TOR for Consultancy service

On

Development of Standard for laying Aerial/Underground Cable and Design Pilot Project

1. Background

There are different wire line telecom operators and Broadcasting operators laying out and using the wire line cable for the provision of different services to their customers in Nepal. It seems lack of proper standards relating to the proper laying out and usage of the wire line in major cities including Kathmandu Valley which causes the negative impact in the beauty of the city. The new ICT and Telecom technologies are being developed to cater the demand of public services in effective and efficient manner. High capacity wireline solutions are also introduced through the means of Optical fiber. The telecom policy 2060 has envisaged that Spectrum, Numbering and Right of way are the limited resources that are to be managed effectively and efficiently and separate approval and licensing will be applicable for using such scarce resources. Infrastructure Sharing is very important tool for the optimum utilization of high capacity resources including the optical fibers and large towers. The Directive of the GoN in relation to the Telecom Infrastructure Promotion introduced in 2069 has also envisaged the importance of the large infrastructure and sharing of such large infrastructure to protect environment which might be potential causes pollution to the environment. In this context, it seems necessary to develop appropriate standards and norms for laying out wire line cables in the city and the management of such infrastructure in effective and efficient manner. NTA has identified annual program for development of standard to lay out and operate the wire line cable in the public places and migration of the improperly hanging and laying out of wire line cable to the identified norms and standards through a Project. It is necessary to identify the Project and different associated components of the Project and implement the same in coordination with the concerned stakeholders such as Nepal Telecom, ISPAN, Cable Service Providers, MICT, NEA, Kathmandu Municipality, Kathmandu Valley Development Authority, and Department of Road. Thus NTA intends to engage Consultant/contractor to perform the following two tasks mainly two parts:

(i) To development of Standard for laying out wire line cable in the public places; and identify and design a Project

(ii) To prepare bid document for implementation of identified Project for a specified route and assist in implementation.

2. Objective

The objective of this project is to develop standard for layout of aerial cable and managing the wire line cable of existing aerial wires (optical fiber, Cable for Television and coaxial cable) used in providing Telephone, Television and internet services for implementation taking into account the associated technical requirement.

3. Scope of Work

The scope of work consists of mainly two components in order to meet the afore mentioned identified objective:

(A) Development of Standard for laying Aerial/Underground Cable

The scope of the work relating to aerial/underground cable includes but not limited to the followings:

I. Identify the existing status/provisions for laying out the wire line cable intended for the provision of different services including telecommunication services, broadcasting services.

II. Identify the different stakeholders including but not limited to internet services, cable TV service, Telephone (Fixed/Mobile) services relating to the laying out the wire line cable and quantify its current operation/usage.

III. Study and analyze the existing norms that are being used for laying out the wire line cable by the different stakeholders and also identify the current problems and challenges.

IV. Study and analyze the international trends and practices relating to the standard in connection with laying out the wire line cable in the public places.

V. Develop the standards to be followed by the different operators for laying out the Communication wire line cable in the public places in relation with the followings:

- Standard for Metro Backbone

- Standard for Metro distribution including the Architecture
- Standard for Highway Backbone
- Standard for In-building ICT Infrastructure- Telephone, Internet, Cable, Dish
- Short term Strategy for managing the aerial cable
- Long Term Strategy for migrating all aerial cable to underground cabling as applicable

VI. Study, analyze and identify the roles and responsibilities of different stakeholders including telecom operators, broadcasting operators, MOIC, NTA, and Local Authority of the `GoN.

VII. Explore the possibilities of latest new technologies that can be used for the provision of services through the means of appropriate wire line technologies and also explore the associated infrastructure sharing options and modalities.

VIII. Study, analyze and explore the options and modalities in relation to the provision for Right of Way to be taken into account while laying out wire line cable in the public places and also determine the appropriate coordination mechanism for the implementation.

IX. Study, analyze and explore the possibility of Independent Infrastructure provider while laying out the wire line cable and also explore the sharing mechanism if applicable

X. Develop comprehensive Directives **for laying out of wire line cable** in the public places taking account aforementioned clauses of the scope of work.

XI. Also identify the action plan and migration strategies and plan in order to implement the identified Directives in phase wise manner.

XII. Suggest any other issues relating to the standard and norms of laying out wire line cable

B) **Identification, Design and implementation of a Project**

I Site survey and requirement analysis:

Consultant will carry out site survey to define detailed project requirement. NTA will provide relevant information and documents of their existing and proposed systems to Consultant.

II Assessment of Technology & Standards:

Based on requirement definition, an assessment of latest technology & standards will be carried out to identify the technology best suited to the project. Consultant will explore various alternatives based on most appropriate technology available.

III Technical design and preparation of specifications:

After selection of most suitable technology & standard, Consultant will prepare technical design and bill of quantities (BOQ).

IV ***Financial analysis and preparation of cost estimates***:

Based upon the Scope of Work, the cost of the project will be estimated and necessary approval will be sought from NTA in this respect. Consultant will estimate the CAPEX, OPEX and TCO (Total Cost of Ownership) of each aspect of the project.

V Preparation of tender documents:

Consultant will prepare tender document to be floated by NTA. Consultant, in consultation with NTA, will prepare eligibility criteria for prospective bidders. The technical and commercial part of the tender document will also be prepared by Consultant.

4. Budget Allocation

Rs. 10,000,000.00 has been allocated for this consultancy service in the Annual Program of FY 2074/75.

5. Requirement for the Professional/Consultant

Consultants have qualification and Experience in Following field

1. Team Leader- Master in Telecommunication and at least 10 year experience in Wire line management and telecommunication sector.
2. Civil Engineer: Bachelor in civil Engineering and have at least 7 year experience in road construction and wire line management.
3. Procurement expert: Bachelor and have at least 5 year experience in procurement.

Responsibilities of NTA

- Allow Consultant to use existing 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 T for carrying out its duties.
- Approve Cost estimates prepared by Consultant.
- Allocate a nodal officer for routine interaction.
- To arrange permissions from statutory authorities like DOR/ Municipal authorities/ VDCs/ LDCs etc.
- Provide Office Space-Desk, Chair, Office Stationary, Internet Connection to the Consultant