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भारत संचार निगम लिमिटेड
(भारत सरकार का उपक्रम)
BHARAT SANCHAR NIGAM LIMITED
(A Govt. of India Enterprise)

No. 64-225/2012-BB

Dated 20.12.2016

To

**All Chief General Managers
Telecom Circles/ Districts, BSNL.**

Subject: Usage of Broadband Drop Cable in place of Drop wire for providing Broadband connectivity [ADSL/ VDSL] to the subscribers – Regarding.

1. This office received observation from field unit that the drop wire being currently used for providing broadband connection was originally designed for voice connection and later on when broadband services were introduced, it also continued to be used for provision of broadband connection. The drop wire is mainly suitable for voice frequency, whereas for BB data which operates in higher frequency range is susceptible to interference and loss of signal due to radiation etc and hence this is also one of the reasons for slow speed of Broadband.
- 1.1 It was also reported that such type of broadband drop cable is also used by other telecom operators for providing BB connections.
- 1.2 It was also requested/ proposed by Circles for permitting usage of Broadband drop cable in place of drop wire for providing Broadband connections for facilitating improved performance.
2. The above proposal was examined by a Committee at BSNL CO and also noted that the cost of Broadband drop cable is less than cost of drop wire [D-8], thereafter based on the recommendations of the Committee, the Management Committee of BSNL in its 302nd meeting held on 01st December 2016, approved the usage of Broadband drop Cable in place of drop wire (D-8) for providing last mile connectivity to the broadband subscribers, as below;
 - 2.1 a) For New Broadband Connections:

Telecom Circles are authorized to procure Broadband drop cable from market through open tendering process, of quantity equal to 50% of their new wireline Broadband Gross provision as per the existing norms of requirement of drop wire which is at present 70M per new connection. The requirement of drop wire shall be accordingly reduced by equal amount.
 - b) For Existing Broadband Connections:

Telecom Circles are authorized to procure Broadband drop cable from market through open tendering process, for replacement of existing BB connections for quantity equivalent to 10% of existing working Broadband connections in the Circle. The priority in replacement may be accorded to customers with higher monthly Broadband plan.
 - c) *The requirement of drop wire for maintenance of DELs shall be accordingly reduced by 50% of the quantity of the drop cable procured for replacement for existing Broadband connection (as worked out under para (b) above).*
- a. *The specifications of the Broadband drop cable to be procured is enclosed as Annexure-1, to this letter.*

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3. Based on the average Broadband Gross connections provision and working BB connections of Circles & considering 70M BB Drop cable per broadband connection on an average, MC approved for procurement of 81,500 KM of BB drop Cable [45500KM for new BB connections + 36000KM for replacement of drop wire of 10% of existing BB connections] by the Circles. Accordingly, the authorization to the Circles for Broadband drop Cable procurement quantity is worked out and authorized quantity to various circles for the FY 2017-18 is enclosed as Annexure-2, for procurement through Open Tendering process.
- 3.1 Circles shall follow all the guidelines/ procedures of procurement of decentralized items through Open Tendering process.
4. Further, Circles shall ensure that all such procurement of Broadband drop cable shall be subject to QA procedures of BSNL so as to ensure that supplied material is as per approved specifications (Annexure 1) and meets the field requirement of providing of Broadband connection. For this, Circles shall contact the CGA QA office and mention to this effect in tender document accordingly.
5. The upper limit of pricing of Broadband drop cable so procured shall be Rs. 5/- (all inclusive) per meter, however actual rate shall be determined by open tendering process.
6. CGM Telecom Stores, Kolkata shall carry out the procurement of Broadband drop cable for Assam, N.E.-I, N.E.-II, J&K, A&N, West Bengal, Kolkata TD and Jharkhand Circles, for the quantity as authorized under Annexure II to this letter.
7. Circles shall also make efforts to utilize the recovered drop wire for the maintenance of landline connections to the maximum possible extent.
8. Circles are requested to initiate necessary actions accordingly.
9. This is based on the approval of MC of Board and has the approval of Dir (CFA).

Encls.: As above


(Deepak Garg)
GM (NWP-BB)

- Copy to:
1. Dir (CFA).
 2. CGM QA Circle.
 3. CGM Telecom Store Kolkata for action as per para 6 above.
 4. CS & Sr. GM (Legal), BSNL CO New Delhi.
 5. GM (NWO-CFA) - to reduce the corresponding quantity of drop wire to the respective Circles as per the authorization of BB drop Cable.

S. N	Test	Unit	Final Specification of BB Drop Cable
A	Visual Examination		
1	Packing (in coils)		Coils of 500 Meters(+/-) 10%
2	surface finish		Smooth & bright
3	Copper wire	Smooth, Bright	Tinned Copper as per IS 8130 (Latest issue)
4	Insulation	Smooth W/o Bubbles	Finish, No bubbles
5	Sheath		Finish, No bubbles
6	Ripcord	to be provided	750TEXx3 for requirement of ripping 6 inches of cable
B	Physical Dimensions		
1	Conductor Material	-	High conductivity annealed tinned copper as per IS 8130 (latest issue)
2	Conductor Diameter	mm	0.500±0.01
3	Insulator Material	-	Insulated Compound HDPE without UV (Raw material approved by CACT for PIJF cables may be used), Natural color HDPE with color master batch
4	Pairs Colors	-	With color marking red throughout the length
5	Insulation Core Diameter	mm	1.00(Max) per wire
6	Insulation Thickness	mm	0.18 to 0.25
7	Pair Lay	mm	35(max.)
8	Pair Lay direction	-	Right Hand
9	Wrapping Material	-	Polyester tape (Natural)
10	Over lap	%	20 (min.)
11	Sheath Material	-	HDPE with UV [Raw material approved by CACT for Optical Fibre Cables may be used)
12	Sheath Color	-	Black
13	Sheath Thickness	mm	0.80±0.1
14	Sheath Over all Diameter	mm	Vendor has to give construction diagram with overall diameter and tolerance to QA
C	Mechanical Tests		
1	Conductor Elongation	%	15(min)
2	Conductor Weight	kg/Km	1.75(min)
3	Insulation Elongation	%	300(min)
4	Insulation Tensile Strength	N/mm ²	15.0(min)
5	Sheath Elongation	%	300(min)
6	sheath Tensile Strength	N/mm ²	15(min)
7	Fibre Roving 2400 tex	-	To be laid helically around the core after polyester tape
8	Breaking Load	Kg	80 (min)
D	Electrical Tests (At 20 C)		
1	Conductor Resistance	Ω/Km	92.20 (max)
2	High voltage Test (for 1 minute)	KV, rms	2.0 (min)
3	Insulation Resistance (at 500 V dc)	M Ω /Km	10000 (min)
4	Character Impedance at 1 MHz	Ω	100±15
5	Character Impedance at 4 MHz	Ω	100±15
6	Attenuation at 1 MHz	dB/100m	2.0 (max)
7	Attenuation at 4 MHz	dB/100m	4.1 (max)

Circle wise Broadband drop cable Distribution

Circle	BB Drop Cable Cable Authorized		
	New BB Connection (Km) @70M per BB connection	Replacement of Existing BB Connection (Km) @70M per BB Connection	Total (in KM)
A & N	102	56	158
A P.	4534	3405	7939
Assam	539	363	902
Bihar	692	433	1125
Chattisgarh	508	453	961
Chennai	1537	1863	3400
Gujarat	2674	2295	4969
Haryana	1566	921	2487
H.P	581	391	972
J & K	880	440	1320
Jharkhand	459	391	850
Karnataka	3080	3244	6324
Kerala	5775	4695	10470
Kolkatta	571	733	1304
M P	1855	1709	3564
Maharashtra	4568	3551	8119
N E I	273	195	468
N E II	154	133	287
Orissa	1264	809	2073
Punjab	3589	2142	5731
Rajasthan	2490	1716	4206
Tamilnadu	4373	3314	7687
U P (East)	1440	1109	2549
U P (West)	965	753	1718
Uttaranchal	527	398	925
W. B.	504	488	992
Total (in KM)			81500

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