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State of the Market Survey 2014

Street Lighting

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Street Lighting

State of the Market 2014

Introduction

APSE conducted an on-line survey during early Summer 2014. A series of questions were asked covering a range of issues of interest to those officers and councillors responsible for highways issues in general and street lighting specifically. 46 responses were received from local authorities throughout the UK. This report identifies the key findings of the survey.

This is the fifth year APSE has undertaken a state of the market survey for highways, street lighting and winter maintenance so a comparison over time is available and this comparison will be highlighted where appropriate. It must be noted that the councils and individuals responding may not be the same from year to year. In previous years there has been a combined survey for highways, street lighting and winter maintenance whereas this year they were sent out separately and so will be reported separately.

48 responses were received to the highways survey and a further 49 to the winter maintenance survey making a total of 143 responses to all 3 surveys.

The surveys are an attempt to understand perceptions of the market amongst people directly involved in delivering services rather than a survey of the same individuals from year to year.

Context

The provision of a street lighting service remains one of the most basic council services. It provides light for vehicular traffic and pedestrian movement, helps to reduce the incidence and fear of crime as well as providing aesthetic quality to many public places. The soaring cost of electricity, cuts to local government budgets and developments in lighting equipment and systems have all had an impact upon the way this service has been delivered in recent years. The approach taken will clearly be dependent upon access to funds and the levels of historic investment in the stock.

We should expect research and development to continue in this sector. A report this year by MarketsandMarkets expects the smart lighting market to be worth $56billion dollars by 2020 claiming that the market for lighting control systems is increasing dramatically due to government and stakeholders focusing on reducing energy use. This will include domestic and commercial lighting but there is certainly demand for further technical innovation in the market.

Nevertheless, using less energy remains one of the most important issues for those managing street lighting services. As the cost of electricity has risen and budgetary restrictions are tightened so the pressure to reduce costs has grown. Targets to reduce carbon emissions are also on the minds of managers. Trimming, dimming and switch off have been the implemented by a number of councils but there is no firm proof that these approaches have resulted in the kind of outcomes expected. Some councils are investing in central management systems and switching gear enabling much more specific management of the network as others replace large numbers of columns and lamps but these are expensive options and are the exception rather than the rule.

Addressing the fear of crime is one argument made for the provision of a street lighting service, alongside the need to provide light for drivers, and this is likely to remain. Publicity over the number of police officers on the beat and the growing number of elderly people as a proportion of the population mean that pressure for an effective street lighting service will remain.

Note

The tables below show figures for 4 or 5 years but the questions were asked of specifically of street lighting services only in the last 2 year's survey whereas in previous years questions had been asked of the highways, street lighting and winter maintenance services combined. Therefore the tabular data is a comparison only for the last 2 years. It does however provide a general trend and contextual information for the street lighting service.

Results from the survey

1) How has the budget for the street lighting service changed over the past 12 months?

Of the 46 who responded to this question only 8 said that the budget had increased, 17 had remained the same whilst the budget had decreased in 21 councils.

Where an increase was experienced, a number of respondees noted that these increases were made to cover the contractual arrangements in place as part of a PFI and so were made to match the cost delivery profile of the contract. Others mentioned that they had specific increases for investment in LED projects with others noting that the increase was an inflation only increase.

Those who experienced a decrease noted that reductions were between 2.7% and 50%. In the case of the latter, half of that saving is estimated to come from the increased use of LED fittings. Other comments noted that budgets had been cut across all street lighting activities from night scouting to bulk lamp change and clean.

2) How do you expect the budget for the street lighting service to change when allocated for 2015-16?

Answer Options	2014 Number (%)	2012 Number (%)	2011 Number (%)	2010 Number (%)	2009 Number (%)	% change 2009-2014
Increase	4 (8.7%)	13 (31.7%)	4 (8.3%)	4 (4.9%)	12 (16.7%)	-8
Stay the same	17 (37%)	17 (41.5%)	20 (41.6%)	37 (45.7%)	41 (56.9%)	-19.9
Decrease	25 (54.3%)	11 (26.8%)	24 (50%)	40 (49.4%)	19 (26.4%)	+27.9
Total	46	41	48	81	72	

A greater number and proportion of councils expect the budget to decrease when allocated in 2015-16 than at any point in the previous years of this survey. This shows a significant increase on the previous year and equates to over 54% of all responses received. The number of respondees expecting an increase in funding dropped from 32% in the previous survey to just 9%. There can be no surprise in these expectations given the state of public sector finances. The general trend is that fewer officers expect increases in funding, fewer expect budgets to remain about the same and more expect them to decrease. One response identified the context being a requirement to save £50million across the authority. Another referred to even bigger cuts expected in 2016-17, another noted a proposal for a 15% cut over 3 years and one other declared that they had already experienced a 60% budget cut in 3 years..

These perceptions do not look hopeful for lighting services although the service does not appear to have done any worse than other services in terms of budget allocations.

3) **Some councils have had historic problems maintaining their assets due to restricted budgets. To what extent will your 2014/15 budget for street lighting meet the need to maintain your assets and/or provide replacements where necessary?**

Answer Options	2012 Number (%)	2014 Number (%)
Budget to cover 100% of maintenance/investment	12 (29.3%)	13 (28.9%)
Budget to cover 75% -100% of maintenance/investment	8 (19.5%)	14 (31.1%)
Budget to cover 50% - 75% of maintenance/investment	9(22%)	7 (15.6%)
Budget to cover 25% - 50% of maintenance/investment	6 (14.6%)	6 (13.3%)
Budget to cover 0% - 25% of maintenance/investment	6 (14.6%)	5 (11.1%)
Total	41	45

Those councils were a PFI is in operation will of course have to allocate the budget to meet the agreed fees for the contract which means this question is not especially relevant in those circumstances and a number of those responding that the budget will meet 100% of needs are PFI contracts. Approximately 25% of those responding think they will only have enough funding to cover up to 50% of their maintenance and investment needs.

One comment notes that 'We are going to have to stage the work to pace the budget. Another bad winter could undo all the years planning' whilst another noted that 'Routine maintenance will generally be OK, but replacement will not keep up with demand'.

Comments also refer to cuts to one of either revenue or capital budgets inferring that the impact of cutting one of these rather than the other is preferable. Depending on accounting practices in different authorities the point remains that both maintenance and investment are vital and without either it is very likely there will be even greater demands for funding in future or services will be cut.

4) How are your services currently delivered?

Answer Options	2014 Number (%)	2012 Number (%)	2011 Number (%)	2010 Number (%)	2009 Number (%)	Change 2009-14
In-house - combined service	21 (45.7%)	14 (34.1%)	34 (82.9%)	35 (72.9%)	26 (61.9%)	-16.2%
In–house – client /contractor split	10 (21.7%)	10 (24.4%)	3 (7.3%)	8 (16.7%)	11 (26.2%)	-4.5%
Externally provided	12 (26.1%)	15 (36.6%)	3 (7.3%)	4 (8.3%)	4 (9.5%)	+16.6%
Arms length organisation	0 (0%)	1 (2.4%)	1 (2.4%)	0	0	0
Joint venture company	3 (6.5%)	1 (2.4%)	0 (0%)	1 (2.1%)	1 (2.4%)	+6.5%
Total	46	41	41	48	42	

The majority of responses were received from councils where the service is delivered in house with about two thirds being combined services. As a % of responses overall, this sample shows a move towards delivery by external providers/JVCs with the majority of these contracts commencing over the last 12 months. Some are spilt with maintenance, whilst electrical connections, specialist structural testing and installations provided externally.

5) Do you expect the service to remain in-house over the next 12 months?

Of the 31 who responded to this question, only 1 thought there may be a chance that the council will consider outsourcing the service in the near future.

6) What has happened to your training budget over the past 12 months?

32 of 45 councils have seen their training budgets remain the same over the past 12 months with none being increased. The remaining 13 councils, or about 30% of all who responded, have seen training budgets decrease over the period.

One comment noted that there has been a 50% reduction in the training budget whilst another noted that the training budget is very low so they try to use job shadowing and on line learning to supplement it.

Training budgets are often one of the first resources to be reduced in times of austerity and it appears that many local authorities have been through this exercise already. It may be surprising that 13 councils have not had training budgets cut but they most likely fall into the category of having had them cut already.

7) Are you having trouble recruiting or retaining operatives or technical/managerial staff? (over the past 12 months)

Answer Options	2014 Number (%)	2012 Number (%)	2011 Number (%)	2010 Number (%)	2009 Number (%)
Trouble recruiting operatives	4 (8.7%)	2 (5%)	11(10.2%)	21(11.1%)	23(13.7%)
Trouble recruiting technical/managerial staff	2 (4.3%)	3 (7.5%)	7 (6.5%)	33 (17.5%)	33 (19.6%)
Trouble retaining operatives	3 (6.5%)	0	7 (6.5%)	12 (6.3%)	7 (4.2%)
Trouble retaining technical/managerial staff	1 (2.2%)	0	4 (3.7%)	10 (5.3%)	13 (7.7%)
Trouble recruiting & retaining operatives	2 (4.3%)	2 (5%)	0 (0%)	12 (6.3%)	8 (4.8%)
Trouble recruiting & retaining tech/managerial staff	2 (4.3%)	1 (2.5%)	2 (1.9%)	13 (6.9%)	22 (13.1%)
No or Not taken on any staff	32 (69.6%)	32 (80%)	77 (71.3%)	88 (46.6%)	62 (36.9%)
Total	46	40	108 *	189*	168*

*Including highways and winter maintenance staff.

Previous year's figures for this question (as noted in the above table) include highways and winter maintenance responses as well as street lighting.

15 councils are not taking on any staff and these are included with the 17 who have responded that they are not experiencing recruitment or retention problems. Recruitment freezes remain a significant issue and has been the case for a few years and will presumably continue for the foreseeable future. Clearly geography plays a role here as some areas have lower unemployment whilst jobs are much harder to find in other areas. The trend is for less local authorities to be taking on staff and for less people leaving their current employment.

8) Do you feel staff absence levels are acceptable?

Answer Options	2014 Number (%)	2012 Number (%)	2011 Number (%)	% change 2011-14
Yes	34 (75.6%)	30 (73.2%)	38 (67.9%)	+7.7%
No	11 (24.4%)	11 (26.8%)	18 (32.1%)	-7.7%
Total	45	41	56*	

*Including highways and winter maintenance staff.

Previous year's figures for this question (as noted in the above table) include highways and winter maintenance responses as well as street lighting.

Of all responses 76% felt that absence levels were acceptable which is a steadily increasing figure and it is to be hoped that this trend continues.

The issue of sickness amongst small numbers of staff and its impact remains a problem for those with small teams whilst one respondee noted that an ageing staff was a factor. Another response noted that there were more stress related issues than previously.

9) Do you run an apprenticeship scheme?

Apprenticeships schemes are only offered by 18, or 39.1%, of the 46 councils who responded. Last year's figure was 35%, 45% with 33% in the previous two years.

The figures appear to show that there are a group of local authorities who understand the value of their apprenticeship schemes and view them as a priority and as a result, relatively safe from budget cuts. In this survey and in general, local authorities with operational apprenticeship schemes remain in the minority

10) What is the average age of your operational staff?

The average age is 46 years (from 34 responses) which is the same as last year with the range being between 37 and 57. 9 authorities had an average age for operational staff of 50 or over. A number of factors impact on the average age of staff such as the ability for councils to train and recruit staff, the state of the economy, how attractive councils are seen as employers and whether older staff are seen as a benefit or a drag on the workforce. Overall the average age of the population is increasing so this may be reflected in the age of the workforce.

However this issue cannot be ignored and years of experience is often lost when a single older worker takes a redundancy package. When funds are found to replace such staff it is most commonly with people who are new or relatively new to the sector and so without any experience.

11) Do you currently sell your services to organisations external to the council?

Answer Options	2014 Number (%)	2012 Number (%)	2011 Number (%)	2010 Number (%)	2009 Number (%)	% change 2009-14
No & not considering it for the near future	10 (22.2%)	18 (45%)	16 (40)	17 (31.5%)	13 (29.5%)	+15.5%
No but considering it in the near future	3 (6.7%)	5 (12.5%)	2 (5%)	3 (5.6)	4 (9.1%)	+3.4%
No but likely to start in the near future	3 (6.7%)	0	1 (2.5%)	0	0	0%
Yes and expecting to continue	28 (62.2%)	17 (42.5%)	20 (50%)	33 (61.1%)	26 (59.1%)	-16.6%
Yes but not expecting to continue long term	1(2.2%)	0	1 (2.5%)	1 (1.9%)	1 (2.3%)	-2.3%
Total	45	40	40	54	44	

The answers from responses to this question show that more local authorities are trading externally. The figure for those who do not trade and are not considering has reduced from 45% to 22%. They presumably have taken a decision to concentrate on their own local service users and ensure the service provided is top quality. A small number are considering it as an option whilst a small number of others are likely to start in the near future. This is line with current thinking on generating income from all sources where capacity allows it. Examples given include occasional installation work and design work for developers, consulting on good practice as well as maintenance of equipment that was previously council equipment and has been taken over by housing associations

12) Where do you see growth areas for the service over the next 12 months?

Clearly there will be differing opinions in relation to this question and whilst a number of responses noted that there opportunities for growth others suggested there would be none. Areas of growth that were noted include the following

- CMS; low energy / control systems - expanding to establishments other than highways who have exterior lighting; intelligent lighting
- Efficiency projects; Energy efficiency and reduction; energy saving strategies
- Capital investment for energy savings such as LEDs; installation of LED lanterns to drive energy costs down; LED conversions; LED replacements; external funding to replace lanterns for carbon and energy savings
- Refurbishment / replacement of luminaires; replacing existing luminaires with energy efficient alternatives
- Design / consultancy services; development / housing activity; external clients, private clients and other local authorities; selling the service further
- Changes in policies re. dimming, switching off lights
- Carbon reduction
- Invest to save
- Structural testing

- Sustainability

13) Where do you see areas where work may decrease for the service over the next 12 months?

Again there was a mixture of responses to this question with some people claiming there would be no reduction in work whilst others thought all areas of work would experience cuts. The items noted will reflect circumstances in each locality. Equally there will be areas of reduced work in some councils which will be areas of increased work in others. However this does give an idea of areas where the level of work is likely to change.

Some specific responses included

- Additional housing developments
- CMS
- Discharge lamps
- Faults and repairs, Maintenance especially due to the changes to LEDs
- General planned maintenance and column replacement; planned lamp replacement programmes
- Installation and associated new design works; installation of lighting columns and sign posts
- Investment in existing stock
- Monitoring and inspections
- More of the day to day management may go to the contractor when the contract is re-procured
- Reduction in budgets in other departments may impact on lighting schemes
- Reduction in SOX lighting
- Externally lit signage; replacement of illuminated street furniture
- Service level agreements

14) Has your council undertaken any of the energy saving initiatives? (If so please provide details such as 20% dimming or switch off for 5% of lighting stock between 2am and 5am)

Answer Options	2014 Number (%)	2012 Number (%)
Lamp switch off	9 (20%)	6 (23%)
Lamp dimming	32 (71.1%)	21 (81%)
Reduced lighting hours	16 (35.5%)	17 (65%)
Total	45	26

Of the 45 respondees, 32 have dimmed some of their lights, 16 have reduced the hours they light and 9 of them have switched off some lights. 8 local authorities have not taken any of these measures.

Some of the actions taken are as follows

- 30% dimming between10pm -5am in residential area. Traffic routes 30% between 8pm-midnight and 50% between midnight-5am
- Approximately 1000 units dim by 40% from midnight until 5am
- Complete inventory replacement to LED units
- Dimming down to 50% lighting output midnight to 5am approximately 6000 units. Switching off from midnight to 5am approximately 1800 units.
- Installation of LED lanterns reducing energy by approximately 73% per unit fitted
- Permanently removing 10% of lighting stock. Dimming remaining units by 40% off peak
- Reduced wattage of lamps and dimming between midnight and 6:00am on traffic routes
- Reduced areas dimmed by 50% power and traffic routes by 25% from 2300-0530 every day. There are a few exceptions (mainly town centres) where dimming starts at 0000, 0100, 0200 or not at all but these are few
- Trunk roads have been left as is. CCTV areas have remained untouched. Some roads have had dimming ballasts fitted. The majority have had part night cells/switches fitted.
- Use of white light to lower lighting levels.
- Many of these are trial or pilot projects.

15) What is your council's approach to lamp replacement within your street lights (burn to extinction, planned replacement or other)?

With 17 councils responding that they carry out planned replacements and 24following a policy of burn to extinction, both are popular. A number of councils noted that they have changed or are about to change their policy in this area. One noted a mixed approach - planned for CDO and burn to extinction for SOX.

16) Does your council scout for failures?

There were 45 responses to this question and 13 councils stated that they did not scout for failures.

Comments included the fact that this activity has been cut as a result of budget restrictions whilst others rely on calls from residents and staff reports. There are a number of approaches such as only part of the stock being scouted such as principal routes or weekly scouting between September and April whilst others cover 100% of the stock every month. Two, three and monthly cycles were noted as was fortnightly in winter/monthly in summer. Another note covered scouting of illuminated signs and bollards once a quarter. Scouting is being reduced as some introduce CMS whilst another goes out with the contractor to check a sample of inspected lights.

Overall scouting is undertaken far less than a few years ago enabled by developments in technology and limited by budget cuts.

17) How does your council track energy usage (by half hourly metering, estimated annual consumption or other)?

14 councils (of 45 respondees) use estimated annual consumption whilst 27 use half hourly metering. A further 2 use a mix of both with one each using hourly and monthly actual figures.

18) What is your council's target time for restoring street lights to working order (in days)?

The most popular target for restoring lights is 5 days a target adopted by 22 councils. A further 8 have a target of 7 days. The shortest target time was a single day and the longest was 28 days. The average for all responses is 5.8 days, up from 4.9 days last year.

Clearly a range of circumstances will impact upon target times which are set such as the area and the number of lights to be covered by the service, the urban/rural split or the split between different types of roads. Target times are distinct from actual restoration times. This refers to the target time for standard faults.

19) Which energy supplier do you use?

A variety of power providers are used by the 41 respondees. These are as follows :-

Scottish Power – 1 (10)
NPower –9 (9)
EDF – 18 (6)
Scottish and Southern Energy (Scottish Hydro and Southern) – 1 (2)
Haven Power – 2 (2)
Southern Electric – 4 (1)
E.ON – 3 (1)
West Mercia Energy 1
NEDL 1

The number in brackets refers to the number of respondees using this supplier last year.

20) What is the length of your current energy contract?

Contracts last for a variety of time spans from 12 months to 6 years with 8 out of 30 being for a single year and 8 being for 5 years.

21) When does your current energy contract end?

As expected contracts end at various times and are being negotiated on a continuous basis

There is always further room for collaboration on purchasing and although geographical distance would make this more difficult it is not an insurmountable issue. There are many examples of councils working together and energy should be no different from other commodities. In terms of responses to the survey, 4 are due to end in 2014, 11 in 2015, 6 in 2016, 1 in 2017 and 5 in 2018 and one in 2019. Some are renewed annually.

Conclusions

The survey covers a range of questions and provides a lot of information. The main issues of energy management, reduced budgets and trials of different approaches remain high profile. Different authorities have different outlooks to, for example, trading with external organisations or areas of work which they think will expand or contract in future years. Different local circumstances around the age profile of the staff or the approach to scouting will impact on perceptions of how the service may develop in future.

There is no doubt that innovation is alive and well in local government and there are examples within this survey to justify such a statement. Equally the scale of the lighting market, as note at the start of this report, mean innovation in the sector will continue to increase.

The Association for Public Service Excellence

APSE member authorities have access to a range of membership resources to assist in delivering council services. This includes our regular advisory groups, specifically designed to bring together elected members, directors, managers and heads of service, together with trade union representatives to discuss service specific issues, innovation and new ways of delivering continuous improvement. The advisory groups are an excellent forum for sharing ideas and discussing topical service issues with colleagues from other councils throughout the UK.

Advisory groups are a free service included as part of your authority's membership of APSE and all end with an informal lunch to facilitate networking with peers in other councils. If you do not currently receive details about APSE advisory group meetings and would like to be added to our list of contacts for your service area please email enquiries@apse.org.uk.

Our national advisory groups include:-

- Building cleaning
- Catering
- Housing, building maintenance and construction
- Parks, horticultural and ground maintenance
- Renewables and climate change
- Roads, highways and street lighting
- Service delivery models
- Service improvement and performance management
- Sports and leisure management
- Vehicle maintenance and transport operations
- Waste management, refuse collection and street cleansing