

	TECHNICAL SPECIFICATION STATION LIGHTING SYSTEM 2 X 800 MW NTPC SINGRAULI STPP, STAGE - III	PE-TS-512-558-E001
		Issue No: 01
		Rev. No. 00
		Date : 29.09.2025

IEEMA LDB & LIGHTING TRANSFROMER

Cir. No.: 09/DIV/LVSWGR/05

February 20, 2019

**To All members of LV Switchgear and MV+HV Switchgear Division
 To all State Electricity Boards, Utilities and Other purchasing organizations**

Sub: Final Price variation clauses for

1. LV Switchgear and Controlgear
2. MV AIS (Up to & Including 36 KV) Switchgear and Controlgear

IEEMA LV Switchgear and MV+HV Switchgear division has decided to revise old Price Variation clause applicable for LV and MV Switchgear (effective from January 2002) with change in cost composition and changes the sources for few raw materials which are currently in vogue.

IEEMA had circulated a Draft PV clause for LV and MV Switchgear vide cir. No. 02/DIV/LVSWGR/05 dated **January 17, 2019**. After incorporating suggestions on the above; we are making it final and operational from 1st January 2019.

We enclose separate revised PV clauses (effective from January 2019) for LV Switchgear (up to 1100 KV) and MV Switchgear (above 1100 up to 36 KV) along with sample two-step calculation. Monthly PV circulars of January 2019 as per old and new PV clauses are being published separately.

We request and recommend all the users & stakeholders including Utilities, PSUs etc. to incorporate these revised PV formula in all the new tenders/contracts.

For pending contracts, for the date of delivery on or after 1st April 2019, to arrive at the final price variation, we recommend using the following two stage method, which is a standard institutionalized methodology adopted by IEEMA for change over in all IEEMA PV clauses.

1. Calculate price variation 'P' from applicable prices/indices as per your base date / date of tendering up to January 2019 i.e. considering all prices/indices published in PV circular of January 2019 at numerator place; using IEEMA PV clause effective from January 2002.
2. Treat the above calculated 'P' as 'P₀' and calculate final price variation considering all prices / indices published in January 2019 as base prices/indices (at the denominator place) up to the applicable prices/indices as per your date of delivery; using revised LV / MV Switchgear clause effective from 1st January 2019.

A two-step sample calculation is given as annexure.

Senior Director

Annexure to cir no 09/DIV/LVSWGR/05 dated February 20, 2019

Price variation formula for LV SWITCHGEAR AND CONTROLGEAR up to & including 1100 V							
		Date of Tendering	Apr-18	Date of Delivery	Apr-19		
Step I				Step II			
IEEMA SWGR PVC effective from 1st January 2002				IEEMA LV SWGR PVC effective from 1st January 2019			
% Weightages	Raw Material	Applicable month as per Date of Tendering (Apr-18)	Applicable month as per Date of of Delivery (FIXED)*	% Weightages	Raw Material	Applicable month as per Date of Tendering (FIXED)#	Applicable month as per Date of of Delivery (Apr-19)
25	Fix cost			21	Fix cost		
17	IS	Jan-18	Nov-18	19	IS	Nov-18	Dec-18
18	C (Copper Bar)	Mar-18	Jan-19	21	C (LME Copper)	Jan-19	Feb-19
10	AL	Mar-18	Jan-19	12	AL	Jan-19	Feb-19
					In (Phenolic Moulding Powder)		
13	In	Mar-18	Jan-19	15	Powder)	Jan-19	Feb-19
17	W	Dec-17	Oct-18	12	W	Oct-18	Nov-18

Price variation formula for MV AIS (Above 1100 V and Up to & Including 36 KV) for outdoor circuit breakers and switchgear							
		Date of Tendering	Apr-18	Date of Delivery	Apr-19		
Step I				Step II			
IEEMA SWGR PVC effective from 1st January 2002				IEEMA MV SWGR PVC effective from 1st January 2019			
Weightages	Raw Material	Applicable month as per Date of Tendering (Apr-18)	Applicable month as per Date of of Delivery (FIXED)*	Weightages	Raw Material	Applicable month as per Date of Tendering (FIXED)#	Applicable month as per Date of of Delivery (Apr-19)
25	Fix cost			20	Fix cost		
17	IS	Jan-18	Nov-18	28	IS	Nov-18	Dec-18
18	C (Copper Bar)	Mar-18	Jan-19	26	C (LME Copper)	Jan-19	Feb-19
10	AL	Mar-18	Jan-19	4	AL	Jan-19	Feb-19
13	In (Epoxy Resin)	Mar-18	Jan-19	9	In (WPI of Insulator)	Nov-18	Dec-18
17	W	Dec-17	Oct-18	13	W	Oct-18	Nov-18

In step I calculation,

* all prices/indices to be taken from circular ref IEEMA(PVC)SWGR/(R)/01/2019 for applicable month as per old PV formulae wef Jan 2002

In step II calculation,

all prices/indices to be taken from circular ref IEEMA(PVC)SWGR(R-1)/01/2019 for applicable month as per new PV formulae wef Jan 2019

IEEMA/PVC/LVSWGR/2019 (R-2)

Effective from: 1st January 2019

PRICE VARIATION CLAUSE FOR LV SWITCHGEAR AND CONTROLGEAR (up to & including 1100 V)

The price quoted/confirmed is based on the input cost of raw materials/components and labour cost as on the date of quotation and the same is deemed to be related to prices of raw materials and all India average consumer price index number for industrial workers as specified in the price variation clause given below. In case of any variation in these prices and index numbers, the price payable shall be subject to adjustment, up or down in accordance with the following formula:

$$P = \frac{P_0}{100} \left(21 + 19 \frac{IS}{IS_0} + 21 \frac{C}{C_0} + 12 \frac{AL}{AL_0} + 15 \frac{In}{In_0} + 12 \frac{W}{W_0} \right)$$

Wherein,

P = Price payable as adjusted in accordance with the above formula.

P_0 = Price quoted/confirmed. (Exclusive of all taxes & duties)

IS_0 = Wholesale price index number for 'Manufacture of Basic Metals' (Base: 2011-12=100)(refer notes)
 This index number is as applicable for the month, THREE month prior to the date of tendering.

C_0 = Average LME settlement price of copper wire bars (refer notes)
 This price is as applicable for the month, ONE month prior to the date of tendering.

AL_0 = Price of busbar grade aluminium (refer notes).
 This price is as applicable on the 1st working day of the month, ONE month prior to the date of tendering

In_0 = Price of phenolic moulding powder
 This price is as applicable on the 1st working day of the month, ONE month prior to the date of tendering.

W_0 = All India average consumer price index number for industrial workers, as published by the Labour Bureau, Ministry of Labour, Govt. of India (Base: 2001 = 100)
 This index number is as applicable for the month, Four months prior to the date of tendering.

For example, if date of tendering falls in April 2019, applicable prices of Copper (C_0), Aluminium Busbar (AL_0) and Insulating Material (In_0) should be as on 1st March 2019 and Wholesale price index number for 'Manufacture of Basic Metals' (IS_0) and all India average consumer price index no. (W_0) should be for the month of January 2019.

The above prices and indices are as published by IEEMA vide circular reference number IEEMA(PVC)/SWGR(R-1)/ONE month prior to the date of tendering.

IEEMA/PVC/LVSWGR/2019 (R-2) page 1 of 3

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IEEMA/PVC/LVSWGR/2019 (R-2)

Effective from: 1st January 2019

IS = Wholesale price index number for 'Manufacture of Basic Metals' (Base: 2011-12=100) (refer notes)
 This index number is as applicable for the month, FOUR month prior to the date of delivery.

C = Average LME settlement price of copper wire bars (refer notes)
 This price is as applicable for the month, TWO month prior to the date of delivery.

Al = Price of busbar grade aluminium (refer notes).
 This price is as applicable on the 1st working day of the month, TWO month prior to the date of delivery.

In = Price of phenolic moulding powder
 This price is as applicable on the 1st working day of the month, TWO month prior to the date of delivery.

W = All India average consumer price index number for industrial workers, as published by the Labour Bureau, Ministry of Labour, Govt. of India (Base: 2001 = 100)
 This index number is as applicable for the month, FIVE months prior to the date of delivery.

For example, if date of delivery in terms of clause given below falls in June 2019, applicable prices of Copper (C_0), Aluminium Busbar (Al_0) and Insulating Material (In_0) should be as on 1st April 2019 and Wholesale price index number for 'Manufacture of Basic Metals' (S_0) and all India average consumer price index no. (W_0) should be for the month of February 2019.

The date of delivery is the date on which the product is notified as being ready for inspection/despatch (in the absence of such notification, the date of manufacturer's despatch 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 modvatable GST/CV duty amount and exclusive of any other central, state or local taxes, octroi etc.

b) The details of prices are as under:

1. The wholesale price index number for 'Manufacture of Basic Metals' is as published by the Office of Economic Advisor, Ministry of commerce & Industry, Govt. of India, New Delhi with base 2011-12 = 100
2. The LME price of Copper Wire Bars (in Rs./MT) is the LME average settlement price of Copper Wire Bars converted into Indian Rupees with applicable average exchange rate of SBI of the month. This price is the landed cost, inclusive of applicable customs duty only but exclusive of countervailing duty

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IEEMA/PVC/LVSWGR/2019 (R-2)

Effective from: 1st January 2019

3. The price of busbar grade aluminium (in Rs/MT) is the average of ex-works price as quoted by the two primary producers for the busbar size 152.4 x 6.35 mm flat approximately, grade equivalent to E91 E as per IS 5082-1998 (or the latest).
4. The price of insulating material (in Rs/Kg) is the average price of phenolic moulding powder quoted by three manufacturers applicable for Switchgear and Controlgear of medium/lower voltage up to 1100 volts


Senior Director

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IEEMA/PVC/DIST_DT_CU/2021

Effective from: 01 September 2021

**PRICE VARIATION CLAUSE FOR COPPER WOUND DRY TYPE DISTRIBUTION TRANSFORMERS
 COMPLETE WITH ALL ACCESSORIES AND COMPONENTS
 (Of ratings up to and including 2,500 KVA and voltage class up to 33 KV)
 supplied against domestic contracts**

This price variation clause is applicable for 'Copper Wound Dry Type Distribution Transformers', with rating up to and including 2,500 KVA and voltage class up to 33 KV supplied against domestic contracts. A separate price variation clause IEEMA/PVC/DIST_DT_CU/DE/2021 has been evolved for above types of Transformers supplied against export/deemed export contracts under special imprest licensing scheme.

The price quoted/confirmed is based on the input cost of raw materials/components and labour cost as on the date of quotation and the same is deemed to be related to prices of raw materials and all India average consumer price index number for industrial workers as specified in the price variation clause given below. In case of any variation in these prices/indices, the price payable shall be subject to adjustment, up or down in accordance with the following formula:

$$P = \frac{P_0}{100} (7 + 35 \frac{C}{C_0} + 30 \frac{ES}{ES_0} + 7 \frac{IS}{IS_0} + 8 \frac{IM}{IM_0} + 7 \frac{ER}{ER_0} + 6 \frac{W}{W_0})$$

Wherein,

P = Price payable as adjusted in accordance with the above formula.

P_0 = Price quoted/confirmed.

C_0 = Price of CC copper rods (refer notes)
 This price is as applicable for the month, **ONE** month prior to the date of tendering.

ES_0 = Price of CRGO Electrical Steel Lamination (refer notes)
 This price is as applicable for the month, **ONE** month prior to the date of tendering.

IS_0 = Price of HR Coil of 3.15 mm thickness (refer notes)
 This price is as applicable for the month, **ONE** month prior to the date of tendering.

IM_0 = Price of Insulating Materials (refer notes)
 This price is as applicable for the month, **ONE** month prior to the date of tendering.

ER_0 = Price of Epoxy resin (refer notes)
 This price is as applicable for the month, **ONE** month prior to the date of tendering.

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IEEMA/PVC/DIST_DT_CU/2021

Effective from: 01 September 2021

W_0 = All India average consumer price index number for industrial workers, as published by the Labour Bureau, Ministry of Labour, Govt. of India (Base: 2016 = 100)
 This index number is as applicable for the month, **THREE** months prior to the date of tendering.

For example, if date of tendering falls in December 2021, applicable prices of Copper (C_0), Epoxy Resin (ER_0), CRGO Steel Sheets (ES_0), HR Coil (IS_0) and Insulating material (IM_0) should be as on 1st November 2021 and all India average consumer price index no. (W_0) should be for the month of September 2021.

The above prices and indices are as published by IEEMA vide circular reference number IEEMA(PVC)/PWR_DIST_TRF (R-1)/ONE month prior to the date of tendering.

C = Price of CC copper rods (refer notes)
 This price is as applicable for the month, **ONE** month prior to the date of delivery.

ES = Price of CRGO Electrical Steel Lamination (refer notes)
 This price is as applicable for the month, **ONE** month prior to the date of delivery.

IS = Price of HR Coil of 3.15 mm thickness (refer notes)
 This price is as applicable for the month, **ONE** month prior to the date of delivery.

IM = Price of Insulating Materials (refer notes)
 This price is as applicable for the month, **ONE** month prior to the date of delivery.

ER = Price of Epoxy resin (refer notes)
 This price is as applicable for the month, **ONE** month prior to the date of tendering.

W = All India average consumer price index number for industrial workers, as published by the Labour Bureau, Ministry of Labour, Govt. of India (Base: 2016 = 100)
 This index number is as applicable for the month, **THREE** months prior to the date of delivery.

For example, if date of delivery in terms of clause given below falls in December 2022, applicable prices of Copper (C), Epoxy Resin (ER), CRGO Steel Sheets (ES), HR Coil (IS) and Insulating material (IM) should be as on 1st November 2022 and all India average consumer price index number (W) should be for the month of September 2022.

The above prices and indices are as published by IEEMA vide circular reference number IEEMA(PVC)/PWR_DIST_TRF (R-1)/ONE month prior to the date of delivery.

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IEEMA/PVC/DIST_DT_CU/2021

Effective from: 01 September 2021

The date of delivery is the date on which the transformer 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 and exclusive of any other central, state or local taxes etc..

a) Date of Tendering is the due date of tender submission or date of tender opening whichever is earlier

b) The details of prices are as under:

1. Price of 8 mm CC copper rods (in Rs/MT) is ex-works price as quoted by the primary producer.
2. The price of CRGO Electrical Steel Lamination suitable for Transformers of voltage up to 33 KV is the average price as quoted by processing centres of mills and lamination suppliers
3. Price of steel is the average retail price of HR Coil 3.15 mm thickness as published by Joint Plant Committee (JPC) in Rs./MT
4. The average price of Insulating materials (in Rs./Kg) of pre-compressed pressboards of size 3 mm and 10 mm thick, 3200 mm x 4100 mm C&F price in free currency per MT converted into Indian Rupees with applicable exchange rates prevailing as on 1st working day of the month as quoted by primary suppliers. This price is the landed cost, inclusive of applicable customs duty only but exclusive of countervailing duty.
5. The price of Epoxy resin is price quoted by resin manufacturer for their grade CT 5900 or its nearest equivalent.

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	TECHNICAL SPECIFICATION STATION LIGHTING SYSTEM 2 X 800 MW NTPC SINGRAULI STPP, STAGE - III	PE-TS-512-558-E001
		Issue No: 01
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		Date : 29.09.2025

IEEMA LIGHTING POLES



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Cir. No. 10/PVC/T & D Project/05

25 May 2022

To Members of T & D Project Division, SEBs and other listed purchasing bodies.

Sub: New PV formulae for Steel Tubular Pole and Polygonal Pole

Currently Steel poles are increasingly used in distribution network especially in hilly area due to sturdiness and ease of transportation. And in the wake of upcoming scheme of Revamped Distribution network strengthening scheme (RDSS); members of IEEMA T & D project division decided to evolve PV formula for Steel Tubular Poles and Polygonal Poles.

IEEMA has collected costing data, lead time for manufacturing etc. from major manufacturers of poles and in consultation with division arrived at the draft Price Variation Clauses for Steel Tubular Poles and Polygonal Poles and circulated to all stakeholders vide circular no. **14/PVC/T & D Project/05 dated 9 Mar 22** for their comments.

After incorporating changes suggested by the industry stakeholders on the **Steel Tubular Pole and Polygonal Pole PV formulae**; we are making the Price Variation formulae operational from 1st April 2022.

We have enclosed PV clauses applicable for **Steel Tubular Pole and Polygonal Pole** which are effective from 1st April 2022.

Although, the PV clause is made effective from 1st April 2022, practically it can be incorporated in all the current new tenders/contracts starting from 1st May 2022.

We request and recommend all the users & stakeholders including Utilities, PSUs etc. to incorporate the above PV formulae in all the new tenders/contracts henceforth.

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IEEMA/PVC/Poles/2022

Effective from: 1st Apr 2022

PRICE VARIATION CLAUSE FOR POLES

The price quoted/confirmed is based on the input cost of raw materials/components and labour cost as on the date of quotation and the same is deemed to be related to prices of raw materials and all India average consumer price index number for industrial workers as specified in the price variation clause given below. In case of any variation in these prices and index numbers, the price payable shall be subject to adjustment, up or down in accordance with the following formula:

(A) Steel Tubular Poles

$$P = \frac{P_0}{100} (7 + 70 \frac{IS}{IS_0} + 13 \frac{Zn}{Zn_0} + 10 \frac{W}{W_0})$$

(B) Polygonal Poles

$$P = \frac{P_0}{100} (9 + 64 \frac{IS}{IS_0} + 13 \frac{Zn}{Zn_0} + 14 \frac{W}{W_0})$$

Wherein,

P = Price payable as adjusted in accordance with the above formula.
 P_0 = Price quoted/confirmed.
 IS_0 = Price of HR Coil of 3.15 mm thickness (refer notes)
 This price is as applicable for the month, ONE month prior to the date of tendering.
 Zn_0 = Price of Electrolytic high grade zinc (refer notes)
 This price is as applicable on the 1st working day of the month, ONE month prior to the date of tendering.
 W_0 = All India average consumer price index number for industrial workers, as published by the Labour Bureau, Ministry of Labour, Govt. of India (Base: 2016 = 100) (Refer notes)
 This index number is as applicable for the month, THREE months prior to the date of tendering.

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IEEMA/PVC/Poles/2022

Effective from: 1st Apr 2022

For example, if date of tendering falls in May 2022, the applicable prices of HR Coil (IS₀) should be for the month March 2022, Zinc (Zn₀) should be for the month April 2022 and all India average consumer price index number (W₀) should be for the month of February 2022.

The above prices and indices are as published by IEEMA vide circular reference number IEEMA (PVC)/TLT-2014 (R-1)//_ ONE month prior to the date of tendering.

IS = Price of HR Coil of 3.15 mm thickness (refer notes)
 This price is as applicable for the month, FOUR month prior to the date of delivery.

Zn = Price of Electrolytic high grade zinc (refer notes)
 This price is as applicable on the 1st working day of the month, ONE month prior to the date of delivery.

W = All India average consumer price index number for industrial workers, as published by the Labour Bureau, Ministry of Labour, Govt. of India (Base: 2016 = 100) (Refer notes)
 This index number is as applicable on the first working day of the month, THREE months prior to the date of delivery.

For example, if date of delivery falls in December 2022, the applicable prices of HR Coil (IS) should be for August 2022 and Zinc (Zn) should be for the month November 2022 and all India average consumer price index number (W) should be for the month of September 2022.

The date of delivery is the date on which Poles are 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 and any other central, state or local taxes etc.

(b) The details of prices are as under:

1. Price of steel is the average retail price of HR Coil 3.15 mm thickness as published by Joint Plant Committee (JPC) in Rs./MT.
2. The price of Electrolytic high grade zinc (in Rs/MT) is ex-works price as quoted by a primary producer.



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