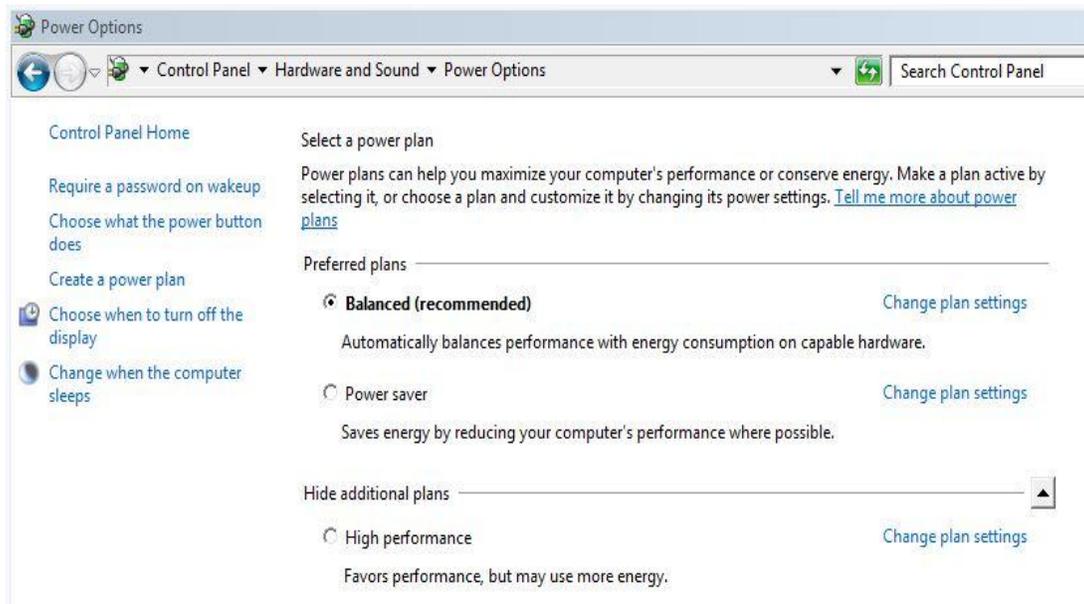


CONFIGURING POWER OPTIONS IN WINDOWS 7

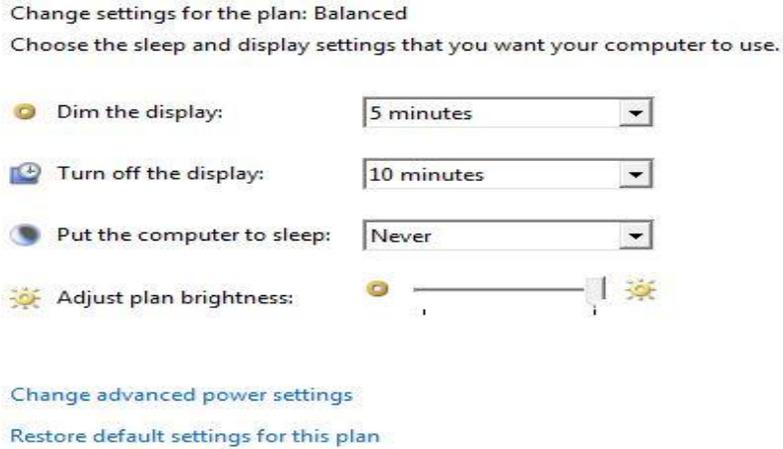
Power Options

We can find Power Options screen in Control Panel. The screen looks like this.



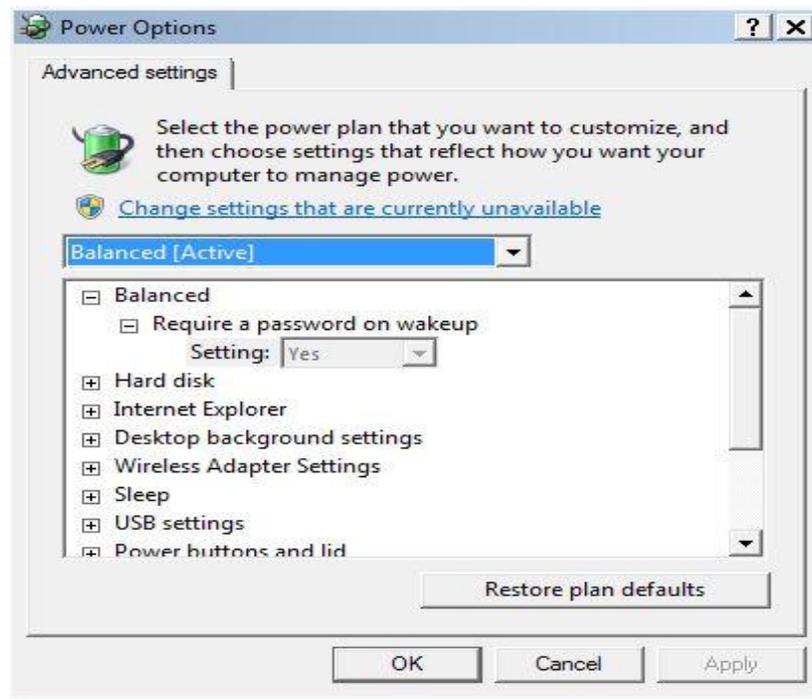
Power Options Screen in Control Panel

Here we can see three built in power plans, Balanced, Power saver and High performance. We can choose the one we want to use and we can customize the plan by clicking on the "Change plan settings" link. For example, if we try to customize the Balanced power plan, we will see this.



Power Plan Settings

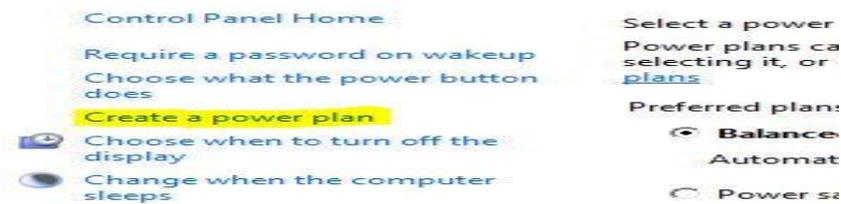
So, we can choose when to dim the display or when to turn it off. We can also choose when to put the computer to sleep and adjust the brightness of the screen. If we click on the "Advanced settings" link, we will see this.



Power Plan Advanced Settings

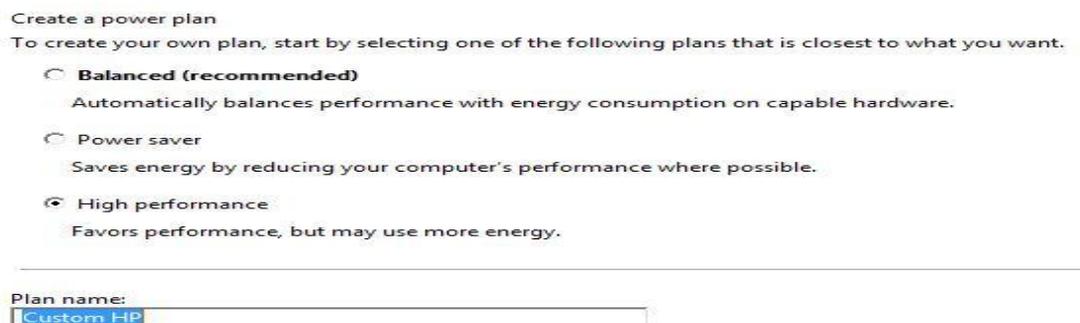
In this window we can change advanced settings for all three power plans (we can choose the plan on the drop down list). For some options we will have to click on the "Change settings that are currently unavailable" since some of the options need elevated privileges.

Note that we can't delete default power plans, but we can create our own custom power plan. To do that we can click on the "Create a power plan" link in Power Options.



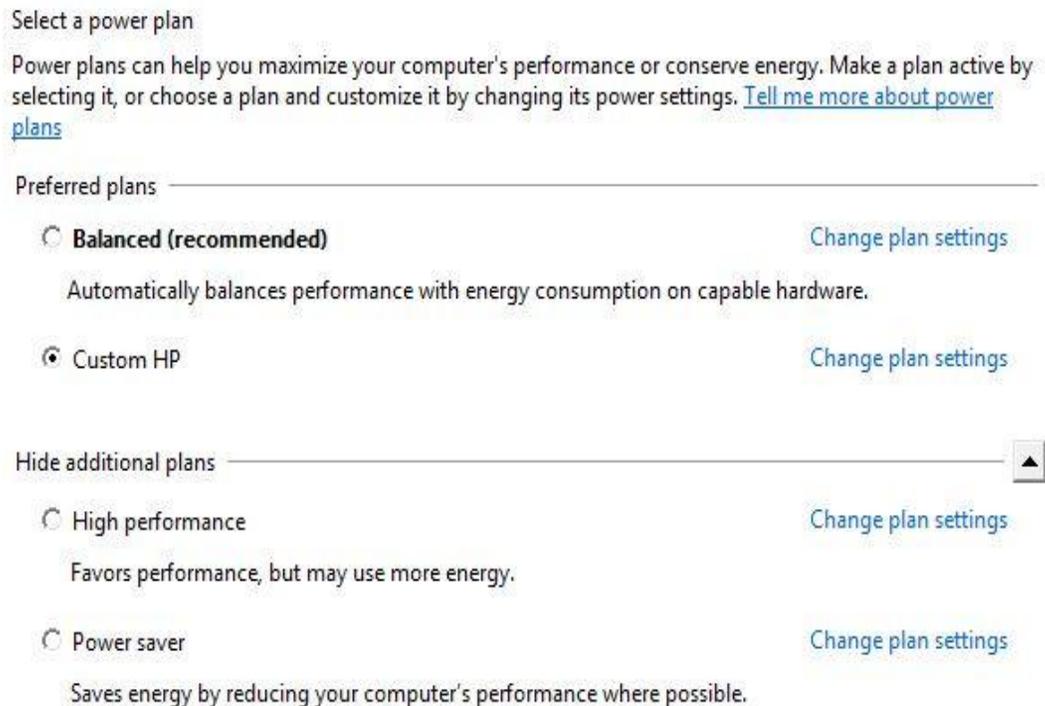
Create a power plan Link

On the next screen we will have to choose the default plan that is closest to what we want (it will serve as a template). In our case we will select "High performance" and call it "Custom HP".



Power Plan Template and Name

On the next few screens we will be able to choose display and sleep settings. In our case we will choose that our display never turns off and our computer never goes to sleep, and click the Create button. The new plan will then be listed on the Power Options screen.



New Power Plan Listed

We can always change settings for our new power plan. For example, if we don't want our hard disks to turn off, we will enter 0 as a value for minutes.



Hard Disk Timer

Command Line Power Plan Options

We can also manage power options from the command line. We have to run CMD as administrator (right-click CMD and select "Run as administrator"). From the elevated command line, we can use the **powercfg** command. If we want to list all available plans we can use the **-list** switch.

```
C:\Windows\system32>powercfg -list
Existing Power Schemes (* Active)
-----
Power Scheme GUID: 381b4222-f694-41f0-9685-ff5bb260df2e (Balanced)
Power Scheme GUID: 8c5e7fda-e8bf-4a96-9a85-a6e23a8c635c (High performance)
Power Scheme GUID: a1841308-3541-4fab-bc81-f71556f20b4a (Power saver)
Power Scheme GUID: ae6a8d04-daf8-497f-ac3d-68dff990adc6 (Custom HP) *
```

Listing Power Plans in CMD

To change to another power plan we can use the **-setactive** switch. We have to use the GUID of the power plan we want to change to.

So, in our case, if we wanted to switch back to the Balanced power plan, we would have to enter the following command: "powercfg -setactive 381b4222-f694-41f0-9685-ff5bb260df2e".

We can also export our settings by using the **-export** switch. We will have to specify the location and name of the file, and the GUID of the plan we want to export. The command looks like this: "powercfg -export C:\CustomHP 381b4222-f694-41f0-9685-ff5bb260df2e". Now that we have our plan exported, we can import it on multiple computers by using a script.

To delete a power plan we can use the **-delete** switch and specify the GUID of the plan we want to delete, for example: "powercfg -delete ae6a8d04-daf8-497f-ac3d-68dff990adc6". The plan we are trying to delete mustn't be active.

So, we have actually deleted the CustomHP power plan that we have created earlier. Let's now try to import the plan back by using the **-import** switch. The command looks like this: "powercfg -import C:\CustomHP". If the import is successful, we will see the new GUID of the imported power plan (it will be different from the previous, despite of the same name of the plan).

Of course, we can also delete and import power plans from the GUI, and we will see the options to delete the plan if we try to change settings on the custom power plan which is not active (we can only delete custom power plans).



Delete this plan Link

To see the report of the power management settings, including diagnostics, we can use the **-energy** switch. The system will be observed for some time in order to acquire data for the report. After that we will get the report in a HTML format which can be opened with the browser.

```
C:\Windows\system32>powercfg -energy
Enabling tracing for 60 seconds...
Observing system behavior...
Analyzing trace data...
Analysis complete.

Energy efficiency problems were found.

8 Errors
12 Warnings
38 Informational

See C:\Windows\system32\energy-report.html for more details.
```

Energy Efficiency Analysis Command

Power Efficiency Diagnostics Report

Computer Name **IVANCIC-S**
Scan Time **2015-01-22T13:54:12Z**
Scan Duration **60 seconds**
System Manufacturer **Hewlett-Packard**
System Product Name **HP Compaq 8200 Elite AiO Business PC**
BIOS Date **09/15/2011**
BIOS Version **J10 v02.07**
OS Build **7601**
Platform Role **PlatformRoleWorkstation**
Plugged In **true**
Process Count **171**
Thread Count **2091**
Report GUID **{acf06aff-89bf-4581-a7e2-340f0e633bdd}**

Analysis Results

Errors

Power Policy:Sleep timeout is disabled (Plugged In)
The computer is not configured to automatically sleep after a period of inactivity.

USB Suspend:USB Device not Entering Suspend
The USB device did not enter the Suspend state. Processor power management may be prevented if a USB device does not enter the Suspend state when not in use.

Device Name	USB Input Device
Host Controller ID	PCI\VEN_8086&DEV_1C2D
Host Controller Location	PCI bus 0, device 26, function 0
Device ID	USB\VID_046D&PID_C06A
Port Path	1,5

USB Suspend:USB Device not Entering Suspend
The USB device did not enter the Suspend state. Processor power management may be prevented if a USB device does not enter the Suspend state when not in use.

Device Name	USB Input Device
Host Controller ID	PCI\VEN_8086&DEV_1C2D
Host Controller Location	PCI bus 0, device 26, function 0
Device ID	USB\VID_03F0&PID_0024
Port Path	1,4

Example Energy Efficiency Report

To check the devices that can wake up the computer from sleep mode (like mouse or keyboard), we can use the "**-devicequery wake_from_any**" switch.

Source: <http://www.utilizewindows.com/7/management/518-configuring-power-options-in-windows-7>