



Transition to Green Telecom/ Network Engineering Aspects

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Present Scenario

- ICT Carbon Emissions: 02-1.3%/07-2%/20-3%
- 20% of ICT by Telecom Sector and by 2020 it will be 30% of ICT.
Mobile: 50% of Telecom
- In ICT GHG/CE is mostly due to Power. In Urban 67% -Grid/33%-DG & Rural vice versa, National Average one BTS gets 13.5 hours Grid power
- Contributors: ICT Waste disposal, Bldgs, Manufacturing process and Networks 71%
- Break-up of Mobile Network Power consumption
 - Access (RAN): 60%:
 - Core: 20%
 - Transmission: 40%
- Availability of Renewable energy: In India:18,455 MW 11% of installed base



Challenges and opportunities

- Better N/W Planning: Go for 3G, LTE/WiMAX, 4G which will save 30% passive and 60% active technology costs, Urban traffic limited, Rural coverage limited 700Mhz, Femto, Pico, FMC(single core N/W)
- Infrastructure Sharing: Active sharing, SDR(50% Power & 70% Hard ware Saving), IBS sharing
- Use of energy efficient Shelters & Equipment and innovative technologies :Hr Temp rating, less A/C, Power efficient designs (Mistral-Mobile) 85% in cooling & 40% in power, 3D heat sinks, SON, Smart Bldg, SOHI
- Use of renewable power sources: Solar, wind, Bio-mass, fuel cell, Pico Hydro- All high CAPEX thus heavy subsidy required.
- Why not: Common interconnect, all IP like/through NIXIE



Thank you