Asunción, 19 de Octubre de 2021.-

Señor
Ing. Félix Eladio Sosa
Presidente
Administración Nacional de Electricidad (ANDE)
Presente

Ref.: Licitación Pública Nacional ANDE Nº 1545/2019 "Adquisición de Transformadores de Distribución" – Contrato Nº 8117/2020 – Item 1 –Reajuste de Precios - Solicitud de pago

De nuestra consideración:

Es grato dirigirnos a Ud. con la finalidad de presentarle la Liquidación Proforma correspondiente a los equipos entregados conforme al contrato de referencia y por su digno intermedio Solicitar el pago del Reajuste de Precios; se incluyan además los siguientes documentos:

Item 1

- Liquidación Proforma Nº 01: Reajuste de Precios Lote 01 al 11

Una vez concluido las verificaciones rogamos ponerse en contacto con la Lic. Sonia Arguello, Teléfono Nº 021-296595 Interno 103, para la emisión y entrega de la Factura Legal correspondiente.

Sin otro particular, aprovecho la ocasión para Saludarle muy atentamente.

Lic. Juan C. Guanes Carrillo

Lic. JUAN CARLOS GUANES
Director Presidente
TRAFOSUR S.A.

Asunción, 02 de Junio de 2022.-

Señor
Ing. Félix Eladio Sosa
Presidente
Administración Nacional de Electricidad (ANDE)
Presente

Ref.: SOLICITUD de Pago de Ajuste de Precios - Licitación Pública Nacional ANDE Nº 1545/2019 – ID 368023 "Adquisición de Transformadores de Distribución" – Contrato Nº 8117/2020 – Item 1.- CGC 14 del PBC.-

De nuestra consideración:

Nos dirigirnos a Ud. con el objeto de presentar la Liquidación Proforma correspondiente al Ajuste de precio de los equipos entregados conforme al contrato de la referencia, de los Lotes correspondientes a las entregas 12, 13, 14 y 15.

Destacamos que por Expediente ANDE 1000000674 hemos solicitado con anterioridad el pago del ajuste de precios de los Lotes correspondientes a las entregas 01 al 11 respectivamente.

Los Valores iniciales a la fecha de apertura de ofertas en fecha 13/05/2020 son:

Do	*= 6.565,15*	*(Cotización del dólar Mercado Abierto BCP del 13/05/2020)*
So	*= 84.340*	*(Resol. MTESS N° 2293/2019 del 01/07/2019)*
Aco	*= 107,583*	*(índice CONV.GOES en Ene-2020, base abril-17)*
Alo	*= 1.457,15*	*(LME - precios promedios del mes anterior abril-20)*
Cuo	*= No aplica*	

Adjuntamos a la presente la nota, la Proforma N°2 de Planilla de Cálculo de Reajuste de Precios que resulta de la aplicación de fórmula y procedimiento para el ajuste establecido en las CGC 14 del PBC indicado por la Unidad Administradora del Contrato. También adjuntamos a la presente, los **ANEXOS** abajo citados, documentos respaldatorios que contienen la cotización, valores índices mensuales de cada entrega efectiva, utilizados en la fórmula para determinar el Ajuste de Precios.

1. **Proforma N° 2 de la Planilla de Calculo de Reajuste de Precios Lotes correspondientes a las entregas 12 al 15 del Cronograma de entregas del Contratato.-**

1- **Informe Planilla de Índices mensual del Precio del Acero Silicio, que determina el valor (Ac) mensual en la fórmula del CGC, obtenida de la publicación de la T&D Europe Transformer Comodities Indices – CONV GOES.**
2- **Informe Planilla de Índices mensual del Precio del Aluminio, que determina el valor del (Al) en la fórmula de la CGC, acorde a las publicaciones de la Bolsa de Valores de Metales de Londres (LME).-**
3- **Informe de Tipo de Cambio diario, que determina el valor del (D) en la fórmula para cada entrega efectiva, publicado por el Dpto. de Operaciones del Mercado Abierto del Banco Central del Paraguay.**
4- **Resolución del. MTESS por el cual se reglamenta el reajuste de sueldos y jornales.**
5- **Copia digital de cada una de las Remisiones de entregas de transformadores, recibidos en Depósitos de la ANDE, a los efectos de considerar la fecha efectiva de entrega**

Nos ponemos a disposición para aclarar cualquier duda y solicitamos que una vez concluida las verificaciones correspondientes a la brevedad, se sirvan comunicar a la Lic. Sonia Arguello, Teléfono Nº 021-296595 Interno 103, a los emails: administracion@trafosur.com.py trafosur@trafosur.com.py, para la suscripción del acuerdo, la emisión y entrega de la Factura Legal correspondiente.

Sin otro particular, aprovecho la ocasión para Saludarle muy atentamente.

Lic. Juan C. Guanes Carrillo

Lic. JUAN CARLOS GUANES
Director Presidente
TRAFOSUR S.A.

DOCUMENTO DE CONFORMIDAD PARA REAJUSTE DE PRECIO Nro 01

FECHA: 07 / 09 / 2022

CONTRATO: N° 8117/2020 – Licitación Pública Nacional ANDE N° 1545/2019 –

"Adquisición de Transformadores de Distribución" – ID 368023

LOTES / ITEMS: Items 1 (el 50%)

ENTREGA PREVISTA Nro: Desde 1ra hasta la 15ta entrega prevista

UNIDAD ADMINISTRADORA DEL CONTRATO: Dpto. de Control de Suministro de Materiales de Distribución - **DD/SMD**.

CONTRATISTA/PROVEEDOR: TRAFOSUR S.A.

FÓRMULA DE REAJUSTE:

$$Pr = [0{,}27\ D/Do + 0{,}19\ S/So + 0{,}27\ Ac/Aco + 0{,}27\ (Cu/Cuo \times P_{Cu}/P_{Tot} + Al/Alo \times P_{Al}/P_{Tot})]$$

(Se adjunta planilla de cálculo firmada por ambas partes).

MONTO TOTAL DE REAJUSTE (IVA incluido): ₲ 6.868.891.344 (Guaranies Seis Mil Ochocientos Sesenta y Ocho Millones Ochocientos Noventa y Un Mil Trescientos Cuarenta y Cuatro).

Observación: El Contratista/Proveedor afirma por el presente su plena conformidad con el Monto total de reajuste, sin nada más que reclamar entre las partes.

P/A

Lic. Esteban Guanes C.
Director
Trafosur S.A.

Sr./a.....
Por Contratista/Proveedor
Firma con aclaración

Ing. Gustavo Gayoso
DD/SMD
Jefatura

Sr./a .....
Por ANDE/UAC
Firma con aclaración

PLANILLA DE COTIZACIONES AL MIERCOLES 13 DE MAYO DEL 2020

MONEDA	ME/USD.	₲ / ME
DOLAR AMERICANO	1,0000	6.565,15
YEN JAPONES	106,9400	61,39
LIBRA ESTERLINA *	1,2227	8.027,21
FRANCO SUIZO	0,9707	6.763,32
CORONA SUECA	9,7977	670,07
CORONA DANESA	6,8807	954,14
KRONE (NORUEGA)	10,1456	647,09
REAL	5,9324	1.106,66
PESO ARGENTINO	67,5400	97,20
DOLAR CANADIENSE	1,4092	4.658,78
RAND SUDAFRICANO	18,5296	354,31
DERECHO ESPECIAL DE GIRO	1,3627	8.946,33
ONZA TROY *	1.710,9300	11.232.512,09
PESO CHILENO	821,0500	8,00
EURO *	1,0835	7.113,34
PESO URUGUAYO	43,8600	149,68
DOLAR AUSTRALIANO *	0,6462	4.242,40
YUAN CHINO	7,0910	925,84
DOLAR DE SINGAPUR	1,4189	4.626,93
PESO BOLIVIANO	6,8463	958,93
SOL PERUANO	3,4380	1.909,58
DOLAR NEOZELANDES	0,6008	3.944,34
PESO MEXICANO	24,3161	269,99
PESO COLOMBIANO	3.898,6500	1,68

(*) USD x GBP, DEG, EUR, XAU, AUD.

(**) Moneda Extranjera (ME) | Dólar Americano (USD) | Guaraní (₲)

PLANILLA DE COTIZACIONES DEL AÑO 2021 DE MONEDA DOLAR AMERICANO

#	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC
1	ND	6.920,03	ND	ND	ND	6.766,95	6.760,35	ND	6.927,40	6.915,86	6.893,87	6.824,00
2	ND	6.899,42	6.649,94	ND	ND	6.765,70	6.787,39	6.914,57	6.933,42	ND	6.878,62	6.805,34
3	ND	6.871,52	6.679,15	ND	6.618,87	6.769,00	ND	6.927,75	6.926,32	ND	6.885,94	6.813,77
4	6.923,34	6.871,24	6.669,34	ND	6.690,72	6.739,78	ND	6.945,85	ND	6.926,17	6.891,94	ND
5	6.876,55	6.863,58	6.657,39	6.375,70	6.748,04	ND	6.798,10	6.933,52	ND	6.919,92	6.883,31	ND
6	6.837,69	ND	ND	6.381,68	6.792,06	ND	6.788,81	6.935,43	6.915,50	6.912,61	ND	6.829,55
7	6.853,68	ND	ND	6.259,11	6.779,86	6.711,79	6.786,01	ND	6.909,56	6.901,02	ND	6.838,38
8	6.890,38	6.805,34	6.638,25	6.236,41	ND	6.676,82	6.801,84	ND	6.914,06	6.900,72	6.871,13	ND
9	ND	6.802,97	6.621,82	6.244,43	ND	6.704,04	6.806,74	6.912,10	6.913,10	ND	6.863,11	6.831,27
10	ND	6.783,33	6.596,10	ND	6.757,86	6.717,01	ND	6.911,31	6.906,63	ND	6.878,64	6.810,52
11	6.908,40	6.741,62	6.608,44	ND	6.666,76	6.730,19	ND	6.922,63	ND	6.900,00	6.872,85	ND
12	6.905,03	6.710,17	6.623,31	6.241,44	6.542,37	ND	6.826,86	6.930,16	ND	6.898,25	6.867,90	ND
13	6.888,93	ND	ND	6.310,48	6.679,99	ND	6.849,31	6.929,95	6.904,43	6.902,03	ND	6.801,29
14	6.870,17	ND	ND	6.420,27	ND	6.740,91	6.831,72	ND	6.892,07	6.905,00	ND	6.784,56
15	6.853,61	6.670,65	6.618,42	6.438,35	ND	6.739,17	6.839,83	ND	6.907,57	6.907,93	6.856,24	6.798,59
16	ND	6.627,28	6.599,51	6.391,27	ND	6.728,77	6.838,87	6.923,59	6.905,42	ND	6.859,41	6.795,42
17	ND	6.615,16	6.576,80	ND	6.730,88	6.745,05	ND	6.924,56	6.885,00	ND	6.852,05	6.801,66
18	6.874,89	6.648,63	6.552,83	ND	6.707,50	6.764,73	ND	6.933,75	ND	6.911,60	6.843,30	ND
19	6.907,24	6.627,46	6.538,00	6.420,09	6.709,84	ND	6.856,01	6.944,35	ND	6.919,57	6.840,76	ND
20	6.910,02	ND	ND	6.450,02	6.724,85	ND	6.880,81	6.941,31	6.871,58	6.917,19	ND	6.804,97
21	6.928,56	ND	ND	6.457,71	6.768,28	6.777,19	6.892,96	ND	6.869,93	6.912,77	ND	6.813,31
22	6.938,48	6.617,52	6.557,24	6.475,13	ND	6.789,02	6.912,55	ND	6.891,24	6.906,48	6.841,60	6.818,52
23	ND	6.606,92	6.529,83	6.509,99	ND	6.791,11	6.916,84	6.933,68	6.884,91	ND	6.825,80	6.799,69
24	ND	6.611,30	6.490,04	ND	6.728,81	6.770,62	ND	6.933,19	6.881,33	ND	6.822,14	6.804,08
25	6.942,17	6.624,67	6.462,52	ND	6.721,39	6.760,01	ND	6.936,18	ND	6.901,84	6.827,81	ND
26	6.955,93	6.620,75	6.449,27	6.456,05	6.756,13	ND	6.917,84	6.940,04	ND	6.918,84	6.831,91	ND
27	6.993,79	ND	ND	6.502,49	6.787,58	ND	6.933,98	6.925,41	ND	6.917,28	ND	6.805,07
28	6.963,90	ND	ND	6.531,82	6.781,51	6.747,53	6.930,31	ND	6.896,65	6.907,20	ND	6.832,21
29	6.950,06	ND	6.326,61	6.583,67	ND	6.752,29	6.904,76	ND	6.900,73	6.904,76	6.842,77	6.872,85
30	ND	ND	6.154,97	6.587,48	ND	6.754,47	6.917,79	6.921,56	6.913,99	ND	6.838,40	6.885,79
31	ND	ND	6.311,11	ND	6.764,76	ND	ND	6.921,13	ND	ND	ND	ND

PLANILLA DE COTIZACIONES DEL AÑO 2022 DE MONEDA DOLAR AMERICANO

#	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC
1	ND	7.037,83	6.974,39	6.924,75	ND	ND	ND	ND	ND	ND	ND	ND
2	ND	7.039,71	6.973,72	ND	ND	ND	ND	ND	ND	ND	ND	ND
3	6.906,86	6.995,06	6.990,87	ND	6.834,55	ND	ND	ND	ND	ND	ND	ND
4	6.952,73	6.984,02	6.970,09	6.913,28	6.825,28	ND	ND	ND	ND	ND	ND	ND
5	6.961,22	ND	ND	6.906,87	6.836,80	ND	ND	ND	ND	ND	ND	ND
6	6.956,22	ND	ND	6.891,93	6.846,57	ND	ND	ND	ND	ND	ND	ND
7	6.950,65	6.962,58	6.956,49	6.865,78	ND	ND	ND	ND	ND	ND	ND	ND
8	ND	6.944,19	6.966,76	6.824,18	ND	ND	ND	ND	ND	ND	ND	ND
9	ND	6.963,27	6.976,86	ND	6.870,82	ND	ND	ND	ND	ND	ND	ND
10	6.948,37	6.960,14	6.971,35	ND	6.870,27	ND	ND	ND	ND	ND	ND	ND
11	6.944,84	6.948,65	6.964,47	6.802,04	6.882,22	ND	ND	ND	ND	ND	ND	ND
12	6.961,50	ND	ND	6.823,89	6.890,18	ND	ND	ND	ND	ND	ND	ND
13	6.967,86	ND	ND	6.864,24	6.878,99	ND	ND	ND	ND	ND	ND	ND
14	6.978,85	6.956,59	6.968,90	ND	ND	ND	ND	ND	ND	ND	ND	ND
15	ND	6.946,95	6.962,03	ND	ND	ND	ND	ND	ND	ND	ND	ND
16	ND	6.939,68	6.971,26	ND	6.858,24	ND	ND	ND	ND	ND	ND	ND
17	6.972,00	6.939,02	6.969,54	ND	6.852,01	ND	ND	ND	ND	ND	ND	ND
18	6.965,99	6.961,41	6.975,19	6.858,74	6.846,49	ND	ND	ND	ND	ND	ND	ND
19	6.985,83	ND	ND	6.850,27	6.841,86	ND	ND	ND	ND	ND	ND	ND
20	7.012,00	ND	ND	6.855,17	6.834,76	ND	ND	ND	ND	ND	ND	ND
21	7.026,25	6.937,56	6.963,49	6.827,46	ND	ND	ND	ND	ND	ND	ND	ND
22	ND	6.936,62	6.963,66	6.830,04	ND	ND	ND	ND	ND	ND	ND	ND
23	ND	6.954,32	6.962,70	ND	ND	ND	ND	ND	ND	ND	ND	ND
24	7.036,97	7.023,46	6.963,91	ND	ND	ND	ND	ND	ND	ND	ND	ND
25	7.055,71	6.999,82	6.965,64	6.821,40	ND	ND	ND	ND	ND	ND	ND	ND
26	7.074,35	ND	ND	6.841,66	ND	ND	ND	ND	ND	ND	ND	ND
27	7.098,80	ND	ND	6.846,81	ND	ND	ND	ND	ND	ND	ND	ND
28	7.095,34	ND	6.970,98	6.842,25	ND	ND	ND	ND	ND	ND	ND	ND
29	ND	ND	6.961,03	6.826,70	ND	ND	ND	ND	ND	ND	ND	ND
30	ND	ND	6.953,82	ND	ND	ND	ND	ND	ND	ND	ND	ND
31	7.047,60	ND	6.930,05	ND	ND	ND	ND	ND	ND	ND	ND	ND

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NEWS LETTER

22	COPPER							ALUMINUM							USD
Days	LME				LME Average			LME				LME Average			PTAX
	Cash	Variação	3 meses	Spread	Cash	3 meses	Stocks	Cash	Variação	3 meses	Spread	Cash	3 meses	Stocks	
01-Dec-20	**7.644,00**	-0,4%	7.649,00	5,00	7.644,00	7.649,00	149.925	**2.045,50**	1,5%	2.052,50	7,00	2.045,50	2.052,50	1.368.125	**5,2789**
02-Dec-20	**7.616,50**	-0,4%	7.623,00	6,50	7.630,25	7.636,00	149.675	**2.051,50**	0,3%	2.062,00	10,50	2.048,50	2.057,25	1.364.175	**5,2267**
03-Dec-20	**7.679,00**	0,8%	7.682,00	3,00	7.646,50	7.651,33	149.325	**2.028,00**	-1,1%	2.039,50	11,50	2.041,67	2.051,33	1.358.425	**5,1625**
04-Dec-20	**7.741,50**	0,8%	7.748,50	7,00	7.670,25	7.675,63	149.675	**2.027,50**	0,0%	2.040,00	12,50	2.038,13	2.048,50	1.353.350	**5,1706**
07-Dec-20	**7.656,50**	-1,1%	7.672,00	15,50	7.667,50	7.674,90	150.125	**2.004,00**	-1,2%	2.018,50	14,50	2.031,30	2.042,50	1.350.575	**5,1018**
08-Dec-20	**7.635,00**	-0,3%	7.647,50	12,50	7.662,08	7.670,33	149.625	**1.986,00**	-0,9%	2.007,00	21,00	2.023,75	2.036,58	1.343.950	**5,0920**
09-Dec-20	**7.704,50**	0,9%	7.723,50	19,00	7.668,14	7.677,93	149.575	**2.010,00**	1,2%	2.027,50	17,50	2.021,79	2.035,29	1.338.575	**5,1109**
10-Dec-20	**7.712,00**	0,1%	7.729,50	17,50	7.673,63	7.684,38	147.825	**2.031,00**	1,0%	2.042,00	11,00	2.022,94	2.036,13	1.333.375	**5,0852**
11-Dec-20	**7.741,00**	0,4%	7.760,00	19,00	7.681,11	7.692,78	146.325	**2.022,00**	-0,4%	2.034,50	12,50	2.022,83	2.035,94	1.329.600	**5,0691**
14-Dec-20	**7.763,00**	0,3%	7.787,00	24,00	7.689,30	7.702,20	144.775	**2.042,50**	1,0%	2.054,00	11,50	2.024,80	2.037,75	1.357.650	**5,0578**
15-Dec-20	**7.753,00**	-0,1%	7.775,50	22,50	7.695,09	7.708,86	141.900	**2.022,00**	-1,0%	2.038,00	16,00	2.024,55	2.037,77	1.357.375	**5,0968**
16-Dec-20	**7.823,00**	0,9%	7.847,50	24,50	7.705,75	7.720,42	133.125	**2.029,00**	0,3%	2.045,50	16,50	2.024,92	2.038,42	1.377.225	**5,1057**
17-Dec-20	**7.893,00**	0,9%	7.914,00	21,00	7.720,15	7.735,31	127.725	**2.028,00**	0,0%	2.041,00	13,00	2.025,15	2.038,62	1.371.300	**5,0612**
18-Dec-20	**7.964,00**	0,9%	7.984,50	20,50	7.737,57	7.753,11	123.400	**2.049,00**	1,0%	2.059,50	10,50	2.026,86	2.040,11	1.367.025	**5,0986**
21-Dec-20	**7.838,50**	-1,6%	7.858,30	19,80	7.744,30	7.760,12	122.975	**2.012,50**	-1,8%	2.023,50	11,00	2.025,90	2.039,00	1.390.350	**5,1572**
22-Dec-20	**7.753,00**	-1,1%	7.777,00	24,00	7.744,84	7.761,18	119.600	**1.993,00**	-1,0%	2.006,50	13,50	2.023,84	2.036,97	1.383.725	**5,1473**
23-Dec-20	**7.764,50**	0,1%	7.784,50	20,00	7.746,00	7.762,55	119.375	**1.999,00**	0,3%	2.008,50	9,50	2.022,38	2.035,29	1.378.100	**5,1740**
24-Dec-20	**7.793,00**	0,4%	7.811,50	18,50	7.748,61	7.765,27	116.100	**2.022,00**	1,2%	2.025,50	3,50	2.022,36	2.034,75	1.372.350	**5,1800**
28-Dec-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**5,2390**
29-Dec-20	**7.840,00**	0,6%	**7.854,00**	14,00	7.753,42	7.769,94	113.975	**2.000,00**	-1,1%	**2.004,00**	4,00	2.021,18	2.033,13	1.366.275	**5,1942**
30-Dec-20	**7.803,50**	-0,5%	**7.815,50**	12,00	7.755,93	7.772,22	110.875	**1.995,50**	-0,2%	**1.997,00**	1,50	2.019,90	2.031,33	1.351.250	**5,1967**
31-Dec-20															
AVERAGE	[illegible]		[illegible]				[illegible]	[illegible]		[illegible]				1.360.639	5,1432

AVERAGE				
Month	Copper	Aluminum	USD	BRL Copper
Jan.20	6.049,20	1.771,73	4,1495	25,1010
Feb.20	5.686,45	1.685,85	4,3410	24,6849
Mar.20	5.178,68	1.611,14	4,8839	25,2919
Apr.20	5.048,25	1.457,15	5,3256	26,8849
May.20	5.233,82	1.459,79	5,6434	29,5368
Jun.20	5.742,39	1.564,02	5,1966	29,8409
Jul.20	6.353,76	1.639,35	5,2802	33,5491
Aug.20	6.496,70	1.733,90	5,4612	35,4800
Sep.20	6.712,41	1.745,34	5,3995	36,2436
Oct.20	6.702,77	1.802,82	5,6258	37,7084
Nov.20	7.063,43	1.932,12	5,4178	38,2685
Dec.20	7.755,93	2.019,90	5,1432	39,8899
Average.20	6.168,65	1.701,93	5,1556	31,8733

AVERAGE				
Week	Copper	Aluminum	USD	BRL Copper
1ª	7.670,25	2.038,13	5,2097	39,9595
2ª	7.689,80	2.010,60	5,0918	39,1549
3ª	7.839,20	2.034,10	5,0840	39,8546
4ª	7.787,25	2.006,63	5,1646	40,2182
5ª	7.821,75	1.997,75	5,2100	40,7511

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21	COPPER							ALUMINUM							USD
Days	LME				LME Average			LME				LME Average			PTAX
	Cash	Variação	3 meses	Spread	Cash	3 meses	Stocks	Cash	Variação	3 meses	Spread	Cash	3 meses	Stocks	
01-Apr-22	**10.247,00**	-0,9%	10.260,00	13,00	10.247,00	10.260,00	93.975	**3.483,00**	-0,6%	3.499,00	16,00	3.483,00	3.499,00	635.975	**4,6984**
04-Apr-22	**10.301,50**	0,5%	10.324,00	22,50	10.274,25	10.292,00	94.800	**3.444,00**	-1,1%	3.461,00	17,00	3.463,50	3.480,00	629.775	**4,6175**
05-Apr-22	**10.426,00**	1,2%	10.450,00	24,00	10.324,83	10.344,67	95.975	**3.415,00**	-0,8%	3.441,00	26,00	3.447,33	3.467,00	623.325	**4,6400**
06-Apr-22	**10.350,50**	-0,7%	10.373,00	22,50	10.331,25	10.351,75	94.925	**3.443,50**	0,8%	3.467,00	23,50	3.446,38	3.467,00	619.875	**4,6967**
07-Apr-22	**10.292,00**	-0,6%	10.301,00	9,00	10.323,40	10.341,60	101.275	**3.346,00**	-2,8%	3.374,00	28,00	3.426,30	3.448,40	619.775	**4,7422**
08-Apr-22	**10.390,00**	1,0%	10.380,00	-10,00	10.334,50	10.348,00	103.775	**3.395,00**	1,5%	3.423,00	28,00	3.421,08	3.444,17	615.750	**4,7513**
11-Apr-22	**10.235,50**	-1,5%	10.254,00	18,50	10.320,36	10.334,57	105.600	**3.234,50**	-4,7%	3.251,00	16,50	3.394,43	3.416,57	609.850	**4,7025**
12-Apr-22	**10.201,00**	-0,3%	10.226,00	25,00	10.305,44	10.321,00	104.350	**3.214,50**	-0,6%	3.245,00	30,50	3.371,94	3.395,13	610.775	**4,6483**
13-Apr-22	**10.290,50**	0,9%	10.306,00	15,50	10.303,78	10.319,33	107.000	**3.207,00**	-0,2%	3.238,50	31,50	3.353,61	3.377,72	612.275	**4,6811**
14-Apr-22	**10.277,00**	-0,1%	10.310,00	33,00	10.301,10	10.318,40	110.675	**3.237,50**	1,0%	3.266,00	28,50	3.342,00	3.366,55	608.000	**4,7158**
15-Apr-22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18-Apr-22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**4,6746**
19-Apr-22	**10.381,00**	1,0%	10.391,50	10,50	10.308,36	10.325,05	118.825	**3.312,00**	2,3%	3.326,00	14,00	3.339,27	3.362,86	603.650	**4,6664**
20-Apr-22															
21-Apr-22															
22-Apr-22															
25-Apr-22															
26-Apr-22															
27-Apr-22															
28-Apr-22															
29-Apr-22															
AVERAGE	10.308,36		10.325,05				102.834	3.339,27		3.362,86				617.184	4,6862

AVERAGE				
Month	Copper	Aluminum	USD	BRL Copper
Mai.21	10.183,97	2.433,84	5,2911	53,8840
Jun.21	9.612,43	2.439,09	5,0319	48,3688
Jul.21	9.433,59	2.491,95	5,1567	48,6462
Aug.21	9.357,19	2.610,64	5,2517	49,1413
Sep.21	9.324,07	2.839,68	5,2797	49,2282
Oct.21	9.778,50	2.955,17	5,5400	54,1727
Nov.21	9.765,48	2.641,41	5,5569	54,2654
Dec.21	9.550,31	2.695,36	5,6514	53,9725
Jan.22	9.775,93	3.003,08	5,5341	54,1010
Feb.22	9.941,35	3.260,83	5,1966	51,6610
Mar.22	10.237,59	3.537,85	4,9684	50,8642
Apr.22	10.308,36	3.339,27	4,6862	48,3074
Average.22	10.065,81	3.285,26	5,0963	51,2134

AVERAGE				
Week	Copper	Aluminum	USD	BRL Copper
1ª	10.247,00	3.483,00	4,6984	48,1445
2ª	10.352,00	3.408,70	4,6895	48,5461
3ª	10.251,00	3.223,38	4,6869	48,0457
4ª	10.381,00	3.312,00	4,6705	48,4845
5ª	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

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22	COPPER							ALUMINUM							USD
Days	LME				LME Average			LME				LME Average			PTAX
	Cash	Variação	3 meses	Spread	Cash	3 meses	Stocks	Cash	Variação	3 meses	Spread	Cash	3 meses	Stocks	
01-Sep-21	**9.312,00**	-1,6%	9.310,50	-1,50	9.312,00	9.310,50	252.725	**2.667,50**	-1,7%	2.664,50	-3,00	2.667,50	2.664,50	1.336.850	**5,1576**
02-Sep-21	**9.347,00**	0,4%	9.354,50	7,50	9.329,50	9.332,50	252.400	**2.694,50**	1,0%	2.705,50	11,00	2.681,00	2.685,00	1.335.300	**5,1735**
03-Sep-21	**9.361,00**	0,1%	9.372,00	11,00	9.340,00	9.345,67	252.225	**2.696,00**	0,1%	2.703,50	7,50	2.686,00	2.691,17	1.343.425	**5,1685**
06-Sep-21	**9.401,50**	0,4%	9.411,00	9,50	9.355,38	9.362,00	250.700	**2.745,50**	1,8%	2.756,00	10,50	2.700,88	2.707,38	1.341.000	**5,1773**
07-Sep-21	**9.325,00**	-0,8%	9.335,00	10,00	9.349,30	9.356,60	242.550	**2.740,50**	-0,2%	2.759,00	18,50	2.708,80	2.717,70	1.333.625	**-**
08-Sep-21	**9.256,00**	-0,7%	-	-	9.333,75	-	237.700	**2.775,00**	1,3%	-	-	2.719,83	-	1.334.225	**5,2524**
09-Sep-21	**9.356,50**	1,1%	9.381,00	24,50	9.337,00	9.360,67	233.950	**2.817,00**	1,5%	2.828,00	11,00	2.733,71	2.736,08	1.325.225	**5,2825**
10-Sep-21	**9.515,00**	1,7%	9.533,50	18,50	9.359,25	9.385,36	233.950	**2.896,50**	2,8%	2.907,00	10,50	2.754,06	2.760,50	1.317.725	**5,2158**
13-Sep-21	**9.627,00**	1,2%	9.640,00	13,00	9.389,00	9.417,19	240.350	**2.950,00**	1,8%	2.950,00	0,00	2.775,83	2.784,19	1.309.450	**5,2190**
14-Sep-21	**9.407,00**	-2,3%	9.416,50	9,50	9.390,80	9.417,11	235.950	**2.847,00**	-3,5%	2.858,00	11,00	2.782,95	2.792,39	1.303.500	**5,2260**
15-Sep-21	**9.488,50**	0,9%	9.505,00	16,50	9.399,68	9.425,90	234.000	**2.868,00**	0,7%	2.888,00	20,00	2.790,68	2.801,95	1.299.900	**5,2576**
16-Sep-21	**9.392,00**	-1,0%	9.420,00	28,00	9.399,04	9.425,36	231.200	**2.869,00**	0,0%	2.893,00	24,00	2.797,21	2.810,23	1.319.150	**5,2594**
17-Sep-21	**9.435,50**	0,5%	9.457,00	21,50	9.401,85	9.428,00	240.800	**2.915,00**	1,6%	2.927,00	12,00	2.806,27	2.819,96	1.327.725	**5,3103**
20-Sep-21	**9.145,50**	-3,1%	9.132,00	-13,50	9.383,54	9.405,23	239.500	**2.847,00**	-2,3%	2.857,00	10,00	2.809,18	2.822,81	1.326.150	**5,3332**
21-Sep-21	**9.106,00**	-0,4%	9.107,00	1,00	9.365,03	9.383,93	231.075	**2.864,00**	0,6%	2.878,50	14,50	2.812,83	2.826,79	1.315.975	**5,3044**
22-Sep-21	**9.255,00**	1,6%	9.246,00	-9,00	9.358,16	9.374,73	229.725	**2.887,00**	0,8%	2.906,00	19,00	2.817,47	2.832,07	1.304.725	**5,2783**
23-Sep-21	**9.252,00**	0,0%	9.251,00	-1,00	9.351,91	9.367,00	226.025	**2.937,00**	1,7%	2.951,00	14,00	2.824,50	2.839,50	1.289.075	**5,2891**
24-Sep-21	**9.275,00**	0,2%	9.271,00	-4,00	9.347,64	9.361,35	226.175	**2.905,50**	-1,1%	2.918,00	12,50	2.829,00	2.844,12	1.281.550	**5,3435**
27-Sep-21	**9.341,00**	0,7%	9.328,00	-13,00	9.347,29	9.359,50	223.175	**2.888,00**	-0,6%	2.904,00	16,00	2.832,11	2.847,44	1.273.750	**5,3478**
28-Sep-21	**9.263,00**	-0,8%	9.260,00	-3,00	9.343,08	9.354,26	226.625	**2.899,00**	0,4%	2.916,00	17,00	2.835,45	2.851,05	1.256.450	**5,4206**
29-Sep-21	**9.227,00**	-0,4%	9.215,50	-11,50	9.337,55	9.347,33	220.875	**2.913,00**	0,5%	2.930,00	17,00	2.839,14	2.855,00	1.248.625	**5,4173**
30-Sep-21	**9.041,00**	-2,0%	9.021,00	-20,00	9.324,07	9.331,79	219.525	**2.851,00**	-2,1%	2.867,00	16,00	2.839,68	2.855,57	1.238.300	**5,4394**
AVERAGE	9.324,07		9.331,79				235[illegible]09	2.839,68		2.855,57				1.307.350	5,2797

AVERAGE				
Month	Copper	Aluminum	USD	BRL Copper
Oct.20	6.702,77	1.802,82	5,6258	37,7084
Nov.20	7.063,43	1.932,12	5,4178	38,2685
Dec.20	7.755,24	2.017,90	5,1456	39,9052
Jan.21	7.970,50	2.003,80	5,3562	42,6920
Feb.21	8.460,25	2.079,60	5,4165	45,8249
Mar.21	9.004,98	2.191,59	5,6461	50,8434
Apr.21	9.335,55	2.323,75	5,5621	51,9256
Mai.21	10.183,97	2.433,84	5,2911	53,8840
Jun.21	9.612,43	2.439,09	5,0319	48,3688
Jul.21	9.433,59	2.491,95	5,1567	48,6462
Aug.21	9.357,19	2.610,64	5,2517	49,1413
Sep.21	9.324,07	2.839,68	5,2797	49,2282
Average.21	9.186,95	2.379,33	5,3325	48,9[illegible]5

AVERAGE				
Week	Copper	Aluminum	USD	BRL Copper
1ª	9.340,00	2.686,00	5,1665	48,2554
2ª	9.370,80	2.794,90	5,2320	49,0280
3ª	9.470,00	2.889,80	5,2545	49,7597
4ª	9.206,70	2.888,10	5,3097	48,8848
5ª	9.218,00	2.887,75	5,4063	49,8350

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22	COPPER							ALUMINUM							USD
Days	LME				LME Average			LME				LME Average			PTAX
	Cash	Variação	3 meses	Spread	Cash	3 meses	Stocks	Cash	Variação	3 meses	Spread	Cash	3 meses	Stocks	
01-Dec-20	**7.644,00**	-0,4%	7.649,00	5,00	7.644,00	7.649,00	149.925	**2.045,50**	1,5%	2.052,50	7,00	2.045,50	2.052,50	1.368.125	**5,2789**
02-Dec-20	**7.616,50**	-0,4%	7.623,00	6,50	7.630,25	7.636,00	149.675	**2.051,50**	0,3%	2.062,00	10,50	2.048,50	2.057,25	1.364.175	**5,2267**
03-Dec-20	**7.679,00**	0,8%	7.682,00	3,00	7.646,50	7.651,33	149.325	**2.028,00**	-1,1%	2.039,50	11,50	2.041,67	2.051,33	1.358.425	**5,1625**
04-Dec-20	**7.741,50**	0,8%	7.748,50	7,00	7.670,25	7.675,63	149.675	**2.027,50**	0,0%	2.040,00	12,50	2.038,13	2.048,50	1.353.350	**5,1706**
07-Dec-20	**7.656,50**	-1,1%	7.672,00	15,50	7.667,50	7.674,90	150.125	**2.004,00**	-1,2%	2.018,50	14,50	2.031,30	2.042,50	1.350.575	**5,1018**
08-Dec-20	**7.635,00**	-0,3%	7.647,50	12,50	7.662,08	7.670,33	149.625	**1.986,00**	-0,9%	2.007,00	21,00	2.023,75	2.036,58	1.343.950	**5,0920**
09-Dec-20	**7.704,50**	0,9%	7.723,50	19,00	7.668,14	7.677,93	149.575	**2.010,00**	1,2%	2.027,50	17,50	2.021,79	2.035,29	1.338.575	**5,1109**
10-Dec-20	**7.712,00**	0,1%	7.729,50	17,50	7.673,63	7.684,38	147.825	**2.031,00**	1,0%	2.042,00	11,00	2.022,94	2.036,13	1.333.375	**5,0852**
11-Dec-20	**7.741,00**	0,4%	7.760,00	19,00	7.681,11	7.692,78	146.325	**2.022,00**	-0,4%	2.034,50	12,50	2.022,83	2.035,94	1.329.600	**5,0691**
14-Dec-20	**7.763,00**	0,3%	7.787,00	24,00	7.689,30	7.702,20	144.775	**2.042,50**	1,0%	2.054,00	11,50	2.024,80	2.037,75	1.357.650	**5,0578**
15-Dec-20	**7.753,00**	-0,1%	7.775,50	22,50	7.695,09	7.708,86	141.900	**2.022,00**	-1,0%	2.038,00	16,00	2.024,55	2.037,77	1.357.375	**5,0968**
16-Dec-20	**7.823,00**	0,9%	7.847,50	24,50	7.705,75	7.720,42	133.125	**2.029,00**	0,3%	2.045,50	16,50	2.024,92	2.038,42	1.377.225	**5,1057**
17-Dec-20	**7.893,00**	0,9%	7.914,00	21,00	7.720,15	7.735,31	127.725	**2.028,00**	0,0%	2.041,00	13,00	2.025,15	2.038,62	1.371.300	**5,0612**
18-Dec-20	**7.964,00**	0,9%	7.984,50	20,50	7.737,57	7.753,11	123.400	**2.049,00**	1,0%	2.059,50	10,50	2.026,86	2.040,11	1.367.025	**5,0986**
21-Dec-20	**7.838,50**	-1,6%	7.858,30	19,80	7.744,30	7.760,12	122.975	**2.012,50**	-1,8%	2.023,50	11,00	2.025,90	2.039,00	1.390.350	**5,1572**
22-Dec-20	**7.753,00**	-1,1%	7.777,00	24,00	7.744,84	7.761,18	119.600	**1.993,00**	-1,0%	2.006,50	13,50	2.023,84	2.036,97	1.383.725	**5,1473**
23-Dec-20	**7.764,50**	0,1%	7.784,50	20,00	7.746,00	7.762,55	119.375	**1.999,00**	0,3%	2.008,50	9,50	2.022,38	2.035,29	1.378.100	**5,1740**
24-Dec-20	**7.793,00**	0,4%	7.811,50	18,50	7.748,61	7.765,27	116.100	**2.022,00**	1,2%	2.025,50	3,50	2.022,36	2.034,75	1.372.350	**5,1800**
28-Dec-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**5,2390**
29-Dec-20	**7.840,00**	0,6%	**7.854,00**	14,00	7.753,42	7.769,94	113.975	**2.000,00**	-1,1%	**2.004,00**	4,00	2.021,18	2.033,13	1.366.275	**5,1942**
30-Dec-20	**7.803,50**	-0,5%	**7.815,50**	12,00	7.755,93	7.772,22	110.875	**1.995,50**	-0,2%	**1.997,00**	1,50	2.019,90	2.031,33	1.351.250	**5,1967**
31-Dec-20															
AVERAGE	7.755,93		7.772,22				135.785	2.019,90		2.031,33				1.360.639	5,1432

AVERAGE				
Month	Copper	Aluminum	USD	BRL Copper
Jan.20	6.049,20	1.771,73	4,1495	25,1010
Feb.20	5.686,45	1.685,85	4,3410	24,6849
Mar.20	5.178,68	1.611,14	4,8839	25,2919
Apr.20	5.048,25	1.457,15	5,3256	26,8849
May.20	5.233,82	1.459,79	5,6434	29,5368
Jun.20	5.742,39	1.564,02	5,1966	29,8409
Jul.20	6.353,76	1.639,35	5,2802	33,5491
Aug.20	6.496,70	1.733,90	5,4612	35,4800
Sep.20	6.712,41	1.745,34	5,3995	36,2436
Oct.20	6.702,77	1.802,82	5,6258	37,7084
Nov.20	7.063,43	1.932,12	5,4178	38,2685
Dec.20	7.755,93	2.019,90	5,1432	39,8899
Average.20	6.168,65	1.701,93	5,1556	41,87[illegible]3

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AVERAGE				
Week	Copper	Aluminum	USD	BRL Copper
1ª	7.670,25	2.038,13	5,2097	39,9595
2ª	7.689,80	2.010,60	5,0918	39,1549
3ª	7.839,20	2.034,10	5,0840	39,8546
4ª	7.787,25	2.006,63	5,1646	40,2182
5ª	7.821,75	1.997,75	5,2100	40,7511

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TRANSFORMER COMMODITIES INDICES

MONTHLY

STATISTICS

FOR THE PERIOD

January 2009 - July 2021

PUBLICATION DATE: 9 SEPTEMBER 2021

"The indices are published monthly, usually in the first week of the month starting three months after the month of reference in compliance with EU market statistical rules (e.g. data for February 2017, is published in the first week of June 2017)."

IMPORTANT
In April 2020, the December 2019 - March 2020 indices for GOES High Grade have been updated due to a change in the number of reporting organisations.

We have stopped publishing the **Aluminium and Copper indices** after December 2012, as information is readily available from other sources.

T&D EUROPE

TRANSFORMER COMMODITY INDICES

BASE APR-2017 = 100 [Goes Conv., Goes High Grade, Goes Super High Grade, Mineral Oil] [1]The number of reporting organisations has changed and a linking factor has been applied to the series.

		GOES CONV.	GOES HIGH GRADE	GOES SUPER HIGH GRADE	MIN. OIL	PAPER	COLD STEEL	HOT STEEL
2017	FEB					109.7	123.3	121.7
	MAR					109.5	123.8	124.3
	APR	100.000	100.000	100.000	100.000	109.500	121.800	123.200
	MAY	100.163	100.000	99.378	101.734	109.665	120.519	121.335
	JUN	100.235	98.979	99.412	101.080	109.673	119.865	120.967
	JUL	105.145	98.013	100.828	98.896	110.000	119.348	120.410
	AUG	106.172	97.843	99.390	98.620	110.000	120.707	122.027
	SEP	106.435	97.843	99.317	98.286	109.999	121.160	121.249
	OCT	107.814	96.028	99.326	95.043	110.222	121.249	121.389
	NOV	107.878	96.028	99.160	95.673	110.649	121.472	119.327
	DEC	109.272	96.028	100.098	96.045	110.759	121.194	121.212
2018	JAN	109.007	95.216	99.302	100.808	111.458	124.213	125.963
	FEB	110.347	97.141	98.774	101.875	111.890	125.712	128.463
	MAR	110.663	97.139	99.916	101.427	112.269	125.992	129.341
	APR	110.378	97.047	99.745	101.371	112.588	126.281	130.752
	MAY	110.115	97.047	99.705	102.369	112.918	127.249	131.036
	JUN	110.186	97.217	100.370	102.766	113.355	127.332	130.483
	JUL	111.646	98.734	99.968	108.084	113.517	127.625	131.227
	AUG	111.985	99.572	99.947	107.179	113.407	127.902	131.029
	SEP	111.325	99.234	99.853	107.373	113.459	128.167	131.381
	OCT	111.700	99.245	100.027	110.128	113.788	126.984	131.100
	NOV	112.119	99.245	100.212	110.257	114.280	125.242	128.790
	DEC	112.228	98.229	100.636	110.368	114.335	124.156	127.591
2019	JAN	110.143	98.269	99.205	110.660	114.947	122.791	126.203
	FEB	109.353	98.268	99.425	110.470	115.582	123.407	125.984
	MAR	108.991	98.406	99.146	110.334	115.525	125.242	127.719
	APR	109.069	98.439	99.396	104.816	115.733	123.038	126.157
	MAY	109.101	98.277	99.580	104.613	115.634	122.054	124.932
	JUN	110.869	98.612	99.070	104.345	115.381	122.647	125.062
	JUL	110.695	98.541	98.539	107.540	115.480	123.374	124.758
	AUG	111.183	98.541	99.284	106.875	115.436	123.933	127.046
	SEP	111.173	98.378	99.141	106.875	115.535	124.649	126.472
	OCT	110.630	96.123	99.192	105.139	115.326	122.725	123.153
	NOV	110.641	96.123	99.559	103.939	115.183	120.119	119.640
	DEC[1]	110.186	96.114	100.365	104.160	115.073	120.219	119.944
2020	JAN[1]	107.583	95.845	99.427	104.881	114.876	122.949	122.709
	FEB	106.867	96.344	99.121	104.871	114.876	125.992	125.496
	MAR	106.835	96.444	99.029	102.664	114.711	124.727	124.303
	APR[1]	107.421	97.126	99.033	100.799	115.304	121.819	121.982
	MAY	107.421	97.126	99.518	100.217	115.249	121.304	121.299
	JUN	107.431	97.126	99.039	98.019	114.996	119.805	118.740
	JUL	107.507	97.126	98.814	89.782	114.887	119.515	119.087
	AUG	107.507	97.126	99.855	85.894	114.832	120.488	120.399
	SEP	107.659	97.126	99.059	79.845	115.040	126.819	125.029
	OCT	106.857	96.406	98.549	82.089	115.194	129.359	129.172
	NOV	106.857	96.406	97.631	83.733	115.084	132.256	131.698
	DEC	106.857	96.406	97.978	84.342	115.557	139.907	139.473
2021	JAN	109.112	97.958	98.345	89.329	115.997	156.139	158.851
	FEB	109.210	97.958	98.814	89.819	116.415	164.808	169.088
	MAR	109.828	97.958	98.386	87.685	116.843	175.155	180.702
	APR	112.843	102.210	99.478	93.983	117.261	194.071	202.227
	MAY	114.176	104.566	101.028	99.100	119.064	204.531	219.761
	JUN	119.772	114.128	105.252	100.180	120.119	211.008	229.998
	JUL	147.077	138.935	131.229	104.761	121.702	231.937	249.137
	AUG	155.318	155.801	134.473	107.808	123.879	233.783	250.666
	SEP	156.294	157.508	134.718	108.279	126.198	235.651	251.891
	OCT	176.323	157.938	136.412	113.654	127.363	236.923	251.160
	NOV	176.790	159.050	137.769	115.418	130.013	240.331	251.160
	DEC	172.886	159.630	139.739	115.468	130.068	235.114	242.164
2022	JAN	182.828	168.341	154.287	127.012	132.255	225.751	233.825
	FEB	190.394	171.295	155.644	126.786			
	MAR							
	APR							
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