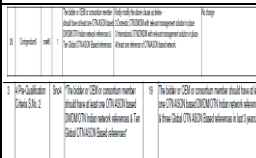


RFP No.: APSFL/OLA/284-2/2018, Dated 02/03/2019						
Supply, Installation and Commissioning of DWDM Network Upgrade Equipment for AP Fiber Grid						
Clarifications 04 Dt:15.05.2019						
SNO	RFP Part No.	Section No.	Page no.	Content of the RFP requiring clarification	Clarification Sought	Clarifications by APSFL
1	Corrigendum 06, Dt:30.04.2019	Clause 8	2	Payment terms	1. Kindly request you to provide 10% of the Contract Value as mobilization advance against submission of a Bank Guarantee of equivalent amount. 2. We also request you to release the payment for AMC after end of each quarter at 0.5% of the Contract Value.	1. No change 2. No Change
2	Clarifications 02, Dt:30.04.2019	Clause 68	10	Bidder has to deliver the equipments within 6 weeks directly to the APSFL designated locations and complete the installation within 2 months after the delivery	1. We kindly request you to increase the timeline of delivery to 3 months considering the fact that the lead time of the OEMs for delivery is a minimum of 6-8 weeks. 2. We also request you to increase the time for completion to 7 months from the zero date as there is dependency on existing APSFL network elements for the completion of implementation.	No Change
3	Corrigendum 06, Dt:30.04.2019	2.2.1 General Requirements, Clause 29	6	District Headquarter shall have 2 ports of 100 G client available from day one. It shall have capability to upgradable 4 port 100 G client ports.	We understand that mentioned 2x100G client pluggables have to be supplied at 13 DHQ nodes in addition to the list of pluggables (QSFP 100G) required in Annexure II - Price Bid table on Page 12 of Corrigendum 06. Request APSFL to kindly confirm.	Yes. The 100G ports asked in both DHQ and Zonal nodes has to be supplied from Day 1 as part of the solution itself. The two 100G pluggables also have to be considered as part of solution from day 1
4	Corrigendum 06, Dt:30.04.2019	2.2.1 General Requirements, Clause 29	6	District Headquarter shall have 2 ports of 100 G client available from day one. It shall have capability to upgradable 4 port 100 G client ports.	Request APSFL to kindly confirm if Bidder need to supply 4x100G Client port card from Day-1 at DHQ nodes.	Yes. The ports should be available from day 1 along with two preloaded the QSFP also and other two ports should be able to put to use with just addition of additional QSFPs.
5	Corrigendum 06, Dt:30.04.2019	2.2.1 General Requirements, Clause 30	6	Zonal Headquarter shall have 2 port of 100 G client available from day one. It shall have capability to upgradable 4 port 100 G client ports.	We understand that mentioned 2x100G client pluggables have to be supplied at 52 Zonal nodes in addition to the list of pluggables (QSFP 100G) required in Annexure II - Price Bid table on Page 12 of Corrigendum 06. Request APSFL to kindly confirm.	The 100G ports asked in both DHQ and Zonal nodes has to be supplied from Day 1 as part of the solution itself. The two 100G pluggables also have to be considered as part of solution from day 1
6	Corrigendum 06, Dt:30.04.2019	2.2.1 General Requirements, Clause 30	6	Zonal Headquarter shall have 2 port of 100 G client available from day one. It shall have capability to upgradable 4 port 100 G client ports.	Request APSFL to kindly confirm if Bidder need to supply 4x100G Client port card from Day-1 at Zonal nodes.	Clause is clear
7	Corrigendum 06, Dt:30.04.2019	2.2.1 General Requirements, Clause 33.1	6	For L1 OTN services: Minimum 10 ports with flexibility to support any of the STM-1/4/16/64, 1/10G.2. from day 1 and future expansion in same supplied card up to 20 ports by inserting SFP only.	We understand that mentioned 10xSTM-1/4/16/64, 1/10G client pluggables have to be supplied in addition to the list of pluggables (SFP) required in Annexure II - Price Bid table on Page 12 of Corrigendum 06. Request APSFL to kindly confirm.	Yes... Bidder need to consider the required cards as part of the solution being proposed.
8	Corrigendum 06, Dt:30.04.2019	2.2.1 General Requirements, Clause 33.2	6	For L2 packet services: Minimum 10 port with 1/10G accessible from day 1 and future expansion in same supplied card up to 20 ports by inserting SFP only.	We understand that mentioned 10x1G/10G client pluggables have to be supplied in addition to the list of pluggables (SFP) required in Annexure II - Price Bid table on Page 12 of Corrigendum 06. Request APSFL to kindly confirm.	Yes... Bidder need to consider the required cards as part of the solution being proposed
9	Corrigendum 06, Dt:30.04.2019	2.2.1 General Requirements, Clause 33.4	6	At each DHQ, bidder has to provide at least 20x10G client interface card along with the required SFPs preloaded from day 1 to add/drop the capacity towards the primary and secondary NOCs.	Request APSFL to kindly confirm whether 20x10G client interfaces are distributed as 10x10G towards Vishakhapatnam NOC and 10x10G towards Guntur NOC as we have 1x100G line capacity from each DHQ to Vishakhapatnam NOC and 1x100G line capacity from each DHQ to Guntur NOC as per Clause 34 of Corrigendum 06.	Clause is clear
10	Corrigendum 06, Dt:30.04.2019	2.2.1 General Requirements, Clause 36	36	All the supplied DWDM/OTN nodes should support a SDN control plane for future integration with a external controller (or) Service orchestration platform.	As per our understanding, in order to have capability of integration with SDN control plane in future, it is recommended that supplied NMS shall have open APIs and controller capability to integrate with the orchestration layer. The open Rest APIs and the required licenses shall be available on day-1 for seamless integration with orchestration layer as and when required. Request APSFL to kindly consider and confirm this requirement.	Clause is clear. All the nodes should support SDN control plane with the capability to be managed directly from an orchestration platform without an intermediate NMS/EMS system.
11	Clarifications 02, Dt:30.04.2019	S.No.9	2	We have only 13 districts in AP and the topology is showing both district nodes and OLA nodes also. Capacity in State ring is expected in the district nodes. DWDM and OTN nodes should be present in districts and amplifier nodes will be as per the vendor solution	The connectivity details of Vizianagaram and Srikakulam DHQ nodes is still missing in Corrigendum 06. Request APSFL to kindly provide fiber connectivity details and intermediate sites (if any) to connect these two sites in DHQ ring. This is important for link engineering of DHQ rings.	Wherever exact losses are not mentioned, take 0.3 db/Km loss along with extra 3db margin. Wherever exact distance is not mentioned, it is to be taken as 80 Km.
12	Clarifications 02, Dt:30.04.2019	S.No.13	2	VISAKHAPATNAM	The connectivity details of Vizianagaram and Srikakulam DHQ nodes is still missing in Corrigendum 06. Request APSFL to kindly provide fiber connectivity details and intermediate sites (if any) to connect these two sites in DHQ ring. This is important for link engineering of DHQ rings.	Wherever exact losses are not mentioned, take 0.3 db/Km loss along with extra 3db margin. Wherever exact distance is not mentioned, it is to be taken as 80 Km.

13	Clarifications 02, Dt:30.04. 2019	S.No. 38	6	Each of the districts in APSFL network has its own zonal ring , these zonal rings have 4 -5 nodes in each zonal ring. Following is an indicative diagram of the zonal ring having 4 nodes and the respective distances	In Corrigendum 06, Annexure II - Price Bid on Page-12, it's mentioned that there are 52 Zonal nodes connected to 13 DHQ nodes. Also, two Zonal nodes in each Zonal ring are connected to Zonal nodes of other neighbouring Zonal rings. Hence there would be 26 Zonal nodes with 2 fiber degrees and 26 Zonal nodes with 3 fiber degrees. Request APSFL to kindly confirm.	All the nodes supplied as part of this bid has to support minimum of four degrees.
14	General	General	-	Separate Electrical and Optical Shelves	In order to achieve maximum redundancy, to fully utilize the OTN switching capacity and as per the global practices followed in the market, it is recommended to keep electrical OTN shelf and optical shelf separate i.e. optical cards shall not consume any slots in OTN shelf. Request APSFL to kindly consider and confirm this requirement.	No change
15	General	General	-	Management System	Request APSFL to kindly confirm whether geographical redundancy is required for Network Management System (NMS) hardware at two different locations or shall the bidder supply NMS hardware at one location only.	Yes. Geographical redundancy is required and it has to be collocated in the primary and secondary NOC locations where DWDM is also getting installed.
16	General	3.1 Functional Requirement.	3	3.1 Functional Requirement.	Does the Bidder need to provide UPS and Batteries for power backup of DHQ location DWDM/OTN equipment. If yes then how many hours power backup need to be considered for UPS?	UPS and Batteries are not required.
17	General	3.1 Functional Requirement.	3	3.1 Functional Requirement.	Does the Bidder need to provide UPS and Batteries for power backup of Zonal location DWDM/OTN equipment. If yes then how many hours power backup need to be considered for UPS.	UPS and Batteries are not required.
18	General	3.1 Functional Requirement.	3	3.1 Functional Requirement.	As per solution there is a requirement of ILA/OLA in different locations, Tender it is not clear that power and infra, Racks and required accessories such as PDU, Power cables, optical patch chords, fiber cable managers etc. requirement for ILA/OLA node locations will be provide by Bidder or customer will be provide the same.	Any additional locations other than the existing OLA locations, bidder need to consider all the additional infrastructure requirements as required in the solution.
19	General	3.1 Functional Requirement.	3	3.1 Functional Requirement.	Does the Bidder need to provide UPS and Batteries for power backup of ILA/OLA equipment. If yes then how many hours power backup need to be considered for UPS.	UPS and Batteries are not required.
20	General	3.1 Functional Requirement.	3	3.1 Functional Requirement.	As there is no any specification provided for ILA/OLA equipment in the tender, kindly specify the same.	Bidder should propose based on the distances, losses and margins as per RFP meeting all DWDM/OTN technical requirements.
21	General	3.1 Functional Requirement.	3	3.1 Functional Requirement.	For ILA location if temperature requirement more than 45°C then Air conditional rack will be required for all the ILA/OLA locations. No OEM supports more than 45°C operational temperature for ILA/OLA equipment.	As clarified in tender. If bidder is proposing any equipment not supporting 65% temperature, they need to supply rack with airconditioning for supporting those devices.
22	Corrigendum 07	Sno4	19	The bidder or OEM or consortium member should have at least one OTN ASON based DWDM/OTN Indian network references & three Global OTN ASON Based references in last 3 years.	It is requested to change the clause as "The bidder or OEM or consortium member should have at least Three OTN ASON based OTN Indian network references & Ten Global OTN ASON Based references" . We have been requesting this from the beging so OEM's with good fiacnials can be part of this RFP.	No Change
23	Corrigendum 07	Pre-Qualification	NA	OEM(Parent Company) & its Indian group company should have turnover more than INR 800 cr in each of last 3 financial years .(FY15-16,16-17&17-18)	We Strongly feel that the OEM & its Indian company should be a major industrial player with sound financials in last 3 years in order to provide top class support with best quality & resources . So kindly add that the OEM(Parent Company) & its Indian group company should have turnover more than INR 4000 cr in each of last 3 financial years and not 800 Cr .(FY15-16,16-17&17-18). Request you to please chnage this to 4000 Cr.	No Change
24	Corrigendum 06	Criteria	4	Bidder is responsible to provide equipments for District & Zonal Network along with racks and required accessories such as PDU, Power cables, optical patch chords, fiber cable managers etc.In case of Zonal nodes where it was asked to support 65 degrees, if the equipment doesn't support 65 degrees operating temperature, bidder has to provide racks with required air conditioning to support 65 degrees operating temperature and necessary capacity of UPS and batteries to support the required backup capacity.	We understand the bidder need to provide Air Conditons Racks at Zonal Lcoations to meet the temperature requirement. UPS & Battery back is required for transmission equipments only that is already available at site, so please delete the UPS and Battery backup from this clause also Please confirm that Transmission equipment can be AC or DC power supply.	UPS and Batteries are not required. If bidder is proposing any equipment not supporting 65% temperature, they need to supply rack with airconditioning for supporting those devices.

25	New clause to be added	General Requirement	NA	New Clause addition	In order to have quality and competitive products, bidders/consortium should bid with single DWDM OEM only. Bid with multiple OEM offer will not qualify.	Please refer Corrigendum
26	Clarifications 01, Dt:27.03.2019	Clause 58	4	For District Headquarter shared bandwidth will be 400 G, Sharing mechanism shall be based on individual Bidders/OEMs solution. Please check Network Diagram for Fiber length, OLA shall be considered based on individual OEMs solution.	pl confirm based on the OEM's design if OLA sites increase from existing 18Nos. How will APFSL evaluate ? , will they add additional cost for the same if yes, how much per site additional cost will be added in evaluation.	Any additional locations other than the existing OLA locations, bidder need to consider all the additional infrastructure requirements as required in the solution without any additional cost to APSFL.
27	<DWDM-corr6.pdf >	3.1 Functional Requirement	3	The bidder solution should make sure that at least 400G of OTN capacity is factored in for any district to any district communication in the state ring and there should be possibility to make use of the same for the inter zonal OTN traffic across districts. The bidder solution should have at least 200G of OTN capacity for any zonal to any zonal communication within one zonal ring with at least two alternate paths from each zonal to adjacent zonal rings of other districts	For 400G capacity required in state ring, Muxponder/Transponder solution is acceptable or not, which can reduce the cost comparing to OTN solution. For 200G capacity required in zonal ring, Muxponder/Transponder solution is acceptable or not, which can reduce the cost comparing to OTN solution.	Clause is clear
28	<DWDM-corr6.pdf >	Technical Requirements	5	General	Kindly request to add below clause: To reduce slot occupation and save room space, high integration card should be provided. The 100G line card should have minimum 4 ports on day1. Reason: Propose the line card should have minimum 4 ports for integration consideration, high integration will reduce slot occupation and save room space	No Change
29	<DWDM-corr6.pdf >	Technical Requirements	5	General	Kindly request to add below clause: The cross-connect card of OTN subrack should support M+N protection. Reason: Propose the cross-connect board of OTN subrack should be M+N protection due to the switchover time in M:N protection is longer than that in M+N protection, which may cause bit errors.	No Change
30	<DWDM-corr6.pdf >	Technical Requirements	5	General	Kindly request to add below clause: OTN subrack and optical subrack should be separated. Optical cards should not occupy slots on electrical subrack. Reason: OTN subrack and optical subrack should be separated. If optical cards are installed in electrical subrack, the switching capacity will be wasted.	No Change
31	<DWDM-corr6.pdf >	2.2.1 General Requirements	5	33.1. For L1 OTN services: Minimum 10 ports with flexibility to support any of the STM-1/4/16/64, 1/10G.2. from day 1 and future expansion in same supplied card up to 20 ports by inserting SFP only. 33.2. For L2 packet services: Minimum 10 port with 1/10G accessible from day 1 and future expansion in same supplied card up to 20 ports by inserting SFP only. 33.3. At each zonal node, bidder has to provide client ports for access of L1 and L2 services based on the above.	At each zonal node, 20 ports 10G traffic with SFP should be deployed at day one. Please kindly confirm the same.	Clause is clear
32	<DWDM-corr6.pdf >	3.1 Functional Requirement & Technical Requirements 2.2.1 General Requirements	3&6	The bidder solution should make sure that at least 400G of OTN capacity is factored in for any district to any district communication in the state ring and there should be possibility to make use of the same for the inter zonal OTN traffic across districts. 29. District Headquarter shall have 2 ports of 100 G client available from day one. It shall have capability to upgradable 4 port 100 G client ports.	In the state ring, each DHQ should consider 2*100G client ports at day one. In the line side, 400G shared bandwidth from any district to any district should be considered at day one. Please kindly confirm the same.	Yes

33	<DWDM-corr6.pdf >	2.2.1 General Requirements	6	At each DHQ, bidder has to provide at least 20x10G client interfaces with preloaded 10G SR SFPs from day 1 to add/drop the capacity towards the primary and secondary NOCs in addition to OTN capacity requirements mentioned above.	At each DHQ node, 20 ports 10G traffic with SFP should be deployed at day one in addition to 20x10G traffic from DHQ to NOC. Please kindly confirm the same.	Clause is Clear.
34	<DWDM-corr6.pdf >	2. Service Requirements	7	15. The equipment shall support mapping packet frames, VCs and other service carried by OTN to different sub-wavelength in one lambda.	Kindly request to change as below: The equipment shall support mapping packet frames, VCs and other service carried by OTN to different sub-wavelength in one lambda. Reason: Propose that the VC cross-connection should be able to use the universal client and line card to reduce the TCO, can not require special client, line card. It will save APFSL Capex, as special cards are not required for VC switching.	No Change
35	<DWDM-corr6.pdf >	/	/	General	In the RFP, it mentions there are totally 13 districts. But we only find 11 DHQ sites: NOC-DHQ, KAKINADA, Vijayawada, GUNTUR, MARTUR, ONGOLE, NELLORE, Tirupatti, KADAPA, ANANTHAPUR, KURNOOL. Please kindly provide another 2 DHQ sites. If the capacity requirement for that two DHQ is different, please kindly indicate.	Srikulam and Vijayanagarm will be the other two DHQ sites
36	<DWDM-corr6.pdf >	/	/	General	As per RFP, APFSL topology have high risk , as if DHQ fails then there will be no inetconnectivity between zonal node to adjacent zonal node. If there is direct physical connectivity between zonal node to adjacent zonal node then please provide the details of such link.	As already mentioned in RFP, every zonal ring in a district should have option to connect to adjacent district zonal ring for any of the zonal nodes in the ring. This is reason for asking 4 degree at each node
37	<DWDM-corr6.pdf >	5. Switching Fabric Requirements	9	6. Supplied Equipment switching capacity should not be less than 5 Terabytes in day 1 across the network (District & Zonal Equipments)	Kindly request to change as below: Centralized electrical switching capacity of supplied equipment should not be less than 9 Terabytes for state ring equipment, and 4 Terabytes for Zonal ring equipment. The bandwidth per slot in OTN subrack should be at least 400G. Reason: According to the service access requirement, Zonal devices only require 200G switching in day 1 and each zonal ring only have 4-7 sites, State ring have 11 service nodes and should be able to accessing and dispatching services among 12 zonal rings, each DHQ site require 400G switching capacity in day 1. Base on the analysis above and consideration of Capex saving, we propose that the switching capacity of device to be 4 Terabytes in Zonal and 9 Terabytes in District equipments, and the bandwidth per slot should be at least 400G .	No Change
38	<DWDM-corr6.pdf >	5. Switching Fabric Requirements	9	10. The Och switching should support Directionless and Colour less configuration and the vender should depict the configuration with schematic diagram.	Since only 1+1 protection is required, the cost will be high if directionless and colourless ROADM is deployed for all the sites. We propose to deploy directionless and colourless ROADM in NOC sites, and for other sites ROADM architecture design should be based on vendor's optimized solution. Please kindly confirm the same. This will be helpful to reduce customer project cost.	No Change
39	Clarification3&Corrigendum7	row#28 & row #7	5,2		Corrigendum and Clarification are not align. Kindly Change as below - 2 Domestic OTN/DWDM with relevant management solution in place 3 International OTN/DWDM with relevant management solution in place At least one reference of OTN/ASON based network.	Clause stands as per Corrigendum 7
40	Clarification3	row#12	3	All equipment supplied as part of the Bid should run with AC power. About the racks, bidder needs to provide the required racks with the airconditioning and airflow mechanism to maintain the required environmental temperature even in case of power failures	ST OTN DXC and DWDM boxes have high power ratings and as per standard industry procedure, it is recommended to run the equipment with DC power rather than AC power.	No Change
41	Corrigendum2	128		For the 100G OTN switch function, traffic should be groomed either by cross connection cards/cross connect on OTN card, and backplane, should not by bridge/auxiliary cards or external pigtailed.	Since our architecture is leaf and spine, we have fabric in one unit and actual ports on another unit. Our solution has cable between Interface Shelf & Fabric Shelf to ensure we can scale very high number of ports in our solution. Kindly remove this caluse as our architecture is different and very scalable.	No Change

42	Technical Requirements	requirement	14	It shall support fiber fault monitor by in line or embedded OTDR without any additional instrument	Kindly allow OTDR as standalone unit. Though standalone, it will be managed by same NMS as of DWDM. This is due to our leaf an spine architecture we are proposing for APSFL, which gives practically unlimited ports on fabric chassis.	No Change
43	Point 7, Corrigendum7	Point 7	Page 2 of 3	OEM(Parent Company) & its Indian group company should have turnover more than INR 800 cr in each of last 3 financial years .(FY15-16,16-17&17-18)	We propose that, " OEM(Parent Company) & its Indian group company should have cummulative turonver of 2500 Cr. in last 3 years or more than INR 800 cr in each of last 3 financial years .(FY15-16,16-17&17-18)"	Please refer Corrigendum