

international debate focus on those hundreds of millions of people without any access to modern energy. Authoritative studies suggest that, even in 2030, there will be 1.3 billion people without electricity: this figure is only 200 million below today's estimate, meaning that increased power generation capacity worldwide is expected only to nearly offset the additional needs created by an increasing population. Despite the genuine gains in development in many parts of the world, 'business as usual' policies will merely condemn many of the poorest to life without clean and efficient energy services. Such services are essential to advance human development and provide opportunities for economic and social progress. We, the OPEC Fund for International Development (OFID), certainly believe that the international community can do better than this.

In the concluding statement of the 12th International Energy Forum attended by Ministerial Delegations from 66 producer and consumer countries, we read that 'The fight against energy poverty has been unsuccessful so far.' We couldn't agree more with the general idea, as we know that 2.5 billion people are still lacking access to modern fuels to satisfy their basic needs. However, a closer look shows us that we cannot qualify the 'fight against energy poverty' as being 'unsuccessful', because what is called 'fight' has hardly begun. Indeed, the topic of increasing energy access has been on the international agenda since the World Summit in Johannesburg in 2002, but concern has rarely resulted in concrete commitments and actions on the ground. In fact, energy poverty has received too little attention to say that a real 'fight' was ongoing.

The success of fighting energy poverty in the two coming decades will depend on partner countries' (i.e. developing countries benefiting from international development assistance) political willingness to reform but mainly on the priority the international community would like to attach to this issue. Energy poverty should not continue to be considered the oldest orphan of the



Suleiman J. Al-Herbish rejects the gloom and doom surrounding energy poverty

Introduction

Energy security is always high on the agenda of both consumers and producers but rarely does the

international development debate. Climate change issues are here to remind us that we live in a globalised world, tackling energy poverty worldwide is of importance for all developed and developing countries alike. Providing universal, clean, affordable and sustainable access to energy will certainly be one of the key challenges of the twenty-first century. The Energy for the Poor Initiative launched by the King Abdullah of Saudi Arabia and supported by the G20 leaders and recently by the 12th International Energy Forum meeting is providing a new momentum to the fight against energy poverty allowing us to envisage scenarios with universal access to modern energy to all human beings by 2030.

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Magnitude – The Many Benefits of Combating Energy Poverty

The excellent economic performance of some regions of the developing world has improved energy access for many communities since 2000. Good progress has been made in East Asia, also in Latin America as electricity networks have been extended. But access to modern energy in South Asia or Sub Saharan Africa continues to lag the rest of the world. In South Asia 614 million people live without access to electricity whilst in Sub Saharan Africa the number of people living without electricity has risen to 587 million since 2000, despite a slight increase in the rate of electrification. Generating capacity is far below the needs of the population. Total installed generating capacity in Sub Saharan Africa (excluding South Africa) is about 30 GW, less than that of Norway whilst the population of the region is 150 times as large.

Electricity is important to support all

kinds of income-generating activities, whether agricultural, commercial or manufacturing. Agriculture is by far the most important source of employment and incomes in developing countries and access to affordable electricity can provide a significant increase in productivity. Electricity can power irrigation equipment and allow rural communities to add value to crops by drying, processing and packaging. To face the challenge of food security, highlighted by the crisis of 2007 and 2008, world food supply will have to double by 2050 to nourish world population. This doubling of agricultural output on roughly the same available land can only be achieved by a substantial increase in productivity, by more water availability and consequently by enhanced energy accessibility.

Higher levels of mechanisation can make a vital contribution to raising growth rates by lowering costs and improving competitiveness, and mechanisation relies on electricity. Better communications may open new markets to farmers and producers and provide up-to-date information on price trends and selling opportunities.

Raising the income levels of rural communities can make a significant contribution to social stability by lessening the pressures to migrate to cities. Rapid growth of urban populations exacerbates environmental and social tensions in developing countries as cities rarely have the resources to meet housing and other needs.

Lack of access to electricity is not the only problem facing the energy poor. Clean fuels for cooking and transport are also in short supply. LPG and kerosene can provide efficient solutions for cooking and lighting and a reliable and affordable supply of vehicle fuels is essential if communities hope to move beyond subsistence agriculture and transport their produce to market. Diesel generators can also provide useful energy in the village to drive workshop equipment or power irrigation systems. Overall the consumption of modern energy per capita in the poorest countries is less than one-sixth that of developing countries as a whole.

It is now recognised that modern energy is needed in all sectors and for achieving all the Millennium Development Goals. Lower reliance on harmful biomass will reduce illness from serious respiratory disease. Modern energy creates opportunities for better medical care, education and communications. Access to the world of information will release human potential, opening doors to science and culture. How many exceptional brains able to make scientific breakthroughs may be found in the hundreds of millions of people newly enabled to play a fuller part in the life of global society?

Energy investments require large-scale commitments of resources over long periods of time. But once in place they offer enormous benefits to every businessman considering investment in manufacturing or process activity and every farmer planning irrigation or food processing projects.

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Why Are Many Countries Plagued with Persistent Energy Poverty?

Like income poverty, energy poverty has different causes in different countries. However to alleviate this curse there are broadly two protagonists who could play key roles in making energy accessible, affordable and sustainable: the international community and partner countries.

For the international community, energy poverty is not receiving enough attention in the international development debate. The priority attached to energy poverty has still not reached a

level commensurate with the dimensions of the problem.

In the international arena, the issue has just started to gain momentum. There are many international meetings taking place to address energy poverty but no international donors' conference has been organised to increase the assistance provided. Many non-binding statements are issued after high-level meetings but with little commitment on the ground. When oil prices reached levels higher than \$140/bbl, there were many discussions at OECD level concerning the resilience of economies and the potential impact on the poor; but when the oil prices declined the debate on this issue just vanished.

From a policy point of view, energy poverty has no 'champion', unlike issues such as HIV-Aids, forest preservation, water, desertification and so on. Even at the UN, energy is considered as a cross-cutting issue. There are some laudable initiatives contributing to the international debate such as UN-Energy, which is an inter-agency mechanism to coordinate energy-related issues within the UN system; also UN-CSD (UN Commission on Sustainable Development) under UNDESA, which addressed energy issues at UNCSD-15 without reaching a consensus on how to alleviate energy poverty. Both UNDP and UNIDO have developed real expertise in the field on how to tackle energy poverty but they work with relatively limited resources.

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UN meetings and results are necessary as they shape the local, regional and global policies. Indeed, Agenda 21, the United Nations Millennium Development Goals, the Johannesburg Plan of Implementation, the Monterey consensus all provide development goals.

However the results on the ground are implemented slowly. One can observe that most low-income countries still have not implemented an appropriate economic and financial environment to alleviate energy poverty. Besides the UN and some countries, other players are not so powerful as to be able to raise the energy poverty flag high enough.

From a financing point of view, the international effort to assist poor developing countries is increasingly fragmented. This fragmentation of the development aid is not helping to implement the specific focus needed for alleviating energy poverty. The fragmentation is characterised by the welcome emergence of the private sector in international cooperation but also by the multiplicity of potential donors; in fact this is in contradiction with the so-called Paris Declaration where over 100 countries and institutions, among them OFID, called for more effectiveness in dispensing assistance. Fragmentation means that partner countries are dealing with a high number of donors giving sometimes relatively small amounts of money – and requiring more bureaucracy simply to keep track with them. The alleviation of energy poverty is therefore 'drowned' in a myriad of other development issues with little effectiveness on the ground.

Regarding climate change issues, for the past decade many analysts considered that making energy accessible to the poor would drastically increase CO₂ emissions. Although this opinion later appeared to be an exaggeration, it was used as a reason not to trigger a real fight against energy poverty, which would have been detrimental to the planet. In fact, there appeared to be a tacit international consensus to postpone the accessibility of energy for poor countries until so-called green energy technologies could be scaled-up technically and economically.

We know today that many research centres among them the IEA have recognised that with the current trends of the fuel mix, if electricity access is generalised then there will be an additional increase in global

energy-related CO₂ emissions of just 1.3 percent by 2030. Even if one allows for model uncertainties, this percentage remains very low. International cooperation and assistance in combating energy poverty should not be preconditioned by stringent conditions regarding renewables. In fact, switching from traditional biomass to sustainable modern biomass or a fossil fuel such as LPG would protect the forest and have a beneficial impact on deforestation. Moreover, without requiring fundamental technological breakthroughs, some scientists are devising development paths for Europe and North Africa to reach 100 percent of electricity produced from renewables by 2050. Consequently, climate change issues should not be used as an argument to impede the fight against energy poverty.

From the energy markets point of view, with a diversified energy mix including both renewable energy and fossil fuel, it is now recognised that the additional progressive demand for oil and gas generated by much wider access to energy by poor countries will not significantly disturb markets.

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Regarding partner countries, they also bear their share of responsibility in not providing energy access to a large portion of their population. Energy access is not at the forefront of many governments' preoccupations, especially in the poorest countries. There are many impediments such as poor governance, a history of conflicts, mismanagement of utilities, lack of an enabling environment conducive to investment, corruption, inappropriate and badly targeted policies as well as a lack of regional vision in fostering trade in energy.

Fortunately there are developing

countries showing appreciable progress in alleviating energy poverty. Thanks to appropriate reforms and targeted electrification programmes, China, India, Vietnam and Brazil do have success stories to tell in the field of energy access. They have improved the access for their citizens substantially in the last two decades. However all across sub-Saharan Africa, and in parts of Asia, too many people are still living without basic energy services.

Urgency of the Issue of Energy Poverty for the Low Income Countries

The close links between economic growth and access to affordable supplies of modern energy have already been highlighted. This linkage was well illustrated in recent years. From 1990 to 2000, total primary energy consumption in the developing countries rose at an annual rate of 3.6 percent; this growth rate increased to 5.6 percent from 2000 to 2007. The rates of growth of the network energy services were the highest of all the energy sources. This growth has accelerated sharply since 2000 particularly in Asia, in line with the fast growth of industrial and commercial activity. The annual average growth rate of both gas and electricity demand from 2000 to 2007 was over 6 percent for the developing countries as a group.

Concentration on the electricity sector can obscure the important contribution of fossil fuels in reducing energy poverty. In 2007, electricity only accounted for some 15 percent of total final energy consumption in developing countries. Regarding manufacturing and commercial operations, however, there is usually no alternative to grid-sourced electricity as a single source of flexible, scalable and economic energy to satisfy mechanical, lighting and communications needs. This logic underlies the fast growth rates for electricity demand that are a feature of most medium-term assessments of the energy outlook for developing countries.

Such expectations may be consistent with macroeconomic projections and

historical trends but they may underestimate the constraint of limited and ageing generation capacity, especially in the low-income countries. Total electricity consumption in these countries increased by 60 percent from 2000 to 2006. Over the same period total generating capacity increased by only 27 percent. Updating the analysis to 2010 suggests that the low-income countries are facing severe pressures on generating capacity.

Indeed if 2000–2006 growth rates of demand and capacity had been maintained, by 2010 the average capacity utilisation required of these countries would be 45 percent. IEA data for developing countries, which includes countries with much more modern generating equipment than most low-income countries, suggest that realised capacity utilisation percentages in 2007 clustered around 40–43 percent for Latin America, Africa (excluding South Africa), China and India. Electricity utilities in the low-income countries will only be able to meet such projected demand for power if they achieve remarkable increases in capacity utilisation.

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More likely, as soon as pre-crisis demand patterns are restored, the power market will tighten further leading to higher costs, increased outages and brownouts. The high costs and unreliability of the electricity supply will act as a constraint on the growth of GDP – moreover such a constraint will operate over the medium term since investments in generating capacity take years to come into operation. In addition to the economic aspect, constraints on the electricity generating capacity will make adaptation measures to climate change extremes by energy

poor countries even more difficult.

Over the past ten years electricity consumption in the low-income countries has probably doubled but total generating capacity has only increased by about 50 percent. Most spare capacity in the generating industry has been absorbed over this period and economic growth in many of these countries may be threatened by aggravated power shortages unless investment in generation is stepped up as a matter of urgency.

A Key Lesson from the Financial Crisis

The recent financial crisis has taught us a lesson: whenever an important issue is given high priority on the international agenda and a concerted, consensual, unified, resolute solution is provided by the international community, then success follows. Banks in the USA and Europe benefited from substantial bailout plans. Some US\$ 1300 billion was injected into the banking systems of the advanced economies, a policy that rapidly improved the banks' liquidity and trading performance. In contrast, the regulation of financial and commodity markets aiming at reducing excessive speculation received only lip service, as the issue was not considered to be of sufficient priority, particularly for the USA.

Building on this lesson, it is reasonable to assert that if combating energy poverty in developing countries is given appropriate priority (and followed by concrete actions), it will allow a departure from the 'business as usual' pattern and permit us to envision a world free of energy poverty by 2030.

The Way Forward – Solutions

In order to face the challenges raised by the scaling up of energy access, the proposed solutions should address both partner countries and the international community. For partner countries, on the basis that a one-size-fits-all solution does not exist, the barriers to energy access mentioned previously should be addressed. In short, partner countries

should develop or reinforce inclusive policies, regulatory frameworks and institutions that facilitate investment (both public and private) and encourage trade to make energy accessible and sustainable. They should also implement pro-poor financing mechanisms with the involvement of local communities to make energy affordable. There are success stories in India, China and Vietnam that could be emulated. However, in order to develop the appropriate enabling environment, poor countries need specific support in human resources and institutional capacity building.

Equally or more importantly, the energy poverty issue should be more visible on the international agenda. Not a single financial institution no matter how large it is, not a single country no matter how rich it is can tackle the issue of energy poverty by itself. Energy poverty alleviation needs collective international solutions.

This challenge has been recognised, notably by the leaders of OPEC at the Third OPEC Summit in Riyadh in November 2007. The Riyadh Declaration mandated the OPEC Fund for International Development (OFID) as well as the other OPEC Member Countries aid institutions to align their programmes to eradicate energy poverty in developing countries, a task to be achieved in cooperation with other financial institutions and the energy industry. Since the last OPEC summit, OFID alone has committed close to \$450 million in energy poverty alleviation covering 22 operations in 17 countries.

In the spirit of the Riyadh Declaration, King Abdullah of Saudi Arabia during an ad-hoc meeting of producers and consumers launched what has become known as the Energy for the Poor Initiative, which underlined the prime importance of extending energy access to the poorest countries. The Initiative embodies the political will expressed in the Riyadh Declaration in a plan of action to encourage the wider participation of both public and private sectors and to leverage the effectiveness of the initial seed capital.

Today OFID is contemplating together with other institutions, among

them the World Bank, a medium-term programme of \$5 billion to contribute to alleviating energy poverty. OFID is coordinating its actions with the World Bank.

This important initiative has enabled the prioritisation of energy access in the international development debate, at a time when the oil barrel reached its highest price ever. Since then energy poverty alleviation has gained new momentum. OFID is doing its utmost to support and increase this momentum within the international community.

Conclusion

Three years ago, OFID proposed for the first time at an international conference that energy poverty alleviation be designated as the ninth Millennium Development Goal. The aim was to provide more international visibility in the development debate for the issue

of energy poverty as well as to include it specifically in national development plans. I am pleased that this idea has received general acceptance and that recently 66 Energy Ministerial delegations of producer and consumer countries at the 12th International Energy Forum held in Cancun, Mexico, in March, 2010, recognised the advantage of defining such a goal for the international community. Such a goal would, indeed, provide the needed coherent global vision to address energy poverty.

As in the case of climate change negotiations, the 'business as usual' attitude in solving energy poverty should not be an option. Leaving 1.3 billion people on the side of the road by 2030 is just not acceptable. The Energy for the Poor Initiative is showing us that we can be bold and ambitious in our vision: universal access to affordable, acceptable energy should become a reality for all.