SE4All High Impact Opportunity Clean Energy Mini-grids:

Mapping of clean energy mini-grid support providers and programmes

SUSTAINABLE
ENERGY FOR ALL

THE SE4All HIGH IMPACT OPPORTUNITY CLEAN ENERGY MINI-GRIDS: Mapping of clean energy mini-grid support providers and programmes

First Edition

Publication date: May 2015

Authors: Marcus Wiemann (ARE) and David Lecoque (ARE)

With the contributions of: ABB, Absolute Energy Africa, Accenture Development Partnerships, AECF AFRICA, Africa-EU Renewable Energy Cooperation Programme (RECP), African Association for Rural Electrification (CLUB-ER), African Development Bank (AfDB), African Network for Solar Energy (ANSOLE), African Trade Insurance Agency, Agencia Española de Cooperación Internacional para el Desarrollo (AECID), Bloomberg New Energy Finance (BNEF), CEFA Onlus, cKinetics, Coperson-Hill Nigeria Limited, CrossBoundary Energy, De Montfort University, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, Dunamai Energy, E2P Enterprises, ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE), EDP – Energias de Portugal, S.A., Energising Development (EnDev), Energia sin fronteras (Esf), EOLICAR SRL, EU Energy Initiative Partnership Dialogue Facility – EUEI PDF, European Investment Bank (EIB), First Solar, Inc., Fondazione ACRA-CCS, Fonds Francais pour l'Environnement Mondial (FFEM), Foundation Rural Energy Services (FRES), Global Lighting and Energy Access Partnership (Global LEAP), GoSolar Africa, GVEP International, IBERDROLA, Innovation Energie Développement, IED Invest, Inter-American Development Bank (IDB), International Renewable Energy Agency (IRENA), IQgrid Ltd., Kaboni, Ministry of Energy and Petroleum Kenya, Lawrence Berkeley National Laboratory, Limyè Pa w, Malawi Energy Regulatory Authority (MERA), Malmok Vision, ME SOLshare Ltd., Mera Gao Power, Nevada Solar Designs, NRECA International, OPEC Fund for International Development (OFID), Plan International Spain, PowerGen Renewable Energy, Rassembleurs d'Energies (ENGIE ex-GDF SUEZ), Reiner Lemoine Institut gGmbH (RLI), Remergy A/S, Renewable Association of Nicaragua, Republic Of The Philippines - Department Of Energy, Rockefeller Foundation, Rural Renewable Energy Alliance, Schneider Electric, SE4All Global Facilitation Team (GFT), Sierra Club, Smart Hydro Power GmbH, SNV Netherlands Development Organisation, Société des Energies de Côte d'Ivoire - CI-ENERGIES, Solteq Energy bv, Statera Capital, Sustainable Agriculture Community Development Programme (SACDEP-Kenya), Technolectric Ltd., Tessa Power, Trama TecnoAmbiental, S.L., Trojan Battery Company, UK Department for International Development (DFID), United Nations Environment Programme (UNEP), VITO, Yiitidi Ltd.

With the financial support of:
Rockefeller Foundation and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Photos courtesy of Engineers without Borders, FRES

Mapping of clean energy mini-grid support programmes - HIO Working Group

Alliance for Rural Electrification (ARE)
Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ)
EU Energy Initiative Partnership Dialogue Facility (EUEI PDF)
Rockefeller Foundation (RF)
SE4All Global Facilitation Team (GFT)
UK Department for International Development (DFID)
United Nations Environment Program (UNEP)
United Nations Foundation (UNF)

Contents

1. Foreword
SE4All

Dear Colleagues,

On behalf of Sustainable Energy for All, we are pleased to share with you the first version of the mapping of funding and support services to clean energy mini grids. This work is a product of the Clean Energy Mini-grids High Impact Opportunity (HIO), an international framework that strives to multiply the impact of existing and upcoming efforts in the area of clean energy mini-grids. With a current membership of 145, and under the leadership of a coordinating committee, this HIO focuses on supporting the establishment of an enabling ecosystem for accelerated investment, deployment and replication of clean energy mini-grids grids towards the target of 40% access via mini-grids by 2030.

The HIO is a platform to address the following agreed-to barriers to mini-grid deployment:

- Inadequate regulation, policy gaps or uncertainty
- Early stage market fragmentation and unmade linkages
- Capacity issues and lack of standardisation
- Lack of proven commercial business models
- Lack of access to affordable longer term finance

The mapping information presented here has been assembled as a first step to accelerate the linkage of the demand and supply of funding and support, with a goal of identifying funding gaps. **This will be followed later in 2015 with a survey by the UN Foundation of its extensive Energy Access Practitioner Network membership and by support of the Alliance for Rural Electrification, for a second edition of its investment directory to be released in late 2015. This will include a specific section focusing on a range of mini-grid practitioners, that will provide intelligence on what business models and technologies are being prioritised, promising opportunity areas, what types of electricity needs are being served, and what types and amounts of funding are required.** The overall objective is to better understand the market structures as well as current and upcoming developments for mini-grids (e.g. number and type of market players on supply and demand side, type of mini-grid technologies deployed), with a goal to inform the placement of donor funds more effectively into the sector. We hope that this information will benefit mini-grid stakeholders through increased access to information on what donors and funders are doing and where, enabling them to adapt their business strategies and priorities accordingly, and better understand who can assist them to fill the technical or financial gaps in their projects. The intent is to increase their ability to actually implement projects and provide a solid basis for scaling them up, thus leading to increased access to clean energy services.

The Clean Mini-grid HIO welcomes your feedback and comments through the SE4All Collaboration Platform. For more information, please visit: http://www.se4all.org/hio/clean-energy-mini-grids/.

Best,
Christine Eibs Singer
Senior Advisor
Sustainable Energy for All

2. Introduction & Key findings

by the Alliance for Rural Electrification (ARE)

Dear clean energy mini-grid stakeholders,

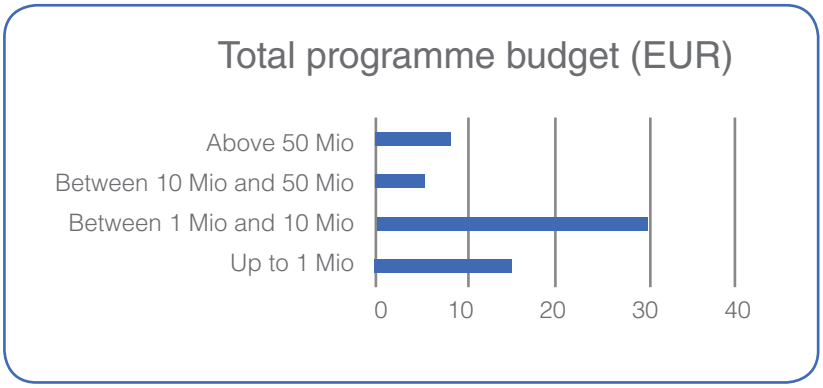
The clean energy mini-grid sector is crucial in providing clean energy access and alleviating poverty in developing countries, but is hampered by a number of barriers such as early stage market fragmentation and unmade linkages. To address this issue, the **Clean Energy Mini-Grids HIO set out to map public, philanthropic and commercial sources of funding, technical and other support available for the implementation of clean energy mini-grids.**

To do so, the Alliance for Rural Electrification on behalf of the **HIO collected information on the relevant activities of a broad group of stakeholders** from the whole clean energy mini-grids value chain. The results of this project, the first of its kind made possible by the kind financial support of the Rockefeller Foundation and Deutsche Gesellschaft fuer Internationale Zusammenarbeit GmbH (GIZ) and more importantly by the input from a wide range of stakeholders in the mini-grid markets are reflected in this first edition and an online tool on the SE4All website for the benefit of all stakeholders.

The mapping project contributes to **enabling private actors** to make informed decisions, implement more scalable projects and optimise their business strategies. International and national public **institutions and donors can utilise the mapping** in their ongoing preparation and development of **country level support programmes**. The mapping will also help them both in **aligning activities to SE4All priorities** and on the strategic level help to **improve coordination** in the sector.

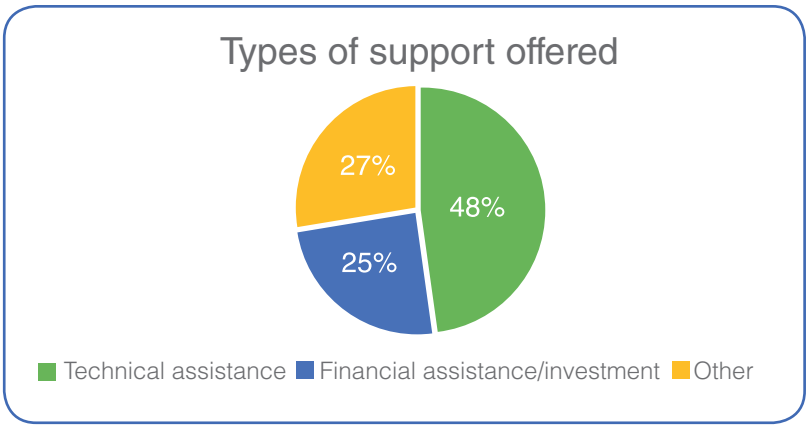
In terms of outcome, the mapping project received **good feedback from** mini-grid stakeholders, chiefly **international (development) organisations, private companies, NGOs, finance institutions and academia.** Key public sector respondents include AfDB, DFID, ECREEE, EIB, EnDev, EUEI PDF, GIZ, Global LEAP, IDB, IRENA, SNV and UNEP and as well as relevant government bodies as for example of Kenya, Malawi, Spain and the Philippines. Key private companies, foundations and funds include the ACRA-CCS, EDP, FFEM, FRES, GVEP International, IED, OFID, Rassembleurs d'Energies (ENGIE), Rockefeller Foundation, Schneider Electric, Trojan Battery, and many others.

It appears that a clear **majority of clean energy mini-grid support programmes have a budget up to 10 Mio EUR, followed by budgets above 50 Mio EUR and between 10 and 50 Mio EUR**. Two-thirds of these programmes are operational, one-third being in the planning stages.



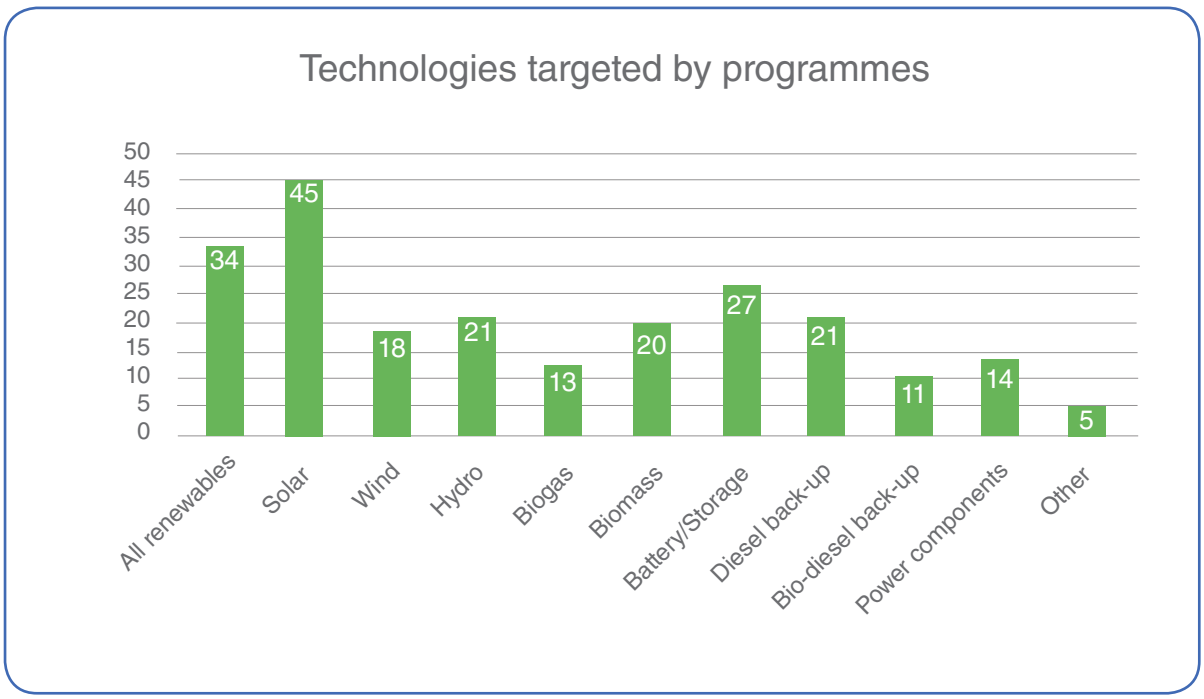
The **majority of the programmes offer technical assistance**, prioritising feasibility study support, business plan development and technical, environmental and social assessment of projects. A number of initiatives also support financial modelling, market and risk assessment and the marketing of projects to financiers and buyers, as well as other elements such as GIS maps and operator training.

With regard to the type of **financial assistance or investment** offered by a quarter of the programmes, results show that grants are most commonly used (35%), followed at a distance by loans (17%), equity (15%) and further financial mechanisms (33%) such as hybrid capital, convertible grants, venture capital, guarantees and other types of credit enhancement. These instruments are used either individually or in combination, and may require (co-)investment by a private project developer or third party.

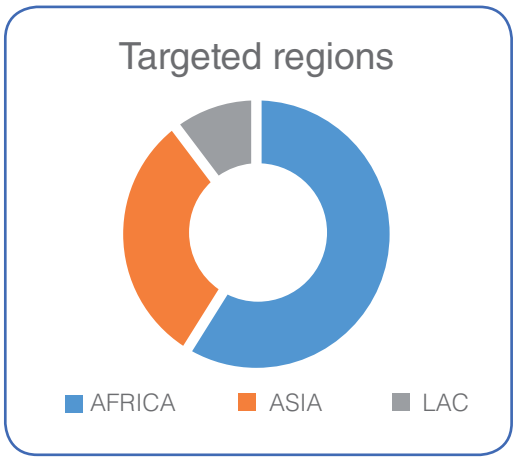


In addition to technical and financial assistance, clean energy mini-grid stakeholders are also providing **many other** types of support. The most common initiatives are policy advisory services, training of policy makers and organising dialogue events. A significant number of programmes are also engaged in association support, awareness campaigns, community involvement and support for household and/or non-household energy users such as telecom, agriculture, water, tourism, education and health sectors.

Taken together, the clean energy mini-grid programmes support a **wide array of renewable energy technologies** (RET). They may favour all RET or focus on one or several specific technologies. Individually, solar energy stands out as the most favoured generation technology, followed by batteries/storage, hydro, diesel back-up, biomass and wind. A number of programmes also encompass power components, biogas and biodiesel back-up.



Finally, the programmes span vast regions and a large number of countries. The **most targeted developing region is Africa,** with Kenya, Tanzania, Uganda and Nigeria in the lead. The **second region is Asia**, in particular India, Indonesia, Bangladesh and the Philippines. **Latin America and the Caribbean (LAC)** had Peru, Brazil and Nicaragua standing out.



In conclusion, it is clear that clean energy mini-grids are gathering ever more pace as crucial sustainable solutions to deliver universal access to electricity. Given the huge need and growing demand for clean energy, it will be crucial for policymakers, funders, Civil Society Organisations (CSOs) and private companies alike to keep building on the momentum and put the right tools in place to at last eradicate energy poverty.

In this regard, as also appears from the first edition of this survey, financial flows must be vastly increased if the SE4ALL objectives are to be achieved by 2030. Indeed, to achieve universal access to electricity, the IEA estimates that an average annual investment of USD 45 billion is required (compared to USD 9 billion estimated in 2009). More than 60 percent of the incremental investment required would have to be made in Sub-Saharan Africa and 36 percent in developing Asia. SE4All itself plays a key role to help reach this objective, by bringing together stakeholders, raising awareness and thus attracting financing for already available sustainable energy technology solutions .

It is a great pleasure for ARE and its membership to be a proactive supporter of the SE4All initiative. In this regard we are happy to thank the HIO Steering Committee as well as the HIO working group for this project - composed of Christine Eibs-Singer (SE4All), Dean Cooper (UNEP), Bozhil Kondev (GIZ), Michael Franz (EUEI PDF), Richenda Van Leeuwen (UNF), Steven Hunt (DFID) and Clare Boland Ross (Rockefeller Foundation), for their strong support as well as the ARE Board and more importantly all stakeholders providing input to my colleague David Lecoque, ARE Policy and Business Development Officer, who put a lot of efforts into this work to present the results at the 2nd SE4All Forum in New York on 18th to 21th May 2015. Finally, the authors would like to express their gratitude to all the expert contributors and reviewers for their valuable comments and inputs.

Please enjoy reading and make best use of information provided.

Marcus Wiemann
Executive Director
Alliance for Rural Electrification

3. Overview of Clean Energy Mini-Grid Support Providers & Programmes

1. ABB

ORGANISATION PROFILE

NAME OF ORGANISATION	ABB
COMMITMENT TO MINI-GRIDS	Comprehensive portfolio of solutions for grid stabilisation, Microgrids and renewable energy integration.
MINI-GRID PROGRAMME	Microgrids and Renewable Integration
CONTACT	http://new.abb.com/power-generation/microgrids-solutions

PROGRAMME

NAME OF THE INSTITUTION	ABB - Asea Brown Boveri
INSTITUTION TYPE	Corporate firm
NAME OF THE PROGRAMME	Microgrid Solutions
CONTACT	Pablo Astorga pablo.astorga@es.abb.com
TYPES OF SUPPORT	• Technical assistance • Other: Provision of solutions for Microgrids and the integration of renewable energy
COUNTRIES	Worldwide
REGION/LOCATION WHERE PROGRAMME IS OPERATIONAL	Worldwide
TYPE OF TECHNICAL ASSISTANCE OFFERED	• Feasibility study support • Business plan development • Technical evaluation • Technical validation • Financial modelling • Market and risk assessment • Marketing of projects to financiers and buyers • Environmental and Social Impact Assessments
TYPES OF MINI-GRID PROJECTS ELIGIBLE FOR SUPPORT	• Greenfield • Brownfield
PROGRAMME BENEFICIARY	• National/local public authority • Manufacturing • Installation • Operation • Maintenance • Consultancy/Research: Resource assessment • Consultancy/Research: Community surveys • Consultancy/Research: Policy • Private company • Non-governmental organisation
TYPE OF TECHNOLOGY	• Solar • Wind • Hydro • Battery/Storage • Power components

2. Absolute Energy Africa

ORGANISATION PROFILE

NAME OF ORGANISATION	Absolute Energy Africa
MISSION STATEMENT	AEA aims to create an energy revolution across Sub-Saharan Africa, bring affordable and reliable electricity to rural populations, thus providing the bases for faster sustainable economic and social development and growth.
COMMITMENT TO MINI-GRIDS	Small, spread and easy-to-built off-grid renewable plants would allow to connect a huge number of people living in rural areas. AEA believes that an energy supply should be: • Reliable to avoid discontinuity of service, fostering the development of commercial activities; • Accessible for all, also in remote locations where it is too costly to extend the main transmission grid; • Fast time to market, to reach the rural population and to reduce the construction time for each individual power plant; • Modular in generation and storage to adapt the plant to the demand of the community in line with its growth, with a relative ease of expansion; • Green, using sustainable generation source.
MINI-GRID PROGRAMME	Rural electrification in Sub-Saharan Africa
CONTACT	Alberto Pisanti +39 0686765686 alberto.pisanti@ae-capital.com www.ae-capital.com

PROGRAMME

NAME OF THE INSTITUTION	Absolute Energy Africa
INSTITUTION TYPE	Independent investment platform focused on the development, construction and management of RE projects
NAME OF THE PROGRAMME	Rural electrification in Sub-Saharan Africa
TOTAL PROGRAMME BUDGET (EUR)	Between 1 Mio Euro and 10 Mio Euro
WEBSITE	www.ae-capital.com
CONTACT	Alberto Pisanti +39 0686765686 alberto.pisanti@ae-capital.com
TYPES OF SUPPORT	• Technical assistance • Financial assistance / investment • Other: supporting local businesses
OBJECTIVES	The objective is to provide electrification from renewable energy sources, supporting the sustainable economic growth of the local populations.
COUNTRIES	Uganda
SHORT DESCRIPTION	AEA's instrument fosters and follows local development through an innovative approach based on: easily scalable modular generation systems, direct sale of electricity to consumers, cutting-edge technological solutions, investing in beneficiaries' growth to ensure the project's sustainability and major social impact.
TYPE OF FINANCING AND/OR CREDIT ENHANCEMENT	Equity: 50 % of project value
TYPES OF MINI-GRID PROJECTS ELIGIBLE FOR SUPPORT	Required investment by private third party: 50 %
PROGRAMME BENEFICIARY	• Distribution • Installation • Operation • Maintenance • Training providers: Business • Training providers: End-users • Consultancy/Research: Resource assessment • Consultancy/Research: Community surveys
TYPE OF TECHNOLOGY	All renewable energy sources

3. Accenture Development Partnerships

accenture
High performance. Delivered.

ORGANISATION PROFILE

NAME OF ORGANISATION	Accenture Development Partnerships
MISSION STATEMENT	Accenture helps Organisations assess how to maximise their performance and works with them to achieve their vision. We develop and implement technology to improve our clients' productivity and efficiency – and may run parts of their business. Ultimately, we enable our clients to become high-performance businesses and governments.
COMMITMENT TO MINI-GRIDS	Accenture has been involved in the strategic development, assessment and analysis of mini-grids ranging in a variety of sizes.
MINI-GRID PROGRAMME	Accenture and the University of Notre Dame have partnered on a mini-grid program called: CE3 – Connectivity, Electricity, and Education for Entrepreneurship. This program has piloted in three locations in Northern Uganda, and hopes to expand to additional locations both in Uganda and South Africa this year.
CONTACT	David Taylor David.taylor.jr@accenture.com www.accenture.com

PROGRAMME

NAME OF THE INSTITUTION	Accenture Development Partnerships
INSTITUTION TYPE	Consultancy
NAME OF THE PROGRAMME	Energy Access for Development Impact (EADI)
TOTAL PROGRAMME BUDGET (EUR)	Up to 1 Mio Euro
TYPES OF SUPPORT	Technical assistance
COUNTRIES	• Botswana • Brazil • South Africa • Tanzania, United Republic of • Thailand • Uganda • Zambia • Ethiopia • Ghana • India • Indonesia • Malaysia • Mozambique • Nigeria • Philippines
STATUS	Operational – open end
TYPE OF TECHNOLOGY	All renewable energy sources

4. AECF AFRICA

ORGANISATION PROFILE

NAME OF THE INSTITUTION	AECF AFRICA
NAME OF THE PROGRAMME	REACT (Renewable Energy and Adaptation to Climate Technologies)
TOTAL PROGRAMME BUDGET (EUR)	Above 50 Mio Euro
WEBSITE	www.aecfafrica.org/windows/react-window
TYPES OF SUPPORT	Financial assistance / investment
OBJECTIVES	REACT's goal is to contribute to reducing rural poverty in Sub-Saharan Africa. Its purpose is to catalyse private sector investment and innovation in low cost, clean energy and climate change technologies.
COUNTRIES	Kenya
REGION/LOCATION	Sub Saharan Africa
SHORT DESCRIPTION	The AECF provides grants and interest free loans to businesses to implement innovative, commercially viable, high impact projects in rural Africa. The Renewable Energy and Adaptation to Climate Technologies (REACT) Window is a special fund of the AECF that is open to business ideas based on low cost, clean energy; and solutions that help small holder farmers adapt to climate change.
TYPE OF TECHNOLOGY	• Solar • Biogas • Biomass

5. Africa-EU Renewable Energy Cooperation Programme (RECP)

ORGANISATION PROFILE

NAME OF ORGANISATION	Africa-EU Renewable Energy Cooperation Programme (RECP)
MISSION STATEMENT	The Africa-EU Renewable Energy Cooperation Programme (RECP) is a multi-donor programme promoting renewable energy market development and investment in Africa. It is rooted in the Africa-EU Energy Partnership (AEEP), and contributes to the strategic goals and objectives of both, the AEEP as well as the SE4All. It serves "meso-scale" projects aiming to fill the gap between conventional infrastructure-scale support programmes on the one hand and those for household-scale support on the other, thereby addressing a segment of strategic importance for development of Africa's energy sector.
COMMITMENT TO MINI-GRIDS	Mini-grids projects involving renewable energy (i.e. fully renewable, or hybrid) are suitable for RECP support.
NAMES OF YOUR ORGANISATION'S MINI-GRID PROGRAMME	The RECP supports mini-grids through: • Long- and short-term advisory services for policy and regulatory frameworks (e.g. the Mini-grid Policy Toolkit, or the regional project with SADC / RERA); • Capacity building for Rural Electrification Agencies; • Development of market information products; • Identification of investment opportunities through a project scouting; • Helping projects find business partners through match making events; • Advisory in early-stage project preparation; • Supporting projects in identifying and accessing relevant sources of finance; • Building local skills through TVET and higher education support.
CONTACT	Contact: recp@euei-pdf.org Dr Mike Enskat Programme Manager mike.enskat@euei-pdf.org http://africa-eu-renewables.org/

6. African Association for Rural Electrification (CLUB-ER)

ORGANISATION PROFILE

NAME OF ORGANISATION	African Association for Rural Electrification (CLUB-ER)
MISSION STATEMENT	The CLUB-ER is a network of around 40 African national agencies and structures in charge of rural electrification. Through experience-sharing and feedback, the CLUB-ER intends to reinforce capacities of its members and function as a platform to discuss the different issues linked to rural electrification.
COMMITMENT TO MINI-GRIDS	Between 2002 and 2014, the CLUB-ER has organized 22 workshops and 9 technical trainings. Two workshop and a thematic conference on Green Mini-grids were organised in 2012 and 2013. In 2011 a specific training was organised on PV-Hybrid systems. A workshop on off-grid Renewable energy financing was carried out in 2014. The CLUB-ER aims at becoming an international platform of exchange and discussions in the field of MG in Sub-Saharan Africa.
CONTACT	Silvia Puddu secretariat@club-er.org www.club-er.org

PROGRAMME

NAME OF THE INSTITUTION	African Association for Rural Electrification (CLUB-ER)
INSTITUTION TYPE	Non-governmental Organisation
NAME OF THE PROGRAMME	African Association for Rural Electriifcation (CLUB-ER)
WEBSITE	www.club-er.org
TYPES OF SUPPORT	Other: Capacity building
OBJECTIVES	The CLUB-ER aims at strengthen capacities in the field of rural electrification, Min-grids was one of the focus in the past 3 years and trainings on Mini-grids and on PV-Diesel hybrid systems have been carried out.
COUNTRIES	• Benin • Burkina Faso • Gabon • Ghana • Guinea • Kenya • Rwanda • Senegal • Sudan • Tanzania, United Republic of • Togo • Uganda
	• Madagascar • Malawi • Mali • Morocco • Mozambique • Niger • Burundi • Nigeria • Zambia • Cameroon • Central African Republic • Chad • Congo • Congo, The Democratic Republic of The • Cote D'ivoire • Djibouti
REGION/LOCATION	Africa
STATUS	Operational – open end
TYPE OF TECHNOLOGY	All renewable energy sources • Solar • Wind • Hydro • Biogas • Biomass • Battery/Storage • Diesel back-up • Biodiesel back-up • Power components

7. African Development Bank

ORGANISATION PROFILE

NAME OF ORGANISATION	African Development Bank
MISSION STATEMENT	The overarching objective of the African Development Bank (AfDB) Group is to spur sustainable economic development and social progress in its regional member countries (RMCs), thus contributing to poverty reduction. The Bank Group achieves this objective by: • mobilising and allocating resources for investment in RMCs; • providing policy advice and technical assistance to support development efforts.
COMMITMENT TO MINI-GRIDS	The development of a strong Green Mini-Grid market in Africa is a necessary step to achieve universal energy access in Africa, but the market is still in its infancy stage. The African Development Bank's Green Mini-Grid (GMG) Africa Market Development Programme and Country Packages are designed to address key barriers that limit widespread adoption of GMGs by improving market intelligence, supporting business developers, addressing policy and regulatory issues, improving quality control and standardisation, and improving access to finance for GMG projects. AfDB's interventions aim to help transform the GMG sector in Africa from a nascent and sporadic series of pilot projects to a thriving industry.
MINI-GRID PROGRAMME	GMG Africa Market Development Programme (MDP), implemented by SE4All Africa Hub and funded by the Sustainable Energy Fund for Africa (SEFA). GMG Africa Country Support Packages, funded through the enabling environment window of SEFA.
CONTACT	Joao Cunha j.cunha@afdb.org www.afdb.org/en/ Andrew Carter a.carter@afdb.org

PROGRAMME

NAME OF THE INSTITUTION	African Development Bank
INSTITUTION TYPE	Development Organisation
NAME OF THE PROGRAMME	Green Mini-Grid Market Development Programme and Country Support Packages
TOTAL PROGRAMME BUDGET (EUR)	Between 1 Mio Euro and 10 Mio Euro
CONTACT	Joao Duarte Cunha +225 20 26 10 20 j.cunha@afdb.org
TYPES OF SUPPORT	• Technical assistance • Other: Policy advisory support
OBJECTIVES	Removing or reducing market barriers and strengthening the ecosystem for the scaling-up of GMGs investments in Sub-Saharan Africa.
COUNTRIES	• Benin • Botswana • Burkina Faso • Burundi • Cameroon • Cape Verde • Central African Republic • Chad • Comoros • Congo • Congo, DRC • Cote D'ivoire • Equatorial Guinea • Eritrea • Ethiopia • Gabon • Gambia • Ghana • Guinea • Guinea-Bissau • Kenya • Lesotho • Liberia • Madagascar • Malawi • Mali • Mauritania • Mozambique • Namibia • Niger • Nigeria • Rwanda • Sao Tome and Principe • Senegal • Seychelles • Sierra Leone • Somalia • South Africa • Sudan • Swaziland • Tanzania • Togo • Uganda • Western Sahara • Zambia • Zimbabwe

PROGRAMME (continued)

REGION/LOCATION	Sub-Saharan Africa
SHORT DESCRIPTION	As part of the Green Mini-Grid Programme finance by DFID, the African Development Bank will be launching a regional Market Development Program (MDP) as well as up to 5 targeted Country Packages of support. These initiatives are currently in the design phase, and are expected to be launched in Q3 2015. The MDP will be delivered in a phased approach following 5 business lines: 1. Market Intelligence 2. Business Development Support 3. Policy and Regulatory Support 4. Quality Assurance 5. Access to Finance The Country Packages will support up to 5 countries, selected through a demand-driven process. Potential actions to be financed are: • Policy Development Processes • Sector Planning & Resource Assessments • Training & Capacity Development • Consultations & Awareness • Feasibility studies (demonstration projects) • Risk mitigation strategies
STATUS	Planned launch date: 31 July 2015
TYPE OF TECHNICAL ASSISTANCE OFFERED	• Feasibility study support: Feasibility study support may be delivered in the context of demonstration projects as part of the country packages. Tools and methodologies for site surveys and feasibility studies are expected to be made available through the Market Development Program. • Business plan development: Support for business plan development will be made available through the Business Development Support component of the Market Development Program. • Technical evaluation: Technical evaluation is expected to be provided as part of the Business Development Support component of the Market Development Program. • Technical validation: Technical validation is expected to be provided as part of the Business Development Support component of the Market Development Program. • Financial modelling: Template financial models and advisory support will be provided to developers as part of Business Development Support within the Market Development Program. • Market and risk assessment: Market and risk assessment activities will take place as part of the Market Intelligence component of the Market Development Program, and possible within the Country Packages. • Marketing of projects to financiers and buyers: Some marketing of projects may take place as part of the Access to Finance business line of the Market Development Program. • Environmental and Social Impact Assessments: Methodological support for Environmental and Social Impact Assessments may be provided as part of the Business Development Support component of the Market Development Program. • Other: It is envisaged that a virtual help-desk will be set up to support mini-grid project developers with a variety of business development issues, such as market sizing / demand assessment, technical and financial feasibility assessment, regulatory compliance, business model design, grant applications, financial structuring raising of equity and debt, government interface, human resources, institutional capacity, and community engagement.
OTHER SUPPORT	• Training of policy makers: Training of policy makers is expected to take place as part of the Country Packages, and may also be included in later phases of the Market Development Program. • Organisation of dialogue events: It is highly likely that some dialogue events may be organised in the context of all of the business lines of the Market Development Program. • Policy advisory: Policy advisory support will be delivered as part of the Country Packages • Association support: Association support may be included in later phases of the Market Development Program • Awareness campaigns: Awareness campaigns will be delivered as required in the context of the Market Development Program.

PROGRAMME (continued)

TYPES OF MINI-GRID PROJECTS ELIGIBLE FOR SUPPORT	• Greenfield and Brownfield • Required % of investment by private project developer and/or by private third party is to be determined. • Preference is for projects resulting in new connections
PROGRAMME BENEFICIARY	• National/local public authority • Financier: Business • Private company • Non-governmental organisation
TYPE OF TECHNOLOGY	• All renewable energy sources • Solar • Wind • Hydro • Biogas • Biomass • Battery/Storage • Diesel back-up • Biodiesel back-up
TARGETED PROJECT CAPACITY (kW)	To be determined
NUMBER OF END-USERS	To be determined
% OF ENERGY USED BY BUSINESSES	To be determined
% OF ENERGY USED BY HOUSEHOLDS	To be determined
PREFERRED BUSINESS MODEL	No pre-determined preference of business model

8. African Network for Solar Energy (ANSOLE)

ORGANISATION PROFILE

NAME OF ORGANISATION	African Network for Solar Energy (ANSOLE)
MISSION STATEMENT	ANSOLE is a platform of exchange among various stakeholders who are all devoted to promote in a concerted way the use of sustainable energy to address the (acute) energy problem in Africa while preserving and protecting the environment. It has three main goals: 1. Fosters technical and vocational training and education (TVET) in renewable energy at various skill levels (capacity building); 2. Fosters research activities in renewable energy among African scientists and non-African scientists who are directly involved in the education of African students and experts (capacity building); 3. Promotes and encourages the use of renewable energy in Africa (substainable development, environmental protection, business mediation, etc).
COMMITMENT TO MINI-GRIDS	Based on its third goal, ANSOLE is committed to promote the use of mini-grids in Africa.
MINI-GRID PROGRAMME	ANSOLE does not yet have its own Mini-grid programme. ANSOLE, however, can be regarded as a platform which facilitates the implementation of Mini-grid programme in Africa.
CONTACT	Prof Dr. Daniel Ayuk Mbi Egbe Daniel.egbe@ansole.org www.ansole.org

9. African Trade Insurance Agency

African Trade Insurance Agency
Agence pour l'Assurance du Commerce en Afrique

ORGANISATION PROFILE

NAME OF ORGANISATION	African Trade Insurance Agency
MISSION STATEMENT	To turn African risk into opportunity by providing insurance and financial products, in partnership with the private and public sectors.
COMMITMENT TO MINI-GRIDS	Provision of Insurance Policies to Energy and Renewable Energy projects including mini-grids.
CONTACT	+254 (0)20 272 6999 / 271 9727 info@ati-aca.org www.ati-aca.org

PROGRAMME

NAME OF THE INSTITUTION	African Trade Insurance Agency
INSTITUTION TYPE	Export Credit Agency (ECA) - Multilateral
NAME OF THE PROGRAMME	ATI Renewable Energy Projects
TOTAL PROGRAMME BUDGET (EUR)	Between 1 Mio Euro and 10 Mio Euro
PRECISE TOTAL PROGRAMME BUDGET (EUR)	Up to 4.7 Mio Euro per transaction
WEBSITE	www.ati-aca.org
CONTACT	African Trade Insurance Agency (ATI) info@ati-aca.org +254 (0)20 272 6999 / 271 9727
TYPES OF SUPPORT	Other: Insurance Policies
OBJECTIVES	• Underwriting tool based in Africa that will also involve other ECAs active in the region with the objective of providing insurance and reinsurance support for renewable energy transactions which includes mini-grids. • Attract other partners with the objective of revitalising the renewable energy landscape in Africa.
COUNTRIES	Kenya
REGION/LOCATION	Africa
SHORT DESCRIPTION	ATI is Africa's Export Credit Agency. The institution provides political risk and trade credit risk insurance products with the objective of reducing the business risk and cost of doing business in Africa. ATI's main goal is to help increase investments into the African member countries and two-way trade flows between Africa and the world. Currently, ATI is seeking for additional capacities, initiatives, funds etc. to specifically promote renewable energy projects in the region within the SE4All initiative.
TYPE OF FINANCING AND/OR CREDIT ENHANCEMENT	Other Credit enhancement: Credit Insurance policy that protects against non-payment risks
TYPES OF MINI-GRID PROJECTS ELIGIBLE FOR SUPPORT	• Greenfield • Required investment by private project developer: 85 %
PROGRAMME BENEFICIARY	• National/local public authority • Manufacturing • Assembly • Distribution • Installation • Operation • Maintenance • Financier: Business • Financier: End-users • Private company
TYPE OF TECHNOLOGY	All renewable energy sources

10. Agencia Española de Cooperación Internacional para el Desarrollo (AECID)

ORGANISATION PROFILE

NAME OF ORGANISATION	Agencia Española de Cooperación Internacional para el Desarrollo (AECID)
MISSION STATEMENT	AECID is the Spanish aid bilateral agency, created in November 1988 as the administering body for the Spanish Development Cooperation policies under the Ministry of Foreign Affairs and Cooperation (MAEC) and within the Secretary of State for International Cooperation and for Latin America (SECIPI). AECID is responsible for elaboration, execution and management of the cooperation programs and projects, either directly, through its own resources, or in collaboration with other national or international Organisations and non-governmental Organisations (NGOs). The Office of FONPRODE in AECID manages the Fund for the Promotion of Development, whose target is fighting against poverty through social and economic impact and financially sustainable funds
COMMITMENT TO MINI-GRIDS	As it is fixed in the Master Plan of the Spanish Cooperation 2013 / 2016, AECID will support strategic sectors or sectors with a promising potential for development, such as the energy sector, in particular, the renewable energy sector, following the UN's initiative: "Sustainable Energy for All", the small, medium and large infrastructure and sustainable tourism or transportation, depending on local demands. This will be a way to further develop markets and widen access to basic services for all of the population (pushing for the transition to "inclusive markets"). Promoting energy efficiency and green growth will be of high priority for the Spanish Cooperation. The AECID's Environment and Climate Change Action Plan includes among its priorities to promote mitigation measures. Mini-grids are one the main action fields considered in the implementation of these measures.
MINI-GRID PROGRAMME	Impulse to the development of renewable energies industrial sector, based on solar energy, for its implementation within the Vietnam national plan for renewable energies 2011-2015, based on the Spanish experience (1M€)
CONTACT	Office of FONPRODE and Financial Cooperation Department +34 91 583 8100 cooperacion.financiera@aecid.es Avenida Reyes Católicos 4 Madrid 28040 Spain www.aecid.es

11. Alliance for Rural Electrification (ARE)

Alliance for Rural Electrification
Shining a Light for Progress

ORGANISATION PROFILE

NAME OF ORGANISATION	Alliance for Rural Electrification (ARE)
MISSION STATEMENT	• International business association representing the decentralised energy sector working towards the integration of renewables into rural electrification markets in developing and emerging countries. • Enabling improved energy access through business development support for more than 90 members along the whole value chain for off-grid technologies by targeted advocacy and facilitating access to international and regional funding. • Global platform for sharing knowledge and best practices to provide for rapid implementation of available and advanced RE technologies and services • ARE Energy Access Services : Early Finance Access – Business Models – Effective Project Implementation
COMMITMENT TO MINI-GRIDS	ARE promotes clean energy mini-grids as they have great potential to reduce energy poverty in a sustainable way, allow for scaling up and can group various renewable generation sources.
MINI-GRID PROGRAMME	Global promotion of Clean Energy Mini-Grids
CONTACT	Alliance for Rural Electrification 00 32 2 709 55 42 are@ruralelec.org • www.ruralelec.org Rue d'Arlon 69 -71 • 1040 Brussels • Belgium

PROGRAMME

NAME OF THE INSTITUTION	Alliance for Rural Electrification (ARE)
INSTITUTION TYPE	• Development Organisation • Non-profit Organisation
NAME OF THE PROGRAMME	Global promotion of Clean Energy Mini-Grids
WEBSITE	www.ruralelec.org
CONTACT	Alliance for Rural Electrification David Lecoque – Policy and Business Development Officer 00 32 2 709 55 25 are@ruralelec.org
TYPES OF SUPPORT	Other: contribute to a business enabling environment for clean energy mini-grids
OBJECTIVES	Promote clean energy mini-grids as they have great potential to effectively reduce energy poverty in a sustainable way, allow for scaling up and can group various renewable generation sources.
COUNTRIES	Worldwide
REGION/LOCATION	Developing countries
SHORT DESCRIPTION	• As private sector partner recognised by SE4All, ARE for example has been co-founder of the High Impact Opportunity (HIO) on Clean Energy Mini-grids and now leads its Secretariat together with the UN Foundation. • Together with EUEI PDF and REN21, ARE developed a "Mini-Grid Policy Toolkit" for policymakers aspiring to make use of experiences made in order to implement a successful mini-grid policy and for all stakeholders to better understand key mini-grid aspects (available on http://euei-pdf.org/thematic-studies/mini-grid-policytoolkit). • In the same vein, in 2014 ARE established a working group to support its Members HNU and i-deee with a study kindly supported by GIZ, firstly to analyse the experiences of practitioners regarding the handling of risk assessment and even more importantly to give recommendations on how to best mitigate risks for investments in mini-grids. Key findings can be found at: http://ruralelec.org/fileadmin/DATA/Documents/06_Publications/RISK_Mitigation_for_Minigrids_EX_SUM_Final.pdf • ARE, by itself or together with cooperation partners, regularly organises dialogue events, workshops and business delegations amongst others to promote and facilitate exchanges on renewables-based rural electrification including clean energy mini-grids.
STATUS	Operational: open end

PROGRAMME	
OTHER SUPPORT	• Organisation of dialogue events • Policy advisory • Awareness campaigns • Involvement of Community • Support for household energy users • Support for non-household energy users (e.g. telecom, agriculture, water, tourism, education and health sectors)
TYPE OF TECHNOLOGY	• All renewable energy sources • Solar • Wind • Hydro • Biogas • Biomass • Battery/Storage • Diesel back-up • Biodiesel back-up • Power components

12. Bloomberg New Energy Finance (BNEF)

ORGANISATION PROFILE

NAME OF ORGANISATION	Bloomberg New Energy Finance
MISSION STATEMENT	Bloomberg New Energy Finance provides unique analysis, tools and data for decision makers driving change in the energy system. With unrivalled depth and breadth, we help clients stay on top of developments across the energy spectrum from our comprehensive web-based platform. BNEF has 200 staff based in London, New York, Beijing, Cape Town, Hong Kong, Munich, New Delhi, San Francisco, São Paulo, Singapore, Sydney, Tokyo, Washington D.C., and Zurich. BNEF's consultancy activities have since 2012 included the Global Climatescope project.
COMMITMENT TO MINI-GRIDS	Through Climatescope, BNEF provides publicly-available country-level information on market conditions and regulatory frameworks for the development of mini-grids. Climatescope is a unique country-by-country assessment of the clean energy investment conditions in 55 countries worldwide. The result is an online interactive tool which can be used by investors and businesses to identify opportunities for clean energy investment. For policy makers it provides rich insight into the levers they can use to attract further sustainable investment. The project is supported by the UK Department for International Development (DFID), the Multilateral Investment Fund of the Inter-American Development Bank Group (MIF) and the Power Africa initiative.
MINI-GRID PROGRAMME	Global Climatescope
CONTACT	Nico Tyabji +44 20 3525 8540 • ntyabji@bloomberg.net http://global-climatescope.org/ http://about.bnef.com/

PROGRAMME

NAME OF THE INSTITUTION	Bloomberg New Energy Finance
INSTITUTION TYPE	• Academia/research institute • Consultancy • Corporate firm
NAME OF THE PROGRAMME	Global Climatescope
WEBSITE	http://global-climatescope.org/
CONTACT	Nico Tyabji +442035258540 ntyabji@bloomberg.net
TYPES OF SUPPORT	Technical assistance
OBJECTIVES	Climatescope provides publicly-available country-level information on market conditions and regulatory frameworks for the development of mini-grids.
COUNTRIES	• Argentina • Bahamas • Bangladesh • Barbados • Belize • Bolivia • Botswana • Brazil • Cameroon • Chile • China • Colombia • Congo, DRC • Costa Rica • Cote D'ivoire • Dominican Republic • Ecuador • El Salvador • Ethiopia • Ghana • Guatemala • Guyana • Haiti • Honduras • India • Indonesia • Jamaica • Kenya • Liberia • Malawi • Mexico • Mozambique • Myanmar • Nepal • Nicaragua • Nigeria • Pakistan • Panama • Paraguay • Peru • Rwanda • Senegal • Sierra Leone • South Africa • Sri Lanka • Suriname • Tajikistan • Tanzania, United Republic of • Trinidad and Tobago • Uganda • Uruguay • Venezuela • Viet Nam • Zambia • Zimbabwe

PROGRAMME (continued)

REGION/LOCATION	Africa, Asia, Latin America and the Caribbean
SHORT DESCRIPTION	Climatescope is a unique country-by-country assessment of the clean energy investment conditions in 55 countries worldwide. The result is an online interactive tool which can be used by investors and businesses to identify opportunities for clean energy investment. For policy makers it provides rich insight into the levers they can use to attract further sustainable investment.
STATUS	Operational – open end
TYPE OF TECHNICAL ASSISTANCE OFFERED	• Market and risk assessment: Climatescope provides publicly-available information on market conditions (e.g. local electricity and fossil fuel prices) and regulatory frameworks, including those specific to the development of mini-grids. • Other: Climatescope is an index, a country-by-country assessment and an online interactive tool which can be used by investors and businesses to identify opportunities for clean energy investment.
PROGRAMME BENEFICIARY	• National/local public authority • Manufacturing • Installation • Financier: Business • Consultancy/Research: Policy • Private company

13. CEFA Onlus

ORGANISATION PROFILE

NAME OF ORGANISATION	CEFA Onlus
MISSION STATEMENT	CEFA (European Committee for Training and Agriculture) is an Italian NGO that promotes initiatives of development, cooperation and international volunteer service. Founded in 1972, CEFA supports projects promoting integrated self-development in rural regions of the Mediterranean, East Africa and Central/South America. Active in Tanzania since 1976, CEFA promotes interventions in the fields of Rural electrification, Water supply, Agriculture, Agro-processing. In 2007 CEFA started implementing projects in Dar es Salaam addressing urban poverty.
COMMITMENT TO MINI-GRIDS	CEFA's commitment to rural electrification in Tanzania lasts since 25 years. In this period the Organisation has realised three mini hydro-electric power plants, providing electricity to hundreds of people living in the rural areas of the Iringa and Njombe Regions. Careful planning procedures for technical capacity, good institutional arrangements, managerial capacity and economic considerations, as well as multi-stakeholder involvement from the planning phase onwards, have resulted in the sustainable operation of the three hydro power plants. Such commitment in the sector continues still today, with a current upgrade project in Ikondo and the design of a new project in Ninga, allowing more and more families to benefit of the opportunities offered by having electricity in their villages.
MINI-GRID PROGRAMME	Increasing Access to Modern Energy Services in Ikondo Ward – Njombe.
CONTACT	Jacopo Pendezza Cefa.energy@gmail.com www.cefaonlus.it

14. cKinetics

ORGANISATION PROFILE

NAME OF ORGANISATION	cKinetics
MISSION STATEMENT	cKinetics' mission is to propagate and develop market driven solutions for rapid adoption of sustainable growth strategies in industries and communities within emerging economies.
COMMITMENT TO MINI-GRIDS	Sustainable Energy, specifically Decentralised systems, is a key area of engagement and focus for cKinetics. Over the recent years, cKinetics' work has contributed and enabled: • Launch of a 1000 mini-grid Pan-India energy access program, SPRD • Development of a 1 MWp DRE mini-grid capacity in 2014 alone • Ongoing work on a mini-grid pilot program in Rajasthan state in India under the ADB TA • Assessment and preliminary due diligence on prospective portfolio for a Euro 20 mn energy access line of credit in India. Collectively these efforts have resulted in about USD 30 mn of investment being committed to the DRE mini-grid segment over the last 2 years alone.
MINI-GRID PROGRAMME	• Smart Power for Rural Development • ADB Technical Assistance for Rajasthan Mini-grid Pilot Program • DGO to REO Franchising Program (supported by CDKN) • Catalytic Debt Financing Facility jointly with CIIE
CONTACT	Upendra Bhatt ubhatt@ckinetics.com Shradha Kapur skapur@ckinetics.com General Enquiries contact@ckinetics.com www.ckinetics.com

15. Coperson-Hill Nigeria Limited

ORGANISATION PROFILE

NAME OF ORGANISATION	Coperson-Hill Nigeria Limited
MISSION STATEMENT	Our values are wrapped around the belief that "all wheels can be modified" for more efficiency and effectiveness. Therefore to attain great heights and continuously improve on values, we seek to harness individual skill and experience into a focus vision that will allow for the maximum use of all the skill present in our team and the capabilities that others can bring to us.
COMMITMENT TO MINI-GRIDS	Our approach to projects will always be based on having a dynamic team without compromising on quality, consultation with our partners and clients without relinquishing independency and we will persistently pursue innovativeness in all our approaches therefore we will be involved in Joint ventures, partnership and collaboration with Organisations that will be willing to use renewable energy for development of the society.
MINI-GRID PROGRAMME	Itanna Power Line
CONTACT	www.coperson.com

PROGRAMME

NAME OF THE INSTITUTION	Coperson-Hill Limited
INSTITUTION TYPE	• Development Organisation • Small or medium enterprise (SME)
NAME OF THE PROGRAMME	Itanna Microgrid
TOTAL PROGRAMME BUDGET (EUR)	Up to 1 Mio Euro
PRECISE TOTAL PROGRAMME BUDGET (EUR)	€125,000
WEBSITE	www.coperson.com
TYPES OF SUPPORT	Financial assistance / Investment
OBJECTIVES	To put in place a metered micro grid in specific villages in Nigeria using Lithium Ion battery as the energy saving back up from solar PV.
COUNTRIES	Nigeria
STATUS	Planned launch date: 5 December 2015
TYPE OF FINANCING AND/OR CREDIT ENHANCEMENT	• Equity: 40% of project value • Loan: 20% of project value
TYPES OF MINI-GRID PROJECTS ELIGIBLE FOR SUPPORT	Greenfield
TYPE OF TECHNOLOGY	• Solar • Hydro
TARGETED PROJECT CAPACITY (KW)	We are targeting 10kW for our first solar PV solar plant and 5MW for our first Small Hydro project.
NUMBER OF END-USERS	Ondo state South West Nigeria
% OF ENERGY USED BY BUSINESSES	40%
% OF ENERGY USED BY HOUSEHOLDS	60%
PREFERRED BUSINESS MODEL	• Joint Venture • A(nchor) – B(usiness) – C(ommunity) Model

16. CrossBoundary Energy

ORGANISATION PROFILE

NAME OF ORGANISATION	CrossBoundary Energy
MISSION STATEMENT	CrossBoundary Energy is Africa's first dedicated investment fund for Commercial and Industrial solar. We finance distributed solar projects between 200kW and 10MW that provide cheaper and cleaner power to African enterprises.
COMMITMENT TO MINI-GRIDS	Inside-the-fence energy solutions for commercial offtakers form the foundation of CrossBoundary Energy's model. We finance off-grid renewable energy systems that have anchor tenants. CrossBoundary Energy is also exploring the potential for community-connected mini-grids through partnerships with rural electrification programs and development institutions.
MINI-GRID PROGRAMME	Through the CrossBoundary Energy I Fund, CrossBoundary Energy is financing 10 MW of captive solar solutions for African enterprises. This pipeline includes an 858 kW solar asset to serve a 50,000 square meter mixed-use real estate development in Nairobi, Kenya. The installation – large enough to power 280 homes – will be the first solar carport in East Africa and one of the 5 largest solar projects in East Africa. It will result in annual CO2 reductions of 490 tonnes and will also enable the offtaker to become the first LEED-certified mixed-use development in East Africa.
CONTACT	Matt Tilleard matt.tilleard@crossboundary.com www.CrossBoundaryEnergy.com

PROGRAMME

NAME OF THE INSTITUTION	CrossBoundary Energy
INSTITUTION TYPE	Finance Institution
NAME OF THE PROGRAMME	CrossBoundary Energy I Fund
TOTAL PROGRAMME BUDGET (EUR)	Between 10 Mio Euro and 50 Mio Euro
WEBSITE	www.crossboundaryenergy.com
CONTACT	Matt Tilleard +1 617 671 5384 Matt.tilleard@crossboundary.com
TYPES OF SUPPORT	Financial assistance / investment
OBJECTIVES	Across Africa, electricity remains expensive and unreliable. As a result, African enterprises identify access to electricity as one of their greatest obstacles to growth. Solar is now a cheaper alternative for many African companies – but installers struggle to sell solar due to its high upfront costs and the technical risk of owning the system outright. Financiers do not support these mid-scale solar projects, because their small size and high transaction costs do not justify investment. By financing, owning, and operating renewable energy solutions for African enterprises, we improve access to electricity, strengthen the financial performance of our offtakers, and reduce carbon emissions from grid and inside-the-fence diesel electricity. Further, by aggregating multiple mid-scale projects under a single fund, we reduce transaction costs and unlock previously inaccessible solar assets for investors.
COUNTRIES	Kenya
REGION/LOCATION	Sub-Saharan Africa
SHORT DESCRIPTION	CrossBoundary Energy is the first dedicated fund for commercial and industrial solar in Africa. Through our Solar4Africa platform, we provide an integrated finance solution so installers can offer power purchase agreements to customers. This allows installers to deliver on-site energy-as-service while we retain ownership of the asset. We absorb the upfront costs and technical risk of ownership, addressing the primary barriers to solar energy faced by African enterprises. The mid-scale commercial and industrial solar assets that we finance are aggregated under a single fund. By pooling projects, we reduce transaction costs and unlock a new asset class for investors. Further, aggregating projects unlocks financing and risk coverage that would be inaccessible for smaller individual investments, and secures sufficient scale to access equipment in bulk at a discounted rate. CrossBoundary Energy provides commercial and industrial businesses with cleaner and cheaper power. At the same time we have created a new African asset class that profitably unlocks capital.

PROGRAMME

STATUS	Operational – open end
TYPE OF FINANCING AND/OR CREDIT ENHANCEMENT	• Equity • Loan • Hybrid capital
OTHER SUPPORT	Support for non-household energy users (e.g. telecom, agriculture, water, tourism, education and health sectors): Commercial off-takers are CrossBoundary Energy's core market. We serve enterprises including off-grid light manufacturers, cell towers, farms, remote hospitals, eco-lodges and beverage bottlers.
TYPES OF MINI-GRID PROJECTS ELIGIBLE FOR SUPPORT	Greenfield
PROGRAMME BENEFICIARY	• Manufacturing • Assembly • Distribution • Installation • Operation • Maintenance • Financier: Business • Financier: End-users • Private company
TYPE OF TECHNOLOGY	• Solar • Battery/Storage • Power components
TARGETED PROJECT CAPACITY (KW)	200 kW to 10 MW per investment
NUMBER OF END-USERS	An initial pipeline of 10 MW will serve an estimated 10 commercial and industrial offtakers and create an estimated 100 jobs.
% OF ENERGY USED BY BUSINESSES	100%
% OF ENERGY USED BY HOUSEHOLDS	0%
PREFERRED BUSINESS MODEL	CrossBoundary finances, owns, and operates on-site solar assets for African enterprises. Our technical partner, NVI Energy, sources equipment at scale. Partner installers develop our solar solutions. We rely on local firms to oversee O&M.

17. De Montfort University

ORGANISATION PROFILE

NAME OF ORGANISATION	De Montfort University
MISSION STATEMENT	We are a university of quality and distinctiveness, distinguished by our life-changing research, dynamic international partnerships, vibrant links with business and our commitment to excellence in learning, teaching and the student experience. We celebrate the rich cultural diversity of our staff, students and all our partnerships.
COMMITMENT TO MINI-GRIDS	The university is committed to sustainability and is integrating sustainability into its fabric. As part of its research and teaching activities in the area of energy and sustainable development, there is a wider emphasis on cleaner energies, with a particular attention on the developing world. Mini-grids and other energy access solutions form part of this overall commitment to sustainable development.
MINI-GRID PROGRAMME	OASYS South Asia Project
CONTACT	www.dmu.ac.uk/research/research-faculties-and-institutes/institute-of-energy-and-sustainable-development/research-projects/oasys/index.aspx

PROGRAMME

NAME OF THE INSTITUTION	De Montfort University
INSTITUTION TYPE	Academia/research institute
NAME OF THE PROGRAMME	OASYS South Asia Programme
TOTAL PROGRAMME BUDGET (EUR)	Up to 1 Mio Euro
WEBSITE	https://dmu.academia.edu/OASYSSouthAsiaResearchProject
CONTACT	Prof. Subhes Bhattacharyya subhesb@dmu.ac.uk
TYPES OF SUPPORT	Technical assistance
OBJECTIVES	This is a research project undertaken by a consortium led by De Montfort University and has carried out a detailed investigation of off-grid electrification in South Asia using mini-grids. It considered the techno-economics, social, governance and environmental aspects of such projects and undertook action research through demonstration projects in India.
COUNTRIES	Nepal
REGION/LOCATION	South Asia
SHORT DESCRIPTION	This five year project undertaken by a consortium of UK universities and India research institutes/ universities analysed the off-grid electrification issues in South Asia considering a multi-dimensional perspective. It has focused on mini-grids as a preferred option and undertook extensive analysis as well as action research. This has resulted in a book (Minigrids for rural electrification of developing countries edited by SC Bhattacharyya and D Palit, Springer 2014) and a guidebook for Solar PV-based electricity supply (to be published in 2015 by Springer), a set of demonstration projects in India covering various business models, and delivery systems.
STATUS	Operational – closing date 30 Apr 2015
OTHER SUPPORT	• Training of policy makers • Organisation of dialogue events • Policy advisory • Involvement of Community
TYPE OF TECHNOLOGY	• Solar • Battery/Storage

18. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

ORGANISATION PROFILE

NAME OF ORGANISATION	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
MISSION STATEMENT	The GIZ mission statement is available online at: www.giz.de/en/aboutgiz/identity.html
COMMITMENT TO MINI-GRIDS	GIZ is a leading provider of international cooperation services in the area of rural electrification and mini-grids in particular. GIZ brings experience from supporting the promotion, development and implementation of hundreds of mini-grids in more than 20 countries around the world spanning a wide range of policy and regulatory environments, technologies, financing structures and business models. GIZ supports rural electrification planning, assists the development of policies and regulations, helps project development and implementation, promotes productive use of energy, strengthens organisations and individuals through capacity development, commissions research and impact assessments, and documents lessons learnt.
MINI-GRID PROGRAMME	• Renewable Energy Supply for Rural Areas, Afghanistan • Indo-German Energy Programme (IGEN) – Renewable Energy Component, India • Nigerian Energy Support Programme, Nigeria • Promotion of Solar-Hybrid Mini-grids, Kenya • Promotion of Rural Electrification through Renewable Energies, Madagascar • Programme for the promotion of renewable energy, rural electrification, and sustainable supply of household fuels, Senegal • Promotion of renewable energy and energy efficiency programme, Uganda • Renewable Energies and Energy Efficiency, Pakistan • Renewable energy and energy efficiency (ProFREE), Brazil • Energy Sector Support Programme, Tanzania • Support to the Philippine Climate Change Commission, Philippines • Coping with climate change in the Pacific island region, Pacific states • Renewable Energy and Energy Efficiency Technical Assistance (REETA), Caribbean states
CONTACT	hera@giz.de www.giz.de/en/html/index.html

PROGRAMME 1

NAME OF THE INSTITUTION	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
INSTITUTION TYPE	Development Organisation
NAME OF THE PROGRAMME	Renewable Energy Supply for Rural Areas, Afghanistan
TOTAL PROGRAMME BUDGET (EUR)	Between 1 Mio Euro and 10 Mio Euro
WEBSITE	www.giz.de/en/worldwide/14722.html
CONTACT	Robert Dilger robert.dilger@giz.de
TYPES OF SUPPORT	Technical assistance
OBJECTIVES	Afghanistan's rural population has a better and more sustainable power supply. Power is generated from renewable sources, such as water and the sun, in decentralised plants in the villages and communities themselves.
COUNTRIES	Afghanistan
SHORT DESCRIPTION	Since 2003, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ), has been supporting Afghanistan's efforts to provide its rural population with low-cost energy. GIZ is advising the responsible national ministry on the legal framework required to establish a sustainable energy supply, enabling for example, the introduction of private sector models. The project is working with provincial governments to develop electrification strategies. GIZ is supporting the construction of micro power stations in communities. The lessons learned in the provinces feeds into the sustainable energy guidelines and policies of the Ministry of Energy and Water. GIZ is helping Afghanistan to develop the capacities of ministry and provincial government employees, as well as engineers and technicians. With a view to raising energy efficiency, GIZ is also advising the government on the introduction of national standards within the energy sector, for example relating to power lines, transformers and light bulbs.
STATUS	Operational – closing date 31 December 2018
TYPE OF TECHNICAL ASSISTANCE OFFERED	Feasibility study support Business plan development
OTHER SUPPORT	• Training of policy makers • Organisation of dialogue events • Policy advisory • Association support • Awareness campaigns • Involvement of Community • Support for household energy users • Support for non-household energy users (e.g. telecom, agriculture, water, tourism, education and health sectors) • Other: introducing electrotechnical standards in line with international guidelines to boost energy efficiency; development of provincial electrification plans
TYPES OF MINI-GRID PROJECTS	Greenfield
ELIGIBLE FOR SUPPORT PROGRAMME BENEFICIARY	• National/local public authority • Installation • Operation • Maintenance • Consultancy/Research: Resource assessment • Consultancy/Research: Community surveys • Consultancy/Research: Policy • Private company • Non-governmental organisation
TYPE OF TECHNOLOGY	All renewable energy sources

PROGRAMME 2

NAME OF THE INSTITUTION	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
INSTITUTION TYPE	Development Organisation
NAME OF THE PROGRAMME	Indo-German Energy Programme (IGEN) – Renewable Energy Component
TOTAL PROGRAMME BUDGET (EUR)	Between 1 Mio Euro and 10 Mio Euro
WEBSITE	http://www.igen-re.in/
CONTACT	Harald Richter harald.richter@giz.de
TYPES OF SUPPORT	Technical assistance
OBJECTIVES	The use of energy efficiency measures and renewable energy sources is leading increasingly to the more sustainable management of energy, and contributing to climate protection.
COUNTRIES	India
REGION/LOCATION	Uttar Pradesh, West Bengal
STATUS	Operational: closing date 30 June 2018
TYPE OF TECHNICAL ASSISTANCE OFFERED	• Feasibility study support • Business plan development
OTHER SUPPORT	• Training of policy makers • Organisation of dialogue events • Policy advisory • Association support • Awareness campaigns • Involvement of Community • Support for household energy users • Support for non-household energy users (e.g. telecom, agriculture, water, tourism, education and health sectors) • Other: Development of tendering modalities for privately operated mini-grids; Promotion of productive use; Implementation of detailed demand assessments
TYPES OF MINI-GRID PROJECTS ELIGIBLE FOR SUPPORT	Greenfield
PROGRAMME BENEFICIARY	• National/local public authority • Installation • Operation • Financier: Business • Financier: End-users • Consultancy/Research: Resource assessment • Consultancy/Research: Community surveys • Consultancy/Research: Policy • Private company • Non-governmental organisation
TYPE OF TECHNOLOGY	All renewable energy sources

PROGRAMME 3

NAME OF THE INSTITUTION	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
INSTITUTION TYPE	Development Organisation
NAME OF THE PROGRAMME	Nigerian Energy Support Programme (NESP), Nigeria
TOTAL PROGRAMME BUDGET (EUR)	Between 1 Mio Euro and 10 Mio Euro
WEBSITE	http://www.giz.de/en/worldwide/26374.html
CONTACT	Jannik Moller jannik.moller@giz.de
TYPES OF SUPPORT	Technical assistance
OBJECTIVES	The conditions for the application of and investments in renewable energy, energy efficiency and rural electrification are improved.
COUNTRIES	Nigeria
SHORT DESCRIPTION OF INSTRUMENT	• NESP's activities are focused around the following topics: • Policy reform and on-grid renewable energy: The programme is supporting implementation of the Electric Power Sector Reform Act, while helping to improve the legal framework for investment in renewable energy. Key stakeholders in the sector are also being supported to coordinate and harmonise their activities. • Energy efficiency: The programme is contributing to draw up strategies and standards for energy efficiency in accordance with international best practice, and to encourage the implementation via support mechanisms and demonstration projects. • Rural electrification and sustainable energy access: A standardised approach at national level to planning and promoting rural electrification is being supported. Five federal states are being supported to produce electrification plans and develop a data management system. The electrification of off-grid villages, social facilities and small businesses will demonstrate how renewable energy can contribute to providing electricity access to rural areas. • Capacity development: The capacity of organisations for training delivery is being strengthened by NESP. The National Power Training Institute of Nigeria (NAPTIN) and other training institutes are being assisted to deliver a range of relevant training courses on renewable energy and energy efficiency for engineers, architects and technicians. Interventions will also train selected professionals of partner institutions and enhance capacities of the power sector as whole.
STATUS	Operational: closing date 31 December 2018
TYPE OF TECHNICAL ASSISTANCE OFFERED	• Feasibility study support • Other: Rural electrification planning; Information about mini-grid experiences; Contacts to potential partners
OTHER SUPPORT	• Training of policy makers • Organisation of dialogue events • Policy advisory • Awareness campaigns • Involvement of Community
TYPES OF MINI-GRID PROJECTS ELIGIBLE FOR SUPPORT	Greenfield
TYPE OF TECHNOLOGY	All renewable energy sources

PROGRAMME 4

NAME OF THE INSTITUTION	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
INSTITUTION TYPE	Development Organisation
NAME OF THE PROGRAMME	Promotion of Solar-Hybrid Mini-grids, Kenya
TOTAL PROGRAMME BUDGET (EUR)	Between 1 Mio Euro and 10 Mio Euro
WEBSITE	http://www.giz.de/en/worldwide/25332.html
CONTACT	Jasmin Fraatz jasmin.fraatz@giz.de
TYPES OF SUPPORT	Technical assistance
OBJECTIVES	Electrification of remote areas has improved – with the participation of the private sector as a model for nationwide electrification.
COUNTRIES	Kenya
SHORT DESCRIPTION OF INSTRUMENT	The project aims to improve the policy framework and the technical expertise among key political decision makers and the implementing skills of private business enterprises for sustainable installation and operation of climate-friendly solar-hybrid village power systems. Based on these goals, the project is active in four fields of action: • Support is being provided to the key political decision makers to build up sufficient expertise and develop guidelines for disseminating solar-hybrid village power systems. • The actors are being empowered to develop mechanisms for accelerating broad implementation based on the experience gained from pilot projects. • The planning, technical and commercial skills of the private sector are being improved in order to ensure high-quality installation and operation of solar-hybrid village power systems. • Support is being provided to establish and expand pilot projects. Rural population is receiving training in system operation and maintenance. The project's target group includes private and small-business power consumers in remote rural areas where the national power grid is not expected to be expanded to in the foreseeable future. Technical and financial cooperation are closely linked within the project, which forms part of the German Climate Technology Initiative (DKTI). In parallel with GIZ's advisory services, KfW Entwicklungsbank is financing related investment projects.
STATUS	Operational: Closing date 30 September 2018
TYPE OF TECHNICAL ASSISTANCE OFFERED	• Feasibility study support • Business plan development • Financial modelling • Other: Information on mini-grid experiences; Contacts to potential partners
OTHER SUPPORT	• Training of policy makers • Organisation of dialogue events • Policy advisory • Association support
TYPES OF MINI-GRID PROJECTS ELIGIBLE FOR SUPPORT	Greenfield
PROGRAMME BENEFICIARY	• National/local public authority • Installation • Private company • Non-governmental organisation • Academia • Operation • Maintenance • Training providers: Business • Financier: Business • Financier: End-users • Consultancy/Research: Resource assessment • Consultancy/Research: Community surveys • Consultancy/Research: Policy
TYPE OF TECHNOLOGY	• Solar • Diesel back-up

PROGRAMME 5

NAME OF THE INSTITUTION	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
INSTITUTION TYPE	Development Organisation
NAME OF THE PROGRAMME	Promotion of Rural Electrification through Renewable Energies, Madagascar
TOTAL PROGRAMME BUDGET (EUR)	Between 1 Mio Euro and 10 Mio Euro
WEBSITE	www.giz.de/en/worldwide/20065.html
CONTACT	Martin Hofmann martin.hofmann@giz.de
TYPES OF SUPPORT	Technical assistance
OBJECTIVES	The conditions for a rural electrification in the country are improved.
COUNTRIES	Madagascar
STATUS	Operational: Closing date 31 December 2016
TYPE OF TECHNICAL ASSISTANCE OFFERED	• Feasibility study support • Business plan development
OTHER SUPPORT	• Training of policy makers • Organisation of dialogue events • Policy advisory • Involvement of Community • Other: Development of a national strategy for rural electrification; Identification of potential mini-grid sites; Further development of procedures for private sector participation
TYPES OF MINI-GRID PROJECTS ELIGIBLE FOR SUPPORT	Greenfield
TYPE OF TECHNOLOGY	• Solar • Hydro

PROGRAMME 6

NAME OF THE INSTITUTION	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
INSTITUTION TYPE	Development Organisation
NAME OF THE PROGRAMME	Programme for the promotion of renewable energy, rural electrification, and sustainable supply of household fuels, Senegal
TOTAL PROGRAMME BUDGET (EUR)	Between 1 Mio Euro and 10 Mio Euro
WEBSITE	www.peracod.sn
CONTACT	Jörg Oelschläger
	joerg.oelschlaeger@giz.de
TYPES OF SUPPORT	Technical assistance
OBJECTIVES	Thanks to improvements made to the relevant frameworks, the population has access to modern energy services and energy efficient products.
COUNTRIES	Senegal
SHORT DESCRIPTION OF INSTRUMENT	To extend the reach of energy services, particularly in rural areas, the capacity of the Senegalese Agency for Rural Electrification (Agence sénégalaise d'électrification rurale – ASER) is being strengthened. In addition, rural electrification models are being developed, assessed and distributed. Pilot projects to test productive use are being carried out, including one project in which a solar-powered ice machine has been installed in a women's cooperative in the fishing industry.
STATUS	Operational: Closing date 31 December 2016
OTHER SUPPORT	• Training of policy makers • Policy advisory • Support for household energy users • Support for non-household energy users (e.g. telecom, agriculture, water, tourism, education and health sectors) • Other: Development of monitoring procedures for rural electrification projects (customer protection, quality of supply, etc.)
TYPES OF MINI-GRID PROJECTS ELIGIBLE FOR SUPPORT	Greenfield
PROGRAMME BENEFICIARY	• National/local public authority • Installation • Operation • Maintenance • Consultancy/Research: Policy • Private company
TYPE OF TECHNOLOGY	All renewable energy sources

PROGRAMME 7

NAME OF THE INSTITUTION	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
INSTITUTION TYPE	Development Organisation
NAME OF THE PROGRAMME	Promotion of Renewable Energy and Energy Efficiency Programme (PREEEP), Uganda
TOTAL PROGRAMME BUDGET (EUR)	Between 1 Mio Euro and 10 Mio Euro
WEBSITE	www.giz.de/en/worldwide/19268.html
CONTACT	Markus Exenberger markus.exenberger@giz.de
TYPES OF SUPPORT	Technical assistance
COUNTRIES	Uganda
SHORT DESCRIPTION OF INSTRUMENT	The Promotion of Renewable Energy and Energy Efficiency Programme (PREEEP) supports the Ugandan Ministry of Energy and Mineral Development (MEMD) in promoting the sustainable use of energy for social and economic empowerment, while increasing access to renewable energy and promoting the efficient use of existing supplies. PREEEP carries out capacity building measures for the Ministry as a contribution to improved policies, budget planning, monitoring and evaluation. Currently, the programme is also assisting MEMD to establish energy focal points in 17 pilot districts. This is intended to improve exchanges between the Ministry and the local governments.
STATUS	Operational: Closing date 31 January 2017
OTHER SUPPORT	• Training of policy makers • Organisation of dialogue events • Policy advisory • Association support • Awareness campaigns • Involvement of Community • Support for household energy users • Support for non-household energy users (e.g. telecom, agriculture, water, tourism, education and health sectors) • Other: Contacts to potential partners; Information on mini-grid experiences; GIS maps; Establishment of regional structures in charge of energy
TYPES OF MINI-GRID PROJECTS ELIGIBLE FOR SUPPORT	Greenfield
PROGRAMME BENEFICIARY	• National/local public authority • Installation • Operation • Maintenance • Training providers: Business • Private company • Non-governmental Organisation
TYPE OF TECHNOLOGY	All renewable energy sources

PROGRAMME 8

NAME OF THE INSTITUTION	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
INSTITUTION TYPE	Development Organisation
NAME OF THE PROGRAMME	Renewable Energies and Energy Efficiency, Pakistan
TOTAL PROGRAMME BUDGET (EUR)	Between 1 Mio Euro and 10 Mio Euro
WEBSITE	www.giz.de/en/worldwide/17995.html
CONTACT	Bernhard Meyhöfer bernhard.meyhoefer@giz.de
TYPES OF SUPPORT	Technical assistance
OBJECTIVES	The national strategies and incentives for investment in renewable energy by SMEs and end-users are improved.
COUNTRIES	Pakistan
STATUS	Operational: closing date 31 December 2016
OTHER SUPPORT	• Training of policy makers • Organisation of dialogue events • Policy advisory • Association support • Awareness campaigns • Involvement of Community • Support for household energy users • Support for non-household energy users (e.g. telecom, agriculture, water, tourism, education and health sectors)
TYPES OF MINI-GRID PROJECTS ELIGIBLE FOR SUPPORT	Greenfield
TYPE OF TECHNOLOGY	All renewable energy sources

PROGRAMME 9

NAME OF THE INSTITUTION	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
INSTITUTION TYPE	Development Organisation
NAME OF THE PROGRAMME	Renewable energy and energy efficiency (ProFREE), Brazil
TOTAL PROGRAMME BUDGET (EUR)	Between 1 Mio Euro and 10 Mio Euro
WEBSITE	www.giz.de/en/worldwide/12565.html
CONTACT	Johannes Kissel johannes.kissel@giz.de
TYPES OF SUPPORT	Technical assistance
OBJECTIVES OF INSTRUMENT	Renewable energy sources and energy efficiency play a central role in Brazil's energy supply.
COUNTRIES	Brazil
SHORT DESCRIPTION OF INSTRUMENT	GIZ is working closely with the Brazilian energy authorities to create and maintain a political environment that favours the use of renewable energies.
STATUS	Operational: Closing date 31 December 2015
OTHER SUPPORT	Policy advisory
TYPE OF TECHNOLOGY	All renewable energy sources

PROGRAMME 10

NAME OF THE INSTITUTION	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
INSTITUTION TYPE	Development Organisation
NAME OF THE PROGRAMME	Energy Sector Support Programme, Tanzania
TOTAL PROGRAMME BUDGET (EUR)	Between 1 Mio Euro and 10 Mio Euro
WEBSITE	www.giz.de/en/worldwide/347.html
CONTACT	Gerd Henning Vogel henning.vogel@giz.de
TYPES OF SUPPORT	Technical assistance
OBJECTIVES	The framework conditions and the implementation capacities of actors in the area of sustainable energy in Tanzania are improved.
COUNTRIES	Tanzania, United Republic of
STATUS	Operational: Closing date 31 March 2016
OTHER SUPPORT	• Training of policy makers • Organisation of dialogue events • Policy advisory • Association support • National/local public authority • Installation • Operation • Maintenance
PROGRAMME BENEFICIARY	Private company
TYPE OF TECHNOLOGY	All renewable energy sources

PROGRAMME 11

NAME OF THE INSTITUTION	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
INSTITUTION TYPE	Development Organisation
NAME OF THE PROGRAMME	Support to the Philippine Climate Change Commission, Philippines
TOTAL PROGRAMME BUDGET (EUR)	Between 1 Mio Euro and 10 Mio Euro
WEBSITE	www.giz.de/en/worldwide/18251.html
CONTACT	Bernd-Markus Liss bernd-markus.liss@giz.de
TYPES OF SUPPORT	Technical assistance
COUNTRIES	Philippines
SHORT DESCRIPTION OF INSTRUMENT	The project is helping the Department of Energy to implement the Renewable Energy Act. The partners are developing policy frameworks, devising feed-in regulations, analysing where there is greatest potential for renewable energy and improving administrative processes.
STATUS	Operational: Closing date 31 August 2015
TYPE OF TECHNICAL ASSISTANCE OFFERED	• Feasibility study support • Business plan development
OTHER SUPPORT	• Policy advisory
PROGRAMME BENEFICIARY	• National/local public authority • Installation • Private company
TYPE OF TECHNOLOGY	Solar

19. Dunamai Energy

ORGANISATION PROFILE

NAME OF THE INSTITUTION	Dunamai Energy
INSTITUTION TYPE	Consultancy
TYPES OF SUPPORT	Other: Research
COUNTRIES	Malawi
TYPE OF TECHNOLOGY	All renewable energy sources

20. E2P Enterprises

ORGANISATION PROFILE

NAME OF ORGANISATION	E2P Enterprises
MISSION STATEMENT	To become the first reason for every house to become digitally smart enough, and to have a shared-powered consumption arrangement for societies in need.
COMMITMENT TO MINI-GRIDS	• Starting with Internet-of-Things-based apps for consumer devices and then going to connect entire house; • Development of a vehicle which can draw power from a grid and can power an entire colony. Now, the vehicle also comprises of a control to the central app that controls every installation inside the house, so basically powering from that vehicle can run everything in the house. The vehicle is to be used for such powering purposes when the main power supply is non-functional, which might be due to a fault or snapping due to a natural calamity, and then power becomes a necessity. • Once the target of the grid is set up, establishment of small power plant that generates power from the most abundant renewable and clean source present in that locality. The Power generated is transmitted to the different localities via small grids, from which the vehicle draws power for emergency purposes. • To Create Educational and Employment Opportunities in setting up the Projects and an Energy Consultancy.
MINI-GRID PROGRAMME	Energy Fraternity [EF]
CONTACT	Sayan Ganguly (+91)8978043354 www.i-m.mx/Sayang/E2PENTERPRISES/businesses.html [to be linked with the main domain purchased]

PROGRAMME

NAME OF THE INSTITUTION	E2P Enterprises
INSTITUTION TYPE	Small or medium enterprise (SME)
NAME OF THE PROGRAMME	Energy Fraternity
TYPES OF SUPPORT	Technical assistance
OBJECTIVES	To centralise and connect all consumer devices to one app [the concept of IoT], and then to make them accessible from a car, which again draws power from grid and powers a colony. The grid is made such that it draws power from both the transmission company and also from localised system of power generation from renewable sources of energy.
COUNTRIES	India
REGION/LOCATION	Andhra Pradesh and Tamil Nadu
SHORT DESCRIPTION	A Firmware which controls an entire house - including its water connections, communication channels and the powering, and which is controlled from a car which again draws power from the grid to power an entire colony in the same way.
STATUS	Planned launch date: 03 January 2015
TYPE OF TECHNOLOGY	• All renewable energy sources • Battery/Storage • Power components • Diesel back-up • Other: Cloud-based Application Development for SMART Switching
TARGETED PROJECT CAPACITY (KW)	500
NUMBER OF END-USERS	50 households
% OF ENERGY USED BY BUSINESSES	30
% OF ENERGY USED BY HOUSEHOLDS	70
PREFERRED BUSINESS MODEL	• Basic Development of IOT apps for consumer devices -> Centralising all development to one suite -> making the suite app available to car control which again draws power from the grid • A(nchor) – B(usiness) – C(ommunity) Model

21. ECOWAS Centre for Renewable Energy and Energy Efficiency

ORGANISATION PROFILE

NAME OF ORGANISATION	ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE)
MISSION STATEMENT	ECREEE contributes to the sustainable economic, social and environmental development of West Africa by improving access to modern, reliable and affordable energy services, energy security and reduction of energy related externalities.
COMMITMENT TO MINI-GRIDS	The adoption of the ECOWAS Renewable Energy Policy in 2013 by ECOWAS Heads of State set a goal of deploying 128.000 mini-grids by 2030. ECREEE has been called upon by the ECOWAS Authorities to act as the SE4All Focal point for the region and clean energy mini-grids are the main pillar of the 2015-2020 ECOWAS Rural Electrification program currently implemented by ECREEE.
MINI-GRID PROGRAMME	Support to the integration of clean energy mini-grids within national energy plans and regulations Program: • Support all the 15 ECOWAS Member States in development of SE4All Action Agendas and investment prospectus which also includes mini-grids; • Support GIS based rural electrification planning including clean energy mini-grids; • Supporting Member States in the establishment of a tariff scheme for mini-grids. Mini-grids Project development and Financing Program: • Second call of the ECOWAS Renewable Energy Facility consecrated to clean energy mini-grids: 5 projects have been selected and have started their implementation in Sierra Leona, Burkina Faso, Niger, Guinea, Cabo Verde and Guinea Bissau. 10 additional interesting projects are receiving mentorship for their improvement while conversations with potential donors for their funding are advancing; • DPER-Sud Est Sénégal: 4 years long, EU Energy Facility co-funded project currently being implemented in Senegal aiming to deploy 40 clean energy mini-grids; • Support promoters in program preparatory activities and technical studies and accessing funds for mini-grids implementation; • Small and medium-sized Renewable Energy enterprise advisory facility; • Implementation of demonstration systems in Cabo Verde, Guinea Bissau and Gambia; • Identification of a regional mini-grids program. Mini-grids Capacity development Program: • Regional training of trainers and national workshops on HOMER software; • Hands-on-training on mini-grids; • Mini-grids technical manual; • Regional study tours for experiences exchange. Mini-grids Knowledge Management: • Mapping of clean energy mini-grids projects and initiatives in the region; • ECREEE works as a knowledge management hub for the region and the ECOWREX (www.ecowrex.org) has been designed specifically for sharing experiences.
CONTACT	Nicola Bugatti +2382604641 nbugatti@ecreee.org Sylla Elhadji +2382604660 selhadji@ecreee.org www.ecreee.org

PROGRAMME

NAME OF THE INSTITUTION	Ecowas Centre For Renewable Energy And Energy Efficiency (ECREEE)
INSTITUTION TYPE	Regional Institution
NAME OF THE PROGRAMME	ECOWAS RE Facility (EREF) and Renewable Energy SME advisory facility
TOTAL PROGRAMME BUDGET (EUR)	Between 1 Mio Euro and 10 Mio Euro
WEBSITE	www.ecreee.org/event/support-facility-provides-advisory-assistance-small-and-medium-sized-renewable-energy
CONTACT	Nicola Bugatti 00238-2604630 nbugatti@ecreee.org
TYPES OF SUPPORT	• Technical assistance • Financial assistance / investment • Other: Integration of clean energy mini-grids within national energy plans, Capacity development, Knowledge Management and regulations
OBJECTIVES	The combination of financial support and mentorship aim to strengthen the project promoters' capacities and trigger the market.
COUNTRIES	• Benin • Burkina Faso • Cape Verde • Cote D'ivoire • Gambia • Ghana • Guinea • Guinea-bissau • Liberia • Mali • Niger • Nigeria • Senegal • Sierra Leone • Togo
REGION/LOCATION	ECOWAS (Economic Community of West African States) Region
SHORT DESCRIPTION	The ECOWAS Renewable Energy Facility (EREF) supported the second call for proposals, which the focus is to provide grant co-funding for the installation of renewable energy powered micro-grids (including hybrids), in rural and peri-urban areas of the ECOWAS Member States. As an outcome of the IRENA-ECREEE ProSPER initiative, a support facility was created to provide advisory assistance to small and medium-sized renewable energy enterprises, particularly in the fast-growing field of solar PV.
STATUS	Operational: Open end
TYPE OF FINANCING AND/OR CREDIT ENHANCEMENT	Grant: up to 50 % of project value
TYPE OF TECHNICAL ASSISTANCE OFFERED	• Business plan development • Technical evaluation • Technical validation • Financial modelling • Market and risk assessment • Marketing of projects to financiers and buyers
OTHER SUPPORT	• Training of policy makers • Organisation of dialogue events • Policy advisory • Association support
TYPE OF TECHNOLOGY	• All renewable energy sources • Battery/Storage • Diesel back-up • Biodiesel back-up

22. EDP – Energias de Portugal, S.A.

ORGANISATION PROFILE

NAME OF ORGANISATION	EDP – Energias de Portugal, S.A.
MISSION STATEMENT	EDP is a multinational power and gas utility company, operating in 13 countries with over 12,000 employees and serving more than 10 million customers. EDP is present in power generation, distribution and supply in Portugal (largest operator), Spain and Brazil, as well as in gas distribution and supply in the Iberian Peninsula. EDP has a clear vision of its role in society and in the relationship with its stakeholders. As per its Sustainable Development Principles, EDP believes in the interconnection of seemingly distinct areas, such as the economy, culture, art, education, science and social innovation, and that it is the combination of these realities that maximizes contribution to society. EDP is recognised in several areas, such as engineering, finance, ethics, human capital management, environment, communication and social commitment. For having a unique and consistent view and given its economic, social and environmental performances, EDP has been considered since 2013 as the global leader of Utilities sector in the Dow Jones Sustainability Index
COMMITMENT TO MINI-GRIDS	As a reference power utility company pursuing a policy of openness to the world, EDP is committed to promote Access to Energy (A2E) in developing countries, focusing on remote rural regions and areas which have no connection to the main power grid, contributing in this way to break poverty cycles. EDP endorses sustainability as a priority and Access to Energy is part of its Principles of Sustainable Development. By developing A2E Programmes which provide access to energy based on sustainable renewable energy solutions, mainly solar, EDP is contributing to the social, economic and environmental development of those communities in greatest need. A2E Projects reflect EDP´s constant commitment to the local communities in which it operates. In countries where a significant part of rural populations have no access to electricity services, combining social responsibility and economic sustainability.
MINI-GRID PROGRAMME	4 Mini-grids in 4 villages in Amazonia – Brazil (under completion) SOLARBIO I – Mozambique (pipeline)
CONTACT	Guilherme Collares Pereira Access to Energy – International Relations Director Collares.pereira@edp.pt www.edp.pt

PROGRAMME

NAME OF THE INSTITUTION	EDP - ENERGIAS DE PORTUGAL SA
INSTITUTION TYPE	Corporate firm
NAME OF THE PROGRAMME	A2E- ACCESS TO ENERGY
WEBSITE	www.edp.pt/sustentabilidade/acessoenergia/pages/AcessoEnergia.aspx
CONTACT	Guilherme Collares Pereira +3512100216478 collares.pereira@edp.pt
TYPES OF SUPPORT	Other: Facilitator - Identifying opportunities, supporting fundraising managing projects and ensuring the financial self-sustainability.
COUNTRIES	Angola, Mozambique
REGION/LOCATION	Mozambique - Titimane Village (Niassa Province)
SHORT DESCRIPTION	UNEP programme Clean Energy Minigrid, commercially viable Solar (100kWp) + Biomass Minigrid (60KWp) to deliver energy services to 900 households.
STATUS	Planned launch date: 1 June 2017
TYPE OF FINANCING AND/OR CREDIT ENHANCEMENT	Grant: 40 % of project value Equity: 60 % of project value Other Credit enhancement
TYPE OF TECHNOLOGY	Solar Biomass
TARGETED PROJECT CAPACITY (KW)	100KWp + 60 KWp
NUMBER OF END-USERS	~5000
% OF ENERGY USED BY BUSINESSES	30%
% OF ENERGY USED BY HOUSEHOLDS	70%
PREFERRED BUSINESS MODEL	• The private investors (70%) and the public investors (30%) will create a local company, that will have the license to operate (Concessionaire) the rural mini-grid • A(nchor) – B(usiness) – C(ommunity) Model

23. Energising Development (EnDev)

ORGANISATION PROFILE

NAME OF ORGANISATION	Energising Development (EnDev) c/o Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH c/o Rijksdienst voor Ondernemend Nederland (RVO)
MISSION STATEMENT	Energising Development - EnDev - is an impact-oriented initiative between the Netherlands, Germany, Norway, Australia, the United Kingdom and Switzerland implemented by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH and Rijksdienst voor Ondernemend Nederland (RVO). EnDev provides energy access to households, social institutions and small and medium-sized enterprises in developing countries in Africa, Asia and Latin America. This is done by establishing economically sustainable energy solutions and distribution schemes, mainly for rural communities.
COMMITMENT TO MINI-GRIDS	EnDev provides energy access to households, social institutions and small and medium-sized enterprises in developing countries through the development of markets for a range of technologies including mini-grids. Examples of mini-grid activities include assisting entrepreneurs with energy-related businesses, transferring knowledge regarding technology, project identification, project design, quality assurance, contract management, technical assistance, capacity building and where necessary, financial support to kick-start markets or buy down capital investments.
MINI-GRID PROGRAMME	• EnDev Bangladesh • EnDev Ethiopia • EnDev Honduras • EnDev Indonesia • EnDev Mali • EnDev Nepal • EnDev Rwanda • EnDev Senegal • EnDev Uganda
CONTACT	EnDev@giz.de http://endev.info/

PROGRAMME 1

NAME OF THE INSTITUTION	Energising Development c/o Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
INSTITUTION TYPE	Development Organisation
NAME OF THE PROGRAMME	EnDev Indonesia
TOTAL PROGRAMME BUDGET (EUR)	Between 1 Mio Euro and 10 Mio Euro
WEBSITE	http://endev.info/content/Indonesia
CONTACT	Robert Schulz robert.schulz@giz.de
TYPES OF SUPPORT	Technical assistance
COUNTRIES	Indonesia
SHORT DESCRIPTION	In the field of electrification, EnDev Indonesia focuses on mini-grid installations based on micro-hydro power (MHP) and solar photovoltaic (PV) technologies. All installations are community operated and administered. EnDev Indonesia limits infrastructure investments and dedicates most resources towards technical support services (design, supervision, commissioning, and quality assurance) and sustainability measures (community preparation, rural electrification programmatic and policy support, monitoring and evaluation, sector development, and productive-use-of-energy initiatives).
STATUS	Operational: Closing date 31 July 2018
TYPE OF TECHNICAL ASSISTANCE OFFERED	• Feasibility study support • Business plan development • Technical evaluation • Technical validation • Operator Training • Information about mini-grid experiences and projects • GIS maps • Monitoring
OTHER SUPPORT	• Training of policy makers • Policy advisory • Involvement of Community • Support for household energy users

PROGRAMME 1 (continued)

TYPES OF MINI-GRID PROJECTS ELIGIBLE FOR SUPPORT	Greenfield
PROGRAMME BENEFICIARY	• National/local public authority • Installation • Operation • Maintenance • Private company • Non-governmental organisation
TYPE OF TECHNOLOGY	• Solar • Hydro

PROGRAMME 2

NAME OF THE INSTITUTION	Energising Development c/o Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
INSTITUTION TYPE	Development Organisation
NAME OF THE PROGRAMME	EnDev Honduras
TOTAL PROGRAMME BUDGET (EUR)	Between 1 Mio Euro and 10 Mio Euro
WEBSITE	http://endev.info/content/Honduras
CONTACT	Klaus Hornberger klaus.hornberger@giz.de
TYPES OF SUPPORT	Technical assistance
COUNTRIES	Honduras
SHORT DESCRIPTION	EnDev Honduras supports locally produced micro hydro power plants local NGOs. The communities are responsible for organisation of an administrative entity which operates and maintains the systems and collects fees. EnDev supports communities in this task.
STATUS	Operational: Closing date 31 December 2016
TYPE OF TECHNICAL ASSISTANCE OFFERED	• Feasibility study support • Business plan development
OTHER SUPPORT	• Policy advisory • Awareness campaigns • Involvement of Community • Support for household energy users
TYPES OF MINI-GRID PROJECTS ELIGIBLE FOR SUPPORT	Greenfield
PROGRAMME BENEFICIARY	• National/local public authority • Manufacturing • Assembly • Installation • Operation • Maintenance • Non-governmental organisation
TYPE OF TECHNOLOGY	Hydro

PROGRAMME 3

NAME OF THE INSTITUTION	Energising Development c/o Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
INSTITUTION TYPE	Development Organisation
NAME OF THE PROGRAMME	EnDev Ethiopia
TOTAL PROGRAMME BUDGET (EUR)	Between 1 Mio Euro and 10 Mio Euro
WEBSITE	http://endev.info/content/Ethiopia
CONTACT	Rainer Hakala rainer.hakala@giz.de
TYPES OF SUPPORT	Technical assistance
COUNTRIES	Ethiopia
SHORT DESCRIPTION	EnDev Ethiopia promotes household electrification through pico hydro power and micro hydro power plants, by providing technical assistance and introducing appropriate low-cost designs for hydro power. We train local scouts to promote hydro power and assist municipalities in identifying and developing suitable sites. EnDev provides financial resources to cover parts of the investment costs. The local community contributes with civil works, such as constructing the canal or the headrace, installing the penstock, and building the machinery house and roads. EnDev selects the personnel to do the installation of the machinery, the supervision of the civil works and the wiring. Partners from local institutions were sent to Indonesia to be trained in turbine manufacturing.
STATUS	Operational: Closing date 30 June 2018
TYPE OF TECHNICAL ASSISTANCE OFFERED	• Feasibility study support • Business plan development
OTHER SUPPORT	• Policy advisory • Involvement of Community • Support for household energy users • Support for non-household energy users (e.g. telecom, agriculture, water, tourism, education and health sectors) • Information on mini-grid experiences • Contacts to potential partners
TYPE OF TECHNOLOGY	Hydro

PROGRAMME 4

NAME OF THE INSTITUTION	Energising Development c/o Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
INSTITUTION TYPE	Development Organisation
NAME OF THE PROGRAMME	EnDev Nepal
TOTAL PROGRAMME BUDGET (EUR)	Between 1 Mio Euro and 10 Mio Euro
WEBSITE	http://endev.info/content/Nepal
CONTACT	Bart Jan van Beuzekom bart.vanbeuzekom@giz.de
TYPES OF SUPPORT	• Technical assistance • Financial assistance / investment
COUNTRIES	Nepal
SHORT DESCRIPTION	EnDev Nepal supports the efforts of remote communities to get access to electricity from micro hydropower plants via a dedicated debt fund. This enables the communities to repay the high upfront costs over a long period of time and encouraging commercial banks to finance micro hydro projects in rural Nepal. This Micro Hydro Debt Fund (MHDF) is aligned with the new multi donor funded National Rural and Renewable Energy Programme (NRREP) for the energy sector of Nepal. EnDev has taken part in the preparation of this plan alongside other development partners.
STATUS	Operational: closing date 30 June 2018
TYPE OF FINANCING AND/OR CREDIT ENHANCEMENT	Loan
TYPE OF TECHNICAL ASSISTANCE OFFERED	• Feasibility study support • Business plan development
OTHER SUPPORT	Policy advisory
TYPES OF MINI-GRID PROJECTS ELIGIBLE FOR SUPPORT	Greenfield
PROGRAMME BENEFICIARY	• National/local public authority • Installation • Operation • Financier: Business • Financier: End-users • Private company • Non-governmental organisation
TYPE OF TECHNOLOGY	Hydro

PROGRAMME 5

NAME OF THE INSTITUTION	Energising Development c/o Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
INSTITUTION TYPE	Development Organisation
NAME OF THE PROGRAMME	EnDev Rwanda
TOTAL PROGRAMME BUDGET (EUR)	Up to 1 Mio Euro
CONTACT	Mirco Gaul mirco.gaul@giz.de
TYPES OF SUPPORT	Financial assistance / investment
COUNTRIES	Rwanda
SHORT DESCRIPTION	The RBF fund provides financial incentives to private companies that are investing in village grids in remote rural areas of Rwanda. The total amount of funding available will be EUR 650.000 and a total of 15-25 village grids are expected to be installed. The fund will run for 2 years (2014-2016).
STATUS	Operational: Closing date 31 December 2017
TYPE OF FINIANCING AND/OR CREDIT ENHANCEMENT	Grant
TYPE OF TECHNICAL ASSISTANCE OFFERED	• Feasibility study support • Business plan development
OTHER SUPPORT	• Training of policy makers • Policy advisory • Training of financiers
PROGRAMME BENEFICIARY	• National/local public authority • Installation • Operation • Financier: Business • Private company
TYPE OF TECHNOLOGY	All renewable energy sources

PROGRAMME 6

NAME OF THE INSTITUTION	Energising Development c/o Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
INSTITUTION TYPE	Development Organisation
NAME OF THE PROGRAMME	EnDev Senegal
TOTAL PROGRAMME BUDGET (EUR)	Between 1 Mio Euro and 10 Mio Euro
CONTACT	Mireille Affoudji Ehemba mireille.affoudji@giz.de
TYPES OF SUPPORT	• Technical assistance • Financial assistance / investment
COUNTRIES	Senegal
SHORT DESCRIPTION	EnDev Senegal facilitates access to electricity in rural areas, thereby decreasing reliance on the already overburdened national grid. Based on an assessment of the ability and willingness to pay for electricity, EnDev identified interventions to serve the different demands of households and social institutions. Electricity will be provided by village grids (PV-diesel hybrid) or by individual solar home systems (in smaller villages) based on technical and economic criteria. The households pay on a fee-for-service basis. In each case private enterprises are responsible for installing and maintaining the system in order to ensure correct and long-lasting use. Of the hardware cost, 70% is subsidised by EnDev while the remainder is contributed by the operator and the communes concerned.
STATUS	Operational: Closing date 31 December 2017
TYPE OF FINANCING AND/OR CREDIT ENHANCEMENT	Grant
TYPE OF TECHNICAL ASSISTANCE OFFERED	• Feasibility study support • Business plan development • Information on mini-grid experiences • Contacts to potential partners
OTHER SUPPORT	• Training of policy makers • Policy advisory • Awareness campaigns • Involvement of Community • Support for household energy users
TYPES OF MINI-GRID PROJECTS ELIGIBLE FOR SUPPORT	Greenfield
PROGRAMME BENEFICIARY	• National/local public authority • Installation • Operation • Maintenance • Private company • Non-governmental organisation
TYPE OF TECHNOLOGY	Solar

24. Energia sin fronteras (Esf)

ORGANISATION PROFILE

NAME OF ORGANISATION	Energia sin fronteras (Esf)
MISSION STATEMENT	EsF's mission is to extend and facilitate access to energy, water supply and sanitation services to those lacking or not being offered them in adequate condition. Final beneficiaries and local counterparts are the central part of cooperation, which should focus on their development respecting their beliefs, customs and choices.
COMMITMENT TO MINI-GRIDS	Esf is committed to apply their recently developed mini-grid model to the energy supply projects being implemented in rural isolated zones of Sub-saharan Africa and Latin America.
MINI-GRID PROGRAMME	Two flagship projects with mini-grids were recently completed in Nyumbani (Kenya) and in Fô Bouré (Benin). Additionally specific feasibility studies are ongoing for Brasil and Ruanda with the support of Iberdrola and the collaboration of the US MIT and Institute of Research and Technology (IIT) linked to the University of Comillas.
CONTACT	Jesus Tapia +34679420654 jtapiab@telefonica.net www.energiasinfronteras.org

PROGRAMME

NAME OF THE INSTITUTION	Energia sin fronteras
INSTITUTION TYPE	• Consultancy • Non-governmental Organisation • Development Organisation • Non-profit Organisation
NAME OF THE PROGRAMME	Micro-grid Study for the electrification of rural isolated communities
TOTAL PROGRAMME BUDGET (EUR)	Up to 1 Mio Euro
PRECISE TOTAL PROGRAMME BUDGET (EUR)	2 applications= 500.000 €
WEBSITE	www.energiasinfronteras.org
CONTACT	Jesus Tapia 00 34 679 420 654 jtapiab@telefonica.net
TYPES OF SUPPORT	Technical assistance
OBJECTIVES	Develop a standard design of micro-grids for several renewable sources which would be applicable to the electrification of rural isolated communities
COUNTRIES	Kenya, Benin
REGION/LOCATION	Nyumbani (Kenya) and Fo-Buré (Benin)
SHORT DESCRIPTION	The study considers the specificities of a micro-grid for different kind of technologies: Photovoltaic, wind, micro-hydro, biomass and other sources. It also covers the energy storage alternatives, the control system, the distribution network and the possibilities to connect a micro-grid to the country or region general grid. An analysis of the sustainability of the micro-grid is also included. An example is also shown for easy understanding.
TYPE OF TECHNICAL ASSISTANCE OFFERED	• Feasibility study support: Assessment of a specific Project feasibility, defining the most suitable alternative. The interested Organisation shall provide the input data to perform such a study. • Technical evaluation: The criteria described in the study are a good basis for the technical evaluation of a project by an expert • Financial modelling: The scheme of the micro grid shown in the study can be used to define the needed components and consequently evaluate the cost of the investment • Marketing of projects to financiers and buyers: The study will be a support instrument for the marketing of projects to financiers and buyers • Environmental and Social Impact Assessments: There are some bases what can be used for the social impact in what refers to sustainability

PROGRAMME (continued)

OTHER SUPPORT	• Training of policy makers: Very useful information for that purpose • Organisation of dialogue events: It could be a basis for further discussion on the use of micro-grids • Policy advisory: Recommendations are included which are a good advice to define energy services policy • Association support: Useful for definition of association agreements • Support for household energy users: It is rather applicable to community services. • Support for non-household energy users (e.g. telecom, agriculture, water, tourism, education and health sectors): Only as a reference
TYPES OF MINI-GRID PROJECTS ELIGIBLE FOR SUPPORT	Greenfield
PROGRAMME BENEFICIARY	• National/local public authority • Training providers: Business • Training providers: End-users • Consultancy/Research: Resource assessment • Consultancy/Research: Community surveys • Consultancy/Research: Policy • Non-governmental organisation
TYPE OF TECHNOLOGY	• Solar • Wind • Hydro • Biomass • Battery/Storage • Diesel back-up • Power components
TARGETED PROJECT CAPACITY (KW)	Current applications capacity are about 50KW each
% OF ENERGY USED BY BUSINESSES	100%
PREFERRED BUSINESS MODEL	Electrification of Rural isolated communities with non-reimbursable capital investment but operation and maintenance covered by the Project results.

25. Eolicar Srl

ORGANISATION PROFILE

NAME OF ORGANISATION	EOLICAR SRL
MISSION STATEMENT	Clean Energy, hybrid systems for off-grid applications (30-60kW), smart monitoring and precision farming to serve your business, village, farm or home. We help you generate your own energy and use it more efficiently.
COMMITMENT TO MINI-GRIDS	We want to enable our clients (companies, farms and farmers, villages, schools, individuals) to generate the energy they need and do it in the cleanest, most efficient and sustainable way, whether they are connected to the grid or are off-grid. We decided to take an active part within the global effort to make the energy infrastructure more intelligent and socially and economically sustainable. Indeed, we place ourselves at the heart of such transition: we design, manufacture and integrate technologies for energy generation from renewable sources (10-50kW) with advanced ICT solutions for the energy efficiency sector and sustainable agriculture.
MINI-GRID PROGRAMME	Hysolwind (www.hysolwind.com), Monkey Energy (Monitoring is key)
CONTACT	Andrea Bertello +39 340 0602870 abertello@eolicar.it www.eolicar.it/welcome_eng.lasso www.hysolwind.com

PROGRAMME

NAME OF THE INSTITUTION	Eolicar Srl
INSTITUTION TYPE	Small or medium enterprise (SME)
NAME OF THE PROGRAMME	SE4All Clean Energy Mini-Grids High Impact Opportunity (HIO)
TYPES OF SUPPORT	• Technical assistance • Other: technology transfer / supply
COUNTRIES	Italy
TYPE OF TECHNOLOGY	• Solar • Wind • Battery/Storage

26. EU Energy Initiative Partnership Dialogue Facility (EUEI PDF)

ORGANISATION PROFILE

NAME OF ORGANISATION	EU Energy Initiative Partnership Dialogue Facility (EUEI PDF)
MISSION STATEMENT	The EU Energy Initiative Partnership Dialogue Facility (EUEI PDF) is a multi-EU-donor facility employing the best of European skills and experiences for the achievement of global goals on sustainable energy for developing countries (SE4All and subsequently SDGs). Its objective is to support developing countries and regions in enhancing and implementing policies, market development approaches and in building the capacity needed to accelerate progress, including investment, in the energy sector. The EUEI PDF was established in 2005 by the European Commission and European Member States. It is currently funded by Austria, the European Commission, Finland, France, Germany, the Netherlands and Sweden. The EUEI PDF's work is currently structured in three components, comprising the provision of strategic energy advisory and dialogue services, secretariat services for the Africa-EU Energy Partnership (AEEP), and the implementation of the Africa-EU Renewable Energy Cooperation Programme (RECP).
COMMITMENT TO MINI-GRIDS	Mini-grids are a central topic cutting across the different components of the EUEI PDF's work.
MINI-GRID PROGRAMME	The EUEI PDF supports mini-grid deployment and market development through: • Advisory on policies and strategies concerning rural electrification and mini-grids; • Political and thematic dialogue and exchange; • Thematic studies and publications; • Various market development support services provided under the RECP.
CONTACT	Website: http://euei-pdf.org/ Contact: info@euei-pdf.org Programme Manager: Dr Mike Enskat, mike.enskat@euei-pdf.org

27. European Investment Bank (EIB)

ORGANISATION PROFILE

NAME OF ORGANISATION	European Investment Bank (EIB)
MISSION STATEMENT	EIB is the long-term lending bank of the EU. As the largest multilateral borrower and lender by volume, we provide finance and expertise for sound and sustainable investment projects which contribute to furthering EU policy objectives. More than 90% of our activity is focused on Europe but we also support the EU's external and development policies.
COMMITMENT TO MINI-GRIDS	More broadly, EIB is committed to support for renewable energy projects in the context of its lending mandate and climate action objectives, and as part of the EU's response to the Sustainable Energy for All initiative (SE4AIII).
MINI-GRID PROGRAMME	EIB programmes are predominately on-grid, and not specifically mini-grid, but the EIB has some existing and developing set of innovative financing instruments that enable us to reach smaller renewable energy projects. The new EIB ACP Impact Financing Envelope is not sector specific, however some focus on small scale renewables is already emerging for example the Energy Access Ventures Fund (private equity fund targeting low income household electricity supply).
CONTACT	SE4All coordination: Morag Baird M.Baird@eib.org www.eib.org

PROGRAMME 1

NAME OF THE INSTITUTION	European Investment Bank, EIB (hosting EU-Africa ITF Secretariat)
INSTITUTION TYPE	Finance Institution
NAME OF THE PROGRAMME	EU Africa Infrastructure Trust Fund (AITF)
TOTAL PROGRAMME BUDGET (EUR)	Above 50 Mio Euro
PRECISE TOTAL PROGRAMME BUDGET (EUR)	SE4All envelope EUR 330m
WEBSITE	www.eu-africa-infrastructure-tf.net
CONTACT	Eva Romer e.romer@eib.org
TYPES OF SUPPORT	• Technical assistance • Financial assistance / investment
OBJECTIVES	The "Sustainable Energy for All" SE4All envelope of the ITF supports regional, national and local projects targeting SE4All objectives.
COUNTRIES	• Angola • Benin • Botswana • Burkina Faso • Burundi • Cameroon • Cape Verde • Central African Republic • Chad • Comoros • Congo • Cote D'ivoire • Djibouti • Equatorial Guinea • Eritrea • Ethiopia • Gabon • Gambia • Ghana • Guinea • Guinea-Bissau • Kenya • Lesotho • Liberia • Madagascar • Malawi • Mali • Mauritania • Mauritius • Mozambique • Namibia • Niger • Nigeria • Rwanda • Sao Tome and Principe • Senegal • Seychelles • Sierra Leone • Somalia • Sudan • Swaziland • Tanzania • Togo • Uganda • Zambia • Zimbabwe
REGION/LOCATION	Sub-Saharan Africa (excluding South Africa)
SHORT DESCRIPTION	Established in 2007, the EU-Africa Infrastructure Trust Fund (EU-AITF) aims to increase investment in infrastructure in Sub-Saharan Africa by blending long term loans from participating financiers with ITF grant resources. Projects must be financed by at least one member of the EU-AITF Project Financiers Group and both private and public sector co-financing is encouraged.

PROGRAMME 1 (continued)

STATUS	Operational: Closing date 31 December 2023
TYPE OF FINANCING AND/OR CREDIT ENHANCEMENT	• Grant • Convertible Grant • Equity • Guarantees • Other Credit enhancement
TYPE OF TECHNOLOGY	All renewable energy sources

PROGRAMME 2

NAME OF THE INSTITUTION	European Investment bank (EIB)
INSTITUTION TYPE	Finance Institution
NAME OF THE PROGRAMME	Energy Access Ventures Fund
TOTAL PROGRAMME BUDGET (EUR)	Above 50 Mio Euro
PRECISE TOTAL PROGRAMME BUDGET (EUR)	EUR 54.5 million total (in partnership with Schneider and other financiers)
WEBSITE	http://www2.schneider-electric.com/documents/press-releases/en/shared/2015/03/20150302_PRF_AfricaEnergyAccessFund_EN.pdf
TYPES OF SUPPORT	• Technical assistance • Financial assistance / investment
OBJECTIVES	The objectives of the Fund is to reach low income beneficiaries, in rural and peri- urban areas, who lack reliable access to electricity.
COUNTRIES	• Burundi • Ethiopia • Kenya • Malawi • Mozambique • Rwanda
SHORT DESCRIPTION	The Fund will target smaller businesses in Africa that specialise in promoting low-carbon and low cost electricity access solutions in rural and peri-urban areas that cannot access regular finance. It is expected to include pico-solar and household level systems, as well as potentially mini-grids.
STATUS	Operational

28. First Solar, Inc.

ORGANISATION PROFILE

NAME OF ORGANISATION	First Solar, Inc.
MISSION STATEMENT	First Solar is the global leader in photovoltaic (PV) solar energy solutions. With more than 10 gigawatts (GW) installed worldwide, we believe that clean affordable solar electricity is an essential part of the worldwide energy mix. We also believe that clean energy should be available to everyone, including the 1.3 billion people not currently connected to an electricity grid.
COMMITMENT TO MINI-GRIDS	First Solar offers off-grid and energy access solutions that provide a practical and affordable option for underserved energy markets across the globe. Our micro-grid-based energy solutions can provide village electrification in remote locations to power homes, schools, hospitals, telecom systems, and productive activities.
MINI-GRID PROGRAMME	Off-grid and energy access solutions.
CONTACT	Lucinda Gibbs lucinda.gibbs@firstsolar.com www.firstsolar.com

PROGRAMME

NAME OF THE INSTITUTION	First Solar, Inc.
INSTITUTION TYPE	Corporate firm
NAME OF THE PROGRAMME	Off-Grid & Energy Access Solutions
WEBSITE	www.firstsolar.com
CONTACT	Lucinda Gibbs lucinda.gibbs@firstsolar.com
TYPES OF SUPPORT	• Technical assistance • Financial assistance / investment
OBJECTIVES	To bring together complementary capabilities to incubate and deliver scalable and commercially-viable micro-grid-based energy solutions.
COUNTRIES	Worldwide
STATUS	Operational: open end

29. Fondazione ACRA-CCS

ORGANISATION PROFILE

NAME OF ORGANISATION	Fondazione ACRA-CCS
MISSION STATEMENT	ACRA-CCS is a lay and independent non-government Organisation working to eradicate poverty through sustainable, innovative and participatory solutions. Particular attention is focused on the peripheral areas of the planet and the marginalised segments in the South and North of the world. In Europe and in Italy ACRA-CCS promotes a culture of peace, dialogue, cultural exchange and solidarity.
COMMITMENT TO MINI-GRIDS	We are working since 2006 to promote access to energy through renewable energies for rural communities in Africa and Latin America. We recognise the role of the private sector and we are eager to collaborate to enhance access for households, social services and SMEs.
MINI-GRID PROGRAMME	Renewable Energies for Rural Electrification, composed of: • Hydroelectric Energy for 20 Isolated Rural Villages in the Ludewa District, Tanzania- funded by the EU Energy facility II (7'650'000 EUR) • Small hydroelectric plants and adaptation to climate change, Bolivia – funded by MAE ITALY (1'700'000 EUR) • Implementation of eco-system services and green economy for socio-economic development in Matam, Senegal – MAE Italy (2'560'000 EUR)
CONTACT	Nicola Morganti - President Tel +39 02.27000291 / Fax +39 02.2552270 - nicolamorganti@acraccs.org - pvs@acraccs.org Via Lazzaretto 3, - 20124 Milano – Italy - www.acracss.org

PROGRAMME

NAME OF THE INSTITUTION	Fondazione ACRA-CCS
INSTITUTION TYPE	Non-governmental Organisation
NAME OF THE PROGRAMME	Renewable Energies for Rural Electrification
TOTAL PROGRAMME BUDGET (EUR)	Between 10 Mio Euro and 50 Mio Euro
PRECISE TOTAL PROGRAMME BUDGET (EUR)	11.910.000
WEBSITE	www.acraccs.org
CONTACT	Mr. Nicola Morganti +39 0227000291 nicolamorganti@acraccs.org
TYPES OF SUPPORT	Other: Project design and implementation
OBJECTIVES	To support rural communities in accessing energy for domestic, social and productive use in a sustainable, environmentally friendly and profitable way.
COUNTRIES	Tanzania, United Republic of, Bolivia, Senegal
REGION/LOCATION	Ludewa District in Tanzania; Bolivia (several locations); Matam in Senegal
SHORT DESCRIPTION	Donor funded projects combined with local Organisations' investment and eventually loans
STATUS	Operational: Open end
TYPE OF FINANCING AND/OR CREDIT ENHANCEMENT	Grant: 90 % of project value Loan: 10 % of project value
TYPE OF TECHNICAL ASSISTANCE OFFERED	• Feasibility study support: Done in partnership with engineering firms • Business plan development: Generally developed by our staff or sometimes consultants • Technical evaluation: Done in partnership with engineering firms • Technical validation: Done in partnership with engineering firms • Financial modelling: Generally developed by our staff or sometimes consultants • Market and risk assessment: Generally developed by our staff or sometimes consultants • Marketing of projects to financiers and buyers: Done by ACRA-CCS energy programme manager and CEO • Environmental and Social Impact Assessments: Done by qualified consultants

PROGRAMME (continued)	
OTHER SUPPORT	• Organisation of dialogue events: Organisation of workshops and events to discuss about rural electrification issues together with local partners and governments • Association support: Support the creation of community based social enterprises managing the power plant and distribution lines • Awareness campaigns: Before households access electricity, awareness campaign are undertaken in order to make sure people understand risks and benefits of accessing electricity • Involvement of Community: All ACRA-CCS projects aim at involving communities since the inception phase through participatory approaches. Generally the infrastructures developed are handed over to community based Organisations • Support for household energy users: Connection costs represent a major barrier in accessing electricity for poor households. ACRA-CCS is therefore engaged in developing access to the distribution line up to the meter. Households have to take care of internal wiring. Gender issues are taken care of. • Support for non-household energy users (e.g. telecom, agriculture, water, tourism, education and health sectors): ACRA-CCS has developed a methodology to enhance productive use of energy by supporting SMEs in training and access financial resources to purchase required machineries. Social services in the project area are generally connected as a mean to share advantages of electrification also to those who cannot access it at home.
TYPES OF MINI-GRID PROJECTS	• Greenfield
ELIGIBLE FOR SUPPORT	• Open to collaborate with private investors
PROGRAMME BENEFICIARY	• Private company • Non-governmental organisation • CBOs
TYPE OF TECHNOLOGY	• Solar • Hydro
TARGETED PROJECT CAPACITY (KW)	2MW
NUMBER OF END-USERS	80.000
PREFERRED BUSINESS MODEL	• All projects must be financially sustainable after project end. Communities must be involved in the management and benefits of power production and distribution. Use access to electricity as a driver for natural resources preservation (in the case of hydropower); • A(nchor) – B(usiness) – C(ommunity) Model; • ACRA-CCS is a lay and independent non-government Organisation working to eradicate poverty through sustainable, innovative and participatory solutions, open to collaborate with private sector investors.

30. Fonds Francais pour l'Environnement Mondial (FFEM)

FONDS FRANÇAIS POUR L'ENVIRONNEMENT MONDIAL

ORGANISATION PROFILE

NAME OF ORGANISATION	Fonds Francais pour l'Environnement Mondial
MISSION STATEMENT	The French Facility for Global Environment (FFEM) is a bilateral public fund initiated by the French Government in 1994. The FFEM secretariat and its financial management are entrusted to the Agence Française de Développement (AFD). The FFEM co-finances projects that encourage the protection of the global environment in developing countries. Its co-financing is used for the implementation of pilot projects that combine environmental protection and economic development in the recipient countries. The FFEM is an influential strategic instrument for the French policy on Official Development Assistance regarding global environmental protection. Its activities focus on the topics of biodiversity, international waters, the climate change, land degradation and desertification, persistent organic pollutants and the stratospheric ozone layer. By the end of 2014, the FFEM has co-financed 275 projects with 317 Million Euros.
COMMITMENT TO MINI-GRIDS	In 2015, FFEM is directly currently cofinancing 3 mini-grids operations in Madagascar, Guinea, and Cambodia, for an amount of cofinancing 2,5 Million Euros (global total investments around M€ 10). FFEM is also cofinancing the Energy Access Ventures Fund (www.eavafrica.com) which will target smaller businesses in Africa that specialise in promoting low-carbon and low cost electricity access solutions in rural areas and close to main towns and that cannot access regular finance, including mini-grids.
MINI-GRID PROGRAMME	No Specific name
CONTACT	ffem@afd.fr www.ffem.fr

PROGRAMME

NAME OF THE INSTITUTION	Fonds Francais Pour L'environnement Mondial
INSTITUTION TYPE	Finance Institution
NAME OF THE PROGRAMME	Fonds Francais Pour L'environnement Mondial
TOTAL PROGRAMME BUDGET (EUR)	Between 1 Mio Euro and 10 Mio Euro
PRECISE TOTAL PROGRAMME BUDGET (EUR)	20 Mio Euros
WEBSITE	www.ffem.fr
TYPES OF SUPPORT	Financial assistance / investment
OBJECTIVES	The French Facility for Global Environment (FFEM) is a bilateral public fund initiated by the French Government in 1994. The FFEM secretariat and its financial management are entrusted to the Agence Française de Développement (AFD). The FFEM co-finances projects that encourage the protection of the global environment in developing countries. Its co-financing is used for the implementation of pilot projects that combine environmental protection and economic development in the recipient countries. The FFEM is an influential strategic instrument for the French policy on Official Development Assistance regarding global environmental protection. Its activities focus on the topics of biodiversity, international waters, the climate change, land degradation and desertification, persistent organic pollutants and the stratospheric ozone layer. By the end of 2014, the FFEM has co-financed 275 projects with 317Millions Euros.
COUNTRIES	Developing Countries Virgin Islands, U.S.
REGION/LOCATION	Developing Countries
STATUS	Operational: open end
TYPE OF FINANCING AND/OR CREDIT ENHANCEMENT	Grant: 90% of project value Convertible grant: 10% of project value
TYPE OF TECHNOLOGY	All renewable energy sources

31. Foundation Rural Energy Services (FRES)

foundation RURAL ENERGY SERVICES

ORGANISATION PROFILE

NAME OF ORGANISATION	Foundation Rural Energy Services (FRES)
MISSION STATEMENT	FRES stimulates rural electrification in developing countries by establishing small-scale, commercial electricity companies in areas that have no access to a national or regional electricity network. FRES does so via a market-based approach, which guarantees that electricity (preferably solar-powered) is made structurally available for the long term. FRES is a small multinational with daughter companies in developing countries that actively expand rural electrification.
COMMITMENT TO MINI-GRIDS	Since 2006, FRES has been utilising mini-grids in densely populated rural villages to meet the higher energy demands of local businesses and households. To date, FRES operates 10 mini-grids in south-eastern Mali, with an installed solar PV capacity of 622kWp and supplying 4,000 households and small businesses with long term access to electricity. Looking ahead, FRES views mini-grids as an integral and complementary tool to Solar Home Systems (SHS) as a means of scaling up rural electrification across sub-Saharan Africa. In the coming years, FRES has the following plans with respect to mini-grids: • Expansion of solar PV capacity at existing grids in Mali. • Possible replacement of one diesel mini-grid with solar PV in Mali. • Deployment of new solar mini-grids in Guinea-Bissau. • Feasibility studies and market research for new mini-grids in other FRES countries. • Sparring partner for national governments and international development organisations with respect to rural electrification policies and support mechanisms.
MINI-GRID PROGRAMME	2008 – 'Solar plant in the cotton zone of Koutiala, Mali'. Pilot project of 72kWp solar power plant at Kimparana village. 2010 – Phase 1 of 'L'électrification par centrales solaires au Mali'. Installation of 200kWp and new grid extension at 2 villages. 2011-2012 - Phase 2 of 'L'électrification par centrales solaires au Mali'. Installation of 350kWp and new grid extension at 6 villages.
CONTACT	Caroline Nijland Director Business Development +31 (0)20 582 9056 Caroline.nijland@fres.nl www.fres.nl

PROGRAMME

NAME OF THE INSTITUTION	Foundation Rural Energy Services
INSTITUTION TYPE	Non-governmental Organisation
NAME OF THE PROGRAMME	2008 – 'Solar plant in the cotton zone of Koutiala, Mali'. Pilot project of 72kWp solar power plant at Kimparana village. 2010 –
TOTAL PROGRAMME BUDGET (EUR)	Between 1 Mio Euro and 10 Mio Euro
WEBSITE	www.fres.nl
CONTACT	Caroline Nijland +31 (0)20 582 9056 Caroline.nijland@fres.nl
TYPES OF SUPPORT	Other: Project development, implementation and ongoing management
OBJECTIVES	FRES stimulates rural electrification in developing countries by establishing small-scale, commercial electricity companies in areas that have no access to a national or regional electricity network. FRES does so via a market-based approach, which guarantees that electricity (preferably solar-powered) is made structurally available for the long term. FRES is a small multinational with daughter companies in developing countries that actively expand rural electrification. Since 2006, FRES has been utilising mini-grids in densely populated rural villages to meet the higher energy demands of local businesses and households.

PROGRAMME

COUNTRIES	Mali
REGION/LOCATION	Ségou
SHORT DESCRIPTION	To date, FRES operates 10 mini-grids in south-eastern Mali, with an installed solar PV capacity of 622kWp and supplying 4,000 households and small businesses with long term access to electricity. Looking ahead, FRES views mini-grids as an integral and complementary tool to Solar Home Systems (SHS) as a means of scaling up rural electrification across sub-Saharan Africa. In the coming years, FRES has the following plans with respect to mini-grids: • Expansion of solar PV capacity at existing grids in Mali. • Possible replacement of one diesel mini-grid with solar PV in Mali. • Deployment of new solar mini-grids in Guinea-Bissau. • Feasibility studies and market research for new mini-grids in other FRES countries. • Sparring partner for national governments and international development organisations with respect to rural electrification policies and support mechanisms.
STATUS	Operational: Open end
OTHER SUPPORT	FRES stimulates rural electrification in developing countries by establishing small-scale, commercial electricity companies in areas that have no access to a national or regional electricity network. FRES does so via a market-based approach, which guarantees that electricity (preferably solar-powered) is made structurally available for the long term. FRES is a small multinational with daughter companies in developing countries that actively expand rural electrification. These daughter companies fully perform all activities relating to the delivery of electricity services, including installation, ongoing maintenance, and collection of fees and management of the company.
PROGRAMME BENEFICIARY	• Distribution • Installation • Operation • Maintenance • Private company
TYPE OF TECHNOLOGY	• Solar • Diesel back-up
TARGETED PROJECT CAPACITY (KW)	622
NUMBER OF END-USERS	4.000
PREFERRED BUSINESS MODEL	Fee for service

32. Global Lighting and Energy Access Partnership (Global LEAP)

ORGANISATION PROFILE

NAME OF ORGANISATION	Global Lighting and Energy Access Partnership (Global LEAP)
MISSION STATEMENT	The Clean Energy Ministerial's Global Lighting and Energy Access Partnership (Global LEAP) initiative is a transformative partnership that works to catalyse the development of sustainable commercial markets for energy access solutions. Global LEAP transforms clean energy access markets through public-private partnerships, industry engagement, and other market-enabling interventions focused on quality assurance, promotion of demand-side energy efficiency in off-grid contexts, and partner collaboration.
COMMITMENT TO MINI-GRIDS	Global LEAP is developing a Quality Assurance Framework for mini-grids that will catalyse the use of standard technological and operational concepts in mini-grids sector, thereby addressing root barriers to aggregation, scale-up and investment. This work builds on Global LEAP's existing efforts on quality assurance for product-based energy access solutions such as off-grid lighting and solar home systems. The mini-grids QA Framework project is part of the SE4All Clean Energy Mini-Grids High Impact Opportunity, the US-India Promoting Energy Access through Clean Energy (PEACE) initiative, and Power Africa's Beyond The Grid initiative.
MINI-GRID PROGRAMME	Quality Assurance Framework for Mini-Grids project
CONTACT	Staff Contacts: Caroline McGregor +1 202-586-3920 Caroline.McGregor@Hq.Doe.Gov Rose Mutiso +1 202-586-5741 Rose.Mutiso@Hq.Doe.Gov www.cleanenergyministerial.org/GlobalLEAP

33. GoSolar Africa

ORGANISATION PROFILE

NAME OF ORGANISATION	GoSolar Africa
MISSION STATEMENT	We provide a solution (Solar PV) for citizens to produce their own renewable energy, save money, and create a greener and more secure world for our children.
COMMITMENT TO MINI-GRIDS	We Commit to generate 3,000MW through a decentralised Mini-grid Rooftop Network by 2017 in Africa. We are serious about cleaning up the environment, stem global warming, strengthen the energy grid, support national security and energy independence, while we build energy independent citizen to hedge against rising power and maintenance costs with a fixed-price rental contract.
MINI-GRID PROGRAMME	1-Watt Solar
CONTACT	Tope Adeyemi +234 803 708 0251 t.adeyemi@1wattSolar.org www.1wattSolar.org www.goSolarAfrica.org

PROGRAMME

NAME OF THE INSTITUTION	SMEFUNDS GoSolarAfrica
INSTITUTION TYPE	• Development Organisation • Non-governmental Organisation • Small or medium enterprise (SME)
NAME OF THE PROGRAMME	Developing 3,000MW Single Largest Smart Grid in Nigeria
TOTAL PROGRAMME BUDGET (EUR)	Above 50 Mio Euro
PRECISE TOTAL PROGRAMME BUDGET (EUR)	60 Mio Euro
WEBSITE	www.1wattSolar.org
CONTACT	Femi Oye 08037080251 coachxx@gmail.com
TYPES OF SUPPORT	• Technical assistance • Financial assistance / investment • Other: Development
COUNTRIES	• Ghana • Nigeria
REGION/LOCATION	Africa
STATUS	Operational: Closing date 2 January 2017
TYPE OF TECHNOLOGY	• Solar • Biomass • Battery/Storage

34. GVEP International

ORGANISATION PROFILE

NAME OF ORGANISATION	GVEP International
MISSION STATEMENT	GVEP is an international donor-funded Organisation supporting energy access in Sub-Saharan Africa. We deliver demand-driven, practical, and customised support to businesses that provide renewable energy services to low-income communities. With activities focused in East Africa, and a smaller presence in West Africa, we provide advisory services and access to capital for SMEs and social enterprises, and capacity building and micro-finance for micro-enterprises. We help companies understand and address strategic and operational barriers to growth, and leveraging their strengths, raise capital from a range of financiers. We also engage closely with other market participants including banks, investors, incubators and others support the development of the sector.
COMMITMENT TO MINI-GRIDS	We are highly committed to developing mini-grids as a key model for electrification, and support businesses using various mini-grid models. Our Nairobi-based Advisory Services team positions us well to support relevant businesses and project developers. Through our involvement in the HIO, we commit to continuing to: • Deliver consulting and strategic advisory services to companies in the mini-grid sector. • Support companies to secure debt, equity, and grant financing through transaction advisory services. • Develop and implement local enterprise development support to stimulate demand for electricity by productive users that employ income-generating activities. • Contribute to knowledge building with relevant stakeholders e.g. donors, investors, financial institutions, regulators, etc.
MINI-GRID PROGRAMME	GVEP's activities are funded by major development agencies including Sida (Sweden), DfID (UK), World Bank, OFID, and the EU.
CONTACT	Peter George Director, Advisory Services +44 771 705 8589 peter.george@gvepinternational.org www.gvepinternational.org

PROGRAMME

NAME OF THE INSTITUTION	GVEP International
INSTITUTION TYPE	• Consultancy • Development Organisation • Non-governmental Organisation • Non-profit Organisation
NAME OF THE PROGRAMME	Multiple programmes
TOTAL PROGRAMME BUDGET (EUR)	Between 1 Mio Euro and 10 Mio Euro
CONTACT	Peter George +447717058589 peter.george@gvepinternational.org
TYPES OF SUPPORT	• Technical assistance • Financial assistance / investment
COUNTRIES	• Kenya • Rwanda • Tanzania, United Republic of • Uganda
STATUS	Operational: open end

PROGRAMME (continued)	
TYPE OF TECHNICAL ASSISTANCE OFFERED	• Feasibility study support • Business plan development • Financial modelling • Market and risk assessment • Marketing of projects to financiers and buyers
TYPES OF MINI-GRID PROJECTS ELIGIBLE FOR SUPPORT	• Greenfield • Brownfield • Required investment by private project developer • Required investment by private third party
PROGRAMME BENEFICIARY	Private company
TYPE OF TECHNOLOGY	All renewable energy sources

35. IBERDROLA

ORGANISATION PROFILE

NAME OF ORGANISATION	IBERDROLA
MISSION STATEMENT	We aspire to be the preferred Global Energy Company because of our commitment to the creation of value, quality of life, the safety of people and of supply, the protection of the environment and customer focus.
COMMITMENT TO MINI-GRIDS	Reach over 1 million beneficiaries in 2020 in projects of universalisation.
MINI-GRID PROGRAMME	Electricity for All
CONTACT	Mónica Oviedo Sustainability Management moviedo@iberdrola.es www.iberdrola.com www.itd.upm.es/iberdrola/gsep-lanza-una-convocatoria-para-proyectos-de-energia-sostenible/

36. Innovation Energie Développement + IED Invest

ORGANISATION PROFILE

NAME OF ORGANISATION	Innovation Energie Développement + IED Invest
MISSION STATEMENT	IED (Innovation Energy Development) is an independent consulting and engineering firm, involved in the provision of sustainable energy services since its creation in 1988. Our involvement extends from the pre and feasibility study phase right through to the construction supervision and commissioning of infrastructures such as distribution networks and renewable energy production plants. IED Invest finance and operates mini-grid systems in developing countries mobilising funds through equity, loans and grants.
COMMITMENT TO MINI-GRIDS	In the field of Mini-grids IED scope includes: sites identification and feasibility studies, design and technical specification of the systems incl. MV and LV networks, preparation of tenders, works supervision and social intermediation, Capacity building: training on off-grid rural electrification planning, on design and management of electrical systems, specific training on design of PV/diesel hybrid systems. On-going MG projects: Burkina Faso, Mauritania, Cameroun. IED-Invest has identified, designed, assisted in installation and is currently supervising operations a 200 kW power mini-grid plant based on a rice husk in Cambodia. The tender procedures for a 1.22 MW small hydro power plant in Cameroun have already been launched. In Cambodia, a pre-feasibility study for the development of an off-grid wood-biomass power plant using a boiler and a steam turbine has been completed and the financial engineering is on-going.
CONTACT	Anjali Shanker ied@ied-sa.fr www.ied-sa.fr www.iedinvest.com

PROGRAMME

NAME OF THE INSTITUTION	Innovation Energie Developpement and IED Invest
INSTITUTION TYPE	• Consultancy • Small or medium enterprise (SME)
NAME OF THE PROGRAMME	Feasibility studies / design / construction supervision
TOTAL PROGRAMME BUDGET (EUR)	Up to 1 Mio Euro
WEBSITE	www.ied-sa.fr
TYPES OF SUPPORT	Technical assistance
OBJECTIVES	IED offers technical assistance for the design and development of Mini-grids (Hydro power plants, Gasifiers and PV-Diesel Hybrid systems) in Sub-Saharan Africa and South Eastern Asia.
COUNTRIES	• Burkina Faso • Cambodia • Cameroon • Comoros • Madagascar • Mauritania
TYPE OF TECHNOLOGY	• Solar • Hydro • Biomass

37. Inter-American Development Bank

ORGANISATION PROFILE

NAME OF ORGANISATION	Inter-American Development Bank - Sustainable Energy for All Americas initiative
MISSION STATEMENT	We work to improve lives in Latin America and the Caribbean (LAC). Through financial and technical support for countries working to reduce poverty and inequality, we help improve health and education, and advance infrastructure. Our aim is to achieve development in a sustainable, climate-friendly way. With a history dating back to 1959, today we are the leading source of development financing for LAC. We provide loans, grants, and technical assistance; and we conduct extensive research. We maintain a strong commitment to achieving measurable results and the highest standards of increased integrity, transparency, and accountability.
COMMITMENT TO MINI-GRIDS	The IDB is committed to development in LAC and is the regional HUB of the SE4All initiative. The bank is supporting Universal Access to electricity in the region as part of its activities to help LAC countries meet the 2030 SE4All targets. IDB is promoting the creation of universalisation national plans, providing technical assistance and financial investment programs that consider, among other solutions, mini-grids.
MINI-GRID PROGRAMME	On-going rural electrification loans (e.g., in Ecuador, Nicaragua, Panama, Guatemala, Bolivia)
CONTACT	Arnaldo Vieira de Carvalho Sustainable Energy Lead Specialist Energy Division IDB/INE/ENE arnaldov@iadb.org +1 (202) 623-1719 Website IDB: www.iadb.org/en/inter-american-development-bank,2837.html

PROGRAMME

NAME OF THE INSTITUTION	Inter-American Development Bank
INSTITUTION TYPE	Finance Institution
NAME OF THE PROGRAMME	Part of normal lending and in support of SE4All
TOTAL PROGRAMME BUDGET (EUR)	Above 50 Mio Euro
PRECISE TOTAL PROGRAMME BUDGET (EUR)	Approx. 60 Mio Euro/year, not all dedicated to mini grids
WEBSITE	www.iadb.org/se4allamericas
CONTACT	Arnaldo Vieira de Carvalho 202 623 1719 arnaldov@iadb.org
TYPES OF SUPPORT	• Technical assistance • Financial assistance / investment
OBJECTIVES	Help countries reach a higher level of social and economic development
COUNTRIES	• Honduras • Mexico • Paraguay • Uruguay • Hungary • Nicaragua • Peru • Venezuela • Jamaica • Panama • Trinidad and Tobago
REGION/LOCATION	Latin America and the Caribbean
SHORT DESCRIPTION	SE4All Americas is the hub for Latin America and the Caribbean of the SE4All Global Initiative, providing technical and financial support to help IDB borrowing member countries meet their commitments to the SE4All targets for 2030.

PROGRAMME (continued)

STATUS	Operational: Closing date 31 December 2016
TYPE OF FINANCING AND/OR CREDIT ENHANCEMENT	• Grant: 5% of project value • Loan: up to 100% of project value • Loan guarantees
TYPE OF TECHNICAL ASSISTANCE OFFERED	• Feasibility study support • Business plan development • Technical evaluation • Technical validation • Financial modelling • Market and risk assessment • Marketing of projects to financiers and buyers (not always) • Environmental and Social Impact Assessments
OTHER SUPPORT	• Training of policy makers • Organisation of dialogue events • Policy advisory • Association support • Awareness campaigns • Involvement of Community • Support for household energy users • Support for non-household energy users (e.g. telecom, agriculture, water, tourism, education and health sectors)
TYPES OF MINI-GRID PROJECTS ELIGIBLE FOR SUPPORT	• Greenfield • Brownfield • 25 % required investment by private project developer • Required investment by private third party
PROGRAMME BENEFICIARY	• National/local public authority • Manufacturing • Consultancy/Research: Community surveys • Consultancy/Research: Policy • Private company • Non-governmental organisation • Academia • Assembly • Distribution • Installation • Training providers: Business • Training providers: End-users • Financier: Business • Financier: End-users • Consultancy/Research: Resource assessment
TYPE OF TECHNOLOGY	• All renewable energy sources • Battery/Storage
TARGETED PROJECT CAPACITY (KW)	100 W - 300 MW
NUMBER OF END-USERS	Unlimited
% OF ENERGY USED BY BUSINESSES	No constraints
PREFERRED BUSINESS MODEL	All that provide long term sustainability for operation and maintenance

38. International Renewable Energy Agency (IRENA)

ORGANISATION PROFILE

NAME OF ORGANISATION	International Renewable Energy Agency (IRENA)
MISSION STATEMENT	The Agency shall promote the widespread and increased adoption and the sustainable use of all forms of renewable energy.
COMMITMENT TO MINI-GRIDS	Technical evaluation • IRENA mini-grid assessments and analysis IRENA provides technical advice to IRENA Members to support the deployment of renewables in mini-grid and stand-alone systems. The technical advice takes place in three areas: 1) IRENA grid-stability assessment methodology and country support in its application; 2) Technical guides with latest developments in renewable energy grid integration technologies, including solutions for storage, smart grids and mini-grids and 3) Analysis of future technologies and potential for deployment in markets to match new energy needs with innovative and cost-effective renewable energy solutions. www.irena.org/publications • Mini-grid studies in the Philippines as technical advisory to Renewables Readiness Assessment (RRA) Policy advisory • International Off-grid Renewable Energy Conference (IOREC) Platform. Provides platforms for stakeholder engagement at a regional and global-level to facilitate exchange of best practices in the design and implementation of off-grid (stand-alone and mini-grids) renewable energy strategies. Develops knowledge products with state-of-the-art analysis to inform country-level decision making relevant to the mini-grid sector. www.iorec.org • IRENA/Abu Dhabi Fund for Development (ADFD) project facility The facility involves the selection of projects by IRENA for funding by ADFD. As a result of the size of the loans offered (USD 5 to USD 15 million) and the transparent process to select projects with the greatest transformative impacts, most of the projects recommended by IRENA for funding by ADFD so far have been mini-grid projects. See www.irena.org/adfd for projects selected.
MINI-GRID PROGRAMME	• IRENA mini-grid assessments and analysis Mini-grid studies further to Renewables Readiness Assessment (RRAs); • International Off-grid Renewable Energy Conference (IOREC) platform for stakeholder engagement; • IRENA/Abu Dhabi Fund for Development project facility funding for renewable energy projects including mini-grid projects.
CONTACT	IRENA Secretariat +971 2 417 9000 secretariat@irena.org www.irena.org

PROGRAMME

NAME OF THE INSTITUTION	International Renewable Energy Agency (IRENA)
INSTITUTION TYPE	Intergovernmental Organisation
NAME OF THE PROGRAMME	IRENA policy, technical and finance support to mini-grid and off-grid activities
TOTAL PROGRAMME BUDGET (EUR)	Above 50 Mio Euro
WEBSITE	www.irena.org, www.irena.org/adfd, www.iorec.org, www.irena.org/publications
CONTACT	IRENA Headquarters +971 2 417 9000 secretariat@irena.org
TYPES OF SUPPORT	• Technical assistance • Other
OBJECTIVES	Promote the widespread and increased adoption and the sustainable use of all forms of renewable energy.
COUNTRIES	Worldwide
STATUS	Planned and operational
TYPE OF TECHNICAL ASSISTANCE OFFERED	Technical evaluation: • IRENA grid-stability assessment - IRENA provides technical advice to IRENA Members to support the deployment of renewables in mini-grid and stand-alone systems. The technical advice takes place in three areas: 1) IRENA grid-stability assessment methodology and country support in its application. With this initiative IRENA supports member Small Island Developing States (SIDS) by working closely with the local power utilities in the planning of and conducting grid integration technical studies. These studies facilitate the planning process for the operation of the isolated systems with high shares of variable renewable energy resources. They allow the identification of technically feasible integration levels, in the current infrastructure, for the short term. Additionally they facilitate the definition of expansion and operational measures to securely integrate expected variable renewable energy targets in the long term. The initiative has a capacity building component which includes the access to specialized software tools to conduct grid studies, the development of methodological guidelines to facilitate the own conduction of studies and the Organisation of technical expert meetings and workshops. 2) Technical guides with latest developments in renewable energy grid integration technologies, including solutions for storage, smart grids and mini-grids. In this activity, IRENA has developed a global status report on off-grid renewable energy technology deployment. The report provides a categorisation of different off-grid renewable energy technologies and their deployment status in different countries and applications. The report also provides a number of guidelines to improve data collection and analysis of the status and developments in off-grid renewable energy systems. The report is available at: http://www.irena.org/menu/index.aspx?mnu=Subcat&PriMenuID=36&CatID=141&SubcatID=555 3) Analysis of future technologies and potential for deployment in markets to match new energy needs with innovative and cost-effective renewable energy solutions. In this activity, IRENA is preparing a technology outlook study on mini-grids. It aims at informing policy-makers and investors on what are the main technology related challenges and the possible future technology developments to make renewables-based mini-grids a competitive electricity supply alternative in the next two decades. The study will benefit countries by enabling a more focused and effective implementation of incentive programmes and policy actions supporting innovation, technology research and development, for a transition towards a sustainable energy regime. • Mini-grid studies in the Philippines as technical advisory to Renewables Readiness Assessment (RRA) As a follow to its Renewable Readiness Assessment (RRA) study and recommendations, IRENA will conduct a study assessing the potentials for hybrid and green mini-grids as a sustainable option for provision of energy to island states and remote areas. Collaborating with GIZ it will assess the existing frameworks for off-grids, barriers that inhibit the deployment of mini-grids and provide recommendations in the use of renewable energy mini-grids with involvement of the private sector.

PROGRAMME

OTHER SUPPORT	Policy advisory:
TYPE OF TECHNOLOGY	• International Off-grid Renewable Energy Conference (IOREC) 1. To accelerate the deployment of off-grid renewable energy technologies, both stand-alone and mini-grids, in rural and island contexts, IRENA supports its Member States in developing an enabling environment. More specifically, the Agency provides the platform for disseminating best practices and lessons learnt in off-grid renewable energy deployment, carrying out policy analysis, formulating recommendations, improving access to reliable data and information, and providing technical expertise. In supporting policy-making for accelerated mini-grid development, IRENA: 1.1 Provides platforms for stakeholder engagement at a regional and global-level to facilitate exchange of best practices in the design and implementation of off-grid renewable energy strategies. IRENA has established the International Off-grid Renewable Energy Conference (IOREC) platform which convenes stakeholders from across the off-grid renewable energy sector to collectively identify pathways to scale-up off-grid renewable energy deployment. The 2014 edition of IOREC was held in Manila, Philippines and was organised in collaboration with the Asian Development Bank and the Alliance for Rural Electrification (www.iorec.org). It convened over 400 key stakeholders, including representatives from rural electrification agencies, ministries in charge of renewable energy development, the private sector, academia, financing institutions and international organisations. The outcomes from the conference have been published and are avail-able on www.irena.org/publications. IOREC is a biennial event with a rotating regional focus. IOREC 2012 was held in Accra, Ghana. The findings from IOREC also guide IRENA's programmatic activities to address specific deployment barriers prevalent in the region together with the public and private stakeholders. 1.2 Develops knowledge products with state-of-the-art analysis to inform country-level decision making relevant to the mini-grid sector. Building on the findings from IOREC as well as stakeholder engagements, IRENA analyses policies and regulations to scale-up development of renewable energy-based mini-grids. In this context, for example, IRENA is preparing a study that will provide policy makers with insights on how a variety of policy and regulatory measures impact mini-grid development through different delivery business models. It will build on existing knowledge on the topic and assess diverse case studies of successful private sector involvement. In addition, to strengthen the evidence on the benefits of off-grid solutions, IRENA is also undertaking a study to assess the socio-economic impacts of off-grid renewable energy deployment, especially for non-electricity applications. • IRENA/Abu Dhabi Fund for Development (ADFD) project facility 2. IRENA's mission to scale up renewable energy globally is actively supported through the IRENA/Abu Dhabi Fund for Development (ADFD) project facility. Through this facility, USD 350 million in concessional loans have been committed by ADFD to projects in developing countries recommended by IRENA. These funds are allocated over seven cycles, leveraging the equivalent or more from other sources. The facility's focus is on innovative projects with transformative results that enhance learning, are easily replicated or scaled up and further the advanced deployment of energy and sustainable development. The concessional loan value for each project ranges from a minimum of USD 5 million to a maximum of USD 15 million. The loan amount for each project covers up to 50 percent of the estimated total project cost. Loan rates vary between 1 percent and 2 percent per annum, with a duration of 20 years, including a grace period of 5 years. Both as a result of the size of the loans offered and the transparent process to select projects with the greatest transformative impacts, most of the projects recommended in the first and second cycle have been mini-grid projects. See www.irena.org/adfd for projects selected. All renewable energy sources

39. IQgrid Ltd.

ORGANISATION PROFILE

NAME OF ORGANISATION	IQgrid Ltd.
MISSION STATEMENT	Our mission is to passionately and profitably empower the energy poor through innovative and sustainable micro-grid electric power solutions.
COMMITMENT TO MINI-GRIDS	IQgrid is a startup-phase micro-grid project development company that provides sustainable electrical power solutions to remote rural regions of global emerging markets.
MINI-GRID PROGRAMME	MPower^3 Platform
CONTACT	Dr. Myles E. Mangram (805) 493-1120 myles@iqgrid.net www.IQgrid.net

40. Kaboni

ORGANISATION PROFILE

NAME OF ORGANISATION	Kaboni
MISSION STATEMENT	Kaboni believe that climate change matters and that we can make a difference. We care about the communities we work with and also understand that development must pay its own way. We are a business creation and project management consultancy that also develops renewable energy projects and programmes. We provide support services for African RE development and have the resources, experience, expertise and networks required to ensure successful RE project development, through the entire cycle from origination to financial close. If a project makes sense we can make it happen.
COMMITMENT TO MINI-GRIDS	Kaboni have developed several mini-grid project proposals that are progressing through the cycle and are working with NGOs in several countries to develop the business plans and survey information required to commence more projects. Kaboni works with DFIs to enable funding of these projects and can bring in late stage development partners and financing.
MINI-GRID PROGRAMME	Cameroon RERE Programme, Cameroon Mungo River Hydropower Programme. Malawi Village Impact Hydropower Programme.
CONTACT	Phillip Stovold phillip@kaboni.org +(44) 7900 364103 www.kaboni.org

PROGRAMME

NAME OF THE INSTITUTION	Kaboni
INSTITUTION TYPE	• Consultancy • Development Organisation • Small or medium enterprise (SME)
NAME OF THE PROGRAMME	Cameroon Renewable Energy Rural Electrification Programme
WEBSITE	www.kaboni.org
TYPES OF SUPPORT	• Technical assistance • Financial assistance / investment • Other: Expertise and Project Origination and Development, Resourcing
OBJECTIVES	Kaboni develop renewable energy projects in sub-saharan Africa and resource expertise, local teams, grants and development finance whilst designing projects in the early stages and bring them to a point where established EPC contractors and late stage developers adopt them. We also provide consultancy survives to EPC contractors and other organisations who want to develop projects and or markets in Sub-saharan Africa. In Cameroon, Malawi, Kenya, Nigeria, Mauritius and Uganda we are currently working on small run-of-river hydropower proposals and utility scale solar PV projects.
COUNTRIES	• Cameroon • Cape Verde • Kenya • Liberia • Malawi • Mauritius • Nigeria • Pakistan • Sierra Leone • South Africa • Uganda
REGION/LOCATION	East, Central and West Africa
SHORT DESCRIPTION	The Renewable energy rural electrification (RERE) programme was developed with an NGO in South West Cameroon and involves gird connected and off-grid small hydropower projects planned to connect local communities along the way. Therefore using the security of grid connected electricity provision to finance off-grid development and new connections.

PROGRAMME (continued)

STATUS	Planned launch date: 31 March 2015
TYPE OF FINANCING AND/OR CREDIT ENHANCEMENT	Hybrid capital
TYPE OF TECHNICAL ASSISTANCE OFFERED	• Feasibility study support: Kaboni can do full feasibility studies for renewable energy projects across Africa. This includes site surveys, legal and contracting support and every aspect of feasibility and process management • Business plan development: Kaboni provide business plans and financial assessments for RE Projects, we provide full project design, business plan development and writing and project planning. This includes in country data collections and teams development as required. • Technical evaluation: Kaboni provide full technical support and evaluation for hydropower, solar and biomass systems • Technical validation: Kaboni work with contracted EPC providers and can provide technical validation • Financial modeling: Kaboni can do full financial modeling • Market and risk assessment: Kaboni does political, social and environmental risk assessments and are experts in market assessments. • Marketing of projects to financiers and buyers: Kaboni package up and prepare projects for finance and grant aid • Environmental and Social Impact Assessments: Kaboni provide ESIAs though a dedicated provider in the UK and one in Africa • Kaboni works with EPCs and Governments to progress RE projects and programmes
OTHER SUPPORT	• Training of policy makers: Kaboni has PPP and policy advisors on its team • Policy advisory: Renewable Energy advice and policy guidance for regulators and energy ministries • Involvement of Community: Stakeholder engagement and community liaison RAP and community surveys. • Support for non-household energy users (e.g. telecom, agriculture, water, tourism, education and health sectors): We provide commercial renewable energy solutions to companies and connect the best solution providers to commercial private wire companies and organisations. • Kaboni provides all aspects of renewable energy project support, from the complete project development cycle to parts that other developers need assistance with.
TYPES OF MINI-GRID PROJECTS ELIGIBLE FOR SUPPORT	• Greenfield • Brownfield • 30 % required investment by private project developer • 30 % required investment by private third party
PROGRAMME BENEFICIARY	• National/local public authority • Installation • Non-governmental organisation • Operation • Training providers: Business • Financier: Business • Financier: End-users • Consultancy/Research:Resource assessment • Consultancy/Research:Community surveys • Consultancy/Research:Policy • Private company
TYPE OF TECHNOLOGY	• All renewable energy sources • Solar • Wind • Hydro • Biogas • Biomass • Battery/Storage • Diesel back-up • Biodiesel back-up • Power components
TARGETED PROJECT CAPACITY (KW)	100.000
NUMBER OF END-USERS	50.000
% OF ENERGY USED BY BUSINESSES	25
% OF ENERGY USED BY HOUSEHOLDS	75
PREFERRED BUSINESS MODEL	• On grid off-grid hybrid with anchor loads • A(nchor) – B(usiness) – C(ommunity) Model

41. Kenya - Ministry of Energy and Petroleum

ORGANISATION PROFILE

NAME OF ORGANISATION	Kenya - Ministry of Energy and Petroleum
MISSION STATEMENT	To facilitate provision of sustainable, affordable, reliable and secure energy for national development while protecting the environment.
COMMITMENT TO MINI-GRIDS	Promote decentralised energy services to all who do not have access to the grid.
MINI-GRID PROGRAMME	SREP Investment Plan Project Document on Mini-grids
CONTACT	Eng. Isaac N. Kiva Director of Renewable Energy +254 20 3310112 Ext 145 Isaac_kiva@yahoo.com www.energy.go.ke

PROGRAMME

NAME OF THE INSTITUTION	Ministry of Energy and Petroleum
INSTITUTION TYPE	Government Agency
NAME OF THE PROGRAMME	Project Document for Mini-grids Development in Kenya (SREP Investment Plan)
TOTAL PROGRAMME BUDGET (EUR)	Above 50 Mio Euro
PRECISE TOTAL PROGRAMME BUDGET (EUR)	205,249,288.959
WEBSITE	www.energy.go.ke
CONTACT	Eng. Isaac N. Kiva isaac_kiva@yahoo.com +254 20 3310112
TYPES OF SUPPORT	• Technical assistance • Financial assistance / investment
OBJECTIVES	• Increase access to clean energy • Increase the contribution of Renewable energy to the generation mix • Accelerate development in off-grid areas
COUNTRIES	Kenya
REGION/LOCATION	East Africa
SHORT DESCRIPTION	Scaling-up Renewable Energy Programme Investment Plan for Mini-grids. The financing of this plan is partially provided by development partners. The AfD and the World Bank facilitate respectively 33 million EUR and 10 Million EUR under concessional loans, whereas KfW provides a 7.5 million EUR grant.
STATUS	Operational: open end
TYPE OF TECHNICAL ASSISTANCE	• Feasibility study support • Business plan development • Financial modelling • Market and risk assessment
OTHER SUPPORT	• Training of policy makers • Organisation of dialogue events • Policy advisory • Support for household energy users • Support for non-household energy users (e.g. telecom, agriculture, water, tourism, education and health sectors)

PROGRAMME (continued)	
TYPES OF MINI-GRID PROJECTS ELIGIBLE FOR SUPPORT	• Greenfield • Brownfield
PROGRAMME BENEFICIARY	• National/local public authority • Installation • Consultancy/Research: • Policy • Private company • Non-governmental organisation • Academia • Operation • Maintenance • Training providers: Business • Training providers: End-users • Financier: Business • Financier: End-users • Consultancy/Research: Resource assessment • Consultancy/Research: Community surveys
TYPE OF TECHNOLOGY	• Solar • Wind • Hydro • Biogas • Biomass • Diesel back-up • Biodiesel back-up • Power components
TARGETED PROJECT CAPACITY (KW)	As per investment Plan
NUMBER OF END-USERS	TBD
% OF ENERGY USED BY BUSINESSES	TBD
% OF ENERGY USED BY HOUSEHOLDS	TBD
PREFERRED BUSINESS MODEL	A/B/C To be determined

42. Lawrence Berkeley National Laboratory

ORGANISATION PROFILE

NAME OF ORGANISATION	Lawrence Berkeley National Laboratory
MISSION STATEMENT	Perform analysis, research, and development leading to better energy technologies and reduction of adverse energy-related environmental impacts.
COMMITMENT TO MINI-GRIDS	Create technology of Local Power Distribution to make power distribution much more flexible and enable universal technologies for a network model of power.
MINI-GRID PROGRAMME	Local Power Distribution
CONTACT	Bruce Nordman bnordman@lbl.gov +1 510-486-7089 nordman.lbl.gov

PROGRAMME

NAME OF THE INSTITUTION	Lawrence Berkeley National Laboratory
INSTITUTION TYPE	Academia/research institute
NAME OF THE PROGRAMME	Electronics, Lighting, and Networks
WEBSITE	nordman.lbl.gov
CONTACT	Bruce Nordman +1 510-486-7089 bnordman@lbl.gov
TYPES OF SUPPORT	Other: Technology Research
COUNTRIES	United States
SHORT DESCRIPTION	Local Power Distribution
TYPE OF TECHNOLOGY	• Battery/Storage • Power components • Power Distribution Technology

43. Limyè Pa w

ORGANISATION PROFILE

NAME OF ORGANISATION	Limyè Pa w
MISSION STATEMENT	Clean Energy for Realising Human Potential
COMMITMENT TO MINI-GRIDS	Launched pilot mini-grid in rural southern Haiti in February 2015
CONTACT	www.limyepaw.com info@limyepaw.com

PROGRAMME

NAME OF THE INSTITUTION	Limye Pa w
INSTITUTION TYPE	Small or medium enterprise (SME)
TOTAL PROGRAMME BUDGET (EUR)	Up to 1 Mio Euro
WEBSITE	www.limyepaw.com
TYPES OF SUPPORT	Other: electricity
COUNTRIES	Haiti
REGION/LOCATION	South
SHORT DESCRIPTION	rural electrification
STATUS	Operational: open end
TYPE OF TECHNOLOGY	Biomass

44. Malawi Energy Regulatory Authority (MERA)

ORGANISATION PROFILE

NAME OF ORGANISATION	Malawi Energy Regulatory Authority (MERA)
MISSION STATEMENT	To regulate the energy sector in an objective, transparent, effective and efficient manner.
COMMITMENT TO MINI-GRIDS	MERA is committed to development of not only mini-grids but the whole spectrum of renewable energy technologies (RETs), especially in the rural areas in order to complement Government's policy on increasing access to modern and clean energy at national level. In order to achieve this, MERA developed policy guidelines on renewable energy feed in tariff (REFIT) for different renewable energy technologies (RETs) including mini-grids.
MINI-GRID PROGRAMME	MERA does not have Mini-grid programme of its own, but MERA granted a license (with appropriate tariff) for the privately owned Bondo Mini-grid Project in Mulanje district, Southern Malawi.
CONTACT	Malawi Energy Regulatory Authority (MERA) +265775810 / Fax: +2651772666 mera@meramalawi.mw Postal Address: Private Bag B496, Capital City, Lilongwe 3, Malawi Physical Address: 2nd Floor Development House, City Centre, Lilongwe, Malawi www.meramalawi.mw

45. Malmok Vision

ORGANISATION PROFILE

NAME OF THE INSTITUTION	Malmok Vision
INSTITUTION TYPE	• Consultancy • Small or medium enterprise (SME)
NAME OF THE PROGRAMME	Clean Energy Mini-grids
WEBSITE	www.malmokvision.com
TYPES OF SUPPORT	• Technical assistance • Financial assistance / investment
COUNTRIES	• Netherlands • Netherlands Antilles
TYPE OF TECHNOLOGY	• All renewable energy sources • Solar • Wind

46. ME SOLshare Ltd.

ORGANISATION PROFILE

NAME OF ORGANISATION	ME SOLshare Ltd.
MISSION STATEMENT	By sharing capacities of electricity generation and storage, SOLshare will enable millions of poor people in rural areas to help themselves out of an energy poverty situation, create new income opportunities and give them access to modern technologies that will significantly improve their quality of life.
COMMITMENT TO MINI-GRIDS	SOLshare design and manages the interconnection between multiple users to a decentralised, low voltage DC micro-grid and facilitates electricity trade.
MINI-GRID PROGRAMME	Dynamic Nanogrid installation Bangladesh
CONTACT	info@solshare.com www.me-solshare.com

PROGRAMME

NAME OF THE INSTITUTION	ME SOLshare Limited
INSTITUTION TYPE	Small or medium enterprise (SME)
NAME OF THE PROGRAMME	Bottom-up DC nanogrids
TOTAL PROGRAMME BUDGET (EUR)	Up to 1 Mio Euro
WEBSITE	www.me-solshare.com
COUNTRIES	Bangladesh
TYPE OF TECHNOLOGY	Solar

47. Mera Gao Power

ORGANISATION PROFILE

NAME OF ORGANISATION	Mera Gao Power
MISSION STATEMENT	To be a leader in off-grid energy.
COMMITMENT TO MINI-GRIDS	MGP builds, owns, and operates low-cost, fully automated, solar powered micro grids in North India. This is MGP's only business.
MINI-GRID PROGRAMME	Mera Gao Power
CONTACT	Nikhil Jaisinghani +1-706-666-0339 njaisinghani@meragaopower.com www.meragaopower.com

PROGRAMME

NAME OF THE INSTITUTION	Mera Gao Power
INSTITUTION TYPE	Small or medium enterprise (SME)
NAME OF THE PROGRAMME	Mera Gao Power
WEBSITE	www.meragaopower.com
TYPES OF SUPPORT	Other: Micro grid operation
COUNTRIES	India
REGION/LOCATION	Uttar Pradesh
SHORT DESCRIPTION	Micro grid
STATUS	Operational: open end
TYPE OF TECHNOLOGY	Solar

48. Nevada Solar Designs

ORGANISATION PROFILE

NAME OF THE INSTITUTION	Nevada Solar Designs
INSTITUTION TYPE	• Consultancy • Small or medium enterprise (SME)
NAME OF THE PROGRAMME	SE4All Village Empowerment
TOTAL PROGRAMME BUDGET (EUR)	Up to 1 Mio Euro
WEBSITE	nevadasolardesigns.com
TYPES OF SUPPORT	Technical assistance
OBJECTIVES	Develop, produce and deploy Solar Electric Systems (SES) as personal and village power platforms enhancing economic livelihood and connection with a digital world.
COUNTRIES	Indonesia
SHORT DESCRIPTION	Our SES village empowerment platform solutions is based on our off-grid industrial power plants. Fundamental design and component building blocks are USA established. Our Indonesia partners are actively developing regional production and logistic integration support.
STATUS OF THE PROGRAMME	Planned launch date: 1 November 2015
TYPE OF TECHNOLOGY	Solar

49. NRECA International

ORGANISATION PROFILE

NAME OF ORGANISATION	NRECA International
MISSION STATEMENT	NRECA International, as a global leader in the design and implementation of successful and sustainable rural electrification programs, works to bring electricity to the world, thereby improving health, education and economic opportunities and helping to create parity of opportunity for millions in the developing world.
COMMITMENT TO MINI-GRIDS	NRECA International is committed to developing, building and running mini-grids in the developing world. NRECA International has built many mini-grids in the past and is currently running four with one more due to become operational in the summer of 2015.
MINI-GRID PROGRAMME	• PPSELD, HREC in Haiti • ESP in South Sudan
CONTACT	Nrecainternational.coop

PROGRAMME

NAME OF THE INSTITUTION	NRECA International
INSTITUTION TYPE	• Consultancy • Development Organisation • Non-governmental Organisation • Non-profit Organisation
NAME OF THE PROGRAMME	HREC
TOTAL PROGRAMME BUDGET (EUR)	Between 10 Mio Euro and 50 Mio Euro
WEBSITE	http://www.ect.coop/newsmakers/international/haitians-form-new-electric-co-op/66559
TYPES OF SUPPORT	• Technical assistance • Financial assistance / investment • Other: Utility Management
OBJECTIVES	Right now, the co-op can serve about 1,600 consumers. Infrastructure will consist of 33 miles of new or upgraded LV and MV lines. A solar-diesel hybrid system will provide the power under a partnership between NRECA International and Solar Electric Light Fund.
COUNTRIES	Haiti
REGION/LOCATION	Coteaux
STATUS	Planned launch date 15 July 2015
TYPE OF FINANCING AND/OR CREDIT ENHANCEMENT	Grant: 100 % of project value
TYPE OF TECHNOLOGY	• Solar • Diesel back-up

50. OPEC Fund for International Development (OFID)

ORGANISATION PROFILE

NAME OF ORGANISATION	OPEC Fund for International Development (OFID)
MISSION STATEMENT	• The vision: To aspire to a world where Sustainable Development, centred on human capacity-building, is a reality for all. • The mission: To foster South-South Partnership with fellow developing countries worldwide with the aim of eradicating poverty.
COMMITMENT TO MINI-GRIDS	OFID believes that mini-grids have a large potential to help eradicate energy poverty and ensure universal access to modern energy services.
MINI-GRID PROGRAMME	Mini-grids constitute a key component of OFID's Energy for the Poor initiative "EPI".
CONTACT	http://www.ofid.org/

PROGRAMME

NAME OF THE INSTITUTION	The OPEC Fund for International Development (OFID)
INSTITUTION TYPE	• Development Organisation • Finance Institution
NAME OF THE PROGRAMME	Mini-grids are part of OFID's "Energy for the Poor" initiative
WEBSITE	http://www.ofid.org/FOCUS-AREAS/Energy
TYPES OF SUPPORT	Financial assistance / investment
COUNTRIES/REGION/LOCATION	All developing countries except OFID member countries
STATUS	Operational: open end
TYPE OF FINANCING AND/OR CREDIT ENHANCEMENT	Grant: <= 50% of project value Equity Loan: <= 50% of project value
TYPES OF MINI-GRID PROJECTS ELIGIBLE FOR SUPPORT	Greenfield Brownfield
PROGRAMME BENEFICIARY	National/local public authority Installation Operation Maintenance Financier: Business Financier: End-users Private company Non-governmental organisation
TYPE OF TECHNOLOGY	All renewable energy sources Diesel back-up Hybrid mini-grids

51. Plan International Spain

ORGANISATION PROFILE

NAME OF ORGANISATION	Plan International Spain
MISSION STATEMENT	Plan International is a nongovernmental Organisation that works for the promotion and realisation of the children rights. Plan Niger´s vision is defined as that from a world where children can fulfil their full potential in their societies which respect the peoples´ rights and dignity.
COMMITMENT TO MINI-GRIDS	Plan Int. Spain aims to bring modern energy to the rural communities where we are currently working. Through a diverse serial of methodologies and approaches (adapted to each context and situation) Plan foresees mini-grid as one of the most potential and promising technologies to achieve this mean.
MINI-GRID PROGRAMME	EREF NE1 – WP 2014 funded by the ECREEE ENERGY FACILITY - Project funded by EU in 2015 in Liberia.
CONTACT	Carlos Sordo Olive RE and EE department manager at Plan Spain carlos.sordo@plan-international.org (+34)915241222 Extensión 106 Skype: Carlos.sordo.plan http://plan-espana.org/

PROGRAMME

NAME OF THE INSTITUTION	Plan Int. Spain
INSTITUTION TYPE	Non-profit Organisation
NAME OF THE PROGRAMME	Renewable Energy and Energy Efficiency Programme
TOTAL PROGRAMME BUDGET (EUR)	Between 1 Mio Euro and 10 Mio Euro
PRECISE TOTAL PROGRAMME BUDGET (EUR)	2.700.000
WEBSITE	http://plan-espana.org/
TYPES OF SUPPORT	• Financial assistance / investment • Other: Logistic in the field, relationship with communities, access to governmental institutions, local knowledge
OBJECTIVES	To increase impact on development of several Plan International programmes through the use of the energy resources. Energy is therefore a crosscutting issue.
COUNTRIES	• Ethiopia • Nicaragua • Mali • Niger
REGION/LOCATION	• Spain • Africa • Latin America
SHORT DESCRIPTION	Using appropriated technologies to support rural isolated communities where Plan Works permanently together with other intervention areas, such as education, health, resilience, etc.
STATUS	Operational: open end
TYPE OF FINANCING AND/OR CREDIT ENHANCEMENT	• Grant: 70% of project value • Venture Capital: 30% of project value
TYPE OF TECHNICAL ASSISTANCE OFFERED	• Marketing of projects to financiers and buyers: Experience with engagement of energy micro-enterprises • Environmental and Social Impact Assessments: Experience in rural social and environmental assessments

PROGRAMME	
OTHER SUPPORT	• Training of policy makers: Experience in training, capacity building, institutional support, etc. • Organisation of dialogue events: Experience in organising all sort of events • Policy advisory: Institutional policy support, working with ministries, municipalities, councils, etc. Relationships with all sort of institutional level within the countries. • Association support: Women groups, CSOs, and other associations´ support • Awareness campaigns: Experience in awareness campaigns in the rural communities and urban areas • Involvement of Community: Experience in the involvement of communities within the projects • Support for household energy users: Experience in supporting households to use energy devices, to increase energy efficiency, etc. • Support for non-household energy users (e.g. telecom, agriculture, water, tourism, education and health sectors): Experience with water, agriculture, education and health sectors.
TYPES OF MINI-GRID PROJECTS ELIGIBLE FOR SUPPORT	• Greenfield • Required investment by private project developer • Required investment by private third party
TYPE OF TECHNOLOGY	• Solar • Hydro • Biogas • Biomass

52. PowerGen Renewable Energy

ORGANISATION PROFILE

NAME OF ORGANISATION	PowerGen Renewable Energy
MISSION STATEMENT	PowerGen's mission is to increase access to high quality affordable renewable energy in East Africa. PowerGen has two sectors- PowerGen Solar and PowerGen Grid. PowerGen Solar installs commercial scale solar PV, battery backup, and hybrid systems for both on and off-grid applications. PowerGen Grid develops kW scale AC solar micro-grids in off-grid communities.
COMMITMENT TO MINI-GRIDS	PowerGen believes micro-grids are the optimal solution for off-grid electrification in rural communities. AC micro-grids provide more functionality than solar lanterns or solar home systems without the high upfront costs of the national grids. Micro-grids are a new way of thinking about rural electrification- rapidly deployable private infrastructure. PowerGen is pioneering this model and has installed over 20 micro-grids across Kenya and Tanzania.
MINI-GRID PROGRAMME	Beyond Lighting: AC Solar Micro-Grids for East Africa
CONTACT	Eve Meyer emeyer@powergen-re.com http://powergen-renewable-energy.com/

PROGRAMME

NAME OF THE INSTITUTION	PowerGen Renewable Energy
INSTITUTION TYPE	Small or medium enterprise (SME)
NAME OF THE PROGRAMME	Beyond Lighting: AC Solar Micro-Grids for East Africa
TOTAL PROGRAMME BUDGET (EUR)	Up to 1 Mio Euro
WEBSITE	http://powergen-renewable-energy.com/
CONTACT	Eve Meyer emeyer@powergen-re.com
TYPES OF SUPPORT	• Technical assistance • Other: On the ground implementation partner
OBJECTIVES	PowerGen's objective is to increase access to high quality affordable renewable energy through solar micro-grids.
COUNTRIES	• Kenya • Tanzania, United Republic of
SHORT DESCRIPTION	PowerGen has been designing, installing, and operating power systems in East Africa for the past 5 years. We have built the local knowledge and operational capacity to install complex systems in very remote areas. Now, we are using this capacity to build and operate micro-grids throughout East Africa. We develop our own grids and also act as the local implementation partner for international organisations.
STATUS	Operational: Open end
TYPE OF TECHNICAL ASSISTANCE OFFERED	• Feasibility study support: PowerGen has undertaken extensive site surveying throughout Kenya and has the team, skills, and methodology to undertake site surveys throughout East Africa and analyse the data for micro-grid feasibility. • Business plan development: PowerGen can model customer demand and revenue streams to develop a business plan. • Technical evaluation: PowerGen has installed over 100 renewable energy systems across East Africa and can design and evaluate technical plans for solar, wind, and hybrid projects.

PROGRAMME	
	• Technical validation: PowerGen has a team of highly skilled engineers who can validate existing or planned technical projects. • Environmental and Social Impact Assessments: PowerGen has the team and local knowledge to conduct environmental and social impact assessments before, during, and after project implementation. • PowerGen has built the local capacity to take the lead on installations and operations throughout East Africa. PowerGen has a team of over 20 employees trained in micro-grid installations, operations, and maintenance, a fleet of 4 vehicles, and a 10,000 sq ft workshop space. We can undertake every aspect of the micro-grid development project including site sourcing, engineering design, procurement, fabrication, installation, customer interactions, ongoing operations, and maintenance.
OTHER SUPPORT	• Involvement of Community: PowerGen has a customer team that handles all community interactions on our micro-grids. We meet with local leaders, hold community meetings, and engage with customers one-on-one to develop the project to best meet the community's needs. • Support for household energy users: PowerGen operates a customer care phone, which micro-grid customers may call when they have a question or issue. PowerGen's customer team has over a year of experience managing micro-grids and addresses any issues quickly and professionally.
TYPE OF TECHNOLOGY	• Solar • Battery/Storage • Diesel back-up
PREFERRED BUSINESS MODEL	Alternating current solar micro-grids

53. Rassembleurs d'Energies (ENGIE ex-GDF SUEZ)

ORGANISATION PROFILE

NAME OF ORGANISATION	Rassembleurs d'Energies (ENGIE ex-GDF SUEZ)
MISSION STATEMENT	Promote access to clean energy for all in developing countries and fight against energy scarcity in Europe through direct investments in Debt or Equity, donation and skills sponsorship.
COMMITMENT TO MINI-GRIDS	Yes, as a complementary alternative to distribution of photovoltaic kits (individual solutions).
MINI-GRID PROGRAMME	• Consider impact investments in start-up initiatives for scaling-up and commercial development; • Support JUMEME project in Tanzania with possible investment; • Support mini-grids project developers through partnership for technological developments and commercial approach; • Internal incubation program for development of hybrid mini-grids solutions in emerging countries; • R&D program on access to energy including mini-grids and possible pilots.
CONTACT	http://horizon.gdfsuez.net/fr/group/rassembleurs_d_energies/Pages/rassembleurs_energies.aspx http://rassembleursdenergies.gdfsuez.com/

54. Reiner Lemoine Institut gGmbH (RLI)

ORGANISATION PROFILE

NAME OF ORGANISATION	Reiner Lemoine Institut gGmbH (RLI)
MISSION STATEMENT	Scientific research towards 100% renewable energies.
COMMITMENT TO MINI-GRIDS	The RLI's off-grid division focuses on studies on rural electrification with renewable energies and the substitution of oil-based power generation with renewable energies in isolated energy systems. By that a lot of experience and knowledge about the enhancement of renewable technologies in rural areas and the integration of renewables in conventional power systems has been collected. Know-how about off-grid areas, e.g. rural villages, both from a geographical and energy system point of view has been developed. Core methods of the off-grid division are geographic (GIS) and database analyses to assess the power generation sector of a certain region, country or location. In a further step the attractiveness of implementing renewable energy technology is assessed by an in-house energy simulation model based on local input parameters. Furthermore, the business environment of a country is analysed and evaluated by economic and politic indicators. The described methodology has already been applied and proved successfully in a number of concluded projects with both national and international partners.
MINI-GRID PROGRAMME	The RLI off-grid team focuses on mini-grid simulations and optimisations and GIS analyses. For projects please refer to: http://www.reiner-lemoine-institut.de/en/projects/off_grid_systems
CONTACT	Philipp Blechinger +49 30 53 04 20 12 philipp.blechinger@rl-institut.de http://www.rl-institut.de/en/research/off_grid_systems

PROGRAMME

NAME OF THE INSTITUTION	Reiner Lemoine Institut gGmbH (RLI)
INSTITUTION TYPE	Academia/research institute
NAME OF THE PROGRAMME	Mini-grid research (optimisation, simulation, GIS assessments)
WEBSITE	www.rl-institut.de/en/research/off_grid_systems
TYPES OF SUPPORT	• Technical assistance • Other: Scientific support and monitoring
OBJECTIVES	Scientific research towards 100% renewable energies.
COUNTRIES	• Bangladesh • Greece • Tanzania, United Republic of • Barbados • Grenada • Trinidad and Tobago • Cameroon • Nigeria • Cook Islands • Philippines • Germany • Saint Vincent and The Grenadines
SHORT DESCRIPTION	The RLI developed a mini-grid simulation tool, atomises GIS assessments and works on a tool for least cost electrification approaches.
STATUS	Operational: Open end
TYPE OF TECHNICAL ASSISTANCE OFFERED	• Feasibility study support: We are experienced in providing feasibility studies for renewable hybrid mini-grids globally. • Financial modelling: Our simulation tools are LCOE-based and hence include financial modelling. In addition, the financial modelling tool is further developed to create outputs like cash-flows over the lifetime of the system. The tool allows a dynamic change of input parameters to assess sensitivities and with that the risks for investors. • Environmental and Social Impact Assessments: With our tools we calculate the fossil fuel and CO^2-savings of for different system configurations within renewable hybrid

PROGRAMME (continued)	
	mini-grids. • We carry out geospatial analyses with geographic information systems (GIS). This is especially important when focusing on different electrification pathways, as local characteristics and spatial relations are important to consider in all planning processes.
PROGRAMME BENEFICIARY	• National/local public authority • Financier: Business • Consultancy/Research: Resource assessment • Consultancy/Research: Policy • Private company • Non-governmental organisation • Academia
TYPE OF TECHNOLOGY	• All renewable energy sources • Battery/Storage • Diesel back-up

55. Remergy A/S

ORGANISATION PROFILE

NAME OF ORGANISATION	Remergy A/S
MISSION STATEMENT	Remergy's mission is to serve energy starved population with sustainable energy solutions. In next 5 years Remergy targets to connect 100,000 households with reliable electrical supply. Currently Remergy offers 2 product ranges in rural electrification. One is Solar Mini-grid customised to individual community needs. Remergy designs, commissions and maintains Solar Mini-grids. Mini-grid supplies 1phase 230VAC power to individual households and small business, similar to the way power is supplied in grid connected areas. These Mini-grids comes with Remergy's own pre-payment system and state of the art remote monitoring. Remote access enables Remergy or any interested stakeholder to monitor operational and financial performance of individual Mini-gird. Also, Remergy uses this operational data to provide maintenance support. Further these Mini-grids are scalable can be integrated into national grid, when and if grid extension happens, and 2 or more of Remergy's Mini-grids can be connected to create a "Smart Grid". Mini-grids are more economical to closely clustered communities. To serve the rural population that lives in sparsely populated area, Remergy developed Solar Home System (SHS). In this product range also, Remergy differentiates itself from the competition in product innovation. Remergy's SHS is reliable and comes with 3 years warranty on whole product and needs no frequent maintenance. These products are highly compact, pre-assembled, supplied in Plug & Play mode. Along with above rural electrification products, Remergy provides customised solutions to Industrial customers, Milk collections centres with solar milk coolers (no battery storage), Solar street lighting solutions and LED lights.
COMMITMENT TO MINI-GRIDS	Remergy's pilot Mini-grid is operational in Uganda since May 2014. Now Remergy is going for project rollout with a target to connect 100+ rural communities in next five years in Uganda. Also, Remergy plans to expand Uganda's success into other countries in sub-Saharan Africa.
MINI-GRID PROGRAMME	Pilot project name: "Kayanza Solar Mini-grid"
CONTACT	Prabhakar Tunuguntla Regional Manager, India & East Africa +45 40197782 +45 88339600 ptu@remergy.com www.remergy.com

PROGRAMME

NAME OF THE INSTITUTION	Remergy A/S
INSTITUTION TYPE	Small or medium enterprise (SME)
NAME OF THE PROGRAMME	Solar Mini grids in Uganda
TOTAL PROGRAMME BUDGET (EUR)	Between 1 Mio Euro and 10 Mio Euro
PRECISE TOTAL PROGRAMME BUDGET (EUR)	3.5 Mio Euro
WEBSITE	www.remergy.com
CONTACT	Prabhakar Tunuguntla +4540197782 ptu@remergy.com
TYPES OF SUPPORT	Other: We promote, design, commission and sell mini-grids.
OBJECTIVES	To provide electricity for households, small and micro enterprises through solar mini grids.
COUNTRIES	Uganda
REGION/LOCATION	Kasese district
SHORT DESCRIPTION	Power generation equipment is supplied to communities on credit finance. Communities will repay the cost, through pre-paid power purchases, in 3 to 4 years.
TYPE OF TECHNOLOGY	Solar
TARGETED PROJECT CAPACITY (KW)	165 mini-grids, 5kw average capacity
NUMBER OF END-USERS	16.500
% OF ENERGY USED BY BUSINESSES	30
% OF ENERGY USED BY HOUSEHOLDS	70
PREFERRED BUSINESS MODEL	• Build operate transfer model • A(nchor) – B(usiness) – C(ommunity) Model

56. Renewable Association of Nicaragua

ORGANISATION PROFILE

NAME OF ORGANISATION	Renewable Association of Nicaragua
MISSION STATEMENT	Being an association that organises and strengthen Nicaraguan actors for mass equitable and efficient use of renewable energy sources in the public and private sector, through projects with national and international alliances, the development of public policies, and disclosure of Good PRACTICES, scientific research, and formal education for a sustainable energy future.
COMMITMENT TO MINI-GRIDS	The Association directly supports the strengthening of the mini-grids through resource management and training. Through partners rests on the installation, technical assistance in the purchase of equipment, training, network expansion, productive uses of energy, linking gender and power, process of legalisation.
MINI-GRID PROGRAMME	• Small Hydroelectric Power Bilampi Wanawas • Small Hydroelectric Power the orange clouds • Small Hydroelectric Power EMEEAW Wiwili • Salto Hydroelectric Mollejones (HISMOW S.A) • Small Hydroelectric Power HIBIMUSUN S.A • Small Hydroelectric Power Rio Bravo Puerto Viejo • Small Hydroelectric Power Kubali La Florida S.A • Small Hydroelectric Power ADTER BL • Small Hydroelectric Power Cerro Frío S.A • Small Hydroelectric Power Salto Negro S.A. • Small Hydroelectric Power HISAJOMA S.A. • Small Hydroelectric Power APRODELBO. Organisations supporting the installation of micro and small hydro: • AsoFenix. • PELICAN S.A. • COINIC S.A.
CONTACT	Lic. Lizeth Zúniga Garcia Executive Director 8354-6179/2252-5931 direccion@renovables.org.ni

PROGRAMME

NAME OF THE INSTITUTION	Renewable Association of Nicaragua
INSTITUTION TYPE	Non-governmental Organisation
NAME OF THE PROGRAMME	Micro and small hydro
TOTAL PROGRAMME BUDGET (EUR)	Up to 1 Mio Euro
PRECISE TOTAL PROGRAMME BUDGET (EUR)	120.000
WEBSITE	www.renovables.org.ni
TYPES OF SUPPORT	• Technical assistance • Financial assistance / investment • Other: Installation, technical assistance in the purchase of equipment, training, network expansion, productive uses of energy, linking
COUNTRIES	Nicaragua
REGION/LOCATION	Matagalpa, RAAN, Jinotega, Chontales, Boaco, RAAS.
SHORT DESCRIPTION	Installation of micro and small hydroelectric plants that supply renewable energy to the surrounding communities, resulting in productive use of it.
STATUS	Operational: open end
TYPE OF FINANCING AND/OR CREDIT ENHANCEMENT	Grant

PROGRAMME	
TYPE OF TECHNICAL ASSISTANCE OFFERED	• Feasibility study support • Business plan development • Technical evaluation • Technical validation • Market and risk assessment • Environmental and Social Impact Assessments
OTHER SUPPORT	• Training of policy makers • Organisation of dialogue events • Association support • Awareness campaigns • Involvement of Community • Support for household energy users • Support for non-household energy users (e.g. telecom, agriculture, water, tourism, education and health sectors) • Productive uses of energy, linking gender and power.
TYPES OF MINI-GRID PROJECTS ELIGIBLE FOR SUPPORT	• Greenfield • Required investment by private project developer • Required investment by private third party
PROGRAMME BENEFICIARY	• Distribution • Installation • Operation • Consultancy/Research: Policy
TYPE OF TECHNOLOGY	All renewable energy sources
TARGETED PROJECT CAPACITY (KW)	212 kW to 0.9 MW
NUMBER OF END-USERS	More 5.000 people.
% OF ENERGY USED BY BUSINESSES	30
% OF ENERGY USED BY HOUSEHOLDS	70
PREFERRED BUSINESS MODEL	• Community model • A(nchor) – B(usiness) – C(ommunity) Model

57. Republic Of The Philippines - Department Of Energy

ORGANISATION PROFILE

NAME OF ORGANISATION	Republic Of The Philippines - Department Of Energy
MISSION STATEMENT	We at the Department of Energy, in partnership with our stakeholders, shall improve the quality of life of the Filipino by formulating and implementing policies and programs to ensure sustainable, stable, secure, sufficient, and accessible energy. In pursuit of this mission, we commit to render efficient service with utmost integrity and professionalism.
COMMITMENT TO MINI-GRIDS	DOE policy is to pursue least-cost option in electricity services provision in rural/missionary areas in the country Preference is also given to parties that would utilise renewable energy resources in providing electricity.
MINI-GRID PROGRAMME	• Major Programme: Rural Electrification Program • Sub-program: Private Sector Participation In Rural Electrification: Qualified Third Party (Qtp) Program
CONTACT	Mylene C. Capongcol Director (632) 8402120 or (632) 4792900 extension 414 mycaps@doe.gov.ph; capongcol@yahoo.com

PROGRAMME

NAME OF THE INSTITUTION	Philippines' Department Of Energy
INSTITUTION TYPE	Government Agency
NAME OF THE PROGRAMME	Rural Electrification Programme: Qualified Third Party (Qtp)
WEBSITE	www.doe.gov.ph
TYPES OF SUPPORT	• Technical assistance • Other: Policy advisory services
OBJECTIVES	To encourage private sector investment in off-grid rural electrification
COUNTRIES	Philippines
REGION/LOCATION	Philippines
OTHER SUPPORT	Policy advisory:
TYPE OF TECHNOLOGY	• Provides advice to potential off-grid investors along policy and regulatory procedures specifically on the contacts/instruments needed to proceed with the mini-grid project. • The DOE endorses the potential private investors to the Energy Regulatory Commission for the authorisation to provide electricity services in off-grid areas. • All renewable energy sources • Battery/Storage • Diesel back-up • Hybrid Systems

58. Rockefeller Foundation

ORGANISATION PROFILE

NAME OF ORGANISATION	Rockefeller Foundation
MISSION STATEMENT	To promote the well-being of humanity throughout the world.
COMMITMENT TO MINI-GRIDS	With a total commitment of $75 million, The Rockefeller Foundation has launched Smart Power for Rural Development to promote sustainable business models that deliver renewable electricity and spur economic development among underserved rural populations. The initiative focuses on India, where the Foundation is funding the creation of a new Organisation –'Smart Power India' – responsible for expanding the Smart Power model which uses mini-grid technology for both lighting and productive use. Smart Power India will be The Rockefeller Foundation's key partner in working with Energy Service Companies, private sector partners, investors, NGOs, and the Indian government to reach the collective goal of bringing electricity to underserved villages in India. The Foundation will use the experience and insights from India to explore how to support greater economic development by scaling up a viable model for rural electrification in other geographies in Africa and Asia, and to contribute to a more dynamic global dialogue on addressing energy poverty.
MINI-GRID PROGRAMME	Smart Power for Rural Development
CONTACT	http://www.rockefellerfoundation.org/ - For more information on Smart Power for Rural Development and opportunities for partnership, please contact cboland@rockfound.org

PROGRAMME

NAME OF THE INSTITUTION	The Rockefeller Foundation
INSTITUTION TYPE	Foundation
NAME OF THE PROGRAMME	Smart Power for Rural Development
WEBSITE	http://www.rockefellerfoundation.org/our-work/current-work/smart-power-india
TYPES OF SUPPORT	• Technical assistance • Financial assistance / investment
OBJECTIVES	To promote sustainable business models that deliver renewable electricity and spur economic development among poor, underserved rural populations. The initiative focuses on India and aims to electrify 1,000 villages in the next three years (2014-2017).
COUNTRIES	India
REGION/LOCATION	Currently UP and Bihar
SHORT DESCRIPTION	The program provides debt financing to eligible renewable energy service companies setting up micro-grids in rural India to serve anchor tenants, consumers, and micro-enterprises. It also provides operational support to the RESCOs in terms of site selection, energy surveys, bulk procurement and technology innovation and load development services through initial engagement with local communities, enterprises and other partnerships and education on best practices. A final component of the program looks at policy, in particular related to eventual grid connectivity. The overall program commitment is $75M.
STATUS	Operational: Closing date 31 December 2017
TYPE OF FINANCING AND/OR CREDIT ENHANCEMENT	Loan: ~35 % of project value
TYPE OF TECHNICAL ASSISTANCE OFFERED	• Feasibility study support: Site selection and energy access surveys • Technical validation: Innovation support and technology best practice sharing. • Financial modelling: Initial financial modelling to validate the overall approach.

PROGRAMME	
OTHER SUPPORT	• Organisation of dialogue events • Policy advisory: We are working with a local grantee to support a positive policy framework. • Involvement of Community: We provide significant support to help ESCOs engage positively with the local community. • Support for non-household energy users (e.g. telecom, agriculture, water, tourism, education and health sectors): We are working closely with other sectors to promote the use of energy for development and livelihood creation.
TYPES OF MINI-GRID PROJECTS ELIGIBLE FOR SUPPORT	• Greenfield • Brownfield • Required investment by private project developer
TYPE OF TECHNOLOGY	• Solar • Biomass • Battery/Storage • Diesel back-up

59. Rural Renewable Energy Alliance

ORGANISATION PROFILE

NAME OF THE INSTITUTION	Rural Renewable Energy Alliance
INSTITUTION TYPE	Nonprofit Organisation
NAME OF THE PROGRAMME	Skip the Grid
TOTAL PROGRAMME BUDGET (EUR)	Between 1 Mio Euro and 10 Mio Euro
PRECISE TOTAL PROGRAMME BUDGET (EUR)	$2.5m
WEBSITE	www.skipthegrid.org
TYPES OF SUPPORT	Technical assistance
OBJECTIVES	To build infrastructure of West African health care through delivering reliable clean energy mini-grids.
COUNTRIES	Liberia
REGION/LOCATION	Liberia
SHORT DESCRIPTION	Skip the Grid brings solar electricity to communities and individuals in need.
STATUS	Planned launch date: 27 February 2016
PROGRAMME BENEFICIARY	Non-governmental organisation
TYPE OF TECHNOLOGY	• Solar • Battery/Storage • Diesel back-up

60. Schneider Electric

ORGANISATION PROFILE

NAME OF ORGANISATION	Schneider Electric
MISSION STATEMENT	As a global specialist in energy management with operations in more than 100 countries, Schneider Electric offers integrated solutions across multiple market segments, including leadership positions in Utilities & Infrastructure, Industries & Machines Manufacturers, Non-residential Buildings, Data Centres & Networks and in Residential. Focused on making energy safe, reliable, efficient, productive and green, the Group's active commitment helps individuals and Organisations make the most of their energy. Through its Access to Energy program, Schneider Electric's goal is to promote safe, clean electricity in off-grid and rural areas for people who need it the most. The program addresses three key issues to provide sustainable access to electricity: • Lack of financial resources available for innovative energy entrepreneurs through impact investing funding • The skills and expertise shortage through technical and business training • Lack of appropriate equipment through the development of an adequate offer and dedicated business models
COMMITMENT TO MINI-GRIDS	Focusing on rural and peri-urban electrification, Schneider Electric develops a comprehensive portfolio of products and solutions, ranging from lighting and Solar Home Systems products to decentralised rural electrification solutions based on solar photovoltaic, hybrid or concentrated solar generation. Starting from end-users needs, Schneider Electric builds partnerships to support the right business models for sustainability and ensures training of local technicians and entrepreneurs.
MINI-GRID PROGRAMME	Access to Energy program
CONTACT	Thomas Andre +33141393163 thomas.andre@schneider-electric.com http://www2.schneider-electric.com/sites/corporate/en/group/sustainable-development-and-foundation/access-to-energy/presentation.page http://energy-access.schneider-electric.com/ contact: global-bipbop@schneider-electric.com

PROGRAMME

NAME OF THE INSTITUTION	Schneider Electric
INSTITUTION TYPE	Corporate firm
NAME OF THE PROGRAMME	Access to Energy Program
WEBSITE	http://energy-access.schneider-electric.com/
CONTACT	Thomas André +33141393163 thomas.andre@schneider-electric.com
TYPES OF SUPPORT	• Technical assistance • Financial assistance / investment • Other: Product/solution development, commercialization, and project development
OBJECTIVES	Through its Access to Energy program, Schneider Electric's goal is to promote safe, clean electricity in off-grid and rural areas for people who need it the most. The program addresses three key issues to provide sustainable access to electricity: • Lack of financial resources available for innovative energy entrepreneurs through impact investing funding • The skills and expertise shortage through technical and business training • Lack of appropriate equipment through the development of an adequate offer and dedicated business models

PROGRAMME

COUNTRIES	• Bangladesh • Benin • Brazil • Cambodia • Cameroon • Central African Republic • Chad • Congo, DRC • Cote d'Ivoire • Egypt • Ethiopia • Ghana • India • Indonesia • Kenya • Myanmar • Namibia • Nigeria • Peru • Philippines • Senegal • South Africa • Thailand • Uganda • Viet Nam • Zambia • Zimbabwe
REGION/LOCATION	Sub-Saharan Africa, India and South-East Asia, Latin America
STATUS	Operational: open end
PROGRAMME BENEFICIARY	• National/local public authority • Assembly • Non-governmental organisation • Distribution • Installation • Operation • Maintenance • Training providers: Business • Financier: Business • Financier: End-users • Private company
TYPE OF TECHNOLOGY	• Solar • Wind • Biomass • Battery/Storage • Diesel back-up • Biodiesel back-up • Power components
TARGETED PROJECT CAPACITY (KW)	from 1 to 100 kW
PREFERRED BUSINESS MODEL	A(nchor) – B(usiness) – C(ommunity) Model

61. Sierra Club

ORGANISATION PROFILE

NAME OF THE INSTITUTION	Sierra Club
INSTITUTION TYPE	• Non-governmental Organisation • Non-profit Organisation
NAME OF THE PROGRAMME	International Climate Program
WEBSITE	http://www.sierraclub.org/international/clean-energy-access
TYPES OF SUPPORT	Other: Advocacy and communications
OBJECTIVES	Driving more public and private investment into off-grid / mini-grid renewables (and driving investment away from fossil fuels).
COUNTRIES	United States
SHORT DESCRIPTION	Non-profit Organisation that conducts research and advocacy to drive greater investment into off-grid and mini-grid renewables.
STATUS	Operational: open end

62. Smart Hydro Power GmbH

ORGANISATION PROFILE

NAME OF ORGANISATION	Smart Hydro Power GmbH
MISSION STATEMENT	We believe in sustainable development and empowering people to be able to define their own choices and to shape their own lives. We want to make this world an even better place to live.
COMMITMENT TO MINI-GRIDS	Smart Hydro Power GmbH develops and commercialises affordable and environment-friendly solutions for rural electrification. The core product of these solutions is a kinetic micro hydropower system (river turbine). This proprietary technology is standardised and easily scalable.
MINI-GRID PROGRAMME	Enlightening the Future of Rural Communities
CONTACT	Juliana Carneiro da Cunha Baumgartl Marketing +49 (0) 8158 907 897 – 11 juliana.baumgartl@smart-hydro.de www.smart-hydro.de/en/home.html

PROGRAMME

NAME OF THE INSTITUTION	Smart Hydro Power
INSTITUTION TYPE	Small or medium enterprise (SME)
NAME OF THE PROGRAMME	Enlightening the Future of Rural Communities
TOTAL PROGRAMME BUDGET (EUR)	Up to 1 Mio Euro
PRECISE TOTAL PROGRAMME BUDGET (EUR)	40.000
WEBSITE	https://www.indiegogo.com/projects/enlightening-the-future-of-rural-communities/x/8353195#home
TYPES OF SUPPORT	Technical assistance
OBJECTIVES	The installation of a base load hybrid-power plant for rural electrification is the project to be implemented by Smart Hydro Power (SHP) in the Peruvian village Marisol. This is a pioneer base load renewable energy project that combines photovoltaic, hydropower and diesel. The three sources would complement each other using sophisticated control systems that ensure stable electricity generation. The aim of this implementation is to show the effectiveness of hybrid systems energy solutions and to empower communities such as Marisol, so they can develop a sustainable business model, which allow them to be productive and economically organised. This will serve as a reference for spreading this solution to other rural communities.
COUNTRIES/ REGION/LOCATION	Peru
SHORT DESCRIPTION	This project consists of a combined photovoltaic and a river turbine for primary generation, an electrical cabinet for power management and distribution, and a backup generator. These three sources will complement each other, ensuring reliable electricity generation year-round. This is a reference project to show the results of the hybrid power plant, the same renewable energy system can be applied in many communities living in the same situation as Marisol. We estimate that in Peru, Ecuador, Colombia, Central America and the Caribbean, more than one hundred and twenty thousand villagers could benefit from it (study by Smart Hydro Power based on hydrological feasibility and third party studies on PV market potential).
STATUS	Operational: open end
TYPE OF FINANCING AND/OR CREDIT ENHANCEMENT	Hybrid capital
TYPE OF TECHNICAL ASSISTANCE OFFERED	• Feasibility study support: SHP engineers were sent to Marisol in Peru two times to perform feasibility tests. • Technical evaluation: The Installation of the baseload hybrid power plant in Marisol is: • Ease in maintenance: it could be easily taken over by the local community, no specific education is required. • A complete solution: making sure the full potential of the available natural resources will be used for the best cost benefit.

PROGRAMME (continued)	
	• A competitive system: both in economical as well as in environmental aspects, when comparing with other power supply alternatives, such as diesel as only source • Financial modelling: At the first stage, this showcase installation was performed. The first objective is to show how the system works. While at the second stage, parts of the turbine will be manufactured locally, so the prices will drop and the systems can be acquired via leasing by the community business owners. • Environmental and Social Impact Assessments: The installation of this system enable the access to energy for longer periods, while with the generator it was restricted from 4 to 6 hours per day. SMART turbines use the flow of rivers and canals without the need for dams or modifications to the natural river course, thereby resulting in competitive installation costs and low environmental impact.
OTHER SUPPORT	Organisation of dialogue events: Each project Smart Hydro Power implements counts with the first installation of the turbine made by SHP engineers, together with the community members that are assigned to be the responsible ones for the project. So, the engineers go to the project location and assembled the turbine, showing and giving instructions how it should be made. As soon as the turbine is working, all the training in managing and maintaining this hydropower system is taught. This education process is provided by SHP in order to transfer knowledge, develop skills and create jobs, so the community is able to take over the project, guaranteeing sustainability.
PROGRAMME BENEFICIARY	• Manufacturing • Assembly • Installation • Training providers: Business • Training providers: End-users
TYPE OF TECHNOLOGY	• Solar • Hydro
TARGETED PROJECT CAPACITY (KW)	4kW
NUMBER OF END-USERS	150

63. SNV Netherlands Development Organisation

ORGANISATION PROFILE

NAME OF ORGANISATION	SNV Netherlands Development Organisation
MISSION STATEMENT	SNV is dedicated to a society where all people enjoy the freedom to pursue their own sustainable development. We contribute to this by strengthening the capacity of local organisations.
COMMITMENT TO MINI-GRIDS	Currently SNV is involved in mini-grid projects in five countries: Peru, DRC, Nepal, Rwanda and Zimbabwe. SNV has the ambition to further boost this portfolio in the coming years. So far, the power sources of current SNV's mini-grids include hydro, solar, biogas, and biofuel. While some maturity is observed in terms of technology, attention will be paid to the development of realistic business models and financial mechanism to come out with commercially viable mini-grids.
MINI-GRID PROGRAMME	• Sustainable Energy 4 Rural Communities (Mashaba Solar Mini-grid)- Zimbabwe • Access to energy in isolated communities of Peruvian Amazon based on local production of biogas-Peru • Rural community electrification with Improved water Mill Technology and Micro-Enterprise Development-Nepal • Participation to the Development of Pico-Hydro sector – Rwanda • Rural community Electrification by mini-grid through fuel switch from diesel to biodiesel (palm oil waste) -DRC
CONTACT	www.snvworld.org

PROGRAMME

NAME OF THE INSTITUTION	SNV Netherlands Development Organisation
INSTITUTION TYPE	• Non-governmental Organisation • Non-profit Organisation
NAME OF THE PROGRAMME	Sustainable Energy 4 Rural Communities, Access to energy in isolated communities of Peruvian Amazon
TYPES OF SUPPORT	• Technical assistance • Financial assistance / investment
OBJECTIVES	The following Mini-grid programme are being implemented: • Sustainable Energy 4 Rural Communities (Mashaba Solar Mini-grid)- Zimbabwe • Access to energy in isolated communities of Peruvian Amazon based on local production of biogas-Peru • Rural community electrification with Improved water Mill Technology and Micro-Enterprise Development-Nepal • Participation to the Development of Pico-Hydro sector – Rwanda • Rural community Electrification by mini-grid through fuel switch from diesel to biodiesel (palm oil waste) -DRC
COUNTRIES	• Peru • Rwanda • Zimbabwe
STATUS	Planned - Operational
TYPE OF TECHNOLOGY	• Solar • Hydro • Biogas • Biomass • Biodiesel back-up

64. Société des Energies de Côte d'Ivoire - CI-ENERGIES

ORGANISATION PROFILE

NAME OF ORGANISATION	Société des Energies de Côte d'Ivoire - CI-ENERGIES
MISSION STATEMENT	CI-ENERGIES's mission in Côte d'Ivoire and abroad, is to monitor the management of electrical energy movements and project management work back to the State as the licensing authority.
COMMITMENT TO MINI-GRIDS	Mini systems based on renewable energy, including solar, are being developed by the Ministry of Petroleum and Energy (Department of Energy). Some private initiatives are also developed
MINI-GRID PROGRAMME	Initiatives as assets in the Ministry of Petroleum and Energy are: • Street lighting and community infrastructure Gligbeuadji (San Pedro) in 2009 with a total power of 4060 Watt peak; • Street lighting and community infrastructure of the village of Debo 1, (Department of Daloa) in 2014 with a total power of 5660 Watt peak; • Street lighting and community infrastructure of the village of Détroya (Department of Daloa) in 2014 with a total power of 7700 Watt peak; • Electrification pilot project by solar photovoltaic system in the locality of Nafana (department of Priko), ongoing project, with financial support of China government; Private initiatives include: • Public lighting of the village of BAPO (Jacqueville) by installing a mini network 1690 Watt peak in 2012; • Public lighting of the village of Baradjan (Odienné) by installing a mini network 1690 Watt peak in 2012.
CONTACT	Contact person : Mr. DIARRASSOUBA Nagaky, +225 20203185, dnagaky@cinergies.ci YAO Bi Jean Luc: +225 20206039 jlyao@cinergies.ci Mr. KASSI Bagaman +225 20206245 bkassi@cinergies.ci Ministry of Petroleum and Energy: www.energie.gouv.ci CI-ENERGIES: www.cinergies.ci

65. Solteq Energy bv

ORGANISATION PROFILE

NAME OF ORGANISATION	Solteq Energy bv
MISSION STATEMENT	Deliver sustainable water and electricity to everyone at affordable prices.
COMMITMENT TO MINI-GRIDS	We developed a hydraulic windmill which produces both water through reverse osmosis desalination and electricity with the excess energy at higher wind speeds. This can be done at locations with a weak grid or no grid.
MINI-GRID PROGRAMME	FreshWaterMill (for base load the wind energy is converted to high pressure and this is almost without losses used for reverse osmosis, but to use all available energy the excess energy is used for electricity production)
CONTACT	H. Rost van Tonningen h.tonningen@solteq.eu www.freshwatermill.com

66. Statera Capital

ORGANISATION PROFILE

NAME OF ORGANISATION	Statera Capital
MISSION STATEMENT	Statera Capital advises, invests, and arranges funding for businesses in Sub-Saharan Africa.
COMMITMENT TO MINI-GRIDS	Statera Capital is serving as an advisor to AFD and DFID in mini-grid investment.
CONTACT	David L. Ross Managing Director david@stateracapital.com www.stateracapital.com

PROGRAMME

NAME OF THE INSTITUTION	Statera Capital
INSTITUTION TYPE	• Consultancy • Corporate firm • Finance Institution • Small or medium enterprise (SME)
NAME OF THE PROGRAMME	Green Mini Grids
TOTAL PROGRAMME BUDGET (EUR)	Up to 1 Mio Euro
PRECISE TOTAL PROGRAMME BUDGET (EUR)	Confidential
WEBSITE	www.stateracapital.com
CONTACT	David L. Ross david@stateracapital.com
TYPES OF SUPPORT	• Technical assistance • Financial assistance / investment
OBJECTIVES	To advise on capital structures and capital raising
COUNTRIES	• Ethiopia • Kenya • Tanzania, United Republic of
REGION/LOCATION	Sub-Saharan Africa
SHORT DESCRIPTION	Statera Capital advises on capital structures and capital raising
STATUS	Operational: Open end
TYPE OF TECHNICAL ASSISTANCE OFFERED	• Business plan development • Financial modelling • Market and risk assessment • Marketing of projects to financiers and buyers
TYPE OF TECHNOLOGY	All renewable energy sources

67. Sustainable Agriculture Community Development Programme (SACDEP-Kenya)

ORGANISATION PROFILE

NAME OF ORGANISATION	Sustainable Agriculture Community Development Programme (SACDEP-Kenya)
MISSION STATEMENT	To accomplish its mission SACDEP will facilitate and support sustainable development through sustainable agriculture for resource limited communities in Eastern Africa (Kenya, Uganda, Tanzania, Rwanda, Burundi, Somalia, Djibouti, Ethiopia, Eritrea and Southern Sudan) through practical, socio-economic, scientific linkages and partnerships in Sustainable Agriculture practices for food, nutrition, renewable energy and income security.
COMMITMENT TO MINI-GRIDS	SACDEP is committed to having communities access to Renewable Energy in form of Wind, Solar, Biomass for use in cooking, lighting, phone charging, any other domestic use and income generation. We appreciate it all those at no costs since it is free energy. However installation costs are required in order to make the free energy accessible and usable by the communities. Renewable Energy is one of the 6 pillars we use Sustainable Agriculture.
MINI-GRID PROGRAMME	1) Renewable Energy for Schools and Prisons for Livelihood Improvement (RESPIL) 2) Renewable Energy for Social Ecology (RESCUE) Please not that these have mainly had generation of energy for use at Household for cooking and lighting.
CONTACT	Polly Wachira Outreach and Networking Manager 254-020-2614690 / Fax: 254-0703 441614 sacdepkenya@iconnect.co.ke SACDEP-Kenya P.O Box 1134-01000 Thika www.sacdepkenya.org

PROGRAMME

NAME OF THE INSTITUTION	Sustainable Agriculture Community Development Programme (SACDEP-Kenya)
INSTITUTION TYPE	Non-governmental Organisation
NAME OF THE PROGRAMME	Youth, Renewable Energy And Enterprise Creation Project
TOTAL PROGRAMME BUDGET (EUR)	Up to 1 Mio Euro
PRECISE TOTAL PROGRAMME BUDGET (EUR)	Euros 713,000
WEBSITE	www.sacdepkenya.org
CONTACT	Ms. Polly Wachira sacdepkenya@iconnect.co.ke 254-722-780149
TYPES OF SUPPORT	• Technical assistance • Financial assistance / investment
OBJECTIVES	The proposed Youth Renewable Energy and Enterprise Creation Project will be an Outscaling Project of the skills and success that has been achieved by the partnership SACDEP towards promoting Renewable Energy on Kenya. And In rural Kenya, more than 70% of the population is not connected to the National Grid. This means that they obtain their energy for cooking and lighting mainly from wood fuel. In this regard, removal of tree cover in forests and agricultural landscapes is continuous. Unfortunately, with a population increase of around 2- 7% per annum, the pressure on tree and vegetation cover continues to increase. Unfortunately, this removal is at a time while effects of climate change are beginning to bite. 75% of the Kenyan population derives their food needs from agriculture. Dependence on rainfall is therefore critical for their livelihoods. At the same time, river flows and volumes for populations further away from forests are important for water supply for humans, crops and livestock. As such, tree cover on highlands as a regulator of rainfall and water flows is a livelihood matter.

PROGRAMME

	Studies have indicated that the towns neighbouring the Forests are the heaviest consumers of wood fuel. They therefore continue to put pressure on the forests due to the demand. This imbalance may be arrested through use of RE sources. For many years, RE technology has been recommended by a variety of development practitioners. However, the use of Biomass and Solar sources of energy is still rated at less than 20%. The question that remain is:- If the RE sources are more reliable than the most used hydro sources, why the low level of its development? On the other hand the same towns that consume the wood fuel continue to produce of biomass through waste foods that goes to the garbage. The other source of biomass is the slaughter houses in towns where meat is consumed in large numbers every day. This project aims at giving the communities an alternative source of energy by producing Commercial Biogas plants from the slaughter houses and selling it to the communities at affordable rates. It will also tap into the wealth of trained Youth who are unemployed so that they create jobs out of Renewable Energy enterprises.
COUNTRIES	Kenya
REGION/LOCATION	In Kenya, Central and Rift Valley Provinces
SHORT DESCRIPTION	The proposed project will aim at bringing RE into the mainstream of Energy sources. 200 Households will benefit from sale of biogas from the 2 commercial Biogas units, 200 HH will benefit from use of Solar for pumping water for irrigation and an additional 90 Youth will benefit from employment creation. A total of 490 HH will benefit directly. Since on average every HH has about 5 family members, the project will therefore reach 2,450 individuals directly. I Specifically the following initiatives will be implemented: 2 Commercial Biogas of 220 Cubic meters using the slaughter house waste as a source of Biomass for gas generation. 2 Youth Managed Biogas Energy Kiosks will be established 2 Solar Assembling kiosks will be established and run by 20 Youth Solar units for lighting 50 Units Solar units for water pumping 60 units Solar units as portable lamps 200 units
STATUS	Planned launch date: 1 August 2015
TYPE OF FINANCING AND/OR CREDIT ENHANCEMENT	• Grant: 60 % of project value: • Convertible Grant: 40 % of project value
TYPE OF TECHNICAL ASSISTANCE OFFERED	• Technical evaluation • Technical validation • Marketing of projects to financiers and buyers
OTHER SUPPORT	• Training of policy makers • Organisation of dialogue events • Policy advisory • Association support • Awareness campaigns • Support for household energy users • Support for non-household energy users (e.g. telecom, agriculture, water, tourism, education and health sectors)
TYPE OF TECHNOLOGY	• Solar • Wind • Biogas • Biomass

68. Technolectric Ltd.

ORGANISATION PROFILE

NAME OF ORGANISATION	Technolectric Ltd.
MISSION STATEMENT	To provide high quality electrical engineering products and services for clients in East Africa.
COMMITMENT TO MINI-GRIDS	We are licensed in Kenya to provide hybrid and on-grid Solar PV installations and are committed to helping Kenya and the rest of Sub-Saharan Africa become self-reliant for our electrical energy requirements using renewable energy sources.
CONTACT	Ali Pirbhai +254 732 539 832 P.O. Box 99808-80107 Mombasa, Kenya www.technolectric.com

PROGRAMME

NAME OF THE INSTITUTION	Technolectric Ltd.
INSTITUTION TYPE	Corporate firm
NAME OF THE PROGRAMME	Private
TOTAL PROGRAMME BUDGET (EUR)	Up to 1 Mio Euro
TYPES OF SUPPORT	Financial assistance / investment
COUNTRIES	• Kenya • Tanzania, United Republic of • Uganda
TYPE OF FINANCING AND/OR CREDIT ENHANCEMENT	Equity: 51 % of project value
TYPE OF TECHNOLOGY	• Solar • Wind • Battery/Storage • Diesel back-up • Power components

69. Tessa Power

ORGANISATION PROFILE

NAME OF ORGANISATION	Tessa Power
MISSION STATEMENT	Leading the transformation to a competitive, affordable, safe, smart, green and clean energy future. Produce, distribute and commercialize electricity from renewable sources with social responsibility, respecting environment, health and safety of employees and customer oriented. We aspire to be the preferred African Global Energy Company because of our commitment to the creation of value, quality of life, the safety of people and of supply, the protection of the environment and customer focus.
COMMITMENT TO MINI-GRIDS	TESSA POWER is legally committed to electrify by mini-grids 20 Villages per year in Niger Republic. Achieving this will help us to achieve the Niger's rural electrification objectives.
MINI-GRID PROGRAMME	Tessa Power Mini-Grids Project Phase I - 2015-2018
CONTACT	Ousmane Mahaman Laouali +22794990779 |+22792509429 tessa_power@outlook.com Tessa Power BP 13052 Niamey - Niger

PROGRAMME

NAME OF THE INSTITUTION	Tessa Power
INSTITUTION TYPE	Corporate firm
	Small or medium enterprise (SME)
NAME OF THE PROGRAMME	Tessa Power Mini-Grids Project Phase I - 2015-2018
TOTAL PROGRAMME BUDGET (EUR)	Between 10 Mio Euro and 50 Mio Euro
PRECISE TOTAL PROGRAMME BUDGET (EUR)	39 Mio Euro
CONTACT	Ousmane Mahaman Laouali tessa_power@outlook.com +22794990779 Bp.13052 Niamey-Niger
TYPES OF SUPPORT	Technical assistance
OBJECTIVES	Rural Electrification Engineering Specifications and Business Models
COUNTRIES	Niger
REGION/LOCATION	Agadez and Maradi
SHORT DESCRIPTION	Rural Electrification Engineering Specifications and Business Models
STATUS	Planned launch date: 1 July 2015
TYPE OF TECHNICAL ASSISTANCE OFFERED	• Feasibility study support: Site Assessment • Business plan development: Mini-grids business models • Technical evaluation: Resources evaluation • Technical validation: Engineering specification validation • Financial modelling: COE Models • Market and risk assessment: Market research and risk mitigation • Environmental and Social Impact Assessments: Methodology of environmental effects analysis, Description and Evaluation of environmental effects
TYPE OF TECHNOLOGY	• Solar • Wind • Biogas • Biomass • Battery/Storage • Biodiesel back-up • Power components

70. Trama TecnoAmbiental, S.L.

ORGANISATION PROFILE

NAME OF ORGANISATION	Trama TecnoAmbiental, S.L.
MISSION STATEMENT	TTA has been committed for over 25 years to reduce energy vulnerability by promoting access to modern, affordable and sustainable renewable energy based electricity services in rural areas all over the world. Providing high quality services and solutions that are technically, socially, economically and environmentally optimal, integrating and harmonizing the needs of all parties involved.
COMMITMENT TO MINI-GRIDS	TTA recognised the value of rural RE micro grids, when already in 1994 it designed its first PV micro-grid for a remote village in Spain. Since then, we are committed to our MSG concept Multi user Solar (hybrid) Micro grids based on Photovoltaic Generation for reliable and environmentally friendly tailored electricity service. We can offer all the required services in a project: from turn- key solutions to involvement in any specific part of the value chain, feasibility studies, technical assistance, engineering, project management, evaluation, operation, etc. Our load management patented concept "EDA" simplifies invoicing, gives flexibility to the user as well as consciousness for rational use of electricity. Moreover, it introduces certainty assisting planners, designers, operators and users. Capacity building activities are part of our overall MSG approach for sustainability.
MINI-GRID PROGRAMME	• "Service d'Électricité Solaire avec des Micro-Réseaux en Afrique - SESMA Burundi": Electrification of 7 remote villages through PV micro-grids with set up of an operator: identification, demand study, system design, installation, capacity building and O&M. • "Project Design Study on the Renewable Energy Development for Off-Grid Power Supply in Rural Regions of Kenya": Supporting the Ministry of Energy & Petroleum of Kenya and Rural Electrification Authority with the preparation of an implementation-ready project design for an off-grid rural electrification program (with an initial focus on 3 pilot mini-grids). • "Construction and Commissioning of Solar Photovoltaic Mini grid in Chad on a Turn-key Basis": Study, engineering and installation of 5 Pilot micro-grids with Photovoltaic generation of 40 to 50 kWp including distribution lines in 5 different towns. • "Program for Rural Electrification in West bank with PV Hybrid Micro-Grids Palestine": Electrification of 10 villages with PV Hybrid Micro-Grid in the districts of Nablus, Jenin, Hebron and Tubas. • "Access to sustainable electricity for rural communities in the island of Santo Antao; Cape Verde": Rural electrification for the community of Monte Trgio through a PV Hybrid Micro-grid in operation since February 2012.
CONTACT	Xavier Vallvé xavier.vallve@tta.com.es Nuria Bohigas + 34 93 446 3234 nuria.bohigas@tta.com.es www.tta.com.es

PROGRAMME

NAME OF THE INSTITUTION	Trama TecnoAmbiental
INSTITUTION TYPE	• Consultancy • Small or medium enterprise (SME)
NAME OF THE PROGRAMME	Solar Electricity Service with Mini-grids in Africa - SESMA Burundi
TOTAL PROGRAMME BUDGET (EUR)	Between 1 Mio Euro and 10 Mio Euro
PRECISE TOTAL PROGRAMME BUDGET (EUR)	2.500.000
WEBSITE	www.tta.com.es
CONTACT	Xavier Vallvé +34934463234 xavier.vallve@tta.com.es
TYPES OF SUPPORT	Technical assistance
OBJECTIVES	The overarching goal of this project is to improve access to modern, affordable and sustainable energy services in rural off-grid areas in Burundi, by providing a sustainable and scalable model for Mini-grid Operator (MGO) in order to be replicated and foster the deployment of hybrid mini-grids in the country. This project supports the economic and human development in seven villages through Bubanza, Gitega and Makamba provinces with the implementation of a 25kWp Solar Hybrid Micro-grid plant in each village; that will supply electricity directly for public services; productive activities; and a proportion of households.
COUNTRIES	Burundi
REGION/LOCATION	Bubanza, Gitega and Makamba provinces
SHORT DESCRIPTION	This project expects to provide a high quality service of electricity 24/7 through a 25kWp SHP-based mini-grid in each village, achieving the target of 18,000 final beneficiaries and 1,200 connections. The electricity supplied will have the equivalent quality to the main grid, in terms of product (230V AC, 50 Hz, <3% THD) and in terms of service (time to respond to a new connection application, unplanned black outs, customer support). • Establish a management mechanism that guarantees O&M through a public-private partnership that ensures long-term financial sustainability and potential growth. • Scalability to other villages in the region, promoting and replicating our technologic and business model. Our work will be organized in four interrelated components: i) Policy and de-risking instruments for SHP and RE-based mini-grids; ii) Technology supply chain and MGO business model; iii) Deployment of SHP-based mini-grids; iv) Public relations and promoting investment. Collectively, these components seek to put in place cornerstone policy instruments at national level, supported by technical, policy-related, educational, and financial measures to raise capacity, reduce risk, and help assure successful implementation.
STATUS	Operational
TYPE OF FINANCING AND/OR CREDIT ENHANCEMENT	Grant: 70 % of project value
TYPE OF TECHNICAL ASSISTANCE OFFERED	Feasibility study support: The different experts will perform detailed site locations visits and tests in order to finalise the following steps; SHP-based mini-grid data analysis: validate all the needs (energy needs, Organisational framework, environmental constraints, etc.) analyse feasibility aspects of the proposed electrification project. The expected results of this assignment are to provide the list of hypothesis and data relative to the electrification project as well as the description of the Organisational context in which the systems will be installed, operated and maintained. Civil work analysis: Together with the local counterpart the appropriateness of the site locations shall be analysed and confirmed. During the stakeholder consultation any possible issues that could hinder the project development will be explored. All the requested tests, analysis and studies will be performed by the experts, with the support of local expertise when and if requested. Key conclusions of the civil/structural study justifying the site locations recommendations and distribution line implementation are also included in this activity. This activity is the basis for the technical PV generation aspects, civil constructions evaluation and the social analysis which will be performed. Data collection activities include inspections, visits, analyses, consultations, etc with the concerned parties to be able to collect the necessary information. Social aspect: Social and commercial aspects will be also considered like operation and maintenance scheme, training needs for consumers, government officers, university and technical schools graduates and village workers as well as policies makers and energy development institutions. At the end of this first assignment the project will provide the Ministry of Energy an idea of the preliminary views and proceedings of project development. It is expected that this initial scope confirms the desired work line and provides sufficient information to recommend any considered or suggested modification of activities. In this step the opinion and feedback from the stakeholders will be discussed and collected.

PROGRAMME (continued)

OTHER SUPPORT

Training of policy makers:
Successful mini-grid projects require human capital from all those involved in the development of a project. In the initial phases of the project, traditional concepts of capacity building, which might focus more on general business skills and technical knowledge, have to be complemented with project specific and problem targeted technical assistance at specific stages of the mini grid development. In the later phases, growing from demonstration single projects to roll out of multiple projects, there will be a need for internally driven human capital development within mini grid developers to complement the earlier technical assistance received. They need detailed knowledge of the local target communities and their socio cultural environment; they need business and technical knowledge to create a commercially sustainable micro energy company; and, once the equipment is commissioned they must have the technical capacity to operate, maintain, and repair the equipment.
In order to meet the capacity building needs, both initial training and continuous feedback from the project results must be implemented. On the other hand, all skill levels must be taken into account, including technology providers, Government, local institutions, service providers and financial institutions.

Organisation of dialogue events: Appropriate policy mechanisms must be promoted to support the development of RE –based mini-grids and, particularly, SHP-based mini-grids in Burundi. The policy-related work of this project will strongly count on the collaboration and buy-in of the Government institutions related to the success of the enforcement of such policies (Ministries of energy, but also Finance, and also other Government institutions such as Agriculture, Environment, Planning, etc). Such collaboration will be structured in workshops such as a multi-stakeholder meeting, a specific workshop on rural electrification policy and a final one about tools and methodologies, to be attended by public and also private institutions.

Policy advisory: MGOs (micro grid operators) must be given the legal right to exist and policy must provide clear language allowing micro grid operators to exist within a certain service area, and establish a clear and simple process for them to register this activity. If restrictive or unclear regulations exist the project will consider ways to adapt or update them as this will be easier than starting entirely from scratch. The MGO needs a document that gives it the legal right to operate. This document could be the registration and the grant agreement that gives the MGO the status that may be needed to obtain a bank loan or some other source of financing.

Technological decisions are the engineering decision like the safety standards for micro grids that serve retail customers. While the content of these rules is technical, the effects of the rules are both technical and economic.

Economic or commercial decisions set the price that the operator will charge for the sale of electricity, the grants that are available to create the micro grid and the taxes that apply during operation.

Process decisions will specify entry and exit conditions through permits to the process by which the operators fulfil the legal requirements to develop a project and operate.

Awareness campaigns: For replication and promotion, the project will disseminate the results of the project among Government agencies to advocate for long term political commitment. Based on the success of the project, replication of the mini grid model can be extended as well to villages that have other potential RE sources to generate electricity.
As well, the project will seek to disseminate information among the potential target communities through communication channels such as radio, printed documentation, events and also seek to establish information channels in the different regions of the country. In such ways, potential beneficiary communities can approach the program and seek advice or apply for potential project development. The project will also be promoted in international, regional, national conferences and seminars with other stakeholders in the renewable energy sector, to share lessons learnt through this project, promote replication and investment.

Involvement of Community: Access to mini-grids electricity service must develop social activities (health, education, etc.), improve basic services (telecommunications, water) and commercial & productive activities as well as households. Therefore, our SHP-based mini-grid development approach brings all stakeholders, community leaders, companies, aid Organisations and public authorities to work together, aiming at defining key roles, establishing management and O&M models. Capacity building activities are part of this overall approach. The community is involved in the managerial and rational use of the plant's electricity. Customers need to be actively involved in decision making regarding their energy supply, especially in small rural villages which traditionally debate community issues. This community involvement is not only requested by the communities themselves but also makes economic sense. Involving local communities from the start helps improve SHP-based mini-grid design, ensure local support, mobilise contributions in cash or in kind, and increase local ownership, which in turn contributes to operational sustainability. For this project, preliminary discussions have been conducted with the communities during the project identification visits, and for many of the households, a basic monthly tariff in the range of 5 to 8 US$ seemed acceptable as it equals their avoided costs in candles and kerosene. Local participation also helps to reduce theft and distribution losses, improves billing and revenue collection efficiency, ensures stable delivery of electricity, and prevents many potential conflicts. Community's involvement may leave some decision-making power to the community through discussions and negotiations between the MGO and the community's representatives.

Other: For rural development, electricity has two distinct uses: residential and productive. Residential uses of electricity are expected to positively impact the rural quality of life or improve rural living standards. The productive use of electricity in rural areas is expected to result in increased rural productivity, greater economic growth, and a rise in rural employment, which would not only raise incomes but also reduce the migration of the rural poor to urban areas.
In terms of economic development, electricity access provides the basis for improving productivity by facilitating income generating activities and improving the business climate. With respect to agricultural production, electricity principally used to provide motive power for agriculture-based industries and powers farm machinery, such as water pumps, fodder choppers, threshers, grinders, and dryers. This results in the modernization of agricultural production. Electricity would bring an increase in irrigation, which in turn would result in The generous output of these modernised farms would provide inputs to large commercial enterprises such as rural cooperative sugar factories. Electric services for rural non-farm businesses actually improve productivity, increase in the amount of required labour and provide additional income for rural people.

In terms of human development, electricity access assists reducing child mortality, maternal mortality, and other diseases by facilitating better health services and therefore improves health. Modern electricity services improve health service delivery, increase access to safe drinking water, provide clean fuels that reduce indoor pollution, and make available various communication tools (e.g., radio, television, and the Internet), which can be used effectively against HIV/AIDS and other diseases. Rural health clinics are the front line against disease and in the promotion of health in rural communities. Yet few rural health clinics in the developing world have access to electricity, modern fuels, clean water, or telecommunications. Provision of electricity to rural health clinics allows cleaner and safer environments, power for operating lights, water pumping and heating, sanitation, sterilization of medical equipment, medical refrigerators, other laboratory equipment, and telecommunications equipment. Because people who are unhealthy cannot work as much as people, who are healthy, surely improved health will lead to higher incomes. Thus, the use of electricity in homes or businesses has a positive impact on social and economic development.

Electricity use in rural homes is also related to an improvement in education levels. It encourages the development of higher literacy rates, gender equality, and women's empowerment. Modern electricity services have a positive impact on the time children spend at school and also improve the quality of the schools and the teaching. Electricity also provides lighting for rural homes, which increases the number of hours children have to study. Women and girls who spend the most amount of time and effort cooking, collecting water, and collecting fuel wood and other biomass resources. Thus, any improvement in electricity access will disproportionately benefit them. By reducing the time women must spend cooking and collecting water, electricity allows women to spend more time on educational, social, and income-generating activities. This additional time can have a fantastic effect on a woman's level of education, health, economic opportunities, and involvement in community activities. Public lighting also improves women's safety and encourages evening community and commercial activities. A less obvious impact for women´s empowerment, is the use of electricity for activities traditionally considered consumptive (e.g., home lighting or television) or unproductive; However, recent studies revealed that women in households with electricity were much more aware about gender equality issues than women in households without electricity.

PROGRAMME (continued)

TYPES OF MINI-GRID PROJECTS ELIGIBLE FOR SUPPORT	• Brownfield • 30 % required investment by private third party
PROGRAMME BENEFICIARY	• National/local public authority • Distribution • Private company • Non-governmental organisation • Installation • Operation • Maintenance • Training providers: Business • Training providers: End-users • Financier: Business • Financier: End-users • Consultancy/Research: Policy
TYPE OF TECHNOLOGY	Solar
TARGETED PROJECT CAPACITY (KW)	25 kW * 7 Villages
NUMBER OF END-USERS	18.000
% OF ENERGY USED BY BUSINESSES	45
% OF ENERGY USED BY HOUSEHOLDS	10
PREFERRED BUSINESS MODEL	Costs Reduction Strategy: The strategic perspective for this project is to find the balance between commercial viability for the MGO and providing universal access to electric services through tariff settings. To make the model commercially sustainable over time, the initial investment for this project is cross-subsidized; therefore tariffs will be more affordable to users and at the same time will generate sufficient revenue for the MGO. Tariffs will be calculated in order to bring, in a reasonable period of time, enough revenue, to cover Operating and Maintenance (O&M), depreciation on capital investment [whether it has been financed entirely by grants (in this case) or partially by the MGO in equities and loans supported by grants (in future replications of this project)] and finance an emergency fund for contingencies, fraud or theft. Customers Segmentation: In the selected villages, even if the investment budget is limited, the project will target the whole population thanks to an inclusive business strategy designed to fill the needs identified within the local population. The initial budget available for investment will finance the installation of the SHP-based mini-grid, the backbone distribution grid, designed with a modular engineering design for future scalability. Different types of service tiers will be offered to end users, with associated tariffs, connection fees and output quality. All tariffs schemes and service conditions will be agreed with the community. Tariffs are set to cover O&M costs but also generate revenues, to be reinvested in the grid extension as the economic development of the region increases the demand for electric services, with new households deciding to apply for grid connection. This project applies the ABC approach and divides its customer in three categories in order to (i) improve commercial viability of the MGO, while (ii) reducing the risk to service the rural customers, and (iii) improving the MGO's ability to access further financing on the long term. Revenues Stream & Tariffs: TTA's innovative concept, "EDA" (Energy Daily Allowance®) makes for the MGO the demand-management more intelligent and flexible by capping the power and energy available to each user to an agreed maximum. This ensures more stable revenues for the MGO by incentivizing and motivating costumers to plan their consumption ahead and foster the efficient use of electric appliances. It also ensures the plant operates within its rated design and prevents black outs or unforeseen increases in operating costs because of higher back-up diesel fuel consumption. This limit is, nevertheless, flexible, depending on the plant's condition. On very sunny days users are encouraged to make use of the surplus generation at no extra cost. The implementation is done through a patented type of meter called the electricity dispenser that permanently shows the user the available energy and includes a signal to encourage or reduce consumption, always according to the plant's condition. The EDA concept is a vital design feature, as it is the element from which the PV generator and all the other major plant's components are sized. Thus it is essential to establish in a detailed and accurate way each user's energy demand. The EDA also estimates future increase according to the community's specific social and economic environment, and enables components like batteries and inverters to operate within the specified range, hence increasing the plant's efficiency and their life time. Connection fees will be applied, to measure and guarantee the commitment of the customers and to cover further connection costs. If some customers found themselves unable to pay the one-time connection charges (connection and in-house installation), the MGO can reduce the charge, by spreading 50% of it over a certain time period and gain more customers. To increase its revenues and its client's portfolio on long term, the MGO could foster a productive and diversified use of electricity, by collaborating for example with a Micro-Finance Institution (MFI). Operation & Maintenance Services: MGO's tariff collection is based on fixed monthly rates related to the EDA and is established within the population's payment capacity. This does not only sustains O&M but also partially pays for the depreciation of capital costs. The O&M activities are organised in order to involve local users and will be structured around a concept of three levels of involvement: (i) final users, (ii) fist-level O&M up-keeper/user and (iii) second-level O&M technicians. The first level includes the users themselves, as they are the first component of a successful and durable service. The objective is not only to support them in maintaining their home installation, but also make their electricity consumption behavior and habits more efficient. The second level includes a team of trained users, responsible for the basic daily operation, maintenance and, in case of specific alarm and issues, reporting. Finally, the operator's technical personnel are the focal point for problem-solving, ensuring substitution when end of life is reached, as well as for specific maintenance and overall activities. Operator's Business Model: For this project, the MGO's business model will setup using a Hybrid operator model The type of hybrid model used will depend on the changes agreed by the central government to the regulatory framework to accommodate 'mixed' ownership and management. The duties and responsibilities will be split according to who has built, owns, operates and maintains the system. It will be essential during the implementation phase of the project, to clearly define roles and responsibilities of all actors involved in the project prior to transferring the assets and commissioning. The aim of such a model is to benefit from the technical expertise and experience of the utility with the possibility to realise economies of scale in the realisation of big infrastructure works, the local involvement of the community-based Organisation, and the financial investment, technical expertise and efficiency of a private company (grants, subsidies and TTA). A(nchor) – B(usiness) – C(ommunity) ModelA(nchor) – B(usiness) – C(ommunity) Model Business growth strategy: As mentioned before, this project first aims at social/public services, productive activities and households in the selected villages as its final beneficiaries from the electricity service. However, once the Operator will be running successfully, (i) demand for new connections will increase rapidly along with the economic growth opportunities within the community (30% increase in household connection demand, according to TTA´s previous experiences), (ii) new economic activities will rise from the establishment of a suitable legal framework for the renewable energy sector, benefiting the Operator at regional and national level, (iii) further strategies to increase revenues and customer portfolio for the MGO will be implemented, (iv) if on the long-term, the national grid connection can instead provide the opportunity for the micro-grid operator to retain the business and earn income by selling the electricity produced to the central grid.

71. Trojan Battery Company

ORGANISATION PROFILE

NAME OF ORGANISATION	Trojan Battery Company
MISSION STATEMENT	With more than 85 years of experience manufacturing batteries, Trojan's mission is to offer the highest quality deep-cycle battery for mini-grids to ensure the success of the project and high returns on the investment.
COMMITMENT TO MINI-GRIDS	Educate our partners and the mini-grids' beneficiaries to make them experts in battery technologies. Help them to choose the right battery technology for their projects. Train them to manage the mini-grids properly to maximise the life of the batteries. Trojan is also committed to support agencies and partners of the HIO to develop technical guidelines related to batteries.
MINI-GRID PROGRAMME	Trojan Tech Training
CONTACT	Romina Arcamone +1 562 595 3182 rarcamone@trojanbattery.com www.trojanbattery.com

PROGRAMME

NAME OF THE INSTITUTION	Trojan Battery Company
INSTITUTION TYPE	Corporate firm
NAME OF THE PROGRAMME	Trojan Battery Tech Training
WEBSITE	www.trojanbattery.com
TYPES OF SUPPORT	Other: Trojan Battery Technical Training
OBJECTIVES	Trojan's commitment to micro-grids is to educate installers and beneficiaries to make them experts in battery technologies. The training aims to help the participants to choose the right battery technology and help them to manage the micro-grids properly to maximise the life of the batteries. Trojan is also committed to support agencies and partners of the HIO to develop technical guidelines related to batteries.
COUNTRIES	• Argentina • Australia • Ghana • Guatemala • Honduras • India • Kenya • Lebanon • Mexico • Namibia • Nicaragua • Nigeria • South Africa • Spain • Uganda • United Arab Emirates
REGION/LOCATION	United States
SHORT DESCRIPTION	Trojan Tech training briefs attendees about the newest battery technologies including Reliant™ AGM and Smart Carbon™ for Partial State of Charge applications. The sessions cover battery charging, battery testing, and battery autopsy, among other topics.
STATUS	Operational: Open end
TYPE OF TECHNOLOGY	• Solar • Wind • Battery/Storage

72. UK Department for International Development (DFID)

ORGANISATION PROFILE

NAME OF ORGANISATION	UK Department for International Development (DFID)
MISSION STATEMENT	The Department for International Development (DFID) leads the UK's work to end extreme poverty. We're ending the need for aid by creating jobs, unlocking the potential of girls and women and helping to save lives when humanitarian emergencies hit.
	The UK has committed a total of £75m to support the development of clean energy mini-grids in Africa. This includes support to mini-grid investment and deployment in Kenya and Tanzania, along with a wider regional preparation and support facility run by the African Development Bank, and an Action Learning Facility run by the World Bank/ESMAP.
COMMITMENT TO MINI-GRIDS MINI-GRID PROGRAMME	The Green Mini-Grids Africa (GMGs) Initiative is constituted by the four projects below: - Green Mini-Grids Kenya - Green Mini-Grids Tanzania - Green Mini-Grids African Regional Facility - Green Mini-Grids Africa Action Learning and Evaluation Programme
CONTACT	Steven Hunt Energy Advisor s-hunt@dfid.gov.uk www.dfid.gov.uk

PROGRAMME

NAME OF THE INSTITUTION	UK Department for International Development
INSTITUTION TYPE	• Development Organisation • Government Agency
NAME OF THE PROGRAMME	Green Mini-Grids Africa
TOTAL PROGRAMME BUDGET (EUR)	Above 50 Mio Euro
PRECISE TOTAL PROGRAMME BUDGET (EUR)	100m
WEBSITE	https://www.esmap.org/sites/esmap.org/files/DocumentLibrary/Steven%20Hunt_Speaker.pdf
TYPES OF SUPPORT	• Technical assistance • Financial assistance / investment • Other: Knowledge/Research
OBJECTIVES	This programme aims to help transform the Green Mini-Grids sector in Africa from a nascent and sporadic series of pilot projects, to a thriving industry on track to contribute the IEA's estimated 40% of universal electricity access by 2030. This will be achieved by creating a critical mass of experience and evidence of GMGs success in two countries, coupled with improved policy and market conditions for investment in mini-grids regionally.
COUNTRIES	• Kenya • Tanzania, United Republic of
REGION/LOCATION	Africa
SHORT DESCRIPTION	This is a programme consisting of four sub-projects, GMGs Kenya, GMGs Tanzania, GMGs Regional Facility (AfDB) and GMGs Action Learning and Evaluation (ESMAP/WB). Note that these sub-projects may appear elsewhere in this mapping as individual projects. This entry refers to the GMGs Africa initiative, and corresponding DFID support, as a whole.
STATUS	Operational: Closing date 31 October 2019
TYPE OF FINANCING AND/OR CREDIT ENHANCEMENT	• Grant: TBC/competitive % of project value • Loan: TBC/competitive % of project value • Hybrid capital • Other Credit enhancement: Credit line to national banks, creating willingness to lend and/or preferential rates and longer tenors.

PROGRAMME	
TYPE OF TECHNICAL ASSISTANCE OFFERED	• Feasibility study support: Available in Kenya and Tanzania, and TBC regionally • Business plan development: Regionally • Financial modelling: Via the Action Learning/Research component • Market and risk assessment: TBC - at the regional level • Marketing of projects to financiers and buyers: TBC - at the regional level • Environmental and Social Impact Assessments: In Kenya and Tanzania
OTHER SUPPORT	• Training of policy makers: Via the Regional Facility • Organisation of dialogue events: Via the Regional Facility • Policy advisory: Via the Regional Facility • Awareness campaigns: In Kenya and Tanzania • Involvement of Community: In Kenya and Tanzania • Support for household energy users: In Kenya and Tanzania • Support for non-household energy users (e.g. telecom, agriculture, water, tourism, education and health sectors): These would be stated in applications
TYPES OF MINI-GRID PROJECTS ELIGIBLE FOR SUPPORT	Greenfield: TBC/competitive % required investment by private project developer
PROGRAMME BENEFICIARY	• National/local public authority • Installation • Consultancy/Research: Policy • Private company • Non-governmental organisation • Academia • Other (please specify) • Operation • Maintenance • Training providers: Business • Training providers: End-users • Financier: Business • Financier: End-users • Consultancy/Research: Resource assessment • Consultancy/Research: Community surveys Note that the beneficiaries vary by component of the programme.
TYPE OF TECHNOLOGY	All renewable energy sources
TARGETED PROJECT CAPACITY (KW)	up to 10MW maximum
NUMBER OF END-USERS	No limit, but must be new connections
% OF ENERGY USED BY BUSINESSES	No target
% OF ENERGY USED BY HOUSEHOLDS	No target
PREFERRED BUSINESS MODEL	No preference, to be set by developers - applications will be evaluated.

73. United Nations Environment Programme (UNEP)

ORGANISATION PROFILE

NAME OF ORGANISATION	United Nations Environment Programme (UNEP)
MISSION STATEMENT	To provide leadership and encourage partnership in caring for the environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations.
COMMITMENT TO MINI-GRIDS	UNEP's current work and interest in clean energy mini-grids is based upon its ongoing programme that aims to demonstrate the commercial viability of mini-grids in developing countries, both brownfield (replacing diesel in existing mini-grids) and greenfield (new grids for currently unserviced sites). Several locations have been targeted in Africa, Asia and Latin America, with a view to making a significant contribution to the goals of SE4All. Different business models will be demonstrated (including public sector finance where necessary) to reduce the risk for potential future investors. Linking the necessary policy frameworks and appropriate clean energy technologies with the required financial mechanisms will be the focus of this UNEP initiative, which is a key part of the current 2014-15 work programme.
MINI-GRID PROGRAMME	• Renewable Energy in Hybrid Mini Grids and Isolated Grids: Economic Benefits and Business Cases • Promoting Investment in Decentralised Energy Options: Clean Energy Mini-Grids in Remote Areas
CONTACT	Dean Cooper Energy Finance Programme Manager +33 1 44 37 16 27 dean.cooper@unep.org www.unep.org/energy/

PROGRAMME

NAME OF THE INSTITUTION	United Nations Environment Programme
INSTITUTION TYPE	International environment body
NAME OF THE PROGRAMME	Haiti Sustainable Energy
TOTAL PROGRAMME BUDGET (EUR)	Between 1 Mio Euro and 10 Mio Euro
PRECISE TOTAL PROGRAMME BUDGET (EUR)	Phase 1: 2.5 Mio, upcoming Phase 2: 3 Mio
WEBSITE	http://www.unep.org/disastersandconflicts/CountryOperations/Haiti/EnergyandEnvironmentProgrammes
TYPES OF SUPPORT	Technical assistance
OBJECTIVES	To demonstrate a scalable model for Haitian rural electrification
COUNTRIES	Haiti
REGION/LOCATION	Port a Piment & Roche a Bateau
SHORT DESCRIPTION	1. Geographically expand the reach of the existing co-operative owned mini-grid (phase 1 of the programme) adding extra power generation if needed. 2. Continue Organisational capacity building for the co-operative. 3. Delivery of a policy support, capacity building and communications package at the national level.
TYPE OF FINANCING AND/OR CREDIT ENHANCEMENT	Grant: 100 % of project value Venture Capital
TYPE OF TECHNOLOGY	Solar Wind Hydro Biogas Biomass Battery/Storage Diesel back-up

74. VITO

ORGANISATION PROFILE

NAME OF ORGANISATION	VITO
MISSION STATEMENT	Climate change, food security, resource scarcity, sustainable energy, ageing population, etc. VITO's research agenda focuses on the major societal challenges we are facing today. The fields of expertise of VITO initiate a social transition. That is why VITO combines sustainability and transition throughout its research programmes, and is committed to maximise the valorisation of VITO's research results.
COMMITMENT TO MINI-GRIDS	The demand for renewable energy increases every day. VITO and EnergyVille are performing research into two crucial technological breakthroughs: electricity storage and the optimisation of thermal energy systems.
MINI-GRID PROGRAMME	- Unit ETE (energy technology) - Unit TEM (energy transition management)
CONTACT	Peter Coenen peter.coenen@vito.be Arnoud Lust arnoud.lust@vito.be www.vito.be

PROGRAMME

NAME OF THE INSTITUTION	VITO Energy Technology Unit (ETE)
INSTITUTION TYPE	Academia/research institute
NAME OF THE PROGRAMME	Energy technology unit (ETE)
TOTAL PROGRAMME BUDGET (EUR)	Between 1 Mio Euro and 10 Mio Euro
PRECISE TOTAL PROGRAMME BUDGET (EUR)	7 M€
WEBSITE	www.vito.be
TYPES OF SUPPORT	Technical assistance Other: Market and business analysis
COUNTRIES	Belgium
REGION/LOCATION	Western Europe, China, India
SHORT DESCRIPTION	R&D in smart grid: integration of renewables, storage, electricity markets, heat networks
STATUS	Operational: open end
TYPE OF TECHNICAL ASSISTANCE OFFERED	• Feasibility study support: This is one of the core activities of the "E-markets" team • Business plan development: This is not a focus area of our work • Technical evaluation: This is the focus of the business unit energy technology. Main areas are: electrical storage, mainly different battery technologies, integration of renewables, (micro) grid balancing and regulation. • Technical validation: Yes, as above • Financial modelling: Not a focus area • Market and risk assessment • Environmental and Social Impact Assessments: The ETE (energy technology) unit has no activities in this area. However Vito's energy transition management unit (TEM) does.
TYPE OF TECHNOLOGY	• Solar • Wind • Battery/Storage • Diesel back-up • Biodiesel back-up

75. Yiitidi Ltd.

ORGANISATION PROFILE

NAME OF ORGANISATION	Yiitidi Ltd.
MISSION STATEMENT	Delivering Access to Energy & Access to Communications in emerging countries beyond large urban centres.
COMMITMENT TO MINI-GRIDS	100% committed Our concept is based on an integrated hub formed by Mobile Antenna and PV Power plant & storage to provide electricity to villages.
MINI-GRID PROGRAMME	Focused on Isolated mini-grids based on Local Initiatives for Rural Electrification
CONTACT	Alvaro Hidalgo +44 (0) 20 32 87 51 17 ahe@yiitidi.com http://www.yiitidi.com

PROGRAMME

NAME OF THE INSTITUTION	Yiitidi
INSTITUTION TYPE	• Consultancy • Corporate firm • Small or medium enterprise (SME)
NAME OF THE PROGRAMME	Yiitidi deployment
TOTAL PROGRAMME BUDGET (EUR)	Between 1 Mio Euro and 10 Mio Euro
PRECISE TOTAL PROGRAMME BUDGET (EUR)	5.450.000
WEBSITE	www.yiitidi.com
TYPES OF SUPPORT	• Technical assistance • Other: Direct investment
OBJECTIVES	Yiitidi is an impact investment start-up, driven by private capital The objectives is to put in place financially sustainable, PV based hubs providing Mobile signal & power supply through mini-grid (off grid)
COUNTRIES	Senegal
REGION/LOCATION	West Africa
SHORT DESCRIPTION	100% mini-grid Our concept is based on an integrated hub formed by Mobile Antenna and PV Power plant & storage to provide electricity to villages.
STATUS	Planned
TYPE OF TECHNICAL ASSISTANCE OFFERED	Direct implementation: • Feasibility study support • Business plan development • Technical evaluation • Technical validation • Financial modelling • Market and risk assessment • Marketing of projects to financiers and buyers • Environmental and Social Impact Assessments
TYPES OF MINI-GRID PROJECTS ELIGIBLE FOR SUPPORT	Greenfield • 25 % required investment by private project developer • Required investment by private third party: open
TYPE OF TECHNOLOGY	• Solar • Battery/Storage

4. List of abbreviations

AECID	Agencia Española de Cooperación Internacional para el Desarrollo
AEEP	Africa-EU Energy Partnership
AfDB	African Development Bank
AG	Aktiengesellschaft
Ah	Ampere Hour
ANSOLE	African Network for Solar Energy
ARE	Alliance for Rural Electrification
ATM	Automated Teller Machine
AUC	African Union Commission
BNEF	Bloomberg New Energy Finance
CI-ENERGIES	Société des Energies de Côte d'Ivoire
CLUB-ER	African Association for Rural Electrification
CSO	Civil Society Organisations
DC	Direct Current
DFID	UK Department for International Development
ECREEE	ECOWAS Centre for Renewable Energy and Energy Efficiency
EDA	Energy Daily Allowance
EDP	Energias de Portugal, S.A.
EIB	European Investment Bank
EnDev	Energising Development
ESCO	Energy Service Company
EUEI PDF	EU Energy Initiative Partnership Dialogue Facility
EUR / €	Euros
FFEM	Fonds Francais pour l'Environnement Mondial
FRES	Foundation Rural Energy Services
GDP	Gross Domestic Product
GFT	SE4All Global Facilitation Team
GIS	Geographic Information System
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
Global LEAP	Global Lighting and Energy Access Partnership
GmbH	Gesellschaft mit beschränkter Haftung
GSM	Global System for Mobile Communications
HIO	High Impact Opportunity
IDB	Inter-American Development Bank

IRENA	International Renewable Energy Agency
km	Kilometre
kVA	Kilovolt-Ampere
kW	Kilowatt
kWc	Kilowatt crête (Kilowatt Peak)
kWh	Kilowatt Hour
kWp	Kilo Watt Peak
LAC	Latin America and the Caribbean
Lda	Limitada (Limited Liability Company)
LED	Light-Emitting Diode
Ltd	Limited
LV	Low Voltage
m	Metre
MERA	Malawi Energy Regulatory Authority
MPPT	Maximum Power Point Tracking
MSG	Microgrids with Solar Generation
MV	Medium Voltage
NGO	Non-Governmental Organisation
OFID	OPEC Fund for International Development
PIDA	Programme for Infrastructure Development in Africa
PV	Photovoltaic
REA	Rural Electrification Authority
RECP	Renewable Energy Cooperation Programme
RECP	Renewable Energy Cooperation Programme
RES	Renewable Energy Sources
RLI	Reiner Lemoine Institut gGmbH
SACDEP-Kenya	Sustainable Agriculture Community Development Programme
SE4All	Sustainable Energy For All
SERG	Sustainable Energy Research Group
SHS	Solar Home System
SSA	Sub Saharan Africa
TV	Television
UN	United Nations
UNEP	United Nations Environment Programme
UNF	UN Foundation
USD	U.S. dollar
V	Volt
VDC	Voltage Direct Current
W	Watt
Wp	Watt Peak

Alliance for
Rural
Electrification
Shining a Light for Progress