BUNDI THOMAS
Phone Number: +254(0)727639800
Email: bundithomas@outlook.com; tbundi@strathmore.edu
Skype: bundithomas

Profile

Thomas has a keen interest in sustainable renewable energy generation and energy efficiency through capacity building, research, standards development, quality assurance and system design best practice. His research interests are on solar photovoltaics, solar thermal, information technology, design thinking, and renewable energy solutions for rural electrification and productive use. My current responsibilities as the quality engineer is to participate in development of electrotechnical standards, lead in testing of solar PV systems and components following various standards, train in professional courses and lead or technical support in projects at the Centre.

Educational background

BSc Mechatronic Engineering, Dedan Kimathi University of Technology, 2012 – 2016

Kenya School of Secondary Education, Lenana School, 2008 – 2011

Professional qualifications/ memberships

Nov 2017	Registered graduate engineer with EBK.
Jun 2018	Member Association of Energy Professionals Eastern Africa (AEPEA)
Feb 2018	Licensed T3 SPV technician with EPRA (ERC/SPVT/00604).

Selected trainings undertaken

Sep 2019	Personal Leadership Programme, SU
Jun 2019	Challenge Driven Education and Design Thinking, SU and KTH
Mar 2019	Solar cooling workshop on promoting agricultural value chains, SERC
Nov 2018	Pilot training of trainers on Solar powered irrigation systems toolbox, GIZ, energypedia.
Mar 2018	Solar water pumping Training of Trainers, SERC
Feb 2018	Solar thermal (water heating) training, SERC
Feb 2018	ISO 17025:2017 Implementers' course training - SERC
Jan 2018	Micro-Grid Academy training – KPLC, SERC, Res4Africa, AVSI
Nov 2017	National Industrial Training Authority & RENAC Solar training curriculum review.
Sep 2017	Solar photovoltaics technician training on grid connected and hybrid systems, SERC
Apr 2017	Solar photovoltaics technician training on stand-alone systems, SERC

Work experience

Jun 2018- Present	***Quality Engineer,*** Strathmore Energy Research Centre.
Mar 2017- Jun 2018	***Engineering Trainee,*** Strathmore Energy Research Centre.

Jan 2017-Mar 2017	***Intern,*** Strathmore Energy Research Centre.
Jan 2016- Mar 2016	***Attaché,*** Central glass industries Ltd. Forming Department.

Key Projects illustrating work experience

Name of project	***Oxfam Project: Training on Solar Water Pumping Systems***
Year	November, 2019
Client	Oxfam GB.
Main project features	Capacity building to WASH engineers from selected development agencies in Somaliland on solar powered water pumping solutions. The training covered sizing, selection of components, installation, operation and maintenance.
Role	***Lead trainer and course coordinator***
Achievements	1. The participants were training on solar as a resource, its features and advantages. 2. The participants were also training on best practices and rule of thumbs in borehole drilling and development, water quality, water pumps, pump controllers, solar PV, water pipes and accessories. 3. Finally, the participants were trained on the complete design of solar water pumping systems.

Name of project	***Solar PV feasibility study and implementation supervision.***
Year	2019, ongoing.
Client	AIC Kijabe Hospital.
Main project features	Consultancy project for conducting feasibility studies for a solar PV grid connected system, designing the solar system, bid management and supervision of the contractor during the installation phase.
Role	***Technical lead***
Achievements	1. Feasibility assessment on PV installation space, energy consumption analysis and design simulations. 2. Preparation of bill of materials with the required specifications. 3. Preparation of bid documents, analysis of bids submitted and the report ranking bids. 4. Supervision of the installation of the solar PV system.

Name of project	***Assessing opportunities for off grid cooling & processing in value chain promotion***
Year	2019
Client	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
Main project features	Conducting studies on the existing value chains in fish, vegetables and fruits in Kismayo and recommending low cost off-grid technologies in cooling and processing to promote livelihoods and quality of life.
Role	***Technical lead***
Achievements	1. Design and propose recommendations on solar cooling and off-grid food processing technologies. 2. Recommendation on solar powered water treatment and desalination solutions. 3. High level summary on the existing value chains in fish, milk and vegetables in Kismayo. 4. Interview of key informants, stakeholders, ministry officials and development agencies.

Name of project	***Specialized training on Hybrid Solar PV system operation and maintenance***
Year	2019
Client	International Centre of Insect Physiology and Ecology (ICIPE, Kenya)
Main project features	Training solar PV system owner's engineering team on the optimum operation and maintenance of the plants at Nairobi and Mbita.
Role	***Project lead***
Achievements	1. Trained five electrical engineers on design and installation of grid connected and hybrid solar PV systems 2. Conducted a site walk-through and interpreted the plant operation and layout. 3. Gave operation and maintenance recommendations based on the system setup. 4. Analysis and explanation of the system monitoring platform data.

Name of project	***Solar PV system audit on WeHUBs***
Year	2018
Client	Siemens Stiftung
Main project features	Assessment and technical audit on eight stand-alone systems used for solar lantern charging, water purification and cybercafé in the western coast of Kenya to investigate system integrity and advise on the performance status.
Role	***Technical lead***
Achievements	1. Verifying the AC and DC wiring connection integrity by measuring the insulation resistance, continuity and earth resistance. 2. Checking the system configuration settings and correcting where necessary. 3. Recommending on the load expansion given the current system status.

Name of project	***Construction and Installation of a commercial rooftop, Grid Tie Solar PV plant***
Year	2018
Client	Equatorial Energies
Main project features	Proposals for project management, design verification and interpretation of technical drawings for the construction and installation of a 850kWp solar PV system in Nakuru, Kenya,
Role	***Design and technical associate***
Achievements	1. Verification of the shop drawings from the contractor on the installation of the PV module. 2. Preparation of a detailed workplan to ensure timely completion of the project. 3. Drafted the methods specifications matrix.

Name of project	***Feasibility and design of a Grid Tie Solar PV system***
Year	2018, ongoing.
Client	Karen Country Club
Main project features	Consultancy services to determine the feasibility of a grid connected solar PV system, running design simulations, advise on project financing and preparation of bid documents for the implementation of the project.
Role	***Project lead***
Achievements	1. Lead in the feasibility studies that analyzed the space requirements, the energy consumption trends, and other project constrains. 2. Presented the optimum solar PV system size that met one-third savings on the electricity bills. 3. Presented the financing options available for the project implementation and guided on the ideal model. 4. Prepared bid documents that will be advertised to get a contractor to install the system.

Name of project	***Training of Trainers on solar PV stand-alone system***
Year	2018
Client	International Labor Organization (ILO)
Main project features	The project involved training of twenty graduates, electrical technicians and engineers on the design, installation, operation and maintenance of off-grid, residential power systems.
Role	***Lead trainer***
Achievements	1. The participants were trained based on the T1/T2 solar technicians training curriculum used in Kenya. They were trained on how to train others on the same course. 2. Guided in the assembly and use of solar mobile training kits developed by SERC in understanding stand-alone power systems. 3. Trained on best practice guidelines and use of tools and measuring equipment in installation.

Name of project	***Development of a Dual Axis Solar Tracking mechanism on a solar system***
Year	2016
Main project features	Development of a dual axis solar tracking mechanism on a solar system for maximum energy harvest. Project was submitted as a final year undergraduate group project.
Role	***Lead mechanical and electrical designer.***
Achievements	1. Lead in the CAD design and simulation of the mechanical structure up to fabrication. 2. Tested the prototype and confirmed that the light sensor diodes actuated the servomotors supporting the solar PV module to track the sun.

Name of project	***ROBOKEN competition for academic institutions***
Year	2014
Main project features	Development of an autonomous guided vehicle (AVG) that would complete the game in the shortest time possible given a set of competition rules.
Role	***Mechanical draughtsman and design assistant.***
Achievements	1. First place finish in the 2014 competition, second runners up in 2015. 2. Prepared CAD drawings on the robot's chassis and servo arm. 3. Assistant in microchip programming and PCB fabrication.

Hobbies

Reading on the history of and emerging technology, robotics, automation, automotive industry and energy related issues. Travelling, tinkering, data analysis and playing football.

Skills

Design and optimization of solar PV systems, capacity building and training in implementation of solar PV systems, research on renewable technologies, proficient in MS Office suite, moderate skills in mechanical and electrical CAD software. Fluent in speaking and writing English and Swahili.

Referees.

Eng. Christopher Gichere
Maintenance Engineer,
Central Glass Industries Ltd.
E:cgichere@centralglass.co.ke
T: +254(20)5131272

Martin Kamande
Lecturer,
Dedan Kimathi University of Tech.
E:mikmartinirungu@gmail.com
T: +254 707 472 648

Anne Wacera
Quality Manager,
Strathmore University.
E:awambugu@strathmore.edu
T: +254 703 344 396