

Term of Reference

For

Consultancy Service to Study for Identification of Reliable and Cost Effective Alternate Solution to Make Accessibility of Internet Connectivity to Submarine Cable from Nepal

A. Background

Nepal Telecommunications Authority (NTA) is an autonomous telecommunications regulatory body established in February 1998 pursuant to Telecommunications Act, 1997 and Telecommunications Regulation, 1998. There are six voice operators/licensees, more than 90 Internet Service Providers (ISPs) and 15 Network Service Providers (NSPs) till licensed from the Authority.

Nepal Doorsanchar Company Limited (Nepal Telecom), the incumbent, is operating nationwide and providing a full range of telecom services such as fixed line/PSTN, cellular mobile and Internet/Email services. Furthermore, Nepal Telecom is providing telecom services based on various technologies such as GSM, CDMA, WCDMA, LTE, WiMAX, and ADSL etc. Ncell Pvt. Ltd. is another cellular mobile operator which has been providing cellular mobile service nationwide based on GSM, WCDMA and LTE. Smart Telecom Pvt. Ltd is operating basic telephone service including mobile service e.g. GSM and LTE. United Telecom Limited has obtained license for providing basic telephone service including mobile service. Nepal Satellite Telecom Pvt. Ltd. is operating its basic telecommunication service starting from Mid-Western and expanding to Western and Far -Western Development Regions taking into special consideration for the coverage in the un-served and underserved areas of rural and remote areas. STM Telecom Sanchar Pvt. Ltd. is operating Rural Telecom services.

Currently Telecom Operators and Internet Service Providers have brought internet bandwidth from India and China. There is no direct connectivity from Nepal to Marine cable. So tariff for internet service in Nepal is relatively higher. The direct connectivity to Marine cable may

reduce the price of internet in Nepal. Hence, NTA feels necessity to study and identify Reliable, Secure and Cost Effective Alternate for Internet Connectivity from Nepal to Marine Cable.

NTA has been utilizing the RTDF fund to build and operate Information Superhighway through Mid-Hill Highway connecting every District Head Quarter through high capacity optical fiber network. Besides, NTA has been utilizing the RTDF fund to expand broadband service to all over the nation.

Hence, NTA intends to engage a consulting firm to prepare strategic plan and regulatory framework to identify reliable, secure and cost effective alternate for Internet Connectivity from Nepal to Marine Cable.

B. Objectives

The main objective of this assignment is to identify a reliable, secure and cost effective alternate solution for Internet Connectivity from Nepal to Marine Cable.

C. Scope of the Study

The scope of work in connection with this assignment includes the followings:

1. Carry out study reflecting the current status of Broadband network and the bandwidth requirement.
2. Study and analyze the existing legislative provision for access to submarine cable and recommend amendment required if any.
3. Explore the international trends and practices for access to submarine cable from landlocked country.
4. Identify the possibilities associated with this assignment for connecting to neighboring countries' projects (e.g. Road initiatives).
5. Identify the possibility of G2G and B2B coordination in connection to this assignment.
6. Carry out feasibility study to define detailed requirement for implementation of access to submarine cable.

7. Study and analyze different options with appropriate technologies including Infrastructure capacity assessment.
8. Carry out study in terms of technical aspect, service aspect, business aspect and organizational aspect in regard to submarine cable access.
9. Analyze the socio-economic impact of connectivity up to submarine.
10. Study and explore the potential routes for access to submarine cables through the appropriate infrastructure as applicable.
11. Identify the methodology/entity responsible for settling inter-countries and inter-operator disputes in case of disputes if any.
12. Explore the potential security threats concerned with the project and ways to mitigate them.
13. Conduct the consultation workshop with the concerned stakeholders after the submission of draft final report and incorporate the feedback and prepare the final report. The cost incurred for organizing the consultation workshop shall be borne by the consultant.
14. Develop strategy and regulatory mechanism to make reliable and cost effective alternate for Accessibility of Internet Connectivity to Submarine Cable from Nepal.
15. Any other issues related to this assignment.

D. Budget Allocation

Rs. 49,35,000.00 has been allocated for this consultancy service in the Annual Program of FY 2075/76.

E. Duration of the Project:

Four months effective from the date of assignment.

F. Requirement for the Professional/Consultant

Consultants shall have a team comprises the following professionals/ experts with minimum qualification and Experience as indicated.

S. No.	Designation	Minimum Educational Qualification and experience	Indicative Mandays	Remarks
1.	Team Leader (Telecom/Network Expert)- 1 No.	<ul style="list-style-type: none">• Masters in Telecommunication/ Electronics and Communication Engineering/ Computer Engineering/ IT and at least 10 year telecom related experience.• Experts having expertise in optical fiber and microwave transmission work(s) are sought.• Expert shall have experience of at least 3 projects related to optical fiber and microwave transmission work(s).	60	
2	Team Member (Telecom Infrastructure and Network Expert)- 2 Nos.	<ul style="list-style-type: none">• Bachelor (Masters preferable) in Telecommunication/ Electronics and Communication Engineering/ Computer Engineering/ IT and equivalent with at least 5 year relevant experience.• Experts having expertise in optical fiber and microwave transmission work(s) are sought.	60 each	
3	Team Member (Highway	Bachelor (Masters preferable) in Civil Engineering and equivalent with at	30	

	Engineer)- 1 No.	least 5 year experience in telecom related utility management in highway and relevant field.		
4.	Team Member (Economist)- 1 No.	<ul style="list-style-type: none"> • Masters in Economics or equivalent with at least 5 year relevant experience. • Expert shall have expertise in utility sector. 	30	
5.	Team Member (Legal Expert)- 1 No.	Bachelor Degree (Masters preferable) in law and shall have at least 5 year relevant experience.	30	

G. Responsibilities of NTA

- Allow Consultant to use existing available data of NTA so as to be in synchronization with the overall implementation and operational plan of NTA.
- Allow Consultant and its authorized representatives to access various sites in connection with execution of project.
- Provide all liaison support as required by the Consultant for carrying out its duties including bilateral coordination with neighboring countries.
- Allocate a nodal officer for routine interaction.
- To arrange permissions from statutory authorities like DOR/ Municipal authorities/ VDCs/ LDCs etc.