

**JUSTIFICATION OF LAYING OF UNDERGROUND
CABLE IN FOREST AREA**

Alternate feasible routes were studied based on preliminary/ walkover survey keeping in view of length of lines, number of angle points, power line crossing and other statutory clearances. Upon detailed study, the proposed laying of UNDER GROUND cable of 66kv found to be generally feasible and with minimum infringement with the already existing permanent features and least inconvenience to habitat at large. Moreover circumventing of forest area comes to more than 35 k.m which mostly consist of agricultural area and villages.

Place: Tumakuru

Date: 22-11-2017


(S. Kailash)

Manager-Corporate Affairs,
Adani Green Energy (TN) Ltd.,

Counter signed by



Deputy Conservator of Forests,
Tumakuru Division, Tumakuru.

Full Title of the Project: Laying of Under Ground 66 K.V Transmission Cable.
File No: A5/Land/66K.V/CR-110/2017-18
Date of Proposal: 29-08-2017

CERTIFICATE FOR MINIMUM USE OF FOREST LAND

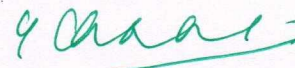
This is to certify that the forest area involved in the proposal is unavoidable and barest minimum forest area i.e. 0.895 ha area is proposed for diversion.

Place: Tumakuru
Date: 22-11-2017


(S. Kailash)

Manager-Corporate Affairs,
Adani Green Energy (TN) Ltd.,

Counter signed by



Deputy Conservator of Forests,
Tumakuru Division, Tumakuru

Full Title of the Project: Laying of Under Ground 66 K.V Transmission Cable.
File No: A5/Land/66K.V/CR-110/2017-18
Date of Proposal: 29-08-2017

**UNDERTAKING FOR PAYMENT OF NET PRESENT VALUE
OF FOREST AREA**

It is to certify that I, S. Kailsah, Manager-Corporate Affairs (Authorised Signatory) of M/s Adani Green Energy (UP) Ltd., Bengaluru have applied for diversion of 0.895 ha., of forest area for the purpose of non-forest activities, hereby, undertake to pay the net present value (NPV) of the above forest land.

Place: Tumakuru
Date: 22-11-2017


(S. Kailsah)

Manager-Corporate Affairs,
Adani Green Energy (TN) Ltd.,

Counter signed by-



Deputy Conservator of Forests,
Tumakuru Division, Tumakuru

Full Title of the Project: Laying of Under Ground 66 K.V Transmission Cable.
File No: A5/Land/66K.V/CR-110/2017-18
Date of Proposal: 29-08-2017

**UNDERTAKING FOR PAYMENT OF ADDITIONAL NET
PRESENT VALUE OF FOREST AREA**


It is to certify that I, S. Kailsah, Manager-Corporate Affairs (Authorised Signatory) of M/s Adani Green Energy (UP) Ltd., Bengaluru have applied for diversion of 0.895 ha., of forest area for the purpose of non-forest activities, hereby, undertake to pay the additional net present value of the above forest land.

Place: Tumakuru
Date: 22-11-2017


(S. Kailash)

Manager-Corporate Affairs,
Adani Green Energy (TN) Ltd.,

Counter signed by-


Deputy Conservator of Forests,
Tumakuru Division, Tumakuru

DECLARATION

I, S. Kailsah, Manager-Corporate Affairs (Authorised Signatory) of M/s Adani Green Energy (UP) Ltd., Bengaluru hereby, declare that we would pay the land lease rent and supervisory charges as per the rules of the Forest Department as applicable to forest land to the extent of 0.895 ha., in Ankasandra Reserved Forest, sought to be diverted for non-forest activity.

Place: Tumakuru

Date: 22-11-2017



(S. Kailsah)
Manager-Corporate Affairs,
Adani Green Energy (TN) Ltd.,

Appendix-10B 09.10.2017

No, 160, on Chambers, 2nd Floor

No. Total Gas Pump, Bangalore - 560 020.

81)

ಚೆಂಡಾಂಯಕ್ ಲಾ.ವೈದ್ಯ - ಬಿ.ಎ.ಎಸ್.

அகதரது (பொது) கருவியை

ಅಂಶ ೨(ನಿ)

ଅନ୍ତର୍ଗତ

ಲಿಂಕ್ :- ಲಿಂಕ್ ಬಂದ್ರಾ ಎಂಕಿ ನಲ ಅರ್ಜಿ ನ್ಯಾಕ್ಟಿ
ಕೊಡುನ ಹೆಣ್ ವ.ನಂ-16,17, ಮತ್ತು ತಿರ್ಲೆ
ಲಿಂಕ್ ಗ್ರಾಂಪಿ ವ.ನಂ-19 ವ್ಯಾ ನಂ-28
ಲಿಂಕ್ ಲಿಂಕ್ ನ್ಯಾಕ್ಟಿ Forest Right
Act-2005 ರಿ ಅರ್ಜಿ, ತಿರ್ಲೆ ನಲ
ಲಿಂಕ್.

ಹೊಸಪೇಟೆ ಎಲ್ಲಾ ರೀತಿಯ ಪರಿಸರ ಸಂರಕ್ಷಣೆ ಮತ್ತು
Green Energy (P) Ltd. ಈ ಸಂಸ್ಥೆ 34, ಬೆಂಗಳೂರು ರೋಡ್
"ಅಂತರರಾಷ್ಟ್ರೀಯ" ಅಂತರರಾಷ್ಟ್ರೀಯ ಕುರಿತು ಸಂಸ್ಥೆ
16, 17 ಮತ್ತು 18 ರಲ್ಲಿ (ಸಂಸ್ಥೆ) ಸಂಸ್ಥೆ 19 ರಲ್ಲಿ 0-28 ಎಕರೆ
ಜಮೀನನ್ನು ತಾಲ್ಲೂಕಿನಲ್ಲಿ - ಅಂತರರಾಷ್ಟ್ರೀಯ ಸಂಸ್ಥೆ ಕುರಿತು
ಸಂಸ್ಥೆ ಸಂಸ್ಥೆ 1980 ರ ಅಂತರರಾಷ್ಟ್ರೀಯ (ಸಂಸ್ಥೆ) ಸಂಸ್ಥೆ
2 ರಲ್ಲಿ ಸಂಸ್ಥೆ ಸಂಸ್ಥೆ ಸಂಸ್ಥೆ - ಸಂಸ್ಥೆ ಅಂತರರಾಷ್ಟ್ರೀಯ
ಅಂತರರಾಷ್ಟ್ರೀಯ ಸಂಸ್ಥೆ ಸಂಸ್ಥೆ ಸಂಸ್ಥೆ. ಈ ಸಂಸ್ಥೆ ಅಂತರರಾಷ್ಟ್ರೀಯ
ಸಂಸ್ಥೆ ಸಂಸ್ಥೆ ಸಂಸ್ಥೆ ಸಂಸ್ಥೆ ಸಂಸ್ಥೆ ಸಂಸ್ಥೆ ಸಂಸ್ಥೆ ಸಂಸ್ಥೆ
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Forest Right Act-2005 ರಲ್ಲಿ ಅಂತರರಾಷ್ಟ್ರೀಯ ಸಂಸ್ಥೆ
ಸಂಸ್ಥೆ ಸಂಸ್ಥೆ ಸಂಸ್ಥೆ ಸಂಸ್ಥೆ ಸಂಸ್ಥೆ ಸಂಸ್ಥೆ ಸಂಸ್ಥೆ ಸಂಸ್ಥೆ
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Tree Enumeration List for 66 Kv under ground Cable at Ankasandra SF, Gubbi Range

(In Cms)

Sl No.	Common Name	Botanical Name	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	TOTAL
1	Bevu	Azadirachta indica	12	-	4	2	-	-	-	-	-	-	18
2	Biduru	Bamboo	1	-	-	-	-	-	-	-	-	-	1
3	Devadaru	erythroxylon monogylen	4	-	1	-	-	-	-	-	-	-	5
4	Elachi	zyzyphus jujub	-	-	1	-	-	-	-	-	-	-	1
5	Hatti	Ficus glomerata Roxb	1	-	1	-	-	-	-	-	-	-	2
6	Hippe	madhuka indica	7	-	-	-	-	-	-	-	-	-	7
7	Honge	pongamia pinnata	76	-	21	-	-	-	-	-	-	-	97
8	Honne	pterocapus marasupium	3	-	-	-	-	-	-	-	-	-	3
9	Kadublikke	gardenia gummlifera	1	-	4	1	-	-	-	-	-	-	6
10	Kakke	casipistola	1	-	1	-	-	-	-	-	-	-	2
11	Kanara	haradwickia binata	11	-	-	-	-	-	-	-	-	-	11
12	Muttuga	butea monosforma	1	-	-	1	-	-	-	-	-	-	2
14	Nayibela	Acacia leucophloea	-	-	-	1	-	-	-	-	-	-	1
15	Seemetangadi	cassia sisamea	18	-	-	3	-	-	-	-	-	-	21
16	Sisu	dalbergiasissoo	2	-	-	-	-	-	-	-	-	-	2
17	Taredu	acacia catachu	14	-	21	10	-	-	-	-	-	-	45
18	Tuggali	albizzia amara	3	-	4	3	-	2	-	-	-	-	12
19	Udaya	stereospermum	1	-	1	-	-	-	-	-	-	-	2
TOTAL													238

Deputy Conservator of Forests
Tumkur Division, Tumkur.

ಸಹಾಯಕ ಅರಣ್ಯ ಸಂರಕ್ಷಣಾಧಿಕಾರಿ,
ತುಮಕೂರು ಉಪವಿಭಾಗ, ತುಮಕೂರು

Range Forest Officer,
Gubbi Range, Gubbi

SITE INSPECTION REPORT NOT BELOW THE RANK OF DCF

(For the Forest land to be diverted under FCA)

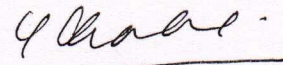
A proposal has been received by this office from **M/s Adani Green Energy (UP) Ltd., Bengaluru** for diversion (under FCA-1980) of **Laying of Under Ground 66 K.V Transmission Cable at Talekoppa Sy. No. 19 & Kurubarahalli Sy. No. 16 & 17 of Ankasandra Reserved Forest at Gubbi Range.** The subject envisages the use of forest land for non-forest activity. The site inspection of the land involved in the proposal has been done by me on dated 30-10-2017 & 21-11-2017.

On inspection of the site, it is found that the land required by the user agency is a forest measuring 0.895 hectare.

The requirement of forest land as proposed by the user agency in Col. 2 of part-I is unavoidable and is barest minimum required for the project.

Place : Tumakuru

Date 22-11-2017


(Y. Chakrapani)

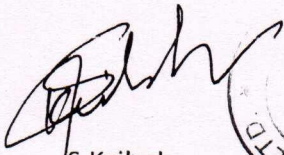
Deputy Conservator of Forests,
Tumakuru Division, Tumakuru.

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UNDERTAKING

On behalf of User Agency M/s. Adani Green Energy (U.P) Ltd., the undersigned hereby, give undertaking that the user agency will take all proper care such as Fire Proofing, Root Proofing and all such steps to safeguard the Flora & Fauna of the Forest. Moreover, we assure that we will maintain the corridor as per the directive of Forest Department.


S. Kailash

Adani Green Energy (UP) Ltd
No 160, Om Chambers, 2nd Floor, Nr Total Gaz Pump
1st Main Road, Sheshadripuram
Bangalore 560 020
Karnataka, India
CIN: U40106GJ2015PLC083925



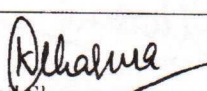

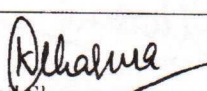

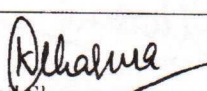
Tel +91 80 2344 7202
info@adani.com
www.adani.com

Registered Office: Adani House, Nr Mithakhali Circle, Navrangpura, Ahmedabad 380 009, Gujarat, India

INSPECTION & TECHNICAL DETAILS OF CABLE

Appendix-15

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	TATA PROJECTS LIMITED		AHM11AHP206/DELKEI110412IKSX Date: 11.04.2012 Sheet: 1 of 2 Contract Code: AHM11AHP206																						
	INSPECTION / EXPEDITING REPORT																								
CLIENT : ADANI PROJECT : HAZIRA EQUIPMENT : HT Cables PERSONS CONTACTED : Mr. V.K. Gupta TEL: 07665678844 QAP Ref: Given below Inspection Call ref.: E-Mail Dated 06.04.2012 by Mayank Pandya of M/S Adani Inspection & Test status: Accepted / Rework / Hold / NCR / Rejected as given below																									
VENDOR : KEI Industries Ltd. SUB VENDOR : ----- Qty. : As given below TEL: 07665678844 Rev.: --																									
P.O. No. /Dtd.: As Given Below P.O. No./ Date : ----- Date of Visit : 10 to 11-APR-2012 Fax : 01493-5221732 Date: -- Stage / Final Inspection																									
1. REFERENCE DOCUMENTS: a) P.O. No. 4500064655 DT 09.11.2011 b) Approved with commented QAP for 66KV XLPE Cable #Doc No.KEI/QAP/EHV Cables/P-15261 Rev.00 (03 sheets) c) Approved GTP for Single Core X 630 Sqmm X 66KV REV.00 (03 Sheets) d) IEC-60840																									
2. SCOPE OF INSPECTION: a) <u>Acceptance Tests</u> : - Witness Acceptance tests as per QAP clause No. 3.2 b) <u>Document Review</u> : - Documents Review as per QAP.																									
3. DESCRIPTION OF ITEMS OFFERED/INSPECTED: <table border="1"> <thead> <tr> <th>PO Item No.</th> <th>ITEM DESCRIPTION</th> <th>ORDER QTY</th> <th>OFFERED QTY</th> <th>FINAL QTY</th> <th>ACCEPTED QTY.</th> <th>Balance Qty</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td colspan="4">Mtrs</td> <td></td> </tr> <tr> <td>1.</td> <td>1Cx 630 sq mm 66 kV (E) EHV XLPE CABLE</td> <td>13800</td> <td>14304</td> <td>14283</td> <td>Refer Conclusion</td> <td>Nil</td> </tr> </tbody> </table>					PO Item No.	ITEM DESCRIPTION	ORDER QTY	OFFERED QTY	FINAL QTY	ACCEPTED QTY.	Balance Qty			Mtrs					1.	1Cx 630 sq mm 66 kV (E) EHV XLPE CABLE	13800	14304	14283	Refer Conclusion	Nil
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4. NARRATIVE SUMMARY: (DETAILS OF INSPECTION CARRIED OUT): <table border="1"> <thead> <tr> <th>S.No.</th> <th>DETAILS</th> <th>CHARACTERISTICS</th> <th>QUANTUM OF CHECK</th> <th>OBSERVATIONS</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Visual check</td> <td>Checked for general workmanship, surface finish (Defect & damage free) construction, circularity, core identification, shape of Conductor, embossing on outer sheath, sequential markings, cable drum marking, cable drum condition etc</td> <td>Randomly</td> <td>Acceptable</td> </tr> </tbody> </table>					S.No.	DETAILS	CHARACTERISTICS	QUANTUM OF CHECK	OBSERVATIONS	1.	Visual check	Checked for general workmanship, surface finish (Defect & damage free) construction, circularity, core identification, shape of Conductor, embossing on outer sheath, sequential markings, cable drum marking, cable drum condition etc	Randomly	Acceptable											
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<table border="1"> <tr> <td> VENDOR : KEI Signature:  Name: V.K. Gupta </td> <td> TPL Signature:  Name : Kapil Sharma </td> <td> CLIENT Signature: _____ Name: _____ </td> </tr> </table>					VENDOR : KEI Signature:  Name: V.K. Gupta	TPL Signature:  Name : Kapil Sharma	CLIENT Signature: _____ Name: _____																		
VENDOR : KEI Signature:  Name: V.K. Gupta	TPL Signature:  Name : Kapil Sharma	CLIENT Signature: _____ Name: _____																							

TQF - 05 Rev.



KAPIL SHARMA
Senior Surveyor
Tata Projects Ltd., Delhi

CUSTOMER NAME : GETCO VADODRA
LOI NO. : ACE(Proc)/I/E-2576/66KV XLPE Cable/LOI/Torrent/6436 Dt.: 05.05.2017

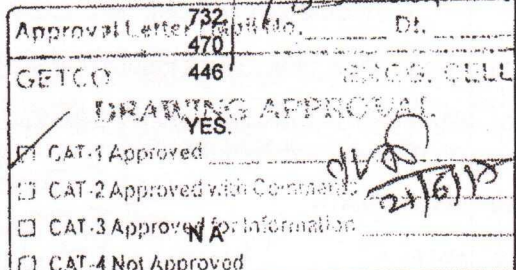
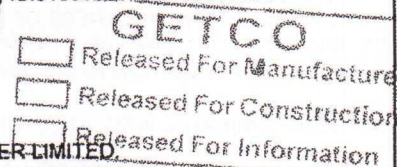


GURANTEED TECHNICAL PARTICULARS.

Ref. No. : TPL/WKS/TK-655/F-6/16-17.

PAGE 1 OF 4

SR. NO.	TECHNICAL PARTICULARS	UNIT	CORES SQ.MM.
			1 630 A2XCW2Y
1.00.00	GENERAL		
1.01.00	NAME OF THE CONTRACTORS		TORRENT POWER LIMITED (CABLES UNIT)
1.03.00	SPECIFICATIONS & STANDARDS		IS:7098 (3) 1993 IS:8430/1984 /IS: 5831 /1984
1.04.00	SPECIFICATION'S & STANDARDS		
1.05.00	GENERAL TECHNICAL REQUIREMENT OF CABLE SHALL BE AS PER CL.1.5 OF TENDER SPEC.		YES.
2.00.00	CABLE		
2.01.00	NAME OF THE MANUFACTURER		TORRENT POWER LIMITED
2.02.00	PLACE OF MANUFACTURER		YOGI NAGAR,MISSION ROAD, NADIAD.
2.03.00	CABLE TYPE		A2XCW2Y
2.04.00	APPLICABLE SPECIFICATION AND STANDARDS		IS:7098 (3) 1993.
2.05.00	VOLTAGE GRADE		38/66 KV
2.06.00	NO. OF CORES & SIZE		1 x 630
2.07.00	SUITABLE FOR EARTHED / UN EARTHED SYSTEM		EARTHED SYSTEM
2.08.00			TRIPPLE EXTRUSION DRY GAS CURED
a)	DESCRIBE TECHNIQUE FOR COND. SCREEN INSULATION AND INSULATION SCREEN		
b)	PERMISSIBLE VOLTAGE & FREQUENCY VARIATION FOR SATISFACTORY OPERATION		VOLTAGE : + / - 10 % FREQUENCY : + / - 5 % VOLTAGE & FREQUENCY COMBINED : + 10 % & - 15 %
2.09.00	CONTINUOUS CURRENT CARRYING CAPACITY FOR SITE CONDITION		
2.09.01	1) IN AIR AT 40°C AMP. 2) IN GROUND AT 30°C AMP. 3) IN DUCT AT 30°C AMP.	AMP. AMP. AMP.	
2.09.02	DERATING FACTORS FOR VARIOUS CONDITIONS OF LAYING ARE NOT WORSE THEN THOSE SPECIFIED IN APPLICABLE IS /IEC		
2.09.03	DERATING FACTOR FOR FIRE RESISTANCE --- TREATMENT		
2.10.00	CONDUCTOR		
2.10.01	MATERIAL		
2.10.02	SHAPE OF CONDUCTOR		
2.10.03	NOMINAL CROSS SECTIONAL AREA IN SQ MM	SQ.MM.	
2.10.04	NUMBER OF WIRES		
2.10.05	DIAMETER OF EACH WIRE MM. (BEFORE STRANDING & COMPACTING)	MM	
2.10.06	APPROX. DIAMETER OF COND. MM.	MM	
2.10.07	CURRENT CARRYING CAPACITY		
a)	ON CONTINUOUS BASIS		
b)	S.C.CURRENT FOR 1 SEC. IN KA.	KA	
2.11.00	CONDUCTOR SCREENING		
2.11.01	TYPE		EXTRUDED
2.11.02	MATERIAL		S. C. COMPOUND With Thickness of 0.80 mm Minimum
2.11.03	CONTINUOUS WORKING TEMP. °C	°C	90°C
2.11.04	MAXIMUM ALLOWABLE TEMP. AT S.C.CURRENT	°C	250°C



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CUSTOMER NAME : GETCO VADODRA

LOI NO. : ACE(Proc)/I/E-2576/66KV XLPE Cable/LOI/Torrent/6436 Dt.: 05.05.2017



PAGE 3 OF 4

SR. NO.	TECHNICAL PARTICULARS	UNIT	CORES SQ.MM.	1 630 A2XCW2Y	CABLES UNIT
2.17.00	OUTER SHEATH				
2.17.01	MATERIAL			BLACK HDPE ST-7 (IEC - 60502)	
2.17.02	THICKNESS OF SHEATH (MINIMUM) MM.	MM		2.68 MM MINIMUM	
2.17.03	TOLERANCE ON THICKNESS			NOT APPLICABLE	
2.17.04	APPROX.OVERALL DIAMETER OF CABLE IN MM.			78.00 MM +/- 3.0 mm	
2.19.00	SHORT CIRCUIT WITH STAND CAPACITY OF OFFERED CABLE				
2.19.01	SHORT CIRCUIT CURRENT KA.	KA		59.22 KA	
2.19.02	DURATION OF SHORT CIRCUIT	SEC.		ONE SECOND	
2.20.00	ALLOWABLE / ATAINABLE MAXIMUM CONDUCTOR TEMP. WHEN CARRYING CONTINUOUS CURRENT AS PER ITEM.2.09.00 ABOVE	°C		90°C	
2.21.00	ALLOWABLE / ATAINABLE MAXIMUM CONDUCTOR TEMP. AT THE TERMINATION OF SHORT CIRCUIT CURRENT AS PER ITEM 2.19.00 ABOVE.	°C		250°C	
2.22.00	CABLE CONSTANTS				
2.22.01	MAX. DC RESISTANCE AT 20°C IN OHMS /KM	OHM/KM.		0.0469	
2.22.02	APPROX. AC RESISTANCE AT OPERATING TEMP.	OHM/KM.		0.0615	
2.22.03	LOSS TANGENT			0.001 MAX.	
2.22.04	DIELECTRIC CONSTANT			2.35 APPROX.	
2.23.00	MAX. CABLE CHARGING CURRENT AT NORMAL OPERATING VOLTAGE IN AMPS /KM	A/KM.		3.20 A/KM. APPROX.	
2.25.00	IS THE OFFERED CABLE GUARANTED TO SAFELY WITHSTAND CONTINUOUS CONDUCTOR TEMP. OF 90°C AND ALSO SAFELY WITH STAND TEMP. UPTO 130°C FOR A DURATION OF 100 Hrs per Year			YES, OVERLOAD PERIOD FOR 2 HOURS MAX. DURING ONE PERIOD / OCCURANCE. TOTAL DURATION OF CABLE OVER LOADING AT CONDUCTOR TEMP. OF 130°C SHALL BE LIMITED TO 100 HOUS MAX. IN ANY TWELVE CONSECUTIVE MONTH AND 500 HOURS FOR THE CABLE LIFE.	
A)	OVERLOAD AMP. IN GROUND			IN GROUND (30°C) : 564 Amp.	
B)	OVERLOAD AMP. IN DUCT			IN DUCT (30°C) : 534 Amp.	
2.26.00	ARE THE OFFERED 1 CORE CABLE GUARANTED TO PERFORM SATIS -FACTORY UNDER INSTALLATION CONDITION SPECIFIED IN d.1.3 IF YES ,FURNISHED CALCULATION IN SUPPORT INCLUDING FOLLOWING DATA WHEN BOTH END GROUNDED WITH SVL & MIDDLE POINT SOLIDLY GROUNDED.			Approval Letter / No. 185 Dt. 21/6-17	
	CALCULATION				
	APPROX. ARMOUR REACTANCE PER KM.			0.052	
a)	INDUCED VOLTAGE IN ARMOUR WHEN				
	(1) AT RATED CURRENT (470 Amps) PER KM.	VOLTS		25 V (AT470 AMPS)	
	(2) AT S.C.VALUE OF 31.50 KA	KV		1.64	
	APPROX. SCREEN REACTANCE PER KM.			0.062	
b)	INDUCED VOLTAGE IN COPPER SCREEN				
	(1) SCREEN AT RATED CURRENT (470 Amps) /KM	VOLTS		29.2 V (AT470 AMPS)	
	(2) AT S.C.VALUE OF 31.5 KA	KV		1.95	

Approval Letter / No. 185 Dt. 21/6-17

GETCO VADODRA

ENGG. CELL

DRAWING APPROVAL

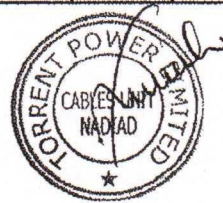
☒ CAT-1 Approved

☒ CAT-2 Approved with Comments

☐ CAT-3 Approved for Information

☐ CAT-4 Not Approved

The above approval, in general does not absolve you from Contractual Obligations.



GETCO

☐ Released For Manufacture

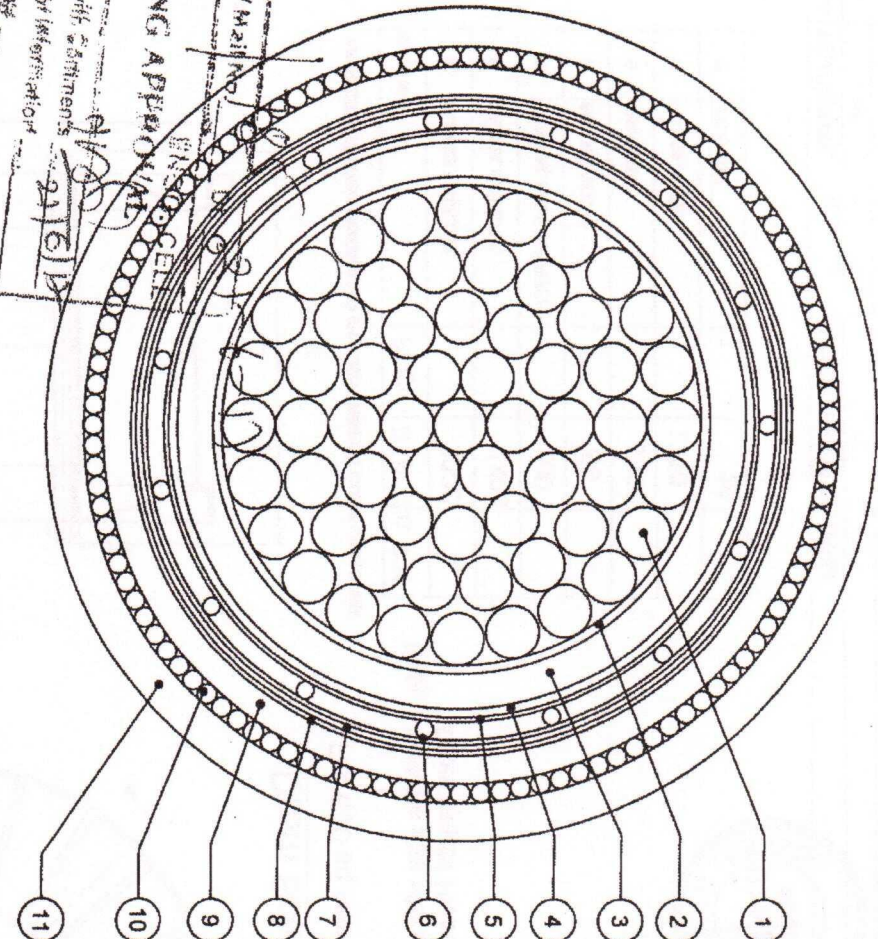
☐ Released For Construction

☐ Released For Information

TORRENT POWER
LTD. (CABLES UNIT)
YOGINAGAR,
MISSION ROAD,
NADIAD.

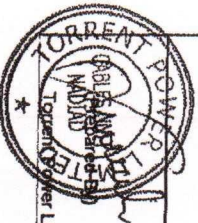
1 core x 630 Sq.mm. A2XCW2Y 38/66 KV
LOI NO: ACE(proj)/ME-2576/ 66 KV XLPE CABLE/ LOI/Torrent/6436 Dt.06/05/2017.

Customer:-
GETCO.
BARODA.
Tender No.: ACE(Proc)/E-2576/K/
66KV XLPE & 6.6 KV PVC/
Ref:- 2016-17 Due on- 16.12.2016



- 1 Stranded Compacted Circular Aluminium Conductor (Class-2 of IS: 8130-1984). Approx Conductor Diameter = 29.50 mm
- 2 Extruded S.C. Conductor Screen (Thick. = 0.80 mm Minimum)
- 3 XLPE Insulation (Thick = 11.0 mm Nominal). Approx Diameter Over Insulation = 53.70 mm
- 4 Extruded S.C. Insulation screen (Thick. = 0.80 mm Minimum). Approx Diameter Over Insulation Screen = 55.60 mm
- 5 Layer of Wrapped S.C. Water Swellable Tape
- 6 Hallically copper wire screened & Lapped with open helix copper tape (Thick. = 0.091 mm Minimum). Cross sectional Area = 210 Sq.mm Min. [Suitable for E.F. Current of 31.5 KA/ 1 Sec.] Approx Diameter over Metallic Screen = 60.50 mm
- 7 Layer of Wrapped S.C. Water Swellable Tape
- 8 Poly - Al - Poly Tape (Moisture barrier) (0.05+0.20+0.05 = 0.30 mm Nominal)
- 9 Extruded polyethylene inner sheath (Thick. = 1.20 mm Minimum). Approx Diameter Inner Sheath = 65.00 mm
- 10 Single Hard Drawn Aluminium wire armour (Dia. = 3.15 mm Nominal) [Suitable for E.F. Current of 31.5 KA / 1.Sec.] Minimum No. of Armour Wire = 56 Nos. Approx Diameter Over Armour = 71.50 mm
- 11 HDPE Outer Sheath with Conductive Coating. Minimum Thick. = 2.68 mm
- 12

Approval Letter / Memo
GETCO
DRAWING APPROVAL
CAT-1 Approved
CAT-2 Approved with comments
CAT-3 Ad. Approved for information
CAT-4 Not Ad. Approved
The above Note is by General Manager as Applicable per IS:7098(Pt-3)1993.
Tests & Test Requirements as Applicable per IS:7098(Pt-3)1993.
2) Approx. Capacitance = 0.27 mF / km.
21/6/17



(Approved By)

GETCO
☐ Released For Manufacture
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☐ Released For Information

Drawing No. TPLMKS/TK-655/F-6/16/17/21
Date: 24.05.17.
Revision:- 1
Date:- 16.06.17




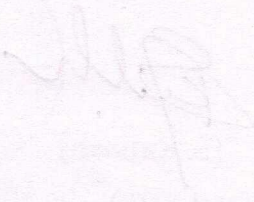
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Appendix

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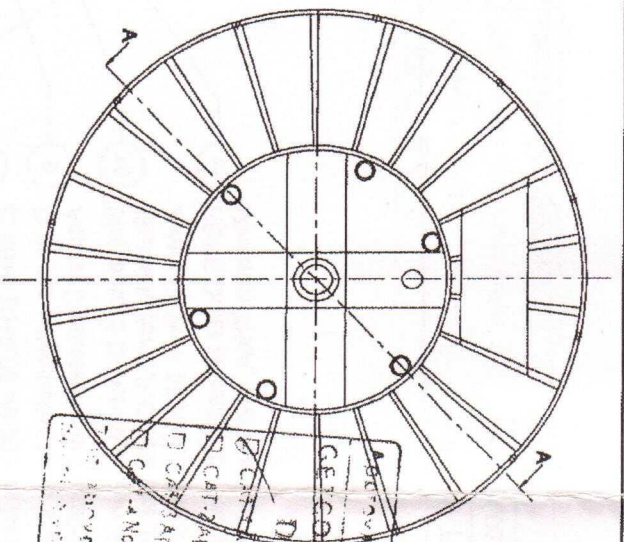
APPENDIX FOR ...

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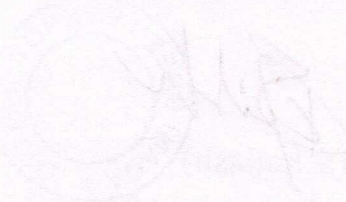
86

Appendix 2

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STATEMENT OF WORK FOR THE PAYMENT OF THE ROYALTY VALUE OF THE FOREST AREA

The purpose of this statement is to provide a clear and concise description of the work to be performed by the contractor. The work is to be performed in accordance with the terms and conditions of the contract. The contractor is to provide a detailed statement of work for the payment of the royalty value of the forest area.



Signature of [Name]

Date: [Date]

Location: [Location]

Project: [Project Name]

CUSTOMER NAME : GETCO VADODRA

LOI NO. : ACE(Proc)/I/E-2576/66KV XLPE Cable/LOI/Torrent/6436 Dt.: 05.05.2017

PAGE 4 OF 4

SR. NO.	TECHNICAL PARTICULARS	UNIT	CORES SQ.MM.
			1 630 A2XCW _a 2Y
2.27	RECOMMENDED MINIMUM INSTALLATION BENDING RADIOUS		20 TIMES OVER ALL DIAMETER OF CABLE (1560 MM)
2.28.00	SAFE PULLING FORCE		30 N / SQ.MM. 1927 KG.
2.29.00	APPROX. CABLE WEIGHT KG/KM.		7800 KG/KM. APPROX.
2.30.00	LENGTH OF CABLE PER DRUM MTR.		1 x 700 Meter \pm 5 %
2.31.00	CABLE DRUM		
2.31.01	NET WEIGHT (APPROX.)	KG	5450 APPROX.
2.31.02	DRUM WEIGHT (EMPTY)	KG	450 APPROX.
2.31.03	SHIPPING WEIGHT	KG	6300 APPROX.
2.31.04	MARKING ON OUTER SHEATH		TORRENT TOROLINK-X, VOLTAGE GRADE, & YEAR OF MFG., "NAME OF PURCHASER", A2XCW _a 2Y SEQUENTIAL LENGTH MARKING AT EVERY METER WILL BE PROVIDED ON OUTER SHEATH BY PRINTING.
2.32.0	TESTING AND MARKING ON OFFERED CABLES		AS APPLICABLE AS PER IS:7098 (3) 1993 ONLY. ONLY ACCEPTANCE TESTS TO BE CARRIED OUT DURING INSPECTION AT TPL WORKS.

FILE : GETCO 66 KV 1 X 630 SQ.MM. 2016-17

Approved Letter / Serial No. 785 Dt. 21/05/17

GETCO
ENGG. CELL
DRAWING APPROVAL

☒ CAT-1 Approved
☐ CAT-2 Approved with Comments
☐ CAT-3 Approved for Information
☐ CAT-4 Not Approved

The above approval, in general does not release you from Contractual Obligations.

GETCO

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☐ Released For Construction
☐ Released For Information

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CUSTOMER NAME : GETCO VADODRA

LOI NO. : ACE(Proc)/I/E-2576/66KV XLPE Cable/LOI/Torrent/6436

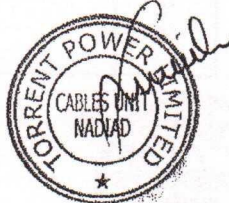
Dt.: 05.05.2017



PAGE 2 OF 4

SR. NO.	TECHNICAL PARTICULARS	UNIT	CORES SQ.MM.	1 630 A2XCW2Y
2.12.00	INSULATION			
2.12.01	MATERIAL			XLPE AS PER IS:7098 (PT-3) 1993.
2.12.02	THICKNESS OF INSULATION MM. (Ti)	MM		INSULATION THICKNESS 11.0 mm Nominal NA
	1) BETWEEN CORES (MM)			
	2) BETWEEN CORES & INNER SHEATH			
2.12.03	TOLERANCE ON THICKNESS OF INSULATION			0.1* Ti, i.e. 9.90 mm Minimum
2.12.04	DIAMETER OF CORE OVER INSULATION APPROX	MM		53.70 mm Approx
2.12.05	SPECIFIC INSULATION RESISTANCE at 90°C	Ohm-Cm		TO BE MEASURE & CHECK WITH REQ. OF V.R. V.R. AT 90°C = 1×10^{12} OHM-CM MINIMUM YES, DRY GAS CURED.
2.12.06	WHEATHER XLPE INSULATION DRY / GAS CURED			
2.13.00	INSULATION SCREENING			EXTRUDED SEMI CONDUCTING COMPOUND FOLLOWED BY A LAYER OF S.C.WTER SWELL ABLE TAPE (0.25 mm Approx Thickness of Tape)
2.13.01	MATERIAL			0.80 MM MINIMUM
2.13.02	(1) THICKNESS OF SEMICONDUCTING MM.			2.10 +/- 0.025 mm(Subje to Alter)
2)	(2) METALLIC PART DIA. OF EACH COPPER WIRE	MM		CU Wire Dia & Nos for guidance & May change as per Process Needed ; Copper Screen Area (210 sq mm) , However Shall be Maintained ; Calculation (Annexure-A) Enclosed 61 Nos Minimum (Subject to Alteration)) 0.10 mm +/- 10 %
	(3) -----do----- but total no of such CU wires			
	(3)a NOMINAL THICKNESS OF CU TAPE			
	(4) CURRENT CARRYING CAPACITY			
	a) CONTINUOUS			NA
	b) S.C.CURRENT FOR ONE SEC. BASIS IN KA	KA		31.50 KA FOR ONE SECOND
2.13.03	DIAMETER OF CABLE OVER INSULATION SCREEN	MM		55.60 mm Approx (OVER EXTRUDED INSULATION SCREEN)
2.13.04	WHEATHER INSULATION SCREEN IS REMOVABLE WITHOUT APPLICATION OF HEAT			NO.
2.14.00	INNER SHEATH			BLACK H D PE ST-7 AS PER IS:7098 (3) 1993. YES 1.20 MM MIN.
2.14.01	MATERIAL			
2.14.02	EXTRUDED			
2.14.03	MINIMUM THICKNESS IN MM.	MM		65.00 MM APPROX.
2.14.04	DIAMETER OF CABLE OVER INNER - SHEATH IN MM.	MM		0.25 MM APPROX. (S.C WATER SWELL ABLE TAPE OVER METALLIC SCREEN)
2.14.05	THICKNESS OF WATER SWELLABLE TAPE IN MM	MM		0.30 MM APPROX. (TOTAL THICKNESS)
2.14.06	THICK. OF POLY ALUMINIUM POLY TAPE LAYER	MM		
2.16.00	ARMOURING			HARD DRAWN Aluminum WIRE
2.16.01	MATERIAL			ROUND WIRE
2.16.02	TYPE OF ARMOURING			3.15 MM NOMINAL
2.16.03	DIAMETER OF EACH WIRE ARMOUR IN MM	MM		56 Minimum
2.16.04	NO. OF SUCH WIRE	NO.		71.50 MM APPROX.
2.16.05	DIAMETER OF CABLE OVER ARMOUR APPROX	MM		
2.16.06	CURRENT CARRYING CAPACITY OF ARMOR			
	a) ON CONTINUOUOD BASIS			NA
	b) S.C.CURRENT FOR 1 SEC. BASIS (31.5 KA)	KA		31.50 KA FOR DURATION OF ONE SECOND

GETCO
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Approval Letter / Mail No. Dt.

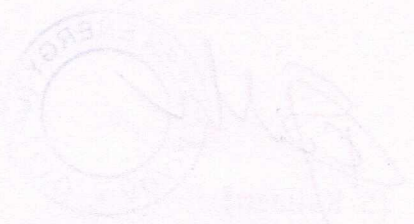
GETCO ENG. CELL
DRAWING APPROVAL

☒ CAT-1 Approved
☐ CAT-2 Approved with Comments
☐ CAT-3 Approved for Information
☐ CAT-4 Not Approved

The above approval, in general does not absolve you from Contractual Obligations.

DECLARATION

I, the undersigned, being a duly qualified person, do hereby certify that the foregoing is a true and correct copy of the original as the same appears in the records of the County of [] State of []



Notary Public for the State of []
My Commission Expires []

Witness my hand and seal this [] day of [] 20[]

012

TATA PROJECTS LIMITED

INSPECTION/EXPEDITING REPORT
(CONTINUATION SHEET)

AHM11AHP206/DELKEI 1104121KSX
Date 11.04.2012

Sheet: 2 of 2

4. NARRATIVE SUMMARY: (DETAILS OF INSPECTION CARRIED OUT):

S.No.	DETAILS	CHARACTERISTICS	QUANTUM OF CHECK	OBSERVATIONS
2.	ACCEPTANCE TEST	Conductor Examination	As per sampling plan of IEC-60840	Acceptable
		Conductor Resistance		Acceptable
		Measurement of Insulation thickness		Acceptable
		Thickness of Metallic Sheath		Acceptable
		Measurement of diameter		Acceptable
		Thickness of Poly-Al Sheath		Acceptable
		Thickness of Outer Sheath		Acceptable
		HV Test at Room Temperature		Acceptable
		Hot Set Test for Insulation		Acceptable
		Partial Discharge Test		Acceptable
		Tensile Strength and Elongation of Insulation and Sheath		Acceptable
		Volume Resistivity Test		Acceptable
		Measurement of Capacitance		Acceptable
		Water Penetration Test		Under Progress
		Void and Contamination Test		Acceptable
3.	Document Review	Raw Material, In-Process, Routine Test and Type Test Report	For offered lot of Cable	Acceptable

5. **CALIBRATION:** ITMES having valid calibration traceable to National Standards were used during Testing & Inspection


6. **RECORD NOTE:-**

- Long Duration test i.e. Water Penetration test is Under Progress and shall be completed on 21.04.2012.
- Final acceptance to be given after successful completion of Long Duration Test.
- Inspection was jointly carried out with Mr.S.D.Modh of M/S GETCO and Mr.Alpesh Kumar of M/S Tractebel Engg.(MOM Enclosed)


7. **CONCLUSION:**

- The offered lot of cable as per scope of inspection/narrative summary is acceptable subjected to satisfactory completion of long duration test
- Inspection report is forward to the client for their perusal

8. **IDENTIFICATION**

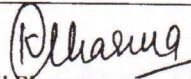
- Paper sticker stamped  Top and Bottom end of each cable length for identification only.

9. **ATTACHED DOCUMENTS:** - a) Witness TC-02 Sheets b) Routine TC- 01 Sheet c) Type TC- 02 Sheets
d) RMTC-19 Sheets e) Packing List-01 Sheet d) MOM-01 Sheet

VENDOR: KEI
Signature: 

Name: V.K. Gupta

TPL:

Signature: 

Name: Kapil Sharma

CLIENT:

Signature: _____

Name: _____

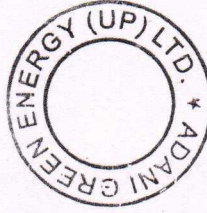
Continuation sheet



KAPIL SHARMA
Senior Surveyor
Tata Projects Ltd., Delhi

ದೇಶದ ಹಿತವಿರಬೇಕೆಂದು ಈ ಕಾರಣಕ್ಕೆ ಈ ಕೆಳಕಂಡಂತಿರುವ
ಅಂಶಗಳನ್ನು ಪರಿಶೀಲಿಸಿ ಮತ್ತು ಅಂತಿಮವಾಗಿ
ವಿವರಣೆ ನೀಡಿ ಕೊಡುವಂತೆ ಈ ಬಗ್ಗೆ
ಕ್ರಿಯಾ ಪರಿಶೀಲಿಸಿ ಕೊಡುವಂತೆ ಕೋರಲಾಗಿದೆ.

ಶ್ರೀಮತಿ ಎಸ್.ಎಸ್.ಎಸ್.



[Signature]
9.10.17

(S. Kailash)
8098881662

Received on 10/10/2017

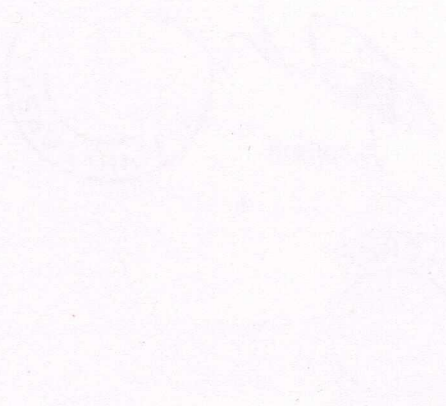
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ಶ್ರೀಮತಿ ಎಸ್.ಎಸ್.ಎಸ್.
ಅಧ್ಯಕ್ಷರು, ಕಾರ್ಯಾಲಯ,
ಗಾಂಧಿ ನಗರ

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INDEX

The index is arranged in alphabetical order of the names of the persons mentioned in the text. It is intended to facilitate the search for names and to show the pages on which they occur. The names are given in full, and the page numbers are given in full. The names are given in full, and the page numbers are given in full.





THE FUTURE OF THE BANK OF AMERICA

(The future of the Bank of America is a subject of great interest to the public.)

A number of factors are likely to influence the future of the Bank of America. The first is the general state of the economy. If the economy continues to grow, the Bank of America will likely continue to grow. The second factor is the competition. The Bank of America is currently facing competition from other large banks, such as Citicorp and Chase Manhattan. The third factor is the management of the bank. The Bank of America has a long history of successful management, but it is important to ensure that the management remains effective in the future.

The management of the bank is a key factor in its future success. The management should focus on improving the bank's efficiency and reducing its costs. It should also focus on expanding its services and increasing its market share.

The future of the Bank of America is uncertain, but it is likely to remain a major player in the financial industry. The bank's success will depend on its ability to adapt to changing market conditions and to provide high-quality services to its customers.