



RSM/COAI/2015/232  
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Jawahar Lal Nehru Marg (Old Minto Road)  
New Delhi-110002

**Subject: TRAI Consultation Paper on Implementation Model for BharatNet**

Dear Sir,

1. This is with reference to the TRAI Consultation Paper No. 5/2015 dated November 17, 2015 on Implementation Model for BharatNet.
2. In this regard, please find enclosed our response for your kind perusal.

We hope that our views and submissions will merit the kind consideration and support of the Authority.

Regards,

**Rajan S. Mathews**  
**Director General**

**CC : Shri. Ram Sewak Sharma, Chairman, TRAI**  
**: Shri. Sudhir Gupta, Secretary, TRAI**



**COAI comments on TRAI Consultation Paper  
On  
Implementation Model for BharatNet  
Released on November 17, 2015**

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**Preamble**

1. COAI supports the vision to achieve accelerated, affordable & ubiquitous broadband access across the length and the breadth of the country. We believe that all citizens of India should have access to broadband and the transformative opportunities it offers. Broadband services allow individuals to access new career and educational opportunities. They help businesses reach new markets and improve efficiency and they enhance the Government's capacity to deliver critical services.
2. **Wireless is the quickest and most efficient medium to provide internet services** in the access network. And, it is now well recognized that broadband is a key enabler for inclusive growth, social equity and sustainable economic development. In fact, broadband represents an enormous opportunity to provide a platform for improving an individual's quality of life by providing increased opportunities for income generation and fostering innovation across all walks of life to our citizens. Availability of broadband services will attract new investment, create jobs and provide a larger more qualified labour pool, and increase productivity through infrastructure creation and access to new and improved services.
3. Hence, we believe that there is a need for the development of a robust pan-India National Broadband network in the long-term, however would like it to be technology neutral. We believe that it is important for the Government to leverage and harness all available technologies to achieve the national broadband objectives in the most expeditious and effective manner. Therefore, the focus should not only be on a particular media, but all available technologies should be leveraged for building up such a national broadband backbone.
4. NTP'12 and the recent "Digital India" have directionally set out the desired objectives and strategies for the achievement of the Broadband vision. The way forward now is the development and implementation of a detailed action plan for the Broadband Policy with clear and measurable targets of achievement at disaggregated levels. Key action items in this regard are as follows:
  - a. Rationalization of Levies & Duties: The Indian mobile industry is burdened by multiple duties and levies, both at the central as well as the state level. These need to be rationalized so as to enable affordable tariffs for broadband services.
  - b. Ensure Spectrum Availability: The broadband revolution in India will be spearheaded by mobile (wireless) broadband.
    - i. To prepare a yearly roadmap for availability of additional spectrum for next 5 years.
    - ii. To permit spectrum sharing and trading to enable optimal utilization of spectrum.

- iii. Availability internationally harmonized spectrum bands through large contiguous blocks.
  - iv. Optimize spectrum pricing framework.
  - v. Policy for allocation of Microwave RF carriers including the release of E-band.
- c. Easier Access to Funding Broadband Network Growth: Measures for alternative financing needs to be identified and made operational. A strategy imperative to create a Telecom Finance Corporation as a vehicle to mobilize and channelize financing for telecom projects in order to facilitate investment in the telecom sector.
- d. Availability and Easy Access to Transport Network: Common procedure with statutory backing through applicable Rules in the Indian Telegraph Act for RoW permissions. Stipulated time frame with accountability for RoW clearances at reasonable charges (which should not be beyond the cost of maintenance and repair of the road) will enable timely implementation.
- e. Availability of Power to Telecom Related Infrastructure at Priority: Provisioning of power supply to service providers at subsidized rates instead of commercial rates. This would enable lower cost oriented tariffs for broadband services to be offered.
- f. Digital Content Availability: Government supported initiatives including mandating of m-governance for all Government Departments and other funding.
5. The Government has set the agenda with detailed plans for “Digital India” being among the top priorities, approved by the Cabinet envisaging:
- a. Broadband as digital infrastructure as a utility to every citizen
  - b. Financial inclusion - mobile phone and bank account, make financial transactions electronic & cashless
  - c. e/m-Governance – on demand services in real time on online and mobile platform,
  - d. Digital empowerment of citizens - all documents, certificates available on cloud.
6. The need now is to bring in the synergies of both public and private sector entities to live up to the expectations set by the Government. For this, the first and the foremost step is to do a reality check on where the sector is now, estimating investments required, incentive to enable this and the targets that are to be met. Once this is done then realistic policy and regulatory measures are to be devised to meet these targets from the present state.
7. India started with a plan to build the BharatNet but the project has struggled to take off due to operational reasons. We believe that a nationwide, professionally implemented national backbone network can surely act as a great catalyst for broadband penetration in the country. However, the problem with BharatNet is that the scheme is not holistic and comprehensive and hence is not able to take off properly.
8. Many analysts have clearly noted that the project would build a strong middle mile, but for a sustainable and scalable ecosystem with viable and profitable business models around the relevant e-services for the rural masses, the core and last mile would also need to be taken care of. The biggest hurdle in the taking off of this project is that there is no focus on the core and the last mile.

9. Until and unless a strong business case is built including designing of the services, provisioning of these services to the customers, hosting and tariff options, etc., there will be no takers for this connectivity at the block level. There is need for a favourable policy environment to be in place in order to develop sustainable business models for the takers of this connectivity.
10. The incentives to private players to provide last mile access and deliver services in rural areas as of now are absent in the BharatNet scheme. While several trials/models in the areas of m-Banking, m-Agricultural Support, m-Education, m-Health and m-Commerce are being studied, traction is yet to be achieved in creating viable economics and commercials to scale these across the countries. Demand is still to be generated and while the Government's plan to subsidize access to the rural household holds promise, measures are still wanting when it comes to creating relevant content for the rural citizen and building awareness in him/her on the benefits of such m-services. While availability and accessibility of infrastructure have been planned for, its affordability and acceptability vis-a-vis a rural household still remain unaddressed.
11. While the current thrust of the Government is almost entirely on giving the supply side push vis-a-vis broadband, creating the demand pull with credible public and private sector partners and more importantly making broadband conveniently accessible, affordable, applicable, acceptable and advantageous for the rural citizen are equally important, rather more critical for the success of BharatNet.
12. The focus of the Government should be to make this fibre usable. Thus, there is a need to review the scheme to align the requirements with business and then build this network so as to optimize its usage. This would require collaboration between the Government and private sector enterprises to work out access strategies that make the proposition viable for all stakeholders.
13. The Authority itself has noted in the consultation paper that at various places, there is a problem in the existing OFC which is not in a usable condition; hence, there is a need to cater for connecting the NOFN OFC directly to the PoP at District level in such cases.
14. Besides laying out the BharatNet or similar such project what will be equally important is an accompanying institutional mechanism that will enable cost based, non-discriminatory access to BharatNet. The physical access to the network should be enabled through a single window mechanism with stipulated time frames that will ensure increased usage from all operators and higher usage of BharatNet.
15. It is important to take these steps right now so that a viable and sustainable model is created which is in a usable otherwise, the BharatNet will keep lying idle with no takers. Thus, we once again emphasize that there is a need to focus on development of entire ecosystem.
16. BharatNet envisions meeting the digitally connected agenda by reaching broadband connectivity to 2.5 lakh Gram Panchayats for public services and serving the needs of all central policy objectives with benefits of affordability to the intended user. Hence cost and timeline for implementation of the BharatNet project become two crucial factors to address.

17. The rural market is not yet fully ready. The eco-system, availability of affordable handsets, digital literacy etc. are some of the key factors which would impact the returns on investment and influence the decision making, as well as, the pace of implementation.
18. Government alone cannot fill this gap. Private sector participation would allow Government to leverage the existing resources and investment, so that government funds can be targeted efficiently and effectively. This would translate to taking a holistic approach and also leveraging the opportunities provided by technology. A mix of technologies (for backbone transmission, and local access) to build BharatNet network and engaging the operators from the middle mile level could help faster and cost effective network.
19. The private participation amongst the private stakeholders could be encouraged by one or all of the following proposed steps:
  - a. The collaborative, complimenting role of each of the stakeholders including mobile operators, the existing fixed line operator, the Government, etc.
  - b. Identifying the key aggregation points till which the fibre network could be built and further engaging the operator on the areas that can be offered / taken by them.
  - c. The BharatNet agenda can be enabled by operators by upgrading their physical site infrastructure.
  - d. Government support through performance linked benefits by incentivising the Industry with phased reduction in USOF, SUC basis the rural coverage achieved. This would motivate the Industry towards higher participation and investing in building on the required and existing assets.
  - e. Phased approach for deployment, offering reinvestment utilization opportunities
20. Right combination of fibre supported by microwave technology can help bridge the coverage gap in a much faster timeframe and substantially lower cost for reaching broadband connectivity to Gram Panchayats.

### **Issues for Consultation**

1. The “Report of the Committee on NOFN” has recommended three models and risks/advantages associated with these models. What are the other challenges with these models?
2. Do you think that these three models along with implementation strategy as indicated in the report would be able to deliver the project within the costs and time-line as envisaged in the report? If not, please elucidate.
3. Do you think that alternate implementation strategy of BOOT model as discussed in the paper will be more suitable (such as cost, execution and quality of construction) for completing the project in time? If yes, please justify.

It is generally accepted that the private sector with suitable incentives should be the primary driver of broadband development in most cases. Particularly when the Government resources are limited or sufficient public money may not be available for broadband infrastructure spending, the policy makers and regulators must consider those models which are best to attract and encourage private sector involvement and investment in broadband.

Moreover, certain other issues like who is authorized to sell bandwidth and dark fibre, etc. also need to be resolved before finalizing any one model.

We believe that it is highly unlikely that any one of these three models will completely facilitate the timely and affordable implementation of the project as certain core issues of implementation, timing, cost, etc. remain unaddressed. There is a need to create scalable, commercially feasible business model considering both the criteria of speed and quality of implementation.

BOOT model benefits the implementing agency by giving it an opportunity to earn revenues from the project, and since it permits more autonomy, it has a better chance to succeed.

The Government also has to note that this project should not lead to a similar failure situation like in the case of USO tower bidding.

#### 4. What are the advantages and challenges associated with the BOOT model?

**Advantages:** Indirect involvement of the Government in the day to day implementation issues of the projects and subsidization of the agency to upgrade its own infrastructure or build one counts as the major advantage of the BOOT model. Further, the involvement of the Government only in the provision of Viability Gap Funding (VGF) will lead to simple contractual arrangements, relatively rapid deployment and the offset of risks to the grant recipient/operator.

**Challenges:** The major challenges with this model would be the lack of interest of private firms in investing in rural areas and the risk of monopolization of the network by them. Also, if executing agency which is also providing retail services is selected for the project, it may like to vertically integrate its services and monopolize the market which may defeat the basic purpose of affordable broadband in rural areas. Following are the few other challenges of the model:

- higher cost for the end user due to the BOOT provider accountability of 100 percent financing and on-going maintenance
- negative reaction of community to private sector involvement
- not realizable full benefits of economic development
- time consuming
- requirement of a rigorous selection process in selecting a BOOT partner

#### 5. What should be the eligibility criteria for the executing agency so that conflict of interest can be avoided?

Selection of implementation agency may be done for a single LSA or state or a combination of both. The agency may be selected by adopting the criteria of Minimum Viability Gap Funding (VGF) sought by the agency for the given state/LSA. However some safeguards should be there to prevent bidders from making desperate bids viz. Floor price should be fixed below which the bidders may not be permitted. The Government also has to note that this project should not lead to a similar failure situation like in the case of USO tower bidding.

There is a requirement to relook the Guidelines on VGF by the Department of Economic Affairs.

**6. Should there be a cap on number of States/ licensed service area to be bid by the executing agency?**

Yes, there should be a cap on number of States/ licensed service area to be bid by the executing agency. We propose that LSAs should be divided into five regions namely North, East, West, South and Central only one Region shall be allotted to each agency based on the bidding process and the competency of the entity.

Further, though BOOT model will have more feasibility of delivering the project in cost effective manner with lesser direct risk to the Government, but participation by the private operators in the BOOT model may be limited to a few States only as many of the service areas may not be attractive enough for private service providers for the project. Therefore, there may be a need to take some other measures to maximize participation in such States.

**7. What measures are required to be taken to avoid monopolistic behaviour of executing agency?**

To avoid the monopolistic behaviour of the executing agency and disproportionate holdings, an appropriate regulatory and oversight framework towards access control, price control, transparency and non-discrimination needs to be put in place.

It should be ensured that there is non-discriminatory access to all users including the Government as well as private users.

**8. What terms and conditions should be imposed on the executing agency so that it provides bandwidth/fibre in fair, transparent and non-discriminatory manner?**

Ex-ante regulation such as price control can be considered to ensure fairness and transparency in the implementation of the project.

Further, if VGF is provided upfront, then the selected agency may not have any interest to complete the project in time and therefore, we agree that VGF should be linked to the completion of the project/milestones of the project.

**9. What flexibility should be given to the agency in terms of selection of route of laying optical fibre, construction, topology and deployment of technology?**

One of the strategic options for cost optimization and reduction in deployment time for BharatNet may be to prioritize deployment/rollout at the key aggregation points, which may be shortlisted basis the population density and technology. Use of electricity poles through overhead cables may also be considered.

**10. What should be the methodology of funding the project? In case of VGF, what should be the maximum value of VGF for each State/service area and what should be the terms and conditions for making payments?**

**11. What kind of fiscal incentive and disincentive be imposed on the agency for completing the project in time/early and delaying the project?**

The respective implementation agency should furnish a 10 year bank guarantee equivalent to the value of the asset for timely and credible execution of the fibre being available and maintenance for smooth roll out of services.

The incentive should be enabling, rather than just the basic fiscal incentive.

There should be a performance linked incentive built in the model, an incentive, which can offer a motivation for the deployment agency to deliver in timely manner and be cost conscious in the choice of execution methodology.

An incentive (in form of reduction in USOF), to upgrade infrastructure to support Broadband with mix of fibre, microwave and Base station can be the proposed model to achieve goal in finite time.

**12. What should be the tenure/period after which the ownership of the project should be transferred to the Government?**

Government should extend the lease tenure to at least 30 years, extendable further in blocks of 10 years. This model has worked successfully in the case of development of the new Bangalore Airport (BIAL) where the Concession period is 30 years, extendable to 60.

**13. Do you think that some measures are to be put in place in case the executing agency earns windfall profits? How should windfall profits be defined?**

The atmosphere should not be vitiated by curbing the entrepreneurial spirit from earning profits in the later years. Already enough checks and balances exist in the system through the regulatory mechanisms of the Government, the existing tax laws, the laws of anti-competition, etc to ensure that no windfall gains are achieved in an unlawful manner.

**14. Whether there is a need to mandate the number of fibres to be offered as a dark fibre to other operators to ensure more than one operator is available for providing bandwidth at GP level?**

It should be ensured that there is non-discriminatory access to all users including the Government as well as private users.

**15. What measures are required so that broadband services remain affordable to the public at large?**

For broadband services to remain affordable, it is important to ensure that the costs of network deployment are minimised. This means ensuring that existing assets of the participants are leveraged rather than duplicating the efforts. In particular, the rural presence of mobile operators could be developed to meet the requirements of broadband and achieve rural broadband penetration in a fast and cost effective manner, promoting affordable prices.

The use of fibre could target at meeting the data requirement at key aggregation points identified on the basis of population and other factors.

Facilitating lower cost rollout options can also extend the reach of competing networks, promoting competition on quality, innovation and price.

Key action items in this regard are as follows:



- a. Rationalization of Levies & Duties: The Indian mobile industry is burdened by multiple duties and levies, both at the central as well as the state level. These need to be rationalized so as to enable affordable tariffs for broadband services.
- b. Ensure Spectrum Availability: The broadband revolution in India will be spearheaded by mobile (wireless) broadband.
  - i. To prepare a yearly roadmap for availability of additional spectrum for next 5 years.
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  - v. Policy for allocation of Microwave RF carriers including the release of E-band.
- c. Easier Access to Funding Broadband Network Growth: Measures for alternative financing needs to be identified and made operational. A strategy imperative to create a Telecom Finance Corporation as a vehicle to mobilize and channelize financing for telecom projects in order to facilitate investment in the telecom sector.
- d. Availability and Easy Access to Transport Network: Common procedure for RoW permissions. Stipulated time frame with accountability for RoW clearances at reasonable charges (which should not be beyond the cost of maintenance and repair of the road) will enable timely implementation.
- e. Availability of Power to Telecom Related Infrastructure at Priority: Provisioning of power supply to service providers at subsidized rates instead of commercial rates. This would enable lower cost oriented tariffs for broadband services to be offered.
- f. Digital Content Availability: Government supported initiatives including mandating of m-governance for all Government Departments and other funding.

Developing Viable Business Models is important for the faster adoption and maturity:

- a. Offering free services will not help in creating viable and sustainable business model. Free Wi-Fi and price-capping may slower the required pace)
- b. **Prices capped at low levels**: It needs to be considered as this will impact prices of broadband offered by the same TSP in the district but in places where the BBNL infra is not being used.

**16. What safeguards are to be incorporated in the agreement entered between Government and executing agencies if RoW is not being granted to the executing agency in time?**

1. The requirement for rollout of backhaul fibre networks has increased the importance of RoW (Right of Way). Key Issues related to RoW are as follows:
  - a. Exorbitant levies being imposed by various municipalities increase the cost of service provision.

- b. Need to approach multiple agencies for obtaining RoW clearance, leading to delays in network rollout.
  2. The situation is worsening as many Government authorities and municipalities impose additional levies based on their perception that telecom is a hugely profitable business. This is resulting in the double burden of delays and increased cost of provision that negates attainment of the vision to provide affordable and timely broadband services across India.
  3. NTP'12 has recognized the problem and set out an objective to "Address the Right of Way (RoW) issues in setting up of telecom infrastructure". In addition the strategies enunciated in this regard in the policy are as follows:
    - a. To review and simplify sectoral policy for Right of Way for laying cable network and installation of towers, etc. for facilitating smooth coordination between the service providers and the State Governments/ local bodies.
    - b. To review Standing Advisory Committee on Frequency Allocation (SACFA) clearance process for faster and simplified site clearances.
  4. Some action steps that can back up the above strategy suggestions are:
    - a. There is an urgent need for a centralized and common procedure for RoW permissions and charges; therefore, the Central Government should issue guidelines on RoW under the Section 7 of the Indian Telegraph Act.
    - b. Supporting trenching activities of USOF through Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)<sup>1</sup> as discussed in TRAI consultation paper on "National Broadband Plan" released on 10<sup>th</sup> June 2010.
    - c. Stipulated time frame with accountability for RoW clearances at reasonable charges (which should not be beyond the cost of maintenance and repair of the road) will enable timely implementation of telecom networks. The Central/ State Government / Local bodies / Ministry of Surface Transport etc. should take necessary steps to provide the necessary directives.
- 17. The success of BOOT Model depends on participation of private entities which will encourage competition. What measures should be adopted to ensure large scale participation by them?**

Participation should be on a voluntary basis. Presence of bandwidth/OFC of an operator in DHQ-BHQ-GP will not preclude them from participating in the subsequent fibre auction/bandwidth procurement process by BBNL. Accordingly, there should be no mandate to pool fibre assets, but that this should be left to mutual commercial agreement with the choice of voluntary participation.

Maximising private sector investment rests on two fundamental tenets:

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<sup>1</sup> Government of India has started the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) with an objective to provide at least 100 days of guaranteed wage employment in a financial year to every household whose adult members volunteer to do unskilled manual work.

- a. Making the BOOT terms and conditions attractive to private investors, including financing.
- b. Facilitating private investment as far as possible on commercial terms by:

Employing public investment only in areas where the Government's broadband ambitions cannot be achieved by the market on a commercial basis so as not to crowd out public investment; and

Taking measures to reduce the costs to the private sector of rolling out broadband networks, such as making available spectrum at a reasonable price (the value of which can be accounted for in other ways, such as data coverage obligations) that can be used for more efficient wireless broadband networks and reducing the costs of site approvals and rights of way.

Government must also take responsibility in stimulating demand for the services required for CSC, PHC, educational institutions etc.

**18. Please give your comments on any other related matter not covered above.**

Understanding and clarity with respect to the timeline of the auction process for the purpose of "utilization". Would the auction start post the entire implementation phase is over or it can be initiated in phases, as and when the districts are ready with infrastructure.

As suggested by report a consultative process with the probable users of the network, to be conducted by the committee, before firming up the auction model for utilization. This collaborative process is appreciated and Industry will be keen to participate and understand as the model develops over time with more specificity and clarity.

Whichever model is finalized by the Government, there will be a need for a centralized Network Operation Centre (NOC). A strong facility for management and control of a centralized NOC will be crucial for the project.

Mechanism for UE & subscriber devices on subsidy/bundled be considered.

**Need to Facilitate Capital Investments in Telecom Infrastructure:** Telecom and Telecom Towers being critical in nature, the Cabinet Committee of Infrastructure (CCI), Government of India, has already recognized the significance of telecom towers, the aspect of it being a highly capital intensive business and with a view to give some reprieve for this much needed infrastructure has included it in the harmonized list of Infrastructure vide its gazette notification dated April 5, 2013 (copy enclosed as **Annexure – 1**).

The Telecom industry is one of those very few industries which is intrinsic to the success of two of the key flagship programmes of the government- "Digital India" and "Make in India" (entire investment is made on capital goods and equipment manufactured in India).

We would like to bring to your notice that the Government, in its last budget, allowed NHA, 6 other PSUs to raise INR 40,000 crore via tax free bonds. Seven state-owned entities, including NHA, IRFC and NTPCBSE -1.31 %, were allowed to raise INR 40,000 crore in the current fiscal through tax-free bonds.

The National Highways Authority of India has been permitted to raise INR 24,000 crore

and Indian Railways Finance Corporation has been permitted to raise INR 6,000 crores, Housing and Urban Development Corporation has been allowed to raise INR 5,000 crore and Indian Renewable Energy Development Agency, INR 2,000 crores. NTPC, Power Finance Corporation BSE 0.78 % and Rural Electrification Corporation BSE 0.27 % can issue tax-free bonds of INR 1,000 crore each.

Retail investors, which include HUFs and NRIs investing on repatriation basis, can invest up to INR 10 lakh in such bonds. Those investing higher amount would be classified as HNIs. The bonds will have tenure of 10, 15 or 20 years and the interest rates are to be decided with reference to the rates of Government Securities.

"The ceiling coupon rate for 'AAA' rated issuers shall be the reference G-sec rate less 55 basis points (100 basis point is one per cent) in case of RIIIs and reference G-sec rate less 80 basis points in case of other investor segments". The coupon rate for below 'AAA' rated bonds could go up to 20 basis points above the rates offered for the bonds with highest rating.

Besides, Retail Individual Investors (RIIs), Qualified institutional buyers, corporates, trusts, partnership firms, Limited Liability Partnerships, co-operative banks, regional rural banks and other legal entities and High Networth Individuals (HNIs) would be eligible to subscribe the bonds.

The companies will have to raise 70 per cent of the issue size through public offer, of which 40 per cent has to be reserved for retail investors.

**In view of the above, we request that the same should be facilitated for the telecom sector infrastructure as well.**

#### **Funding for Building Telecom Infrastructure**

- a) Telecom sector is a capital intensive sector with huge investments required towards spectrum acquisition, network rollout etc. According to Government estimates, total investment required in the sector during the erstwhile Twelfth Plan will be around INR 9,43,899 crores<sup>2</sup> inclusive of private and central sector investments. The telecom industry requires a cumulative capital expenditure of almost INR 2,50,000 crores between 2013–2020, in order to meet targets (mentioned below), envisaged under the NTP 2012.
- b) Achieve 100% rural tele density by 2020: This requires incremental cumulative capex of INR 80,000–90,000 crores, since the industry needs to add more than 50 crores (52 lakhs/month) rural subscribers at a CAGR of 12%–13% during the period between 2012 and 2020.
- c) Achieve 60 crores broadband connections by 2020: This requires a cumulative capex investment of INR 1, 30,000 –1, 40,000 crores, to achieve 52 crores (54 lakhs/month) additional broadband connections at CAGR of 29%, during the period 2015–2020.

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<sup>2</sup> "Report of the working group on the telecom sector for the twelfth year plan (2012-2017)," Planning Commission report, 23 December 2011.

- d) To achieve targets as envisaged in NTP 2012, significant capex investment is required. However, the industry capex has declined at a CAGR of 18% from period between 2009 and 2012.
  
- e) In light of the above, it is evident that the fund requirements for telecom companies is very high and this should be facilitated by allowing to raise funds via issue of tax-free bonds, the proceeds of which shall be invested in developing the telecom infrastructure sector.
  
- f) Further, Infrastructure Debt Funds (IDFs) should be encouraged to raise resources for providing long term low cost debt to telecom infrastructure sector. Allowing telecom companies to fund this capex through tax free bonds rather than high interest bearing loans or external commercial borrowings will support the long-term viability of the industry besides encouraging the investor fraternity.

The telecom/ telecom infrastructure sector is the backbone of the telecom sector and is hugely capital intensive. It has been time and again emphasized that in order to enable economic growth there is an urgent need to infuse massive resources into infrastructure development especially in the telecom services and telecom infrastructure sector.

### **Recommendations**

- a) Telecom/ telecom infrastructure industry, which has been granted infrastructure industry status, should be allowed to issue tax free bonds which would reduce the overall cost of capital and mobilize cheaper funds for growth of the telecom/telecom infrastructure sector at large thereby help achieve the national vision of a connected India.
  
- b) Further, the telecom/ telecom infrastructure industry should also be made eligible for access to long term low cost debt for infrastructure projects to be provided by Infrastructure Debt Funds (IDFs).



सत्यमेव जयते

# भारत का राजपत्र

## The Gazette of India

असाधारण

EXTRAORDINARY

भाग I—खण्ड 1

PART I—Section 1

प्राधिकार से प्रकाशित

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(अवसंरचना अनुभाग)

अधिसूचना

नई दिल्ली, 1 अप्रैल, 2013

फा. सं. 13/6/2009-इंफ्रा.—सक्षम प्राधिकारी के अनुमोदन से एतद्वारा अवसंरचना के उप-क्षेत्रों की अद्यतन सुमेलित मास्टर सूची अधिसूचित की गई है (अनुबंध-1)। इससे 27-3-2012 की अधिसूचना में निम्नलिखित नए उप-क्षेत्र जोड़े जाएंगे :

- i. उप-क्षेत्र 'पत्तन' के अंतर्गत तलकर्षण
- ii. पतले मसाले की पाइपलाइनें
- iii. दूरसंचार और दूरसंचार सेवाएं

आशीष वछानी, निदेशक (अवसंरचना)

अनुबंध-1

## अवसंरचना उप-क्षेत्रों की अद्यतन सुमेलित मास्टर सूची

क्र.सं.	श्रेणी	अवसंरचना उप-क्षेत्र
1.	परिवहन	<ul style="list-style-type: none"> <li>सड़क और पुल</li> <li>पत्तन<sup>1</sup></li> <li>अन्तर्देशीय जलमार्ग</li> <li>एयरपोर्ट</li> <li>रेलवे मार्ग, सुरंग, सेतु, पुल<sup>2</sup></li> <li>शहरी लोक परिवहन (शहरी सड़क परिवहन के मामले में रोलिंग स्टॉक के सिवाय)</li> </ul>
2.	ऊर्जा	<ul style="list-style-type: none"> <li>विद्युत उत्पादन</li> <li>विद्युत पारेषण</li> <li>विद्युत वितरण</li> <li>तेल पाइपलाइनें</li> <li>तेल/गैस/द्रवीभूत प्राकृतिक गैस (एलएनजी) भंडारण सुविधा<sup>3</sup></li> <li>गैस पाइपलाइनें<sup>4</sup></li> </ul>
3.	जल और स्वच्छता	<ul style="list-style-type: none"> <li>ठोस अपशिष्ट प्रबंधन</li> <li>जल आपूर्ति पाइपलाइनें</li> <li>जल शोधन संयंत्र</li> <li>मलव्यय संग्रहण, प्रबंधन तथा निपटान प्रणाली</li> <li>सिंचाई (बांध, चैनल, तटबंध आदि)</li> <li>स्टोर्म वाटर निकासी प्रणाली</li> <li>पतले मसाले की पाइपलाइनें</li> </ul>
4.	संचार	<ul style="list-style-type: none"> <li>दूरसंचार (फिक्सड नेटवर्क)<sup>5</sup></li> <li>दूरसंचार टावरस</li> <li>दूरसंचार और दूरसंचार सेवाएं</li> </ul>
5.	सामाजिक तथा वाणिज्यिक अवसंरचना	<ul style="list-style-type: none"> <li>शिक्षण संस्थान (कैपिटल स्टॉक)</li> <li>अस्पताल (कैपिटल स्टॉक)<sup>6</sup></li> <li>1 मिलियन से अधिक आबादी वाले शहरों से बाहर अवस्थित तीन-सितारा अथवा उच्चतर श्रेणी के वर्गीकृत होटल</li> <li>औद्योगिक पार्कों, एसईजेड, पर्यटन सुविधाएं तथा कृषि बाजार हेतु सांझी अवसंरचना</li> <li>उर्वरक (पूजी निवेश)</li> <li>कृषि तथा बागवानी उत्पाद हेतु शीत भंडारण सहित कटाई उपरान्त भण्डारण अवसंरचना</li> <li>टर्मिनल बाजार</li> <li>मृदा-परीक्षण प्रयोगशालाएं</li> <li>शीत श्रृंखला<sup>7</sup></li> </ul>

<sup>1</sup> तलकषण शामिल है।

<sup>2</sup> लोडिंग/अनलोडिंग टर्मिनलों, स्टेशनों तथा भवनों जैसी सहायक टर्मिनल अवसंरचना शामिल हैं।

<sup>3</sup> कच्चे तेल का महत्वपूर्ण भंडारण शामिल है।

<sup>4</sup> शहरी गैस संवितरण नेटवर्क शामिल है।

<sup>5</sup> आप्टिक फाइबर/वायर/तार नेटवर्क, जो ब्राडबैंड/इंटरनेट उपलब्ध कराते हैं, शामिल हैं।

<sup>6</sup> चिकित्सा कालेज, पैरा-चिकित्सा प्रशिक्षण संस्थान तथा नैदानिक केंद्र शामिल हैं।

<sup>7</sup> कृषि तथा संबद्ध उत्पाद, जल उत्पाद तथा मांस के परिरक्षण अथवा भण्डारण हेतु खेत स्तर की प्री-कूलिंग हेतु शीत कक्ष सुविधा शामिल है।

**MINISTRY OF FINANCE**  
**(Department of Economic Affairs)**  
**(Infrastructure Section)**

**NOTIFICATION**

New Delhi, the 1<sup>st</sup> April, 2013

**F. No. 13/6/2009-INF.**—With the approval of the competent authority, an updated Harmonized Master list of Infrastructure Sub-sectors is hereby notified (**Annexure-I**). This adds the following new sub-sectors to the notification dated 27-3-2012 :

- i. Capital Dredging, under the sub-sector 'Ports'.
- ii. Slurry Pipelines
- iii. Telecommunication & Telecom Services

ASHISH VACHHANI, Director (Infra)

**Annexure-I**

**Updated Harmonised Master List of Infrastructure Sub-Sectors**

S.No	Category	Infrastructure Sub-sectors
1	Transport	<ul style="list-style-type: none"> <li>• Road and bridges</li> <li>• <b>Ports<sup>1</sup></b></li> <li>• Inland Waterways</li> <li>• Airports</li> <li>• Railway Track, tunnels, viaducts, bridges<sup>2</sup></li> <li>• Urban Public Transport (except rolling stock in case of urban road transport)</li> </ul>
2.	Energy	<ul style="list-style-type: none"> <li>• Electricity Generation</li> <li>• Electricity Transmission</li> <li>• Electricity Distribution</li> <li>• Oil pipelines</li> <li>• Oil/Gas/Liquefied Natural Gas (LNG) storage facility<sup>3</sup></li> <li>• Gas pipelines<sup>4</sup></li> </ul>
3	Water & Sanitation	<ul style="list-style-type: none"> <li>• Solid Waste Management</li> <li>• Water supply pipelines</li> <li>• Water treatment plants</li> <li>• Sewage collection, treatment and disposal system</li> <li>• Irrigation (dams, channels, embankments, etc.)</li> <li>• Storm Water Drainage System</li> <li>• <b>Slurry Pipelines</b></li> </ul>
4.	Communication	<ul style="list-style-type: none"> <li>• Telecommunication (Fixed network)<sup>5</sup></li> <li>• Telecommunication towers</li> <li>• <b>Telecommunication &amp; Telecom Services</b></li> </ul>
5.	Social and Commercial Infrastructure	<ul style="list-style-type: none"> <li>• Education Institutions (capital stock)</li> <li>• Hospitals (capital stock)<sup>6</sup></li> <li>• Three-star or higher category classified hotels located outside cities with population of more than 1 million.</li> <li>• Common infrastructure for industrial parks, SEX, tourism facilities and agriculture markets.</li> <li>• Fertilizer (Capital Investment)</li> <li>• Post-harvest storage infrastructure for agriculture and horticultural produce including cold storage</li> <li>• Terminal markets</li> <li>• Soil-testing laboratories</li> <li>• Cold chain<sup>7</sup></li> </ul>



<sup>1</sup>Includes Capital Dredging.

<sup>2</sup>Includes supporting terminal infrastructure such as loading/unloading terminals, stations and buildings.

<sup>3</sup>Includes strategic storage of crude oil.

<sup>4</sup>Includes city gas distribution network.

<sup>5</sup>Includes optic fibre/wire/cable networks which provide broadband/internet.

<sup>6</sup>Includes Medical Colleges, Para Medical Training Institutes and Diagnostic Centres.

<sup>7</sup>Includes cold room facility for farm level pre-cooling, for preservation or storage of agriculture and allied produce, marine products and meat.