

ARE Energy Access Investment Summit 2016 in Amsterdam (The Netherlands) on 12 April 2016

To mobilise key decision makers as well as institutional and business representatives to further investments in off-grid renewables in the developing world, the Alliance for Rural Electrification (ARE) organised a high level Energy Access Investment Summit at ING Headquarters in Amsterdam, The Netherlands, on 12 April 2016.

Results and Key Recommendations from the ARE Energy Access Investment Summit:

The key recommendations summarised below are taken from the event's discussions, and are focused on supporting the goal of expanding energy access in developing countries through the design of appropriate business models, enabling environment and financial mechanisms:

1. Promote strong partnerships between governments, private sector, donors, civil society and financing organisations to consolidate and harmonize the rural electrification market.
2. Support the developing world's authorities to implement clear sustainable tariff structures, also for mini-grids, as well as transparency on grid extension plans, as they are today the two main policy challenges faced. Sensibilisation work is needed to convince the authorities of their interest in clean rural electrification.
3. Bring governments and institutions together to design innovative financial vehicles, adapted to the market, transparent and accessible, such as small revolving capital pools or result based financing funds, to develop bankable business models and prepare the field for commercial investments.
4. Creation of standardised finance access calculation tools for projects developer and investors. To increase effectiveness of communication and negotiation it is highly recommended to create common source tools which will reduce the time to finalise and to sign projects with public support.
5. Develop supporting tools to help commercial funder's involvement: foreign exchange hedging tools and base models for KPIs were mentioned as effective solutions.
6. Invest in learning, to standardise and develop the market. In particular, consolidating reliable data on consumption patterns and ability to pay, but also demand-assessment tools to design proper projects.
7. Develop and promote matchmaking as well as knowledge sharing tools, e.g. through business associations and/or national and regional platforms, to consolidate the market, and to close the gap between the various actors.
8. Concurrently, improve the dialogue between sectors and stakeholders through national platforms, to build on the potential synergies between development projects.
9. Focus on understanding the needs of the community served when designing a project, to develop adapted energy services offers and tariffs for households and rural businesses. Quality of the relationship with the community is essential to build viable projects, and to remain competitive compared to low-cost services and products.
10. Develop attractive financing mixes by bringing together different financial partners, and strong investment structures to derisk investments, make it easier to invest over time, and attract investors.

The Summit was attended by more than 200 participants from development partners, private sector and financiers. The day showed a number of highlights:

- **Keynote speech by Rachel Kyte, the CEO of SE4All and Special Representative of the UN Secretary-General**, who appealed to investors and financiers to help de-risk, unlock and amplify investments in renewable off-grid projects;
- Speech by **Roberto Ridolfi, Director for Sustainable Growth & Development, DG for International Cooperation & Development at European Commission**, who announced the first call for proposal of ElectriFi for Friday, 15 April 2016 (www.electrifi.org)
- **Launch of ARE Off-Grid Match-Making Platform on new ARE website by Ernesto Macias, ARE President** (<http://are.afd.website/business-opportunities>)

❖ Welcome and Introduction

The Summit started with several introduction speeches, all highlighting the key message that was about to drive the following interventions: increasing interactions to realise access to energy and services in the short term.

Ernesto Macias, ARE President, opened the day by insisting on ARE's commitment to foster coordination among Rural Electrification practitioners and supporters; a new website (<http://are.afd.website/>) with matchmaking tools, several networking events across the world, and an envisaged new partnership with UNIDO were announced.

Following **Kees Rade's**, **Ambassador Sustainable Development and Director Climate, Water, Food Security, Energy and Natural Resources at the Ministry of Foreign Affairs of The Netherlands**, reaffirmation of Dutch Government's support to private renewable energy projects, **Roberto Ridolfi** announced **ElectriFi's** much-awaited first call for proposal for 15 April 2016. Aiming to reach 500 m Euro, the first phase of this initiative financed by the European Commission will consist of 75 m Euro, managed by FMO jointly with the EDFI Association, and should be followed by at least one other phase in 2016.

Reminding the panel that Manufacturing Value Added indicator is above 90% in South East Asia, and only 4% in Sub-Saharan Africa, **Christophe Yvetot, Head of UNIDO Liaison Office to the European Union, Belgium & Luxembourg, UN Industrial Development Organisation**, emphasized on the need to turn energy into local business and productive opportunities.

“The Sustainable Development Goal n° 7, in particular the access to energy part, is the most concrete goal to be reached; it is a central goal, vital to meet the other ones”, insisted **Rachel Kyte**, CEO of SE4All and Special Representative of the UN Secretary-General, during her welcome speech. She underlined the need for a sounder policy environment, long-term support to governments and private companies, and public private partnerships to share risks and knowledge. She concluded on the importance to aggregate the various innovative financial organisations, and prepare them to conjointly bear the risk of this new high opportunity market.

❖ **10:30 – 11:30: Deployment of decentralised Renewable Energies in the Emerging and Developing World**

Arnaud Agbo-Panzo (moderator), Business developer – African Market, Siemens & ARE Board Member

Eun Young So, Programme Officer, PV Cost and Markets in Africa, IRENA

Frederik Jan van den Bosch, Fund Manager Massif & Blending, ElectriFI/FMO

Christine Lins, Executive Secretary, REN21

Dean Cooper, Chair of Steering Committee, SE4All HIO Clean Energy Mini-grids

Nico Tyabji, Associate, Bloomberg New Energy Finance / Climatescope

As **Christine Lins** emphasised, out of the 286 bn USD invested in renewable energy in 2015 across the world, 67 bn USD were invested in small-scale distributed capacity, showing today's off-grid potential. **Mr Nico Tyabji** highlighted that 500 m USD were invested in off-grid solar in 2015, with 250 m USD in PAYG companies.

“Mainstreamisation” of the market is clear today: 44m pico-solar lighting products were sold up to June 2015, with 20m of cash sale branded products, 0,5m of PAYG products, and 23m of generic products. According to IRENA's cost analysis (coming out in June 2016), there is a high potential for African SHS's cost reduction, where the 15 USD average cost per W is three times that of Bangladesh's. Strong engagement is highly needed from governments, industry associations, and stakeholders to provide cost databases to design adapted calls for proposals.

To push the necessary involvement of commercially based financial organisations, **ElectriFI**, represented by **Frederik Jan Van Den Bosch**, reaffirmed its intention to reduce the associated risks by building up a track record of successful private projects.

From a more practical perspective, **Dean Cooper** reminded the audience that a deeper understanding of the various markets, people served, and private projects' impacts is vital to transform those social opportunities into viable projects. Clean-Energy Mini-grids may be the most-suited option to serve needs of as much as 40% of unconnected rural population, and their development will require stronger relationships between NGOs, private and public actors.

❖ **12:00 – 13:00: Decentralised Renewable Energies in the Developing World - Venture Business Models for Rural Electrification**

Caroline Nijland (moderator), ARE Vice-President – Director Business Development FRES

Sara Dourado, Team Leader, TESE Bambadinca in Guinea-Bissau

Martin Hiller, Director General, REEEP

Benjamin Pallière, Rural Electrification expert, GERES

Wim van Nes, Global sector coordinator – Energy, SNV Netherland

Wim van Nes began by reminding the public of the necessity to promote a long-term sector-based approach opening the market for more actors, rather than a closed, risky and not patient project-based one distorting it. In this regard, and in order to prepare the financial markets for commercial investments in the sector, he highlighted the need for transparent and accessible financial vehicles such as the 1 m USD 'Result Based Financing Fund' implemented with the ARE in Tanzania in 2012 to help local retailers sell pico-solar products, that his organisation expects to replicate and extend.

Martin Hiller claimed on his side that institutions and governments should launch innovative financial vehicles, such as small revolving capital pools, adapted to this frontier market characterised by small projects. Still, as organizations such as REEEP and SNV are today willing to finance established companies, seed funding remain very difficult to secure.

According to **Benjamin Pallière from GERES**, the priority is to develop specific offers to rural businesses, which have a different need of energy requiring adapted systems. In his opinion, a better knowledge of the productive uses' ability to pay is also vital to adapt prices to their costs.

Sara Dourado, pointed out the lack of reliable data on consumption patterns and ability to pay, but also of demand-assessment tools, that has been a real challenge for **TESE**, resulting in under-sized projects. **Mr Pallière** confirmed that the GERES had encountered the same obstacle in West Africa.

❖ **14:00 – 14:10: Dr Wim Sinke, Professor, University of Amsterdam & Manager Program Development Solar Energy, ECN**

For **Dr Wim Sinke**, solar PV is today bringing high benefits thanks to the huge cost reduction and experience that has been built up in high volume on the incentivised “Gigawatt” market; with a lowest cost of 0,05 USD/kWh, solar is now competing directly with fossil fuels in sunny regions. It is time to put rural energy access back on top of the energy agenda, as it is where lies the highest value that can be withdrawn from solar PV.

❖ **14:10 -15:00: Talking Business and investment in the African Context with Solar Home Systems (SHS)**

Anthony Ighodaro (moderator), Managing Director at KZN Nigeria, ARE Board Member

Chris Service, Business Developer, FRES

Davidi Vortman, CEO & Co-founder, Lumos

David Otieno, Project manager, Africa-EU Energy Partnership

Christopher Baker-Brian, Co-founder & CTO, BBOXX

Koen Peters, Executive Director, GOGLA

The SHS sector is today becoming commercially attractive: private companies are reaching profitability, and many low-cost products are appearing. **Davidi Vortman** said that Lumos, a company operating in Nigeria, is experiencing a 100% growth per month. Nonetheless, substantial challenges are still to be overcome to allow more businesses and investments.

Although improved by the development of many initiatives such as the **Africa-EU Energy Partnership**, the uncertainty of policies is still very damageable to the sector's development. For **Chris Service** designing sustainable tariff structures that could be negotiated between the project developer and the community itself is the priority; transparency from the government regarding grid extension and licensing procedures are also two main policy challenges for them.

Now that SHS companies are scaling, local people's training is mandatory for private operators. The FRES has developed some training programs in Uganda to train operators who can become teachers afterwards, while BBOXX has a team of full time trainers. **Chris Service** highlighted that training should rather be handled by national renewable energy agencies in partnership with international associations. Moreover, if training on the use of local resources is doable, **Christopher Baker-Brian** insisted on the difficulty to find local senior managers.

Christopher Baker-Brian defended that the solution to face cheap competitors invading the market lies in the quality of service offered to the customers: they are building trust over long-term relationships, by allowing upgrades of systems, and offer wider service on the long-term.

Access to large scale finance to secure the necessary 15-20 months of working capital is also a challenging issue when scaling, forcing private operators to increase their prices or the reimbursement duration for their customers. **BBOXX** is currently looking for local sources of debt finance, and to develop securitization of

receivables. For **Lumos**, it is vital to develop proper foreign exchange hedging and to standardise the sector with base models for KPIs to help commercial funders get involved.

In addition, a few unanswered questions were raised. How to aggregate projects, to increase the ticket size and reach wider financial actors? How to manufacture locally the products sold? How to use the data collected from SHS? What will be the next step in the market, developing productive uses systems, or selling more consuming appliances?

❖ **15:00 – 16:00: Talking Business and investment in the Latin American Context with Small Hydro/RE hybrid grids**

Matteo Della Volta (moderator), Business Development, Siemens

Michael Köberlein, Senior Advisor, GIZ

Jose Gabriel Martin Fernandez, Project Manager, Fundacion Acciona Microenergia

Menno Broers, Managing Director, BT Projects

Unai Arrieta, Associate Manager, Trama Tecnoambiental (TTA)

Three things must be considered by operators when approaching the Latin American market, as **Michael Köberlein** and **Unai Arrieta** reminded. First, universal access is mainly handled by national utilities, and the private sector is not stimulated, except through public-private partnerships tenders. Concurrently, communities are very strong and already have financing and infrastructure to manage. Lastly, if electricity access rates are higher than Africa's, the potential for hybridisation of current diesel generators is huge.

Michael Köberlein reminded the audience that strong partnerships should be promoted to harmonise the complex rural electrification ecosystem, in particular between governments, private sectors, donors, and climate financing organisations to develop effective financing instruments. The **GIZ** is trying to facilitate the capital through guarantees to protect entrepreneurs, grants and subsidies. Still, something needs to be done to develop standards to help financial actors to approach local entrepreneurs. Regarding financial issues, **Menno Broers** said that BT Projects are developing a performance insurance to derisk the new "Blue Barriers" technology they are trying to test in off-grid areas.

According to **Jose Gabriel Martin Fernandez**, success lies in the quality of the relationship with the community, and its involvement in the project. For example, owning the project after a few years can be an interesting incentive for the inhabitants. Similarly, **Unai Arrieta** insisted on the necessity to link energy services to the needs of the community: Colombia had set an effective platform where on the field NGOs could communicate their energy needs in order to develop adapted public tenders afterwards. On his side, **Michael Köberlein** raised the effectiveness of developing joint-ventures between international developers and local entrepreneurs.

Unai Arrieta, going further into projects success, highlighted the importance to improve the dialogue between sectors, as energy usually comes first and alone. The success will lie in national matchmaking platforms to connect different actors and promote knowledge. In addition, he communicated the intention of the OLADE and the IDB to replicate platforms to share knowledge on PV and rural electrification such as America de Sol in Brazil.

❖ 16:00 – 17:00: Talking Business and investment in Asia with hybrid mini-grids

Michael Wollny (moderator), Wollny Consulting and ARE Vice-President

Fuad Siala, Energy Adviser, OPEC Fund for International Development (OFID)

Richard Azarnia, Founder, Mlinda Charitable Trust

Vimal Mahendru, IEC Ambassador and President, Legrand – India

Ernesto O. Silvano Jr, Head of the Office of the Renewable Energy Development (ORED), National Electrification Administration (NEA) of the Philippines

Kosis Tselenis, Head of Investments, Quadia

Fuad Siala said that the OFID as a big institutional investor is currently trying to involve private finance by promoting mini-grids projects. Nonetheless, as **Kosis Tselenis** said, mini-grids private companies are either too small for big investors, either too risky for smaller financial organization such as his impact investment fund Quadia. He believes that bankability requires the right financing mix, for example bringing together a local investor partner for the expertise and a DFI; a ground provider is also needed to take the early phase risk. Derisking the capital by designing a strong long-term financing structure is also very important to make it easier to invest over time.

Different solutions were evoked: **Fuad Siala** mentioned the possibility to bundle projects to reach the minimum ticket size of 10-15m USD , while **Kosis Tselenis** insisted on the need to introduce more and more matchmaking platforms.

Regarding India, **Richard Azarnia** said that the main challenges experienced by the Mlinda Charitable Trust, which is implementing 20-30 kW micro-grids in India, are the difficulty to finance the cost of equipment due in part to the complicated supply chain, resulting in very high CAPEX per household and the disproportionate use of energy between productive and residential uses. To address the latter, Mlinda is considering a model with two parallel systems.

Richard Azarnia insisted on the enormous bureaucracy that makes India so particular; while the policies promised are always properly implemented, it is moving very slowly, and a procedure not adapted to your company will result in huge losses of time and money.

The case of the Philippines was also evoked by **Ernesto O. Silvano Jr**, as the insularity of the country makes it a perfect field for off-grid electrification. It accounts 300 diesel-generation mini-grids, but a recent law is making it compulsory to hybridise them and give 24h access. Thanks to a Clean Technology Fund program, 100m USD have been invested in solar mini-grids projects and SHS deployment, summing up to 10 MW.