
Subject: FW: Arc Flash Rule Proposal

From: Ned Ratterman [mailto:NRatterman@otecc.com]
Sent: Friday, July 18, 2008 4:20 PM
To: MURRAY Jerry
Cc: Debby Ray
Subject: Arc Flash Rule Proposal

Jerry Murray
Senior Electrical Engineer
Oregon Public Utility Commission

Mr. Murray:

As the representative of Oregon Trail Electric Cooperative Inc. (OTEC), I am responding to the possibility of the Commission's consideration to extend the implementation date for the adoption of the 2007 NESC with a projected effective date of January 1, 2009. After reviewing the Commission's list of seven questions dealing with the arc flash issue, it should be pointed out that additional issues exist that are possibly more critical than monetary concerns. The one consideration that is paramount in the opinion of OTEC is the lack of direction given by the Code for accomplishing the task of performing an arc flash calculation study and associated hazard analyses. Without a clear and concise guideline, consistency from one utility to another, or even within the same utility will result in dubious conclusions and applications. This flaw should not be allowed to exist. Within all other standards in the NESC specific distances, guidelines and mandates are established. Without clarity results of inconsistency will inevitably result.

The Public Utilities Commission (PUC) hearing held on 6/17/08 left an indelible impression in my mind that the majority of the electric utilities in the state of Oregon are presently in a state of confusion, frustration and sometimes even denial; concerning the pending arc flash mitigation issue.

Many utilities, including OTEC, asked for an extension of the January deadline based on several key issues including:

1. The NESC requires a system assessment, yet does not give direction on which methodology should be used. This lack of direction lends itself to a probable significant variance between risk category ratings in similar situations by separate utilities. Without a prescriptive method for performing calculations, no code can truly exist.
2. The pending changes on the federal level to OSHA 1910.269 with regards to arc flash analysis allows for five different methods of determining hazard classifications. Again, following mathematical calculations using varying methods specific locations on an electric system will have significantly different results depending upon the method used in each situation. For example, in one location on a distribution system using two accepted OSHA methods, the difference in cal/cm² was equal to a 1500% variance from one rating to another. We are concerned that the NESC and any updated 1910.269 standards will undoubtedly become intertwined following adoption by each

7/22/2008

standard. An additional concern is that these standards with or without more detailed guidelines may eventually conflict with one another.

3. Because of the many possible methods available to determine the assessment and arc flash analysis, liability concerns arise through fear of attorneys questioning the method a company uses in their calculations when they find that other companies are using different programs resulting in higher or lower caloric outputs deemed as negligent choice of methodology.
4. It is currently speculated that some of the data available in the 2007 NESC code specific to Table 410-1 may be incorrect. This should be sufficient cause to postpone the implementation date purely based on the obvious haste of the material's compilation.
And;
5. With many rules and court proceeding hinging on "industry best practices" this illusion becomes even more difficult to comply with when our entire industry is overrun with confusion about which method to use.

Throughout the hearing spokespersons mentioned the need for consensus among affected utilities. This point is significant and valid. However, that does not change the fact that January is fast approaching. ArcPro® is one of the five methods listed in the pending OSHA 1910.269 modifications and results in conservative values when compared to other methods. This software is also used throughout the United State. Finally, ArcPro® is the method used by the IEEE to construct all tables available in the 2007 NESC for those who choose to forego an individual arc flash analysis of their system and defer to the tables following a system assessment. But, is this the only method? Is this the best method? Could this method be challenged in the future? If this is not used could a utility face challenges as a result of not using it? Many of the utilities in attendance at the hearing admittedly haven't performed their assessments or analyses because of concern for not complying with industry norms. We don't believe there can be industry norms where the calculations are concerned without specific guidelines.

Monetary issues should not override the critical issue of accuracy. This is where employee safety is best served, when a method for determining empirical evidence is shared by all.

Thank you for your consideration,

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