**CURRICULUM VITAE**

# Personal details

**Name:** Harness Sakwa Mukhongo, *(HSC)*

**Profession:** Energy Auditor (Grade A)/Senior Technical Assurance Engineer & Lecturer Mechanical Engineering**Email:** harness77@yahoo.com**Present Address:** GreenWise Limited, Po Box 26983 -00100 Nairobi**Tel:** +254 721 486 339**Permanent Address:** Po Box 1187-5200 Bungoma

# Professional Certifications and Memberships

**Energy Auditor (A) licence No. ERC/EA/00024** -licenced Energy Regulatory Commission

**ISO 50001 Energy Management Systems Lead Auditor**

**Member** -Association of Energy Professionals (Eastern Africa)

**Member** -Professional Trainer Association of Kenya (PTAK)

**Graduate Engineer -**Engineers Registration Board (ERB)

# PROFESSIONAL Training & education

**Trainer of Trainers (ToT) for Certified Energy Manager (CEM)**

Association of Energy Engineers (at the World Energy Engineers Congress) Washington DC USA – September 2016.

**Certified Energy Manager (CEM)**

Association of Energy Engineers July 2016 Nairobi Kenya.

**Certified Measurement and Verification Professional** in International Measurement and Verification Protocol (IPMVP)

Association of Energy Engineers (AEE) & Efficiency Valuation Organization – Orlando Florida – Georgia USA -2015

**Using Smart Metring to Cut Energy Costs**

Association of Energy Engineers (at the World Energy Engineers Congress) Washington DC USA -2014

**ISO Energy Management Systems Lead Auditor Course**

BUREAU VERITAS; Nairobi Kenya -2014

**Master of Science in Energy Management**Department of Mechanical and Manufacturing Engineering University of Nairobi - 2012

**Senior Management Course**Kenya Institute of Management (KIA); Nairobi Kenya -2011

**Performance Appraisal Systems**Kenya Institute of Management (KIA); Nairobi Kenya -2006

**Bachelor of Science in Mechanical Engineering (Upper Second Class-Honours)**Department of Mechanical and Manufacturing Engineering University of Nairobi -2002

**Kenya Certificate of Secondary Education Mean Grade B+ (plus)**

Friends School Kamusinga -1995

# work experience

1. **Head of Capacity Building Committee** Association of Energy Professionals (Eastern Africa) – 2013 to date.

The committee is responsible for Development of medium and long term strategic plans and/projects; alignment of projects to help get focus on priority programs/projects; review progress and performance of the programs and advice on required realignments.

1. **Chief Technical Assurance Engineer** – Kenya Electricity Generating Company from August 2016 to date. In charge of energy management and technical assurance functions across the company.
2. **Kenya Bureau of Standards – Energy Management Technical Sub-Committee Member. 2016 to date**

The committee careers out the standardization of energy management. This involves through development, establishing and publication of the standards with the aim of: improving quality of goods and services; maintaining and improving quality of life of society; enabling more efficient utilization of resources; providing a framework within which to facilitate and encourage trade; and promotion of efforts to facilitate the correct application of standards.

1. **Head of Strategy and Operations Committee** Association of Energy Professionals (Eastern Africa) – 2013 to 2017.

The committee is responsible for Development of medium and long term strategic plans and/projects; alignment of projects to help get focus on priority programs/projects; review progress and performance of the programs and advice on required realignments.

1. **Senior Technical Assurance Engineer** – Kenya Electricity Generating Company from March 2015 to July 2016. Coordinating energy management and technical assurance project and activities across the company.
2. **Senior Research & Development Officer** –Kenya Electricity Generating Company from February 2013 to December 2014. Responsible for Coordinating Research Development and Innovation (RDI) across the company. During this period I was involved with developing research, development and innovation policy and an implementation framework (procedures and evaluation criteria); planning and implementing RDI programs within allocated budget(s) to meet performance targets to support the company’s corporate goals; identifying and couching of R&D mentors to enable idea generation and proposal writing; evaluating and appraising of research and development proposals; tracking progress and performance of ongoing research projects to ensure they meet targets.
3. **Consultant/Energy Auditor –**GreenWise limitedfrom 2013 to date.

During this tenure done energy audits and energy management consultancy to: the Energy Regulatory Commission; Kens Metal Industries Limited; Auto Anillaries Limited, Kenapen limited, KETEPA Tea Parkers Ltd –Kericho Head Office and Factory; Subati Flowers Ltd -Subukia and Naivasha Flower Farms

1. **Consultant/Energy Auditor** atSyrecon Services limited (2012 to 2013):

In this tenure done energy audits for: Morop flowers Ltd, New KCC Nakuru milk cooling plant; Uchumi supermarkets Ltd Nakuru Bravo branch; Githunguri water& sanitation company ltd; Safaricom limited

1. **Senior Lecturer Ministry of State for Defence/ Defence Forces Technical College (7th March 2005 to 24th February 2013):** lecturing Mechanical Technology, Thermodynamics, Materials Science and metallurgy; and Technical Drawing.
   1. **Member of Ministry of State for Defence Energy Management and Environment Conservation Committee (EMECC)** with the responsibility to:
      1. Develop an energy management and environmental conservation policy frame work.
      2. Develop Strategic plan for the energy management and environment conservation program (EMECP).
      3. Oversee the implementation of the energy management and environment program.
   2. **Member Research and Development Ministry of State for Dense**

Responsible for:

* + 1. Establishment research and development functions and units the ministry of state for defence
    2. Develop guidelines for research and development activities in the ministry of state for defence
    3. Under take research and development projects for the ministry of state for defence

**Accomplishments:**

1. At the Defence Forces Technical College Research and Development we designed and fabricated a diesel fired mobile field kitchen in 2010 for use by the military during detachment to stop use of fire wood. The innovation was awarded during the public service innovations week on 25th June 2012.

My duties on this project included:

1. Design, fabrication and testing of the diesel burner (specifications: burns with blue steady flame).
2. Conduct burner performance tests and prepare Burner patent report for filing at the Kenya industrial properties institute (KIPI).
3. Prepare technical drawings (Auto CAD) for the parts.
4. Conduct compliance test on specialized parts upon completion; test the burner for proper performance and conduct hydrostatic test on the fuel tank for safety.
5. Make assembly drawing for the field kitchen.
6. Monitor fabrication and assembly to ensure conformity to design and drawings.
7. Secretary Research and Development committee/Projects Evaluation and Advisory Team (PEAT) in 2009. This was the first initiative to research and development activities in the ministry of state for defence.

The PEAT was mandated to:

1. Visit military barracks across the country to collect information on technical projects or problems and suggested solutions there to.
2. Develop projects proposals from the technical challenges encountered in the service.
3. Evaluate proposals from committee members and form other staff for feasibility.
4. Recommend feasible projects to be undertaken by the college (lecturers/or students).
5. And advise the college on the implementation and progress of the projects.

**Performance Appraisal Systems champion ministry of state for defence**

Accomplishments:

**2010: Team leader and Facilitator** of Performance Appraisal Systems trainer for middle levels Ministry of State for Defence (MOSD) civilian staff.

1. 2009: Facilitator Performance Appraisal System (PAS) workshop for trainers in the Ministry of State for Defence.

I prepared Ministry of State Defence trainers who will in turn train other staff in the ministry of state on performance based appraisal or Performance Appraisal Systems (PAS).

**Chairman Technical Support Wing Kenya Armed Forces Technical College** (2008) in charge of coordination of:

1. Setting, invigilation, marking and syllabi revisions.
2. Upgrading of reference materials, teaching and learning aids.
3. Sensitizing KAFTEC staff on KNEC activities.
4. Support academic department running.
5. Advising the college on staff professional development.
6. Coordinating student projects supervision and marking.

**Lecturer at Tekno International:** lecturing Project Management, Energy management, preventive maintenance, AutoCAD and Autodesk Inventor

1. **Lecturer at Multi Media University** (former Kenya College of Communication Technology –KCCT): I taught Technical drawing in 2008 and 2009.
2. **A volunteer with CARE International in Kenya** Refugee Assistance Programme (CARE-RAP) at Dadaab, in 2004 with the following TOR:

a. Improve operations and performance at the Daadab Mechanical Service Unit.

b. Revise vocational training curriculum (for refugee).

c. Product development for self-sustenance for skilled and semi-skilled refugee artisans graduating from the care training programme.

1. **Research Engineer at Perc-Pace International:** consulting in design and production engineering, energy management

**Accomplishment:**

Sugar supply and demand; Industry Systems and Structures; Practices and Future Trends Research for the Kenya Sugar Board (KSB) with the following TOR March 2003-July 2004

a. Evaluation of technical and operational efficiencies of local (Kenyan) sugar factories and Jaggaries.

b. Assess capacity availability and utilization in the sugar industry.

c. Make recommendations necessary for efficient, sufficient, economical sustainable production to meet the local demand and to compete with external production (imports) especially in the COMESA frame work.

1. **Research Assistant at University of Nairobi (2003 -2004)** on a research project titled ***“Technology diffusion in the informal ‘Jua-Kali’ sector”***. With objective to:

a. Evaluation of product development methods in the Kenyan informal metal work sector (“Jua-kali”)

b. Study technology diffusion modes and their impact on production in the “Jua-kali”

1. **Designer for Environmental and Combustion Consultants Ltd** (2001- 2002): responsible for design and construction of air pollution control system for a rotary kiln incinerator (for burning/disposal of hazardous waste).

# awards

**Head of State Commendation (H.S.C.)** - awarded on 12th December 2011 -Jamuhuri Day:Award conferred by his Excellency Hon. Mwai Kibaki, C.G.H., M.P. President and Commander-In-Chief of the Defence Forces of the Republic Of Kenya, for my distinguished service to the nation through Research and Development activities in the Ministry of state for defence; one of the accomplishments being the design and fabrication of the mobile field kitchen for use by the Kenya Defence during detachment and combat. This project has since enabled our military to stop the use of wire wood and LPG in the field, by not using fire wood our Defence Forces help in conservation of the environment by curbing deforestation. From the combat point of view, by not using fire wood and LPG the risks our soldiers would be exposed to while foraging the bushes for firewood or the danger of LPG being targeted by the enemy are reduced.

# skills

I have articulated skills in:

1. Public speaking and lecturing skills
2. Energy auditing, monitoring and evaluation of energy management systems
3. Drafting of research proposals, contacting and managing research and development activities
4. Project management
5. Drafting/writing and implementation of policy documents, strategic plans and schemes of service.
6. Implementation; monitoring and control; appraisal and evaluation of results based management systems
7. Meeting management skills

# interests

Sports especially playing football,

Community activities including youth mobilization, empowerment and mentorship

# Referees

1. Professor Izael Da Silva Periera,

DVC Academic Affairs Strathmore University

&

Director Strathmore Energy Research Centre

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1. Dr Julius Maima Ogola

Chairman Department of Mechanical and Manufacturing Engineering,

University of Nairobi,

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Mobile: +254 733 952 777.

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1. Andrew Amadi,

Energy Consultant UNEP-Kenya Country Programme,

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