



PUBLIC LIGHTING

CUTTING CONSUMPTION - MAINTAINING SERVICE

presented by

Richard Workman

Director of Technical Services

Lle Gwell...
Yr Amgylchedd

www.sirgar.gov.uk

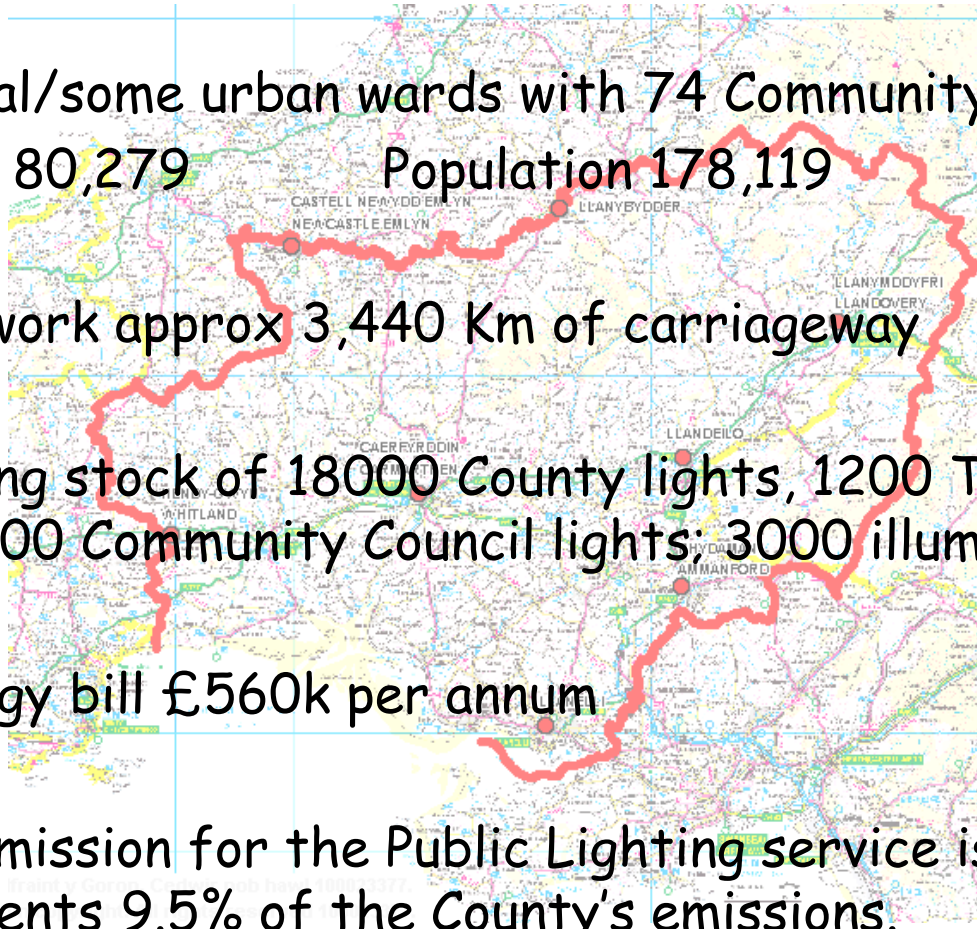


A Better Place...
Environment

www.carmarthenshire.gov.uk

Carmarthenshire profile

- Primarily rural/some urban wards with 74 Community/Town Councils
- Households - 80,279 Population 178,119
- Highway network approx 3,440 Km of carriageway
- Street lighting stock of 18000 County lights, 1200 Trunk Road lights and 5000 Community Council lights; 3000 illuminated signs
- Current energy bill £560k per annum
- Annual CO₂ emission for the Public Lighting service is 3114 tonnes which represents 9.5% of the County's emissions.



Drivers for Change

- Financial savings due to increasing energy rates and the general volatility and uncertainty of the energy markets.
- Commitment to reduce carbon footprint where possible

Process

- Task and Finish sub-group set up to look at possibility of reducing the street lighting energy consumption and carbon footprint
- Group comprised six County Council Members and seven officers, and Dyfed Powys Police Authority co-opted member

Objectives of Task and Finish Group

- Identify energy costs of current public lighting and future estimated costs
- Carbon footprint of current public lighting network
- Identify any capital investment costs associated with altering lighting control mechanisms

Objectives of Task and Finish Group

- Advise on role and involvement of town and community councils
- Consider associated risks, impact on community and road safety, and related legal aspects
- Identify potential energy, carbon and financial efficiencies
- To consider most appropriate scheme for Carmarthenshire

Key stakeholder involvement

- Key stakeholders and partners vital for success of whole process
- Key groups consulted included:-
 - CCC Community Safety
 - Dyfed Powys Police Authority
 - CCC Road Safety and Traffic Management
 - CCC Members
 - CCC Planning, Housing & Legal Departments
 - General public via web based survey/opinion poll
 - Other local authorities

Options Considered

- Several options available to the Council and these were common to the approach taken by other local authorities:-
 - Part-night lighting
 - Switch-off/decommissioning
 - Dimming
 - New technologies (LED, solar, wind powered)

New Technology

- There are a number of alternative technologies available e.g. LED, solar, wind power
- Such technology whilst being relatively green in terms of energy usage, is only suitable for certain applications at present
- Examples include solar powered/wind powered variable message signs, solar powered bollards and LED for certain street lighting applications.

Typical solar installation in rural area



Lle Gwell...
Yr Amgylchedd
www.sirgar.gov.uk



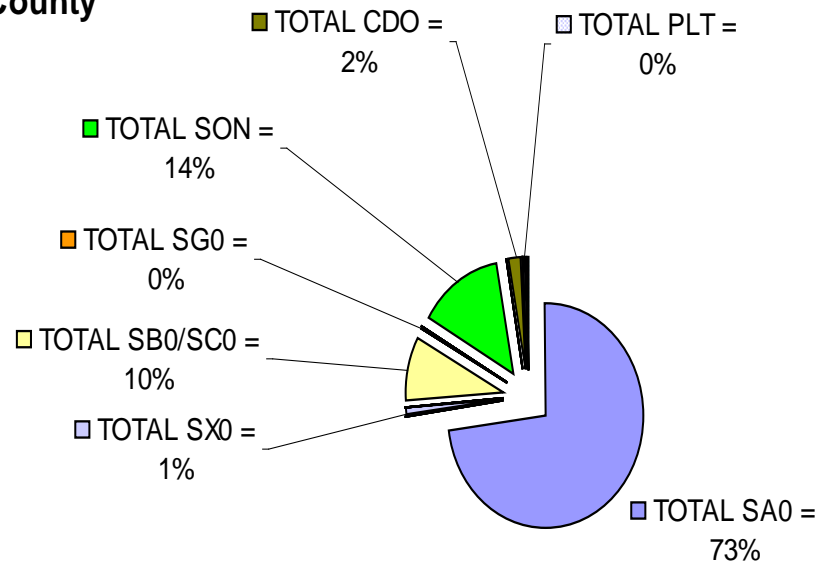
A Better Place...
Environment
www.carmarthenshire.gov.uk

Option Viability

- Dependant on profile of lighting stock within Carmarthenshire
- Stock profile within each local authority will be different
- 75% of Carmarthenshire stock is relatively low energy consumption Sox-E type lamps
- Higher energy SON type lanterns needed for town centres and conflict areas

Stock Profile Chart

Type of Lantern In County



Lle Gwell...
Yr Amgylchedd

www.sirgar.gov.uk



A Better Place...
Environment

www.carmarthenshire.gov.uk

Potential Savings

In reality, we have found that:

- Potential savings are a direct function of the Authority's stock profile.
- Having a relatively low energy consumption profile to begin with might place the authority as a disadvantage as the large savings realised by others are not available.
- The only way to achieve greater savings in this scenario is by taking a fairly radical approach and simply decommission a large proportion of your stock.

Lle Gwell...
Yr Amgylchedd

www.sirgar.gov.uk



A Better Place...
Environment

www.carmarthenshire.gov.uk

View from the outside

- Not all street lights within the County are owned by the Authority.
 - 5% of the lights are trunk road assets
 - 20% are owned by town/community councils.
- The public in the main don't necessarily realise this and assume the County Council is the responsible authority for all lights.
- Clear communication of relevant information is therefore essential.

Consistent Approach

- We have met with most of the 74 town and community council to advise them of the options for their stock.
- Some have already decided to implement a part night system.
- We are also in communication with the trunk road agencies in an attempt to establish common practice.

Proposals

- Best option - part night scheme with option of decommissioning
- Proposal involves retro-fitting part night cells to proportion of lighting stock
- Core areas identified for exclusion:
 - Town Centres
 - CCTV areas
 - Conflict areas
 - Locations with traffic calming features
 - Locations with pedestrian crossing facilities

Principles of Implementation

- Part night scheme to be implemented outside defined core areas
- Scheme will be implemented in:
 - residential/urban areas (1 in 3 lamps part night)
 - all other areas on highway network (2 in 3 lamps part night)
 - lights decommissioned on some local distributor and link roads

Conflicts and Practical Issues

- Layouts are designed to current national and European standards and codes of practice.
- In implementing energy saving measures, there is a direct conflict with the standards set out in the design manuals and codes of practice.
- Differing policies and practices adopted within and across authority boundaries by various asset owners.
- There are other types of conflict that need to be balanced, often within authorities. A typical example of this is shown on the next slide.

Illuminated Roadside Gateway Feature



Lle Gwell...
Yr Amgylchedd
www.sirgar.gov.uk



A Better Place...
Environment
www.carmarthenshire.gov.uk

Legal Aspect

- The provision of a public lighting service is discretionary.
- We will not really be absolutely certain of the legal position until a test case judgment is made.
- Strongest indicator to date is the Buckinghamshire case where the lack of effective lighting was cited as a contributory factor to a fatal accident in a recent coroner's case.
- The Coroner strongly urged Buckinghamshire County Council to reconsider its policy on reduced lighting.

Where are we now?

- Task and Finish Group review
- Approximately 33% of Council stock will be subjected to part night scheme
- Savings of £50k per annum identified
- Capital investment required £90-£140k with payback period between 1.8 and 2 years

Lle Gwell...
Yr Amgylchedd

www.sirgar.gov.uk



A Better Place...
Environment

www.carmarthenshire.gov.uk

Key Learning Points

- Member engagement and “buy in” essential
- Listening and learning from other authorities beneficial
- Consultation with stakeholders paramount
- Clear communication of information is key
- Agenda needs to be realistic/deliverable
- One size does not fit all - need to do what is right for your authority

The Future

- Implement part night and limited decommissioning in a phased approach from October onwards
- Continue to review new technology and appraise how this can be used
- Evaluate the benefits, savings and any problems as a result of the part night scheme to inform future decisions

Lle Gwell...
Yr Amgylchedd

www.sirgar.gov.uk



A Better Place...
Environment

www.carmarthenshire.gov.uk

Finally Our Aim

"To brighten the
future by making it
darker!"



Thank you for listening

www.sirgar.gov.uk

www.carmarthenshire.gov.uk



(01267) 234567



Lle Gwell...
Yr Amgylchedd
www.sirgar.gov.uk



A Better Place...
Environment
www.carmarthenshire.gov.uk