

## POWER MANAGEMENT

### *Recommended Settings*

When enabled, power management places your monitor, hard drives and computer into a low-power “sleep” mode after a period of inactivity. A simple touch of the mouse or keyboard “wakes” the computer, hard drive and monitor in seconds. Power management features are standard in Windows and Macintosh operating systems.

The use of power management can reduce energy consumption and cooling costs, reduce noise, and prolong the battery life of laptop PCs. And when your PC consumes less power, you reduce your impact on the environment.

To improve the power efficiency of your PC, the Climate Savers Computing Initiative recommends the following power management settings:

- **Monitor/display sleep:** Turn off after 15 minutes (or less)
- **Turn off hard drives/hard disk sleep:** 15 minutes (or less)
- **System standby/sleep:** After 30 minutes (or less)

Detailed instructions for setting power management by operating system and system manufacturer follow.

**Note:** *Windows NT 4.0 Workstation operating system does not support monitor power management. EZ Wizard and manual enablement will not work for a computer running Windows NT.*

*Instructions for manually enabling power management*

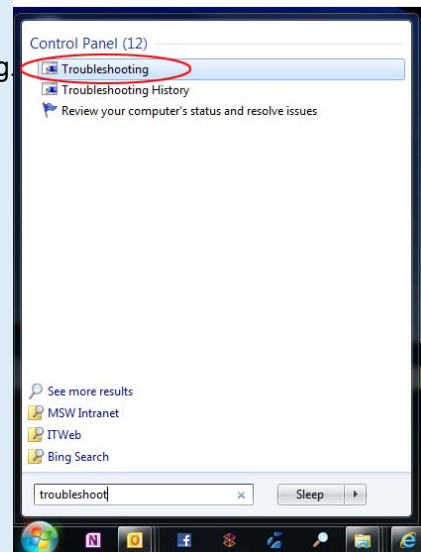
**Windows 7**

**Optimizing Energy Savings in Windows 7**

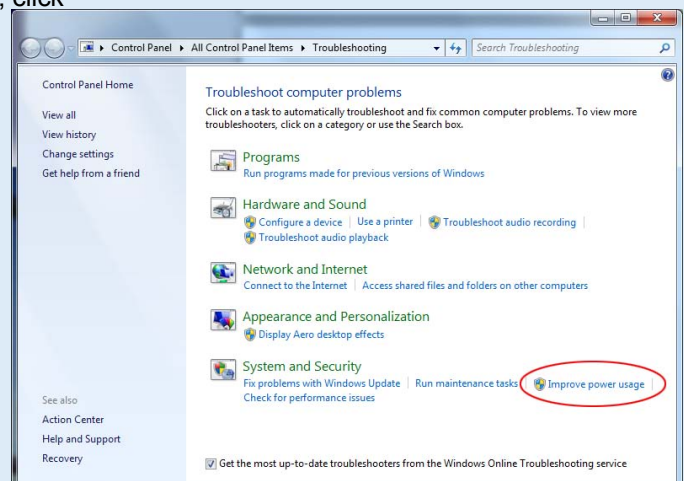
Nearly all PCs installed with Windows 7 will initially have power management enabled with Energy Star recommended settings or better. However, sometimes power management is disabled or made less effective by other users or system administrators who manage your PC for you.

Although power management settings can be changed through the Control Panel, we recommend you use the “Improve power usage” troubleshooting tool in Windows 7 to optimize energy savings. Follow the step-by-step directions below or view a video of the extensive Windows 7 power management features at <http://technet.microsoft.com/en-us/windows/ee524728.aspx>

1. Select Start. In the Search Programs and Files box, type "troubleshoot" and select Troubleshooting

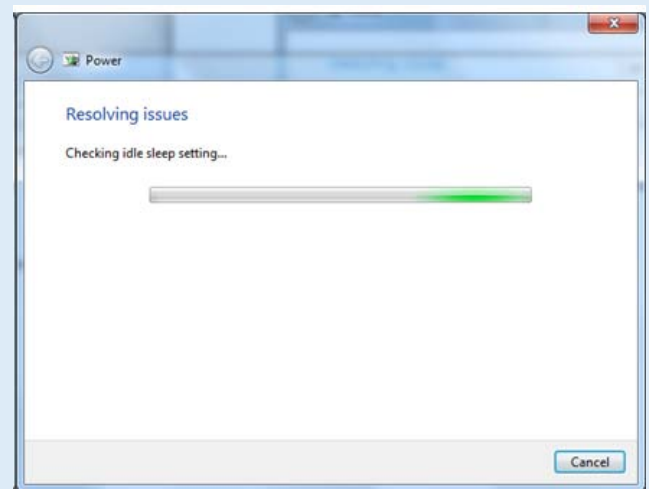
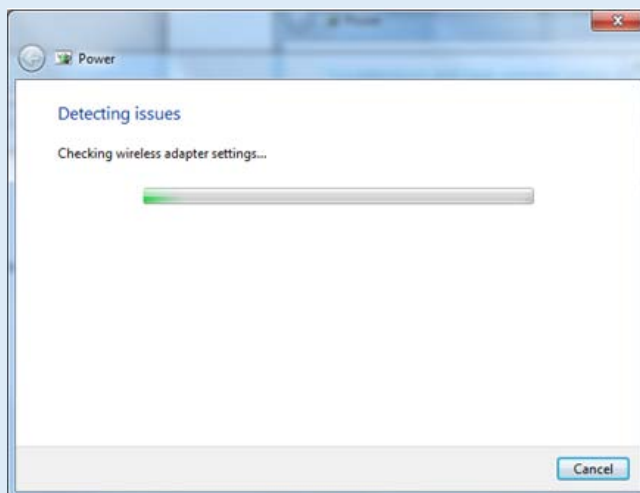
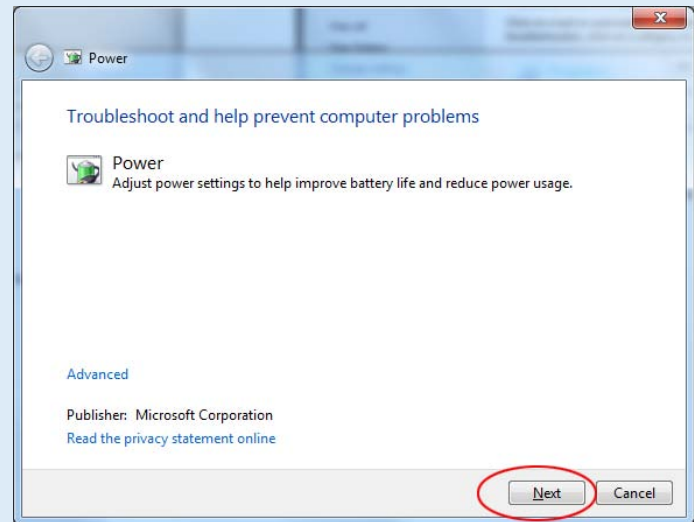


2. Under the System and Security heading, click Improve power usage



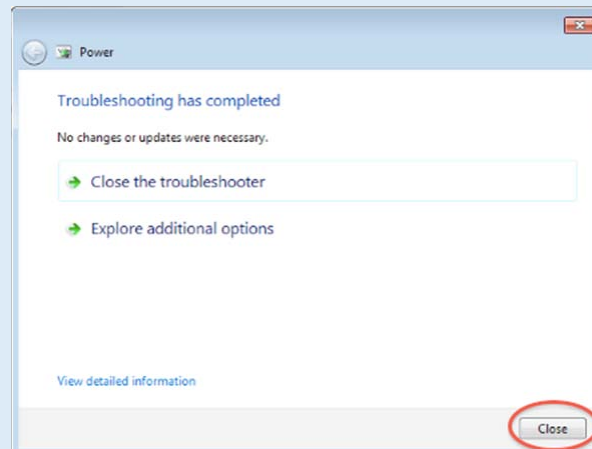
### Windows 7(continued)

3. Click Next to optimize your computer power management settings, including a 10-minute display blanking timeout and 30-minute automatic sleep setting.



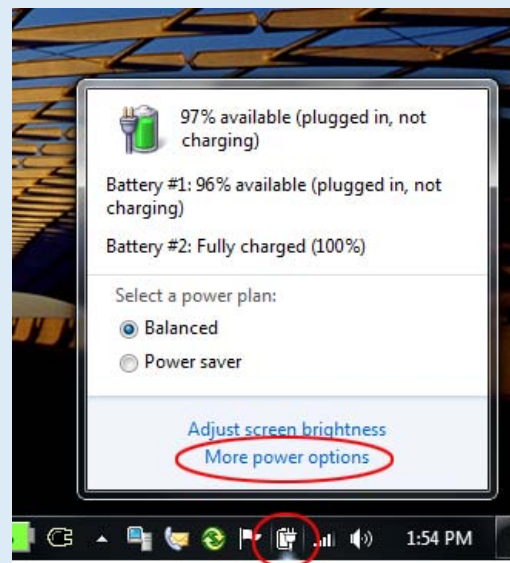
## Windows 7 (continued)

4. Click Close to exit.



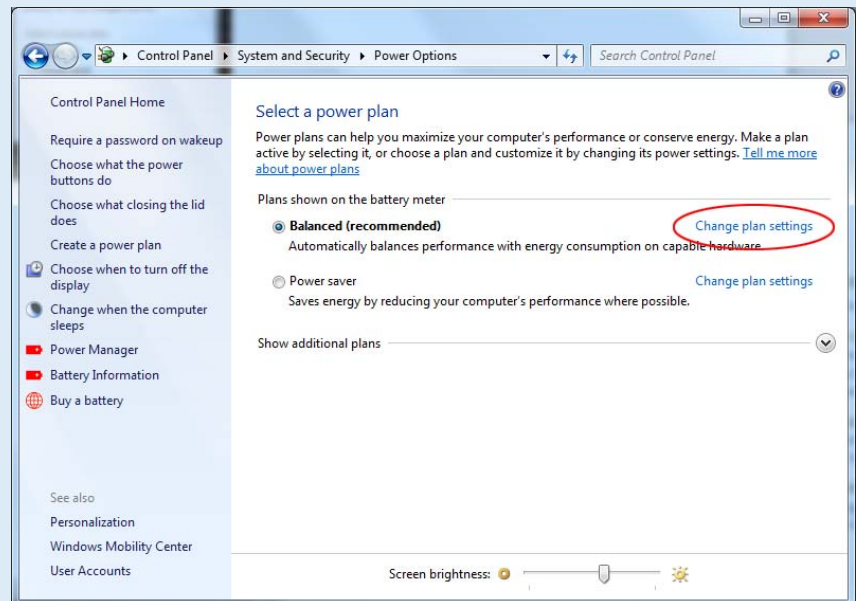
### Additional Power Options

Power settings can be optimized further by going directly to the Power Options setting. Click Start and type "power options" in the Search Programs and Files box. On a mobile PC, this can be accessed directly by clicking on the power icon in the system tray (typically located on the bottom right of the screen) and selecting More power options.

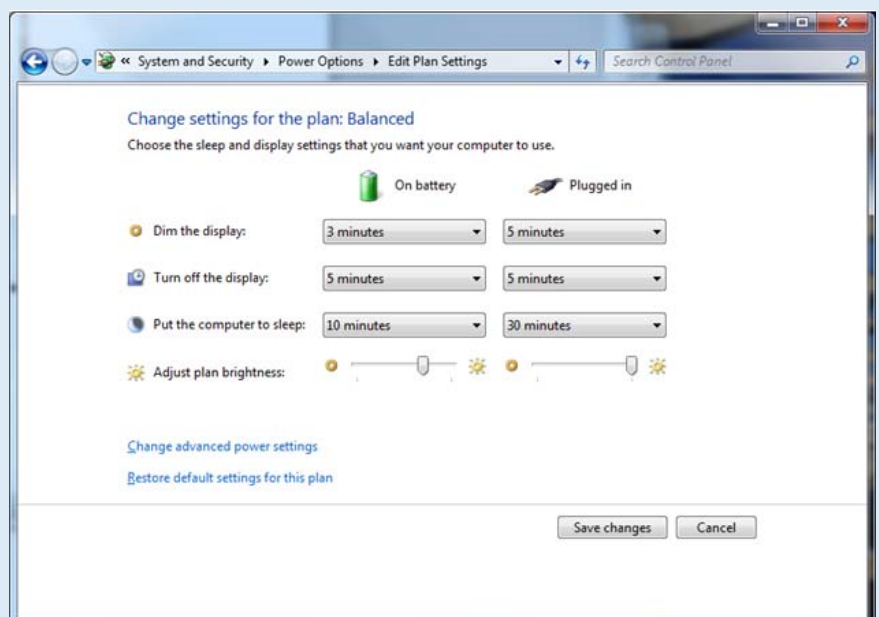


## Windows 7(continued)

Click Change options on the currently selected plan.



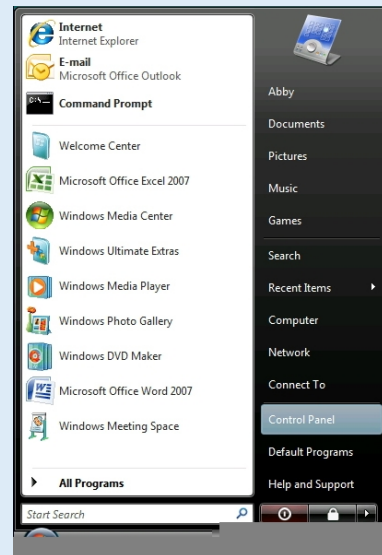
Select the desired timeouts and screen brightness (if using an integrated display). Recommended timeouts are shown below. Click save when done and close the power options control panel.



## *Instructions for manually enabling power management*

### **Windows Vista**

1. Select Start > Settings > Control Panel from the Start Menu.



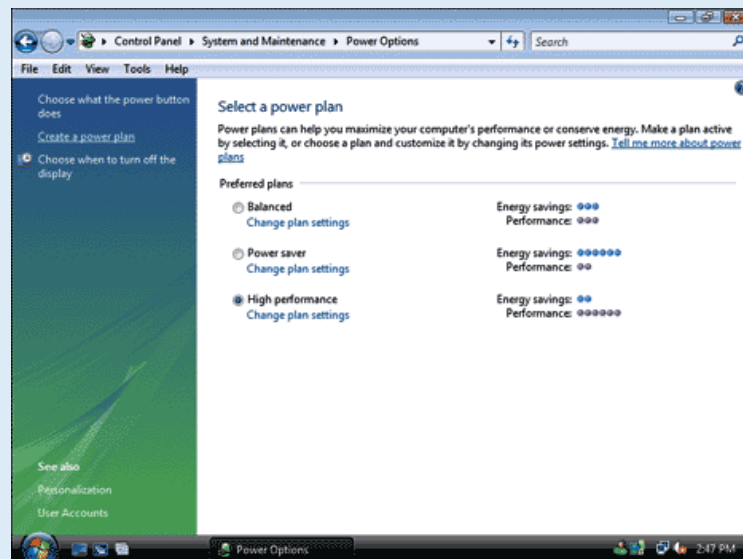
2. The Control Panel has two views. If you are in Theme View select System Maintenance and the Power Options.



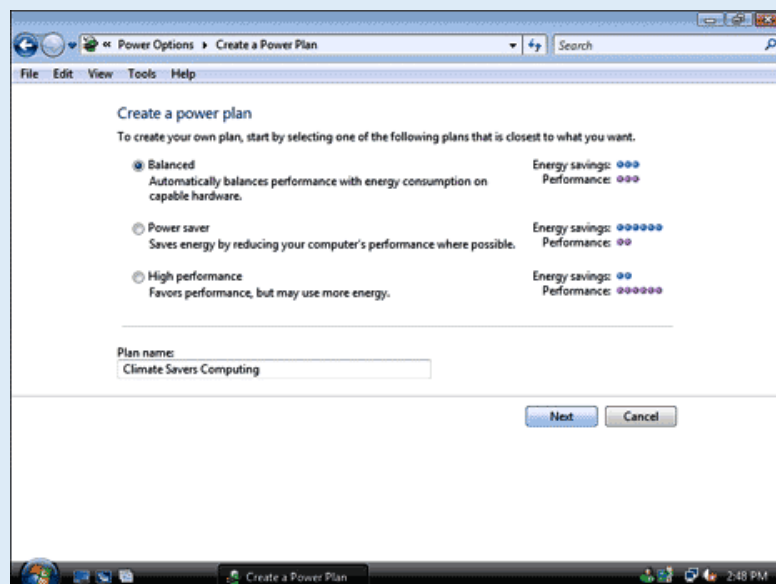


## Windows Vista (continued)

- Once you are in Power Options, click "Create a power plan" link.

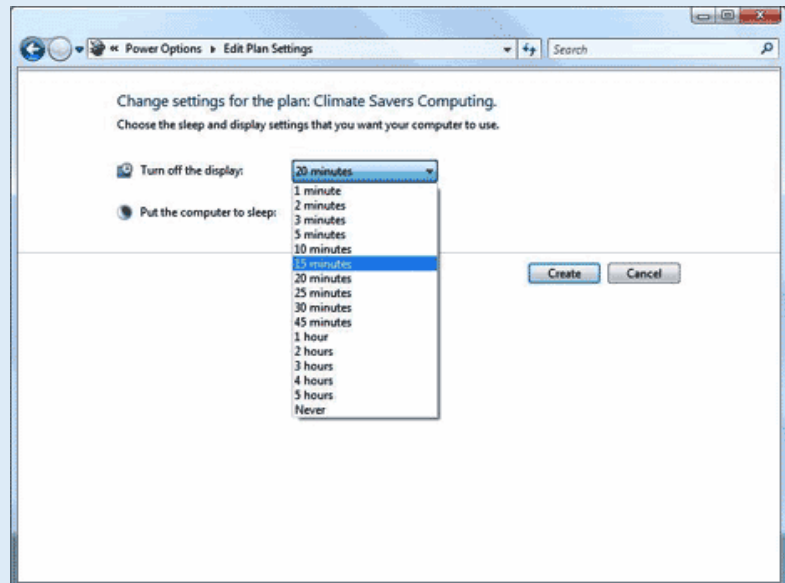


- Enter a name of your new plan in the "Plan name" field and click Next. Ensure that you select the Balanced plan as the starting point of your new power plan.

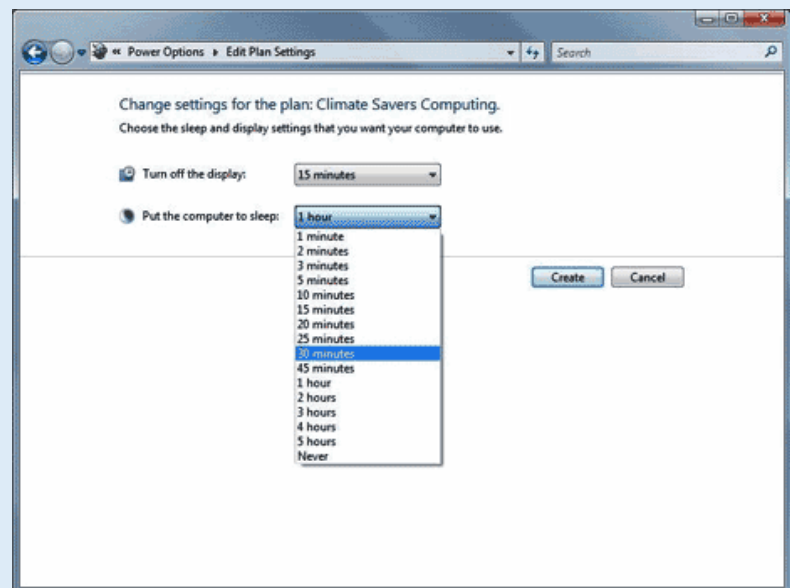


### Windows Vista (continued)

- The initial screen for editing a plan allows you to change the monitor and sleep timeout settings. Set Turn off the display for 15 minutes (or less).

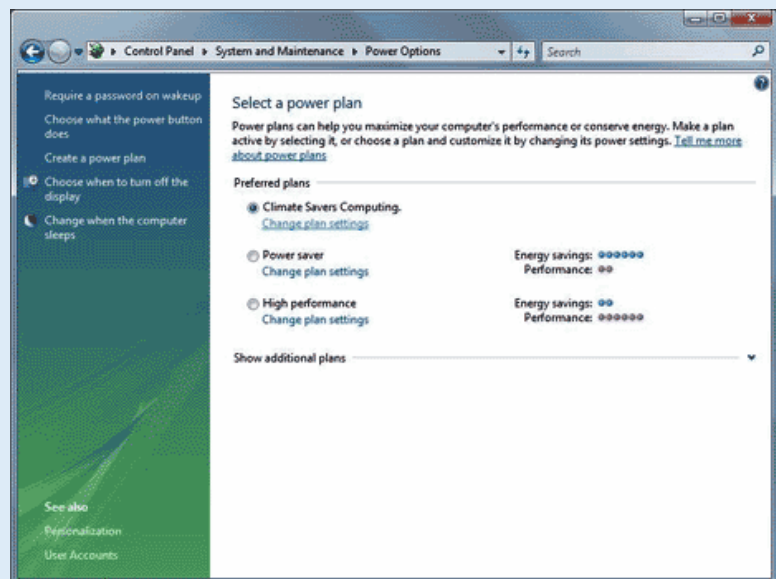


- Set Put computer to sleep for 30 minutes (or less)

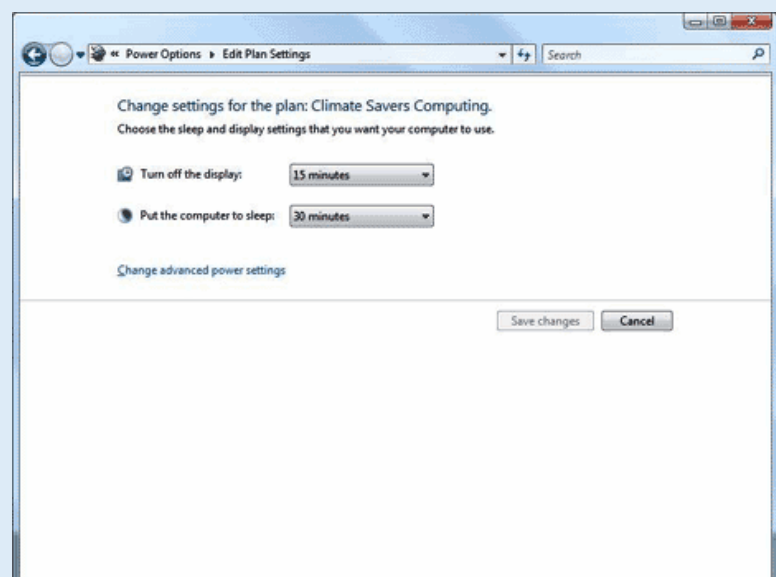


## Windows Vista (continued)

7. Click the Create button to create and activate your new Power Plan.
8. To make additional changes, click on "Change plan settings" underneath the name of the plan you just created.

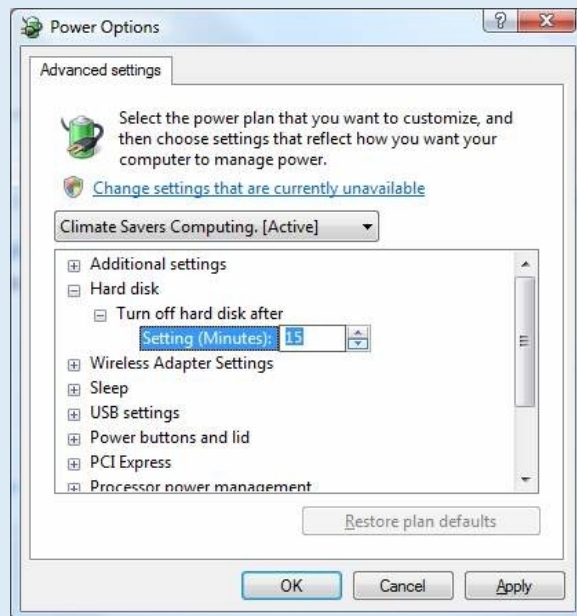


9. Click on Change advanced power settings. Here you will be able to enable or set values for a variety of Power Management options.

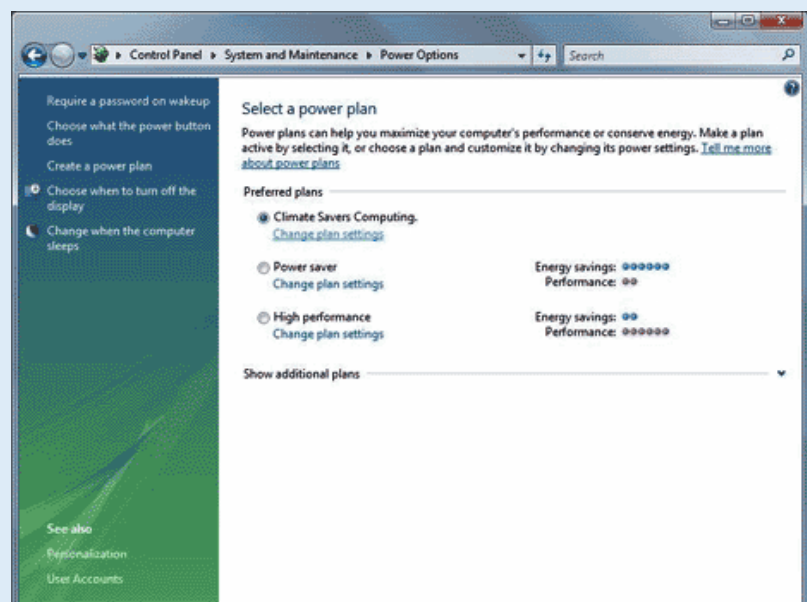


## Windows Vista (continued)

- Set Turn off hard disks after 15 minutes (or less)



- Click Okay.
- Click Save changes.
- You should now see your custom plan available in the list.  
You can change between plans by selecting the associated radio button.



## **Windows Vista (continued)**

### **Situations That Cause Vista to Not Sleep**

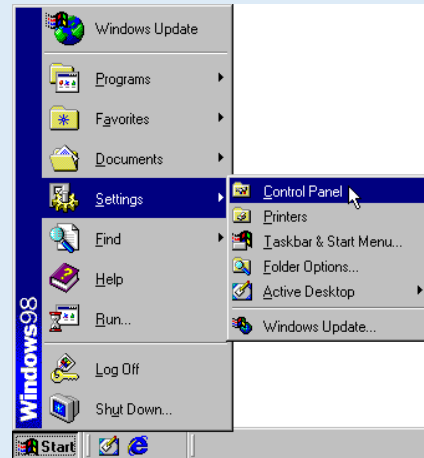
PCs may not enter sleep mode when they have a file open over the network. Graphics-intensive screen savers can prevent PCs from entering sleep mode as well, and should be disabled.

Otherwise Vista should not allow software applications to stop it from going to sleep. However, it is possible for a network administrator to change this default, allowing applications to "veto" sleep when they are busy. The default can be changed using Group Policy, but cannot be set through the Power Options applet in the Control Panel.

*Instructions for manually enabling power management*

**Windows 98**

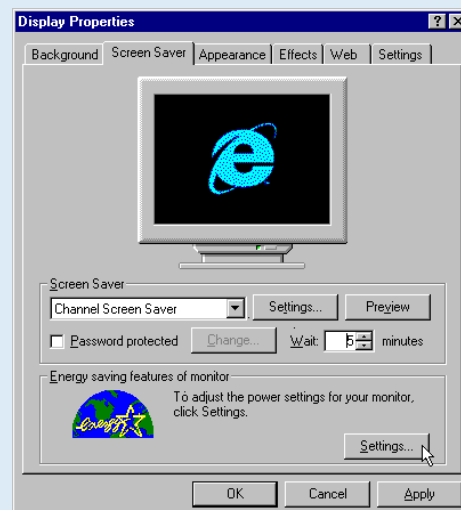
1. Select Start > Settings > Control Panel from the Start Menu.



2. Double-click the Display icon in the Control Panel window.

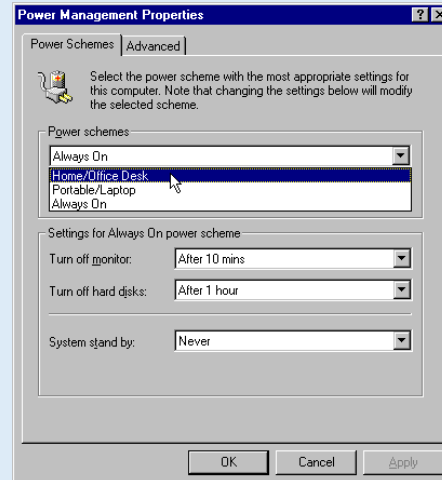


3. In the Display Properties window, click the Screen Saver tab, then click the Settings button in the Energy Saving Features of Monitor box.

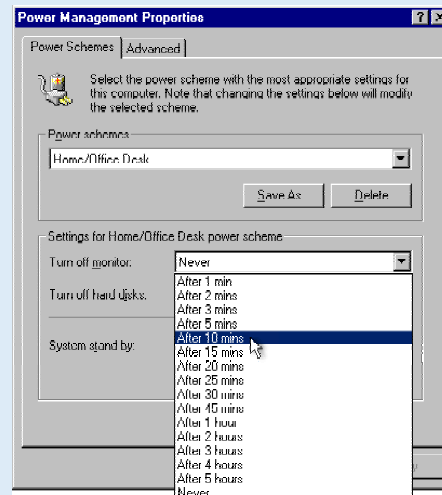


## Windows 98 (continued)

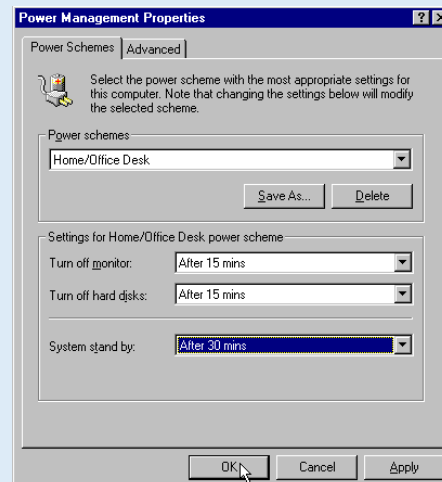
- Under Power Schemes, select Home/Office Desk.



- Set Turn off monitor for 15 minutes (or less).
- Set Turn off hard disks for 15 minutes (or less).
- Set System standby for 30 minutes (or less).



- Click OK.



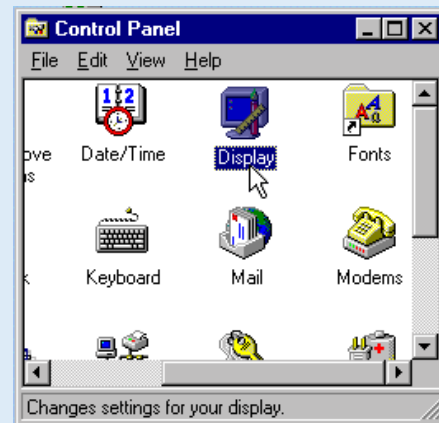
*Instructions for manually enabling power management*

**Windows 95**

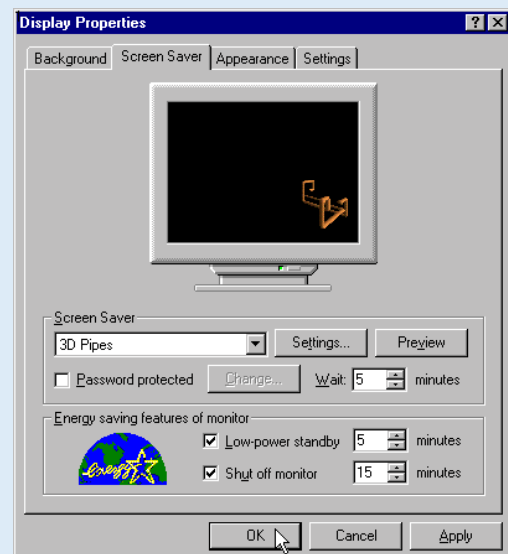
1. To set up power management in Windows 95: Select Start > Settings > Control Panel from the Start Menu.



2. Double-click the Display icon in the Control Panel window

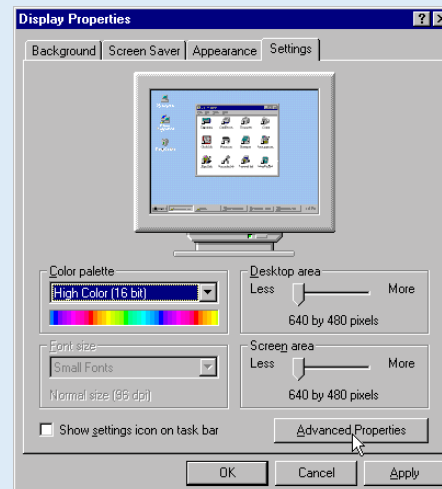


3. Click the Screen Saver tab, then check the Low-Power Standby box and set it for 5 minutes or less. Check the Shut off monitor box and set it for 15 minutes (or less).



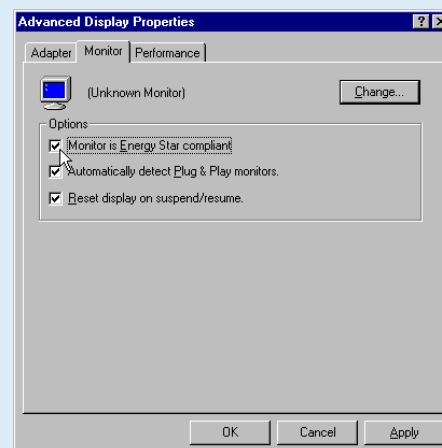
## Windows 95 (continued)

4. If the Energy Saving Features of Monitor box is grayed-out and you know you have an ENERGY STAR qualified monitor:
  - a) Click the Settings tab, then click the Advanced Properties button.
  - b) Add a check in the box marked Monitor is ENERGY STAR Compliant, then return to step

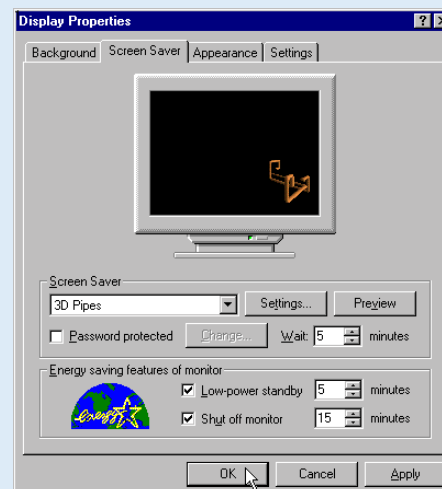


5. If you are not sure whether your monitor is ENERGY STAR qualified, make sure that your monitor has been properly installed and recognized by the operating system.

*If you don't know how to do this, contact your administrator for assistance. Once properly installed, if the monitor is ENERGY STAR qualified, the Energy Saving Features of Monitor box should no longer be grayed-out.*



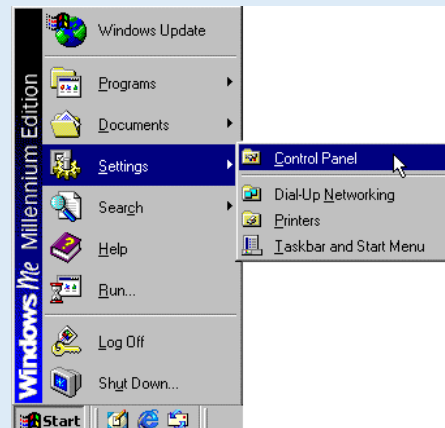
6. Click OK.



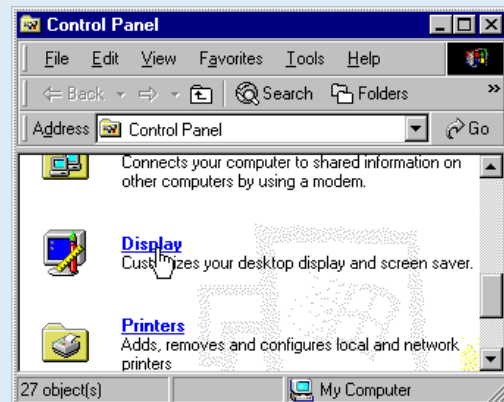
*Instructions for manually enabling power management*

**Windows ME**

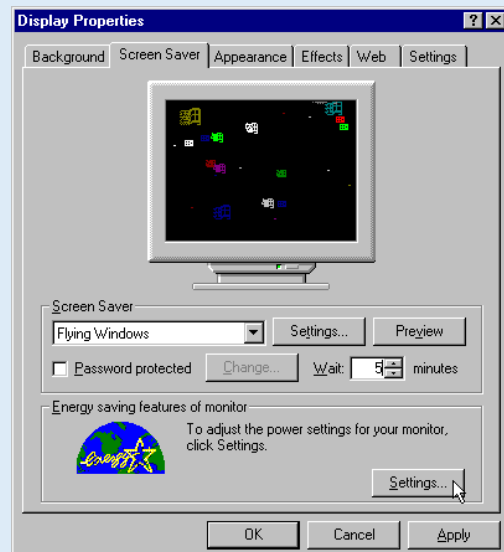
1. Select Start > Settings > Control Panel from the Start Menu.



2. Click the Display icon in the Control Panel.

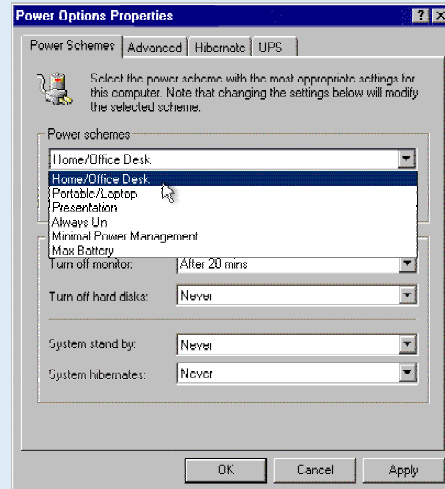


3. In the Display Properties window, click the Screen Saver tab, then click the Settings button in the Energy Saving Features of Monitor box.

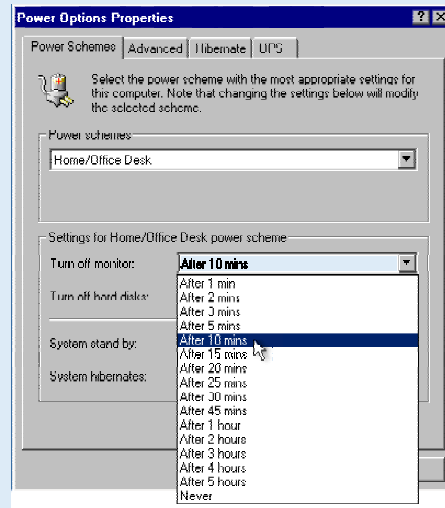


### Windows ME (continued)

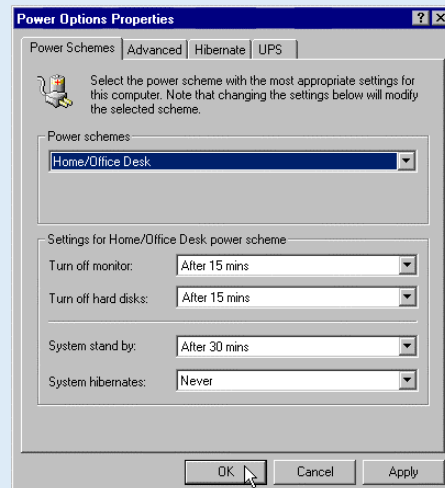
- Under Power Schemes, select Home/Office Desk.



- Set Turn off monitor for 15 minutes (or less).
- Set Turn off hard disks for 15 minutes (or less).
- Set System standby for 30 minutes (or less).



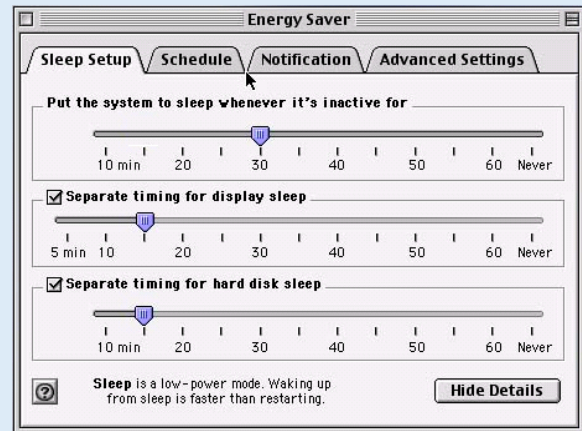
- Click OK.



## Instructions for manually enabling power management

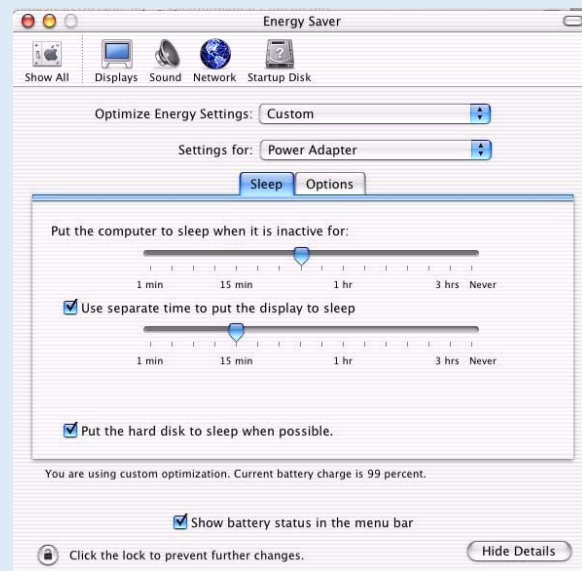
### Mac OS 9

1. Click on the apple symbol (Apple Menu) in the upper left of your screen.
2. Go to "Control Panels" and select "Energy Saver".
3. Click on the "Sleep Setup" tab.
4. Set "Put the system to sleep whenever it's inactive" to 30 minutes (or less) using the slider.
5. Check the box for "Separate timing for display sleep" and set the time to 15 minutes (or less) using the slider.
6. Check the box for "Separate timing for hard disk sleep" and set the time to 15 minutes (or less) using the slider.



### Mac OS X

1. Click on the apple symbol (Apple Menu) in the upper left of your screen.
2. Go to "System Preferences," Click "Show All" and select "Energy Saver" from the "Hardware" row.
3. Click on the "Show Details" button. Select "Power Adapter" under "Settings For:" If you are unable to complete this step an administrator has prevented you from changing these settings. Please stop here.
4. Set "Put the computer to sleep when it is inactive" to 30 minutes (or less) using the slider.
5. Check the box for "Use separate time to put the display to sleep" and set the time to 15 minutes (or less) using the slider.
6. Check the box for "Put the hard disk to sleep when possible."



### *Other helpful power management tips*

- Limit screen-saver use. A screen saver does not save energy. In fact, more often than not, a screen saver not only will draw power for the monitor, but also will keep the CPU from shutting down. Instead, set your computer to turn off the monitor first, then go into standby mode after a longer period of inactivity.
- Keeping your Virtual Private Network (VPN) connected may limit your system's ability to enter standby mode. We recommend you disconnect your VPN when not actively using your corporate network.
- Many popular computer games and other third party software packages that run in the background will not allow the computer to go to sleep – even if they are paused or the active window is minimized.
- Some web sites or pages that have active banners and or animated advertisements will not allow the computer to sleep on its own and must be closed, or the computer put manually into a sleep state.
- Advanced users may wish to establish multiple power schemes to address different usage models. For example, you can create a power scheme for playing music CDs that shuts off your hard drive and monitor immediately, but never puts your system into standby mode.
- To maximize the battery life of your laptop computer, consider setting even more aggressive monitor, hard drive and standby/sleep settings for battery mode.
- To further reduce power consumption, turn off computing and peripheral devices that are not being used or being used for an extended period of time such as overnight.
- Plug all your electronics into one surge protector, so you can easily switch them all off when you leave the room or go to sleep. Most power supplies (such as your cell phone charger) continue to draw power and generate heat even when not attached to a device.