ITU-T

L.1315 Standardisation terms and trends in energy efficiency

READ MORE ON L.1315

Scope

It specifies terminology, principles and concepts for energy efficiency and energy management. It establishes a common understanding of energy efficiency and management and measurement methodology and its usage as a framework for other ITU-T standards or SDO documents.

Relevance for EXIGENCE

Relevant for **requirements and scenarios**, **energy metrics**, **energy measurements** and **data collection**.

Summary

L.1315 defines Energy efficiency as "The percentage of total energy input to a machine or equipment that is consumed in useful work and is not wasted as useless heat". For ICT it is important to consider not only energy consumption and energy efficiency (h) but also the Energy Efficiency Rating (EER). EER as a device metric shows how much of the input energy is used to perform a functional unit of the IT equipment (e.g., bps/J).

$$\eta = \frac{PowerForUsefulWork}{TotalUsedPower} \qquad EER = \frac{UsefulWork}{TotalUsedEnergy}$$

The energy efficiency metric is defined for 3 different levels: (1) Network/solution level (2) equipment/system level, and (3) component level. Levels (1) and (2) are considered and used for testing and evaluation of EE and EER, (3) only as suggestions, e.g. to improve the energy efficiency of equipment.

Co-funded by the European Union

Funded by the European Union. The project is supported by Smart Networks and Services Joint Undertaking (SNS JU) and its members. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or SNS JU. Neither the European Union nor the granting authority can be held responsible for them.