Airtel Africa – Greening the Telecom Network



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Bharti Airtel

- 20 countries operation across Africa and Asia
- 300+ million customers
- 175,000+ owned towers under operations
- Average site sharing is more than 60%



Airtel Africa- unique foot print

Operations in 17 African Countries acquired by Zain in 2010

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Focus area for Green Tower Sites

Reduction of Power Consumption

- 100% Outdoor Site Deployment
- Conversion of Indoor Sites to Outdoor Sites
- Optimized Shelter Temperature for Indoor Sites
- Site Monitoring Tools deployment to improve visibility

Reduction of DG Runtime

- Deployment of DCB hybrid batteries
- Maximize Commercial Grid connections
- Aggressive Solar Deployment

Reduction of DG CPH

- Right Sizing of DGs
- Replacement of EOL DGs
- Introduction of CPH model



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Greening of Telecom tower sites – Key challenges

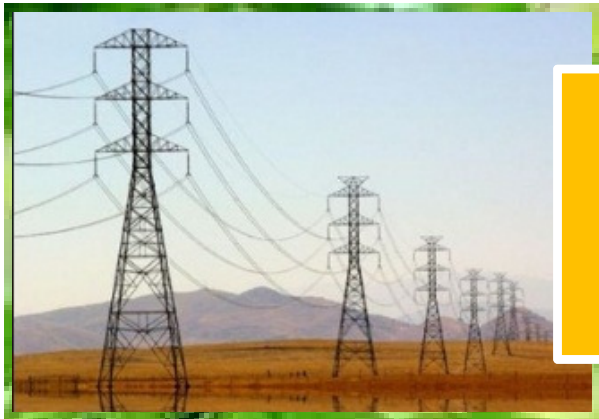
- Poor Grid Coverage and Availability
- Scarcity of Technical Competence
- Equipment and spares sourcing
- Sabotage of Opex efficiency Initiatives due to vested interests
- Lack of 100% Site visibility
- High transpiration cost

Airtel Africa – Key challenges on tower sites

	Off grid	Unstable grid	
Power solution	D.G. only	Grid + D.G.	Grid + backup battery
			
	24 x 7 D.G. running time	D.G. supply power when grid outage	Battery supply power when grid outage
Challenges	• Cost of fuel: $20k~25k /site/year • Cost of D.G. maintenance : $6k~10k /site/year	• Cost of fuel: $10k~12k /site/year • Cost of D.G. maintenance : $3k~5k /site/year	• Cost of batteries replacement: $4k~6k /site/year
	• Problems related with separated equipment.	• High cooling cost	• No OSS

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Green Energy Journey: Airtel Africa



Commercial Grid Penetration from 40% to 60%



Deep Discharge Battery Hybrid Increase from 24% to 50%

100% Outdoor Sites deployment



No Site Running on 24* 7 DG (Reduced from 36% sites in 2010)



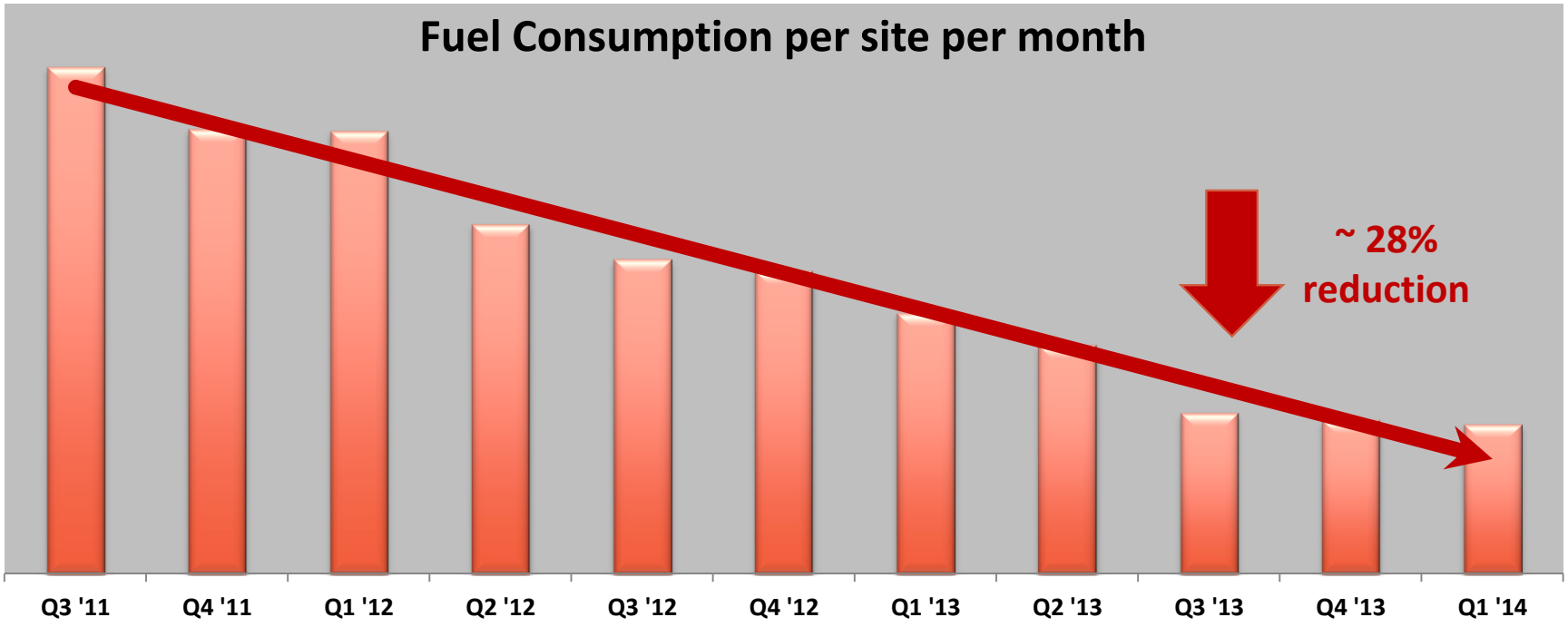


~ 1,200 Solar Sites Deployment across Africa



Average sites sharing on owned sites increased from 10% to 22% in last 2 years

Results: Green Environment





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Solar Deployment – Airtel's unique model

- **CAPEX Investment:** Airtel
- **PARTNER:**
  - Selection based on local presence and strengths.
  - AMC/MS with the solar solution provider
  - **Diesel Run Hours KPI : Max 4.8 to 5 Hours/Day**
- **Reward/Penalty linked with:**
  - Average DG run rate **< 4.8hrs/day**: **25% of savings to partner**
  - Average DG run rate **> 4.8hrs/day**: **Penalty for Fuel to Partner**

Airtel Key Solar Deployments


Nigeria: 308 sites


Niger: 188 sites


Tanzania: 154 sites


Malawi: 117 Sites


Tchad: 97 sites


Zambia: 89 sites

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Airtel Africa- Future Strategy

- **Hive off towers to established tower companies to ensure focus on passive infrastructure and energy expenditure**
- **Enhance telecom site sharing**
- **Work with both active and passive partners in reducing further energy requirements**

Thank You

