

ISO 50015:2014-12 (E)

Energy management systems - Measurement and verification of energy performance of organizations - General principles and guidance

Contents	Page
Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Measurement and verification principles	4
4.1 General principles	4
4.2 Appropriate accuracy and management of uncertainty	4
4.3 Transparency and reproducibility of M&V process(es)	4
4.4 Data management and measurement planning	5
4.5 Competence of the M&V practitioner	5
4.6 Impartiality	5
4.7 Confidentiality	5
4.8 Use of appropriate methods	5
5 Measurement and verification plan	5
5.1 General	5
5.2 Scope and purpose	6
5.3 Energy performance improvement actions	7
5.4 M&V boundaries	7
5.5 Preliminary M&V plan assessment	8
5.6 Characterization and selection of energy performance metrics including EnPIs	8
5.7 Characterization and selection of relevant variables and static factors	9
5.8 Selection of the M&V method and calculation method	9
5.9 Data	10
gathering plan	10
5.10 Energy baseline establishment and adjustments	11
5.11 Resources required	12
5.12 Roles and responsibilities	12
5.13 Documentation of the M&V plan	12
6 Implementation of M&V plan	12
6.1 Data	12
gathering	12
6.2 Verification of the implementation of the EPIA(s)	13
6.3 Observation anticipated or unforeseen changes	13
6.4 M&V analysis	13
6.5 M&V reporting	14
6.6 Review the need to repeat the process	14
7 Uncertainty	14
8 Measurement and verification documentation	15

Annex A (informative) Overview of the measurement and verification flow	16
Annex B (informative) Measurement uncertainty examples	17
Bibliography	18