

## Introduction

Tower & Infrastructure Providers Association (TAIPA) is a body of players (Registered as IP-1 with Department of Telecom) engaged in setting up and running over 400,000 towers in India. This infrastructure is integral for carrying wireless signals across India & by enabling sharing of expensive infrastructure it lowers the cost of delivering services. Thanks to TAIPA members, even the poorest urban users enjoy cheap call rates. Mobile phones are helping rich and poor alike to live and work productively and safely.

TAIPA commends the MNRE on its approach towards expanding the use of renewable energy in India. Its document offers a clear and concise estimate of India's huge energy deficit and offers a rich framework to discuss the possibilities. The proposed sub-groups will enable us to identify steps needed to overcome the challenges in deploying clean energy across India.

A recent report by a respected think-tank ICRIER, highlights the use of mobile phones by farmers to obtain key information about weather, market prices, fertilizer, etc. Mobile phones are saving lives and livelihoods of fishing communities in Kerala. ICRIER study shows the clear causal link between a State's GDP and its level of telecom penetration. Telecom industry, which is now widely recognised to be central economic and social development in India, has a unique stake in a reliable energy supplies. In particular, the approximately 4 lakh towers in India need 24x7 power to disseminate wireless signals.

However, barely 33% of the energy needs can be met from the supplies from the grid. Inevitable use of diesel to address the deficit is a major concern since it costs several times more and increases Green House Gases (GHG). The use of diesel by Telecom Infrastructure players is not only voluntary but also forced on them since the Electricity Boards (EBs) are unable to meet even a fraction of the demand for power. If the EBs could meet the demand, naturally there would be no need for diesel.

TRAI has recently recommended that Telecom infrastructure should be treated as an essential infrastructure & DoT should address all State Governments to direct the Power Distribution companies in the States to provide grid power connectivity on priority for telecom tower sites.

Steps to improve access to power directly affect the economics of the telecom industry. Growth of telecommunications services is central to the success of several other sectors such as banking, health and education as well as governance. So poor power supplies hurt many critical sectors of the economy and retard development.

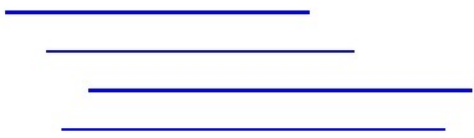
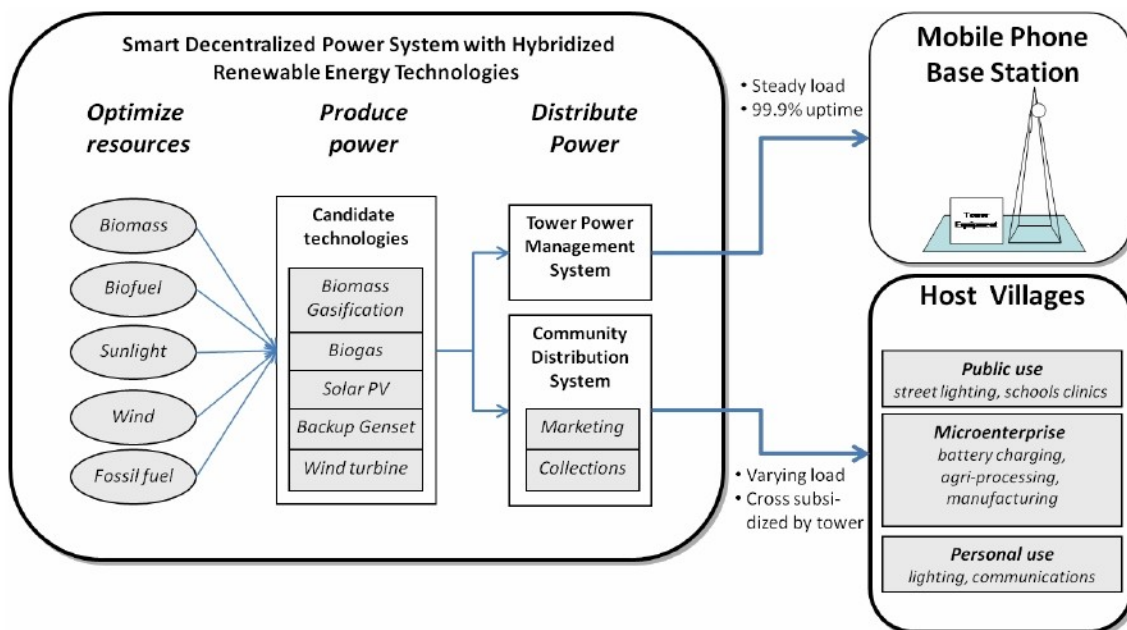
## Towards sustainable Telecommunication & Energy

TRAI's analysis of rural electrification confirms the grim situation of power in India and shortage of power to run telecommunication infrastructure in the country. Electric Generation in India is seriously below the peak demand & due to non availability of grid power, load-shedding or voltage irregularities, telecom infrastructure providers are compelled to deploy expensive solutions like diesel for powering their infrastructure. This practice has several associated problems. These players are not in the energy business. They have neither the mandate nor the level of expertise and options available to electricity boards and related agencies to carry out this task effectively and economically. It is doubly worrying for them that they also now face allegations now about increasing pollution. As major victims of poor electricity supplies that have raised their costs and hurt their returns, they now run the risk of being treated as villains. IP-1 players cannot be held responsible for and penalized for a systemic failure unrelated to their functioning. This is unacceptable and risky since interruption of telecom services can hurt millions of people directly and indirectly.

IP-1 players also assert that communications infrastructure building is a national task and instead of deserving incentive/reward based approaches for encouraging efficiencies that are key to expanding access to telecom services across India, especially, rural areas where they can dramatically improve lives and livelihoods, they are being penalized from all corners. However, it is often forgotten that telecom operators do not just increase demand for energy. They are also important for addressing the demand by improving the economics of supply. For instance, several plants that provide renewable energy are simply uneconomic unless it is adequately deployed.

In other words, the cost of setting up the infrastructure is prohibitive if the levels of demand are low and do not offer economies of scale. With a large 'anchor' demand for energy from just one user viz. a local telecom infrastructure, several off grid distributed solar and other renewable energy projects can achieve scale and become viable. So far from being just a part of the problem, telecom industry is a veritable part of the solution. Especially, when all reports are indicating that at the current growth rate, it is estimated that the subscriber base would reach 1 billion by the year 2014. In order to serve additional millions of wireless subscribers, another 120,000 towers are required (Industrial Development Bank of India).

Indeed, this is the basis of a successful development project of the Rockefeller Foundation and Confederation of Indian Industry (CII) in partnership with a highly respected civil society organization, Development Alternatives. The project aims to exploit the anchor load of telecom towers to make rural electrification viable. It is being implemented in India as well as the other countries of Asia as well as Africa. Telecom Infrastructure providers and operators voluntarily provided all the required support to this project by connecting their sites to this mini community power stations installed in Rural Bihar based on Bio Mass. The project is currently in its second phase after the first one showed considerable potential.



## Recommendations:

In view of their important role in demand and supply part of the renewable energy programmes, the TAIPA recommends that:

1. MNRE must set up an additional sub-group to deal with issues relating to renewable energy for telecom operations especially towers. Such a sub-group could consider issues relating to inter alia, demand estimation, constructive collaboration, tariff issues and effective mechanisms to interface with bodies like the Telecom Regulatory Authority of India (TRAI) & Industry bodies like TAIPA.
2. Renewable Energy Service Providing Company (RESCO) must be mandated to prioritize and expedite supply of clean energy for telecom towers. This makes eminent sense since RESCOs are channel partners of MNRE and get substantial support from government. There must be specific roll-out commitments on RESCOs to provide energy to Telecom Infrastructure Companies at agreed prices, failing which there must be penalties on RESCOs.
3. With telecom services available in several areas where there is no electricity, it makes eminent sense to require RESCOs to prioritize these areas for renewable energy solutions. Telecom towers can provide anchor loads immediately and help improve economics of power distribution. In case of any limitation or failure of RESCOs, similar subsidies can be extended to Telecom Infrastructure Companies.
4. RESCOs and tower companies must work closely together to ensure that they are able to avail economies offered by each other's operations. This could include arrangements to use each other's physical infrastructure like land and pucca buildings to expedite and maximise the impact of each other's functions.
5. Efforts must be made to design templates for instruments such as agreements for use and payments, service level agreements so that decentralized operations for renewable energy can continue in an orderly and efficient fashion.
6. An institutional mechanism must be created to ensure effective coordination between multiple user types and related ministries and other agencies. These will inevitably come in to play on the ground when new players and technologies augment current arrangements for power generation and distribution.