

interoperability technical requirements which applies to all DER interconnections. Other standards, recommended practices, and guide documents may be applicable to individual projects and should be referenced based on the DER technology and configuration being proposed and characteristics of the Area EPS³ to which it is being interconnected. In general, the content of industry standards is not reproduced here, but instead the additional standards are referenced in Section 3 of this document.

Consistent with IEEE 1547, these requirements apply to the interconnection of all DER units within the Local EPS that parallel with the Area EPS. The requirements in the TIIR shall be applied at the Reference Point of Applicability (RPA)⁴, unless otherwise specified by the TIIR or mutually agreed upon. The DER shall not create or contribute to an intentional Area EPS island, unless approved by the Area EPS Operator.

When the need arises, the Area EPS should coordinate with Transmission Providers and Regional Transmission Operators to accommodate requests from these entities which cross the transmission and distribution electric interface while still maintaining the Area EPS Operators' primary responsibility of providing safe, reliable, and quality service for Area EPS retail customers.

Protection systems requirements in the TIIR, are structured to protect the Area EPS, Area EPS customers, and the public. Details of protection systems requirements are specified in the Area EPS Operator's TSM. The protection of the DER and the Local EPS is solely the responsibility of the Interconnection Customer and is not addressed in these technical requirements.

The DER Operator shall be responsible for complying with all applicable local, independent, state and federal codes such as building codes, National Electric Code (NEC), National Electrical Safety Code (NESC) and local municipality noise and emissions standards. As required by Minnesota State law (326B.36 Subd. 5 Duty of Electrical Utility), the Area EPS may require proof of complying with the National Electrical Code before the interconnection is completed, through approval by an electrical inspector recognized by the Minnesota State Board of Electricity. The DER Operator shall maintain the DER facilities using industry standards and best practices in order to reduce the likelihood of an unintended DER operating state causing adverse impacts to customers or the Area EPS.

In the event of an inconsistency between various laws, rules, standards, contracts, or policies over interconnection requirements, the resolution to this inconsistency shall be resolved by assigning an order of precedence from highest to lowest as follows:

1. State of Minnesota statutes
2. Minnesota Public Utilities Commission approved standards, tariffs or orders
3. National Standards, Codes, and Certifications

³ For example, low voltage secondary networks have unique interconnection concerns and the recommended practice in IEEE 1547.6 should be used in conjunction with IEEE 1547 and IEEE 1547.1.

⁴ See IEEE 1547 and the TIIR Annex B for further information on the RPA. The RPA is the point at which IEEE 1547 interconnection and interoperability requirements are required to be met.

4. Agreements between the Area EPS Operator and the DER Operator
5. Area EPS Operator published documents

Figure 2 contains a depiction and description of the relationship of some key terms used throughout this document. The usage of these terms as it relates to Figure 2 is consistent with IEEE 1547 definitions. Each of the terms are defined in Section 3-B of this document. Additional discussion of the terms is found in Annex B.

Figure 2. Relationship of Terms

