



## Tech Transitions: Network Upgrades That May Affect Your Service

America's communications networks have been rapidly changing from copper-based networks originally built for voice services to alternative platforms built for a variety of purposes, including broadband, video and data as well as voice. These "tech transitions" involve switching the network infrastructure from copper wire to optical fiber and coaxial cable, combinations of all three, or even wireless technology. They also often involve changing to network equipment that uses Internet Protocol, or "IP," to communicate.

Telephone service providers replacing their copper networks with fiber must comply with FCC rules designed to protect customers. The rules focus on:

- Ensuring reliable backup power
- Protecting consumers who must be informed about their choices
- Providing consumers options in preserving competition where it exists today

## Required Disclosures for Customers

Your home telephone service may not work during power outages if it is not line-powered (not a copper line). Telephone companies that provide service that is not line-powered must disclose the need for backup power to each new subscriber at the point of sale and to all subscribers annually.

At the point of sale, telephone service providers must give new customers the option to buy a battery that provides a minimum of 24 hours of standby backup power, and tell customers what would happen if a backup battery is not purchased.

Telephone service providers must also provide annual disclosures regarding:

- The capability of the service to accept backup power, and if so, the availability of at least one backup power solution available directly from the provider.
- Any service limitations with and without backup power.
- Purchase and replacement information, including cost.
- Expected backup power duration.
- Proper usage and storage conditions.
- Subscriber backup power self-testing and monitoring instructions.
- Backup power warranty details, if any.

If you are receiving voice service through the Internet, the company providing it must give you the same information.



## **Backup Power FAQ**

### **Why might I need backup power?**

Line-powered traditional landline telephone service through copper wires typically continues to work during power outages, allowing you to call 911 in an emergency. However, newer alternatives – including fiber, coaxial cable, and wireless – usually need backup power, such as a battery, to keep operating.

### **What does a backup battery do?**

If you choose to buy a battery backup it will improve your chances of retaining telephone service for at least 24 hours during a power outage.

### **Where can I get a backup battery?**

You could buy a battery from your phone company or another vendor, or purchase another source of backup power – such as an uninterruptible power supply or generator – to support your home voice service.

### **Do I have to get a backup battery?**

No, but you should consider how you would call 911 and other emergency services during a power outage. One option is your mobile phone, which also requires a charged battery to function.

### **If I buy a backup battery, what am I responsible for?**

You should test, monitor, and maintain it as instructed by the service provider or manufacturer.

### **Will my cordless phone work during a power outage?**

Likely not. Cordless phones require their own power source and will not work during a power outage unless connected to an uninterruptible power source or unless your home is equipped with a generator.

### **What are my home voice service provider's obligations?**

When you first agree to purchase a new service that uses a technology that does not have its own power, your provider must:

- Inform you that phone service will not be available when the electricity goes out, unless you have backup power.
- Offer you the option to buy a backup battery that would last for at least 24 hours when the power is out.
- Provide information to help you make an informed choice about whether to purchase backup power.
- Tell you how to properly use a backup battery – including how to test, monitor and maintain it – and tell you what would happen to your backup power under varying conditions.

Your service provider must provide this information to you again every year.



## Notification FAQ

### **What prior notice will I receive if my provider decides to change the network it uses to provide my service?**

Service providers must directly notify residential customers of plans to retire the part of the copper networks that extend to the consumers' premises at least three months in advance. Non-residential retail customers must be notified least six months in advance.

### **What prior notice will I receive if my service will be affected?**

Service providers must directly notify customers of plans to discontinue, reduce, or impair their service. Depending on who the service provider is, that notice may be either 30 days or 60 days prior to the planned change.

You can file comments or objections to a planned discontinuance, reduction, or impairment of service. The notice from the service provider will include the deadline for filing comments or objections, and how to file them. Depending on who the service provider is, the period for filing comments or objections may be either 15 days or 30 days from the date of the notice.

## What to Ask Your Provider

In most cases, you will not need to do anything; services and rates are not supposed to change because of a network transition. But if you are concerned about the telephone network you use, you can call your telephone company and ask about any transition plans. Some things you can ask include:

- Is my network transitioning from copper wire to fiber? If so, is just part of the network being replaced with fiber, or the entire network all the way to my house?
- Do you provide backup battery systems for your customers? If so, how much will I need to pay for these backup batteries, if anything?
- Are you switching to an all-IP network?
- If you are switching to an all-IP network, how will my service be affected?
- Will things like a fax machine or a home security system be able to operate with the new network?

## More Q&As

Additional questions and answers about what you can expect from a copper-to-fiber tech transition include:

### **Can service providers change the network they use to provide my service without my consent?**

Telephone service providers can replace their copper wire networks, but such a transition should not have any significant effect on your telephone services. If a service provider wants to stop or reduce the telephone service provided to existing customers or replace the existing service with a different type of service (like IP-based or wireless service), it must apply to the FCC for approval.



## Will I be required to upgrade my service and pay for features I don't want?

If you are an existing customer who only receives traditional telephone service, you cannot be required to subscribe to additional services, such as Internet access and television programming. If you only want traditional telephone service over the public switched telephone network, whether it is copper or fiber, the service provider must keep that option available to you unless it has obtained FCC authority to discontinue that service.

## What has been done to prepare for these tech transitions?

The FCC authorized various experiments and launched data collection initiatives in 2014 to evaluate how customers are affected by technology transitions. Using service-based experiments, it examined the impact on consumers and businesses of replacing existing services with IP-based alternatives.

The FCC also sponsored targeted experiments and cooperative research to learn how new technologies can more effectively reach all Americans, including individuals with disabilities, and provided funding for rural broadband experiments to help the FCC understand what kinds of next-generation networks can best serve the needs of rural America.

Additionally, everyone was given the opportunity to provide input using the [FCC's public comment process](#).

## How can I find information about tech transitions where I live?

Service providers generally maintain webpages related to changes to their networks. Additionally, they are required to file such notices with the FCC, and those notices may be found at <https://www.fcc.gov/wireline-competition/general/section-251-wireline-network-changes>. Certain states also require service providers operating in their jurisdiction to notify them when a transition is planned. If you think your network has undergone a transition and your provider did not communicate with you about that transition, you may wish to contact your state public utility commission to inquire about network changes taking place in your region. They may also be able to share information about alternative providers in your area. Contact information for your state public service commission can be found at [www.naruc.org](http://www.naruc.org) or in the blue pages or government section of your local telephone directory.

## Copper vs Fiber

### What are some differences between copper wire and fiber optics networks?

	<i>Copper</i>	<i>Fiber</i>
<i>Service</i>	<ul style="list-style-type: none"><li>• Limited speeds</li><li>• Susceptible to signal interference/loss</li></ul>	<ul style="list-style-type: none"><li>• Extremely high speeds are possible</li><li>• Lower signal loss</li></ul>
<i>Reliability</i>	<ul style="list-style-type: none"><li>• Relatively short life</li></ul>	<ul style="list-style-type: none"><li>• Longer life cycle requiring less frequent maintenance</li><li>• Lighter and thinner, making it easier to deploy</li></ul>
<i>Power</i>	<ul style="list-style-type: none"><li>• Will work in the event of a power outage</li></ul>	<ul style="list-style-type: none"><li>• Backup battery units required during power outages</li></ul>



## File a complaint

You have multiple options for filing a complaint with the FCC:

- File a complaint online at <https://consumercomplaints.fcc.gov>
- By phone: 1-888-CALL-FCC (1-888-225-5322); TTY: 1-888-TELL-FCC (1-888-835-5322); ASL: 1-844-432-2275
- By mail:

Federal Communications Commission  
Consumer and Governmental Affairs Bureau  
Consumer Inquiries and Complaints Division  
45 L Street NE  
Washington, DC 20554

## Alternate formats

To request this article in an alternate format - braille, large print, Word or text document or audio - write or call us at the address or phone number above, or send an email to [fcc504@fcc.gov](mailto:fcc504@fcc.gov).

Last Reviewed: 10/31/19

