

## **Considerations for Adapting IEEE 1584-2002 Arc Flash Study Results to a Post IEEE 1584-2018 Risk Assessment**

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**Abstract** - Arc Flash studies have been performed by many industrial and commercial users since the publication of IEEE 1584-2002 and NFPA 70E-2004. These studies represent a substantial investment in resources and time. The 2018 revision of IEEE 1584 is an improved arc flash model, substantially different in many ways and in some instances, particularly when the greater range of input parameters is used, the resultant prediction in terms of arcing current ( $I_{arc}$ ), or incident energy ( $E_i$ ) can be different from the previous predictions using the 1584-2002 model. This presents an additional risk to be considered when performing risk analysis for specific work tasks when only a 2002-based study is available. The possibility exists that 2018 study would provide significantly different Incident  $E_i$  requiring different hazard control decisions. The intent of this paper is to provide some guidance and present some strategies to identify when a 2002 based study may be conservative, or not, and when updated calculations may be needed to properly identify potential higher incident energy levels. Similarly, there may be times when the 2002 study is sufficiently conservative to base hazard control decisions upon.