PWCET Series – 4th Event – OEC21

Capacity Building to support sustainable implementation of Decentralised Renewable Energy (DRE) Solutions

Introduction

Under the new joint initiative '*Paving the way for Clean Energy Transition with Decentralised Renewable Energy (PWCET) Series*', the Alliance for Rural Electrification (ARE) and the Green People's Energy (GBE) organised the forth event titled 'Capacity Building to support sustainable implementation of Decentralised Renewable Energy Solutions'' on 2nd December 2021, which took place at the OFF-GRID Expo + Conference 2021 event in Augsburg, Germany.

The session brought together experts from the industry to outline the need for and importance of capacity building for the DRE sector and the achievement of all the Sustainable Development Goals (SDGs), as well as to elaborate on experiences of DRE companies and stakeholders with capacity building in emerging markets.

Session Summary

The session was opened and moderated by **Mr. David Lecoque, CEO of ARE**, who gave a brief outline of the Agenda, introduced the PWCET series to the audience, followed by a quick introduction to ARE. In introducing the Agenda of the session, Mr Lecoque further the opportunity to announce the launch of the publication, "Understanding the Clean Energy Transition with Community-Driven Decentralised Renewable Energy projects in Germany and Sub-Saharan Africa", under the GBE-ARE cooperation.

Mrs. Bärbel Höhn, Special Representative for Energy in Africa, The Federal Ministry for Economic Cooperation & Development (BMZ) gave a keynote speech where she introduced the GBE initiative and its objectives.

Giving insights on DRE solutions, Ms Höhn outlined their importance: cheaper compared to their alternatives, eradication of poverty, energy dependancy, job creation, better opportunities for vulnerable groups, especially in developing regions. However, to contribute to the success of DRE solutions and reap the benefits associated, it is important that projects embed capacity building by engaging with the local community, enhancing local entrepreneurship, knowledge and skill. Furthermore, Ms Höhn highlighted four aspects in how capacity building can support DRE solutions:

- Through the need for high technical standards to create a robust off-grid solution;
- Via provision of basic and practical training (technicians) to enhance local empowerment after project implementation;
- Via access to financial instruments to help build more local entrepreneurs; and
- Via a strong need for political will at the country level to layout frameworks to ramp up the implementation of renewable energy.

Following the keynote speech, four presentations were conducted by experts from different companies.

Mr Olivier Jacquet, the first speaker from Schneider Electric gave insights on how their organisation addresses global energy access challenges and **deliver impact through its dedicated 'Access to energy' program**. With nearly 870 Million people still lacking access to electricity, DRE solutions are key to improving people's access to sustainable energy, including other underpinned benefits such as health, education, economic development, security and access to water. Our challenge is creating ways in which we can make DRE technologies and solutions available for the target market, where local economy is meagre, and reflecting on capacity building - how to ensure that those solutions are longterm and that they create value for the people operating them, Mr Jacquet stated. By embedding three main pillars in their Access to Energy Program, Schneider Electirc seeks to address the above-mentioned challenges:

- Vocational training for both businesses and technicians to address local skill deficiency;
- Provision of investments funds to boost local innovative energy entrepreneurship such as Start-ups; and
- Offers and business models for the design and deployment of adequate distribution offers.

Second in line was **Ms Diana Mbongo, MD, Millennium Engineers Enterprises** who gave perspectives on the **importance of capacity building for local companies in DRE solutions** by highlighting the need for capacity building in four levels:

- Institutional capacity to strengthen capacities of institutions or organisations in order to provide effective training on renewable energy;
- Restructuring value systems to align SME business models with local energy policies, partners and DRE advocacy initiatives;
- Human resource development for the implementation of successful DRE projects at grassroot level through provision of renewable energy training programmes; and
- Company restructuring to enhance more awareness to renewable energy projects.

She further stressed on the need to define capacity building in its various aspects and that specific capacity building initiatives need to be undertaken at each level as stated below:

- Individual level to improve knowledge, ownership and skills;
- Organisational level for single organisation to improve the overall organisational performance and functioning capabilities through an integration of renewable energy skill training in processes and programmes; and
- System level for multi-organisation to improve policy frameworks in which individuals and organisations operate and interact.

Ms Mbongo then concluded that capacity building help to minimise an over-reliance on outside experts, fosters a sense of ownership and empowerment and strengthens confidence, skills, knowledge, and resources.

As the third speaker of the session, **Mr Felix Boldt, CEO, SolarWorX** tackled the theme by providing insights on **building microgrids – building capacity**. Briefly introducing some of their projects, Mr Boldt also stated how integrating capacity building within each project phase led to success:

- Team building via project-oriented training programmes;
- Community sensitisation by engaging people's participation to create ownership, empowerment and confidence in the DRE projects;
- Abstract and planning for ease of project visualisation;
- In the installation of the DRE solution by the local community, thus creating local jobs;
- End-customer training on how to buy and sell electricity on token basis; and
- Front-end training on data analysis for a better understanding of DRE monitoring systems.

Günter Mögele, Deputy Mayor of Wildpoldsried explained how capacity building played a role in the development of **the energy village of Wildpoldsried**. To integrate capacity building within their projects, Mr Mögele stated that they developed their own education centre for the Wildpoldsried community and additionally also offer training and educational programmes in African countries. Six aspects of how capacity building worked in Germany, particularly in the village, were outlined:

- Learning by doing through pioneers and engaged farmers;
- Provision of coaching and training forces;
- Citizen participation, a very important aspect, led to mobilisation of huge investments by the community and acceptance of DRE technologies such as wind turbines;
- Support through specialists and suitable companies;
- Collection of experiences; and
- Development of skills and knowledge.

Last in line was **Ms Laura Corcoran, Aptech Africa,** presenting on **building a strong EPC team for sustainable African energy solutions**. Before delving into the topic, Ms Corcoran emphasised that capacity building is not just needed for the technical staff but in all departments, to create finance ready African companies. For DRE projects implemented in Africa to be successful, it is important to work with African companies. However, these companies face difficulties such as accessing energy project finance as a result of capacity shortages. Capacity building can therefore address a lot of challenges faced when developing DRE projects in capacity short regions:

- Issues with local staff competencies such as lack of knowledge of installing best practices, lack of product knowledge, lack of knowledge for more complex systems, lack of experience and knowledge of newer technology in dynamic energy markets, etc.;
- Lack of regulation at national and local level such as installation guidelines, regulatory framework and regulation of quality of products on the market; and
- Safety & environmental issues – many local staff may lack experience in safety & environment risk assessment, environment mitigation measures, waste disposal, etc.

Capacity building brings about sustainability, a critical aspect for the longterm success of DRE. This can be achieved by increasing competence by training of local people to do regular maintenance of the DRE solution and to help them understand the technology and when to take necessary steps, and ensuring locally available spare parts.
To conclude, Ms Corcoram emphasised the need for tailored capacity building programmes to cater for local culture and gender aspects, gather lessons learnt from previous projects, particularly from the failed ones, local community involvement to account for their inputs throughout project development, and finally develop capacity building initiatives for African companies that can help unlock access to project funding.

Under the moderated panel discussion, Mr. Lecoque opened the floor the audience to pose questions to the panellists.

The first question was directed to Mr Mögele: ***What measures were undertaken in mobilising DRE investment from the community?***

Thanks to our 20 year operation within the village, we were able to gain trust and confidence in renewable energy solutions from the community along the way. It is important that the community sees the fruits of these DRE solutions so that they believe in the system and hence develop a strong will to invest in them.

Question to Mr. Boldt: ***Given that the average cost of electricity connection is approximately USD 1000 and affordability is also huge challenge in African markets, how can this challenge be addressed?***

The advantage of SHS is that they are mounted directly within the village and in some cases, they are installed by the village. This means less infrastructure and human resources are required for the installation and operation of the system, allowing for lower energy prices as connection costs drop significantly.

Lastly, the moderator directed the final question to Ms Höhn. ***What measures were undertaken to motivate the German community to invest in DRE solutions?***

By realising the concept of “energy for the people”, the German government provided renewable energy producers access to the grid, enabling energy producers to sell their surplus energy into the grid. In addition, producers are guaranteed a 20 years tarrif for every kilowatt injected into the grid. With this guarantee, the producers are able to apply for more loans to further invest into DRE solutions. This was key to kick-start increased interest to participate.

Bringing the session to an end, **Mr Lecoque** thanked the panellists for their contributions and encouraged the audience to mobilise more resources towards the DRE sector.

Annex: Session Programme

PWCET Series – Forth Event	
Date/Time	02 December 2021 – 14:00 - 15:30 CET
Title	Capacity Building to support sustainable implementation of Decentralised Renewable Energy Solutions
Description	As the DRE sector inevitably grows and the world moves towards universal electrification by 2030, it is utmost importance that sustainability is embedded in all projects and that safety, efficiency and reliability become the cornerstone of rural electrification efforts. What is at stake is no less than the achievement of the SDGs, most of which are largely dependent on sustainable electricity to be delivered. The solution to the sustainability challenge lies with the skills of the local workforce, which must be strengthened to deal with the monumental increase in decentralised electrification needs in the years to come. Hence, the purpose of this session is to gather experts from the industry to outline the need for and importance of capacity building for the DRE sector and the achievement of all the Sustainable Development Goals, as well as to elaborate on experiences of DRE companies and stakeholders with capacity building in emerging markets.
	Programme
90 Minutes	**14:00 – 14:10 Opening & Welcome remarks** Mr. David Lecoque, CEO, ARE
	14:10 – 14:20 Keynote speech Mrs. Bärbel Höhn, BMZ Special Representative for Energy in Africa
	Speaker Interventions **Moderator** Mr. David Lecoque, CEO, ARE **14:20 – 14:28 Deliver impact through dedicated Access to energy program** Mr Olivier Jacquet, VP Business Development, Schneider Electric **14:28 – 14:36 Capacity building for local companies** Ms Diana Mbongo, Managing Director, Millennium Engineers Enterprises **14:36 – 14:44 Buidling microgrids – Building capacity** Mr Felix Boldt, CEO, Solarworx **14:44 – 14:52 The energie village of Wildpoldsried** Mr Günter Mögele, Deputy Mayor of Wildpoldsried **14:52 – 15:00 Building a strong EPC team for sustainable African Energy Solutions** Ms Laura Corcoran, Director of Business Development, Aptech Africa
	15:00 – 15:30 Q&A
	Closing remarks Mrs. Dorothea Otremba, Senior Advisor, GIZ

Partners:

About GBE

Dr. Gerd Müller, the Federal Minister for Economic Cooperation and Development, announced a new initiative, named Green People's Energy for Africa (GBE) in June 2017. This initiative aims to enable, expand and secure the supply of sustainable energy in rural Africa. It is part of the Marshall Plan with Africa and relies on the broad participation of small and medium-sized enterprises, municipalities, cooperatives, public associations and citizens.

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About ARE

Established in 2006, the Alliance for Rural Electrification (ARE) is the global business association representing the whole decentralised renewable energy sector for rural electrification in developing and emerging countries.

With more than 185 Members, ARE aims to promote a sustainable decentralised renewable energy industry for the 21st century, activating markets for affordable energy services, and creating local jobs and inclusive green economies. ARE enables improved energy access through advocacy and business development support for its Membership comprising the whole value chain of off-grid technologies.

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