

# ISO/IEC 15067-3-30:2024-03 (E)

## Information technology - Home Electronic System (HES) application model - Part 3-30: Energy management agent functional requirements and interfaces

---

Contents	Page
FOREWORD.....	3
INTRODUCTION.....	5
1 Scope.....	6
2 Normative references .....	6
3 Terms, definitions and abbreviated terms .....	6
3.1 Terms and definitions.....	6
3.2 Abbreviated terms.....	7
4 Conformance.....	7
5 Configuration of multiple energy management agents in a residential community .....	8
5.1 Overview.....	8
5.2 Hierarchical EMA configuration for home or residential community.....	9
5.3 Distributed EMA configuration for home or residential community .....	10
6 EMA functional requirements and reference interfaces .....	11
6.1 Overview.....	11
6.2 Functional requirements.....	12
6.3 EMA interfaces .....	13
6.3.1 The four EMA interfaces .....	13
6.3.2 The southbound interface .....	13
6.3.3 The northbound interface.....	14
6.3.4 The eastbound interface .....	14
6.3.5 The westbound interface.....	14
Annex A (informative) Emerging challenges in EMAs .....	15
A.1 General.....	15
A.2 Integration with smart appliances.....	15
A.3 Integration with artificial intelligence .....	15
A.4 Integration with big data.....	15
A.5 Integration with energy prosumers .....	16
A.6 Integration with microgrids .....	16
A.7 Integration with smart home .....	16
A.8 Integration with smart cities .....	16
Bibliography.....	18
Figure 1 – Example of interconnected EMAs in a residential area .....	9
Figure 2 – A hierarchical configuration in a residential area .....	10
Figure 3 – A distributed EMF configuration in a residential area.....	11
Figure 4 – An EMA reference model with four functional requirements and four reference interfaces .....	12
Figure A.1 – Emerging challenges associated with EMAs.....	17