

## Response to TRAI Consultation Paper No. 5/2015

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**Q.1 The “Report of the Committee on NOFN” has recommended three models and risks/advantages associated with these models. In your opinion what are the other challenges with these models?**

The complexity of monitoring and managing the operations of the countrywide network from single location is to be managed by integrating eMS of various network elements. Adoption of extremely divergent standards by SPVs is to be avoided by DoT with effective participation in SPV proceedings. As far as standards and payouts are concerned central govt nominees on SPV will have final say and that of devising methods of execution etc will be at the discretion of the state govt representatives in SPV.

Bharatnet may be allocated to the same CPSU in the states where CPSUs have executed more than 60% of works or 20% of GPs are serviced under NOFN. In other states, Bharatnet may be allotted to states first, if they wish to execute. The States may also be advised that they get the work done through CPSUs or distributing the work between CPSUs and private operators. The work may be distributed on 50:50 basis or with some deviation.

**Q.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.**

No. As per the timelines mentioned in the report, the works could commence only after 9 to 12 months after the approval of the Government. The approvals were to happen before Q2 of 2015. We are already in Q4 of 2015 and approvals are yet to be given including the modalities. Due to various grey areas and inconsistencies in the report and its cost implications, it is unlikely that the work in the new scheme be approved before Q3 of 2016. The time lines for paper works including approvals where decisions are taken in controlled environment have overrun by more than 200% of that prescribed by the NOFN committee. The timelines for implementation will definitely overshoot, where uncertain conditions exist like ROW permissions, Natural calamities, Labor related issues and Local festivals and above all political will of local representatives and leaders. Any way the delays attributable to the pooling of finances and resources including that of suppliers' delay etc will have to be absorbed by the project. The works that are concentrated like in Bangalore International Airport Limited project is different from carrying out distributed works like NOFN/Bharatnet. Timelines needed for Bhartanet execution is approx 36 months after all approvals from Government are conveyed including supplies if any to be made by other Government bodies like BBNL, DoT and/or SPV. The cost estimates need upward revision as the costs related to Satellite, Radio, Sizing of OFC and Ducts, assumption that existing BSNL ducts can be partially used, WiFi estimations and space and power back up at GPs are either estimated on the lower side or not included in the NOFN committee report. Report mentions Rs 72778 Cr as the project cost and that will shoot up to nearly Rs 117000 Cr. The NPV of OPEX if added will shoot up the cost to Rs 271000 Cr from the estimated Rs

85364 Cr. The cost overruns are also subject to supply and demand and anticipated speed of work execution. Hence if 36 months timelines are given in advance, the factors like demand and supply will not adversely effect, but will be influenced only by inflation.

**Q.3 Do you think that alternate implementation strategy of BOOT model as discussed in the paper will be more suitable (in terms of cost, execution and quality of construction) for completing the project in time? If yes, please justify.**

Not fully, but the BooT model can be given a thought for implementation in Cat A LSAs.

The success of BIAL is quoted in this paper. The BIAL project is entirely different from Bharatnet Project in many ways. Some of them are

- a. BIAL is limited to about 3000 acre complex, Bharatnet is distributed
- b. BIAL is in controlled environment and Bharatnet is in public domain
- c. In BIAL, Government commitment is delivered in advance by handing over about 3000 acres of land free of cost, where as in Bhartanet, all the three tiers of the Government of the day has to continue the support on daily basis
- d. Assured returns from high networth individual (HNI) users in BIAL, whereas Bharatnet is expected to serve rural population where surplus money is not available.
- e. BIAL has superintendence over all vendors or sub vendors on minute to minute basis physically, where as it is impossible for such monitoring in Bharatnet.
- f. Other development works like road widening, water, sewerage, electricity, irrigation, railway etc take precedence over Bharatnet and accordingly relegated to lower order priority, where as BIAL is never like that in their area of work.
- g. Other services do not virtually exist in BIALwhereas other services run along the same roads and paths in Bharatnet

Hence to conclude that since BIAL is successful, Bhartanet will be successful is not appropriate. Let us compare BOOT projects of NHAI which are still limited in geographical area compared to Bharatnet, but most of NHAI projects are both cost and time overrun. Now banks are cautious in financing the NHAI project partners. Bharatnet is much more distributed than that of NHAI projects and hence may not be that easy to succeed. In NHAI projects, users (pay masters) are above middle income group and in Bhartanet the users are lower middle income group.

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

Same as answered in Q 3 above.

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

It is easier said than done. Also kindly see Answer to Q7 below. BIAL is monopoly and dictating terms for all the stakeholders to serve the consumers in airport. A cup of coffee inside the airport is more than five times that available just outside the gate. The telecom service providers (TSPs) are not in a position to service the customers in airport because of huge money demanded in accessing the airport. The lease charges for fibre inside the complex is 50 times of that available across the industry. BOOT model virtually gives monopoly and hence the purpose of proliferation of Broadband services may not be met under this model unless terms and conditions are properly choosen.

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

Cap is not desirable. However to enable parallel and speedy works maximum of three states may be given to single agency. TSPs may be given unlimited states and LSAs if they are licenced to operate in them.

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

As answered in Q5 above. Micro management of BOOT operator is uncalled for. However, as long as the targets of proliferation of BB services are met, the project goal is achieved.

**Q.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?**

The targets of BB connections in a given period is the ultimate goal and hence there should be no terms and conditions on intermediate processes. VGF release may be linked to proliferation of services as answer to Q 18 below.

**Q.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?**

Only the end points for connectivity are to be mandated. The bandwidth size and capability to serve minimum number of customers should only be specified. The rest of the planning is to be left to the discretion of BOOT partner.

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

In case of execution by private agencies and CPSUs, the basis of funding should be that of lowest cost quoted to the government including opex for 10 years. The roll out costs should be quoted per meter of construction and execution including installation of electronics. The material should be procured by the SPV and/or BBNL to maintain uniformity and centralized monitoring the network. However sundry material like RCC pipes, Joint Chambers etc can be supplied and constructed by the executing agency. The agency has to follow the plans and standards given by BBNL/SPV.

In case of BOOT model, the VGF should not be determined on tender basis. Our experience in USO project which were determined on tender basis like recent mobile infrastructure scheme has not yielded desired results. Instead, VGF should be decided in advance by the Govt on the basis of study and practice. Estimate prepared by the NOFN committee can be moderated taking into account the experiences of costing and anticipated revenues in NOFN. Accordingly the VGF should be decided payable on monthly basis to the BOOT operator for 10 years from the date of completion. Each GP village has to be connected by Fibre with exceptions which are less than 10% which can be reached on alternate media like satellite, Radio etc. Payment of VGF is linked to number of connections working in GP areas at the end of month.

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

VGF funding is to be linked to number of connections provided and working and nothing else. In order to have roll out in all areas, fix the tenure say 3 years to roll out atleast three connections of 4 mbps in each GP village. Incentives and disincentives are as below

**Disincentive:** If the roll out is delayed, 1% cut in the VGF may be applied for every month of delay beyond 3 years and the cap on this may be fixed at 15% for 15 months beyond which the contract for the BOOT model will be terminated with one year notice to wind up. This cut may be applied block wise. Also the VGF payout period ends in 13 years from the date of award of work.

**Incentive:** If the roll out happens in less than three years, incentive of 1% of VGF per month upto a maximum of 15% shall be paid in addition to VGF. In addition the VGF payout period continues for a period of 13 years from the date of award of work i.e. VGF will be paid for more than 10 years if the works are completed before three years.

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

Ideally the assets should be made over to Govt after 10 years from the end of project roll out period i.e. 3 years. Hence total period is 13 years. Alternative to this is that the ownership continues with the BOOT operator as the assets shall be maintained better and VGF should disappear after 10 years and revenue share of 5 to 10% to be paid to Government on revenues of this network from the beginning of 14<sup>th</sup> year of award of work and/or make over to BBNL/SPV.

**Q 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?**

No. The wind fall profits can be earned from receipts from the retail services. Wind fall profits means more services are rolled out and consumed by customers and hence the Government of the day should be happy that the objective is achieved.

**Q.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?**

Yes. This is necessary to avoid high auction prices. But the same can be enforced by way of number of connections that are serviced rather than number of fibres.

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

Allocation of work to BOOT operator is given by the number of connections quoted by the operator in GP area. Since payment of VGF is linked to number of users, in order to gain more customers BOOT operator will have to keep the prices under control. If the numbers quoted and that achieved by the end of fourth year of awarding the work is less than 30% of that number, the contract can be terminated.

**Q.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?**

This is a complex issue. Governments at the Center, State, Muncipal and GP level have to issue orders for ROW in advance, but cannot enforce at field level as ROW

authorities have their own reasons. ROW issues need be tackled on regular basis by the executing agency/ BOOT operator. Only agreements can be part of the BOOT terms and conditions with a mention that the BOOT operator need to follow up and comply with all requirements at local level to get the permissions. An additional six months time may be given (which is included in 3 year allotted for execution) for ROW related activity. No further relaxations can be given on account of ROW delays.

**Q.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?**

The following shall help in more participation

1. High VGF
2. Liberal terms and conditions
3. Non interference in internal processes of BOOT operator
4. No intermediate checks other than the final goal for releasing VGF
5. Transparency in documentation
6. Quick redressal of any issues by independent external monitors

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

I summarise the comments as below

- a. In the states where more than 30% of GPs are terminated with fibre as on 2<sup>nd</sup> Nov 2015 through NOFN, the Bharatnet works may be allocated to the present executing agency. The executing agency may be asked to complete the project at USOF cost plus the centage. The owner of the network will continue to be BBNL and executing PSU may be given the responsibility of O and M also at costs. Marketing of the NOFN/Bharatnet network may be done by BBNL. A period of two years may be given to complete the roll out as per plans of BBNL/SPV.
- b. In the remaining states, state Government may be given the first choice to form SPV and execute the project. The Cat A circles may follow the BOOT model as they are remunerative and private participation may be forthcoming. Cat B circles may follow either BOOT model or upfront payment model. Cat C circles may follow only project execution model.
- c. In all states, where the works are not given on BOOT model, works may be given district wise, to private and CPSU in the ratio of approximately in 50:50 in each state.
- d. VGF may be worked out such that the model breaks even over a period of seven years and earns profit for next three years making the period of VGF support for 10 years. VGF may be quantified such that the model is self sustainable beyond 10 years. This may be released on a monthly basis on the strength of submission of BB customer data base like name, address, technology used and bandwidth extended etc. VGF may also be graded such that pay outs are more in the initial months and gradually reduced over the 10 year period.
- e. In BOOT model, the average BB customers in GP areas quoted is the criterion for selecting the BOOT operator. The bidder who quotes highest number per GP area with given VGF will be the successful bidder. The wired customers and wireless customers will be given a weightage of 1 and 0.2 respectively for arriving at the numbers quoted. The wired customers shall be offered a minimum of 2 mbps speeds averaging to 4 mbps speeds in the whole of GP areas (excluding THQ connections). The wireless customers should have minimum speed of 1 mbps in GP area. Each wired connection in THQ will be paid

about 30% of that paid in GP area. No VGF will be paid for wireline customers in DHQ area and wireless customers both in THQ and DHQ.

- f. The period of roll out may be fixed as three years from the date of award. If 90% of the GPs villages planned on fibre (and 100% of GPs planned on radio and satellite) are given minimum 3 numbers of 2 mbps broadband connections (including GP office) using the network from THQ to GP, the works are treated as completed.
- g. If the roll out is delayed, 1% cut in the VGF may be applied for every month of delay beyond 3 years and the cap on this may be fixed at 15% for 15 months beyond which the contract for the BOOT model will be terminated with necessary notice to wind up. This cut may be applied block wise.
- h. If the roll out happens in less than three years, incentive of 1% of VGF per month upto a maximum of 15% shall be paid in addition to VGF.
- i. ROW permissions should be liberally granted. State, Central and Local Government has to inform all the ROW authorities of the same and enable expedite issuing permissions. For this every state has to appoint a Principal Secretary level officer of state government as nodal officer who will conduct meetings every fortnight and proceedings/decisions will be circulated to all concerned. BBNL will have fortnightly meeting with Railways, NHAI at each state level. These meetings shall be followed up at National level by BBNL/DoT with all concerned once in two months.
- j. The BOOT operator shall be paid VGF as per number of connections in each GP area. Number of connections may be fixed as % of average population in GP area in a given LSA. For example, in Karnataka this may be fixed as 50 numbers of 2 mbps wired and 250 numbers of wireless broadband connections per GP area. This VGF amount shall be divided by the numbers (Per line VGF) quoted by the BOOT operator based on which the work is awarded to BOOT operator. The amount equal to the working numbers multiplied by Per Line VGF may be released to BOOT operator on monthly basis .
- k. VGF for Karnataka may be approximately Rs 1000 per month per wired BB connection in GP area subject to a maximum of 50 connections and that for mobile data connection of 1 mbps speed is about Rs 200 per month subject to maximum of 250 mobiles. The mobile provided is eligible for VGF if the mobile is used atleast for 10 days in a month in the village whose address is recorded in data base and also atleast 10% of data downloads of any month happen in the village. VGF may also be extended to connections provided in THQ (if the same is not GP) at Rs 300 per wired connection subject to a maximum of 200 connections. No VGF may be provided for mobile at THQ level. The VGF is about Rs 1 lakh per GP per month if the numbers quoted by the BOOT operator is fully achieved.
- l. It may also be mandated to open wireless access towers in GP village areas using the network in atleast 10% of GP areas after the work is awarded to BOOT operator using backhaul of Bharatnet in four years from the date of award.

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