ISO/IEC 30134-2:2026-01 (E)

Information technology - Data centres key performance indicators - Part 2: Power usage effectiveness (PUE)

Contents

Page

Foreword v

Introduction vi

1 Scope 1

2 Normative references 1

3 Terms,definitions,abbreviatedtermsandsymbols 1
3.1 Terms and definitions 2
3.2 Abbreviated terms 3
3.3 Symbols 3

4 Applicableareasofthedatacentre 4

5 Determination of power usage effectiveness (PUE) 5
5.1 General 5
5.2 Total data centre energy consumption 6
5.3 Total data centre energy consumption in mixed-use buildings 7

6 Measurement of power usage effectiveness 8
6.1 Calculation and measurement of energy consumption 8
6.1.1 General 8
6.1.2 On-site electricity generation 8
6.1.3 Measurement period and frequency 8
6.1.4 Meter and measurement requirements 8
6.1.5 EDC measurement location 8
6.2 Categories of power usage effectiveness 8
6.2.1 General 8
6.2.2 Category 1 (PUE1) -- Basic resolution 9
6.2.3 Category 2 (PUE2) -- Intermediate resolution 9
6.2.4 Category 3 (PUE3) -- Advanced resolution 9

7 Application of PUE 10

8 Reporting of power usage effectiveness 10
8.1 Requirements 10
8.1.1 Standard construct for communicating PUE data 10
8.1.2 Example of reporting PUE values 10
8.1.3 Data for public reporting of PUE 10
8.2 Recommendations 11
8.2.1 Use of PUE category 11
8.2.2 Trend tracking data 11

9 PUE derivatives 12
9.1 General 12
9.1.1 Purpose of PUE derivatives 12
9.1.2 Using PUE derivatives 12
9.2 Interim PUE (iPUE) 12
9.3 Partial PUE (pPUE) 12
9.3.1 General 12

9.3.2 Zoning 13
9.3.3 Metering requirements for pPUE 14
9.3.4 Reporting of pPUE 14
9.3.5 Use of pPUE in energy management 15
9.4 Mixed use PUE (mPUE) 16
9.5 Designed PUE (dPUE) 16

Annex A (normative) Energy measurements 18

Annex B (informative) Calculation of PUE using various energy supplies 20

Annex C (normative) Interpretation of PUE and its derivatives 27

ISO/IEC 30134-2:2026(en) Annex D (informative) Calculating dPUE 29

Annex E (informative)mPUEmeasurementandcalculationmethodformixedbuilding 32

Bibliography 35