



## Editorial

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### Developing the Market for Renewable Energy Solutions

#### Availability, Affordability, and Accountability

The Rural Energy Foundation (REF) acts as a market development facilitator for renewable energy solutions for rural households, now already in 9 different African countries. Working across the supply chain from supplier to end-user, they are first in line to spot existing and potential barriers to a successful and sustainable market development. Markets make sure that products end up on the shelf or with the end-user in a cost-efficient way – solving the problem of availability and affordability. Moreover, by stimulating private ownership, accountability is greatly improved by creating the appropriate incentives.

But then, how does one develop a market?

#### Developing a Market

REF's market development strategy divides the activities into three main pillars, based on front-row experiences in the field of renewable energy, the first of which being 'capacity building'. Under the umbrella of capacity building, REF designs and gives training courses to actors in the supply chain, accompanies retailers to visit surrounding off-grid areas to increase awareness and stimulating demand for their products. To increase visibility, local entrepreneurs and retailers can adopt REF's free Solar.Now! or Solaire.Ici! label after going through the training program.

A second pillar is 'market facilitation', where REF increases awareness on a larger scale. Common examples used by REF's teams across the continent include radio campaigns to increase general awareness for renewable energy solutions, and networking events to create and strengthen the ties between suppliers and retailers. In this aspect, the use and spread of REF's quality labels – Solar.Now! and Solaire.Ici! – comes into play, so that potential customers will associate this label with quality and service.

'Finance' then is the third and final pillar, with the financial barrier often proving to be a notoriously difficult one to surpass. To help solve this problem, REF launched, with and without financial institutions, pilot projects to extend credits to retailers and end-users, depending on the market and

its characteristics. REF stimulates financial institutions to adopt renewable energy finance by guaranteeing part of the loan portfolio.

### **Numbers and figures**

The Solar.Now! network includes more than 200 retailers who sell and install solar home system to families in rural and off-grid areas, often providing the end-users with extra services such as after-sales visits and warranty on the installation. At the end of 2009, 83,000 solar home systems had already been sold over a period of 3 years, meaning that a total of 332,000 people had been provided access to energy through this approach. REF has managed to achieve all this with a low-cost no-nonsense attitude, employing a total of 32 highly motivated professionals divided over 9 country offices.

The REF concept proves to be highly efficient: REF can help connect any individual for only \$5. Every dollar invested is subsequently leveraged multiple times by local entrepreneurs, financial institutions and end-users.

### **Winner of the EU Sustainable Energy Award 2010**

The European Union decided to award REF with the prestigious 'EU Sustainable Energy Award 2010' for its Solar.Now! program. It confirms the growing consensus in the development- and renewable energy sector that the private sector can and should play a key role in rural electrification.

### **What lies ahead?**

Based on the successes of the past, REF targets to facilitate access to renewable energy to a further 1 million people in the period of 2011-2013 at a cost of \$3 per newly connected person.

In the coming years the market shall see a growing number of low-cost renewable energy solutions, thereby enabling low-income households to also benefit from renewable energy. Quality control is expected to become even more important, with an example from Tanzania clearly setting the right tone by issuing an order to confiscate solar panels that do not exceed a certain quality threshold. REF will continue to educate entrepreneurs in the chain about quality issues. Also, REF hopes to create a breakthrough credit scheme that can be replicated in many other countries. This will enable the many households to buy their energy solutions, thereby reducing their energy expenses and improving their productivity and life.

The road ahead is long, this is much certain. But by facilitating and guiding sustainable and accountable supply chains, while correcting for the imperfections of the market, REF is more than convinced that the enormous untapped energy potential of rural Africa will be unleashed in the years to come.



## News from the Alliance

### **NEW MEMBERS IN THE ALLIANCE FOR RURAL ELECTRIFICATION:**

KACO new energy is specialized in all types of power inverters, with photovoltaic inverters and accessories for PV system monitoring accounting for the largest proportion of the company's sales. KACO is one of the leading global manufacturers in this field, having delivered inverters with an accumulated power of 2 Gigawatt since 1999.

CTEK Sweden AB is developing and marketing products where maximized life and performance of mainly lead acid batteries are in focus. Hence, their main products' line is a series of high-performance AC/DC chargers. Nowadays, CTEK is working on battery life and performance for Off-Grid power solutions with some innovations on expansion and use.

### **RELAUNCH OF ARE WEBSITE. TAKE A LOOK AT IT!**

During the past few months, the ARE team has been working on improving the corporate image of the organization through its most visible tool: its website. In Google, the ARE homepage is among the top ranked websites for "rural electrification" and the ARE homepage, with more than 3000 visitors a month, is one of the most popular internet resource for information about off-grid solutions and rural electrification.

### **ARE VIDEO REPORTAGE FROM SOLARPV.TV**

In the context of our AGM (Annual General Assembly) and of the off-grid strategy workshop held last March, the free web TV [www.solarpv.tv](http://www.solarpv.tv) recorded an extensive video reportage about the Alliance for Rural Electrification and the future of rural electrification. The video reportage includes interviews of ARE members and actors from the off-grid renewable energy sector.



## **ISWC 2010. INTERNATIONAL SMALL WIND 2010, CONFERENCE AND EXHIBITION**

Glasgow, UK, 27 – 29 April 2010

ISWC2010 was held at Glasgow Science Centre with 35 companies and 400 people displaying their products and services at the exhibition and exchanging on the last evolution of the small wind energy market. The ARE was participating at this conference to exchange with these companies, promote its work but most of all to talk about the tremendous market potential that developing countries represent.

The market for Small wind systems is constantly growing. Driven by government policy, planning, building regulations, climate change and increasing fossil fuel prices, microgeneration technologies are becoming an integral part of national, householder or business approaches to energy use and onsite generation. Furthermore, in the framework of rural electrification small wind can play a very interesting role and therefore developing and emerging economies start to represent an interesting market for small wind companies. This was the core message of the presentation made by Simon Rolland, the Policy officer of the Alliance during the session on International Markets and which was very broadly attended.

## **5TH EUROPEAN PV-HYBRID AND MINI-GRID CONFERENCE**

Tarragona, Spain, 29 - 30 April 2010

This conference gave an overview on the latest technological developments in the mini-grid area. Mr. Guido Glania, the Secretary General of the Alliance, gave a presentation in the opening session on Economical and Political Frameworks about “Legal and Financial conditions for the sustainable operation of mini-grids”. This conference, organised by OTTI enjoyed broad participation and many of our members were among the organizers, sponsors and participants.

## **REN21 EXPERT MEETING – RENEWABLE ENERGY DATA IN AFRICA. HOW TO IMPROVE RENEWABLE ENERGY STATISTICS IN AFRICA?**

Paris, France, 6 May 2010.

There are very few reliable statistics about renewable energy in Africa. We know that there are some hundreds of thousands of Solar Home Systems in operation across the continent and there are also hundreds of mini-grids as well as large scale installations of solar PV and wind. However, there are very few national statistics about renewable energy deployment. Hence assessments about the trends are based on observations rather than reliable data. Useful quantitative information is particularly rare in the off-grid sector.

Against this background REN 21 organised an expert session with a view to see how the situation can be improved. The meeting took place on 6 May 2010 in Paris. The session was moderated by ARE Secretary General Guido Glania. The experts appraised the availability of data and the information needs for the various stakeholders (companies, governments etc.). A key finding was that national and regional experts have gathered a lot of quantitative information but most of this data is not in the public domain. The expert group will propose realistic and effective measures which can improve the situation and will communicate its propositions to relevant institutions such as the World Bank, IRENA, IEA and UNDP.

## **IEA, UNDP AND UNIDO WORK JOINTLY ON ACCESS TO ENERGY STRATEGY**

Paris, 7 May 2010

In this year's IEA World Energy Outlook a chapter will be dedicated to access to energy. The IEA, UNDP and UNIDO have teamed up to make sure that this analysis will not only become an appraisal of the current situation but also highlight concrete steps for the way forward. This joint paper is supposed to be presented before the Millennium Development Goals Summit which will take place in September 2010 in New York.

For the preparation of this study IEA, UNDP and UNIDO are interested in involving experts and stakeholders. Accordingly interested parties were invited by the IEA on 7 May 2010 to a one-day expert meeting in Paris. At this occasion ARE Secretary General Guido Glania has stressed the competitiveness of renewable energy off-grid solutions and urged the IEA to underline the need for acceleration of rural electrification. All experts agreed that rural electrification does not enjoy enough political attention. Financing would have to be substantially increased to make sure that electrification rates outpace population growth.

The meeting also highlighted the close linkages between access to energy and the pursuit of various Millennium Development Goals, for instance as regards education and health. A key question which has been debated was the usefulness of quantitative targets. The IEA access to energy chapter is supposed to be published shortly before the MDG Summit (20-22 September 2010).

## **EU PV TECHNOLOGY PLATFORM, WG4 ON DEVELOPING COUNTRIES**

Brussels, 3 June 2010

The latest meeting of the Working Group Developing Countries of the EU PV Technology Platform, took place at the Renewable Energy House in Brussels on 3 June 2010.

The meeting was organised in two different parts. The first part was dedicated to presentations on the new Indian Solar Energy plan and the EU research agenda for PV. The second part focused on the way forward of the WG.

The group decided to concentrate on capacity building, developments on emerging markets, exchange with the EU research programme and innovative financing schemes.

If you want to have more information about the working group, please visit

<http://www.eupvplatform.org/wg4-dev-countries.html> or contact us.

## **INTERSOLAR OFF-GRID POWER CONFERENCE AND ARE SOCIAL EVENT**

*Munich, Germany, 9-11 June*

The world's largest solar technology trade fair was held in Munich 9-11 June. In the context of this major event, an international session on power supply in developing countries, the off-grid Power conference, was organized. ARE was a supporting organisation of this event organized by our friends from BSW rural electrification.

This year the conference was focusing and quality assurance for products and service. International speakers presented their experience in controlling and maintaining technical quality of solar components and systems and the financial implications of quality control in larger PV projects were also presented and discussed. Hence, operators of different solar dissemination strategies like fee-for-service or micro-financed approaches also presented their view on quality control.

*For more information please visit: [www.off-grid-conference.org](http://www.off-grid-conference.org).*

ARE also organized its "traditional" social event during Intersolar. On the evening of the 10th June, more than 100 attendees invited by ARE participated to this gathering to exchange impressions and discuss experiences on rural electrification around a delicious buffet of Bavarian Specialties. The very large participation from our friends, partners, contacts and other persons interested in our

organisation and in rural electrification demonstrate once more the raising interest of the off grid market, and we are proud to take part in this movement.

*This event was sponsored by SMA and the Trojan Battery Company.*



## RURAL ELECTRIFICATION'S ACTORS, RURAL ELECTRIFICATION'S STORIES

### STORAGE: A KEY ASPECT FOR SUSTAINABLE OFF-GRID SOLUTIONS. THE EXPERIENCE FROM THE TROJAN BATTERY COMPANY

*Bryan Godber, vice president renewable energy, is the latest member of the Godber family to join Trojan Battery Company. A fourth-generation member of Trojan's family ownership, Godber is responsible for the strategic development, manufacturing, partner alliance and global expansion of Trojan's renewable energy division. Godber's keen interest in renewable energy inspired the development of Trojan's portfolio of renewable energy solutions. Promoted to vice president renewable energy in 2009, Godber focuses his attention on expanding Trojan's rapidly expanding renewable energy business and serves on Trojan's advisory board and executive steering committee. Godber is an active member of the Alliance for Rural Electrification and a graduate of the University of Southern California where he earned his bachelor's degree and MBA from the Marshall School of Business.*

**Could you please present shortly Trojan and your main businesses? In which developing countries do you work in the framework of your renewable energy activities? Also, it would be interesting to have a description of the main end-uses of these batteries (in dev.countries) – e.g. with what kind of system are you working with primarily?**

Trojan Battery Company is a leading manufacturer of deep cycle batteries. Trojan batteries are built on our historically-proven deep cycle technology and designed to meet the complex requirements of today's advancing applications for renewable energy applications.

Trojan batteries are used in renewable energy systems in over 100 countries around the world, from remote telecommunications sites in North America, rural medical clinics in Africa to village electrification projects in Central and South America. As another example, in the aftermath of the recent earthquake in Haiti, Trojan provided battery donations to relief organizations to provide power for field hospitals, solar powered water filtration systems and emergency lighting systems working to provide for basic human needs as part of the recovery effort.

**Does the so called “solar battery” exist? What are their main characteristics compared with other type of batteries? Which type of batteries Trojan recommends for stand-alone systems such as SHS or WHS, and for hybrid mini-grids? Which are the main differences between the big “families” of battery and their advantages/disadvantages for RES?**

The solar battery does indeed exist and is getting better! Because of their availability on a global scale in developing countries, automotive “starting” batteries are prevalent in rural electrification systems today, which is unfortunate because they are a poor choice based on several factors. Over time, as these starting batteries have led to premature battery replacements in renewable energy systems, true deep-cycle lead-acid batteries have become more prevalent because they offer the low cost advantage of lead-acid technology but have long cycle life characteristics. Deep cycling lead-acid batteries are the best solution for rural electrification because of their low cost and high cycling combination, giving them the lowest lifetime cost of any energy storage technology available.

Batteries used in renewable energy systems tend to operate in partial states of charge for extended periods of time, and this is a unique characteristic to renewable energy systems not seen in many other applications which have a reliable and consistent charging source. Because of this, battery manufacturers need to focus on designing batteries that can operate in a partial state of charge for many years. While a standard deep-cycle battery is a much better choice than a starting or dual-purpose lead acid battery, the ideal choice is a deep-cycle lead-acid battery that has been specifically designed to operate in this partial state of charge condition over a long period of time.

Within the lead-acid battery family, there are Flooded (FLA), AGM and Gel batteries. GEL batteries are constructed with a micro porous separator and utilize an acid electrolyte that has been mixed with silica to form a gel. AGM batteries are constructed with a highly porous fiberglass mat which is sandwiched between the positive and negative plates and saturated with acid electrolyte. Both AGM and GEL batteries are considered ‘recombinant’ which means that sealed pressure relief valves force the recombination of oxygen and hydrogen back into water during recharge so that almost no electrolyte is lost and unlike FLA batteries, they do not require regular watering. While both AGM and GEL batteries provide solutions for applications that require maintenance-free energy storage, both are more expensive than FLA batteries and do not provide the longevity in terms of cycle life that FLA batteries offer.

New energy storage solutions such as Lithium-Ion are attractive in terms of their theoretical cycling capabilities, but their cost is a major concern, especially for rural electrification in developing countries where cost is critical. It will be very difficult to beat the cost per cycle, recycling infrastructure, distribution networks and proven capabilities that deep-cycle lead acid batteries have had in the field for over a century.

**What is the “normal” (if rightly used) life time of a solar battery used on a RE system? Do quality/manufacturing standards/policies have a real influence on the lifetime of the battery? Which minimum quality standards do you think should be mandatory for batteries delivered in developing countries?**

This is a difficult question to answer since all energy systems are different and given the wide range of potential loads, environmental conditions and sizing methodologies that might impact the system design approach. Battery life depends on a number of factors, many of which are difficult to predict or control. A properly designed system, installed by a well trained renewable energy professional has the potential for longest battery life if maintained according to manufacturer’s recommendations. We have seen batteries in poorly designed systems that did not last a year while in some cases batteries that were initially designed for a seven-year life are still going strong after ten years in service due to proper care and maintenance. Our premium line of RE Series batteries are designed for 10-year life, however all deep cycle batteries must be properly installed and maintained to ensure maximum potential life.

The manufacturing of lead acid batteries is composed of many processes that have to be carefully monitored and coordinated. This requires the implementation of quality controls in all the critical areas of manufacturing where they can prevent any defects from ever reaching the customer.

**As you perfectly know, the cost of batteries is a major drawback for many people interested in renewable energy systems in developing countries. What would be your answer to this? How much do you think this cost affect the overall cost of the system? Are there any expectations of important cost reductions in the battery field in the short, medium and long-term? Would any major breakthrough occur in the storage world?**

With the recent and rapid growth in the renewable energy and inverter markets worldwide, there has been an increasing focus on batteries as a key component in power delivery solutions. As the true heart of the system, selecting the right type of battery can have a significant impact on the performance, durability, and total cost of the system. Despite increasing focus on batteries, however, there still seems to be much confusion in the marketplace as to the pros and cons of various battery technologies. At a more basic level, while there is little debate as to the performance advantage deep cycles batteries have over standard car batteries, starter batteries are still widespread and are even written into some specs for large scale SHS projects. While starter batteries do present an initial cost advantage, this advantage quickly diminishes over the life of the

system. Since the main function of an automotive battery is to be discharged briefly using high currents, its construction is focused on shallow discharging and having low internal resistance. The emphasis on the shallow discharging and low resistance will affect the construction parameters of the battery in such a way that slow and deep discharging will degrade it rapidly.

It is critical to look at the Total Cost of Ownership rather than initial purchase price when selecting a battery for a renewable energy system. Our research shows that a deep-cycle lead-acid battery is the clear winner when stacking up against other technologies in terms of lifetime cost. Cheap, starting or dual-purpose lead acid batteries have low initial up-front costs, but will live a short life and end up being a very expensive option for the system owner over the life of the system. In the long run, these systems will become too expensive and our fear is that rural electrification projects will be given a bad name because the wrong battery was selected up front causing the system to be unaffordable over time. We have seen this result in rural electrification systems become abandoned by the owner later in its life because of the replacement costs are too high, the cycle life of the battery is too short. That problem becomes amplified in regions where finding a replacement battery requires traveling a great distance, which is common in rural parts of the world where many of these systems reside.

New technologies such as Lithium-Ion do offer very good cycling potential, however their unproven capability in the field and their cost make them a less than ideal choice for renewable energy systems today, particularly in developing countries where cost is critical. This will be the concern with most of the new storage technologies being researched today. There may be applicability for renewable energy systems where cost is not a factor, but for rural electrification in developing parts of the world, we see the deep-cycle lead-acid battery remaining the most cost-effective energy storage solution for years to come.

**Which are the environmental concerns related to batteries once their lifetime is over? How do battery manufacturer work to address this control and what measure do you think should be taken?**

Lead-acid batteries are the environmental success story of our time because more than 97 percent of all battery lead is recycled, which cannot be said about most of the new energy storage technologies in development today. In fact, lead-acid batteries top the list of the most highly recycled consumer products and Trojan Battery supports proper recycling of our battery to keep the environment clean. The container plastic, battery lead and electrolyte from old deep-cycle batteries can be recycled to produce new deep cycle batteries. With Trojan's worldwide network of Master Distributors, we can ensure a recycling infrastructure is in place for our batteries all over the world.

Through Trojan's involvement with rural electrification programs worldwide, we do run into situations where a particular country may not have the infrastructure in place to handle the proper

recycling of lead-acid batteries. In these situations, Trojan has worked with the local governments, NGOs and our in country Master Distributors to design a recycling program that can leverage existing infrastructure or ship the spent batteries to another country with the infrastructure in place. Because the lead-acid battery has been in existence for over a hundred years, this global recycling infrastructure is already in place and functional.

**In the framework of all these questions where do you think an organization like ARE can play the greater role to promote renewable energy systems, quality batteries, environmental controls etc.?**

The Alliance for Rural Electrification is made up of an elite group of companies who know their own technology categories very well. The power of ARE is its network, and the combined knowledgebase of this network should be leveraged to ensure that rural electrification projects are successful on a global basis. ARE plays a role by being the central organization working with its members and acting as an interface to the development banks, NGO's, governments, financial institutions etc. which get involved with specifying technical requirements for rural electrification projects globally. There needs to be a standardized, consistent set of requirements for components used in these renewable energy systems and ARE is critical for making that happen.

Specifically, ARE can serve as a conduit for communicating the importance of selecting the right battery solution for rural electrification projects. The battery is more often than not the first and most expensive component needing replacement, so the quality and maintenance of the battery can have a huge impact on the overall success of the project. In addition, many rural electrification efforts historically have not taken into account the support infrastructure needed to continue to support battery replacement after the project has been launched. There are many projects that were initiated several years ago that are now at a standstill because users don't have access / funding for replacement batteries. With its focus on rural electrification projects and standards, ARE can continue to educate the community on the role the battery plays in the ongoing sustainability of projects worldwide.

**Bryan Godber**

*Vice President, Renewable Energy, Trojan Battery Company*

## **THE SUSTAINABLY ENERGY CAMPAIGN AND AFRICA**

### **Beyond the games: revolutionising energy in Africa**

There is no doubt that the 2010 World Cup games in South Africa are energising the continent in a figurative sense. But Africa has some very real and very tangible energy needs. What is the energy

outlook for this vast continent? Are sustainable energy options realistic for the one billion people who live there? What role can Europe play?

### **Africa's energy issues: Infrastructure, supply, efficiency**

The growing demand for energy in Africa is said to be greater than anywhere else in the world. But because of a lack of stable infrastructure and few national electricity grids, meeting the demand is fraught with challenges. Energy supplies in most of Africa are generally difficult to access, unreliable, or simply unaffordable. In low-income homes across the continent, the dominant fuel source for cooking and lighting is wood, dung or crop waste. Kerosene is also widely used. These sources are neither good for the environment, nor a healthy or sustainable solution for the users.

The majority of African countries (excluding South Africa and Egypt) are able to provide direct access to electricity to no more than 20% of their citizens. Only 2% of Africa's rural residents are connected to national power grids.

It's not only about supply. According to an Energy Research Centre (University of Cape Town) study, energy efficiency is one of the key factors that South Africa must focus on in the coming years. And this is just one example from one country in a continent of more than 50 African nations.

Clearly for Africa to prosper, improvements must be made to the energy infrastructure. In most cases, for better or for worse, there is no existing or inherited traditional energy grid to overhaul. In other cases, power plants exist but many have fallen into disrepair.

It would seem that the timing has never been better for Africa to focus on implementing and investing in long-term sustainable energy solutions.

### **Can Europe help Africa win?**

Central grids provide the electricity supply to virtually all of Europe. But in Africa, a continent where social and economic development has been slow and erratic for decades, national electricity grids still do not exist. Most rural Africans rely on kerosene lanterns for the home and on fuel-powered generators to run televisions or power hospitals.

Sustainable energy sources might very well be the answer for Africa. Solar energy solutions, for example, are cleaner and safer than kerosene and other fuels, and photovoltaic panels offer an affordable alternative to major electrification initiatives.

In recent years, and in the years to come, many Europe-based corporations, organisations and NGO's have been and will continue to manage projects across Africa to help bring sustainable energy sources to the people who live there.

Some of these efforts are part of the Sustainable Energy Europe Campaign, an effort launched by the European Union in 2005 to promote sustainable energy policy across the EU-27, and beyond. Here are two examples of Sustainable Energy Europe projects currently active in Africa.

Solar.Now!, managed by the Rural Energy Foundation (REF) in The Netherlands (A member of the Alliance for Rural Electrification), is helping to provide access to renewable energy across seven African countries: Burkina Faso, Ethiopia, Ghana, Mali, Tanzania, Uganda, and Zambia. The project's mission is to improve the living conditions of rural, off-grid households and entrepreneurs in sub-Saharan Africa by stimulating the development of sustainable markets for renewable energy products. Essentially the project helps local entrepreneurs set up and develop their solar business, thereby establishing sustainable supply chains.

Solar.Now! is a market development programme managed by REF in The Netherlands that is providing rural Africa with sustainable access to renewable energy. REF also has launched large-scale awareness campaigns to help drive consumer demand for installations of solar panels. In addition, the programme helps to facilitate access to finance for entrepreneurs and households. To date, more than 110,000 off-grid households have benefited from the programme.

'Having safe and reliable in-home lighting after dark is something most residents in developed countries take for granted,' said REF Director Willem Nolens. 'In Africa, such access can be life-changing. Thanks to solar panels, people can be more productive, for longer periods of time. Parents can read, children can study, families can connect, businesses can grow.'

Another European initiative in Africa is a project of Partners for Euro-African Green Energy (PANGEA). Focused on promoting a sustainable biofuel industry in Africa, PANGEA encourages investment in renewable energy for transport as well as household use. The range of energy products includes biofuels, biomass, co-generation and biogas in addition to large-scale biofuel production for export to the European Union.

For developing countries, PANGEA maintains that increased awareness and access to renewable energy will allow the rural and peri-urban poor to access energy where they had none before. And for countries both in Africa and Europe, using biofuels as a portion of transport fuel reduces reliance on volatile petroleum markets and allows value addition to be kept in the producing country.

Countless other efforts under the umbrella of Sustainable Energy Europe are also helping to make inroads in Africa. Project organisers are hopeful that the focus on Africa sparked by the 2010 World Cup games will help to increase interest in building sustainable energy use across the continent.

### **About Sustainable Energy Europe**

Managed by the European Commission's Executive Agency for Competitiveness and Innovation (EACI), the Sustainable Energy Europe campaign comprises more than 1,200 energy projects. The campaign is designed to spread best practices in sustainable energy technology, build alliances, and inspire new energy ideas and actions.



## **NEWS FROM ARE MEMBERS**

### **REF (RURAL ENERGY FOUNDATION) FINALIST FOR THE ASHDEN AWARDS FOR SUSTAINABLE ENERGY**

The Dutch not-for-profit organization and member of the Alliance, REF, is finalist on the prestigious Ashden Awards. REF has been successfully working to promote the use of solar energy in rural areas in Sub-Saharan Africa by developing training, capacity building and financing for Solar Home Systems and Solar appliances.

REF already won last March the EU Sustainable Energy Award 2010, and the Alliance sincerely wishes REF the best of lucks for this prestigious award. The final result will be announced 1 July in London at a ceremony hosted by Sir David Attenborough.

**These awards have been awarded in the pasts to other ARE members such as Sunlabob Renewable Energies Ltd in Laos, KXN in Nigeria and IT Power in India.**

*More information on the Ashden Award on [www.ashdenawards.org](http://www.ashdenawards.org)*

*More information on Rural Energy Foundation on [www.ruralenergy.nl](http://www.ruralenergy.nl)*



## **NEWS FROM THE RURAL ELECTRIFICATION WORLD**

### **Rwanda: Rural Electrification Will Elevate Living Standards**

9,000 rural households will benefit from three micro-hydropower plants currently under construction in the districts of Rubavu and Rutsiro. Research has demonstrated that energy plays an important

role in poverty reduction and as Rwanda advances in ICT's, rural electrification will ensure widespread use of ICT's in the countryside. This program will guarantee equal opportunities among students both in the villages and urban areas, as education facilities in both settings ranging from computers to laboratories will be powered by electricity. Indeed all sectors will be it agriculture or health or any other area of human socio-economic endeavour will be transformed, forever, to the benefit of the Rwandan people.

*To read the full article, please click here.*

### **World Bank Scores Africa Low in Power Generation and to invest \$200m in rural electrification project**

The World Bank has said that only 24 per cent of the Sub-Saharan Africa population could access electricity in spite of the various interventions to address energy power crisis on the continent. This clarification was made known by the bank's Senior Specialist on Energy, Wagar Haider, at a workshop on 'Policy Framework For Rural Electrification and Renewable Energy' in Abuja. Haider said the number of those without electricity access was projected to rise from 590 million in 2008 to 700 million in 2030, following the growing population on the continent.

According to him, installed power generation capacity is extremely low at 39 Mega watts per million people, resulting in regular outages and load shedding in more than 30 countries. He said the continent was endowed with resources that could provide more than two sources of energy if well harnessed, urging the continent to explore renewable energy.

*To read the full article please click here.*

**The World Bank also announced that it will invest \$200m** in mini-grid and stand alone renewable energy schemes in Nigeria. It said the federal and state governments, co-financiers of the project, will pool an extra \$100m.

*To read the full article please click here.*

### **Bangladesh. RERED Project connects over 630,000 rural households.**

The Rural Electrification and Renewable Energy Development (RERED) Project has connected more than 630,000 rural households with grid electricity through the Rural Electrification Board (REB). About 270,000 households have been provided Solar Home Systems (SHSs).

The Infrastructure Development Company Ltd (IDCOL) has been implementing the SHS program through its Partner Organizations (POs). In total, IDCOL has installed almost 500,000 SHS in remote rural areas of Bangladesh with support from the World Bank and other donors. The World Bank is

making available a grant amount of US\$ 8.3 million from a multi-donor trust fund for this project. The grant amount will be used to provide subsidies to the SHS and other renewable energy based mini-grid operations, which will lower the price of the systems. Therefore, more rural households in remote areas will be able to afford the systems.

*To read the full article please click [here](#).*

### **Sri Lanka. Wind energy projects for rural Lanka**

The Singapore based firm Daily Life Renewable Energy (DLRE) will fund wind energy projects in remote areas in Sri Lanka with over US \$ one million investment. The company will be focusing on the telecommunication sector, in particular on wiring up the telecommunication base stations with renewable energy to complement diesel generators currently in place. DLRE Operations Manager Patricia Alvina said solar and wind energy generators do not need fuel and frequent maintenance.

*To read the full article please click [here](#).*

### **Liberia to Double Electricity Generation within Next Year**

Liberia's electricity generation capacity will be more than double within the next year from 10 megawatts to 23 megawatts, the Cabinet was told on last Friday.

Asked to address the Cabinet on the state of the Liberian power sector, Joseph T. Mayah, Acting Managing Director of the Liberia Electricity Corporation (LEC), said he was confident that an additional 13-megawatt generating capacity would be available within the next 12 months.

On rural electrification, the President also learned that the Rural and Renewable Energy Agency (RREA) has plans to electrify the rural areas, starting with the pilot project at Yandohun, Lofa County, using a micro-hydro electric Plant. The Executive Director of RREA, Mr. Augustus Goanue, informed the Cabinet that a rural energy fund is being set up under the theme, "Lighting One Million Lives in Liberia," by having rural dwellers swap their kerosene lanterns for solar powered and rechargeable by sunlight.

*To read the full article please click [here](#).*



## **RURAL ELECTRIFICATION AND RENEWABLE ENERGIES EVENTS: INCOMING APPOINTMENTS**

**11 June – 11 July: Public viewing of the Football World Cup | Oboadaka, Ghana**

In a small non-electrified village in Ghana the World Future Council and its partners, including ARE, will enable football enthusiasts to watch the South African World Cup on a large screen. This public viewing will be powered by solar energy and comes in conjunction with a workshop on renewable energy policies for sustainable African development.

The Alliance for Rural Electrification has acted as technical advisor of the workshop. The WFC's cooperation partner Energiebau Sunergy Ghana Ltd. will install modern solar panels on a local health centre. The charged batteries will be used to power the public viewing and give the village community hospital permanent and reliable electricity supply, medication cooling and modern communication facilities.

**21 June – 23 June: POWER KICK FOR AFRICA – Renewable Energy Policies for Sustainable African Development | Accra, Ghana**

In these dates and also in Ghana, the WFC will organize of the workshop: POWER KICK FOR AFRICA – Renewable Energy Policies for Sustainable African Development. This will be the 2nd convention of the African Renewable Energy Alliance (AREA) and it will gather representative of politics, economy and civil society from different African countries.

The Alliance for Rural Electrification is an official supporter of both events.

**6 – 9 September: 25th EU PVSEC/ European Photovoltaic Solar Energy Conference and Exhibition | Valencia, Spain**

From 6 to 9 September 2010, the Feria de Valencia will host the 25th European Photovoltaic Solar Energy Conference, the most important international conference in the field of photovoltaics.

The conference will provide an excellent platform for dialogue and information exchange across the world. The PV solar branch will meet at Valencia to discuss the latest developments in science and industry. At the same time, the exhibition will bring together international manufacturers of PV modules and components, manufacturers of production equipment, supply industry, PV system companies and distributors, PV installation companies, PV project development companies, research and testing institutes and engineering consultancies.

Thanks to the kind support of the European Photovoltaic Industry Association (EPIA), we will be participating to this event for the 3rd time in a row. The Alliance will be present at the EPIA stand.

Furthermore, the Alliance will organise its traditional event for the off-grid sector and rural electrification. More information on registration will be provided soon. Please take a look at our website for future information.

For more information [www.photovoltaic-conference.com](http://www.photovoltaic-conference.com)

**22 – 24 November 2010: 5th International Renewable Energy Storage (IRES 2010) | Berlin, Germany**

In 2006 EUROSOLAR and the World Council for Renewable Energy (WCRE) started the IRES conference series which intended to contribute to new developments in energy storage and to popularize the resulting applications and solutions. IRES has meanwhile developed into the central platform for sharing knowledge and exchanging ideas on one of the key issues of future energy supply.

The Alliance for Rural Electrification will be an official supporter of IRES 2010, and we offer special registration discounts for our members. You are invited to contact ARE secretariat for more information.