



Powering a fairer recovery

Annual Review 2020



“Energy access saves lives. Solutions are available, and if we do not seize them during a time of crisis, when will we?”

Damilola Ogunbiyi
CEO and UN Special Representative to the Secretary-General for Sustainable Energy for All



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01

The big picture

Access to energy is not just an end in itself. It impacts every facet of human endeavour, from healthcare, education, and entrepreneurship, to agriculture, and so much more. Energy brings sweeping changes to a community: children who go to school during the day can study at night; families can keep food fresh and cook it, making less smoke in their homes; health clinics can provide 24-hour care with functioning equipment and refrigerated vaccines; farmers can grow more food; businesses can be more productive; and shops can stay open longer and get more trade. As all these benefits multiply, they improve life in communities, from village to country to region.



The unprecedented health, economic, and social impact of the Covid-19 pandemic has put millions more people into extreme poverty, jeopardising years of progress and exacerbating existing inequalities. These unfolding setbacks have only reinforced the urgency of our mission in the face of this current crisis and the economic recovery that must follow.

We can build back a fairer, more resilient recovery that helps the poorest nations to keep closing the poverty gap, but ending energy poverty must be a pillar of this rebuild. To meet and overcome these problems in the coming years, we have focussed our efforts on four key challenges:



Boosting livelihoods

Creating income opportunities through increased access to, and productive use of, energy.



Empowering women

Supporting women's role in the economic growth of their communities, and improving their daily lives at home and work.



Coping with climate change

Mitigating the impact of climate change on agriculture, using clean energy technologies to make farms more resilient and productive.



Serving the poor and vulnerable

Making clean energy affordable for the very poorest, who may otherwise be left behind by growing energy markets.



“Unless we make progress on ensuring access to sustainable energy, it will be difficult to achieve an equitable recovery from this crisis.”

Dr Rajiv J. Shah,
President of the Rockefeller Foundation



Our approach

We believe in private sector-led development. That’s why we help clean energy suppliers and businesses in Africa to expand energy access and use energy to grow.

Energy access alone will not help businesses to grow; they also need new skills, investment, equipment and markets.

By helping them with these ancillary resources, we ensure jobs are created and incomes improved.

What we do

We help to build markets and develop enterprises. We train and advise on business and technical matters. We help raise capital. We implement projects in a range of challenging frontline contexts:



Working with the poorest 20% of households



Helping women entrepreneurs in the last mile



Incubating clean energy start-ups testing new technologies and models



Advocating for policies that promote gender and social equity



Helping smallholder farmers



Exploring ways to make mini-grids more profitable



Working in refugee camps



Solarising rural schools and clinics



Crowdfunding for energy access companies

02 Our attainments

Since 2007 we have helped over 18.9 million people in sub-Saharan Africa acquire better energy access.

And we've also helped 8,100 businesses – local micro-energy businesses, small and medium enterprises, and project developers – access the capital, skills and equipment to use energy, grow, and deliver energy access.



15,400

local jobs created
within the businesses we support.



13.4m

tonnes of CO₂ emissions avoided
by adopting clean energy technologies.



Unlocking investment for energy access enterprises:

- Our crowdfunding initiatives have helped raise over **£20 million**, giving over **1.2 million people** improved access to energy.
- We have assisted 12 companies in raising over **\$1.7 million** for Covid-19 pandemic support.
- Our technical support has directed over **\$5 million** of private investment to new mini-grid projects.
- We designed a **multi-million dollar first-loss debt facility** to encourage local institutional lending to energy access companies.
- In Uganda, we are working on a large **investment incentive facility** for mini-grid projects.
- In Senegal, we are working with international donors to ensure **Covid-19 recovery funds** and grants are made available to businesses in need to maintain their machinery, lower credit, and cushion equipment retailers against payment failures.
- In the last 10 years, companies we've helped have raised over **\$160 million**.



In the last year, we:



Extended energy access to an additional 0.4 million people



Supported 55 mini-grids across sub-Saharan Africa in demand assessment, productive use of energy, technical design, site selection, regulatory advice, and raising capital



Helped 1,251 businesses across East and West Africa (587 of them owned by women) to use electricity to increase productivity for:

- Welding
- Carpentry
- Shops and restaurants
- Refrigeration



Helped 1,468 smallholder farmers access funding, equipment (especially solar irrigation), and markets



Made it possible for 1,692 of Kenya's very poorest households to afford solar, thanks to a top-up payment to government allowances



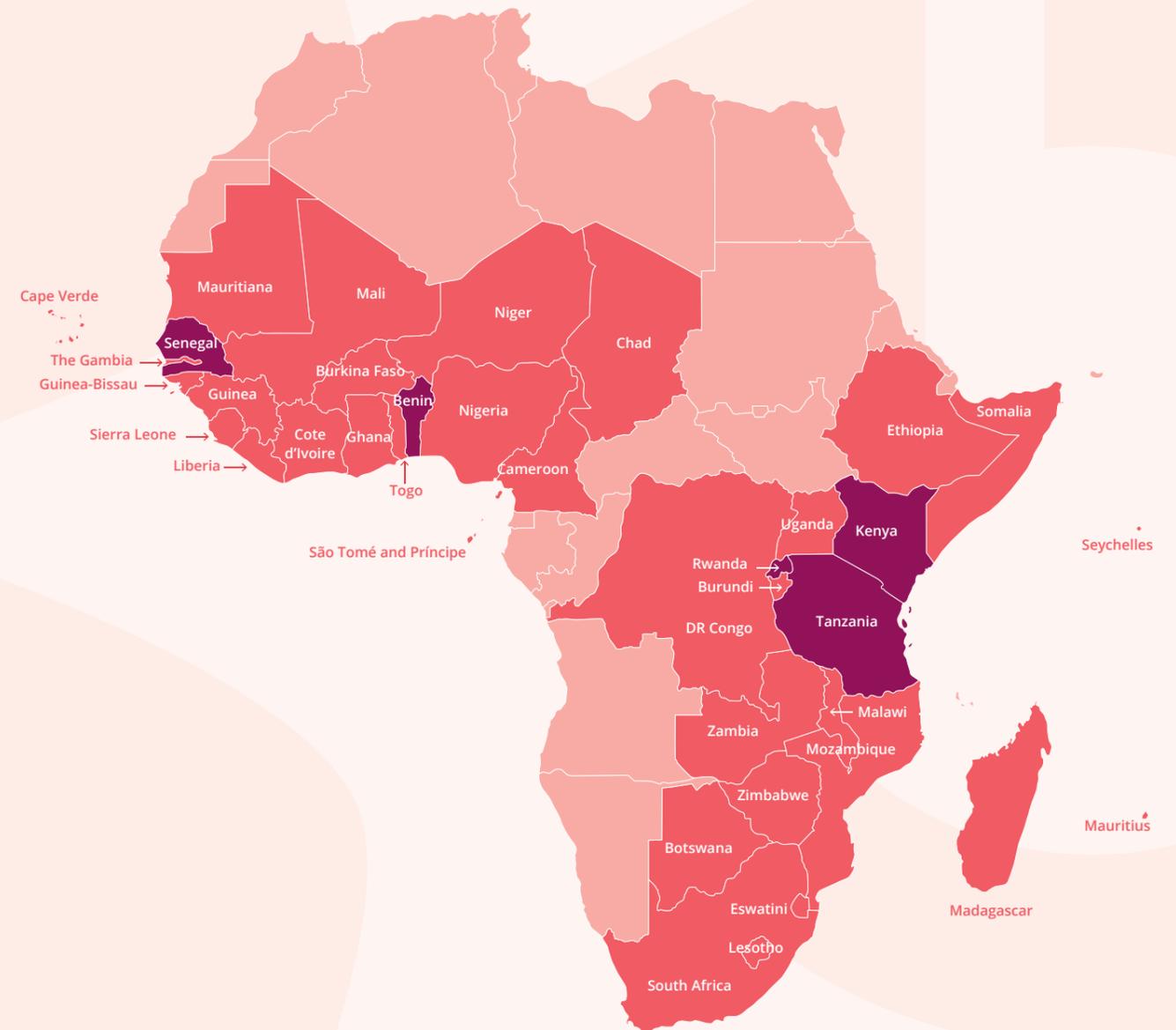
Provided solar power to schools and health clinics in poor and remote areas of Kenya, serving 15,000 students and over 550 patients every week



Supported seven companies providing **solar home systems to households in refugee camps in Uganda, Kenya and Rwanda**

Where we work:

- Country Offices
- Project Experience



03 Boosting livelihoods

Supporting energy suppliers and the businesses they serve to realise their potential.



2%

Unreliable electricity hampers Africa's economic development, costing as much as 2% of GDP.



1/5

Rural enterprises are one fifth as productive as urban ones.



Independent, off-grid energy creates jobs. For every one job in an energy supply company, five more jobs are created in energy-consuming businesses.

We helped Tanzania's Rural Energy Agency in villages recently connected to the grid, to help local businesses to expand using the newly available power.



349 enterprises increased their profits by 183%.



523 jobs were created.



📍 Builders, Tanzania

As part of our strategy to create jobs and stimulate rural, off-grid economies in sub-Saharan Africa under the Powering Renewable Energy Opportunities (PREO) programme, we support companies that build and install off-grid energy products, and that use energy to drive productivity in projects ranging from e-mobility solutions, agribusiness, rural supply chains, to affordable energy and internet access for educational institutes.

Beyond the initial supply of energy, equipment, and training, we work with people in local markets, systematically addressing problems in farming, business, logistics, and investment, to ensure progress in one area is not held back by shortcomings in others. We help them decide what they are going to sell and to whom; how best can they transport their goods; what additional equipment will be most helpful; how to finance new equipment and projects; and many other challenges they face in their particular context.



We are supporting a range of energy-for-livelihoods projects:

Energy access

- 1 Manufacturing affordable and efficient cookstoves
- 2 Electric boats for fishermen
- 3 Ice-making for island mini-grids
- 4 Agricultural mechanisation services
- 5 Shea nut processing for a women's cooperative

Transport

- 6 Electric vehicles and battery rental for sustainable transportation
- 7 Electric motorcycle and battery recharging station

Business

- 8 Manufacturing off-grid agricultural equipment
- 9 Engineering and manufacturing of solar PV units
- 10 Internet connectivity for micro-enterprises
- 11 Off-grid solar refrigerators for fish traders

Agriculture

- 12 Off-grid milk pasteurisation and cooling
- 13 Solar water pumping and equipment for farmers
- 14 Solar-powered drip irrigation systems
- 15 Solar refrigeration for greenhouse-grown produce
- 16 Solar/hybrid-powered coffee bean roaster
- 17 On-demand pay-as-you-go cold storage for agricultural value chains

Logistics

- 18 Distribution of solar water pumps for agricultural value chains

Healthcare

- 19 Digital health information systems

Education

- 20 Pay-as-you-go solar systems to enable digital education



📍 Customers in Kailahun, Sierra Leone

Mobile Power supplies affordable energy to low-income households through a Battery as a Service model. The batteries are charged centrally and then rented to customers in off-grid communities in Sierra Leone, Uganda, Zambia, the Gambia, and Liberia.

With daily battery rentals, Mobile Power provides energy access at a flexible and affordable cost, without customer debt or long-term commitment. As they scale up their business, our initial financial support has been complemented with strategic and business advice, enabling them to refine and demonstrate their business model to investors and partners.



📍 Avocado farmers in Kenya

SokoFresh provides Cold storage as a Service to smallholder farmers across Kenya, connecting them to buyers and maximizing the value of their harvests.

Over the last year, they signed up 530 avocado farmers who traded 10,000 kg of avocados, increasing their income by 58%.



“By expanding access to clean energy across nascent markets, we can unlock massive opportunities for business and education whilst improving health and reducing carbon output.”

Chris Longbottom
CEO, Mobile Power





We improve the commercial viability of rural power projects by stimulating demand amongst the businesses they serve.



In the last year, we have advised **55 mini-grid projects** across **17 sub-Saharan countries**.

Streamlining revenue collection for mini-grid developers

Nigeria

Havenhill Synergy operates two mini-grids in Nigeria, rated 42kWp and 21kWp respectively. Their customers were making many small electricity payments each month, meaning high payment collection costs for the supplier.

We advised Havenhill to shift to an arrangement in which each customer makes just a single payment at the beginning of the month.

We helped with:

- Design of new monthly block energy tariffs for different customer categories
- Support in deploying the tariffs through customer education, with leaflets, meetings, and events at each village
- Monitoring of energy consumption and payments

New monthly tariffs created a simplified, predictable revenue schedule and reduced Havenhill's operational expenses significantly.

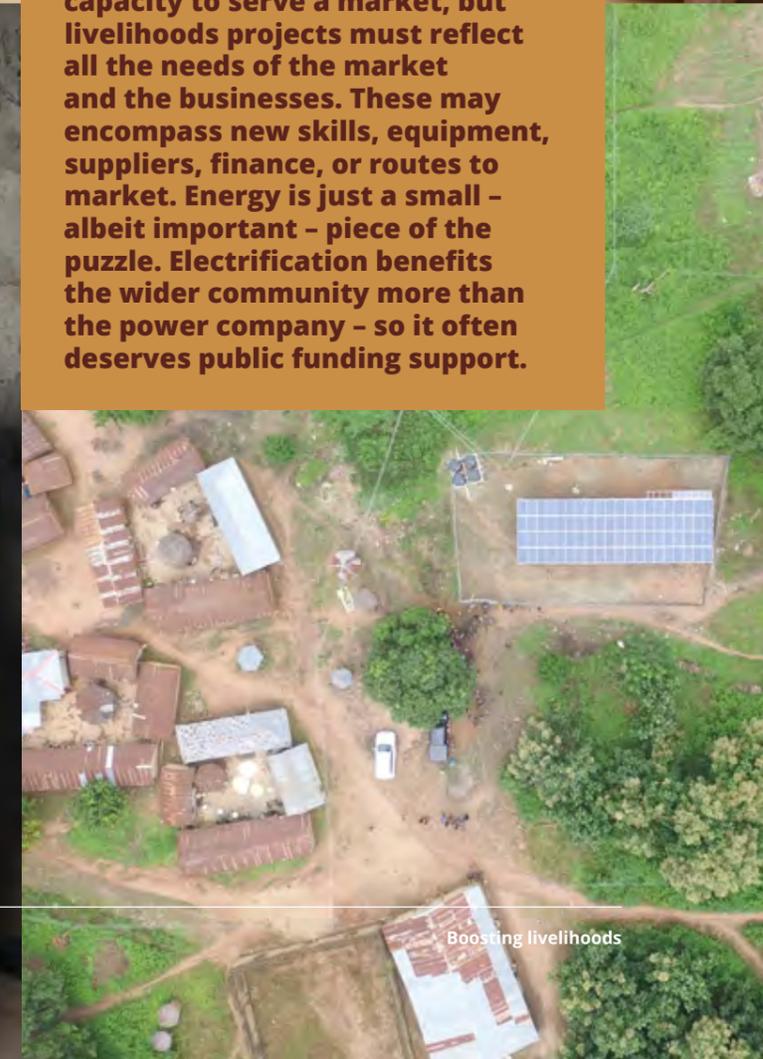
“The technical support from Energy 4 Impact has contributed immensely to our energy access projects across Nigeria.”

Olusegun Odunaiya, Havenhill



What we learned

Energy improves a businesses capacity to serve a market, but livelihoods projects must reflect all the needs of the market and the businesses. These may encompass new skills, equipment, suppliers, finance, or routes to market. Energy is just a small – albeit important – piece of the puzzle. Electrification benefits the wider community more than the power company – so it often deserves public funding support.



04

Coping with climate change

To prosper in a changing climate, African farmers need better access to energy and the tools and skills to use it.



65%

Agriculture employs **65% of Africa's workforce** and makes up a third of its gross domestic product (GDP).



Only **4% of arable land in sub-Saharan Africa is irrigated**, leaving farming vulnerable to drought.



Crop yields on properly-irrigated land can be more than double those on rain-fed and hand-irrigated land.



50%

According to the Food and Agriculture Organization, in sub-Saharan Africa, **up to 50% of produce perishes before reaching customers.**



We promote climate-smart agriculture and technologies – like solar irrigation systems, cold storage, and crop processing equipment – which improve yields, preserve fresh produce, and reduce carbon emissions.

With our agronomic, operational, and financial advice, plus support in routes to markets, inputs, and supply chain management, we help farmers make their businesses more effective and profitable.



In **Rwanda**, we helped nearly **1,500 smallholder farmers buy solar irrigation systems** and grow cash crops, which **increased yields by up to**

70%



In **Senegal**, we helped a **women's cooperative** acquire cold rooms to preserve fish and vegetables, reducing losses and increasing market access. Their monthly **sales grew by**

75%



📍 Farmer in Rwanda

Solar irrigation and new skills for cash crop farming

Rwanda

Twisungane is a small cooperative of eight farmers operating in the Eastern Province of Rwanda. Traditionally they could only practice subsistence farming, due to the prevailing dry spells and long dry season, which make it hard to grow cash crops without proper irrigation.

In late 2018, Twisungane joined the group of small-scale farmers being helped by Energy 4 Impact to acquire quality solar irrigation systems through partnership with the government, financial institutions and equipment suppliers. The cooperative financed the \$1,900 cost of the irrigation system with the combination of a bank loan, and a grant subsidy provided by the project.

In one year:

- Twisungane's profit went from \$460 in 2018, to \$1,700 in 2019 after purchasing the irrigation system.
- They paid the bank loan off in April 2020 and have expanded their farmland from 0.4 to 1.5 hectares, with high expectations for the 2020 harvest.

“Energy 4 Impact did a great job helping farmers get solar irrigation systems and know-how in agricultural practices, pest control and new crops. This will have a long-lasting benefit on productivity, enabling farmers to increase the number of planting seasons and diversify their produce. This technology contributed to irrigation in the dry period, allowing farmers access to water. The district’s leadership appreciates this support provided by Energy 4 Impact”

Rusilibana Jean Marie Vianney, Vice Mayor in Charge of Economic Development, Ruhango District, Rwanda



What we learned

Solar irrigation can boost farmers’ yields and help them cope with erratic rains, but the multiple supply chains – for crops, equipment, and finance – all need to function well for the solar irrigation market to develop. This takes a system-wide approach, equipping everyone – not just the farmers – with the necessary skills, knowledge and resources.



05

Empowering women

Energy offers life-changing opportunities for women, through selling energy products and services and working in electricity-powered enterprises.

In sub-Saharan Africa:

74%  74% of women work in informal, often unpaid employment, performing hard manual labour.

 Girls spend up to **18 hours a week** gathering fuel for household cooking and 5 hours per week collecting water.

50%  Women are **50%** of the agricultural workforce but control only **20%** of the land.

 **Young women are over 1.5 times less likely to be formally employed** or undergoing education or training than young men.



In 2020, 47% of the enterprises we supported were led by women.

In Benin, we helped **25 women entrepreneurs upgrade their businesses** through better energy efficiency and improved management skills. Their businesses – ranging from pineapple juicing, chicken rearing, fish chilling and wholesaling, to palm oil pressing – have in the last year **grown their net profits by 66% and created 130 jobs** in their communities.



In Senegal, we helped **200 agricultural cooperatives with 11,000 female members get finance** for solar freezers, pumps, dryers, water purification systems and lighting.

- This has increased profits by 100% and created 823 jobs.





📍 Egg farmer in Benin

From diesel and elbow-grease to solar-powered profits

Benin

When Energy 4 Impact met Emma, she had a flock of 2000 egg-laying hens and used a diesel engine to crush corn, soya, and other cereals to make the **600kg of feed per day** needed, which she would then mix by hand.

We helped her acquire an electric mixer and grinder linked to the power grid, which now enables her to produce up to **2,000 kg of feed per day**. With our business support, she scaled up, and in one year increased her flock from 2,000 to 4,000 hens, and created a second farm. As a result, her annual **revenue grew from \$7,100 to \$13,700** and her casual day employee – also a woman – was hired full-time. Emma later had the opportunity to pass on her knowledge by coaching five young women as part of a local women’s entrepreneurship support programme.

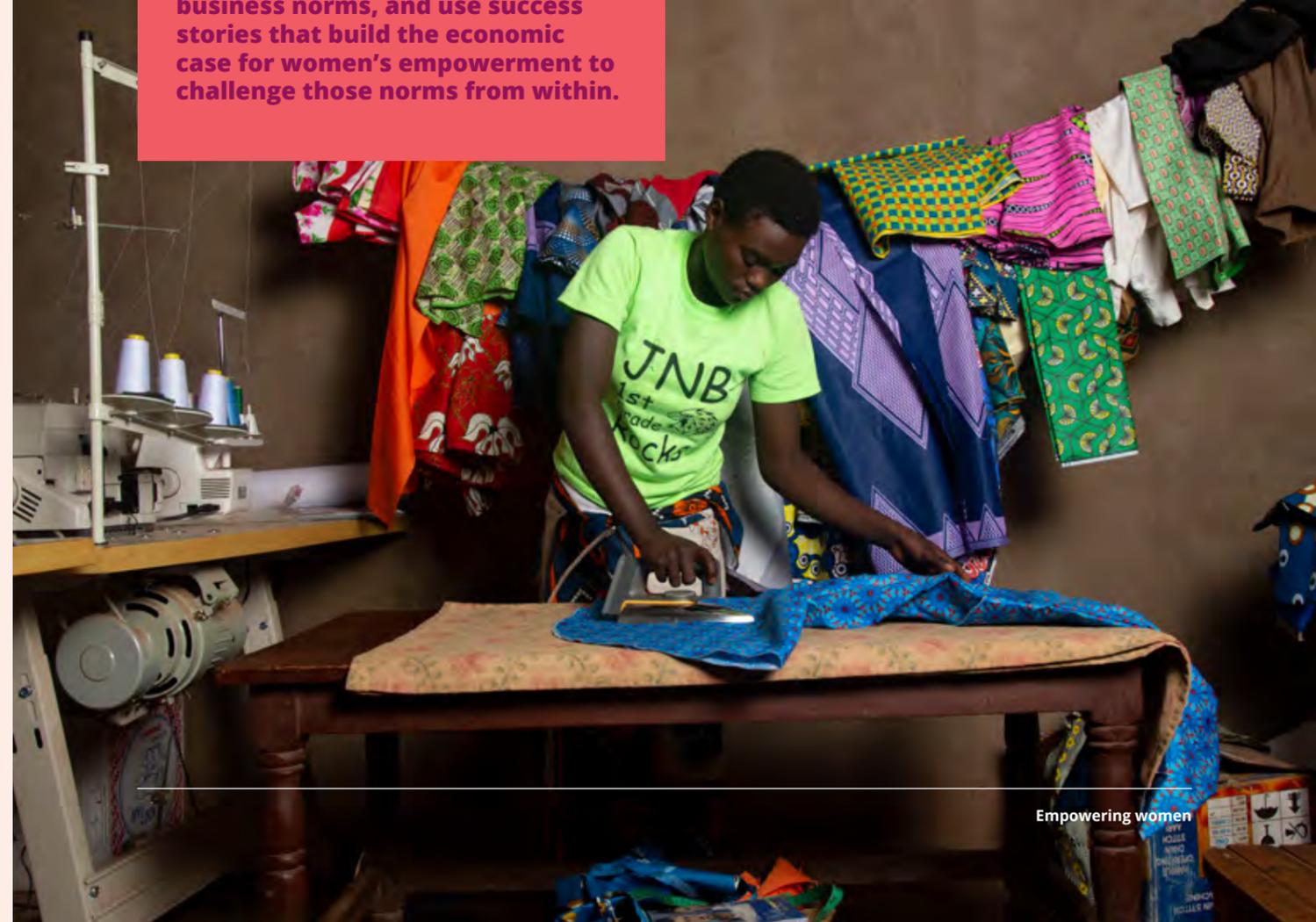
“Notwithstanding the terrible headwinds that the pandemic has created for our sector and many others, we have managed to carry on supporting businesses in the most deprived areas in marginalised and displaced situations, ensuring women are empowered to become active participants in the economic recovery, making a difference for millions of people.”

Anthony Marsh
Chairman, Energy 4 Impact



Key insights

Women benefit disproportionately from energy access and should have a major role in their communities’ development. That said, we must adapt to entrenched cultural and business norms, and use success stories that build the economic case for women’s empowerment to challenge those norms from within.



06

Serving the poor and vulnerable

Using pro-poor strategies to reduce inequality and help people escape poverty.

In sub-Saharan Africa:



More than **368 million people** live on less than **\$1.90** a day. The economic crisis caused by the pandemic will increase this number by **13 million**.



Almost **60% of health facilities** have no power for life-saving equipment.



Over **90 million children** attend schools without electricity.



There are more than **18 million** displaced people, **26% of the world's refugee population**.



We address the energy needs of the poorest, by making clean energy available and affordable.

In Kenya:



We are **providing solar systems to 300 schools and health clinics** in five of its poorest counties.



More than 86,000 students and over 19,000 patients **per week are benefitting from lighting, computers, learning tools and life-saving equipment** provided by better energy access.



We helped top up government **subsidy payments to 1,600 of the poorest households, enabling 8,000 people to access solar energy.**

In Kigoma, Tanzania:



In a region hosting a major population of refugees from Congo and Burundi, **we helped 82 women entrepreneurs increase their productivity and income, create jobs, and improve living standards and food security.**





Patients and staff of Nanam Health centre in Turkana, Kenya

Enabling local partnerships that uplift displaced communities

Uganda and Rwanda

In Uganda, we have incentivised solar providers to better serve refugee communities by allowing payment for solar equipment and energy consumption in small instalments, rather than complete up-front investments. These providers have since sold more than 4,100 solar systems in 16 months, helping to create more than 200 local jobs.

Amita, a South Sudanese refugee, was spending 27 cents per day on kerosene and 13 cents per mobile phone charge. Her new solar system costs just 24 cents per day for lighting and charging.

In Rwanda, we are working with government, NGOs, and private sector partners, to meet the energy needs of refugee-owned businesses, and enable them to access skills, markets, capital, and equipment. These businesses include hairdressers, beauticians, butchers, cyber cafés, phone repair shops, and refrigeration services for fresh food.

With our support, Mahoro and her husband, both refugees in Gihembe settlement camp, can now produce quality maize flour in a shorter time, at less cost; helping their income grow 220%, from \$68 to \$218 per month.

Inadequate energy limits the poorest people's access to education, employment, and healthcare, trapping them in poverty. Energy access can help them overcome this, but it needs to be affordable.



What we learned

There is a compelling case for subsidising the poor's initial purchases in energy access markets, but how will they manage the systems, and pay for parts and replacements in the long term? We are experimenting with various mechanisms to address this challenge and create more sustainable solutions.

Thank you

Access to energy, and the empowerment it brings, changes everything. This truth resonates ever more powerfully as African countries wrestle with the privations of the current Covid-19 pandemic, and look for ways to rebuild their embattled economies. The ongoing transformative impact of our work would be impossible without the brilliant private sector businesses that we work with, and the generous support of our partners and donors. To all those we work with and who support us, thank you. You are changing lives.

There is still much to do. Together, we can deliver not just expanded energy access, but also the equipment and know-how to use it to help farming communities, women, businesses, and the most deprived and vulnerable.

Get involved

If you are a practitioner, investor or business involved in energy access and you're interested in collaborating with us, please contact us on info@energy4impact.org.

To support our work visit <https://www.energy4impact.org/donate>

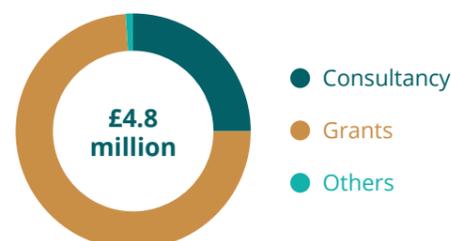
Our partners and donors



Financials

Income

£4.8 million



Expenditure

Total expenditure was £4.5 million. Of this 90% is spent on direct project costs.



	2020 Unrestricted £	2020 Restricted £	2020 Total £	2019 Total £
Income from:				
Donations and legacies	15 368	-	15 368	20 981
Charitable activities - grants	-	3 623 078	3 623 078	5 433 830
Charitable activities - consultancy	1 199 569	-	1 199 569	1 564 444
Investments	526	-	526	238
Other income	8 087	-	8 087	5 917
Total income	1 223 550	3 623 078	4 846 628	7 025 410
Expenditure on:				
Raising funds	60 410	-	60 410	120 455
Charitable activities	919 007	3 568 734	4 487 741	6 721 309
Total expenditure	979 417	3 568 734	4 548 151	6 841 764
Net income / (expenditure)	244 133	54 344	298 477	183 646
Transfers between funds	(11 993)	11 993	-	-
Net movement in funds	232 140	66 337	298 477	183 646
Reconciliation of funds:				
Total funds balances brought forward	449 649	1 253 767	1 703 416	1 519 770
Funds at the start of the year				
Total fund balances carried forward	681 789	1 320 104	2 001 893	1 703 416

📍 An unconnected village on Banda Island, Lake Victoria, Uganda, and typical of the sites that would benefit from the mini-grid schemes we work on.





ENERGY4IMPACT
ACCELERATING ACCESS TO ENERGY

Energy 4 Impact is a non-profit organisation working with local businesses to extend access to energy in Africa. Our work growing sustainable clean energy markets is creating jobs, accelerating economic growth and improving the quality of life for millions of people.

Visit our website: www.energy4impact.org

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