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05 July 2018

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## **Non - Confidential**

### **Response to proposed guidance on protecting access to emergency organisations when there is a power cut at the customer's premises – guidance on General Condition A3.2(b).**

#### **Introduction**

As the UK's largest rural Fibre-to-the-Premises (FTTP) network operator, Gigaclear welcomes the opportunity to respond to Ofcom's proposed guidance for General Condition (GC) A3.2(b).

We share the Government's ambition to bring full fibre to all areas of the UK. As a rural FTTP operator, we are committed to delivering on the most difficult part of that ambition – bringing full fibre to the UK's rural communities. Given our shared commitment and ambition, we want to best equip both Ofcom and Government to encourage further investment in full fibre connectivity.

We have seen first-hand how consumers are increasingly moving away from copper-based services and embracing the superior bandwidth and service reliability that comes with full fibre broadband. As bandwidth demand continues to grow and the supply of fibre connectivity increases as networks expand, we believe that the sunset of copper-based technology will now progress rapidly; particularly as network operators will want to decommission copper lines to avoid maintaining dual network infrastructure and the unnecessary and excessive maintenance costs that come with this.

Due to these changes, we then agree with Ofcom that voice services will be increasingly provided over internet protocol (VoIP) as opposed to telephony networks.

As VoIP based services do not function in a power cut due to the associated premises equipment requiring mains power (as opposed to being powered through the copper connection from the exchange), Ofcom is right to reflect on how communications providers can meet their obligations under GC A3.2(b) whilst providing VoIP services over a full fibre connection.

The proposed four principles offer a useful starting point from which to discuss building proportionate guidance – that enables efficient, targeted solutions to complying with GC A3.2(b), without disproportionately impacting smaller, or rural operators.

In the below, we set out where we believe these principles can be improved in order to deliver a better targeted solution that avoids placing costs of implementation disproportionately on operators delivering services in areas where these services are most needed. In doing so, we hope to inform Ofcom so that it can deliver effective guidance that avoids the unintended negative consequences that some of the principles currently risk creating.

### **To Whom the Principles Apply**

GC A3.2(b) applies to a ‘regulated provider’, which is defined as a person who ‘provides a Publicly Available Telephone Service (PATS) and/or a Public Electronic Communications Network (PECN) over which a PATS is provided’. The provision of PATS is then the trigger for consideration of GC A3.2(b) – be it when provided directly or indirectly over a PECN.

Whilst this demarcation appears clear cut, providers of PECN services can often be unaware of ‘over the top’ services that meet the PATS definition operating over the network.

As a pertinent example, Gigaclear operates a PECN and at an Internet Service Provider (ISP) level only offers broadband connectivity. Should customers then seek a voice service, Gigaclear advises interested parties to contact alternative providers. Beyond this advice to interested parties, Gigaclear has no sight of whether a customer has purchased a VoIP service or not<sup>1</sup>. Gigaclear is then a ‘PECN over which a PATS *could* be provided’.

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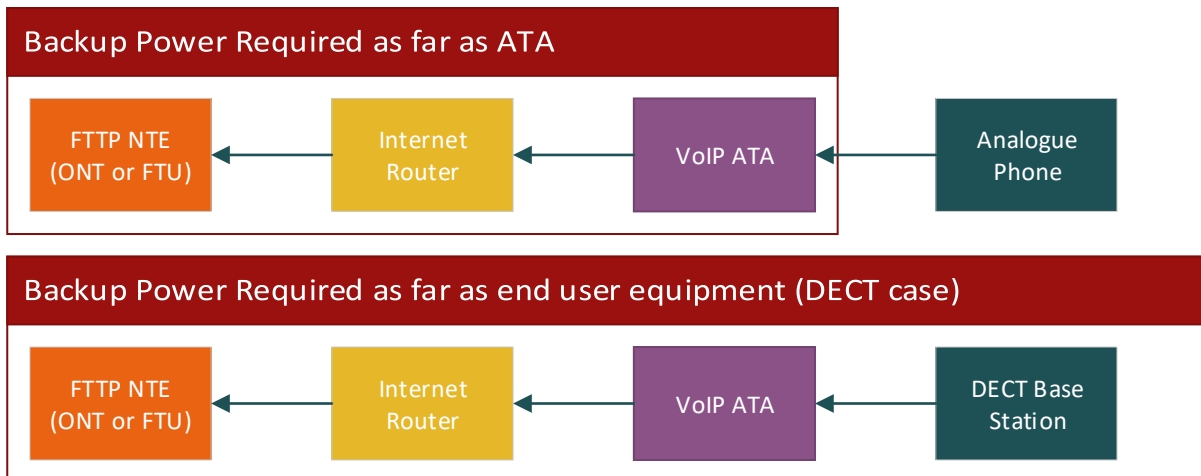
<sup>1</sup> Beyond a referral fee which may be provided where Gigaclear offers a recommended provider of VoIP services.

We expect that multiple other operators will fall within this definition, as PATS services can be readily purchased and provided over a PECN service without the PECN’s knowledge.

Whilst we then welcome Ofcom’s acknowledgement that it ‘may not be possible and/or proportionate for providers offering only the network element to meet all of the measures set out within the principles’ – as this will be a common scenario, Ofcom guidance should acknowledge that it is first and foremost the VoIP operator who is aware of a VoIP service (PATS) being provided over an FTTP connection.

The consequence of this is that Ofcom must explore the ramifications of these principles where the Network Operator, ISP and VoIP provider may all be different operators, each with their own equipment within the premises. This is further complicated by considering commonly used wireless phones with DECT base stations that require mains power to operate, which are generally provided by the end user (see figure 1 below).

Figure 1: Multiple operators/equipment across the VoIP Analog Telephone Adaptor (ATA) chain



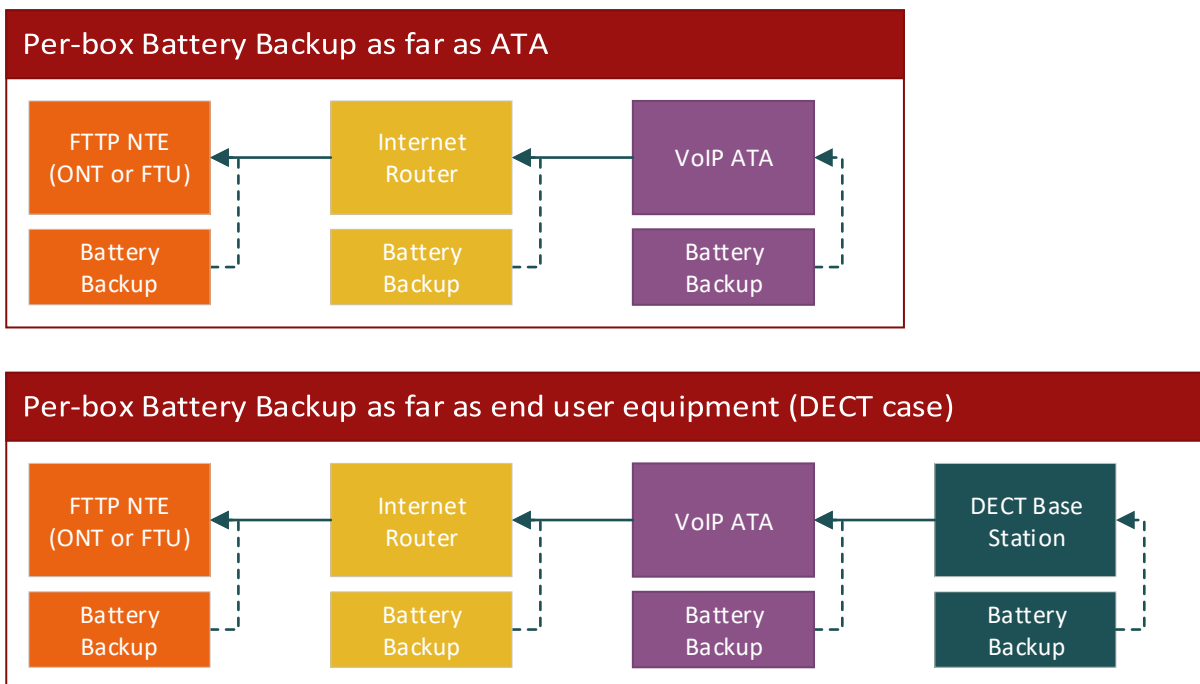
### **NTE/Router/VoIP ATA Split**

Where a PECN operator seeks to meet its obligations under GC A3.2(b), the end-user may still not receive access to emergency organisations in the event of a power outage. This is because the PECN may only be responsible for the Network Terminating Equipment (NTE) or home router within the customer premises, whereas the VoIP service

could be provided either by the Internet Service Provider (ISP) through its own router, or via a separate VoIP operator providing services through an ATA connected to the ISP's router. These scenarios could then result in the NTE and/or router receiving backup power during a power cut, yet the router and/or VoIP ATA - not being provided with backup power - would fail.

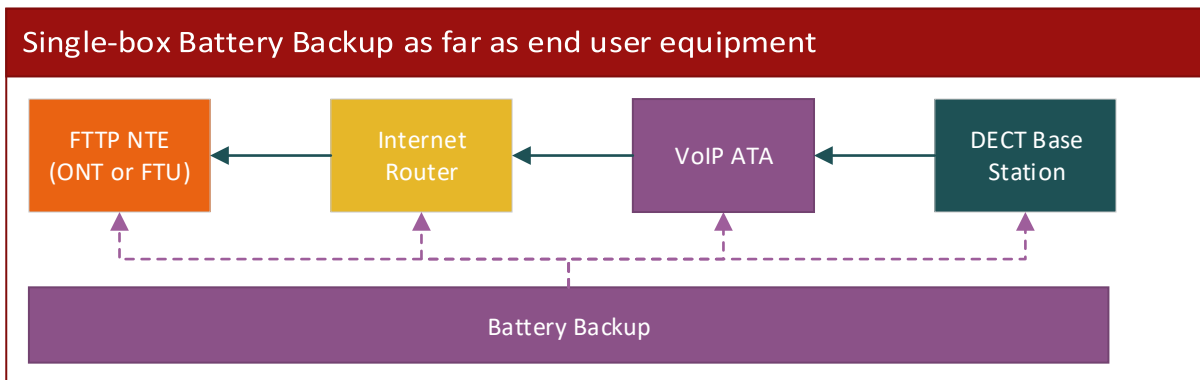
Even in scenarios where the internet service provider is also the PATS operator (purple and yellow boxes in the diagrams below may be merged into a single box), three separate power backup systems may then be required to ensure the General Condition's intent is practically realised. Figure 2 (below) highlights what the GC's intent may then require. Any consideration of cost upon industry should then acknowledge the opportunity for multiple "backup boxes" being required for a single individual line.

Figure 2: Potential Per-box power backup chain



In light of the above, the provision of a single redundant power system capable of providing power to standard UK mains adapters (see Figure 3 below) is a highly attractive option, although this would require technical alignment between operators and equipment suppliers.

Figure 3: A single unit solution across the backup power chain



A single battery backup device would be far simpler to implement, have a much lower risk of failure, and with the right technical specifications could provide at least an hour of backup to all devices including end-user equipment.

However, as it is the VoIP operator that contractually provides the voice service to the end-user, is the only operator that has full sight of where this service is being provided and receives revenue for providing the service; the VoIP operator should incur the cost of providing this backup solution. If it does not, ISPs and FTTP networks will be incentivised to restrict and/or deny VoIP services over their infrastructure, in order to avoid incurring costs for a service that they do not accrue any revenue from.

Ofcom alludes to this outcome in 2.38 – by reference to ‘opportunities for separate CPs to work together’.<sup>2</sup> To then avoid the unnecessary and inefficient outcome described in Figure 2, we propose that VoIP operators be obliged to provide a backup solution that can also support the other dependencies that the VoIP services relies upon. Gigaclear would be happy to provide guidance as to the appropriate technical standards that would facilitate such a solution.

**Principle 1: At least one solution that enables access to emergency organisations for a minimum of one hour in the event of power outage in the premises**

**At least one solution**

<sup>2</sup> [https://www.ofcom.org.uk/data/assets/pdf\\_file/0018/114219/consultation-access-emergency-power-cut.pdf](https://www.ofcom.org.uk/data/assets/pdf_file/0018/114219/consultation-access-emergency-power-cut.pdf)

As networks becoming increasingly smart and with the increased popularity of community grids, new opportunities to deliver back up solutions are likely to continually emerge. We then support Ofcom's proposal that GC A3.2(b) remains technology neutral and does not prescribe a specified solution.

### **A minimum of one hour**

Ofcom is right to emphasise that a 'minimum of one hour' is appropriate given that the average length of a power outage is significantly less than one hour and that one hour provides ample time for someone to contact the emergency services when required.

We are then concerned by the introduction of a further obligation for CPs 'to take appropriate steps to identify and address the needs of customers who would benefit from additional protection [beyond a single hour]'.<sup>3</sup>

Ofcom's own evidence highlights that such a requirement would deliver a solution in excess of what Ofcom itself deems necessary to address the harm identified. Whilst Ofcom then offers the example of additional protection being required for 'households that have a history of long-duration power outages', the hour provision is still, as stated by Ofcom, 'enough time to call for help'.<sup>4</sup>

### **Enables Access**

Whilst Ofcom states that it does not intend to 'provide detailed guidance on how CPs should manage the provision and maintenance of their solution', it also states that it 'expect[s] CPs to have procedures and practices in place appropriate to the solution adopted that will ensure that the solution continues to work on an ongoing basis'<sup>5</sup> and that

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<sup>3</sup> Paragraph 3.10 [https://www.ofcom.org.uk/\\_data/assets/pdf\\_file/0018/114219/consultation-access-emergency-power-cut.pdf](https://www.ofcom.org.uk/_data/assets/pdf_file/0018/114219/consultation-access-emergency-power-cut.pdf)

<sup>4</sup> Paragraph 3.9 [https://www.ofcom.org.uk/\\_data/assets/pdf\\_file/0018/114219/consultation-access-emergency-power-cut.pdf](https://www.ofcom.org.uk/_data/assets/pdf_file/0018/114219/consultation-access-emergency-power-cut.pdf)

<sup>5</sup> Paragraph 3.13 [https://www.ofcom.org.uk/\\_data/assets/pdf\\_file/0018/114219/consultation-access-emergency-power-cut.pdf](https://www.ofcom.org.uk/_data/assets/pdf_file/0018/114219/consultation-access-emergency-power-cut.pdf)

‘in this respect, CPs ... do everything within their reasonable control to ensure that the solution is properly maintained’.<sup>6</sup> A definition of reasonable control is not then provided.

It is difficult to estimate the life of a battery back-up solution, as this varies significantly due to the exact equipment being protected, how regularly it is utilised and the temperature range that it operates and is stored in, as well as other factors. Further, as mobile coverage and end-user needs change, it is difficult to pre-empt when a battery backup service may need to be replaced or be withdrawn. Recurring maintenance checks are thus unlikely to be an efficient solution.

However, as most available power backup solutions now come with a means of informing the end-user when a fault has occurred (be it through a buzzer or flashing LED), the most efficient means of maintaining these devices would be to inform the end-user as to how to check the device and how to contact their VoIP service provider for a replacement device if the device cannot provide an hour of backup power.

This solution also has parallels to mobile services, coverage of which Ofcom points to offering a viable alternative means of accessing the emergency services given the prevalence of mobile technology and the benefit of emergency roaming. This mobile service is dependant upon the end-user being;

- A) responsible for identifying when mobile battery power is low; and
- B) being empowered by the CP to address this.<sup>7</sup>

We propose that these same principles be applied for the provision of battery backup services from the VoIP operator. CPs should be obliged to provide effective communications to inform communicators as to how to do this in line with the third principle.

## **Access to Emergency Organisations**

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<sup>6</sup> Paragraph 3.14 [https://www.ofcom.org.uk/data/assets/pdf\\_file/0018/114219/consultation-access-emergency-power-cut.pdf](https://www.ofcom.org.uk/data/assets/pdf_file/0018/114219/consultation-access-emergency-power-cut.pdf)

<sup>7</sup> In the case of mobile, this is done through the CP providing a means to charge the battery from the mains power supply.

Ofcom is right to acknowledge that many of the viable solutions for meeting the obligations set out under GCA3.2(b) will allow customers to make calls to any number. Where this is the case, we would expect CPs to make this clear to the end-user.

**Principle 2: Solution should be suitable for customer's needs and should be offered free of charge to those who are at risk as they are dependent on their landline**

**Consumer's dependent on their landline**

GC A3.2 b obliges CPs to provide emergency access to those 'dependant upon their landline'. In setting out the metrics to assess 'dependency', Ofcom begin by highlighting that mobile phones and service are so readily available that 'not being able to contact emergency organisations via a landline in the event of a power cut is very unlikely to affect [those that have these services] or cause a safety of life concern'.

However, from this point, Ofcom stresses that 'some consumers remain dependent on their landline because, for example:

- they have disability or accessibility requirements that mean they are more reliant on their landline; and/or
- they do not have an alternative method of calling emergency organisations.'<sup>8</sup>

The introduction of 'and/or' removes clarity from Ofcom's guidance. On the basis of Ofcom's own analysis, we would expect that 'and' would be the correct guidance. In effect, stating that consumers who may have a higher propensity to contact the emergency services (due to disability or accessibility requirements) would be entitled to receive emergency access support where adequate mobile coverage is not available.

Yet Ofcom's introduction of 'or' suggests that;

- a) A vulnerable end user would still require secured emergency access even where mobile coverage was adequate; and
- b) End-users without adequate mobile coverage, regardless of vulnerability, would be entitled to secure emergency backup.

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<sup>8</sup> Paragraph 3.28 [https://www.ofcom.org.uk/data/assets/pdf\\_file/0018/114219/consultation-access-emergency-power-cut.pdf](https://www.ofcom.org.uk/data/assets/pdf_file/0018/114219/consultation-access-emergency-power-cut.pdf)



In regard to a), given Ofcom's own analysis regarding the widespread adoption of mobile and the improved mobility that mobile devices provide over landline, we would expect that the presence of adequate mobile coverage would mean that most vulnerable end-users would not require further battery backup supply of their fixed line, particularly given the introduction of BT's Next Generation Text Relay app. With that said, we acknowledge that telecare functionality provided over a FTTP connection could not be easily transferred to mobile facilitation. We then propose that cases such as this remain eligible for a backup power solution.

In regard to b), this would mean that the absence of adequate mobile coverage would be the only pre-requisite to be eligible for a backup power supply. Such an outcome would be excessive and inefficient, as the solution would not prioritise protecting vulnerable end-users and would dramatically increase the number of eligible end-users – thereby limiting the business case for providing VoIP services in remote rural areas.

Further, should Ofcom not place the cost of backup provision on the VoIP service provider but rather on each operator within the chain individually (figure 2) – eligibility based purely on the absence of adequate mobile coverage would disproportionately impact network operators that prioritise delivering full fibre in rural areas, such as Gigaclear. The outcome would then increase full fibre delivery costs in rural areas – which is directly contrary to current UK government policy.

To address these issues, we then advise that Ofcom amend 3.28 to state that dependency will be understood as;

'having disability or accessibility requirements that mean they are more reliant on their landline and that they do not have a viable alternative method of contacting emergency organisations'.

Further, where end users do not have disability or accessibility requirements, we propose that these end-users can purchase a backup power solution from the VoIP service provider, but for a charge equivalent to the wholesale cost to that operator.

This would deliver a solution that delivered a free of charge product to those most likely to require the service, without disproportionately impacting rural VoIP service providers or full

fibre operators delivering connectivity to where it is needed most (i.e. where mobile coverage is inadequate).

**Principle 3: CPs should i) take steps to identify at risk customers and ii) engage in effective communications to ensure all customers understand the risk and eligibility criteria and can request the protection solution**

### **Steps to identify at risk customers**

We support Ofcom's proposal that CPs should take steps to identify their customers who may be dependent on their landline. However, assessing the scope to which CPs can be expected to take such steps relies upon the definition of 'dependant', as explored in the above.

For example, it is reasonable that CPs be obliged to capture whether a new customer is within scope of the Chronically Sick and Disabled Persons Act 1970 and to enable customers to do this if they are not so identified at the point of sale. This is because this is already due to become a requirement for broadband providers when providing priority fault repair for fixed broadband services under the updated General Conditions.

However, assessing 'adequate mobile coverage' for every prospective customer premises places a substantial administrative burden on network operators, particularly those that do not themselves offer a mobile service – so would be wholly dependant on utilising Ofcom's own mobile coverage checker. To aid this process, Ofcom should consider an extra layer within the coverage checker journey, thereby enabling the end-user to assess if adequate voice coverage is available from viewing one screen, rather than having to estimate how the four mobile network operator coverage maps align.

If a backup power solution is to be offered to all customers outside adequate mobile coverage, coverage checking each prospective customer premises will be timely for a sales agent, thereby increasing the length of customer service calls and subsequently impacting call waiting times. The associated costs of provision would also dramatically increase due to the expanded eligibility criteria and would once again disproportionately

impact rural operators, as they would have a higher proportion of customers relevant to the requirement thresholds<sup>9</sup>.

The impact of this process would then be mitigated if, as proposed in response to principle two, VoIP service providers were only required to offer this solution to those reliant on their landline and without adequate mobile coverage. Where they are not, the customer should be informed of the relevant criteria and have the service made available to them at the wholesale cost to the operator.

### **Engage in effective communications**

In light of our recommendations, we do then fully endorse Ofcom's proposal that CP's engage in effective communications to ensure that all of their customers:

- understand the risk of the phone not working in a power cut;
- understand the eligibility criteria for receiving the solution free of charge; and
- are informed as to how they can request the solution even if they have not been identified as at risk.

### **Principle 4: CPs should have a process to ensure that customers who move to a new house or whose circumstances change in some other way are aware of the risk and protection solution available.**

We fully acknowledge that after the point of sale, a customer's eligibility for receiving a backup power supply may change. For example, they may move to a new house, their indoor mobile coverage improves or their personal health changes. We then agree that CPs should have a process in place to ensure that these customers are aware of the risk of the phone not working in a power cut, that there is a protection solution available and how to access it if required.

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<sup>9</sup> Prior to submission of this response, Gigaclear has requested access to Ofcom's own mobile coverage data, in order to compare 2G indoor coverage across the 4 mobile networks to Gigaclear's current and planned network build. Once in receipt of this data, Gigaclear would be happy to provide further analysis of the costs that such a solution could impose.

As there are multiple scenarios through which VOIP access to emergency services can be provided, we support Ofcom's decision to not prescribe the means by which this is done and to instead offer recommendations of what could be deemed reasonable.