5th Energy Access Investment Forum
Abidjan
Ivory Coast
13-14 March 2019
ORGANISED BY
#EAIF2019
ARE EAIF first time to happen in Africa
Special thanks to our Co-Organisers & Sponsors!

Co-organisers

Sponsors

BlueSolutions  EDFI  ElectriFl  KFW  DEG  RES4MED  RES4AFRICA

FLEXGRID  POWERBLOX  STÄUBLI  TCX  Trinasmolar  AT2ER

Swedfund  ECREEE  WINDKINETIC
EAIF 2019 – Participants

- 326 registered participants from 40+ countries
- 316 requested meetings
- 211 accepted B2B meetings

Participants per region:
- Americas
- Asia
- East Africa
- Europe
- Middle East & North Africa
- Southern & Central Africa
- West Africa
ARE to further expand its leading role on market intelligence and policy advise

New Partnerships of ARE to make clean energy access investable

23 Jan 2019: Partnership with UNIDO on business models and productive use

26 Feb 2019: Partnership with Swedfund on consumer protection principles for mini-grids

13 Mar 2019: Partnership with ECREEE to support SMEs and start-ups for upscaling DRE and cross-sectoral collaborations in the ECOWAS region
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<td>International funding initiatives to support the off-grid sector</td>
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<td>10.40 – 11.10</td>
<td>Coffee Break &amp; Exhibition</td>
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<td>11.10 – 12.30</td>
<td>Updates on regulatory frameworks for off-grid renewable energy in Sub-Saharan Africa</td>
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| 14.00 – 15.15| Impact investments to finance the off-grid renewable energy project pipeline in Sub-Saharan Africa | ElectriFI side-event: Launch of the EUR 10 million ElectriFI Côte d’Ivoire funding window  
**Location:** Breakout rooms (1st floor) |
| 15.15 – 15.45| Coffee Break & Exhibition                                                               |                                                                                                                                           |
| 15.45 – 17.00| Win-Win Partnerships - Building local capacity for off-grid renewable energy project deployment | AT2ER side-event: Stratégie d'électrification du Togo: développer des PPP pour la construction de mini-réseaux solaire  
**Location:** Breakout rooms (1st floor) |
| 17.00 – 17.15| Closing Remarks & Introduction to B2B Matchmaking                                      |                                                                                                                                           |
| 17.15 – 18.15| ARE Awards 2019                                                                         | B2B Meetings  
**Location:** Matchmaking Room (1st Floor)                                                                                           |
<p>| 18.30 – 20.00| Networking Reception - <strong>Location:</strong> Cafeteria (Ground Floor)                            |                                                                                                                                           |</p>
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<tr>
<td>09.15 – 10.15</td>
<td>Business models for clean energy mini-grids: creating nexi between off-grid renewable energy &amp; productive uses of energy</td>
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| 10.15 – 11.00 | Pitching session I: Innovative solutions to scale off-grid renewables in emerging markets | GET.invest side-event: Mobilising Renewable Energy Investments  
*Location*: Breakout rooms (1st floor) |
| 11.00 – 11.30 | Coffee Break & Exhibition                                                              |                                                                                                                                              |
| 11.30 – 12.15 | Pitching Session II: Financing solutions to scale off-grid renewables in emerging markets | UNIDO side-event: Scaling up homegrown solutions for decentralised energy  
*Location*: Breakout rooms (1st floor) |
| 12.15 – 12.20 | Closing Remarks                                                                       |                                                                                                                                              |
| 12.20 – 13.45 | Lunch Break & Exhibition                                                               |                                                                                                                                              |
| 13.50 – 15.30 | B2B Meetings  
*Location*: Matchmaking Room (1st Floor)  
Swedfund side-event: Consumer Protection Principles for clean energy mini-grids  
*Location*: Breakout rooms (1st floor) |                                                                                                                                              |
| 15.30 – 16.00 | Coffee Break & Exhibition                                                              |                                                                                                                                              |
| 16.00 – 17.40 | B2B Meetings  
*Location*: Matchmaking Room (1st Floor)                                         |                                                                                                                                              |
EAIF 2019 – Practical information

EAIF featuring **English-French interpreters** for the first time
Each participant should have received event bag with programme, participant list, ARE fact sheet, GET.invest 1-pager, Matchmaking info

**B2B Matchmaking:** Matchmaking rooms 1st & ground floor. You can still register for B2Bs with **Pauline from CEFE**!

**Side-events:** Breakout rooms (1st floor)

ARE is offsetting the CO2 emissions from its flights. Interested? More info: [greentripper.org](http://greentripper.org)

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<td>Ling Ng</td>
<td>Jens Jaeger</td>
<td>David Lecoque</td>
<td>Melina Monjour</td>
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Welcome remarks

Daniel Schroth, Acting Director for Renewable Energy, AfDB & Chair, Mini-Grid Partnership
Welcome remarks

Vivian Vendeirinho, President, ARE
Status quo of energy access finance

What is needed:
USD 52 billion per year of investments to provide electricity to all by 2030 (IEA 2017).

Business as usual
USD 30.2 billion invested per year.

This means we are only reaching just over half of this goal!

Source: SEforALL, Energizing Finance (2018), p.34
Energy access finance in Sub-Saharan Africa

Out of the 674 million people projected to be without energy in 2030, it is estimated that 600 million will be in Africa.

95% of additional investment in energy access will need to go to Sub-Saharan Africa to meet the 2030 energy for all target.

Finance for energy access increased from USD 180 million in 2015 to USD 427 million in 2018.
Make Energy Access happen now!

**ARE** is an international business association that promotes a sustainable decentralised renewable energy industry for the 21\textsuperscript{st} century, activating markets for affordable energy services, and creating local jobs and inclusive economies.

**Special Offer:** Join the Alliance within the next two weeks and benefit from **30% fee discount for 1\textsuperscript{st} year**!
ARE Members (with green sticker on badge)

133 ARE Members at the end of 2018
10 new Members since beginning of 2019

What unites ARE Membership is the commitment to deliver on clean energy access to rural populations.

ARE is important as it helps on sector coordination and development by:

• **Service Line 1**: Market Intelligence & Business Services
• **Service Line 2**: Policy & Advocacy
• **Service Line 3**: Support to Individual Members

More info: [https://ruralelec.org/matchmaking-platform](https://ruralelec.org/matchmaking-platform)
ARE’s unique global voice as “Alliance” within a broad sector

Strengthen its character as “Alliance”

**Matchmaking:**
Local and international b2b events, connecting the sector

**Think Tank:**
Off-grid market intelligence, information about the sector, business models
Keynote speech

Felice Zaccheo, Head of Unit Sustainable Energy and Climate Change, DG International Cooperation and Development - European Commission
Keynote speech

Sediko Douka, ECOWAS Commissioner for Energy and Mines
Keynote speech

Prosper Magali, Board Member, ARE & Director of Project & Business Development, ENSOL
Supporting the off-grid sector in Sub-Saharan Africa

ENSOL has been providing energy solutions that create value to people’s life and environment in Tanzania since 2001.
Supporting the off-grid sector in Sub-Saharan Africa

We have technologies and tools to deploy off-grid projects in Africa. We have suppliers and services ready to support scale-up.

What is holding more investments back?

- Regulations and government policy?
- Lack of financial support instruments?
- Lack of capacity and partnerships across sectors?
- Immaturity of the sector and unproven business models?
Supporting the off-grid sector in Sub-Saharan Africa

ARE unites stakeholders across the rural electrification value chain and unites more than **150 Members** with the mission to provide energy access for all.

Work with us to grow the sector!

**ARE Services**

- **VISIBILITY**
- **INTELLIGENCE**
- **INFLUENCE**
- **BUSINESS CONTACTS**
- **ACCESS TO MARKETS & FINANCE**
- **DISCOUNTS**
Facilitating projects on the ground: ARE-OFID CfP for hybrid mini-grids

990,000 USD for launching a **Call for Proposals** funding in the form of grants for installation of hybrid mini-grids.

**Three success stories** from **Bangladesh, India** and **Mali**.

The projects brought great **improvements in the quality of life** of people. The possibility of using clean power **productively** is **bringing local economic development**.

*Blendio, Mali*  
*Muradpur Island, Bangladesh*  
*Naratoli - Jharkhand, India*
Call for ‘New Deal’ to empower start-ups & SMEs

To deliver on SEforALL and SDG objectives off-grid solutions are expected to deliver 71% of all new electricity connections in rural areas, serving 485 million people by 2030 (IEA 2017)!

Start-ups and SMEs offer:
• Commitment to SEforAll objectives
• Innovation Power and
• local ownership and community involvement

What start-ups and SMEs lack and therefore need support from the public sector?
• Research support on energy access data collections and benchmarking of off-grid solutions
• Advocacy support to develop and implement business favorable conditions (e.g. by the help of GN-SEC, ARE local coordinators)
• Interim subsidies, result based financing + de-risking support enabling price signals so to facilitate customer and market development by its own means

Clean RE-based socio-economic growth based on new built and operated assets and with consumers to build their own assets!
International funding initiatives to support the off-grid renewable energy sector

Moderator

Sukla Chandra, Board Member, ARE & Managing Director, GE Licensing & Technology Ventures

Panellists

Mahama Kappiah, Executive Director, ECREEE

Pierre-Daniel Telep, Senior Specialist Renewable Energy, Green Climate Fund

Long Cheng, General Manager - Africa, Trina Solar

Joao Sarmento Cunha, Division Manager - Renewable Energy Initiatives, AfDB

Dominiek Deconinck, Fund Manager, ElectriFI
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#EAIF2019
Updates on regulatory frameworks for off-grid renewable energy in Sub-Saharan Africa

Moderator

Guilherme Collares Pereira, Vice-President, Alliance for Rural Electrification (ARE) A2E - Access to Energy International Relations Director, EDP Renováveis S.A.

Panellists

Sanusi Mohammed Ohiare, Executive Director, Rural Electrification Fund (REF), REA Nigeria

Shegun Bakari, Senior Advisor to the President, Togo

Hary Andriantavy, Sécuretaire Executif, CLUB-ER

Olivier Colas, Director Business Development, BlueSolutions

Bolade Soremekun, CEO, Rubitec Nigeria
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Impact investments to finance the off-grid renewable energy project pipeline in Sub-Saharan Africa

Moderator

Aaron Leopold, Vice-President, ARE & CEO, African Minigrid Developers Association

Panellists

Siré Abdoul Diallo, Private Sector Support Facility Coordinator, ROGEP

Wim Jonker Klunne, Lead Coordinator, EEP Africa

Rim Azirar, Investment Officer - West Africa, Sunfunder

Matthew Tilleard, Co-Founder & Managing Partner, CrossBoundary

Emma Miller, Business Development Advisor, Shell Foundation
5th Energy Access Investment Forum
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#EAIF2019
Win-Win Partnerships - Building local capacity for off-grid renewable energy project deployment

Moderator

Rebecca Symington, Board Member, ARE & Executive Director, Mlinda Foundation

Panellists

Ute Collier, Global Energy Representative, Practical Action

Astria Fataki, Founder & President, Energy Generation

Philippe Baudez, Energy Sector Leader Ghana, SNV

Rana Ghoneim, Chief, Energy Systems & Infrastructure Division, UNIDO
Closing remarks & Introduction to B2B Matchmaking

Marcus Wiemann, Executive Director, ARE
Welcome remarks

Guilherme Collares Pereira, ARE Awards 2019 Jury Chair
ARE Vice-President

ARE Awards 2019 Jury

Arthouros Zervos, Chair, REN21

Martin Hiller, Director General, REEEP

Rana Ghoneim, Chief, Energy Systems & Infrastructure Division, UNIDO

Salvatore Vinci, Head, Partnerships and Technical Advisory Services, IRENA

Supported by:
ARE Secretariat

HNU
ARE Awards 2019

- Category 1: Multilateral & International Organisations
- Category 2: NGOs & Foundations
- Category 3: Private Sector in Australia, Europe & North America
- Category 4: Private Sector in Africa, Asia-Pacific & Latin America - Caribbean
- Category 5: Government in Africa, Asia-Pacific & Latin America - Caribbean
- Category 6: Best Off-Grid Project
- Category 7: Best Start-Up
Category 1:
Multilateral & International Organisations

Presented by ARE Awards 2019 Jury Member:

Rana Ghoneim, Chief Energy Systems & Infrastructure Division, UNIDO
Category 1: Multilateral & International Organisations

Nominees:

UN Capital Development Fund – UNCDF Clean Start (Thailand)

OPEC Fund for International Development - OFID (Austria)

Africa – EU Energy Partnership - AEEP (Belgium)
Winner:
UN Capital Development Fund - UNCDF Clean Start (Thailand)
UNCDF CleanStart co-invests in early stage business ideas that have a ripple effect in the way customers buy and use clean energy solutions

- Reaching:
  - Over 1 million customers (60% women // SMEs; Households; Schools; Health Centres; Productive Use)
  - In Uganda, Ethiopia, Cambodia, Nepal, and Myanmar via partner sales of over 250,000 solar products
  - Offsetting 471,745 Tonnes of CO2 and 132,913 Tonnes of firewood saved

- Committed Investments of:
  - $6M as grants and $.5M as concessional, local currency debt
  - 29 Energy SMEs (Solar; LPG; Biogas; ICS)
  - 6 Financial Service Providers (Development Banks; MFIs; Intermediaries)

- Piloted:
  - Microfinance-led consumer financing model in Nepal (135,000 products sold by 4 financial service providers)
  - Uganda market entrance of one of the largest global solar PayGos (+41,000 products sold over 2 years)
  - Cookstove manufacturer using SACCOs as last mile distributor to address affordability, credit scoring and repayments via group liability
  - Digital platform in Nepal to crowdsource external investment for solar water pump installations and digital platform in Uganda to improve investor confidence for PayGo solar home system receivables finance
  - Nearly 50% of energy service providers in portfolio using grants to integrate PayGo financing option into product offering
Category 2: NGOs & Foundations

Presented by ARE Awards 2019 Jury Member:

**Martin Hiller**, *Director General, REEEP*

Replaced by:

**John Tkacik**, *Head, Energy Information and Analytics, REEEP*
Nominees:

Artgeo Foundation (Liberia)

Green Empowerment (Nicaragua)

Guakia Ambiente (Dominican Republic)
Winner:
Guakia Ambiente
(Dominican Republic)
GUAKÍA AMBIENTE ("We the environment") is a Dominican NGO that promotes environmental sustainability through community empowerment. The guiding principles are: self-determination of local communities, learning-by-doing, networking, spirit of service.

The challenge: Respond a primary need of people, i.e. lack of electricity.

The solution: Community micro hydropower systems, which turn into an integral intervention.

Innovation:
- Development of local solutions with incidence on the global system.
- Empowerment of local groups.
- Multi-stakeholder platform oriented to the achievement of the same objective.

Achievements:
- 49 micro hydropower systems working and over 20,000 people benefited, with more than 1.3 MW of installed capacity.
- More than 70 km² reforested and/or conserved.
Category 3: Private Sector in Australia, Europe & North America

Presented by ARE Awards 2019 Jury Member

**Martin Hiller**, *Director General*, REEEP

Replaced by:

**John Tkacik**, *Head, Energy Information and Analytics*, REEEP
Nominee and Winner:

Tesvolt GmbH
(Germany)
The challenge

Avocado production requires a lot of water 5000m³/ha, on average, about 280 litres of applied water are required to produce a kilogram of avocados. Reliable power supply and energy independence is becoming one of the key focus in the farming community.

The solution

The ground-mounted 53kW LG Neon stand-alone PV system with the 2 different battery storage technologies are capable to run the farm 100% on renewable sources.

The implementation

160 kWh Aquion Hybrid Ion battery storage system (salt-water batteries) was already installed but they couldn’t supply the high current demand. In order to meet high surge demand 48kWh TESVOLT TS was used as a 3rd cluster to provide fast discharge option. The ground mounted 53 kW stand-alone LG Neon2 PV system is capable to run the Farm **100% on renewable sources**.

The innovation and uniqueness

- Environmentally friendly, economical and safe.
- One of the first off grid solutions in the world combining 2 different battery technologies in one multi-cluster system
- New Aquion Battery Management System (test version) was implemented the first time.
- TESVOLT Energy NMC Storage was introduced first time to the Australian market.
- Openable inverter walls (to reduce DC cable length)
Category 4: Private Sector in Africa, Asia & Latin-America

Presented by ARE Awards 2019 Jury Member:

Arthouros Zervos, Chair, REN21
Category 4: Private Sector in Africa, Asia & Latin America

Nominees:

African Power Platform (Sub-Saharan Africa)

Artgeo Foundation (Liberia)
Winner:
Artgeo Foundation (Liberia)
Rural Electrification using Solar Technology

Artgeo Foundation, Inc. is a non-profit organization, to restore electricity to rural inhabitants. 80% of our revenue in-take is internal initiative.

Our Sept. 2018 feasibility studies engaged 2,000 communities with estimated 450,000 inhabitants as primary beneficiaries due to extreme demands for electricity in rural Liberia. Only 3% of Liberia’s 4.5 million population has access to electricity!

Challenges
1) Logistical constraints (vehicles)
2) Cost intensive (lack of financial support)
3) High demands (limited supplies)

Solutions
✓ Solar PV Technology is the fastest way to remedy the demands as government could take more than 30 years to reach rural dwellers.

Achievements
❑ We have connected 2 clinics and 1 hospital and nearly 160 homes and two youth recreation centers in the north. The health facilities serve 3 districts and accommodate nearly 3 hundred patients a day.

Innovative
❑ This is the first of its kind in the north since Liberia’s independence in 1847 and is being overwhelmingly embraced by local authorities
Category 5:
Government in Africa, Asia & Latin-America

Presented by ARE Awards 2019 Jury Member:

Rana Ghoneim, Chief, Energy Systems & Infrastructure Division, UNIDO
Category 5: Government in Africa, Asia & Latin America

Nominees:

Sarawak Energy (Malaysia)

Hemeva SAS & Ministerio de Relaciones Exteriores de Colombia - MREC (Colombia)
Category 5: Government in Africa, Asia & Latin America

Winners:

Hemeva SAS (Colombia)

Ministerio de Relaciones Exteriores de Colombia – MREC (Colombia)
The Borders Plan (BP) is an integral and strategic response promoted by the Colombian government to the daily challenges presented in frontier regions.

The BP acts as a coordinator between agencies, state entities and the government, searching for harmony and effectiveness on efforts and institutional interventions to make.

The Plan aim is to prompt for economic and social development of the frontier communities of the country, through the creation of economic opportunities and social inclusion, as it also reinforces integration with neighboring countries.
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<th>THE SOLUTION</th>
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| **Sarrapia** community starts in 2017 a productive entrepreneurship with the creation of “Chejeru – Woman’s House” and “Artisan Cooperative” to produce and sell clothes (for their and near communities) and handicrafts for national and international markets. As an off-grid community they use a **diesel generator** for their activities, but the supply of diesel was not constant and only a few hours of energy availability. **Borders Plan** contract **Hemeva** to design, supply, install, commissioning and train the community in preventive maintenance of a **PV system** to supply energy to 25 sewing machines and lighting. | **Sarrapia** is a remote community, belong to the **Unified Indigenous Reservoir “Mataven’s Jungle”**, located in the basin of the Orinoco River, close to the Venezuelan Border, with no access to electricity. The **PV system** charges a battery bank during the day. The battery system with **Studer inverter** ensures continuous electricity supply and 24/7 energy availability to the equipment installed there, if they ensures a rational and efficient use of energy | The system installed **reduce** the use of **Diesel in 100%**, with all the other facts of the diesel usage (noise, air quality, inefficiency, oil waste, filters, spills) Now they have a **24/7 energy availability**, so they can **schedule** in a better way the cooperative labors with the other community compromises and reduce night working time. An strategy for remote communities integration, women’s empowerment and sustainable development. | **Selected for good quality and long lifespan and warranties:**  
**PV:** 22x320Wp - 7.04 kWp  
**BB:** 8x1225Ah/6V (1225Ah/48V)  
**SC:** 1xVS – 120 MPPT  
**INV:** 1xXTH6000-48-01 |

**Spirale Foundation** was born from Sarrapia experience, to bring Solar Street Lights (SSL). Right now is under a raise money campaign to install 30 SSL in Sarrapia (3 are already installed).
Category 6: Best Off-Grid Project

Presented by ARE Awards 2019 Jury Chair:

Guilherme Collares Pereira, Vice-President & ARE Awards 2019 Jury Chair, ARE
Category 6: Best Off-Grid Project

Nominees:

- SHINE (Burundi)
- RVE.Sol (Kenya)
- Mytilineos SA (Greece)
Category 6: Best Off-Grid Project

Winner:
MYTILINEOS
(Greece)
OUR HYBRID/OFF-GRID PROJECT: ELECTRIFICATION OF NIGERIAN UNIVERSITIES

RURAL ELECTRIFICATION INITIATIVE BY THE FEDERAL GOVERNMENT OF NIGERIA FOR THE DEVELOPMENT OF IPPS FOR THE GENERATION AND PROVISION OF UNINTERRUPTED POWER SUPPLY TO 37 UNIVERSITIES AND 7 TEACHING HOSPITALS IN THE COUNTRY.

PHASE I: **9.3 MWP OF SOLAR PANELS** & **5,760 BATTERY CELLS** WILL BE INSTALLED, MAKING 4 UNIVERSITIES 100% AUTONOMOUS FROM THE GRID

+ **STREET LIGHTING** WITHIN THE CAMPUSES FOR SAFE & SECURE LEARNING ENVIRONMENT
+ **ONE TRAINING CENTER** FOR THE STUDENTS OF EACH UNIVERSITY

- **OVER 120,000 STUDENTS & 28,000 STAFF** WILL HAVE ACCESS TO UNINTERRUPTED POWER
- **156 ACCESS ROADS AND 2,850 STREET LIGHTS** WILL BE ILLUMINATED
Category 7: Best Start-Up

Presented by ARE Awards 2019 Jury Chair:

Guilherme Collares Pereira, Vice-President & ARE Awards 2019 Jury Chair, ARE
Category 7: Best Start-Up

Nominees:

Technosol (Kenya)

Lifi LED (Liberia)

Cour Comme Une (Ivory Coast)
Winner:

Lifi LED
(Liberia)
Rural Electrification in Africa

- In Africa, the problem of the energy deficit and its corollary of access to electricity for all, as well as the problem of high-speed Internet connectivity, considerably hamper both economic and social development.

- Make Africa an intelligent continent through the combination of solar energy and innovative communication technology. A continent where light does bring hope. That of sustainable and inclusive development.
This evening, 18h30 – 20h: Networking Reception at the Cafeteria (Ground Floor)

14 Mar: Knowledge & Business Matchmaking

- 08h00: Registration
- 09h00: Welcome remarks

Outlook into next year: In case of interest to contribute to the 6th ARE Energy Access Investment Forum 2020, kindly contact Marcus Wiemann
Thank you!

We look forward to see you at **Intersolar Europe** in Munich, 15-17 May 2019