GLOBAL Group Enterprise

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GTL's Green Power Initiatives in Telecom

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Agenda

- Importance of green power to telecom
- GTL's vision about Green Power
- Green Base stations is the future !
- Solar-Wind hybrid ('GLOSUN' & 'GLOWIND')
- Ambient (free) cooling Technology 'GLOCOOL'
- Diesel saver (DG optimizer) 'GLOMASTER'
- 'GLOGREEN' shelter
- Continuing R&D Efforts & Other Initiatives
- Thanks

Importance of Green Power in telecom

- Future development of Networks in rural, off grid sites leading to over dependence on DGs & various operational problems associated with it
- Energy security is an important concern for telecom
- Social & Governmental pressure all over the world to reduce GHG gas emissions & carbon footprint
- Sustainable development throughout lifecycle of networks.

GTL's Vision about Green Power

- Establish a dedicated energy management department
- Ensure efficient energy use in telecom
- Reduce GHG gases emissions & carbon footprint of telecom Industry
- Minimize dependence on Diesel Generators
- Act Voluntarily establishing economic viability of green power
- To carry out innovative pilot Green power projects
- Develop attractive Business models to make green power economical power also

Green Base Stations is the future !

- All future rollouts happening in off grid areas
- It is not financially viable for grid power to reach remote sites
- Dependency on diesel is nightmarish situation operationally & economically also
- Solar Power &/OR wind power abundantly available in new telecom markets.
- Energy efficient systems backed by Green power are the future passwords for base stations.
- Reducing CO2 emissions is on Agenda of most Telcos in India & internationally.

Solar–Wind hybrid('GLOSUN' ,'GLOWIND')



- GLOWIND & GLOSUN solutions developed & prototype site already functional
- Separate MPPT charge controllers in master-slave modes for solar panels & wind turbine giving added flexibility
- Indigenously developed in house Charge controllers
- System commercially available
- GLOWIND solution i.e. a stand alone wind turbine installed in Pune at a site called Kalus
- Wind turbine installed on a live telecom tower for the first time in India

Ambient(free)cooling Technology GLOCOOL

- Stand Alone free cooler
- Microprocessor controlled
- Sophisticated Algorithm
- Substantial savings in air conditioning costs
- Rugged design
- works on 48/24 VDC



Diesel saver(DG optimizer) 'GLOMASTER'



- Microprocessor controlled
- Stand alone solution
- If combined with GLOCOOL gives a system solution with significant savings

GLOGREEN shelter



- A complete base station solution with optimized energy usage
- Renewable energy ready
- Separate battery compartment
- Innovative technologies used
- Non monopolistic design approach
- O&M friendly

Continuing R&D efforts & other initiatives

Continuous improvements in existing products & Efforts on to develop more green technologies some future products being.

- Glostar
- Glogas
- Glosuper

New Technologies tried

- Ground cooling for telecom shelters
- Bio diesel
- Chemical additives for Diesel.

Thank you