

02-16-2020, Beginners/Mac Basics SIG – Energy Saver Preference Pane

Note: This discussion is based on macOS, 10.14.6 (Mojave). Some illustrations may differ when using other versions of macOS or OS X. Most illustrations are from screenshots on my iMac or MacBook Pro.

In this Mac Basics presentation, we'll discuss the **Energy Saver Preference Pane** (what it is and how to use it).

Credit: This presentation is based a recent article at the Rocket Yard, a blog at Other World Computing (<https://blog.macsales.com>) and a great source of articles and guides about using your Mac. (See the credit at the end of this presentation for the URL.)

As the article notes, the Energy Saver Preference Pane enables you to “better tune your Mac to run at peak performance, save energy, reduce potential data loss when power fails, and extend the runtime and battery life of portable Macs.”

Energy Saver Preference Pane

The Energy Saver preference pane is found in macOS **System Preferences** and (surprise) looks like a light bulb:



System Preferences – Energy Saver Preference Pane

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It's a bit difficult to describe the features of the Energy Saver preference pane for several reasons because it looks and acts differently depending on:

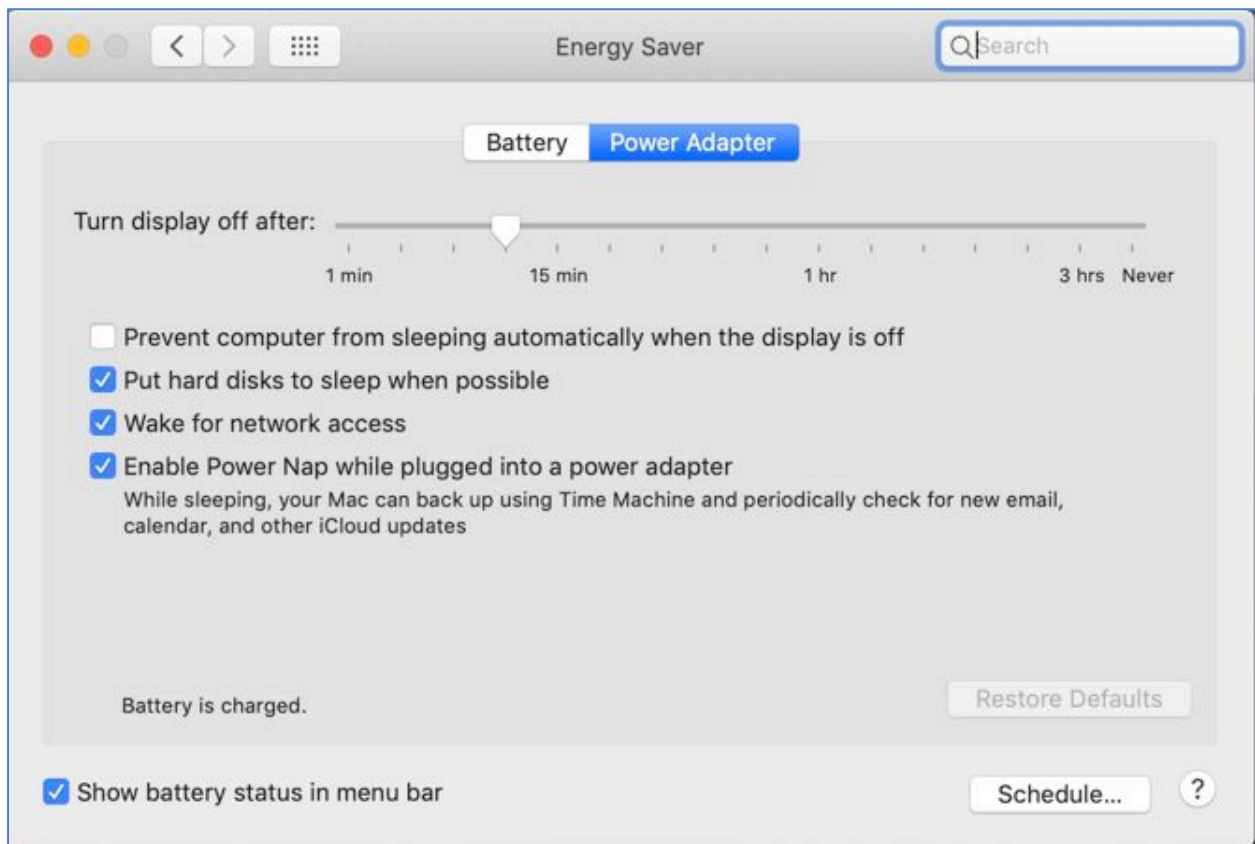
- Which version of the macOS you're using
- Whether you're using a desktop Mac or a portable Mac
- Whether there is a UPS (Uninterruptable Power Supply) connected to your Mac

I'm using screenshots from both my iMac and MacBook Pro, each of which is running macOS 10.14.6 (Mojave) along with their Energy Saver settings. Double Click's MacBook Pro uses macOS 10.15 (Catalina), so the meeting presentation of the Energy Saver preference pane may also show some differences.

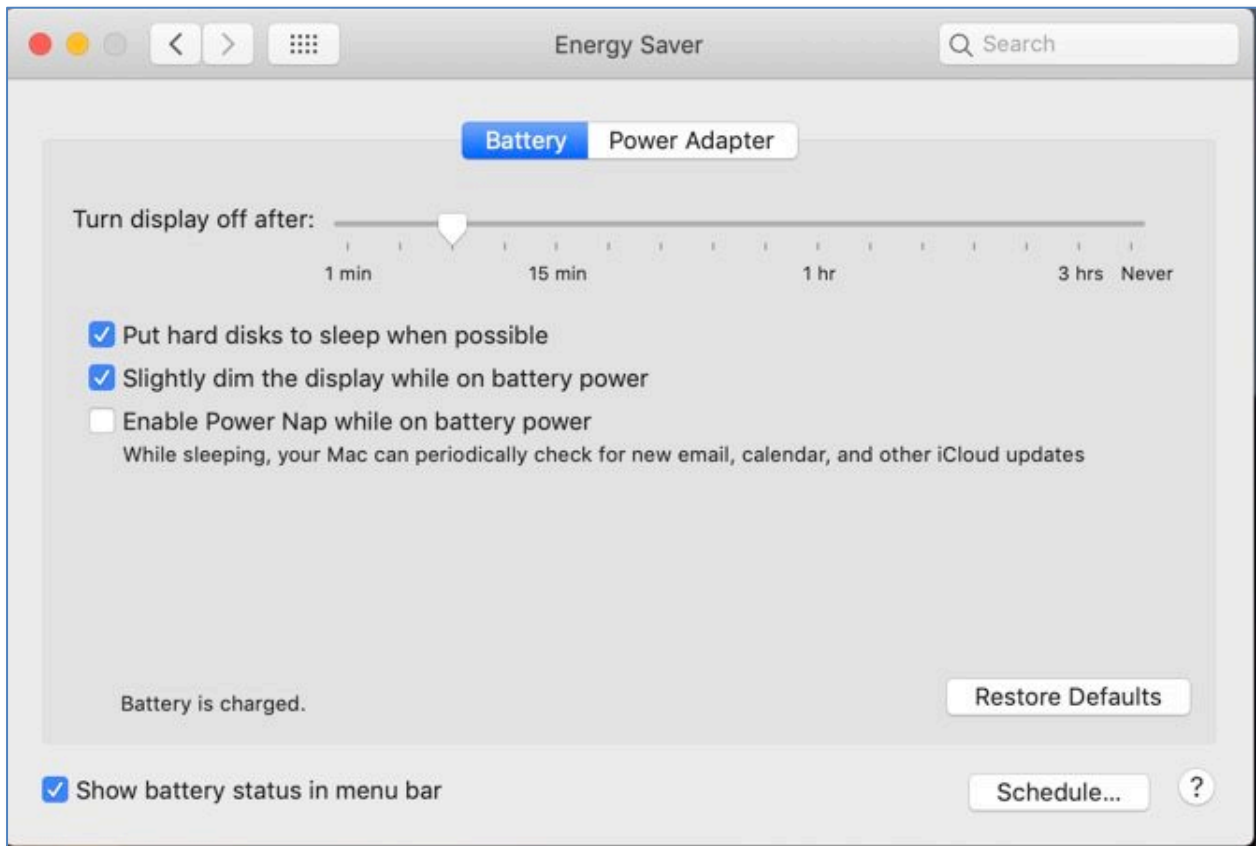
Energy Saver Settings

Click on the **Energy Saver** icon to open its window. What's displayed depends on the type of Mac that you're using, MacBook or Desktop, and whether or not a UPS is connected. The result is four basic configurations:

MacBooks. There's a single slider for adjusting the time until the display is turned off. Also, there are two tabs: one (**Battery**) for when the MacBook is powered by its internal battery, and the other (**Power Adapter**) for when the MacBook is powered by an external power adapter. Select each tab to adjust the settings for each power source independently:



Energy Saver Preference Pane (MacBook – Power Adapter Tab)



Energy Saver Preference Pane (MacBook – Battery Tab)

Desktop Macs. There’s a single slider to adjust when the display is turned off, and only a single set of settings. Unlike MacBooks, there is no option to select a power source to which to apply the settings.

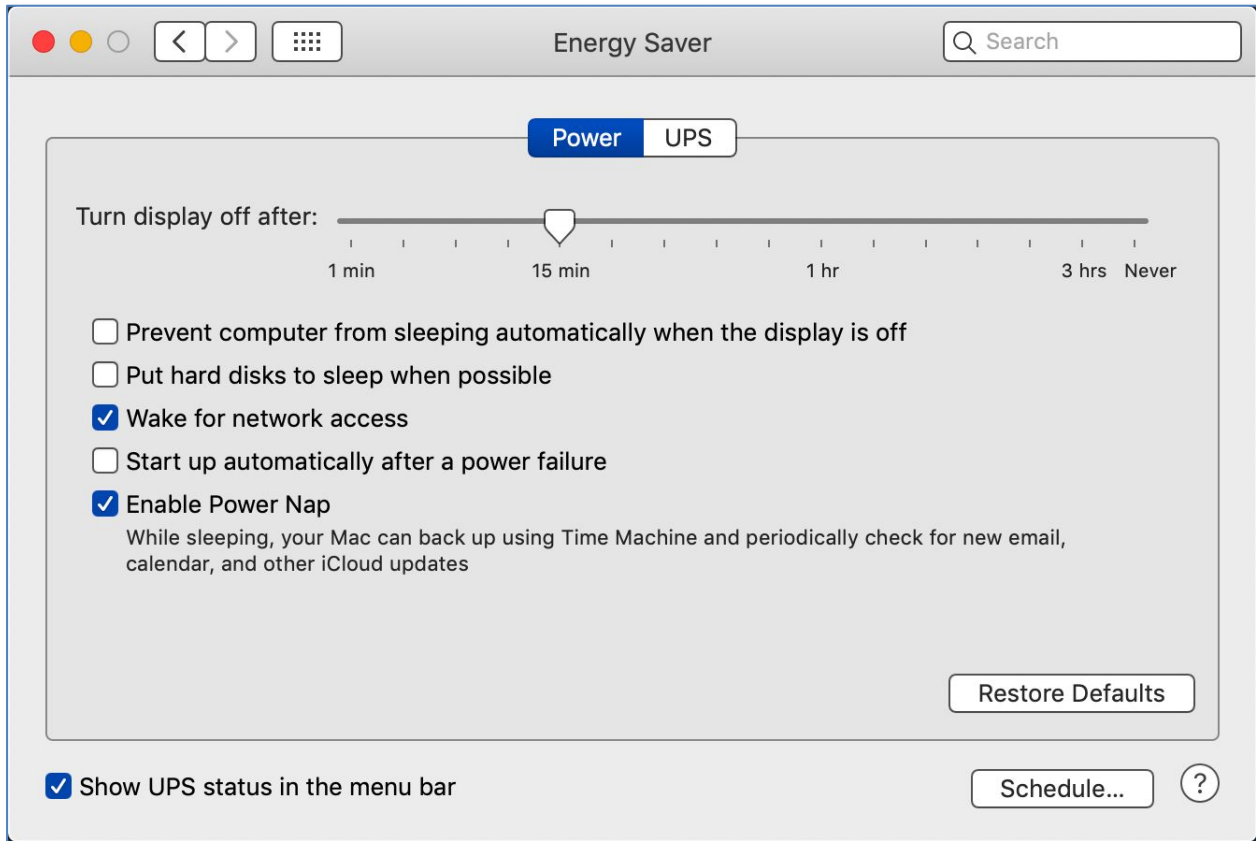
UPS Connected Macs. If you have a desktop Mac with a UPS connected, you should see two tabs, similar to the MacBook: one (**Power**) for setting Energy Saver options when the Mac is running off the main power and one (**UPS**) for setting UPS options (primarily how quickly to shut down when a power failure occurs).

Depending on the UPS manufacturer, separate UPS management software may be available. In this case, it’s common to use a USB cable to connect the Data port on the UPS to the USB port on your computer.

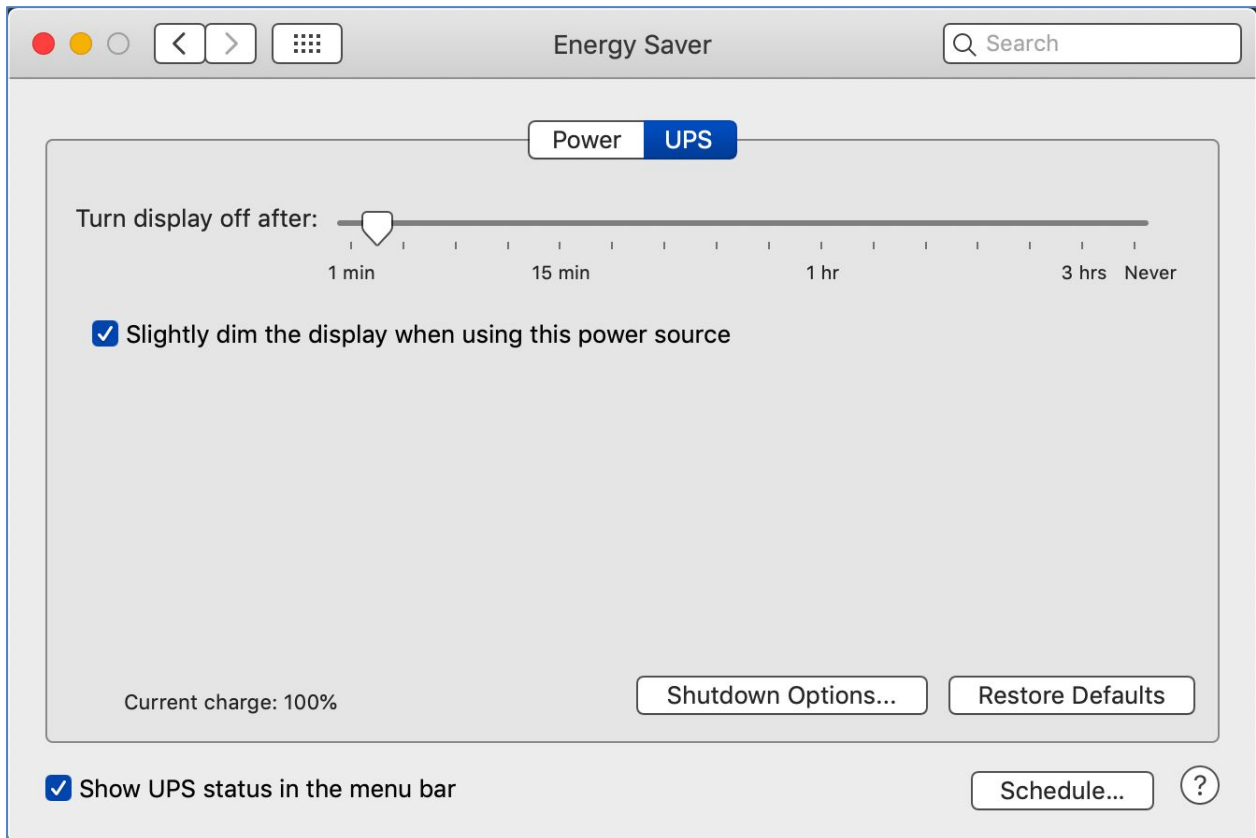
Note: My iMac is connected to a UPS, one made by APC (American Power Conversion™ Corporation, owned by Schneider Electric Industries), model: “Back-UPS 650VA Battery Back-Up System.” It’s rated at 650 volt-amperes and 360 watts. Run time depends on the amount of power that it must supply. For example, a small computer might draw 40 watts, and this UPS is rated to supply that load for 67 minutes. However, really large computer with some peripherals might draw 180 watts, and then the UPS can supply that load for only 10 minutes.

Here’s the Energy Saver preference pane when a UPS is connected. (See the illustration on the next page.)

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Energy Saver Preference Pane (Desktop iMac – Power Tab)



Energy Saver Preference Pane (Desktop iMac – UPS Tab)

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Servers and Some Desktop Macs. If you're running a Mac as a Server, there may be some additional settings such as allowing you to specify, independent of the display, when the computer should sleep.

Energy Saver Options

There are *lots* Energy Saver options that you can adjust depending on the type and model of Mac that you have along with the version of macOS that you're using. Some of them discussed below may pertain to specific hardware. So, if you don't have that hardware, you won't see them.

Automatic Graphics Switching. In some Macs, especially MacBook models, there may be more than one set of graphics hardware (a graphics chip integrated with the processor set and a separate, higher-performance graphics chip that uses more energy). *Note: My MacBook Pro doesn't have this option.* Depending on the power source or the charge level of the battery, selecting the Automatic Graphics Switching option will cause the Mac to switch between graphics systems. So, this option can extend the runtime of your Mac when running on the battery.

Computer Sleep, Display Sleep, or Turn Display Off. If available, these sliders are used to set the time interval before your Mac enters sleep mode, the display enters sleep mode, or the display is turned off. If you're running on battery, you can maximize battery runtime by setting the display to sleep quicker.

Put hard disks to sleep when possible. This option spins down hard disks when they're inactive, thus helping save battery life by eliminating the power draw of the hard drives. There's a slight downside to this setting, however, since it can cause a delay when data is needed since the drives have to spin back up. Of course, this setting does not affect solid state drives (SSDs).

Wake for network access. Do you have others that use your network, perhaps for sharing a printer or iTunes library on your Mac? If so, this option will allow your Mac to wake up when someone on the network needs to use these resources.

Enable Power Nap. Setting this option allows your Mac to perform certain functions (checking for emails, calendar updates, and iCloud syncing, etc.) even when your Mac is asleep.

Allow power button to put computer to sleep. Normally, the power button allows you to turn off the power to your Mac. However, when this option is selected, a single tap on the power button will put your Mac to sleep. You can still turn the power off with a long press of the power button.

Prevent computer from sleeping automatically when the display is off. If your Energy Saver preference pane uses a single slider to turn off the display (the case with both of my Macs), that same time setting is used for putting your Mac to sleep. If you select this option, your Mac will stay awake even when the display has turned off or gone to sleep.

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Start up automatically after a power failure. This option will automatically restart your Mac when power has been restored after a power failure. However, it's a good idea to make sure that the power is back on and stable. This is because the power may come back, go away, and come back again several times before it's stable. So, unless you have a specific need, such as the Mac has shared resources used by others, it's probably a good idea to leave this option turned off. There's simply no upside (or possible damage?) in having the Mac automatically turn on and off with each power incident.

Show battery status in menu bar. With a MacBook, this option will show a battery icon in the menu bar and will show if the Mac is connected to a power supply, if the battery is charging, and the battery charge level.

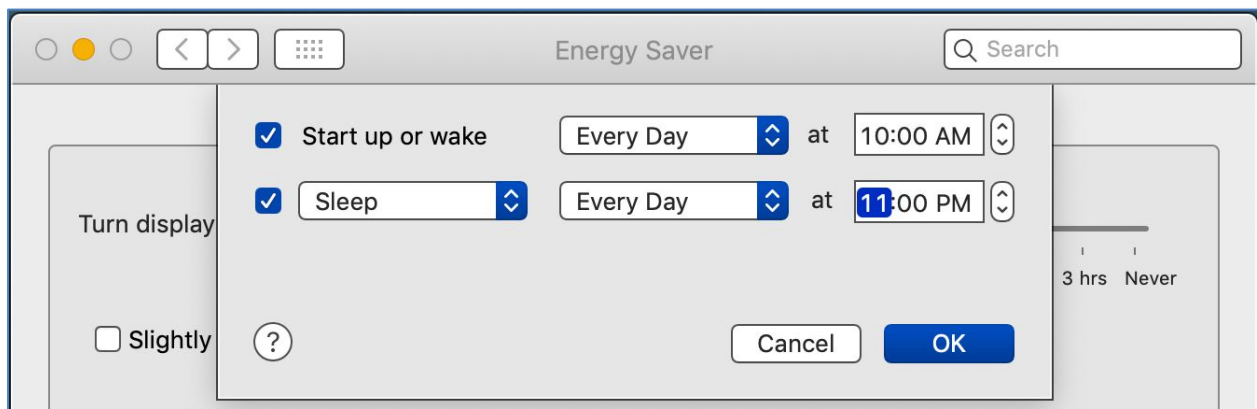
Startup and Sleep Schedule

Check at the bottom of the Energy Saver preference pane, and you'll find the **Schedule** button. Click this button and a sheet will drop down from the top of the pane that allows you can set a specific time for your Mac to start up as well as a time for your Mac to sleep, restart or shut down.

- For Start up or wake, click the checkbox, chose the daily schedule from the menu and the time.
- For Sleep, Restart or Shut Down, click the checkbox, chose the daily schedule from the menu and the time.

Make your selections, and then click the **OK** button.

If you have predictable times when you want to start using your Mac or when you're done using it, then consider using this schedule to set up Start Up/Wake and/or Sleep/Restart/Shut Down.



Energy Saver Preference Pane (Startup & Sleep Schedule Dropdown Sheet)

UPS

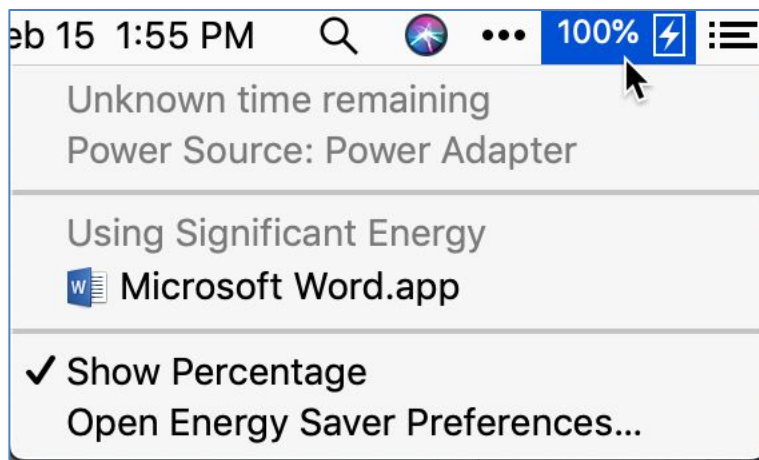
If you have a UPS connected to your desktop Mac you'll see a tab for **UPS** in addition to the one for **Power**. The UPS tab is used to set options related to how your Mac will shut down after a power outage occurs. It has several options:

Turn display off after. The slider adjusts how long to leave the display on when your Mac is running from the UPS battery. A short time setting will turn the display off quickly to reduce the load on the UPS battery and extend its runtime.

Slightly dim the display when using this power source. This option will dim the display slightly when your Mac is running on the UPS. It serves as a reminder if you've set a longer time to turn the display off. Of course, if you're in the middle of a power outage, running on the UPS should be apparent. Then again, perhaps it's just a local circuit breaker in your house that has tripped the power source for your Mac.

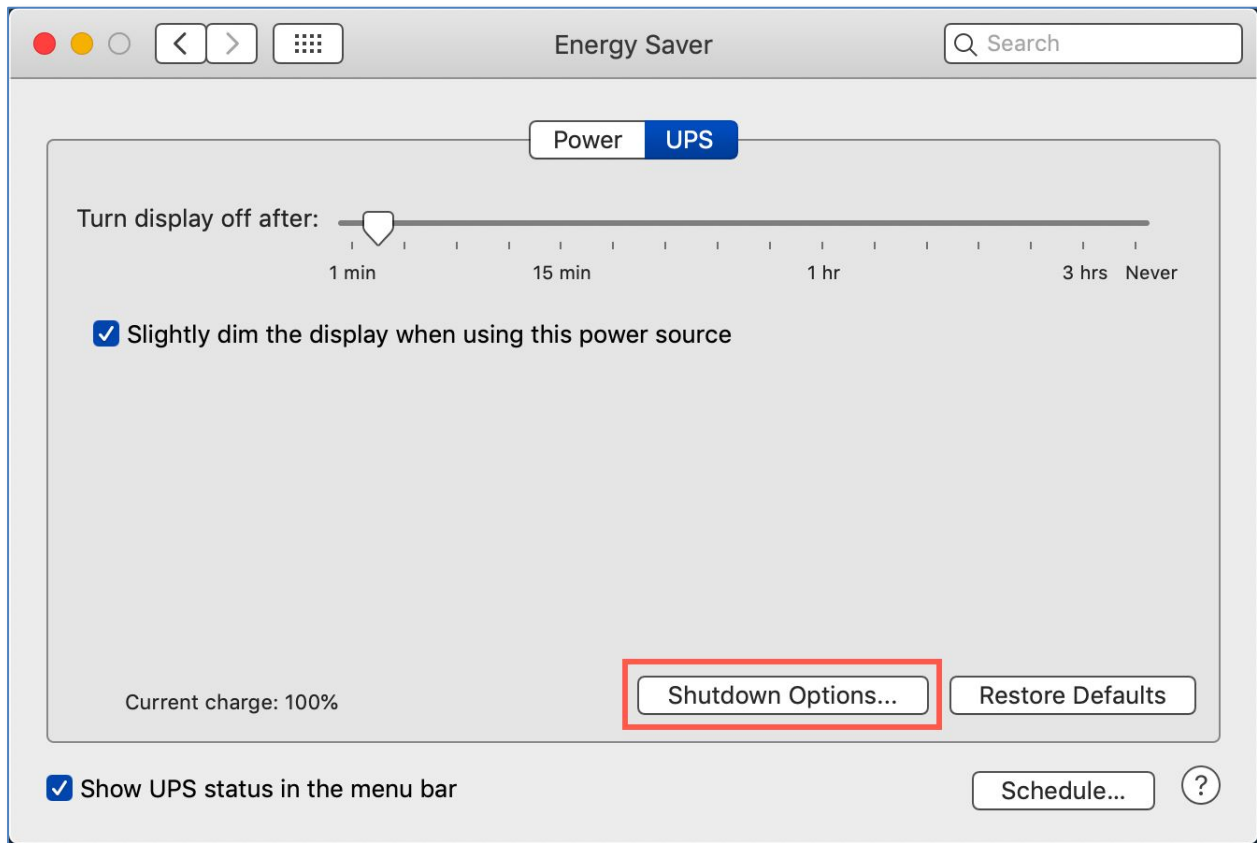
Show UPS status in the menu bar. This option will make the UPS status appear in the menu bar as a battery icon. Depending on the Mac and the UPS, the menu bar item may be able to display the time remaining on UPS battery, and which power source is being used.

Depending on the type of Mac that you're using, the menu bar icon may look like the one in the illustration below, or it might resemble a battery lying on its side with the amount of charge indicated by how "full" the battery is.



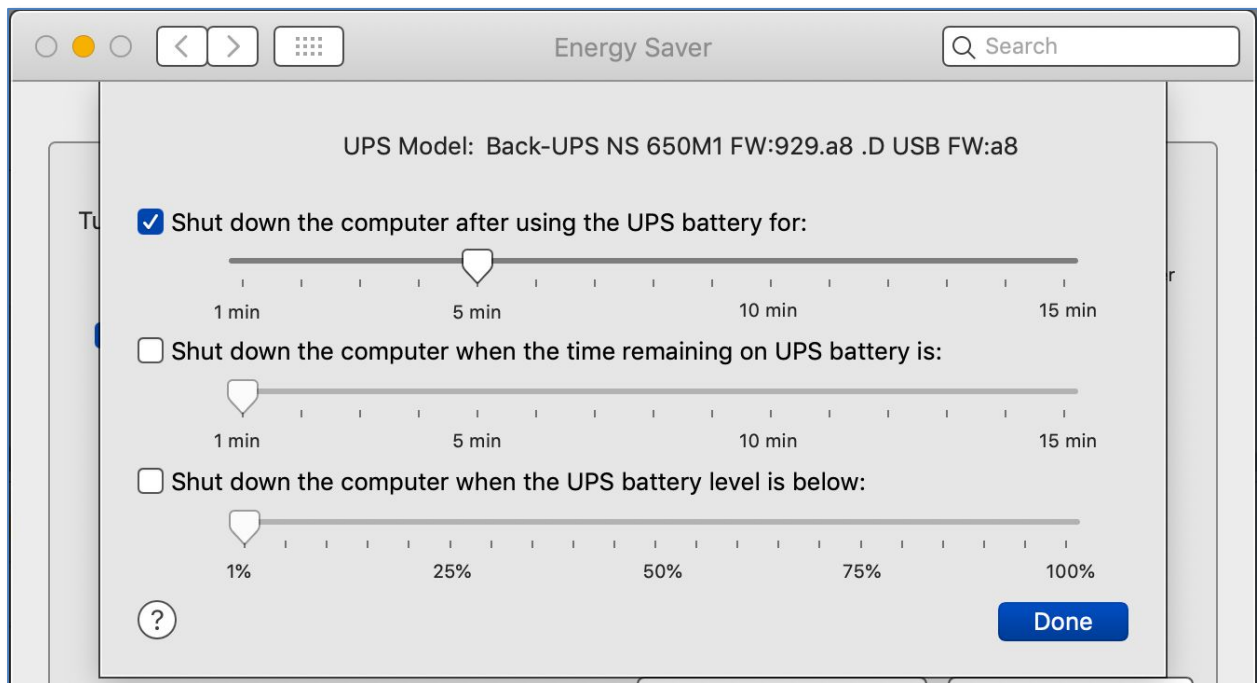
UPS Status Indicator (Menu Bar)

Shutdown Options. Click this button to configure your Mac's shutdown options (the criteria used to determine when your Mac should turn off after a power outage). (See the illustration on the next page.)



Energy Saver Preference Pane (Shutdown Options...)

Clicking the button will cause the **Shutdown Options** sheet to drop down from the top of the pane.



UPS Shut Down Schedule

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There are three shut down options:

Shut down the computer after using the UPS battery for. Use the slider to select the amount of time to wait before shutting down.

Shut down the computer when the time remaining on the UPS battery is. Use the slider to select the amount of runtime remaining on the UPS battery.

Shut down the computer when the UPS battery level is below. This slider represents the amount of remaining battery life by percentage.

You can select more than one of the items. For example, you could choose to shut down your Mac after 10 minutes, and also select shut down when the UPS battery is below 25%. This would allow you to continue to use your Mac for 10 minutes unless the battery level falls below 25%, at which point your Mac will begin to shut down.

Finally, make your selections, and then click the **Done** button.

Note: Some UPS manufacturers include their own software for managing the UPS. Because of this, you may have very different UPS options available to you.

Summary

The Energy Saver preference pane is found in System Preferences and offers a wide range of options to “better tune your Mac to run at peak performance, save energy, reduce potential data loss when power fails, and extend the runtime and battery life of portable Macs.” The options available vary considerably and depend on which version of the macOS you’re using, whether you’re using a desktop Mac or a portable Mac, and whether you have a UPS (Uninterruptable Power Supply) connected to your Mac.

The main difference among the options available depend on whether you’re using a MacBook model or a desktop Mac (and whether the desktop Mac is connected to a UPS). Some of the more significant options include settings for: (1) Computer Sleep, Display Sleep, or Turn Display Off; (2) Put hard disks to sleep when possible; (3) Enable Power Nap; (4) Show battery and/or UPS status in menu bar; and (5) UPS Shutdown Options.

Next Presentation

For the next presentation, we’ll take a look another macOS feature.

Have a favorite Mac Tip or utility? Please feel free to pass it along, and I’ll see if I can work it into a future presentation.

If you have any suggestions for presentation topics, including macOS utilities, please contact me at slp4668@gmail.com.

–Steve Parker

Credit:

<https://blog.macsales.com/57756-use-the-macs-energy-saver-preference-pane>