

999 access at risk as telcos flout Ofcom rules

Summary

People without a reliable mobile signal look set to lose the ability to make emergency calls during a power failure once their landlines are converted to digital working.

Regulator Ofcom has set guidelines that require telecoms companies to offer battery backup units that will keep voice calls going through a power cut, but telecoms companies are not complying. Nevertheless, Ofcom is allowing the national rollout of the digital conversion programme at speed – many areas will be converted by the end of 2023, with the programme due for completion within two years.

Landline phones have until now been powered from telephone exchanges, which have backup power to last for several hours of power failure. With the change to digital, voice calls are carried over the customer's internet connection, using power from their domestic supply – but when the power fails, voice calls will stop too.

Ofcom has issued guidelines saying that communications providers should offer a battery backup unit to customers considered “at risk” – which includes those without a reliable mobile signal. The backup unit is required to keep the customer's router running for at least the first hour of a power outage, and is to be provided free of charge. But the guidelines are unclear over whether it is the broadband company or the VOIP voice service company that has to provide the backup unit – and it seems that companies are exploiting this to avoid the cost of providing units.

Among broadband suppliers, only one small broadband company, Hyperoptic, is publicly offering backup units to relevant customers.

Test calls to major UK VOIP suppliers failed to find a single operator intending to provide backup batteries. BT, whose Digital Voice product is set to be the most popular service, offer a suitable unit for sale through their EE subsidiary (at £84.99 but currently out of stock). But they aren't providing free-of-charge units to “at risk” customers, instead opting to exempt these customers, for the moment, from the digital changeover. Vonage, Voipfone, Xenix, and Voiphone all said that they would not be providing backup batteries.

Mobile phones have become the predominant way of reaching the emergency services, but even those able to make mobile calls from home may not be able to communicate fully with the emergency services in an emergency.

Ofcom makes no requirement for backup power for mobile phone masts, and while many are thought to have short-duration backup to cover momentary glitches, Ofcom are unable to say how long masts would maintain service during a wide-area power failure.

Where masts are still working, full communication with the emergency services is restricted to those with a strong enough signal on their normal network. Others may manage to place a call via a different network, but calls made in this way cannot be returned, so the emergency services can't call back for clarification if an ambulance can't find the address.

DETAIL (and citations)

As phone lines “go digital”, many will lose 999 access if the power fails

- At present “PSTN” landlines guarantee access to 999 even in a power cut. (As long as you use a corded phone: DECT cordless phones will fail because the base station needs power to work)
- A change from PSTN to Digital lines is starting to roll out now (several regions due to complete by the end of 2023), and is set to complete by the end of 2025.
- Digital lines are not powered from the exchange. They need a router on the customer end (voice-only customers will get an adapter which is just a simple router) and this needs power from the domestic electricity supply in order to work. Voice calls will use the internet connection provided by the router, but the internet connection will fail as soon as the power goes off.

Ofcom’s requirements don’t properly protect the public

- Ofcom sees mobile phones as the main replacement for fixed-line voice access to 999 in a power cut. But:
 - If the power outage is over a wide area, mobile calls will only work while users can connect via a mast that has backup power. There is no requirement saying how long this must last: it is expensive to provide, so perhaps it won’t be for very long. How long? Scarily, it seems that Ofcom don’t know how long mobile masts will run when the mains goes offⁱ.
 - While Ofcom talks about being able to make calls TO the emergency services, they skirt over a problem with the mobile 999 setup. If a call cannot be placed over a caller’s “own” mobile operator’s network, their phone will attempt to call over any other mobile network. But the emergency services will only be able to call back later (eg to seek help with locating the emergency if their crew can’t find it from the original location details) if there is service over the caller’s “own” network. Other-network calls cannot be returnedⁱⁱ. This should mean anyone without reliable **own-network** mobile service in their home should count as “at risk” but there is no evidence that Ofcom has understood this.
 - There is no ready way for consumers to find out whether they would be able to get through to 999 from their mobile, whether via their “own” network or another network. Ofcom have not adopted the suggestionⁱⁱⁱ of a “998” service that would allow test calls using the same infrastructure as 999, but terminating on an automated announcement confirming whether they would have been successful in reaching 999 had it been a real emergency call.
- Ofcom recognises that the move to digital phone lines will leave those without a usable mobile signal in danger: they will not be able to make a 999 call when the mains goes off (which could be a failure of the public supply, or the home consumer unit tripping off as the result of the emergency – eg flood or fire, or being deliberately tripped off by a savvy intruder). They are expecting suppliers to provide a “solution” (which will inevitably be a battery backup unit to power their router for those without a mobile signal) , but:
 - Ofcom have been very unclear about who is responsible for providing a “solution” such as a battery backup unit. They talk of this being the responsibility of all “Communication Providers”^{iv} - but that document vacillates over whether it is a Broadband-only or a VOIP provider who should provide the “solution” for the

customer who buys their VOIP from a different supplier than their broadband. I sought clarification on this, but came out none the wiser. Their failure to pin responsibility clearly to a particular class of Communications Provider in effect means that everyone can point their fingers at others when asked about the expensive business of providing battery backup, and as a result nobody is apparently meeting the Ofcom requirement.

- Customers will be offered VOIP as an extra-cost add-on, and many are likely to decide that this is the point when they will move to relying just on mobile phones. There is no clear process by which such customers will be warned to check that they can actually get through to the emergency services via the mobile network (as opposed to via Wifi Calling, which will fail in a power cut).
- The requirement to provide a backup unit does not apply to those marketing their VOIP services as “for business” – even though many such VOIP suppliers are very happy to accept residential customers.
- There is no ready way to find a list of “residential VOIP” suppliers in the UK who count as providing PATS

The change to digital lines is being watched, rather than managed, by Ofcom

- In a FOI response to me, Ofcom confessed^v that they don’t know who they are regulating. The rules on emergency power for digital lines apply to “**Publicly Available Telephony Services**” (PATS) but while Ofcom use the term in their documentation, there appears no listing of which companies provide such services.
- Ofcom has not set rules – it has issued “guidance” that it admits has no legal effect^{vi}
- Ofcom may have started to look at conformance^{vii}, but they haven’t shared any results yet
- Yet they appear content that the changes should be rolled out, at speed, across the UK

Ofcom’s programme to change from PSTN to digital phone lines envisages Telecoms Providers taking special action to make sure that people can reliably call 999 during a loss of power

- Fixed-line voice calls will become an optional extra on top of a broadband package, encouraging many people to rely solely on their mobile phones for voice calls.
- Even those opting to keep a fixed-line voice service will not be able to use it during a loss of power (in contrast to PSTN lines which are powered by backup batteries in the exchange)
- Before making the change, Telecoms Providers are meant to find out^{viii} which customers are “at risk” (including those with no usable mobile signal) and offer, without cost, a solution to ensure that they can make 999 calls during the first hour of a power failure.

The programme is not working as Ofcom envisaged

- BT are not seeking out those “at risk”. They are not even ready to be told that people are “at risk”. When I asked their press office how people could notify them, ahead of the PSTN change, that (for example) they had no usable mobile signal at home (and were therefore “at risk”), they couldn’t tell me^{ix}.
- BT aren’t offering Battery Backup Units at present. They are delaying the changeover for those who they know to be at risk (but of course they don’t know about many of these, as explained above)
- BT aren’t even offering Battery Backup Units for purchase. Their EE subsidiary offers a unit specifically for BT Hub owners on their website^x at £84.99, but they are currently out of

stock. (I had registered to be notified last time they came back into stock – the site reported a total UK stock of 10 units, but I didn't think to keep a screenshot).

- A Google searches for “Broadband Battery Backup” identifies only Broadband supplier Hyperoptic as volunteering the without-charge provision of Battery Backup Units. A reference^{xi} to a BT unit turns out to be an outdated unit once supplied to FTTP customers (but no longer). Otherwise, there is no sign that any Broadband supplier is acknowledging the issue, let alone arranging supply of backup units.
- Enquiries to a series of higher Google-ranked suppliers (Voipfone, Xenix^{xii}, Voiphone) received the answer that whilst they marketed themselves as providing a Residential VOIP service in the UK, they did not have a no-power 999 solution to offer to a customer without a usable mobile signal.
- Major VOIP operator Vonage requires those signing up to its UK service to confirm that they have an adequate mobile signal. Those who do not are invited to call Vonage. When I eventually got them to respond, their sales agent told me I had to sign up first and then they would decide what to do. (Ofcom say that a solution must be “offered” to those at risk.) When I pushed harder for information on what they could offer to me (without a reliable mobile signal at home), I was put in touch with their UK “Director Country Ops”, who said^{xiii} that they could provide a mobile phone for those without one, but not a battery backup.

ENDS

Contact: John Geddes (parish councillor for a Derbyshire village)

john@winster.org

01629 650364

0770 414 0700

i

<https://www.whatdotheyknow.com/request/1032298/response/2454355/attach/html/3/Backup%20power%20duration%20for%20Mobile%20Phone%20masts.pdf.html>

Letter from Ofcom – “We are unable to provide the information set out within this request as we do not record the information in this way.”

ii [Letter](#) from Ofcom Chief Executive, 20 October 2023

iii [Correspondence](#) with Ofcom Chief Executive, via Sarah Dines MP, November 2022

iv [Open Letter](#) from Ofcom to Communications Providers, 20 July 2023: “I am writing to remind you of your obligation as a Communications Provider (CP) to ensure that your customers are able to contact the emergency services, including in the event of a power cut at a customer’s home or premises.”

v “Ofcom does not hold a list of all companies regulated by Ofcom”- [Reply by Ofcom to FOI request, 5 Jan 2023](#)

vi “Please note that the Guidance itself does not have binding legal effect” - [Reply by Ofcom to FOI request, 5 Jan 2023](#)

vii As of Jan 2023, Ofcom wrote “Ofcom has also recently opened an own-initiative compliance monitoring programme to assess compliance by regulated providers with General Condition A3.2(b) with particular reference to the guidance.”

viii In [Ofcom Guidance, 10 October 2018](#): 1.9.3(i) “Providers should ... take steps to identify at risk customers”

ix [Correspondence with BT Press Office](#)

^x <https://store.ee.co.uk/products/cyberpower-back-up-for-bt-digital-voice-service--non-ftp--091297-FV54.html>

^{xi} [“Fibre Home Phone service: Questions about the battery back-up unit”](#)

^{xii} Call to Matt in Residential Sales at Xenix on 03333 055 888 at 0945 on 1 November 2023. Confirmed that Xenix provides residential VOIP in the UK. He suggested that I could buy a battery backup on eBay but Xenix would not provide one.

^{xiii} [Emails to/from Vonage](#)