**# Title:**

Fix Battery and Power Meter Device for HW Reduced ACPI

**# Status:**

Draft

**# Document:**

ACPI 6.5 specification

**# License:**

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**# Summary of the change**

This ECR proposes to fix some of the language in *Chapter 10* ***﻿****POWER SOURCE AND POWER METER DEVICES* to make it more generic, to indicate it supports HW Reduced ACPI platforms as well.

**# Benefits of the change**

Better clarity.

**# Impact of the change**

* No impact to any system is foreseen.

**# Detailed description of the change [normative updates]**

* Insertions in green
* Removals in ~~red~~
* Cross-reference highlighted

**﻿POWER SOURCE AND POWER METER DEVICES**

…

**﻿**A Power Meter device is the logical representation of a platform sensor that measures the power consumption of one or more devices in the system. A basic platform implementation implements interfaces that query the current power consumption and get the currently configured power consumption hardware limit, while more advance power meter device implementations provide interfaces that support OSPM configurable power consumption trip points that trigger ~~SCI~~ events, or enable configuration of the underlying hardware to enforce a hard limit on the maximum amount of power that can be consumed.

…

**﻿10.2.1 Battery Events**

**﻿**The AML code handling an ~~SCI~~ interrupt for a battery event notifies the system of which battery’s status may have changed. … ﻿In any case, any changes in battery status should generate an ~~SCI~~ interrupt in a timely manner to keep the system power state UI consistent with the actual state of the system battery (or batteries).

…

﻿A user can program peak power delivery thresholds in the \_BPT control method for each battery. When a threshold is crossed, the platform firmware such as the embedded controller will assert an ~~SCI~~ interrupt to indicate the event. The AML event handler for this interrupt issues a Notify(<battery\_device>, 0x83) on the battery device.

…

**Table 10.3: Battery Control Methods**

|  |  |
| --- | --- |
| **Object** | **Description** |
| \_BTM | … |
| \_BTP | ﻿Sets the Battery Trip point, which generates an ~~SCI~~ interrupt indicating the event when battery capacity reaches the specified point. |
| \_OSC | … |

﻿**10.2.2.10 \_BPT (Battery Power Threshold)**

**…**

﻿OSPM can call this object to set a relative battery peak power capability change threshold. A notification must be issued when the value from the fuel gauge has changed by the amount that is greater than or equal to the last argument passed to \_BPT. For example, if the last threshold passed to \_BPT is 250mW and ID is 0x1 (Instantaneous Peak Power), the platform must generate ~~a GPE~~ an event when the battery instantaneous peak power delivery capability has changed by 250mW or more since the threshold was last set. The AML handler for the ~~SCI~~ interrupt indicating the event should issue a Notify (<battery\_device>, 0x83). This will cause the OSPM to re-evaluate \_BPS to obtain the current battery power delivery capability, and may call \_BPT to set a new threshold value or re-arm the threshold crossing event for the same relative threshold value.

…

**﻿10.2.2.11 \_BST (Battery Status)**

**﻿**This object returns the present battery status. Whenever the Battery State value changes, the system will generate an ~~SCI~~ interrupt indicating the event to notify the OS.

…

﻿**10.2.2.14 \_BTP (Battery Trip Point)**

﻿This object is used to set a trip point to generate an ~~SCI~~ interrupt indicating the event whenever the Battery Remaining Capacity reaches or crosses the value specified in the \_BTP object.

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