Energy Consumption Rating and Test Facility in TEC

The world's increasing need for the computation, data storage, and communication is driving the rapid growth in telecommunication but at same time it is enhancing the carbon emissions in the atmosphere. India has the second largest and fastest growing mobile telephone market in the world. Telecom products, services and network operations are most significant contributors of carbon emissions in the telecom industry. The greening of the telecom sector assumes significance not only for reduction of carbon emissions which facilitate to meet the overall India's target set out in Paris climate agreement 2015 but for the need to impact favourably on the economy in telecom sector as well.

A necessary first step for greening the telecom sector is to measure emission quanta from telecom devices and networks. After estimating the carbon footprint, the next step should be to adopt carbon neutral strategy in telecom network operation and to deploy energy efficient product/equipments in Indian telecom network which will put in place a robust carbon emission measurement system by identifying standardized metric that can evaluate the performance of a telecom product, equipment and network or service against its energy consumption which is termed as Energy Consumption Rating (ECR).

In this endeavour, TEC has brought out a new **TEC Standard on ECR** which delineates the test procedures and measurement methodologies for ECR and Energy Passport (EP) for various telecom products, equipment and network or services which will facilitate benchmarking for green passport certification. This standard is intended to help service providers and consumers in comprehensive energy consumption evaluation of telecom products, equipment and services for energy planning purposes which will enable them to add energy efficiency to their purchase criteria so as to achieve required reduction in carbon footprint. Presently the ECR standard covers DSLAM, MSAN, GPON, GEPON, Wireless Access Technologies (BTS, Node B, eNodeB), Routers, Ethernet switches, Small Networking Devices, WDM/TDM/OTN Transport MUXes/Switches, Converged packet optical equipment with packet signal and TDM signal, Converged packet optical equipment with packet signal, TDM signal and WDM signal functions, RNC and Mobile core functions (GGSN, HLR, MGW, MME, MSC, SGSN and PGW/SGW or equivalent terminology in 4G). TEC has established Green Passport Lab, which will capture the ECR values of Telecom products.

However, greening the telecom sector is an endeavour that would require active participation of all three sets of stakeholders – the government, the telecom industry and the citizenry.