Dear friends of the Alliance for Rural Electrification,

The good news is that thanks to increasing international and regional efforts, 950 million people in sub-Saharan Africa are projected to gain access to electricity by 2040. This region has one of the highest needs for energy access worldwide. However, at the same time, the International Energy Agency (IEA) states in its new Africa Energy Outlook that about 530 million Sub-Saharan people, primarily in rural communities, are expected to remain without access to energy in 2040.

As sizeable and ready-to-install technologies exist, rural areas definitely have the potential to rapidly advance access to energy and services for the locals in a cost-efficient manner. Using more solar and wind energies will encourage the capitalising on the still largely untapped potential of renewable energies in the region and worldwide. According to the IEA, due to increases in cost-competitiveness solar photovoltaic (PV) panels constitute already the fastest-growing renewable energy technology in the world since 2000, yet solar still makes up less than 1% of energy capacity worldwide.

In the understanding that market information and partnering with key players is strategic to engage more effectively in developing countries, the Alliance has prepared together with the Africa-EU Energy Partnership (AEEP) and the African Union Commission (AUC) a new edition of the ARE Best
Practices for Clean Energy Access with 20 case studies successfully implemented in Africa.

Equally, legally stable framework conditions are of utmost importance to enable safe investments in an increasingly interdependent business world. More details in this regard are provided by Urban Rusnak, Secretary General of the Energy Charter Secretariat in the Guest Editorial.

To make best use of existing and upcoming donor schemes such as the ElectriFI, as announced at the EuropeAid Workshop on 29-30 September 2014, the Alliance organised the Energy Access Seminar. During this Seminar, 90 mostly private sector attendees shared experts’ experiences with already existing and future business models for rural electrification. In addition, ARE’s Risk Mitigation Study on Rural Electrification Businesses as well as the Mini-Grid Policy Toolkit later developed together with EUEI PDF and REN21 provides interesting insights for both policy-makers and practitioners.

The Alliance is a membership fee based organisation and welcomes more organisations to support us and join us in our efforts to support SE4All objectives (ARE Benefits & Advantages Presentation; Membership Form). In September and October, we warmly welcome eight new members: Aquanovis, cdw Stiftungsverbund gGmbH, Cellstrom GmbH, Cordaid, GDF SUEZ Rassembleurs d’Energies, Salai Energy Solutions, SNV Netherlands Development Organization and SOLARKIOSK GmbH.

Finally, I would like to thank our newsletter readers, which has increased from 7,500 at the start of this year to nearly 30,000 today, for their great attention and interest for the activities of the Alliance.

Wishing you all a sunny and windy reading,

Marcus Wiemann

Guest Editorial

Amb. Urban Rusnak, Secretary General (Energy Charter)
ENERGY CHARTER TREATY: ENSURING AN INVESTMENT CLIMATE FOR
CLEAN ENERGY AND RURAL ELECTRIFICATION IN AFRICA
I welcome the current debate supported by ARE on rural electrification as a viable business solution for access to energy and services in developing countries. Investments in mini-grid and in off-grid power generation will contribute to achieve the Sustainable Development Goal of ensuring access to affordable, reliable, sustainable and modern energy for all. In this sense, the EuropeAid Workshop and the ARE Energy Access Seminar on 29 and 30 Sep 2014 in Brussels gave a full overview of the existing opportunities and of the challenges ahead.

From the perspective of the Energy Charter Treaty, we look with special attention to the challenge of creating a legal framework securing a sound and solid investment climate to implement the business model for clean energy and rural electrification. What are the laws and regulations that facilitate cross border investments in clean energy and in rural electrification? What are the barriers to be removed? The Mini-grid Policy Toolkit (MGPT) is indeed an excellent starting point. How to secure its implementation?

Since 1994, the Energy Charter Treaty is the only binding multilateral investment agreement promoting and protecting private energy investments and trade against regulatory and political risks. The 54 government parties to the Treaty are encouraged to structure their energy sector in such a way so as to create a favourable investment climate. Most importantly, the Treaty offers investors a remedy against discriminatory and arbitrary treatment by the host state.

The Energy Charter Treaty is also the platform for regional cooperation projects aimed at removing barriers to cross border energy investment and trade. This resulted for instance in projects among Central, South East and North East Asian countries promoting energy markets integration at different degrees and facilitating cross border investments. The same model could as well apply to the African Clean Energy Corridor initiative and other regional cooperation projects on clean energy and rural electrification.

Of course, the accession to the Energy Charter Treaty by the African countries is a prerequisite. To date, six African countries are observers of the Energy Charter Conference (Algeria, Egypt, Nigeria, Mauritania, Morocco and Tunisia). In the last couple of years, the Energy Charter Secretariat received expressions of interest from the African Union and several African countries. The current negotiations of a World or International Energy Charter, expected in 2015, see the participation of Ethiopia, Sudan, South Sudan and South Africa. In the next year, we look forward training officers from the Ministries of Energy of Mauritania, Mozambique, Nigeria and Tanzania.

The direct beneficiaries of the Energy Charter Treaty are investors which can count on increased market confidence and regulatory stability. The uninterrupted dialogue with the private sector, investors and financial institutions, is an essential feature of the investment promotion under the Energy Charter. The Secretariat looks forward to the contribution of the Alliance for Rural Electrification to support international cooperation under the Energy Charter Treaty for the implementation of clean energy and rural electrification investment projects.

The Energy Charter Secretariat is ready and willing to contribute to the current momentum promoting private energy investment in developing countries, and to assist states and investors to respond to the call for additional $ 450 billion in power sector investment (IEA, 2014 Africa Energy Outlook). The road ahead is steep, and the complementary effort of all stakeholders is required to create the most favourable investment climate for investors, governments, donors, international institutions. We see the Energy Charter Treaty as an integral component of this effort.
The ultimate goal of rural electrification is to enable remote communities to become more productive, communities that currently only have restricted or no access to electricity. One of the well-known challenges faced to provide rural electrification is the limitation of clean technologies in generating reliable and constant energy, due to the variability of the resource. However, when energy generation is essential for commercial production of goods, the factor of reliability becomes indispensable.

![Figure 1: SMART Monofloat kinetic hydroturbine](image)

The hydrokinetic turbine developed by Smart Hydro Power has the great advantage of providing baseload energy supply. The river is always flowing, sometimes slower, sometimes faster – always generating a correlated amount of power. However, for productive use of the generated electricity, this lack of consistency can compromise the production.

To provide a more complete system as a reliable and constant supply of power all year round, the complementary use of different energy sources provides a great opportunity. Photovoltaic and kinetic hydropower are such complementary systems: the sun shines in dry seasons while in wet seasons there is abundant water power.
The approach has been confirmed from an economical perspective by running a HOMER simulation, optimising leveraged costs per kWh and comparing alternative sole sources and hybrid systems. The hydrokinetic-solar hybrid system for decentralised generation with or without diesel backup (see Figure 2) does not only assure 100% availability but also beats the next best system by being 50% cheaper. This data is stable for sites with flow streams above 1.2 m/s and radiation between 3.5 to 5 hours per day.

![Figure 2: Hybrid system consisting of hydrokinetic turbine, solar PV panels and a backup diesel generator](image)

The system does not only control and use the different generation sources according to their relative competitiveness but uses a simple load management by serving three independent electrical circuits which can be prioritised according to their importance (or willingness to pay). By introducing a merit order on the generation side and a market for available load we implement a simple but effective SMART grid for rural areas.

Before entering the market, the system was successfully tested as an off grid installation in Germany feeding a workshop with electrical welding and an electrical saw as well as a basic kitchen. The system is now available in in India, Eastern-Africa and South Africa.

For further development, Smart Hydro Power has installed a system in the Peruvian Amazon. In this highly challenging environment, Smart Hydro Power continues to develop a more advanced load management and to integrate mobile payment systems.

The river Rio Huayabamba situated in the village of Marisol, Peru has average flow velocities in the range of 1.2 m/s -1.7 m/s (Figure 3). During the dry winter season, both the river level and flow
velocities are low. Marisol seems in many perspectives exemplary for the challenges of rural electrification.

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Figure 3: Average monthly flow velocity of the Rio Huayabamba

Even under these conditions, the system works well – and besides supplying stable and competitive power all year round it and replaces around 5,058 kilograms of CO₂ emissions per year. Sustainability is possible with hybrid systems.

If you like this idea, you can help the development of this plan. To install this hybrid system in the Peruvian Amazon, Smart Hydro Power launched a crowdfunding campaign until 2 Nov 2014 to raise resources for a project to be executed in the village of Marisol.

IN FOCUS: VOICES FROM THE GROUND

2008-2014: ONLY SIX YEARS AND AN AMAZING NEW PERSPECTIVE FOR PV

By Ernesto Macias, Partner, SFC Business Partners

Many things have changed in the past six years: 2008 represented a 75% growth – where a huge surge in big ground mounted PV plants was witnessed. For 2014, the latest forecasts announce around 50,000 MW of new capacity worldwide and more importantly with more promising perspectives for developing countries.

While the large plants continued growing, small-scale installations have also begun to grow – not only in the developed world, but also in developing countries, which is excellent news. Mainly thanks to higher radiation in many developing and emerging economies, PV generation costs are largely
much cheaper than northern countries. In this regard, ARE with the support of EPIA, commissioned a study carried out by AT Kearny, called the ‘Unlocking the Sunbelt Potential of Photovoltaics’, which predicted this new scenario in 2010.

And as with multiple studies, the reality and facts were much better than expected.

Today, at an average retail price of around 6 € per Watt, it is possible to provide electricity with a compact mini-grid solution in isolated regions of developing countries including all necessary elements.

This has been made possible, not only due to the cheaper modules, but to the rapid technological evolution of all components of the systems and the smart integration of all of them. In addition, the demand management can be optimised through the use of smart collecting methods via mobile phones to the mini-grid, for example, which in turn benefits the final users with more accurate service fees.

The new vision of rural electrification includes as a main driver the deployment of mini-grids as forecasted by the SE4All initiative and supported by leading donor and technical assistance organisations.

It is very promising to see innovative solutions such as the Plug Play Mini-grid systems developed by
the Spanish company Generalia that makes these systems much more feasible and sustainable by integrating all elements of the installation in a pre-tested unit in the isolated area.

This “hardware” combined with the tailor-made EDA (Energy Daily Allowance) software includes a dispenser/meter which used as a key design parameter. From a social point of view, it responds to the users’ needs more accurately and guides them through the management of energy use and its associated budget. Designed and patented by Trama TechnoAmbiental from Spain, the software offers an unbeatable solution for the most efficient off-grid medium-sized solutions to date. This is an innovative technology that provides a new perspective for developing countries who aim for rapid electrification of rural areas while taking the latest technological innovations on board.

To conclude, thanks to innovation and better integration of technologies, the latest market developments show that it is now possible to deliver on an on-grid basis in the industrialised world, the same customer price of 6 € per WP for the benefit of hundreds of millions of people in developing countries. Today, solar distributed generation is, no doubt competitive at an LCOE basis.

RESULTS BASED FINANCING (RBF) FOR PICO-SOLAR
By Maarten Kleijn, Junior Professional, SNV – Netherlands Development Organization

‘Previously, I would walk to a relative’s house that is connected to the national grid, to charge my cell phone. Now that I have my own solar system, I charge my phone at home and no longer have to feel ashamed of being the head of an underdeveloped household’, a farmer in Misungwi district of Tanzania.

Through SNV’s recently launched Results Based Financing (RBF) for Pico-Solar project, many off-grid households like these, in rural areas of Tanzania’s Lake Zone, will get the chance to benefit from clean, safe and affordable lighting and phone charging through linkages with suppliers and retailers of quality ‘pico-solar’ products. These pico-solar products range from solar lanterns, to powerful solar lights that can charge phones and radios to small solar home systems, with panels ranging from less than 1 to around 10 Watt peak.

This unique project, as financed through Energising Development (EnDev), which is managed by GIZ and funded by DFID, works by creating a temporary post-financing product within mainstream banking to players in the solar sector. The monies available to import-suppliers come in the form a sales incentive that can only be claimed for payment after the sales of approved solar product are verified. The value of the sales incentive is determined by the energy service that the product provides (brightness and runtime). Half of the incentive value is awarded to the retailer in the form of a bonus product that will help grow their business, while the supplier earns the remaining value of the incentive as cash.

The total amount all of the incentives are managed as a competitive RBF Fund valued at €1 million. These funds are hosted by the Tanzania Investment Development Bank through which the financial incentives are transacted. SNV’s main role in this project is to broker relations among actors that ensure fair, transparent and verifiable financial transactions throughout management of the fund.
Although the RBF Fund has only opened its first round of applications to the private sector in February 2014, significant progress has been made in bringing unique financial products to the market. It is now considered to be the first operational RBF Fund under the EnDev global programme in Africa.

Since the opening of the fund in May 2014 to qualified and claimable sales, four out of five suppliers that have been competitively selected to participate in the RBF, have started operations in Tanzania’s Lake Zone with serious investments. Each supplier has applied a unique distribution model and used the opportunity of the RBF Fund to independently leverage for additional commercial pre-financing. Three have expanded their operations to start new office operations in the Lake Zone. In the process, they have trained and employed more than 50 persons in creating new work opportunities while realising the sales of quality pico-solar products – providing the benefits of clean and affordable lighting to more than 10,000 rural Tanzanians. As a result, more than 80,000 € have been verified as claimable for direct payment to the private sector.

RBF is proving to be a powerful tool for supporting the private sector in increasing rural access to renewable energy technologies.

BRINGING SUN AND WIND ENERGY TO THE PHILIPPINES

By Serge Remy, Head of Sales & Marketing, Studer Innotec S.A.

In November 2013, the Philippines was hit by one of the most destructive typhoons in the modern history – Haiyan – which left the larger part of the country without electricity. To contribute to the relief activities in the region, a Swedish company InnoVentum AB funded and carried out the installation of one of its Dali PowerTowers for an orphan village at the Hills of Grace near Manila. This village is run by the NGO Children’s Mission.
The Dali PowerTower designed and manufactured by InnoVentum, is a hybrid wind-solar energy station that is robust, easy to install and made of renewable and recycled materials. It provides 4,000-5,000 kWh of green energy per year, day and night, thanks to the complementarity of solar and wind energy generating technologies. A 1.5 kW solar generator contributes to the daily consumption of the Children’s Mission during the sunny season while a 3 kW wind turbine complements during the night and rainy season.

The integration of the battery backup and associated electronic components was carried out by InnoVentum’s project partner company, Teroc. An inverter/charger Xtender of 3.5 kVA (XTM 4000-48) made by Studer Innotec, Switzerland, provides energy to the users giving priority to the renewable energy generated onsite over the public grid whenever the renewable energy is available, otherwise the system works as a backup.

The permanent availability of energy provides services like school lighting, water pumps and cell phone charging is a great improvement for the community, who was particularly exposed to utility
The Xtender inverter/charger provides very specific functionalities and is particularly tailored for rural and off-grid electrification. In the case at the Children’s Mission, the application is featured to ensure continuous energy supply with a priority use of locally produced renewable energy. The utility grid, whenever present, is used as a second priority source (backup).

**OFF-GRID POWER SOLUTIONS: MAXIMUM PROFITABILITY, MINIMUM EMISSIONS**

By Matteo della Volta, Siemens S.A./N.V.

Reliable and efficient power generation for decentralised producers and in remote locations

That energy markets are changing is not really new. And neither the reasons for these changes: significant shifts in the energy mix, rising operating costs for fossil energy, falling investment costs for wind parks and PV plants as well as fluctuating prices, integration of renewables, weak and/or overloaded grids and last but not least environmental aspects. The way electricity is generated has changed and of course there are solutions for centralised generation. But looking closer into the details, there are still areas where one-stop, comprehensive and at the same time future-proof solutions are rare. Just think of two scenarios: There is a(n) (group of) investor(s) willing to finance and build a new PV plant. While it is quite easy to build a new PV plant, the challenge is how to operate it efficiently as soon as it has gone into commercial operation. Or think of a remote location that is not connected to the grid but needs reliable power at lowest possible costs.

Reliable power supply in remote locations with minimised costs and emissions

Currently diesel power stations are used to provide isolated grids with electricity. In order to reduce fuel consumption and associated logistic costs as well as emissions, old diesel generators can be replaced and/or complemented by generation units fed by renewable energy sources. Of course, high grid stability is here a prerequisite and must be guaranteed.

The turnkey Siemens Hybrid Power Solutions manage the volatile renewable energy sources and ensure reliable power while integrating high levels of solar and/or wind energy with fossil (e.g. diesel, HFO) generation units of all sizes. This hybridisation leads to a significant reduction in fuel consumption and costs as well as in carbon emissions. Each project is customised for local conditions based on a detailed analysis of the customers’ load requirements, solar and wind resources. Up to 100% peak penetration of renewables is enabled by the utilisation of integrated energy storage.
The optimised operation is automated, thanks to the Siemens Fleet Control Solution with embedded Power Management, which is based on the proven SPPA-T3000 Control System. It offers numerous functions:

- Integration of scheduling and optimisation into the plant automation
- Power sharing among generators to meet load demand in the most efficient way
- Generation of operation schedules based on historical load profiles and weather forecasts
- Dynamic optimisation of generator operation based on real time weather and load situation

All these functions minimise operation costs and lead to increased efficiency.

Siemens Hybrid Power Solutions provide reliable power supply for remote industrial installations

**Reliable monitoring and control of decentralised generation units**

The Siemens Performance Monitoring Solutions enable reliable monitoring and control of decentralised generation units like wind parks or photovoltaic plants – locally and via remote access, anytime, anywhere. In the event of a malfunction, the plant operator can immediately take appropriate action, fix any problems quickly, and thus keep losses to a minimum. Dependable forecasts are based on reliable operation, as well as integrating the latest information and forecasts about the weather. All of which ensures that the energy produced can be marketed as effectively as possible. The solution can be integrated into new and existing plants, enabling even globally distributed fleets to be centrally managed – thus offering maximum future-proofing for the investor.

The solution comprises complete monitoring and control of a plant and offers full access to the plant’s data and key performance indicators and to the plant’s control technology and electrical systems via the control system “at the push of a button”.

The solution comprises technology, experience and individual service packages. In line with the needs of a specific project, each solution covers the whole process from planning via engineering, installation and commissioning, right through to service:

- Tailored control technology and electrical systems for plant, Electrical Balance of Plant (eBOP) and grid connection
- Fish-eye camera and algorithms for short- and medium-term yield forecasts
- Data processing and evaluation via Energy Asset Management software
- Information platform for plant data
- Selection, configuration and integration of battery storage
- Customer-specific service packages that range from remote monitoring and operation through to maintenance and complete plant operation

All plant data are available at the push of a button – anytime, anywhere via a performance monitoring portal

NEW MEMBERS

AQUANOVIS

Country: England
www.aquanovis.com
Our company philosophy is to introduce technology that will assist the conversion of the world economy to a sustainable future. The hydroelectric system that is now being introduced by Aquanovis is predicated on producing the cheapest electricity while minimising its environmental impact. Profitability is essential, but not at the expense of environmental degradation. We also believe that local stakeholders, such as indigenous communities, consumers and local government must always benefit from any installation that we build.
CDW STIFTUNGSVERBUND GMBH

Country: Germany
www.cdw-stiftungsverbund.de/en/home.html

cdw Stiftungsverband gGmbH is a foundation dedicated to the support for the German region of North Hesse, especially the regional energy transition, on the one hand and the electrification of remote regions on the other hand. Within the key focus area of rural electrification, the foundation is developing and promoting concepts and business models to make the use of PV-based remote mini-grid systems more widespread in developing countries.

CELLSTROM GMBH

Country: Vienna
energy.gildemeister.com/en

GILDEMEISTER energy solutions is part of the DMG MORI Group and offers integrated solutions in the field of saving, generating, storing and utilising renewable energy for industrial and commercial businesses. Cellstrom GmbH, based in Vienna, is part of GILDEMEISTER energy solutions and offers a pioneering storage and energy management system called CellCube which is based on vanadium redox flow technology. It can be used as an e-mobility, industrial, off-grid, telecom or power solution.

CORDAID

Country: Netherlands
www.cordaid.org

Our mission is to bring about transformation in societies around the world so that they become more
just, more inclusive and more sustainable. That is why Cordaid aims to be the NGO working internationally and consistently with constituents on locally-based development and cooperation to build flourishing communities in fragile contexts and (post-) conflict areas. We do that through our social enterprise approach and financial innovation.

**GDF SUEZ RASSEMBLEURS D’ENERGIES**

Country: France
www.gdfsuez.com

Since 2011, the Group has set a unifying dynamics into motion to help population groups in fuel poverty in Europe and throughout the world. The aim of GDF SUEZ’s Rassembleurs d’Energies is to contribute to developing energy access for impoverished population groups in the less developed countries and to combat fuel poverty in developed countries.

**SALAI ENERGY SOLUTIONS**

Country: India
www.smartmanipur.com

With a focus on rural electrification, Salai Energy Solutions has assets and strong interests in solar, power components and energy storage technologies in India.

**SNV NETHERLANDS DEVELOPMENT ORGANIZATION**

Country: Netherlands
www.snvworld.org
SNV’s goal is to catalyse sustainable development processes. We support people to access and develop the capabilities, services and opportunities needed to live a healthy, productive and otherwise fulfilling life, while sustainably using the natural resources they depend on. Together we develop local capacities, strengthen governance systems, and make markets work for the poor.

SOLARKIOSK GMBH

Country: Germany
www.solarkiosk.eu

SOLARKIOSK GmbH enables and empowers the sustainable economic development of remote communities worldwide. Its unique energy solution, the Solarkiosk, was designed by Berlin-based GRAFT architects and provides remote communities with crucial energy services and quality products. Using an inclusive business model to foster local entrepreneurship, SOLARKIOSK GmbH links communities at the Base-of-the-Pyramid (BoP) with the means to operate a sustainable business and provide vital energy services, communication, information, and education with clean solar energy.

News from the Alliance

INVITATION: SUSTAINABLE ENERGY IN CENTRAL ASIA: BUSINESS OPPORTUNITIES AND TECHNOLOGY TRANSFER (BRUSSELS, 6 NOV 2014)
With the exception of large hydro, Central Asia has a significant untapped potential for both energy efficiency improvements and renewable energy deployment. This conference aims at raising awareness on the sustainable energy policy developments and investment plans in Central Asia, as well as the subsequent business opportunities that are arising in the region. It will be represented by senior government representatives, major international financing institutions active in the region, recognised international organisations with extensive expertise in sustainable energy, and European companies active in the region. This conference will therefore provide a valuable platform to build direct business-to-business contacts and to promote energy investment, trade and cooperation between Europe and Central Asian countries.

David Lecoque, ARE Policy and Business Development Officer will be speaking at the ‘Deploying Sustainable Energy Projects’ session on the topic of ‘Energising Rural Areas: Off- and Mini-grid Solutions’.

INVITATION: AFRICA MINI-GRID SUMMIT (NAIROBI, 18-19 NOV 2014)

The Africa Mini-grids Summit will convene key decision and policy makers along with the power players in the mini-grids sector to share their invaluable expertise and experience to help stakeholders effectively strategise their mini grid blueprints.

The Summit will also feature the launch by ARE President Ernesto Macías of the new “Mini-grid Policy Toolkit: Policy and Business Frameworks for Successful Mini-grid Roll-outs” in Africa. This Africa-focused publication, which helps policy makers to navigate the mini-grid policy design, was developed by the EUEI PDF under the Africa-EU Renewable Energy Cooperation Programme (RECP), REN21 and ARE.

INVITATION: INTERSOLAR INDIA (MUMBAI, 18-20 NOV 2014)
**Intersolar India** is India’s largest exhibition and conference for the solar industry and, as a leading industry platform, focuses on the areas of photovoltaics, PV production technologies, energy storage and solar thermal technologies. The accompanying Intersolar India Conference consolidates the topics of the exhibition. In 2013, more than 500 attendees and 100 speakers discussed the latest industry topics surrounding technologies, markets and financing. Intersolar India supports the development of the Indian solar market and promotes the cooperation between key players from industry, commerce, service providers and politics.

As part of the ARE-EBTC cooperation in India, ARE Secretary General Marcus Wiemann will hold a keynote presentation entitled ‘Case for solar powered energy access - Role of international organisations and inter-governmental co-operation’. Together with Richa Goyal, ARE Country Manager India, the ARE team will represent ARE European SME members and hold B2B meetings with strategic partners on their behalf. Marcus and Richa look forward to welcoming you at booth number 6.D38 (*Intersolar India interview*).

After the conference, the Steinbeis Centre for Technology Transfer India will also be offering a ‘Solar PV Engineer Certificate Training Program’ on 20-22 Nov 2014.

**INTENSIFYING LINKS AT THE EU-INDIA RENEWABLE ENERGY MISSION 2014 (DELHI, 3-5 SEP 2014)**

In cooperation with partners ACCIÓ, CEIPIEMONTE and the Indo-Italian Chamber of Commerce and Industry, EBTC organised a commercial mission of European companies dedicated to the renewable energy sector.
The EU-India Renewable Energy Mission took place in the framework of the 8th Renewable Energy India Expo. This fair provided the ideal opportunity to present the technological expertise of European companies and to explore possibilities of collaboration and synergies with Indian institutions and local companies.

ARE Secretary General Marcus Wiemann attended Asia’s largest event on renewables as a panellist to further intensify interaction between India and ARE experts with a view to address opportunities for renewable energy based applications and solutions in rural India. With the assistance of ARE Country Manager India Richa Goyal, ARE also joined the EU mission booth and participated in business meetings on behalf of ARE members.

HIGHLIGHTS OF THE MICROGRID DEPLOYMENT WORKSHOP (BARCELONA, 22-23 SEP 2014)

HOMER Energy, along with local co-organiser Trama TecnoAmbiental, held a sold out Microgrid Deployment Workshop.

With 28 countries represented during the workshop, ARE Secretary General Marcus Wiemann held a presentation on the activities carried out during the ARE Mini-grid Campaign in the second half of 2014 and thereafter, inviting practitioners to join the SE4All Mini-grid High Impact Opportunity (HIO). The meeting itself covered every aspect of the microgrid market, with a focus on actual projects and the steps required to deploy systems.

EMPOWERING RURAL ELECTRIFICATION: THE EU FRAMEWORK FOR ACCESS TO SUSTAINABLE ENERGY WORKSHOP (BRUSSELS, 29-30 SEP 2014)
The European Commission has expressed its interest to give more and better tailored support to electrify rural areas in developing countries more effectively. As a result, over 300 attendees, a large number of them coming from outside Europe, came to a two-day workshop to bring in their experiences and know-how to a promising new innovative and close-to-the-market concept addressing gaps created by market failures in rural electrification finance in developing countries.

The new Electrification Financing Initiative (ElectriFI) aims at leveraging available public financial resources by attracting private sector investments in sustainable business models as well as by reinvestments in new projects in case investment projects will be successful. It is expected that this mechanism will accelerate sustainable access to clean rural energy in developing countries by boosting the private sector to yield business opportunities and takes into account a number of points relevant for the industry.

“The Alliance welcomes the new initiative from the European Commission and we are aware that should this new tool gain success, it will act as a strong signal for the shaping of future development support schemes. ElectriFI will incentivise the strong engagement of the private sector to make universal access to clean energy a reality by facilitating and thus multiplying small and medium scale private investments and operations in sustainable energy projects.” Marcus Wiemann, ARE Secretary General.

ENTERING NASCENT ENERGY ACCESS MARKETS AT THE ARE ENERGY SEMINAR: ‘MEET THE EXPERTS’ (BRUSSELS, 30 SEP 2014)
After the two-day EuropeAid Workshop, the Alliance for Rural Electrification organised an Energy Access Seminar, hosted by the Embassy of Portugal in Brussels. 90 private sector players shared experts’ experiences from already existing and future business models for rural electrification as well as lessons learnt on how to best enter still nascent clean energy access markets through the assistance of existing and planned donor programmes.

WORKING TOGETHER FOR A SUSTAINABLE ENERGY FUTURE AT THE ITALY-AFRICA INITIATIVE MINISTERIAL CONFERENCE (ROME, 13-14 OCT 2014)

At the Italy-Africa Initiative Ministerial Conference, hosted by the Italian Ministry of Foreign Affairs, IEA Chief Economist Fatih Birol explained that although nearly one billion people in the region will gain access to electricity, 530 million primarily in rural communities would still be without power in 2040. To enable energy to act as an engine of inclusive economic and social growth, the IEA recommends an upgraded power sector, deeper regional cooperation and better management of resources and revenues. ARE President Ernesto Macias, noted that the Alliance was delighted that the IEA chose Sub-Saharan Africa as the topic for this year’s regional World Energy Outlook Special Report, as this region has the highest needs for access to energy and energy services in the world.

In the understanding that market information and partnering with key players is strategic to engage effectively in rural Sub-Sahara, ARE together with the Africa-EU Energy Partnership (AEEP) and the African Union Commission (AUC) published a new edition of ARE’s flagship publication: Best Practices for Clean Energy Access in Africa. This publication, which comprises 20 case studies and details how to effectively electrify rural areas based on the latest innovations and existing cost-efficient technologies, was presented at the “Dialogue forum with the Private Sector in the off-grid renewable energy market” Workshop on 13 Oct 2014, the first day of the Ministerial Conference in Rome.

ROLLING OUT RURAL ELECTRIFICATION SOLUTIONS AT THE GLOBAL GREEN GROWTH FORUM (COPENHAGEN, 20-21 OCT 2014)
The Global Green Growth Forum (3GF) convenes governments, businesses, investors and international organisations to act together for inclusive green growth. ARE Vice-President Balthasar Klimbie took part in the discussion between industries and governments that had the central question of – how to move things forward?

The second day of the meeting was dedicated to the topic of rural electrification and was organised by the National Rural Electric Cooperative Association (NRECA), an organisation made up of over 900 non-profit rural electric cooperatives from the United States. During this session, 3GF demonstrated green off-grids as a viable solution for providing access to electricity in remote rural and isolated areas. A collaborative partnership was launched to provide 20,000 villages around the world with access to high quality and renewable energy.

RECENT MINI-GRID PUBLICATIONS

AFRICA ENERGY OUTLOOK

By the International Energy Agency
Sub-Saharan Africa’s energy sector can be improved to unlock a better life for its citizens. This report describes one of the most poorly understood parts of the global energy system, offers an authoritative study of its future prospects, broken down by fuel, sector and sub-region and shows how investment in the sub-Saharan energy sector can stimulate rapid economic and social development across the region.

**BEST PRACTICES FOR CLEAN ENERGY ACCESS IN AFRICA**

*By the Alliance for Rural Electrification*

The new edition of the Best Practices for Clean Energy Access in Africa prepared by the Alliance for Rural Electrification (ARE) together with the Africa-EU Energy Partnership (AEEP) and the African Union Commission (AUC) is a compilation of 20 case studies and business cases on access to energy and services successfully implemented by ARE members and partner organisations.

**MINI-GRID POLICY TOOLKIT**

*By EUEI PDF, ARE & REN21*

The Mini-grid Policy Toolkit is for policy makers to navigate the mini-grid policy design process. It contains information on mini-grid operator models, the economics of mini-grids, and necessary
policy and regulation that must be considered for successful implementation. The publication specifically focuses on Africa.

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RISK MITIGATION IN HYBRID MINI-GRIDS

By David Manetsgruber and Bernard Wagemann, Hochschule Neu-Ulm University

This paper represents an analysis of experiences with regard to the handling of risk assessment and risk mitigation for investments in mini-grids. The analysis is mainly based on the views of project developers and mini-grid operators. However, the publication is not only dedicated to entrepreneurs with a long-track record in this sector, but also to “newcomers” who are in the process of entering the market or considering such a step.

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