

C.V

JOHN FADIRAN

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ENGINEERING / PROJECT - MANAGER

A high calibre lead engineer and expert project manager with extensive experience in the solar PV industry with high levels of energy and commitment. Specializing in power generation and management; system modelling and evaluation; consultancy and advisory for medium to large scale hybrid solar PV systems. With an analytical and first-hand problem-solving disposition in engineering design and application, detailed system performance analysis and electrical planning for off-grids systems.

Project Management ♦ Leadership ♦ Client Relationship ♦ Presentations ♦ Multicultural Communication
Technical Sales Support ♦ PV System Modelling ♦ Power System Analysis

PROFESSIONAL EXPERIENCE

SUSTAINABLE POWER GENERATION PTY LTD, CAPE TOWN, SOUTH AFRICA ♦ 2018 – PRESENT LEAD / PROJECT ENGINEER

Sustainable Solar Systems Pty. Ltd. is a young clean energy company with a very far-reaching vision to become Africa's dominant decentralized independent power producer and change the way developing economies generate power. In the absence of a CTO, my key role is to lead the development and deployment of operational methods & processes for the engineering arm of the company.

KEY ENGINEERING RESPONSIBILITIES:

- Draft technical proposals and tender submissions, with an aptitude to filter out low percentage leads.
- Perform feasibility assessments and preliminary design for quantified leads.
- Conduct performance analysis using PVsyst and other proprietary software.
- Ensure that each level of design complies with the commercial and operational expectations of projects' business plan, costs and schedule, and that technical risks are under control.
- Development of the solar product line and continued qualification of existing and new technologies.
- Support throughout the project lifecycle and site commissioning hybrid or stand-alone PV systems.
- Review / validate contractors' and suppliers' detailed design and plans for commissioning and tests.
- Follow up during construction, supporting the team with site queries / emergencies, interface management and change management.
- Provide engineering /emergency support to minimize down time, across the company portfolio.

KEY MANAGEMENT RESPONSIBILITIES:

- Develop, track, and control the development of annual operating and capital budgets for the engineering department.
 - Take the initiative in thought leadership, innovation, and creativity for the engineering department.
 - Mobilization of engineers of the various disciplines in project teams, at all stages of a project (development, design & procurement, construction), in accordance with the operational matrix of the organization.
 - Ensure through an appropriate regulatory survey that countries' technical regulations are known and integrated in projects' design and specifications, including grid codes
 - Identify, compare, select, and implement technology solutions to meet current and future needs
 - Create overall technology standards and practices and ensure adherence
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Other Relevant Experience

- 06/2018 – 03/2022 **Chief Technical Officer**, at Hot Nozzle, Responsible for the product design, testing and certification for hotnozzle. Oversight of two technologies and company QMS. Orchestrated an update to the SANS 10400 for Zone 0 electrification, using the 'hotnozzle' to demonstrate a 60% increase in energy efficiency.
- 10/2016 – 06/2018 **Electrical Engineer**, at Converge Consulting, Key duty to assist senior engineers in site measurements, electrical and electronic design, consult with clients on project specifications, CAD engineering design proposals project feasibility studies, quality and cost control and tender review.
- 04/2014 - 10/2014 **Energy Advisor at OST Energy**, for Banks, Lenders, Private Equity Investors, Owners, Utilities and Developers. Assist Independent Power Producers (IPPs) in the bid submission process and provide technical checks for the implementation of solar projects including Feasibility studies, Factory audits, Environmental services, Site Metering and Monitoring, Photovoltaic Module technical due diligence and energy yield studies.
- 01/2011 – 06/2016 **Teaching and Research Assistant**, (400 Level, University of Cape Town). Developed and improved laboratory experiments, drafted software operational procedures, supervised tutors and coordinated class activities, regularly reporting to the department. Co-supervised research projects and published 11 publications under the Micro-grids and Smart-grids Research Unit. Areas of focus where Power System analysis and condition monitoring, Energy efficiency, Electric Vehicles and Renewable Energy.
- 06/2009 - 08/2009 **SCADA Engineer in Training at the Network and Engineering Group**, of MTN Swaziland. Conducted frequency audits and planned/commissioned new base transceiver stations. Responsible for the fault management and maintenance of mobile switching control servers at the network operation center (NOC) and further attended to radio and transmission faults.
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Project Highlights

Mini-Grids / Off-grids

Completed the feasibility study, energy audit, design, integration, and further the site inspection and commissioning of 20 Off-grid / Mini-grid projects of <80kWp each across the African Continent. This included the mobilization of Engineers of the various disciplines in these project teams, at all stages of the project (development, design & procurement, construction), according to matrix organization principles (operational reporting to the project manager).

Substation Project Management

Managed the construction and completion of a 20MVA substation. Design of the secondary ring feeders. Managed the subcontractor throughout the construction and hand-over.

PV Based Electric Vehicle Charging Infrastructure

ESKOM together with Nissan are currently assessing the likely adoption of electric vehicles in South Africa. My most recent research project focuses on assessing the feasibility of a wide-spread photovoltaic based charging infrastructure for electric vehicles in South Africa. I was responsible for the decision-making algorithm, framework and charging station design which will ensure that the large-scale adoption of electric vehicles in South Africa has minimal impact on the utility grid, net energy demand and the environment.

Masters Dissertation

Submitted a dissertation entitled '*An Assessment of Hybrid State Estimation Considering Phasor Measurement Unit Placement for Parallel WAMPAC Applications*'. A Global Positioning System (GPS) SCADA time synchronized metering architecture for geographically spread electrical power systems that allows power network operators to monitor and communicate wide-area network dynamics in real-time, with a capacity to support the large-scale integration of renewable energy sources and prevent system blackouts.

Due-Diligence – PV Modules

Conducted the due-diligence and audit for multiple top ten PV module manufacturers prior to their product approval in the UK. Extensive PV module testing audit and life cycle competence.

Skills Summary

Soft Skills

- Background in a growing a business with a proven track record.
- Practical knowledge of solar / hybrid design principles with an oversight of yield analysis and modelling.
- Good understanding of low voltage systems, and design principles.
- Detailed understanding and knowledge of all related technical standards and be fully conversant with detailed technical specifications, appendixes, and client requirements.
- Detailed knowledge and proven relationships with key equipment suppliers.
- Hands on experience with complex project management.
- Excellent organizational and time-management skills.
- Comfortable with business travel.

Others

English | iSiZulu | SiSwati | Yoruba | French
Traveling | Basketball | Reading

Education

Ph.D. in Electrical Engineering, 2014 - present, University of Cape Town.

- Thesis: A Design Framework for the Combined Integration of Electric Vehicles and Photovoltaic Generation into Traditional Traction Networks.

MSc in Electrical Engineering, with Distinction, 2011 - 2013, University of Cape Town.

- Activities: IEEE - Student Member, Engineering and Build Environment Society
- Relevant Courses: Power System Analysis Operation and Control, Power Transmission and Distribution Networks, Energy Conversion and Utilization.

BEng., Electronic Engineering, First Class (A), 2005 - 2010, University of Swaziland.

- Activities: Vice President of the Electronic & Engineering Society
- Prototype: A Programmable Building Power and Energy Manager

Achievements

International Academic / Industry Research Publications

- Optimal Placement of Phasor and Conventional Measurements for Power System State Estimation and Fault Observability, *Powercon, Auckland, New Zealand.*
- Practical Demand Side Management – A Programmable Load Manager. *Power & Energy Society Transmission and Distribution, Orlando, USA.*
- The Impact of Wind Power Penetration on Recloser Operation in Distribution Networks. *The 47th International Universities' Power Engineering Conference, London, UK.*
- Evaluating the Economic Viability of Vehicle to Grid Applications in South Africa & Power System Restoration with Distributed Generation in a South African Network. *Power & Energy Society General Meeting, San Diego, USA.*
- Power System Restoration with an Automatic Voltage Regulated Distributed Generators. *International Conference on Sustainable Energy Technologies, Hong Kong.*
- Possibilities of Interfacing Electric Vehicle Charging Infrastructures with AC Railways. *International Conference on Sustainable Energy Technologies, Hong Kong.*
- Performance Comparison of Voltage and Frequency Based Loss of Grid Protection Schemes for Microgrids' *Power & Energy Society General Meeting, Vancouver, British Columbia, Canada.*
- A Multi-criteria Optimal Phasor Measurement Unit Placement for Multiple Applications Microgrids, *Power & Energy Society General Meeting, Vancouver, British Columbia, Canada*

In Summary

I enjoy working to a high standard at a fast pace and I'm excited by the scale of the challenge.

I hope my resume has been a good read and my skillset a good match for the advertised position.

Looking forward to your favorable feedback.

