

**Interpretation Number:** 3-07/06  
**Topic:** PD classification  
**Relevant Clause:** Figure 33-6 and Table 33-5  
**Classification:** Unambiguous

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### **Interpretation Request**

I am having difficulty understanding the requirements of Clause 33 of IEEE STD802.3-2005 pertaining to PSE output power. If I follow the state machine flow I believe that if my PSE detects a low power PD and the power supply can support its power needs the PSE is allowed to power it; however, if I read the text I am left with the conclusion that the power supply must have at least 15.4W of power available in order to power up a port. Specifically:

Assuming that my implementation has properly entered the state "CLASSIFICATION\_EVAL" in the state machine "Figure 33-6-PSE state diagram" and the variables "pd\_requested\_power" is set to 0, "pse\_available\_power" is set to 1 and "ted\_timer\_done" is true, the state machine should enter the "POWER\_UP" state and apply power to the PSE. However, Table 33- 5 items 4 and 5, as well as the associated text in sections 33.2.8.4 and 33.2.8.5 seem to indicate that the PSE must be able to source full power consistent with Class 3.

My question is: Is my interpretation of the state machine and associated text incorrect or if I am not in error which takes precedence, table/text or state machine?

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### **Interpretation for IEEE Std 802.3-2005**

Your interpretation of both the state machine and associated text is correct. As stated in subclause 21.5 'State diagrams', 'State machine diagrams take precedence over text.'. Based on this the behaviour of the PSE described in Figure 33-6 'PSE state diagram' takes precedence over the text.