CONTENTS

FOREWORD ................................................................. 4

1 Scope ........................................................................ 6

2 Normative references .................................................. 6

3 Terms and definitions .................................................. 6

4 General ....................................................................... 6

5 Comparison between HVDC and AC alternatives ................. 8

  5.1 Consideration of overall network planning ...................... 8
  5.1.1 Overall network planning ....................................... 8
  5.1.2 Connection topologies for HVDC systems ................ 8

5.2 Comparison of transmission capacity ............................. 9

5.3 Comparison of operation requirements ........................... 9

  5.3.1 Comparison of system fault and stability ................... 9
  5.3.2 Comparison of voltage regulation and reactive power compensation 9

5.4 Comparison of cost .................................................. 10

5.5 Comparison of other aspects ......................................... 11

6 HVDC solutions .......................................................... 11

  6.1 Main circuit topologies ............................................. 11
    6.1.1 General ......................................................... 11
    6.1.2 Monopolar HVDC transmission system .................. 12
    6.1.3 Bipolar HVDC transmission system ...................... 12
    6.1.4 Rigid bipolar HVDC system ................................. 12

6.2 Main equipment ....................................................... 13

    6.2.1 General .......................................................... 13
    6.2.2 Converter ........................................................ 13
    6.2.3 AC filtering equipment ....................................... 14

6.3 Key DC rating parameters ........................................... 14

    6.3.1 Rated DC power .............................................. 14
    6.3.2 Rated DC voltage ............................................ 15
    6.3.3 Rated DC current ............................................ 16

6.4 Line conductor .......................................................... 16

6.5 Station sites and transmission line routes ....................... 17

    6.5.1 Converter station sites ....................................... 17
    6.5.2 Electrode station sites ......................................... 18
    6.5.3 Overhead line route .......................................... 18
    6.5.4 Submarine cable route ...................................... 18
    6.5.5 Land cable route ............................................ 19

6.6 Interface requirements between AC network and HVDC ...... 19

6.7 Requirements of HVDC control system ....................... 20

    6.7.1 Requirements for basic control and protection .......... 20
    6.7.2 Supplementary control ...................................... 20

7 Analysis of security of supply and stability for DC alternatives ...... 21

    7.1 Requirements for power network connection criteria ...... 21
      7.1.1 General requirements for AC/DC power network ....... 21
      7.1.2 Short-circuit ratio (SCR) of the AC system connected with single DC system .......... 21
      7.1.3 Short-circuit ratio of the AC system connected with multi-infeed DC system ...... 22
7.1.4 Effective inertia constant of AC/DC power network ........................................... 23
7.2 Stability of AC power system due to HVDC alternatives .......................................... 24
  7.2.1 Stability analysis for AC power system ............................................................. 24
  7.2.2 Analysis of sub-synchronous torsional interactions (SSTI) between
      HVDC and nearby turbine-generator .................................................................. 24
  7.2.3 Analysis for multi-infeed HVDC links .............................................................. 25
8 Economic comparison among the alternatives ............................................................. 25
  8.1 General .............................................................................................................. 25
  8.2 Main factors to be considered ............................................................................ 25
  8.3 Indexes to be considered .................................................................................... 26
  8.4 Sensitivity analysis ............................................................................................ 26
  8.5 Economic conclusion for recommended solution ................................................ 26
9 Study conclusions and recommended solution .......................................................... 26

Bibliography .................................................................................................................. 28

Figure 1 – Phases during integration of a new HVDC system into the power network ....... 7
Figure 2 – Procedure for planning an HVDC system ......................................................... 8
Figure 3 – Cost versus distance ...................................................................................... 11

Table 1 – Typical overhead bipolar HVDC project for power transmission .................. 15
INTERNATIONAL ELECTROTECHNICAL COMMISSION

GUIDELINE FOR PLANNING OF HVDC SYSTEMS –

Part 1: HVDC systems with line-commutated converters

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IEC TR 63179-1, which is a Technical Report, has been prepared by IEC technical committee 115: High Voltage Direct Current (HVDC) transmission for DC voltages above 100 kV.

The text of this Technical Report is based on the following documents:

<table>
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<tr>
<th>Draft TR</th>
<th>Report on voting</th>
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<tr>
<td>115/216/DTR</td>
<td>115/230/RVDTR</td>
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Full information on the voting for the approval of this Technical Report can be found in the report on voting indicated in the above table.
This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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1 Scope

This document provides guidelines for the selection of a high-voltage direct current (HVDC) system with line-commutated converters (LCC), hereafter referred to as HVDC system, for the purposes of integrating HVDC systems in AC power networks, selection of rated voltage and power, overloads, circuit configuration, expandability, comparison of technical, economic, regulatory, political, social and environmental factors, etc. This document is applicable for planning an HVDC system.

This guideline is not exhaustive and it is possible that there will be other specific aspects, particular to a specific HVDC project, which will also need to be considered.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60633, High-voltage direct current (HVDC) transmission – Vocabulary