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Smart Grid Interoperability Process Reference Manual



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Smart Grid Interoperability Process Reference Manual

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CONTENTS

Foreword	iv
Section 1	General1
1.1	Scope1
1.2	References 1 1.2.1 Normative References 1 1.2.2 Other References 2
1.3	Definitions3
1.4	Abbreviations and Acronyms6
1.5	Nomenclature7
Section 2	Background
2.1	Problem Statement
2.2	Smart Grid Product Testing Flow Model8
2.3	Intended Audience9
Section 3	Foundation Reference Standards11
3.1	Overview of ISO/IEC 17025 11
3.2	Overview of ISO/IEC 1706512
Section 4	ITCA Implementation of the IPRM13
4.1	What is an ITCA?
4.2	ITCAs and Available Industry Testing and Certification Programs
4.3	Stakeholder Relationships14
Section 5	Interoperability and Conformance Test Program Construction15
5.1	General Test Policies
5.2	Test Suite Specification
5.3	Attributes of a Test Profile in lieu of Complete TSS 19
5.4	ITCA Technical Program Design19
5.5	Program and Field Experience Feedback
Section 6	Interoperability Certification Body and Test Laboratory Requirements23
6.1	Certification Bodies and Test Laboratories
6.2	Governance
6.3	Laboratory Qualification
6.4	Improvements
Section 7	Additional Issues Impacting Interoperability27
7.1	Cybersecurity27
7.2	Electromagnetic Compatibility Considerations28

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ANNEX A	Cybersecurity Testing (Informative)	29
A.1	Cybersecurity Concepts	29
A.2	Cybersecurity Testing Environment	29
A.3	Cybersecurity Testing Types and Frameworks	29
A.4	Additional Cybersecurity Testing Laboratory Best Practices to Consider	31
A.5	Role of the Cybersecurity Testing Providers	32
A.6	Cybersecurity Requirements and Recommendations	33
ANNEX B	Electromagnetic Compatibility Testing (Informative)	34
B.1	Introduction	34
B.2	Incidences of EMC Immunity Problems	35
B.3	EMC Phenomena	35
B.4	Typical Immunity/Emissions Tests	36
B.5	Test Plan	37
B.6	Perform Tests and Determine if Product Passes	37
B.7	Performance Degradation	37
B.8	EMC Requirements and Recommendations	38
ANNEX C	Frequently Asked Questions (Informative)	39

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TABLES

Table 1 General Test Policy Requirements and Recommendations	16
Table 2 Test Suite Specification Requirements and Recommendations	17
Table 3 Test Profile Requirements and Recommendations	19
Table 4 ITCA Technical Program Design Requirements and Recommendations	19
Table 5 Governance Requirements and Recommendations	23
Table 6 Improvement Requirements and Recommendations	25
Table 7 Cybersecurity Requirements and Recommendations	33
Table 8 EMC Requirements and Recommendations	38

FIGURES

Figure 1 Smart Grid Product Testing Flow—Proposed Model	9
Figure 2 Relationships between ITCAs, Certifiers, Test Labs, Accreditors, and SGTCC	14
Figure 3 Typical EMC Investigation Process	34

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Foreword

(This foreword is not part of ANSI/NEMA SG-IPRM 1-2016)

The Interoperability Process Reference Manual, or IPRM, is a key foundational element of the Smart Grid Interoperability Panel (SGIP). The SGIP Smart Grid Testing and Certification Committee (SGTCC) developed and issued the IPRM to detail its recommendations on testing and certification processes and best practices that enhance the introduction of interoperable products in the market place. These recommendations build upon international standards-based processes for interoperability testing and certification.

The strongly held belief is that implementation of the IPRM by Interoperability Testing and Certification Authorities (ITCAs) will increase the quality of standards-based, secure, and interoperable products in the smart grid marketplace. The SGTCC members also believe that implementation of the IPRM will lead to reduced deployment costs of smart grid systems and devices, and to enhanced product quality with respect to interoperability and conformance, ultimately providing increased end-user customer satisfaction, and confidence to the buyer through meaningful certification programs.

The IPRM enables the adoption of consistent and measurable certification and testing policies and procedures across standards-based smart grid products based on the conformance, interoperability, and cybersecurity testing experience and expertise of SGTCC participants, and the widely accepted International Organization for Standardization (ISO)/International Electrotechnical Commission (IEC) 17025 and ISO/IEC 17065 international standards for testing laboratory and certification body management systems.

These two ISO/IEC standards provide a solid foundation for the development and operation of highquality testing and certification programs. The SGTCC also recognizes that additional technical requirements and best practices are necessary to help assure test program technical depth and sufficiency in meeting end user expectations for interoperability and cybersecurity. These additional recommendations are detailed in the IPRM.

History and Supercedence

Version 2 of the IPRM was publicly released in January 2012. The goal of Version 2 was to enhance the utility of the document to support implementation of the criteria and recommendations by an ITCA and to structure it in a way to better facilitate assessments of ITCA implementation both internal to the ITCA and for external independent assessments. The changes in structure and clarity between Version 1 and Version 2 were significant, although the technical content changes and intent were minor. Fundamentally, Version 2 had an operational focus, while Version 1 provided an informational focus. Most of the key informative material from Version 1 was retained in Version 2, and underwent only minor editorial changes in Version 3.

Version 3 forms the basis of this standard and retains much of the technical material of earlier versions. New material and revisions to the document approach are found in Version 3 based on:

- a) Lessons learned from ITCAs as they have implemented the IPRM.
- b) Clarification of issues that were unclear or confusing to ITCAs based on comments and questions received by the SGTCC.

Some of these revisions were addressed since the last version of the IPRM using interim documents prepared by the SGTCC, and these interim materials have now been incorporated into Version 3.

Key changes in IPRM Version 3 as compared to the prior version include:

- a) A new section providing more detailed, step-by-step implementation processes recommended for use by ITCAs building programs based on IPRM.
- b) A new section on ITCA business considerations that influence program structure and operations.

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