

## **Appendix-B**

### **Data Requirement Sheets**

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The following sets of Data Requirement Sheets are required to be filled up by the bidders to aid in the evaluation process. The response shall be brief and to the point and shall be supported by the printed product description and other literature. The DRS duly filled, and the relevant drawings shall also be submitted during the detailed engineering along with the relevant technical brochures.

DRS Form 1(a)

**DATA REQUIREMENTS SHEETS for**  
**OVERHEAD FIBRE OPTIC CABLE**

OPTICAL GROUND WIRE (OPGW) - 24/48  
 Fiber:

Manufacturer: \_\_\_\_\_

Part #: \_\_\_\_\_

Configuration: \_\_\_\_\_

CABLE CONSTRUCTION			
Seq	Parameter:	As per Technical Specification	As per Bidder Offering
1.	No. of Fibers Dual Window Single-Mode:	24/48	
2.	Buffer Type:	As applicable	
3.	Buffer Tube material	As applicable	
4.	No. of Buffer Tubes:	As applicable	
5.	No. of Fibers per buffer Tube:	As applicable	
6.	Expected Cable Life:	25 Year	
7.	<b>Parameters of OPGW</b>		
(i)	UTS	In Kgf	
(ii)	Effective area	In mm <sup>2</sup>	
(iii)	Weight	In kg/m	
(iv)	Diameter	In mm	
(v)	Modulus of elasticity	In kg/ mm <sup>2</sup>	
(vi)	Coeff. Of linear expansion	In /°C	
(vii)	Central tube design	Al or Steel	

DRS Form 2  
**DATA REQUIREMENTS SHEETS for OPTICAL  
 FIBRE**  
 DUAL-WINDOW SINGLE MODE (DW-SM)

OPTICAL PARAMETERS			
Seq	Parameter:	As per Technical Specification	As per Bidder offering
1.	Fiber manufacturer(s)/Type:		
2.	Attenuation Coefficient@ 1310 nm: @ 1550 nm:	$\leq 0.35$ dB/km $\leq 0.21$ dB/km	
3.	Point discontinuity @ 1310nm: @ 1550nm:	$\leq 0.05$ dB $\leq 0.05$ dB	
4.	Nominal Mode Field Diameter @ 1310 nm:	8.6 to 9.5 $\mu\text{m}$ ( $\pm 0.6$ $\mu\text{m}$ )	
5.	Chromatic Dispersion Coefficient @ 1310 (1288-1339) nm: @ 1310 (1271-1360) nm: @ 1550 nm:	3.5 ps/(nmxkm) 5.3 ps/(nmxkm) 18 ps/(nmxkm)	
6.	Zero dispersion wavelength:	1300 to 1324 nm	
7.	Cutoff wavelength:	$\leq 1260$ nm	
Physical and Mechanical Properties			
8.	Bend Performance: (37.5 mm radius, 100 turns) @1310 nm (30 mm radius, 100 turn) @1550 nm (16mm radius, 1 turn) @ 1550nm	$\leq 0.05$ dB  $\leq 0.05$ dB  $\leq 0.50$ dB	
9.	Cladding Diameter (nominal $\pm$ deviation):	125.0 $\mu\text{m} \pm 1$ $\mu\text{m}$	
10.	Polarisation mode dispersion coefficient	$\leq 0.2$ ps/km <sup>1/2</sup>	
11.	Proof test level	$\geq 0.69$ Gpa	

DRS Form-  
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**DATA REQUIREMENTS SHEETS for  
OPTICAL LINE TERMINATION EQUIPMENT (OLTE)**

Manufacturer: \_\_\_\_\_

Model #: \_\_\_\_\_

Seq	Parameter:	As per Technical Specification	As per Technical Specification	As per Bidder Offering	As per Bidder Offering
		<b>STM-4 Equipment</b>	<b>STM-16 Equipment</b>	<b>STM-4 Equipment</b>	<b>STM-16 Equipment</b>
1.	SDH hierarchy level: Capacity Aggregate Bit-rate: CEPT E-1 Ports:	STM-4 620 Mbps 252 x E1	STM-16 2480 Mbps 1008 x E1		
2.	Minimum No. of protected (MSP) directions	Three	Three		
3.	No. of E1 Interfaces per card	minimum 16	minimum 16		
4.	No. of 10/100Mbps Ethernet Interfaces per card with layer 2 switching	minimum 8	minimum 8		
5.	Service Channel provision a) Voice Channel b) Data Channel	Yes Minimum 1 Minimum 1	Yes Minimum 1 Minimum 1		
6.	Cross Connection Capacity (Non-Blocking & bi- directional) High Order: Low Order	64 STM-1 64 STM-1	256 STM-1 128 STM-1		
7.	Power Supply cards of SDH equipment  Common Control* Card of SDH equipment	1:1 APS or distributed power supply  1:1 APS	1:1 APS or distributed power supply  1:1 APS		

\* = Common Control Cards which are essentially required for the operation of the equipment

## DRS Form-4

**DATA REQUIREMENTS SHEETS for  
Primary Multiplexer/Drop & Insert Multiplexer**

Manufacturer:

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Model #:

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Configuration:

Seq.	Parameter	As per Technical Specification	As per Bidder Offering
1.	Output Aggregate Rate	2.048 Mbps +/- 50 ppm	
2.	Interface Code	HDB3	
3.	Impedance	75 ohms unbalanced	
4.	Maximum Insertion Loss	6 dB	
5.	Power Supply card of multiplexer	1:1 APS or distributed power supply	

The detailed DRS for all equipments/items are required to be submitted along with brochures during detailed engineering.

-----End of the Appendix-----