RECHARGING THE DEVELOPING WORLD

Coming up with solutions for enabling access to energy in remote areas can be quite a challenge. When the sun stops shining or the wind stops blowing, it’s the batteries that take over. For those living in the poorest countries of the world this is both a cost-effective and a sustainable solution. Therefore, we’ll dedicate this newsletter to the battery industry as part of the renewable energy sector, in particular their importance in developing markets.

In this issue we’ll hear from SMA, the integrated PV systems company. They will tell us about their off-grid systems applied to residential areas, commercial buildings or remote villages and small towns. We also talk to Trojan, the giant in the battery industry and RVE.SOL, a social entrepreneurship that mitigates towards access to clean water and energy in Africa.

It is also our great pleasure to feature Blue Sky Energy in our “Members Interview” section. They will talk about their solar charge controllers, as well as their patented technique of getting the maximum possible power from one or more solar panels.

We warmly welcome two new members who joined ARE network: Star Energia SRL, the Italian engineering company, developing PV and wind farms and Orb Energy, an Indian solar sales and service company.

Take a look at the latest news from the Alliance. Many events took place in the past months, including Hidroenergia and Intersolar, where the Alliance organised a Networking Reception. ARE was also present at the Renewable Energy House Open Day during the Sustainable Energy Week.
As stated in the previous issue, we are glad to invite you to the 1st International Off-grid Renewable Energy Conference. The event has been rescheduled to 1 - 2 November 2012. In this way we will not clash with other events and ensure the highest-possible attendance of decision makers and hence create as many networking opportunities as possible.

Also, make sure not to miss the launch of our new members area in the coming weeks, a platform for exchanging ideas and facilitating communication between members.

Thanks for reading and until next time,

Simon Rolland

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**In Focus**

**SOLAR AID: AMBITIOUS CHARITY TELLS THE WORLD OF ITS HUGE GOAL**

At the international headquarters of SolarAid, things are hotting up. The fast-growing charity has announced that SunnyMoney, its social enterprise wing, has just sold its 100,000th solar light. However, with the goal of replacing all kerosene-based lighting with solar lights across Africa by 2020, it still has a very long way to go.

There are around 60 million households in Africa currently using kerosene to light their homes when the sun goes down - every day, all year around. Not only is the light that kerosene lamps produce of very poor quality but when kerosene burns, its fumes are hugely toxic, contributing to indoor air pollution that leads to a whole host of health problems. Kerosene is also crippling expensive – families can burn up to 30% of their household budget on it.

Working in four Sub-Saharan African countries - where sunshine is in abundance - SolarAid thinks that using the power of the sun to improve health, wealth and education standards is an absolute no-brainer. Founded by the solar industry in 2006, SolarAid passionately believes in business-based solutions to poverty.
“As soon as you start treating people as customers, rather than aid beneficiaries, you’re putting the power in the hands of the people who need it most. That’s what SunnyMoney is all about” says SolarAid’s CEO Steve Andrews.

Something else SunnyMoney stands for is choice. By offering a large range of solar products at different price points, most customers’ budgets are catered for – even many of those at the base of the pyramid. The cheapest product that SunnyMoney sells is $7. This product, the S1, sells particularly well through an innovative study light campaign, working with teachers (key influencers within their community) in promoting the benefits of solar lighting to parents. And in turn, this promotional approach also addresses one of the major hurdles facing SunnyMoney – trust in the product. SolarAid has found that when consumers trust that a solar light works and will continue to work, they find the money to buy one. World Bank research shows that trust increases vastly when consumers have seen the lights in action for several nights.

Lack of consumer credit and poor distribution networks are other equally significant challenges constraining SunnyMoney and its peers across the sector: from selling more products to truly catalysing what is an enormous potential market.

Despite such challenges, SunnyMoney is projecting sales of 2.5 million lights across four countries over the next three years, reaching over 10 million people. The organisation knows that in order to succeed, it needs to find partners and collaborators; organisations which are as focused and whose goals are as audacious as its own. The strategy is to invite these collaborators on board to join its mission, to reach scale and then replicate the model across the continent. That’s a lot to do in just seven and a half years. But with the right investors and energetic delivery partners, SunnyMoney really can harness the sun’s power to change the world, so long as it aims for the stars.

As an organisation, it’s certainly one to watch.

Go to www.solar-aid.org to find out more, and follow in social media: twitter @SolarAid Facebook/SolarAid
Three young female customers take home their solar lights from a market in Malawi. Photo: Jerry Barnett

Students in Malawi studying using S1 solar lights. Photo: Jerry Barnett

MEMBER INTERVIEW
BLUE SKY ENERGY

We talk to Melanie Cullen, the Operations and Marketing Vice-President at Blue Sky Energy, ARE’s member from the U.S.

Blue Sky Energy provides off-grid solar solutions, offering the largest collection of small-sized MPPT solar charge controllers. Fourteen years after introducing the first MPPT product to a clean energy community, Blue Sky Energy maintains its commitment to excellence in personalised customer service, philanthropy, and international relations with distribution to over 33 countries worldwide.

Can you please tell us more about the main objectives and activities of Blue Sky Energy?

Blue Sky Energy, Inc. has been a pioneer in MPPT technology for solar charge controllers since 1998. Our primary objective is the development and manufacture of MPPT solar controllers for the battery based or off-grid market. Solar Boost™ charge controllers are deployed worldwide in off-grid systems. Used in a wide variety of applications from industrial, telecom, pumping and traffic signals, to RV, marine, homes and lighting, Solar Boost charge controllers have earned a solid reputation for performance, proven reliability and consistent quality. Many of our objectives center on our ability to listen to customers and the market place. In this respect, we are introducing our first non MPPT controller to the market. Blue Sky customers are the driving force for many of our new product introductions, including our Sun Charger 30. This new non MPPT controller is expected to begin shipments early July.

As part of our core business philosophy, we are active in providing our controllers at either no charge or at much reduced prices for educational or humanitarian purposes. We have many Solar Boost controllers used around the world for study and implementation in student projects in addition to the ones we have donated for humanitarian purposes.

Blue Sky Energy developed a technique used to get the maximum possible power from one or more solar panels. Can you tell us more about the two patents received in 1998 for this Maximum Power Point Tracking technology?

Blue Sky Energy was originally founded as RV Power Products. As the name implies, we initially produced products for the Recreational Vehicle (RV) market place and as such our first MPPT charge controller, the original Solar Boost 2000, was targeted at this marketplace. Our first patent issued in 2000 covers any MPPT charge controller used in a Motorhome application. Our second patent issued in 2001 expands on the first patent and covers any MPPT charge controller which utilizes 3-stage type battery charging.

You have domestic, as well as international distributors. What is the importance of off-grid markets for your business? Do you expect them to grow in the future?

The importance of off-grid markets is instrumental to our success and growth. Our products are typically installed where there is no electric power or the expense to add an electric line is more than
the cost of a renewable installation. Many of our products are used in remote areas and we recognize the necessity to produce products that will meet high quality and reliability standards.

In the US, there remains a market for many off-grid applications; however we see the largest growth in international rural electrification markets to help provide power to communities that do not have ready access to electricity. We have continued to see steady growth both domestically and internationally for our products and we expect the trend to continue. A key factor is the understanding of the MPPT technology and how it can provide more power from a given set of solar panels over conventional, non MPPT controllers. Non MPPT controllers will cost less, but often it will be more cost effective to provide an MPPT controller to charge batteries faster, and more efficiently.

Batteries are a big part of the cost of off-grid systems, and the energy market in developing countries is particularly price-sensitive. Do you expect these costs to decrease? What are the other challenges faced by battery companies that supply these communities?

While our products are designed to charge batteries, we do not focus on the challenges of the battery manufacturers. This question is best answered by a battery company, such as Trojan Batteries.

Your products will be exhibited at Solar Power International 2012 in Florida. Are you planning to exhibit in other events as well this year?

We do not have any other events planned this year, except the Solar Power International show. We have a total of 3 new products in development and are using our available resources to drive the products to completion for 2012. We expect to be able to introduce 2 of them as in production and shipping, with a third one to be completed by end of year. Our efforts presently are focusing on the products and having them available by the Solar Power International 2012 Show.

How do you think the battery sector will contribute to the UN goal of achieving universal access to modern energy by 2030?

I believe the battery sector, including renewable components will be important as in many areas it will remain more economically feasible and much faster to install renewables compared to the infrastructure needed for an electric grid. So many areas, around the world are without access to power or fuel for burning.

Renewables can be broken down into smaller systems, portable systems to help families and communities achieve an improvement in the quality of their lives. I think modern energy will be a combination of renewables and the electric grid. This determination will be driven by the region and the government of a particular country in how quickly power will be brought to its people. In remote areas, renewable energy will most likely be the power of choice.
NEW MEMBERS IN THE ALLIANCE FOR RURAL ELECTRIFICATION:

ARE is proud to welcome three new members:

ORB ENERGY

Country: India
Website: www.orbenergy.com

Orb Energy, founded in 2006, is India’s largest direct solar sales and service company. Its main activities are product design and manufacturing, installation of photovoltaic and solar water heating systems, but also sales and servicing of PV. The company’s markets are usually situated in rural areas where the population lacks access to energy. Orb Energy is rapidly expanding to new markets such as East and West Africa, South Asia, Southeast Asia and South America.

STAR ENERGIA

Country: Italy
Website: www.starenergia.com

The medium-sized Italian engineering company was founded in 2007. It develops mini or industrial photovoltaic and wind farms, and builds photovoltaic stand-alone or grid-connected plants. It also deals with audit concerning grid balance loading and energy consumption, and acts as an advisor in legislation and regulation for renewable energy in developing countries.
LAUNCH OF THE SMALL WIND CAMPAIGN

As a cornerstone of its Small Wind Campaign, ARE has published a position paper “The potential of small and medium wind energy in developing countries. A guide for energy sector decision-makers”.

The paper addresses the main bottlenecks and misconceptions about small-scale wind energy, and aims to help energy sector decision-makers in developing countries to integrate this technology in their energy choices for rural communities. It also includes case studies from China, Indonesia, Madagascar and Namibia.

“The fact is that decision-makers have a major influence not only in the expansion of small wind systems, but in its performance and safety. This guide identifies policy tools that national and local governments can implement to bring the benefits of small wind turbines to their communities” says Simon Rolland, ARE Secretary General.

During the Campaign, which will last one year, ARE will approach energy sector decision-makers in developing countries through several workshops, webinars and one-on-one meetings to assess their country’s or community’s energy needs, fill information gaps and share best-practices on small wind development.

SMALL HYDROPOWER POTENTIAL AND DEVELOPMENT DISCUSSED AT THE HIDROENERGIA 2012 CONFERENCE

Hidroenergia 2012, the key event for the small hydropower sector, took place on 21-26 May in Wroclaw, Poland. Organised jointly by the European Small Hydro Association and the Polish Small Hydropower Association, the event gathered industry specialists and facilitated business networking. Political, technical and financial sector developments were debated and exhibitors had the chance to demonstrate their wide range of products and services.
Baiba Auzane, ARE’s Policy Officer presented Alliance’s findings on the “Small hydropower potential and development”. 
More information about the event can be found here.

ARE NETWORKING RECEPTION AT INTERSOLAR EUROPE

ARE’s Networking Reception

On 14 June, ARE organised its annual Networking Reception at Intersolar Europe, attended by over 90 participants interested in the off-grid market. There, off-grid professionals had the chance to network and exchange information in an informal environment. The event was possible due to the kind support of ARE’s members SMA and Trojan Battery Company.

The Alliance was also present at Intersolar with a stand where visitors could pick up our latest publications and learn more about ARE’s work and members. Also, Simon Rolland, ARE’s Secretary General, was invited by the Conference organisers to be a part of a discussion panel on Global Rural PV Markets.

More about the conference here.
AFRICA AND EU JOINING FORCES ON RENEWABLE ENERGY: THE FIRST STAKEHOLDER FORUM OF THE AFRICA-EU ENERGY PARTNERSHIP

Simon Rolland represented the Alliance at the First Stakeholder Forum of the Africa-EU Energy Partnership (AEEP) taking place from 9-10 May in Cape Town, South Africa.

The aim of the Forum was to achieve progress on the AEEP 2020 targets in the fields of renewable energy and energy efficiency, energy access, and energy security, with a focus on renewable energy. It brought together over 250 representatives from government, civil society, research and the private sector, including financial institutions, to explore, among other issues, how to enhance synergies among different stakeholder groups and address barriers to increased investment and development assistance in the energy sector. The meeting also provided a platform for dialogue and exchange of ideas and experiences to facilitate implementation of “actions on the ground.”

The Forum was hosted by the Department of Energy, South Africa, in collaboration with the AEEP Co-Chairs: the African Union (AU) Commission for Infrastructure and Energy; the Federal Ministry for Economic Cooperation and Development, Germany; the Federal Ministry of European and International Affairs, Austria; and the Ministry of Energy and Public Utilities, Mauritius. Additional support was received from the European Commission.

Simon Rolland participated in the "AEEP and UN SE4ALL initiative – what role for private sector, research and civil society in energy access?" session, and moderated the session on “Decentralised Systems for Energy Access”.

More information about the Forum here.

MEET THE EXPERTS - ARE BUSINESS WEBINAR ON RURAL ELECTRIFICATION IN INDIA

Following the tradition, ARE held a business webinar for its members on 16 May. Jointly with the European Business and Technology Centre in India, it introduced the topic of “Rural electrification in India: Opportunities for Decentralised Generation and Distribution”.
Suman Lahiri, EBTC Regional Manager in Kolkata, introduced and answered questions about the Indian decentralised renewables market and the opportunities and challenges for international companies. Concrete electrification project opportunities in West Bengal region were shared.

More information is available here.

ARE AND OTHER ASSOCIATIONS INVITE TO THEIR HQ DURING THE RENEWABLE ENERGY HOUSE OPEN DAY

In line with the EU Sustainable Energy Week, the Renewable Energy House (REH) organised the Open Day on 20 June in Brussels. REH hosts Europe’s leading renewable energy sector associations and organisations. 14 associations, including the Alliance, welcomed visitors to their headquarters, gave presentations about their organisations and answered questions. ARE talked about the "Energy Poverty and the Role of Off-grid Renewables".

Guided technical tours of the Renewable Energy House were provided in Dutch, English and French, and the event closed with a Cocktail reception.

More information here.

Association stands at the REH Open Day
Baiba Auzane participated in the kick-off event organised by the Coalition SiRHCA in Fuerth, Germany, and presented the findings of the Alliance on the major challenges in rural electrification.

Coalition SiRHCA (Coalition for Solar in Rural Health Centers in West Africa) is an association between solar energy firms, medical engineering companies, professional organizations, private persons, and beacons of hope from Europe and West Africa, aiming to bring energy to rural health centres and reach out to people excluded from the healthcare system in Western Africa.

The kick-off meeting took place in presence of high-ranking representatives from business and politics and under the patronage of H.E. Mrs. Marie Odile Bonkoungou, Ambassador of Burkina Faso in Germany, and gathered solar energy, medical technology and health care experts.

ARE welcomes the kick-off of the Coalition and is looking forward to its successful activities in African countries.

More information about SiRHCA and the event can be found here.
Participants of the Coalition SiRHCA kick-off event. From left: HE Paul Robert Tiendrebeogo, Ulrich Heldmann, Larba Nadieba, Philip Schamberger, Dr. Amadou Sienou, HE Marie Odile Bonkoungou

Baiba Auzane participating in the Colaition SiRHCA kick-off event

ARE EXHIBITS AT SOLAR EXPO 2012 IN VERONA
ARE stand at Solar Expo

In May 2012 ARE was for the first time represented at Solar Expo International in Verona, the leading solar energy fair in Italy and among the top 3 events worldwide focusing on this sector. ARE was present with a stand, generously provided free of charge by the organizers, who are active supporters of rural electrification in developing countries.

This year Solar Expo welcomed 1,230 exhibitors and over 52,000 professional visitors. The event was international, but with a strong focus on Italian market.

For more information please visit the website.

NEWS FROM THE SPONSORS

RVE.SOL – “MADE IN AFRICA, FOR AFRICA”

With the advent of the UN’s international Sustainable Energy for All initiative, the conversation around rural poverty, specifically energy poverty and how to solve it has become quite heated. The Rio+20 debate lends more fuel to the fire. With only 18 years to go until 2030, time is short – we believe what is needed is the kind of leadership and innovation that moves the conversation to action.

RVE.SOL is a young social entrepreneurship, working on the ground with concrete action, to create transformational change in the fight against rural poverty. We believe three of the most critical causes of rural poverty are access to water, energy and finance. The company’s philosophy is holistic in the sense that it is addressing these three main causes with one integrated, community solution. The KUDURA rural energy hub is self-contained and stand-alone, providing pre-pay community access to potable water, solar electricity via a mini-grid and biogas for cooking. Once installed in a
community, it creates jobs and opportunity for community entrepreneurship. This in turn creates increased income, access to finance and ultimately poverty reduction. During RVE SOL pilot program in Sidonge, Western Kenya, a high “willingness to purchase” these services was observed, the reason being the convenience and benefits they offer. The company’s follow-up social impact study will demonstrate improved health and productivity, increased savings and ultimately increased wealth in the community. In this way, rural poverty is tackled one village at a time.

Once these basic utilities are available within a rural community, many new opportunities spring up for ancillary enterprises. In Sidonge, the community has sponsored the construction of kiosks, co-located with KUDURA, in which a number of new local businesses are planned. These include a mobile-phone service and battery charging store, a hot-water shower facility, a laundry and a seamstress. These businesses will pay the community enterprise for rent and electricity and offer value-added services to the community.

Currently manufactured in Leiria, Portugal, a KUDURA installation takes less than 2 weeks to conclude, including site preparation, erection of the mini-grid and community sensitisation training. The unit is operated entirely from the “outside” by a trained energy vendor or operator who is responsible to the community for the provision of the services and resolution of any issues or concerns that arise.

Critical to a venture such as RVE SOL, is strong partnership with like-minded organisations and appropriate technology providers. Seccua, their provider for ultra-filtration technology, ensures the water they offer is safe for human consumption. RVE SOL recently launched a brand campaign, “Maji safi ya Seccua” intended to create an association of potable water with Seccua and KUDURA in the communities in which they are working. RVE SOL’s contact with the community is through local Community-Based and Non-Governmental Organisations. By doing this, they leverage local know-how and relationships, existing trust and provide solutions to real problems where they are needed. RVE SOL’s vision is to manufacture the unit in its entirety in one or more African countries, creating local jobs and know-how – a product “Made in Africa, for Africa”.

RVE.SOL is seeking to raise a second round of social venture funding - if you are interested, please contact them.

twitter: @rvesol Facebook/changingrurallifeforever
Erecting posts for a mini-grid

Operator at work
For more than 30 years, SMA’s vision has been to provide people all over the world with safe and economical access to electricity. After all, electricity is the key to clean water, education and health—and it enables greater prosperity for all. As a part of the world market leader in PV inverters, SMA’s Off-grid Solutions business area develops integrated and renewable energy supply systems. These are environmentally friendly, economical and individually adapted to the local conditions.

Flexible – the right system for every capacity
Photovoltaics serve as the basis of SMA’s flexible, AC-coupled off-grid solutions. A PV-based off-grid power supply is the most cost-effective way to set up a stable power distribution grid, especially in rural areas and regions located far from a grid. Additional renewable energy sources such as wind turbine and hydroelectric power systems can be integrated into the stand-alone grid.

Residential (1 to 15 kW)
A classic situation is a remote house that cannot connect to the power distribution grid. The off-grid system supplies everyday devices such as lamps, radios, televisions, refrigerators, stoves and vacuum cleaners. The system is easily set up with only a few components required. The intelligent Sunny Island off-grid inverter handles all energy management and control functions. If energy demand increases, the stand-alone grid can be modularly extended at any time.

Commercial (10 to 200 kW)
The robust hybrid system is ideal for farms, hotels and lodges, workshops and industrial plants with greater energy demands. Thanks to the flexible system, a stand-alone grid can be constructed to perfectly meet local needs and conditions. Contingent upon existing resources, any generator can be integrated into the stand-alone grid. A diesel generator can be easily incorporated as a reserve power supply. This generally allows for a significantly smaller battery. The Sunny Island simultaneously manages the grid and battery to guarantee a reliable supply of electricity. The completely prewired boxes enable fast and simple construction of off-grid and hybrid systems.
**Village supply (30 to 300 kW)**

Modular power supply is ideal for villages, islands and small towns with weak or lacking grid structures. Depending on available energy sources, the AC-coupled off-grid system with multicluster technology, integrates various renewable energy sources and ensures a stable and effective supply of energy. It is also possible to easily set up a medium-voltage grid in order to integrate more remote sources of energy as well as to connect multiple small villages. The Sunny Island inverters are connected in clusters of three devices each – which allows the stand-alone grid to be modularly extended in order to integrate additional consumers of alternating current.

**Robust – worldwide applications**

SMA off-grid systems are easy to install and modularly extendable up to 300 kilowatts to meet rising energy demands, plus, they are available worldwide. These off-grid systems are the economical alternative to laborious and expensive diesel systems.

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**TROJAN BATTERY COMPANY - SPICE VILLAGE RESORT, INDIA - CASE STUDY**

Spice Village is a 56-cottage resort on the border of the Periyar Tiger Reserve in the Kerala province of Southern India, and is one of the largest solar-powered, off-grid resorts in the world. The resort provides comfort for modern travelers while giving them a chance to enjoy a simple “back-to-nature” experience. As the hospitality industry looks for ways to “go green” to ensure the lowest possible environmental impact from tourism, Spice Village decided to use energy efficient measures and solar power to make itself a low carbon emissions resort.

In 2011, TeamSustain was hired to design an off-grid photovoltaic (PV) system for the resort to cover 100% of the resort’s electrical load. By analyzing energy audit data and identifying how to reduce the electrical load without greatly impacting the resort’s amenities, TeamSustain was able to improve Spice Village’s energy efficiency by reducing the daily consumption from 750kWh to 200kWh.
TeamSustain designed a 65kW AC-coupling micro-grid PV system to support the resort’s full electrical load. The PV system consists of 650,100W thin film modules wired in 108 strings of six modules per string for a total system size of 65kW. They are mounted in a fixed array with a 16 degree tilt. Due to the high vegetation in the area and adhering to a mandate that no trees could be cut, TeamSustain implemented an elevated structure to raise the solar array 33 feet above the ground. This elevated design maximizes irradiance and utilizes the area underneath for the tennis and basketball courts.

Nine SMA Sunny Island 5048 inverters are used in clusters of three for a total capacity of 45kW. The inverters convert the DC electricity generated by the PV modules to AC electricity. The SMA inverters are highly efficient, easy to configure, and their intelligent battery management system helps ensure maximum battery life.

Nine Sunny Mini Central 7000HV inverters were used to allow more modules to be connected in series than is possible with common inverters due to their higher DC input voltage and maximum power point tracking range. This reduces cabling costs on the DC side and simplifies the installation. Their performance range permits the installation of large PV systems made up of distributed string inverters, which allows for detailed system monitoring. The energy produced is stored in 72 Trojan deep-cycle, flooded IND29-4V Industrial batteries. Trojan batteries were chosen based on their reputation for high quality and reliability. Also, the size of the Industrial batteries met the specifications of the project design. Trojan’s Industrial batteries are constructed with wide plates which allow for more electrolyte to be stored at the top of the plates, thus enabling longer intervals between watering.

Each battery has a 1,409 Amp hour capacity at C10. The Trojan 72 IND29-4V batteries are wired in six strings of 12 batteries, with two strings paralleled per each inverter cluster for a 48V DC output with a total capacity of 8,454 Ah at C10. The battery bank was designed for 50 percent depth of discharge with two days of autonomy.

Trojan Battery’s Industrial line of deep-cycle, flooded batteries is designed for 1,500 cycles at 80 percent depth of discharge and is specifically engineered to withstand the rigorous conditions of renewable energy applications such as extreme temperatures, remote locations and the intermittent nature of solar power generation. These batteries are designed to be cycled regularly and are engineered to perform optimally under a partial state of charge, where the batteries are not fully charged or discharged every day - a common occurrence in renewable energy applications due to the varying levels of irradiance, temperature, and available sun hours.

This project is eligible to earn carbon credits since there is an expected carbon reduction of 256 tons of CO2. Overall, Spice Village expects to save nearly $45,000 per year by switching to solar energy.
For more information visit the website.

Structure side view

Spice battery room
UPCOMING ARE EVENTS

1ST INTERNATIONAL OFF-GRID RENEWABLE ENERGY CONFERENCE AND EXHIBITION, 31 OCT-2 NOV, ACCRA, GHANA

The 1st International Off-grid Renewable Energy Conference has been rescheduled to 1–2 November 2012. In this way we will not clash with other events and ensure the highest-possible attendance of decision makers and hence create as many networking opportunities as possible. The event, taking place in Accra – Ghana, is organised by the Alliance for Rural Electrification, together with the ECOWAS Regional Centre for Renewable Energy and Energy Efficiency (ECREEE) and the International Renewable Energy Agency (IRENA) and is an official contribution to the UN Sustainable Energy for All Initiative.

This Conference will be the first major international event focusing on off-grid renewables in developing countries with a special focus on Africa.

A wide variety of participants, from Energy Ministers to rural electrification decision-makers and international financing institutions will be present at the event, playing a crucial role in advancing off-grid renewables in developing countries.

In parallel with the Conference, the Alliance for Rural Electrification is organising an Exhibition, taking place between 31 October and 2 November. This is an opportunity for the private sector to further present its products and projects, and to offer general stakeholders ample networking opportunities.

More information here.

MEET THE EXPERTS - ARE BUSINESS WEBINAR "ALTERNATIVE FINANCING OPTION FOR RENEWABLE ENERGY PROJECTS IN DEVELOPING COUNTRIES", 8 AUG
The next ARE's webinar organised exclusively for its members will take place on 8 August. This time the topic is devoted to "Alternative financing option for renewable energy projects in developing countries". The webinar will focus on business opportunities in Eastern Africa and concrete financing options there.

More information about the programme and the exact time will be circulated shortly to ARE’s members.

**INTERSOLAR NORTH AMERICA, 10-12 JULY, SAN FRANSCISCO, USA**

This event focusing on photovoltaics and solar thermal technologies, gathers PV cell, module and inverter manufacturers, service companies, manufacturers of solar thermal applications and solar sector decision makers from all around the world.

Ernesto Macias, ARE’s President, is among the speakers.

More information here.

**27TH EUROPEAN PHOTOVOLTAIC SOLAR ENERGY CONFERENCE AND EXHIBITION (EU PVSEC), 24-28 SEPT, FRANKFURT, GERMANY**

The leading PV sector event will take place in Germany in late September. Once again, ARE will participate and also organise a workshop, this time devoted to the collaboration between research field and the renewables industry. More information will be circulated shortly.

More information about the EU PVSEC here.

**14TH EDITION OF BATTERIES, 24-26 OCT, NICE, FRANCE**

The event gathers delegates and exhibitors from across Europe, Asia and the Americas covering the whole value chain of the battery market.

This year the technical conference sessions will include 74 high-level speakers. Among the topics discussed are energy storage batteries (solar, wind, smart-grids), marketing and business issues as well as updates on the latest trends in R&D.

More information here.
The event, organised by EUROSOLAR and the World Council for Renewable Energy, gathers renewable and conventional energy storage businesses, players from the hybrid and electric vehicle sector, the building industry, finance, R&D and politics. In 2011, IRES attracted attendance from more than 40 countries.

The programme will focus on, among others, self-consumption of photovoltaic energy, off-grid and micro-grid systems; cost models for the operation of storage systems and strategies for systems with a large share of Renewable Energy.

More information here.

**RECENT PUBLICATIONS AND STUDIES**

**RENEWABLE ENERGY JOBS AND ACCESS – REPORT AND CASE STUDIES, IRENA, JUNE 2012**

IRENA’s report examines job creation in the context of rural access to energy, a topic which to date has received insufficient attention.

The report presents twelve original case studies from Central America, Sub-Saharan Africa and Asia highlighting linkages between local job creation and renewable energy. The study is intended to help policy makers design and implement successful rural energy strategies.

ARE was among the organizations providing the case study data.

Read more and download the report here
The recently published report by IEA Renewable Energy Technology Deployment talks about energy access in remote areas. Among the contributors to the paper are Trama Tecno Ambiental (ARE’s member), Meister Consultants Group, E3 Analytics and Homer Energy.

The study takes into account demographic trends, economic benefits and technical issues. Remote regions are then analysed separately, from those having long winters, like Kodiak, Alaska (USA) to areas with temperate and warm climate, like Akkan (Morocco). Financing schemes and innovative business models are presented, as well as policy challenges and potential solutions.

Read more or download the report here: http://www.ewea.org/index.php?id=1926

The International Energy Agency’s publication presents scenarios and strategies for achieving the 2050 objective of limiting the global temperature rise and enhancing energy security.

The book explains how to encourage technologies that will revolutionise the entire energy system. It also shows why flexible electricity systems are increasingly important and how a system with smarter grids, energy storage and flexible generation can work.

Read more or download the report here.
The Africa Electrification Initiative paper offers a summary of the workshops on rural energy held in 2011 in Senegal. The themes addressed are stand-alone PV solutions, the use of renewable energy in rural areas and viable long-term photovoltaic solutions.

Read more or download the report here.

GREEN ENERGY FOR A BILLION POOR - HOW GRAMEEN SHAKTI CREATED A WINNING MODEL FOR SOCIAL BUSINESS

The book by Nancy Wimmer, an entrepreneur, researcher and advisor to the World Council of Renewable Energy, reveals for the first time the story of Grameen Shakti, one of the largest and fastest growing rural based renewable energy companies in the world.

Readers will trace Shakti’s evolution in rural Bangladesh while learning how they can adapt the Grameen Shakti business model to their own organisations. The book illustrates the possibilities of an untapped market where billions of rural customers in developing countries are deprived of electricity.

Read more here.

RENEWABLES 2012 – GLOBAL STATUS REPORT, REN21
The 2012 edition of REN21's Renewables Global Status Report provides a testimony of the growth of electricity, heat, and fuel production capacities from renewable energy sources.

The report places a special focus on rural renewable energy in the developing world. It highlights the main trends in Africa, Asia and Latin America.

Read more or download the report here.