

## EXPERT SPEAK

**"We must explore tools to make equipment consume less power and define technologies that can be developed to manage grids."**

**Mr. Gowton Achaibar**  
President, Ericsson  
India Private Limited

**"You have to be smarter and look at better things; you have to further optimise your environment—be it by using equipment that are cheaper to operate or moving to outdoor sites."**

**Mr. Rajiv Bawa**  
Executive Vice-President,  
Corporate Affairs, Uninor

**"We should not look at benefits on a weekly or monthly basis, but over long term. Once you look at a yearly average, investing in solar energy should make sense."**

**Mr. Danesh Bansal**  
CTO, Indus Towers

**"There are several things that the industry must do. The fact about solar energy is that we have 3 lakh tower sites and it will only be feasible to deploy solar in 20-25 percent of these."**

**Mr. Kishor Kale**  
Executive Director  
Operations, Global Towers

**"The government must take initiative and pump in investment. Private sector must realise that it is in the interest of the nation to go green and do what little has to be done."**

**Mr. Peeyush Vaish**  
Partner, KPMG India



From the left: Mr. Danesh Bansal, CTO, Indus Towers; Mr. Peeyush Vaish, Partner, KPMG India; Mr. Kishor Kale, Executive Director, Operations, Global Towers; Ms. Damini Kumari, Senior Editor, ET NOW; Mr. Gowton Achaibar, President, Ericsson India Private Limited and Mr. Rajiv Bawa, Executive Vice-President, Corporate Affairs, Uninor

## The Indian Telecom Sector Heads the Green Way

After growing leaps and bounds, the next laurel the Indian telecom sector aspires for is that of environmental sustainability

It is irrefutable that energy is a dominant cost component for telecom companies. From an operator perspective, about two-thirds of the cost—the opex costs—happens to be network costs. Of this two-thirds cost, energy remains one of the largest items, standing at almost one-third of the total opex. Operators face a cost-crunch as tariffs drop, while about 5-8 percent of the total revenue per call or revenue per minute is relayed to energy cost. With 40 percent of towers existing in rural India and several regions like UP and Bihar receiving negligible power; there is much pressure on diesel to operate equipment, run towers and for cooling. Besides being expensive (with costs ranging from Rs 15-45/unit), diesel generates a considerable amount of carbon-dioxide. Yet, the telecom sector contributes only about 0.2 percent of global emissions. In view of these facts, the ETIG Knowledge Forum in association with Global Group has attempted to articulate the road map to green telecom in India. Moderated by Ms. Damini Kumari, Senior Editor, ET Now, the event focused on the means and initiatives to adopt the Go Green Policy for the telecom sector, and clarified the government's role in aiding this effort, among a variety of discussion points. Ms. Kumari helped the panel of experts highlight and resolve the challenges for increased energy-efficiency in achieving a green awakening in telecom.

### GOING GREEN A STEP AT A TIME

When sites are deployed in rural areas, costs start rising. So while it is a third of the opex on an average, in rural areas diesel-related or energy-related costs are as much as 50 percent. A few viable options are elaborated. **Better Technology:** Constantly evolving professional grade energy management products are leading the revolution and R&D

has helped bring costs down. There are battery sets that consume almost one-tenth of what was consumed earlier. Mr. Gowton Achaibar, President, Ericsson India Private Limited, informed, "Diesel run time can be cut to four hours. Alternatives like solar panels and other types of sources of energy and their combinations depending on the cost-effectiveness of deploying the capex versus the opex savings, is something that has to be looked at." In the past, to deploy 2G, 3G, 4G technology, one would need separate base-stations. Today, a single base-station puts all the technology in one

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place such that one needs to simply change the radio configuration.

**Improving Efficiency:** Mr. Danesh Bansal, Chief Technical Officer, Indus Towers, pointed to a need to improve efficiencies of passive equipment. In indoor sites with air conditioners, 40 percent of the energy consumption is for ACs. Outdoor sites show significant improvement in energy consumption. Mr. Kishor Kale, Executive Director, Operations, Global Towers, believed that free cooling is something that can be deployed at all the indoor sites and can significantly bring down costs. Fuel optimisers can also be used. Mr. Rajiv Bawa, Executive Vice-President, Corporate Affairs, Uninor, thought that efficient cooling units and outdoor Base Transceiver Stations can reduce diesel cost. Operators that are here for the long run will have to pay 15-20 percent more now to

reap returns in the long run.

**Renewable Energy:** Solar energy is cheaper to produce on a large scale. With single towers in rural areas, the question of viability is a glaring one especially when the government only subsidises up to 200 units of solar panels. There are operational challenges, but they make sense when their yearly benefits are considered. By combining solar and energy management products, it is possible to achieve savings to the extent of 40-50 percent while reducing DG riding hours from 17-18 to 4 hours (or in some cases even zero), with combinations.

**Network Sharing:** There are about 3.1 lakh towers in India and about 40 percent of those are in rural areas. Because operators need to grow and build their footprints, more and more rural coverage is sought. Operators can ensure operational efficiency by sharing a built tower instead of building a new one. This trend started two years ago and has become a great business model because of the efficiencies gained. Mr. Bansal elucidated, "If I have a site with one operator, we spend Rs 100; if we have two operators, we end up spending Rs 80 each with a total of Rs 160 and if we get three operators on the site, we end up spending Rs 210, which comes to about Rs 70 per

government help is necessary to augment the sector.

For renewable energy, the government presently offers 30 percent subsidy. Last year their cap was 100 sites per operator, which is a tiny number when the present three lakh sites are considered. Also, subsidies are not sustainable over the long term. Mr. Kale suggested that "The government should look into investing with private partnership where they can process the silicon or thin film technology to make modules or cells required by the modules. These can then be

**ET NOW**

Catch the coverage of The ETIG Knowledge forum in association with Global Group on ET NOW on 12th March (Sat) at 5:30 p.m. and repeat telecast on 13th March (Sun) at 6:00 p.m.

supplied at about 40-50 percent of today's cost to module manufacturers. Modules will then be offered at half their present price, making them commercially viable." Mr. Peeyush Vaish, Partner, KPMG India, questioned why the USO fund could not be given specially to expand in rural areas. "The Average Revenue per User in rural areas is insignificant, while operators are investing money into these areas," he said. He opined that this is the reason why there is a pressure for operators and infrastructure-providers to go green.

### THE FINAL WORD

Telecom or otherwise, the government must focus on policies that promote the production and use of clean energy in India, observed Ms. Kumari. If suggested reforms materialise, they will shape the course of green telecom. With increased coordination between the sector's stakeholders for an effective solution and various initiatives taking form, it may be hoped that the sector will soon find the green path it has desired.

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operator. So by sharing itself, we have significant reduction from 20-30 percent from an operator perspective."

### NEED FOR PROGRESSIVE REFORMS

It is clear that to 'go green,' the sector needs to focus beyond solar energy. Additional options, such as wind, fuels like LNG, CNG and PNG can be tapped. Yet certain challenges like high cost and a longer wait for ROI—about 4-5 years—persist. Hence,



A Penetrative Interaction in Progress

## Demystifying the Intricacies of Green Telecom

After an enlightening discussion involving the esteemed panelists, the board was thrown open to questions from the audience. Several pertinent doubts were raised and answered—from fundamental topics like why green is relevant for the telecom sector, to the subject of carbon credits. Here is a look at what the specialists had to say.

To a query raised regarding whether carbon footprints are relevant in the telecom space, Mr. Gowton Achaibar, President, Ericsson India Private Limited, responded that telecom is probably the greenest industrial revolution. In his opinion, the problem that the sector is still trying to address—as it pertains to developing countries—is about energy management and energy cost-efficiency. The Indian government subsidises diesel, so it also means fewer burdens on emerging markets as it pertains to energy cost. He pointed out that statistics mention, with advances in

telecom, the number of airline travelers will reduce by 21 million by 2012. It is already possible to eliminate the use of cars on the road by making phone or video calls.

Revealing which renewable energy sources have good market potential apart from solar and what initiatives need to be taken to develop these, Mr. Danesh Bansal, Chief Technical Officer, Indus Towers, stated that there has been some experimenting with fuel cells, hydrogen-based fuel cells, PNG and even LPG. "We have experimented with wind, but wind standalone did not make much sense, so we did solar first and topped it up with the wind. So solar-wind hybrid will be the way forward," he said. With regard to fuel cells and LPG, logistical issues exist because fuel must be transported to the site. He added that efforts are being made to tie-up with different agencies to enable the conveyance of these sources to sites in an uninterrupted manner.

The panelists received a question regarding the mechanism of how green audits are done and converted into credits. To this, Mr. Rajiv Bawa, Executive Vice-President, Corporate Affairs, Uninor, replied that as an operator, he did not believe that any relevant audits presently existed in the industry.

In fact, these initiatives are generally self-driven and self-motivated. He said, "We are trying to measure for our own sake because we want to know if we are improving month-over-month, quarter-over-quarter or year-over-year. So as we build a site through the tower company, put our equipment in it; whether it is indoor, outdoor, or what sort of cooling we have done, we are actually in our own mechanism measuring our CO<sub>2</sub> emissions. I think a lot of it is part of being a responsible business and making yourself accountable."

Mr. Bansal further elaborated that from the carbon trading perspective, challenges exist since ours is a

decentralised environment and does not easily fit into policies made for more centralised set-ups. "For instance, you have a big plant, you get its benefits and move on. In our kind of scenario, this challenge is more like if I am going for a 1,000 site kind of project, I must set the base line for 1,000 sites, do the measurements and get the validation done by the respective agencies. So one possibility could be to simplify the process, do it on a sample basis on one site and replicate depending on number of sites," he said. He suggested that such policies need to be reconsidered since they are not very conducive. Benefits received from these are minimal due to smaller scales of onsite power utilisation.

It was an evening of lucrative dialogues where panelists were delighted to answer visitors' penetrative queries. At its conclusion, this much was certain—that 'green' is now much more than a trend in Indian telecom.



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