



Towerlines Private Limited
An ISO 9001,14001,18001 Certified Company

# Turnkey Solutions for Power Infrastructure



**Energizing Through Power Infrastructure** 





That MCS QAC



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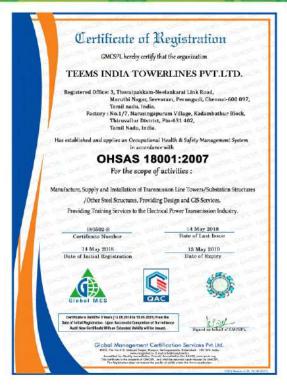
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# TEEMS INDIA Towerlines Private Limited An ISO 9001,14001,18001 Certified Company







### **QUALITY POLICY**

"We at Teems India Towerlines Private Limited are committed to meet customers requirements and expectations by delivering competitive services and solutions viz. manufacturing and installation of EHV Transmission Line Structures, providing GIS Services and providing Training Services for the electrical Power Transmission Industry. We strive for customer satisfaction through continual improvement by empowering our employees to comply with our Quality Management Systems and Standards and adhere to all statutory and regulatory requirements".



#### **About Teems India**

Teems India Towerlines Private Limited, an ISO 9001:2015, 14001:2015 & OHSAS 18001:2007 certified and ICRA rated Company (BBB-, Stable) which has over 35 years of experience in carrying out High Voltage Transmission Lines construction/installation of up to 765 KV in India, Middle East and Africa. Teems India has completed construction of more than 3000 Kms of Transmission Line both as an EPC Contractor and Installation Partner. Teems India has successfully completed Projects on turnkey basis for Power Utilities including projects funded by International Funding agencies, Independent Power Producers and Large Multinational EPC Companies. Some of our Clients include.

#### **Domestic Clients**

- Power Grid Corporation of India Limited (PGCIL).
- Tamilnadu Transmission Corporation Limited (TANTRANSCO).
- · Larsen & Toubro Limited (L&T).
- Adani Green Energy Ltd.
- Welspun Renewables Pvt Ltd.

#### **International Clients**

- Elecnor SA, Spain.
- Bouygues Group, France.
- Amec Power Ltd, UK.
- Larsen & Toubro Limited (L&T), Oman.
- •Hyundai Engineering Co Ltd, Korea. NCC,
- •Saudi Arabia.
- ·LG Tek, Korea.
- •HG Power Transmission, Malaysia.

The company has a Lattice Tower Manufacturing Facilities in Chennai, India with an installed capacity of 7,200 MT/per annum and supplied Transmission Line/Substation structures to State Power Utilities, Independent Power Producers and Captive generation units. Apart from offering Transmission Line solutions, Teems India Completed over 3000 Kms of Transmission Line Route Feasibility Survey using Remote Sensing, DGPS and Total Station for TANTRANSCO and PGCIL and has also established a Training Academy for imparting Transmission Line Construction Skills for Engineers and Linesman and also offering Consultancy services for Transmission Line Route Planning, Quality Control, etc.





Crane Erection of 400 kV S/C Agra-Bassi Transmission Line at Bassi, India



Erection of 230KV DC line on 400kV DC towers at Neyveli, Tamil Nadu, India



#### **Teems India Key Strengths**

- Established and Successful Track Record in the completing Projects on time and to satisfaction of Client in more than 10 countries
- Reliable and Quality Oriented
- Integrated Solutions including design, Planning, project management, execution and commissioning
- Qualified and Skilled Manpower equipped to execute projects with safety and quality compliance

#### **Teems India Business Focus Areas**

- High Voltage Transmission Line and Substation Construction on Turnkey basis
- · Consultancy and Project Management Services
- · Training and Skill Development in Power Sector
- Supervision Services for Installation of High Performance Conductors
- Mobile Application -Android Based Asset Management Services (Prototype Developed)

# Engineering, Procurement, Construction Solutions for Utilities and Independent Power Producers

With over 35 years of experience in Transmission Line Construction, Teems India has theresources and expertise to offer turnkey solutions for Construction of Transmission Lines from 66kv to 765 kv.

The company has executed Projects for State Power Utilities, Central Transmission Utility and various Independent Power Producers across India. In addition to that, Teems India has experience in executing Projects Funded by Multilateral Funding agencies like World Bank, Japanese International Cooperation Agency (JICA) and Rural Electrification Corporation as per their stringent procurement guidelines.

Teems India has offered their EPC/Turnkey services from Route Planning till commissioning of Transmission Lines for several Independent Power Producers in the last 5 years including some Leading Solar Power Producers like M/s.Adani Green Energy and M/s. Welspun Renewables.

#### **Management Contractor/Installation Partner**

Teems India has successfully completed Transmission Line Projects from 66KV to 400 KV in 9 different countries and varied terrain conditions as Management Contractor/Installation Partner with major European EPC companies. The company has also undertaken and successfully completed Erection and Stringing works in hilly/mountainous terrain conditions in Republic of Congo and Algeria (North African Countries).



# **List of Projects for State and Central Government Utilities**

S. No	Type of Line	Description of Projects	Volume of Work	Scope of Work
1	132kV Single/Double Circuit Line Incl OPGW live line*	(i) Tower Package -TW01 associated with NER Power System Improvement Project (Intra-State Tripura) (ii) Tower Package -TW02 associated with NER Power System Improvement Project (Intra-State Tripura) (ii) Tower Package -TW03 associated with NER Power System Improvement Project (Intra-State Tripura)	250 KM	Supply, Foundation, Erection, Stringing, Testing and commissioning for PGCIL
2	765kV Single Circuit & 400kV Single/ Double Circuit Line*	Supply and Execution of erection /services work for shifting /modification of 400 KV S/C Hisar-Bhiwadi TL, 400 KV S/C Moradabad-Muradnagar TL,400 KV D/C Meerut-MandolaCkt-I & II (Twin Moose) and 765 KV S/C Bhiwani-Meerut (Delta) TL due to infringement with DFCCIL under Neemrana, Dadri& Meerut Groups in NR-I.	6.5 KM	Supply, Foundation, Erection, Stringing, Testing and commissioning for PGCIL
3	400kV Double Circuit Line*	Tower Package-TW01 for Diversion / Modification of existing POWERGRID lines due to upcoming construction of proposed railway line by Central Railway Nagpur under Consultancy Services.	7 KM	Supply, Foundation, Erection, Stringing, Testing and commissioning for PGCIL
4	400kV Double Circuit Line*	Turnkey Construction in LILO of one circuit of 400 KV DC line on DC Tower with Twin Moose conductor from Thappagundu to Anaikadavu400 KV DC line at Udumalpet (Myvadi) 400KV substation, Falling in wind zone-2 including cost of all materials under turnkey contract (Tapping location: Between Loc.119 and 120 0f 400 KV DC Thappagundu - Anaikadavu line).	20.01 KM	Manufacturing, Supply, Foundation, Erection, Stringing, Testing and commissioning for TANTRANSCO.
5	132kV Single Circuit Line incl OPGW Live Line*	Transmission Line Packages TW04 for Assam associated with NER Power System Improvement Project (Intra State: Assam) for 132 kV S/C (on D/C tower) Dhemaji - Silapathar.	36 KM	Supply and Service Contract for Transmission line package for PGCIL
6	400kV Double Circuit Line*	Transmission-GCC/Trichy - Erection of 400KV DC line on 400kV DC towers with Twin Moose conductor from Neyveli TPS-II to proposed Neyveli 230/110KV SS- (10 Reaches).	5.8 KM	Supply and Service Contract for Transmission line package for TANTRANSCO.
7	400kV Double Circuit Line*	Diversion work of 400KV D/C Lucknow Sultanpur Line and 400KV D/C Ballia Lucknow Line due to construction of Lucknow Ring Road by NHAI	8.19 KM	Supply, Foundation, Erection, Stringing, Testing and commissioning for PGCIL
8	400kV Single Circuit Line*	Erection Package of Diversion Work of 400kV S/C Fatehpur- Kanpur-II and 400kV Allahabad-Kanpur TL.	2.03 KM	Service Contract forTransmission line package for PGCIL
9	400kV Double Circuit Line*	Tower Package-TW01 for Diversion / Modification of existing POWERGRID lines due to upcoming construction of proposed railway line by Central Railway Nagpur under Consultancy Services.	5.21KM	Supply, Foundation, Erection, Stringing, Testing and commissioning for PGCIL
10	400kV Double Circuit Line*	Diversion Of 400kV DC Gorakhpur - Lucknow Line Between Tower No.646 to 649 Crossing of NHAI.	1.2 KM	Supply, Foundation, Erection, Stringing, Testing and commissioning for Powerlinks Transmission Limited
11	400kV Single Circuit Line	Diversion Work of 400kV Transmission Lines in NR-I (Supply & Service Work).	2.61 KM	Supply, Foundation, Erection, Stringing, Testing and commissioning for IPGCIL

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S. No	Type of Line	Description of Projects	Volume of Work	Scope of Work
12	400kV Single Circuit Line	Manufacture, Supply, Erection and stringing of 400KV SC line with TWIN Mosse Conductor by introducing 1 No. DD type tower in between NCTPS - Sunguvachatiram 400 KV DC line inside the premises of Sunguvachatiram 400KV Substation.	0.13 KM	Manufacturing, Supply, Foundation, Erection, Stringing, Testing and commissioning for TANTRANSCO.
13	765/400 kV Single Circuit Line	Diversion Work of 765kV and 400kV Transmission Lines at Agra and Kanpur ( Service Work)	9.500 KM	Survey, Foundation, Erection and Stringing, Testing and Commsioning work for Power Grid Corporation of India Limited
14	110kV Mono pole line	Mono pole structure for the proposed erection of 110 KV SC line on DC towers from the existing Periyapalayam 110KV SS to the Thervaikandigai 110KV SS.	2.292 KM	Supply of Monopole Structure, Foundation , Erection and Stringing work for TANTRANSCO Guindy ,Chennai.
15	230/110kV Double Circuit Line	JICA Funded Package 21- 230/110kV lines associated with Kanchipuram & Savasapuram for TANTRANSCO	46 KM	Survey,Foundation,Erection and Stringing,Testing and Commsioning works for JICA-1786 P-21 Kanchipuram & Savasapuram
16	230/110kV Double Circuit Line	JICA Funded Package 32- Purusai 230/110kV associated line in Villupuram Region for TANTRANSCO	38 KM	Survey,Foundation,Erection and Stringing,Testing and Commsioning works for JICA-1838 P-32 Purusai in Chennai Circle
17	230kV Double Circuit Line  Ulundurpet 230kV Auto SS to Neyveli Zero Unit STCMS - Neyveli TS II		5.2 KM	Manufacturing & Supply, Erection and Stringin Works for TANTRANSCO, Trichy
18	110kV Single Circuit Line	Villupuram - Deviyakurichi at Proposed Manalurpet 110 Kv SS	4.4 KM	Manufacturing & Supply, Erection and Stringin Works for TANTRANSCO, Trichy
19	110kV Single Circuit Line on DC Towers	110kV Single Circuit Neyveli-Panruti Radial Line, Tamil Nadu, India	20.92 KM	Manufacturing & Supply, Foundation, Erection and Stringing Works for TANTRANSCO, Trich
20	110 KV Double Circuit Line	110 KV LILO of Nagudi - Peravurani 110 KV S/C Line at Propose 110 KV Keeramangalam S/S	6.90 KM	Manufacturing & Supply, Foundation, Erection and Stringing Works for TANTRANSCO, Trich
21	230kV Multi Circuit Line	NCTPS - TVLM feeder I & II and NCTPS - Sriperumbudur, Gummidipoondi feeder at Neithavoyal Village, Tamil Nadu, India	2.5 KM	Manufacturing & Supply, Foundation, Erection Works for M/s. Standard Grease Ltd / TANTRANSCO, Chennai
22	110kV Single Circuit Line on DC Towers			Manufacturing & Supply, Erection and Stringin Works for TANTRANSCO, Trichy
23	110kV Single Circuit Line			Supply, Foundation, Erection and StringingWorks for TANTRANSCO, Trichy durin 2012
24	110kV Double Circuit Line	LILO of 110 KV Palladam- Ingur feeder at Proposed 110/11 KV SS at Alagumalai, Tamil Nadu, India	2.5 KM	Supply, Erection and Stringing Works for TANTRANSCO, Coimbatore during 2012
25	110kV Double Circuit Line	Dhandapani Cements to Samayapuram SS, Tamil Nadu, India	7 KM	Total Turnkey (EPC,EHV) OHTL Construction (Survey, Supply, Foundation, Erection and Stringing Works) for TANTRANSCO, Trichy during 2012

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S. No	Type of Line	Description of Projects	Volume of Work	Scope of Work
26	400kV Multi Circuit Line	Sunguvarchatram - Alamathy, Chennai, Tamil Nadu, India	18 KM / 4500 MT	Foundation, Tower Erection and Stringing Works for JSL/Tamil Nadu Electricity Board during 2010-2011
27	220 KV Double Circuit Line	Mysore - Kushalnagar,Karnataka,India	85 KM	Survey,Foundation,Erection and Stringing works for KPTL during 2007 - 2009
28	110 KV Double Circuit Line	Kondenellu - Gerumar,Karnataka,India	25 KM	Survey,Foundation,Erection and Stringing works for KPTL during 2007
29	400 KV Double Circuit Line	Dhar,Madyapradesh,India	105 KM	Stringing work during 2007
30	110 KV Feeder Line	TamilNadu Chemicals for Power evacations to TNEB Substation,India	3.2 KM	Total Turnkey during 2007
31	230 KV Double Circuit Line	Valathur - Karaikudi(2nd reach),TamilNadu,India	21 KM	Survey,Foundation,Erection and Stringing works for M/s ICOM LTD 2007
32	230 KV Double Circuit Line	Valathur - Karaikudi(1st reach),TamilNadu,India	21 KM	Survey,Foundation,Erection and Stringing works for M/s BAJAJ ELECTRICALS LTD during 2007
33	400 KV Double Circuit Line	Neyveli - Pugalur,TamilNadu,India	50 KM	Foundation works for PGCIL,India during 2006 - 2007
34	230 KV Double Circuit Line	Hubli Karnataka	71 KM	Erection and Stringing works for M/s Larson & Turbo Limited during 2004 - 2005
35	400 KV Single Circuit Line	Gooty - Hooty Karnataka	100 Towers Maintenance work under shutdown condition	Insulator changing for Power Grid Corporation of India Limited, Southern Region II during 2004 - 2005
36	400 KV Single Circuit Line	Bangalore - Nelamangala Line ,Karnataka	Railway Crossing work	Survey,Foundation,Erection and Stringing works of Railway crossing for M/s Power Grid Corporation of India Limited,Southern Region II during 2004 - 2005
37	400 KV Single Circuit Line	Hydrabad - Kurnool Gooty for Power Grid Corporation of India	170 KM	Foundation,Erection and Stringing works of Twin Moose Conductor for M/s SPIC SMO during 2004 - 2005
38	400 KV Double Circuit Line	Kolar - Hosur for Power Grid Corporation of India	53.5 KM	Stringing of Twin Moose Conductor for M/s Hyundai Engineering Co.Ltd.,Korea during 2002 - 2003
39	400 KV Double Circuit Line	Kolar - Hosur for Power Grid Corporation of India	80 KM	Foundation,Erection and Stringing works of Quad Bersimis Conductor for M/s Hyundat Engineering Co. Ltd.,Korea during 2002 - 2003

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S. No	Type of Line	Description of Projects	Volume of Work	Scope of Work
40	400 KV Single Circuit Line	Kolar - Arakkonam for Power Grid Corporation of India	104 KM	Tower Erection and Stringing works of Twin Moose Conductor for M/s SPIC SMO during 1999 - 2000
41	110 KV Double Circuit Line	Saint Gobain Factory - SIPCOT, TamilNadu, India	8 KM	Tower Erection and Stringing works of Panther Conductor for TNEB during 1999 - 2000
42	230 KV Double Circuit Line	Singaperumal Kovil - Tharamani, Tanil Nadu, India	37 KM	Tower Erection and Stringing works of Zebra Conductor for TNEB during 1998 - 1999
43	230 KV Double Circuit Line	Trichy - Karaikudi,TamilNadu,India	20 KM	Tower Erection and Stringing works of Zebra Conductor for TNEB during 1997 - 1998
44	230 KV Double Circuit Line	Sriperumpudur - Koyambedu, Tamil Nadu, India	80 Km	Foundation,Erection and Stringing work for TNEB,during 1995
45	230 KV Double Circuit Line	Thiruvalam - North Madras Thermal Power Project	70 KM	Foundation,Erection and Stringing work for TNEB,during 1994
46	230 KV Double Circuit Line	Sriperumpudur - North Madras Thermal Power Project	80 KM	Foundation,Erection and Stringing work for TNEB,during 1992
47	230 KV Double Circuit Line	Sriperumpudur - Koyambedu, TamilNadu, India	40 KM	Foundation,Erection and Stringing work for TNEB,during 1990
48	230 KV Double Circuit Line	Hosur - Thiruvalam,TamilNadu,India	82 KM	Foundation,Erection and Stringing work for TNEB,during 1989
49	110 KV Single Circuit Line	Sriperumpudur - Kadaperi, TamilNadu, India	40 KM	Foundation,Erection and Stringing work for TNEB,during 1989
50	230 KV Double Circuit Line	Sriperumpudur - Kadaperi, TamilNadu, India	40 KM	Foundation,Erection and Stringing work for TNEB,during 1985
51	400 KV Single Circuit Line	Neyveli - Salem,TamilNadu,India	100 KM	Foundation, Erection and Stringing work for Best & Cromptom Ltd., during 1981

<sup>\*</sup> Current Projects



# **List of EPC Projects For Independent Power Producers**

S. No	Type of Line	Description of Projects	Volume of Work	Scope of Work
1	230kV Single Circuit Line	M/s Welspun Renewable Energy Pvt Ltd to terminate at 400/230kv Ayanarothur, Kayathar SS on Total Turnkey Basis, Tamil Nadu, India.	5.596 KM	Total Turnkey / EPC OHTL Construction ( Survey, Manufacturing & Supply, Foundation, Erection, Stringing, Testing and Commsioning) for M/s.Welspun Renewable Energy Private Limited during 2016
2	230kV & 110kV Single Circuit Line on Double Circuit Towers	Erection of 230kV and 110kV Single Circuit Line on DC Tower From M/s.Adani Solar Private Limited to Proposed Kamuthi 400kV SS, Tamil Nadu, India.	5.776 KM	Total Turnkey / EPC OHTL Construction (Survey,Manufacturing & Supply, Foundation, Erection,Stringing, Testing and Commsioning) for M/s. Adani Infra (India) Limited during 2016
3	110kV Single Circuit Line	M/s Welspun Energy Private Limited Solar Power Plant to Panchapatty -110/33kV SS of TANTRANSCO, Tamil Nadu, India.	6.01 KM	Total Turnkey/EPC OHTL Construction (Survey, Manufacturing & Supply, Foundation, Erection,Stringing ,Testing and Commsioning) for M/s Welspun Energy Private Limited during 2015
4	110kV Single Circuit Line  M/s Welspun Energy Private Limited Solar Power Plant to lyermalai -110/33kV SS of TANTRANSCO, Tamil Nadu, India.		5.6 KM	Total Turnkey/EPC OHTL Construction (Survey,Manufacturing & Supply, Foundation, Erection,Stringing,Testing and Commsioning) forM/s Welspun Energy Private Limited during 2015
5	110kV Single Circuit Line	Sri Venkatramana Paper Mills Private Limited Gas Plant to Kodavasal 110kV S/S for Power Evacuation to their 6 MW Gas Based Power Plant, Tamil Nadu, India	11.19 KM	Total Turnkey (EPC) OHTL Construction (Survey, Manufacturing & Supply, Foundation, Erection and Stringing Works) for M/s. Sri Venkatramana Paper Mills Private Limited
6	110kV Single Circuit Line on Double Circuit Towers	Tulsyan Nec Limited to 110kV Gummidipondi S/S for Power Evacuation to their 70 MW Coal Based Power Plant,Tamil Nadu, India	7.9 KM	Project Management Services for OHTL Construction for (M/s.Tulsyan Nec Limited) during 2012-2013 and Foundation,Erection and Stringing of Monopoles.



S. No	Type of Line	Description of Projects	Volume of Work	Scope of Work
7	230kV Double Circuit Line	Suryadev Alloys and Power Private Limited, Gummidipondi for Power Evacuation to their 160 MW Coal Based Power Plant, Tamil Nadu, India	5 KM	Total Turnkey (EPC) OHTL Construction (Survey, Supply, Foundation, Erection and Stringing Works) for M/s. Suryadev Alloys and Power Private Limited during 2012
8	230kV Double Circuit Line	M/s.Cauvery Power Generation Private Limited, Billakuppam Village - Gummidipoondi TNEB Substation for Power Evacuation to their 60 MW Coal Based Power Plant, Tamil Nadu, India	5 Km	Total Turnkey (EPC) OHTL Construction (Survey, Supply, Foundation, Erection and Stringing Works) for M/s.Cauvery Power Generation Pvt Ltd during 2010-2011.

# **List of Projects Across India**

S. No	Type of Line	Description of Projects	Scope of Work
1	Various High Voltage Transmission Lines	CTC Global Corporation, USA	Training and supervision services for ACCC (Aluminum Conductor Composite Core) Conductors Installation across India



# **Projects Completed for Power Utilities**

SI.No.	Name of the Utility	Line Voltage Rating	Line Name	Route Lengt (Kms)
1	Tamil Nadu Transmission Corporation Limited (TANTRANSCO)	230kV DC Lines	JICA T-1786 PGK 21 - Construction of 230kV and 110kV Transmission lines associated with Savasapuram 230kV AIS Substation (SS) in	14.363
•	(State Power Utility)	110kV SC & DC Lines	Tirunelveli Region and Kancheepuram 230kV AIS Substation (SS) in Chennai Region on Total Turnkey Basis.	30.225
2	Tamil Nadu Transmission Corporation Limited (TANTRANSCO)	230kV DC Lines	JICA T-1838 PKG-32 - Construction of 230 KV and 110 KV associated Transmission lines of Purusai 230 KV AIS Substation (SS) in Villupuram	11.76
۷	(State Power Utility)	110kV SC & DC Lines	Degion on Total Turnkov Begin	26.89
3	Power Grid Corporation of India Limited (PGCIL) (Central Power Utility)	400kV SC Line & DC Line	Diversion Work of 400kV Transmission Lines in NR-I (Supply & Service Work) Faridabad	2.61
4	Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)	230kV DC line on 400kV Towers	Transmission-GCC/Trichy - Erection of 230KV DC line on 400kV DC towers with Twin Moose conductor from Neyveli TPS-II to proposed Neyveli 230/110KV SS- (3 Reaches).	1.20
5	Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)	110kV SC Line	Stub setting, concreting, Erection of mono pole towers, stringing and supply of Monopole structure for the proposed erection of 110 KV SC line on DC towers from the existing Periyapalayam 110KV SS to the Thervaikandigai 110KV SS. Reach I Location 55 to 64, Reach II - Location 65 to 74,Reach III Location 75 to 83.	2.17
6	Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)	230kV SC Line	Earthwork excavation, Stub setting, concreting, Supply of towers, Polymer core insulator, hardware fittings & transport and erection of towers, hoisting of insulators and stringing of Zebra conductor for LILO of Alandur- Alagarkoil 230 KV line at Mondipatty TNPL Unit II 230KV SS.(Loc.44 to 48), (Loc.49 to 54).	4.69
7	Power Grid Corporation of India	400kV SC Line	Diversion Work of 765kV and 400kv Transmission Lines at Agra and	6.51
/	Limited (PGCIL) (Central Power Utility)	765kV SC Line	Kanpur (Service Work)	2.96
8	Power Grid Corporation of India Limited (PGCIL) (Central Power Utility)	400kV SC Line	Diversion of 400kV S/C Agra-Bassi I Transmission line (New Line Name:- Dausa -Gangapur)Railway crossing.	0.82
9	Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)	230kV DC Line	Earthwork, Excavation, Stub setting, Concreting, Supply and Erection of Location(Loc 71 to Loc 90) (Reach 4) & 71A, 72A, 73A,74A & 75A Stringing of Conductor and Earthwire from 70A to 76 of the existing 230kV Neyveli zero unit STCMS- Neyveli TS-II Line at the Proposed Ulundurpet 230kV SS.	5.20
10	Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)	110kV SC Line	Earthwork, Excavation, Stub setting, Concreting, Supply and Erection of towers at Loc 40 to 54, Stringing of Conductor and Earthwire from Villupuram- Deviyakurichi at Proposed Manalurpet 110kV SS Reach VI, VII.	4.35
11	Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)	110kV SC Line	Stub Setting Concreting Loc 24 to 37, Supply and Erection of Towers from Loc 24 to 107 and Stringing of Panther Condcutors and Earthwire from Loc 24 to 102 to Take off Structure for Neyveli - Panruti radial line into 110kV SC Line On DC towers with Panther Conductor. (10 Lines)	21.25
12	Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)	110kV SC Line	Supply and erection of towers from Loc 1 to 48 and stringing of panther conductor and earth wire from Loc 1 to 48 of LILO of Neyveli -Aduthurai 110 KV SC line at Pappakudi 110 KV SS - (Reach I to IV).	12.00



Name of the Utility	Line Voltage Rating	Line Name	Route Length (Kms)
Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)	110kV SC Line	Earthwork, Excavation, Stub setting, Concreting, Supply and Erection of towers and Stringing of Panther Conductor and Earthwire for 110KV SC Line on DC towers and Stringing from Existing 110kV Samayapuram - Trichy I Grid feeder fed off Trichy 230kV SS to M/S.Dhandapani Cements (P) Ltd at Samayapuram in Trichy Dist for the extension of EHT Supply from loc.01 to 20. (3 Lines)	4.50
Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)	230kV SC Line	Supply, Fabrication, Transport, Erection of "MD" towers Loc.70 & 74, Stringing of Zebra Conductors and Earthwire with fittings from Loc.70 to 71. & 74 to 75 LILO of Veerapuram - Kalivanthapattu 230KV line at M/s.Omega Industrial Estate 230/110KV SS. (5 Lines)	1.00
Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)	110kV DC Line	Earthwork, Excavation, Stub setting, Concreting, Supply and Erection of towers from Loc.4 to 15 and Stringing of DC line - with panther Conductors and earth wire from Loc 3 to 15 for Strengthening of existing 110kV Trichy Link feeder I II from Trichy 230kV SS to Trichy 110kV Sub Station with Wolf Conductor into 110kV DC Line on DC towers with Panther Conductor (3 Lines).	3.18
Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)	110kV LILO Line	Supply , Erection of GI Towers from Loc 1 to 5 over pile foundation and stringing of Panther conductor and earthwire from Loc 1 to 8 fo erection of 110kV Trichy-Samayapuram feeder II at the proposed Thiruvanaikoil 110/11kV SS.	1.88
Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)	110kV SC Line	Earthwork, Excavation, Stub setting, Concreting, Supply, Transport and Erection of towers from Loc (1-3),(4-8),(21-26),(42-43) and Stringing of Panther Conductor and Earthwire of 110KV LILO line from Nagudi - Peravurani 110KV at Proposed Keeramangalam 110KV SS. (4 Lines)	2.78
Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)	110kV SC Line	Earthwork, Excavation, Stub setting, Concreting, Supply and Erection of towers Loc.14 to 17 & Loc.22 to 25 and Stringing of Panther Condcutor and Earthwire from Loc.13 to 17 & Loc.21 to 25 for LILO of Kuttalam GTPP-Kumbakonam 110KV SC Line at Kumbakonam 110KV Urban SS. (Reach-IV) & (Reach-VI).	0.56
Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)	110kV DC Line	Earthwork, Excavation, Stub setting, Concreting, Supply and Erection of Monopole and tower, stringing of conductor and earthwire for deviation of existig 66kV SC line in between Loc.2 & 3 from Sathanur 110kV SS to the Trichy 110kV SS. (2 Span)	0.50
Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)	230kV SC Line	Supply, Erection of D Type Towers and Stringing for Deviation of 230kV SC Lines (Sriperumpudur-Korattur Loc.48-50 & Sriperumpudur-Koyambedu Loc-69-71) Near Thokanampattu Village for forming of ORR by TNRDC	1.20
Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)	110kV SC Line	Earthwork, Excavation, Stub setting, Concreting, Supply and Erection of towers and Stringing of Panther Conductor and Earthwire for 110KV LILO line from Kallakudi - Thuraiyur 110KV SC Line at Proposed Puthanampatti 110KV SS from Loc 1 to Loc 4.	2.26
Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)	230kV DC Line	Earthwork, Excavation, Stub setting, Concreting, back filling, earthing, Erection, Stringing and Transporatation and supplying tower parts and galvanizing for MD tower in between 8-9 Locations in Sriperumpudur-Nokia Sipcot 230kV DC line for Changing the Circiut.	0.90
	Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)	Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)	Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (TANTRANSCO) (State Power Utility)  Tamil Nadu Transmission Corporation Limited (T



# **International Transmission Line Projects**

International Transmission Line Project Completed					
S. No	Voltage Rating (KV)	KM			
1	33	26			
2	60	140			
3	115	160			
4	132	230			
5	220	282			
6	400 KV & Above	204			
	Total KM	1042			

## Some of the important Overseas Transmission Line Projects Completed

S. No	Type of Line	Description of Projects	Volume of Work	Scope of Work
1	132 KV Double Circuit	Manah- Nizwa, Nizwa- Izki, High Point Muscat Sultanate	80 Km	Erections and Stringing works for Amec Power Ltd., UK, 1995-1996
2	115 KV Single Circuit	Namluk, Hydro Electric Power Project Lao PDR	45 Km	Check Survey, Stub setting, Tower Erection and Stringing works for Amec Power Ltd.1999-2000.
3	132 KV Double Circuit	Sharquiya Transmission System Project Al Mudaibi to Al Mudairib Line Muscat, Sultanate of Oman.	60 Km	Check survey, Stub setting, Concreting tower, Erection and Stringing of YEW conductor and OPGW earth wire for Jyothi structures Ltd., Oman 2001-2002
4	220 KV Double Circuit	Ceylon Electricity Board , Transmission Project Catagoda to Veyangoda, Colombo, Srilanka	17 Km	Tower Erection, Stringing of twin Zebra conductor for Consortium of LGE EC and LG TEK, 2001-2002
5	132KV Double Circuit	Dhofar Power Company Salalah Privitization projects (Raysut Ittin Alqurm) Sultanate of Oman	50 Km	Tower Erection and Stringing of YEW power conductor and OPGW for M/s. Larsen and Turbo (Oman) LLC 2002-2003

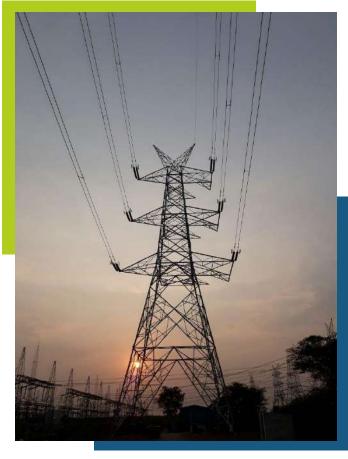


S. No	Type of Line	Description of Projects	Volume of Work	Scope of Work
6	132 KV Double Circuit	Dhofar Power Company Salalah Privitization Project (Thumrait Ittin) Sultanate of Oman	39 Km	Check Survey, Foundation, Tower Erection and Stringing of ELM conductor and OPGW for M/s. HIDAMCO (Egypt) Ltd. 2002-2003.
7	33 KV express line double circuit			Check Survey, Foundation for M/s. HG Power Transmission, Sdh,Bhd. 2002-2003
8	115 KV Double Circuit	Transmission line between Ban NA and Attepu at LAO PDR	115 Km	Survey and Soil Investigation works for M/s. Jaquar Overseas Ltd., at LAO PDR. 2003- 2004
9	220 KV Double Circuit	Overhead line between Ras Laan / DNS and Reconductoring of 220 KV OHL RAF B/ DSS at Doha , Qatar	86 Km	Erection works for M/s. N.C.C Ltd. At Qatar 2003-2004.
10	400 KV Single Circuit	Transmission line between TILGHMIT and DJELFA, ALGERIA	204 Km	Tower Erection and Stringing works for M/s. ELECNOR SA. 2008 - 2009.
11	220 KV Double Circuit Line	Ain Saleh, Algeria	75 KM / 800 Tonnes	Tower Erection and Stringing, Engineering Services (Topography) for M/s Elecnor SA
12	60 KV Single Circuit Line	Ghardaia-Berriane Ghardaia-Guerara	140 KM / 1000 Tonnes	Tower Erection and Stringing, Engineering Services (topography) for M/s Elecnor SA
13	220 KV Single Circuit Line	Mindouli-Tsielampo, Republic of Congo	104 KMS	Stringing and Engineering Services for M/s ETDE, France, during 2010-2011

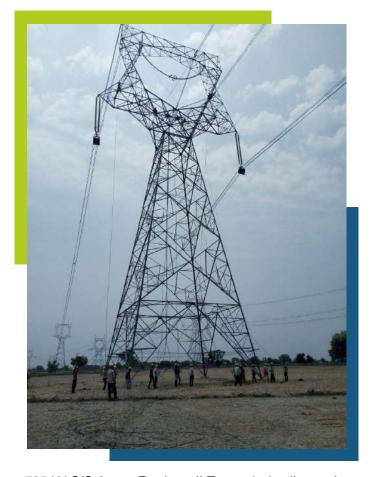
# **Projects Completed as Management Contractor**

S. No	Description of Projects	Volume of Work	Client
1	Project Management Services for Construction of 220kV Mindouli Tsileampo Line in Republic of Congo	104 Km	M/s. Bouygues Energies and Services, France (formerly M/s ETDE)
2	Erection and Stringing of 66 & 220kV Transmission Lines in Algeria	226 Km	M/s. Elecnor Infrastructures, Spain
3	Erection and String of 400kV Transmission Lines in Algeria	205 Km	M/s. Elecnor Infrastructures, Spain
	Total KM	535	





400 kV D/C Transmission Line at Myvadi, Tamil Nadu, India



765 kV S/C Agra - Fatehpur-II Transmission line at Agra, India





400 kV STF Tilghmit-Djelfa Line Stringing for Elecnor SA, Spain



Stringing of 220 kV Line, Brazzaville, Republic of Congo





Erection of 110kV S/C Monopole Transmission Line

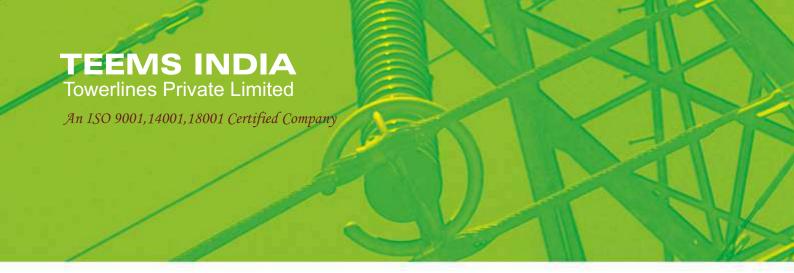


110kV S/C Monopole Transmission Line at Periapalayam, Tamil Nadu, India





Transposing of Phases 400 KV Single Circuit Line Tilghmit, Algeria



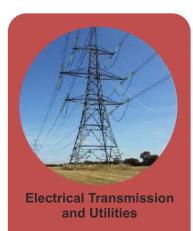


IRS P6 LISS IV MX data using transmission line alignment



#### **Teems India GIS Division**

Teems India is specialized in providing end to end geo-spatial solutions for organizations in different fields, using Geographic Information Systems (GIS), Remote Sensing, Surveying, CAD, GPS Technology for managing spatial phenomena & process and development, with its talented team of professionals. The company has qualified and experienced Survey professionals supported by high technology equipments to deliver quality services to clients. We are specialized in delivering GIS services to the following industries:



- Planing for the new projects
- Route Alignment and Mapping
- Existing Utilities and Asset Management



- Managements System
- Solid Waste Management
- Soil Classification
- Forest Management



- Government Organizations
- Infrastructure Management (Roads, Water, Sewer)
- Urban Planning and Development
- Property Records and Appraisal

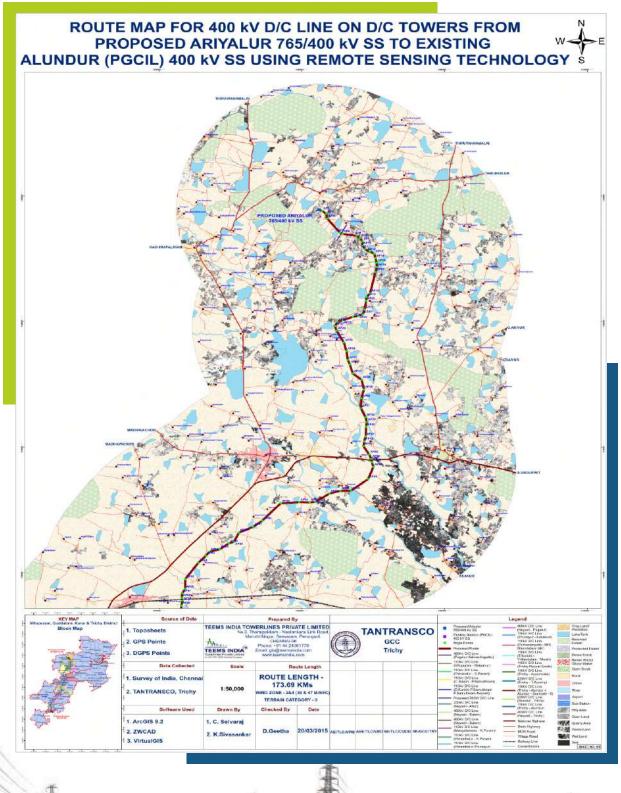


Real Estate and Marketing

- Demographic Analysis
- Retail site selection, Site Evalution

Our GIS team is not only committed to the above fields but also has the capability and skills to offer customized GIS services based on the client needs and deliver it to their convenience.

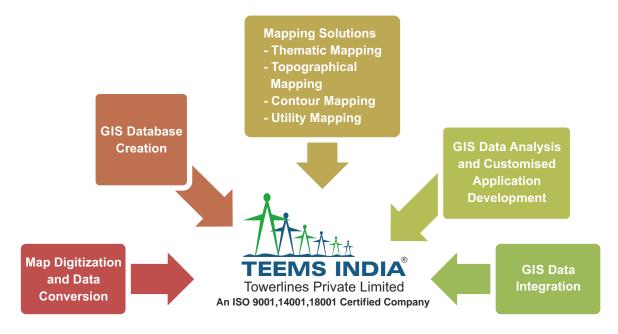






#### **GIS Services**

At Teems India, we are committed to identify the best possible solution(s) to suit client's requirements and anticipated future needs, in a world of a rapidly expanding complex geospatial tools. We provide customized solutions by integrating GIS with GPS, Satellite imaging and CAD technologies.



Our GIS team is not only committed to the above fields but also has the capability and skills to offer customized GIS services based on the client needs and deliver it to their convenience.

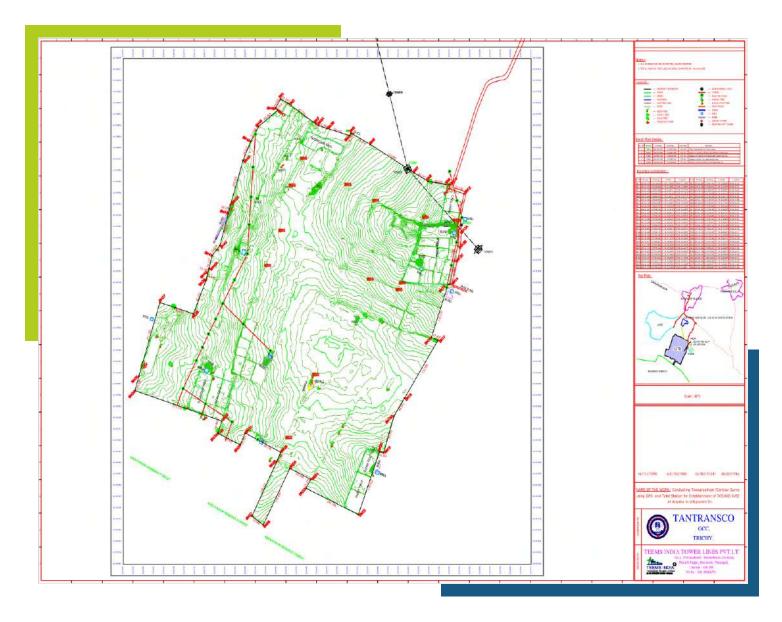
#### **Remote Sensing Services**

Teems India provides expert service in processing high-resolution imagery into quality raster data products. This involves removing distortions in the images (geo rectification) and ensuring that the output is of high quality in terms of clarity, resolution, and color. The processing consists of geo referencing images, mosaicing and cutting to specified output formats. Teems India has the expertise in satellite image interpretation and processing. We offer specialized remote sensing solutions which involve interpretation and analysis of data from most of the commercial satellite imageries like LISS IV MX, IKONOS, Quickbird, Landsat, Radarsat and Cartosat.

We offer the following services

- · Satellite image rectification/ Geo referencing
- Feature Extraction
- Image processing / Image interpretation
- Mosaicing / Clipping





Topographical/Contour Survey for 765/400 KV Ariyalur SS at Tamilnadu, India



#### **CAD Conversion**

We offer complete CAD Conversion services, paper to CAD Conversion and CAD Drafting Services with precision and quality, using global standards. We convert paper drawings and maps into highly accurate digital files, with the help of paper to CAD conversions.

CAD conversion is the most effective way to document technical drawings and related information in an organized manner. It allows conveniently handling, storing and maintaining information from paper drawings in an electronic format and protecting these from possible damages or loss of data in the process of paper to CAD conversions. We also offer paper to CAD conversion services and digital file format conversion services such as DWG to PDF, DWG to TIFF or JPG format for publication, distribution and archiving.





#### Survey

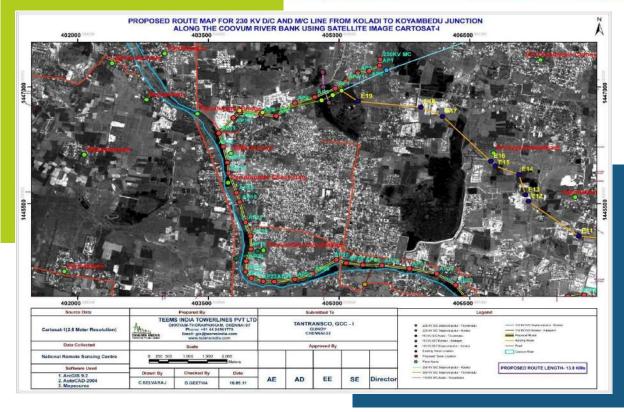
The company has qualified and skilled Survey professionals who have experience in using specialized and modern survey equipments. We use GPS technology and Total Stations for surveying, which provides accurate and credible data. This makes us deliver the best quality surveying services for our clients

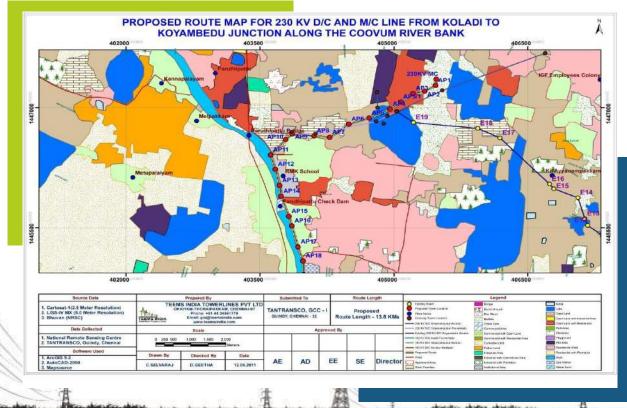
We offer the following survey services

- Cadastral Survey
- Ground Control Points
- Route/Road Survey
- Point Of Interest (POI)
- Building/Property Survey



# TEEMS INDIA Towerlines Private Limited An ISO 9001,14001,18001 Certified Company







# **GIS Projects**

S.No	Name	Route Length(KM)	Client
1	GIS Application for Route alignment and Cadastral Map of Transmission Line for the Proposed 765kV D/C Line from North Chennai Pooling Station 765/400kV SS to Ariyalur 765/400kV SS using GIS & Remote Sensing methodology	270.735	TANTRANSCO, Guindy, Chennai
2	Conducting detailed survey and profile plotting for providing tentative route alignment in GTS Map and route alignment Map using Remote sensing method of the transmission scheme for the proposed 765 KV DC Line on DC towers (wind zone 4,TC-1) with hexa zebra conductor from proposed Ariyalur 765/400 KV SS to Thiruvalam PGCIL 765/400 KV SS	172	TamilNadu Electricity Board, Trichy.
3	Conducting detailed survey and profile plotting for providing route alignment in GTS map and route alignment map using remote sensing method of the transmission scheme for the proposed 400 KV DC line from Ariyalur 765/400 KVSS to Alundur 400 KVSS.	174	TamilNadu Electricity Board, Trichy.
4	GIS and Remote Sensing 400kv D/C line with Quad Moose Conductor from Rasipalayam 400kV SS to Singarapet (Palavadi) 400kV SS – Reach I& II	134	TamilNadu Electricity Board, Salem
5	Conducting topographical /contour survey using GPS and Total station for establishment of 765/400 KVSS at Ariyalur in Villupuram Dt.	104.199 Acres	TamilNadu Electricity Board, Trichy
6	"Detailed survey using GPS, DGPS and total Station route alignment using remote sensing and GIS including preparation of Route Map,profile plotting and tower spotting for the proposed 400 KV DC line with Moose Conductor from the proposed Kamuthi 400/230/110 KV SS."	329.292	TamilNadu Electricity Board, Madurai.



7	Proposed 400kV D/C Line from Kamuthi Proposed 400/230kV SS to Karaikkudi Existing 400kV PGCIL SS	107	TANTRANSCO Madurai
8	Proposed 230kV D/C Line from Kamuthi Proposed 400/230kV SS to Kavanur Existing 230kV SS	26.7	TANTRANSCO Madurai
10	Proposed 230kV D/C Line from Kamuthi Proposed 400/230kV SS to New Muthuramalinga Puram Proposed 230/110kV SS	23.8	TANTRANSCO Madurai
11	Proposed 230kV D/C Line from New Muthuramalinga Puram Proposed 230/110kV SS to Savasapuram Proposed 230/110kV SS	11.6	TANTRANSCO Madurai
12	Proposed 110kV D/C Line from Existing Kamuthi 110kV SS to Kamuthi Proposed 400/230kV SS	10.1	TANTRANSCO Madurai
13	Proposed 110kV D/C Line from New Muthuramalingapuram 230/110kV SS to Proposed Existing Muthuramalingapuram 230kV SS	6	TANTRANSCO Madurai
14	Proposed 110kV D/C Line from Proposed New Muthuramalingapuram 230kV SS to Proposed Vilathikulam 230/110 kV SS	39.6	TANTRANSCO Madurai
15	Proposed 110kV D/C line from KITS Perumpakkam-Perumpakkam TNSCB SS	5	TANTRANSCO, Chennai
16	Proposed 230kV DC Monopole Line survey & Feasibility study work at Erode	3.195	TANTRANSCO, Coimbatore
17	Proposed 230kv Monopole survey work at Erode 110kv SS	3.3	TANTRANSCO, Coimbatore
18	Proposed 230kV Monopole survey work at Kumbakonam	1.0	TANTRANSCO, Coimbatore
19	Conducting Detailed Surey for the Erection of 110kV line from Neyveli – Pappakudi 110kV SS	4.201	TANTRANSCO, Trichy



20	Proposed 110kv SC line from Venkatramana Paper Mills to Kodavasal SS	11	Venkatramana Paper Mills
21	Conducting Detailed Surey for the Proposed 400kV lines at Thervoykandigai -Manali- Korattur, & Proposed 110kV line from LILO of GDP-PUNJETY – Thervoykandigai Sub Station using GIS & Remote Sensing Technology	114	TANTRANSCO, Chennai
22	Conducting Detailed Survey for the Proposed 230kV and 110kV lines at Karuvalur using GIS & Remote Sensing technology	39.826	TANTRANSCO, Coimbatore
23	Conducting Detailed Survey for the proposed 400KV DC & MC line from Ottiyampakkam to Guindy & SVC – Alamathy – Guindy 400kv SS using GIS & Remote Sensing Technology	21.60	TANTRANSCO, Chennai
24	Proposed 230KV & 110KV lines at the proposed (Tirupur) Kumarnagar SS	19.26	TANTRANSCO, Coimbatore
25	Proposed 230KV & 110KV lines at the proposed Shenbagapudur SS	92.22	TANTRANSCO, Coimbatore
26	Erection of 110kV DC line from Tulsyan Nec Limited to Gummidipoondi 110kV SS	9.2	Tulsyan Nec Limited
27	Proposed 110KV line from Acharapakkam – Elavamangalam	8.1	TANTRANSCO, Tiruvanamal
28	Proposed 230 & 110kV lines at Kumbakonam Pateeswaram 230/110kV SS	56.7	TANTRANSCO, Tiruvarur
29	Proposed 230kV DC & MC line from Karamadai 230kV SS to Existing Thudiyalur 230kV SS	40.232	TANTRANSCO, Coimbatore
30	Proposed 400kV DC line from MTPS -Arasur LILO to Karamadai 400kV SS	29.8	TANTRANSCO, Coimbatore
31	Proposed 230kV SC line on DC towers from NPPL Power plant to Tiruvarur- Kumbakonam Existing 110kV SS	56.3	KVK INFRA TECH PVT LTD, NAGAPATINAM



32	Proposed 230KV SC line from ARS Metals Pvt.Ltd – Gummidipoondi	6	ARS METALS PVT LTD
33	Proposed 230kv line from Suryadev Steel Plant ltd to Gummidipoondi 230kV SS	2	SURYADEV STEEL PLANT LTD
34	GPS, GIS & Remote Sensing Technology for Tentative Transmission Route Alignment at Karuvalur for Coimbatore Region – JICA (JAPAN INTERNATIONAL COORPORATION AGENCY) project	51.44	TANTRANSCO, Coimbatore
35	GPS, GIS & Remote Sensing Technology for Tentative Transmission Route Alignment at Kanchipuram Region – JICA (JAPAN INTERNATIONAL COORPORATION AGENCY) project.	123	TANTRANSCO, Chennai
36	GPS, GIS & Remote Sensing Technology for Tentative Transmission Route Alignment at Madurai Region – JICA (JAPAN INTERNATIONAL COORPORATION AGENCY) project.	31	TANTRANSCO, Madurai
37	GPS, GIS & Remote Sensing Technology for Tentative Transmission Route Alignment at Trichy Region – JICA (JAPAN INTERNATIONAL COORPORATION AGENCY) project.	130	TANTRANSCO, Trichy
38	GPS, GIS & Remote Sensing Technology for Tentative Transmission Route Alignment at Coimbatore Region – JICA (JAPAN INTERNATIONAL COORPORATION AGENCY) project.	126.0	TANTRANSCO, Coimbatore
39	GPS, GIS & Remote Sensing Technology for Tentative Transmission Route Alignment at Chennai Region – JICA (JAPAN INTERNATIONAL COORPORATION AGENCY) project.	305	TANTRANSCO, Chennai
40	Proposed 400KV D/C Line from Thapukkundu - Anikkadavu (Theni) using GPS, GIS & Remote Sensing Technology	48.1	TANTRANSCO, Coimbatore



41	Proposed 230KV D/C from Cauvery Power Construction India Limited to Gummidipoondi 230kV SS	4.7	Cauvery Power Construction India Ltd, Chennai
42	Proposed 230kV SC line from Michelin India Tyres Pvt Ltd to Gummidipoondi 110kV SS	18.329	TANTRANSCO, Chennai
43	Proposed 400KV S/C line from Padappai to Orattur using GIS & GPS Technology	7	TANTRANSCO, Chennai
44	Proposed 400KV D/C Line from Ariyalur to Ottiyampakkam – Reach I and Reach II using GIS, RS and GPS Technology	170.461	TANTRANSCO, Chennai
45	Proposed 400KV D/C Line from KalivanthaPattu to Ottiyampakkam using GIS, Remote Se and GPS Technology	26.981	TANTRANSCO, Chennai
46	Proposed 400 KV D/C Line from Sengattu Village  – Ariyalur Reach II using GIS, Remote Sensing and GPS Technology	91.201	TANTRANSCO, Villupuram
47	Proposed 400 KV D/C Line from Pugalur – Sengattu Village – Reach I using GIS, Remote Sensing and GPS Technology	95.709	TANTRANSCO, Trichy
48	Proposed 230KV D/C Line from Koladi to Koyambedu using GIS, Remote Sensing and GPS Technology	13.780	TANTRANSCO, Chennai
49	Power Grid Corporation of India Limited PROJECT – OPGW – Check Survey Project LINK III Kumarghat – Aizwal	131	PGCIL / Simnoor Pooya
50	Power Grid Corporation of India Limited (PGCIL)  - OPGW – Check Survey Project LINK II – Siliguri  - Jorethang	126.04	PGCIL / Simnoor Pooya
51	Power Grid Corporation of India Limited (PGCIL)  - OPGW - Check Survey Project LINK I Galephu to Bongaigoan	49.883	PGCIL / Simnoor Pooya



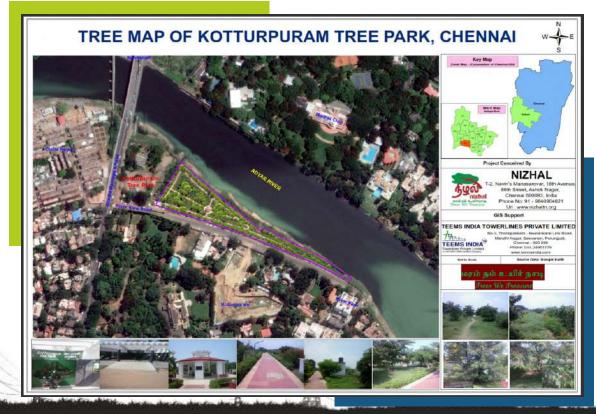
52	Proposed 400 KV D/C Line from Udangudi – Karaikkudi using GIS and GPS Technology	64.3	Tamilnadu Electricity Board, Madurai
53	Land survey using GIS Technology, DGPS and Total Station at Panichamedu village	43.00 Acres	Barabola Hotels, Adyar, Chennai.
54	Project completed using Toposheet (1:50,000 scale) and LISS IV MX data for 400 KV DC Transmission line route alignment from MTPS Stage – III to Arasur 400 KV SS. Final output was delivered by Map Digitization and Data Conversion using GIS.	109.77	TamilNadu Electricity Board, Salem.
55	Tower Line mapping and route alignment for 400kv MC Transmission line from Sunguvachatram SS to Alamathy using GIS, GPS and Total station. Final output was delivered by Map Digitization and Data Conversion using GIS.	48.423	TamilNadu Electricity Board, Chennai.
56	GIS Data analysis for Tower line mapping and Route Alignment for 400 Kv MC link line from NCTPS stage II to Alamathy 400 KV SS using High Resolution Satellite Image.  GIS Data analysis for Tower line mapping and Route Alignment for 400 Kv DC link line from vallur JV project to NCTPS stage II using High Resolution Satellite Image.	33.4873.108	TamilNadu Electricity Board, Chennai.
57	Generating Alternate Feasible routes for Deviating Existing Transmission Line from Sriperumbudur-Arani.	9	TamilNadu Electricity Board, Chennai.
58	GIS Utility mapping for 220 Kv DC line from Basthipura SS to Kushal Nagar SS.	80	Karnataka Power Transmission Corporation Ltd, Mysore.
59	Proposed Transmission Route alignment and field surveying for 110 Kv SC from Oragadam Substation (SS) 230 Kv/110 Kv to Existing Line of SP Koil-Kancheepuram using GIS and GPS.	11	TamilNadu Electricity Board, Chennai.

#### **Teems GIS Infrastructure**

We use a variety of GIS and CAD packages on multiple stations including ArcGIS, PLSCADD, ZWCAD and Auto Plotter. Our experience with Remote Sensing formats include high-resolution satellite imagery, LISS IV MX Data and also Survey of India (SOI) toposheets with 1:50,000 scale. We use modern survey instruments with advance technology like Leica Total Stations, Trimble (R3, GeoXT, JUNO SB) and Garmin GPS.











Training and certification program conducted by CTC Global Top Management team



ACCC Conductor Installation in Bangladesh



#### **Teems India-CTC Global Corporation (US)**

CTC Global a technological leader in carbon composite coreconductors has appointed and signed MOU with Teems India for Training and Supervision for Installation of high-capacity ACCC® conductors. The ACCC® uses approximately 28% more aluminum than other conductors of the same diameter and weight and provides cost-effective conductor solutions that can double the capacity of congested transmission lines, with little to no tower modifications. During 2015, Teems India has supervised Installation of ACCC® conductors for Power Grid Corporation of India, Torrent Power and MSETCL and several projects are in pipeline. Teems India in coordination with CTC Global can plan and offer customized solutions for Reconductoring/augmenting the current carrying capacity of existing transmission lines with little of no modification of the towers. Please refer the website of CTC Global Corporation (www.ctcglobal.com) for more product information on the above conductors.

#### **CTC** GLOBAL

#### **ACCC Conductor Update: July 2015**

#### MSETCL Completes ACCC Installation in Nagpur

With the help of Sterlite Technologies Ltd. and CTC Global, Maharashtra State Electricity Transmission Co. Ltd. (MSETCL) successfully completed their second ACCC conductor installation in Nagpur, Maharashtra, India. The 132 kV Ambazari - Hingna - Mankapur project utilized over 30 km of 622.6 kcmil (315.5 mm^2) Lisbon ACCC conductor manufactured by Sterlite Technologies, Ltd.

Nagpur, often called "Orange City" is precisely at the geographical centre of India and home of the zero mile marker. According to ABP News, Nagpur is the best Indian city to live in based on a number of indices. It is a major trade center for oranges cultivated in the region and also a key Information Technology center.

Hingna is an industrial area where load shedding previously occurred and Mankapur is a growing residential area that also suffered from power outages. The installation of ACCC conductor on this line mitigates the problem even when adjacent lines become overloaded - as the ACCC conductor can handle contingency loads without exhibiting excessive conductor sag.

Due to high population density, it was not possible to build a new line so ACCC was selected as the most cost-effective alternative. The project was successfully completed under the supervision of Sterlite's Field Installation

Team and TEEMS India Tower Lines, an in-country ACCC installation supervisor specialist, exclusively appointed by CTC Global.

#### **CTC GLOBAL**

**ACCC Conductor Update: August 2015** 

Torrent Power Completes 132 kV reconductor project in India

With the support of BNC Power, Teems India, APAR and CTC Global, Torrent Power completed its 5th ACCC conductor installation in India. The double circuit 132 kV project was located in Ahmedabad, Gujarat.

Torrent Power selected ACCC Drake size conductor manufactured by APAR Industries for its New Pirana to Pirana line to increase line capacity and reduce line losses. The successful completion of this project marks the 15th ACCC conductor installation in India.

CTC GLOBAL Newsletter July & August 2015



An ISO 9001,14001,18001 Certified Company



#### TRANSMISSION LINES ACADEMY

#### **Training and Development**

The company has set up TEEMS TRANSMISSION LINES ACADEMY to impart training to the linesman already engaged in the field of Transmission line construction to improve/upgrade their skills and knowledge competency and also to provide full training to the new entrants.

The objective of setting of the Academy is to play a vital role in providing skill development training to the work force to meet the present challenges faced by the Transmission Line construction industry. This is an employment oriented program which has immense scope in the Transmission field.

The manpower requirement in Transmission sector is enormous during 12th plan period and the industry is already reeling under severe shortage of properly trained workforce. We identified appropriate training programs to meet the requirements of the industry, maintaining the quality standards and steady supply of trained workforce to support the industry's manpower needs.

#### The following training courses are offered:

- Linesman Foundation, Tower Erection & Stringing
- Surveyor Transmission Line
- Program for Graduate Engineer on Transmission Line Construction

Teems Transmission Lines Academy has plans to introduce a course on "Safety aspects for Transmission Line Construction." Please note that we can also offer customized Training Program as per requirement of utilities/Institutions.

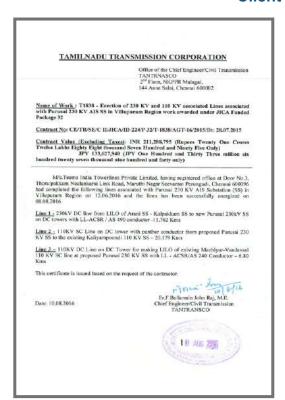




Inauguration of Training Course and Program Conducted at Karaikal Polytechnic College



#### **Client Credentials**

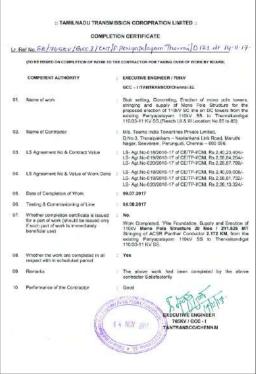














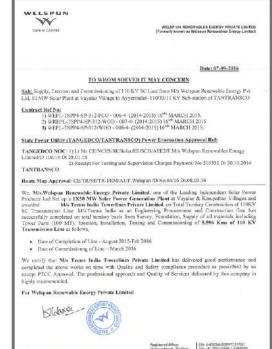








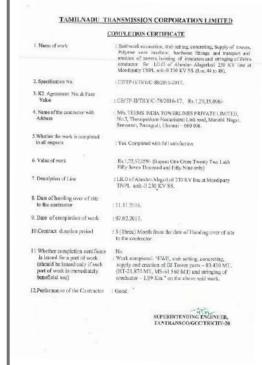


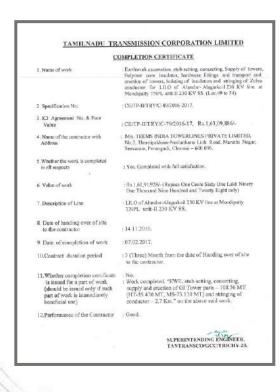






#### COMPLETION CERTIFICATE TO BE ISSUED ON COMPLETION OF WORK TO THE CONTRACTOR FOR TAKING OVER OF WORK BY BOARDS COMPETANAT AUTHORITY SUPERINTENDING ENGINEER, TLC/TANTRANSCO/CUDDALORE Earth world Excession Stud Secting, Concreting, Supply and Excellent of Towers, Stringing of Conductor and GI Earther's for 230 KV DC in on DC towers from the proposed Ulundurpet 230 KV Auto SS ULO the existing 230 KV Rey : C.14/2013-14/D.222-7/2014 03. Agreement No & Face Value : K2.AGT.Na.CE/TP.WTRV/C-04/2013-14 / Rs.1,67,52,829. Mis. TEEMS INDIA TOWERLINES PRIVATE LIMITED, R 214. Kaveri Street, Kalaksheira Colory, Besani Napar, Chennai – 600 080. 04. Name of Contrac 05. Value of Work : Rs. 1.97,49.421/- (Rupees One Crore Ninety Seven Lak's Forty NineThousand Four Hundred and Twenty One Only) : 230 KV DC line on DC towers from the proposed Ulundurpet 230 KV Auto SS LILD the existing 230 KV Neyvell Zero Unit STCMS Neyvol: TS - IL 98. Date of Completion of Work Not. Completed. "EWE, Stubesting, Concresing, Supply and Erection of GI Tower Parts — 137,510 MT, and Stringing of Conductor — 3,620 KM,"on the above said work. 10. Performence of the Contrac OFFICE OF THE Mrg with SUPERINTENDING ENGINEER TLC/TASTRANSCO/CUDDALORE Superintending Engineer, Traismission Line Construction, Tomiladu Traismission Corporation, Cuddalore - 1, 2 1 NOV 2014





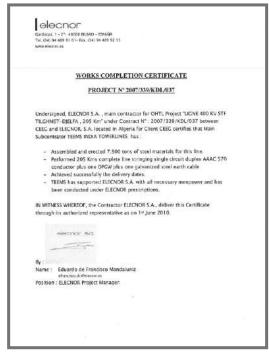


# TEEMS INDIA Towerlines Private Limited

An ISO 9001, 14001, 18001 Certified Company









#### The Value of our Association

At Teems India, we believe in offering Professional and value based service to our clients without compromising on quality. This has been our driving force in successfully executing various projects under difficult conditions and enabled us to meet our client expectations in India and overseas. As a client, associating with us for execution of transmission line and GIS related projects can be assured of the following

Quality of Service

Reliability of Service

Timely Delivery of Project Optimum
Cost Benefit Ratio
to the Client

#### www.teemsindia.com









Certificate No.: Q-180508, 180502-S, 180502-E

An ISO 9001,14001,18001 Certified Company

#### Registered and Administrative Office:

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