

ENERGY4IMPACT

ACCELERATING ACCESS TO ENERGY

ANNUAL REVIEW 2017





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FROM THE CHAIRMAN

I am delighted to present my first Annual Review as chairman of Energy 4 Impact. As a relative newcomer to the board, I am still struck by the terrific variety of activities in our portfolio.

From helping women become solar dealers to improving energy supplies in refugee camps. From helping schools save money with clean energy to helping farmers make money with solar irrigation. From crowdfunding the working capital needs of pay-as-you-go solar companies to credit enhancement for micro-lending to energy enterprises. From advising mini-grid project developers to helping small businesses in newly electrified villages make the most of their new power supply.

The breadth of our portfolio is impressive, and reflects the equally impressive dynamism of the off-grid energy sector.

But we should not forget that underlying our work is a real, desperate human need. Too many people are missing out on life chances as a result of poor access to energy. It impacts their health, affects their education and stops them breaking out of poverty. And all too often it is women and children who bear the brunt of this deprivation.

This is something that must be fixed. It is a priority which has been recognised at the global level, for example in the promulgation of the Sustainable Development Goals. But it also needs creative, business-oriented solutions to be implemented, practically and cost effectively, at the local level.

That is where Energy 4 Impact makes its contribution. Our team includes over 90 specialists in Africa, working in the "last mile" of energy access. For us it is all about the direct impact we can make at a local level and, with over 16 million people benefiting, we know that our approach works. However, much remains to be done to ensure that people's life chances are improved. I would like to thank the Energy 4 Impact team for the great things they are doing on the ground, and I am very proud to be part of this organisation.

Anthony Marsh

But we should not forget that underlying our work is a real, desperate human need. Too many people are missing out on life chances as a result of poor access to energy. It impacts their health, affects their education and stops them breaking out of poverty.

FROM THE CEO

Welcome to Energy 4 Impact's 2017 Annual Review, describing another busy year. We are progressing towards our target of improving energy access for 20 million people by 2020, but at the same time our work is reflecting a more nuanced agenda.

Beyond the numbers of people with better energy access, we also think about: how financial and technological innovation changes supply chains; the impact of policy and regulation; what to do when a growing market "leaves behind" the poorest; how women can gain from, and contribute to, new energy access markets; and, most important, how energy access is not an end in itself – it is the impact that counts.

These sorts of considerations have driven the way we have developed our project portfolio this year with the generous support of new and existing funders. New projects include:

- Developing women energy entrepreneurs in east Africa
- Three programmes advising mini-grid developers
- Providing solar PV systems to schools and clinics in two of Kenya's "most difficult" rural counties
- Helping to grow small businesses newly served by mini-grids

We have agreed extensions to existing programmes, including:

- Developing women energy entrepreneurs in Senegal
- Trialling new approaches to providing energy access for refugees
- Pushing new approaches to crowdfunding to mobilise capital for solar home system businesses
- Providing concessional capital to village banks for micro-loans
- Activities for the World Bank, including advice to energy SMEs, clean cooking in Uganda and biogas in Senegal
- Development support for mini-grid and pico-hydro projects in Rwanda

The breadth of our activities reflects the dynamism and complexity of energy access markets. But it also shows that, when people see Energy 4 Impact working, at the coalface, to deliver practical, market-oriented solutions, they are keen for us to do more of it.

For that, I thank the team on the ground, as well as our funders and trustees. As ever, though, the last word must go to the entrepreneurs we work with, whose tireless endeavours, through multiple challenges, are an inspiration to us all.

Ben Good

The breadth of our activities reflects the dynamism and complexity of energy access markets. But it also shows that, when people see Energy 4 Impact working, at the coalface, to deliver practical, market-oriented solutions, they are keen for us to do more of it.

OUR APPROACH TO THE ENERGY ACCESS CHALLENGE

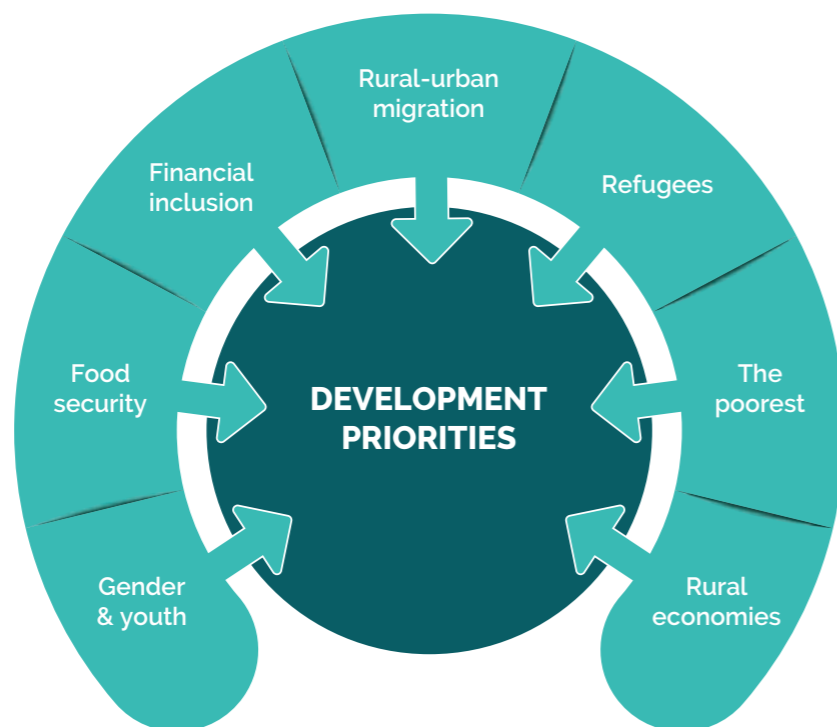
Access to modern energy is essential to social and economic development. Modern energy services and products provide lighting, heating and cooling for homes, businesses, schools and clinics. They provide power to industry and agriculture, enable cooking and water pumping and provide access to information and communication. Energy contributes to job creation, food production, security and increasing incomes. Yet 625 million Africans remain without access to electricity and 730 million rely on inefficient biomass for cooking.

One of the key challenges of our time is to address the lack of energy access and enable millions of people to achieve a better standard of living. Attaining the United Nation's Sustainable Development Goal - ensuring access to

affordable, reliable, sustainable and modern energy for all - will contribute significantly to the realisation of other SDGs, including eradicating extreme poverty, gender equity and achieving universal secondary education.

"Energy is not an end in itself. It is a prerequisite for most Sustainable Development Goals and underpins multiple development priorities. For us it is all about the difference that energy access can make, hence Energy 4 Impact"

Ben Good, CEO, Energy 4 Impact



Where we work



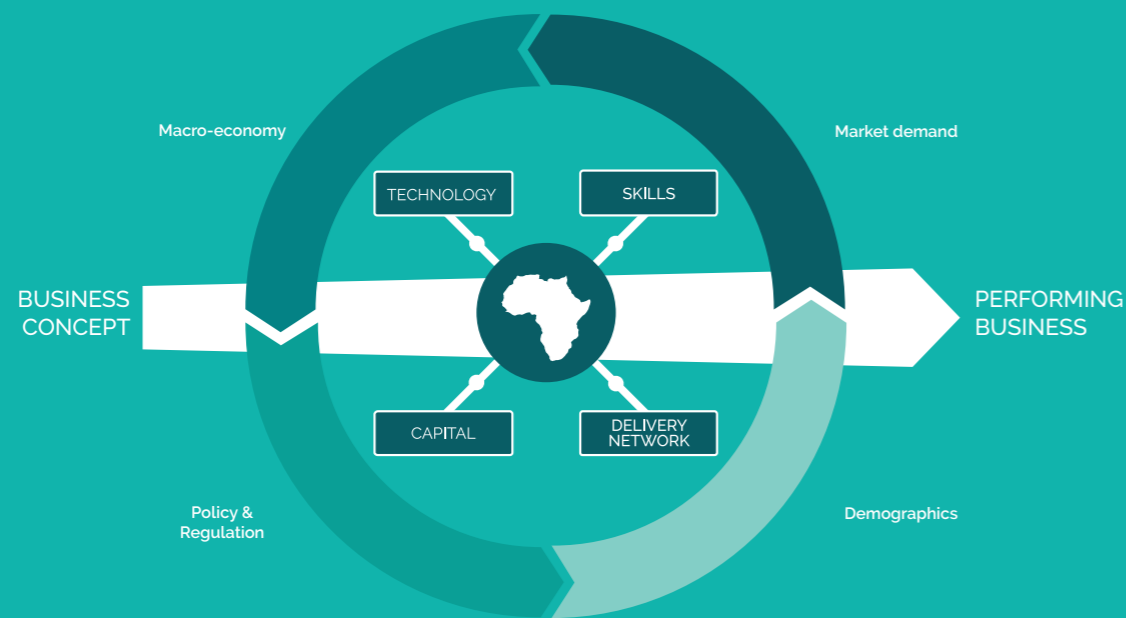
● Recent project experience
● Country offices

"An important role in both attracting early-stage investors and taking early steps towards building a successful company."

Myles Lutheran, MD EFK Group

"An invaluable resource and advisor ... We are happy to continue to work closely with them."

Natalie Balck, Sollatek Electronics (Kenya)



We offer support to businesses at different stages of development from helping to address challenges in early stages of growth to forming productive partnerships and enabling them to become sustainable and scale-up. We also advise donors, governments and other market players.

Our strengths

- 

Mission focused exclusively on energy access markets
- 

Strong networks with companies, financial institutions and other market actors
- 

Excellent understanding of both entrepreneurs' and investors' perspectives
- 

Supporting innovative, pioneering business models
- 

Strong on-the-ground presence – 90 people in 'the last mile'
- 

Expert in gender-sensitive and inclusive market development
- 

Low-cost delivery-focused structure

There is a huge untapped market across Africa, as poor households spend a large proportion of their income on low quality fuel (e.g. kerosene for lighting and charcoal for cooking) that costs more than cleaner alternatives. Solar technology, mini-grid power generation and efficient, clean cooking solutions are critical in meeting the energy needs of the rural and off-grid population. This is the natural domain of small businesses and market-based approaches. With better availability of more affordable energy products, the poor can and will pay market prices for energy solutions of their choice. However, this can only happen where there are vibrant, inclusive, sustainable energy markets.

Thriving markets need a conducive regulatory environment; supply chains in which all actors have the requisite expertise, financial incentives and access to capital; and consumers with awareness, appetite and the means to buy. Energy 4 Impact works with all these parties, especially off-grid businesses, to put these conditions in place.

OUR BUSINESS MODEL

Energy 4 Impact is a non-profit organisation working with businesses that provide energy access to off-grid communities in Africa. We firmly believe that business, not aid, can provide long-term solutions to the energy access problem, so we aim to develop the capacity of enterprises to deliver access. Through a unique, client-focused approach, our development, financial, technical and advisory support to energy businesses builds both the demand and supply sides of the market.

We believe that to succeed in the energy market, businesses must have resources such as technology, skills, capital and a delivery network. These are difficult to access for early stage businesses, especially in sub-Saharan Africa. We offer solutions and services to help companies access resources and training and overcome gaps in the market environment. We focus on innovative business models and sustainable market strategies which help businesses to grow and make energy products and services more affordable for the poor.

Energy 4 Impact's strengths come from a deep understanding of the energy market in the last mile of development in sub-Saharan Africa. They deliver energy access by putting the businesses at the centre of their approach and by engaging with all the players in the energy access eco-system."

Sheila Oparaocha, Coordinator of the International Secretariat on Gender & Energy – ENERGIA

The gender dimension of energy poverty

Women often bear the burden of energy poverty, from gathering fuelwood to cooking meals on inefficient, smoky stoves.

Traditionally, the treatment of energy in development policy and planning is gender blind, assuming that any well designed programme will meet the needs of both women and men. However, this fails to recognise that women and men have different needs, experiences and opportunities. Any new planning or policy must take into account the realities of gender experiences to ensure maximum opportunity, benefit and impact for the whole population.

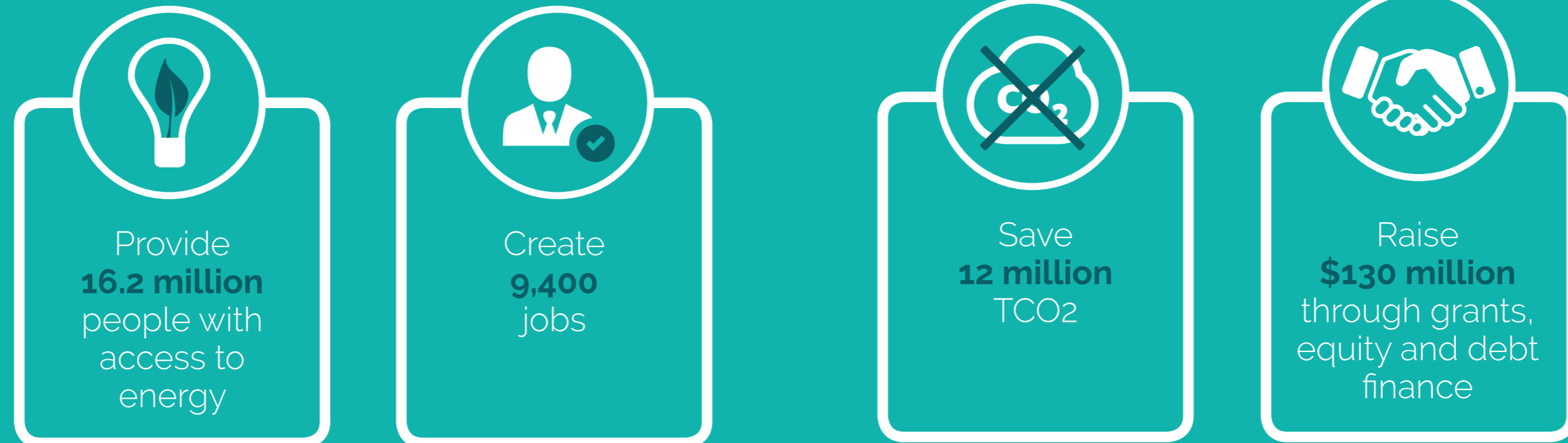
At Energy 4 Impact, we believe that women play an important role in expanding access to energy for unserved or under-served communities. We are committed to rolling out initiatives aimed at understanding and unlocking women entrepreneurs' potential. To this end, our gender-informed approach focuses on helping women entrepreneurs to overcome gender-specific business challenges.

Our strategies include building women's capacity in developing local energy markets, advocating for gender equality in national development strategies and setting up financial mechanisms to unlock investments.

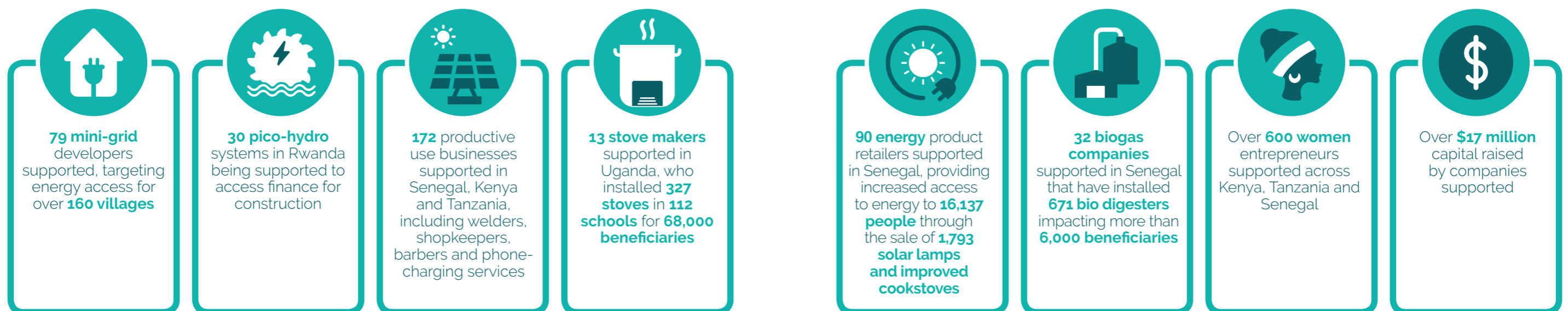


IMPACT

We estimate that our initiatives have helped almost 4,000 businesses to:



In the last year we have worked on projects across a wide spectrum of activities and technologies. Examples include:

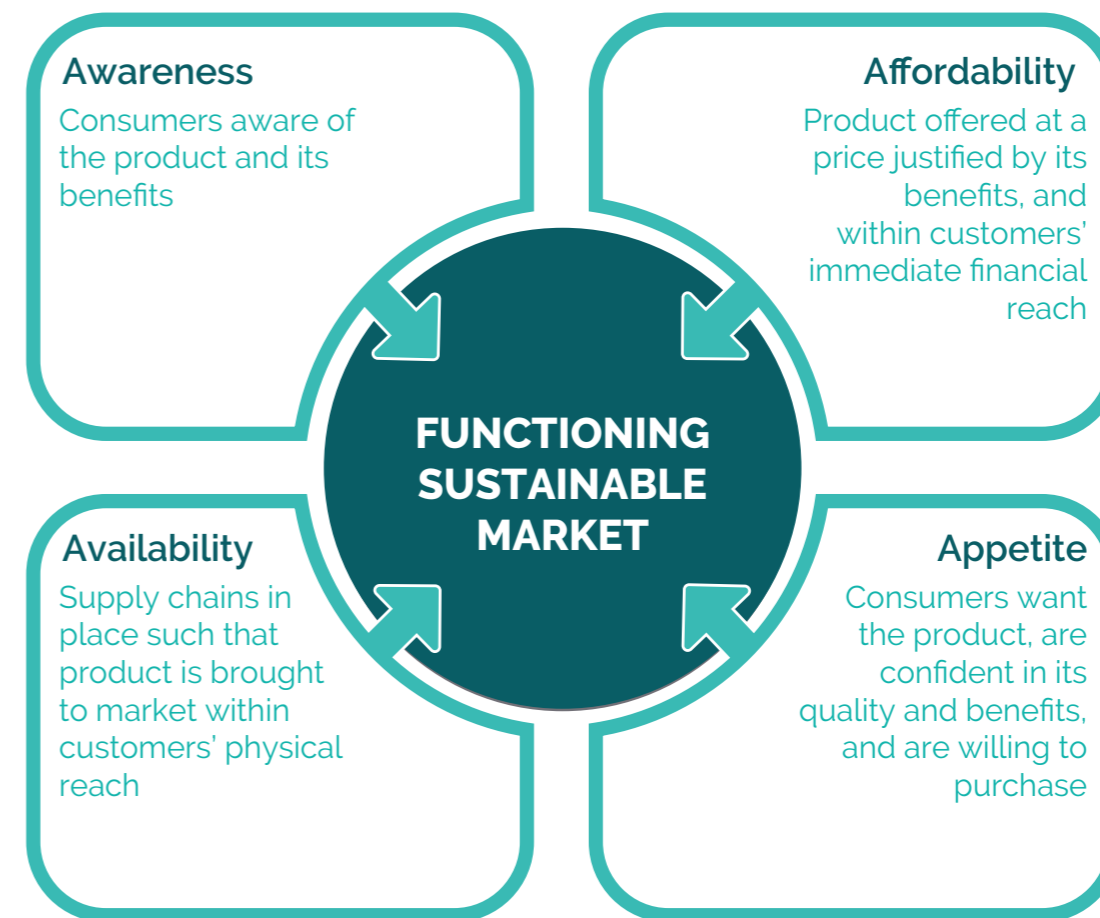


Together, these interventions have had a positive impact on rural social economic development in the form of enhanced food security and climate change resilience, improved health, increased youth and women's employment opportunities, women's economic empowerment, financial inclusion for the poorest slice of the population and improved energy access and opportunities for displaced people.



BUILDING AND DEVELOPING ENERGY MARKETS

We believe that for energy markets to function effectively, four conditions have to be satisfied: awareness, availability, affordability and appetite. A lack of awareness is still a key challenge when it comes to large-scale adoption of energy products and services. This is especially true where markets have been flooded with low-quality knock-offs. The availability of energy products varies enormously across sub-Saharan Africa. Although markets are growing there is still a concentration in a few countries, mainly in East Africa, meaning consumers across the rest of the continent struggle to access products even where there is a willingness to buy. Affordability is a major factor in unlocking greater energy uptake for the poorest and there also needs to be a clear desire and appetite to buy the product, based on its quality and value proposition.



Unfortunately, these four conditions will not develop on their own. Building markets depends on resolving the issues of capital availability, customer awareness and actors' capacities. Advocacy is also needed to ensure that favourable policies are in place.

OUR APPROACH TO BUILDING AND DEVELOPING ENERGY MARKETS

Energy 4 Impact works to build effective markets through a number of integrated interventions involving all players in the market ecosystem: private sector businesses, consumers, investors and financial institutions, governments, development initiatives and academia.

These interventions are geared towards strengthening the growth and development of enterprises serving these markets with a range of tailored services: supporting strategies for improving the awareness, affordability and availability of energy products and building

demand; increasing capital availability; carrying out advocacy and research to influence policies and strategies; and facilitating the integration of women into the energy access value chain.

Supporting the development and growth of energy enterprises

We advise businesses ranging from micro-enterprises operating in the informal economy and serving the poorest in remote areas to SMEs and larger local or international businesses and project developers, able to achieve impact at scale. These are all important players in the same market system. To build effective markets and expand energy access we must engage with these actors and establish cross-business synergies.

We work with thousands of enterprises, assisting them to build their capacity and access finance. We offer support at different stages of development, from helping to address challenges in early stages of growth and enabling them to scale-up. We focus on innovative business models and sustainable market strategies and help companies to build their supply chains and delivery networks.

We advise on key business issues from financial planning to project development and also help businesses, governments and other market players form productive partnerships.

Our work in the last year includes: supporting women to integrate into the energy value chain selling clean cookstoves, briquettes and solar products; assisting stove makers to expand their businesses; investment readiness advisory helping a number of companies to improve their chances of raising capital; assisting a solar irrigation system company to de-risk their business model and build their market; and supporting entrepreneurs to increase or diversify their income through productive activities.

Strategies for improving availability and affordability of products

Whilst technology trends such as decreasing product costs and PAYG/mobile banking are transforming poor people's purchasing power and energy markets, the poorest still face real challenges accessing energy products and services. The "last mile" of distribution is still challenging. It can be difficult to deliver products and services cost-effectively to remote locations, and poor infrastructure and widely dispersed consumers pose additional challenges. Most companies choose to target an easier, wealthier, customer base.

To counter this Energy 4 Impact is pioneering new strategies and initiatives. For example, we are facilitating last mile distribution partnerships and designing new donor approaches to incentivise the supply and improve the affordability of products for the poorest.

CASE STUDY

With funding from The Adventure Project we are working to support the development of a sustainable stove market in Kenya. As well as technical and business advisory for 19 micro and small enterprises producing stoves we put a strong emphasis on market stimulation, including facilitating attendance at marketing fora and developing a finance package linked to village banks to address affordability issues in the market. As a result, the entrepreneurs made nearly \$4000 of direct sales and have formed valuable relationships.

Facilitating last mile distribution partnerships

In Senegal, we have created partnerships with energy product suppliers to expand their reach into rural areas. Since suppliers are often faced with the issue of building cost-effective distribution networks in the last mile of rural areas, we proposed a distribution chain by training groups of women to retail the products in these areas. We have created a new network of 23 women distribution agents for lower cost pay-as-you-go (PAYG) solar home systems in a remote region of the country.

Increasing credit facilities to supply the poor

Under the ENERGIA-funded Women's Economic Empowerment (WEE) programme in Senegal we have designed a supplier's credit guarantee that allows groups of women entrepreneurs to purchase pico-solar products and improved cookstoves on credit and to extend that credit to customers. The business model is based on women placing bulk orders of products with the supplier, who requires 25% of the value in cash and the remaining 75% within 60 days. To improve the creditworthiness of these informal groups, Energy 4 Impact acts as the guarantor for that 75% with the supplier. The women can then sell on credit to their customers, who need to pay 25% cash and the rest within 45 days. To minimise the risk of buyers defaulting they can only sell on credit to people they know or who are known to the community.

Supporting financial inclusion

Energy 4 Impact is working with a number of PAYG solar companies that are creating pathways to financial inclusion for parts of the population which have, until now, been excluded. More than half of the world's adult population do not have an account at a formal financial institution. Financial inclusion means that households and businesses can use appropriate services in order to improve their lives, including via access to energy.

PAYG business models are allowing poor households to pay off the cost of solar products by making small payments over a longer period of time. When PAYG companies integrate with a local mobile money service, this lowers the cost of repayment for both the company and the customer, minimizes risk to the company as the system can be turned off remotely in the event of non-payment, and can help customers build credit history that can be used to access future financing. In more nascent mobile money markets, PAYG solar can create an incentive for clients to open a mobile money account for the first time, simultaneously expanding access to electricity and creating pathways to financial inclusion.



Building the IICS market in Uganda

The institutional improved cook stove (IICS) sector is at early stage in Uganda and has great potential, as approximately 23,000 education institutions across the country could benefit from at least one stove. Head teachers tell us that the provision of a hot meal in the middle of the day is important in maintaining high attendance levels at their schools and in ensuring individual pupils' capacity to learn. It is therefore central to their role as an educational institution.

Energy 4 Impact is promoting the uptake of IICS in schools in Uganda by working with cookstove manufacturers, distributors and retailers to: improve their technology for fixed and movable stoves; supply a concessional loan which can be used as a working capital facility so manufacturers can finance inventory and sell the stoves on credit to schools; and assisting them to handle credit sales and cash management. We are also assisting the manufacturers in marketing the benefits and use of IICS through school awareness campaigns, different marketing techniques and promotional events. Awareness campaigns have been carried out across more than 4,000 schools and 515 schools have installed efficient stoves benefiting 204,170 school children, cooks, teachers and administration staff.

Improving awareness

Many potential consumers are unaware of the existence and benefits of energy products such as solar lanterns and improved cookstoves. In the absence of an alternative energy source, rural people continue to use inefficient stoves and rely on kerosene or candles for lighting. Awareness campaigns are needed not only to enable consumers to distinguish good quality products from bad, but also to generate a change in consumer practices. Energy 4 Impact works with local suppliers and distributors on customer awareness campaigns.

A campaign carried out by Energy 4 Impact in Tamabounda, eastern Senegal, resulted in a significant increase in the number of people who are aware of the benefits of solar lamps and improved cookstoves and resulted in a 72% increase in sales.

Integrating women in energy access value chains and their role in serving the poor

Women-led enterprises face the same challenges as most micro businesses operating in informal economies: a tendency to remain small and unproductive, mainly due to lack of business skills, a shortage of reliable and affordable supplies and distribution channels, and a lack of access to credit. Women also come up against a range of gender-related barriers that make it difficult for them to penetrate male-dominated energy markets: they rarely own assets or formal land title, have unequal access to education, market information and capital and are less mobile than men.

We work with women to help overcome these challenges and to facilitate their integration into energy markets through wide-ranging, gender-sensitive support. Our interventions include: providing gender-focused business, empowerment and leadership training; sensitising manufacturers, suppliers, retailers and consumers by challenging pre-defined gender roles and setting up effective partnerships; working with financial institutions to design and manage credit lines, loan guarantee funds and seed capital grants earmarked for women businesses in sustainable energy.

Over the last year, with funding from the US Department of State's Partnership on Women's Entrepreneurship in Renewables (wPOWER) and ENERGIA, we have supported 560 women in rural Senegal, Kenya and Tanzania to boost their involvement in the renewable energy value chain.

Advocacy and research to influence policies and strategies

Market-based approaches together with favourable policy can accelerate energy access. And governments have a critical role to play in facilitating sustainable energy markets and achieving universal equitable energy access. However, change does not happen overnight. For effective change to take place, it needs to be supported by a cultural shift at the national and policy level.

This is why, alongside our women economic empowerment programmes, we also raise awareness on the socio-economic benefits of integrating women into energy value chains, advocate for gender equality in development strategies, energy policies and energy access projects.

Over the last year we have carried out original research and used evidence from our projects to influence policies and strategies. For example, our advocacy work in Senegal is showing clear results, with gender being integrated into energy policies and investments in Senegal. The work forms part of ENERGIA's Gender and Energy Advocacy Programme, which is supporting the SE4ALL campaign to ensure that governments and donors allocate investments to energy programmes that are gender informed. Energy 4 Impact's approach was to bring together a task force of members from the public and private sector, civil society and academia to jointly inform and push for the integration of specific gender actions and objectives in energy policies and programmes.

As a result of these efforts, all key documents related to SE4ALL now include specific references to gender, the Ministry of Energy has decided to elaborate a strategy for integrating gender in its energy policies and programmes, and the Senegalese Agency for Rural Electrification has integrated Energy 4 Impact's observations related to gender into their programme. We are now following up on these to ensure gender is taken into account during the implementation phase.





INNOVATIVE APPROACHES TO CAPITAL ACCESS

Access to finance is key for the growth of off-grid energy businesses in Africa. However, there are numerous barriers facing companies when trying to access finance. These fall on both the demand side – lack of experience of the capital requirements, a lack of awareness, a lack of credit history and a lack of collateral – and on the supply side.

On the supply side, financial institutions may have limited understanding of the off-grid energy sector. They are wary due to a lack of proven experience and business models, low returns and unclear exit strategies. Local banks are often risk averse and see micro-enterprises as high-risk and low-volume business. Foreign exchange risk is a critical issue for international lending and investment, and relatively small transaction sizes are an issue for many institutions. Meanwhile, grant providers can have convoluted requirements and are often inflexible and slow to disburse funds.

OUR APPROACH TO TACKLING CAPITAL ACCESS

For over ten years we have been tackling these supply and demand side challenges. Energy 4 Impact has been helping energy entrepreneurs to access equity, debt and grant funding and has partnered with financial institutions, investors and donors to help them better understand the energy sector. We use different strategies to support different types of companies to access capital: from micro-enterprises that require a few hundred dollars to mini-grid developers and solar home system providers that need millions of dollars.

Helping micro-enterprises access capital

Micro-enterprises, whether suppliers of clean energy products or productive users of off-grid electricity, help drive the growth of the off-grid sector and enhance the developmental impact of rural electrification programmes, creating jobs and economic growth. However, they often face greater challenges in accessing finance than larger companies. Local banks can be reluctant to finance them because of the perceived high level of risk and the proportionately high transaction costs. Those financial institutions that do offer loans tend to charge high interest rates and transaction fees, have onerous collateral requirements, and can be slow to do business with. Micro-enterprises, therefore, require additional support to secure their financial viability and sustainability.

It is particularly hard for women entrepreneurs in the informal economy to access capital. Most women lack the required collateral, since land and buildings are owned and inherited by men, and many do not have the credit history the financial institutions require. They may also lack the skills and confidence and have fewer empowerment opportunities whilst the lenders tend to work with male-dominated networks.

Our approach is to work in parallel with the financial institutions and micro-enterprises. We provide business and financial training to entrepreneurs, including advice on applying for and managing loans. We introduce them to financial institutions for loans, and can monitor loan performance and repayments. At the same time, we train financial institutions on renewable energy businesses and their funding needs, recommend and introduce entrepreneurs to them and can provide partial guarantees or concessional finance for loans.

We have supported micro energy business through a combination of loan guarantees – to cover part of the loss from borrowers defaulting on their loans – and **concessionary funding**. The concessionary funding is aimed at local financial institutions for on-lending at the micro level for small-scale energy entrepreneurs and end-users. Recently, for example, a loan was provided to a local micro-financial institution to become a last mile distributor of clean energy products and a provider of end-user credit.



CASE STUDY

Siongiroi Financial Services Association (SFSA) serves 5,000 members in Bomet County, Kenya. In an effort to increase the distribution and adoption of locally manufactured efficient cookstoves, Energy 4 Impact provided a loan to SFSA, to enable it to sell the products on credit to end users. We also introduced SFSA to 10 stove manufacturers and supported SFSA in product awareness raising and marketing.

As a result of the marketing campaign, SFSA ordered 1,000 improved cookstoves and 200 solar lanterns from eight suppliers. We provided a six-month interest-free loan to SFSA to cover the full costs of the order. On repayment the money is available for further loans for purchasing stock for this and other financial services associations. To date, at least 5,000 people have benefited from the initiative, and SFSA has the capacity to offer clean energy products and an incentive to recruit new members.

Helping SMEs and project developers raise capital

We have in-depth experience of helping companies raise different forms of public and private capital. Over the last decade, Energy 4 Impact has supported more than 200 SMEs to raise capital, 13 during last year. These vary from very early stage to later stage companies that have already raised a few million dollars in equity financing. They range from mini-grid developers to companies selling solar products/services or clean cooking solutions. Since receiving support from Energy 4 Impact they have raised \$17 million in grant, equity and debt (\$130 million over the past decade).

For example, we helped Solaris Offgrid, a pay-as-you-go solar energy company offering affordable rural energy solutions, to raise more than €1 million to expand its operations. We advised on valuation, the company's financial model and on financing termsheets.

Crowdfunding has a growing role in raising capital for energy access businesses, from early stage seed capital to working capital loans and equity. There are now a number of platforms active in the sector, including Bettervest, Lendahand and Trine, and the crowdfunding market for energy access grew from \$3.4 million in 2015 to \$8.7 million in 2016. Energy 4 Impact provides innovative support for a broad range of platforms including debt, equity, reward and donation.

"We are proud to have brought clean and safe electricity to almost 10,000 people across six countries, since we began operations in 2015. But that's just the beginning. Energy 4 Impact assisted us with preparing and executing a Series A round, which successfully closed earlier this year. This funding will prove crucial as we work towards our ambition of providing power to 10 million people by 2022."

Siten Mandalia, co-founder of Solaris Offgrid

We are implementing a DFID-funded programme, Crowd Power, which tests whether grants by public agencies can accelerate the impact of crowdfunding platforms. Financial support is provided to trial a variety of approaches such as match-funding, guarantees (insurance), first-loss and "gift" vouchers. To date, the Crowd Power programme has contributed a total of \$250,000 across 16 energy access related campaigns in 2016, which in turn raised \$1.5 million for projects expected to provide 62,500 people with energy access.

This year we launched a paper examining the use of crowdfunding by start-ups and non-profits raising capital: *Crowd Power: Can the Crowd Close the Financing Gap?* The report looks at energy-access-related crowdfunding across a range of platforms, showcases successful campaigns and highlights key trends and statistics. For instance, the strongest growth has been identified in debt crowdfunding by SMEs. It suggests that debt crowdfunding is the most scalable of all crowdfunding types for the off-grid energy space and suggests funders can play an important role in this area by providing investment guarantees to the crowd and developing other interventions such as foreign exchange protection buffers to accommodate local currency loans.

Energy 4 Impact has also supported the development of a platform designed for direct retail lending to solar PAYG companies. Energise Africa is an additional component of Crowd Power funded by DFID and Virgin Unite. Jointly delivered by Lendahand and Ethex, the online platform was launched in October 2017. The target is to raise £3.6 million in the first year of activity, increasing to £16.6 million over three years.

Accessing capital for mini-grids

Many commercial investors are risk averse and are put off by the lack of proven, scalable business models in the sector, the low risk-adjusted returns and lack of successful exits. The management of foreign exchange risk is a key concern if mini-grid capital costs are financed in hard currency while their revenues are in local currency; small transaction sizes may not justify the due diligence, structuring and transaction costs." Another challenge to project finance includes the lack of predictable cash flows. Despite these challenges, strategic investors such as Enel, EON, Engie and Caterpillar are investing in the sector, which suggests there is a growing appetite to invest.

An alternative for a creditworthy developer with the necessary appetite and balance sheet capacity is to finance smaller mini-grids through corporate finance. It is an option for all types of mini-grids, including smaller projects (less than 100 kW), and may be quicker and cheaper to execute than project finance.

Capital raising is a key component of three separate mini-grid programmes managed by Energy 4 Impact on behalf of the African Development Bank, IFC and World Bank. We offer mini-grid developers tailored investor facilitation, advice, capital raising assistance and introductions to potential investors.

Developing financial models – We have developed or improved financial models for a number of developers. One of these, RVE Sol, was recently awarded a grant by the DFID-funded Green Mini-Grid Facility Kenya.

"We have been working with Energy 4 Impact on our solar mini-grid business in Kenya since last year in a number of areas: business model assessment, demand analysis and stimulation, financial modelling and technical design. We have found the Energy 4 Impact team to be very professional and extremely responsive and look forward to continuing to engage with them, as we expand from our Sidonge pilot to replication sites in western Kenya."

RVE Sol (Kenya): Vivian Vendeirinho, Founder and Managing Director



Recently Energy 4 Impact helped secure a financial agreement between InfraCo Africa and Virunga Power to develop the Lilondi 2.5MW mini-hydro power project in Tanzania. Energy 4 Impact was initially involved in auctioning the project site on behalf of the Rural Electrification Agency (REA), under the ESME programme funded by the World Bank. Through the IFC funded programme and working with partners, Energy 4 Impact's legal advice and support enabled a lease agreement for the land to be finalised and for Virunga to reach financial close with InfraCo Africa. InfraCo Africa will now fund the rest of the development costs and the construction costs.

Lilondi will supply electricity to agricultural, residential and small commercial/industrial consumers who are not currently served by the national grid. The construction is expected to commence in 2018, and the plant will be fully operational by 2020. With an estimated 480MW of small hydro potential in Tanzania, Lilondi will be run as a pilot project to assess the viability of community partnership hydropower projects and their potential for supplying electricity to rural East Africa.



FARMING AND FOOD SECURITY

Agriculture is Africa's largest economic sector, contributing 32% of the continent's gross domestic product and providing employment for two thirds of people in rural areas. The majority of the sector is made up of smallholdings, which account for approximately 80% of farmland in sub-Saharan Africa.

Energy access is key to increasing productivity along the whole agricultural value chain, from farm to market, and contributes to food security, economic growth and increasing incomes.

Electricity also has a role in linking agricultural workers to their markets and increasing their knowledge by powering information and communication technologies.

However, there are a number of barriers preventing the widespread uptake of energy technologies. These include relatively high technology costs, limited awareness of the benefits, lack of appropriate policy incentives and limited access to finance for farmers and technology suppliers.

OUR WORK IN THIS SECTOR

We support enterprises that adopt, develop and market sustainable, cost-effective solutions for agricultural production, post-harvest and storage processing, including solar pumping, cooling, chilling and drying. These technologies result in saved costs, increased yields and local value capture for farmers or local agro enterprises.

Our support to businesses includes advice on entering markets, product pricing, sales strategies, market assessments, payment solutions, route-to-market strategies and on inputs to the agricultural value chain.

Solar irrigation

Strategic advice on routes to market

In the past year, we have worked with SunCulture, a pay-as-you-go (PAYG) solar irrigation system supplier in Kenya, to help increase its market reach and share by offering asset financing for its products. Our advisory team suggested that SunCulture should adopt an innovative strategy that would improve the farmers' access to markets, and thus increase these farmers' ability to make the repayments on the asset provided. This de-risks the company's business model whilst helping small farmers increase their profitability. This pioneering approach should jump start a sustainable market for clean irrigation while promoting the development of the agri-food sector in the country.

Energy 4 Impact is also advising Azuri, a British PAYG solar home system provider, on entering Kenya's solar irrigation market. We are helping Azuri to assess the impact of 20 pilot irrigation systems on farmers' yields and the related economic, social and environmental impacts, as well as assessing farmers' needs and ability to pay, the appropriateness of the technology, and the business case against diesel for a portfolio of high value crops.

Designing a financial mechanism for upscaling solar irrigation

In Rwanda we are working to increase the adoption of solar irrigation equipment by smallholders, in order to increase their incomes and food security. Agriculture is the backbone of Rwanda's economy and key to the country's growth and poverty reduction strategy. However, dependence on rains and a lack of irrigation are holding back productivity and affecting food security.

On behalf of Sida, we have completed a number of assessments of farmers' needs, suppliers and financial institutions. As a result, we have designed a financial mechanism to increase affordability by supporting PAYG solar irrigation system suppliers with a working capital facility to finance inventory purchase, and a facility to enable farmers and farming cooperatives to purchase systems on credit. We are now seeking to secure funding to roll out the financing facilities, plus other interventions to help develop the market.

Solar refrigeration

We have been advising a number of companies that have designed solar refrigeration and food preservation solutions that can be deployed at the farm level.

Energy 4 Impact has worked with clients such as Sure Chill, D-Grid Energy and Inficold to help them identify the potential for off-grid solar refrigeration among the horticulture value chains in Kenya.

Energy 4 Impact has also worked with Sollatek on its product expansion that involved the provision of PAYG solar refrigeration to small-holder milk farmers. We helped Sollatek analyse the key risks and opportunities of solar milk chilling, including potential price points, and suggested strategies to target the market and recommendations on how to mitigate the risks involved.

Agro-waste briquette production

We have supported several companies in Kenya who are using agricultural waste as feedstock for small-scale and large-scale briquette production. For example, Energy 4 Impact has provided business, technical and financial advice to companies producing non-carbonised industrial briquettes using rice husks, coffee husks, bagasse and pineapple waste. These companies include major players in Kenya such as Olkaria, Kings Bio Fuels, Global Supply Solutions Limited and Hermissons Energy.

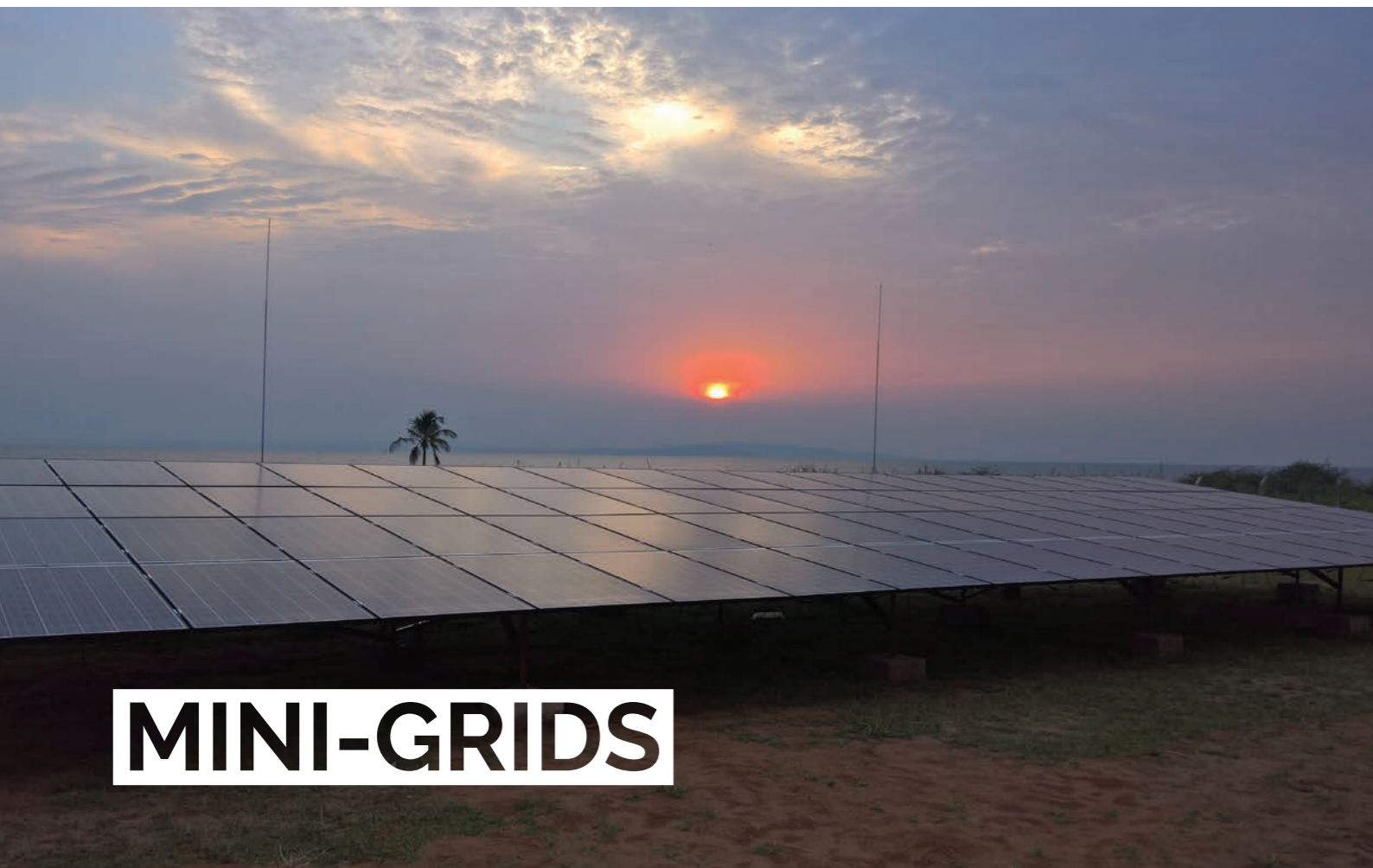
Powering agriculture through mini-grids

As communities get power for the first time, much needs to be done to help the local micro-businesses to take advantage of the growth opportunity offered by the new power. Energy 4 Impact has worked with mini-grid companies, such as Absolute Energy, to analyse different regions' agricultural value chains to assist in mini-grid site selection and maximise agri-production. We have also supported existing mini-grid companies to spur growth in various agro-processing activities such as maize milling and milk chilling.

CASE STUDY

Securing farmers' livelihoods through solar-powered irrigation

FuturePump, a company operating in East Africa, has developed a low-cost solar-powered irrigation system that mitigates the impact of unpredictable rainfalls on small-scale farmers in western Kenya. Its portable pumps can lift enough water to irrigate half an acre per hour, so farmers can grow more produce year round. FuturePump is already seeing positive correlations between solar irrigation and smallholders entering the formal economy. Farmers can buy the \$650 system in installments through mobile phone payments. This also helps them to build a good credit history. We helped FuturePump establish its operations in Kenya and introduced them to distributors, sales partners and potential investors. The company was also given access to facilities at the *Kenya Industrial Research and Development Institute* to test the performance of the pump.



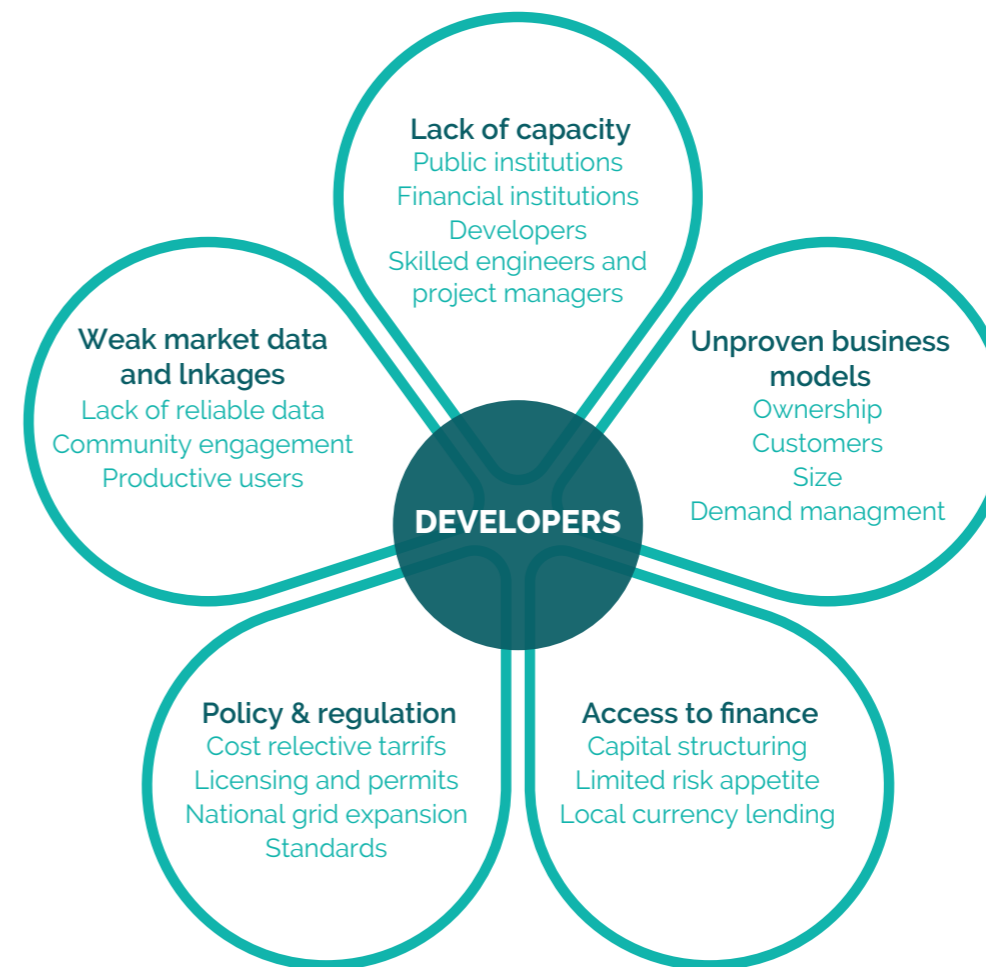
MINI-GRIDS

Mini-grids are expected to make a major contribution to achieving universal electricity access in sub-Saharan Africa. The International Energy Agency (WEO 2017) estimates that if universal energy access were to be achieved by 2030, then mini-grids would account for 44% of the additional people getting access.

However, this estimate may be optimistic. Although there is growing experience of mini and micro-grids, there are few demonstrated examples of medium- or long-term success, or of commercially viable mini-grid business models. This is because of the many challenges developers face.

We see five interrelated main barriers to the growth of private sector mini-grids in Africa. The most important for developers are gaps in the

policy and regulatory framework, specifically issues related to tariffs, which in turn affects the profitability and sustainability of a mini-grid and its ability to access finance. There are also issues relating to licensing and arrival of the national grid. Other significant hurdles include a lack of proven business models; inadequate market data and linkages; the lack of capacity of key stakeholders; and challenges in accessing finance.



OUR WORK WITH MINI-GRIDS

Energy 4 Impact provides mini-grid developers with specialist support through all stages of development, from early-stage market sizing, site selection and feasibility all the way through to assisting in equity raising, financial close and operation and maintenance. Projects can range in size from a few kilowatts up to a few megawatts, (in which case there may well be a grid connection as well as local distribution), and include a number of renewable technologies.

We also work within communities newly served by mini-grids to stimulate demand and to ensure that the impacts of energy access are maximised, and with policy makers on tariff, licensing, legal and regulatory issues.

Over the last year we have provided support to around 100 renewable electricity mini-grid developers across sub-Saharan Africa, through several initiatives funded by the AfDB, IFC, Sida, Power Africa, Rockefeller Foundation, the World Bank and the Mott Foundation.

Addressing barriers to scaling-up green mini-grids

With funding from the African Development Bank, Energy 4 Impact and Inensus have been leading a flagship mini-grid programme, addressing the technical, policy, financial and market barriers confronting the emerging green mini-grid sector in Africa. Through this programme we have provided assistance to 54 mini-grid developers in 22 countries, covering projects at all stages of development.

We provided services ranging from technical and engineering support, business and financial advice, legal and compliance advice, capital raising and investor facilitation and advice on market scoping, and community engagement.

We have also developed a number of knowledge products on demand assessment, promoting productive use, billing methods and performance monitoring. Our report *Green Mini-grids in sub-Saharan Africa: Analysis of Barriers to Growth and the Potential Role of the African Development Bank in Supporting the Sector* is available on our website.

▲ **Figure above: Barriers to the development of green mini-grids in Africa**

Source: "Green Mini-Grids in Sub-Saharan Africa: Analysis of Barriers to Growth and the Potential Role of the African Development Bank in Supporting the Sector" by Energy 4 Impact and Inensus. Published by: African Development Bank



CASE STUDY

One of our clients, Havenhill Synergy, commissioned a 20 kWp solar-battery mini-grid close to Abuja in Nigeria earlier this year. The project has connected 70 customers and one drinking-water pump and plans to connect 163 customers. Energy 4 Impact and Inensus provided advice and training on the installation and commissioning of the \$117K pilot project, which is funded by a \$100K USADF grant. We also advised the company on the demand assessment, technical design, equipment procurement and bill of quantities and the development of a financial model.

"The support we received enabled us to optimise our resources and save money on technical design and procurement. We look forward to having a long partnership."

Olusegun Odunaiya, Managing Director, Havenhill Synergy Limited

For developers who just need light-touch support we have launched the Green Mini-grid Help Desk, a knowledge hub that includes practical documents to assist them in all phases of development and access to online expert advice. See greenminigrid.se4all-africa.org.

Transaction Advisory Facility for green mini-grid developers

Within the last year Energy 4 Impact, in a consortium with Norton Rose Fulbright, MultiConsult, TAREA and BICO, delivered the IFC's Transaction Advisory Services Facility (TASF). The programme's goal was to support mini-grid project developers in Tanzania through three key interventions: direct technical support, capacity building through training workshops, and knowledge access through a web portal for the project developers to download tools and templates.

Technical assistance was provided to 31 project developers, the majority of whom were small hydro developers. Many of these developers had poor-quality feasibility studies, financial models and business plans which meant it was difficult for these projects to develop further. We helped these developers by carrying out an investor readiness assessment, highlighting the key steps to progress the project and, for a small number of developers, we prepared a bespoke financial model.

Developing the off-grid renewable energy market in Rwanda

With funding from Sida we are working with small and micro-project developers in Rwanda to strengthen the off-grid renewable energy market and deliver energy access to an estimated 77,500 people in some rural areas of the country.

Energy 4 Impact is supporting seven small renewable energy projects with a package of technical and transaction advisory support services. They range from 50kW to 3MW and from isolated greenfield renewable energy mini-grids to grid extension projects. Under the same programme we are also boosting the expansion of the local pico-hydro market by supporting the development of 30 micro-utilities, with a total capacity of 450kW.

Besides providing early stage project development support to the mini and micro-grid utilities, our strategy involves supporting micro and small business in the communities they serve to develop productive use activities.

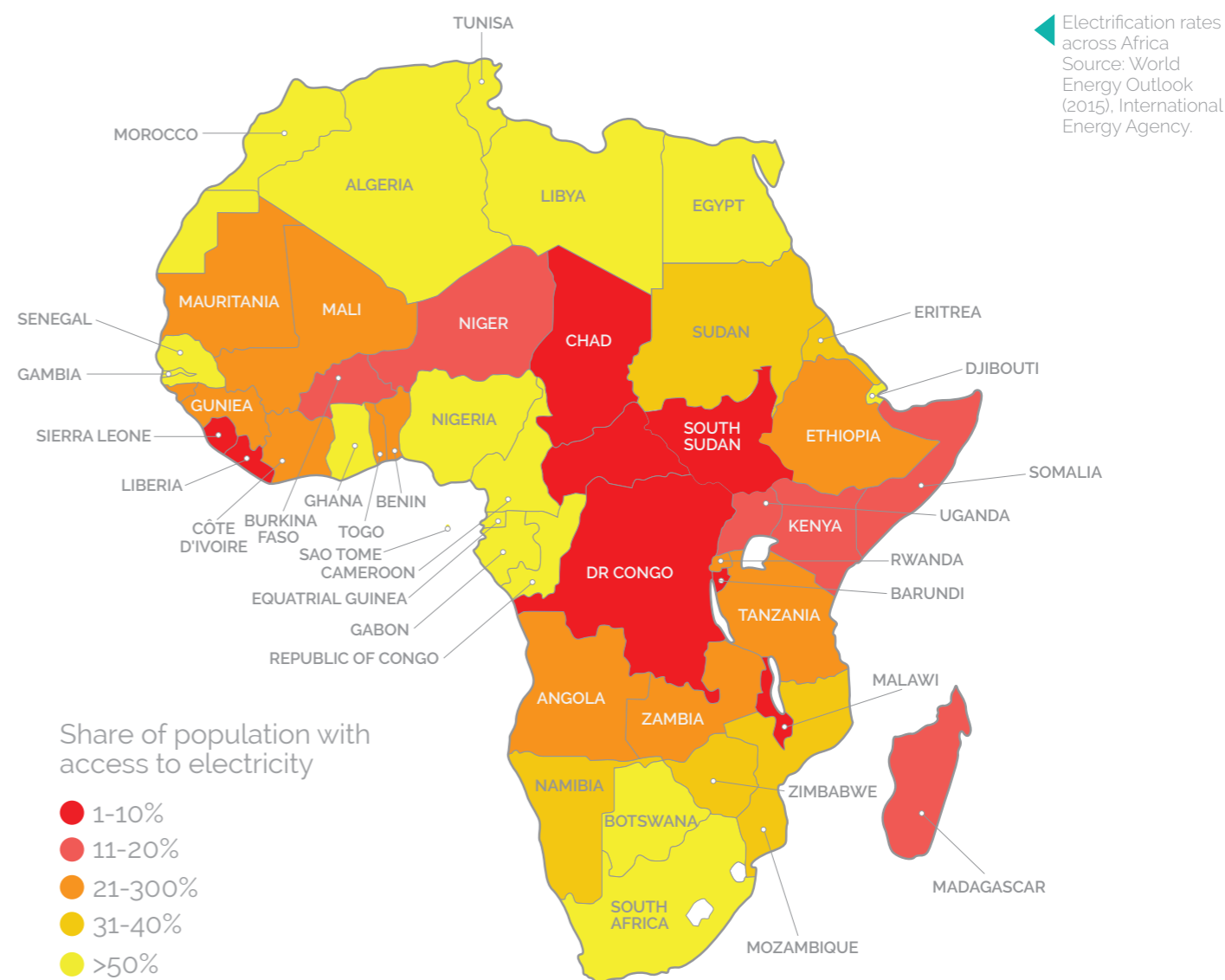
Energy demand stimulation to help the viability of mini-grids

Mini-grids that focus on industry and businesses are more likely to reach a critical mass of power demand and cover their costs compared with those that focus only on households. It is crucial for developers of smaller mini-grids to promote productive uses for electricity among their customers by engaging with grinding mills, wood or metal workshops and other small, household-based industries.

Energy 4 Impact supports mini-grid developers in a variety of ways from analysis of existing productive users to community engagement, and promotion training among end users. We have also been designing a working capital facility which enables developers to provide credit to local micro-enterprises wishing to buy productive appliances. We will explore this in more detail in the next chapter.

"The TASF team has been of great help in assisting us to analyse the financial model and technical feasibility of our project up until the final stages. Their hard work and dedication has helped us learn a lot."

Diana Mbogo, Millennium Engineers Enterprises Ltd





PROMOTING PRODUCTIVE USES OF ENERGY

“Productive use of energy” (PUE) is the term used by the development industry for the uses of energy for business-related activities. Typical rural productive uses of energy are in irrigation and agro-processing (e.g. milling, drying), various small-scale manufacturing businesses such as carpentry, tailoring, welding and looming, and in the service sector such as shops, bars and restaurants, salons, internet providers and mobile-phone-charging.

The opportunity to expand productive uses is a key rationale for rural electrification. Because energy access can enable these small businesses to grow, it creates livelihoods, income and employment opportunities. At the same time, if these businesses prosper, more power is purchased and the economic viability of electrification projects is improved.

The catch is that, while energy may be a necessary condition for businesses to grow, it is not sufficient. Making power available to a

community does not automatically result in the expansion of its small businesses. For that to happen multiple other conditions have to be satisfied. The businesses need to know about the opportunity to grow/diversify, and have a plan and the capacity to realise it, encompassing a route-to-market, supply chain, staffing etc. They may also need access to capital. These are challenges which Energy 4 Impact faces in much of its work, and therefore we are well placed to help address them.

OUR APPROACH TO SUPPORTING PRODUCTIVE USE OF ENERGY

We provide enterprise development support to help businesses devise and implement plans to use electricity to cut costs, grow, and diversify. The work is tailored to each business, but might include advice on markets, supply chains, equipment specifications, the economics of the business case, and accessing capital to acquire new electrically powered equipment.

We also work with mini-grid developers to expand productive use demand as a way of improving the viability of the power project and its economic impact, and see a significant opportunity to provide the same service to national utilities and grid-connected power distribution companies.

Our approach is informed by our work with entrepreneurs over the last ten years. We have learned that, firstly, PUE interventions must be rooted in the local market reality and serve the interest of the micro-entrepreneurs. Secondly, access to finance is a critical component of enterprise development, particularly when the capital costs of some equipment can be large compared with the size of the enterprise. Thirdly and importantly, successful enterprise development cannot be achieved by a “quick fix” but requires mentoring over many months. We believe that a long-term partnership with an entrepreneur is necessary for long-term results.

We are implementing seven programmes that focus on supporting productive use of energy in off-grid or newly electrified villages across sub-Saharan Africa. These programmes are funded by the World Bank, Sida, Power Africa, Energia, AfDB, Rockefeller Foundation and Mott Foundation and are supporting around 100 mini-grid developers and over 300 rural businesses.

Expanding productive use demand for rural electrification projects through enterprise development

Mini-grid companies often struggle to find economically viable business models due to a lack of larger dependable customers. Including productive use demand can significantly improve the economics, because productive users tend to use a lot more electricity than households, and mainly use ‘cheaper’ electricity because they operate during the day.

Our approach is to advise mini-grid developers in a way that adds value to their businesses by building the capacity of the businesses they serve. As well as supporting the mini-grid companies

themselves in defining their productive use of energy strategies, we train and mentor micro-enterprises to use the energy for productive purposes and help them access capital to buy equipment.

Over the last year we have conducted research of agricultural value chains to inform productive use-oriented expansion strategies for mini-grids. We have also conducted studies for different PUE appliance suppliers on viable price points and market entry strategies for their products (such as solar refrigeration, solar cooling, solar irrigation and pumping businesses).

Energy 4 Impact has also received funding from the Mott Foundation to test the commercial potential and impact of incorporating productive use of energy appliances and micro-enterprise training into micro-grid business models.

Maximising businesses' capacity to profit from access to power

We provide productive-use support and develop businesses' capacity to use access to power to increase business productivity and profitability. The work includes helping to develop the value chain for PUE by identifying PUE appliances, suppliers, prices and technical specifications including power ratings. This facilitates more efficient uptake and stimulates demand.

CASE STUDY

Arafa Iddi is a restaurant owner and customer of Rafiki Power in Kwamtoro Village. Rafiki Power operates eight solar mini-grids in Tanzania providing affordable energy to households and businesses.

Energy 4 Impact's mentors helped Arafa explore different ways to expand her business and establish market linkages, such as sourcing a secondhand freezer. She recently purchased a freezer on credit repaid over three months. The freezer enables her to offer cold drinks, which brings in new customers, prolongs their stay at her restaurant and allows her to store perishable food and left-overs.



**CASE
STUDY**

Helping juice producers acquire productive electrical appliances

We have supported Senegalese women involved in traditional agricultural practices to diversify their sources of income and set up new sustainable economic activities using solar refrigeration.

Manio Keita and her women's group have been providing juice to the village of Dialacoto, East Senegal, since 2012. "We had to pay extra costs to buy ice to keep it fresh. Under this heat it obviously melted fast, so we had to move our products very quickly," says Manio.

Thanks to a partnership between Energy 4 Impact, solar fridge supplier Bonergie and MFI Caurie Microfinance, the group was able to buy a solar-powered fridge on credit. Seventy-five percent of the cost of the equipment was available as a loan, making the equipment more affordable. "The fridge has been installed and we are already seeing an increase in our sales. We now have effective storage and no longer run out of products when clients show up at the shop," says Manio.

Our business mentors worked closely with the women to develop effective business plans and grow their sales to make sure they can comfortably pay back the loan. The product supplier also benefits from the use of consumer credit to increase the realisable demand for its product.

As part of Energy 4 Impact's work advising Jumeme on how to promote growth and development in the community around its mini-grid, we are supporting 45 newly electrified enterprises on the island of Ukara, through on the ground business mentoring.

For example, we provided business mentoring support to Mr Nyakalege, a local miller. Before Jumeme's electricity arrived on the island, he owned a single diesel-engine milling machine. Upon connection to the grid, Mr Nyakalege was able to secure pre-financing from Jumeme to purchase six milling machines. With our support in financial record keeping, technical assistance and general business operational support he has been able to repay his loan. Mr Nyakalege has significantly grown his business in Bwisya village and has employed 10 people at his mills.

Innovative financing for productive use appliances

We support businesses operating on mini-grids and beyond the grid to acquire electrical appliances by creating appropriate financing facilities or partnerships with equipment providers. This makes appliances available to customers who are typically too remote to have access to appliances at all, and who may have incomes that make upfront cash purchases very difficult.

We are working with the Rockefeller Foundation to design an appliance financing facility for implementation in 2018. It is a working capital facility for mini-grid developers to finance the purchase of energy efficient appliances to be sold on credit to their consumers (households and commercial), including productive appliances.



ENERGY FOR REFUGEES

There are 65 million displaced people in the world, the highest ever number. European politics and societies have been fundamentally changed by the arrival of large numbers of refugees from the Middle East and Africa in the last few years. This creates multiple challenges for the development sector, including how to make countries "less compelling places to leave", whether the underlying motivation is conflict, natural disaster or lack of opportunity (or, often, a combination of these).

But it also includes improving the lives of people once they have become "displaced". Part of that includes recognising that, for all too many, this is not a short term, transient state: the average displaced person has in fact been displaced for 10 years. Dadaab, Kenya's largest refugee camp, was established in 1992.

Furthermore, there is an important energy dimension: in a report we helped to publish last year, we estimate that over 89% of residents of refugee camps lack access to electricity and 80% cook using traditional biomass. This has consequences. Probably more than 20,000 premature deaths per

year are due to indoor air pollution and annual fire wood consumption equivalent to 49,000 football pitches of deforestation. But not all displaced persons live in refugee camps; in fact, 89% do not, finding themselves predominantly in urban centres. The circumstances for this much larger group differ widely, but in all cases the extra burden placed on energy resources and infrastructure has a significant economic cost, and can be a source of social conflict. Jordan's population, for example, has grown by 20% since the start of the Syrian conflict.

Our work in the humanitarian sector

Our response to this is the Moving Energy Initiative, led by Energy 4 Impact, which includes UNHCR, Chatham House and others, supported by DFID. The objective is to change the way the humanitarian sector manages energy and delivers energy access, with a particular focus on developing new ways of partnering with the private sector.

We have undertaken new research on energy use within the humanitarian sector. We have created the first ever geographic information system incorporating humanitarian energy data at a more global level, and at a more local level we have developed and trialled in two locations an energy access planning tool for refugee camps. We have also developed the business case, and carried out the preliminary design for, a humanitarian energy investment fund that would help to design and fund humanitarian energy projects.

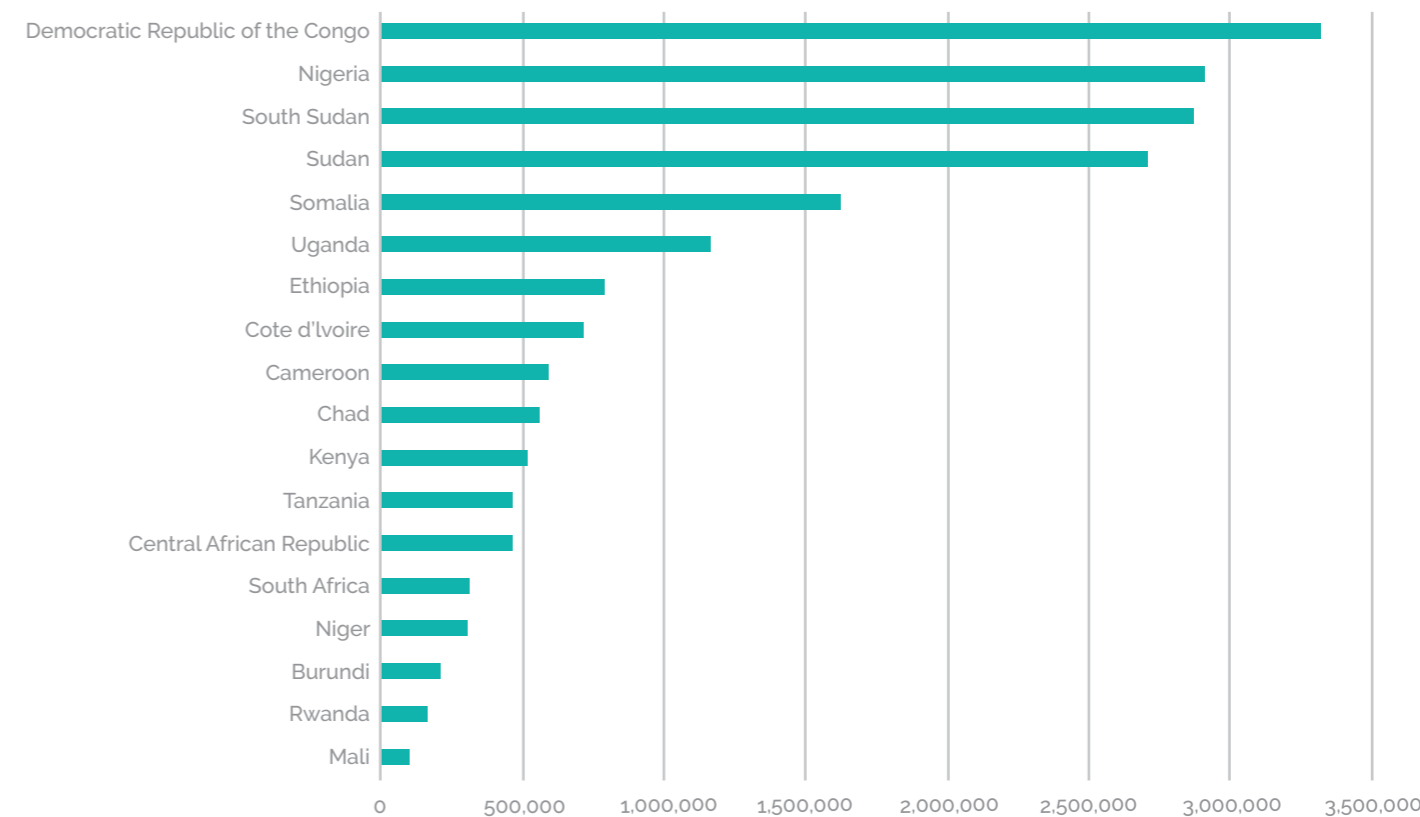
At the more practical level, we are working on a range of exciting projects in specific locations, with various partners. In Jordan, we are funding the solarisation of the diesel-generating capacity on a hospital roof to demonstrate both the favourable economics of such investment and the fact that humanitarian support can and should result in gains for host communities as well as refugees. We are also supporting there the development and demonstration of energy-efficient building codes for residential buildings, in an area where the key undersupply issue exacerbated by refugees is not, in fact, energy, but housing.

The costs of providing energy in refugee camps are unnecessarily high, whether this is calculated in terms of money, health or the environment. There are ways to improve energy access which also create livelihoods and entrepreneurial opportunities. The huge level of interest in our work and our previous research shows that this is just the tip of the iceberg. The value that could be created by increased humanitarian energy investment is enormous.

Ben Good, CEO of Energy 4 Impact

In Africa, we are exploring new models for private sector engagement in refugee camps. This includes developing the business case for outsourcing management, and potentially financing, of energy infrastructure in the Kalobeyei (Kakuma), Kenya, camp. We are also running a procurement/market engagement exercise for a potentially ground-breaking award of a concession for a clean cooking fuel/stove provider to trigger a wholesale switch away from firewood in Kakuma, Kenya. In both Burkina Faso and Kenya, we are funding other partners to develop clean energy/energy access-related livelihood opportunities for the refugees themselves. This includes working with a British PAYG company to build an SHS business within refugee camps.

Through these initiatives, Moving Energy will, we believe, achieve two critical objectives. First, it will expand the evidence base for new ways to "do energy" in the humanitarian sector, and second and more important, will improve lives for large numbers of displaced people.



Sub-Saharan Africa hosts more than 26% of the world's refugee population (UNHCR). Graph: Top sub-Saharan countries with refugee population above 100,000. The numbers include asylum-seekers, IDPs, returnees and stateless persons. Source: UNHCR Population Statistics http://popstats.unhcr.org/en/overview#_ga=1.1490737.1410439585.1452783218

FUNDING

Total income for the year was £4.027m comprising unrestricted income of £1.436m and restricted income of £2.591m. This represents an increase of 8% from last year's figure. Total expenditure was £4.739m, of which £1.397m was unrestricted and £3.342m was restricted. This represents an increase of 40% from last year's figure.

Energy 4 Impact is grateful to our funders for their continued support. Below are our main sources of funding in 2016/17 and a summary of the projects, activities and consultancies undertaken in each case.



Energy for Business Development (EBD)

This programme provides advisory services and capacity building support for micro, small and medium enterprises that are developing productive use activities of newly electrified villages, clean cooking and women's economic empowerment in Kenya, Tanzania, Senegal and Uganda. EBD is the second phase of the Energy SMEs Programme, financed by the ESME Trust Fund, which is administered by the World Bank. Building on the lessons we learned in the first phase, this programme is helping energy businesses and project developers to grow the markets in sub-Saharan Africa.



Scaling up Off-Grid Energy in Rwanda (SOGER)

SOGER aims to grow sustainable off-grid renewable energy markets by supporting private sector companies to deliver energy access to an estimated 77,000 people in poor rural areas and create 7,000 jobs. The programme is designed to respond to the government's priorities in reducing poverty and increasing energy access in rural areas. It involves a facility to support small, isolated mini-grid projects providing electricity to rural communities.



Kenya Climate Innovation Center (KCIC)

The KCIC provides business incubation services to climate technology start-ups. Services include proof of concept grants of up to \$50,000 and help for companies to access investment capital, business advice, access to information, workshops, laboratories and office facilities. Initially funded by the World Bank and subsequently by Danida, the KCIC supports enterprises that are improving access to energy, water and sanitation and agricultural productivity in Kenya. Energy 4 Impact helped set up KCIC and over the years has supported a number of renewable energy start-up companies with capital-raising, investment readiness, strategic and technical advisory services, project development, financial planning and analysis, marketing and distribution advice.



Crowd Power

A three-year programme to stimulate, develop and learn from crowdfunding into renewable energy enterprises in sub-Saharan Africa and Asia. We provide direct financial support to crowdfunding campaigns trialling a variety of approaches such as match-funding, guarantees (insurance) and/or grants or "gift" funding, and we produce in-depth research and analysis of lessons learned.

Energise Africa

An initiative to finance businesses supplying solar home-systems to households in sub-Saharan Africa via peer-to-peer lending. We are working with DFID and crowdfunding platforms in the UK to facilitate lending from small-scale UK investors to reputable businesses.

Ideas 2 Impact

Energy 4 Impact is part of a consortium that is implementing a five-year programme to support innovation in the development sector. It will run five prizes designed to incentivise innovative problem-solving around key challenges in energy access, water and sanitation and climate adaptation. We are the energy access theme lead on the project team.

Moving Energy Initiative

We are leading a consortium on a ground-breaking new project that seeks to meet the energy needs of refugees and internally displaced persons in a way that reduces costs and is safe, healthy and respectful. The initiative will emphasise local realities and integrate them with global technological advancements, through research, evidence-building and sustainable energy pilot projects.



African Development Bank

Green Mini-Grid Market Development Programme

Energy 4 Impact in partnership with INENSUS implemented this 18-month programme focusing on green mini-grid market development. Financed by the African Development Bank, the programme supported developers on issues ranging from business planning, market development and grid design to project finance, grid operation and maintenance. It aimed to accelerate the development cycle of Green Mini-Grid projects and to improve their bankability, create links between market actors in order to address gaps and developer capacities, technology and financing, and contribute to the evidence base of commercially viable projects. The second phase of the programme, kicked off in October 2017, will build on the experiences and lessons learned from the first phase and will see a scale-up in terms of scope and reach.



US Department of State

Women Integration into Renewable Energy Value Chains in Support of wPOWER

Working in conjunction with wPOWER (a US Department of State initiative), this programme is designed to strengthen the role of women in the clean cooking and off-grid lighting supply chains in Kenya and Tanzania. The programme is targeting the integration of 400 women in the renewable energy value chains by providing them with business and technology training and mentorship, and helping them access finance and marketing opportunities.



ENERGIA (governments of Finland, Norway and Sweden)

Energy Opportunities for Women in Senegal

This three-year initiative, implemented with local partner SEM Fund, aimed to improve livelihoods, incomes and employment in rural areas in Senegal. It will support 250 micro-enterprises engaged in both expanding energy access and productive uses.

Integrating gender issues in energy policies in Senegal

This is an advocacy and communications programme we are running in partnership with SEM Fund. We are advocating for the integration of clear gender objectives and actions within the SE4ALL national action plan and investment prospectus. We are also raising awareness of issues related to women's economic empowerment within the global campaign on energy, women, children and health.



Power Africa

Power Africa Programme

In partnership with NREL, the US Department of Energy's National Renewable Energy Laboratory, Energy 4 Impact is providing advisory services to mini-grid developers operating across sub-Saharan Africa under Power Africa's Beyond the Grid initiative.



Mott Foundation

Productive Use of Energy on Devergy micro grids in rural Tanzania

With funding from the Mott Foundation, we are implementing a project seeking to address the complexity of designing and implementing strategies for developing micro-enterprises that use energy produced by small solar energy micro-grid companies operating in Tanzania.



International Finance Corporation

Transaction Advisory Services Facility (TASF)

This one-year project supported green mini-grid project development in Tanzania. The TASF was part of IFC's Tanzanian Mini-grid Programme, managed in partnership with the government of Tanzania, which is in turn funded through the Scaling Renewable Energy Programme (SREP). In collaboration with Tanzanian and international partners, Energy 4 Impact assisted private mini-grid developers in designing, developing, implementing and scaling of individual green mini grid projects in the country.



The Ministry for Foreign Affairs of Finland Energy and Environment Partnership (EEP)

Jumeme: Micro Power Economy Demonstration Project

We have implemented a mini-grid demonstration project in partnership with private energy businesses INENSUS and Terra Projects and St Augustine University of Tanzania. The project aims to connect nearly a thousand households and 350 businesses, with Energy 4 Impact playing a key role in developing productive use.



The unrestricted reserves of £440,305 represent a decrease of £478,587 or 52% on last year's figure. The decrease in reserves from last year was expected as we invested in staff and transferred funds out of unrestricted to restricted accounts to meet deficits on restricted funds. The charity's aim is to build reserves progressively in order to ensure continuity of our activities.

Statement of financial activities (incorporating an income and expenditure account)
For the year ended 31 March 2017

	2017 Unrestricted £	2017 Restricted £	2017 Total £	2016 Total £
Income from:				
Donations and legacies	635	-	635	44,653
Charitable activities – grants	882,448	2,591,059	3,473,508	3,526,111
Charitable activities – consultancy	541,994	-	541,994	148,801
Investments	3,754	242	3,995	259
Other income	7,370	-	7,370	2,422
Total income	1,436,201	2,591,301	4,027,502	3,722,246
Expenditure on:				
Raising funds	150,583	-	150,583	75,292
Charitable activities	1,246,752	3,342,224	4,588,976	3,306,961
Total expenditure	1,397,335	3,342,224	4,739,559	3,382,253
Net income / (expenditure)	38,866	(750,923)	(712,057)	339,993
Transfers between funds	(517,453)	517,453	-	-
Net movement in funds	(478,587)	(233,470)	(712,057)	339,993
Reconciliation of funds:				
Total funds balances brought forward	918,892	394,288	1,313,180	973,187
Funds at the start of the year				
Total fund balances carried forward	440,305	160,818	601,123	1,313,180

TRUSTEES

Anthony Marsh, Chairman, Managing Director, Palus Limited
Carolyn Tobin, Management Consultant
Sheila Oparaocha, International Coordinator and Programme Manager for the ENERGIA International Network on Gender and Sustainable Development
Dianne Rudo, Principal of Rudo International Advisors
Richenda van Leeuwen, Chair, International Institutions at the Global LPG Partnership (clean cooking), and a member of the Technical Advisory Group to ESMAP at the World Bank

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ACCELERATING ACCESS TO ENERGY

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