

**Northern Ireland Electricity Limited**

**RESPONSE TO OFCOM'S CONSULTATION  
ON BUSINESS CONNECTIVITY MARKET  
REVIEW: VERY LOW BANDWIDTH LEASED  
LINES**

July 2015



This paper comprises the response of Northern Ireland Electricity Limited (**NIE**) to the OFCOM's consultation entitled, "Business Connectivity Market Review: Very low bandwidth leased lines", dated 15 May 2015 (the **Consultation**). We welcome the opportunity to respond to Ofcom's Consultation. However, after reviewing the Consultation questions, we believe that they are fairly limiting in scope and do not sufficiently address the issues faced by operators of Critical National Infrastructure (CNI) such as NIE. Therefore, NIE will respond by commenting more generally to the consultation document and raise issues that hopefully form part of Ofcom's decisions in relation to the "Business Connectivity Market Review", in particular to the cost and service provision of leased lines services.

NIE is the owner of the transmission and distribution electricity network in Northern Ireland and operates the distribution electricity network. Telecommunications services are central to its ability to operate the electricity network safely as well as ensuring that security of supply is maintained for all its customers. Although NIE has its own private telecommunications infrastructure, it is still reliant on BT leased lines where it does not have network connectivity and it is too costly to deploy its own infrastructure. NIE currently utilises 94 BT circuits to carry a range of Distribution SCADA, Protection and Security CCTV Services. Of these 94 circuits, 67 are low bandwidth circuits which will be affected by the withdrawal of BT support in March 2020. NIE, as other UK Distribution Network Operators (DNOs), is currently in the process of finding alternative solutions to replace these circuits.

NIE acknowledges BT's need to withdraw its very low bandwidth (VLB) leased lines services. NIE's ability to migrate off these services in the majority of cases is dependent on moving the services (which are critical applications used to ensure safe operation of the electricity network such as SCADA or teleprotection<sup>1</sup>), onto a replacement BT product such as Ethernet Access Direct (EAD). Often, BT circuits are the only viable option to replace the circuit being withdrawn.

Discussions with other DNOs suggest that the rate of delivery of EAD circuits has been very slow, to the point that it is uncertain if they can meet the deadline for withdrawal of the VLB circuits. NIE had a similar experience when getting field surveys completed by BT (for better estimate of excess construction costs to install EAD circuits) as it has taken several months to complete. NIE is aware that there is a consultation in progress that is intending to address the current deterioration of BT rate of delivery of new circuits (under remedies of Quality of Service), however it is yet to be proven how well these measures are enforced or if they go far enough to make any meaningful impact. If BT cannot give its

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<sup>1</sup> SCADA, or Supervisory Control and Data Acquisition, is the term used for the systems which monitor and control distributed assets on an electricity network. It comprises the remote terminal units, communication infrastructure and human interface within central control rooms.

Teleprotection is the use of communications in schemes/systems used by electricity networks to maintain the functioning / operation of the network.

assurance to DNOs that they will guarantee delivery of EAD circuits ahead of VLB circuits being withdrawn, it should not be allowed to withdraw those circuits, due to the role they play in critical national infrastructure.

Another concern of DNOs is in relation to whether BT is required to communicate to Communications Providers (CPs) or their wholesale customers whenever it makes any changes to service delivery and whether it provides a suitable notification period before carrying out any changes.

A specific concern is that electricity utilities are required in the UK to provide 'black start' capability, which is the ability to maintain electricity supply to critical equipment (particularly to maintain teleprotection and SCADA services for remote monitoring and control of the electric network). In the event of a nationwide or regional power failure, batteries or on-site generators are required to provide standby power. NIE and other DNOs currently migrating to EAD are requesting a specific product where the BT NTE<sup>2</sup> is powered locally on site without any other active switching devices in the path of the circuit. Therefore, NIE is not dependent on third-party provision of standby power supply. If BT decided to change the way it provides the service, say by introducing an active network switch (which needs a power supply) in the path of the circuit, this can jeopardise NIE's ability to function during a black start situation.

Due to the impact on NIE of BT withdrawing its VLB leased lines circuits, there is concern about whether / when BT will begin withdrawing its higher-capacity TDM-based circuits (2MB and higher BT MegaStream). NIE currently uses around 21 BT MegaStream circuits to deliver some of its most critical teleprotection schemes. Other than the significant amount of resource required to find alternative solutions to replace these circuits, there is the added challenge that these teleprotection schemes rely on stringent low and non-variable delay/latency requirements that is currently only provided through MegaStream. It is critical that if BT intends to migrate away from this platform and withdraw its MegaStream circuits, that all DNOs are given significant notification ahead of services being withdrawn in order to give sufficient time to migrate to other solutions. As the business plans for DNOs are approved by Ofgem in 8 year price review periods (under the RIIO regime), the notification period may need to extend as much as 10 years in order for the DNOs to build in the cost of the migration into their business plans for the following price review.

NIE, just as many other DNOs, is still reliant on BT leased line infrastructure for the operation of its electricity network. NIE welcomes Ofcom's consultation to review the pricing of BT providing Ethernet leased lines services. The costs charged by BT should be appropriate and reflective of the costs to provide these services. BT should not be abusing its position with significant market power as provider of leased line services.

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<sup>2</sup> 'NTE' stands for network termination equipment.

It is critical that Ofcom recognises the role leased line services play in the running of critical national infrastructure. If the quality of service from BT continues to deteriorate, NIE and other DNOs still using BT leased line services will be forced to migrate their critical teleprotection, SCADA and any other telecommunication services onto private operational telecommunications to ensure control over performance, reliability and costs. This will lead to higher costs for the customers as NIE and other DNOs will need to expand both the coverage and capacity of their private operational telecommunications network.