

## Request for Arc Flash and/or Fault Current Data

Submitted to:

City of Oak Ridge Electric Department  
100 Woodbury lane  
Oak Ridge, TN 37831  
Fax (865) 482-8313  
Attn: Engineering Division

**Requesting Party:** \_\_\_\_\_

**Contact Person:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Electric Account Number:** \_\_\_\_\_

**Phone:** \_\_\_\_\_

**Email:** \_\_\_\_\_

Requested by: Account Holder ( ) or Consultant ( )

The City of Oak Ridge Electric Department will not perform calculations regarding fault current for any party. Select data is available only to customers. If a third party is requesting information for a customer, a letter authorizing the third party to act as the customer's agent should be attached.

Data being requested:

- Transformer KVA, Primary and Secondary Voltage, Impedance of Transformer On Site at Date of Request, 1 or 3 Phase
- Fuse Type
- Typical Transformer Diagram Indicating Internal Fuse Location(s)

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### Notice to those requesting Arc Flash and Fault Current data at a particular location:

The source impedance from the Tennessee Valley Authority (TVA) changes often which in turn changes the source impedance at any particular point on the City of Oak Ridge system. Additionally, the City of Oak Ridge Electric Department (CORED) reconfigures the distribution system on a routine basis for various reasons including, but not limited to, adding grid tied distributed generation, isolating power outages, performing system maintenance, serving new load, and optimizing system performance. Therefore, the available fault current and X/R ratio at any given point on CORED's distribution system is in a state of flux. The associated upstream protective devices, settings, and clearing times vary as the system is reconfigured.

CORED recommends multiple calculations be performed using the full range of conditions for Utility Fault Current Contribution, including varying per unit voltage +/- 10%, varying ground resistivity and fault impedance in a manner appropriate for the actual field conditions, and varying the transformer impedance for

the complete range cited in IEEE Std 141 (Red Book). A full range of conditions for the Utility Fault Current Contribution will include, at a minimum, calculations performed for each of the assumptions below:

- Infinite impedance at the transformer source,
- 50% of the maximum three-phase bolted fault current at the secondary side of the transformer,
- Minimum fault conditions using the appropriate soil resistivity and fault impedance.

### **Acknowledgement & Acceptance**

By acceptance of the requested data, the Requesting Party acknowledges the transformer serving the account at the requested location is subject to change without notice or notification and the impedance of that transformer may fall anywhere in the range described in the IEEE Red Book and its source, the American National Standard C57.12.10.

- The Requesting Party hereby acknowledges that persons using the data to perform calculations are knowledgeable of IEEE Std. 1584, IEEE STD 399 (Brown Book), and IEEE STD 141 (Red Book) requirements and recommendations for Arc Flash Study, Arc Flash Hazard Analysis, and Incident Energy calculations.
- The Requesting Party acknowledges that any calculations using the data provided by the City of Oak Ridge Electric Department will be used by a Professional Engineer licensed by the State of Tennessee competent in the field of electrical engineering and the City of Oak Ridge is indemnified and held harmless by the Requesting Party and those they may hire to perform fault current calculations and arc flash studies.

Requested by:

Date:

\_\_\_\_\_  
Full name (Please print)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title