

P2656

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Type of Project: New IEEE Standard

PAR Request Date: 27-Jul-2017

PAR Approval Date: 28-Sep-2017

PAR Expiration Date: 31-Dec-2021

Status: PAR for a New IEEE Standard

1.1 Project Number: P2656

1.2 Type of Document: Guide

1.3 Life Cycle: Full Use

2.1 Title: Guide for Functional Specification of Voltage-Sourced Converter for HVDC Stations

3.1 Working Group: HVDC Working Group (PE/SUB/WGI10)

Contact Information for Working Group Chair

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None

3.2 Sponsoring Society and Committee: IEEE Power and Energy Society/Substations (PE/SUB)

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4.1 Type of Ballot: Individual

4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot: 10/2020

4.3 Projected Completion Date for Submittal to RevCom

Note: Usual minimum time between initial sponsor ballot and submission to Revcom is 6 months.: 10/2021

5.1 Approximate number of people expected to be actively involved in the development of this project: 15

5.2 Scope: This guide assists users in specifying the functional requirements for Voltage Source Converter based HVDC systems, using self-commutated technology and topologies. This guide covers specifications, applications, engineering studies, main component characteristics, system functions and features, factory testing, commissioning, operations and maintenance of VSC HVDC Converter Stations. Functions covered include real power transfer, reactive power interaction, voltage regulation and fault recovery, frequency regulation, main components, control and protection, and accepted engineering practices for the application of VSC HVDC Systems. The HVDC transmission line or cable systems are beyond the scope of this document. A number of sections in the guide will address specific ancillary services that the HVDC may provide to the system. The guide also provides considerations with regards to different intended applications of the HVDC system, including transmission, back-to-back, and multi-terminal systems. The commercial terms and conditions for the purchase of the HVDC Systems are beyond the scope of this document.

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

5.4 Purpose: This guide presents technical information that may be used as the basis of functional specifications for VSC HVDC Converter Stations. This guide also includes informative appendices that allow users to develop or modify specific clauses to meet a particular system application.

5.5 Need for the Project: The guide assists the users in understanding the functional requirements for the specifications, implementation and testing of VSC HVDC Converter Stations. This guide should be considered a general purpose resource and it does not necessarily include all the required details needed for a specific application.

5.6 Stakeholders for the Standard: The users and stakeholders of this standard are engineering consultants or owner's engineers who are preparing the technical specifications for an HVDC VSC facility, the end-users (e.g. utilities, developers, investors) who will own, maintain and operate an HVDC VSC facility, as well as the manufacturers who are designing the HVDC VSC facility.

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: 5.2: HVDC: High Voltage Direct Current
VSC: Voltage-Sourced Converter

The wording deliberately uses "should" rather than "shall", given that the document is a guide, not a standard specification. The user of this guide might wish to make this adjustment when converting specific sections into a specification.