

4th ARE Energy Access Investment Summit Outcome Report

Catania, Sicily (Italy)
13 March 2018

The [Alliance for Rural Electrification](#) (ARE) with the kind support of [Renewable Energy Solutions for the Mediterranean and Africa](#) (RES4MED & Africa) and the Africa-EU Renewable Energy Cooperation Programme ([RECP](#)) and committed industry and finance sector sponsors hosted its 4th edition of the ARE Energy Access Investment Summit in Catania on 13 March 2018. This well-established Forum, also again supported through the ARE Proud Partnership with SEforALL, has become the key milestone energy access event in spring each year and has been identified as a key deliverable to enhance global efforts to promote a level-playing field for decentralised clean energy technology and business solutions by allowing the private sector including civil society and research/academia to effectively contribute to SEforALL and SDGs targets.

The Forum attracted more than 260 guests from over 30 countries worldwide from the international public and private sector, including high-level institutions, financiers, technical support and solution providers as well as project developers ([press release](#)) to receive an comprehensive view of the actual and upcoming clean-energy sector policy framework and key industry trends to foster the integration of remote communities into emerging economies around the world.

Highlights

- ❖ Interventions from government, videos, keynote speeches and discussions with **high-level representatives** from the sustainable energy sector, including:
 - **Ernesto Macías**, ARE President (2006 - 2018)
 - **Vivian Vendereinho**, new ARE President (2018 - 2019)
 - **Francesco La Camera**, Director General for Sustainable Development, Environmental Damage, European Union & International Affairs, Italian Ministry of Environment, Land & Sea
 - **Massimo Gaiani**, Director General for Global Issues and for Asia, Sub Saharan Africa, Latin America, Italian Ministry of Foreign Affairs and International Cooperation
 - **Rachel Kyte**, Special Representative of the UN Secretary-General & CEO, SEforALL
 - **Antonio Cammisecra**, CEO, Enel Green Power
 - **Georgios Pantoulis**, Head of Sector, Sustainable Energy, DG International Cooperation and Development, European Commission
 - **Monojeet Pal**, Division Manager for Renewable Energy & Energy Efficiency, African Development Bank
 - **Roberto Vigotti**, Secretary General, RES4Africa

- ❖ Kick-off session on ‘Scaling Investments in Energy Access through Innovation’, following presentations from Mobisol and Microsoft.

- ❖ In-depth discussions in different panels on deployment and barriers for off-grid renewables in Latin America, Africa and Asia with more 20 speakers from the public and private sector as well as financiers and other stakeholders in the off-grid sector.
- ❖ **Lunch-time workshop** of the European Commission’s Directorate General for International Cooperation and Development (DG DEVCO) on the energy-digital nexus.
- ❖ **ARE Awards 2018 ceremony** to encourage and reward initiative and innovation in the decentralised renewable energy sector with winners in seven categories.

Key recommendations from the 4th ARE Energy Access Investment Forum - Next steps by ARE

Building on SDG7, ARE exists to enable its Members to build a sustainable decentralised renewable energy industry for the 21st century, activating markets for affordable energy services, and creating local jobs and inclusive economies.

Obviously, there is a strong need to advance a level-playing field for the sector and also further growing B2B and sector financing will be vital. In addition, while the sector is evolving from a “why” to a “how” phase, for transparency improvements the industry as represented by ARE has an expressed interest to measure its future success on a sectoral and geographical basis in terms of additions of quality rural off-grid connections (homes / businesses / community / public) as well as new distributed energy investments and local socio-economic and job creation impact.

To align with the new ARE Strategy Concept 2018-2022 as agreed by its Membership at the AGM on 12 March 2018, with this paper ARE provides key recommendations captured from conference session discussions with panellists and participants within the following new four ARE work streams:

1. Global Voice – “speaking as one cohesive team”

- ❖ Document and share standardised data from decentralised renewable energy developers and implementers to increase sector transparency. For example, mini-grid developers could publish anonymised customer data profiles, possibly by means of an ARE interactive platform, towards better load and revenue forecasting. The potential impact of this form of data sharing is that emerging early stage off-grid solution providers can create better proposals.
- ❖ Chair / ARE Board Member: Aaron Leopold; support: [Ling Ng](#)

2. Global Association acting locally - “global partnerships working locally”

- ❖ Research and highlight best practices (public & private) in policy, regulation and capacity building through on-going structured dialogues in regions and countries.
- ❖ Support governments in developing countries to implement transparent policy frameworks, including sustainable tariff structures, standardised IPP agreements, transparency on grid extension plans, accessible data on local communities and local financing facilities.
- ❖ Chair / ARE Board Member: Vivian Vendeirinho; support: [David Lecoque](#)

3. Powerful Partnerships – “strength in numbers and common learning”

- ❖ Cultivate key partnerships with a select few major players in the energy and related sectors such as agriculture and tech companies to collaborate on creative, innovative solutions tailored to sector needs.
- ❖ Chair / ARE Board Member: Katarina Uherova Hasbani; support: [Jens Jaeger](#)

4. Fundraising – “leveraging the ARE member base to unlock capital”

- ❖ Develop attractive and innovative financing mixes by bringing together different financial partners, and strong investment structures to derisk investments, in order to make it easier to invest over time and attract more investors to the sector. Create compelling proposals for core ARE and Member Project activities over next strategy period (2018-2022).
- ❖ Chair / ARE Board Member: Pablo Astorga; support: [Marcus Wiemann](#)

Summary of the Event

Welcome remarks and setting the scene

Marcus Wiemann, Executive Director, ARE thanked all sponsors for their important contribution to make the event happen and the participants for coming. Marcus Wiemann presented an overview of which countries were represented (75 % Europe, 25 % rest of the world), as well as key ARE services, ARE Members and the governance structure of the ARE.

Ernesto Macias Galan, Leaving President, ARE & Managing Director Spain, Solarwatt reminded that ARE was created thinking about the real value of PV could add 12 years ago and highlighted the great potential of all types of renewables for fulfilling SEforALL objectives. He thanked all companies and associations being part of ARE in the last 12 years. 12 years ago the scenario was around 1.2 billion people lacking access; 12 years later population has grown, but a similar number of people lack access to energy. Objectives of mission 2030 seem hard to reach in this perspective. More resources are needed. Hopes this and future forums contribute in reaching this target.

Vivian Vendeirinho (Incoming President, ARE): In 10 years, ARE Membership development has been incredibly positive. It is clear, that there is a market growing. Bankability of projects is now a key topic for ARE and its Members. ARE works in the framework built by the SDG7 in order to support a sustainable development for rural communities. With the slogan “If you can’t measure it, you can’t improve it” he highlighted that the industry has to boost its efforts to measure its impact on the ground. Four key areas of work have been identified inside ARE to support future developments: Global voice, Global association acting locally, Powerful partnerships, Fundraising.

Francesco La Camera, Director General for Sustainable Development, Environmental Damage, European Union & International Affairs, Italian Ministry of Environment, Land & Sea: Ministry of Environment (Italy) has increased its efforts on climate change after the Paris Agreement. Three main areas of activity include: Pacific islands, Caribbean and Africa. Rural electrification can play a key role in these areas. EUR 240 million is provided for adaptation, mitigation and crosscutting activities. The Ministry provides support the multilateral system funds (World Bank, UNDP, ADB SEFA, ...) and has to make the multilateral work for the bilateral. The real challenge is how the programs are developed. Good projects make good investments, but how to leverage private finance? You need to put the finance structure of the project from the beginning of pre-feasibility study.

Massimo Gaiani, Director General for Global Issues and for Asia, Sub Saharan Africa, Latin America, Italian Ministry of Foreign Affairs and International Cooperation believes in energy diplomacy and that private and public sectors must act together to accomplish and overcome challenges. In the last year, big results have been obtained, but there's still a lot to do. Supporters of the energy transition and the Ministry have invested a lot in renewables and in the deployment of smart systems.

Remarks to highlight three important issues: (i) there can be no development without access to energy, (ii) Africa is already facing the fastest urbanisation process, as 200 million people will move from rural to urban environments, creating a big stress on the whole system, and (iii) Africa has a vulnerable land, as no access to clean cooking means a strong impact on the environment and deforestation.

What is needed is a combination of technologies and resources that have to be deployed in a sustainable way with a large use of renewables, including: Regulatory framework to attract investment from the private sector; training and capacity building, enhance local ownership as well as African entrepreneurship spirit. The task is huge but feasible!

Keynote speech

Antonio Cammisecra, CEO, Enel Green Power

Access to electricity is a universal goal in the context of many global trends: population growth, growth of emerging economies, urbanisation and megacities, global demand growth, technological breakthroughs. In the future the energy demand will shift to emerging countries (60% of new electricity demand is expected in emerging economies). Populations without access to electricity in 2030 are concentrated only in Sub-Saharan Africa (600 million), due to population growth. Renewables will play a key role in addressing this issue. Those who will gain access to energy will do so through renewables, and they will do it for economic reasons. Today the cost of solar, wind, hydro plant is below the cost of a classic fossil fuel plant. Scaling solar is a clear example developed by IFC to attract private investments in energy sector. Risk is not completely mitigated, more can be done.

In this context, a clear problem for Africa is the lack of infrastructure. A solution could be the involvement of private finance for the energy sector. Low rate of transmission lines per capita in SSA. Substantial investments are needed. Private sector is needed also in the transmission sector, not only in generation. A holistic approach is needed to develop a bankable and sustainable mini-grid business model, as there are three main barriers for decentralised solutions: regulatory, technical and local markets. Personal message: we need strong emotional engagement from the private institutions.

Scaling investments in energy access through innovation

Thomas Gottschalk, CEO, Mobisol: Mobisol provides solutions to fill the energy gap in rural areas and started with Solar Home Systems and now we provide a business model with the right applications (iron, cookstove, tv, fridge...). Customers do not pay for the electricity, they pay for what comes out from the electricity use. Mobisol has electrified over 100,000 households in Tanzania, Rwanda and Kenya and has launched a spin-off: PAYGEE. Paygee: 12 MW installed via the PayAsYouGo business model and aims to try to scale off-grid solutions through digitalisation. Thanks to the cooperation with RAFIKI POWER we can innovate hybrid-grid solutions and lower the cost.

Bunmi Durowoju, Senior Business Development Manager - Emerging Markets and Affordable Access Initiative (AAI), Microsoft: The Microsoft Airband Initiative focuses on internet access and energy access with the help of commercial partnerships, grant funding and developing education, healthcare and agriculture. Key point to achieve targets is to build good strategic partnerships. Example for technology acceleration are: M-KOPA, NEW SUN ROAD and MAWINGU.

Panel discussion: High-level Initiatives & News from ARE Cooperation Partners

Georgios Pantoulis, Head of Sector, Sustainable Energy, DG International Cooperation and Development, European Commission: DG DEVCO focuses in the energy sector on three main areas: policy, capacity building, supporting investments. Many partner countries are asking to implement the national bilateral cooperation with the EU on the topics of energy and electrification and therefore to provide tailor-made support for the local context. EC is in the process of planning and implementing the External Investment Plan to de-risk investments, supporting concrete investments, offering guarantees for private investments in energy sector in developing countries to support the risky part of the pilot projects to come out with a success business model to apply to all the other projects.

Monojeet Pal, Division Manager for Renewable Energy & Energy Efficiency, African Development Bank informed about the AfDB fund for energy inclusion: platform recently launched for financing of all ranges renewable energy projects, from mini-grids to on-grid investments. Engagement with local governments is crucial to achieve AfDB objectives. AfDB collaborates with ARE on training programs and it is a very productive collaboration.

Roberto Vigotti, Secretary General, RES4Africa: Institutional training is a key driver to move towards more sustainable development. RES4Africa is trying to do this in Kenya, Ethiopia, Algeria, organising courses with utilities and state companies involved in the energy sector. More private investors are encouraged to come into the African energy market. We need more inclusive business models and try to not sell energy but services. ARE should be the platform where Members can prove bankability and replicability of projects.

Lamberto Dai Prà, Head of Renewable Energies Sub-Saharan Africa, Asia & Australia, Enel Green Power: Regulation is a key topic. Renewables were fostered by proper regulation, we should support something similar in the rural electrification sector. With the right regulation the money will come; We have seen incredible technological and cost improvement. Clear and transparent tenders are crucial to let the private sector invest in a country. The main problems today are: tendering processes; ensure flexible tariffs maybe also supported by subsidies; protection of the investments (e.g. what happens when the grid arrives?).

Panel discussion: Deployment of Decentralised Renewable Energies in Latin America, Africa & Asia

Takehiro Kawahara, Lead Analyst, Bloomberg New Energy Finance: Frontier Power covers off-grid and mini-grid power. In 2017, the investments in off-grid solutions have been huge, much more than in the previous years. Asia is the key continent for Micro-grid projects, and China is very active in this field- India and SSA are the geographical focus of decentralised solutions because of the huge increase in the population.

Geraldine Crosset, Senior Investment Officer, ElectriFI: ElectriFI is preparing the ground for mini-grid deployment. When ElectriFI looks at projects, it has expectations about the impact on the population and on the environment. A high number of new connections is a crucial aspect for the financing of a

project. Our mandate is to take high risk investments, such as investments in off-grid projects. We need to have a clear picture and plan of the project, because the projects have to be attractive and bankable for the investors. We want to help companies to scale-up their projects. The quality of the applications are generally quite poor. With good data you can understand the risk of the local environment and anticipate how to make economies of scale and standardise your process.

Faris Hasan, Director Corporate Planning, OFID: Putting the private sector, NGOs and public sector all together is the right way to develop a sustainable access to energy for everybody; “You don’t go alone” it’s a key point in financing a project. You need to create a system of stakeholders. We have to change our approach, otherwise we’ll never achieve our objectives of electrification. Adaptation comes from small and medium projects, cover comes from utilities. The lack of regulation is stopping the process of electrification. Nigeria is a great example of this: “The more the information, the less the risk”.

Antonia Orsoni, Off-grid Solutions Manager, Blue Solutions: Drops in prices and technological innovation, are the two key drivers. In remote areas storage is crucial. The technological improvement can help the deployment of mini-grids. Data is very important in the management phase of the project, but you need to collect the right data before you can use it. Partnerships are also a key tool to develop high quality projects (Example of partnership between Blue Solutions and CANAL + in SSA). Sharing data is necessary to improve business models for decentralised solutions.

Angus Vantoch-Wood, Programme Manager, Carbon Trust: Carbon Trust is looking to provide innovation to catalyse investment and improve energy access. Data can really help in the development stage of decentralised solutions.

Panel discussion: Talking Business & Investment: Latin America – Rural Electrification beyond Basic Need Supply

José Gabriel Martín Fernández, Director, ACCIONA Microenergía Foundation & Steering Committee Member, ACCIONA Microenergía Perú & ACCIONA Microenergía México: ACCIONA tries to supply electricity where the market conditions have not allowed it. You need to find communities that are less spread out if you want to develop a feasible business model for a mini-grid. ACCIONA is working with the bottom of the pyramid of the population, so we need to give them the best electricity that they can pay. Today there is no market in very remote areas, but when the market will grow in a few years, there will be a huge market.

Rafael Hoyuela Lopez, Outreach & Partnerships EU, Inter-American Development Bank: Experience and working in the field will let you understand what works and what cannot work. From the bankability point of view, is very difficult to work with the private sector in rural projects. It’s not easy to find the right guarantees, and from our experience IDB has worked more with the public sector. The role of the public sector is fundamental for a project in the rural areas. In order to develop the area, you need to invest in different sectors, first of all in the energy one. Rural electrification and productive uses of energy are the real enablers of the development. Gender equality is equally a key objective for our bank.

Gianluca Gigliucci, Head of Energy Storage Innovation, Enel Green Power. When the company goes to a rural area, they establish a lot of relations with the local community and Enel Green Power tries to share the value of its project with the community. In a small village, we started distributing solar home systems and after a couple of years EGP integrated this system with a solar plant and then in 2016 included also smart meters to improve the system efficiency. The “feeling of ownership” for the local community can be improved in very remote and rural projects. It is important that the idea of business connected with the access to electricity comes from local entrepreneurs. EGP has learned in a lot of rural projects is that working with women is much more effective than working with men.

Xavier Vallvé, Managing Partner, Trama TecnoAmbiental: Latin America is a different market from Africa and South Asia. We started in Latin America, but today we are active also in Africa. There are plenty opportunities but you need to approach always in a different way. Capacity building is essential as it is very important to develop local skilled workforce.

Panel Discussion: Talking Business & Investment in Africa: Time to Break Down Barriers

Guilherme Collares Pereira, Vice-President, ARE & A2E - Access to Energy International Relations Director, EDP Renováveis S.A. (Moderator): It's time to break down the barriers. We have the right technologies, consultants, money. The private sector is ready to invest. What is really missing is the correct regulatory framework. If we'll have the market, we'll have opportunities.

Fiona D. Wollensack, Policy Advisor, Africa-EU Energy Partnership (AEEP): At the political level thanks to SEforAll, SDG7 and other activities we can really see how much progresses have been done. We have to translate progresses into actions and tangible benefits and create partnerships that ensure a share of knowledge and win-win situations. Multi-stakeholder partnerships are needed to develop serious and long-term view projects.

Claudio Pedretti, Business Development Manager, Windkinetic: We started in Zambia with five microgrids - two of our customers are NGOs. Working with local communities and NGOs is helping us understand the local environment and prevent a lot of mistakes in our business model. We are going to scale up these microgrids to the next level, serving private customers and few anchor points, small economical business. Delivering microgrids that are economically sustainable is the most difficult part. We are going to self-finance these projects, investing our own money believing in our technology. The problem of small projects is that they have small budgets that are not taken into account by any financing institutions. We need to focus on the financing of small-scale projects, in order to deploy distributed generation systems, which is the only way to give access to energy to a certain part of population.

Michele Porri, Head of Business Development Africa, Enel Green Power: There are different barriers in different segments of business. There is a lack of political interest to let the private sector run and lead the business. It is not always in rural areas you find "good consumers". Lowering the cost of energy, you let the governments focus on the transmission system and reach more remote areas. Financing just CAPEX makes the business die once that CAPEX finance has been used up. In all EGP projects there is a local partner, local procurement...EGP works with the local community. "The more you keep it simple, the more you can generate a business" What makes a country attractive? A simple, straightforward regulation, a clear idea of what is wanted. The energy sector is a natural monopoly business, and you need to put the rules to let the market work. Strong need: long-term thinking of the politicians for the rules they make. When politicians make regulations they shouldn't look at the next year, but they have to think about the next 20-30 years"

Bunmi Durowoju, Senior Business Development Manager - Emerging Markets and Affordable Access Initiative (AAI), Microsoft

The execution, the project management, the operation and maintenance are issues to be addressed and solved to develop a project in SSA. Where we have the business knowledge, we have entrepreneurs. Sustainability of the project passes through the uses of local resources and local companies to be subcontracted.

Panel discussion: Talking Business & Investment in Asia: Can Microgrids Solve Asia's Energy Access Challenge?

Salvatore Vinci, Head, Partnerships and Technical Advisory Services, IRENA: IRENA works together with local governments to pave the way for the development of renewables in the countries. To achieve the SDGs, it is essential to have the private sector onboard, supporting the creation of an enabling framework for private investments. Tariff regulation is one of the key aspects: tariffs should allow the private sector to implement bankable projects. The importance of realistic grid extension plans are often underestimated, and at least a clear regulation on what happens to the decentralised plants when the grid arrives is needed. We are no more thinking about kWh's but about the use of the kWh – e.g. how much is lost due to lack of food conservation facilities. This link is a fundamental change in the narrative.

Mylene Capongcol, OIC Director, Renewable Energy Management Bureau, Department of Energy Philippines: The government is committed to reach 100% electrification in the country. Due to geographical composition of Philippines, it is not so easy to reach all the people who live in the 7,000 islands of the Philippines. Mini/microgrids work mainly on small and isolated grids. There is a huge interest from the government to hybridise the local mini-grids, which already exist but are served with diesel. Regulatory support is the most important issue that we address with the private sector. The government is working to reach the “last mile communities” and to foster productive uses of energy. We are confident that the partnership between government and the private sector will allow us to reach 100% electrification in our country.

Benjamin Ho, Regional Director - Europe, Singapore Economic Development Board: Public-Private Partnerships is a key way to enhance and support investments in infrastructure sector. Singapore has different needs if compared to other South Asian countries. The regulatory framework has been set up and Singapore could be a good country to move first in the area.

Vincenzo Argentieri, Head of Business Development East Asia & Pacific, Enel Green Power: India, Indonesia and Australia have been the focus countries for EGP in this region. Every country has specific issues to be addressed and you need to tailor your business model to the specific countries. Regulatory frameworks are always a critical step in the development of our projects. Forecasting demand is also essential to develop a feasible project. If you make a mistake of about 3-4 % in the forecast of the demand, it is possible that your project is not profitable anymore. In order to access commercially viable mini-grids for a utility, the topic is what should be the consumption of the load.

Rebecca Symington, Executive Director, Mlinda Charitable Trust: Installed 13 mini-grids in 13 villages. The plan is to install 50 mini-grids by 2020. The anchor loads are agriculture production, water pumps and other appliances, replacing diesel power. Results: increase by 10% the GDP pro capita in each village. Also, positive impacts on women and children. Three important things made our model successful: (i) we wanted projects to be scalable and replicable, and we have achieved this with intense engagement of the communities; (ii) we supported the regulatory authorities; (iii) we employed local people to build the energy center and involved them in every single stage. Environmental, social and financial aspects are equally important for us.

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ARE Secretariat Contact



Marcus Wiemann
Executive Director
Phone: + 32 2 709 55 44
E-mail: m.wiemann@ruralelec.org



David Lecoque
Policy & Business Development Manager
Phone: +32 2 709 55 25 / +32 471 05 27 03
E-mail: d.lecoque@ruralelec.org



Ling Ng
Communication & Marketing Officer
Phone: +32 2 709 55 42
E-mail: l.ng@ruralelec.org



Jens Jaeger
Policy & Business Development Officer
Phone: +32 2 709 55 42
E-mail: j.jaeger@ruralelec.org