Tim Yeo MP  
Chairman  
Energy and Climate Change Committee  
Committee Office  
House of Commons  
14 Tothill Street  
London  
SW1H 9NB  

28 July 2014  

London Electricity Distribution Network  

Thank you for your letter dated 16 July concerning failures in our electrical network in manhole covers. I want to assure you and your Committee that the safety of the public and our staff is UK Power Networks' top priority. We will continue to take the management of these reported failures very seriously.

We continue to monitor the number of disruptive failures caused through cable pits and link boxes across our three license areas. This type of disruptive event occurs nationally across all electricity distribution companies. We are, therefore, carrying out our own work as well as working as an industry through the Energy Networks Association (ENA) to share best practice and to try and mitigate the risk.

We have 110,085 link boxes and 53,801 cable pits across UK Power Networks and the annual number of disruptive failures is very small at less than 0.05% but nevertheless the consequences through possible injuries to members of the public or our employees could be serious. Below are the specific answers to your questions:

Q1: What investigations has UK Power Networks carried out in terms of determining the cause of pavement explosions?

The number of disruptive failures reported has increased over the last few years. Through forensic examination carried out on failed link boxes through ERA Technology Ltd in Leatherhead, there is clear evidence that the main cause of failure is ingress of water. We believe the extreme wet weather we have had over the last two winters has been a significant factor in the increasing number of failures. The presence of gas makes the impact of such disruptive failures worse and where we see evidence of gas leaks during inspections we report these immediately to the appropriate gas distribution company for action.
We also believe that the increase in reported numbers is due to improved reporting of network faults. Historically we have viewed cable pits and link boxes as part of our underground cable network, and therefore these failures would have been reported as a cable failure in the past. Since 2012 we have put increased focus on the reporting of cable events to ensure we differentiate between cable faults and disruptive events caused through cable pits and link boxes.

Q2: What is the extent to which UK Power Networks has invested in asset maintenance over the last five years to prevent such incidents?

This is a national issue, and through the industry trade association the ENA, have established a national working party to address the matter for the UK. We will, along with other distribution companies, play an equal part in assisting the development of a national strategy and approach to manage this.

We have already put in place a number of improvements to our management systems, increased our capital replacement programmes and we have increased the frequency of inspections carried out to link boxes in the Central London area.

Over the last five years we will have invested over £48 million on UK Power Networks link boxes and cable pits.

With regards to the inspection, maintenance and replacement of the link boxes, over the period 1 April 2010 to 31 March 2015 we will have:
- carried out over 37,000 inspections of link boxes at a cost of £2 million; and
- replaced over 5,000 link boxes at a cost of £38 million.

With regards to cable pits:
- We have carried out 5,000 inspections and associated mitigation of the cable pits assessed as higher risk with either in-fill of sand or the fitting of a new vented cover at a cost of £4.5 million.
- We are in the process of inspecting a further 4,000 medium risk pits during 2014 with the associated mitigations at a cost of £3.6 million.

Q3: What specific actions are being taken as a result of your current plan of action to protect residents from future incidents?

Given how important safety is to UK Power Networks, we are increasing significantly the number of link box replacements. In the London area alone, we have doubled the number of link box replacements compared to historical levels and will continue to increase this until the number of disruptive failures reduces significantly. The increase in replacements is shown in Table 1.

Table 1: Number of Link Box Replacements in London

<table>
<thead>
<tr>
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<th>2010/11</th>
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<tbody>
<tr>
<td></td>
<td>529</td>
<td>584</td>
<td>878</td>
<td>1,122</td>
<td>1,971</td>
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To further manage the expectations of our stakeholders, we have established a new Central London Operational Centre at Shorts Gardens near Covent Garden. The objective of this new centre is to improve response times in Central London to both power outage and safety incidents. This new facility is estimated to cost approximately £4 million per annum.

Looking forward, for the period 2015 to 2023 we have included some £80m of expenditure on link boxes and cable pits inspection, maintenance and replacement. We are also currently in discussion with the Health and Safety Executive to determine whether a further increase is required by as much as approximately another £200m over the eight year period.

The safety of the public and our staff is an absolute priority for us and I hope that this information shows how seriously we treat the management of link boxes and cable pits. Please do not hesitate to contact me at your convenience for any further information you may require.

Yours sincerely

Basil Scarsella
Chief Executive Officer