(Related with Decision No. 1829/2066-10-05)

Terms of Reference (ToR) for hiring consultant to recommend modalities on Telecom infrastructure sharing to increase rural telecom density and to develop guidelines for infrastructure sharing

1) Project Background

Nepal Telecommunications Authority (NTA) is an autonomous telecommunications regulatory body established on March 4, 1998 (Falgun 20, 2054 BS) as stipulated within the framework of the Telecommunication Act 1997 (2053 BS) and Telecommunication Regulation 1997 (2054 BS) with the view to manage and regularize telecommunications services.

There are three Basic Telecommunications Service operators, two Rural Telecommunication Service (RTS) operators, two mobile telecommunication service operators and 36 Internet Service Providers licensed by NTA till date. Nepal Doorsanchar Company Limited (Nepal Telecom), the incumbent, is operating nationwide and providing a full range of telecom services such as fixed line, cellular mobile and Internet/Email services. Furthermore, Nepal Telecom is providing telecom services based on various technologies such as GSM, CDMA, WCDMA, ADSL etc. by building its own infrastructure. Furthermore, Nepal Telecom has also installed east-west optical fiber link. In the case of cellular services, Nepal Telecom and Spice Nepal have built many BTSs all over Nepal with higher concentration especially in metropolitan cities like Kathmandu.

Similarly, United Telecom Limited has built its own towers, BTSs and has laid down its own cables to extend its network outside Kathmandu Valley. It has been using optical fiber of Nepal Electricity Authority (NEA) for its network expansion outside valley and is providing basic telephone service based on WLL with limited mobility as an additional facility to its users. Currently, it has also started distributing RUIM to its subscribers.

Spice Nepal Pvt. Ltd. is another cellular mobile operator which has been providing cellular mobile service by establishing its own network. It is also expanding its service to various parts of the country by installing its own infrastructures. It has extended its services to about 34 districts.

Nepal Satellite Telecom Pvt. Ltd. and Smart Telecom P. Ltd. are the upcoming telecom service providers and they are being provided licenses to operate basic

telecommunication service and rural telecommunication service respectively. They are expected to commence operations soon.

In the case of Internet services, there are 36 Internet Service Providers (ISPs) and 9 Network Service Providers (NSPs) in existence as of February 2009.

In general, there are around 1500 BTSs all over the country. Based on the data provided by telecom operators, it has been estimated that nearly 900 BTSs will be added each year to the existing network to cater the growing demand. Using the rule of thumb, roughly 10,000 BTSs are needed to provide mobile telecom services to the entire population of the country.

The operators might be sharing their infrastructures to some extent; however, NTA does not have any guidelines that provide them a mechanism or strategy for infrastructure sharing. Section 13 of the Telecommunications Act, 1997 (2053) has directed NTA to carry out different activities which is basically related to telecommunications but the main theme of this Section is working of NTA to have a nationwide telecommunication network to provide services which are affordable, reliable and accessible. To achieve this goal, Infrastructure sharing can be one of the tools. Most administrations and telecom regulators of other countries have already devised or are working on devising Infrastructure sharing modalities.

Duplication of investment is waste of resources. In some cases duplication is even not possible due to natural limitations e.g. vantage locations such as hill tops, or space for additional towers or solar panels or right of way.

Optimum utilization of resources can bring down investment cost. In the end, cost savings through optimum utilization of scarce resources will pass on to the end customers of telecom. Infrastructure sharing will also allow operators to accelerate service expansion and thus increase the access to telecom services. Even aesthetics of a landscape can be stopped from deteriorating further by enforcing infrastructure sharing.

2) Objective of the consultancy

The objective of the consultancy is to find out and recommend modalities on Infrastructure Sharing and develop guidelines related to it in consultation with operators and other stakeholders. Furthermore, the consultant shall prepare a consultation paper on Infrastructure sharing and should incorporate findings and feedbacks received during consultation into his final report. While carrying out the assigned task the consultant should consider present socio-economic aspect of Nepal and should strictly focus on Nepalese perspective while giving higher priority to enhance ICT access (including mobile telephony) in rural areas, especially mobile

and internet. Moreover, areas having least telecom penetration and lower coverage need higher attention.

Another objective of this consultancy is to find out areas where pilot projects of infrastructure sharing can be initiated. Before going into a full-fledged implementation of infrastructure sharing, pilot project implementation of the same will give a basic idea about how to go about infrastructure sharing in a phase wise manner. For a faster roll out of the network, particularly in rural areas there is no alternative to wireless, hence, pilot projects should be focused on that perspective.

3) Tasks to be performed

a) Related to recommend modalities on telecom infrastructure development and its sharing to increase the telecom coverage in rural areas

i) Identify the infrastructures that can be shared in urban and rural areas;

ii) Identify the constraints/challenges in infrastructure sharing and recommend solutions to mitigate such type of challenges;

iii) Find out the present infrastructure sharing practices around the world and analyze International best practices on infrastructure sharing;

iv) Develop the modalities and sharing costs in particular, of infrastructure sharing which is best suited for Nepal and carry out the present cost benefit analysis of such modalities. *For this purpose, the consultant may require data related to projection and pattern of growth of networks, towers, subscribers, etc. to find out the real cost of expansion and savings achievable by implementing network sharing;*

v) Develop modalities for building new infrastructure for sharing by service providers;

vi) Develop modalities for techno-commercial arrangement for infrastructure sharing for both existing & to be built infrastructure;

vii) Prepare consultation paper on infrastructure sharing and consultation with different stakeholders;

viii) Incorporate feedbacks received during consultation period into the final report;

ix) Devise an incentive (might be full/partial financial or any other instruments) modality which will best motivate operators to have an agreement on infrastructure sharing. Incentive modality might be different based on areas or telecom penetration rate;

x) Recommend plan of action which has to be carried out for a successful implementation of infrastructure sharing;

xi) Identify nine underserved districts/areas, three each from Mountainous, Hills and Terai regions where pilot projects pertaining to infrastructure sharing, can be implemented and recommend the scope and modality to implement those pilot projects to achieve a complete coverage in those districts/areas; and

xii) Identify the scope and locations of infrastructure sharing for the above identified nine districts. This includes enumerating infrastructure which can be shared in details.

b) Related to development of guidelines for infrastructure sharing

i) Recommend and develop guidelines/strategies for such infrastructure sharing;

4) Outputs and deliverables

The consultant shall submit an inception report to start the study and a progress report (mid-term) which should contain most of the tasks mentioned in Sections 3 "Tasks to be performed". However, the final report shall consist of all the outputs mentioned in section 3 "Tasks to be performed".

5) Duration and Timing

The consultant will submit the inception report, which shall be finalized within a week in consultation with NTA, within 15 days. The consultant shall submit its mid-term progress report within 60 days and conduct consultation within 75 days. The final report should be submitted within 120 days which includes 35 days of consultation period. Hence, total duration of this assignment is 120 days. Finally, the consultant should be available to answer questions, update any required information and take part in dissemination of findings, upon request, for the duration of the project.

Note: All duration starts from the day of signing a contract.

6) Qualifications and selection criteria

Consultant will be chosen based on the following criteria.

a) Competency to carry out the assignment and experience of carrying out similar tasks in telecom or other utility sectors, to be included with reference

b) Project proposal with detailed modality of carrying out the tasks mentioned in section 3 "Tasks to be performed".

c) Qualifications of the Professional Personnel to be Assigned to the Project

d) Cost of the consultancy service

e) Consultant's capability to conduct consultation with the stakeholders

f) Other relevant qualifications of the consultant as mentioned in Evaluation Criteria for Consultancy service

7) Remuneration

a) 20% payment[1] of the quoted amount will be paid on submission of inception report.

[1] As per NTA's bylaws, 20% payment of the quoted amount can be paid as an advance after signing a contract against a Bank Guarantee of the same.

b) The Consultant will receive another 40 % payment of the quoted amount when it submits the mid-term report, and

c) The final 40% payments of the quoted amount will be released when final report is submitted to NTA.

d) In case, the Consultant does not want to receive payment under Clause 7(a), the Consultant shall be entitled to obtain 60% of the contract amount as the final payment under clause 7(c).

8) Terms and Conditions

a) As a bid security, a bank-voucher evidencing a cash deposit of NRs. 25,000/- (Nepalese Rupees Twenty Five Thousand) on A/C No. 010601 16642 01, Nabil Bank, Kantipath, has to be submitted along with the bid documents.

b) NTA will issue Letter of Intent (LoI) to successful bidder.

c) Consultant shall submit a performance bond of 10% of the quoted amount within 7 days of issuance of LoI.

d) The contract will be signed within 7 days of the submission of the performance bond of 10% of the quoted amount and the bond shall be valid till 150 days after signing the contract.

e) In case of failure to submit performance bond in due time second best bidder will be called to work on this assignment after completing due process.