

Battery Backup for Voice Service

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In accordance with the Federal Communications Commission (FCC) rule FCC-15-98 known as ‘Ensuring Continuity of 911 Communications’, the following information is presented to assist Sunset Fiber LLC voice subscribers with determining their options for battery backup solutions to ensure the availability of emergency 911 dialing during a commercial electricity outage (power outage). The FCC rule and related documents can be found at: <https://www.fcc.gov/document/ensuring-continuity-911-communications-report-and-order>

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Overview

For many years, consumers have been accustomed to having telephone dial tone even when the power is out. As new voice technologies have been introduced to replace copper-based, line-powered technology, some consumers may be unaware that they must take action to ensure that dial tone is available in the event of a commercial power outage. Although there are several required steps to ensure access to emergency dialing, the major component is the use of a battery backup solution, sometimes called an uninterruptible power supply (UPS).

While it is important that all subscribers have access to emergency dialing during a power outage, it may also be important to maintain the ability to dial for the following reasons:

- Emergency 911 dialing
- Emergency calls to family and friends
- Alarm systems that use voice lines to communicate with dispatch centers
- Personal alert devices (including but not limited to Life Alert®)

It is important to understand that during a power outage, voice calls should be limited to only emergency and essential calls. This is to conserve battery power and extend the time available to make calls. Additionally, cordless phones, and other electronic devices that utilize a power plug, will not work in a power out unless they have a separate UPS. Consequently, it is essential to have a corded phone, which does not require a power plug, available for use in case of a power outage.

Please refer to the Readiness Checklist to ensure that your house is ready to make voice calls during a power outage.

Covered services

This document and associated information apply to all residential voice services provided by Sunset Fiber LLC. Although other business voice services are not covered by the FCC rule or this document, the information provided here may help business voice subscribers determine their options for battery backup solutions as well.

IMPORTANT, this document DOES NOT cover information related to medical, security or other electronic devices and accessories that may utilize voice lines.

Responsibilities of the voice service provider and the consumer

The following items are the responsibility of Sunset Fiber LLC:

- At the point of sale of voice service, provide the option to the subscriber to purchase a battery backup solution (UPS) that is capable of providing at least eight (8) hours of standby power to ensure that emergency voice calls are possible.
- Disclosure to the subscriber at the point of sale and once per year thereafter of the capabilities, limitations, maintenance, replacement, proper usage and testing of the battery backup solution (UPS).

The following items are the responsibility of the voice service subscriber:

- Read all information provided by Sunset Fiber LLC in relation to battery backup solution (UPS).
- Properly use, test, maintain and when necessary replace the battery backup solution (UPS).
 - Maintenance of the battery backup solution (UPS) can be performed by Sunset Fiber LLC upon request or with subscription to the paid maintenance service (Inside wire maintenance).

Availability and location of battery backup solutions (UPS)

Sunset Fiber LLC have chosen to provide a battery backup solution (UPS) as part of all standard installations of voice service. This solution will usually be installed near to the service demarcation point, sometimes referred to as a Network Interface Device (NID) or Optical Network Terminal (ONT) which is usually located on the exterior of residential structures and on the interior of commercial structures. The battery backup solution (UPS) may be mounted to the exterior, or located inside of the structure. Please reference the chart below for guidelines on location the battery backup solution (UPS) for your service:

Structure Type	Electric Service Provider	Likely Location of Battery Backup Solution (UPS)
Residential - Single Family	BVU Authority	Exterior near electric meter ¹ or, interior for some customers that were connected prior to 2006
Residential - Single Family	Other Provider	Interior ¹
Residential - Small Multi-dwelling (units with individual exterior access)	BVU Authority	Exterior near electric meter ¹
Residential - Small Multi-dwelling (units with individual exterior access)	Other Provider	Interior ²
Residential - Large Multi-dwelling (units with interior public spaces)	NA	Interior - telecommunications, utility room/closet ²
Commercial – Small Freestanding	NA	Exterior near electric meter ¹ or, Interior - telecommunications, utility room/closet ³
Commercial - Multiple Unit Strip Center	NA	Interior - telecommunications, utility room/closet possibly located in an adjacent unit/suite. ³
Commercial - Large Complex	NA	Interior - telecommunications, utility room/closet ³

¹ Battery backup solutions (UPS) that are located on the exterior of a structure are connected by wire to power sources attached to the electric meter. It is important that the subscriber only touch the battery backup solution (UPS) itself. Touching or modifying the power supply device could result in serious injury to people or pets, and can cause serious damage to property.

Limitations and expected performance of available battery backup solutions

¹ The following locations are the most likely places to find the battery backup solution (UPS) if it is located inside of the structure: Room (inside wall) adjacent to the NID which is usually located near the electric service meter. This could be any room inside of the structure including bedrooms, closets, laundry rooms, garages and in some limited cases basements. The solution will be plugged into a standard electrical outlet.

² Battery backup solutions (UPS) that are located inside of telecommunications or utility rooms / closets may not be accessible by the voice service subscriber. If the location is not accessible, please contact the building owner or manager for more information. Additionally, Sunset Fiber LLC may be contacted for questions about maintenance options.

Scope

The battery backup solutions (UPS) provided to voice service subscribers by Sunset Fiber LLC are designed to provide power to the necessary equipment that provides voice service during an electric outage. This equipment, usually referred to as the Network Interface Device (NID) or Optical Network Terminal (ONT), will have a sticker located on the outside of the device indicating that it is property owned by Sunset Fiber LLC.

IMPORTANT: The battery backup solutions (UPS) provided are NOT intended to provide power to other devices or systems including but not limited to cordless telephones, answering machines, fax machines, multi-function office electronics, computers, intercom systems, speakers, emergency alert systems, alarm/security systems, remote access systems, surveillance equipment, or any other devices or systems.

Duration of battery

The battery backup solution (UPS) contains a battery that has enough capacity to power the necessary equipment to provide voice service for at least 8 hours (stand by). The following factors can contribute to a reduction of this available stand by time:

- Use of voice services during a power outage (making or receiving voice calls)
- Age and condition of the battery (maximum battery life is usually 3-5 years)
- Age and condition of the connecting wires and battery terminals
- Ambient temperature where the battery is located
- Number of charge / discharge cycles of the battery
- Storage length and conditions of batteries not connected to a charging system (such as UPS)

If for any reason the battery backup solution (UPS) is not functioning properly, voice services may be unavailable during a power outage. This could include the inability to dial emergency services (911).

Extending duration of battery

The battery backup solution (UPS) contains a battery that has enough capacity to power the equipment necessary for voice service to function for at least 8 hours (stand by). Power outages that last longer than 8 hours could result in the eventual loss of voice services. For this reason, some subscribers may find it desirable to prepare for longer power outages. Although Sunset Fiber LLC do not offer solutions for extending the duration of the battery backup solution (UPS), it is possible to do so. Subscribers that wish to extend the duration of the system should research the following options.

- **Additional batteries.** By simply having more than one compatible battery on hand, the subscriber may extend the time available of power. Note: It is important to properly store and charge batteries. Batteries left in storage for extended periods without charging may not be effective when needed. Please consult the documentation provided with the battery for more information.
- **Backup generator (gasoline or natural gas) systems** capable of providing AC power to the battery backup solution (UPS). Note: Alternate installation methods may be required in order to implement this option. Subscribers with exterior battery backup solutions (UPS) will need to contact Sunset Fiber LLC for more information.

- **Photovoltaic (solar) battery recharging systems.** These devices may be used to recharge the battery after discharge. Note: Additional batteries may be necessary to ensure an uninterrupted supply of power while charging the depleted battery.
- **Photovoltaic (solar) whole-home systems** capable of providing AC power to the battery backup solution (UPS). Note: Alternate installation methods may be required in order to implement this option. Subscribers with exterior battery backup solutions (UPS) will need to contact Sunset Fiber LLC for more information.

Note: This list does not constitute an endorsement for any or all of the solutions, nor does it represent a comprehensive list of options.

Monitoring, maintenance and replacement options of battery backup solutions





Safety warnings

The following instructions and information are important for the safe operation and maintenance of the battery backup solution (UPS). Please read these instructions carefully before attempting maintenance or replacement of the battery.

- The battery can energize hazardous live parts inside of the battery backup solution (UPS) and related equipment even when the AC input power is disconnected.
- To prevent the risk of fire or electric shock, only perform maintenance in a temperature and humidity controlled indoor area, free of conductive contaminants.
- To reduce the risk of electric shock, do not remove the cover of the battery backup solution (UPS), except to service the battery. There are no user serviceable parts inside except for the battery.
- To avoid electric shock, turn off the unit and unplug it from the AC power source before servicing

Monitoring condition of battery

Each battery backup solution (UPS) may have slightly different indicator lights and labels for monitoring its operation and battery condition. The table below shows typical system indicator lights and symbols:

Indicator	Color	Condition
 SYSTEM STATUS	Green	Indicates normal mode of operation.
 DC	Green	Indicates the battery is supplying the power. At 45% battery capacity, the LED will flash and then alarm will beep 4 times per minute.
 MUTE	Orange	Press and hold the button "Alarm Silence" for 0.5 second to silence the audible alarm for 24 hours, and the LED will flash.
 REPLACE BATTERY	Red	Battery replacement required. Alarm will beep once every 15 minutes. The LED also illuminates when battery is absent.

Replacement of battery

Before handling the battery or touching any part of the battery backup solution (UPS), please read and understand all safety guidelines included in this document as well as the manufacturers user manual.

In the event of battery failure or when the life of the battery has reached 3-5 years, it is advisable to change the battery for a new one. Compatible batteries can be obtained at the Sunset Fiber LLC office (15022 Lee Hwy., Bristol, VA 24202) at no charge for subscribers with active services that are in good standing. One battery per service location can be obtained every 3 years.

Steps to replace battery:

1. Read and understand all safety guidelines and manufacturer's user manual.
2. Obtain a new compatible battery for the battery backup solution at your location.
3. Locate the battery backup solution. Refer to the section "Availability and location of battery backup solutions (UPS)" for more information.
4. Remove the battery cover, making sure to not disturb the wiring inside.
5. Disconnect the battery cable connector to remove battery.
6. Replace with a new battery and reconnect the battery connector. Ensure that the red wire is connected to the red terminal on the battery and the black wire is connected to the black terminal on the battery.
7. Make sure the battery is fixed properly in the compartment and close the battery cover. 8. Properly dispose of the old battery. Refer to the section "Proper usage, storage and disposal of battery backup solutions" for more information.
8. Ensure that there are no warning lights illuminated on the battery backup solution (UPS). If so, ensure all connectors are properly secured.

Proper usage, storage and disposal of battery backup solutions

Each battery backup solution (UPS) manufacturer may have slightly different recommendations for proper usage, storage and disposal. The information in the following sections are general guidelines. For more specific information, please refer to the manufacturer's website or user's manual.

Proper Usage

Please read and understand the manufacturer's user manual for detailed instructions on proper use of the battery backup solution (UPS) and battery.

- **CAUTION!** The battery can energize hazardous live parts inside the battery backup solution (UPS) and related equipment even when the AC input power is disconnected.
- **CAUTION!** To reduce the risk of electric shock, do not remove the cover, except to service the battery. No user serviceable parts inside, except for the battery.
- **CAUTION!** To avoid electric shock, turn off the unit and unplug it from the AC power source before servicing the battery or installing a computer component.
- **CAUTION!** Risk of Energy Hazard. Before replacing batteries, remove conductive jewelry such as chains, wrist watches, and rings. High energy through conductive materials could cause severe burns.
- **CAUTION!** Do not dispose of batteries in a fire. The batteries may explode.
- **CAUTION!** Do not open or mutilate batteries. Released material is harmful to the skin and eyes. It may be toxic.

Proper Storage

Follow these guidelines to properly store the battery when it is not in use:

- Store out of the reach of children and pets
- Store in an inside location free of excessive air moisture and dust
- Store off of the ground and avoid contact with water or other liquids
- Store in an area that maintains temperatures between 0 and 100 F
- Long-term storage of the battery may cause the battery to not charge properly and or have limited effectiveness. Batteries should be periodically charged. If multiple batteries are stored, a rotation schedule should be maintained. Example: Battery A is in use and battery B is stored. After 3 months, the batteries are swapped. This rotation would continue for the life of the batteries.

Please consult the battery manufacturer's website or user's manual for additional details.

Proper Disposal

In order to help protect the environment, it is important to properly dispose of used batteries. Recycling centers as well as some electronics and home improvement centers often take batteries at no charge to the subscriber. Please check this website for nearby locations <http://www.call2recycle.org> or call 1-800-8Battery (1-800-822-8837).

Available maintenance plans offered through Sunset Fiber LLC

For subscribers that do not wish to maintain the battery in the battery backup solution (UPS) themselves, Sunset Fiber LLC provides a maintenance plan. This maintenance plan is a part of our “Inside Wire Maintenance” service. Please refer to the “Inside Wire Maintenance” documentation for full details.

For purposes of maintaining the battery in the battery backup solution (UPS) it is important to understand that the maintenance plan does not include active monitoring of the condition of the battery. It is still the subscriber’s sole responsibility to monitor the condition of the battery and notify Sunset Fiber LLC if a problem is detected. Please refer to the section “Monitoring, maintenance and replacement options of battery backup solutions” for more information.

Subscriber responsibilities:

- Subscribe to and maintain the Inside Wire Maintenance product
- Monitoring the condition of the battery
- Notifying Sunset Fiber LLC if maintenance is needed
- Providing access to the battery backup solution to Sunset Fiber LLC personnel in order to perform maintenance

Sunset Fiber LLC responsibilities:

- Offer the Inside Wire Maintenance product to subscribers
- Respond to subscribers requests for battery maintenance in a reasonable amount of time
- Resolve any and all problems associated with the battery backup solution (UPS) once notified of a problem
- Replace defective or old batteries and components every 3-5 years or as needed

Inaccessible battery backup solution (UPS)

Due to physical or logistical considerations, Sunset Fiber LLC may have installed the battery backup solution (UPS) in a location that is inaccessible to some subscribers. Common scenarios of this are multi-dwelling complexes. If the battery backup solution (UPS) is not accessible, Sunset Fiber LLC will either maintain the solution free of charge to the subscriber or relocate the solution to an accessible area.

It is the subscriber’s responsibility to notify Sunset Fiber LLC if the battery backup solution (UPS) is not accessible to them.

Other considerations

In addition to the information provided in this document, we recognize that some consumers may be utilizing Sunset Fiber LLC services in a manner that has not been directly addressed. It is important for each consumer to understand how devices and services provided by other third-parties work during power outages. We will not be able to provide detailed information about third-party devices, but we would like to offer some examples of services that may be impacted. This is only intended to encourage further research and preparedness on the part of the consumer.

Third-party broadband Internet based voice and video chat providers

Third-party voice and video chat providers that sell devices and services directly to consumers that utilize broadband Internet connections may be affected by power outages (including but not limited to Vonage®, magicJack®, Skype®, FaceTime® and Google Voice®). The standard practice of Sunset Fiber LLC is to install broadband Internet equipment that requires electricity in order to operate. In the event of a power outage, this equipment is designed to shutdown broadband Internet and video services (cable TV) in order to preserve as much standby time as possible for Sunset Fiber LLC voice service. This is the case whether or not the consumer has subscribed to Sunset Fiber LLC voice service. Therefore, any third-party voice and video chat services that rely on a broadband Internet connection may not function during a power outage.

Third-party broadband Internet based cellular telephone extenders

Some third-party cellular telephone providers sell devices directly to consumers that utilize broadband Internet connections in order to create a local cellular network extended beyond the reach of public cellular networks. These devices may be affected by power outages. The standard practice of Sunset Fiber LLC is to install broadband Internet equipment that requires electricity in order to operate. In the event of a power outage, this equipment is designed to shutdown broadband Internet and video services (cable TV) in order to preserve as much standby time as possible for Sunset Fiber LLC voice service. This is the case whether or not the consumer has subscribed to Sunset Fiber LLC voice service. Therefore, any third-party cellular devices that rely on a broadband Internet connection may not function during a power outage.

Third-party broadband Internet based security, personal alert or medical devices

Some third-party security, personal alert or medical equipment providers sell devices directly to consumers that utilize broadband Internet connections. These devices may be affected by power outages. The standard practice of Sunset Fiber LLC and is to install broadband Internet equipment that requires electricity in order to operate. In the event of a power outage, this equipment is designed to shutdown broadband Internet and video services (cable TV) in order to preserve as much standby time as possible for Sunset Fiber LLC voice service. This is the case whether or not the consumer has subscribed to Sunset Fiber LLC voice service. Therefore, any third-party security, personal alert or medical devices that rely on a broadband Internet connection may not be fully functional during a power outage.

Readiness Checklist

- Know where your battery backup solution (UPS) is located.
Make a note of it here: _____

- Periodically check the condition of your battery backup solution. Monthly is recommended.

- Replace the battery in the backup solution (UPS) as needed or every three to five years, whichever is sooner.

- Have at least one corded telephone that does not require an electrical outlet to operate.

Battery Backup Solution (UPS) Self-Maintenance Log

Date	Condition of Battery Backup Solution	Action Taken (If Any)