

P2030.9

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Type of Project: New IEEE Standard

PAR Request Date: 24-Oct-2014

PAR Approval Date: 16-Feb-2015

PAR Expiration Date: 31-Dec-2019

Status: PAR for a New IEEE Standard

1.1 Project Number: P2030.9

1.2 Type of Document: Recommended Practice

1.3 Life Cycle: Full Use

2.1 Title: Recommended Practice for the Planning and Design of the Microgrid

3.1 Working Group: Microgrid: Working Group for the General Planning and Design of the Microgrid (SASB/SCC21/Microgrid)

Contact Information for Working Group Chair

Name: Wenpeng Luan

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Contact Information for Working Group Vice-Chair

None

3.2 Sponsoring Society and Committee: IEEE-SASB Coordinating Committees/SCC21 - Fuel Cells, Photovoltaics, Dispersed Generation, and Energy Storage (SASB/SCC21)

Contact Information for Sponsor Chair

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None

4.1 Type of Ballot: Entity

4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot: 02/2017

4.3 Projected Completion Date for Submittal to RevCom: 08/2017

5.1 Approximate number of entities expected to be actively involved in the development of this project: 5

5.2 Scope: This recommended practice focuses on factors that should be taken into account for planning and designing microgrids. It provides approaches and good practices relevant to planning and designing considerations such as power generation prediction, load forecast, micro-sources configuration, system architecture, grounding, protection and information exchange. This recommended practice applies to AC, DC or hybrid microgrid that can be either grid-connected microgrid or islanded microgrid.

5.3 Is the completion of this standard dependent upon the completion of another standard: No

5.4 Purpose: This project aims at the standardization of the microgrid design and planning process, the technical requirement specification of microgrid design and the evaluation of the microgrid planning scheme. The implementation of the proposed recommended practice will enhance the safe, reliable and economic operation of microgrid.

5.5 Need for the Project: This project aims at the standardization of the microgrid design and planning process, the technical requirement specification of microgrid design and the evaluation of the microgrid planning scheme. The implementation of the proposed recommended practice will enhance the safe, reliable and economic operation of microgrid.

5.6 Stakeholders for the Standard: The universality of this recommended practice relates not only to the technical aspects, but also to the manufacturers, utilities, energy service companies, and other interested entities.

Intellectual Property

6.1.a. Is the Sponsor aware of any copyright permissions needed for this project?: No

6.1.b. Is the Sponsor aware of possible registration activity related to this project?: No

7.1 Are there other standards or projects with a similar scope?: No

7.2 Joint Development

Is it the intent to develop this document jointly with another organization?: No

8.1 Additional Explanatory Notes (Item Number and Explanation): IEEE Std 1547(TM)-2003 IEEE Standard for Interconnecting Distributed Resources with Electric Power Systems

IEEE Std 1547.1(TM)-2005 IEEE Standard Conformance Test Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems

IEEE Std 1547.2(TM)-2008 IEEE Application Guide for IEEE Std 1547(TM), IEEE Standard for Interconnecting Distributed Resources with Electric Power Systems

IEEE Std 1547.3(TM)-2007 IEEE Guide for Monitoring, Information Exchange, and Control of Distributed Resources Interconnected with Electric Power Systems

IEEE Std 1547.4(TM)-2011 IEEE Guide for Design, Operation, and Integration of Distributed Resource Island Systems with Electric Power Systems

IEEE Std 1547(TM)-2003 standardizes the technical requirement of connecting distributed energy resource (DER) to electric power system (EPS), and the test requirement of the interconnection interface system of the DER and EPS.

IEEE Std 1547.1(TM)-2005 specifies the type, production, commissioning and periodic tests that shall be performed to demonstrate that the interconnection functions and equipment of the distributed resources(DR) conform to IEEE Std 1547(TM)-2003.

IEEE Std 1547.2(TM)-2008 provides the technical background and application details as an interpretation to the IEEE Std 1547(TM)-2003, and describes the characteristics of various DER and then interconnection related issues, as an interpretation to IEEE Std 1547-2003.

IEEE Std 1547.3(TM)-2007 is the functions, parameters and methods guidance of the monitoring, information exchange and control system of the DER connected to EPSs.

IEEE Std 1547.4(TM)-2011 is the draft guidance of transition from an islanding DER system to a microgrid with intentional islanding operation mode. It provides the method and practice guidance of the design, operation and integration of a DER with intentional islanding and grid-connected operation modes.

The differences between the project in application and the above mentioned standards.

The above mentioned standards regulate the technical requirements, test items and methods of connecting DERs to EPSs, the functions and practical methods regarding to the monitoring, information exchange and control of DERs connected to EPSs, and the planning, design, and issues need to be considered in the construction of islanding DER system. However, the above standards do not cover the scope of the project in application, which includes the process/method of microgrid planning and design, the technical requirements of planning and design, and the design scheme evaluation and selection, etc.