

Energy Management Centre - Kerala (Department of Power, Govt of Kerala)

CERTIFICATE OF EMPANELMENT

This is to certify that **M/s. Indira Babu Energy Ventures Pvt Ltd (Vydhyuthi Energy Services)** (Thiruvathira, CP III 250,
Thiruvananthapuram, Kerala - 695015) is empanelled as Energy
Audit firm in Energy Management Centre Kerala to conduct
mandatory energy audit as per Government of Kerala G.O (Rt)
No.2/2011/PD dated 01.01.2011.

Empanelment No: EMCEEA- 4720E- 1

Saama / Amaa	Building	Industry -Electrical	Industry Thermal
Scope/Area	Yes	Yes	No

This empanelment is valid up to 31/01/2027

Issuing Date: 06/04/2024

 ${\it Place: Thiruvan} anthapuram$

Director,
Energy Management Centre Kerala

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1.	Name & a	ddres	s of	the	firr	n						Indir Thir Thir	uva	th	nira,	CP	III 5	52	1,0	Na	ala	nc	hii	ra	Ρ.		5		
	Office(wit	h STE))									+91	. 94	19	9635	555	54												
	Mobile											+91	. 94	19	9635	555	54												
	Fax numb	er																											
2.	Website (if any)									www	w.v	У	dyu	thi.	cor	n											
3.	Email address	a d	m	i	n	@	V	У	d	У		u t	h		i .	С	0	r	n										
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	Residence	e(with	STD))																									
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7.	Year of es	stablis	hmeı	nt								2020)																
8.	Year of co	omme	ncerr	nent	of e	energ	ју а	udi	t by	the	9																		
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	Details of	Associated Energy Expe	rts and Audits Conducted by firm
1.	Number of res	ource persons available	7
2.	position, with	I-time energy auditors in work experience of all ors associated with the	Smt. Sudha Kumari – 6 years experience Sri. Jishnu Sanand – 3 years experience
3.	position during	ime energy auditors in ng the current year / associated with the firm.	Sri. Thanveer Hussain: 13 years experience
4.	has conducte	ich the energy audit firm ed energy audits since number of audits in each	Hospitals- 11 IT Sector- 1 Educational Institutions- 6 Industry- 2 Buildings- 18
5.	sectors) - If n	process system (list o energy audit has been the process system and lease list nil.	NIL
6.	Energy audit (list sectors)	of thermal utility system	NIL
7.	Energy audit (of electrical utility system	NIL
8.	Instruments available	(a) Electrical (list the name of the instruments) (b) Thermal (list the name of the instruments)	1. Power Logger 2. Lux Meter 3. Clamp meter 4. Thermal Imager 5. Anemometer

	*Bio data of Cert	ified Energy Auditor	
1	Name of energy auditor	Smt. Sudha Kumari R	
2.	Qualifications.	B-Tech - 1986 MBA - 2014 M-Tech - 2020	
3.	Experience. (use additional sheet if required)*	About 30 years in Post qualification Experience	
4.	Residence(with STD)	9497355554	
5.	Mobile	9497355554	
6	Email address sudha@vydyuthi.	com	
7	Date of certification as Energy Manager or Energy Auditor (pl specify) by Bureau of Energy Efficiency (BEE) (if not appeared list as nil	2009	
8	Date of passing the examination in "Energy Performance Assessment for Equipment and Utility Systems"	2009	
9	Examination Registration Number of (i) Energy Manager (ii) "Energy Performance Assessment for Equipment and Utility Systems" (In case of Certified Energy Auditor, please write CEA Registration No.)	EA-72	33
10	Certificate Registration Number of (i) Energy Manager (ii) "Energy Performance Assessment for Equipment and Utility Systems"	Certificate No. 4536	
11	Are you a BEE accredited Energy auditor. If so: Date of accreditation		
	Tromaino(ii airy) 14ii		

Working Experience

- About 30 years of working experience in the field of Electrical Engineering activities, Training and Energy Auditing:-
 - Electrical Consultant
 - Kerala State Rural Development Board
 - KMML
 - Fan Industry
 - Engineering college Institutes
 - Kerala State Electricity Board Ltd.(KSEBL)
- Trainer of KSEBL training centres
- Conducted Energy Audits in various consumer segments
- Handled Energy Conservation/Energy Efficiency training sessions in various districts of Kerala State (Schools, Engineering colleges, Public etc.)
- Conducted Energy Efficiency activities in Hospitals
- Conducted Agricultural DSM activities
- Conducted Supply Side Management(SSM) and Demand Side Management(DSM) activities

		*Bio data o	f Certified Energy Auditor	
1	Name of ene	rgy auditor	Sri. Jishnu Sanath	
2.	Qualifications		B.Tech (Electrical Engineering) M.Tech (Power system) MBA(HRM)	
3.	Experience. (I required)*	use additional sheet if	Certified Energy Auditor (Bureau of Energy Efficiency) Since 24th Dec 2021. Certified Energy Manager (Bureau of Energy Efficiency)	
4.	Residence(w	vith STD)		A LA P
5.	Mobile		9995748722	
6	Email address	jishnusanath@gmail.co	om	
7	Manager or E specify) by Bu	cation as Energy Energy Auditor (pl Ireau of Energy EE) (if not appeared list	2021	V
8	"Energy Perfo	ng the examination in ormance Assessment tand Utility Systems"	2021	
9	(i) Energy Ma (ii) "Energy Pe Assessment f Utility System (In case of Ce	erformance or Equipment and	EA-328	89/21
10	(i) Energy Ma	erformance or Equipment and	Certificate No. 10591	
11	auditor. If so: Date	E accredited Energy of accreditation editation No.		
			Remarks(if any)—Nil	

- 1. Certified Energy Auditor (Bureau of Energy Efficiency) Since 24th Dec 2021.
- 2. Certified Energy Manager (Bureau of Energy Efficiency) Presently working with Greenturn Idea Factory, Cochin as Domain Specialist since 11th November 2020.
- 3. Associate Energy Manager at Athul Energy Consultants Private Limited on project basis since March 2020.
- 4. Aries Marine Engineering Services, Kochi: Worked as Sales Engineer in ARTEQ division from September 25th 2019 to 6th March 2020.
- 5. Thrissur Corporation Electricity Department, TCED: Worked as Assistant Engineer at 110kv substation, Thrissur Corporation Electricity Department from October 9th 2014 to September 13th 2019.
- 6. Steel Industrials Kerala Limited, SILK, Athani: Worked as Trainee Engineer in Projects Engineering and Exports Division (PEED) of Steel Industrials Kerala Limited from January 7th 2016 to May 5th 2016.
- 7. HZAMPS, Thrissur: Associated with HZAMPS Electro Power Engineers in Electrical HT projects as Project Engineer in 2018-19.

		*Bio data of Cer	tified Energy Auditor	
1	Name of energy auditor		Thanveer Hussain	
2.	Qualifications.		B. Tech. In Electrical & Electronics Engineering University of Kannur- India	
			MBA-Consultancy Practice(pursuing)	
3.	Experience. (use addition required)*	nal sheet if	11+ years of expertise in energy efficiency, renewable energy and infrastructure projects	
4.	Residence(with STD)		9496355554	
5.	Mobile		9496355554	
6	Email address	admin@vydyuthi.	com	
7	Date of certification as E or Energy Auditor (pl spo of Energy Efficiency (BE appeared list as nil	ecify) by Bureau	2014	
8	Date of passing the exal "Energy Performance As Equipment and Utility Sy	ssessment for	2013	
9	Examination Registration (i) Energy Manager (ii) "Energy Performance Equipment and Utility Sy (In case of Certified Energy Person Please write CEA Register)	e Assessment for vstems" ergy Auditor,	EA-16278	
10	Certificate Registration I (i) Energy Manager (ii) "Energy Performance Equipment and Utility Sy	e Assessment for	Certificate No. 11102	
11	Are you a BEE accredite If so: Date of accreditation Accreditation No	on		
	Remarks(if any)—Nil			

KEY QUALIFICATION:

• 11+ years of expertise in energy efficiency, renewable energy and infrastructure projects

- Strategic growth specialist in Acquisition and Mergers –Initiated merger with Hansa Group and instrumented in forming JV with EESL, Government of India, the largest ESCO in the world. This helped place the company largest ESCO in UAE.
- Expert in Measurement & Verification in line with IPMVP Volume I EVO10000-1:20012
- Trained for ISO 50001 lead auditor course by SGS Global
- Expert in Energy Audits
- Expert in On-Grid Solar Photovoltaic System in line with Shams Dubai Program
- Specialist in Energy Business development alongside strategic policy of Government
- Specialist in Energy Efficient retrofit products-LED, VFD, ERV, HRW, BMS, PLC, Chillers
- Specialist in lighting design using DIALUX software and power/control designer

CURRICULUM VITAE

SUDHA KUMARI. R

T.C. 27/73, MRA – 45

NEAR GOVT. EYE HOSPITAL, VANCHIYOOR(P.O)

THIRUVANANTHAPURAM, PIN -695035

Contact no. 9446271913, E Mail ID: skrkseb@gmail.com

Objective

 To keep our planet healthy by Energy Conservation and Energy Efficiency activities

Educational/ Professional Qualifications

- B.Tech (Electrical Engineering)
- M.Tech (Power system)
- MBA(HRM)
- Dip.TD (Diploma in Training and Development from ISTD)
- BEE Certified Energy Manager and Auditor
- NLP practitioner

Working Experience

- About 30 years of working experience in the field of Electrical Engineering activities, Training and Energy Auditing:-
 - Electrical Consultant
 - Kerala State Rural Development Board
 - KMML
 - Fan Industry
 - Engineering college Institutes
 - Kerala State Electricity Board Ltd.(KSEBL)
- Trainer of KSEBL training centres
- Conducted Energy Audits in various consumer segments

- Handled Energy Conservation/Energy Efficiency training sessions in various districts of Kerala State (Schools, Engineering colleges, Public etc.)
- Conducted Energy Efficiency activities in Hospitals
- Conducted Agricultural DSM activities
- Conducted Supply Side Management(SSM) and Demand Side Management(DSM) activities

Hobbies

• Reading & Singing

Personal Profile

Mother's Name: M. Rajamma

Father's Name: N. Kunjuraman Pillai

Husband's Name: D. Sreekumar

Date of Birth: 10-05-1964

Nationality: Indian

Languages known: Malayalam, Hindi & English

CURRICULUM VITAE

JISHNU SANATH

'Sopanam', Puliyath House, Santhi Nagar, Irinjalakuda North P O – 680 125, Thrissur Dist, Kerala, India

Phone: 9995748722

Email: jishnusanath@gmail.com



CAREER OBJECTIVE

Aim to be associated with a progressive organization that gives me the scope to apply my knowledge and skills in the area of Electrical & Electronics Engineering and to involve as the part of the team that dynamically works towards the growth of the organization.

PROFESSIONAL EXPERIENCE

- 1. Certified Energy Auditor (Bureau of Energy Efficiency) Presently works as an Empanelled Energy Auditor by Energy Management Centre, Kerala for Vydyuthi Energy Services, Trivandrum since 25th Dec 2021 and Associate Auditor for East Coast Sustainable Pvt Ltd, Vishakapatnam (on freelance basis) since 25th Dec 2021.
- 2. Certified Energy Manager (Bureau of Energy Efficiency) Worked with Greenturn Idea Factory, Cochin as Domain Specialist since 11th November 2020 to 24th Dec 2021.
- 3. Associate Energy Manager at Athul Energy Consultants Private Limited on project basis since March 2020.
- 4. Aries Marine Engineering Services, Kochi : Worked as Sales Engineer in ARTEQ division from September 25th 2019 to 6th March 2020.
- 5. Thrissur Corporation Electricity Department, TCED: Worked as Assistant Engineer at 110kv substation, Thrissur Corporation Electricity Department from October 9th 2014 to September 13th 2019.
- 6. Steel Industrials Kerala Limited, SILK, Athani: Worked as Trainee Engineer in Projects Engineering and Exports Division (PEED) of Steel Industrials Kerala Limited from January 7th 2016 to May 5th 2016.
- 7. HZAMPS, Thrissur: Associated with HZAMPS Electro Power Engineers in Electrical HT projects as Project Engineer in 2018-19.

Projects involved in:

Own projects-

- 1. Detailed energy audit of Sahrdaya Engineering College, Kodakara
- 2. Detailed energy audit of Skyline Synergy, Kochi
- 3. Detailed energy audit of Raghunanda Paper Mill, Pollachi
- 4. Detailed energy audit of schools for Vishwasanthi Foundation

[1] Certified Energy Auditor at Vydyuthi Energy Services, Trivandrum

- 1. Detailed Energy Audit of SCT College of Engineering, Trivandrum
- 2. Detailed Energy Audit of Barton Hill Engineering College, Trivandrum
- 3. Detailed Energy Audit of SUPPLYCO, BEVCO outlets across Kerala
- 4. Detailed Energy Audit of CDAC Office, Trivandrum
- 5. Detailed Energy Audit of Jalabijnanabhavan, Trivandrum
- 6. Detailed Energy Audit of ITI Kazhakkoottam, Trivandrum.
- 7. Detailed Energy Audit of General Hospital, Neyyattinkara
- 8. Detailed Energy Audit of General Hospital, Varkala

[2] Certified Energy Auditor at Devki Energy Pvt Ltd.

1. Detailed energy audit of Hittachi Energy India Pvt Ltd, Mysore (Paper Board Manufacturing)

[3] Certified Energy Auditor at ITIFY, Chennai

- 1. Detailed energy audit of BBM Tobacco processing industry
- 2. Detailed energy audit of Hilton Garden Inn, Trivandrum
- 3. Detailed energy audit of Courtyard by Marriott, Mumbai
- 4. Detailed energy audit of Sahara star, Mumbai

[3] Certified Energy Auditor at East Coast Sustainables Pvt Ltd, Vishakpatnam

- 1. Detailed Annual Energy Audit of BESCOM (Bangalore Electricity Supply Company) 2021
- 2. Detailed Annual Energy Audit of BESCOM (Bangalore Electricity Supply Company)2023
- 3. Detailed Annual Energy Audit of Visakhapatnam Steel Plant, RINL.
- 4. Detailed Annual Energy Audit of TSNPDCL, Telangana State Electricity

[4] Domain Specialist at Greenturn Idea Factory, Cochin

- 1. Energy Monitoring and Analysis at VKL Seasonings Private Limited, Alappuzha.
- 2. Energy Monitoring and Analysis at VKL Prabha Engineering, Pune.
- 3. Energy Monitoring and Analysis at Carrefour Hypermarkets, Dubai

[5] Energy Manager at Athul Energy Consultants Private Limited

- 4. Energy Audit for Marine Products Export Development Authority, Kochi.
- 5. Energy Audit for Kerala Feeds Limited, Kallettumkara, Thrissur

[6] Sales Engineer at Aries Marine Engineering Services – Projects Converted to Sales

- 1. Mooring equipment for MV LILA TOKYO, Arka Global Marine Services LLC, UAE
- 2. Electrical Equipment for TONEGAWA, Koch Supply & Trading, Houston, USA

- 3. Electrical Cables for VALLE DI CORDOBA, Navigazione Montanari S.P.A, ITALY
- 4. Valves for SOHAR MAX, SAHAM MAX, DABA, SEEB vessels, Oman Drydock Company, OMAN
- 5. Electrical Cables for SUHAR, Nova Ship Tech SA, Switzerland
- Ballast Eductor for NAVIGATOR ORION, Thome Ship Management Pte Ltd, SINGAPORE
- 7. Electric Chain Hoist to Balmer Lawrie, UAE

Experience in DISCOM Sector – 5 years (110 KV Substation Thrissur Corporation Electricity Department)

- Power system HT fault identification and rectification. (Earth faults, overcurrent faults, high voltage faults, high temperature faults ,high pressure faults)
- Power transformer protection and maintenance.
- High precision protective mechanical and static relay operations. (IDMT relays, Induction type relays, Directional relays etc)
- SF6, Vacuum and Minimum oil circuit breaker operations and maintenance.
- Metering and Protection of system using current and voltage transformers. (Continuous hourly monitoring, tabulation and energy bulk supply efficiency calculations)
- Transformer oil property testing (By Break Down Voltage test (BDV)), HT Insulation resistance meggering.
- DC Battery backup monitoring, Battery electrolyte Specific Gravity Measurement using Hydrometer.

[6] Trainee Engineer at Steel Industrials Kerala Limited

- 1. Electrical design and installation of stadiums, swimming pools and shopping complexes for LSGD. Kerala Govt.
- 2. Installation testing and commissioning of Rural Solar PV power plants for KSEB.
- 3. Electrical design and installation of SIDCO Industrial Gala at Puzhakkal, Thrissur.
- 4. Erection Testing and Commissioning of High Mass Lights and town planning works for PWD and KTDC, Kerala Govt.

[7] Project Engineer at HZAMPS Electro Power Engineers

- 1. 500 KVA Transformer and LT Control Panels at Marksmen Marine Products Private Limited, Edayar, Aluva.
- 2. 630 KVA Transformer and LT Control Panels at Powergrid Corporation HVDC project at Madakkathara, Thrissur.
- 3. 315 KVA Transformer and LT Control Panels at Thrissur Polymers, Mundur, Thrissur.
- 4. 400 KVA Transformer and LT Control Panels at Sitaram Ayurveda Pharmacy ,Thrissur.

Internships and Industrial Training

- Completed BEEE EMC Preliminary training successfully Certified Building Energy Simulation Expert.
- Attended 20 days Industrial training at 110kv and 66kv substation of Thrissur Corporation electricity Department in operations and maintenance of power transformers, circuit breakers, relays, CT's and PT's.

- Internship at GSH Utilities Services Private Limited in 42 TPH AFBC Boiler at Apollo Tyres, Perambra for 6 Days.
- Represented Aries Marine, ARTEQ Division at ADIPEC, Abu Dhabi
- Represented Aries Marine, ARTEQ Division at Light Middle East, Dubai

EDUCATIONAL QUALIFICATION

COURSE	UNI/BOARD	COLLEGE	STREAM	YEAR OF PASSING	PERCENTAGE OF MARKS
B-Tech	University of Calicut	NSS College of Engineering, Palakkad	Electrical and Electronics Engineering	2014	7.23(CGPA)
AISSCE (+2)	CBSE	Bharatiya Vidya Bhavan, Irinjalakuda	Computer Science	2010	74.6%
AISSE (10 th)	CBSE	Gulf Indian School,Kuwait		2008	89.2%

LANGUAGES KNOWN

	READ	WRITE	SPEAK	UNDERSTAND
English	*	*	*	*
Malayalam	*	*	*	*
(Mother Tongue)				
Hindi	*	*	*	*
French	*	*		*

PERSONAL PROFILE

Name	Jishnu Sanath
Father's Name	Jinan Kanat Sanathanan
Mother's Name	Sreedevi Jinan
Gender	Male
Marital Status	Single
Date of Birth	23/03/1992
Mother Tongue	Malayalam
Nationality	Indian
Passport Details	:T5588443 (Valid up to
	:06/06/2029)
	·

DECLARATION

I Jishnu Sanath, do hereby declare that all the above furnished information and particulars are true to the best of my knowledge and belief.

PLACE: IRINJALAKUDA SIGNATURE: JISHNU SANATH



BUREAU OF ENERGY EFFICIENCY



Examination Registration No. :	EA-32889	Serial Number 16812
Certificate Registration No. :	16812/20	

Certificate For Certified Energy Manager

This is to certify that Mr./Mrs./Ms.	JISHNU SANATH
	who has passed the National
camination for certification of energy manager	held in the month of September 2019 is
ualified as certified energy manager subject	to the provisions of Bureau of Energy Efficiency
Certification Procedures for Enemy Managers) (Regulations 2010

This certificate shall be valid for five years with effect from the date of award of this certificate and shall be renewable subject to attending the prescribed refresher training course once in every five years.

His /Her name has been entered in the Register of certified energy manager at Sorial Number .16812 being maintained by the Bureau of Energy Efficiency under the aforesaid regulations.

Mr./Mrs./Ms. JININU SANATH is deemed to have qualified for appointment or designation as energy manager under clause (f) of Section 14 of the Energy Conservation Act, 2001 (Act No.52 of 2001).

Given under the seal of the Bureau of Energy Efficiency, this .1. day



Secretary Bureau of Energy Efficiency New Delhi

Dates of attending the refresher course	Secretary's Signature	Dates of attending the refresher course	Secretary's Signature



ऊर्जा दक्षता ब्यूरो



परीक्षा रजिस्द्रीकरण सं.	EA-32889	कम	H. 16812
	16812/20		

प्रमाणित ऊर्जा प्रबंधक के लिए प्रमाणपत्र

यह प्रमाणित किया जाता है कि थी / थीमती / सुधी <mark>जिप्णु सनध</mark>
जो थी / ऑसती. <mark>जिनान के एस</mark> के पुत्र / पुत्री हैं जिन्होंने वर्ष. 2019 मास <mark>सितंबर</mark> में आयोजित कर्जी प्रबंधक प्रमाणन के लिए राष्ट्रीय परीक्षा उत्तार्ण की है, कर्जी दक्षता
ब्यूरो (ऊर्जा प्रबंधकों के लिए प्रमाणन प्रक्रिया) विनियम 2010 के उपबंधों के अध्यधीन रहते हुए प्रमाणित
प्रांची प्रसंप्रक के बार में वर्तक हैं।

यह प्रमाणका, प्रदान किए जाने की तारीख से पांच वर्ष के लिए विधिमान्य होगा और प्रत्येक पांच वर्ष में एकआर विहित पुनश्चर्या प्रशिक्षण पारखक्षम में उपस्थित रहने के अध्ययांन रहते हुए पुन; नवीकरण किया आएगा ।

उनके नाम को पूर्वोक्त विनियमों के अधीन ऊर्जी दक्षता ब्यूरो हारा अनुरक्षित क्रम संख्या. <mark>16812</mark> पर प्रमाणित ऊर्जी प्रबंधक के रिजेस्टर में प्रविष्ट कर दिया गया है ।

2020 मास <mark>मार्च</mark> दिन 1 को ऊर्जा दशता ब्यूरों के अधीन दिया गया है ।



सचिव कर्जा दक्षता ब्यूरो

पुनश्चर्या पाठमञ्जम में उपस्थित रहने की तारीखें	सचिव के हस्ताधर	पुनश्चर्या पाठमञ्ज्ञम में उपस्थित रहने की तारीखें	सचिव के हस्तानर

T.S. Jose B Tech. ELECTRICAL ENGINEER THRISSUR CORPORATION THRISSUR - 680 001



PHONE : { 0487 - 2423559 (o) 0487 - 2451237 (R)

Date......13.09.2019.

CERTIFICATE

This is to certify that, Mr. Jishnu Sanath, Puliyath House, Sopanam, Santhinagar, Irinjalakkuda North. P.O. has worked with Thrissur Corporation Electricity Department (TCED) as Assistant Engineer on Contract Basis at 110 KV Substation, from October 9th, 2014 to September 13th 2019. He has undergone a 15 days technical training at 110 KV Substation, TCED in September, 2014.

During his employment with TCED, he has gained experience in the following areas:

- 1.) Power system HT fault detection, identification and rectification.
- 2.) Operation and maintenance of Power Transformers, SF6, Vaccum and Oil circuit breakers.
- 3.) Operation of protective mechanical and static relays.
- 4.) Metering of Bulk supply and efficiency calculations.
- 5.) DC Battery Back-up Monitoring.
- 6.) Testing Transformer Oil property, Megger HT insulation resistance.

Electrical Engineer

JOSE.T.S
Electrical Engineer
Electricity Department
Thrissur Corporation
Tel:2423559







BCG Tower, Opp. CSEZ, Seaport Airport Road, Kakkanad, Cochin - 682037

Ph: +91 484 4081555 Fax: +91 484 4055561

Email: ariesindia@ariesmar.com Web: www.ariesmar.com

AMES/ADMIN/EXP-CER/K-09/2020

6th March 2020

EXPERIENCE CERTIFICATE

This is to certify that Mr.Jishnu Sanath worked as **Sales Engineer** in this organization with effect from 25th September 2019 to 6th March 2020.

We have found him to be sincere, honest, dedicated, duty bound, and as a highly committed team player with strong conceptual knowledge.

He has the motivation to take initiative tasks and we are gratified that he had been helpful in the advancement of our organization. His commitment towards duties is well appreciated.

We wish all success in his future endeavors.

Yours Truly,

For Aries Marine and Engineering Services Pvt Ltd

Authorized Signatory





FACULTY OF ENGINEERING

Whereas it has been certified by duly appointed Examiners that

Jishnu Sanath

is qualified to receive

the Degree of Bachelor of Technology (B.Tech.)

in Branch Electrical & Electronics Engineering ,

he having been placed in First Class at the Examination held in

April 2014 (Reg.No. NSAKEEE046)

The Senate of the University of Calicut hereby confers on him the Degree of

Bachelor of Technology

with all the Rights, Privileges and Honours thereunto appertaining.

Given under the seal of the University

CALICUT UNIVERSITY P.O. Kerala, INDIA PIN - 673 635

Dat 01/11/2014

Vice Chancellor

ellson

Digitally signed by DR. M ABDUL SALAM Date: 01/11/2014 10:35:30 AM









CERTIFICATE OF COMPLETION

This is to Certify that

JISHNU SANATH EMC0121ES15

has successfully completed the "Online Course on ECBC Compliance Check THROUGH ENERGY SIMULATION"

BY "ENERGY MANAGEMENT INSTITUTE, EMC - KERALA"

DEPARTMENT OF POWER, GOVERNMENT OF KERALA
(STATE DESIGNATED AGENCY OF BUREAU OF ENERGY EFFICIENCY,
MINISTRY OF POWER, GOVERNMENT OF INDIA)
05th JANUARY 2021 to 12th JANUARY 2021.



Signature Not Verified DR R HARIKUMAR 11.02.2021 12.05

DIRECTOR ENERGY MANAGEMENT CENTRE-KERALA

THANVEER HUSSAIN (CEA®,CMVP®,LEED GA®)

Name of firm: Hansa Energy Solutions LLC

Years with the Firm: 7 Years

Name of employee: Thanveer Hussain

Profession: Director-Energy Efficiency & Renewable Energy

Date of birth: 8/5/1986

Nationality: Indian

KEY QUALIFICATION:

11+ years of expertise in energy efficiency, renewable energy and infrastructure projects

- Strategic growth specialist in Acquisition and Mergers –Initiated merger with Hansa Group and instrumented in forming JV with EESL, Government of India, the largest ESCO in the world. This helped place the company largest ESCO in UAE.
- Expert in Measurement & Verification in line with IPMVP Volume I EVO10000-1:20012
- Trained for ISO 50001 lead auditor course by SGS Global
- Expert in Energy Audits
- Expert in On-Grid Solar Photovoltaic System in line with Shams Dubai Program
- Specialist in Energy Business development alongside strategic policy of Government
- Specialist in Energy Efficient retrofit products-LED, VFD, ERV, HRW, BMS, PLC, Chillers
- Specialist in lighting design using DIALUX software and power/control designer

EDUCATION:

Degree:	Year
B. Tech. In Electrical & Electronics Engineering University of Kannur- India	2008
MBA-Consultancy Practice(pursuing) – Birla Institute of Technology -Pilani	2022

LANGUAGES: English	SPOKEN	READ ✓	WRITTEN
Malayalam	✓	✓	✓
Hindi	✓	✓	✓
Tamil	✓	✓	✓
Arabic	✓	✓	✓

PROFESSIONAL MEMBERSHIPS:

- Association of Energy Engineers (AEE).
- Society of Energy Engineers (SEEM), India.
- Society of Engineers (UAE).

PROFESSIONAL CERTIFICATION:

• Certified Energy Auditor by Bureau of Energy Efficiency, India (BEE).

- Certified Measurement and Verification Professional by Association of Energy Engineer (AEE).
- DEWA certified expert in Solar On-Grid Projects.
- LEED GA certified by United States Green Building Council(USGBC)
- ISO 50001 EnMS

RELEVANT TRAINING COURSES:

• IPMVP by Evo

PROFESSIONAL EMPLOYMENT RECORD:

PROFESSION From	To	Company / Position/ Job Role	
July,2014	Present	Hansa Energy Solutions LLC	
July,2014	riesent	Designation: Director/Co Founder	
		 Energy Audits for Commercial / Residential buildings – More than 300 buildings audited.100 buildings of Dubai Police, Drydocks, Aqaar properties, Schools, Universities. Energy Audits for Industries – More than 20 Industries audited – Emirates Fiber, Julphar Pharmaceuticals, FTI Global, Fujeirah Gold, Hempel Paints. Implemented first of its kind IoT based Smart LED streetlight 100 kms in UAE Implemented distributed solar projects and provided trainings to 8 batches of Solar Aspirants Retrofitted 40,000 conventional lights to LEDs from 2014 In charge of M&V studies 	
		 In charge of WRV studies In charge of VFD retrofit Projects – 20 buildings retrofitted for HVAC Conduct energy audits within UAE & India Finalization of Estimation cost & budgeting Ensuring the Project schedules and deadlines are met. Develop full scale project plans & associated communication documents. Estimate the resources & participants needed to achieve project goals. Allocation of tasks on Estimation, Design, Procurement, Execution & Completion Design and commissioning of energy efficiency projects 	
August 2010	May 2014	KITCO Ltd. (Kerala Industrial Technical Consultancy Organization) (Govt. Of Kerala) Designation: Consultant	
		Energy Audit – Cochin International Airport, MILMA-6 location, Supplyco, HPCL pumping station	
		In charge of various high tension & renewable energy projects	
		Materials and approvals follow ups.	
		Attending authority inspections and timely clearance to be obtained.	
		Daily progress reports preparation and reporting the manager.	
		 Conduct energy audits, harmonic studies, M& V studies Project survey & Client meetings. 	
		 Plan & schedule project timelines & milestones using appropriate tools. Monitoring and follow up the sub-contractors involved in projects 	
		 In charge for, Sale/ purchase of power for CSEZ, O& M works of 110 kV substation in CSEZ including CT/PT calibration for a period of 2 Months. Projects related Communication (Data and Voice), CCTV and other systems for esteem projects of Kerala Tourism Departments like Kerala Sea Plane Projects and Muziris Heritage Projects 	

May 2009	April 2010	Top Development Consult, Saudi Arabia
		Designation: Consultant
		• Shutdown maintenance supervision work of the plant 5 ARAZI,SABIC in the month of April, 2009.
		Design and Execution of electrical works for renovation scheme of power supply
		within administrative building in Saudi Electricity Co, Al-Khobar
June 2008	March	WESTERN INDIA LTD
	2009	Designation: Maintenance Engineer
		Supervision of 2250KVA DG set testing and commissioning including its control
		circuits.
		7 MVA 33/11kV Transformer and its power system.

SUMMARY OF RELEVANT EXPERIENCE:

- 1. Designed & Implemented HVAC retrofit projects for,
 - Client: Beach Rotana Abu Dhabi, Sffeco Global, Dubai, Standard Charted Bank-Dubai, Dubai Marriott hotel, Regal Towers – Dubai, Emaar – Dubai, Ritz Carlton - Abu Dhabi, O2 Residency – Dubai, Novotel Hotel- Fujeirah, Oberoi Hotel - Ajman
- 2. Designed & Implemented retrofit of 40,000 lights to LEDs for multiple project in Dubai.
 - Client: Emirates Flight Catering Dubai, Emrill-Dubai, Indian School Sharjah, Emaar Dubai, Legoland Dubai Parks & Resorts, Torch Tower-Dubai
- 3. Designed and Implemented On Grid and off grid solar systems projects.
 - Client (On grid Projects): Ajman Port, Dubai Municipality
 - Clients (Off Grid Projects): Meraas, Dubai Properties, Legoland Dubai
- 4. Conducted investment grade energy audits in commercial and industrial segment Clients: Dubai Police, Mohammed Rashid Space Centre Dubai, DEWA, Kaizen Asset Management Group, Dubai Drydocks, Dubai Golf,102 mosques under Government of Dubai, Falcon Pack, Marriott Hotel
- 5. Conducted M&V studies in Dubai, Abu Dhabi, Fujeirah etc.
- 6. Designed many multiple automation projects using PLC and BMS systems
- 7. Conducted Electrical Safety Audits
 - Client: Emirates Nuclear Energy Corporation, Abu Dhabi
- 8. Conducted Power Quality Studies
 - Clients: IKEA & Carrefour Building -DFC, Sharjah International Airport, Al Ain Hospital, Ghaya Grand Hotel, British Indian School, Integrated National Logistics, Dyna Trade
- 10. Extra-High Tension Projects
 - Design, PMC, Testing & Commissioning, Automation with SCADA of 110/11kV Substation Client: Infopark, Cherthala, India
 - PMC, Testing & Commissioning of Interlocking scemes Black out generator
 Clients: TIHAMA power plant-Saudi Arabia, Cochin International Airport Ltd- Golf Academy and
 Conventional Center 33kV OH line for Guna, Madhya Pradesh, Oil Palm Rice Mill, Vechoor High Rise
 building for SEZ, Banglore ,4.Nos Schools for SC-ST Department, Kerala Govt-India
 - 115KV U.G Cable for Saudi Electricity Company. Site surveying and Cable Ampacity calculation considering voltage drop & thermal dissipation.
 - Client: AL- Namer Steel Co., KSA
 - Responsible for the Design, Estimation and Bidding of above work 13.8KV/380V substation Client: AR-RAZI, SABIC, KSA
- 11. Other Projects

- Flame proof installations
 Clients: Indian Oil Corporation, Spices Parks-Jodhpur, Spices Parks-Puttady, Kerala, Spices Lab-Tuticorin, Coir factory- Mullackal
- Energy Audits, and Harmonic Analysis
 Client: Cochin International Airport Ltd (CIAL), Nedumbassery, Data Center of Federal Bank, Aluva,
 FCI-OEN, Cochin , Milma Kollam and Trivandrum Dairy , Hindustan Petroleum Corporation Ltd (HPCL)
 , Irimpanam , Seven different 110kV single phase substation for Southern Railway. Supplyco H.O

11. Renewable Energy Projects

- 200kWp on Grid system SPV for CSEZ
- 75kWp for Cochin Shipyards CSR project
- 100kWP for MEPZ, Chennai

Resume- Vani Vijay

Name : Vani Vijay

Email : vani@vydyuthi.com

vani.vijay2019@gmail.com

Phone. No. : +91 8590152860 Date of Birth : 13/04/1988

Nationality : Indian

Address : Kurishinkal House, P.O. Pathirapally

Alappuzha 688521, Kerala



My career objective is to be always associated with progressive projects and ideas which would give me the best opportunities to utilize and improve my skills and knowledge. I have been molding my career in electrical engineering and renewable energy and want to spread knowledge and motivate younger generations in to the vast possibilities of engineering. Above all to contribute my part to the betterment of the environment and nature.

Job Profile (Total experience-8 years)

Designation	Organization	From	То	Nature of the job
Vydyuthi Energy Services	Technology & Research Expert	Feb 2020	Till Date	Research and development of projects and activities for promoting energy efficiency and sustainable development
Project Engineer/ Engineering Manager	GOPA international Energy Consultants (Dubai)	Oct 2018	Dec 2019	Energy Consultancy, Design and engineering management for Renewable energy projects
Specialist- Renewable Energy	Ras Al Assad LLC. Dubai	May 2017	Sept 2018	Design and Implementation of Solar Power Projects
Senior Research Fellow	Central Power Research Institute, Bangalore (Govt. of India Undertaking)	May 2013	April 2017	Research, training, testing and project management in Energy efficiency , Renewable Energy, Electrical Engg.
Electrical Design Engineer	Sumanam Engineering Services; Trivandrum	May 2012	May 2013	Design and estimation of electrification for High rise buildings

Educational profile

Ph. D in Electrical Engineering	Central Power Research Institute, India
(Renewable Energy)	(Affiliated to VTU, Belgaum) (2019)
M-Tech in Electrical Engineering	Government College of Engineering, Trivandrum, Kerala
(Electrical Machines)	University(2012)
BTech in Electrical & Electronics	Rajagiri School of Engineering and Technology, Mahatma Gandhi
Engineering	University, Kerala (2010)

Job Experience

Experience as Technology and Research Expert (Feb 2020- till date)

- Development of activity plans and innovative solutions in implementing the vision and mission of the firm, to promote energy efficiency and sustainable development
- Technology and market research in the sector to identify the latest trends and gaps
- Development of technical articles, business plans, company branding and marketing strategy
- Knowledge and value addition through technical sessions, webinars and certification courses

Experience as Project Engineer/ Engineering manager (October 2018- Dec- 2019)

- Engineering manager for 800MW utility scale solar PV project (MBR solar park)
- Technical design consultant for utility scale and distributed Solar power projects
- Feasibility study and simulation analysis, Design and calculations for optimized performance of Solar power projects (Roof top and ground mounted-various projects)
- Technical and financial proposal preparation and discussion with clients
- Lightning protection and earthing study
- Technical studies, report preparation and presentation

Experience as Specialist-Renewable Energy (May 2017- September 2018)

- Feasibility study and simulation analysis of Solar Power projects using suitable softwares
- Design and calculations for optimized performance of Solar power projects
- Discussions with clients, consultants and competent authorities
- Risk assessment and review of method statements for work execution
- Technical Consultation and establishing client relationships
- Organizing technical training sessions and talks for students and Engineers

Experience as Senior Research Fellow (May 2013- April 2017)

- Implementation of research project on development of power electronic load emulation system for testing of Solar PV sources (Project Design, Proposal, Discussion with experts, Design and development, Establishment of experimental setup, Periodic Presentation and documentation)
- Proposal and implementation of renewable energy related projects with government grants
- Testing and certification of Solar PV power conditioner units, Solar home lighting and street lighting systems, LED lamps and TFL lamp efficiency based on National and international standards, Environmental testing of Solar PV system components
- Establishment of laboratory facilities for Solar PV inverters, Solar PV panels, LED/TFL/CFL lamps, Solar Home
 lighting and Street lighting systems and instrument calibrations
- Delivering lectures and presentations; Organising technical workshops and conferences
- Publishing technical papers based on research findings in national and International Journals and Conferences
- Preparation of technical specification for instruments and system components, floating tender and purchase
- Management of lab documents, test data, lab quality system, client files and controlled documents
- Energy auditing of power plants data analysis and documentation

Experience as Electrical Design Engineer (May 2012-May 2013)

- Design of lighting, cables, distribution boards, HT and LT panels, APFC panels,
- generator connection, busbars, outdoor landscaping
- Preparation of cable layout and Schematic
- Meeting and discussions with client, architects and other departments
- Preparation of cost estimate, floating tender and Project management

Projects handled/ associated

Renewable Energy Projects

- 800MW utility scale Solar Power plant (MBR solar Park , Dubai)
- Roof top solar PV projects across UAE (100kW to 7 MW)

Research and Development Projects

- Development of Power Electronic Load Emulator (Ph.D. Project)
- Development of In-campus micro grid
- Establishment of testing lab for Solar panel, LED lamps and grid tied inverter
- Project on check testing of LED and TFL lamps by Bureau of Energy Efficiency, Govt. of India

Power System analysis Projects

- Sigma Engineering Works, Abudhabi
- Citibank, Dubai

Electrical System Design Projects

- Tata Elxsi (IT office building), Technopartk Trivandrum
- Rajiv Gandhi Centre for bio technology(Research Labs)
- Kinfra (Tech Park), Cosmopolitan Hospital and various commercial buildings in Trivandrum

Academic projects

- Switch Reluctance motor speed controller: Developed a hardware prototype for efficient speed control of switched reluctance motor suitable for drilling application
- Design and Simulation of switched reluctance motor in NI Labview
- Design and finite element analysis of Double stator switched reluctance motor

Soft Skills

- PV syst, PV SOL (Solar PV design softwares)
- CAD, ETAP (electrical system design and MEP)
- Proteus ISIS Software (circuit design and PCB development)
- Maxwell finite element analysis software (machine magnetics)
- MatLab and Labview (system simulation)
- Interfacing and programing of embedded systems
- Microsoft Word, Microsoft Excel, LateX, Micro soft Power point, C, C++, MikroC

Other skills

- Effective communication capability and training skills
- Confident presentation and lecturing with audience interaction
- Leader ship, Decision making and management skills and capability in technical and management issues
- Talents in Music, Art and Dance
- Enthusiastic traveller
- Proficiency in English, Hindi, Malayalam and Tamil

Declaration

I hereby declare that the information furnished above is true to the best of my knowledge. I consider myself familiar with the above mentioned aspects.

-Vani Vijay

ANOOP BABU, MIE, C.Eng (IEI & SESI)

Email – anoopmjbabu@gmail.com	Mobile - +91 94963 55554
Permanent Address – Kottamughal, Nalanchira, Trivandrum, Kerala, India – 695015	LinkedIn - anoopmjbabu

PROFESSIONAL SUMMARY

Executive level internationally experienced independent consultant, worked across the spectrum of renewable energy, energy efficiency, and energy storage. Demonstrated with an extended record of excellence in corporate advisory and strategy implementation, mergers and acquisitions, joint ventures, creation of special purpose vehicles/companies, detailed technical feasibility and design studies, techno-commercial due diligence, projects finance & legal negotiations, lenders management, procurement management, project execution and operations.

Broad experience in managing government, private and large corporations in the expansion and implementation of corporate strategies and development of project opportunities from the origination till the post commercial operational phases. Successfully accomplished financial closure and delivery of projects over 3GW of renewable energy projects, including solar, wind, green hydrogen, waste to energy, e-mobility, and micro grids with BESS of various capacities in both structured and unstructured commercial settings.

Life Member (MIE) & Dual Chartered Engineer (C.Eng.) title with The Institution of Engineers (India) [IEI] and Solar Energy Society of India (SESI).

Hobby piloting as passion!

KEY PROJECTS:

- Currently engaged in various projects as an independent consultant for over 500 mil USD in solar PV, BESS and green hydrogen projects in the US, MENA, ASEAN and Australia
- Successfully entered joint development agreement of the first commercial scale green hydrogen project in Perth, Australia. (Techno-Commercial Lead)
- QatarEnergy 875MW (EPC awarded in 2022 and ongoing Technology Vendor Evaluations)
- Guam Island Solar Project 200 MW + 800 MWh BESS (Leading Feasibility Study)
- Helios Kizad 200MW Solar + 200MWh BESS Green Ammonia project co-development. (Techno Commercial Manager)
- Public Investment Fund, Saudi Arabia Production and export of green hydrogen (FID stage)
- Feasibility study for 2x40MW power plants under PROLER program, Mozambique (Technology Assessment)
- Dhofar wind farm, Oman 50 MW (Owners Engineer)
- Mohammed Bin Rashid Al Maktoum Solar Park Phase 5 900MW Ground Mounted System with BESS support (Technical Advisor to DEWA and COD achieved)
- Mohammed Bin Rashid Al Maktoum Solar Park Phase 3 800MW Ground Mounted System (Engineering Manager, COD achieved)
- New DEWA Headquarter Building (World's first Government Net Zero Energy Building)
- EXPO 2020 Dubai Renewable Energy package leader for 60 MWp onsite and offsite projects for various countries and national pavilion. Green Hydrogen project advisor for EXPO 2020 in collaboration with DEWA and Siemens Energy at the outdoor testing facilities of R&D center at Mohammed Bin Rashid Al Maktoum Solar Park.
- Leading Delivery of over 100 MW of distributed solar projects in the Europe, Middle East. and Asia

KEY CLIENTS:

- Donors IMF, ADB, USAID, World Bank, etc
- Developers Masdar, EDF, ACWA, Marubeni, TotalEnergies, Mitsui, Engie, Infinite Green Energy etc.
- EPC Contractors Acciona, Ghella, Samsung C&T, ADANI Solar, Sterling Wilson, Mahindra Susten etc
- Consultants EY, KPMG, PwC etc
- Governments India, South Africa, ASEAN governorate, United Arab Emirates, etc

Business Development	Tendering Management (Tender Document Preparation, RFQ management and Evaluation)
Market Research & Origination	Contract Development, Risk Identification and Negotiation
Customer Acquisition	Project Procurement Management
Commercial Structuring	Detailed Design Development and Authority Approvals
Techno-Commercial due Diligence	Construction Planning, Deployment, Monitoring and Reporting
Financial model auditing and lenders management	Contract Deviation Management
Project Finance and Legal reviews	Payment Coordination
Power Purchase and Offtake Agreement Negotiation	Operations and Maintenance Management
Structuring shareholder agreements, Joint Development Agreement, Equity Subscription and exit strategies	Project re-financing and Sustainability Reporting support as per CFA, GRI, TCFD, ISSB, SASB, GHG Protocol etc.

CAREER HISTORY

Principal Consultant

Indira Babu Energy Ventures Pvt Ltd, Kerala, India, 01/2020 - Ongoing

Leading the owners and lenders engineering consultancy for major developers and project financing institutions

Independent Consultant/Advisor

Asian Development Bank and PwC - India, 09/2023 - Ongoing

Leading a project development (Phase 1) on promoting clean energy usage through enhanced adoption of electric vehicles and grid integration of battery energy storage systems of 100MWh capacity for a national utility company in India. Following Phase 2 project size is of 500MWh by 2024.

Responsibilities:

Lead the overall project from stakeholder negotiations, project financing evaluation, conducting load flow studies, technology selection, technical sizing, SLD preparation, project layout, BoQ, BOM, standards, augmentation, performance warranties, financial viability, regulatory requirements, performance guarantees, c-rating analysis, evaluating various software platforms, etc.

Techno-Commercial Manager

Samsung C&T Corporation - Dubai, United Arab Emirates and Sydney, Australia 09/2022 - 06/2023

Debut team member of a newly established investment and development arm of Samsung C&T Corporation (Energy Transition - EX Biz Team), overseeing techno-commercial due diligence of renewable energy and green hydrogen projects across the United States, Europe, Africa, the Middle East, ASEAN, and the Australian region along with project finance and legal.

Responsibilities:

Opportunity scouting - Preliminary assessment of a project/portfolio for M&A - Global project bid participation decision support (Go/No Go) - Technical feasibility studies - Project cost assessment - Project risk assessment (Legal, Market, Political, Technical, Operational, Environmental, Social and Economic) - Market regulatory risk assessment on revenue projections - Commercial structuring - Support project finance and legal team - Establishment of SPCs - Selection of Advisers/Consultants - PPA, EPC, Offtake and O&M contract review and negotiations - On-site project management

Head Of Renewable Energy / Renewable Energy Manager Ras Al Khaimah Municipality, Government of Ras Al Khaimah - Ras Al Khaimah, United Arab Emirates 01/2020 – 08/2022

Program manager of renewable energy strategy within Reem team, the Energy Efficiency & Renewables Administration department of Ras Al Khaimah Municipality, the government office dedicated to driving and reporting to HH Sheikh Saud bin Saqr Al Qasimi, ruler of the Emirate on the implementation and continuous update of Energy Efficiency & Renewable (EE&R) Strategy 2040.

Responsibilities:

Renewable energy program strategy implementation – Initiated the first group tender for solar projects with Government and private entities across Ras Al Khaimah – Developed tender documents, commercial renewable energy equipment lease and EPC contracting standards, operations & maintenance standards, net metering policy regulatory support, techno-commercial evaluation of contractors/developers/consultants, interface with authorities, contract negotiation, construction management and leadership level reporting.

Areas involved from conceptual studies and project implementations: micro-grids, solar absorption cooling, ocean energy, wind energy, utility-scale solar projects, carbon accounting, off-grid projects (BESS) and hydrogen economy framework.

Head Of Renewable Energy

GOPA - International Energy Consultants GmbH - Dubai, United Arab Emirates (HQ – Germany) - 03/2017 – 12/2019

Promoted to senior management role with direct responsibility for leading the professional technical services teams ensuring best in class performance across the region including P&L of Dubai branch office. Delivered consultancy projects worth over 35mn USD in the Middle East and Europe.

Responsibilities:

Managing the delivery of over 2 GW of solar projects in the region ranging from techno-commercial analysis, design basis reports, technology comparison, land utilization, environment impact assessments, developer and EPC contract development, construction laws, labor laws, health and safety regulations, contract negotiation and project management – Driving substantial growth of business in the region – Managing the whole value chain of the project throughout the development phase from concept, feasibility, developer/contractor identification, tendering, evaluation, contract negotiation, contract award, project management and monitoring – Contribute to and support sales cycles to position services value, and define realistic project implementation proposals – Developed and managed both utility and distributed renewable energy project management consultancy services for developers, lenders, sponsors and EPC contractors – Achieve professional services quality target, while driving up utilization and chargeable rates – Build an excellent team and ensure they maintain or develop the capability and expertise in this particular market segment – Leading technical audits and project optimization – Deliver against KPIs across professional services, including accurate financial forecasting.

Solar Consultant

Emirates Insolaire (Dubai Investments PJSC) - Dubai, United Arab Emirates - 07/2016 - 01/2017

Development local and international solar project of different scales with of newly formed SPC between Dubai Investments PJSC, UAE and SwissINSO, Switzerland.

Responsibilities:

Conduct initial technical pre-feasibility and financial overview of identified projects – Coordinated and hosted conferences, events and trips as a part of company's market entry strategy – Closed new business and developed negotiating strategies by coordinating prospects goals and requirements with company objectives and procedures – Created plans for EPC & Solar Project Finance in Dubai market – Proactively grew my accounts through internal networking and negotiating long-term contracts – Self-generated opportunities and delivered over 20mi USD projects in Europe and Middle East – Conducted formal presentations with senior partners and government regulatory bodies.

Energy Consultant Self Employed - Various countries - 04/2009 - 06/2016

EDUCATION

Bachelor of Technology: Electrical and Electronics
University of Kerala - Thiruvananthapuram, Kerala, India
2003 - 2007

Master's in business administration: Marketing & HR

Karunya Institute of Engineering and Technology - Coimbatore, Tamil Nadu, India
2007 - 2009

AFFILIATIONS

Member - World Hydrogen Leaders

Chartered Engineer and Member - Electrical and Electronics, The Institute of Engineers (India) - Kolkata, India

Chartered Engineer - Solar Energy Society of India

External Expert Advisor – CINEA – European Climate, Infrastructure and Environment Executive Agency European Commission, Horizon 2020(H2020)

Project Member (ASA) - Technical Committee 82: Solar Photovoltaic Energy Systems - IEC (International

Electrotechnical Commission)

Project Expert - GCC Solar Testing Lab Networks, EU-GCC Clean Energy Technology Network

MENA Regional Manager - Architectural Solar Association (ASA) MENA Representative - Clean Energy Blockchain Network Member - Society of Engineers, UAE

Life Member - Society of Energy Engineers and Managers, India

Life Member - Solar Energy Society of India

CERTIFICATIONS

Certified Internal Auditor Training on EnMSas per ISO 50001:2018
Asian Development Bank Institute – Climate Change and Sovereign Risk
Asian Development Bank Institute – Energy Economics, Environment and Policy
Asian Development Bank Institute – Green Investments: Renewable Energy
Advanced Course on Climate Change – ISO 14064 & GHG Accounting Protocol
Infocus International Certification on Power Purchase Agreement
World Hydrogen Leaders – Trainings

PRO BONO ACTIVITES

Adjunct Lecturer - University of Bolton, Ras Al Khaimah, United Arab Emirates

Mentor - Kerala Startup Mission, Government of Kerala, India

Guiding 3 companies in the field of renewable energy, energy efficiency, e-mobility, drone technology and carbon accounting for scaling up their valuation.

General Secretary - Alumni Association (bBachelor's degree)

DECLARATION:

I hereby declare that the information shared on this document are genuine and shall provide references upon request.

Regards

Anoop Babu



10 years -Electrical B-Tech - Electrical and Electronics (EEE) akhildevdj007@gmail.com +91 7403137725



Personal Profile

"To grow along with the company by making use of my Technical and Soft skills in the best possible way"

Professional Experience

Current Employer

M/s. Indira Babu Energy Ventures Pvt Ltd (Vydyuthi Energy Services)- Thiruvananthapuram: August 2020 to Present

Vydyuthi Energy Services(VES), helps businesses and organizations across sectors to identify energy efficiency drivers and enable them to adopt viable action plans. VES offer consulting, training, project management services and R&D in the areas of Energy Efficiency, Renewable Energy, Power Quality assessment, E-Mobility and Carbon Accounting for businesses in India and abroad.

Designation: Energy and Market Analyst

Responsibilities:

- Responsible for energy audits and green audits for different sectors.
- Perform data collection, technical and economic analysis.
- Manage clients and projects.
- Networking with manufacturers and research organizations.
- Preparation of BOM and costing
- Competitor analysis
- Requirement analysis and documentation
- Detailing out the requirements
- Project management

Previous Employers

M/s. Sintex BAPL Ltd – Electrical Products Division - Bangalore: June 2018 to July 2020

SINTEX is Asia's Most Integrated Plastic Processing Company With 13 Manufacturing Processes along with post moulding capabilities, Sintex has wide and strong portfolio of electrical products that ensure higher levels of safety and performance. Sintex have multi dimensional products which cater to almost all sectors of industrial and domestic consumers.

Designation: Assistant Manager - Electrical Products -Techno Commercial Responsibilities handled

Played key role in ensuring team efforts met and often exceeded all financial performance quality and reliability goals

- Identifying the new segments that resulted in exponential growth in terms of output and market reach.
- Handled situations that challenges the extreme parameters of the design limits to meet the customer requirements
- Co-ordinated approach for the promotion of products
- First phase interface with the requirement.
- Preparation of BOM and costing for the Electric, Electronic and Telecom customized Panels
- Providing Pre and Post-sales support for the products
- Collecting and delivering all of the technical information required for the sales team and customers
- If required handled combined visit along with the sales team to provide the technical presentations in customer premises
- Ensures every interaction creates the optimal customer experience
- Works as a subject matter expert supporting less experienced team members (new employees)
- Key person in designing and maintaining the catalogue, price list, brochures, write ups in the technical aspect
- Specifying the contents in the company's technical essays, product description, instruction manuals
- Interacting with potential clients and understanding their requirement and Providing Value Engineering
- Handling Multi-dimensional Product Portfolio
- Geographic Coverage of Two States Karnataka and Goa

M/s .Arav Power Controls, Bangalore: September 2015 to 2018

Arav Power Controls has been engaged in manufacturing, wholesaling and retailing of electrical panels and Authorized distributor of Havell's Switch Gears and Ashlok Earthing Systems, focus on all kinds of LT electrical panels such as industrial panels, control panels etc

Designation: Sr. Engineer –Techno Commercial

Responsibilities handled

- Marketing and sales activities in Bangalore Region
- Interstate travel to present technical discussions
- Prepared and delivered technical presentations to explain products and services
- With panel builders: Discussion, provide them products from our basket and also provide solutions as per their design diagram and requirements if required
- With consultants: presenting product range, get products approval in projects and get contractor details
- With contractors: negotiation and product supply in their projects, control panels and accessories for their construction sites
- Key person in increasing customer base in local market
- Increasing customer base in solar photo voltaic projects
- Coordinating customer and production team to provide perfect solution as per requirements
- Organizing activities like seminars for increasing customer base
- Organizing promotional activities for increasing customer base in local markets
- Attended exhibitions for increasing market awareness
- Make use of my knowledge in AUTOCAD, Electrical to identify requirements

M/s. Cape Electric Pvt Ltd, Chennai: 2012 June to 2015 August

Established in 1996, renowned all over India as provider for various electrical components & systems manufacturer. One of the top suppliers for connectivity solutions for Solar PV Power generation Plant in Megawatts scale; till date we have provided solutions for more than 1000 MW cumulatively. Wind Power generation - we owns Wind power Plant of over 5 MW in capacity. We manufacture Special purpose Low tension panels with outdoor compatibility.

Designation: Technical Support Engineer

Responsibilities handled

- Taking the solution aspect of the product to the customer rather than just a product
- As an integral part of research and development team with an aim for smarter products
- Forwarding the potential customer's demands to the sales team
- Managed sales and marketing related activities for the entire south India
- Responsible person in organizing the activities in relation to the participation of our company in exhibitions (Elecrama 2014 Bangalore, Renergy 2014 Delhi, Solarcon 2013 Bangalore, Intersolar 2013 Mumbai)
- Provides advanced post-sales technical support via the email & chat for all our products
- Assists in technical escalations from customer service requests and technical support requests

- Assists potential customer with product selection and configuration
- Designing, estimation and costing of our various products
- Providing technical solution for the solar Photo Voltaic power generation systems
- Have hands on experience in solar Photo Voltaic power generation plant
- Experienced in multiple responsibilities
- Traveled domestically across India which my profile demanded
- Experienced in Microsoft office applications like word, excel, PowerPoint, outlook as part of my profile
- Experienced in AutoCad Electrical
- The role handled by myself in this organization is not limited to the above mentioned responsibilities

Core Strengths

- Pragmatism and practicality to turn a concept into reality
- Presented Excellent Communication, listening and motivating skills
- Ability to convert the mere hint of information into revenue generating ideas
- The ability to use specialist knowledge creatively and innovatively to solve problems
- Positive approach towards personal growth and the growth of the firm which I'm working
- Ability to learn quickly is my forte that has helped me successfully manage various jobs given.
- Work effectively in a team oriented, collaborative environment
- Time Management, Prioritization and Co-ordination
- Risk assessment and management
- Process and performance improvement
- Excelled in almost all departments which I have handles in my past experiences

Knowledge Preview

1. Auto Cad Electrical

2. MAT Lab

3. Turbo C and C++

4. Microsoft Office

Academic Credentials

Bachelor of Technology – EEE - Kerala University - 71 %, 2012 Higher Secondary Examination (Class XII) - Kerala State Board - 86 %, 2007 Secondary School Leaving Certificate (Class X) - Kerala State Board - 93%, 2005

Personal Details

Name : Akhil Dev D J Marital Status : Single

Nationality : Indian Languages : English, Hindi, Malayalam, Tamil, Kannada

Place of Birth : Kerala Current CTC : 600000 INR

Permanent: Devamandiram, Perukavu.P.O,

DOB : 24-06-1990 address Thiruvananthapuram,Kerala-695573

Gender: Male **Father Name**: G.S. Devarajan

LINO KOCHUVILAYIL LALACHAN

(3)

+91 90209 00200

Electrical Engineer

☑ linolalachan@gmail.com



CAREER OBJECTIVE

"Electrical Engineering graduate desiring to work for a progressive organization in a highly motivating and challenging environment that provides the best opportunities to grow and utilize my potential to the fullest to achieve the organization's goal while achieving my personal goals."

EXPERIENCE

Business Development Manager

Company: Vydyuthi Energy Services, Kerala, India

Duration: September 2021 till date

- <u>Professional Expertise</u>
 - Leading business development in solar, energy efficiency and e-mobility

Project Sales Engineer

Company: Ubiz Technologies LLC, Dubai, UAE

Duration: March 2018 till August 2021

- Professional Expertise
 - Create a close relationship with customers within UAE (Dubai & Sharjah).
 - Identifying prospective clients and expanding the client data base.
 - Inspecting the site & explaining the technical aspects with the clients.
 - Attending and networking at major exhibitions & corporate events such as Big 5, WETEX, The Mining Show, etc.
 - Representing the company in several seminars & conferences conducted by the UAE government.
 - Preparing proposals, organizing the sales & negotiating the price.
 - Heading the sales department with two reporting sales executives.
 - Setting sales targets for the sales executives and ensuring the targets are met.
 - Preparing sales reports for higher management.

Marketing Executive

Company: Al Mamzar Printing Press LLC, Sharjah, UAE

Duration: February 2016 to February 2018

- Professional Expertise
 - Handled sales and marketing of products related to printing and advertising industry with the assigned key accounts in UAE.
 - Develop new customers and expand the business network for the company.
 - Handle customer service requests and grievances.
 - Achieve the given targets well before time and improving the company revenues.
 - Follow-up with customers for timely payment receipts.
 - Handle enquiries received and submission of quotations.

■ Site Supervisor

Company: Lyte Master GmbH
Duration Mar 2013 - Sep 2015

EDUCATION

Bachelors in Electrical Engineering Indian
Institution of Engineers –
New Delhi

 Indira Institute of Technology and Management, Kochi (2016)

TECHNICAL PROFICIENCY

- Post Graduate Diploma in Industrial Automation
- Certification in Supply Chain Management -Specialization in Procurement

TECHNICAL SKILLS

Well versed in PLC & PAC Programming, SCADA/Touch Panel Programming (HMI) and Industrial Networks & Communications.

Programmable Logic Controllers (PLCs)

ALLEN-BRADLEY: MicroLogix 1200 & 1400 Series; SIEMENS: S7-200 Series, SCHNEIDER ELECTRIC: Twido, MODICON: M340 and GE FANUC: Versamax Microcontroller, DELTA: DVPSS Series & OMRON CP1E-NA, ABB

Supervisory Control And Data Acquisition (SCADA) Systems

GE FANUC: Intellutioni FIX v5.0, INVENSYS: Wonderware InTouch with Factory suite v10.0, SCHNEIDER: VijeoCitect, and ROCKWELL AUTOMATION: Factory Talkview, SIEMENS: Wince

Variable Frequency Drives (VFDs)

SCHNEIDER ELECTRIC: Altivar 28, 31 Series.

Human Machine Interface (HMI)

SCHNEIDER ELECTRIC: Magelis XBT-GT / XBT-N series

PERSONAL PROFILE

• Address

• Date of Birth

Marital Status

Visa Status

• Driving License

Kochuvilayil,
 Parakkara North P.O,
 Thattayil, Adoor,

Pathanamthitta, Kerala - 691525

01/07/1988

Married

Residence Visa

Valid UAE Driving License

PERSONAL PROFILE

I do hereby declare that all the information provided above is true to the best of my knowledge and belief.

Lino Kochuvilayil Lalachan

AKSHAY ARAVIND



✓ aravindakshay99@gmail.com

9526429348

Akshay TC 14/213(2) Opposite Gas Godown Edatharamukku Poothi Riad Anayara PO TVM-29

in https://www.linkedin.com/in/akshay aravindee



Energy Auditing and Efficiency Improvement

Technical Proficiency in EV Charging Systems

Computer Applications

Effective time management

Adaptability

PERSONAL DETAILS

Date of Birth : 25/07/1999

Marital Status: Single

: Indian Nationality

LANGUAGES

English

Malayalam

Hindi

Tamil



SUMMARY

Experienced professional in energy auditing for both High Tension (HT) and Low Tension (LT) buildings, adept at analyzing consumption patterns and recommending efficiency solutions. Prior expertise includes testing and servicing Type 1 AC electric vehicle charging hardware. Holds degrees in BA Sociology and BTech Electrical and Electronics Engineering, combining technical prowess with a comprehensive understanding of societal dynamics. Eager to leverage this diverse skill set to contribute effectively in your organization.



EXPERIENCE -

Energy Engineer

May 2023 -

Indira Babu Energy Ventures Pvt Ltd - Vydyuthi Energy Services

Conducted comprehensive energy audits for both High Tension (HT) and Low Tension (LT) category buildings, assessing and analyzing energy consumption patterns to identify areas for efficiency improvement and recommending solutions.

Service Engineer

August 2022 - April 2023

BPM Power Pvt Ltd - ChargeMod

Took on the responsibility of testing, assembling, and servicing Type 1 AC electric vehicle charging hardware.



EDUCATION

Bachelor of Arts Sociology

2020-2023

Indira Gandhi National Open University

Bacherlor of Technology Electrical and Eletronics Engineering

APJ Abdul Kalam Technological University 2017-2021

Diploma in Computer Application

2022

Kerala State Rutronix

MUHAMMED RASHID M



🔀 mail.rashidmuhammed@gmail.com

6282873394

Panayil veedu near MHS kaniyapura m, kaniyapuram P O

in https://www.linkedin.com/in/muha mmed-rashid-m



Technical proficiency in electrical wiring system

Microsoft office

Time management and adaptability

Electrical safety proficiency

PERSONAL DETAILS

Date of Birth : 14/08/1998

Marital Status: Single

: Indian Nationality

LANGUAGES

English

Malayalam

Hindi

OBJECTIVE

Seasoned professional with a background in energy audit for both high tension HT and low tension buildings analysing energy consumption patterns and recommending energy efficient solutions and electrical safety solutions. As well as hands-on experience in testing and service of type 1 Electric Vehicle charger hardware. I bring a technical proficiency in electrical safety in the electrical system. Eager to apply this diverse skill set to contribute effectively to your organisation's goals and initiatives.



EXPERIENCE

Energy Engineer

August - 2023 -

Indira Babu Energy Ventures Private Limited Comprehensive energy audit in both high tension (HT) and low tension (LT) buildings, analysing energy consumption patterns and identifying areas for improving energy consumption, recommending solutions in energy saving and electrical safety.

Service engineer

August -2022 - April - 2023

B P M Power Private Limited Took responsibility of assembly, testing and service of type 1 Electric Vehicle chargers.



EDUCATION

Bachelor of technology in Electrical and Electronics engineering

A P J Abdul Kalam technological University

2017-2021

Health and safety professional cirtificate

2022

Institution of occupational safety and health (IOSH)