

A Practical Application of IEEE 1584:2018

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The IEEE Std 1584:2018 *Guide for Performing Arc Flash Hazard Calculations* presents new challenges in data gathering and equipment modeling due to the removal of the 125 kVA exception and the addition of the ability to model electrode configurations, enclosure dimensions, and bus gaps. Engineers must now understand equipment construction and choose whether to field measure equipment and use actual data, or use the typical values presented in IEEE Std 1584:2018. This paper will discuss how incident energy (IE) and arc flash boundary (AFB) are affected by electrode configuration, enclosure size, and bus gap. This will be demonstrated for various equipment types to determine the practical impact of conservative assumptions. It will also discuss the implications of the new statement regarding arc sustainability at less than 2000 A and provide suggested guidelines for the selection of electrode configuration based on examination of real-world equipment construction.