

**JEPP**

Johannesburg Energy & Poverty Platform

Consolidated replies to propositions on the internet debate on access to energy services for the poor.

Highlights from the discussion:

- There was broad consensus that subsidies should be transitional and that in the long run energy access projects should not depend on government subsidies. However, currently subsidies can play an important role in project initiation. Once a project is running it should be commercially viable without further support in order to insure economic sustainability of the project. In the same way subsidies can be used to implement basic infrastructure, of which the financial burden would be too high for poor communities, and which are needed to overcome other techno-economic barriers to providing access (e.g. electrification across mountain ranges).
- Subsidies do not have to play a dominant role in providing energy services to poor as long as the cost and quality of the service meet the willingness to pay of different end-users. In this regard productive use of energy seems to provide most perspective for project development and spin-off local economic development.
- In addition to pure economic considerations in how to provide energy services, social considerations should also be taken into account. An exclusive focus on productive use is therefore not granted.
- The role of governments should focus on creating a facilitating environment and removing barriers for setting up businesses and projects to provide energy access, but should leave the market to develop these projects by itself. Direct and exclusive government-private sector partnerships could stimulate rent seeking by large firms.

Proposition 1 : Projects that aim to increase the access to affordable modern energy for the poor can not be commercially viable without subsidies from the Government

Eric Kamphuis, ETC Energy: This depends on specific context: when increased access leads to the boosting of SME, then energy services may be commercially viable. This is in most of the cases however not to be expected.

It is also important to know how government subsidises. The best seems subsidising through tariffs lower than energy costs, that can be compensated by richer energy consumers (cross-subsidising).

It is always important to assess energy needs in close relation to what households want to spend. It is often shown that poor households want to spend much money on energy.

Frank van der Vleuten: It is not realistic to focus on a strategy that depends on subsidies to make modern energy products accessible for the poor. Fortunately, it is not needed either. Commercial energy products (like solar systems, stoves, etc) are available from basic to luxury systems, from cheap to expensive. Let the people with less money buy the cheaper systems with less service, let the people with more money buy the luxury systems.

In my sector, solar PV, subsidy has mainly been used to sell to people systems that were too expensive for them, while cheaper systems were also available. This only creates market distortion and is not sustainable (if we create the vision that everybody can have a Mercedes-



Benz, who will settle for a Suzuki Alto?, what will happen when Mercedes is no longer subsidised, or when the Mercedes breaks down?).

Kavita Rai, IT Power: Although, in an ideal world where free market reigns, subsidies are not required. However, having worked with some very poor communities in Nepal, I cannot jump to the conclusion that subsidies are not required. One of the ways out is to assign proper values of subsidy and importantly, consistently over a period of time. In the micro hydro sector, subsidy from the government in the 80s and early 90s were erratic and put poor communities often bore the brunt, as rules were erratic. Today, a proper policy and process is making decision making for entrepreneurs and communities easier to access funds to set up RET schemes that ultimately benefit both poor and non-poor (hydro, solar, biogas, or stoves). The biogas subsidy provision is probably hailed as a successful case, reaching thousands of households, many of whom again may not necessarily be poor, but poor nonetheless (it is probably too subjective to lump all into being poor). If one wants to target poorer households (including women headed households), programmes need to think of innovative mechanisms to do so, particularly in providing financial borrowing mechanisms that are simple, easy to understand and probably interest free. I have personally talked to women headed households who would install a biogas system if such mechanisms were to be provided. There are many issues that revolve around this pertinent question. In a nutshell, yes, the poor do need subsidy to fuel switch, but the extent, form and procedures are vital for it to succeed. Mind you, I am not talking of total subsidy, which can be damaging in the long run.

Nguyen Duc Minh, Research Center for Energy and Environment, Vietnam: This situation is right for Vietnam especially for electricity. Firstly the poverty line in Vietnam is very low, about 12 US\$/person/month. It is almost the food line. Secondly the poverty incidence pattern poor group is hardly able to pay the commercial price because of its income level and high cost of electricity supply (mountainous, remote, isolated, ethnic area). Grid can be constructed with high cost, small size of power plant and fuel transportation also make cost high. RE power is still expensive in comparison to poverty line and to average price 5cent\$/kWh.

Of course subsidies cannot last forever but should help to break down the vicious circle. Not only energy subsidies but the integrated socio-economic measures are needed. There is still no indication of the average time duration of subsidies needed.

In Vietnam the poor people is receiving subsidies from the government and international and foreign institutions. The issue is not only to have subsidies but also how to use the subsidies effectively.

Evert van Voorthuysen, GEZEN Foundation for Massive Solar Power: Generally speaking, yes. But all subsidy should be aimed at creating a situation where subsidies are not necessary anymore, otherwise society will collapse (see the fate of the former Sovjet-Union). Subsidizing (lamp) oil or bottled gas is dangerous, such subsidies should diminish each year. Subsidizing renewable energy sources is better, as these technologies will become cheaper each year, and resources are infinite.

The best system for subsidizing renewable energy sources is the feed-in system. The success of this system can be seen in Germany. The feed-in system can be applied on world scale by means of the Solar Mobilization Fund, see http://www.gezen.nl/index.php?option=com_content&task=view&id=60&Itemid=68

Kees Daey Ouwens: No. Well, you need financial support to start projects. However, if you choose the right projects, after the start the activities can be "commercial" and without subsidy. A good governmental policy is, however, a prerequisite.



Peter van Vliet, iNSnet Foundation: In my point of view as long as projects need subsidies to break even they are not commercially viable by nature. Subsidies mean to bring projects to commercial viability sometime in the future. When that sometime will be, depends on the size of the investment related to the possible turnover and profits. The bigger the project, the longer this time will be. And with the increase in time and size, the choice of commercial partners will decrease. From one side because of the size of investment that is required, but from another because commercial companies tend to look for short term profits (not seldom related to the contract period of the CEO).

I mention this because I think it is important for the perspective with which to participate in this discussion. When accepting this perspective, you cannot escape from weighing large scale, centralized supply with extended infrastructures against decentralized, small-scale solutions like solar or wind. (and may I remind about environmental consequences?). Making that choice first is imperative.

Sarah Adams, Electricité de France, Access Programme: I think it is now generally agreed that financial support is needed to initiate projects of this nature and we should not be surprised at this. In industrialised countries this was already the case - if we look at France for example, rural electrification was, and still is, subsidised to the rate of 70% and this is around the level we would expect to be necessary for projects today in developing countries - why should we expect these projects to be self-financing when our own projects are not?

However, where we are all in agreement is that once set-up the project must be commercially viable and sustainable. In remote areas where no services are currently available, the energy services company can extend its activities to cover other services (telephone, water, gas, computing) and thus improve its profitability and better serve the population, without the need to set up another distribution infrastructure. Selling other services will increase the involvement of the population with the company and bring more people into the sales points. If a "fee for service" model is used, rather than a "retail" model, then a real long-term commitment is made and a sustainable rural infrastructure created. Other programmes can then be associated, such as for health (AIDS prevention for example).

Oscar Lema: It is not true that energy projects aiming at increasing access to affordable modern energy for the poor are not viable without subsidies from the Governments. Seed financing to these projects from other sources, be it from the FI's or other investors with softer terms and condition can guarantee viability much more than those receive government subsidies especially when provided as soft loans or equity. Sense of commitment of the project owner- managers who run these projects is much more than one with Government subsidy orientation. What is important from the Government side is to create enabling environment i.e. favorable policies and regulatory framework to effectively implement these projects and leave the private and private- public partnership sectors play their cards.

Proposition 2 : The establishment of public-private partnership is imperative for the provision of sustainable modern energy services to the poor.

Eric Kamphuis, ETC Energy: The qualification 'imperative' is too strong: also when private parties are not immediately available, energy services for the poor can be a strong political priority. One should also realise that pro-poor energy projects always assume that the poor are not able to address completely their energy situation on their own. It is at the same time essential to make a fair assessment what energy cost burden the poor reasonably can bear.

A PPP may bring the risk that only commercial considerations dominate the discussion about where to invest in energy facilities, due to common inclination of governments to please private parties and thus to remain in the background.

Frank van der Vleuten: I do not yet know how the ppps work out in practice. I think the starting point should be to go for commercial provision of modern energy "products"(products is a marketing term which fits better with the reality than services). This means that the private sector is able to provide modern energy services on its own.

The public sector would then get the role to support the removal of barriers for the private sector to perform. In my view the main barrier is the lack of entrepreneurship, the lack of sector infrastructure. Most entrepreneurs need convincing and support to start recognizing rural households as a market worth pursuing.

Kavita Rai, IT Power: The public and private realms in many developing countries find it hard to collaborate because of obvious differences. However, there is a gradual recognition that PP partnerships are beneficial rather than not. In Nepal, one of the best PP partnerships I can think of that seems to be working is the Rural Electrification Cooperatives. The Nepal Electricity Authority (who has been the sole distributor of grid electricity) passed the Community Electricity Distribution By Laws in 2003. Under this By Laws, individual entrepreneurs, rural communities or co-operatives register a Distribution Centre under various Acts such as the Company Act 1996 and Cooperatives Act 1991. They can buy electricity in bulk from the NEA and retail it amongst themselves. Electricity is bought at an agreed tariff based on quantity of distribution area, geographical location, investments and technical aspects. This provides a way out for the local communities to gain more access to modern energy service, not necessarily in the realms of urban people. I have heard that similar initiatives in India are working very well.

Nguyen Duc Minh, Research Center for Energy and Environment, Vietnam: It is controversial problem. Motivation of private participation is benefit. From answer to question 1, there are two scenarios:

- The size of subsidies cannot make the project profitable. It will hardly involve the private participation.
- The size of subsidies can make the project profitable, then the question is: Is it fair while subsidies from government benefit private?

There may be temporary private participation without direct benefit, like technology development, marketing. Furthermore, the private sector can realise the subsidies from the government and international organizations more effectively for the poor people than the state owned ones.

Kees Daey Ouwens: No. Many projects can be realized by consultants; often this is even the best way. If you use PPP than only with small firms (SME) which can establish new SME in developing countries (bi lateral projects). Often will private firms diminish the access of the poor to modern energy; see what happens in South Africa

Peter van Vliet, iNSnet Foundation: Depending on the choice I mentioned under 1. Small scale solutions can be realized with either public or private (micro) financing. PPP usually comes into play when big risks have to be secured (by governments). I prefer PPP's for large scale projects to be avoided for several reasons:

- The countries most likely to be subject here are also countries who are notorious for their levels of corruption. Large scale projects mean big money, lots of officials involved on numerous levels, lack of transparency thus lack of options for control.

- Investments needed for infrastructure can be turned to investments that realize immediate access to energy on a small scale basis.
- Small scale projects are realized much faster, people can profit sooner.

Sarah Adams, Electricité de France, Access Programme: A public-private partnership is not imperative but from the moment where funding is required to set up the project, where the project needs to be run on a commercial basis and where it needs to fit into the national planning and programmes, a public-private partnership that is successful is certainly the ideal solution.

Oscar Lema: Yes this is right especially in those communities that its private sector is in infancy stage like Tanzania.

Proposition 3 : Projects aimed at productive use of energy are more attractive from a commercial point of view than projects that address the basic energy needs of household and communities.

Eric Kamphuis, ETC Energy: We are confronted with the dilemma: to realise either social welfare for everybody in a community, or to have social welfare for those that generate economic welfare based on their productive use of energy. But also counts: basic welfare for everybody gives better long-term perspectives (through better schooling, healthcare).

Frank van der Vleuten: Not necessarily true. The challenge is to find out for what end-use people are willing to pay. At the end of the day we should listen to the opinion of the end-user which energy service he finds most valuable. Where the end-user puts his money is where projects will be most commercially attractive and sustainable.

The distinction between productive and consumptive use of energy is artificial when we talk about rural households, often self-employed farmers.

Kavita Rai, IT Power: Oh, yes! However, the biggest obstacle is to address this. We tried it over a decade and found it as the toughest challenge and I hear that it is continuing. One of the most important lessons we learnt was that productive use of energy could not be looked at in its entirety. Just by installing an electric bakery or an electric Mill did not necessarily lead us to success. Linkages to financial knowledge, markets (particularly cash), roads, management, social relations, and entrepreneurship are only a few extra baggages that came along with the technology itself that proved productive usage to be a challenge to succeed. Technical support for an efficient RE system to provide continuous power (for example, if used to power a rural clinic, mill etc) was another. I could go on..but, probably these discussions will crop up over the next few days! I look forward to your views and hearing of success stories.

Nguyen Duc Minh, Research Center for Energy and Environment, Vietnam: Normally yes it is because the productive use can directly improve income generation. But there is a need to analyze case by case. In many cases the basic energy needs of household and communities increase demand of energy equipment, like electricity will create market for TV, lamps etc.

Kees Daey Ouwens: Well this holds for the large commercial firms. They only care about money and their policy is directed to the short term. They are hardly interested in the poor. There are, however, many possibilities to really help the poor on a "commercial" basis. More important is the policy of the government.

Peter van Vliet, iNSnet Foundation: Again, what is the perspective here: making money or helping communities, people to develop?



The time trap is obvious: access to energy allows people to save much time in executing daily duties, which can be turned into productive labor and thus generate income.

Sarah Adams, Electricité de France, Access Programme: I think what is important is that the poor will only get out of poverty if they can use energy for productive uses. "Comfort" electricity which provides lighting and audiovisual reduces the effects of poverty but if you want to break the poverty cycle you have to provide energy for productive uses. Obviously, this should also make these projects more commercially attractive, but this is because they create a win-win situation for company and poor alike.

Oscar Lema: I agree with this statement on grounds that productive use of energy projects normally generate other measurable co-benefits beyond the provision of energy services like creation jobs; increased productivity and incomes and other sustainable development priorities.

General comments:

Eugene Visagie, Energy Research Centre, University of Cape Town: The South African National Electrification Programme launched in the early 1990s has been an outstanding success in terms of providing access to rural schools, clinics and previously disadvantaged communities.

However, after electrification the majority of lower-income households still use non-electric fuels (fuelwood, dung, paraffin/kerosene etc) for cooking and water heating.

Thus, an energy development strategy aimed at promoting wider access to safe, reliable and affordable energy to the poor must not be restricted to electrification, but needs to improve access to complementary non-electric fuels, appliances and efficient practices. Electrification investments could achieve greater development benefits if they are integrated in cross-sectoral local development planning and implementation.



Edited by Emiel van Sambeek, ECN, 29.05.2005.