

# **The Association of Energy Engineers (AEE) East African Chapter (In formation)**

3rd February 2014

Dear

Mr. Odhiambo Odawa (The Chief Consultant/ Director)  
**S.M.A.R.T.** /JICA/KIAZEN Engineering/ Energy Efficiency /  
Productivity Assement / Entrepreneurship Consultants (K) Ltd  
P.O. Box 59874 – 00200  
Nairobi

**RE: Invitation to Breakfast Launch of AEE East African Chapter 28th February 2014**

You are cordially invited to the breakfast launch of the Association of Energy Engineers East African Chapter, which will be held at Strathmore Business School, Madaraka from 07:00 am to 8:30 am on 28th February 2014.

As a key player in the energy sector, your participation and comments towards the chapter formation will be highly appreciated.

The breakfast launch will be the starting point of a process which will culminate in the inauguration of the East African Chapter at the World Energy Engineering Congress to be held in Washington DC in October 2014.

The local chapter of the Association will, among other things, contribute the following functions to the energy sector in Kenya:

- Self-regulate energy professionals to uphold the highest standards of professionalism in energy management.
- Communicate with the public in creating awareness and provide valuable information on energy management practices and benefits.
- Promote training and capacity development of professionals interested in energy management.
- Spearhead research in the field of energy efficiency, renewable energy and energy management
- Facilitate exchange programmes with international bodies involved in energy management
- Be a neutral, credible and reliable resource for the Government, business and the general public on all matters related to energy management.

Kindly confirm your presence so that suitable arrangement can be made. Looking forward to seeing you on the 28<sup>th</sup> of February, I remain

Yours truly



Prof. Izael Da Silva  
Interim Chairman  
Association of Energy Engineers  
East African Chapter (In formation)





**Strathmore**  
**UNIVERSITY**

22 May 2014

Mr. Odhiambo Odawa

The Chief Consultant/ Director/Chief Technical Trainer

The **S.M.A.R.T.** /JICA/KIAZEN Engineering/ Energy Efficiency /Road Transport

Productivity Improvement Assessor / Entrepreneurship Consultants (K) Ltd

P.O. Box 59874 – 00200

NAIROBI

**RE: ADMISSION TO VOCTECISERC TRAINING OF TRAINERS**

We are pleased to inform you that you have been admitted to VOCTEC/SERC Training of Trainers program which will run from 7<sup>th</sup> July to 18th July 2014 at Strathmore University, Madaraka Campus Nairobi.

Meals, Accommodation and Transport will be provided. Provide receipts of incurred travel expenses for ease of processing refunds.

Kindly give your confirmation to Mrs. Josephine Wandugo on telephone number 0703034402 or e-mail [jwandugo@strathmore.edu](mailto:jwandugo@strathmore.edu) by 27<sup>th</sup> June 2014, so that your name may be included in our program.

Attached is the course booklet. Visit this link <http://www.strathmore.edu/en/contacts> for directions to Strathmore University.

Yours sincerely

**Prof. Izael Da Silva**  
**Director SERC**

**Our Ref:** ERC/REN/5

28<sup>th</sup> March 2014

Dear Sir/ Madam

Mr. Odhiambo Odawa  
The Chief Consultant/ Director/Chief Technical Trainer  
The S.M.A.R.T. /JICA/KIAZEN Engineering/ Energy Efficiency /Road Transport  
Productivity Improvement Assessor / Entrepreneurship Consultants (K) Ltd  
P.O. Box 59874 – 00200  
NAIROBI

**RE: INVITATION TO THE ENERGY AUDITORS' TRAINING  
CURRICULUM VALIDATION WORKSHOP**

We hereby invite you to the Energy Auditors Curriculum development validation workshop at Strathmore Business School, Ole Sangale Road, Madaraka, on the 16<sup>th</sup> of April 2014.

The workshop will seek to:

- Review the Curriculum presented and aligning it with the AEE training Curriculum for energy auditors.
- Modify the existing curriculum for energy auditors to develop the qualification of energy audit research assistant.
- Prepare and develop the structures for an examination board, which will conduct the examination and certification of energy auditors in Kenya and harmonize it with the requirements of the Association of Energy Engineers.

As one of our key stakeholders, your participation and contribution will be highly valued.

Please confirm your attendance by 5<sup>th</sup> April 2014, so we can make suitable arrangements. For any enquiries, contact Ms. Cynthia Kemuma at [ckemuma@eedenergy.com](mailto:ckemuma@eedenergy.com) and Telephone Number 072-623-9333

Yours faithfully



Robert Pavel Oimeke  
**DIRECTOR RENEWABLE ENERGY**



Mr. Odhiambo Odawa

The Chief Consultant/ Director/Chief Technical Trainer

The **S.M.A.R.T.** /JICA/KIAZEN Engineering/ Energy Efficiency /Road Transport

Productivity Improvement Assessor / Entrepreneurship Consultants (K) Ltd

P.O. Box 59874 – 00200

NAIROBI

**RE: NOTES OF THE ENERGY MANAGEMENT CURRICULUM  
DEVELOPMENT STAKEHOLDERS' WORKSHOP AT STRATHMORE  
BUSINESS SCHOOL, 26<sup>TH</sup> NOVEMBER 2013**

**Introduction**

Energy Regulatory Commission (ERC) has been implementing the Energy (Energy Management) Regulations, 2012 which were gazetted on 28<sup>th</sup> September, 2012 via Legal Notice No. 102. These Regulations are assisting in the implementation of Sections 103, 104 and 105 of The Energy Act, 2006, which deals with energy efficiency and conservation.

Through these regulations the energy efficiency shall be enhanced in industrial, commercial and institutional facilities. As one of the key features of the regulations, energy audits are mandatory and should be carried out once every three years. Currently in Kenya, there exist more than three thousand facilities which now have a statutory responsibility to conduct compulsory energy audits. As per the regulations, the audits must be conducted by licensed energy auditors or audit firms. However, a national framework for training and certifying energy auditors does not exist.

ERC has therefore partnered with **Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH**, to develop a training curriculum for energy auditors which will meet the unique demands for Kenya and ensure compliance with international standards and the best practice.

The aim of the workshop was to get various comments from the key stakeholders in the energy sector on what should go into the curriculum. The workshop had presentations from; ERC who elaborated on the legal and regulatory framework for energy management in Kenya, from German consultants who talked about the German energy auditors accreditation system and the Kenyan consultant who outlined the various areas to be covered in the curriculum.

## **Discussions**

After the various presentations were made regarding the legal and regulatory framework and the proposed energy management curriculum the stakeholders had various proposals for the curriculum as follows:-

1. In order to develop a curriculum that will be acceptable nationally a well defined objective for the curriculum should be established which involves training auditors to have the technical skills to be able to carry out competent energy audits that will deliver energy efficiency measures which can be implemented.
2. ERC should review the various energy management courses in the country e.g. the masters degree in Energy Management offered at the University of Nairobi and see what can be borrowed from them.
3. In line with improving acceptability of the energy auditor who will be practicing in the field, the bare minimum background qualification should be considered. It was suggested that the curriculum being developed can consider other qualifications such as Economics since energy audits require different professionals to work together.
4. The period of the training should be defined as this will in turn inform the complexity of the course.
5. Given the diverse nature of the energy management field which has a significant financial component, tax and carbon credit issues should be considered for incorporation.
6. It was proposed that there be levels/modules for the course such that if an individual has proven competence in a certain area he/she be exempted from some modules.
7. The development of the curriculum should bear in mind that the energy audit is a team activity incorporating individuals with various backgrounds and expertise.
8. Noting that there is a great need for consumer education, the curriculum should have a component of information dissemination to the consumer.
9. The course should be tailored in such a way as to address an existing problem regarding energy efficiency in the country.
10. It was noted that there is a Certified Energy Manager(CEM) course being facilitated by the Kenya Association of Manufacturers, and is acceptable for the purpose of licensing of energy auditors and as such should not be scraped off but the curriculum should build up/improve on the course, whereby the CEM course can be used as a benchmark for the energy auditors curriculum development.

11. The component in the curriculum on water and resource use should be improved to factor in various natural resources and raw materials for industries.
12. The training course should be acceptable as a professional course for energy auditors nationally.
13. The curriculum should be aligned with the local education standards i.e. National Industrial training Authority (NITA), Kenya Institute of Curriculum Development (KICD) formerly (KIE).
14. Environmental issues to be highly emphasized in the curriculum.
15. The ISO standardization system e.g. ISO 50001 to be isolated from the energy audit systems as it was noted that the ISO system is also subject to auditing.
16. Standardization of examinations to be considered given that the course will be offered nationally.
17. International best practices should be incorporated in development of the curriculum.
18. Various softwares that are useful in energy auditing e.g. RETSCREEN should be customized for Kenya and made available to assist in data analysis.
19. Soft skills to be highly emphasized in the curriculum as it was noted that the process of energy auditing involves a great deal of communication.
20. Given the highly practical nature of energy auditing it was proposed that practical industry experience should be incorporated in the qualifications for the training.
21. A practical energy audit/field experience to be factored in the curriculum for the training course.
22. It was noted that a great deal of energy saving can be achieved from the design stage of various buildings and projects and so this aspect should be well covered in the curriculum.

### **Way forward**

On the way forward it was agreed that:

1. All the stakeholders unanimously endorsed the process of developing a National Energy Auditors' Training Curriculum.
2. After the stakeholders' workshop an experts' retreat maybe held to incorporate various comments and proposals in developing a draft curriculum.
3. A wider stakeholder workshop will be held for stakeholders to evaluate the draft curriculum and make necessary comments.
4. After incorporation of the stakeholder comments, there will be collaboration between ERC, NITA and KICD to have effective implementation of the Curriculum.





January 17<sup>th</sup> 2014

Mr. Odhiambo Odawa  
The Chief Consultant/ Director  
The **S.M.A.R.T./JICA/KAIZEN Engineering /Energy Efficiency/Energy Conservation**  
**/Productivity Improvement Assessor/ Entrepreneurship Consultants (K) LTD**  
P.O. BOX 59874 – 00200  
NAIROBI

Dear Sir/Madam,

**RE: Renewable Energy Regulatory Capacity Development Workshop**

The Kenya Association of Manufacturers (KAM), Economic Consulting Associates (ECA) and European Union Energy Initiative Partnership Dialogue Facility (EUEI-PDF) wishes to invite you the concluding workshop for the **Renewable Energy Regulatory Capacity Development programme** on the **28<sup>th</sup> February 2014 at 8:30 am- 1:30 pm at the Sarova Panafric Hotel Nairobi**

As part of this programme ECA, KAM and Carbon Africa Limited with support from (EUEI-PDF) embarked to conduct a study to assess the likely technical and economic impacts of the adoption of a net metering programme in Kenya and identify measures that could be implemented to address issues that may arise with the adaption of net metering. The study findings are intended to inform the drafting of net metering regulations. This assessment was undertaken in response to a request from energy sector stakeholders in particular the Ministry of Energy and Petroleum, the Energy Regulatory Commission and Kenya power.

The first stakeholders' workshop was held in February 2013 where stakeholders were briefed on the recent developments surrounding Renewable energy, energy efficiency and mechanisms that would be adopted to enhance developments in the Renewable energy and energy efficiency sector were proposed.

The 2<sup>nd</sup> stakeholder's workshop was held in Nov 2013 where the first draft was presented and discussed. The consultant team has since revised the draft one and integrated the comments. A final draft has been compiled and is ready for presentation.

The final workshop aims it to receive comments on the program's deliverables that included

- Proposed design of a net metering programme
- Draft net metering regulations and related documents
- Draft grid connection study ToR and procedures
- Draft RE project feasibility study template
- 

The workshop agenda and the documents above will be shared by 24<sup>th</sup> Feb 2014

In cooperation with



Please confirm your attendance to the undersigned by 25th Feb 2014 for planning purposes

You shall receive the report for your review by 24<sup>th</sup> Feb 2014

PERIS KASAE; [peris.kasae@kam.co.ke](mailto:peris.kasae@kam.co.ke) ;

0722201368/0734646005

We look forward to seeing you then.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'B Maina', is written over the typed name.

Betty Maina, MBS,  
**Chief Executive Officer**





January 17th 2014

Dear Sir/Madam,

**RE: Renewable Energy Regulatory Capacity Development Workshop**

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- Draft RE project feasibility study template
- 

The workshop agenda and the documents above will be shared by 24<sup>th</sup> Feb 2014

In cooperation with



**Our Ref:** ERC/REN/5

18<sup>th</sup> November 2013

Mr. Odhiambo Odawa  
S.M.A.R.T. Energy Engineering Consultants Ltd.  
**NAIROBI**

Dear *Mr. Odawa,*

**RE: DEVELOPMENT OF ENERGY AUDITORS' TRAINING CURRICULUM**

The Energy Regulatory Commission (ERC) is a single sector regulatory agency established under section 4(1) of the Energy Act, 2006 with the responsibility of economic and technical regulation of electric power, renewable energy and downstream petroleum subsector.

Energy Regulatory Commission has been implementing the Energy (Energy Management) Regulations, 2012 which were gazetted on 28<sup>th</sup> September, 2012 via Legal Notice No. 102. These Regulations are assisting in the implementation of Sections 103, 104 and 105 of The Energy Act, 2006, which deals with energy efficiency and conservation.

The regulations enhance energy efficiency and conservation in industrial, commercial and institutional facilities. One of the key requirements of the regulations is the conducting of energy audits once every three years. Currently in Kenya, there exist more than three thousand facilities with a statutory responsibility to conduct energy audits. The audits must be conducted by energy auditors or audit firms licenced by the Commission. However, a national framework for training and certifying energy auditors to meet the industry demand does not exist.

ERC, with support from **Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH**, and in consultation with industry stakeholders plans to develop a training curriculum for energy auditors geared towards meeting the unique demands for Kenya and in compliance with international standards and the best practices in energy management.

You have been identified as key stakeholder in this process and we are hereby inviting you to a workshop to discuss the details of this curriculum. The workshop will be held on **Tuesday, 26<sup>th</sup> November 2013** at the **Strathmore Business School, Fahari Room**, starting at **09.00 A.M.**

Your attendance and participation will be highly appreciated.

Yours

Sincerely



(DRE)

for

Dr. Frederick Nyang  
**AG. DIRECTOR GENERAL**

10/5/2014

**Mr. Odhiambo Odawa** (0706—605406)

The Chief Consultant / Chief Technical Trainer

The S.M.A.R.T. / JICA—Kaizen Energy Efficiency Auditing / Solar Energy PV Systems Designs & Installations / Maintenance / Productivity (5s—Kaizen) Assessors / Enterprenourship Consultants (K) LTD

P. O. Box 59874—00200 Nairobi

**Dear VECTEC / Educator Participant,**

On behalf of The Strathmore University and The Arizona State University, it is a great pleasure to welcome you to the Vocational Training and Education on Clean Energy (**VECTEC**) Solar Energy Photovoltaics (PV) Systems Designs & Installations / Maintenance Technical Training Workshop for Educators.

The major objective of the **VECTEC** program in Kenya and elsewhere is to strengthen the cadre of qualified Professionals and Technicians to Design, Install, Operate and Repair /Maintain Stand-alone (Off—Grid & Hybrid Systems) Solar Energy PV Systems facilities used in Factories / Hotels & Lodges / Hospitals & Health Centers / Schools & Colleges / Domestic Homes / Real Estate Development Plans etc.

The Arizona State University and Strathmore University have partnered to create a national “**Train-the-Trainers**” (**T.O.T.**) facility at Strathmore’s Madaraka Campus in Nairobi to ensure that Solar Energy PV Technical Trainings for Technicians and Installers / Venders/ Manufacturers meet current and future training needs in the respective countries.

**This Educator’s Workshop** will provide you with the Theory & Practical knowledge, Curriculum and Technical Training Tools & Equipment / Mobile Tool Kits / Practical Training Manuals to conduct Theory & Practical and hands-on Solar Energy PV Systems Technical Trainings to Designers /Installers /Venders / Manufacturers and Technicians in your respective institutions & Companies .

Our special gratitude goes to the United States Agency for International Development (**USAID**) as the sponsor of this important initiative in Kenya.

We hope that this workshop is only the beginning of a mutually beneficial collaboration between our institutions to ensure knowledge dissemination and sustainable clean energy projects throughout Kenya and beyond

Kind regards

Prof Izael Da Silva  
Deputy Vice-Chancellor  
Strathmore University

Prof Anshuman Razdan  
Ira A. Fulton Schools of Engineering  
Arizona State University

10<sup>th</sup> August 2014

**Mr. Odhiambo Odawa (0706—605406)**

**The Chief Consultant / Chief Technical Trainer**

**The S.M.A.R.T. / JICA—Kaizen Energy Efficiency Auditing / Solar Energy PV Systems Designs & Installations / Maintenance / Productivity (5s—Kaizen) Assessors / Enterprenourship Consultants (K) LTD**

**P. O. Box 59874—00200 Nairobi**

"KAM through Center for Energy Efficiency and Conservation (CEEC) with support from the Ministry of Energy and Petroleum (MOEP) and Danish International Development Agency (DANIDA) has created awareness on energy efficiency and conservation activities through energy audits, awareness campaign, targeted training, energy management awards, energy accord and exchange/case study visits.

In this regard, we are organizing exchange visits to companies that have performed well in energy management to enable technical personnel from various industries get firsthand experience on energy efficiency and renewable energy technologies.

This year, Kaluworks Ltd in Mariakani has been nominated to participate in the case study visit following their win in the Energy Management Awards (EMA) 2014 Best New entrant as well as the company's keenness in implementing Energy Efficiency Measures.

You are therefore invited to participate in this case study visit scheduled for the 19th August, 2014 from 10 am. KAM will provide transport and lunch on this day.

Transportation will be facilitated from KAM offices at Uni Plaza, Mombasa at 8am and back.

Kindly confirm your participation by Friday 15th August 2014 noon.

**Attendance is strictly on confirmation.**

*Thanks and Kind Regards,*

**Martha cheruto** EO - Energy Services



**Kenya Association of Manufacturers (KAM) | 15 Mwanzi Road  
opposite Westgate, Westlands, Box 30225 - 00100, Nairobi  
Phone: + 254 (20) 2324817, (20) 2166657, 0706612384  
Fax: + 254 (20) 3200030;  
Email: martha.cheruto@kam.co.ke  
www.kam.co.ke**

**Since 1959**



11/ 11 / 2014

Mr. Odhiambo Odawa (The Chief Consultant / Chief Technical Trainer --0706--605406)

The S.M.A.R.T. / JICA-Kaizen Energy Efficiency Auditing / Solar Energy PV Systems Designs & Installations / Repairs (Off-Grids / Hybrids / Mini-Grids) / Productivity (5s-Kaizen) Assessors / Enterprenourship Consultants (K) LTD. P.O. Box 59874--00200 Nairobi

Dear Sir,

RE : The Invitation for East African—German Industrial Energy Efficiency / Solar Energy PV Systems Designs & Installations (Off-Grids / Hybrids / Mini-Grids ) / Productivity Improvement Assessments Technical Training Workshop on 24 / 11 / 2014 at Southern Mayfair Hotel Nairobi

I hope that this email finds you well. – Pls. feel free to forward this email to the Eastern Africa Chapter of the Association of Energy Professionals!

We cordially invite you to **the East African-German Industrial Energy Efficiency Workshop on 24<sup>th</sup> November**, which will be held in the Southern Sun Mayfair Hotel in Nairobi. **You and your team are cordially invited!** - During the Conference, there is the opportunity to have **individual meetings with some German companies** (see attached profiles), which will be arranged by the German Chamber of Commerce/ Kenya according to your interests.

The Workshop is held in the context of a **German Energy Efficiency Business Delegation Trip to Kenya**, which is co-sponsored by the German Federal Ministry of Economic Affairs and Energy. The German companies come to discuss the technical and economic viability of energy efficient solutions with local stakeholders. Among the German enterprises are suppliers of automation solutions, compressors, efficient electric drives, refrigeration systems /heat exchangers, Solar PV system provider as well as process engineering and technology suppliers.

Generally, **Energy Efficiency helps to improve the overall Productivity and, thus, to improve the competitiveness**. In most industries tremendous energy savings can be achieved through more energy efficient cross-cutting technologies (e.g. electrical drives, pumps, compressors, refrigeration systems, boiler systems, heat recovery etc.) and more efficient process technologies. Energy audits in Kenyan companies have shown that 30-40% of overall energy costs can be saved, e.g. in the dairy factories around 39%. Especially in consideration of the high power tariffs many investments in energy saving measures are paid back within 2-4 years. Finally, especially process-specific energy efficient technologies usually go along also with higher Production Efficiency.

The Workshop **will be a whole day event**: Besides information about the regulatory framework, technical options to save energy and improve production efficiency will be presented by German solution providers and Kenyan companies. In addition, experiences about the economic viability of energy efficiency investments will be shared. Other issues, which will be discussed, are the concept of energy management and finance possibilities.

It would be a pleasure to welcome you / your team on the Conference on 24<sup>th</sup> November! – Pls. fill out the registration form (last page of agenda) by 17<sup>th</sup> November and express your interest in individual meetings. You may send your registration directly to [project1@kenya-ahk.co.ke](mailto:project1@kenya-ahk.co.ke) or to [Georgia.badelt@kenya-ahk.co.ke](mailto:Georgia.badelt@kenya-ahk.co.ke).

Best regards

Georgia

Dr. Georgia Badelt  
Head of Energy Desk



Delegation of German Industry and Commerce in Kenya

Riverside Drive, opp. Prime Bank

Riverside Mews Building (German House)

P.O. Box 19016, 00100

Westlands, Nairobi, Kenya

[Tel:+254-20-2140008](tel:+254-20-2140008)/ +254-724561682 (mob)

Internet: [www.kenia.ahk.de](http://www.kenia.ahk.de)

This position is supported by German development cooperation //

Centre for international Migration and Development — <http://www.cimonline.de>



15<sup>th</sup> September 2014

Mr. Odhiambo Odawa (The Chief Consultant / Chief Technical Trainer)

The **S.M.A.R.T. / JICA-Kaizen** Energy Efficiency Auditing / Solar Energy PV Systems Designs & Installations / Productivity (5s-Kaizen Concepts) Assessors / Enterpmourship Consultants (K) LTD.  
P. O. Box 59874-- 00200 Nairobi

Dear Sir / Madam,

**RE: The Development of New National Curriculum Syllabus for The Solar Energy PV Svstems Designs & Installations Repair / Maintenance ( Off-Grids / Hybrids / Mini Grids Svstems) Solar Water Heating (SWH) Svstems Technical Training Course in Collaboration with The E.R.C. / N.I.T.A. & K.E.R.E.A. at Strathmore Energy Research Center (S.E.R.C.)---The Strathmore University, Nairobi**

Under an activity sponsored by **G.I.Z., (Deutsche Gesellschaft fur Internationale Zusammenarbeit -GIZ—Gmbh)**, The Kenya Renewable Energy Association (**K.E.R.E.A.**) is facilitating the development of a Training Curriculum for The Solar Energy PV Systems Water Heating (SWH) Systems Technical Training Course.

The Technical Training Course is targeted at developing Local Human Capacity for Design, Installation, Trouble--shooting and Repairs & Maintenance of Solar Water Heating Systems for Factories / Hotels & Lodges / Hospitals & Health Centers / Schools & Colleges / Domestic Homes / Real Estate Development Projects / Supermarkets / Petrol Stations etc . The development of the Curriculum and subsequent Technical Training program is in response to The **ENERGY ACT 2006** & The Energy Regulatory Commission (**E.R.C.**) Energy Management Regulations 2012 (Solar Water Heating Systems) ([http://www.erc.go.ke/index.php?option=com\\_docman&view=docman&Itemid=646&limitstart=5](http://www.erc.go.ke/index.php?option=com_docman&view=docman&Itemid=646&limitstart=5)).

As a **Practitioner** and **Stakeholder** in the Energy Efficiency Management & Energy Auditing / Solar Energy PV Systems Designs & Installations ( **Off—Grids & Hybrids / Mini Grids** ) / Energy Efficiency Fault Diagnosis / Repair & Maintenance in the Energy Industrial Sector,

We would like to invite you to participate in The **Workshop to Review** and provide **INPUT** to the above **Draft Curriculum** that would have been developed. The Workshop will be held from **9:00am - 1:00pm on Friday 3<sup>rd</sup> October at the Strathmore Business School / Strathmore University (S.E.R.C.)** (the meeting room will be communicated later).

The **GIZ** have contracted **Global Sustainable Energy Solutions** (G.S.E.S.) (<http://www.gses.com.au/>), an Australian Company specializing in Solar Energy PV Systems Designs & Installations for **Solar Water Heating Svstems** (SWH) Technical Training Programs. The **G.S.E.S.** will guide the Curriculum Development Process and subsequently develop The Technical Training package and implement Technical Training of Trainers (**T.O.T**) Course based on the developed Curriculum.

Please confirm your participation by sending an e-mail response to [administrator@kerea.org](mailto:administrator@kerea.org).

We look forward to your participation

Kind regards,

Charles Muchunku



Mr. Anthony Odhiambo Odawa (The Chief Consultant /Trainer)

The **S.M.A.R.T.** Energy Efficiency Auditing / Solar Energy  
PV Designers & Installations Repairers / Productivity (5s)  
Assessors / Enterprenourship Consultants ( K ) LTD.  
Box 59874—00200 Nairobi

P.O Box 42040-00100  
Strathmore business School (SBS)  
UAP room  
Ole Sangate road off Langata road  
NAIROBI

**RE: INVITATION FOR TRAINING OF TRAINERS ( T. O. T. ) COURSE IN SOLAR ENERGY PV MODULES  
SYSTEMS DESIGNS / INSTALLATIONS / REPAIR & MAINTENANCE AT AFRICA INSTITUTE FOR  
CAPACITY DEVELOPMENT (A. I. C. A. D. ) JKUAT—JUJA FROM 18<sup>TH</sup> ---29<sup>TH</sup> AUGUST 2014**

Although the Kenyan Solar Energy PV market is often considered as a successful commercially driven market, market spoilage due to poor quality of products as well as design, installation and maintenance services has significantly hindered market growth. As a result, the Solar Photovoltaic (PV) Systems Regulations were gazetted by the Energy Regulatory Commission (ERC) in September 2012. The regulations require that all persons designing and installing Solar Energy PV Systems (Off-Grids & Hybrids ) as well as Solar PV System Manufacturers, Importers, Distributors, Venders and Contractors must be licensed by ERC.

To be licensed, Technicians should have undertaken the relevant Practical Training to acquire these respective skills in Solar Energy PV Systems (Off--Grid & Hybrid / SHS) and meet the requirements for licensing by ERC.

Additionally ,Venders and Manufacturer must employ licensed Technicians in order to be licensed themselves.

To support compliance with these ERC regulations the Kenya Renewable Energy Association together with various organizations and Institutions has undertaken a number of activities:

- Facilitating a stakeholder driven process to develop Solar Energy PV Training Curriculum for levels T1, T2 and T3 (according to the regulations of Solar Energy PV) through support from UNDP's Energy Access Program and GIZ
- Identifying and facilitating Capacity Building of 16 Technical Training Institutions to provide short courses in the short term and the institutionalization of Solar Energy PV Training in the long term. This was achieved through implementation of Training of Trainers program with JICA and Jomo Kenyatta University of Agriculture and Technology. The Training of Trainers was based on the developed T1 and T2 curricula.
- Leveraging private sector and UNDP's support to equip the 16 technical training institutions and enable them to effectively offer a hands-on/practical training course. Through advertising support from the IFC/World Bank Lighting Africa Program, K.E.R.E.A .managed to leverage 3.9kW of solar PV equipment from 8 Kenyan solar PV companies and a further 1.8kW from UNDP
- Supporting the development of Trade Test Exams guidelines with the National Industrial Training Authority (NITA). The guidelines are for a Skill based Test which will be used to evaluate trained technician before they can apply for licensing by the E. R. C.
- Undertook intensive campaign to inform Solar Energy PV Systems Technicians and Vendors of the solar PV regulations and where they can get the Practical Trainings in respective Technical Training Institutions. The campaign involved 'door to door' visits of practicing technicians and vendors in 40 towns.

It is in our interest to continue to Capacity-- Build the Technical Training Institutions across the country with qualified Solar Energy PV Modules Sysems Compentency Based Trainers and high quality Solar PV Systems Tools / Machines / Equipment

In view of this, we would like to invite two (2) more lecturers from your Institution to a Training of Trainers' (T.O.T) Course that will take place at A.I.C.A.D within Jomo Kenyatta University of Agriculture and Technology (JKUAT) grounds in Juja. The Training of Trainers' Course will take two (2) weeks from 18<sup>th</sup> to 29<sup>th</sup> August, 2014 and will be facilitated by Solar PV Trainers & Japanese Experts from JKUAT. This training Program to be facilitated by JICA through the BRIGHT Project, who will cater for; the training venue and materials and daytime meals .

The nominated participants are kindly requested to cover :

- Accommodation during their stay in Juja and their transport to and from the venue of the training.
- Carry a calculator to the training and a working LAP TOP for Practical / Hands-on Field work

Assessment Records / Data Collection Activities using Solar Energy PV Systems Tools / Machines / Equipment at The Institute of Energy and Enviroment Technology (I. E. E. T. / JKUAT)

NB :

**B.R.I.G.H.T. :** Better life for people in Rural areas and Interlecctual network on Green Energy and Its Hands-on Technology

Yours Sincerely,

KENYA RENEWABLE ENERGY ASSOCIATION