

Appendix C: BoQ for DWDM Equipments (Pkg-C1)			
Sl. No.	Item Description	Unit	Qty.
A	BackBone Network (for Details ref Appendix C (BoQ) Table C1 and C2 for Backbone)		
i	DWDM Equipment for Backbone N/W Optical Layer (C+L)	Lot	1
ii	Transponder/Muxmonder with Optical Channel Protection module (C+L)	Lot	1
iii	Regenrator modules for Backbone N/W(C+L)	Lot	1
B	Metro Network (for Details ref Appendix C (BoQ) Table C3 and C4 for Metro)		
i	DWDM Equipment for Intracity N/W Optical Layer (C+L)	Lot	1
ii	Transponder/Muxmonder with Optical Channel Protection module (C+L)	Lot	1
iii	Regenrator modules for Backbone N/W(C+L)	Lot	1
C	Pluggable 100G and 400G		
i	400G QSFP-DD LR4	Nos.	216
ii	400G QSFP-DD FR4	Nos.	216
iii	400G QSFP-DD DR4	Nos.	110
iv	100G GREY QSFP(ETH 100G BASE-LR4)	Nos.	393
v	100G GREY QSFP (ETH 100G BASE-ER4)	Nos.	95
vi	100G GREY QSFP (ETH 100G BASE-FR1)	Nos.	200
vii	100G GREY QSFP (ETH 100G BASE-CWDM4)	Nos.	95
viii	100G GREY QSFP (ETH 100G BASE-LR1)	Nos.	173
D	Cabinet (for base equipment mentioned at 'A' & 'B' above)	Lot	1
E	TMN System (as per Technical specifications)		
i	TMN Hardware & Software including SDN Controller for DC	Lot	1
ii	TMN Hardware & Software including SDN Controller for DR	Lot	1
iii	All other Hardware & Software for DCN Network	Lot	1
F	Client Workstations with Client NMS License		
i	Client Workstation	Nos.	20
ii	Client NMS & SDN License	Nos.	20
G	Craft Terminals	Nos.	20
H	Test Equipment (As per TS)		
i	Ethernet Tester	Nos.	7
ii	ODTR	Nos.	20
iii	Fiber Inspection Probe	Nos.	10
I	Training		
i	Expert level Training at Manufacturer's Works	Mandays	100
ii	Training at Employer's Office	Mandays	100
J	Manpower Support (As per TS)		
i	24x7 Shift Operation (for 36 Man-Month) for 1st Year as a fixed % of Total Ex-works/CIF price component	%	0.0540%
ii	Day Operation (for 60 Man-Month) for 1st Year as a fixed % of Total Ex-works/CIF price component	%	0.0168%
Note: From 2nd year onwards till 10th year, the price of Manpower Support Charges for the subsequent years shall be with an annual escalation of 10% per year. The first year shall start from the day contractor deploys manpower for operational support on request of Employer.			
K	Maintenance Services during defect liability period as per TS		
	1 Year DLP : minimum % of Total Ex-works/CIF price component	%	3%
L	Maintenance Services after defect liability period as per TS		
	1st Year AMC : minimum % of Total Ex-works/CIF price component	%	3.25%
	2nd Year AMC : minimum % of Total Ex-works/CIF price component	%	3.50%
	3rd Year AMC : minimum % of Total Ex-works/CIF price component	%	3.75%
	4th Year AMC : minimum % of Total Ex-works/CIF price component	%	4.00%
	5th Year AMC : minimum % of Total Ex-works/CIF price component	%	4.50%
	6th Year AMC : minimum % of Total Ex-works/CIF price component	%	5.00%
	7th Year AMC : minimum % of Total Ex-works/CIF price component	%	5.50%
	8th Year AMC : minimum % of Total Ex-works/CIF price component	%	6.00%
	9th Year AMC : minimum % of Total Ex-works/CIF price component	%	6.50%
Note:			
i	The bidder shall provide the detailed Bill of Material (BoM) including breakup of LOT items, stating all component, their quantity etc.		
ii	Route: Table_C1_Route_Backbone Part 1& Table_C1_Route_Backbone Part 2 Route Details with fiber parameters		
iii	Nodes highlighted in yellow represent Add/Drop sites and are the only permissible locations for regeneration and equalization. No other nodes are allowed for these functions. For remaining sites bidder shall consider 2 directions sites as ILA and sites having more than 2 directions as ROADM sites		
iv	Bidders are not allowed to add additional locations to place Amplifier(ILA), other than the locations provided in the Appendix-C		
v	Table_C2_Traffic Matrix_Backbon with Route Details		
vi	Table_C3_Route_Metro with Route Details with fiber parameters		
vii	Table_C4_Traffic Matrix_Metro		
viii	In case additional quantities, over and above the quantities estimated by the Contractor in BOM are required for successful completion of the scope of work as per Technical Specification, the contractor shall execute additional quantities of these items for which no additional payment shall be made over		
ix	AMC for BackBone Network(A),Metronetwork(B),Pluggable(C),Cabinet(D),TMN System (E),Client Workstations (F), Craft Terminal(G) for 9 years		
x	AMC for Test Equipment (H) for 5 years		
xi	Bidder has to offer hardware for Site as per the number of direction mentioned in the network topology.		
xii	All Sites in Backbone shall support DC power supply.		
xiii	Mertro network shall support AC/DC power supply as requested in Table_C3_Route_Metro		
xiv	Bidders are not allowed to propose any additional locations for installation of equipment's other than those specified in Appendix-C of TS.Bid shall be rejected in case any Bidder proposes additional locations other than those specified in Appendix-C_BoQ of Technical Specification.		