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IOREC EXHIBITION SPONSORS.

Editorial

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ALL ABOUT IOREC

After months of preparation and hard work, the first International Off-Grid Renewable Energy Conference & Exhibition has successfully concluded. This major event was not just another appointment on ARE’s annual agenda, but the most challenging and demanding commitment the Alliance has ever assumed. In order to provide our readers with a full perspective of the event, we have devoted this Newsletter exclusively to IOREC.

You’ll have access to the main conclusions and results of the Conference and side-events, the highlights from Exhibition and the best photos and quotes.

We’d also like to use this opportunity to express our most sincere gratitude to all IOREC Supporters and especially the EUEI PDF, Exhibition Sponsors (Rahimafrooz, Sunpower and Wibots), the 26 Exhibitors and, of course, the 300+ participants that travelled to Ghana from all over the world to join the event.

The ARE team also wants to give a warm welcome to our new members Distrielec, Synergie Solaire, DTSC Limited and MB EcoEnergy Systems.

Thanks for reading and until next time,
The International Off-Grid Renewable Energy Conference and Exhibition (IOREC) was recently celebrated in Ghana as the first major business focused conference and exhibition about the off-grid renewable energy sector in developing countries. From 31 Oct - 2 Nov, over 300 participants met with a big objective in mind: how can we together push for an accelerated development of a sustainable and commercially-viable off grid and mini-grid energy market in the countries that need it most?

Jointly organised by the Alliance for Rural Electrification (ARE), the ECOWAS Regional Centre for Renewable Energy and Energy Efficiency (ECREEE) and the International Renewable Energy Agency (IRENA), it was held back-to-back with the ECOWAS-GFSE-GEF-UNIDO High Level Energy Forum and became an official contribution to the UN Sustainable Energy for All Initiative.

During IOREC, the Accra International Conference Centre welcomed and became the meeting point of participants from all over the world, including Energy Ministers, rural electrification decision-makers, private sector representatives, utilities delegates, international organisations and financing institutions.

One of the objectives of the Alliance for Rural Electrification in creating this event was to promote the off-grid renewable energy market from the supply side, a field with a great potential that remains unexploited. With this in mind, ARE organised an Exhibition in parallel to the Conference, where 26 companies and organisations displayed their latest products, projects and services targeting the off-grid and mini-grid markets.

Main conclusions from the Conference: Entering a new era for rural electrification
The IOREC Conference constituted an ideal platform where the public, private and not-for-profit sectors exchanged lessons learned from their efforts towards accelerating the development of off-grid renewables. There was a general agreement that there was a lack and an extreme need for forums such as IOREC to ensure that information was circulated among all actors.

The 1st day focussed on regulatory, policy and financial aspects, while the 2nd day dealt with the technicalities of off-grid and mini-grid renewable energy systems.

The sessions included representatives from institutional organisations such as UNIDO or ESMAP, the financing sector such as AfDB, Grameen Bank or the Acumen Fund, the public sector such as ECREEE, rural electrification bodies, as well as from Ministries of Energy, public utilities and the private sector including ARE members.

There were many conclusions which seem to be unanimous among speakers and participants. The most important of them being the realisation that, as Ernesto Macias President of ARE rightly pointed out, we are “entering a new era for rural electrification”.

The Conference started right from the beginning on a high-note, with speakers emphasising the growing interest from different sectors in off-grid energy solutions for populations located far away from the grid. Frank Wouters, Deputy Director General of IRENA, and Ernesto Macias, reiterated how constant innovation in the field of renewables and rapid growth of the market has led to a drop in the prices of the systems’ components. Renewable energies have become commercially viable on their own and economically more competitive than fuel powered systems, particularly in remote areas with difficult access.

**IOREC Programme**

1 November: Policy, regulation and finance day
- Session 1. Scaling-up off-grid renewable energy technology deployment. Regulations and market development.
- Session 2. Need for targeted support. What policies? What incentives?
- Session 3. Effective and innovative business models. What viability for privately led initiatives?
- Session 4. Financing off-grid renewable energy systems: lessons learned

2 November: Technical day
- Session 5. Off-grid renewable energy technologies to meet basic needs
- Session 6. Off-grid renewable energy systems: technologies, advantages, challenges and costs
- Session 7. Innovative off-grid renewable energy system design.
- Session 8. Innovation and findings in the field of off-grid renewable energy.

For a more detailed programme, including speakers, please check the [IOREC website](https://iorec.org).

*Off-grid renewable energies approaching full commercial viability*
During the Conference’s 1st day, speakers stressed how essential the establishment of policies focused on off-grid renewable energy will be to create sustainable market, as will be the setting of concrete reachable sustainable electricity access targets and the creation of effective institutions and bodies dedicated to the sector.

The drops in the renewable energy systems’ prices and the ever-increasing fossil fuel prices have accelerated the penetration of clean technologies in the off-grid field. At IOREC there was a general agreement that there has been great innovation when it comes to the development of commercially-viable pilot of off-grid renewable projects. However, it was also agreed that these systems now need support from the public and investment from the private sector to be scaled-up.

As highlighted by Dipal Chandra Barua during a Conference’s key-note speech, transitioning from a fossil fuel-based economy to a greener energy sector via off-grid systems will not only contribute to poverty alleviation and reduce environmental degradation, but will also ensure the creation of green jobs, particularly in remote areas. He also stressed the necessity to develop models embodying a bottom-up decentralised approach. Energy sector reforms that effectively eliminate barriers to development of the off-grid and mini-grid renewable energy market are essential to foster the penetration of these technologies.

However, as underlined by Frank Wouters, this process will need the development of a well designed leapfrogging strategy and unconditional technical, logistical and financial support from the public and private sector.

Philip Mann, RECP Project Manager pointed out yet another essential step: more focus on power sector reforms from the public sector. For instance, from a regulatory point of view these reforms are progressively moving away from classical de-regulation towards re-regulation, which can be a positive change. Also, Governments are increasingly concerned about setting accurate standards for the products present in the market. Alassane Agalassou, Director of Rural Electrification, AMADER Mali also spoke about the need to develop reflective tariffs, and smart subsidies and incentives that contribute to consolidate the off-grid renewable energy market.

Although renewable energy technologies are becoming increasingly competitive, it is necessary to continue promoting their development with smart subsidies and other incentives. It is also important that donors and the banking sector jointly develop long-term low interest loans for renewable energy. A stronger involvement from local banks is essential.

**Showcasing innovative technological solutions**

The sessions of day 2 focussed on presenting the latest off-grid renewable energy technologies for rural electrification.
This day gave a large and yet deepen understanding of what can renewable energy solutions achieve in developing countries but also some of the challenges to be met. For instance, all participants agreed on the necessity to develop feasibility studies that assess the potential of several energy sources. As stated by many speakers during the technical sessions, solar systems are competitive on a life cycle basis, but it is also necessary to evaluate the potential of alternative energies such as wind or biomass/waste. Only through this can we continue the growing trend towards hybridisation of the generation and storage systems in order to ensure firm capacity with 100% renewable energy powered system.

As stated by Brisa Ortiz Head of Team, Autonomous Systems and Mini-Grids, Fraunhofer ISE and Michael Wollny, Director, Business Development Off-Grid Solutions, SMA, the systems are also increasingly moving towards full automation and the serialisation of its production, to ensure economies of scale. However, these processes have to go side by side with the main objective of the off-grid systems: the development of systems adapted to the local needs and purchasing power of their end-users, as pointed out by Pol Arranz Piera from the Polytechnical University of Catalonia. Benoît Connes, R&D Manager, Phaesun also emphasised the need for all systems to embody a monitoring system that ensures a longer life of its components and its adaptation to evolution of the demand.

The Exhibition: Showcasing the best of what’s around

On the 31st of October, the last day of the ECOWAS High Level Forum (also held in the Accra International Conference Centre), and one day ahead of the start of its Conference, IOREC opened the doors of its Exhibition.

It welcomed 26 exhibitors from 13 different countries and created a space where representatives from the private sector cohabited with public and non-profit organisations in an enriching atmosphere of knowledge exchange and networking.

The Exhibition did not just showcased a collection of wind turbines, solar panels and batteries, but, thanks to the diverse selection of Exhibitors, it also provided the visitors with a full perspective of the off-grid renewable energy value chain, from research and innovation to manufacturing/assembling, retailing and installation of the products.

Some of these companies were already present in Africa, while others used the Conference and Exhibition as an initial step in their diversification strategy. As a result, Exhibitors found interesting potential partners and clients and also had the opportunity to exhibit their technologies to High-Level Political Authorities.

As part of the opening ceremony, ARE and ECREEE organised a guided tour for the VIPs of the ECOWAS High Level Energy Forum. Among these special guests, were the Kandeh K. Yumkella, UNIDO
General-Director and Head of the SE4ALL Initiative, and Frank Wouters, Deputy Director General of IRENA. Other participants the ECREEE Director, the Director for Energy and Climate Change of UNIDO, the Director General of REEEP, the Deputy CEO of the Global Environment Facility, Ghana’s Ministry of Energy and the Ambassadors of Spain and France in Ghana.

**Enriching IOREC with insightful side events**

In addition to the official sessions of the Conference, ARE and IRENA, in partnership with other organisations such as the Deutsche Gesellschaft für international Zusammenarbeit (GIZ) or the Africa EU Renewable Energy Cooperation Programme (RECP), also held side events on complementary aspects of rural electrification.


- Workshop: *Strengthening the Renewable Energy Associations’ network*

  Keeping in mind that IOREC’s geographic focus was Africa, ARE organised a side event gathering African Renewable Energy Associations that took place on the 31 of October with the objective of strengthening the Associations’ network and improve private to private exchanges. Associations from all Sub-Saharan African regions were invited to the event in order to explore potential mutually reinforcing partnerships.

- Technology-focused Workshop: *Accelerating the penetration of Small and Medium Wind Technologies in Africa’s market*

**IRENA**

- Workshop: *Making the case for RE-based remote energy supply- Cost trends and technical, economic, and policy challenges for the realization of RE-based mini-grids (organised in conjunction with GIZ)*

- Workshop: *Capacity needs assessments for rural electrification*

- Workshop: *Empowering Communities through Biogas*

**The way forward**

For the first time off-grid renewables sector had a major international event exclusively dedicated to its issues. IOREC was a unique initiative that managed to bring together the main actors in the off-grid movement to meet face-to-face and increase collaboration among them.

Probably, most IOREC participants already arrived in Accra knowing that universal access to electricity is a basic human right and that off-grid renewable energies are the best way to achieve it. But we are certain that they left with some more: useful contacts, best practices they can apply in their own fields, and the belief that these technologies are ready to have a serious impact in the world.

As Ernesto Macias stated during closing Ceremony, “To achieve universal access to energy it takes more than technology, it takes the commitment, communication and passion of all those involved.”
Accra International Conference Centre
ARE booth at the IOREC Exhibition
Technology-focused Workshop: Accelerating the penetration of Small and Medium Wind Technologies in Africa’s market
VIP Tour

QUOTING THE SPEAKERS

HIGHLIGHTING THE MOST INTERESTING QUOTES FROM THE PANELISTS

“We do not need top-down centralised approach to electrify the poorest, but rather a decentralised bottom-up approach”, Dipal Chandra Barua, Co-founder, Grameen Bank; Founding Managing Director, Grameen Shakti; Founder and Chairman, Bright Green Energy Foundation.

“To provide energy services to the poorest in West Africa, it is necessary to collectively address the issue”, Mahama Kappiah, Director ECREEE.

“To achieve universal access to energy, it is necessary to strengthen knowledge and technology exchange and transfer between those countries where there is already an established markets and those where the market is still emerging”, Ernesto Macias, President of the Alliance for Rural Electrification.

“Policies are not stressing off-grid and mini-grid technology solutions, but rather grid extension”, Philip Mann, Senior Project manager of the RECP, EUEI PDF.

“Developing legislative, policy and regulatory framework is key to develop the renewable energy market”, Philip Mann, Senior Project manager of the RECP, EUEI PDF.

“It is necessary to create african companies. africans do not need to be employees, but need to become employers”, Harish Hande, Managing Director, SELCO India.

“Rural Electrification requires strong political will and big financing efforts”, Alassane Agalassou, Director of Rural Electrification, AMADER, Mali.

“Rural electrification requires a taylored regulation that includes a clear legal separation of tasks amongst all actors involved, technology standards, reflective tariffs and smart subsidies”, Alassane Agalassou, Director of Rural Electrification, AMADER, Mali.

“To accelerate rural electrification, it is essential to develop dedicated policies for off-grid renewable energies”, Henry Gichungi, Off-grid Business Manager, Kenya Power Lighting Company.
IOREC ON THE NEWS

MEDIA MONITORING

Alternative Energy Africa (4 November): *IRENA’s Director General to Help West African RE*

Business & Financial Times (7 November): *Tapping renewable energy*

MoEn Ghana (8 November): *Ghana Targets Renewable Energy Sector For Power... Calls For Private Sector Investment*

Global Newsreel (15 November): *IRENA pushes for renewable energy policy framework towards rural development*

Renewable Energy Magazine (30 May): *Off-grid generation to step into spotlight in Ghana*

Planet (26 October): *Powerless no more. Off-grid renewable in developing nations*
On the 2nd November, IOREC held a Press Conference for Ghanaian media with the presence of Mahu Seth, Deputy Director in-charge of Renewable Grid Electricity at the Ministry of Energy, Frank Wouters, Deputy Director-General of IRENA, Ernesto Macías, President of ARE, and Mahama Kappiah, Director of ECREEE.
Press Conference: Mahu Seth, Deputy Director in-charge of Renewable Grid Electricity at the Ministry of Energy, Ernesto Macias, President of ARE, Mahama Kappiah, Director of ECREEE, Frank Wouters, Deputy Director-General of IRENA.
Ernesto Macias, President of ARE, Mahama Kappiah, Director of ECREEE, Frank Wouters, Deputy Director-General of IRENA.
Located on the shores of the Bay of Bengal, Bangladesh and its resourceful population of 162 million, is positioned to become the next 11 economic powerhouses. The prosperity of Bangladesh is a result of implementing the right social and economic policies set by a robust private and public sectors Partnership.

Bangladesh is not only the first nation to host the largest off grid solar home program in the world but also the one proving commercial viability of the technology. Rural Bangladesh today has managed to empower herself from many of the socio-economic downsides of energy scarcity and emerged as a successful role model for other developing nations to replicate.
Rahimafrooz Solar is a leading Solar PV component manufacturer, integrator and system solution provider from South Asia. Over the last 25 years the company has gained experience in off grid and on grid applications, and is a key player in the largest rural solar home systems (SHS) roll out in over 1.7 million homes. The company also has a Social Enterprise, Rural Services Foundation (RSF) that delivers the service to rural area in Bangladesh with 500 unit offices and 3500 green champions. Our aim is to provide access to clean energy for a bright happy life.

We have 18MW state of the art and automated PV module plant with IEC, UL and CE certification from TUV USA. Our Tubular Deep Cycle Solar batteries are recognized as the best performing batteries with over 10 years service life in off grid applications. Our tie up with other leading PV component players creates a partnership of global excellence in everything we deliver. All our operations are ISO9001/ 14001 and OHSAS 18001 certified, ensuring global quality benchmark of our management system to ensure customer satisfaction.

The off-grid solar revolution that has taken place in Bangladesh has accomplished a superior form of lighting to millions of rural families, creating thousands of green jobs and providing rural masses with new opportunities for generating income and improved quality of life. Today we are building capacity to serve not only the local market, but also our brands have gained trust both regionally and internationally. Bangladesh did not create a new technology to build this industry; rather, it has succeeded because it was the first place to find a successful technical and commercial model for putting the solar PV energy into the homes of the rural population.

Our capacity to provide end-to-end solution, including the most proven rural delivery model for energy solution will help foster new partnerships in Africa, Asia and Latin America.
WIBOTS, A SILVER SPONSOR OF THE INTERNATIONAL CONFERENCE

WIBOTS is headquartered in France and supported by offices in The Netherlands, Sweden and Cameroon. During the past 3 years, WIBOTS has become a leader in energy solutions for satellite communication (VSAT) in Africa and the Middle-East.

WIBOTS guarantees the well functioning of different industrial activities such as telecom, oil & gas, bank transfers, embassies and industry and is certified by major companies.

WIBOTS is a fair trade organization caring for the environment and local communities. Its global network of representatives, supporting activities, services and solutions is spread in over 100 countries.

From centralized to localized grid
In most developed countries, a centralized mono energy architecture system is available, based on mass production plants.

A main spin and a skeleton grid are supplying electricity to residential and industrial areas. Unfortunately, this benefit is not available everywhere on the globe. In some of the countries the backbone system is not reliable
enough and in certain remote areas is simply unavailable. WIBOTS, and its three founders from United Kingdom, The Netherlands and France have a vision of a different power architecture; an energy mix, a well crafted solution, that consider the unique conditions in every specific area, bringing energy where needed.

Energy for all
With its kit, WIBOTS proves that you can bring a professional, easy to install energy for less than 1000 USD anywhere. The kit enables energy for all.

Energy mix
Inspired by the highly demanding Telecom technologies, WIBOTS’ SmartGrid System can support grid backbone by managing 2 to 5 different energy sources including grid, renewables (like solar, wind, biomass or fuel cell) and fossil (such as diesel generator).

The SmartGrid System addresses both private and public sectors. Government and Energy suppliers can ensure critical activities during outage. With only small adjustments as power consumption increases, the SmartGrid can limit the use of diesel and replace it gradually.

It optimizes operation cost depending on individual energy cost and availability. SmartGrid System can also be fully integrated in the supplier IT architecture. It can be remotely monitored, controlled and integrate standard alarm protocols as SNMP. SmartGrid System is an automation PLC based open to any custom process control (measurement, control, start, stop) and security (access control and cctv).

WIBOTS at the International OffGrid Conference
WIBOTS uses its professional experience in the rural electrification domain to provide a smart easy to apply solution which uses the existing infrastructure and does not require any additional construction. The SmartGrid is not a black box premade solution; it takes in to consideration the local conditions and provides the best energy solution in an adjustable rhythm.

WIBOTS works exclusively with professional suppliers.

"With our network of partners, we want to develop locally the integration and train people. Our vision is to bring innovation and create employment." Gilles GRANDJEAN - CEO
WIBOTS did rural electrification in Tanzania and will open the 2013 training program session with Cameroon, Tanzania, United Arab Emirates and Burma.

WIBOTS sponsors the International OffGrid Conference to support the ARE (Alliance for Rural Electrification), IRENA and ECREEE initiatives.
ORGANISATIONS PRESENT AT THE IOREC EXHIBITION

IOREC ORGANISERS

Alliance for Rural Electrification (ARE)
ECOWAS Regional Centre for Renewable Energy and Energy Efficiency (ECREEE)
International Renewable Energy Agency (IRENA)

IOREC EXHIBITION SPONSORS

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IOREC SUPPORTERS

Africa – EU Renewable Energy Cooperation Programme
African Renewable Energy Alliance (AREA)
Club of National Agencies and Structures in charge of Rural Electrification (Club Er)
The European Small Hydropower Association (ESHA)
United Nations Foundation
World Future Council

IOREC EXHIBITORS

Barefoot Power Limited
Bergey Windpower
Bestnet
Daasgift Quality Foundation
Energiebau Sunenergy Ghana Ltd
European Commission DG Joint Research Centre
Deutsche Gesellschaft für international Zusammenarbeit (GIZ)
MB EcoEnergy Systems Limited
ARE is proud to welcome its new members:

**DSTC LIMITED**

Country: Ghana
Website: www.dstcafrica.com

Deng PV Solar Training Centre (DSTC) was established in April 2005, in technical collaboration with: Global Sustainable Energy Solutions (GSES) of Australia, and the Department of Mechanical Engineering and Agriculture of Kwame Nkrumah University of Science and Technology (KNUST) in Kumasi.

DSTC is an innovative expansion for Deng as a Solar Company and a contribution to the wider use of solar energy on the continent. It has been established to help expand the solar market in Africa by providing as many stakeholders as possible with the much needed technical training in the design, installation and maintenance of Stand Alone Solar Systems

**DISTRIELEC**

Country: Luxembourg
Website: www.distri-elec.com
Distrielec distributes a range of quality photovoltaic equipment for renewable energy professionals. We aim to be your unique Solution Center bringing you the insurance of the right choice in terms of partnership. Brands distributed by Distrielec are state of the art in terms of quality innovation for energy and energy saving.

**MB ECOENERGY SYSTEMS LIMITED**

Country: Nigeria  
Website: www.mbecoenergysystems.com  
MB Ecoenergy Systems Ltd was founded in England & Wales in 2009 and 2010 in Nigeria. It aims to revolutionaries the commercial application of renewable energy solutions to generate electricity for both on and off grid solutions in Nigeria, West Africa and Africa entity. Our mission will be to ensure positive multiplier effects on employment, education, agriculture, residential, health, farming, etc, on economic activities and well-being of our customers. We will do this by actively participating in the design, implementation, execution and after sales maintenance of renewable energy projects.

**SYNERGIE SOLAIRE**

Country: France  
Website: www.synergiesolaire.org  
Synergie Solaire, a cooperative platform, intends to bring together the major stakeholders in solar energy field with the goal of supplying electrical power to humanitarian aid projects.