The role of International Standards for Sustainable Energy Transition and Achieving Net Zero

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How can international standards help?

International standards represent the amalgamation of knowledge contributed by experts from around the world!

For cities and governments

- Reduce carbon emissions
- Achieve a sustainable digital transformation
- Improve uptake of green energy
- Achieve targets set in the Paris Agreement and SDGs

For the ICT sector

- Technical guidance to implement green energy solutions
- Provide measurement tools to evaluate progress
- Bring low-cost connectivity to rural areas
- Reach net-zero

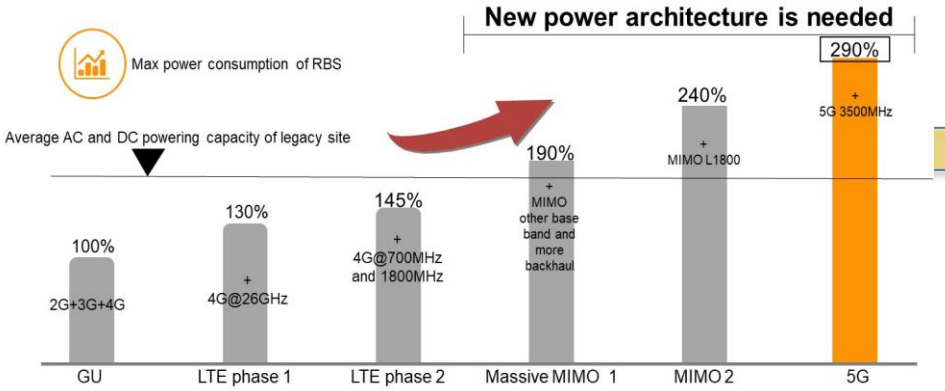
ITU-T Study Group 5

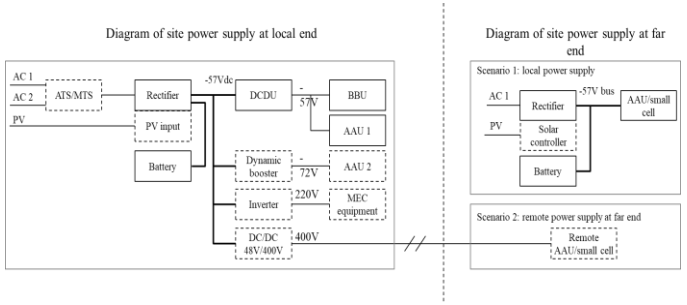
ITU-T Study Group 5 “Environment, Climate Change and Circular Economy”

- Develop international standards
- Research and pre-standardization work
- Awareness raising
- Active collaboration

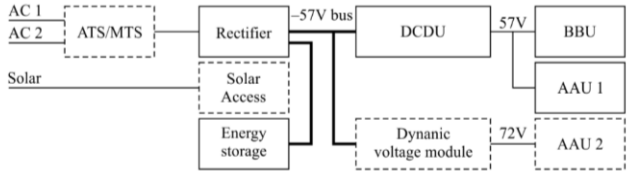
ITU membership consists of 193 Member States and over 900 companies, universities, and international and regional organizations

ITU-T L.1210 “Sustainable power feeding solutions for 5G networks”

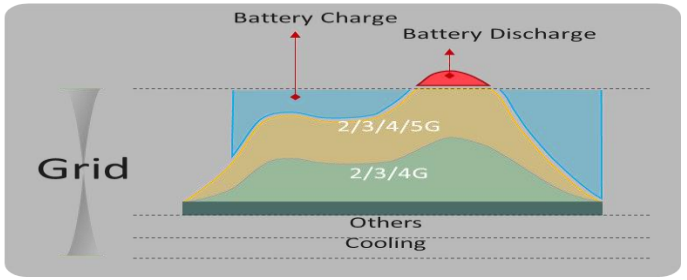




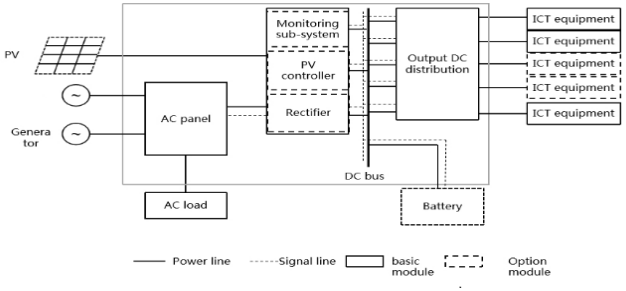
Power solution for C-RAN



Power solution for D-RAN



peak shaving solution



renewable energy solution

ITU standards for smart energy solutions

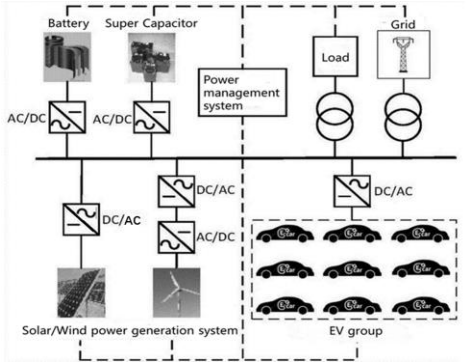
Data center
(ITU-T L.1381)

Telecom sites
(ITU-T L.1380)

Telecommunication Room
(ITU-T L.1382)

- Achieve a green transition
- Reduce carbon emissions
- Improve energy efficiency
- Extend product's life
- Reduce cost

Smart energy solutions for cities and home applications (ITU-T L.1383 - draft)



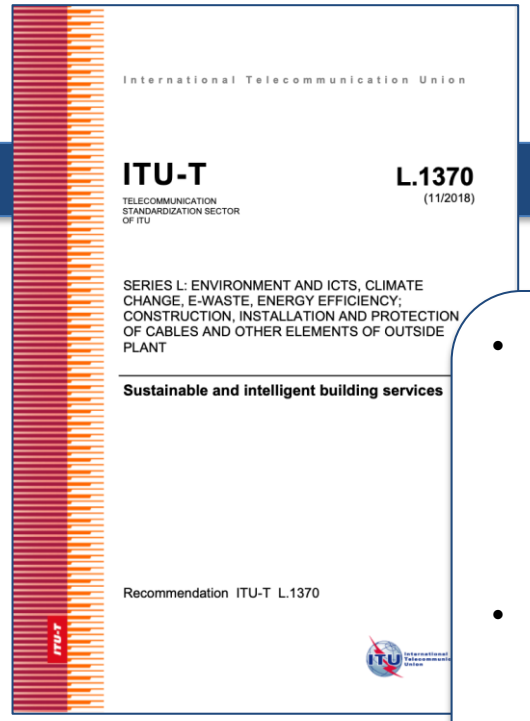
Smart Energy Applications in Residential Community

Smart Energy in Business Building

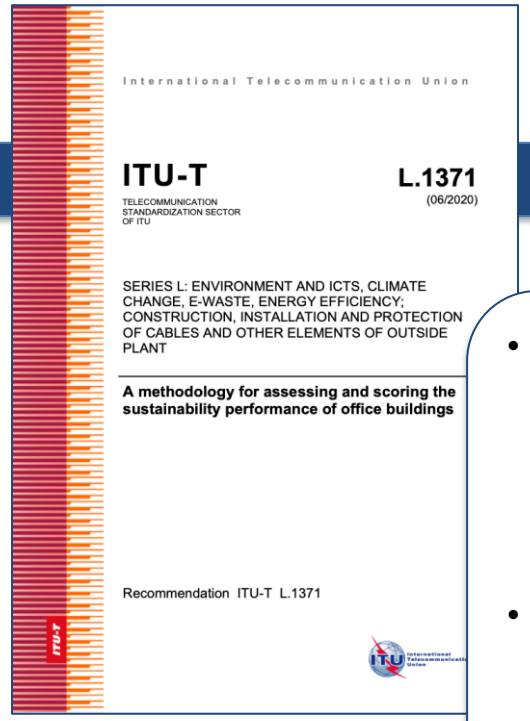
Smart Energy in Industrial Park

And more...

Sustainable and Intelligent Building (SIB)



- Defines the key concept and minimum requirements of SIB;
- Define the functions and requirements of IoT nodes in buildings

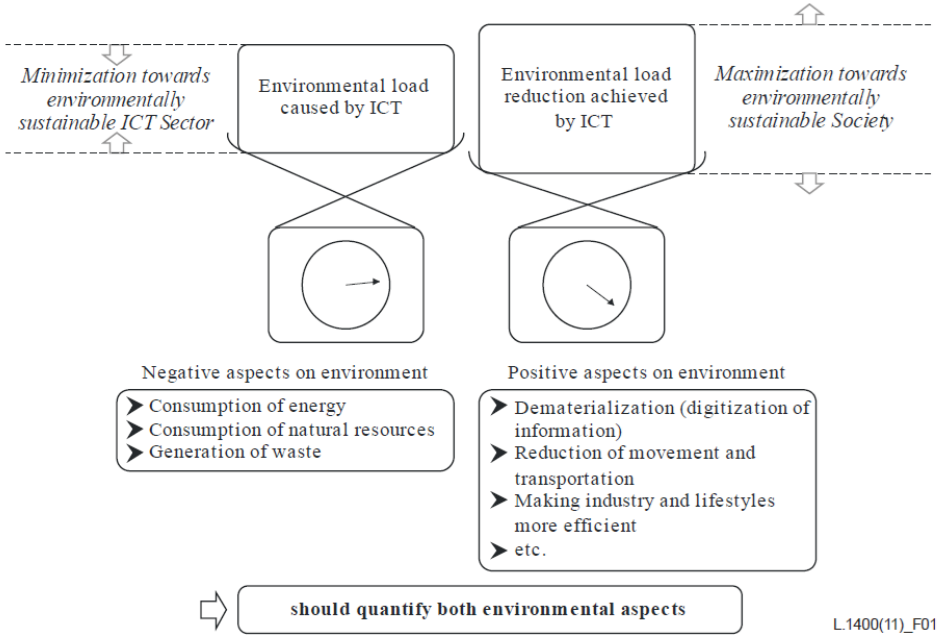


- Specifies a methodology for assessing and scoring office buildings;
- Includes best practices on improving energy efficiency in buildings

Building accounts for nearly 40% of global emissions

ITU-T standards on environmental impacts and Net Zero

Measuring the impacts of ICT is important for sustainable development and enhancing circularity.



The graphic shows ICTs has both positive and negative effects on the environment.
Both aspects should be considered when assessing the environmental impact of ICT.

- **Recommendation ITU-T L.1400:**Overview and general principles of methodologies for assessing the environmental impact of information and communication technologies
- **Recommendation ITU-T L.1410:**Methodology for environmental life cycle assessments of information and communication technology goods, networks and services
- **Recommendation ITU-T L.1420:**Methodology for energy consumption and GHG emissions impact assessment of ICTs in organizations
- **Recommendation ITU-T L.1450:** Methodologies for the assessment of the environmental impact of the information and communication technology sector
- **Recommendation ITU-T L.1451:** Methodology for assessing the aggregated positive sector-level impacts of ICT in other sectors
- **Recommendation ITU-T L.1470:** GHG emissions trajectories for the ICT sector compatible with the UNFCCC Paris Agreement
- **ITU-T L.Suppl.37 to ITU-T L.1470:** Guidance to operators of mobile networks, fixed networks and data-centres on setting 1.5°C aligned targets compliant with Recommendation ITU-T L.1470
- **ITU-T L.Suppl.38 to ITU-T L.1470:** Guidance for information and communication technology manufacturers on setting 1.5°C aligned targets compliant with Recommendation ITU-T L.1470

- NEW **Draft Recommendation ITU-T L.1471 (ex.L.NetZero):** Guidance and criteria for ICT organisations on setting Net Zero targets and strategies

Be part of the change through standards development

ITU-T SG5: Environment, Climate Change and Circular Economy, virtual meeting
30 November – 10 December 2021 (TBC)

WP2/5	Environment, Energy Efficiency and the Circular Economy
Q6/5	Environmental efficiency of digital technologies
Q7/5	E-waste, circular economy and sustainable supply chain management
Q9/5	Climate change and assessment of digital technologies in the framework of the Sustainable Development Goals (SDGs) and the Paris Agreement
Q11/5	Climate change mitigation and smart energy solutions
Q12/5	Adaptation to climate change through sustainable and resilient digital technologies
Q13/5	Building circular and sustainable cities and communities

Thank you!

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