UK ROADS LIAISON GROUP

The Lighting Board is one of four boards of the UK RLG:

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RLG news

● The **Audit Commission** is undertaking a national study to examine how councils can maintain road condition in the face of a tough funding environment with input from the UK Roads Liaison Group (RLG). The study and resulting report will aim to aid councils in making difficult choices on spending priorities. The Audit Commission will consult stakeholders including RLG and then focus research on key areas to discover what works well. A national report is expected in spring 2011 with guidance and tools to help councils implement recommendations. Please direct comments or queries to roads@audit-commission.gov.uk.

● **Audit Scotland** is due to evaluate the extent to which recommendations in its 2004 report Maintaining Scotland's Roads have been implemented. The key objectives are to assess road condition and by how much the maintenance backlog has changed; and to what extent recommendations for improving value for money and reporting of road condition and maintenance backlog information have been implemented.

Connections market leader welcomes competition

The gas and electricity regulator Ofgem launched its 'Competition in Connections' initiative in 2007 to open up the market for supplying connections to electrical power networks, including those for street lighting. EDF Energy – currently the dominant supplier in this market – is welcoming greater competition, writes the company's director of connections Patrick Clarke.

Competition in any industry is healthy and this is no different for the electricity connections market. Competition in Connections is good for EDF Energy, so the company is encouraging others to compete and be players in this market place. This is to ensure customers have a genuine choice in the market, product innovation in the industry is increased, service levels are improved and costs and prices are reduced.

Ofgem has incentivised EDF Energy and all other distribution network operators (DNO) to help develop this more competitive future for their industry. Success for EDF Energy is a future where it is one of many players in a market totally open, without need of regulation.

The work involved in providing new connections can be split into two categories. The first is non contestable work, which can only be undertaken by the host network. The second category is contestable work. This may be carried out by any accredited independent connections provider (ICP). Customers can seek competitive quotations for the works required to make a new connection to an electricity distribution system.

The unmetered connections market is probably one of the easiest sectors for competitors to enter and compete, reflecting the skills required, time scale and size of projects delivered. But in a market place where EDF Energy has the vast majority of market share, it is difficult for customers to compare the company's service levels to others.

A more competitive market with many players will help to improve EDF Energy's service levels, not only in connections but across its entire distribution business. More competition will also provide customers with a fairer, more balanced assessment of the company's performance compared to others. EDF Energy's employees will enjoy a world where they are competing for work rather than the current situation where the company is the only real option for these services.

EDF Energy currently offers a number of different services in the unmetered connections market. These include its traditional offering, which is a full end to end service from enquiry through to completion, plus provision of non contestable work only. This includes support for PFI contractors and new contractual arrangements being developed such as 'rent-a-jointer' and tri-partite agreements between customers, their agents and ICPs. EDF Energy's customers are already benefiting from this range of services.

EDF Energy's director of connections Patrick Clarke

Value of service will improve with more competition

Considering the UK energy market and how customers can switch energy providers as and when

they like, a similar level of flexibility and choice should be afforded to connections customers. For EDF Energy, it is better to know that the company is delivering connections for a new development due to EDF Energy's service, quality and price rather than the mere fact that it is the host DNO.

Another benefit for EDF Energy from greater competition would be less exposure to allegations of monopolistic and anti competitive behaviour. As the largest connections operator across the UK, EDF Energy attracts a proportionate amount of attention from Ofgem and complaints from competitors and new entrants – disproportionate to what is deserved.

We treat these allegations very seriously. Considerable time and effort expended internally in resolving and preventing these matters could be better deployed on more constructive development of our business and service to customers.

Finally, Ofgem's new regulatory framework for 2010-2015 provides very clear incentives (penalties and rewards) for DNOs to pass a competition test by December 2013. The prospect of earning unregulated returns in a competitive market is something to which EDF Energy is very much looking forward to.

The future of the connections market will be very different to the past. We expect to be a leading company in the quest to drive change, resulting in a more competitive and open market.

A UK Lighting Board view of LEDs for road lighting

LEDs have been used successfully in architectural lighting for a number of years. The vibrant colours available, their directional high output, compact size and instant light at the flick of a switch have enabled exciting static and dynamic floodlighting solutions not possible using traditional floodlights. Use of LEDs in more demanding applications, such as road lighting, where specifications need to be met, has been a far more recent innovation.

LED technology has advanced rapidly over the last few years, with high output white LEDs now available, and has become a viable light source. Indeed at the recent Light+Building exhibition in Frankfurt, LED road lighting luminaires were very much in evidence with hardly any traditional luminaires shown. However, while LED luminaires offer a number of important advantages, they also have limitations and are not always the most economic solution.

Development in LED technology continues with luminous output increasing. One LED manufacturer is promising an LED with an output of 160 lm/W will be commercially available this autumn. This compares with circa 116 lm/W for the best white light metal halide sources.

Caution is needed when considering LED outputs as figures are often quoted for 'Cool White' LEDs with colour temperatures of 6000K or greater, or for LEDs driven at very low currents. 'White light' used in road lighting traditionally has a colour temperature of 2800-3000K and a good LED producing this 'warmer' white light (generally found to be more acceptable in practice) would typically have an output about 20% lower. Losses in power supply and optics will further reduce this. It should also be noted that the LEDs with these 'headline' outputs command a premium price. More affordable luminaires are likely to use lower output devices.

LED street lighting: Advantageous but with limitations

Improvements are also being made to the thermal resistance of LED devices, allowing LEDs to be driven at higher currents while still giving good efficacy. The output of LEDs is insufficient for a single LED to form an effective light source for road lighting, so lanterns must consist of arrays. The greater the lighting level required, the more LEDs required in the array, so higher the cost. Consequently, LED lanterns tend to lend themselves more to areas where low lighting classes are specified, such as residential roads in rural areas.

LED optics can be built to focus light precisely onto the road, using the available light very efficiently while minimising unwanted light spill. Also, as LEDs attain full brightness at switch on, they can be controlled with photocells to switch on at lower ambient lighting, offering further savings. Dimming is also straightforward and efficient, so lighting levels can be varied according to demand.

One of the main advantages of LEDs is their extended life, with longevity of more than 50,000 hours often quoted. This offers the obvious attraction of reduced maintenance costs. However, both the life and the high luminous output are dependent on keeping the LED junction temperature cool and both factors will be adversely affected if this is not achieved. Luminaire design is therefore of paramount importance with particular attention to thermal management needed.

LED luminaires are currently relatively expensive and it is difficult to justify LED solutions on cost grounds alone compared with traditional sources. However, as LED technology improves and costs reduce, they will become much more important.

Benchmarking system to reach all authorities

Lighting authorities throughout the UK will have a set of performance indicators (PI) against which to benchmark their lighting services from 2011. A PI system being developed in Scotland will be extended to all UK authorities next year, allowing them to compare and share performance and best practice and learn what other authorities are doing differently.

Dundee City and Perth & Kinross Councils' street lighting partnership manager – and chair of the SCOTS (Society of Chief Officers of Transportation in Scotland) Street Lighting Group – Lindsay McGregor has been leading this work on behalf of the UK Lighting Board.

The SCOTS group has been benchmarking and refining a set of street lighting performance indicators over the last three years. PI information is now being collected for 2009/10 which will allow each Scottish council to compare its performance with similar authorities within five benchmarking family groups.

Lindsay McGregor says: 'The UK Lighting Board is a great forum and platform for collaborative working and it is only logical that the work involved in developing these indictors should be used to set a standard for the whole of the UK. Take up across Scotland has been good and we are keen to encourage authorities in other UK regions to join in.

"There is still some work to do, but organisations will have a fantastic opportunity to compare performance, share best practice, and ultimately improve the quality of lighting services across the UK."