Alliance for Rural Electrification
Shining a Light for Progress

RENEWABLE ENERGY BASED RURAL ELECTRIFICATION

- INDUSTRY LESSONS LEARNT TO MAKE PUBLIC SUPPORTING SCHEMES A SUCCESS -

The Alliance for Rural Electrification (ARE) believes that the approach chosen by the European Commission (EC) in assisting developing countries in their efforts to reduce energy poverty does not fully reflect the complexity of rural electrification markets and the socio-economic reality in rural areas . There is a potential to make better use of experiences made in the past. While fully supporting the EC objectives of further improving access to clean and sustainable energy services, ARE would strongly recommend taking into account the following points:

The EC activities should focus on the construction of cost-effective renewable energy solutions in rural areas. Also building the sector's capacity through the facilitation of market and feasibility information as well as best practices could be complementary activities that would contribute to mitigate the adverse effects of the high fragmentation in the sector.

The mentioned aspects have been at the core of the ARE mandate since the establishment of the association in 2006. Its members have a proven track record in the design as well as in the local installation and operation, generally through the establishment of a network of local technicians, of certified systems. ARE believes that this is the best way forward to ensure the sustainable systems. As a global business match-making platform, ARE is able to promote best practices that stimulate the sustainable development and induce local business cycles.

Together with international donors ARE and its members have developed technical, financial and political recommendations on how to make rural electrification programmes successful. The work of ARE has led to better project and market design as well as to the use of the latest available renewable energy technologies. Public support has significantly contributed to the progress towards a more sustainable rural electrification sector.

Based on the industry experience ARE believes that it is essential to recognise that in most cases the off-grid markets are still very young. Renewable energy solutions have to compete within unfair market conditions and therefore need appropriate public support to incentivise private investment.

1.) Project time frame

The very lengthy process from project identification to final implementation: this is nothing very new, and takes anywhere from 5 to 10 years from project identification to commissioning (steps being project identification, feasibility study, detailed engineering, procurement, supply, installation, commissioning and hand over to "owner" and operator). Sometimes individual steps can be clubbed together. But for each step, the procurement process (short listing followed by full tender) takes around 6 months, to which have to add the time to carry out the work.

The local socio-economic context and risk conditions in rural areas where the industry develops its projects are rapidly evolving. 5 to 8 years after the site has been identified, conditions on the ground are often very different from what the project initially described. Our industry is extremely dynamic and a lot of effort is spent in innovation. This means very rapidly changing environment, in terms of renewable energy generation technology, storage and related electronics' costs and the system's technical features.

Hence we need to find a solution to considerably reduce the time from identification to implementation and also to allow more flexibility at the implementation stage to adapt to the "new" context.

2.) Sustainability

The cost-effectiveness of renewable energy solutions for rural electrification is based on long the lifetime of its components and low operating costs. But in most projects very little attention is paid explicitly to this issue, and hardly any resources or criteria are put into the following aspects:

a) In the tendering for procurement, generally, if the supplier complies with the specifications, the cheapest will then be selected. However, the specifications can never take all aspects into account, and further, as explained above, technology evolves rapidly. In reality, what is happening, average or lower quality equipment (compared to what is available) gets installed, and this does not necessarily does best in withstanding wear and tear. Given rural and remote conditions, sturdiness and quality is needed. This is properly taken into account and better results are achieved if the tendering strategy is based on a technical score (that considers the experience of the provider, the track record of the equipment that he uses, the qualifications of his staff, etc) as well as the price so that the most cost-effective system is selected as opposed to the cheapest one.

b) With regard to long-term sustainability in renewables, we expect a lifetime of 5 up to 15 to 20 years. This requires that spare parts and that capacity to maintain and operate are available. As there is a lot of support to 'pre-project implementation activities' needed, post commissioning stages also deserve an adequate level of attention and resources. A major lesson learnt from past projects, especially in the field of renewable energy is that they stop functioning earlier than they should often because of non-technical issues.

c) Most of the existing infrastructure has been installed in the framework of demonstration projects that have high potential to make use of lessons learned for realising both, replicability and scalability. Although there are evaluation reports often available, these tend to focus on administrative aspects and general considerations useful to developers and agencies that are engaging new projects, their value is limited. More value can be obtained from lessons learned in demonstration projects if technical details, objective data and best practices can be obtained directly from the companies and experts that were directly involved in the field.

3.) Remarks on the special instruments of the European Commission

Based on its international mandate ARE recognizes that the highest needs for energy poverty reduction lies in Africa as well as South-East Asia and the Pacific. At the same time it will be important to reach out to other specific regions in need like Latin-America and the Caribbean and other parts of Asia to enable rapid access to energy and services with the assistance of available renewable energy technologies and training capacities. The positive socio-economic impact of such operations should always be considered when establishing public support schemes.

Also ARE members have observed in the past that a number of energy for development call for proposals (ACP-EU Energy Facility, Switch Asia, etc) have been very difficult to access for the private sector for a variety of administrative, eligibility and financial reasons. Also the resources allocated to technology research and innovation of equipment to be deployed in third countries have been scarce.

4.) Proposed orientations

Renewable energies provide the least cost option for rural electrification over its life cycle. It remains capital intensive, with long payback periods, which is a well known fact. The trend is to ask for private sector fund mobilisation. However still risks related to regulatory, technology, policy issues remain high. The private sector needs additional public support –

through co-financing grants, but also risk mitigation mechanisms – to really enter the market.

The EC grant funds that combine innovative approaches to Public-Private Partnerships could be thought through

- Asia and Latin America are more advanced in terms of renewables than Africa.
- Small renewable IPPs are now mainstreamed in some countries of Asia and Latin America while they are not in Africa: transfer of lessons learnt would be useful.
- Pure off-grid mini-grids (generation + distribution away from the interconnected grid) with private sector participation are scarce if existing at all including in Asia and Latin America.

If a renewable energy mini grid initiative is considered by the EU, Asia and South America shall be participants.

Conclusions

The Alliance for Rural Electrification is committed to serve the EC agenda on energy for development as well as the post-2015 agenda (inc. SE4ALL) to disseminate cost-effective and sustainable renewable energy solutions in developing markets.

Establishing solid and dynamic Public-Private Partnerships is regarded by ARE members as a vital success factor. The latter should be established at the earliest possible point of the project cycle. They should have project replicability and scalability for energy poverty eradication as their overall purpose. In this respect it is vital to consider companies of different sizes and operating at different steps of the value chain – research and development, manufacturing and retailing, system integration, installation as well as operations, maintenance and management - and on all kinds of renewable energies.

Notwithstanding, ARE strongly recommends to provide for further public support to nascent renewable energy markets in developing countries. With this paper, it aims at providing the EC with guidance from practitioner sector. ARE members look forward to further strengthening their collaboration work with international, regional and national institutions to ensure the best use of available renewable energy resources to eradicate energy poverty.

As a supporting organisation of initiatives such as the MDGs and SE4ALL, ARE is the only business association in the world focusing on the promotion of off-grid renewable energy solutions for rural electrification in developing countries. Building on the intelligence from its nearly 80 members who operate on all continents and the complete value chain for renewable energies, ARE engages with decision-makers and opinion-holders to further stimulate the development of an enabling investment environment. To trigger business development, we operate as a global platform sharing best practices and develop technical, policy and financial recommendations.

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For further information please contact:

Marcus Wiemann
Secretary General
Alliance for Rural Electrification
E-mail: m.wiemann@ruralelec.org
website: www.ruralelec.org