

# The Highlight

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# Editor's Note



**M**erry Christmas and Happy New Year 2023; whatever your celebration this season, there is one thing every celebration has in common – gifts, nice meals, family, friends, and happiness!

As you celebrate this holiday season with your family and friends, I welcome you to the 2nd edition of The Highlights for the year 2022/2023. Dig in and gain knowledge on how to make a fireless cooker in the comfort of your home and make your cooking easy, safe and healthy this festive season.

In this edition, we encourage you to transition to cleaner energy by providing practical tips you can use to help the change, especially in the face of rising technology demands as the Corporation spearheads Kenya's green energy drive.

Africa continues to be among the worst hit by the consequences of climate change, despite having contributed the least to global warming and having the lowest emissions. Climate change has become the existential threat of our time. In this issue, we highlight the role of REREC on climate change as the Corporation participates in the KUSI Ideas Festival.

We also bring you news of the prestigious 29th IEK Convention held in Diani, Kwale County where REREC engineers participated and shared their experience, challenges, and new knowledge on emerging technologies and engineering-related topics with academicians, scientists, researchers, industrial participants, engineering students, and other professionals to network.

We have this and many more lined up just for you in this edition highlighting the Corporation's undertaking in the last 3 months.

We further delve into the renewable energy status in the country. On this, we explore the mitigating interventions that the country should put in place in order to harness renewable energy from sources such as solar, geothermal, tidal waves, wind, mini hydros, co-generation green hydrogen and even municipal waste as opposed to using fossil fuel generated power.

Read about all these and more in this issue of The Highlight. As usual, we look forward to your comments, questions and contribution.

We love feedback.  
Engage us through:

[info@rerec.co.ke](mailto:info@rerec.co.ke)

*Wangari Githii*



# Powering Africa Without Burning it



## REREC Champions Use of Renewable Energy Technologies

CEO Peter Mbugua (second from right) and other panelists during the Kusi Ideas Festival. The event focused on exploring the impact of the warming climate on the continent.

Climate change has become the existential threat of our time. Despite having contributed the least to global warming, and having the lowest carbon emissions, Africa continues to be among the worst hit continents.

As a country, Kenya has put in place a number of measures and policies that provide guidance for low-carbon and climate resilient development. The Climate Change Act of 2016 and the National Climate Change Action Plan (NCCAP) 2018 – 2022, has set Kenya's priorities to include adaptation, afforestation and reforestation, landscape restoration, climate-smart agriculture, geothermal and clean energy development, energy efficiency, and drought and flood risk management.

“Organizations are now conspicuously pulling together and working towards keeping Kenya green and clean.”

It is commendable that private entities, public institutions, development partners and non-governmental organizations are now conspicuously pulling together and working towards keeping Kenya green and clean.

Recently, the Nation Media Group organized a two-day conference themed, “Climate Change: Exploring African Responses and Solutions”. The

Kusi Ideas festival, as it is commonly known, focused on exploring the impact of the warming climate on the continent – from its impact on our food security to the financing and technology needed to mitigate its impact on the environment and the people.

The festival brought together some of the most free-spirited and bold people calling out Africa's challenges, and those turning them into opportunities. Rural Electrification and Renewable Energy Corporation, REREC, took part in this important conversation.

Speaking during the conference, REREC's CEO, CPA Peter Mbugua reiterated that the Kenyan Government is keen at ensuring Kenya transitions to a 100% clean energy nation. He pointed out that



the Corporation has undertaken several projects in far flung areas of North Eastern region, most of which are far from the main electricity grid. Mr. Mbugua noted that these regions have been served through installation of solar panels in schools and public facilities and the installation of mini grids which are able to serve a larger population. The CEO opined that this has opened up the regions to economic development, improved security in some areas and even enabled some communities to have powered boreholes providing water for domestic and farming activities.

“That is why the government has taken the broad step to invest in these areas and more so in renewable energies because other than now getting the areas opened up for economic activities, mini-grids can address specific issues for specific areas”, said CPA Mbugua.

The CEO applauded the Government for its continued support towards investments in the fields of renewable energy. He reiterated that there is need for the Government to consider giving more incentives to the renewable energy sector players, adding that this would bring in more players and help the country transition to clean energy sooner.

Engineer Lucy Kariuki, Chief Engineer from Kenya Pipeline Company who also took part in the highlight panel discussion titled “Powering Africa without burning it: Renewable Energy to the Rescue, added that efforts to mitigate climate change should be cascaded and emulated in all regions across the continent.

Kusi Ideas Festival is a Pan-African platform that is utilized to examine the continent of Africa’s place in the world; its citizen’s problem-solving ideas and innovations; and how these prepare Africa to deal with the coming challenges. For many years to come,



CEO Peter Mbugua (center) addressing delegates during the Kusi Ideas Festival.

REREC and other key stakeholders, policymakers, academicians, and engineers will play various roles in shaping the continent towards a green energy-driven society.

REREC’s Board Chairperson Wacuka Ikuu who was also in attendance lauded the Corporation

for being at the forefront of providing sustainable energy solutions for Kenyans through rural electrification and renewable energy for social-economic transformation. She said that REREC is focusing on driving the clean energy agenda as a way of mitigating the dangers associated with climate change.

“ There is need for the Government to consider giving more incentives to the renewable energy sector players. ”



REREC’s Board Chair Wacuka Ikuu (2nd right), C.E.O Peter Mbugua (2nd left), General Manager IEC Dr. Rose Mkalama (Right), General Manager Renewable Energy Mr. Fred Ishuga (Left) and other REREC staff during KUSI Ideas festival in Nairobi.



# Adoption of Renewable Energy Technologies in Rural Kenya



Cabinet Secretary, Water, Sanitation & Irrigation, Alice Wahome (centre) at REREC's stand during the 29th IEK International Convention. She was received by the GM, IEC Directorate Dr. Rose Mkalama (left), and the GM Renewable Energy Research & Development, Mr. Fred Ishugah (right)

Conversations around Renewable Energy Technologies (RETs) as a key catalyst for rural development has been taking shape in recent times. Worth noting, is the realization that renewable energy is the fastest growing source of energy, with 28.1% of the estimated energy consumption coming from the exploitation of renewable energy.

The 29<sup>th</sup> Institute of Engineers of Kenya (IEK) Convention held in Diani, from 21<sup>st</sup> - 25<sup>th</sup> November 2022, themed; "Sustainable Engineering in the Era of climate change" posed to be an excellent platform for the experts to discuss how they are using their expertise to mitigate the effects of climate change.

As an organization that has a heavy technical work force in the engineering field, the Corporation presented a paper on "Developments

**“The Level of electrification in rural areas of Sub-Saharan Africa does not exceed 10%. ”**

in Adoption of Renewable Energy Technologies in Rural Kenya". The presentation, that was delivered by REREC's officials; Eng. Okova Wangaki, Eng. Chepkania & Fred Ishugah pointed out that Africa has a huge opportunity to exploit renewable energy technologies. The REREC engineers observed that the challenge of recurrent crisis faced by most power utilities in the region and the recent increase in oil prices calls for innovators and investors to provide cheaper solutions, and renewable energy provides an all-round solution

as it also mitigates the effects of climate change.

Speaking while making the presentation, Fred Ishuga, who is the General Manager - Renewable Energy, Research and Development at REREC opined that renewable energy offers many benefits to the economy, including, but not limited to new revenue sources, new job and business opportunities leading to improved living standards, innovations in products, practices and policies in rural areas, among others.



“The Level of electrification in rural areas of Sub-Saharan Africa does not exceed 10%. As we all know, rural areas host majority of the population in Africa. I therefore see a huge opportunity for investors in RETs to provide energy solutions to this huge majority who are currently underserved,” added Fred Ishuga.

## Challenges Causing Low Uptake of RETs in Africa

Power demand stabilization required to increase RE penetration.

Policies uncertainties e.g. the reintroduction of VAT on solar energy technologies.

Lack of adequate knowledge and information on RE technologies.

Lack of technical capacity and business models for support.

The high installation cost of technologies, accessories etc.

Inadequate infrastructure and grid to feed extra generated RE.

Unstable financial institutions.

Limited access to private and foreign financing.

Patchy and inconsistent legal and regulatory frameworks.

Low awareness of the potential opportunities and economic benefits of RE.

The National Energy Policy in 2018 laid out strategies and policies to tackle the challenges that the RET sector is facing. One of the key action points of the Policy was to transform the Rural Electrification Authority into the Rural Electrification and Renewable Energy Corporation (REREC) to become the lead agency in the development of renewable energy resources excluding geothermal and large hydros. This was achieved through the enactment of



REREC's General Manager in charge of IEC Dr. Rose Mkalama (second from left), and other REREC officials during the 29th IEK International Convention held in Diani, Kwale County.

the Energy Act of 2019, and REREC is currently the one stop shop for information and guidance to investors on renewable energy projects, among other mandates related to RE.

The 29<sup>th</sup> IEK Convention brought together engineers, academicians, scientists, researchers, industrial participants, engineering students, and other professionals to network, and share experiences, challenges, and new knowledge on emerging technologies and engineering-related topics.

The Corporation was among the co-sponsors of the prestigious IEK event. The convention addressed various topics related to, but not limited to, building resilience infrastructure, harnessing emerging technologies, innovation, mitigation measures against climate change, climate adaptation, climate change impact & engineering, artificial intelligence, energy transition, role of nuclear and renewable energy in combating climate change and the role of green financing and green economy.

While making remarks during the closing ceremony, REREC's General Manager in charge of Information,

**“ The successful completion of the 54MW Garissa power plant, electrification of primary schools, solarisation of diesel power stations, and installation of mini-grids in off-grid areas as some of REREC's major milestones. ”**

Education and Communication, Dr. Rose Mkalama, outlined REREC's achievements in renewable energy by pointing out the successful completion of the 54MW Garissa power plant, electrification of primary schools, solarisation of diesel power stations, and installation of mini-grids in off-grid areas as some of REREC's major milestones.

The IEK/REREC partnership has seen the Corporation not only give staff opportunity for professional growth by exposing them to industry trends and changes, but also offer great opportunity for the Corporation to publicize its achievements as the lead government agency in charge of the promotion of renewable energy.





# Corruption Prevention & Whistle Blowing

The impact of corruption goes beyond the corrupt individuals, the innocent colleagues who are implicated, or the reputation of the organizations they work for.

Corruption erodes the trust we have in the public sector to act in our best interests. It also wastes our taxes and finances that have been earmarked for important community projects – meaning we have to put up with poor quality services or infrastructure, or we miss out altogether.

Corruption is defined as the “offering, giving, soliciting or acceptance of an inducement or reward which may influence a person to act against the interests of the organization”. Corruption can also be defined as the improper use of power/privilege/office for the benefit of any other person(s). It also involves bribery, fraud, embezzlement/misappropriation of public funds, breach of trust, deceiving the employer, conflict of interest, bid rigging, insider trading and failure to declare a gift.

Corruption can be carried out individually or in collusion with others within and/or outside an organization.

Chapter 6 of the Kenya Constitution and the Leadership and Integrity Act (LIA), 2012 are the core legal and regulatory frameworks that address corruption and integrity in the country.

**“ A public officer should respect and abide by the law, take personal responsibility for what they do or fail to do, carry out duties efficiently, honestly, transparently and in an accurate manner ”**

The Leadership and Integrity Act 2012 outlines some of the obligations of state/public officers. The obligations include a public officer to respect and abide by the law, take personal responsibility for what they do or fail to do, carry out duties efficiently, honestly, transparently and in an accurate manner, carry out duties in a manner that maintains public confidence in the integrity of the office, keep accurate official records and documents, declare all conflict of interest, declare, register and surrender all gifts received and to carry out duties with impartiality and objectivity.



## Entrenching the LIA in the Corporation

### Ethics and Code of Conduct - Staff Integrity Pact

The Corporation has established and operationalized a code of conduct aligned to the Leadership and Integrity Act which all Board of Directors, management and all employees must abide by.

Under Ethics and Code of Conduct – Staff Integrity Pact, any employee or stakeholder having well founded suspicion of proven fraud, corruption, misuse of funds and assets, or any irregularities, governing laws of the Corporation is encouraged to report such anomalies. Concerns must also be raised when staff reasonably believe that a corruption incident has occurred, is in the process of occurring, or is likely to occur. Such concerns shall be treated in confidence and investigated thoroughly and impartially.

Any person who makes a report shall be afforded the protections under the Witness Protection (Amendment) Act, 2010, the Corporation's Anti-Corruption Policy and Ethics and Code of Conduct – Staff Integrity Pact.

Individuals and organizations associated with REREC are also required to carry out their duties with integrity. The Corporation shall ensure that any allegations received in any way, including by anonymous letters or phone calls will be taken seriously and investigated appropriately.

The Corporation will deal firmly with those who defraud or engage in corrupt practices or where there has been financial malpractice. The investigation process should not be misused and therefore, any abuse (such as employees raising malicious allegations) may be dealt with as a disciplinary matter.

### Corruption Prevention Policy

The Corporation has also developed a Policy on Corruption Prevention which reiterates REREC's commitment to a corruption-free environment.

The purpose of the Corruption Prevention Policy (CPP) is to safeguard REREC's assets, reputation and enhance performance according to the Corporation's vision, mission and core values. The CPP also reinforces management's commitment and responsibility by identifying areas of risk of corrupt practices, while also establishing strategies and procedures for prevention and detection. It also seeks to highlight the requirements for all employees and stakeholders to refrain from corrupt practices and to encourage reporting of any incidences.

The CPP further ensures that all suspected corrupt practices are detected, reported and dealt with appropriately and promptly. It further provides guidance for conducting investigations into corrupt practices, establishes a mechanism for employees to report matters that they suspect may involve corruption and provides adequate protection to employees against victimization as a consequence of reporting, investigating or being witnesses in corruption cases.

The Corporation's Board of Directors, management and all employees are required to act honestly and with integrity at all times to safeguard the assets and reputation of the Corporation from any attempt to corruptly gain financial and/or other benefits.

The Policy which applies to all of REREC's employees and stakeholders has the objective of voiding corrupt practices by establishing the preventative and detective strategies, controlling corruption relating activities and to put in place reporting channels thus creating an environment that actively discourages corrupt practices.

### Corruption Prevention Committee (CPC)

The Corporation has further appointed a Corruption Prevention Committee (CPC) mandated to;

- Implement corruption prevention programs

- Receive and review reports on corruption prevention initiatives and take and/or recommend appropriate action.

- Ensure compliance to the corruption prevention strategies.

- Recommend staff sensitization and training for committee members on Public Service Integrity Programs (PSIP).


- Ensure that all decisions and guidelines on corruption prevention are communicated effectively to employees and stakeholders.

- Prepare and submit to EACC quarterly progress reports on level of implementation of the program.


- Receive complaints and information on alleged corrupt practices within their areas of jurisdiction and thereafter evaluate, analyze and recommend appropriate action.


- Monitor the impact of corruption prevention initiatives and other recommended actions.

### Avenues for reporting

 **0709 193 000 / 0709 193 600**

 **info@rerec.co.ke**

 **P.O. Box 34585 - 00100, Nairobi, Kenya**

 **Kawi House, South C, Red Cross Road, Off Popo Road, behind Boma Hotel, Nairobi**

**Through corruption prevention boxes**



# Burnt Beans? Not Again!

I love cooking. I like it more when I can cook and do other chores at the same time. Or cook two or three meals at the same time. Maybe I am being theological, but somehow, there is a bad omen that comes with serving two masters at the same time. I am sure you may have experienced the very common accident that is associated with boiling milk. It is all so quiet, and takes ages to boil, until you get the temptation to scroll through your phone, or look away for a second. Just a second, and boom! It boils, overflows, sends the “burnt” smell through the whole house announcing that... “yeah, she/he can’t do a task as simple as boiling milk!” Nkt!

Now even worse, can anyone stomach the smell of burnt beans? It never goes away. Weather you change the sufuria, rinse the beans, add all the spices you know, that *kasmell* will follow through your taste buds.

Luckily, I now have my own way of cooking beans without worrying about the burnt smell, and yeah, I can cook and do other chores at the same time. How lovely.

What’s more, I save upto 80% of energy (be it gas, charcoal, electricity, firewood, etc) and ooh, I can carry my beans, or any other meals, keeping the meal hot a whole day! Need I add that it is also a fireless way of cooking?

Let me introduce you to my fireless cooker. Otherwise known as the haybox cooker.

## What is a haybox cooker?



A haybox cooker is a box, basket or any other container filled with insulating material. Insulating material is anything that heat doesn’t pass

through easily, such as hay (dried grass), papers, wood shavings, wool or dry banana leaves. After heating the food up in the usual way, the cooking pot is placed in the haybox and covered with a pillow or lid, also filled with insulating material. The insulation around the cooking pot stops the heat from escaping, so the food in the pot stays hot and keeps on cooking.

## What are the benefits?

Haybox cookery is a convenient way to cook. You can prepare food in 15 minutes using methods you are used to, put it in the basket to continue cooking slowly as you go out and do something else. Unlike a fire, it is safe to leave it unattended

Haybox cookery is a healthy and convenient way to cook. All the nutrients in the food are retained. It never burns the food; it makes tough meat tender and can keep food warm for a long time



A customer and REREC staff from the headquarters being educated on how to make and use a fire-less cooker by Mrs. Rose a staff at Wambugu Energy Centre

Haybox cookery is a cheap and environmentally friendly way to cook. It uses much less fuel than cooking on a fire or stove. Water is not lost during the cooking process, so it uses one quarter less water than other cooking methods

An interesting fact too, you can boil water in your conventional way, place it in the haybox cooker and in the morning, that water will still be very hot.

You can also cook your food in the conventional way and store it in the haybox. When you come back home in the evening, your food will still be hot. Serve it and enjoy!

**Are there any disadvantages?**

Food does take longer to cook, so preparations need to be made earlier

It works best for cooking larger quantities, but you can use it to keep food warm for later on

It is important to keep the insulating material dry. If it gets damp, it needs to be replaced

**How can I make a fireless haybox cooker?**

Any kind of container stuffed tightly with insulating material can serve as a fireless cooker. A strong cardboard box, a wooden box, a deep drawer, or a basket can all work well. You can adapt this method to the materials you have available, then experiment and innovate to find out what suits you best.

Build your haybox to fit your largest pot. Then, if you are cooking with a smaller pot, wrap it in cloth to fill the space. Your pots will need to have handles so that they can be moved during cooking.

**You need:**

1 container with a lid. There must be room for at least 5cm of insulation around the pot; and more room for insulation on the top because heat rises!

Black cloth (khaki, jinja, drill, or denim)

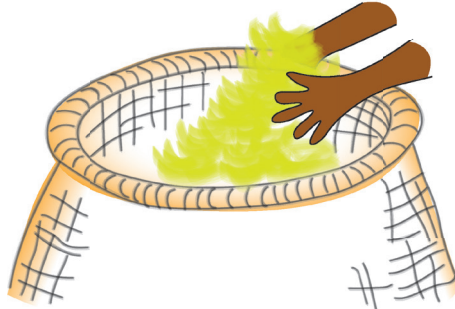
Scissors, sewing needles and strong thread

Insulating materials: hay, sawdust, wood shavings, and/or tightly crushed newspapers

A flat stone roughly the same size as the bottom of the pan

**Step 1**

Fill the basket a third full with the insulating material.



**Step 2**

Place the cooking pot in the centre of a piece of cloth. Collect the corners of the cloth above the centre to make a bag.



**Step 3**

Place this bag inside the basket, on top of the insulating material. Firmly pack more insulating material around the bag and up to the top of the basket



**Step 4**

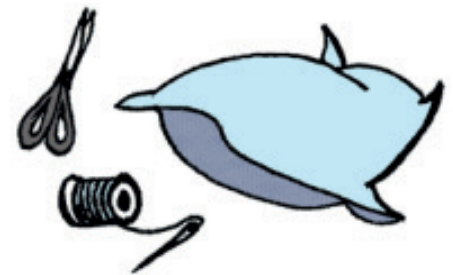
Open out the bag and tuck the edges of the cloth down between the insulating material and the inside of

the basket. Stitch the cloth to the top rim of the basket.



**Step 5**

Make a cushion which is slightly larger than the lid of the cooking pot, filled with the same insulating material



**Step 6**

Insulate the lid. Turn the lid upside down and fill it with insulating material, then cover with a piece of cloth. Tuck the edges of the cloth between the insulating material and the inside of the lid. Stitch the cloth all the way around, along the inside corner of the basket lid.

**Optional:** Add a shiny lining like aluminium foil or mylar to the pot's nest to reflect the radiant heat back into the pot. This works best when the pot fits snugly into the insulation with no air in between. This will also help keep the insulation dry, so that it does not need to be replaced as often.

**How do I use my fireless haybox cooker?**

Put in enough water to cook the food at the start of cooking

Heat your food in the water until it boils and then let it simmer for the recommended time

At the same time, put the flat stone in or at the edge of the fire to heat up



When simmering time is over, put the heated flat stone at the bottom of haybox cooker

Put the pot on top of hot flat stone, quickly cover with the pillow and the insulated lid to stop the heat from escaping, and leave to cook for the recommended time

For more efficiency, wrap the pot with cotton cloth or polythene sheet before putting in the cooker

Approximate cooking times: **Stews:** 3 to 5 hours; **lentils:** 1 to 3 hours

**Important:** All beans, especially red beans, should be boiled using your normal cook stove for at least 20 minutes before placing in the haybox cooker to ensure that the toxins are destroyed. Haybox cookers can be used to keep food warm for eating later. However, for health reasons, meat dishes should always be boiled again before serving.

**A Haybox Cooker Rice Recipe**

**Simmering time:** 5 minutes. **Haybox time:** 1 to 2 hours

- I. 3 cups rice
- II. 4 tablespoons cooking fat
- III. 6 cups water
- IV. 2 onions, peeled and chopped
- V. Salt to taste

Using your normal cook stove, fry the rice for a few minutes

Add water and onions, cover and bring to boil

Reduce heat and simmer for 5 minutes

Place in the haybox cooker for 1 - 2 hours

As your rice cooks slowly in the fireless cooker, you can attend to your other chores, including going to work. When you come back, your rice will be “oven cooked”, hot and ready to be served.

**N/B** *Collect and share recipes for different types of food and experiment with simmering and cooking times.*

**Where can I get a ready-made haybox / fireless cooker?**

Fireless cookers together with other energy saving solutions are available in all of our 16 energy centers across the country.



**You can call us on**  
**+254 709 193 000**  
**+254 709 193 600**

and we shall direct you to the energy center nearest to you, or organize to have one delivered to you.

# Lets Conserve Our Enviroment

Panda miti

#jazamiti

#kuzamiti



# Focusing on the Customer



Pupils from Life and Light Academy visited Kericho Energy Centre and were taken through demonstrations of renewable energy technologies, clean cooking solutions and tree planting.

**R**ural Electrification and Renewable Energy Corporation (REREC) adopted a 360-degree customer engagement model during the 2022 Customer Service Week by engaging in various activities that focussed on a customer centric approach to service delivery.

During the week-long activities that took place in all regional offices, staff were also sensitized on the new innovations that the Corporation has adapted to deliver services more effectively and efficiently to both staff and the publics, who are REREC's main stakeholders.

The Corporation further sensitized the regional members of staff on good customer service, adherence to the customer charter, and the complaints resolution and handling procedure.

Beyond engaging with staff from all regional offices, the Corporation, through the 16 Energy Centres spread in different parts of the country, took time to educate publics on agroforestry and the production of different types of seedlings and woodlots.

This was done through demonstrations and information sharing on renewable energy technologies, which includes solar lighting and solar water heating systems; biogas digester and benefits of biogas; clean cooking stoves (Kenya ceramic jikos, uhai jikos, maendeleo jikos, rocket stoves, parabolic solar cookers, and fireless cookers)

In the Coast region, REREC's staff led by the Energy Centre Manager, Mr. Mohamed Shuqry donated tree seedlings to customers who visited the center. The customers also purchased clean cooking stoves at a subsidized rate.

The activities raised awareness of the value of customer engagement, boosted employee morale, motivation, and teamwork in the dispensation of REREC's mandate.

Customer Service Week is a week-long opportunity for organisations to raise awareness of customer service and the vital role it plays in successful business practice and organisational growth.

The theme for the 2022 Customer Service Week was "Celebrating Service and Sustaining Customer Inclusion."

One of REREC's core values is Customer focus. We purpose to continuously understand our customers' needs and expectations and consequently, provide services that effectively address their needs.

The Corporation carried out customer engagement activities in the following regions:

## Mt. Kenya Region

Mt. Kenya Regional Office in Nyeri town and Wambugu Energy Centre

Nyeri Complex Primary School.

King'ong'o Women's Prison.

Kagumo High School.

Kiawaitanji Secondary School.

Kiawaitanji Primary School.

## West Kenya Region

Awasi yard

Bukura Energy Center

Busia Energy Center

Kisumu office

## North Rift Region

Uasin Gishu Energy Centre

Kipkaren Road Secondary school

Chepyakwai/Kobibasui village

King'wal/Koibasui village

Momoniati village

## Central Rift Region

Central rift office, Nakuru County

Mirangine Energy Center

Ruiru Primary School in Oljororok, Nyandarua County

Tumo Hope Primary School in Subukia, Nakuru County

## Coast Region

Mtwapa Energy Centre

Mariakani Logistics Hub

Coast Regional Office, Mombasa





# Gender Mainstreaming in CSR

REREC GM, IEC Dr. Rose Mkalama, (third from left) and Managers Christine Ndwiga and Beatrice Njuguna lead a team from REREC to make a donation of beehives to women groups in Garissa County.

Gender mainstreaming is the process of making gender concerns and experiences an important aspect in the design, implementation, monitoring, and evaluation of policies and programs in all political, economic, and social spheres with a view to promoting equality between women and men, and combating discrimination and inequalities.

REREC has managed to adopt gender mainstreaming through the implementation of Corporate Social Responsibility activities that promote social and economic empowerment of marginalized groups, including women, fishermen, and persons with disability.

## Donation of Beehives

REREC GM, IEC Dr. Rose Mkalama, Managers, Christine Ndwiga and Beatrice Njuguna led a team from REREC -in donating 30 beehives to two women groups. Each group received 15 pieces with 30 steel metal stands.

The REREC team appreciated the group leaders for supporting women and girls in the community; This initiative aims to provide economic empowerment to women and also young girls within the two groups.

Garissa County has the potential of producing quality honey due to conducive vegetation cover along river Tana and Boni forest.

**“ Gender parity is not just good for women - it's good for societies. ”**  
 ~Angelica Fuentes

## Donation of Solar Lamps



REREC officials donating solar-powered lamps to fishermen of Amu Island - Beach Management Unit (BMU) in Lamu County.

REREC donated solar-powered lamps to fishermen of Amu Island - Beach Management Unit (BMU) in Lamu County as part of our mandate to promote clean, affordable, and sustainable energy in Kenya.

The main objective of the donation is to encourage the use of green and renewable energy in their fishing activities and promote social and economic empowerment. This initiative is an effective intervention that will provide a renewable light source to the fishermen.



## Donation of Assistive Devices to Children with Disability

REREC embraces inclusivity through the donation of various assistive devices to children with disability in various institutions. This was achieved through collaboration with the Kenya Society for Blind (KSB) for the provision of the items;



St. Kizito's Litein School for the Deaf cheering after REREC made a donation of two desktop computers, a laptop and a printer/scanner.

### 1. St. Kizito's Litein School for the Deaf

REREC made a donation of two (2) desktop computers, a laptop and a printer/scanner to St. Kizito's Litein School for the deaf in Bureti Constituency, Kericho County. The devices are installed with softwares and apps to enable the students improve speech and language development, cognitive skills and social skills. Individuals who are deaf or hard of hearing utilize a variety of assistive technologies that provide them with improved accessibility in numerous environments. Most devices either provide amplified sound or alternate ways to access information through vision and/or vibration.



Lodwar Mixed Primary School staff with Mr. Daniel Kapsoot, who presented the donation on behalf of the Corporation.

### 2. Lodwar Mixed Primary School

Lodwar Mixed Primary school is an integrated public educational institution in Turkana Central. The school is sponsored by Ministry of Education with a section of the school catering for blind children.

REREC donated special learning devices including;

#### a) Stylus and slates

These are tools used by blind people to write text that they can read without assistance. Just as the pen or pencil is designed to place a visible mark on a piece of paper, the slate and stylus is designed to punch (emboss) raised, tactile bumps or dots onto a page.

#### b) Writing braille paper

This is a special type of paper that is used by blind people to write on by pushing dots into paper. The dots are created on the reverse of the paper, meaning the braille has to be written back to front.

#### c) Perkins brailier

The Perkins Brailier is a "braille typewriter" with a key corresponding to each of the six dots of the braille code, a space key, a backspace key, and a line space key. Like a manual typewriter, the brailier has two side knobs to advance paper through the machine and a carriage return lever above the keys.

#### d) Embosser for changing print text into braille

This is a hardware device for "printing" a hard copy of a text document in braille.



Don Orione Centre staff in Kajiado County receiving donation of assorted items from REREC

### 3. Don Orione Centre

REREC made a donation of assorted items to Don Orione Centre in Kajiado County. The centre works with children and youth living with cerebral palsy, down syndrome, autism, or the intellectually challenged; most of them coming from poor families. It offers special education, rehabilitation, as well as vocational training in farming and poultry keeping.





# Going Smart to Save Energy, Conserve Environment

The enactment of the Energy Act 2019 created the Rural Electrification and Renewable Energy Corporation (REREC) as a successor to the Rural Electrification Authority. The new Act gave the Corporation an expanded mandate of spearheading Kenya's green energy drive, in addition to implementing rural electrification projects. One of the mandates of the Corporation is to support the establishment of Energy Centres in all the counties.

The Energy Centres, which were recently transferred from the Ministry of Energy to REREC, are the technical outreach arm in the promotion of renewable and sustainable energy technologies as well as alternative energy techniques such as biogas, solar energy applications and improved cook stoves among others.

There are currently sixteen (16) existing Energy Centres namely Bukura, Busia, Garissa, Jamhuri, Kericho, Kisii, Kitui, Lodwar, Marsabit, Migori, Mitunguu,

**“The Energy Centres will be the bridge between the corporate world and the energy world.”**

Mirangine, Mtwapa, Uasin Gishu, Wajir and Wambugu.

In recognizing that technology development in the energy space is moving at lightning speed and in an effort to keep up, REREC has proposed to develop a number of smart technologies in the Energy Centres, which are envisaged to be centres of excellence on renewable energy, energy efficiency and sustainability.

The first of such technologies is the Smart Solar Photovoltaic (PV) System, which is envisaged to allow remote monitoring and control solar systems. Most of the Solar PV systems are currently controlled manually in terms of energy production, utilization and maintenance. Remote monitoring

can improve the performance of solar systems for the end users in order to maximize savings. A smart solar PV system is fitted with remote monitoring system composed of smart management hardware and software that enable the user to produce, utilize, monitor and track performance by providing real-time data from anywhere with internet or mobile phone connectivity.

The system has a smart battery to operate at least cost. A built-in rapid shut-down is activated in case of emergencies for the safety of the users. A communication device is used to send all the important details from the solar energy system to the cloud for monitoring the system over time. This can be done from a central place or

within the precincts of the solar system. The system can be optimized to generate the most power during all daylight hours and it is also smart enough to know when something is not right for repairs to be done. The system gives the user control of the energy usage, how much is saved and how to manage the energy at home and also pro-actively monitor the health of the solar system.



Battery Energy Storage System (BESS)

The other technology is the Battery Energy Storage System (BESS). Given the possibility that an energy supply can experience fluctuations due to weather, blackouts, or for geopolitical reasons, battery systems are vital for utilities, businesses and homes to achieve a continual power flow. BESS is no longer an afterthought or an add-on, but rather an important pillar of any energy strategy. It can be integrated with renewable energy sources, since batteries guarantee a smooth and continuous electricity flow in the absence of the availability of power from renewable sources.

The operating principle of BESS is such that the batteries receive electricity from the power grid, straight from the power station or from a renewable energy source like solar panels or any other energy source and subsequently store it as current to then release it when it is needed. When combined with software, BESS becomes a platform that couples the energy storage capacity of batteries with the intelligence needed to deliver advanced management of energy consumption by harnessing AI, machine learning and data-driven solutions. This makes batteries an important tool in the effort to offset climate change, because they enable a more flexible way of using energy that lets the user adapt to dips and peaks in demand and supply.

As the world races towards zero carbon emissions in the fight against climate change, e-mobility is another key smart technology that REREC is keen on developing. The transport sector is responsible for close to a quarter of global energy-related carbon emissions due to its heavy reliance on fossil fuels. Future power systems will increasingly be based on Variable Renewable Energies (VREs). Electro mobility (e-mobility) is the concept of using electric power train technologies in vehicle information and

communication and connected infrastructures to enable the electric propulsion of vehicles and fleets.

REREC's Energy Centres will be used as sites to promote electric mobility and to study the impact of long-term evolution of mobility on smart charging. As sites for public charging, the Energy Centres will be expected to become more commercially sustainable as the electric vehicle market expands. Each Energy Centre will develop business models based on electricity or retail sales combined with grid services and other revenue streams such as advertising of the charging infrastructure, electrical system requirements and electric vehicle prototypes.

In adopting its role as a renewable energy and energy efficiency marketing hub, the Energy Centres will connect energy buyers with renewable energy and energy efficiency projects, thus helping clients save time, money and energy. The hub will be a full service end-to-end energy marketplace where deals between big energy buyers and renewable energy projects will be brokered.

**“Energy Centres will be used as sites to promote electric mobility”**

The Energy Centres will be the bridge between the corporate world and the energy world. It will be a marketplace for renewable energy and energy efficiency, where providers will be able to connect with new buyers, and buyers will find best deals. Specific activities may take the nature of structuring innovative long-term Power Purchase Agreement contracts while clearing risks for the parties involved.



Green conferencing

Finally, REREC is keen on minimizing the environmental burdens imposed by meetings/conventions through green conferencing. In taking up their role around this duty, the Energy Centres will be critical for event planners where there will be an application of environmentally preferred practices to waste management, resource and energy use, travel and local transportation, facilities selection, siting and construction, food provision and disposal, hotels and accommodations, and management and purchasing decisions.



A person's hands are shown holding a glowing, ethereal brain. The brain is surrounded by vibrant, colorful light trails in shades of purple, pink, orange, and blue, creating a sense of energy and movement. The background is a dark, textured surface with these same colors, giving the impression of a complex, dynamic environment. The overall mood is one of intense focus and mental activity.

# Focus On Mental Disability

**M**ental illness disrupts a person's thinking, feeling, mood, ability to relate to other people and to function at home, work, or school

Mental illnesses can include stress-related conditions, major depression, bipolar disorder (formally called manic depressive illness), anxiety and schizophrenia.



## Types of Mental Disabilities

### 1. Anxiety Disorder

This is a group of disorders in which people feel anxious, frightened, distressed, or terrified to an extent that is more excessive than would be considered appropriate to the situation

### 2. Schizophrenia

This is a very extreme mental illness that impacts a person's ability to think clearly, make decisions, have relationships with others, manage stress emotions as well as function normally in their everyday lives. Most cases of schizophrenia involve one thinking that someone is out to hurt them.

### 3. Bipolar Disorder

This is a mental disorder that causes unusual shifts in mood, energy, activity levels, concentration, and the ability to carry out day-to-day tasks.

### 4. Disassociation Disorder

Dissociative identity disorder is also referred to as 'multiple personality disorder'. People with this disorder experience changes in their identity and have two completely separate personalities in one body. This happens where all the parts of your identity which form your personality are disjointed and not working together as a whole.

### 5. Personality Disorders

These are a group of long-term mental illnesses. They involve long-term patterns of thoughts and behaviours that are unhealthy and inflexible. The behaviours cause serious problems with relationships and work.

## Common Types of Personality Disorders in the Workplace

### Paranoid personality disorder

A pattern of distrust and suspiciousness such that others' motives are interpreted as malevolent. (Paranoia)

### Schizoid personality disorder

A pattern of detachment from social relationships and a restricted range of emotional expression. (Loner)

### Schizotypal personality disorder

A pattern of acute discomfort in close relationships, cognitive or perceptual distortions and eccentricities of behaviour.

### Antisocial personality disorder

A pattern of disregard for and violation of the rights of others. People with this disorder tend to lie, break laws, act impulsively and lack regard for their own safety or the safety of others.

### Borderline personality disorder

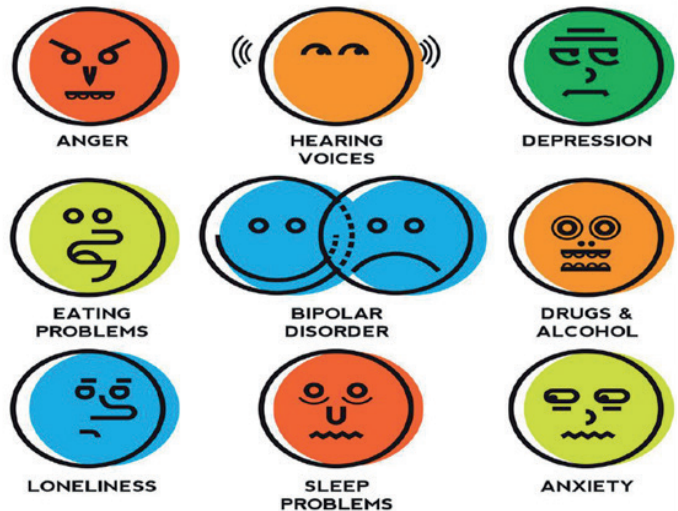
A pattern of instability in interpersonal relationships and self-image.

### Histrionic personality disorder

A pattern of excessive emotionality and attention seeking, talking dramatically with strong opinions, easily influenced, rapidly changing emotions and thinking relationships are closer than they are.

HPD can also be manipulative in order to maintain the interest of others. Sufferers may use behaviour, including seductive sexual behaviour, suicide attempts or even physical illness to obtain attention.

## Signs of Mental Disabilities



## Strategies to Help One Cope with Mental Disability

Find a community or support group

Rest

Consider therapy

Know that mental health starts with me

Accept the condition and stay positive

Its okay not to be okay

Even at your low moments, you still matter

Slow down, exhale to beat depression

Drug and substance abuse might give you a temporary fix but face the problem by speaking out and seeking help from a health care provider

Don't suffer in silence, mental health is just as important as physical health

Your thoughts are your mental health



# Through the Lens



C.E.O Peter Mbugua planting a tree during the National Programme for Accelerated Forestry and Rangelands Restoration campaign at Gakanga area, Gatarakwa ward in Kieni West, Nyeri County. The Programme targets the restoration of 10.6 million hectares of degraded land for climate change mitigation and adaptation through planting 15 billion trees by 2032



Makueni County Governor H. E. Mutula Kilonzo Jr. (left) paid a courtesy call on REREC CEO Peter Mbugua and held discussions on the ongoing 13 matching fund rural electrification projects currently being implemented in the County at a total cost of 72 million Kenya Shillings. The CEO assured the Governor that the projects were progressing well and that REREC will organise for their official commissioning in collaboration with the County Government. Other collaborations that REREC has entered with Makueni County are in the area of Renewable Energy development including high masts and solar-powered street lights.



REREC team led by General Manager Information Education & Communication Dr. Rose Mkalama participated in tree planting during the National Programme for Accelerated Forestry and Rangelands Restoration campaign held at Masai Mau area in Narok County



REREC's CEO, CPA Peter Mbugua joined the Human Resource and Administration Directorate in celebrating Mr. Karisa Kalama (right) on his retirement from the Corporation. Karisa started working in 1987 in the Ministry of Energy before he was transferred to REA, the present REREC, in 2007. During his speech to colleagues, Karisa appreciated the REREC team for the support he had received over the years of his service to the organization.



REREC's North Rift staff were sensitized on good customer service, implementation of the Service Charter and complaints handling procedures during the customer engagement week 2022. The sensitisation took place at the Uasin Gishu Energy Centre



# Through the Lens



REREC's Board Chairperson Wacuka Ikua (Right), and the Corporation's CEO CPA Peter Mbugua (center), visited REREC's exhibition stand at the KUSI Ideas Festival held in Karura Forest, in December 2022. REREC is focused on building a clean energy future for our communities across the country.

REREC held a public sensitization forum (baraza) with beneficiaries of rural electrification programme at Kimasas Village, Nandi County. The construction of the project, which is expected to benefit over 70 customers, is underway. During the baraza, the participants were sensitized on the mandate of REREC, project implementation circle, project status and the use of clean energy. REREC's team also took time to register feedback and answer questions from wananchi.



The Institution of Engineers of Kenya CEO Eng. Linda Otieno paid a courtesy call on CEO CPA Peter Mbugua and held discussions pertaining to future partnership programmes between the two organisations. The two organisations also pledged to work together in ensuring the continuous professional development of engineers and technicians serving at REREC



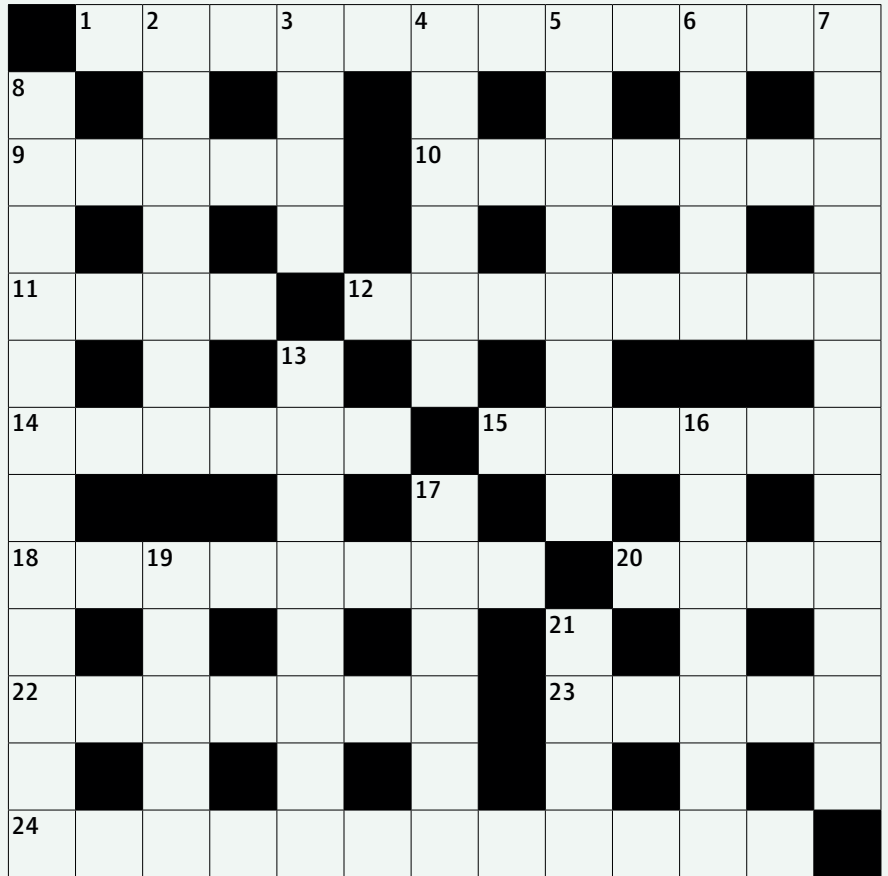
# Cross Word Puzzle

**Across**

- 1 Get by financially (4,4,4)
- 9 Glorify (5)
- 10 Oft-repeated saying (7)
- 11 Grunt (4)
- 12 Unit of digitised information (8)
- 14 Territory over which control is exercised (6)
- 15 Party in Spain (6)
- 18 Plus or minus sign, say (8)
- 20 Smallest man on board? (4)
- 22 Acclaim (7)
- 23 Thorny plant – pipe (5)
- 24 Show contrition (3,6,3)

**Down**

- 2 As joy is to sorrow, say (7)
- 3 Long slimy fish (4)
- 4 Child – crab’s claw (6)
- 5 Landlocked European country (8)
- 6 The other side? (5)
- 7 Etiquette when dining (5,7)
- 8 The very best (6,2,4)
- 13 Coffee-flavoured dessert (8)
- 16 Official language of Kenya and Tanzania (7)
- 17 Associate socially with one’s superiors (6)
- 19 Spot on (5)
- 21 Double-reed woodwind (4)

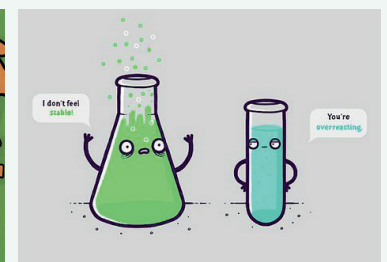
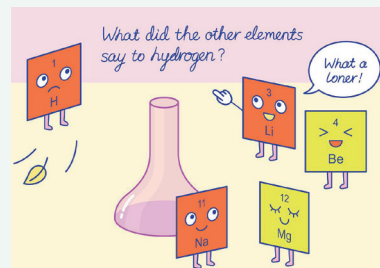
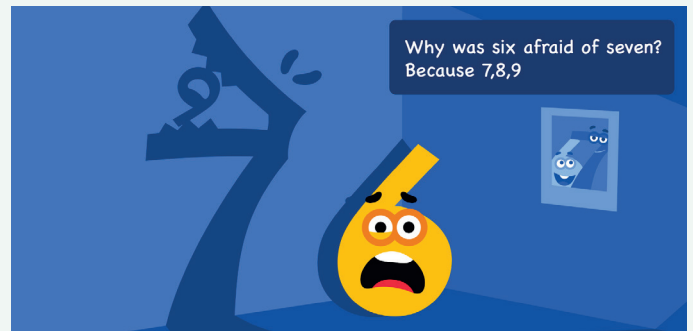


# Sudoku

	7						2	1
8							9	6
4			9	7			3	
					2			
	3	6	1					9
5							3	
					9		1	
3		5		8				
1				3			9	8

Fill in the Sudoku grid of 9 x 9 with Each row, column and square (9 spaces each) needs to be filled out with the numbers 1-9, without repeating any numbers within the row, column or square.

# On a Light Note



Merry  
Christmas

and

Prosperous New Year

2023



# The Highlight

Quartely Newsletter



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Cell Phone: 0719 608 207

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## Energy Centres

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Within Bukura ATC  
P.O. Box 92-50105 Bukura

Jamhuri Energy Centre  
Nairobi, showground  
P.O. Box 21552-00505 Nairobi

Lodwar Energy Centre  
Off Lodwar to Lorgun road  
P.O. Box 501-30500 Lodwar

Mirangine Energy Centre  
Mirangine, Nyandarua County  
P.O. Box 142-20124 Mirangine

Busia Energy Centre  
Busia Town next to Busia Market  
P.O. Box 421-50400 Busia

Kericho Energy Centre  
Off Kisumu road  
behind Siloam Hospital  
P.O. Box 1959 20200 Kericho

Marsabit Energy Centre  
Within Marsabit County  
Commissioners Office  
P.O. Box 143-60500 Marsabit

Mtwapa Energy Centre  
Mtwapa, Kilifi County  
P. O. Box 32 - 80109 Mtwapa

Garissa Energy Centre  
Off Garissa to Sankuri Road  
P.O. Box 1253 -70100 Garissa

Kisii Energy Centre  
Within Kisii ATC  
P.O. Box 2238-40200 Kisii

Migori Energy Centre  
Migori town next to the County HQ  
P.O. Box 329-40400 Migori

Wajir Energy Centre  
Wajir town  
P.O. Box 414 -70200 Wajir

Uasin Gishu Energy Centre  
next to Kiplombe cemetery  
P.O. Box 9050-30100 Eldoret

Kitui Energy Centre  
Next to Kitui High School  
P.O. Box 737- 90200 Kitui

Mitunguu Energy Centre  
Mitunguu market  
P.O. Box 232-60204 Mitunguu

Wambugu Energy Centre  
Within Wambugu Farm, off  
Nyeri - Karatina road  
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