

AGENDA ITEM 3

RHONDDA CYNON TAF COUNTY BOROUGH COUNCIL

CABINET

10th NOVEMBER 2015

SERVICE CHANGE PROPOSALS:- OPTIONS FOR REDUCING STREETLIGHTING ENERGY COSTS BY CONVERTING EXISTING LIGHTING UNITS TO LIGHT EMITTING DIODE (LED) UNITS.

REPORT OF GROUP DIRECTOR, CORPORATE AND FRONTLINE SERVICES IN DISCUSSIONS WITH THE RELEVANT PORTFOLIO HOLDER, CLLR A MORGAN, LEADER OF THE COUNCIL.

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1. PURPOSE OF THE REPORT

- 1.1 The purpose of the report is to provide service change options for reducing revenue costs for street lighting by converting existing lighting units to more efficient light emitting diode (LED) energy saving units.

2. RECOMMENDATIONS

It is recommended that the Cabinet:

- 2.1 Considers the options set out in the report and agrees the implementation of the package of energy saving measures identified in option A, delivering annual savings of £109k (full year).
- 2.2 In light of the ongoing potential to reduce energy and carbon costs by investing in further packages of LED replacement lighting, Cabinet instructs that a further report be brought forward during 2015/16 setting out options for potentially further investment during 2016/17.

3 REASONS FOR RECOMMENDATIONS

- 3.1 The Council operates a system of street lighting across the county borough comprised of 28,600 street lights. These installations

require regular maintenance, consume energy and attract carbon taxation.

- 3.2 LED lighting offers benefits over conventional lighting by delivering reduced maintenance costs due to the extra longevity of the units. LED units also consume less energy and therefore attract lower carbon taxation costs.
- 3.3 The cost of LED lighting units has fallen sharply in recent years; it is therefore now particularly cost effective to replace existing traditional lighting units with LED units. This builds on previous and ongoing packages of investment in new street lighting technology.

4. BACKGROUND

- 4.1 Cabinet (27/8/15) agreed to invest £642kin LED technology to deliver estimated savings of £170k per annum in energy, maintenance and carbon tax costs.
- 4.2 This investment is currently being implemented and will yield in-year savings.
- 4.3 Cabinet instructed a further report be presented in 2015/16 setting out options for further investment in 2016/17.
- 4.4 There is now an opportunity for further in-year investment as identified in the options contained in the previous report.
- 4.5 At the August Cabinet, Options 2 and 4 were not originally supported and are set out below.

		Investment Cost £'000	Energy and Maintenance Savings £'000	Payback Period Years
2	Replace 692 non residential and 808 residential 135 watt and 150 watt luminaires with LEDs Replace existing equipment in 1,500 lighting units with LEDs	683	117	5.8
4	Replace 2,225 sensitive area lights Replace 2,225 lights in non residential and residential sensitive areas including dimmed lights	855	163	5.3

- 4.6 These options have been revised to include latest cost estimates and to net out the elements of option 4 that were delivered under option 3. A new option has been identified as option A;

		Investment Cost £'000	Energy and Maintenance Savings £'000	Payback Period Years
A	Replace 1,597 lighting units, 68 non residential and 1,529 residential (on main traffic routes) luminaires with LEDs	401	109	3.68

- 4.7 Details of the cost reduction calculations are included at Appendix 1.

5 EQUALITY AND DIVERSITY IMPLICATIONS

- 5.1 An Equality Impact Assessment (EqIA) screening form has been prepared for the purpose of this report. It has been found that a full report is not required at this time. The screening form can be accessed by contacting the author of the report or the Cabinet Business officer.

6 CONSULTATION

- 6.1 Consultation was undertaken prior to implementing service change proposals related to part-night lighting. Whilst some issues were raised through the process, the overall feed back was broadly positive. These proposals do not involve turning off or part night lighting and therefore do not constitute a reduction or detriment to existing service provision. The reduction in costs arise from reduced maintenance, energy and carbon costs and represent a more effective and efficient use of public resources without service reduction. Consequently further consultation is not considered appropriate.

7 FINANCIAL IMPLICATION(S)

- 7.1 The total cost of option A is £401k which can be funded through available resources, utilising existing earmarked funding and savings in current operational budgets.

8 LEGAL IMPLICATIONS OR LEGISLATION CONSIDERED

- 8.1 There is no statutory basis to the provision of street lighting, albeit once provided the council has a duty to maintain the infrastructure in a safe condition
- 8.2 The following legislation governs the Councils provision of street lighting:
- The Highways Act empowers local authorities to light roads but does not place a duty to do so;
 - The Council has a duty of care to road users and has an obligation to light obstructions on the highway;
 - The Council has a statutory duty under the Highways Act to ensure the safety of the highway and this includes any lighting equipment placed on the highway;
 - The Electricity at Work Regulations impose a duty on owners and operators of electrical equipment to ensure its safety.

9 LINKS TO THE COUNCILS CORPORATE PLAN / OTHER CORPORATE PRIORITIES/ SIP.

- 9.1 This proposal reinforces the priorities set out in the Rhondda Cynon Taf Single Integrated Plan by maintaining/improving the highways infrastructure.

10 CONCLUSION

- 10.1 Following a review of savings opportunities and risks associated with implementation, the preferred option recommended to Cabinet for the street lighting replacement LEDs are as follows:

Investment package combining options 2 & 4		Estimated Cost £'000	Estimated Saving £'000	Payback Period Years
A	Replace 1,597 lighting units, 68 non residential and 1,529 residential (on main traffic routes) luminaires with LEDs	401	109	3.68

10.2 The preferred option is recommended on the basis that:

- Offer the most cost effective investment package of options available providing the shortest payback time;
- The package can be implemented during 2015/16, yielding full year savings of £109k per year in 2016/17.
- This package represents a 9% reduction in the energy budget from 2015/16 to 2016/17 and would reduce the amount of future maintenance required.
- The majority of the residential lights are on traffic routes, the reduction in maintenance would lead to less traffic management requirements and greater safety for the operatives. The quality of the light will also aid visibility in high risk areas.
- This package is affordable within available funding parameters.
- The option would reduce annual carbon emissions by 371.8 Tonnes, saving £6,692 in carbon tax at the current rate of £18 per Tonne.

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Appendix 1 – Option A

Category			LED	Savings Per Unit £		Total Savings £			Investment Cost £	
			No of units	Energy	Carbon	Energy	Carbon	Total	Cell Per Unit	Total Cost
Non Residential	Sensitive	Dimmed	5	46.34	3.87	232	19	251	250.00	1,250
		Non Dimmed	5	46.96	3.81	235	19	254	250.00	1,250
	Non Sensitive	Dimmed	49	49.28	4.06	2,415	199	2,614	250.00	12,250
		Non Dimmed	9	44.81	3.69	403	33	436	250.00	2,250
Total Non Residential			68			3,285	271	3,555		17,000
Residential	Sensitive	Dimmed	131	42.59	3.50	5,579	459	6,038	250.00	32,750
		Non Dimmed	276	67.89	5.59	18,739	1,544	20,283	251.59	69,440
	Non Sensitive	Dimmed	444	35.19	2.90	15,624	1,286	16,910	250.00	111,000
		Non Dimmed	678	56.06	4.62	38,010	3,132	41,142	251.46	170,490
Total Residential			1,529			77,952	6,421	84,373		383,680
Grand Total			1,597			81,236	6,692	87,928		400,680
Maintenance Savings								18,989		
Cost avoidance - Energy inflation estimate at 2%								1,779		
Total saving including cost avoidance								108,696		

Notes

1. The savings and investment costs per unit are weighted averages for all lamp types/wattages
2. Carbon reduction budget held in Corporately in Misc Finance
3. Maintenance savings are based on units being replaced as part of this proposal with a 12 year life
4. Cost avoidance figures are based on and annualised estimated increase in energy costs for the next 10 years
5. The residential lights are all on main traffic routes