
Meeting of Executive Members for City Strategy and Advisory Panel

30 October 2006

Report of the Director of City Strategy

STREET LIGHTING

Summary

1. This report provides an overview of the current situation regarding the street lighting contract and introduces proposals for improvements and efficiency savings.
2. Members are provided with the latest information regarding the use of the inventory to obtain the best value outcome for the supply of energy.
3. The way in which the above is linked into the work carried out by the Scrutiny Sub-Committee on Sustainable Street Lighting is also demonstrated.

Background

4. The Executive considered a report on 2 May 2006 on procurement of works and agreed to extend the street lighting contract with Amey Infrastructure Service (AIS) for a period of 12 months. This extension has been possible through the cooperation of AIS but has meant that an extended lease on the depot premises has had to be negotiated and that the works are now mainly paid for on 'cost plus' basis with agreed oncosts applied for labour, plant and materials. A minimum staffing level is affordable within the budgets providing the normal amount of Ward Committee work, integrated transport schemes and other works is available to absorb some of the labour costs. Officers are programming works to try to ensure that the budget available for street lighting is adequate and any issues in connection with this will be reported through the quarterly budget monitoring reports.
5. To keep costs to a minimum during this short term extension period, the costs of plant and materials are being kept to a minimum. This effectively means that the street lighting service is operating on a reactive basis with lamps burning to extinction rather than carrying out a bulk clean and change programme. Essential services are being maintained including the repairs and attendance to emergencies. As part of the wider procurement of highway services it is going to be necessary to carry out a procurement of the street lighting service irrespective of the success of the highway maintenance PFI

scheme, as it will be necessary to have a service provider in place up to at least 2010. Work on this procurement is now underway.

6. As part of the contract extension with AIS, a series of discussions took place to identify service improvements and efficiencies. These are outlined in this report.
7. Members will be aware that the very detailed inventory of street lighting and illuminated signs was completed earlier this year. The details have had to be formatted to comply with the requirements of the audit process of the energy distributor NEDL. Council officers carried out audit checks prior to the document being submitted and NEDL have now completed their own work, seeking further information on individual lights or sign assemblies in quite a number of instances to satisfy themselves of the accuracy of the information supplied. The outcome of this process is that an Estimated Annual Consumption (EAC) certificate has now been issued showing that our usage of electricity is 7.6 giga watt which is 15.7% lower than the previous figure of 9.02 giga watt. The implications of this reduced figure are discussed later in this report.
8. The Sustainable Street Lighting Scrutiny Sub-Committee presented a report to the Executive of 25 July 2006 on 'Street Lighting – Strategic Management & Procurement to Reduce CO₂ Emissions and Waste'. The Executive has noted this report and has asked for an Officer report from City Strategy and Resources on the budgetary and resourcing implications of the recommendations to enable the Executive to comment. This Officer report is scheduled to be on the agenda of the Executive Meeting on 24 October 2006.

Consultation

9. The relevant consultation has taken place with the Council's contractor AIS, the Council's energy distributor NEDL and the energy supplier npower. Discussions have taken place between Officers and Members in connection with the Sustainable Street Lighting Sub-Committee and there are continuous consultations with manufacturers of street lighting equipment, other street lighting professionals and the Yorkshire Lighting Group Benchmarking Club.

Options

10. Members have the option to consider the introduction of a number of efficiencies and improvements into the street lighting service, as set out later in this report so as to address any budget shortfall. The options available for the procurement of the street lighting maintenance services provided will be incorporated into a separate report as soon as the outcome of the Highway Maintenance PFI expression of interest is known in December 2006 or January 2007. Should this PFI bid be successful then the maintenance of street lighting and illuminated signs will be included in the PFI scheme. If however the PFI bid is not successful then alternative procurement arrangements will need to be made and this us an issue already under consideration by officers.

11. Regarding the procurement of energy, there are a number of options available to seek the most competitive prices and also options to consider the use of energy from sustainable sources. This links into some of the work carried out by the Sustainable Street Lighting Sub-Committee.

Options for efficiencies and improvements in the service

Option 1: Illuminated Bollards and Street Signs

12. To transfer, where possible, from illuminated to non illuminated street signage and bollards.

Option 2: Equipment

13. To use the least expensive but more efficient equipment to reduce whole of life maintenance costs along with reducing risk to both operatives and the public.

Option 3: Operational Efficiencies

14. To assess the contract needs with respect to new regulations (i.e. working at height and electrical) and good practices in order to improve the operational efficiency.

Option 4: Innovation

15. To continue to trial new technologies in order to assist improvements in the quality of street lighting systems.

Option 5: Ward Committees

16. To implement regular meetings and improved management systems to ensure better service delivery to Ward Committees and York Pride.

Option 6: Energy Procurement

17. To seek the best value procurement of energy through two alternative approaches to procurement and to seek recovery of costs for energy where appropriate.

Option 7: Energy Rates

18. To carry out further work with NEDL to enable the Council to move onto the 'Half Hourly Rate' for energy to further reduce energy costs.

Option 8: Maintenance Regime

19. In the short term to adopt a burn to extinction approach with increased night scouting as necessary.

Option 9: NEDL Connections

20. Lighting units can fail due to a fault in the lamps, the photoelectric cells or the starter equipment. Other reasons include loss of supply that is the responsibility of NEDL. The proposal is to seek improvements from NEDL on the turn around time for re-provision of supply.

Analysis

Option 1: Illuminated Bollards and Street Signs

21. By re-assessing the need for the number of illuminated sign units and illuminated bollards it will be possible to reduce their number by either removal of electrical components, relocating the units to shared posts, or removing them altogether. This has the advantage of reducing the maintained units along with helping to reduce energy needs and street clutter. Although initial investment will be needed to re-assess and reduce the units, there should be cost savings on overall maintenance. Any decisions in this respect will need to be made with reference to the correct regulations. This is also something that can also be addressed within the design process by specifying other non-lit reflective signage and bollard types with the immediate effect of cheaper installation costs compared to powered systems. These non-lit units could also be utilised effectively where lit units are constantly damaged by traffic. Newly approved non-lit bollard types are already in use throughout the country to great effect (e.g. Kensington, East Yorkshire, Hull) and give reduced maintenance and installation costs. Some manufacturers of non-lit bollards also offer a free maintenance and evaluation service for their equipment, reducing costs further.

Option 2: Equipment

22. Officers are constantly assessing the materials and equipment in use in order to gain the best possible value in relation to whole of life costs and maintainability. This gives the benefit of utilising the most recent cost/energy efficient technologies along with addressing maintenance and safety issues that occur as legislation progresses (i.e. working at height and the Recycling Directive). Although there are initial cost implications these need to be taken into consideration from a whole life cost perspective. For example the specifying of all aluminium lanterns to reduce recycling costs and environmental impacts in comparison to plastic models.

Option 3: Operational Efficiencies

23. Continuous improvement of working practices, not only on site but also in the management processes, have the potential to streamline the services whilst increasing output (particularly in engineering terms). This can result in simple initiatives such as acquiring lanterns to be pre-wired.

Option 4: Innovation

24. New technologies are regularly available to the industry and are sometimes able to provide better equipment suited to York's needs. For example on the Millennium Bridge, LED units have been utilised within the decking to replace the frequently vandalised units, resulting in a large reduction in repair visits and a maintenance return period in excess of 15 years. With the introduction of some more innovative technologies it may be possible to improve the Council's street lighting assets and help to combat unwarranted cost throughout the life of the equipment. It may also be possible to reduce maintenance visits in certain locations where it was previously difficult and expensive.

Option 5: Ward Committees

25. New systems have been put in place to improve the assessment and decision making process for Ward Committee and York Pride/Street Environment works. This involves frequent meetings with feedback in relation to the feasibility and timescales of works. This is backed up with written information to show a clear programme for all the works proposed from design stage to eventual commissioning, in order that officers can continue to assess each of the project stages as time moves on.

Option 6: Energy Procurement

26. The current energy contract is based on a variable tariff and is therefore subject to market changes. Following receipt of the EAC certificate, officers can obtain prices for a fixed term contract. It is proposed to tender on a twin track basis by inviting prices through the EU journal and also through the Yorkshire Purchasing Organisation (YPO). YPO has more buying power through economies of scale and recent discussions with YPO have revealed that they have sophisticated systems in place for tracking the price of energy and for buying the quantities they need in advance at the best possible prices. YPO estimates that since 2002 the price of energy has increased by 160% but due to their systems and buying power they have managed to keep the increase to 70%. It is perhaps unlikely that a go-it-alone procurement of energy will result in a better deal than with YPO but this will become apparent in due course.

Option 7: Energy Rates

27. Half Hourly rates are the cheapest energy rates available, paid for to the nearest half hour of usage rather than an unmetred dawn until dusk arrangement that would be obtained in the procurement above. A considerable amount of work is required to reach an agreed position with the energy distributor, involving the purchase and installation of measuring equipment costing £5K and appointing a Metre Administrator costing £6K per year. The equipment records and transmits the times that the different types of photo-electric cells in use, switch on and off and this can be used to accurately calculate the actual energy consumed, providing an up to date inventory is in place. It is a requirement of the Half Hourly system to keep accurate inventories and YPO estimate that this requires up to 15% of 1 FTE. If a Half Hourly rate for energy could be agreed then savings of 2% to 3% of the energy bill are typical and this will more than cover the costs involved. It is possible to move onto the Half Hourly rates once the procurement above is in place and all it essentially means is that the amount of energy used will be charged rather than an assumed, higher, amount based on the unmetred system.

Option 8: Maintenance Regime

28. As already mentioned, the extension to the term maintenance contract is operating on a reactive basis where lamps burn to extinction. This is seen as a temporary measure and work is already underway to procure these services with an anticipated date for contract award of April/May 2007. Should this be achievable it may not be necessary to seek any further extension of the existing contract period already agreed. The new contract will re-establish the

routine maintenance regimes, however, in the meantime if the number of lighting faults will be continuously monitored. The number of faults that are identified will be improved by the frequency of night scouting increasing to a 14 day cycle from October 2006 through to the end of March 2007. This is in comparison to the 28 day cycle operated from April to the end of September. In the unlikely event of additional night scouting being required, to keep on top of fault identification, then this will be implemented prior to the commencement of the new contract.

Option 9: NEDL Connections

29. NEDL is responsible for restoring dead supplies and for emergencies. IUS is responsible for new supplies and transfers of supplies. Both companies are part of CE Electric and both operate on the basis of a service level agreement (SLA). The SLA does not incorporate incentives for achieving targets and the best way to create improvements is through the formation of closer communications, leading to improved working arrangements. This already happens to a large extent with IUS but there is still considerable scope for improvement with NEDL. Efforts to improve communication with NEDL have been made but further efforts will be at a senior level in their organisation. This action is seen as imperative, as NEDL should provide the Council with information about the time taken to rectify faults so that the Council can report this in a BVPI. At the moment the information from NEDL is not coming through despite the requests, but the Audit Commission is unlikely to accept this as a reasonable reason for inaccurate reporting of this particular PI.

Street Lighting PI

30. Members attention is drawn to one of the street lighting PIs, namely COLI 33 - the percentage of street lights not working as planned. This was a BVPI up to 2005/06 but is now reported as a local indicator. The formula used for the PI calculation is:

$$[(W \times Y) / \text{No. of lights}] \times 100.$$

W = faults/period considered

$$Y = (\text{scouting period} + \text{average days to attend})/2$$

31. Under most circumstance the targets are achievable in the last two quarters of the financial year but not so in the first two quarters. The number of faults is relatively constant, as are all the other factors in the formula with the exception of the scouting period.
32. The scouting period in the first two quarters (April to September inclusive) is 1 scout every 28 days but in the second two quarters (October to March) this increases to 1 scout every 14 days.
33. There is very little that can be done to influence and improve the current performance of this PI other than to either alter the scouting period or reduce the number of faults. Altering the scouting period to 14 days throughout the year is expensive would cost an extra £9000, furthermore it is unlikely to be a

realistic option as the number of hours of darkness in the first two quarters is not sufficient to carry out the full scout in a 14 day period. Alternatively, efforts could be made to reduce the number of faults but this is not going to be easily achieved given the standards of maintenance affordable and the age and condition of the stock, such as the lamps, switchgear and cells.

34. The most effective solution would be to alter the targets to something that is still challenging yet achievable as follows:

PI	Current Target	Proposed Target
COLI 33a (not including vandalism)	0.6%	0.8%
COLLI 33b (including vandalism)	0.7%	0.9%

35. These proposed targets would still be amongst the best in the country as anything less than 1% is regarded as good and, for example, the sort of target that authorities should achieve having undergone the investment associated with a street lighting PFI scheme.

Corporate Priorities

36. The Street Lighting Service meets the corporate aims of 'Take Pride in the City' by improving quality and sustainability, creating a clean and safe environment'. It also supports the priority of 'Increase the use of public and other environmental modes of transport' by providing a safe environment for all users of the highway.

Implications

Financial

37. The options can be accommodated within existing budgets but there are unknown implications on the outcome of the tendering exercise to obtain the best value energy prices.

Human Resources (HR)

38. The options can be incorporated within the existing level of HR resources.

Equalities

39. No implications.

Legal

40. There is no statutory requirement for local authorities to provide public lighting but Highway Authorities are empowered by the Highways Act 1980 to provide a service to the correct applicable standard at the time of installation. The Highway Authority under their powers has a duty of care to road users,

however this power does not imply any duty to ensure the lighting is lit. Instead this duty is to ensure systems are in place to maintain the lighting equipment in a safe condition, including the detection of dangerous equipment.

41. Any reduction in signage and illumination may have an impact on the legality of some systems. Where this is assessed to be the case, using the relevant regulations then exceptions would be sought.

Crime and Disorder

42. No implications.

Information Technology (IT)

43. No implications.

Property

44. No implications.

Other

45. No implications.

Risk Management

46. In compliance with the Council's risk management strategy, the main risks that have been identified in this report are risks arising from hazards to assets and people (Physical), those which could lead to financial loss (Financial), and non-compliance with legislation (Legal & Regulatory).
47. Should the recommendations not be approved then the ability to introduce efficiencies and savings will be restricted placing greater pressure on existing budgets. However, measured in terms of impact and likelihood, the risk score all risks have been assessed at less than 16. This means that at this point the risks need only to be monitored as they do not provide a real threat to the achievement of the objectives of this report.

Recommendations

48. The Executive Member is recommended to approve the introduction of the options for efficiencies and improvements in the street lighting and illuminated signs service.

Reason: To enable service efficiencies to be introduced in line with continuous service improvements.

Contact Details

Author:

Chief Officer Responsible for the report:

Paul Thackray
Head of Highway Infrastructure
Tel 01904 551574

Damon Copperthwaite
Acting Assistant Director
(City Development & Transport)

Ricky Watson
Project Engineer – Street Lighting
Tel 01904 551401

Report Approved **Date** 4 October 2006

Specialist Implications Officer(s)

There are no specialist implications.

Wards Affected

All



For further information please contact the author of the report

Background Papers:

Executive Report 25 July 2006 – Final Report of the Sustainable Street Lighting Scrutiny Sub-Committee

Annexes

None