrade of streetlights to LED

Report Author

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Purpose of Report

This report provides a progress update regarding South Kesteven District Council's planned upgrade of streetlights to LEDs.

Recommendations

That the Committee:

1. Notes the progress to date to upgrade the Council's stock of streetlights to LED energy efficiency lighting.
2. Agrees for officers to progress modelling options for the street light replacement programme and present this to the Committee at the next meeting.

Decision Information

Does the report contain any exempt or confidential information not for publication?	No
What are the relevant corporate priorities?	Clean and sustainable environment
Which wards are impacted?	All wards

1. Implications

Taking into consideration implications relating to finance and procurement, legal and governance, risk and mitigation, health and safety, diversity and inclusion, safeguarding, staffing, community safety, mental health and wellbeing and the impact on the Council's declaration of a climate change emergency, the following implications have been identified:

Finance and Procurement

- 1.1 Initial funding of £100k was allocated from the Council's Invest to Save reserve in order to provide pump prime funding to accelerate the replacement programme. Thereafter the agreed operating model is that each replacement bulb is replaced with an energy efficient bulb funding from the energy savings. Clearly the operating costs have increased significantly since the current policy was approved. The electricity budget for 2022/23 was set at £171k and the projected spend for 2022/23 is forecast at £289k. Based on current ESPO price forecasts the budgeted cost for street lighting could increase to £688k for 2023/24. Therefore there is a strong case to accelerate the replacement bulb replacement or change the current operating model of street lighting. However any increase in the replacement programme (which will require significant investment) will require modelling against the return on investment and the payback of the reduction in operating costs.

Completed by: Richard Wyles, Chief Finance Officer

Legal and Governance

- 1.2 The Invest to Save budget has been allocated through a compliant procurement route. Any further changes to the project to allocate further funding would need to comply with the Council's Financial Regulations and Contract Procedure Rules.

2. Background to the Report

- 2.1 South Kesteven District Council is responsible for managing a total of 3893 streetlights within the district: 3590 of these lamps are funded by the General Fund (GF) and 303 are funded through the Housing Revenue Account (HRA). These lights are predominantly for providing lighting to footways, as opposed to the separate stock of streetlights provided for highways, which are managed by Lincolnshire County Council.
- 2.2 The majority of lights operated by the Council are 35W (or 36W) low pressure sodium lamps, and are responsible for approximately 30% of South Kesteven District Council's scope 2 carbon emissions associated with electricity use.
- 2.3 Following a decision at Cabinet on the [11th June 2019](#), a project was initiated to commence upgrade of the Council's stock of streetlights to Light Emitting Diode (LED) lamps. This allocated £100,000 from the Council's Invest to Save reserve to energy efficient LED as part of a 12 year overall programme. Benefits noted from the upgrades included a reduction in energy use and associated cost, with a consequent reduction in carbon emissions associated with energy use.
- 2.4 Environment Overview and Scrutiny Committee was provided with a progress update on [15th December 2020](#). This noted the outcomes of a pilot project for the streetlights, which ran from October 2019 to March 2020. 12 streetlights were installed to demonstrate savings with lamp dimming and motion sensing, including 4 units at Stamford cattle market car park, 4 units at Stamford bus station and 4 units at Winchester Road, Grantham. It was found that, in addition to an energy saving of approximately 60% by upgrading lamps to LED, those with timed schedules for dimming achieved an additional saving of between 10-16%.
- 2.5 As a result of this pilot, additional energy savings achieved through motion sensors and timed schedules were quantified. This information was used in development of detailed tender packs for procurement the main upgrade project.
- 2.6 In tandem with project development work required for the main LED upgrades, repair and maintenance arrangements for existing lamps were also reviewed. Current arrangements are for ongoing reactive maintenance of non-LED lamps where feasible, and where lamps are beyond repair these are now being updated to LED lamps. These arrangements for reactive maintenance are currently being reviewed, to assess the impacts of upgrading all failed units immediately to LED.
- 2.7 The main contract for the upgrade of streetlights to LED was subsequently awarded, effective from August 2021. The below update is provided regarding the current number of streetlights upgraded to LED, with approximately a further 90 lamps awaiting upgrade to LED shortly, pending arrival of components.

	August 2021	October 2022
Standard streetlights	3438	3019
LED streetlights	152	235
LED streetlights with dimming profile	-	336
TOTAL LED units	152	571

2.8 The impact of energy saved is provided on a monthly basis by the appointed data administrator for the scheme. Using an updated inventory of information from June 2021 onwards, the following savings have been reported:

Month	kWh				
	June	July	August	September	October
2022/23	45,255	50,843	61,620	73,286	89,276
2021/22	48,454	53,963	66,239	78,035	95,215
Total % year to year energy use	-6.6%	-5.8%	-7.0%	-6.1%	-6.2%
Total % year to year carbon emissions	-14.7%	-14.0%	-15.0%	-14.2%	-14.4%

2.9 Of the original Invest to Save budget of £100,000 allocated towards upgrades of streetlights to LED, £10,000 has been allocated towards a survey of 700 lights in order to improve understanding of the current stock of existing streetlights and upgrade requirements. Approximately a further £75,000 of the remaining budget has been allocated towards upgrading units to LED, with the average cost of a standard lamp upgrade being around £190 each, and approximately 10% of existing streetlight columns also requiring replacement.

2.10 Since agreement of the Invest to Save budget, South Kesteven District Council, like many others, has seen vastly escalating cost for utilities. The electricity budget for 2022/23 was set at £171k and the projected spend for 2022/23 is now forecast at £289k. As a result of the sharp escalation in cost, the case for a shorter programme of upgrades to LED across the whole stock of streetlights has become stronger. Ongoing work is reviewing this business case and modelling costs of a potential acceleration of upgrades.

2.11 The following table is a projection of the outlay and the payback period based on the latest projected utility increases. However, the utility pricing projections remain extremely uncertain and therefore the payback calculations will change.

	General Fund	HRA	Total
Bulb replacement	3,025	303	3,328
Estimated replacement cost	£786,500	£78,800	£865,300
Energy saving estimated 65% (based on projected ESPO price increases)	£362,000	£40,200	£402,200
Pay back	2.2 years	2 years	2.2 years

3. Key Considerations

- 3.1 The report provides a summary of the streetlighting upgrade project. Members are asked to take note of the upgrades to date and ongoing work on the programme, in particular the impact of sharply increased energy costs and implications for a quicker programme.

4. Other Options Considered

- 4.1 As outlined, ongoing work is occurring to review the speed of upgrading the stock of streetlights.

5. Reasons for the Recommendations

- 5.1 The report provides an update to note upgrades through the streetlighting programme, and ongoing work to model options to increase the pace of the upgrade programme.

6. Background Papers

- 6.1 Cabinet 19th June 2019- [2019-6-11 - Cabinet Street Lighting Report.pdf \(southkesteven.gov.uk\)](#)
- 6.2 Environment Overview and Scrutiny Committee 15th December 2020 - [Street Light Upgrade to LED.pdf \(southkesteven.gov.uk\)](#)