



Is it required to be an NRTL to do field evaluations? And New Microgrid Standard ANSI/CAN/UL 3001

by UL Solutions

Q In my state, I have encountered a field evaluation organization I have never heard of that has an accreditation as a field evaluation body (FEB). However, it is not a Nationally Recognized Testing Laboratory (NRTL). Is it required to be an NRTL in order to do field evaluations?

A The criteria to become an accredited field evaluation body (FEB) does not include recognition as a Nationally Recognized Testing Laboratory (NRTL) by the U.S. Department of Occupational Safety and Health Administration (OSHA). The OSHA NRTL program is the only way for a company to demonstrate its qualifications to conduct product testing, evaluation and listing (product certification) consistent with NEC® 110.3(C). However, many jurisdictions use the NRTL program and the standards within an NRTL's recognized scope as a basic requirement to perform a field evaluation. Requiring field evaluation organizations to be an NRTL as well as an accredited field evaluation body (FEB) provides third-party credentialing of an organization's qualification as an electrical testing laboratory and certification body and a confirmation of an organization's procedures to comply with field evaluation program requirements of NFPA 790, *Standard for Competency of Third-Party Field Evaluation Bodies* and NFPA 791, *Recommended Practice and Procedures for Unlabeled Electrical Equipment Evaluation*. These recognitions and accreditations help AHJs be confident in their approval decision of a provider's field evaluations on un-Certified (un-Listed) or modified equipment in their jurisdiction.

UL Solutions is accredited as a field evaluation body (FEB) by the International Accreditation Service® (IAS) and is recognized as an NRTL by OSHA with a wide scope of standards that UL Solutions can certify (list) products to.

For more information on OSHA's NRTL program, go to <https://www.osha.gov/nationally-recognized-testing-laboratory-program/current-list-of-nrtls>. For more information on the UL Solutions field evaluation program or to get a quote, go to www.ul.com/field.

Q What is a microgrid and does UL Solutions Certify (List) them? If so, what standard is used for Certification (Listing?)

A The National Electrical Code® (NEC®) defines a microgrid as "an electric power system containing interconnected power production sources and capable of acting as a primary source independent of an electric utility." Microgrids can include, but are not limited to, distributed energy resources (DERs) such as photovoltaic systems, engine generators, fuel cell systems, wind turbines, energy storage systems (ESSs) and electric vehicles with power export capabilities. A microgrid can operate as a standalone system that is never connected to a grid or as a grid-connected system to disconnect and operate independently (island mode). Microgrids can operate with alternating current (AC) or direct current (DC), or a combination of both AC and DC.

The NEC contains requirements to address microgrids



primarily in Part II of Article 705 for interconnected electric power production sources. These requirements address:

- Connections to primary power sources
- Reconnection to primary source
- Microgrid interconnect devices (MIDs)
- Microgrid control systems (MCSs)

In addition to Part II of Article 705, Article 517 for healthcare facilities, Article 700 for emergency systems and Article 701 for legally required standby systems contain specific requirements for the use of microgrids as part of the standby systems addressed in those articles. Other articles, including Article 702 for optional standby systems and Article 710 for stand-alone systems, apply if a microgrid were used as part of these systems, but neither article contains specific requirements for microgrids.

Mitigating potential hazards with microgrids

To address potential hazards and promote safer deployment of microgrids, UL Solutions initiated work on drafting safety requirements. Collaboration with industry, code authorities and others led to UL Standards & Engagement publishing ANSI/CAN/UL 3001, the Standard for Distributed Energy Resource Systems, on April 24, 2025. Today, it is the U.S. and Canadian national standard for safety for these systems. This Standard applies to microgrids composed of multiple DERs, including those that power corporate campuses, hospitals, universities and communities.

UL 3001 provides a means to evaluate how interactions among the various energy sources as well as operation of the DER system as a whole affect the risk of fire and electric shock. UL 3001 requires that complete instructions for installation, operation and maintenance accompany all DER systems. The installation instructions include a detailed description of the installation in accordance with the NEC and the Canadian Electrical Code (CEC) Part 1, CSA C22.1.

The operating instructions for the DER system contain information regarding any required system testing and maintenance. Additionally, the operating instructions contain a list of all DER energy sources and critical safety systems and components contained within the system.

DER systems that have been evaluated to UL 3001 can provide code authorities with the necessary documentation and certifications to approve the installation in accordance with the NEC and CEC Part 1. UL Solutions Certifies (Lists) microgrids for compliance with ANSI/CAN/UL 3001 under the product category Distributed Energy Resource Systems ([FCGV](#)) for the United States and for Canada under Distributed Energy Resource Systems Certified for Canada ([FCGV7](#)). The guide information and Certifications (Listings) for FCGV and FCGV7 can be viewed on Product iQ® at www.UL.com/piq ; enter [FCGV](#) or [FCGV7](#) at the search field. Product iQ is complimentary to search; however, registration is required.

Learn more about Distributed Energy Resource Systems (Microgrids) at <https://www.ul.com/thecodeauthority/knowledge/distributed-energy-resource-systems-microgrids-what-code-authorities-should-know>

For A Visual Guide to Direct Current Microgrids and Distributed Energy Resource Systems visit: <https://www.ul.com/insights/unlock-potential-visual-guide-direct-current-microgrids-and-distributed-energy-resource> /

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