

# Sustainable Energy for All and the private sector

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The UN's Sustainable Energy for All initiative (SE4ALL) has a strong focus on the private sector to deliver universal energy access, improved efficiency and increased investment in renewable energy. Leading private sector associations have bought into SE4ALL, including the World Business Council for Sustainable Development (WBCSD) and the Global Compact. However, critics argue that SE4ALL is focusing too much on large-scale infrastructure investment and is missing opportunities to stimulate enterprise more locally and to benefit the poorest. The private sector – including large and smaller-scale businesses, both local and international – is keen to get involved in energy access in low-income markets and sees the value of an initiative such as SE4ALL. Yet some feel that SE4ALL is failing to engage all levels of the private sector effectively.

To deliver universal energy access, SE4ALL needs to address the lack of finance for enterprises and end users, especially in untested markets; infrastructure and support services for new businesses; local skills, capacity and information about workable models; and favourable policy frameworks. With the right incentives, business can open up low-income markets by providing life-improving services to emerging middle class populations who are still excluded from energy access. To reach the poorest SE4ALL can promote private sector partnerships with government and NGOs, encourage corporate responsibility initiatives and support social entrepreneurs.

To see some of the interviews in full online go to:  
<http://www.hedon.info/IIED+survey+role+of+Biz+in+SE4All>

## KEY POINTS

- SE4ALL needs to incentivise not only fully commercial activities, but also financially viable although less profitable models including social enterprises, co-operatives, corporate social investment programmes, as well as private sector partnerships with government and NGOs.
- SE4ALL can offer most value by stimulating policy reform, supporting business innovation, and building confidence in new solutions by credibly demonstrating successful models and putting its weight behind robust validation processes.
- SE4ALL needs to reach out beyond industry associations and international development networks. Active engagement with groups on professional and social networks such as Linked-In and Twitter could increase its outreach among small and medium enterprises, internationally and in-country.
- SE4ALL must maintain its relevance and find a workable institutional form as it is rolled out post-2012 and it needs to be part of a broader strategy for tackling global poverty.

## The private sector and sustainable energy for all

According to the International Energy Agency, universal energy access could be achieved by 2030 by increasing global investment in energy infrastructure by just 3 per cent. The UN's Sustainable Energy for All initiative (SE4ALL) has a strong focus on the private sector to deliver universal energy access, improved efficiency and increased investment in renewable energy. Leading private sector associations have bought into SE4ALL, including the World Business Council for Sustainable Development (WBCSD) and the Global Compact.<sup>i</sup> However, critics argue that SE4ALL is favouring large-scale infrastructure and not sufficiently prioritising the poor, while missing opportunities to foster business more locally.

This briefing explores the potential for SE4ALL to stimulate private sector involvement in delivering universal energy access. We interviewed 28 people mainly from business and non-governmental organisations (NGOs) involved in delivering energy access. We focused particularly on energy for the poorest. We were also interested in energy delivery to those who lack basic access and can afford to pay, but are not currently reached by energy providers. Equally important was to investigate how energy practitioners understand the objectives of SE4ALL and to gather their views on how it can achieve success.

### Box 1. The UN Sustainable Energy for All initiative

In 2012 the UN launched its Sustainable Energy for All initiative (SE4ALL). The UN Secretary General Ban Ki-moon has created a high-level group to “mobilise global action from all sectors to transform the world’s energy systems, pursue the elimination of energy poverty, and enhance prosperity”. SE4ALL has set three measurable goals to be attained by 2030: 1) Ensuring universal access to modern energy services; 2) Doubling the rate of improvement in energy efficiency; and 3) Doubling the share of renewable energy in the global energy mix.

For more information see:  
<http://www.sustainableenergyforall.org/>

## Awareness and definitions

Of the 28 people that we interviewed, 10 already had some understanding of SE4ALL, and most of these are involved in the SE4ALL Energy Access Practitioners' Network – a set of working groups for sharing good practice.<sup>ii</sup> Virtually all of the NGOs who are regularly involved with campaigning or policy work, and the corporate social responsibility (CSR) departments of larger companies had heard of the initiative. However, most small and medium enterprises (SMEs) and many NGOs, with a primary focus on energy, knew nothing or had no more than a vague idea about it. SE4ALL launch events were typically attended by high level participants and did not delve into operational details, leaving practitioners wondering what it meant for their day-to-day activities and how they might participate. The official website was criticised for lacking constructive information and for not being user-friendly. There was also some scepticism about SE4ALL's ability to deliver impact on the ground, with comments such as: “I think it's a great initiative but there have been so many initiatives in the past with dubious results so I'm not getting too excited.”

It quickly became evident during interviews that definitions were extremely important. Interviewees questioned the words ‘private sector’, ‘sustainable’, ‘energy’, ‘access’ and ‘for all’. We define modern energy services as those that improve quality of life and give better development prospects (e.g. through mechanisation, education and employment). ‘Sustainable’ energy services are self-sustaining in the long term and do not undermine quality of life with negative environmental impacts such as pollution, poorly managed waste, or diminished access to land and resources. ‘Access’ is understood not just in terms of infrastructure but also of affordability. Energy ‘for all’ (universal access) includes the poorest of the poor, who are very unlikely to have the purchasing power to pay for fully commercial services. The private sector broadly includes all types of private enterprise, from major multinationals to small-scale family companies, in developed or developing countries. Many of our interviewees believe that SMEs, co-operatives and NGOs are often the biggest innovators in delivering energy access to low-income markets, although they need support in doing so.

## Box 2. CleanStar Mozambique: integrating food production, energy and forest conservation

CleanStar Mozambique is a commercial business that focuses on integrating sustainable supplies of food and bioenergy with forest protection. The project is a joint venture between CleanStar Ventures, Novozymes (biotechnology), ICM (ethanol technology) and Merrill Lynch (carbon-finance). It works with smallholder farmers providing ecosystem conservation and agroforestry technical expertise and capital equipment to enhance productivity. A diverse range of food crops including cassava are grown. In the company's local processing facility, food surpluses are packaged for sale, while cassava is turned into bioethanol cooking fuel, which is sold as an alternative to charcoal in urban settlements together with ethanol cookstoves. "We currently price fuel cheaper than charcoal, so it's affordable for the households and we still make a good business."

For more information see: <http://www.cleanstarmozambique.com/>

## What can the private sector do to deliver sustainable energy for all?

Respondents agreed that the private sector has a key role to play in delivering universal energy access. As one business representative noted: "I do not see governmental institutions as being able to address energy challenges in the time we have available. The government's role is to set rules and be part of a dialogue with other stakeholders, but addressing the access issue is what businesses can do best, by providing technical and operational capacity."

Respondents noted that many innovative models are currently being developed by smaller private sector initiatives or NGO projects funded by public funds from donors and governments. A not-for-profit entrepreneur stated: "To my mind, the primary role of NGOs should be to innovate and demonstrate the viability of systems and technology, reducing the risk for subsequent investment by the private sector." He added, however, "in fact many do not do that because they are not brave enough to subject their work

to critical evaluation." The big challenge is to provide sufficient evidence that project-based pilots can be converted into replicable commercial models to be adopted by the private sector, or by a public-private partnership supported by sustainable government subsidies.

Interviewees highlighted the need for more support in proving and testing groundbreaking approaches in the field. Once models are proven, more dedicated funds could be provided by multilateral institutions to build markets for mainstream investment.

Interviewees noted the need for collaboration with the public sector and non-profit entities if the private sector is going to deliver development goals of energy access. As one interviewee observed, "The role of public-private partnerships is crucial. Innovative governance and capacity building will be key to meeting the goals. The role of research institutions is also crucial and social entrepreneurship will be important in bridging the gap in the short run."

## Box 3. Enel's waste-for-energy credits programme

Enel is an Italian energy multinational. In 2007, its subsidiary in Brazil, Endesa, set up the "Ecoelce" programme in which customers exchange recyclable urban waste for discounts on their energy bills. The scheme simultaneously tackles the frequent defaults on payment and the serious environmental problems caused by lack of recycling services in poor areas. Customers bring their waste to a recycling point where electricity credits are given according to the amount and type of recycling material brought. The service is operated in partnership with recycling companies and associations of waste-pickers. The programme has increased electricity access for the poorer members of the community (currently 236,000 families are taking part) and it has changed the way people look at the power provider. Enel is now planning to roll out the programme in other Latin American countries.

For more information see: <http://www.endesa.com/en/aboutEndesa/businessLines/principalesproyectos/Paginas/Ecoelce-programme.aspx>

Opportunities offered by business-led community development or social investment programmes should not be overlooked, especially where companies can use their core business skills and competencies to enhance energy access (see Box 3 above). An example is the Bonny Utility Company in the Niger Delta, where the Nigerian Liquefied Natural Gas (NLNG) company is providing gas from its LNG plant to power the local community of Bonny Island.<sup>iii</sup> One representative of a major energy corporation stated: “We see CSR activities as a strategic driver that we embed in our business plan... To create competitive advantage we need to create value for the local community and host country.” The main challenge is to create a model that is self-sustaining in the long term and does not create dependency, then fails as soon as the support company pulls out.<sup>iv</sup>

### Barriers to success

Policy issues highlighted by respondents included high import duties and taxes; subsidies for fossil fuel but fewer policy incentives for renewable energy; and the monopolisation of electricity provision with a lack of support for decentralised power generation. Interviewees noted the need for better co-ordination of aid programmes and a better understanding of markets on the part of aid agencies. As one respondent noted, “The overriding rule should be to make markets not destroy them, while clearly lots of aid programmes have been very ineffective in giving things away. Grant money needs to be used to reduce the risk of standard commercial business.”

Finance was the most commonly cited barrier, in particular the need for non-traditional forms of up-front investment for testing new technologies, building infrastructure and creating markets. The challenges are particularly great in developing countries where there is a lack of business support services or existing infrastructure. Investing in energy access in poorer markets

### Box 4. Eight19’s pay-as-you-go service model

Eight19 offers a ‘pay-as-you-go’ service, similar to those adopted by the mobile phone industry, whereby consumers receive a solar home system and purchase scratch cards to activate it for a given period of time (for example a week) through their mobile phones. Starting from a basic set that powers two lights and a mobile phone charger, consumers can upgrade to more powerful configurations (energy escalator) once the system has been paid for through the scratch cards (takes roughly 18 months). Alternatively they can buy the option to unlock their solar panel and continue to use it free of charge.

For more information see:  
<http://www.eight19.com/>

tends to be a high risk business (due to political instability, lack of infrastructure, lack of information about markets) with low rates of return. As one respondent noted, “Private sector investors want to see low risk with reasonable returns or higher risk with high returns. Unfortunately, most energy access investment opportunities among the world’s poorest offer high risk and low returns, which is the wrong combination.” Thus private sector investors want to share the risk with governments and donors. Impact investors could be a potential source of finance, as long as they are willing to accept higher risk and lower rates of return than private equity investment or venture capitalists, which is sometimes not the case. Carbon finance could play a role though it was noted that “it is complicated to set up and price volatility undermines its reliability.”

A major challenge is developing payment models that address end user finance. These schemes allow low-income users to obtain

### Box 5. Small Scale Sustainable Infrastructure Development Fund (S3IDF)

S3IDF is a US based NGO working in India through its ‘Social Merchant Bank Approach’. It operates through two funds, a grant fund and an equity revolving fund. The grant fund is used to support enterprises throughout the business development process, from the identification of successful entrepreneurs, the choice of technology, the design of supply chains, to the formulation of a business plan. The equity fund then invests in the SME. S3IDF supports initiatives to access capital from financial institutions by bringing confidence to the investment. S3IDF still relies on philanthropic support for its own services which are time-consuming and require high levels of expertise.

For more information see: <http://s3idf.org/>

access to energy avoiding unaffordable up-front costs. A range of models have been evolving over the years, based on lend-lease contracts, purchasing the service rather than the equipment, mobile phone payment systems, and flexible payment schedules.

Respondents highlighted the lack of awareness among investors of business models that have been proven to be financially viable. This heightens the perceived risk and therefore reduces the willingness of investors to provide support. At the other end of the spectrum, the same knowledge gaps on the challenges and realities of running grassroots initiatives create false expectations of unrealistic returns (carbon markets hoping to generate high returns on energy access services are an example). The poorest energy users frequently live in remote rural areas and the logistic of 'last mile' deliveries as well as maintenance are costly and cumbersome. One practitioner commented: "I get photos from our guys in the field pushing a bicycle down a pot holed road to get one or two stoves to the end user!"

Lack of quality standards, certification and guarantee is undermining consumers' trust in technology, making market expansion slower. As one entrepreneur noted: "People coming to the city from the countryside buy cheap solar products that break down very quickly and there is no way for these people to take them back or get them repaired."

Lack of skills and capacity in entrepreneurship in many poor regions are a strong barrier to the development of local start-ups and also limit access to supporting services from foreign companies needing local partners. There is a great need for business incubation services that can nurture local enterprise and build entrepreneurial capacities locally. This is very costly and requires serious commitment over time – not something a purely commercial business partner may be willing to invest in.

## Reaching the poorest

Reaching the poorest is the 'holy grail' of universal energy access. A key challenge for the private sector in serving poorer markets is that margins are inevitably going to be very low. As one NGO representative stated: "The key thing that people keep forgetting is that poor people are poor, and therefore they appear not

## Box 6. SELCO

SELCO is a social enterprise that started in 1995, with solar lighting systems for low-income families in Southern India and has now expanded into sustainable energy services to other states in the country. The model consists of three aspects: facilitating the relationship between end users and financial institutions providing consumer loans; servicing products at least for as long as the loan lasts by using a network of decentralised centres dedicated to marketing, sales and servicing; customisation at the installation level, tailoring technical solutions and financing options to customers' needs and context. SELCO Labs explore technology innovations beyond lighting and new delivery models that can reach deeper to the real 'base of the pyramid'.

For more information see:  
<http://www.selco-india.com/>

to constitute an attractive market. In many cases private sector initiatives start with the intention to serve the poor but upscale very rapidly to more profitable markets. For example, in the photovoltaics sector, many companies who started out with the aim of rural electrification, found that it was much more profitable to serve the phone companies, the army and telecommunication companies. Keeping the focus on poor people is very hard". Social enterprises rather than purely profit driven companies are more likely to be successful in servicing poorer markets as their aims are social benefits (e.g. delivering energy) rather than maximising profits.

Even where companies seek to be innovative in serving low-income markets, the decision to pull out or re-focus can be made with a change in senior management. As one entrepreneurial support provider noted: "Many companies, given the current economic climate, are pulling back and cutting some of the more ground-breaking parts of their business. Business trends follow the market and can be fickle... If there is a simpler market ready to be exploited there is little incentive for the private sector to set up cumbersome financial mechanisms and delivery models to serve the poorest."

Liquefied petroleum gas (LPG) is often cited as a way to shift families from harmful fuelwood usage and avoid deforestation and associated climate-change impacts. But as

## Box 7. Liquefied petroleum gas (LPG) innovations to reach poorer customers

While LPG is in many cases a cheaper, cleaner and more convenient option for cooking than charcoal or kerosene, its wider use is limited by the ability of poorer families to save for the upfront cost of canisters and their replacement. To address this barrier, in Kenya the company Pima Gas is using a small 1kg cylinder that can be topped up, enabling people to purchase LPG in small quantities as they traditionally do with kerosene or charcoal. In this case the bottle is provided by the scheme free of charge. In southern India the company Hindustan Petroleum Corporation Limited offers 'community kitchen' facilities in remote rural areas where people can cook on LPG stoves, paying for time allotments. The bulk deliveries of LPG bottles for the kitchen make distribution cheaper. In some cases, women gradually started to acquire their own stoves, benefiting from the already established distribution network.

For more information see: [http://www.hedon.info/IIED+SE4All+Interview\\_WLPA+MKelly?bl=y](http://www.hedon.info/IIED+SE4All+Interview_WLPA+MKelly?bl=y)

one respondent noted: "In most developing countries LPG is widely used by the wealthier emerging middle classes, particularly in urban areas where distribution is easier. For the lower middle class LPG is often an aspirational fuel; people know it and want it, but it could be difficult to afford. And for the poorest of the poor it is not a solution."

Despite many innovations, the private sector alone is frequently unable to reach the poorest of the poor. A lighting provider noted: "I think we need to be honest and recognise that at present we are not able to target the poorest of the poor. ... The basic variant of our lighting system costs around 100 EURO, which is not affordable for the poorest." Yet, as others point out, it does make sense for the private sector to address the huge unserved market of people who can afford services but are still suffering from lack of access. As one Africa-based stove provider noted: "We target working women in urban environments, still on a low income but wealthy enough to value the convenience and safety of the stove."

It is, however, possible for the private sector to reach the poorest through strategic partnerships with government, NGOs and international agencies, who can provide support and subsidies either in the long or short term to boost market development efforts. As one respondent observed: "I'm not sure that a conventional market approach is the right way to reach poorer people. Many successful initiatives are not market based – the UK's National Health Service for example. A successful business model is not necessarily defined by the fact that people have to pay at the point of end use."

## What can SE4ALL do to stimulate private sector involvement?

The general attitude toward SE4All targets, the particular attention given to the private sector and the potential role that the initiative could play, was overall very positive. Some simply see it as a business opportunity: "There are many SME's out there who would love to have the opportunity to build a solar industry in developing countries if given some assistance." Others see it as a long-awaited opportunity to make energy a top priority on the international development agenda. However, many also expressed the concern that the initiative would limit its contribution to "producing documents and organising meetings" while more concrete and effective objectives would be needed. The main aspects where SE4All was seen to have a role can broadly be categorised as coordinating, guiding, stimulating and demonstrating.

### Coordinating

SE4All can provide a platform for actors to coordinate their activities towards delivering energy access for poverty alleviation, encouraging multilateral agencies to harmonise their strategies and donors to complement each other's programmes. An SE4All platform can bring entrepreneurs together with investors, help NGOs to reach out to bigger businesses, and enable the private sector to gain access to decision makers in national governments. One respondent suggested it would be useful to make available clear country-specific guidelines on how to conduct business, how to find partners (with a repository of contact details of companies operating in the sector) and how to obtain support from UN local offices. SE4ALL could

also coordinate data collection and information sharing on other issues, from market analysis to land use and biomass availability.

### Guiding

SE4All can work with governments to raise awareness on energy issues – putting the weight of an international initiative behind these efforts – and generate a policy and economic framework that provides confidence and predictability. A clear opportunity is in providing guidelines for policy directives, pushing the concept among policy makers that stable and clear regulations are absolutely essential to give confidence for investment. Proposed incentives for SE4ALL to promote renewables include reform of fossil fuel subsidies, eliminating import taxes, reducing export duties on locally produced energy products, offering tax benefits for local manufacturing and promoting feed-in tariffs.

### Stimulating

Proposals to address finance barriers included establishing or enabling the formation of dedicated funds investing specifically in energy access with conditions that are tailored to the needs of such a difficult market (low rate, high risk, long-term repayment); developing impact investment models, possibly with the involvement of donor funds; raising awareness to motivate more lines of dedicated international funds; and guaranteeing uncertain private investment (first loss risk guarantees, loan guarantees) with public/grant finance. States could also stimulate technological innovation by adopting new solutions in their early development stage, thus ensuring a sheltered entrance to the market. To stimulate capacity building, SE4ALL can support the development of research and education facilities in developing countries to reach international standards and encourage public sector co-financing of local training programmes to leverage company support.

### Demonstrating

In an environment where risk and uncertainty are major barriers the need for robust business models came out strongly and showcasing was mentioned repeatedly. “By far the most important thing is to have demonstrably profitable business models that business development professionals can replicate and build capacity in financial institutions to understand that these are viable businesses”. But such models need rigorous and authoritative validation. Incorrectly claiming success undermines trust and recognised auditing processes are needed. As one practitioner noted: “This is necessary because in truth, a lot of this technology does not actually work in the field. It is very high risk business and there is very little independent data on performance and price”. Larger companies suggested that standardised ways to measure impact beyond financial profit would assist them: “We need to prove that our concern it is not just image and communication but what we do is also really useful for communities.”

### Looking beyond 2012

Our respondents noted the need to consider ‘what’ SE4ALL will be in the longer term (post-2012) and how the ‘campaign’ will be rolled out. One respondent noted the danger that if the SE4ALL targets are not connected to the post 2015 Sustainable Development Goals, and if energy poverty is seen as totally separate from other forms of poverty and inequality, then SE4ALL is doomed to failure. SE4ALL needs to be part of a wider strategy of dealing with poverty. It is important to define what the formal structure will be and what potential role business, civil society and governments will play. To keep its momentum post-2012 SE4ALL needs to reach out more effectively to the private sector in all its forms, as there is clearly a great deal of desire to engage, but also a large amount of scepticism to overcome.

## Authors

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- i. See: <http://www.wbcsd.org/accesstoenergy.aspx> and [http://www.unglobalcompact.org/docs/publications/A\\_Global\\_Compact\\_for\\_Sustainable\\_Energy.pdf](http://www.unglobalcompact.org/docs/publications/A_Global_Compact_for_Sustainable_Energy.pdf)
  - ii. See: <http://sustainableenergyforall.org/about-us/energy-access-practitioner-network>
  - iii. See: <http://www.nlmg.com/PageEngine.aspx?&id=22>
  - iv. See: <http://www.wbcsd.org/accesstoenergy.aspx> and Shaad and Wilson (2009) Access to Sustainable Energy: what role for international oil and gas companies? Focus on Nigeria, IIED. <http://pubs.iied.org/16022IIED.html>