

Standards and Optical Transmission Technologies to Decrease Power Consumption: What is Being Done and Remains to be Done

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Extended Abstract: The United Nations Organization has set goals for sustainability. All industry sectors are concerned and as telecommunications operators, Orange is concerned by the stakes of the resources consumption of her activity on the environment and the climate. Reducing the CO₂ emission to limit the climate heating is the top priority set by the commitment to reach carbon neutrality by 2040. The Telecom industry, in particular equipment vendors and operators are working together to reduce the carbon footprint of future technology generations. In view of the growing data rates, impact of ever higher performance equipment on power consumption must be compensated. Methods have been investigated to sink the power consumption of equipment for the optical access and transport sections. This presentation will be focused on ITU-T & IEEE standards that are being developed and emerging innovative solutions that can contribute to the overall power consumption decrease. Implementers need to get evidence about what features operators are willing to invest in. On their side, operators need to be convinced about the benefits of power saving features, when technologies are continuously evolving, that they provide a sustainable operating experience without any breach in interoperability and prove to be hitless for the end users.