PRODUCTIVE USE OF RENEWABLE ENERGY (PURE) TO ACCELERATE CLEAN ENERGY ACCESS IN RURAL AREAS

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1.3 billion people live without access to electricity and approximately 87 per cent of these live in rural areas characterised by remote areas and sparsely populated regions, where extension of national grids is often technically difficult, costly and inefficient. In contrast, decentralised electrification generation and distribution through smaller and more local systems such as mini-grids and stand-alone systems (off-grid systems) are in most cases the more competitive solution.

While off-grid renewable energy is used for various consumption purposes such as lighting, access to information, comfort and entertainment, it is not sufficient by itself to trigger development in rural areas: the usage of energy should be aligned in sufficient by itself to trigger development in rural areas.

Local businesses in developing areas can reap the benefits of extended operating hours, mechanisation, product preservation, higher productivity, improved working conditions, education and health. PURE also enables the diversification of the economic base by making it possible for the local community to both deepen and move beyond traditional economic activities.

PURE means that local jobs on different levels of qualification are created directly, as the renewable energy equipment needs to be installed, operated and maintained, as well as indirectly, as the access to electricity favours business creation and expansion. A useful knock-on effect is that the increased income enhances the consumer’s capacity to pay for the energy services and invest in high-quality, reliable products. Rural social and economic development depends significantly on the state of health of the population. Modern energy services improve health service delivery, increase access to safe drinking water, enable clean cooking, and can make available various communication tools (e.g., radio, television, and the internet), which can be utilised effectively against diseases.

Because PURE is based on local renewable energy sources, there is little need for transportation and burning fossil fuels (except in a limited way in projects with diesel back-up), and thus less local pollution or CO₂ emissions.

ADDRESSING KEY CHALLENGES TO IMPLEMENT PURE ON A MASSIVE SCALE

Despite the availability of advanced renewable energy technologies, the widespread adoption of PURE has not been achieved yet due to a variety of obstacles.

ACCESS TO FINANCE

A key barrier is poverty, which obstructs low-income populations from investing capital upfront. In addition, it remains difficult to obtain financing for small and medium-scale renewable energy projects, which makes the high upfront investment costs of many installations challenging. To address this issue, ARE commits to activities, such as ARE Energy Access Investment Summit, on 12 April 2016 and partnerships – for example with the OPEC Fund for International Development (OFID) and the Africa-EU Renewable Energy Cooperation Programme (RECP), which focus on financing to enable accelerated implementations of projects on the ground.

POLICY AND REGULATORY FRAMEWORKS

Policy and regulatory frameworks in many countries are still inadequate to support PURE. It is crucial that there is at the very least a level-playing field for renewable energy markets (i.e., no subsidisation of fossil fuels) and preferably an incentivising scheme such as feed-in tariffs, clear and efficient procedures to become an independent power producer. Such de-risking measures will motivate market participants, professionals and newcomers, to engage to a larger extent. ARE, therefore, works closely through consultations with its members to provide industry advise to institutional partners on global and regional level. For example, one objective of the Africa-EU Energy Partnership (AEEP) is to develop and improve markets and their conditions for off-grid renewables to make them more favorable for investors and project developers.

CAPACITY BUILDING AND SHARING EXPERIENCES

The development of skills remains a crucial challenge in local communities. First, locals should be trained to operate and maintain the renewable energy installation and thereby contribute to socio-economic development in rural areas themselves. Second, to start and run a business, it is highly valuable for budding entrepreneurs to benefit from lessons learnt somewhere else; for example, by participating in ARE rural electrification trainings. Building on the need for capacity building, it is highly relevant to also share experiences and lessons learnt towards the development policy and institutional players. To facilitate sharing of experiences, ARE in cooperation with RECP acts as a central hub for networking, knowledge and intelligence on rural electrification. To find the right experts for all aspect of rural electrification please feel also welcome to visit the ARE Off-grid Matchmaking Platform and latest ARE publications at www.ruralelec.org.

ABOUT THE AUTHOR

As the Executive Director, Marcus Wiemann is responsible for the management and direction of ARE as well as for the relationship management with partners and developing organisations / institutions. In this regard he is a member of numerous steering committees and working groups who are active in the field of rural electrification.

Mr Wiemann holds diplomas in Economics, International Relations/Developing Countries and Environmental Economics from the Universities of York and Trier. He has a professional background from the finance and energy sector as well as in consultancy, advocacy and project management.

ABOUT THE ALLIANCE FOR RURAL ELECTRIFICATION (ARE)

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