Energy Efficiency & Energy outsourcing Model in Idea

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Agenda

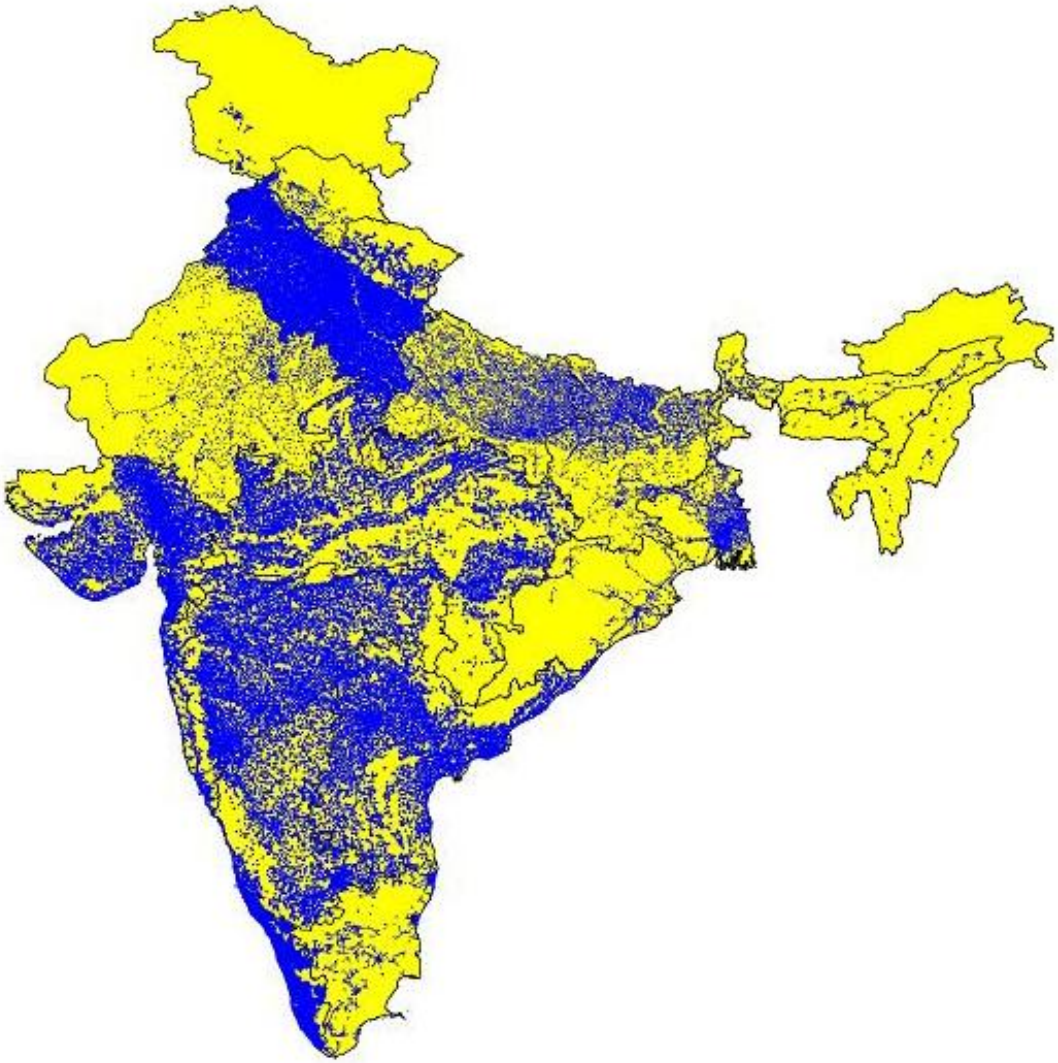
1. **Introduction to Idea**
2. **Initiatives on Energy Efficiency/Optimization**
3. **Energy Outsourcing and Future prospects**
4. **Expectations from Tower Company**
5. **Any other views**

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Idea a PAN India GSM Operator

- About 80K 2G Sites
- About 10K 3G Sites
- 88% Sites are operating from IP Companies
- 12% Sites are owned and Operated by Idea directly
- About 100 Mn Subscriber base
- Adding about 1.5K 2G+3G Sites every month



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Idea Initiatives in Energy Management

Energy Efficiency - Passive

Initiatives taken to reduce net Carbon Footprint of the Production Unit, includes the use of efficient hardware & Low Carbon Energy sourcing

1. **Introduction of OD BTSs in 2007 & Use of ID Shelter in 2011**
2. **Introduction of Ramboll Tower designs in 2006**
3. **Use of Bio-Fuel for powered DGs in 2006**
4. **Use of Twin Battery Banks at Sites in 2006 & higher use of B-Backup**
5. **Use of FCU Air Conditioners in 2007**
6. **Setting higher AC cut-in Temperature for ID BTSs Sites in 2007**
7. **Use of Deep Discharge Batteries (Not deployed)**
8. **Deployment of Hybrid Solutions for Energy since 2010**

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Idea Initiatives in Energy Management

Energy Efficiency - Active

Initiatives taken to Measure, Monitor, Track & Improve Energy efficiency based on the various deployments

1. Creation of Electrical Engineers Panel in the Organization
2. TRX wise, BTS Model wise, Configuration wise Consumption measurement and benchmarking
3. Grid Power and DG Consumption per Hour measurement and benchmarking
4. Grid Power and DG Run hours availability monitoring, tracking and benchmarking region wise
5. Net Energy Cost per Site monitoring tracking and benchmarking

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Idea Initiatives in Energy Management

Energy Efficiency - Active

6. Fixed Energy Model with IP Companies
7. Introduction of DC Energy Metering
8. All Energy Hybrid Models include Measuring, Monitoring & Tracking energy consumption
9. Energy Consumption monitoring of CORE Facilities of 22 Networks centrally and comparison analysis,
    - Monitoring , Tracking & Initiating efforts to improve the DC component of every units consumed in a CORE facility at the benchmark levels (Target is 70% DC & 30% AC in every Kwh consumed at any CORE facility)
10.

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Idea Initiatives in Energy Outsourcing

Following Models were finalized & under deployment in Idea,

1. **Bio-Diesel : Mixing of Bio-diesel and filling it at the Site was outsourced to the Bio-diesel Vendor and it was successful**
2. **Different Hybrid Model: Fixed Energy costs matrix agreed for various combinations of Load, EB availability, Battery back up and DG Run Hours with the Vendor. Rate changes only if EB or Diesel rate changes & those variations are also pre-defined. Subsidy, if any, goes to the Vendor**
    1. **Solar based Hybrid Model for OD BTS Sites**
    2. **DG-Battery-SMPS Hybrid Model**
    3. **Hydrogen Fuel Cell based Hybrid Model for OD BTS Sites**

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Idea Initiatives in Energy Outsourcing

Following Models are under discussion (Fixed OPEX),

1. **Solar – DC AC Hybrid for ID BTS Sites**
2. **Use OD Shelter for ID BTSs**
3. **Use of High Efficient SMPS**

Idea prefer to have OPEX model in all these cases due to following reasons,

1. **Do not want to create competencies of various models in-house**
2. **Need Commitment from the Vendors for their proposed solutions**
3. **Specialization in the areas of Energy efficiency is emerging as an Industry by itself**
4. **Energy Solution Companies can Synergize their strengths for cost optimization**
5. **SBU Concept will bring in more efficiency and innovation**

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Energy Outsourcing Future Trends

Energy efficiency initiatives have unlimited potential in India, some reasons are,

1. **Each unit of energy saved is equivalent to Revenue earned and there is high focus on the same at the Organization level.**
2. **Regulatory Guidelines on Green Telecom is expected anytime, which may lay down roadmap for Emission reductions**
3. **Due to very high lead time for payment realization and high number of reconciliation disputes, Fixed Energy Model is catching up with all IP-Telco relationships & FEM have built in efficiencies for Energy cost reduction**
4. **Going forward Customers may expect Telcos to be more greener and Socially responsible**

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Expectations from IP Providers

Following are the basic expectations from any IP Provider,

1. **Uninterrupted DC power at rated capacity 24x7x365**
2. **Environment for Network Operations**
   - **Leak proof, Dust proof, Air-conditioned ID environment where ever applicable**
   - **Access to Site & Permission to work whenever required**
3. **Infrastructure Hygiene at the highest levels,**
   - **Proper Earthing, Surge & Lightening protection**
   - **Healthy & Transparent operational practices**
   - **Ensuring Safety & Security of Assets**

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Expectations from IP Providers

Energy Solution is only a part of the total deliverables from an IP Vendor and following are the expectations specific to Energy,

1. **Sharing a roadmap on Energy efficiency & related emission reduction**
2. **Compare actual results with the Roadmap targets every quarter**
3. **Based on actual data,**
   - **Benchmark & Publish Consumption pattern for different BTS models, Configurations, etc**
   - **Map and publish Geography based EB availability & DG run hours**
   - **In the Governance meetings bring up Telco Emissions and Emission comparisons to sensitize the stakeholders for improvement**

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Thank You

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