

Islamic Emirat of Afghanistan
Ministry of Communication and Information Technology (MCIT)
Afghan Telecom Corporation (AFTEL)

AMENDMENT NO. 1

To

INTERNATIONAL COMPETITIVE BIDDING (ICB)

FOR

Procurement of Supply of DWDM Equipment for Afghan Telecom

Type of Contract: Lump Sum Contract

Reference No: MCIT-AFTEL/1402/G-014/ICB



ISSUED ON: January 4, 2024
Kabul, Afghanistan

Amendment No.1 to Bidding document

Procurement of DWDM Equipment

Reference No: MCIT-AFTEL/1402/G-014/ICB

The following amendments are made to the SBD Document for the above Project:

Standard Bidding Documents	
S/NO	Reference to Bidding Document
1	<p style="text-align: center;">Original</p> <p>The deadline for submission of bids shall be: Date: January 8, 2024 Time : 10:00 am at Kabul local time</p> <p>Add: Mohammad Jan Khan Wat, Ministry of Telecommunications and Information Technology, Afghan Telecommunication Corporation (AFTEL), Post Parcel Building, Procurement Department, 4st Floor Attention: Faridullah Marjan procurement Facilitation Manager/AFTEL Email: faridullah.ahmadzai@afghantelecom.af CC: s.akramy@afghantelecom.af Telephone: +93 (0) 0202109184</p>
	<p style="text-align: center;">Amendment as</p> <p>The deadline for submission of bids shall be: Date: January 22, 2024 Time : 10:00 am at Kabul local time</p> <p>Add: Mohammad Jan Khan Wat, Ministry of Telecommunications and Information Technology, Afghan Telecommunication Corporation (AFTEL), Post Parcel Building, Procurement Department, 4st Floor Attention: Faridullah Marjan procurement Facilitation Manager/AFTEL Email: faridullah.ahmadzai@afghantelecom.af CC: s.akramy@afghantelecom.af Telephone: +93 (0) 0202109184</p>



Procurement of DWDM Equipment
Reference No: MCIT-AFTEL/1402/G-014/ICB

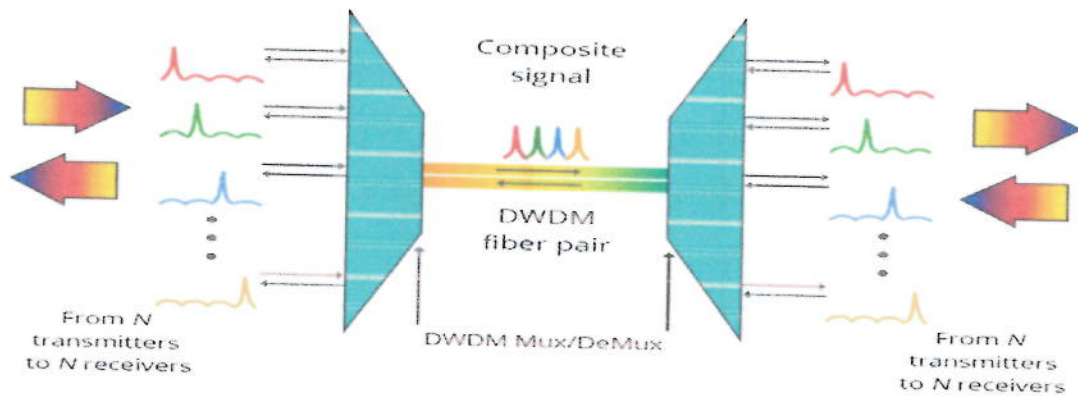
2	Section 5 Schedule of Requirement and GCC1.1 (F)	<p>List of Goods and Delivery Schedule: Completed (DDP, configuration and services migration) project duration after signing the contract date is 6 months.</p> <p>Payment Terms</p> <ul style="list-style-type: none"> • 20% advance payment against similar bank guarantee; • 40% of the total contract value will be paid to the contractor after goods delivery to the customer warehouse (AFTEL warehouse) as DDP base; • 20% of the total contract value will be paid to the contractor after PAC signature date; • 20% of the total contract will be paid to the contractor after FAC signature date; 	<p>List of Goods and Delivery Schedule: Completed (DDP, configuration and services migration) project duration after signing the contract date is 8 months.</p> <p>Payment Terms</p> <ul style="list-style-type: none"> • 30% of the total contract value will be paid to the contractor as advance payment against similar bank guarantee; • 40% of the total contract value will be paid to the contractor after goods delivery to the customer warehouse (AFTEL warehouse) as DDP base; • 20% of the total contract value will be paid to the contractor after PAC signature date; • 10% of the total contract will be paid to the contractor after FAC signature date;
3	GCC 16.1		
4	Technical Specification	Complete revised Technical Specification is attached to this amendment	

Note: Bidders are requested to consider the revised Technical Specification attached to this amendment instead of the Technical Specification available within the Standard Bid Document announced previously.
All the other aspects of the Original Bidding Document remain unchanged.



AFGHAN TELECOM CORPORATION

AFTEL Backbone DWDM (Dense Wavelength- Division Multiplexing) SoW



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1. Afghan Telecom Corporation Introduction:

Afghan Telecom (AFTEL) is a telecom company offering fixed line, wireless voice and data services under a 25-years license in Afghanistan. The company is government owned and operated since 2005, the Afghan Ministry of Communications & Information technology spun it off into a private entity, while retaining oversight and control AFTEL, a country leading telecommunication service provider, has always been on the forefront of the evolution of telecom network. With the development of telecom technology and the growing demands of subscribers, AFTEL first demonstrates its pioneer position to underline its leadership in the future of mobile network, and willing to continue the delivering of advanced services to customers.

Incorporated in 2013, Salaam is the latest entrant in Afghanistan's telecommunication industry providing a top-quality, affordable, 100% Afghani solution. Envisioned by the Ministry of Telecommunications and Information Technology, Salaam is committed to revolutionizing the telecommunication sector in Afghanistan by complementing the nationwide fixed network with 3G GSM voice and data services.

Setting ourselves apart from the competition through our customer-friendly packages without restrictions or tricky charges, Salaam gives its customers the freedom to enjoy lowest call rates, both domestic and international, and trouble-free internet at unbelievable rates without compromising on quality.

2. Scope summary:

Afghan Telecom requires to handle the high volume of local & international traffic. Currently Afghan Telecom is using Huawei DWDM equipment (OSN8800, OSN7500) for transmission. therefore, it has availed a pair of dark fiber to enable transit traffic though out the country and beyond. Afghan Telecoms is looking for vendors to provide equipment, Implementation and NMS for new DWDM platform.

Bidders should respond with detailed Bill of Material ("BoM") based on the requirements below.

3. Expected Response Details:

Proposals from suppliers must contain enough technical information with detail to enable Afghan Telecom to evaluate the offer which should include technical description of each product, LLD and HLD diagram, capacity and product roadmap.

In case the supplier is not able to offer all requested equipment from their own product portfolio, then supplier can quote equipment from a third party.

All the technical documentation (Hardware and software configuration and installation guide) should be provided in either Word or PDF format and addition the provider/vendor is responsible to supports and train AFTEL's technical team during equipment installation. the pricing details should be provided in excel format.



4. DWDM Network:

4.1. Network Design Overview:

The network shown in Figure 1 shows the path of the fiber network connectivity. The fiber is based on ITU-T G.652/G.657 standard. A dark fiber pair will be provided to connect required sites provided in the following sections.

Afghanistan National OFC Ring

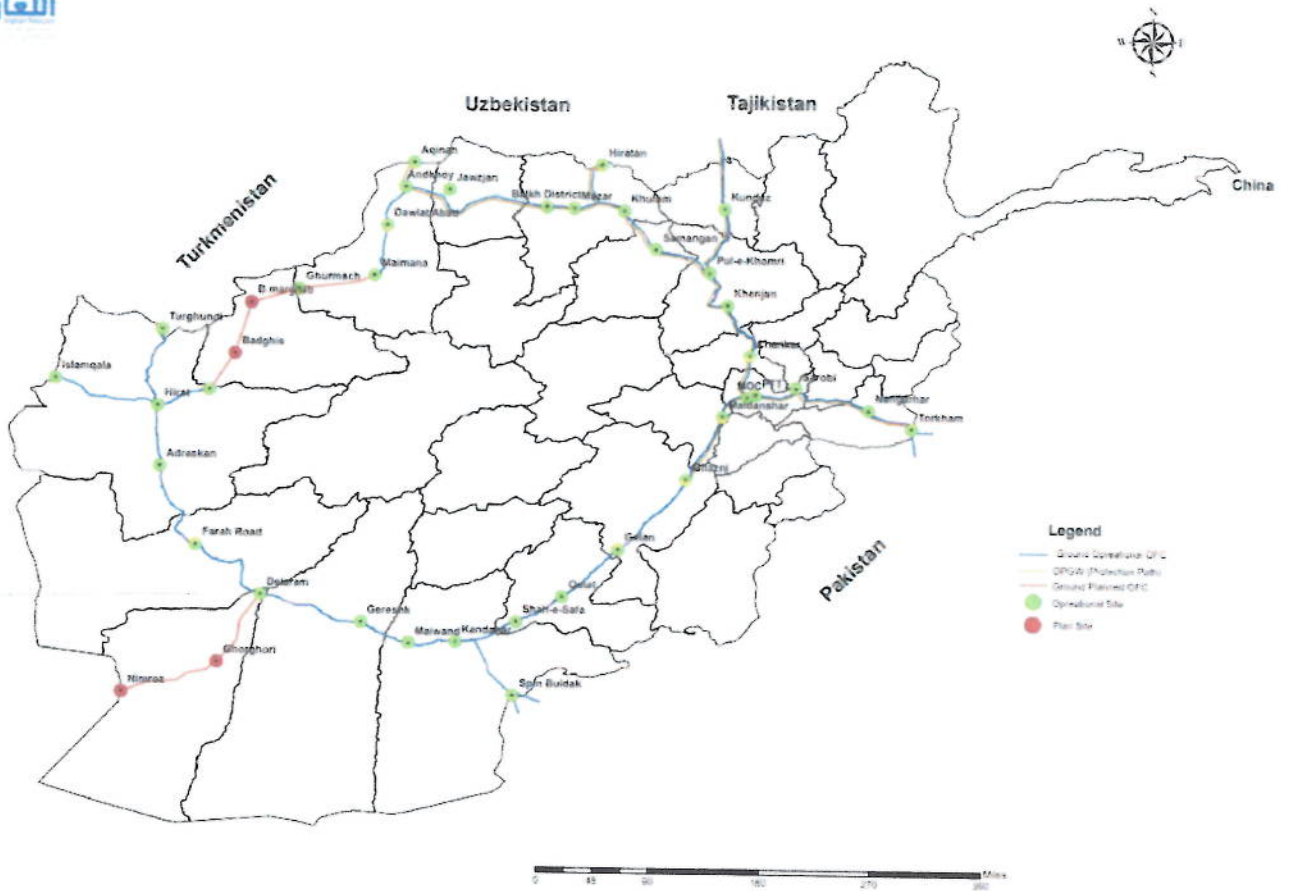


Figure 1: Project Network Map

Based on map fiber links will use alternative physical paths of DABS (OPGW) for protection and all of those segments where AFTEL have the alternative physical paths of DABS (OPGW), provider/vendor need to provide optical line protection solution to protect the hole traffic node by node.



4.2. Network Design Consideration:

For evaluation the sites as shown below are going to be considered for RADOM and FAODM sites of DWDM 100G/lambda and 200G/lambda configurable system without any additional license for 200G/lambda capacity, below is the service matrix including number and capacity of lambda, vender need to provide, deliver and install DWDM (MS-OTN) equipment.

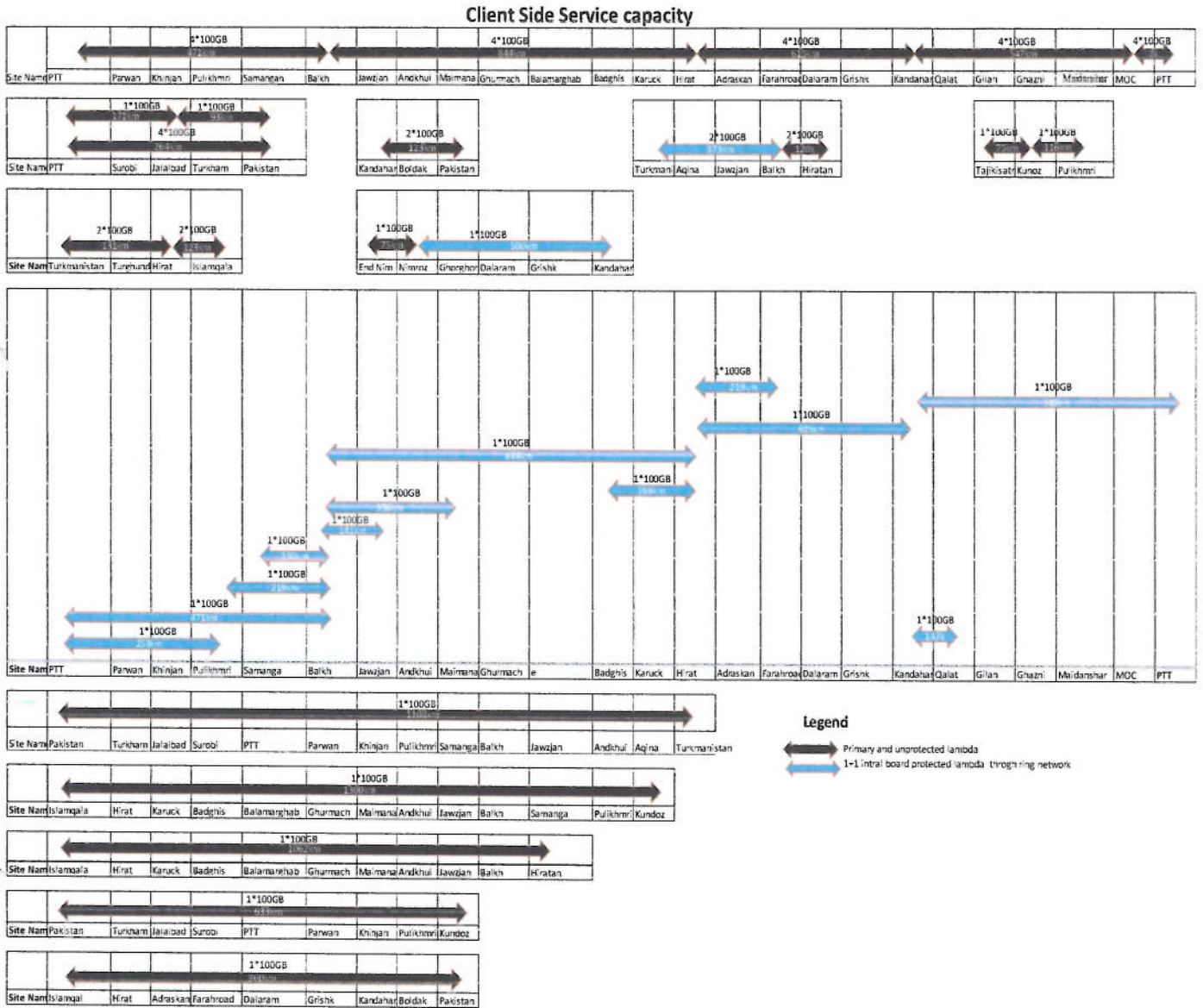
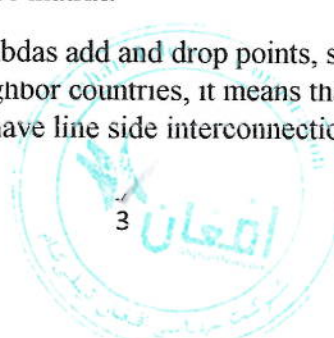


Table 1: Service Matrix

Below points need to be considered on service matrix:

- The double arrow lines show the lambdas add and drop points, some double arrow lines which cross the border sites and interring the neighbor countries, it means that we need to make a circuit with a neighbor country where we need to have line side interconnection for more than one lambda using



only two core of fiber cable, and for this line side interconnection vender/provider need to provide the solution.

- All the lambda with blue color needs to be 1+1 intra board/client protected via ring and should support MS-OTN (VC, OUT, and PKT) services;
- All the lambda with black color are without 1+1 intra board protection and should support all types of services VC, OUT, and PKT, supporting OSUflex with flexible bandwidth starting from 2.4 Mbit/s up to 100Gb;
- All boarder sites should have the capability of client side (via tributary or OTU boards) and line side (through a separated sub rack) interconnection with upstream (neighbor countries), and should support MS-OTN (VC, OUT, and PKT) services;
- Equipment needs to be compatible with other vender for both line and client-side interconnection, currently Afghan telecom has interconnection with 5 Neighbor countries in 8 points which are clearly mentioned in the above map, in all of these points we need to have line side interconnection, vender should provide a reliable solution for this;
- For adding reliability, vendor/provider should not put all the lambdas/Ochs channels on one board. Spread them across multiple boards to have a backup in case one board fails. This way, if one board has issues, the others will keep things running smoothly, ensuring consistent performance and avoiding disruptions;
- In the above services matrix, each 100G indicate one lambda/ Och channel which will supports both 100G and 200G configurable capacity.



A handwritten signature in blue ink, written over the bottom right portion of the stamp. The signature is stylized and appears to be a personal name.

4.3. Transmission sites types:

- Amplifier,
- FOADM,
- ROADM,

No.	Site Name	Site Type
1	PTT	ROADM
2	Parwan	Amplifier
3	Khinjan	Amplifier
4	Pulikhmri	ROADM
5	Samangan	ROADM
6	Khulam	Amplifier
7	Mazar-e-Sharif	ROADM
8	Balkh district	Amplifier
9	Jawzjan	ROADM
10	Andkhui	ROADM
11	Dawlatabad	Amplifier
12	Maimana	ROADM
13	Ghurmach	Amplifier
14	Balamarghab	Amplifier
15	Badghis	ROADM
16	Karuck	Amplifier
17	Hirat	ROADM
18	Adraskan	Amplifier
19	Farahroad	ROADM
20	Dalaram	ROADM
21	Grishk	Amplifier
22	Kandahar	ROADM
23	Maiwand	Amplifier
24	Qalat	ROADM
25	Shar-e-Safa	Amplifier
26	Gilan	Amplifier
27	Ghazni	Amplifier
28	Maidanshar	Amplifier
29	MOC	ROADM
30	Surobi	Amplifier
31	Jalalbad	ROADM
32	Turkham	ROADM
33	Boldak	FOADM
34	Hiratan	FOADM
35	Islamqala	FOADM
36	Turghund	FOADM
37	Kundoz	ROADM
38	Aqina	FOADM
39	Nimraz	FOADM
40	Ghorghori	Amplifier

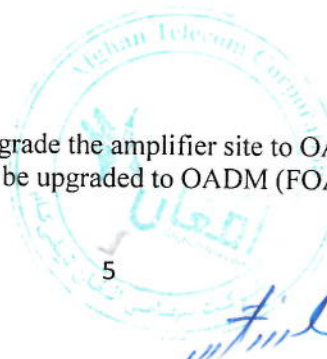
Table 2: Number and Type of Sites

1-Amplifier sites = 17

2- FOADM sites = 6

3- ROADM sites = 17

Future upgrade of sites: in future we need to upgrade the amplifier site to OADM (FOADM or ROADM) so all the amplifier sites should have the capability to be upgraded to OADM (FOADM or ROADM) sites without any software and license limitation



4.4. client-side:

The below table show the client-side capacity between each source and sink sites on the network, which need to be considered during network design,

Client-Side Service capacity																
Source Site	Sink Site	100GE				10GE / STM 64				1GE						
		# of links	SFP pairs type / km				# of links	SFP pairs type / km				# of links	SFP pair types / km			
			10	20	40	80		10	20	40	80		10	20	40	80
PTT	Pakistan (Via Turkham site)	5	2		3	20	5	5	5	5						
Jalalabad	Pakistan (Via Turkham site)	2	1	1		15	5	5	5							
Kandahar	Pakistan (Via Spin boldak site)	2	1	1		10		5	5							
Jalalabad	PTT	1	1			15	5	5	5	24	5	9	5	5		
Hirat	Farahroad	1			1	10		5		5	24	5	9	5		
Hirat	Islamqala	2		1	1	10	5	5								
Hirat	Turkmenistan (Via Turghundi)	2	1	1		10		5	5							
Nimroz	End Nimroz	1			1	10	5	5								
Nimroz	Kandahar	1			1	10	5	5		24	10	10	4			
Balkh	Turkmenistan (Via Aqina)	2	2													
Balkh	Hiratan	2		1	1											
Tajekistan	Kundoz	1			1	10		5	5	24	10	10		4		
Kundoz	Pulikhmri	1	1			10	5	5		24	10	10	4			
MOC	PTT	4	4			20	10	10		24	12	12				
PTT	Kandahar					10	5	5		24	10	10	4			
MOC	Kandahar	4	4			10	5	5		24	10	10	4			
Kandahar	Hirat	4	4			10	5	5		24	10	10	4			
Hirat	Balkh	4	4			10	5	5		24	10	10	4			
Balkh	PTT	4	4			10	5	5		24	10	10	4			
Badghis	Hirat					10	5	5		24	10	10	4			
Balkh	Maimana					20	10	10		24	10	10	4			
Balkh	Jawzjan					20	10	10		24	10	10	4			
Balkh	Samangan					20	10	10		24	10	10	4			
Balkh	Pulikhmri					5		5		12	5	5	2			
PTT	Pulikhmri					5		5		24	10	10	4			
Kandahar	Qalat					10	5	5		24	10	10	4			
Kunduz	Islam qala	1			1	15			5	10						
Isalm Qala	Hiratan	1			1	15			5	10						

Table 3: client-side capacity

Note: provider need to consider extra software and hardware license for free slot of sub rack that we could use those slot without any software and license limitation.
All the client side board and port need to support different type of services (VC, OTUk, Ethernet and packet), and should support granularity pipes with any bandwidth.

4.5. Fiber Length:

The below table show the length of fiber between each segment on the network, which need to be considered during network design.

No	Starting Point	Ending Point	fiber length/km
1	PTT	Parwan	69.36
2	Parwan	Khinjan	107
3	Khinjan	Pulikhmri	77
4	Pulikhmri	Samangan	87.2023
5	Samangan	Khulam	67.8
6	Khulam	Mazar-e-Sharif	62
7	Mazar-e-Sharif	Balkh district	26
8	Balkh district	Jawzjan	118
9	Jawzjan	Andkhui	75.5542
10	Andkhui	Dawlatabad	71
11	Dawlatabad	Maimana	75
12	Maimana	Ghurmach	120
13	Ghurmach	Balamarghab	80
14	Balamarghab	Badghis	120
15	Badghis	Karuck	125
16	Karuck	Hirat	44
17	Hirat	Adraskan	90
18	Adraskan	Farahroad	129.3
19	Farahroad	Dalaram	136
20	Dalaram	Grishk	128
21	Grishk	Maiwand	73
22	Maiwand	Kandahar	72
23	Kandahar	Shar-e-Safa	73
24	Shar-e-Safa	Qalat	74
25	Qalat	Gilan	109
26	Gilan	Ghazni	132.114
27	Ghazni	Maidanshar	117
28	Maidanshar	MOC	42
29	MOC	PTT	2
30	PTT	Surobi	83.86
31	Surobi	Jalalbad	86.972
32	Jalalbad	Turkham	80.622
33	Turkham	Pakistan	13
34	Kandahar	Boldak	109
35	Boldak	Pakistan	13.8
36	Balkh	Hiratan	95
37	Hiratan	Uzbekistan	25
38	Hirat	Islamqala	122.23
39	Islamqala	End Islamqala	32
40	Hirat	Turghund	122.268
41	Turghund	Turkmanistan	9
42	Pulikhmri	Kundoz	116
43	Kundoz	Tajikisatn	75

44	Andkhui	Aqina	36.6287
45	Aqina	Turkmanistan	121
46	Nimraz	Ghorghori	107
47	Ghorghori	Dalaram	130
48	Nimroz	End Nimroz	50

Table 4: Fiber length of each segment

4.6. Mandatory technical specifications:

- Overall System should be design for 96 channels capacity, the initial capacity should provide 48 channels and upgradable to future extension as hot swappable;
- Each node should have MS-OTN, EOTN capability where small granular services (GE, 10GE etc.) would be able to aggregate to higher granular services (100G) for improved bandwidth utilization, and will support all kind of services including VCs, packets and OTUs;
- The 10G interface shall be tunable software configurable to change between STM-64 and 10GE as well as having all installation required materials;
- All required licenses shall be permanent;
- The license should cover the complete sub-rack, including any free slots and spare equipment. When it comes to free slots, the only requirement is need to be adding a board. For additional nodes, only a spare or extra sub-rack needs to be installed. There should be no limitations or restrictions on equipment, EMS software, and hardware licenses;
- The line board capacity needs to be 100G/200G configurable, but the node (sub rack) should support, 400G, 800G line/transponder boards without any license and software changes/modification;
- The optical transmission media is standard single-mode optical fiber;
- Having 5dbm extra margin allowance base on 0.3dBm/km fiber span loss and amplifier adjustment range;
- The primary link budget calculation must be based on 96 channels;
- full NMS solution including all (The licenses validation period to be permanent);
- NMS Solution should support unlimited concurrent users;
- Vendor should provide their latest version of equipment;
- The vendor needs to provide their newest software version with a one-time license, this software should work with all types of boards associated with the specified sub-rack without needing any upgrades to the software or hardware, some sub-racks might have extra free slots, and the software and license should work with these slots that we could add the board on it without requiring any extra changes;
- The provider should submit a commitment to upgrade NMS and equipment software for any new release during equipment time line;
- All the functionalities of EMS should be allowed, including manager, controller and analyzer parts to be able to manage and control the bellow functionalities, service provisioning, service profile, bandwidth on demand, bandwidth adjustment, fault simulation, resource visualization, utilization graphs, OD/FD, NE upgrade, NE configuration, latency map, performance management, service maintenance, network maintenance, SLA analyzer, health prediction, ... and also should support SBI (South-band interface)& NBI (North-band interface) for additional functionalities;
The primary service configuration & service swapping should be shared with AFTEL team;
- 1+1 core cards (switch matrix/fabric, power units...) protected;

- System must have embedded OTDR solution and need to generate OTDR result and also support checking on NMS;
- System and OPM cards should support Online Monitoring of OSNR, Power and frequency of channels;
- Compatible with different vendors, while having a vendor compatibility issue, provider will support and prepare solution during the lifetime of the equipment;
- Based on map fiber links will use alternative physical paths of DABS (OPGW) for protection;
- The DWDM nodes shall be of the Amplifier, FOADM & ROADM type and fully compatible with the AFTEL existence DWDM & SDH equipment, all the termination sites need to be FOADM type and all the sites which have pass through lambdas need to be ROADM type;
- The switching nodes should be able to handle both packet and IP traffic;
- The Equipment shall support the NG-SDH functionalities such as GFP, VCAT and LCAS scalable for new services with the latest international performance and latest specializes specifications issued by ITU-T recommendation, IETF and IEE standards in order to provide high speed, quality of service guaranteed, high reliability and high security;
- The node shall be able to terminate traffic (client side) at 1GE, 10GE, 100GE;
- The GE, 10GE should have (QoS, EVPL, EPL, and VLAN) features;
- The line side of the equipment should be able to support 10GE, STM64,100GE;
- Be able to be configured for protection mechanism for linear, ring and mesh, topology's such as MSP protection, MS-SPRING, MPLS-TP, SNCP, OSNCP, Ethernet ring protection, Spanning tree protocol and LAG protocol;
- The equipment should support ASON or WASON protection mechanism;
- The 100G interfaces should be tunable and coherent;
- Client-side connectivity need to supports 10GbE LANPHY / WANPHY, OTU0, OTU1, OTU2,OTU4. OUT flex, OSU flex OTU2e services;
- GE, 10GE,100GE ports should have ability to be monitored their traffic performance in real time via NMS as well as configuration to be WAN and LAN.
- The equipment's should have the capability of interconnection with the other vendor equipment;
- All optical interfaces must support all modules i.e SFP (Small form pluggable factor), SFP+, XFP, TXFP, CFP2. Etc;
- Equipment should be capable of client-side protection;
- The equipment should be delivered in pre-installed racks;
- Automatic amplifier adjustment capability at all sites to allow for 'non-optimal' splicing that may occur in the spans;
- Handle In-Service upgrades (with having no impact to existing traffic);
- Specify automatic protections switching times (to be < 50ms -1for first switch);
- The equipment should be able to handle a minimum of 96 channels when fully configured;
- EMS 1+1 disaster protection solution;
- The provider should submit a commitment to upgrade NMS and equipment software for any new release during equipment live time;
- System must generate OTDR result and also should check on NMS;
- NMS should have Northbound Interface with license and software to connect to other NMS system, and should support;
 - Alarm Reporting,
 - Inventory Management,
 - Utilization graph,
 - Continuity Check,
 - Connectivity Verification,
 - Remote Defect Indication,



- Packet Loss Measurement,
- Delay Measurement,
- Link trace,
- Performance Monitoring,
- Any required probes for implementing,
- Optical Performance Monitoring,
- NMS should not be limited to the number of users and nodes.

4.7. Boarder sites upstream interconnection:

In certain border sites, multiple interconnections with multiple upstream providers are necessary. To facilitate separate line-side interconnections with each of these upstream providers, additional sub-racks are required. The following is a summary of the required number of sub-racks for upstream interconnection at each border site.

- Tourkham to PAK require 3 sub rack for upstream interconnection;
- Boldak to PAK require 2 sub rack for upstream interconnection;
- Nimroz to End Nimroz 1 sub rack for upstream interconnection;
- Islamqala to End Islamqala require 2 sub rack for upstream interconnection;
- Turghundi to Turkmanistan require 1 sub rack for upstream interconnection;
- Aqina to Turkmanistan require 1 sub rack for upstream interconnection;
- Hiratan to Uzbekistan require 1 sub rack for upstream interconnection;
- Kanduz to Tajakistan require 1 sub rack for upstream interconnection.

4.8. Power Supply Unite:

The DWDM equipment should support dual power source.

5. Spare parts:

The spare parts for the project need to be exactly 10% of the entire project. The specific spare parts (any board or equipment) we choose should be based on the vendor's expertise and AFTEL's requirement and suggestion. Also, the vendor must provide and have the extra of spare parts available in the market for the next 10 years with affordable price, in case we need them in the future.

6. Response information details:

Base on the requirements above and supplier should quote for all the equipment and services with information that will include the following.

- Full solution description including assumptions;
- Details of the equipment offered and summary of the specification;
- Vendors must provide a detailed price Bill of Material ("BoM"), in case of discrepancy between unit price and total, the unit price shall prevail.

7. Product life:

- The product useful life should be 10 years.



8. Warranty:

The seller must deliver equipment which are of the quality and according to the description required by the technical specifications of this contract and which are contained or packed in the manner required by this contract. The seller shall warrant that the quality and specifications of the equipment delivered pursuant to this contract shall confirm to the contract stipulations.

The warranty period shall remain for one year after the sign of FAC.

In the event that the equipment is found to be in breach of the said warranty and so notified during the term of the warranty and the cause of such breach is attributable to the seller, the seller shall promptly repair or replace such equipment.

Inspection and claim:

After arrival of the equipment at the port of destination, AFTEL warehouse the purchaser shall apply to inspection as to the specifications and quantity/weight of the equipment. If damages of the equipment are found, or the specifications and/or quantity are not in conformity with the stipulations in this contract, except when the responsibilities lie with insurance company or shipping company, the purchaser shall, within fifteen (15) days after arrival of the equipment at the port of destination, giving a written notice to the seller, claim against the seller.

In case of damage of the goods incurred due to the design or manufacture defects and/or in case the quality and performance are not in conformity with the contract, the purchaser shall, during the guarantee period, request to make a survey and shall make a claim against the seller (including replacement of the goods) and all the expenses incurred therefore shall be borne by the seller.

9. Technical Support:

Vendor should provide 24/7 remote and physical support in main (PTT and MOC) when required during implements and three years after FAC.

Which should include configuration assistance, supporting in troubleshooting and issue resolution, performance optimization, training and knowledge sharing during technical support, design and planning for new interconnections and links, monitoring and optimization of network.

Note: the new provided software version should support all the new features and boards (the provided sub rack should supports all the related board series without the need to licenses and software upgrades) till next three years after the contract signed.

10. Project Duration:

- The project duration would be around max for 6 months based on calendar days.

11. Responsibility matrix:

R = responsible

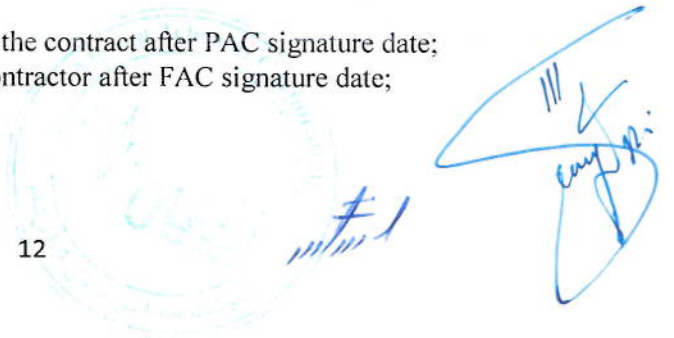
S = support

No.	Item	Contractor	AFTEL
1	Delivery of Equipment		
1.1	Deliver to Kabul, Afghanistan	R	
1.2	Shipment and custom clearance (DDP)	R	
1.3	Submitted on Mahtabqala warehouse	R	S
1.4	Site Access		R

1.5	Deliver to all sites	S	R
2	Equipment Installation		
2.1	Installation of hardware equipment, software configuration, Migration and Service Swap of PTT, Surobi, Jalalabad and Turkham sites and train the AFTEL's technical team to be able to install and configure the remaining sites.	R	S
2.2	All sites Installation of equipment's hardware, software configuration, Migration and Service Swap	S	R
2.3	link performance test for all the links through NMS and Physical tester (physical tester should be provided by AFTEL)	R	S
3	Test for Acceptance		
3.1	Partial Acceptance Test /Acceptance Test Procedure will be done after equipment installation & integration. AFTEL team will test the expanded capacity, physical and stability condition of hardware part, software part, check the alarms, and all the monitoring parameters. software ATP will be done by AFTEL team, Vendor team will be with AFTEL team during ATP.	R	S
3.2	PAC refers to network equipment acceptance certificate signed by the customer. After equipment installation & integration, both AFTEL and supplier team will do the ATP, if no snags observe then AFTEL will sign the certificate.	R	S
3.3	After the PAC signed, both parties will wait 40 days to be sure of the equipment quality. In case no issue is observed in this period. then AFTEL is going to sign FAC.	R	S
3.4	FAC refers to network equipment acceptance certificate signed by the customer. After equipment installation & integration, both AFTEL and supplier team will do the FAC, if there be non-service affecting issues during FAC then AFTEL will sign the FAC.	R	S

12. Payment Terms:

- 20% of the total contract value will be paid to the contractor as advance payment against similar bank guarantee;
- 40% of the total contract value will be paid to the contract after goods delivery to the customer warehouse (AFTEL warehouse) as DDP base;
- 20% of the total contract value will be paid to the contract after PAC signature date;
- 20% of the total contract will be paid to the contractor after FAC signature date;



The page contains a handwritten signature in blue ink on the right side. Below the signature is a large, faint blue circular stamp, likely an official seal or logo, which is partially obscured by the signature and other markings.

13. Acceptance:

- When the project implementation completed, the acceptance process will commence, AFTEL will insure all the equipment used are as per the contract. AFTEL will see if the equipment is properly working and the installation are neatly done item by Item in accordance to the manuals.
- The MPLS performance and QOS would be checked and if any issue found, contractor will support to fix that on the earliest possible.

14. Project Contract Duration:

No.	Task Name	Duration (Calendar days)	Remark
1	Equipment manufacturing	60	
2	Equipment Delivery, Shipment and custom clearance DDP	45	
3	Inland transportation, Installation, commissioning & service swap	45	
4	Optimization	15	
5	Project close up and hand over	15	

Table 5: project implementation plan

