

Agenda Item No. 8

Street Lighting Energy Update

To: **Audit and Accounts Committee**

Date: 22 November 2018

From: Highways Service, Place and Economy

Electoral Division(s): **All**

Purpose: To update Committee on the recent trends relating to energy usage regarding Street Lights.

Key Issues: None

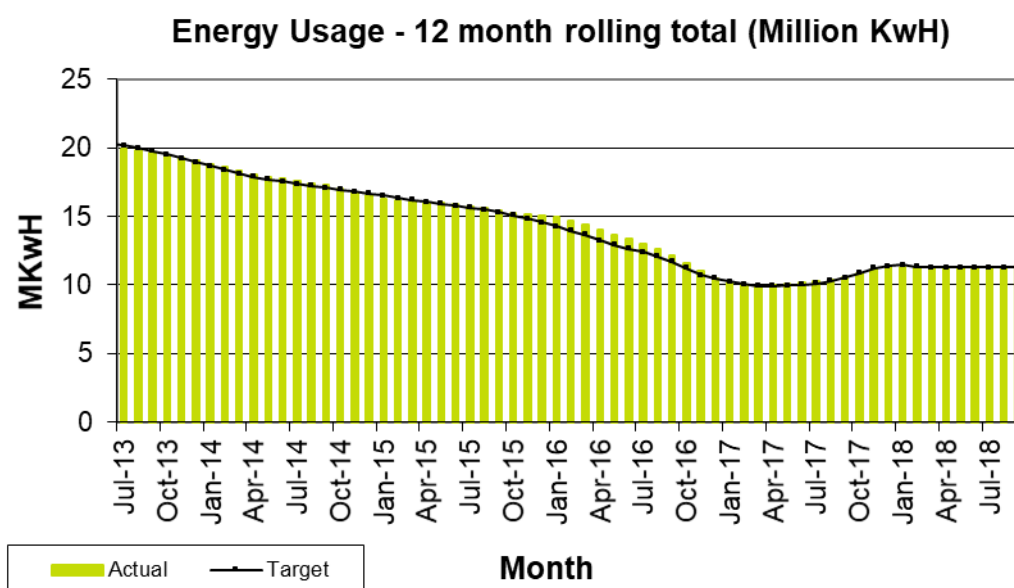
Recommendation: The Committee is asked to note the content of the report.

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1. Background

1.1. Assets covered by the street lighting energy payments include street lighting columns (circa 52,500), illuminated traffic signs (3,102) and a small number of illuminated bollards. Energy payments also include energy for lighting of subways and Zebra crossings on the highway network across the county.

1.2. The below graph shows energy consumption for Cambridgeshire County Council (CCC) owned assets over the last 5 years:



1.3. From the start of CCC's Street Lighting Private Finance Initiative (PFI) contract in July 2011, Balfour Beatty (the Council's Street Lighting PFI contractor) undertook to replace the existing street lighting inventory with a more energy efficient set of lights. The Core Investment Programme (CIP) and associated works ran until March 2017. This reduced the County Council's overall energy usage from approximately 21 million Kwh per year, down to approximately 11 million.

1.4. In addition to the above, the Council took the decision to implement reduced lighting levels, as well as switching off some lights between 2am and 6am, in order to deliver additional energy savings. These reductions were made between April 2016 and January 2017, at which point the Council reversed the decision.

1.5. As a result of the reversal of the part night lighting measures, the 12 month rolling total of energy usage increased between January 2017 and January 2018. This increase highlighted the impact of higher lighting levels and increased 'on-periods' resulting in increased energy use.

2. Recent Changes and Trends

- 2.1. In general, energy consumption will increase year-on-year, as additional street lights are adopted into and maintained through the contract. The increase in the county council's inventory relates to new developments and infrastructure improvement schemes across the County.
- 2.2. Recently, CCC have been working with Balfour Beatty to update the energy consumption target that is reported to committee and our energy supplier, in order for it to reflect recent updates (such as newly adopted lighting) to the inventory in line with the contract. There have been 560 lights accrued into the contract since April 2018.
- 2.3. Our new annual energy consumption target is 11.30 MKwH, which compares with our current energy consumption over the past 12 months of 11.35 MKwH. Any energy used in excess of our target is recovered in the form of contract deductions from Balfour Beatty.
- 2.4. These figures above do not include any savings relating to the roll out of the Light Emitting Diode (LED) lantern replacement programme (circa 3635 lanterns). CCC are currently working with our contractor and our energy supplier to calculate this and update both the target and actual consumption from time of installation. This should decrease both of the figures above. Our current estimate is that we should see a reduction of around 500,000 Kwh due to LED rollout in 2018/19, increasing to around 700,000 Kwh in 2019/20. The LED programme is expected to complete by January 2019.
- 2.5. Other measures that are currently applied to deliver energy efficiencies include:
- Dimming of Lanterns
 - Use of the Central Management System (cms) and controls for efficient switching on and off
 - Upgrade of outdated units where appropriate to LED's.

3. Summary

- 3.1. Other than the recent increased energy use resulting from overturning the decision to switch off lights, the general trend has been one of reducing energy use. It is expected that this trend will continue downward as more lights are upgraded to LED.

Background Papers: None

