



The EU Development Green paper – a note on energy policy by Andrew Barnett

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Those of us who have worked on energy and poverty reduction for the past 40 years can only welcome the prominence given to energy in the new Green Paper on EU Development Policy In Support Of Inclusive Growth And Sustainable Development Increasing The Impact Of EU Development Policy (Brussels, 10.11.2010, COM(2010) 629 final).

The question is how can we help Commissioner Mr Andris Piebalgs by giving him solutions, not just raising more problems. In a short note such as this, probably the place to start is to sort out the key issues and provide analytic clarity and meaningful differentiation between countries and regions on which the Commission can build effective policies and interventions.

People don't want "energy" *per se* but they want the services that modern energy carriers can provide (light, telecommunications, heating and cooling, static and mobile shaft power for transport and processing). We should stress the strong empirical evidence that no country has developed or reduced its poverty significantly without a massive increase in Modern Energy Services. MES are a necessary but not sufficient condition for poverty reducing growth. So taking the increase in modern energy services more seriously provides at least one part of the answer posed by the Green paper about how to facilitate more, and more inclusive, growth in developing countries, as a means of reducing poverty and providing a chance for all to have a decent living and a perspective for their future. (p 5).

The focus on 'modern energy services' rather than 'energy' is not just a quibble. The term is particularly relevant for policy as it involves not only improving the supply of modern energy forms, but also includes the many conversion devices that transform primary energy into useful energy (and the cost and efficiency by which they do this). Many aid related energy interventions see 'energy' as 'electricity' and have focussed on increasing the supply of grid electricity without considering the considerable investment users have to make to convert all forms of energy into useful services. Increasing 'energy access' has frequently not resulted in increase **use** of energy services.

The focus on Modern Energy Services also draws attention to the empirical fact that the poverty reducing impact of the greater use of modern energy services is determined less by the primary energy carrier and more by the choice of the related energy conversion technology and **who** chooses the final energy end-use technology (women's preferences often differ from those of men). Effective energy interventions must therefore consider how the energy is to be used and by whom, and involve investments "both sides of the meter" so as to include energy conversion appliances.

At the analytic level it is important to recognise that not all forms of energy provide all energy services (electricity is required for effective lighting and for telecommunication; liquid fuels are normally required for transport and other requirements for mobile shaft power). Poor people do not often cook with electricity. So the Green Paper is probably wrong to assert that charcoal is

used for cooking “due to the lack of reliable electricity supplies...resulting in widespread health problems and deforestation” page 17¹.

Furthermore inanimate energy for transport and mobile shaft power (for agricultural processes) appears to be critically important to poverty reduction (cf fuel to transport goods to market, and the role of two wheeled tractors in poverty reduction in china). Such issues related to liquid fuels are generally not within the scope of donor-funded “energy interventions”. The availability of liquid fuels to poor people is a matter of the distribution of scarce resources between rich and poor, and is therefore fundamentally a matter of political economy and policy intervention.

Policy discussions concerning climate change, more sustainable environments, energy and development also need to be further clarified if effective policy and practice is to result. There is clearly a widely held view that the term “sustainable energy” will attract political support, and enable the energy sector to gain access to the recent increase in funds related to climate change. While this may be true it conflates a number of important issues that confuse the policy response. It allows belief and ideology to form the basis of action rather than empirical fact.

It is right (but regrettable) that the Green Paper has to note that “action in the renewable sector can be a significant part of the solution to the energy needs of the developing world, **but will need to be seamlessly integrated in a wider energy policy**, covering for example, energy efficiency, networks and infrastructure, and ensuring effective supplies and development of other, more “traditional” energy sources” (page18, emphasis added).

Empirical evidence shows that meeting the basic needs of *poor people* for modern energy services would have an almost negligible impact on greenhouse gases. Furthermore efficient use of small amounts of fossil fuels is less harmful to the environment than use of large amounts of ‘renewable’ biomass used inefficiently – (see Kirk Smith et al).

Similarly it will be important for effective policy and practice to distinguish between interventions that deal with energy related greenhouse gases and those that deal with energy poverty as they are probably not the same (see World Bank Policy²). It is an empirical matter as to whether a ‘renewable’ energy supply option is ‘better’ than a non-renewable option for a particular group of people at a particular location, and indeed it is a matter of political economy as to whether they decide what is optimal for them or whether the European Union does.

The Green Paper is therefore basing the heart of its strategy on weak foundations when it asserts that “To lift people out of poverty will require ensuring that more people have access to energy; this will lead to a huge increase in energy consumption with an associated impact on Greenhouse Gas emissions and the global environment. Therefore, sustainable development needs to be at the core of both our development and climate change policy to ensure that action to combat Climate Change benefits, rather than increases the risk to, the growth potential of the world's poorest citizens”.

It is an empirical matter what is the GHG impact of efforts to reduce energy poverty and will depend on which countries and what is meant by lifting people out of poverty. In Africa efforts to reduce energy poverty will not result in large climate impacts. The Commission’s energy-related Development Policy should therefore differentiate between countries that contribute significantly to greenhouse gases and those that do not. One size will not fit all.

¹ The empirical evidence confirms that most deforestation takes place as a result of logging and the clearance of forest for agriculture.

² See for instance the World Bank Energy Policy Approach Paper 2009, which elaborates some of these trade-offs. It is pledged to “respond to trade-offs where justified. An example of a trade-off drawing attention is coal-based generation. In some countries, electricity from coal is significantly cheaper for providing base load power (continuous generation for basic demand; see annex 3) than any other source”. paragraph 43.

In relation to electricity, grid based electricity is likely to be found empirically to be the lowest cost option per person for supplying electric power to previously un-served users. Decentralised energy supply options will be cheapest for supplying small amounts (milliamps) of electricity to remote or sparsely populated areas. The essence of an effective intervention strategy is therefore to be clear which objective is to be achieved and then to match the solution to the objective.

At least as important to 'sustainable energy' is whether the modern energy services can be supplied on a *financially* sustainable basis. By concentrating on the increased *use* of modern energy services (rather than increasing "energy access") the focus is put on the demand side of the problem: energy poverty results from money poverty. Energy poverty is largely about the inability to pay for modern energy services (and the ability to pay is not the same as the "willingness to pay").

So at the level of intervention the issue is how to enable poor people to gain greater *use* of all Modern Energy Services. This is the crucial insight that enables "decision makers" (whoever they are!) to see more clearly what the problems involves, namely: the increase the supply of modern energy forms, access to and utilisation of energy conversion technology, issues of energy conversion efficiency, and the ability of people to pay for these things. It has been said that poor people do not lack access to energy (they are sweltering in the heat from too much energy from the sun), but they lack the means to make it useful to them, that is they lack of money to buy appliances and primary energy.

Energy poverty is largely a function of the lack of "effective demand" (money to translate a need into a demand). Energy poverty will only be reduced if modern energy services are used to increase enterprise productivity (particularly the productivity of small, micro and medium enterprises) and therefore increasing the ability to pay for energy services. The centre of any strategy to reduce energy poverty must therefore focus on productive uses of modern energy services. Lighting and telecommunications are strongly desired by poor people, but they are often difficult to provide on a financially sustainable basis (unless supported by some income generating – cash – activity).

Unlike a few years ago, the world now knows a great deal about what works where in terms of particular technologies (PV, biogas, electronics, wind, small hydro, diesel, liquid biofuels, solid biofuels, etc). The more difficult problem remains how to implement business models that are financially sustainable to all actors in the whole supply chain.

New regulatory regimes and the recent development of financially viable small scale energy conversion technology make decentralised provision of modern energy services a viable option – there are many examples (E and Co, S3IDF, GVEP, Shell Foundation, Practical Action and many more). The EU can build on the experience of these pioneers.

If subsidies are to be used, and there is strong argument that they should, then they must be "smart". The world now knows what constitutes smart subsidies, but many donor financed subsidies are far from smart. In essence subsidies should be market making rather than market destroying.

The recent surge in interest among donors to prove the direct impact of their interventions poses a particular problem to investments in infrastructure that has complex and provides only indirect impacts at the system level. The impact of increase supply of electricity (or any other energy carrier) is largely determined by the "complementary inputs" supplied by the rest of the system (for instance, the impact of electricity that is used by a pre-existing irrigation system is likely to be far greater than electricity supplies where the irrigation system has still to be built). The exclusion of energy from the original MDG was a significant factor resulting the under investment in energy systems that is now crippling growth in many parts of the world.

While some energy interventions will be measurably less effective than others, the EU can add significant value to the debate by developing more nuanced views of the causal chains associated with the impacts derived from infrastructure. This is likely to prove more valuable than increasing overly narrow monitoring and evaluation systems proposed by the Green Paper.

The Green Paper draws attention to the need to make coordination of aid a reality. In the energy sector donor harmonisation appears largely non-existent. Harmonisation does occur in the sense of increased funding to multilateral agencies, and to some extent at the country level. However at the heart of the problem the incentives not to harmonise and to gain competitive or political advantage by pursuing bilateral activities (so that they can be nationally “flagged”) clearly outweigh the disincentives. The practical and policy related measures that could be taken in the EU to improve donor harmonisation and Policy Coherence for Development would start with a political economy analysis of these incentives and how to create a different set of incentives that could ‘nudge’ countries towards greater aid effectiveness. One-off donor mapping appears to be of little use and to have a very short shelf-life. Initial progress might most effectively focus on the high level decisions, such as which Member States wish to work on energy in which countries. At the moment Member States appear to alter their country level sectors of concentration frequently, and often for no better reason than changes of in-country staff. The decision not to work on energy is probably made on the false assumption that some other donor will step in when they withdraw.

Once the analytical foundations are in place and the diagnosis clear, what next? There would appear to be six areas for choices and priority action by the EU:

1. Demonstrate a clear determination to sort out (simplify) the well known administrative bottlenecks in the EU energy programmes to support poorer countries.
2. Base policy and interventions on clear analytic distinctions between energy for poverty reduction and energy for climate change.
3. Base policy and interventions not on “energy” but on increasing the use of all modern energy services (including energy for transport), provided in the main by local businesses with access to local capital that can provide modern energy services to poor people profitably (that is on a financially sustainable basis).
4. Harmonise the energy-related activities on the Member States on the big issues – who is going to do what (SWAPs), and emphasise the provision of funds (and improvements) to existing mechanisms rather than creating yet more new institutions, frameworks, partnerships and instruments. Less symbolic gestures and more practical agreements.
5. Focus on what the donors do best: improving the policy and regulatory environment conducive to pro-poor investment, leveraging local private capital by buying down the risks, supporting big capital investments (which are beyond the capacity of local capital) including regional investments such as power inter-connectors, and medium scale hydropower.
6. Take seriously the task of Capacity Building: to regulate and run power utilities, to manage oil revenues and to develop local policy making capacities (governments, their advisors and local consultants). This will require long term commitments and joint action between donors to overcome the formidable costs.