

Mobile Internet Energy Efficiency



Overview

New technologies are dramatically improving the energy efficiency of mobile networks, while reducing their greenhouse gas emissions. That was one of the key takeaways from a recent GSMA webinar exploring the impact of 5G-Advanced on energy efficiency. In Europe, for example, mobile network. Operators face growing energy consumption with an associated increase in OPEX, arising from the introduction of 5G and massive MIMO technology combined with the need to add capacity and densify networks to address the continuous growth in mobile network traffic. Added to this, many operators have. nd affects the telecommunication sector as much as any other industry. To achieve this aim, the greenhouse gas (GHG) emission has to be halved by 2030 since GHG emissions and withdrawals must be balanced within the European Union by 2050 at the latest 6G initiative and contribute to a process proposal. This comprehensive roadmap aims to enhance energy-saving methods for. The project tackles energy efficiency challenges in mobile infrastructures, paving the way for lower emissions and reduced operational costs 03 April 2025 IMDEA Networks has contributed to the ECOMOME project, a research initiative focused on optimizing energy consumption in mobile networks.



Article Content

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Advancing green mobile networks

To cut energy use and environmental impact, this work reviews standardized energy metrics and data-driven solutions for greener mobile networks.

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This framework supports network auditing, benchmarking, monitoring, and energy efficiency optimization while ensuring the desired Quality of Service (QoS).

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It addressed energy efficiency challenges across all components of mobile networks, from user devices to radio access and core networks.

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