

Curriculum Vitae (CV)

Sadiqur Rahman Boruah

1. **Family name:** BORUAH

2. **First name:** SADIQUR RAHMAN

3. **Date of birth:** 1st July, 1961

4. **Nationality:** INDIA

5. **Civil Status:** MARRIED

6. **Address:**

46, Mother Teresa Lane, Bhetapara Road,
Hatigaon, Guwahati-781038, Assam, INDIA.

E-mail: boruahsr@gmail.com , Phone : +91 98640 25713 (Mobile).

7. Education

Period	College/University, degree(s)/diploma(s)
1979-1984	Bachelor of Engineering (Electrical) from Jorhat Engg College under Dibrugarh University, Assam, India (a state University)

8. Languages

(1 – excellent; 5 – basic)

	Speaking	Reading	writing
English	1	1	1
Hindi	2	4	5
Assamese	1	1	1
Bengalee	3	3	5

9. Membership of professional bodies

- **Membership No: M-1617987(Electrical Division) of Institution of Engineers (India).**
- **Professional Engineer(P.E.-I)in Electrical Engineering awarded by Institution of Engineers (India). Certificate No- PE 7002735 with validity till 28.02.2025.**
- **Chartered Engineer [India] awarded by Institution of Engineers (India) - no expiration date.**
- **Life Individual Member and an Empanelled Arbitrator of Indian Council of Arbitration (a leading Arbitral body of India formed under the initiatives of Government of India). Membership No.: IL/ICA/6622**

10. Other Qualifications

- **Brainbench certification in Financial Analysis <http://www.brainbench.com>. 2017**
- **Java 2 programming Brainbench Certification from <http://www.brainbench.com>. 2000**
- **National Standard Certificate in Data Comm. & Networking from Computer Society of India Computer Society of India. 1996**

11. **Other Training:** "Cumulative Impacts Assessment in Hydropower Projects" held at Luang Prabang, Lao PDR w.e.f. 20th to 24th February, 2017 sponsored by IFC (International Finance Corporation), ICH, Australian Aid and NORAD.

12. Key qualifications

- Over 39 years of professional experience in the electricity sector, specializing in feasibility studies, financial evaluations, testing, and commissioning. Proficient in planning, electricity policies, strategy, and project preparation, including planning, feasibility, institutional, legal, and regulatory frameworks.
- More than 20 years of experience in operational roles at a state utility (formerly Assam State Electricity Board), managing Load Dispatch, Energy Management Systems, SCADA, and Telecom systems.
- Well-versed in regulations related to tariff setting, Open Access, Grid Code, Distribution Code, Supply Code, and Standards of Performance for Distribution Licensees. Actively participated as a representative of Assam State Electricity Board in stakeholder discussions during the early development of the Indian Electricity Grid Code.
Provided regulatory compliance guidance to two Independent Power Producers (IPPs), M/s Amrit Bio-energy and Industries Ltd. and SM Energenco Ltd., in India. Represented both IPPs before the Assam and Meghalaya State Regulatory Commissions for project-specific tariff determinations, with each engagement lasting over one year.
- Well versed with Grid study, energy modelling and modern Power System Planning(PSP) like Advance Integrated PSP. Have good experience of using Python based open source simulation software packages PyPSA, OSeMOSYS, Pandapower and ANDES to carry out Power System Study, Planning and modelling.
- Over 15 years of experience conducting feasibility studies, basic design, and financial analysis for renewable energy projects, including small hydropower, solar PV, wind, and biomass generation. Proficient in simulation software such as RETScreen, PV Syst, Global Solar Atlas, and Global Wind Atlas. Knowledgeable in grid integration challenges for variable renewable energy and their solutions.
- Worked on a few Asian Development Bank-funded projects, familiar with ADB procurement policies and FIDIC-based specifications of international financial institutions.
- Experienced in Smart Metering and Advanced Metering Infrastructure (AMI) systems, with training at M/s INHEMETER in Shenzhen, China, a globally recognized supplier of metering and AMI solutions.
- Proficient in programming in Java and also have good knowledge on Python scripting and programming. Also proficient in MS Office, SQL, AutoCAD packages.

13. Specific Country experience

Country	From (month/year) to (month/year)
India	Aug. 1985 to Dec 2015 and Jan. 2020 till Present
Lao PDR	Jan. 2016 to Dec. 2019

Curriculum Vitae (CV)

Sadiqur Rahman Boruah

14. Professional experience record

Period:	Employing Organization: Title of Position held: Type of Employment: For Reference:	Country	Summary of Activities Performed Relevant to the Assignment:
April 2022 – Present	Facile Maven Pvt Ltd Title: Consultant For ref: Dr.Harshul Parekh Tel: +919825198384 Email: harshul@facilemaven.com (Part time, Consultancy job)	INDIA	<p>Current Role: Providing coordination support and local data collection for the development of a Master Plan, Detailed Project Reports (DPRs), and bidding documents for Solid Waste Management (SWM) projects in Guwahati under the Guwahati Municipal Corporation. Key responsibilities include:</p> <ul style="list-style-type: none"> Assisting in the bid process management. Conducting feasibility studies and preparing Detailed Project Reports (DPRs) for biomethanation projects using Municipal Solid Waste (MSW) as feedstock.
August 2017 – Oct, 2020	Taru Leading Edge Pvt. Limited Title: SCADA Specialist For references: Mr G K Bhat, Tel: +919106730308/ e-mail: gkbhat@taru.org (Part time, Consultancy job)	INDIA	<p>Consultancy Role – SCADA System Design for Flood Early Warning System Served as a Consultant for the Asian Development Bank (ADB)-funded project (*TA-9157 IND*) – <i>“Strengthening Climate Resilience of Kolkata City through Improved Planning and Disaster Risk Management.”</i> Key responsibilities included:</p> <ul style="list-style-type: none"> Designing a SCADA system to support a Flood Forecasting and Early Warning System (FFEWS). The SCADA system has since been successfully commissioned and is currently operational, performing satisfactorily.
Jan 2016 – Dec 2019	Rasita Power Co.,Ltd., Lao PDR, Title: Adviser (Technical) References: Mr Somphone Oudone, Tele: +8562098833330; Email: rasita@live.cn	Lao PDR	<p>Key Contributions to Nam Hinboun Downstream Hydro Power Project (15 MW), Lao PDR:</p> <ol style="list-style-type: none"> Project Feasibility & Financial Analysis <ul style="list-style-type: none"> Conducted comprehensive review of Feasibility Study Report including financial metrics (IRR, ROI, WACC, Payback Period, DSCR, Cost of Generation, and tariff structure) Evaluated technical and financial documentation prepared by Design Consultant EPC Contract Management <ul style="list-style-type: none"> Developed complete bidding documentation for EPC contract in alignment with Feasibility Study Led negotiations with selected EPC contractor (Sichuan ANHE Hydro Power Engg Co., Ltd.)

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			<ul style="list-style-type: none"> • Drafted critical contract documents including EPC Agreement, Terms & Conditions, Work Order, and Master Schedule <p>3. Engineering Oversight</p> <ul style="list-style-type: none"> • Reviewed Detailed Engineering designs, ensuring compliance with: <ul style="list-style-type: none"> ▪ Local regulatory requirements ▪ Environmental standards ▪ Grid connectivity specifications ▪ Incorporated site-specific conditions into final project design <p>4. Construction Supervision</p> <ul style="list-style-type: none"> • Monitored ongoing construction activities • Conducted bi-weekly progress reviews against project schedule • Developed subsequent phase implementation plans <p>5. Additional Involvement</p> <ul style="list-style-type: none"> • Participated in smart metering training at INHEMETER facilities (Shenzhen, China) • Contributed to AMI solution bid preparation for Vientiane capital city • Reviewed Desk Study Report for Nam Young HPP project in Lao PDR
Nov 2014 – April, 2019	SATCON AI-56, Str 29, New Town, Kolkata-700156 Title: Consultant Reference-Satyaki Mukherjee Tele: +91 9830538398 (Part time, Consultancy job)	INDIA	<p>Key Activities Performed:</p> <ol style="list-style-type: none"> 1. 10 MW Solar PV Plant Feasibility Study (Tuticorin, TN) <ul style="list-style-type: none"> ○ Conducted independent feasibility study for India Power Co Ltd (Kolkata) ○ Project scope: Grid-connected solar plant for Tuticorin SEZ electrification ○ Performed comprehensive financial analysis including ROI and viability assessment 2. 5 MW Solar PV Plant Feasibility Study (Matia, Assam) <ul style="list-style-type: none"> ○ Led technical and commercial feasibility assessment for Centum (New Delhi) ○ Evaluated site conditions and project parameters for proposed solar installation 3. Substation Pre-Bid Engineering Services <ul style="list-style-type: none"> ○ Provided technical consulting for clients bidding on: <ul style="list-style-type: none"> ▪ EHV (Extra High Voltage) substation projects ▪ HV (High Voltage) substation installations ▪ MV (Medium Voltage) substation developments

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			<ul style="list-style-type: none"> ○ Developed bid preparation support including technical specifications and cost estimates
June 2012 – June 2014	SM Energenco Ltd; Title: Dy General Manager Reference: Purnendu Deb; Tele: +919436732294 Email:	INDIA	<p>Key Activities Performed:</p> <ol style="list-style-type: none"> 1. Small Hydro Power Projects (Meghalaya, India) <ul style="list-style-type: none"> ○ Reviewed Desktop Study Reports and Financial Evaluations prepared by Design Consultant (M/s Design Group Pvt. Ltd., Bangalore) for 3 SHP projects. ○ Prepared competitive bid submissions, leading to the successful award of the 25 MW Upper Khri I & II HPP (15 MW + 10 MW) through state government bidding. ○ Evaluated Feasibility Study Reports, Financial Appraisals, and regulatory compliance for the project. ○ Estimated Cost of Generation & Tariff based on Meghalaya’s regulatory framework. ○ Submitted tariff application to Meghalaya Electricity Regulatory Commission (MERC) and engaged in regulatory discussions to secure project-specific tariff approval. 2. Contract & Agreement Review (Upper Khri HPP, Meghalaya) <ul style="list-style-type: none"> ○ Reviewed draft Preliminary Agreement, Implementation Agreement (IA), and Power Purchase Agreement (PPA) for the awarded hydro project. 3. Natural Gas-Based Power Project (Assam, India) <ul style="list-style-type: none"> ○ Prepared a Preliminary Project Report for a gas-based power plant in response to ONGC’s bid invitation for utilizing natural gas from Assam’s Cachar field. 4. Solar PV Project Feasibility Review (Assam, India) <ul style="list-style-type: none"> ○ Assessed Feasibility Study, Financial Evaluation, and Detailed Project Report (DPR) for a proposed 10 MW Solar PV Power Project.

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Oct 2010 – April 2012	Amrit Bio-energy and Industries Ltd, Park Street, Kolkata, India Title: Project In charge Ref: Joydeep Mukherjee Tele: +91 9831047499	India	<p>Key Activities Performed:</p> <ol style="list-style-type: none"> 1. Project Feasibility & Financial Analysis (10 MW Biomass Power Project, Morigaon, Assam) <ul style="list-style-type: none"> ○ Conducted a comprehensive review of the Detailed Project Report (DPR), including financial projections and tariff estimation based on cost of generation. 2. Regulatory Engagement & Tariff Approval <ul style="list-style-type: none"> ○ Prepared and submitted the tariff petition to the state regulatory authority. ○ Actively participated in regulatory deliberations for tariff fixation of the proposed 10 MW biomass power project. 3. Power Purchase Agreement (PPA) Drafting <ul style="list-style-type: none"> ○ Drafted the Power Purchase Agreement (PPA) for execution with the Assam Power Distribution Company Limited (APDCL). 4. Land Acquisition & Site Development <ul style="list-style-type: none"> ○ Spearheaded land acquisition for the project and oversaw site development activities.
Feb 2006 – Mar 2010	Nortech Power Projects Limited, Title: Project Co-ordinator Reference: Mr Arjun Roy; Tele: +919435552100	INDIA	<p>Key Activities Performed:</p> <ul style="list-style-type: none"> • Prepared bid proposals for EPC contracts (Electrical & Mechanical) for small Hydro Power Projects in Arunachal Pradesh and Assam, India, including Lungnit Small HPP (2x3 MW) and Myntriang Small HPP (9 MW + 3 MW) in Assam. • Conducted reviews of detailed engineering and vendor drawings for the erection and commissioning of Electrical & Mechanical equipment for the Pasha Small HPP (2x1.5 MW) in Arunachal Pradesh. • Developed plans and selected subcontractors for the erection and commissioning of the Pasha HPP. • Supervised erection activities performed by contractors for the Electrical & Mechanical works of the Pasha HPP (owned by the state government), followed by testing and commissioning in January 2009. The plant has been operating successfully since then.

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			<ul style="list-style-type: none"> Reviewed detailed engineering and prepared implementation plans for a rural electrification project in Upper Subansiri district, Arunachal Pradesh, involving a new 33 KV substation, 33 KV transmission line, 11 KV distribution lines, and selected household connections.
Aug 1985 – Feb 2006	Assam State Electricity Board Title: Asstt Engineer / Asstt Ex Engineer: Reference: Mr Jatin Baishya, Tele: +919435041494; Email: jatinbaishya@yahoo.com	INDIA	<p>a) October 2003 – February 2006 Key Activities Performed:</p> <ul style="list-style-type: none"> Led the economic operation of Assam’s electricity grid (Load Despatch) as Shift-in-Charge at the State Load Despatch Centre (SLDC), managing a team comprising one Junior Engineer, two Technicians, and support staff. Played a key role in implementing the SCADA/EMS system (supplied by Alstom) as part of the ADB-funded "Unified Load Despatch Scheme" by Power Grid Corporation of India. The project involved deploying 20 Remote Terminal Units (RTUs) across various grid substations in Assam. <p>b) October 1999 – September 2003 Key Activities Performed:</p> <ul style="list-style-type: none"> Monitored and analyzed daily/periodic power position status, import-export reports from SLDC, and telecom network status (submitted by PLCC division), providing actionable recommendations. Reviewed operations of the 132KV Kahilipara substation, evaluating proposals for line and equipment augmentation. Contributed to the implementation of the SCADA/EMS system (under the Unified Load Despatch Scheme) as a core member of the Project Management team, overseeing 20 RTUs across Assam and a Master Station at Kahilipara, Guwahati. Participated in discussions on the draft Indian Electricity Grid Code, proposed by Power Grid Corporation of India (Central Transmission Utility). Convened Zonal Committee meetings to review and approve procurement requests from Load Despatch, Communication, and Kahilipara Grid Substation divisions.

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			<p>c) August 1985 – September 1999</p> <p>Key Activities Performed:</p> <ul style="list-style-type: none"> • Designed and planned telecom infrastructure for Assam’s grid substations, including Power Line Carrier Communication (PLCC), Wireless HF/VHF, and Digital Switching Network Systems. • Managed procurement of telecom equipment through competitive bidding processes. • Executed installation, commissioning, and maintenance of multiple telecom links, including: <ul style="list-style-type: none"> ○ PLCC-based switching communications connecting state generating stations with the SLDC. ○ Wireless VHF communication network covering all 33KV substations in Guwahati.

15. Publications

- **“Artificial Intelligence in Smart Grid Applications : A Brief Review of Different AI Techniques for Critical Grid Applications”** , published (peer reviewed) in the journal **“AI in Sustainable Energy and Environment”** Journal homepage: aisesjournal.com
- **“Microgrid :: A Hybrid Renewable Energy System suitable for application in Yemen”** presented online at the “National Renewable Energy Conference & Exhibition 2023” held in Sanaa, Yemen on 29th October, 2023 convened by Ministry of Electricity and Energy, Govt of Yemen.
- **“Electric Vehicle : Its Advantages and Challenges to Adoption – A Review”** published in the 4th Annual Volume of Electrical Engineering Division of Institution of Engineer (India).
- **“Micro Grid and Smart Grid – An overview”** published in the 3rd Annual Technical Volume of Electronics and Telecommunication Engineering Division of Institution of Engineer (India).
- **“An overview of Renewable Energy Pricing Mechanisms”**. The paper was presented at the “International Conference on Impact of Changing Energy Mix in the Power Sector” held on 23rd and 24th November, 2019 in Kolkata, India sponsored by Institution of Engineers (India).
- **“An overview of Blockchain Technology and its applications in Renewable Energy Management”**. The paper was presented at the International Conference on Blockchain Technology held on 17th& 18th October 2019 in Chennai, India sponsored by Institution of Engineers (India).

Curriculum Vitae (CV)

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- **“An overview of Smart Grid and Energy Storage Systems to address challenges of Grid Integration of Variable Renewable Energies”** was presented at the “International Conference of Electronics & Telecommunication Engineers” held on 7th and 8th September, 2019 in Chandigarh, India sponsored by Institution of Engineers (India).
- **“Grid Management in a Multiple Energy Resources Scenario”** published in the 3rd Annual Volume of Electrical Engineering Division of Institution of Engineer (India).
- **Empanelled Peer Reviewer for Elsevier – Served as a reviewer for three prestigious journals, completing 30+ reviews on topics such as:**
 - Optimization techniques for Smart Grid scheduling and Microgrid operations
 - Planning of Electric Vehicle charging stations using advanced AI methods (e.g., Swarm Optimization)
 - Strategies for decarbonization in the power sector
 - Consistently delivered high-quality reviews, meeting the expectations of editorial boards.

16. References:

(i) **Mr Jatin Baishya, Retired Chief General Manager, Assam Electricity Grid Corporation, Guwahati, Assam, India**

Tele: +919435041494; Email: jatinbaishya@yahoo.com

(ii) **Mr Somphone Oudone, General Manager, Rasita Power Co.Ltd., Vientiane, Lao PDR**

Tele: +8562098833330; +856 2055511731 ; Email: rasita@live.cn

(iii) **Mr Gunajit Bhuyan, Advisor to the Chairman, Assam Electricity Grid Corporation, Guwahati, Assam, India**

Tele: +918811058114 ; Email: gunajitbhuyan@yahoo.co.in

Signature: 

Date: 7th August, 2025