THE HOUSE OF THE RISING SUN

Dear readers,

The rising and setting of the sun is often a metaphor for the passage of time and rhyming cycles. This Solar Issue of our newsletter seems especially appropriate. The Alliance is also experiencing a transition period as this is the last Editorial I sign as Secretary General.

ARE has been my work and more for the past six years, including two very intense years as Secretary General. During that time, we kept growing at a very quick pace (from 45 to 70 members), developed structure and definition in terms of content (policy strategy, communications, IOREC), diversified and dramatically increased its visibility, outreach, capacity of influence and, last but not least, our services to members.

One of my biggest prides is also the team I have managed to gather around me, with three remarkable professionals and human beings, who, each with their own inputs, made possible for me to leave today without fearing to jeopardise ARE’s future.

I am also very pleased with the stable and productive relations I developed with so many of you. As a matter of fact, I would like to thank all of you again, especially our Members, for your confidence and support.

I am confident ARE will not only live through this change of leadership, but improve and keep growing with new input and energy.
Until we meet again,
Simon Rolland.

In Focus

DAASGIFT QUALITY FOUNDATION

Daasgift Quality Foundation (DQF) is a Ghanaian financial non-governmental organisation that seeks to empower the poor and needy, especially women and youth, through the facilitation and provision of micro-loans, micro-business development services, clean energy end user financing, climate change and environmental sanitation interventions, youth career development programmes and employable skills training. The organisation also set itself to achieve meaningful socio-economic empowerment for rural communities through the maintenance of a sustainable environment.

The Challenge

DQF identified energy poverty in Ghana — the lack of basic modern clean energy options (thus, solar and clean cookstoves) — as a critical catalyst in achieving poverty reduction. Despite efforts at the National, Regional and District levels, there remains a significant shortfall in the volume of investment needed to achieve widespread energy access across the country, especially at the grassroots level.

Renewable Energy: Opportunities for expanding access

Given the size of the challenge, it is clear that the public sector cannot meet the needs alone. DQF believes that leveraging the private sector, both in terms of capital and innovation, will be critical to closing the sustainable energy access financing gap. Also, energy access is the perfect opportunity for local business sustainability and improved livelihood for redundant rural folks.

Under the Distribution Agents Energy Store Programme, DQF builds significant partnerships with local Agents (individuals and community-based organisations) to set up clean Energy Stores within their communities. From these Energy Stores, end-users will be able to take an energy loan (between 1 to 12 months) from our local agents to buy a solar product or clean cook stove, based on a signed MOU with the local agent. The Agent’s revenue will be the commission on every sale made/energy loan disbursed, plus other minimal charges of the Agent. Daasgift supports this initiative with an Agents Capacity Building Programme that gives adequate training to local distributors and enables them to run the concept effectively.
With this strategy DQF is able to support local entrepreneurs, create wealth, reduce poverty, and expand access opportunities to sustainable energy for all through microfinance.

In order to sustain its Renewable Energy Access Programs, DQF uses commissions and other rates charged on energy loans that have been advanced to end-users. However, the organisation continues to seek subsidies, funds or grants from relevant agencies to upgrade its operations.

**Outcome**

Since the inception of the REAF programme in 2006, DQF has provided over 5,000 renewable energy loans to individuals, households and micro-enterprises in rural Ghana through 20 grassroots Distribution Agents. Furthermore, under an International Finance Cooperation partnership and a Lighting Africa project, DQF has also trained 20 Solar Technicians in the Western Region of Ghana to support solar installation and maintenance of the systems in the long term.
News from the Alliance

SAVE THE DATE: ALLIANCE FOR RURAL ELECTRIFICATION GENERAL ASSEMBLY

We are pleased to announce that our General Assembly 2013 will be held on the 14th of February 2013 in Brussels. This will be an important event for defining the future directions of ARE after the major events of 2012, but also to approve the new Secretary General, who will be managing the association for the years to come.

All our Members are invited to join us and be presented with an overview of our 2012 milestones and an update on our key activities going forward. Companies and organisations that are interested in joining ARE might also joined the meeting in the limit of available space to get a better understanding of ARE and its benefits.
As in previous years, ARE will also host its End of Year Dinner on the previous evening, the 13th February 2013 - an excellent opportunity to meet other members.
More details will be distributed shortly. Meanwhile, to register please email us.

BUSINESS DELEGATION TO CÔTE D’IVOIRE

ARE has organised a Business Delegation to Côte d’Ivoire (12-13 December) in partnership with Club-ER. Thanks to this initiative, ten Members of the Alliance had the opportunity to hold face-to-face meetings with local businesses, NGOs and local energy decision-makers. Each company had a room for its own disposal to showcase its latest technologies and services in personal Business-to-Business meetings.
Furthermore, the full agenda also included two workshops (one organised by ARE and another by Club ER) where visitors and Côte d’Ivoire stakeholders were invited to exchange experiences and lessons learnt.

Other Business Delegations, this time to Latin America, are foreseen for 2013. For more information, please contact our Policy Officer Luis-Carlos Miró.
LEBANON: EXPANDING ARE’S ACTIVITIES TOWARDS WESTERN ASIA

Western Asia is a region with a great potential for renewable energies, and public authorities are clearly showing and increasing interest in these technologies, even those from countries with big oil and gas reserves. In addition to developing infrastructure to facilitate fast penetration of renewables, many countries are also investing in adapting technologies to the particular conditions (geographical, political, social, etc) of their region.

In this context, ARE attended the UN ESCWA workshop on South-South cooperation and PPPs, and the first International Conference on Renewable Energies for Developing Countries (REDEC) held from 27th to 29th November in Beirut, Lebanon. Both events aimed at exploring ways to accelerate penetration of renewable energies in developing and emerging countries with a special focus on the Maghreb, Mashreq and the Arab Gulf.

The Alliance was invited by the United Nations Economic and Social Commission for Western Asia and the Lebanese Association for Energy Saving and Environment to attend, and Luis-Carlos Miró gave a presentation at the workshop on how the public sector could boost rural electrification through the establishment of an enabling investment framework for the renewable energy private sector.

The workshop gathered representatives of the public and private sectors of the Western Asia region to discuss how to ensure deeper penetration of renewable energies for rural electrification through reinforced South-South Cooperation schemes and innovative Public-Private Partnerships. Successful experiences in the application of grid-tied, mini-grid and stand-alone renewable energies for rural electrification in the Western Asian region were also presented.

At the Conference, engineering academics from the region and Sub-Saharan Africa and Europe presented their studies on improving efficiency of existing renewable energy applications. One of ARE members, the Fraunhofer ISE, participated as a speaker.

Please, contact us if you wish to receive more information on both events.
SMA - THE MICROSITE SUNNY ISLAND 6.0H / 8.0H: SMA - A NEW CLASS OF SUNNY ISLAND

The Sunny Island 6.0H / 8.0H is a truly comprehensive package for a worry-free, reliable and self-sufficient electricity supply.

It is easy to understand, extremely robust, and flexible.

With the two power classes 6.0 and 8.0 kilowatts, the Sunny Island allows a precise plant design for all plant sizes between 3 and 300 kilowatts.

Simple. Everything at a glance with OptiUse

The new OptiUse operating concept makes installation, commissioning and day-to-day use easier than ever before. The Quick Configuration Guide helps you complete the commissioning in just a few steps. And the automatic rotating field detection function shows possible installation errors immediately.

A cluster, i.e., a system with two or three Sunny Island inverters, can be operated centrally using a master device and the Single Point of Operation function. The external control unit Sunny Remote Control enables clearly laid-out remote configuration of the off-grid inverters. The OptiBat battery management system takes care of the sensitive energy storage unit. It controls the most important charging and discharging processes fully automatically, increasing the electrical endurance of the batteries.

Robust. For global use

Sunny Island is perfectly equipped for any situation thanks to its high IP54 degree of protection and the SMA cooling concept OptiCool. It is impervious to fine desert sand, high humidity in rainforests, significant temperature fluctuations, and salty mist in coastal regions.
Even in critical situations, the off-grid system keeps running safely – thanks to the intelligent load and energy management system. The soft start function makes the Sunny Island a powerful aid when starting with critical loads with over-average inrush currents.

**Flexible. Planned precision**

With Sunny Island 6.0H and Sunny 8.0H, the inverter power can be adapted precisely to the system requirements. That is the most important prerequisite for reliable and efficient operation of off-grid systems. Underdimensioned systems are often overloaded and can be switched off. If a system is overdimensioned, it rarely runs at the ideal operating point, which makes it inefficient.

Of course the new Sunny Island inverters also support the SMA multicluster technology – the off-grid systems can be extended at any time as the energy demand increases. From 3 to 300 kilowatts, anything is possible with the Sunny Island 6.0H / 8.0H.

Efficient dimensioning of the off-grid system supports the design and simulation programme SMA Off-Grid Configurator.

To know more about the Microsite Sunny Island 6.0H / 8.0H.
When purchasing deep-cycle batteries for renewable energy applications, it is important that the specifications provided by the battery manufacturer accurately match the battery’s real life performance and that the battery is designed with the unique attributes of RE systems in mind.

Any significant discrepancy can affect the system performance, causing the batteries to have a shorter life than anticipated, cost more than necessary, store less energy than the application calls for, and not adequately supply enough power to the loads.

When selecting batteries for energy storage, it’s important to evaluate the manufacturer’s testing results. While some conduct their own internal testing using industry standard testing parameters, some go a step further and employ outside, third-party testing companies to ensure the accuracy and validity of the battery test data, and few test to solar specific standards.

When evaluating testing data provided by battery manufacturers, confirm that the batteries have been tested to industry standards such as the International Electrotechnical Commission (IEC). The standards recognized by IEC 61427 verify that the batteries have been tested to meet the rigors of deep discharge and recharge cycles characteristic of renewable energy applications.

Trojan Battery Co., the world’s leading manufacturer of deep-cycle batteries, recently announced that its Industrial line of batteries has achieved a major milestone in Trojan’s ongoing IEC 61427 testing, which exposes the batteries to large numbers of shallow cycles at different states of charge. This test is an accelerated simulation in extreme conditions of the battery’s operation in a solar system. By stressing the batteries and operating them in this abusive testing environment, the goal is to evaluate the overall effectiveness of the Industrial battery line’s ability to perform in renewable energy applications where operating at partial states of charge is common.

Trojan’s Industrial line surpassed a 15-year cycle life in IEC cycle endurance testing which has been in progress since October 2010. The results show that the batteries are outperforming their rated 10-year design life, and Trojan’s engineering team reports that IEC 61427 testing of the Industrial line is still in progress.

“These ratings illustrate Trojan’s authenticity in reporting our battery life and capacity ratings,” said Bryan Godber, Trojan’s senior vice president of renewable energy. “We are pleased to discover that IEC testing of the Industrial line surpasses Trojan’s published battery design life estimates. While the Industrial line was developed with a 10-year design life, the batteries have now passed the 15-year life segment of the test, demonstrating that actual battery life is much longer.”
As installations of off-grid and unstable grid solar applications such as telecom BTS stations, micro
grids, rural electrification and backup power increase worldwide, so will the need for reliable, deep-
cycle batteries for energy storage. The IEC testing illustrates that Trojan’s Industrial batteries can
withstand extreme operating conditions where continuous deep discharge and recharge of the
batteries is typical.

Independent testing using international standards provides relevant information about a battery’s
cycling capability and the battery’s ability to perform in renewable energy applications. Whether a
manufacturer tests its batteries at an in-house facility or employs a third-party testing company, it’s
important their products are tested to industry standards such as the IEC 61427 to verify battery
performances. Selecting deep-cycle batteries tested to this standard ensures the best overall
performance at lowest lifecycle cost in a renewable energy application.
UPCOMING ARE EVENTS

SOLAR BUSINESS EXPO SOUTHEAST ASIA, 19 – 20 MARCH, BANGKOK (THAILAND)

Solar Business Expo Southeast Asia is an annual top-level conference and exhibition launched by Solar Media. It aims to support the ASEAN region’s fast-growing solar energy sector. The event will focus on four major markets in particular - Thailand, Indonesia and Malaysia and the Philippines - all of which have begun to pursue wide-scale investment in solar energy and have announced ambitious alternative energy plans. Across the whole ASEAN region, solar markets are forecast to grow at 50%-plus a year for the next five years.

Solar Business Expo Southeast Asia will bring together senior government officials, developers, financial institutions, photovoltaic cell and module manufacturers, and equipment suppliers from all over the world to discuss the latest industry policies, developments and technological innovations.

If you are a Member of the Alliance and you would be interested in attending the event, please, let us know. As partners, we have special conditions for you.

Further information about sponsorship, exhibiting or attending the conference can be found here.

3RD INTERNATIONAL CONFERENCE ON PV MODULE RECYCLING, 28 FEBRUARY, ROME (ITALY)

The third edition of the International Conference on PV Module Recycling will be focused on the impact of new European legislation on PV module recycling. Speakers from across the world and PV recycling value chain will discuss technical developments and the benefits of recycling for the PV industry.

Participate in the PV recycling expert conference and learn how to manage your end-of-life modules effectively.
**SOLARCON CHINA 2012, 19 – 21 MARCH, SHANGHAI (CHINA)**

**SOLARCON China** attracts the world’s leading technology companies who design, develop, manufacture, and supply the technologies to manufacture the photovoltaic that drive today’s most sophisticated consumer and commercial PV products.

**PV SYSTEM TECHNOLOGY FORUM – EU 2013, 19 – 20 MARCH, DÜSSELDORF (GERMANY)**

The **PV System Technology Forum – EU 2013** will address the extremely complex topic of the whole electrical system of a PV plant, being targeted at driving forward its technical optimisation and hence its efficiency.

The conference (18 – 19 March) will take on issues opened up in the “Energy Storage – International summit for the storage of renewable energies” on, with a special focus on PV and inverter technology. The afternoon session of 19 March will be shared between both conferences.

Target groups are project developers, component manufacturers (modules, inverters, junction boxes, transfer stations, monitoring systems, etc.), energy suppliers and grid-network operators, system integrators, designers and planners, financiers and representatives from politics, the media and trade associations.

For further information, please, [click here](#).

**OTHER UPCOMING EVENTS**

**HIDROENERGIA 2014, ISTANBUL (TURKEY)**
The REN21 Renewables Global Status Report provides an integrated perspective on the global renewable energy situation. The Global Status Report has become the most frequently referenced report on renewable energy business and policy, serving a wide range of audiences. Rural Renewable Energy is an integral part of the REN21 Renewables Global Status Report (GSR) and thus a section is dedicated to capturing the advancements in the field of rural energy. In the rural energy field, the absence of substantial consolidated information poses a great challenge. In order to overcome this challenge and to improve the presentation of rural energy in the GSR, REN21 seeks your support to gather relevant information for the 2013 Global Status Report. Share your vision and experiences in this field along with data and information on the status of rural renewable energy and join the illustrious community of REN21 contributors.

The production process for the GSR 2013 has begun and you can take part in it as a rural renewable energy contributor and/or reviewer. Contributors and reviewers are given special acknowledgement in the Global Status Report.

If you would like to be part of the GSR network as contributor or reviewer please contact REN21.
WORLD ENERGY OUTLOOK 2012 (IEA)

The 2012 edition of the World Energy Outlook was released on 12 November 2012. Drawing on the latest data and policy developments the report presents analytical insights into trends in energy markets and what they mean for energy security, environmental protection and economic development. It sets out updated projections of energy demand, production, trade, investment and carbon-dioxide emissions, broken down by country, fuel and sector, to 2035.

Available now on the IEA Online Bookshop.

ENERGY TECHNOLOGY PERSPECTIVES 2012 - PATHWAYS TO A CLEAN ENERGY SYSTEM (IEA)

Energy Technology Perspectives (ETP) is the International Energy Agency’s most ambitious publication on new developments in energy technology. It demonstrates how technologies – from electric vehicles to smart grids – can make a decisive difference in achieving the objective of limiting the global temperature rise to 2°C and enhancing energy security. ETP 2012 presents scenarios and strategies to 2050, with the aim of guiding decision-makers on energy trends and what needs to be done to build a clean, secure and competitive energy future.

Available now on the IEA Online Bookshop.

GLOBAL WIND ENERGY OUTLOOK (GREENPEACE INTERNATIONAL AND THE GLOBAL WIND ENERGY COUNCIL)
The fourth edition of the **Global Wind Energy Outlook** shows that wind power could supply up to 12% of global electricity by 2020, creating 1.4 million new jobs and reducing CO2 emissions by more than 1.5 billion tons per year, more than five times today’s level. By 2030, wind power could provide more than 20% of global electricity supply.

The Global Wind Energy Outlook paints a picture of three different futures for the wind industry—looking at scenarios out to 2020, 2030, and eventually to 2050 - and then measures these scenarios against two different projections for the development of electricity demand: the first based on the International Energy Agency’s World Energy Outlook, and another based on a more energy efficient future developed by the ECOFYS consultancy and researchers at the University of Utrecht.

Download full report: [Global Wind Energy Outlook 2012](#)