

Energy Poverty Action (EPA) Workshop

DATE: 3 June 2008
VENUE: Cape Town, South Africa

An EPA workshop was convened just prior to the start of the World Economic Forum on Africa to discuss issues related to reducing energy poverty in the developing world.

1. Energy Poverty Action: The Big Picture

For the benefit of those who were not abreast of the workings of the EPA, a brief outline of the initiative was given, highlighting its salient features:

- Ø The EPA's overall objective
- Ø The EPA model
- Ø The EPA's regional focus
- Ø The EPA's decision history
- Ø An overview of the Energy Poverty Alliance Management Unit (EPAMU)

To set the scene, the Development Bank of Southern Africa (DBSA), host of the EPAMU, provided opening remarks. Energy is a key area of interest for the DBSA, and infrastructure creation is a key sector. As a development organization, one of the DBSA's key roles is fostering public-private partnerships (PPPs) and improving the linkages to ensure PPPs work better. The DBSA also itself plays a significant role in South Africa in supporting local municipalities that lack full capacity to deliver much needed utilities to households. Importantly, the DBSA is a "neutral" partner of the Forum's EPA, viewing it as having potential to make a positive contribution to reducing energy poverty in the developing world.

As governments lack the necessary capacity to deliver much needed services to rural communities, there is a need for such initiatives as the EPA to fill the gaps.

Key remarks made during the discussion on the EPA's "Big Picture" included:

- Determining how best the activities of the EPAMU can be replicated to deliver on wider objectives
- Finding ways to fill the project pipeline and developing the skills base

- Investigating whether or not the EPAMU should obtain its own legal status and, if so, investigating how it would be funded

2. Project Updates and Sharing Experiences: Critical Next Steps

Ø Lesotho – Mphaki

The project to supply a Lesotho community with off-grid power was initially premised on a mini-hydro plant and reticulation scheme that would be managed in the long run by the community itself.

However, as one participant close to the project explained, as the project's evaluation progressed it became clear from the environmental impact study that raising the height of a local existing dam wall would not be feasible. Furthermore, a financial analysis indicated that a combination of solar power bolstered by power from the grid would cost a quarter of that envisaged for the hydro scheme.

Hence, the project now comprises an extension of the grid combined with solar power. Local ownership of the project is viewed as crucial to its success so a local electricity users' association, the Mphaki Electricity Distribution Association (MEDA), has been formed.

A certain level of bureaucracy has resulted in the delay of the project's implementation. The Lesotho government has applied for funding from the African Development Bank (ADB). While an agreement on the funding was reached in principle in April 2008, due processes must be adhered to and the ADB board will make a final decision only in October 2008. Until then, no calls for public tenders can be made. There are a number of other issues that also require further consideration, including the setting and regulation of tariffs.

In light of these challenges, participants were asked how industry participants might work with prospective donors or funders to expedite future projects.

Ø DRC – Kimbanseke

The EPA's participation in this project to connect an envisaged 70,000 households to the local grid has essentially come to an end after a long and often frustrating process. Together with the other EPA partners, Eskom had committed to developing the project in collaboration with the government of the Democratic Republic of Congo (DRC). Participants were informed, however, that the undertaking reached a stage where political challenges led to an environment that was not conducive to Eskom's continued involvement in the project. SNEL, the DRC's national electricity utility, has on its own been engaging donors for funding of the Kimbanseke project. This is a positive development, as SNEL is able to use Eskom's initial feasibility studies to

advance the project. Thus the need for the project to fall within the ambit of the EPA no longer exists and no further reporting on it will be done.

As part of its commitment to the South African government and in line with the Bi-National Commission Agreement between the DRC and South Africa, Eskom will ensure that it fulfils its mandate and agreed involvement in the Kimbanseke project.

It is necessary for the EPA to collate the lessons learned from its engagement in the DRC project, outlining how the project came about, what the challenges were, why it has been withdrawn from the process, etc., so it may serve as a knowledge base for future projects.

Key challenges experienced with regard to this project include:

- Obtaining timely political and institutional buy-in
- Dealing with political instability in the country
- Managing expectations at the beginning of the project
- Agreeing on the model's key elements, such as metering systems, billing systems, etc.
- Obtaining timely funding for the projects to ensure they do not become outdated

Ø **Sasol – Integrated Energy Centres (IECs)**

IECs fall within the EPA's wider "energyfication" concept. Sasol sees Integrated Energy Centres as forming a part of its Corporate Social Investment (CSI) initiative as well as an attractive way for other corporates to combine their CSI efforts with a business focus. These centres provide remote communities within South Africa with access to affordable energy services; candles, paraffin, liquefied petroleum gas (Liquefied Petroleum Gas), etc., is sold from these centres. In addition, the community is educated on the use of these energy sources.

IECs began in 2001 and are part of the Department of Minerals and Energy's wider strategy. These centres also provide corporates with branding opportunities for their offerings.

There are obvious synergies with the EPA. The question now is how these centres can be replicated and how additional partners can be found to implement further centres.

Ø Remote Electrification – BC Hydro Experience in Canada

In Canada, remote rural communities can often not afford grid power and companies such as BC Hydro are constrained by regulated tariffs that in some cases do not cover the costs of delivering grid power to these communities.

While opportunities to use renewables such as mini-hydro, wind or solar exist, certain challenges remain as Canadian law gives First Nation communities significant autonomy in the power sources that supply them. The communities are small (comprising 10 or more households) and scattered over vast and thinly-populated areas. Part of the solution is the continuation of demand-side management, coupled with the use of alternative energy to supplement that provided by grid power.

Ø ABBs Experience in Remote Electrification

For ABB, the link between poverty and access to energy is clear. ABB is involved in small remote electrification projects in Uganda and India that involve both diesel generation and solar power. Neither of the projects is very large, but ABB has noted that access even to limited amounts of electricity makes a tremendous difference to the business activity and health of communities that previously had no power. Although ABB funded the projects itself, thereby avoiding bureaucratic delays, the aim is to make them self-sustaining in the long run.

Both ABB and Sasol believe that once electricity is made available, people will find a means of paying. Candles and batteries are relatively expensive, so the cost of providing grid or solar power becomes comparable for local users.

While people can generally be counted on to pay for the power they use, they cannot always afford the upfront connection fees covering the capital infrastructure, so it is usually best for these fees to be covered by donor or grant funding.

3. New Alliances: Exploring Possibilities and Defining Priorities

To explore possibilities for new alliances for additional EPA projects, participants were split into groups to examine ways to involve their organizations in the EPA initiative and to share ideas on possible projects. To focus the discussion, the following three questions were posed:

Ø *Mutual interests: What drives my organization's interest in EPA projects?*

Ø *Criteria of interest: What would make a case for my organization to commit to a project?*

Ø *Focus countries or specific projects: Which specific countries or projects would be of particular interest to my organization?*

The responses were as varied as they were instructive. The outcomes were collated, with a view to obtaining a collection of issues that could serve as focus areas going forward.

Ø Mutual Interests

The following points were noted:

- EPA provides a coordinated way of channelling CSI projects for organizations.
- EPA provides a sustainable way of developing projects, as opposed to simply relying on donor funding or grants.
- Some organizations' mandate drives their interest in EPA.
- EPA can provide a forum for negotiating clean development mechanism (CDM) credits and for making good on climate change commitments.
- Organizations engage in EPA for branding purposes and/or to enhance their reputation.
- EPA projects are replicable and offer scale-up potential.
- EPA offers organizations the opportunity to use existing competencies that can be shared among all interested parties, thereby providing lessons and facilitating technology and expertise transfers.
- The EPA model allows local action to be taken and facilitates skills development.
- "Energyfication" provides business opportunities.
- EPA offers a means to fund the capital costs of projects rather than leaving this responsibility to the corporation itself.

Ø Criteria of Interest

The following points were noted:

- Poor areas must be targeted and a project must offer a clear developmental impact.
- The project must be aligned with the organization's main business or core interests and its geographic locations.

- Projects must have the right players in the alliance and their interests and priorities must be properly aligned.
- Projects must be sustainable and should offer CDM potential, empower local communities, provide for renewable energy options, etc.
- Projects need a national or corporate champion that demonstrates strong commitment and has the necessary access to technical support.
- Projects should offer the possibility of value-chain partnerships throughout the endeavour.
- Projects should be located in a stable environment with low country risk and the area must be safe for company staff.
- It must be possible to charge tariffs that cover operating and maintenance costs.
- If necessary, host governments must be prepared to remove restrictions on doing business and should not prevent investigating new solutions.
- Proper regulations and standards should be in place in the specified country.
- There must be a clear exit strategy once the project has been completed; the project must be sustainable and able to take on a life of its own.
- Projects must be environmentally friendly, improve access to energy, contribute to the achievement of the Millennium Development Goals, offer the potential for meaningful public-private partnerships, etc.
- Money must be channelled directly to the project and not diluted by passing through other channels, thereby minimizing the project's overhead costs.

Ø Focus Countries or Specific Projects

The six countries mentioned most frequently as having EPA project potential are those where no more than 10% of the population has access to electricity: Madagascar, Uganda, Malawi, Lesotho, Cameroon and Mozambique.

South Africa, and in particular the Eastern Cape, was also identified as a country of potential interest.

Other possible countries include the DRC, Niger, Tanzania, Comoros and Swaziland.

The reasons for choosing the above-mentioned countries are the following:

- From the perspective of one company, the project must coincide with its geographical presence.
- The project should not simply be about electricity but about a more all-embracing “energyfication” concept – providing the potential for cooking, heating, lighting, etc.
- The country should align with other partners in the value-chain.
- The focus should be on regional blocks that facilitate the scaling-up of projects.
- There should be no “political banana skins” where a slip-up could reflect back onto the company’s home-country government.
- Projects should be in countries where there are no human rights issues.

Regarding specific projects, the IEC were seen as a concept that should be further explored, offering the possibility for EPA to expand beyond just electricity.

Ø Overall

The following conclusions were made based on the above:

- EPA is relevant; organizations are able to resonate with its objectives and it provides a platform for a number of them to make a meaningful contribution to reducing energy poverty.
- Criteria not previously considered for engaging organizations include the ability to provide a safe environment for staff, offering the potential for value-chain partnerships throughout the duration of the project, the potential for CDM credits, the safety of a clear exit strategy, etc.
- Main countries of interest include Madagascar, Mozambique, Lesotho and South Africa.

The presentations led to further questions: Why, for example, should anyone engage in EPA? Can it be distinctive by delivering on its promises? Is it possible to assert that its projects are replicable and amenable to being scaled up? Does it deliver unique advantages to companies and countries?

Defining models for further participation, those present agreed, is essential for EPA to progress and for it to benefit its members.

4. From Pilot Project to Full-scale Project: Critical Next Steps and Necessary Conditions

Participants were asked to identify the critical next steps and necessary conditions enabling EPA to move from pilot projects to full-scale projects.

Some of the comments included:

- The EPA's projects are initiated with the best of intentions, but the initiatives have not so far provided growth in communities' access to electricity. Pilot projects, one participant stated, are essential leaders, but are not the endgame.
- Scaling up is needed to change the development trajectory. The endgame is providing sustainable electricity to half a million people, not just to a hundred or so.
- Not all participants agreed. In some countries the challenge is to bring affordable electricity to small, remote communities. The challenges might be extreme but the problems could be overcome. EPA group work must remain the essential constituent of future projects.

In conclusion, participants agreed that it is indeed possible to move from pilot to full-scale project. By bringing the intellectual capacity of the EPA's members together, it should be possible to convince the financial community that EPA projects represent a "billion-a-year" opportunity.

5. Financing Mechanisms: Outlining Best Practices and Exploring New Possibilities

To set the scene for the discussion on financing mechanisms, a participant shared high-level details on the preliminary work being undertaken to explore new possibilities for the financing of EPA-related projects. The work's main result was the idea to establish a "Rural Electrification Fund", funded by multilaterals and charitable organizations, among others. It could be a centralized fund managed under EPA, with a credit committee responsible for its governance. The viability of this idea and the possible constraints that it could face should the fund be created were discussed.

As one discussion leader pointed out, financing is itself becoming a barrier as projects often become outdated by the time a funding application has been approved. He added other challenges: the EPA's difficulty in scaling up to include multiple projects that might interest financing agencies and the difficulty of putting in place a tariff mechanism that makes a project viable. He suggested that a charitable organization might be an appropriate funder, more so than a conventional fund seeking a return on investment.

The following points were also made:

- Africa has a great many financing vehicles, many of which do very little to provide access to energy.
- While 2.9% of African countries' GDPs is spent on power, 2.2% is directed towards subsidies while only 0.7% is spent on development.
- Governance is largely poor. Tariff payments to electrical utilities generally cover only half of the utilities' costs, leaving most utilities technically bankrupt. If Africa is to achieve 7% annual economic growth, it needs to spend 3.5% of its countries' aggregate GDPs on developing power networks. But, while governments tend to focus on national utilities or grids, delivering power to the 80% of those who do not have access to electricity calls for local initiatives to be undertaken. The EPA's approach should not be that of the conventional utility or development bank.

Another discussion leader concurred. Rural electrification has tended to be ignored as it has long been viewed as government's responsibility. He suggested, however, that EPA's focus should be on bringing together appropriate partners to develop projects that are sustainable in the long term. It needs to disengage from pilot projects that are often viewed as corporate social responsibilities and needs to be a source of technical assistance for large-scale projects.

Another discussion leader remarked on the usefulness of the "realistic" scenarios presented by his co-panellists. The best starting point for business participation in EPA initiatives, he suggested, is an analysis of what local communities need and want – possibly small quantities of high-quality electricity to power cheap, efficient lights and equipment for cooking. Producing such products locally calls, in its turn, for an opening of regional markets, and a reduction in the protectionist tariffs imposed by most African governments. EPA needs to work with business to build value-chains to support the projects and find ways for grid and off-grid solutions to complement each other.

One discussion leader questioned whether funding supported by carbon credits or CDMs would be appropriate. It would be a challenge to apply the CDM principle to current EPA projects, but an opportunity to partake in the voluntary market beyond 2012 exists and should be looked into.

Another discussion leader remarked that it is necessary for a blend of financing to be used and, in particular, the means to finance projects' preparatory phases to make them bankable should be investigated. Such facilities exist and should be used. Research needs to be undertaken to better understand the nature and scope of National Rural Electrification Funds held by various governments. It is necessary to build capacity in this area for EPA.

The question was again posed as to what the nature of an appropriate financing architecture would be.

One participant noted that there is no single model. If infrastructure is to be provided at no cost to poor rural communities, some external funding with country-risk protection is needed. The participant suggested that EPA projects might be too small to attract the interest of funders such as the African Development Bank or World Bank and that greater interest might be envisaged if several projects were to be bundled together.

Bundling would invite a financing facility from which draw-downs could be made. But, again, this would need to be a special facility, as lending organizations generally do not accept the bundling of projects that individually have significantly different risk characteristics.

Another participant said that organizations such as EonCo classified as public purpose investment companies exist and could possibly partner with EPA on certain projects. These companies specialize in providing finance to entrepreneurs engaged in small power projects, and the investment funds supplied are not soft loans. Rather, they lend only after strict due diligence studies and are highly focused on monitoring the performance of each project. Funding can stretch along the value-chain to provide finance for entrepreneurs making components needed for local power projects or the small electrical goods that will be demanded.

The discussion revealed a multiplicity of views and questions that need to be resolved in order to assist EPA in increasing its efforts. Addressing this issue will be an important element of the EPA's work over the months leading to the World Economic Forum Annual Meeting 2009 in Davos.

Conclusion

It was agreed that a reference group comprising Mark Tomlinson (World Bank), Jean Madzongwe (DBSA) and Sara Nordström (Vattenfall) be created to further discuss the proposals being developed by Oliver Wyman with regard to the creation of a financing mechanism for EPA projects.

6. The Energy Poverty Alliance Management Unit (EPAMU): Update and Future Roles

If the EPA is to have the impact originally envisaged, it needs to change gear. This direct view, voiced by an EPA participant, received considerable support from other participants. However a discussion of the issue gave rise to several diverse opinions on the best way forward, particularly as the EPA itself is attracting increased corporate attention.

One participant said the EPAMU should take on a least cost structure (i.e. administration and overhead costs should be kept to a minimum) and be as minimalist as possible in the beginning, with the potential to evolve as time

progresses. He suggested that the management unit should continue to be staffed with secondees from private sector EPA partners. The unit's responsibilities should be aimed at fostering relations with other partners, such as the Southern African Development Community (SADC), the New Partnership for Africa's Development (NEPAD) and the African Union, for example, and further developing partnerships. He added that it would be inappropriate for the management unit to take on a cumbersome governance role at this stage.

However, as the number of alliances for new projects increase, changes will be needed. And although no finality was reached or intended in this private session, a great number of suggestions were made for further consideration before the Annual Meeting in Davos in 2009.

In no order of priority, suggestions included the following:

- Projects slated to be started should be undertaken with alliance partners who take on the responsibility of championing and leading them.
- The words "management unit" do not convey the meaning of partnerships such that the name should be reconsidered to better reflect EPA offerings.
- The EPAMU needs to establish a critical mass of skills that will increase its credibility.
- The EPAMU should become a unit that becomes a point of contact for governments, companies and other participants in projects. It should be the catalyst for energyfication projects and perform matchmaking between the various stakeholders to get the different projects off the ground.
- As projects are scaled up, the EPAMU will need to move beyond reliance on secondees. It will require a small complement of full-time staff members, but the question remains of how they will be employed and whom by.
- Not needed is a top-heavy structure with high overhead costs. Initially, the administrative duties could be performed by the DBSA, which is currently hosting the EPAMU.
- A section 21 company or a not-for-profit company might be preferable as it would insulate alliance partners from downstream liabilities. A trust and trustees seems inappropriate as the latter can be held personally liable.
- The EPAMU should not appear to be just another funding institution.
- It is necessary for the EPAMU to better communicate what it is doing in order to attract the stakeholders the EPA needs.
- The current phase should be wound down – and the Lesotho project shown to have succeeded – before the EPAMU moves on to its next phase.

7. The Role of Networking Partners: Update and Next Steps

The World Business Council for Sustainable Development (WBCSD) and the World Energy Council (WEC) briefly shared their experiences as EPA Network Partners.

It was generally agreed that forming alliances with the EPA was advantageous for all parties involved. To gain momentum and increase the EPA's exposure, a participant noted that it is crucial for the EPA's success stories to be told to attract new Forum members to the EPA and to draw those companies back that displayed a keen interest when the initiative was launched in 2005, but that did not formally join the initiative.

A participant stated that it is important for the EPA to harness private sector innovation in order for it to deliver on its objectives. The EPA should facilitate the pooling of skills to make affordable and environmentally-friendly energy available to communities who lack access.

What is not needed is a duplication of the knowledge and capacity that the EPA and its partner companies can already call upon.

In addition, a participant noted that the corporate Members of the World Economic Forum are indeed large organizations and that if the EPA is to attract their interest, it needs to scale up its activities and position itself in a new way; it is necessary to look into doing projects on a much larger scale than what is currently being done.

The immediately obvious advantages to EPA partners were listed by participants:

- The EPA's umbrella gives projects an additional degree of credibility and confidence.
- The EPA offers corporates the means to facilitate their participation in "energyfication" projects.
- The EPA is seen by governments and communities as a neutral partner that can direct and influence the outcome of projects.

Participants also remarked that the EPA must prove its own capabilities by:

- Bringing the Lesotho project to a successful conclusion.
- Sharing its project experiences with its partner companies.
- Demonstrating that its projects are scalable, that the EPA model is indeed replicable and that the necessary structures to sustain this activity exist.

8. Cross-Industry Dinner between the Energy and Financial Institutions Industries

The cross-fertilization of ideas at the private dinner raised as many challenges as it did proposals.

The aims are clear – to find ways of bringing power to the 80% of Africa's 600 million or so people who have limited or no access to it at present. The question is how that might be achieved in ways that are scalable and that represent sound business propositions. Without these two factors in place, participants heard, projects will soon founder and dry up.

However, taking power to only 10% of Africa's people – the most accessible – will call for a fourfold increase in public sector investment. Most government institutions have not paid much attention to this proposition.

It should not be overlooked, one participant said, that 47 of Africa's countries have economies that are smaller than Belgium's. And while it would be beyond Belgium's capabilities to deliver power to remote communities in geographically large countries, how can those with smaller economies achieve this goal?

New financial instruments and partnerships are needed if the aim is to be achieved.

Issues that will affect the non-traditional financing of projects were enumerated:

- Loan application processes need to be streamlined.
- Projects must be, and must be proved to be, scalable.
- Ways of accessing charitable and private capital need to be determined.
- For each project, three questions need to be posed: Is it viable? What are the constraints? What is the time frame?