

*National Conference on*  
**"Bharat Nirman"**  
*Unlocking Rural India's Development Potential through*  
*Infrastructure Creation*  
16 December 2005, New Delhi

**Dr. Manmohan Singh**  
**Prime Minister, Government of India**

- Bharat Nirman will act to accelerate the process of reducing the gap between Bharat and India.
- Bharat Nirman will make our rural consumers and producers an integral part of the processes of wealth creation and wealth distribution.
- Need to balance the growth process and bridging the various divides through financial, engineering and communication potential.
- Creation of 10 million hectares of additional irrigation capacity.
- Through increasing road connectivity every village would get access to markets, to services, to opportunities and to prosperity.
- There is a shortage of about 15 million houses in rural areas, out of which 6 million houses will be constructed through the Bharat Nirman Programme.
- Providing a telephone to every village by September 2007.
- Every habitation will be provided a source of safe drinking water.
- Electrification of all village by the year 2009.
- Specific funding window for Bharat Nirman through NABARD for funding select components.
- Model of delivery proposes to involve Panchayats and Private Sector as partners.
- Panchayats will play a major role in the creation and management of rural assets.
- Private sector initiative and imagination can accelerate the growth of Bharat Nirman.

**Dr. Montek Singh Ahluwalia**  
**Deputy Chairman, Planning Commission**

- Infrastructure deficit should be given attention.
- Accelerated Irrigation Benefit Programme to be fully funded and its progress will be effectively monitored.

**Inaugural Session**

- Expenditure of Rs. 48,000 crore will be made for providing road connectivity to over 67,000 habitations.
- 55,000 uncovered habitations and those which have slipped back, will be provided safe drinking water.
- Construction of 60 lakh additional houses for the rural poor.
- A subsidy of 90% announced in terms of capital cost for providing telecom connectivity, which will be shared by Central as well as State Governments.
- Planning to go for fiber-optic connectivity for every block-headquarter.
- State Governments' share will be effectively provided and properly implemented for Bharat Nirman Project.
- Panchayati Raj Institutions need to play a special role in Bharat Nirman Project.

**Mr. Yogesh C Deveshwar**  
**President, Confederation of Indian Industry**

- Empowerment implies creation of economic capacity at villages; founded on enhance productivity and value addition in agriculture.
- Need investment to establish connectivity of last mile – physical, digital, knowledge and human.
- Rural entrepreneurship can become a powerful tool for inclusive development.
- Need for an integrated approach to agriculture and manufacturing for enhancing competitiveness in the value chains.
- Growth of industries based on value addition to renewable agricultural produce can create employment multipliers and enhance rural income.
- Value chains that carry significant potential for rural upliftment whilst presenting attractive business prospects for the corporate sector are:
  - Roti value chain of seed to stomach;
  - Kapda value chain of fiber to fashion;
  - Makaan value chain of dust to dwelling;
  - Education value chain of tree to textbook; and
  - value chain of herbs to healthcare.
- Special feature of Bharat Nirman is the focus on time bound outcomes rather than outlays alone.
- A reliable prospect of delivery is needed to encourage private investment in rural India.
- CII-McKinsey study can serve to ignite entrepreneurial interests and supplement the roadmap to rural development.
- This year CII has adopted the theme of sustainable competitiveness for inclusive growth.

**Mr. R Seshasayee**  
**Vice-President, Confederation of Indian Industry**

- Corporate India is endowed with the skills required for successful implementation of Bharat Nirman Programme.
- PPP has proved its efficacy, bringing corporate managerial prowess to government policies.
- Multiplier effect of the Bharat Nirman Programme will open up markets for industrial products.

**Bharat Nirman - An Integrated Approach : Plenary Session**

**Dr. Raghuvansh P Singh**  
**Minister of Rural Development**  
**Government of India**

- Ministry of Rural Development is involved in carrying out three of the components of Bharat Nirman, namely drinking water and sanitation, rural housing and rural roads
- Presence of high percentage of fluoride in water at many villages has affected the lives of many villagers. Need to provide good quality water to all the villages.
- Only 30% of rural households have sanitation facilities. Therefore, sanitation needs to be accorded priority and attention.

**Vinayak Chatterjee**  
**Chairman, CII National Committee on Infrastructure &**  
**Chairman, Feedback Ventures Pvt. Ltd.**

- A break-up of investment statistics is needed for the various sub-sectors of infrastructure.
- There is scepticism regarding delivery systems – a need for accountability and transparency.
- The private sector should be leveraged for management of finances for Bharat Nirman.

**T N Ninan**  
**Chairman, CII Media Committee &**  
**Editor-in-Chief & Publisher, Business Standard Limited**

- Funds alone are not a constraint in attaining the objective of rural infrastructure development. There is scepticism on account of the delivery system; and also a lack of perceived competence for management of these finances.
- India's one billion population offers a huge market.
- For implementation of Bharat Niman Project, delivery system should be made efficient and capability should be enhanced.

**Prof M S Swaminathan**  
**Chairman**  
**M S Swaminathan Research Foundation**

- Bharat Nirman should promote job based growth. Need for diversifying jobs – from agriculture to other sectors. Currently, 60% of jobs reside in the agriculture sector.
- Need to enhance factor productivity and promote knowledge connectivity. Leverage the network of gram sabhas.
- Cross-discipline coordination should be maintained at all levels to ensure success of The Bharat Nirman Project.
- Capacity building measures should be adopted to empower the rural population.

**Sunil Kant Munjal**  
**Immediate Past President**  
**Confederation of Indian Industry**

- Rural hubs should be established across the country, equipped with new schemes / innovative technology. There exists a case for replicating the successful Thai experience of OTOP (One Tabpon One Product). Panchayats should also be involved in these public-private projects.
- In line with CII's project on skill development, companies should set up ancillary units in rural areas.
- Centres of excellence should be established in rural areas.

**Ravi Parthasarathy**  
**Chairman & Managing Director**  
**IL&FS**

- Need for a focus on project implementation.
- An Infrastructure index should be designed at the level of Planning Commission / CSO to map the extent of infrastructure at all levels - national, state & district level.
- Annuity model can be adopted to cover operation & maintenance expenses for infrastructure. State can pay a specific amount annually for a certain time period.
- Need for integrated development. Model and basis of targeting & selection of districts needs to be refined.
- Expenditure incurred for Bharat Nirman should be Monitored and Audited.
- In public-private projects, a specific amount of project cost should be funded through financial institutions.

**Adil Zainulbhai**  
**Managing Director - India**  
**Mckinsey & Co, Inc**

- Companies are ready to invest in public-private projects, provided there is transparency in the delivery system. They are ready to impart their management techniques for handling the financing of funds for the Bharat Nirman Project.
- Need to focus on implementation of Bharat Nirman Project. Private investment should be made in such a way that it complements the government spend, thereby creating a multiplier-effect.

**B K Jhwar**  
**Chairman, CSR & Community Development Committee &**  
**Chairman, Usha Martin Group**

- Base for Bharat Nirman Project should be 4P i.e. Public-Private-Panchayat Partnership.
- A major challenge is to create a mindset change among all partners and constituents; and to get them to work together.
- Need for good partnership with NGOs at a local level; an accreditation Programme for engaging the NGOs.
- Both outlay & outcome should be the basis for implementation & evaluation of the Bharat Nirman programme.

**Rural Roads and Housing: Parallel Session**  
**Pratyush Sinha, Secretary**  
**Ministry of Rural Development, Government of India**

- Competent and able contractors are not always available at a local level in districts and rural areas. There is a need for involving and imbibing international expertise through Joint Ventures.
- At times, grants are not satisfactory and become a constraint in completion of projects.

- Government of India has set up a structure for the maintenance of roads, in a scientific way.
- There should be a model for optimizing available resource.
- Government is looking at leveraging the Private sector for technology, human resource development, maintenance of assets, and direct involvement of companies in the scheme.

**Rajiv B Lall**  
**Managing Director & CEO**  
**IDFC**

- Incentives are key to attracting private investment in rural areas. Incentives should be made in such a way that private companies can be engaged in long term projects – for creation as well as maintenance of the assets.
- Government of India's resources should be used in a strategic way, including design of smart subsidy.
- Micro credit – poor are ready to pay user charges for quality services.

**Prof P V Indiresan**  
**Former Director**  
**IIT Chennai**

- Through the Bharat Nirman Project, villages should be able to establish connectivity with the market, and with the places where employment can be generated.
- Business should reach rural areas within the range of 5-10 kms of the villages.
- Houses should be provided to the rural poor within the range of 5 kms of their villages.
- Acceptance of PURA model will be a profitable way to provide infrastructure facilities.
- Private companies should invest in these projects in such a way that multiplier effects can be provided to the government investment.

**Dr. R Gopalan**  
**Executive Director**  
**Composites Technology Park [RV-TIFAC]**

- For construction of assets, India will face the challenge of meeting the increasing demand for material & natural resources. There is an alternative to natural resources - in manmade material.
- This industry requires low energy, unskilled labour, and low investment. This industry is sustainable and can meet the increasing demand of urban infrastructure.
- The technology for manmade material should be used for rural areas – for development as well as job creation.

**Dr. P S Rana**  
**Chairman & Managing Director**  
**HUDCO**

- Employment generation is required to stop rural-urban migration.

- Access should be given to growth centres as this will gradually turn service providers to users.
- Need to view development in an integrated way for national as well as regional development.

### **Financing Avenues : Parallel Session**

**Ashok Kumar Jha**

**Secretary, Department of Economic Affairs  
Ministry of Finance, Government of India**

- Bharat Nirman is a business plan, 65% of the population resides in rural areas.
- Bharat Nirman is thus necessary to sustain GDP growth at 8%; to prevent migration; to improve productivity; and to alleviate poverty.
- Rs 174,000 crores is required for financing Bharat Nirman.
- An additional outlay of Rs. 70,000 crores is required.
- Preliminary figures are:
  - Budgetary support – Rs 37-38,000 crores
  - External assistance for drinking water and irrigation etc – Rs 18,000 crores.
  - Beneficiary contribution – Rs 6000 crores
  - Market borrowings – Rs 13-14,000 crores
  - Rural telephony – Rs 451 crores

**Rana Kapoor**

**Chairman, CII National Committee on Banking &  
Managing Director and CEO, Yes Bank Limited**

- Expending Rs 174,000 crores over a period of 3.5 years, which works out to around Rs 40,000 crores per year is a challenge.
- Need to stress on how an appropriate viable financial structure can be created and efficient delivery mechanism can be orchestrated.
- It needs to be ensured that the large sums of public money are spent diligently, prudently, with sustainable operations, through an appropriate viable financial structure, and efficient delivery.
- The 5Ps i.e. people, private, public, and panchayat partnership, needs serious consideration
- Need for prioritization of beneficiary targets.

**Dr. Y S P Thorat**

**Managing Director and Acting Chairman  
NABARD**

- NABARD's experience in Rural Infrastructure Development Fund (RIDF) is invaluable.
- RIDF support has extended to 30 investment categories and has been accessed by 28 state governments. The sectoral distribution of RIDF support has been 45% for rural connectivity, 34% for irrigation and rural drinking water supply, power system improvements etc.
- 2.3 lakh projects have been financed, leading to creation of a large amount of physical infrastructure.

## **Lessons from NABARD experiences:**

- Proper utilisation of resources is lacking.
- Good infrastructure tends to get created where it is conceived as a part of an overall integrated development plan.
- Infrastructure at ground level flowers best when it has undergone the states of identification, prioritization, appraisal, implementation, and monitoring and evaluation.
- Prioritization of projects is especially important for optimizing returns.
- The implementing agency must focus on efficient delivery mechanisms to avoid cost and time over runs.
- Timely and appropriate maintenance is a must.
- Good governance and transparent process are important for project success.
- Public finance is the major source for infrastructure. There is a need to identify ways and means to mitigate the budgetary vulnerability of infrastructure finance.
- To ensure success, the following are required:
  - Long term planning by State governments.
  - Appropriate pricing policy
  - Social audit
  - Strong concurrent monitoring mechanism at state government level.
  - Penal provision for withdrawal of projects after sanction for extension in phasing.
  - Capacity building of professional expertise.

## **Dr. K C Chakrabarty Chairman & Managing Director Indian Bank**

- Adequate processes and work plans need to be created that are cost effective and timely.
- Bankable opportunities need to be identified in:
  - Physical connectivity – i.e. Roads
  - Digital connectivity – i.e. Internet
- Banks have a great role to play by financing through insurance schemes, educational loans and advances etc.

## **Michael Carter Country Director, India The World Bank**

- Bharat Nirman, a well-conceived idea.
- Total cost about \$ 10 is almost half the % of GDP.
- This is achievable because of public finance.
- Cost of recovery through operating budget is important.
- Role of beneficiaries and private sector bodies is most important.
- VAT funding will play a catalytic role for sustainability
- Right kind of reform is required.
- Banks can be the best support, particularly in Roads and water supply, irrigation.
- Telecom is also very important.
- O&M pricing is also important for this project.
- Creation of assets without meaningful outcome would be indeed a disappointment.

**Dr. Kamal Taori**  
**Director General**  
**CAPART**

- Focus on social infrastructure first.
- Identify type of infrastructure required in a particular area, eg. Roads or water
- Follow “Flexible” approach and “area based” planning.
- Develop localised entrepreneurship.
- Rural India’s infrastructure development potential is divided in 5 heads:
  - **HIPPO**: (Hidden investible potential power of the organization) – this refers to that infrastructure which is not easily visible which needs to be identified.
  - **KIPPO**: (Known investible potential power of the organization) – if potential is known.
  - **DIPPO**: (Don’t know investible potential power of the organization) – if the potential in an area is not known.
  - **FIPPO**: (Frightening investible potential power of the organization)
  - **GIPPO**: (Globalisational investible potential power of the organization) – taking the global perspective in the development of the infrastructure.
- Identify infrastructure which is unused, underused, and non-used in an area.
- NGOs can take part in these projects in small cities and backward states.
- Management through public-private-panchayat-partnership is important.
- IT and CIC (community information center) are highly under-utilized.
- CII is playing a role in bringing together corporates for rural infrastructure development. Through proper management and assistance from key consultants, success could be achieved up to desired levels
- Use women power, especially for rural areas, because cost will be half and recovery could be double. Do not neglect the local people.

**Irrigation Water Supply and Sanitation : Parallel Session**

**J Harinarayan, Secretary**  
**Ministry of Water Resources**

- Investment per hectare is Rs 1 lakh, and the employment elasticity is about 2.6 people per year.
- Government of India is looking at an investment of Rs 40,000 per job in the agriculture sector.
- Ways should be devised to enable and coordinate the financing of irrigation.
- Need to make irrigation sector service intensive and IT based.
- Development of responsibility in Panchayats.
- There should be sustainability in the taxation system of agriculture sector. There is need to see whether the state is reinvesting the revenue collected from this tax.

**B K Jhawar**  
**Chairman, CSR & Community Development Committee &**  
**Chairman, Usha Martin Ltd.**

- How will the assets, presumed to be created under the Bharat Nirman Project, remain sustainable and how will the user charges be fixed?
- The potential of technology and innovation should be used.
- Innovative methods should be devised for other sources of finances, such as private investment.

**S Sivakumar**  
**Chief Executive Officer – AgriBusiness**  
**ITC Ltd.**

- For agro products, there is a shift in market from supply-driven to demand-driven.
- There should be a time-bound plan to increase income through reforms.
- Regarding APMC Act, Central Government has made a model act in conjunction with other stakeholders. A few states have already moved forward, but there is a need to bring all the states under it, in a time bound manner.
- Need to make some moderation in the present taxation system of agriculture sector.
- There should be opening up of auction market and steps should be taken to make it more liquid.
- Food processing should be innovative and linked to consumer demand.

**Hardeep Singh**  
**Chairman, Rural Infrastructure, Agriculture Regulations &**  
**Market Development Committee &**  
**Chairman & Managing Director, Cargill India Pvt Ltd.**

- Public investment in agriculture has decreased from 3% to 1.3% of GDP over the last 20 years.
- 90 per cent of infrastructure investment in this world is made in public domain and private investment follows subsequently.
- Investment should be made in those crops that need less water.
- It is found that water level is falling in areas that are good in irrigation.
- Small and marginal farmers find it costly to invest in submersibles.
- Need for capacity optimization.

**Catherine Revels**  
**Regional Team Leader**  
**Water and Sanitation Programme, South Asia, (WSP – SA)**

- In most of the states, only 15% of the habitation has access to safe drinking water.
- The approach should be to target each village/community collectively, to achieve an open defecation free village by providing proper sanitation facilities.
- A parallel effort is required for safe water supply and sanitation.

**R Gopalakrishnan**  
**Joint Secretary**  
**Prime Minister's Office**

- There is a major area for complementary action of sustainability in water supply and sanitation.
- Need for local body management.
- Need for re-examining the structural space that sanitation occupies.
- States should have dynamic reporting of data on a common website for citizen monitoring of the Bharat Nirman Project.

- Panchayats should invest 50% funds of National Rural Employment Guarantee Scheme in irrigation.

## **Rural Electrification : Parallel Session**

### **Summary of Discussions:**

- There is adequate liquidity in the system to finance and lend to rural electrification projects. The availability of funds, which was earlier perceived as a bottleneck, is not the issue any longer.
- Several studies conducted at national, regional and state level have established that the rural consumer is willing to pay for reliable and affordable power supply.
- The affordability of the rural electrification projects must be evaluated both from supplier and customer perspectives. This would ensure that the projects are sustainable in long run.
- Central and state governments must discourage the culture of free power as populist measure.
- The Electricity Act 2003 has delicensed and decentralized rural generation and distribution of power. The private sector must participate in the ample opportunities created through this provision of the legislation. The private sector could also join hands with public sector and adopt joint venture route.
- To promote decentralized power generation and distribution the government must issue formal policy framework for Jatropha cultivation. Power plants based on oil from jatropha seeds could be ideal for providing livelihoods and electricity to several far flung villages where rural grids are not being contemplated.
- The sustainability of rural electrification projects will hinge upon involvement of local people in the day-to-day management, operation and maintenance of the projects. Through this route, there exist tremendous opportunities for creating job opportunities for the local population and this will also uplift standard of living of the villagers.
- CII, through intervention at state and regional level could help government in creating awareness, training, motivating and empowering the local rural people.
- The government sought CII assistance in creating needs franchisee networks to operate, maintain and manage the systems.
- The availability of quality equipment and quality manpower for operation and maintenance of the projects is the key to building and sustaining the built up rural electrification infrastructure.
- Adequate measures must be adopted towards bifurcation of electric power supply to rural domestic and rural commercial consumption. The price subsidy on supply could be considered only for BPL families while the rural industrial / commercial consumer must pay for the cost of supply.

### **Discussion leaders included**

**R V Shahi**, Secretary, Ministry of Power; **Session Chairman**

**C P Jain**, Chairman & Managing Director, NTPC Limited

**R P Singh**, Chairman & Managing Director, Power Grid Corporation of India Ltd

**Dr. V K Garg**, Chairman & Managing Director, Power Finance Corporation Ltd.

**A K Lakhina**, Chairman & Managing Director, Rural Electrification Corporation Ltd.

**Banmali Agrawala**, Managing Director, Wartsila India Ltd.

**Rural Telecom & IT Connectivity : Parallel Session**  
**Pradip Baijal**  
**Chairperson**

**Telecom Regulatory Authority of India**

- In 50 years after independence, India achieved 2% incremental increase in teledensity. After privatization started in 1998, 3% increase achieved in next 5 years till 2003. 2003 onwards, prices have come down by almost 4 times and in two and half years (end 2005) 6% incremental teledensity was achieved.
- However only 20% geographical area is covered and today we have an overall teledensity of 35%, with the aim of achieving 65-70% by end 2006.
- Compare this to China – 70% overall and 6% rural teledensity. 40% urban and 60% rural population already covered.
- India has already an urban teledensity of 36% and rural teledensity of 2%. This gap is there because even today it is the government sector, which is working in the rural areas. Need for more efforts.
- New and cheaper technologies like mobile telephony are now available. Government has also allowed USO funds for wireless telephony to rural areas (earlier it was only for fixed line phones). This shall help expanding the cheaper technology to the rural areas also.
- The next generation networks providing convergence are comparatively cheaper and should be taken to rural areas. Even countries like Bhutan & Afghanistan have gone for convergence technologies. India is the only country where number of cable TV connections are more than number of fixed line telephones. Using convergence model, we could achieve the target of covering 4% rural teledensity by spending only 9 to 10,000 crores compared to 30 to 40,000 crores for mobile telephony.
- We must do this quickly because technology is changing rapidly. We should be able to get the first mover advantage because industry is highly competitive.

**B D Khurana**  
**Group President**  
**Reliance Infocomm**

3 major landmark events in last three months –

- Ministry of Communication announced a target of 250 Million telecom subscribers by Dec 2007
- The recommendations of TRAI for growth of Indian Telecom
- Ministry of Communication & IT announced the use of funds under USO for rural telecom and infrastructure
- Huge potential of telecom expansion in rural areas

Handicaps –

- Absence of telecom Infrastructure in rural areas
- Absence of reliable power
- Fiscal burden (taxes etc.) of over 20% on overall revenue
- Future of India has arrived. Access to information and knowledge is very important

– may otherwise result in social and economic inequalities. The challenge is how to tap the intellectual capital of the rural masses and bring everybody not just in mainstream but in infostream.

**P Balaji**

**President, Telecom Equipment Manufacturers Association of India &  
Vice President, Ericsson India Pvt. Ltd.**

- India isn't different from other parts of the world. If China can have a growth where it is today, we can also achieve the same results. Considering that Africa has 100 Mn plus subscribers today, we can also catch up.
- A study done by Consumer lab of Ericsson brings out that 76% of Indians (both urban + rural) understand new technology, compared to 68% in US and 61% in EU. The question is affordability.
- In urban India, the telecom growth is fuelled by youth, same shall happen in rural areas. The goals set under new telecom policy are both achievable and laudable.
- The good news is that in last few years the 'Tools for Classes' have become 'Tools for Masses'. The drivers have been –
  - Proactive government policy
  - Proactive efforts by operators to bring down costs
  - Technology providers have been able to bring down costs of handsets and other infrastructure equipment by 60-70%.
- Other Government initiatives like telemedicine have helped spread telecom on the one hand, while localization of content (like Hindi SMS) have also helped on the other. Thus enabling environment to achieve the targets is already there.
- The roll-out challenges are as follows –
  - Urban – New RF propagation technologies for more capacities.
  - Rural – how do you take RF to have more coverage area
- Many technology providers world-over are working on new technologies.

**Suggestions :**

- Issue of infrastructure sharing is being taken forward – Government is working in the right direction
- Judicious policy on use of spectrum is required, e.g. 900 Spectrum could be shared between operators rather than going for 1800 spectrum
- Apart from USO, other ministries like health and education working in rural areas, can also contribute to rural infrastructure creation – which ultimately shall help them expanding their reach using technology.

**S D Saxena**

**Director – Finance  
BSNL**

- BSNL has provided 14 Mn rural telephones. BSNL is connecting India and has already done its bit. The company has connected villages where there is no road, no electricity. Company motto is telephone before food; and more than 5 lakh villages have already been connected.

- Need to take broadband to villages. Trying to line-up 22000 towers all over the country to empower India. BSNL is happy to share this infrastructure. Similarly, BSNL would like to share urban infrastructure with other operators.

**S C Khanna**

**Secretary General**

**Association of Unified Telecom Service Providers of India**

- Government has done a great job. Because of this, we are growing at 3.7 Mn a month and expect to grow at 4.3-4.5 Mn per month from Jan 2006.
- CDMA is already covering 3900 towns today – the plan is to target 6000 towns by June 2006. 1L villages already covered and target is 6L villages as a part of this expansion. There is a huge scope for telecom expansion in rural areas.
- HLL could sell Rs.1 Shampoo in rural areas, however telecom needs expensive infrastructure. Credit due to TRAI and the Ministry for the access license and the quick actions being taken on infrastructure issues.
- The biggest worry is that the bidding process shall take time. Need to come out with alternate models like rate contracts. Other problems that needs to be tackled is the state government interferences.
- What we are today is because of immense support from Government – e.g. license converted to revenue share, access license etc. Once again, tremendous support is needed from govt. (e.g. microwave charges to be removed from backbone charges)–
  - Use of backbone (e.g. fibre by BSNL) to be shared.
  - Spectrum which is not being used in villages could be given to operators for better results and less costs
  - ARCU's will come down due to lesser purchasing power of people in rural areas. Government can support by –
  - Removal of spectrum charges in all rural telephones
  - Share revenue – reduce taxes including service tax (presently almost 25%)

**T V Ramachandran**

**Director General**

**Cellular Operators Association of India (COAI)**

- Rural telephone is all about creating infrastructure. India has the lowest tariff in the world; our ARCU is one of the lowest – Rs. 380-Rs. 390. We are making money, but not enough funds for investing in expanding operations in rural India.
- Our incremental customer is coming at an ARCU of Rs. 150 Rs. 170 and this price is only feasible for rural areas. TRAI needs to be praised for the PPP proposal where USO funds have to be used for creating infrastructure – which has to be shared. This is a real win-win proposition put on the table by the regulator – and shall give wonderful results when implemented.
- Mobility is going to be 200M by Dec 2007. To make this happen–
  - Create infrastructure through new proposal of sharing USO
  - Change mindset for rural telecom
  - Urban and rural household cash flows are different. Make purchase characteristics to match cash flow characteristics for rural areas. The innovation like 10Rs. Recharge needs to be done for rural areas and specific market research is required to understand the rural markets.

- Affordability – e.g. handset costs – Tailor handsets costs with affordability. Government should remove double taxation on bundling.
- Other innovations are required in the areas like power. We should focus on technology solutions for how to run BTS transmitter and receiver, how to charge mobile phones. Use of non-conventional energy sources for these could also be funded by USO.
- We cannot compare India and China telecom growth. Indian population is much more dispersed in terms of location as well as income, compared to China where 40% or more of the population is in the eastern coastal region which is the predominantly industrial area with high income populace. Hence we need 3-4 times more investment for having the same reach.
- Bidding or no-bidding – time is very critical. Also all the players should be included. Independent service providers and PSU's should also be included in bidding. Introduction of niche players not suggestable now.
- Conclusion – with current activities in hand and with supporting government regulations, India can reach 500M by addressing rural population of India.

**Dr. Rakesh Mehrotra**  
**Chief Officer, Regulatory Affairs**  
**TATA Teleservices**

- Encourage Private & Government operators to go rural by direct and indirect subsidies
- Rural rich are increasing more than urban rich. However dispersion is much higher and hence costs are high for infrastructure. Hence government support is required.
- Other government departments like health and education working in rural areas can join hands to take the benefits of telecom to the rural areas.
- Regular review required to be done
- Free spectrum to be given for rural masses
- All instruments for village communication centers should not have any taxes
- Make mandatory for all service providers to provide interconnectivity
- Support for developing suitable applications like land records etc. shall help in getting faster returns

**Deepak Maheshwari**  
**Secretary, ISPAI &**  
**General Manager, Sify**

- Licensing may be fine where the options are limited e.g. bandwidth. It effectively puts limitation on competition as well as choice of customers.
- Out of 66 Million internet subscribers only 1/8 are rural. Cost of broadband / narrowband access are almost same. However most of the people use narrowband as choice is not available.
- Availability of power remains a big issue. To achieve a target of 7% contribution by ICT sector to GDP, it is very important that government gives a necessary boost by reducing taxes.
- Local content is not just about local layout, context is also important. Should also be locally hosted.
- In many villages VPT's don't work as it is thought that they are used by only some people. TV's work as they are maintained by communities themselves. A need to create value for more and more people.

**Lt. Col. H S Bedi**  
**Managing Director**  
**Tulip IT Services Ltd**

- Tulip has taken one complete district of Kerala and has created data connectivity helping in improving -
  - Skill sets
  - Creating local content
  - Access
- Any network in rural area should be able to provide convergence of voice, data and video. It shall have to be based on wireless. For low cost, infrastructure should be shared.
- Niche operators may have a role to play. Cellular operators may not have much interest in data – here niche operators may provide low cost services.

**Closing remarks by Session Chairman**

- People are serious about creating infrastructure –
- Telecom and civil aviation are two most praised sectors
- Both started miserably, especially telecom. But people dealt with those problems. Telecom sector has now achieved critical mass, and so has broadband.
- Why does BSNL not cooperate ? But people are not waiting for BSNL cooperation. Similarly even BT in UK didn't cooperate.
- But things will move forward.