



Canadian Standards Association
Mississauga, Ontario
To the Part I Committee

Subject No. 3100

Chair: S.J. Coles

Date: October 21, 2003

Title: Deletion of Rule 14-100(d)

Submitted by: Leslie Stoch of L. Stoch and Associates, 4264 Flitter Court, Mississauga, Ontario, L5L 2H8 on January 6, 2003.

Proposal: Delete Rule 14-100(d)

Reasons for Request: Rule 14-100(d) is in direct conflict with other rules of the Canadian Electrical Code. For example, it is not logical that circuits supplied by a 15 kVA lighting transformer with low available fault levels are limited in length by Rule 14-100 to the first point of overcurrent protection, to either 3 m or 7.5 m depending on method of installation. On the other hand, Rule 14-100(d) does not limit the length of a feeder from a 10,000 kVA power transformer to the first location where overcurrent protection is available, even though the fault level in this instance will be much higher.

Supporting Information: See attached electrical code article written several years ago, which explains in detail the conflict of Rule 14-100(d) with other rules.

Chair's Comments: I have reviewed the original proposal to add Subrule 14-100(d) (Subject 2561) submitted on October 5, 1995, which was approved by Part I and included in the 1998 issue of the CEC, basically without change.

I have attached a copy of the original proposal to add Subrule 14-1009(d) for your consideration.

It is the Chair's opinion that there are valid reasons for this Subrule, and they still exist. The submitter may have a different interpretation of the application of this rule, or which situations it applies to. It should be reviewed in the light of the submitter's reasons.

My recommendation is that we reject the proposal and close the subject.

SUBJECT 3100 – S/C BALLOT RESULTS

Agree with Chair's proposal - 6

Agree with Chair's proposal with comments - 2

Disagree with Chair's proposal - 1

One Subcommittee member had the following comments:

1. I would have interpreted the reference 750v to be secondary rather than primary voltage. (However, this would be inconsistent with Rules 26-252,-254,-256)
 2. Primary voltage is irrelevant to secondary conductors.
 3. Size (KVA) of transformers is more relevant than voltage.
 4. On larger transformers, the location of switchgear may be dozens or hundreds of feet from the transformer – this could be for voltages less than or greater than 750v.
 5. Overload protection may be located at either end of the conductor run. Short circuit protection must be upstream, and presumably this is covered by transformer primary overcurrent protection.
 6. I believe combination of 14-100(b)(iv) and 14-100(d)(iii) provide protection against fault in cable.
 7. Impractical to provide large disconnect immediately adjacent to transf.(substation).
- Another member suggested that a new subject be opened to change Sub-rule 14-100(d) rather than delete it.
 - The member who objected to the Chair's proposal felt that the submitter made some valid points and that the S/C should try to rework Subrule 14-100(d) rather than delete it.
 - Items 4 and 7 above were the original reasons given for 14-100(d) being added.

Chair's Comments

The submitter identifies what he perceives as inconsistency within the protection required for the various Subrules 14-100(b) to (g). In fact all except 14-100(d) have to do with protection of conductors that are smaller than would normally be required by the CEC. 14-100(c) has to do with conductors that are correctly sized, but are allowed to run further before terminating in an O/C device.

Reading the original proposal that added Subrule 14-100(d) to the 1998 CEC, I find that the reason stated has to do with accommodating industrial installations, where the distance from the transformer to the secondary breaker is hard to control. It is most likely that both the transformer and main secondary breaker would be in restricted areas in these situations.

For these reasons, I believe that Subrule 14-100(d) is not inconsistent with other Subrules, as claimed. The intended use of this Subrule has unique conditions and application, and is therefore necessary.

Subcommittee Recommendation: Reject this proposal and close the subject.