Comments on

Consultation Paper On Green Telecommunications

By

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Use of Renewable Energy Technologies

3.17 What are the most promising renewable energy sources for powering telecom network in India? How can their production and use be encouraged?

Comments and Recommendations

1. India has abundance of **Sun shine and wind energy**, so these two sources are the obvious choices. Apart from these sources of energy the **remote hilly areas in the North, North East and Central India** has a very huge potential for **Mini and Micro Hydel Power Plants** which should be tapped. Other sources which can prove useful are the Tidal Energy in the coastal areas, **blending of the disel and petrol with bio fuel.**

2. **My own efforts in using solar energy for powering telecom infrastructure in Ladhak had proved very useful**. I could successfully use Solar energy even during severe winter when the temperatures dropped to as low as minus fifteen degrees Celsius. Wind energy similarly can prove to be very useful in this area. Experiments with Solar and wind Energy have proved very useful in Rajasthan, Madhay Pradesh, Maharashtra.

3. The use can be encouraged by **making the cost competitive**. This can be achieved by mandatory regulations and financial incentive by the Government. The **blending of fuel should be made mandatory**. The concessions and incentives if feasible should be given on the production of Solar Voltaic Cells (SVC), wind turbines, secondary batteries etc. The R&D in this area should be given a push and **Academia should be involved in R&D and spreading the awareness among the younger generation of students.**

Better Network Planning

3.21 What steps can be taken by the service providers in planning green networks?

Comments and Recommendations

1. The computing power of the mobile devices is increasing exponentially. **New protocols should be developed which should make the base stations redundant**, i.e we should be able have network without the static infrastructure. MANETS are in experimental stages as of now but the future developments in this area have the potential to cut down the infrastructure requirements substantially.

Standardisation of Equipment

3.22 What standards do you propose to be followed in Indian telecom network for reducing the carbon footprint?

Comments and Recommendations

1. The Indian telecom industry must comply with the international standards i.e **ISO 14001 and ISO 50001. ISO 14001** is designed to assist companies in **reducing their negative impact on the environment**. **ISO 50001** which will be introduced in 4th quarter of 2011 will deal with **effective Management System for Energy** (MSE).

2. International Standards on energy efficiency and renewable energy requires to be formulated.

3.23 Who should handle the testing and certification of green equipment and networks?

Comments and Recommendations

1. Certified Lead Auditors by TRAI / Ministry of Communication and IT should certify the green equipment and networks. Training curriculum and courses should be conducted for award of certification for internal and external audit.

Monitoring and Reporting

3.26 Please give suggestions on feasibility of having energy audit in the telecom sector on the lines of energy audit of buildings.

Comments and Recommendations

1. The prerequisite for the Audit is a standard. The standard on energy efficiency and renewable energy requires to be formulated. However in absence of the new standard the audit can be done against ISO 14001 and ISO 50001.

2. ISO 14001 is designed to assist companies in **reducing their negative impact on the environment**. **ISO 50001** which will be introduced in 4th quarter of 2011 will deal with **effective Management System for Energy** (MSE).

3.27 What should the monitoring mechanism for implementation of green telecom?

Comments and Recommendations

1. Certification for compliance with various international standards from authorized certification agencies will help in effective monitoring.

3.28 Who should be the monitoring agency?

Comments and Recommendations

1. The monitoring agency should be the agency duly authorized by TRAI and Ministry of Environment.

Promoting R&D for Green Telecom

3.32 How can domestic R&D and IPR generation be promoted?

Comments and Recommendations

1. **The Industry must involve academia in the R&D**. The following steps can be taken to promote R&D:

- The industry should be given **tax incentives** to invest in the R&D for green telecom.
- The industry must project the requirements and the challenges faced in implementing green telecom to the **academia.**
- The industry must **fund projects for research in universities** in the area of green telecom.

CSR and Community Service

3.33 Would it be a good idea for TRAI to evolve a best practices document through a process of consultation with the stakeholders?

1. Yes, it will be a good idea for TRAI to evolve a best practices document. The views from academia should also be incorporated.

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