

IEEE 802.3 Ethernet Working Group Liaison Communication

Source: IEEE 802.3 Working Group¹

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From: David Law Chair, IEEE 802.3 Ethernet Working Group
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Subject: TIA 1301 Communications Powering Circuits

Approval: Agreed to at IEEE 802.3 plenary meeting, Orlando, FL, USA, 9th November 2017

Dear Ms Bellis and Mr Earley,

We understand there is currently an appeal pending before the Standards Council requesting the issue of TIA 1301. Please accept this as a letter of support for TIA 1301.

IEEE 802.3 has previously sent liaisons and comments expressing our concerns with the 2017 National Electrical Code® revision as it relates to Power over Ethernet (PoE).

¹ This document solely represents the views of the IEEE 802.3 Working Group, and does not necessarily represent a position of the IEEE, the IEEE Standards Association, or IEEE 802.

We are aware and concerned that the wattage value alone listed in 840.160 is not sufficient to limit temperature rise on communications cabling. Ampacity, and not wattage, is directly related to the temperature rise of the cable and is not specified in the code text.

The NEC PoE Task Group was appointed by the NEC Correlating Committee as a result of the July 2016 Standards Council Decision from a previous appeal. Three proposed TIAs (1299, 1300 and 1301) relevant to power and data circuits, such as PoE, were created, along with an additional nine public inputs. Significant effort was put forth from the committee members along with, at times, a healthy debate. The task group met by phone many times over several months.

TIA 1299 and 1300 balloted in CMP-3 were accepted on both technical merit and emergency nature. TIA 1301 balloted in CMP-16 was accepted on technical merit, but not on emergency nature. IEEE 802.3 supports both the technical merit and emergency nature of TIA 1301.

Issuing TIA 1301 resolves our request that an ampacity value be added to limit the temperature rise of the cable. To provide a complete solution for power delivery over communications cabling, such as Power over Ethernet, all three TIAs developed by the task group should be issued.

The issues addressed by TIA 1301 have been fully discussed in IEEE 802.3 and there is very strong consensus support.

Sincerely,

David Law

Chair, IEEE 802.3 Ethernet Working Group