

Cir. No. 109/DIV/CAB/05

06 December 2017

To Cable Division and Utilities/SEBS, listed of purchasing organisations

**Sub: New Price Variation Clause for EHV Cables (66 KV to 500 KV)**

Further to our Circular No. 99 dated 6<sup>th</sup> November 2017 wherein we have shared new Draft PV clause for EHV Cables (66 KV to 500 KV); we are now making the draft PV formula operational w.e.f.1<sup>st</sup> November 2017 as we have not received any adverse comments on the draft.

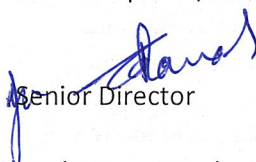
The PV formula is evolved after studying operational PV formulae of some of the leading purchasing organizations.

The salient points of the proposed Draft PV clause is as under.

1. In EHV cables construction there is not much difference in the conductor construction .Hence same factor of LV /MV cables for Copper & Aluminium (For single and 3 Core) are considered and extended up to 2500 sq. mm.
2. For metallic screen (Copper screen / lead sheath) factors are different between individual manufactures based on the temperature of Short circuit test capacity of metallic screen. Hence, Copper screen factor & lead factor will be considered separately as per manufacturers' individual practice and will be declared by the bidder at the time of quotation.
3. We are currently also not considering variation on account of insulation since manufacturers are offering cables as per IEC standards with different XLPE thicknesses.

We are enclosing price variation clause for EHV Cables (66 KV to 500 KV) along with applicable table of factors for your perusal. We recommend all stakeholders to incorporate this new PV clause in all the contracts/tenders henceforth for settlement of price variation.

Relevant prices/indices are being published in PV circular for Cable from November 2017.


 Senior Director

Encl.: New PV clause for EHV Cables along with Table of Factors



**IEEMA (PVC)/EHV CABLE/2017****Effective from: 1<sup>st</sup> November 2017****Material Price Variation Clause For XLPE Insulated EHV Cables (66 kV to 500 KV)**

The Price quoted/confirmed is based on the input cost of raw materials/components as on the date of quotation, and the same is deemed to be related to the prices of raw materials as specified in the price variation clause given below. In case of any variation in these prices, the price payable shall be subject to adjustment up or down in accordance with the formulae provided in this document.

Terms used in price variation formulae:

- P Price payable as adjusted in accordance with above appropriate formula **(in Rs/Km)**  
 Po Price quoted/confirmed **(in Rs/Km)**

**ALUMINIUM (Conductor)**

- AIF Variation factor for aluminium  
 Al Price of Aluminium. This price is as applicable on Two months prior to the date of delivery.  
 Alo Price of Aluminium). This price is as applicable on One month prior to the date of tendering.

**COPPER (Conductor)**

- CuF Variation factor for copper  
 Cu Price of CC Copper rods. This price is as applicable on Two months prior to the date of delivery.  
 Cuo Price of CC copper rods. This price is as applicable on One month prior to the date of tendering.

**COPPER (Screen)**

- CuFc Variation factor for copper screen  
 Cu Price of CC copper rods. This price is as applicable on Two months prior to the date of delivery.  
 Cuo Price of CC copper rods. This price is as applicable on One month prior to the date of tendering.

**LEAD**

- PbF Variation factor for Lead  
 Pb Price of Pig lead (99.97%). This price is as applicable on Two months prior to the date of delivery.  
 Pbo Price of Pig lead (99.97%). This price is as applicable on One month days prior to the date of tendering.

The above prices and indices are as published by IEEMA vide Circular reference IEEMA(PVC)/CABLE(R-1)/--/-- prevailing as on 1<sup>st</sup> working day of the month i.e. one month prior to the date of tendering.

**IEEMA (PVC)/EHV CABLE/2017****Effective from: 1<sup>st</sup> November 2017**

The date of delivery is the date on which the cable is notified as being ready for inspection/dispatch (in the absence of such notification, the date of manufacturer's dispatch note is to be considered as the date of delivery) or the contracted delivery date (including any agreed extension thereto), whichever is earlier.

**Notes**

- (a) All prices of raw materials are exclusive of GST amount.
- (b) All prices excluding Aluminium & Copper are as on first working day of the month.
- (c) The details of prices are as under:
  1. Price of Aluminium is LME average Cash SELLER Settlement price of Primary Aluminium in US\$ per MT as published by London Metal Bulletin (LME) including Premium for Aluminium Ingot in US\$ per MT is converted in Indian Rs./MT.
  2. Price of CC copper rods (in Rs/MT) is ex-works price as quoted by the primary producer.
  3. Price of Pig lead (in Rs/MT) is ex-works price as quoted by the primary producer.

**A. Copper Conductor XLPE Insulated Cable**

$$P = P_o + CuF (Cu - Cu_o) + CuFc(Cu - Cu_o) + PbF(Pb - Pb_o)$$

**B. Aluminium Conductor XLPE Insulated Cable**

$$P = P_o + AIF (Al - Al_o) + CuFc(Cu - Cu_o) + PbF(Pb - Pb_o)$$

Table references:-

CUP – Copper Conductor factor CuF

ALP- Aluminium conductor factor AIF

"The Bidder has to specify in his Bid copper screen component per MT (CuFc), lead component per MT (PbF) and corrugated Aluminium sheath component per MT base on short circuit current requirement for each type and size of cable".


 Authorised Signatory

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IEEMA (PVC)/EHV CABLE/2017

Effective from: 1<sup>st</sup> November 2017

TABLE ALP & CUP

VARIATION FACTOR FOR ALUMINIUM & COPPER CONDUCTOR (AIF & CuF)  
EHV CABLES WITH ALUMINIUM & COPPER CONDUCTOR

Nominal Cross Sectional Area (in Sq. mm.)	ALUMINIUM FACTORS (AIF)		COPPER FACTORS (CuF)	
	1 core	3 core	1 core	3 core
95	0.274	0.821	0.901	2.700
120	0.346	1.036	1.138	3.407
150	0.425	1.279	1.398	4.207
185	0.533	1.605	1.753	5.279
225	0.655	1.965	2.154	6.463
240	0.703	2.099	2.312	6.904
300	0.879	2.635	2.891	8.667
400	1.126		3.703	
500	1.418		4.664	
630	1.828		6.012	
800	2.340		7.696	
1000	2.951		9.706	
1200	3.562		11.619	
1400	4.154		13.578	
1600	4.741		15.509	
1800	5.352		17.346	
2000	5.922		19.430	
2500	7.176		24.287	