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ETSI ES 205 200 Factsheet

How do I use this methodology? Ask for support!

ETSI	ETSI ES 205 200: Access, Terminals, Transmission and Multiplexing (ATTM); Energy management; Global KPIs; Operational infrastructures	
Name of Initiative/Methodology	Access, Terminals, Transmission and Multiplexing (ATTM); Energy management; Global KPIs; Operational infrastructures Part 1: General requirements Part 2: Specific requirements Sub-part 1: Data centres Sub-part 2: Fixed broadband access networks Sub-part 3: Mobile Access Networks Sub-part 4: Cable Access Networks Part 3: Global KPIs for ICT sites	
Link to the latest published version	ETSI ES 205 200-1 (03/2014): Version 1.2.1 http://www.etsi.org/deliver/etsi_es/205200_205299/20520001/01.02.01_60/es_20520001v010201p.pdf ETSI ES 205 200-2-1 (03/2014): Version 1.2.1 http://www.etsi.org/deliver/etsi_es/205200_205299/2052000201/01.02.01_60/es_2052000201v010201p.pdf ETSI ES 205 200-2-2 (05/2018): Version 1.1.1 https://www.etsi.org/deliver/etsi_es/205200_205299/2052000202/01.01_60/es_2052000202v010101p.pdf ETSI ES 205 200-2-4 (06/2015): Version 1.1.1 http://www.etsi.org/deliver/etsi_es/205200_205299/2052000204/01.01_60/es_2052000204v010101p.pdf ETSI ES 205 200-3 (01/2017): Version 1.0.0 (On Approval) http://www.etsi.org/deliver/etsi_es/205200_205299/20520003/01.00.00_50/es_20520003v01000m.pdf	
Developed by	The European Telecommunications Standards Institute (ETSI)	
History and Status	Work started in 2013; still ongoing for Part 2 – Sub-part 3. Published from March 2014 (general requirements) until May 2018 (specific requirements)	
Involved companies / parties	Orange EADS EADS Thales PSA Peugeot Citroen SFR (Part 2 - Sub-part 2 only) e-Ready Building Limited (Part 2 - Sub-part 2 only) Cable Europe (Part 2 - Sub-part 4 only) CableLoss (Part 2 - Sub-part 4 only) RATEL (Part 2 - Sub-part 4 only) Liberty Global B.V. (Part 2 - Sub-part 4 only)	
Scope	Organisation env. accounting Scope 1 Scope 2 Scope 3	Product env. assessment Life cycle approach Use phase only
	GWP GPP Gregy Other environmental impacts	 KPIs Energy consumption Task efficiency Energy reuse Renewable energy
System(s) covered by the methodology	Infrastructures of broadband deployment, including: Data centres (DC) Fixed broadband access networks (FAN) Integrated broadband cable telecommunication networks, including cable access networks	
Goals	 Improving energy management of the operational infrastructures through a reduction in energy consumption, improvements in task efficiency, the re-use of energy and the contribution of renewable energy Providing methodological framework for the definition and calculation of Global Key Performance Indicators (KPI) in relation to the objectives described above (one global indicator + 4 objective indicators) 	
Generic features	 The reduction in energy consumption and task efficiency are primary objectives Conditions to applying the energy re-use indicator: "Non-use" is better than "re-use" and therefore the preference is for energy consumption reduction rather than energy re-use; Re-use of energy should give the preference to heat generated from by ITE/NTE rather than from poorly designed facilities and infrastructures. Conditions to applying the renewable energy indicator: If all energy is renewable, the indicator shall encourage the application of other indicators All indicators are based on measurements of energy consumption and shall be assessed over a defined period of time (typically 1 year). All indicators shall clearly define strict criteria for inclusion/exclusion with the formula Comparative costs and environmental impacts of different energy sources are outside the scope of the document. Recommendations and best practices are not in the scope of the document (a list of references is provided in the documents related to specific requirements). 	

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ICT-specific features	All systems covered by the methodology are not intended to/able to operate within a common limits for the KPIs (e.g.: infrastructures required to deliver high reliability) Part 2: Specific requirements - Sub-part 1: Data centres The KPIs may be applied to a single DC or a group of DC under common governance. All energy input to a DC is converted into heat. The energy provided to DC comes from utility (grid) or local sources (non-renewable or renewable). A DC is unlikely to meet all of its energy needs from local neewable sources on a continuous basis. The energy provided to DC comes from utility (grid) or local sources (non-renewable or renewable). A DC is unlikely to meet all of its energy needs from local neewable sources on a continuous basis. The energy provided to DC for comes from utility (grid) or local sources (non-renewable or renewable). A DC is unlikely to meet all of its energy needs from local The maximum time difference in the periods of assessment shall be 7 days The OS may contain a single fixed broadband access note or a group of FAN in a same site, and can be indoor or outdoor The energy provided to DC is from utility (grid) or local sources (non-renewable or renewable). FAN may meet their energy needs from local, renewable energy into a continuous basis. The scope of the KPI for renewable energy into account. The maximum time difference in the periods of assessment shall be 7 days The data source across the network is registered between the cable modem (in-home) and the headend equipment. The API of the energy use only takes local renewable and caccuss network concerned in the transmission of data between te cable modem and the headend equipment The RD for energy consumption involves all the main energy consumption, that would be dissipated into the environment otherwise (e.g. heat) The Scha sources network is registered between the cable modem (in-home) and the headend equipment The cable modem and the headend equipment The Comerable energy inot account. This does not take into consideration	
	• Use of renewable energy: is the ratio of energy susption from renewable sources over the total ICT site energy consumption. Thus, $\text{KPI}_{\text{REN}} = \text{EC}_{\text{REN}} / \text{KPI}_{\text{EC}}$ • Energy use management: determines the performance of energy use management by a single ICT site or a group of ICT sites. It is composed of two values: • DC _{EC} : is the energy consumption by a single or a group of ICT sites, expressed in MWh over a year and equals KPI_{EC} • DC _{ECLASS} : corresponds to the energy use management performance DC _p of a single ICT site or a group of ICT sites, expressed as a letter within the range A to G (see the default classes table below) • DC CLASS: corresponds to the energy use management performance DC _p of a single ICT site or a group of ICT sites, expressed as a letter within the range A to G (see the default classes table below) • DC CLASS: corresponds to the energy use management performance DC _p of a single ICT site or a group of ICT sites, expressed as a letter within the range A to G (see the default classes table below) • DC A SINGLE ICT SITE: DC _p = KPI _{TE} x (1-W _{REUSE} x KPI _{REUS}) x (1-W _{REW} x KPI _{REW}); where: • W _{REUSE} : Mitigation factor for KPI _{REUSE} (the value may vary depending on the gauge (ffs) within the range 0 to 1, the default value is 0,8), the value used is at the hand of the EC depending on the policy it choose to promote. • FOR A GROUP OF ICT SITE:DC _p = C (lass letters are translated to their rank, i.e. A=1, B=2 and DC _{CLASS} is expressed as a letter; and DC _{EC} = $\sum_{x=x} \text{KPIeC(0)}$ DEFAULT CLASSES TABLE : • $\frac{\delta = \frac{1}{100} + \frac{1}{100}$	
Examples of implementation /	G 2,30 None identified	
Interaction with other	EC Mandate M/462] Standardisation mandate addressed to CEN, CENELEC and ETSI to enable efficient energy use of ICT networks EC DG JRC Code of Conduct for Data Centre Energy Efficiency EC DG JRC Code of Conduct on Energy Consumption of Broadband Equipment [ISO Guide 82] Guide for addressing sustainability in standards [ETSI TS 105 174] Access, Terminals, Transmission and Multiplexing (ATTM); Broadband Deployment - Energy Efficiency and Key Performance Indicators	
	(E15) IR 102 881J Access, Ierminals, Iransmission and Multiplexing (ATTM); Cable Network Handbook And many others for Sub-part 4 [EN 50600] Series: "Information technology – Data centre facilities and infrastructures" [EN 1434] Series: "Heat meters"	

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