



ترانسون اينيرجى سوليوشنز ذ.م.م
TRANSUN ENERGY SOLUTIONS W.L.L

- * Solar EPC Contractor
- * Energy Auditing
- * Consultant for Solar Projects & Energy Auditing
- * Training and Management for Solar & Energy Auditing
- * Construction
- * Trading

PROFILE

**SOLAR PROJECTS & ENERGY AUDITING
(PROJECTS EXECUTION, CONSULTANCY,
TRAINING & MANAGEMENT)**

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DOCUMENTS - SOLAR PROJECTS

CREDENTIALS

Experience in the Kingdom of Bahrain :

Executed 1.25 Megawatts (MW) for M/S Techmaaxx WLL, Bahrain for a School at Saar in the Kingdom of Bahrain,

Experience out of Bahrain :

More than 3500 Projects Executed out of Bahrain

Cumulative Capacity of Power Executed so far :

150 MEGAWATTS (MW) plus

The Highest Capacity of a Solar Power Plant Executed :

20 Megawatts (MW), Vengappally, Telangana, India

SOLAR EPC CONTRACTOR /	ON GRID / OFF-GRID / HYBRID SOLUTIONS	SOLAR EV CHARGING STATION,	SOLAR PUMPS, SOLAR CAR PORTS,
ENERGY AUDITING & ANALYSIS	WIND SOLAR HYBRID POWER PLANTS	SOLAR A/C UNITS, SOLAR STREET LIGHT	CONSTRUCTION & TRADING
CONSULTANCY & MANAGEMENT FOR SOLAR AND ENERGY AUDITING		TRAINING & SKILL DEVELOPMENT	



Transun Energy India Pvt. Ltd.
Chennai, India. Estd. 2010



EnSave Consultancy & Training Pvt Ltd.,
Chennai, India.
(ENERGY AUDITING)



Amazing & Transun Hitech Solutions Pvt. Ltd. Trivandrum, Kerala, India

INTRODUCTION

Solar Projects Division

TRANSUN ENERGY SOLUTIONS W.L.L IS A HIGHLY SPECIALIZED SOLAR EPC CONTRACTOR & CONSULTANT FOR SOLAR ACTIVITIES & ENERGY AUDITING.

Managed by a Group of Highly Qualified & Experienced Leaders who have more than **40 years** of experience in Managing various Industrial sectors such as Solar Power Projects, Energy Auditing, Construction, Trading etc.

In Bahrain, Transun has Executed one of the Largest Rooftop Solar Power Plant with Capacity of 1.25 Megawatts (1.25 MW) for M/S Techmaaxx Projects & Services WLL -Bahrain for a School at Saar in 2020.

TRANSUN has created success stories in Developing **Solar Power Plants & Energy Auditing**. With the Experience and Expertise of the Past Twelve years, we were able to Execute more than **3500** Rooftop and Utility Scale Grid Interactive for Solar Power Plants in Various Countries with a cumulative capacity of **+150 Megawatts (150 MW)**. The largest capacity of a single Utility Scale Solar Power Plants project executed by Transun is a **20 Megawatts (20 MW)** Project for JJ Power in Telengana- **India**.

We excel in Designing, Engineering, Procurement, Installation, Construction, Testing & Commissioning of Solar Power Plants. Our Credentials in establishing them for past years are the proof of the same. Innovation, Quick implementation, Customization based on the need and Scope for Continuous improvement in Project process gave us a Notable position in the Industry. We explore the Best Options to cut down the Over All Cost for Solar Power Plants. By Leveraging the Globally benchmarked practices of Industry we focus on achieving project completion with stipulated time and cost.

We are working as Consultants and Resource Professionals offering Our Services to various Organizations like **MSME (Govt. of India), NSDC, TNPHC** etc.

We are Solar Consultant for RENEWABLE ENERGY COM PANY UK Ltd. (1085494), 102 Cranbrook Road, 02nd Floor, Itford, IGI 4NH, United Kingdom.

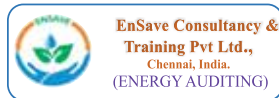
We use the latest technology and machinery for the projects and our workforce is led by Qualified Managers, Project Coordinators, Engineers and Supervisors.

Energy Auditing Division

Our Team of Auditors (Accredited & Certified Energy Auditors), Bureau of Energy Efficiency, Govt. of India are Highly Qualified in the Field of Energy Auditing with Doctorate (Ph.D) Retired from NPC-India, Retired Scientist from Dept. of ATOMIC ENERGY-Govt. of India. They are having more than 35 years of Experience. They have Audited more than **500 Projects** in the various sectors such as Refineries, Oil & Gas, Power Plants, Petrochemical, Pharma, Tyre, Cement, Steel - Aluminum Factories, Hotels, Hospitals, IT Parks, Commercial Buildings etc.

TRANSUN ENERGY SOLUTIONS WLL is committed to keep up the ethical values of business by Maintaining the Principles of Honesty, Integrity and Respect.

We are always committed to our Customers in Delivering Quality of work within the Prescribed time.



OUR CREDENTIALS

01	Executed 1.25 (MWp) Megawatts for a School at SAAR in 2019 in the Kingdom of Bahrain for M/S. Techmaaxx Projects & Services W.L.L, Bahrain.
02	The Highest Capacity of Solar Power Executed in a Single Project is 20 MEGAWATTS (FOR JJ POWER SOLUTIONS AT VENKAPALLI, TELANGANA).
03	Executed more than 3500 Solar PV Projects in & out of India
04	Total Cumulative Capacity of Solar Power Executed is 150 Plus MEGAWATTS
05	2 Megawatts Power project Installed at Aupukottai, TAMILNADU, India.
06	2 Megawatts Power project Installed at Gundur, ANDRAPRADESH, India.
07	2 Megawatts Power project Installed at Madurai, TAMILNADU, India.
08	Member in Net-Metering Policy Making Committee for Tamilnadu Government.
09	Consultant to Various Government organizations and Policy Making Committees.
10	Visiting Faculty in Universities Like Anna University, SASTRA, SRM Industrial advisory member in Saveetha University
11	Panel Member INDO -US MISSION -FAST FORWARD WITH SOLAR
12	Solar Consultant for Renewable Energy Company UK Ltd. (1085494), 102 Cranbrook Road, 02 nd Floor, Itford, IGI 4NH, United Kingdom.

RESEARCH TIE UPS & MOUs FOR SOLAR

➤ ANNA UNIVERSITY- CHENNAI, INDIA.
➤ SRM GROUP OF INSTITUTIONS – CHENNAI, INDIA.
➤ SAVEETA UNIVERSITY- CHENNAI, INDIA.
➤ SSN COLLEGE OF ENGINEERING – CHENNAI, INDIA.
➤ SASTRA UNIVERSITY- THANJAVUR, INDIA.
➤ ST JOSEPH’S GROUP OF INSTITUTION’S – CHENNAI, INDIA.
➤ KCG COLLEGE OF TECHNOLOGY- CHENNAI, INDIA.
➤ JEPPIAAR ENGINEERING COLLEGE- CHENNAI, INDIA.
➤ NSN COLLEGE OF ENGINEERING – KARUR, INDIA.
➤ MAHINDRA GROUP OF INSTITUTION’S- SALEM AND NAMAKKAL
➤ SUDHARSAN COLLEGE OF ENGINEERING – PUDUKKOTTAI, INDIA.
➤ SASTHA INSTITUTE OF TECHNOLOGY- CHENNAI, INDIA.
➤ SKR COLLEGE OF ENGINEERING- CHENNAI, INDIA.
➤ GRT COLLEGE OF ENGINEERING – THIRUTHANI, INDIA.
➤ SA COLLEGE OF ENGINEERING – CHENNAI, INDIA.
➤ SRI VENKESHWARA COLLEGE OF ENGG – THIRUPATHY, INDIA.



Middle East Project Executed : 1.25 Megawatts (MWp) in the Kingdom of Bahrain for M/S Techmaaxx Projects & Services WLL -Bahrain for a School at Saar.



20 MW (Megawatts) in Vengappally, Telangana, India
(The Highest Capacity of the Power Plant Executed in a Single Project)

HEAD OF SOLAR DIVISION



Mr. A.VIJAYABALAN

B.E, A.M. Aesl

(Aeronautical Engineer)

FOUNDER & CEO of TRANSUN INDIA Pvt. Ltd., India. Estd: 2010

- Established the Solar company in 2010
- Executed more than 3500 Solar Projects in & Out of India.
- Consultant and advisor to Various Government Organizations and Policy Making panels
 - Visiting Faculty in Top Universities Like Anna University , SASTRA , SRM etc.
 - Industrial advisory member in Saveetha University
 - Member in Net Metering Policy Making Committee for Tamilnadu Government
- Consultant and advisor to M/s. Renewable Energy Co.UK Ltd. (1085494), 102 Cranbrook Road, 02nd Floor, Itford, IGI 4 NH, United Kingdom.

ACTIVITIES, SERVICES & SUPPLY OFFERED

ON GRID / OFF-GRID / HYBRID SOLUTIONS & ENERGY AUDITING	
Solar EPC Contractor	Consultancy & Management for Solar
Energy Auditing & Analysis	Consultancy & Execution of Energy Auditing
Solar EV Charging Station	Wind Solar Hybrid Power Plants
Solar Car Ports	Solar Street Light
Solar Pumps	Solar A/C Units
Solar Energy Analysis	Training & Skill Development
Construction	Trading

- ATTACHED THE LIST OF MAJOR PROJECTS EXECUTED
- ATTACHED THE LIST OF RESEARCH TIE UPS & MOU's
- **ATTACHED THE PROJECT COMPLETION CERTIFICATES (FEW)**
 - a) Document Attached for 1.25 Megawatts Executed in Bahrain
 - b) Document Attached for 20.00 Megawatts Project
 - c) Document Attached for 2.00 Megawatts Project
 - d) Document Attached for 500 KW Project
 - e) Document Attached for 180.00 KW

Can Submit More Documents & References if Required by the Client

ADVISOR, LEAD CONSULTANT & EXECUTIVE DIRECTOR

(Ex. EWA Advisor for 28 Years in the Kingdom of Bahrain)



RAMESH CHANDRA MISRA

B.E. Electrical Engineering (1978, Nagpur)

CREDENTIALS

Electrical Engineering Specialist & Advisor for 28 years in **EWA Bahrain**
(1995- May 2023)

Ex. Advisor to EWA Vice Chief Executive, Planning & Projects.

Ex. Member of FAT team of EWA.

CPD certification on “Solar radiation & solar cells”.

“A” category certification by the **CRPEP**

Ex. Key member of Sustainable energy unit (**SEU**) for the development of solar PV system in collaboration of UNDP.

Ex. Key Member of Implementing **Net Metering Policy, Kingdom of Bahrain**

Member of Institute of Engineers

Represented EWA in **GCCIA** (cross border interconnection grid) planning committee for expansion and reinforcement plans.

Ex. Head of Team for system fault investigation committee (EWA)

Head of Team for power system studies delegation to consultant ESBI in Dublin, Ireland for implementation of 400KV transmission grid owing to high fault level in the 220 KV system.

Implemented the first ever 5 MW renewable hybrid solar project of EWA in Bahrain.
The Aldur plant is in operation with 3 MW solar PV (crystalline & thin films) & 2 MW from wind.

MMS certification

EWA certification and authorization for work on HV system.

Head of Electrical Maintenance, (1980-1989):
Al-khoums Power Plants, **Libya**

Senior Electrical Engineer, (1989-1995)

SWCC, Jeddah Power Plants, **Saudi Arabia**

2 MEGAWATTS - GUNDUR, ANDRAPRADESH, INDIA



2 MEGAWATTS - MADURAI TAMILNADU, INDIA



5 MWp - THURAIYUR
TAMILNADU



SOLAR FIXING IN CONTAINERS &
PORTABLE CABINS FOR SITE PURPOSES



ACTIVITIES, SERVICES & SUPPLY OFFERED

ON GRID / OFF-GRID / HYBRID SOLUTIONS & ENERGY AUDITING	
Solar EPC Contractor	Consultancy & Management for Solar
Energy Auditing & Analysis	Consultancy & Execution of Energy Auditing
Solar EV Charging Station	Wind Solar Hybrid Power Plants
Solar Car Ports	Solar Street Light & Solar A/C Units
Solar Pumps	Solar for Containers & Porto Cabins for Projects
Solar Energy Analysis	Training & Skill Development
Construction	Trading



Transun Energy India Pvt. Ltd.
Chennai, India. Estd. 2010



EnSave Consultancy &
Training Pvt. Ltd.,
Chennai, India.
(ENERGY AUDITING)



Amazing & Transun Hitech Solutions
Pvt. Ltd. Trivandum, Kerala, India

SOLAR WATER PUMPS

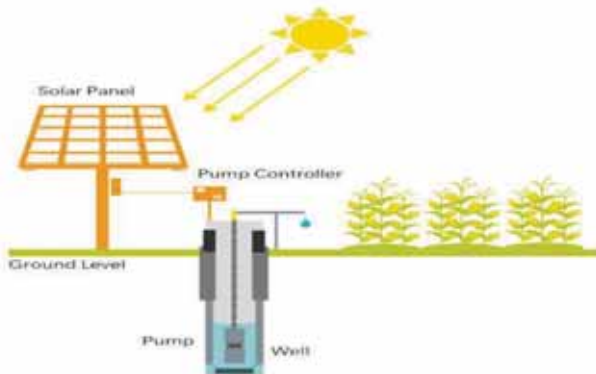


Solar Water Pumps are often used in Remote areas where the cost of running Traditional AC-powered Water Pumping is cost-prohibitive, or you just want to provide water to an Off-Grid System. Solar water pumping systems are also used to pump water for livestock and crop irrigation in Remote locations. Our Solar Pump drives with inbuilt MPPT delivers maximum power from the Sun to both Submersible and Surface Water Pumps. Transun Solar Power Pumps support various applications including Field Irrigation or Supplying Potable water, while drawing water from underground multiple water sources as per requirement.

SOLAR WATER PUMPS (Submersible & Surface Types)

Solar Water Pump Types

Submersible Pump



Surface Pump



SOLAR TREE



A Solar tree is an Energy Generator with a visual appearance similar to a Tree, with the Solar Panels serving as its leaves. The Solar Tree has Several Advantages as it offers more than just Energy output from its Panels. Like a real tree. Solar Trees can offer Shade, making them ideal for integration into an open park or property. They also solve space problems and can have customizable options to add features in the shade below the panels, such as attached seating or a table. 1 Applications of solar tree.

- Solar Trees as EV Charging station
- Solar Trees for Garden Lighting
- Solar Trees for Irrigation Pumps
- Solar Tree for Laptop and Mobile charging stations

WIND SOLAR HYBRID POWER PLANTS



The wind-solar hybrid power system which harvest the solar and wind energy with the wind turbines Installed on the telecom towers or freestanding and photovoltaic system harvest power from sun.

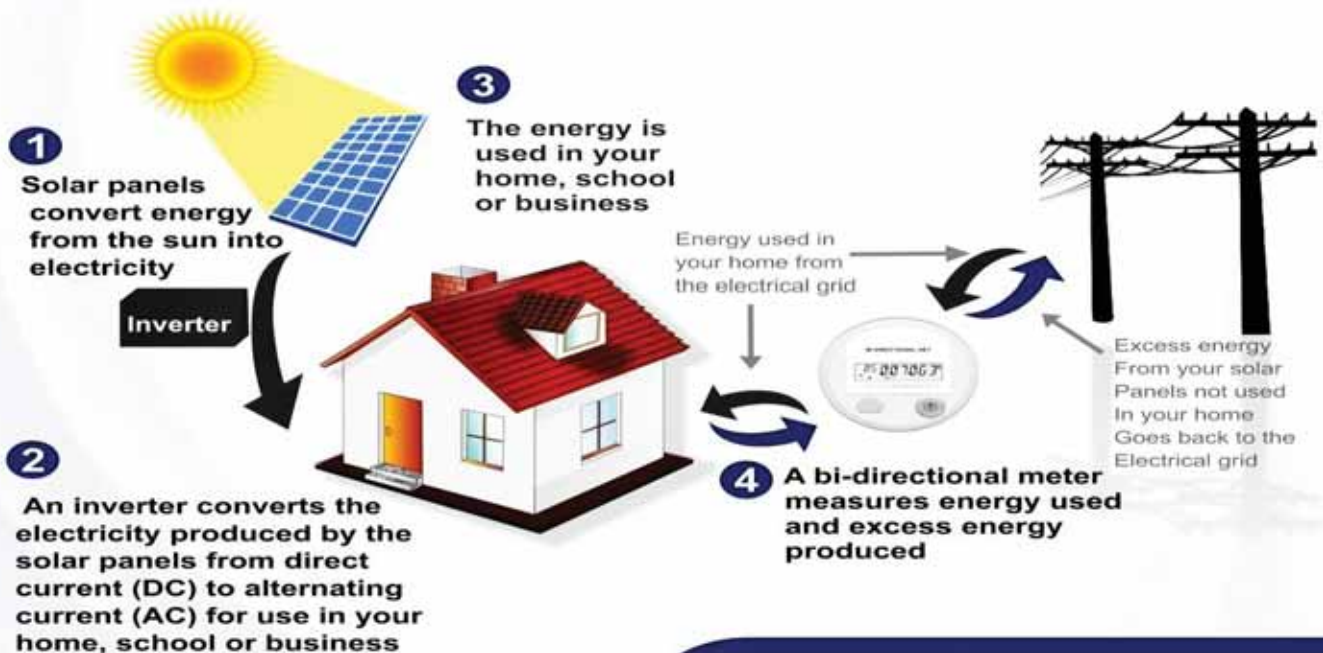
- This system can altogether could assure uninterrupted power supply
- The wind solar hybrid system can be made as On grid as well as off grid.
- The intermittent nature of solar and wind power can be effectively mitigated. Energy storage on-site (batteries) ensures that power is available when the sun isn't shining or the wind isn't blowing.
- Expert system design and dimensioning with consideration of the local sunlight and/or wind patterns maximizes energy capture through a broad range of common conditions

The rooftop as well as Ground Mounted wind solar hybrid solution can be Provided

MEMBER IN TAMILNADU GOVT.' s NET METERING POLICY MAKING COMMITTEE



How Net Metering Works



HIGHLY QUALIFIED PROFESSIONALS IN THE EXECUTION TEAM



MOHAMAD UVAIZ (Regional Manager for Bahrain)

- B.E Instrumentation & Control Engg.
- Holding Bahrain Engineer's License (CRPEP)
- Building Elec., LV, MV
- Solar Construction, Operation & Maintenance
- 19 Years over all Experience in the Kingdom of Bahrain.



SRIDHAR RAMANUJAM, Project Manager

- B.E Mechanical Engineer
- Certified Solar PV Installer from SEU in the Kingdom of Bahrain
- Solar Installation Experience in Bahrain : 7 Years
- Solar Installation Engineer in India : 3 Years
- Solar Construction, Operation & Maintenance



ASHWATH SUDHAKAR, B.E, Project Manager

- Electrical engineer started his career in solar Industry as Site Engineer .
- Professional Safety Consultant with International safety Certification NEBOSH
- Solar safety consultant with project experience of 8 years with more than 700 Installations including in the Kingdom of Bahrain.



T. JONES BASIL, M.E, Project Manager

- Holds a Master degree in Power systems with wide knowledge in Power Plants
- Field Expert with experience of more than 5 years with 1000 rooftop Installations
- He has Played a Major Role In executing 180 KW Chennai Cantonment Board Rooftop Installation and 20 MW installation in Telangana, India.
- Electrical Engineer started his career in solar Industry as Site Supervisor
- Professional electromechanical engineer with experience of more than 12 years in India, Singapore and in the Kingdom of Bahrain.
- Professional Safety Engineer with BCA certification – Singapore.
- He has vast experience in field of Solar Pumps with more than 150 Pumps and Rooftop Solar Installations.



D. PARTHIPAN, Site Engineer

- Electrical Engineer started his career in solar Industry as Site Supervisor
- Professional Electromechanical Engineer with Experience of more than 12 years in India, Singapore and in the Kingdom of Bahrain.
- Professional Safety Engineer with BCA certification – Singapore.
- He has vast experience in field of Solar Pumps with more than 150 Pumps and Rooftop Solar Installations.

LIST OF MAJOR SOLAR PROJECTS

NAME OF CLIENT	CAPACITY	YEAR
MIDDLE EAST PROJECT : TECHMAAXX Projects & Services W.L.L – Bahrain (Project for a Bahrain School at SAAR IN THE KINGDOM OF BAHRAIN)	1.25 MWp	2019-2020
JJ POWER –TELANGANA-INDIA	20 MWp	2015
THURAIYUR, TAMIL NADU, INDIA	5 MWp	2015
ISHWARYAM VENTURES, GUNDUR –A.P INDIA	2 MWp	2016
TAMILNADU, INDIA	2 MWp	2016
EVERSURE ENERGY LLP CHENNAI	500 KWp	2018
CHENNAI CANTONMENT BOARD	180 KWp	2018
SRI SAI INDUSTRIES TELANGANA	100 KWp	2018
ISHA YOGA FOUNDATION	2 x 36 KWp	2019
ANNAMALAI MOTORS THANJAVUR	20 KWp	2017
REDSTAR PLASTIC –SRICITY	20 KWp	2017
ROYAL GREENS –SRICITY	20 KWp	2018
DAMRO FURNITURES-MADURAI	15 KWp	2018
SRI NALLAZHAGHU PEC-CHENNAI	30 KWp	2018
TRILEAVES SCHOOL-CHENNAI	10 KWp	2016
SARAVANA BHAVAN ROOMS	15 KWp	2016
ANGEL NURSING HOME	8 KWp	2016
JEEPIAR ENGINEERING COLLEGE	10 KWp	2015
ST. JOSEPH COLLEGE OF ENGINEERING	20 KWp	2014
BHARATHI ENTERPRISES	4 KWp	2015
NITTTR –GOVT OF INDIA-CHENNAI	5 KWp	2015
In Addition to the above Listed Projects, the Rest of the Completed Projects Details can be Presented if Required.		

OUR CLIENTS / AFFILIATIONS / COLLABORATIONS

	 MICRO, SMALL & MEDIUM ENTERPRISES सूक्ष्म, लघु एवं मध्यम उद्यम OUR STRENGTH • हमारी शक्ति Ministry of MSME, Govt. of India	
		
 एन एस आई सी NSIC ISO 9001 : 2008	 DAMRO SOUTH ASIA'S LARGEST FURNITURE MANUFACTURER	 SREE SASTHA INSTITUTIONS POONAMALLEE, CHENNAI - 600 123 Since 1999
 KCG COLLEGE OF TECHNOLOGY	 इसरो ISRO	 SKR ENGINEERING COLLEGE KNOWLEDGE IS IMMORTAL
 SRI VIJAY VIDYALAYA MATRIC SCHOOL, HOSUR.	 LUMINOUS	 EMMVEE photovoltaics
 N.S.D.C National Skill Development Corporation	 LIBA LOYOLA INSTITUTE OF BUSINESS ADMINISTRATION	 Sree Sastha Institutions POONAMALLEE, CHENNAI - 600 123 Since 1999
 RenewSys™ let there be light	 SASTRA UNIVERSITY A UNIVERSITY DRIVEN ORGANIZATION SINCE 1982	 Unlimited Power ROCKET BATTERY Since 1952
 SSN	 INFAC	 S.A. ENGINEERING COLLEGE
 NSN CET Making Through Education	 RADIANT SOLAR	 KIRLOSKAR SOLAR
 vikram solar vision in action	 niesbud	 WAAREE ® One with the Sun

Work Order

تيكماكس بروجيكتس أند سير فيسيز ذ.م.م - البحرين Techmaaxx Projects and Services W.L.L - Bahrain

Our Ref: TMX/PO/TRANSUN/017-2019

Date: 03-Jul-2019, Wed

M/s.TRANSUN ENERGY SYSTEMS
No.10, Balaji Nagar, 2nd Main Road
Ekatuthangal
Tamil Nadu, Chennai - 600 032
India

Tel : +91 44 - 4359 4187
Email: vijay@transun.co.in
Quotation Ref : 290419111
Quotation Date : 02-July-2019

Attn to : Mr. A. VIJAYABALAN - Founder & CEO
Mobile : +91 95 8555 6451

Dear Sir

Project : 1.25MWp Rooftop Photovoltaic System for St Christopher School, Kingdom of Bahrain

With reference to your QuotationRef No. 290419111 dated 02-July-2019, we are pleasure to confirm our materials order confirmation for the above mentioned project in accordance with agreed terms and conditions as follows,

No.	Description of Goods	Type	Quantity in Pieces
01	Solar panels HS CODE 8537.10	Mono crystalline 375 w	3336 Nos
02	Solar Inverter HS CODE 8537.10	Grid Tied TL 50 KW	24 Nos
03	MMS HS CODE 8537.10	Aluminium	1250 KW
04	Cables and Installation Accesories		1250 KW
05	Design, Installation Testing and Comissioning		1250 KW
Total			850,658.00

United States Dollar Eight fifty thousand six hundred and fifty eight only)



Address: PO Box 38893,
Manama, Kingdom of Bahrain
Website : www.techmaaxx.com

Completion Certificate

J.J POWER SOLUTIONS

Certified Solar Integrators,
No. 29/79, Nanthavanam Road, Dindigul.

Email jjpowersolution15@gmail.com

Project Completion Certificate

1. Project Name 20 MWp Grid connected Plant – Venkapalli Telengana India
2. Implementing Agency - J. J power solutions
3. Name of the EPC contractor – Transun Energy systems Chennai-32
4. Final date of completion- 20 -06-2015
5. Benefits generated out of the project – 20 MWp of Solar Photovoltaic Power plant which can generate 32,00,0000 KWhrs of energy every year for period of 25 years

Certified that I have satisfied myself that the conditions and purpose for which the loans was sanctioned have been duly filled and I have exercised the necessary checks to see that the money was actually spent for the purpose for which it was released.




Authorised Signatory

Completion Certificate



ISWARYAM VENTURS
SOLAR INTEGRATOR

3rd AUGUST 2016.

TO WHOM SO-EVER IT MAY CONCERN

This is to certify that M/s. TRANSUN ENERGY SYSTEMS, Chennai – 600 032 has done a **TWO MEGA WATT SOLAR PROJECT** as E.P.C. on contract basis on behalf of us in Guntur District, Andhra Pradesh State on July 2016. The project was completed in a given time with quality components as specified by us.

For **ISWARYAM VENTURS**,

S. Ravirajan
3rd Aug / 2016

S. Ravirajan

Managing Partner.



Work Order

EVERSURE ENERGY SYSTEMS

GST NO. 33AAGFE5344P1Z5

LIN.: AAJ-9015

Dated 10-02-2018
Chennai.

Transun Energy Systems,
No 10, 2nd Main Road,
Ekkaduthangal,
Chennai-600032

Attention: Mr Vijayabalan

Dear Sir,
Our Ref No.: WO/07/2018-19

We are pleased to issue you this work order for the installation of 500kWp Solar On-Grid Rooftop Power plant, as per the sizing, specification, rate, warranty and other terms and conditions with compliance to the details as contained in your quotation ref.: 2018-19/Transun/Q1973 dated 29 Jan 2018.

You are advised to begin immediately and respect the timeline as agreed.

Thanking You,

Yours truly,
for **EVERSURE ENERGY SYSTEMS LLP**


EVERSURE ENERGY SYSTEMS LLP
27, 6th Street, Ayyappa Nagar,
Madipakkam, Chennai - 600 091.
Partner



27, 6th Street,
Ayyappa Nagar,
Madipakkam
Chennai - 600 091
Tamilnadu. INDIA

Tel.: +91 44 2247 5714
Mob.: +91 81240 54220
sales@eversureenergy.in
www.eversureenergy.in

Work Order

The Refex Group

U40100TN2008PLC067360



Work Order No: REL/Chennai-180KW/WO-01/2017-2018

Work Order Date: 22.02.2018

To,

Transun Energy Systems,

Ekkatuthangal, Chennai 32.

Tel 044 - 4359 4187.

Mobile No. +91 9585556451 /52/54

Email Id: vijay@transun.co.in

Kind Attn.: Mr. K.A. Vijayabalan.

Sub.: Work Order for 180 KWp Rooftop Solar Project Design, Supply, Erection , Testing And Commissioning, Assistance with Net Metering and Relevant Approvals across five different locations in Chennai Office of the Cantonment Board, No. 133, North Parade Road, St. Thomas Mount, Chennai – 600016.

Dear Sir,

With reference to your offer and subsequent discussion had with you, we are pleased to place this Work Order for the above subject. Please find attached herewith the following annexures for the same.

Annexure - I: Scope of Work & Price Schedule.

Annexure - II: Commercial Terms and Conditions.

Kindly sign the duplicate copy of this work order and send to us within 3 days of receiving this order.

Yours Sincerely

For Refex Energy Ltd.



AUTHORIZED SIGNATORY



ترانسون اینیرجی سلوشنز ذ.م.م
TRANSUN ENERGY SOLUTIONS W.L.L

- * Energy Auditing
- * Solar EPC Contractor
- * Consultant for Solar Projects & Energy Auditing
- * Training and Management for Solar & Energy Auditing
- * Construction
- * Trading

PROFILE
ENERGY AUDITING
TRAINING
CONSULTANCY

ABOUT US

ENERGY AUDITING DIVISION

TRANSUN ENERGY SOLUTIONS W.L.L IS HIGHLY SPECIALIZED IN ENERGY AUDIT APART FROM SOLAR PROJECTS DIVISION.

Energy Audit Expertise :

We are having more than 35 Years of Experience in Energy Audit and We are Rendering our Services with a Team of Experienced and **BEE (Bureau of Energy Efficiency, Govt. of India)**, Accredited Energy Auditors (AEA) , Certified Energy Auditors (CEA).

Audit Team : Consists of Electrical and Mechanical Engineers :

With Specializations in Energy management and audit. They are Highly Qualified with Doctorate (Ph.D), Retired Scientist from Dept. of ATOMIC ENERGY-Govt. of India and Retired from NPC-India.

Audit Experience / Our Credentials :

Audited more than **500 Projects** in the Various Sectors such as Refineries, Oil & Gas, Power Plants, Petrochemical, Textile, Mines. Ports. Pharma, Tyre, Cement, Steel - Aluminum Industries, Automobile , Light and Heavy engineering Industries .Hotels, Hospitals, IT Parks, Commercial Buildings etc.

International Assignments :

Audit and training services Provided in Various Countries (Bangkok, Thailand, Iran, Japan, Ghana, Taiwan, Nepal, Tehran, Fiji, Tokyo, Egypt, USA- Washington, Pittsburgh, Los Angeles, San Francisco etc.).

TRANSUN Management :

TRANSUN is Managed by a Group of Entrepreneurs who are Experienced in Managing various Industrial Energy Projects such as Solar Power Projects, Energy Auditing, Construction, Trading etc.

We Explore the Opportunities to Cut down the Cost of ENERGY CONSUMPTION by Leveraging the Globally benchmarked practices of the Industry. We focus on Achieving Project Completion within the Stipulated Time and Cost by Maintaining the Principles of Honesty, Integrity and Respect.

(Please Visit our web for more Details of Energy Audit & Solar Projects. **Web : .transunenergy-me.com**)

For **TRANSUN ENERGY SOLUTIONS WLL.**

Dr. P. DHARMALINGAM (Chief & Executive Director of Energy Audit Division)

Ph.D. (Doctorate), B.TECH, PGDEM, MS, DIM, ACE, BEE, Former Director in NPC, India.

Accredited Energy Auditor, Certified Energy Auditor,

Lead Auditor- ISO 50001-EnMS (CMVP), USA, ISO 14064, GHG Lead Verifier.

Mobile: +973 3367 7088 / 3355 0770

Email : energyauditing@transunenergy-me.com, Web : transunenergy-me.com

ENERGY AUDITING

HEAD OF ENERGY AUDITING DIVISION



Dr. P. DHARMALINGAM. (Ph.D.)

EXECUTIVE DIRECTOR OF TRANSUN ENERGY SOLUTIONS WLL

Doctorate in Energy Audit & Management

B.TECH, PGDEM , MS, DIM (Industrial Management), Auditing
(Energy Audit & Management)

Former Director at NPC, India

35 Years of Experience

Qualified Lead Auditor -ISO 50001-EnMS

Certified Measurement & Verification Professional ® (CMVP),USA

PROFILE OF Dr. P. DHARMALINGAM. (Ph.D)

Dr. P. Dharamalingam is heading our **Energy Auditing Division** for **Transun WLL**, in the **Kingdom of Bahrain**, He is currently one of the leading **Energy Auditing Consultants** and an eminent faculty member in various universities for providing training in the field of Energy Auditing in India. He is also a **Former Director to National Productivity Council (NPC) for the Govt. of India**. He has to his credit **35 years of Experience** in the Field of **Energy Auditing & Skills Development Training**. He is also one of the Founding Members of **Indian Institute of Energy Management (IEM)**.

Dr. P. Dharamalingam had completed his **Ph.D** in **Energy Management** back in 2012 from Vinayaka Mission University, He also Holds **M.S** From Birla Institute of Technology (BITS, Pilani) in 2001, He also has **PGDEM** in **Energy Audit & Management** and **DIM** in **Industrial Management**

PROFESSIONAL CERTIFICATION

- Accredited & Certified Energy Auditor, Bureau of Energy Efficiency, Govt. of India
- Trainer in Green Buildings Initiatives

Dr. P. Dharamalingam has **Authored books** and Developed courses on Energy Efficiency which have been Adopted by many Universities in their Syllabus and in **SAARC** Countries' Training Programs.

Energy Efficiency Training given & Visited in Bangkok, Thailand, Iran, Japan, Ghanan, Taiwan, Nepal, Tehran, Fiji, Tokyo, Egypt, USA- Washington, Pittsburgh, Los Angeles, San Francisco etc.



Mr. J. MOHANAN PILLAI

DIRECTOR OF TRANSUN ENERGY SOLUTIONS WLL

M.Sc, F.I.E (Electrical), SCIENTIST (Retired) from Govt. of India, Dept. of ATOMIC ENERGY,
CHARTERED Engineer (Electrical Engineering from the Institution of Engineers from India),
CEA (Certified Energy Auditor)

Certified Energy Manager, 39 Years in the Energy Field

Certified & Qualified in Solar System Designing, Installation, Project Engineering &
Management.

Retired from this service in 2014.



Mr. T. SANKARANARAYANAN

DIRECTOR OF TRANSUN ENERGY SOLUTIONS WLL

BEE certified Energy Auditor - 689 - EA 1576 (Professional Licenses)

BEE accredited Energy Auditor – AEA 0107

Mr T Sankaranarayanan is an Eminent Certified & Accredited Energy Auditor with
35 years of experience in Energy Efficiency,

Energy Conservation, Energy Management Strategy, Energy Auditing.

Holds a Post graduation in Energy Management.

He was also a Former Regional Director at NPC , Mumbai.

ENERGY AUDITING DIVISION:

Please Refer our WEB (for the ENERGY AUDITING DIVISION) for more Details
Attached in our Web

- ❖ Conducted more than 500 Energy Audit projects in various industrial sectors covering Process and Engineering such as Refineries, Oil & Gas, Power plant, Steel, Chemical, Petrochemical, Textiles, Dairy, Paper, Sugar, Tyre, Cement, Fertilizers, Aluminium, Pharma, Automobiles, Foundry, Railways, Hotel, Hospital, IT software park and Commercial buildings etc.



SERVICE PROVIDED TO VARIOUS COUNTRIES

01. Taiwan - Provided training program on Energy conservation in Foundry,1995
02. Thailand - Provided workshop program on Knowledge management,2005
03. Iran - Faculty & Experts on energy conservation & Management course,2007
04. Iran - Energy Experts on energy conservation & Green Productivity 2008
05. Japan - Practical training on Industrial Energy conservation &Energy Lab,2009
06. USA - Green Buildings Study -Washington, Pittsburgh, Los Angeles and SanFrancisco, 2009
07. Japan - Practical training on Industrial Energy conservation programme,2010
08. Nepal - Chief faculty –Conducted certified <i>Energy auditor course</i> , 2011
09. Nepal - Faculty &Energy Experts –Conducted Energy Audit in Dairy plant,2012
10. FIJI - Energy Experts- Conducted <i>Certified Energy auditor</i> course,2013
11. Taiwan - Worksop on enhancing productivity consultancy sercive,2015
12. FIJI - Faculty - Conducted <i>Green Productivity course</i> for APO Member ,2016
13. FIJI - Chief faculty & Experts - Conducted <i>Green Building course</i> ,2016
14. Ghana - Energy Experts – Setting up Sustainable energy centre & curriculum development for Ghana, March 2019
15. Ghana - Energy Experts – Setting up Sustainable energy centre & curriculum development for Ghana, December 2019

OUR CONSULTANCY SERVICES FOR ENERGY AUDITING

❖ Detailed Energy Audit	❖ ISO 50001 Implementation
❖ Electrical Energy Audit	❖ Carbon Foot Print study
❖ Thermal Energy Audit	❖ Harmonics study
❖ Building Energy Audit	❖ Electrical Safety
❖ Water Audit	❖ Green productivity

ENVIRONMENT MANAGEMENT

- ❖ Waste minimization ❖ Efficient operation of Effluent Treatment plant

GREEN PRODUCTIVITY

- ❖ Lean Management and productivity ❖ 5S and Kaizen ❖ Lean, Clean and Green Management
- ❖ LEED & Green Building Initiative

SECTORS COVERED

❖ Aluminium Industries	❖ Mining
❖ Thermal power plants	❖ Dairy
❖ Steel Plants	❖ Sugar Plants
❖ Foundries	❖ Food & beverage
❖ Cement Factories	❖ Rubber & plastics
❖ Paper Mills	❖ IT sector
❖ Refineries	❖ Multi Speciality Hospitals
❖ Fertilisers	❖ Luxury Hotels
❖ Railways	❖ Educational Institution
❖ Textile Industries	❖ Municipal Corporations
❖ Chemical Plants	❖ Banks (including Reserve Banks)
❖ Engineering Industries (Light & Heavy)	❖ MSMEs
❖ Automobile Industries	❖ Onshore & Offshore Platforms
❖ Ports	❖ Mines etc.



ENERGY COST REDUCTION

Energy cost reduction is the need of the hour, for each Industry. "Energy efficiency" is proven economic drivers that can help industries to reduce their energy waste while reduce 'Greenhouse Gas' emissions. Energy cost on account of Electricity, Fuel oil, Coal, Gas, Water and Steam is an area where very effective & quick results can be achieved by energy auditing. Many of the Energy Audits Identified Cost Savings Potential in the Order of 20-25% even in the well Managed Industries and Commercial Sectors. The Actual Cost Savings will be Known after Detailed Energy Audit of Individual Facilities.

Clean Energy Systems: Renewable Energy, solar, wind, bio-energy, Waste minimization, Clean Technology.

Energy Management: ISO 50001, CMVP, Techno Economic Evaluation of EE Technologies, PAT, M&V, LEED & Green Building Initiative.

AUDIT COVERAGE AREAS

Electrical Energy Systems: Electrical Power Generation Systems, Distribution network study, Plant Electrical Utilities, Transformer, Motors, Capacitors, Electrical network, Fans and blowers, Pumping system, Compressed air system, HVAC, Cooling tower, Illumination, DG sets, Tariff structure, VFD Application and Energy Efficient Capacity Controls, Harmonic, Advanced controls and Electrical Safety.

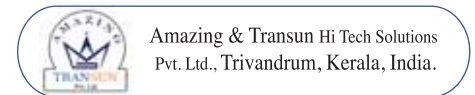
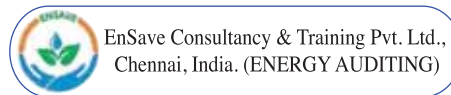
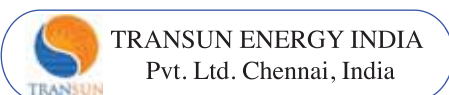
Thermal Energy Systems: Fuels and Combustion, Industrial Boilers, Steam System, Furnaces (Fuel and Electric), Thermal Energy Equipment's (Boilers, Melting and Reheating furnaces), Waste Heat recovery Systems, Energy loss optimization in Thermal energy Distribution network, Fuel Substitution assessment, Performance of Dryers, Hot & Cold Distribution Lines Insulation review and Review of Standing Loss through Refractories. Assessment of Cogeneration and Tri-generation Potential, Gas & steam turbines, WHR and Heat Exchangers. Performance Assessment of Power Generation Equipment, Identification Waste, Heat Recovery Potential and Review of Heat Exchange Performance, Application of Energy Efficient Technologies and performance evaluation of Thermal system.

OUR STRENGTHS

- ❖ Accredited Energy Auditor Professionals
- ❖ Advanced Energy Audit Instruments to carryout energy audit
- ❖ Our recommendation and solutions are practical, implementable and cost economics.
- ❖ Quick & Quality services
- ❖ In-company training to operators & supervisors level and mangers & executives level

CAPACITY BUILDING PROGRAMMES

Conducting Capacity Building Programs / Workshops / Seminars for Govt. & Non-Govt. Sectors for Energy Awareness / Energy efficiency for operating engineers and utility personal .Tailor made in-house training Programme on Energy management and Audit can also be organized at Plant premises as per the requirements.



AUDIT METHODOLOGY

Energy Audit will be conducted through qualified energy Engineers with the Guidance of Accredited Energy auditors . The field activities involve Plant energy data and Major energy equipment's operating data. Short duration trials of Major utilities, Motor load survey, Insulation survey and other field measurements as per the nature of the Industries. All filed measurements will be carried out using portable Instruments as well as Plant panel Instruments. Portable instrument will be used without disturbing the plant operations.

Based on Plant operating data and field measurements Energy Conservation measures with Techno economic analysis and Audit observations will be included in the Energy Audit report. Audit findings will be presented to the plant team and all the feedbacks will be incorporated and the final Audit report will be submitted to the Plant management. We also Explore the Opportunities for reducing the Operating Cost and ENERGY CONSUMPTION by Leveraging the Globally benchmarked practices of the Industry

Our Energy Audit and Management Solutions helps in Creating Sustainable Business and help in reducing carbon Emissions.

OUR TRAINING SERVICES

In the ever-changing energy industry, knowledge management is the key to efficient, reliable and profitable operations. Keeping up-to-date with the latest developments is a huge challenge with new technologies and regulations constantly emerging. Apart from workshops we conduct customised in-house training to your company's specific needs. These can be tailored versions of existing courses, or completely new.

TYPE OF TRAINING

- ❖ Customized In-Company Training
- ❖ Energy awareness for all employees.
- ❖ Open enrolment courses and workshops

LIST OF TRAINING PROGRAMME OFFERED

ENERGY MANAGEMENT

❖ Industrial Energy Audit & Management	❖ FBC Boiler and Cogeneration
❖ Electrical Energy Audit & Conservation	❖ Energy Conservation in Furnaces
❖ Electrical Safety Audit	❖ Boiler & cooling water treatment
❖ Energy Savings in Pumps Fans and Air compressors	❖ Process Integration and Pinch Technology
❖ Energy Conservation in HVAC system	❖ ISO 50001 Energy Management systems
❖ Energy Conservation in Cooling Towers	❖ Operation & Maintenance of Thermal Power Plant
❖ Energy Conservation in D.G Sets	❖ Waste Heat recovery & Heat exchangers
❖ Energy Conservation in Boiler & Steam System	❖ Energy Conservation in Commercial Buildings

TRAINING METHODOLOGY

Training methodology includes lectures, videos, animations, question & answer sessions, quiz and interactive worked examples. Relevant case studies will be provided to illustrate the application of each tool in an operations environment.

CREDENTIALS AND ACHIEVEMENTS OF Dr. P. DHARMALINGAM (Ph.D)

1. AUTHORED, GUIDE BOOKS ON ENERGY EFFICIENCY



2. ESTABLISHED CENTRE OF EXCELLENCE FOR TRAINING IN ENERGY EFFICIENCY



3. National and international program conducted

Practice - Oriented Workshop on Energy Audits And Energy Efficiency
Organised by
ASIAN PRODUCTIVITY ORGANIZATION
&
NATIONAL PRODUCTIVITY COUNCIL (AIP) CHENNAI, INDIA
2 - 11 June 2014



Energy Efficiency Training for Egypt Delegation- 5 days programme Egypt Delegation- Electricity board engineers



5 Days Energy audit and Management programme for Govt of Karnataka Engineers



Energy Audit in Chemical additives Industry



Energy Audit in Heavy Engineering industry

Energy Audit Methodology

1. Plant visit and physical observation of operating practices and critical observations.
2. Discussion with Plant utility personals and management.
3. Study of various plant utilities-Field measurement with energy audit instruments.
4. Design and operating data collection of mechanical, electrical, thermal and production equipment's
5. Comparison of operating data with design data.
6. Motor load measurements and survey with power analyzer.
7. Illumination survey, Insulation survey, Thermography survey
8. Identification of Energy Conservation (ENCON) measures.
9. Economic feasibility analysis for identified measures.
10. Documentation, Recommendations and Presentation to the management.



Building Energy Audit



Energy Auditing and Management Training



Corporate Training Services

LIST OF ENERGY MANAGEMENT COURSE MODULES

A-Electrical Utility

Module-1: ELECTRICAL DISTRIBUTION SYSTEM- TRANSFORMERS, PF, MD, CAPACITORS, LOSS REDUCTION
Module-2: ENERGY EFFICIENCY IN ELECTRIC MOTOR
Module-3: VFDs, HARMONICS & POWER QUALITY MANAGEMENT
Module-4: LIGHTING SYSTEM AND CONTROLS
Module-5: DG SET OPERATION AND MAINTENANCE

B-Mechanical Utility

Module-6: ENERGY EFFICIENCY IN PUMP AND PUMPING SYSTEM
Module-7: ENERGY EFFICIENCY IN FAN SYSTEM
Module-8: ENERGY EFFICIENCY IN COMPRESSED AIR SYSTEM
Module-9: ENERGY EFFICIENCY IN REFRIGERATION SYSTEM
Module-10: ENERGY EFFICIENCY IN AIR CONDITIONING SYSTEM
Module-11: ENERGY EFFICIENCY IN COOLING TOWER

C-Thermal Utility

Module-12: FUELS AND COMBUSTION (Oil & Gas)
Module-13: EFFICIENT OPERATION AND MAINTENANCE OF BOILER
Module-14: EFFICIENT USE OF STEAM AND STEAM TRAP
Module-15: BOILER & COOLING WATER TREATMENT
Module-16: HEAT EXCHANGERS & TRI-GENERATION

D-Energy Audit, Management and General Aspects

Module-17: CLIMATIC CHANGE AND NEED FOR ENERGY EFFICIENCY
Module-18: ENERGY AUDITING AND MANAGEMENT
Module-19: ISO-50001 EnMS CERTIFICATION
Module-20: GREEN BUILDINGS INITIATIVES, ECBC/LEED
Module-21: WATER AUDIT AND CONSERVATION
Module-22: WATER TREATMENT/ETP

E-Renewable Energy

Module-23: SOLAR THERMAL TECHNOLOGY & APPLICATION
Module-24: SOLAR POWER GENERATION TECHNOLOGY & APPLICATION
Module-25: BIO ENERGY TECHNOLOGY & APPLICATION

WHY TO GO FOR ENERGY AUDIT?

ANALYSIS

Analyse existing energy usage.

USAGE

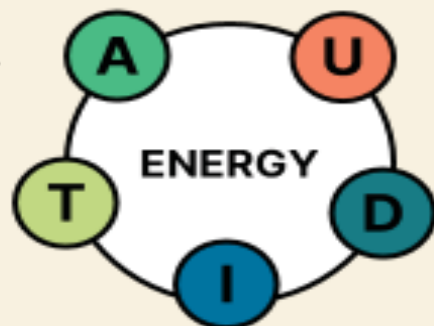
Finding out optimized energy usage.

TOTAL SAVING

Saving on both tangible and intangible betterment of the system.

DECIDE

Decide on better alternatives



IMPLEMENTATION

Implementing the changes in the system

LIST OF MAJOR INTERNATIONAL CLIENTS

Conducted Capacity building training for APO , Asian Productivity Organization (Tokyo): As technical Expert for Energy Efficiency and Green productivity in Fiji
UNEP (Bangkok) – Chief faculty Hands on Energy Efficiency Training
NEEP- GIZ : Development of training project in Energy Efficiency in Nepal
IPHRD , Iran Institute of Productivity and Human Resources Development : Design and development of Energy Efficiency capacity building
USAID - Distribution Reforms and Upgradation Project (DRUM) for electric utilities
JAICA Japan : Development and commissioning of ‘Centre of Excellence for Training in Energy Efficiency’(CETEE) at NPC India
NTPC - National Training & Productivity Centre, Fiji :Design and development of Training modules for capacity building of Engineers in Green Buildings.
UNIDO -Automobile industry cluster, MSME sector
ASSIST - Air-conditioning and refrigeration manual for efficient operation and maintenance and Greenhouse gas reduction
UNDP - Steel rerolling mill Energy Efficiency

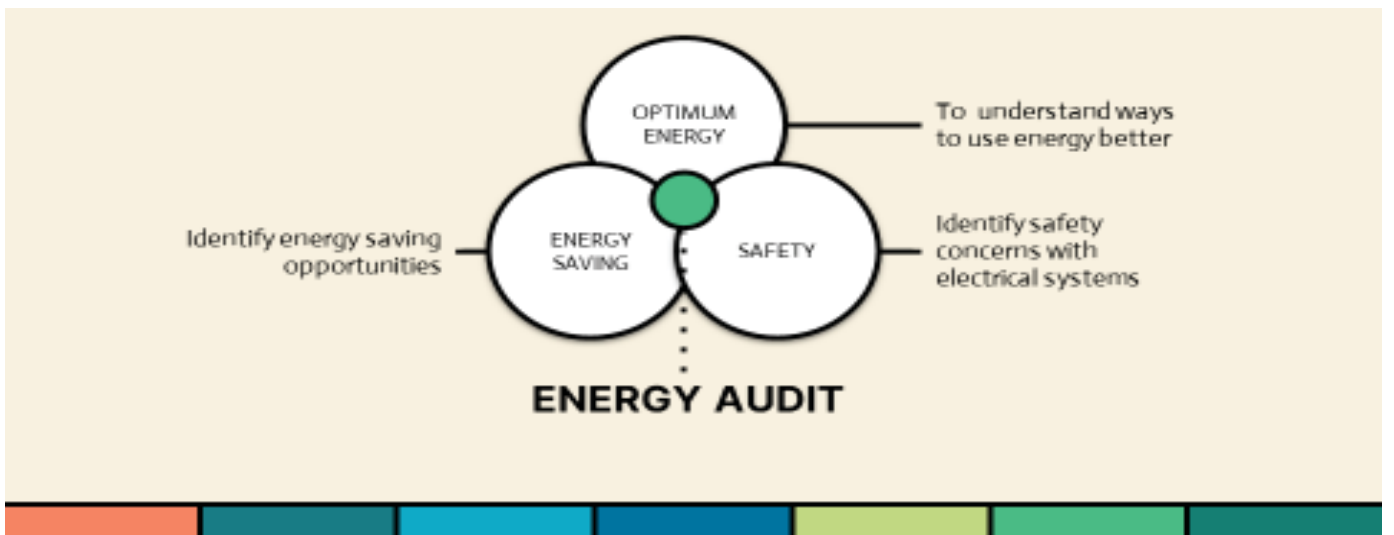
INDIAN CORPORATE CLIENTS

Organised Energy Audit and Practical training program for the Below Noted Corporates
BEE - Bureau of energy Efficiency
NTPC - National thermal power corporation
NALCO - National Aluminium Corporation
GAIL - Gas authority of India
ONGC - Oil and Natural Gas Corporation
PCRA –Petroleum conservation & research association
IOF -Indian ordinance factories
IOCL - Indian oil corporation Ltd
Reliance -Reliance industries
EESL - Energy efficiency services Ltd

LIST OF INDUSTRIAL CLIENTS

EXECUTED ENERGY AUDIT AND CONSERVATION PROJECTS	
Mangalore Refineries & Petrochemicals Ltd, Mangalore	Cochin Refineries Ltd, Cochin
Chennai petroleum corporation, Chennai	Raj petro Chennai
Tamil Nadu petro chemical, Chennai	J. K. Pharmachem, Cuddalore
Ballarpur Industries Ltd, (Caustic Soda plant), Karwar	Asian Paints Ltd, Cuddalore
SPIC heavy Chemicals, Chennai	Servall paper mills
Larsen & Toubro Infotech (Building), Chennai	Premier Mills, Hosur
Carborundum Universal Ltd, Chennai	United Bleachers, Coimbatore
Seamless Steel Tube Plant, BHEL Trichy	FACT Udyogmandal
BHEL Auxiliaries plant, Ranipet	Falcon Tyres, Mysore
Lakshmi Machine Works, Coimbatore	Caterpillar India
Coimbatore Sterlite Copper, Tuticorin	Brakes India, Sholinghur
Hindustan Unilever Limited (building), Chennai	Salem Steel Plant, Salem
EID Parry India Ltd., Sugar Factories	Ordnance Factory, Trichy
Cairn Energy oil drilling rig, Rajamundhry,	Asiatic Oxygen ,Ranipet
Aavin Dairies, Chennai	BOC India Ltd, Chennai
Empee Distilleries and Breweries, Chennai	Residency Towers , Chennai
Reserve Bank of India (building), Chennai	Ramakrishna Steels,
Bharath Petroleum Corporation Ltd	Caterpillar India, Chennai
Neyveli Lignite Corporation Ltd	HAPP Trichy
Railways workshops-Trichy	BSES Kerala Power Ltd
Thumkur Dairy	HAL Diesel Power Plant
Godrej Industries Ltd	IFFCO & MANY MORE

THE IMPORTANCE OF ENERGY AUDIT



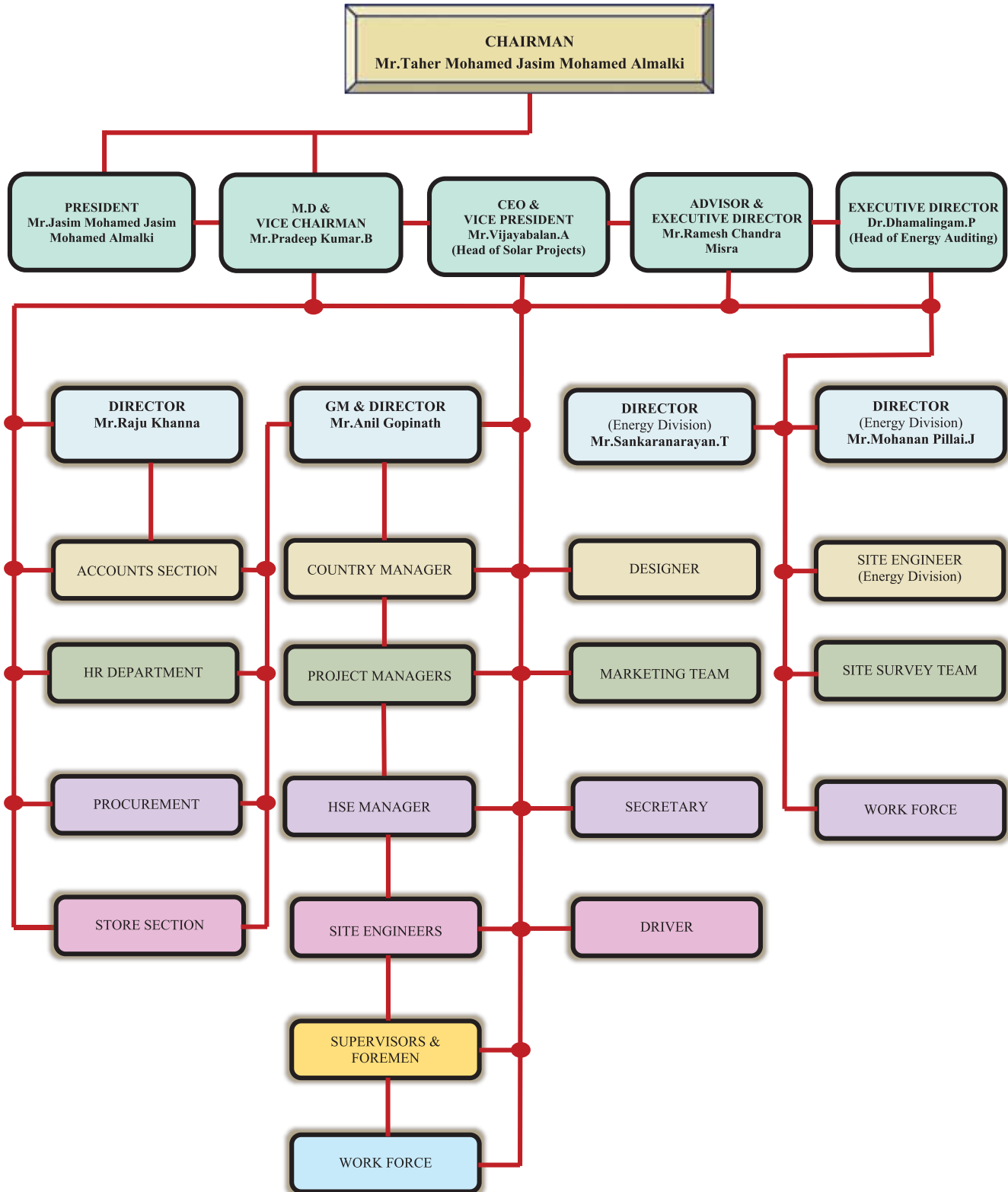
LIST OF HOTELS & COMMERCIAL BUILDINGS WE HAVE PROVIDED CONSULTANCY & CONDUCTED ENERGY AUDIT

01. Hotel Residency Towers
02. Hotel Hablis
03. Hotel Metropolitan
04. Hotel Savera
05. Dell Research Centre, Unit 4 Bangalore
06. Dell Research Centre, Unit 5 Bangalore
07. Tidal Park, Chennai
08. HDFC Office Buildings
09. Polarises software buildings
10. Pon Malligai Hospitals, Chennai
11. Pon Malligai Hospitals, Thanjaore
12. MIOT Hospital, Chennai
13. Paramour Railways Hospitals
14. Shopping Malls
15. Golden House P Ltd (Office complex)
16. Reserve bank of India Buildings, Chennai
17. Reserve bank of India Buildings, Bangalore
18. Reserve bank of India Buildings, Mumbai
19. Reserve bank of India Buildings, Kolkata
20. Reserve bank of India Buildings, Trivandrum
21. Reserve bank of India Buildings, Hyderabad
22. State Bank of India Buildings
23. Sikkim Menial Institute of Technology
24. SRM Institute of Technology, Chennai
25. National Productivity Council Buildings
26. Energy Management Centre, Kerala
27. IREEN Institute, Nasik

MANAGEMENT TEAM
(TRANSUN ENERGY SOLUTIONS W.L.L)

 <p>Taher Mohamed Jasim Mohamed Almalki CHAIRMAN The Founder & President of Cool Kit Group, Kingdom of Bahrain</p>	 <p>Jasim Mohamed Jasim Mohamed Almalki PRESIDENT The Founder & Chairman of Cool Kit Group, Kingdom of Bahrain</p>		
 <p>MANAGING DIRECTOR & VICE CHAIRMAN Pradeep Kumar.B 40 years of Experience in Middle East as Site Engineer, Consultant, Manager, Commercial Manager, Group Manager, GM, MD, Vice Chairman & Chairman in Various Companies in UAE, Qatar & Bahrain. PARTNER & Chairman of AMAZING & TRANSUN HI TECH SOLUTIONS Pvt. Ltd. Trivandrum, Kerala, India. PARTNER & DIRECTOR IN TRANSUN ENERGY INDIA Pvt. Ltd. Tamilnadu, India.</p>	 <p>HEAD OF SOLAR DIVISION CEO & VICE PRESIDENT Vijayabalan.A (B.E., A.M. Aesl), Aeronautical Engineer FOUNDER & CEO of TRANSUN ENERGY SYSTEMS, India, Estd. : 2010 / TRANSUN ENERGY INDIA Pvt. Ltd. Tamilnadu, India. PARTNER, VICE PRESIDENT & CEO of AMAZING & TRANSUN HI TECH SOLUTIONS PVT. LTD. Trivandrum, Kerala, India. The Highest Capacity of a Solar Power Plant Executed : 20 Megawatts (MW), Vengappally, Telangana, India. Executed 1.25 MW Single Solar Project in the Kingdom Bahrain Executed more than 3500 Solar Projects in & Out of India. Cumulative Capacity of Power Executed so far : 150 MEGAWATTS (MW) Consultant and advisor to Various Government Organizations and Policy Making panels Consultants and Resource persons to various Organizations like Ministry of MSME (Govt. of India), NSDC, TNPHC etc. Solar Consultant for RENEWABLE ENERGY COMPANY UK. Ltd. (1085494), 102, Iford, IGI 4NH, United Kingdom. Visiting Faculty in Top Universities Industrial advisory member Member in Net Metering Policy Making Committee for Tamilnadu Government Panel Member in INDO –US MISSION.</p>	 <p>EXECUTIVE DIRECTOR & HEAD OF ENERGY AUDITING DIVISION Dr. P. Dharmalingam (Ph.D) Doctorate in Energy Audit & Management B.TECH, PGDEM, MS, DIM (Industrial Management), Auditing (Energy Audit & Management) Former Director at NPC, India. Over All 35 Years of Experience. Qualified Auditor – ISO 50001-EnMS Lead Auditor ISO 14064 GHG Lead Verifier Certified Measurement & Verification Professional ® (CMVP),USA ACCREDITED ENERGY AUDITOR (AEA-0091) EXECUTIVE DIRECTOR of Ensave Consultancy & Training Pvt. Ltd., India. Accredited & Certified Energy Auditor, BEE (Bureau of Energy Efficiency), Govt. of India Trainer in Green Buildings Initiatives. International Audit and training services Provided in Various Countries like Bangkok, Thailand, Iran, Japan, Ghana, Taiwan, Nepal, Tehran, Fiji, Tokyo, Egypt, USA- Washington, Pittsburgh, Los Angeles, San Francisco etc. Authored Texts and Developed courses on Energy Efficiency and it is Adopted by many Universities in their Syllabus and in SAARC Countries' Training Programs also</p>	 <p>ADVISOR & EXECUTIVE DIRECTOR Ramesh Chandra Misra B.E. Electrical Engineering (1978, Nagpur) Electrical Engineering Specialist & Advisor for 28 years in EWA Bahrain (1995- May 2023) Ex.Advisor to EWA Vice Chief Executive, Planning & Projects, Electrical Engineering Specialist. Ex.Member of FAT team of EWA. CPD certification on "Solar radiation & solar cells". "A" category certification by the CRPEP Ex. Key member of Sustainable energy unit (SEU) for the development of solar PV system in collaboration of UNDP. Ex. Key Member of Implementing Net Metering Policy, Kingdom of Bahrain Member of Institute of Engineers Represented EWA in GCCIA (cross border interconnection grid) planning committee for expansion and reinforcement plans. Ex. Head of Team for system fault investigation committee. Head of Team for power system studies delegation to consultant ESBI in Dublin, Ireland for implementation of 400KV transmission grid owing to high fault level in the 220 KV system. Implemented the first ever 5 MW renewable hybrid solar project of EWA in Bahrain. The Aldur plant is in operation with 3 MW solar PV (crystalline & thin films) & 2 MW from wind. MMS certification. EWA certification and authorization for work on HV system. Head of Electrical Maintenance, (1980-1989): Al-khoms Power Plants, Libya Senior Electrical Engineer, (1989-1995) SWCC, Jeddah Power Plants, Saudi Arabia</p>
 <p>ANIL GOPINATH (B.TECH) DIRECTOR & G.M of TRANSUN ENERGY SOLUTIONS WLL, Bahrain Ex. Employee of INFOSYS INDIA. In Infosys 6.5 Years in Bangalore & Trivandrum, India. Worked in Bahrain in Various Companies PARTNER, Director, General Manager & Head of Procurement in AMAZING & TRANSUN HI TECH SOLUTIONS PVT. LTD. Trivandrum, Kerala, India. PARTNER & DIRECTOR IN TRANSUN ENERGY INDIA Pvt. Ltd. Tamilnadu, India.</p>	 <p>RAJU KHANNA DIRECTOR of TRANSUN ENERGY SOLUTIONS WLL, Bahrain. FOUNDER & MANAGER of Cool Kit Air- Conditioning Company Bahrain (Since 13 Years in Cool Kit). 11 years in BEMCO, Bahrain 4 Years in Dubai. Total 28 Years Experience in Middle East. Experience In India : 10 Years Over All 38 Years of Experience</p>	 <p>SANKARANARAYANAN.T DIRECTOR of TRANSUN ENERGY SOLUTIONS WLL, Bahrain BEE certified Energy Auditor - 689 - EA 1576 (Professional License) BEE ACCREDITED ENERGY AUDITOR -AEA 0107 Certified & with 35 years of experience in Energy Efficiency. Energy Conservation, Energy Management Strategy, Energy Auditing. Holds a Post Graduation in Energy Management. Former Regional Director at NPC, Mumbai, India.</p>	 <p>MOHANAN PILLAI .J DIRECTOR of TRANSUN ENERGY SOLUTIONS WLL, Bahrain M.Sc, F.I.E (Electrical), Scientist (Retired), Dept. of ATOMIC ENERGY, Govt. of India, Chartered Engineer-F-1182710, CEA, Certified Energy Auditor – EA 19444 FIE-118271-0 Certified Energy Manager, 39 Years in the Energy Field. Certified & Qualified in Solar System Designing, Installation, Project Engineering & Management.</p>

ORGANIZATIONAL CHART



CONTACT US

TRANSUN ENERGY SOLUTIONS W.L.L

Middle East Head Office : Office : 01, Building : 2021, Block :815 , Road : 1550,
Isa Town, Kingdom of Bahrain. Tel :77008800, Mob : +973 3367 7088
Email : info@transunenergy-me.com, www.transunenergy-me.com

MANAGEMENT POSITIONS & EMAIL IDs		
SL No.	DESIGNATIONS	EMAIL IDs.
01	Chairman	Mr.Taher Almalki Email : taher.cm@transunenergy-me.com
02	President	Mr.Jasim Almalki Email: jasim.president@transunenergy-me.com
03	Vice Chairman & Managing Director	Mr.Pradeep Kumar.B Email : pradeep.md@transunenergy-me.com
04	CEO & Vice President H.O of Solar Head & Lead Consultant	Mr.Vijayabalan.A (BE, AM, AesI), Aeronautical Engineer Email : vijayabalan.ceo@transunenergy-me.com
05	General Manager & Director	Mr.Anil Gopinath B.Tech, Ex.Infosys-India Email : anil.gm@transunenergy-me.com
06	Advisor, Executive Director & Lead Consultant	Mr.Ramesh Chandra Misra Ex. EWA Advisor in the Kingdom of Bahrain (for 28 Years) Email : misra.ed@transunenergy-me.com
07	Director	Mr.Raju Khanna Email: raju.director@transunenergy-me.com
08	Chief of Energy Audit Division (EXECUTIVE DIRECTOR)	Dr. Dharmalingam. Phd. (Doctorate), B.TECH, PGDEM, MS, DIM, ACE, BEE,Former Director in NPC, India, Accredited Energy Auditor,Certified Energy Auditor, Lead Auditor- ISO 50001-EnMS(CMVP), USA, ISO 14064, GHG Lead Verifier, Green Buildings Initiatives Email : energyauditing@transunenergy-me.com
09	Energy Auditor (DIRECTOR)	Mr.Mohan Pillai SCIENTIST (Retired) , M.Sc, F.I.E (Elec.), Chartered Engineer, CEA, Retired from Atomic Energy of India Email : energyauditing@transunenergy-me.com
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Energy Auditing & Analysis	Wind Solar Hybrid Power Plants
Solar EV Charging Station	Solar Street Light & Solar Containers
Solar Car Ports	Solar A/C Units
Solar Pumps	Training & Skill Development
Solar Energy Analysis	Construction & Trading

