



BEYOND 2015: integrating universal energy access in the new development framework

Dr Arno Behrens is Head of Energy & Research Fellow at the Centre for European Policy Studies (CEPS)

Energy plays a crucial role in socioeconomic development. In much the same way that energy transitions provided for the industrial revolution and thus for increasing productivity and wealth in Europe, today's developing countries require access to secure, affordable, clean and sustainable energy services to fight poverty.

Yet, according to the International Energy Agency (IEA), almost three billion people continue to rely primarily on traditional biomass fuels such as wood, dung, crop residue and even old tyres and plastic for cooking and heating and more than one billion people do not have access to electricity at all. Most of these people live in South Asia and sub-Saharan Africa (SSA), in the rural areas of the world's poorest countries.

The implications of energy poverty are manifold. First, the extensive use of biomass entails numerous *economic costs*, direct and indirect. These include the costs of fuel wood and other sources of energy, the cost of using wood instead of modern fuels for cooking in inefficient stoves, reduced agricultural productivity due to the drain of potential fertilisers towards household use, and the opportunity costs of collecting biomass (instead of going to school or generating income).

Second, there are severe *health risks* associated with the indoor use of solid fuels which lead to almost two million deaths per year, or 4000 daily, mainly from pneumonia, chronic lung disease, and lung cancer. Indoor smoke thus causes more deaths than tuberculosis, malaria or HIV/AIDS.

Third, there is the *environmental dimension* resulting from the fact that fuel wood collection and charcoal production leads to ecological damage such as deforestation or reduced soil productivity.

Fourth, there is a *gender dimension* because it is largely women and young girls that spend hours gathering traditional biomass. Women and children are also most exposed to the health effects of energy-inefficient appliances.

Finally, insufficient access to modern energy sources in rural areas exacerbates *urbanisation*, putting additional pressure

on cities to provide adequate services to their citizens and thus increasing the number of the urban poor further.

The 'United Nations Millennium Declaration', endorsed in 2000, and the accompanying Millennium Development Goals (MDGs), adopted in 2002, have been important instruments in streamlining and coordinating international development action. Since the targets were defined, significant progress has been achieved in almost all the MDGs. The reduction of energy poverty has not been included as one of the MDGs, however, it contributes significantly to progress towards most of the eight current goals, including the reduction of poverty and hunger, the elimination of gender disparities in primary and secondary education, the reduction of maternal health and child mortality and the achievement of environmental sustainability.

The year 2012 was announced by the United Nations as the *International Year of Sustainable Energy for All* with the goal to achieve universal energy access by 2030. However, the Rio+20 outcome document failed to go beyond a generic formulation in this respect let alone to adopt such a target in a binding way including a roadmap on how to achieve it.



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A new window of opportunity will arise in 2015, when the MDGs are up for review. Preparations for this review are in full swing, with a UN special event on the MDGs scheduled for the fall of this year. It is thus time now to increase pressure on governments around the world to deliver on access to energy and to explicitly include universal energy access as one of the headline targets in the post-2015 development framework.

Various estimates show that universal energy access is feasible with annual costs of between \$36-48 billion until 2030. A large part of these investments will need to flow into electricity generation, transmission and distribution.

Fossil fuels are likely to continue to play a role in providing access to electricity, especially where on-grid generation is feasible. However, centralised power capacity and grid extension targets have often failed to improve energy services for the poor. In the last two decades, a learning curve in projects aimed at increasing access to energy has shown that decentralised solutions are often more successful and cheaper. Small-scale mini-grid and off-grid generation activities in sparsely populated rural areas are proving particularly effective.

In this context the use of renewable energy technologies is essential for developing countries to reduce their dependence on fossil fuel imports and related price volatility, as well as to foster a sustainable, low-carbon and green economy. Decentralised renewable energy systems such as hydro, solar, wind and modern biomass provide the opportunity for clean and cost-effective electricity and heat generation in rural off-grid regions. However, potential social and environmental consequences of new energy systems need to be thoroughly evaluated on a case-by-case basis.

The sustainable introduction of renewable energy technologies in developing countries requires a range of supporting tools and processes. In poor rural settings without access to modern energy, the success of a project relies on host government, donor and implementer's efforts to build national and local level governance and regulatory capacity, develop local markets, raise public awareness and develop appropriate skills through training activities. Furthermore, technology transfer is facilitated with more stringent and widespread environmental policies and incentives for adoption of low-carbon technologies in developing countries. Developed countries can provide assistance with the national design and roll-out of such policies.

In terms of finance, a number of funds and mechanisms have been set up to handle the energy investment requirements for developing countries, in particular through the mechanisms created by the UNFCCC, from the Clean Development Mechanism to the newly established Climate Investment Funds. At the same time, there is an increasing focus on the use of public-private partnerships and attracting funds from private financiers, which may further reduce financial attractiveness of local renewable energy projects. Such projects are less bankable than major, grid-connected projects, which often serve large industries. Services to more vulnerable, low-income population groups appear far riskier in terms of potential returns on investment.

However, there are numerous policy and finance tools to enhance their bankability such as the feed-in-tariffs and other incentive schemes, which several developing countries are pursuing. The European Union and some its member states have an obvious technical advantage in these mechanisms and there is potential for increased coordination on experience sharing and technical training.

Two years before the current MDGs expire, it has become clear that energy poverty will persist in developing countries without firm government action in support of sustainable and affordable technologies. On the global level, the post-

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2015 development framework will provide an opportunity to build a strong case for inclusion of energy access into the set of revised goals. Apart from universal energy access, such a goal will need to aim at decentralised solutions, better energy efficiency and the removal of subsidies for fossil fuels. At the same time, the basic elements of a roadmap should be spelled out on how the target can be achieved, possibly building on an international management system that could help track progress towards meeting the proposed energy goal. ■

