

# PSTN switch-off and migration to IP Update to Rural Services Network

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# PSTN switch off and migration to IP – what is happening?

## The Public Switched Telephone Network (PSTN) is approaching the end of its life and will be switched off at the end of 2025

- The PSTN is the traditional copper telephony network used to transmit landline telephone calls as well as voiceband data.
- The process of PSTN switch-off is being led by industry. This is a major change to the UK's telecoms networks, affecting nearly every landline in the country (up to around 30m).
- Replacement strategies are centred on 'Voice over Broadband' (VoBB) and 'Voice over IP' (VoIP) services, using Session Initiation Protocol (SIP) based voice platforms.
- The majority of domestic and business services delivered over individual copper lines will be straightforward to migrate as customers will simply have to connect their existing handset(s) to a different socket. However, there will be some challenges as some non-voice services rely on the PSTN (e.g. telecare devices and card payment terminals).
- Unlike the PSTN network, VoIP services will not function on an end to end basis in the event of a power cut without power back-up at network end points.
- Openreach are running trials of copper switch off in Salisbury and WLR withdrawal in Mildenhall from December 2019 to December 2022.

# PSTN switch off and migration to IP – Ofcom's role

## Our work supports a well-managed migration, and seeks to address some specific challenges for consumers and CNI users

### Consumers

- Up to around 30m landlines to be migrated. Migration is led by CPs so is not centrally planned or orchestrated
- Protecting access to emergency calls during a power cut
- Connected safety-of-life devices
- Published [guidance](#) on ensuring uninterrupted access to emergency organisations in power cuts.
- Set [expectations](#) that CPs should offer advice and assistance for all migrating customers, including those who use connected safety-of-life devices
- Convened CPs, OTT providers and users.
- Requested that OTA2 develop best practice for CPs on migrating consumers.

### CNI users

- Critical use cases in CNI sectors rely on non-voice characteristics of PSTN - knowledge of range of CNI services and applications in use may be limited
- Complex landscape with multiple providers, and long lead times
- Suppliers through many different channels including Systems Integrators (SI) who may not be closely engaged with the migration
- Worked to ensure widespread awareness of the upcoming change, convene other organisations and prompt them to act.
- Worked directly with industry and service providers operating in affected sectors.
- Support DCMS to chair a biannual roundtable with Government departments, regulators and industry.

# Implications for areas with poor broadband and mobile connectivity

**Businesses and residential landline only customers will have to get a broadband connection in order to continue to use their landline.**

- This presents challenges for areas with poor connectivity or customers who do not wish to take a broadband connection.
- There are a number of ways poor internet connections can be addressed:
  - Broadband USO;
  - Public schemes – Gigabit, connectivity voucher schemes, public sector intervention such as R100, Project Gigabit and Access Broadband Cymru;
  - New technologies such as innovative wireless solutions or Low Earth Orbit satellite connections (such as Starlink or OneWeb).
- Communications providers are developing solutions for customers that cannot or do not wish to take a broadband connection e.g. using mobile networks.

# Obligations for communications providers with respect to emergency calls

## Unlike PSTN phones, VoIP services will not work in a power cut

- We expect service providers to provide customers without alternative access with either **battery backup or an alternative means of communication** so they can contact emergency services in a power cut.
- The obligation to maintain access to emergency services during a power cut applies to both **internet** and **voice service** providers.
- The solution should be suitable for customers' needs and should be **offered free of charge to those who are at risk** as they are dependent on their landline.
- With an ever-increasing **majority of calls to 999 originating from mobile** phones, to some extent, this is a diminishing problem overall
- However, with many **new network and service providers** entering the market with VoIP solutions, we are aiming to ensure they understand and discharge their obligations

## PSTN switch-off and migration to IP – Reminder of timeline

There are several key milestones to be aware of in the next year and beyond

**December 2020:**  
Openreach  
copper stop sell  
in Salisbury

**May 2021:**  
Openreach WLR  
stop sell in  
Mildenhall

**December 2022:**  
WLR and copper  
withdrawn in  
Salisbury, and  
WLR withdrawn  
in Mildenhall

**September 2023:**  
Openreach WLR  
stop sell  
nationwide

**December 2025:**  
PSTN switched  
off and WLR  
services  
withdrawn

## What's next?

- ✓ The switch off is 5 years away (and sooner in some areas). It's important to **take action as early as possible**.
- ✓ It is important that organisations internally **carry out a discovery exercise** to see how the PSTN lines are being used within their organisation for non-voice services.
- ✓ Not all communications providers have off-the-shelf solutions available, so it is important to **engage with the provider to find an appropriate solution** – mobile and alternative 'Internet of Things' technologies should also be considered in addition to fixed particularly in rural areas.
- ✓ Please continue raising this within your organisation and **keep it on the agenda**.

## Key takeaways for rural areas

- Businesses and residential landline only customers may have to get a broadband connection in order to continue to use fixed voice.
- For those that cannot or do not wish to have a broadband connection there will be alternative solutions such as mobile or satellite technology.
- Customers who rely on their landline will be eligible for a free resilience solution (such as battery backup) to ensure that their fixed line works in a power cut.
- We have contacted wireless internet service providers (WISPs) who may service rural customers to remind them of their obligations to provide continued access to emergency services.
- Businesses should no longer purchase new PSTN-based solutions.



## Further information

- **Basic provider agnostic information** has been produced by the Broadband Stakeholder Group on behalf of the industry and is likely to be developed further. The current version is [www.futureofvoice.co.uk](http://www.futureofvoice.co.uk)
- The **key PSTN providers provide their own more extensive information** packs and you should approach them direct.
- **Openreach as the wholesale provider of their WLR PSTN capability** to a wide range of downstream comms providers and systems integrators have been holding a series of **events with Local Resilience Fora**
- **Openreach** also held a broader online event recently that covered PSTN switch-off issues - <https://www.openreach.com/events/the-uk-digital-upgrade-event>

# Questions?