Tips for Preparing for Planned and Extended Outages

Power outages are inconvenient and becoming more common. Take control of your energy and prepare for an outage with these steps in order to maximize the performance of your sonnen and keep your essentials powered when the grid goes out.

Backup Buffer Considerations

You can use sonnen's simple, customizable backup buffer setting to preserve a percentage of your storage capacity for grid outages, while enabling you to utilize and cycle your system daily.

If your primary goal is to minimize your reliance on grid power in Self-Consumption or Time of Use (TOU) Modes of operation, consider setting a low backup buffer (15-20%), which will still allow for maximum grid autonomy.

Alternatively, if your primary use case is backup power, you have two options: set your a high backup buffer (50-75%+) to ensure more backup capacity is preserved for grid outages or keep your system in **Backup Mode**.

3 Actions to Take in Advance of Planned Power Outages

1. Place the sonnen in **Backup Mode** as soon as you receive an outage warning, ideally 1-2 days prior to an anticipated outage to ensure maximum battery charge. Refer to Gen 3 User Manual, p 17-18 or Gen 2 User Manual, p. 12-14.
2. Confirm that microgrid settings are enabled and the three wake-up times are scheduled for the optimal times of day when the sun will saturate your solar array. Refer to Gen 3 User Manual, p 17-18 or Gen 2 User Manual, p. 12-14.

For west, southwest, and south facing solar arrays, suggested microgrid wake up times are 11am, 12pm, and 1pm.
For east facing solar arrays, suggested microgrid wake up times are 8am, 10am, and 12pm.

Pro-Tip: If your sonnen has gone into **Standby Mode** (~5% state of charge), set reminders on your phone just before your wake up times to turn off all connected loads for a few minutes in order to enable a smooth wake up process.

3. Preserve your stored energy by reducing the loads powered by your sonnen and try to avoid discharging your battery below 5% during a power outage warning period.

Pro-Tip: Minimizing your loads powered during a grid outage will enable your battery to recharge. If you are unable to carefully manage your loads, connecting your sonnen to an auto-starting generator can prevent your system from entering **Standby Mode** by automatically charging it when it reaches a configured low state of charge.

What to Do If Your sonnen Goes into Standby Mode

At ~5% state of charge, your sonnen automatically goes into **Standby Mode** and waits for grid power to return or for the first set microgrid wake up time to energize the solar inverter — whichever comes first. Your sonnen is AC coupled, so solar production will always supply household loads first. Any excess solar power will be used to charge your sonnen.

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1. Turn off all loads connected to your sonnen prior to your microgrid wake up times to ensure any available solar production can begin charging the sonnen back up to normal levels and out of **Standby Mode**.
2. Once the sonnen comes out of **Standby Mode**, wait at least 300 seconds (5 minutes) for the solar inverter to start providing power to your home. During these 5 minutes, all household loads will be powered by the remaining energy stored in the battery, which is why it is essential to turn them off.
3. Once your solar system is operating and your battery charge reaches an acceptable level, loads may be turned back on.

Pro-Tip: Heavier loads will drain your sonnen faster than other equipment. In a prolonged outage, limit consumption to essentials such as the refrigerator, low energy lights (like LED), internet, cell phone chargers, and TV/radio.

Acccesing Your sonnen When Internet Service Is Down

If internet service is down, rest assured your sonnen will continue to operate as designed offline. Monitoring and remote accessibility will become available once the internet service provider (ISP) restores connectivity in the area.

If your sonnen is powering the router that provides the Local Area Network (LAN), it is possible to access the system Dashboard Login page by finding the DHCP IP address the router has assigned to the sonnen.

1. Login to your home router and navigate to view your connected device list.
2. Identify your sonnen by locating its MAC ID on the list of connected devices. The router will identify a MAC ID and assign it an IP address. The sonnen IP address will be listed next to its MAC ID (See Figure 1). **Note:** Some routers will name the sonnen "SB-serial #" along with listing the MAC ID (e.g. SB-110570).
3. Open your web browser, type the sonnen IP address into the web address bar, and press Enter. You should now see the Login page for your sonnen.
4. Proceed by entering the following sonnen login credentials:
   Username: user and **Password:** Sonnen2016 (or sonnenUser3552)

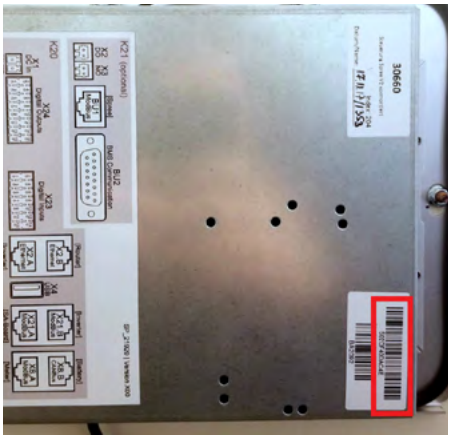

Figure 1 *Mac ID* — located on the inside of door of the sonnen system

Use Cases for an Uninterruptible Power Supply

An uninterruptible power supply (UPS) is an electrical device that enables an instantaneous transition of power when the main input power source fails. Adding a UPS can provide a more seamless experience in an outage and protect equipment such as:

Home router — Your WiFi router may assign a new address for internet communications if it temporarily shuts off, which may interrupt the data connection with your sonnen. While you can correct this by rebooting your sonnen, plugging your router into a small UPS will prevent the router from turning off during an outage and enable seamless communication.

Sensitive electronics (home computer, printers, external disk drives) — While it only takes sonnen a few seconds for your sonnen to begin providing power in the event of a grid outage, adding a UPS enables instantaneous transition of power for devices that may otherwise turn off and re-boot, protecting sensitive devices and preventing any potential file or data loss.

Important Safety Note and Additional Resources

- If you rely on electronic medical equipment for your health, you should have an appropriate plan for charging batteries during extended outages in bad weather and for extended outages in general.
- Always reference the sonnen User Manual as a guide: Gen 3 User Manual or Gen 2 User Manual
- Watch our YouTube video: Preparing your sonnen eco for a prolonged power outage
- For issues you are unable to resolve on your own, your installer can assist you. If you cannot reach your installer, you can email sonnen's Service Team at service@sonnen-batterie.com or call sonnen's Service Hotline (818) 824-6363 Monday through Friday — 5am to 5pm PT. Voicemails are monitored outside of these hours. Reference your unit's serial number.

For technical support, contact us:

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