



POWERING RESILIENCE

Annual report 2020

REEEP[®]



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ABOUT REEEP

THE RENEWABLE ENERGY AND ENERGY EFFICIENCY PARTNERSHIP DEVELOPS INNOVATIVE FINANCING MECHANISMS TO ADVANCE MARKET READINESS FOR CLEAN ENERGY SERVICES IN LOW- AND MIDDLE-INCOME COUNTRIES.

Right: An aerial view of Bisanti Village, Katcha LGA, Niger State Nigeria. PFAN supported Green Village Electricity (GVE) provides 7,400 households in thirteen rural communities including Bisanti with reliable access to electricity.

Credit: ARDA for REEEP

REEEP designs and implements tailor-made financing mechanisms, utilising strategic injections of public funding to build dynamic, sustainable markets and ultimately make clean energy technology accessible and affordable to all. Through a combination of financial assistance, capacity building, facilitation of stakeholder cooperation and technical assistance, our programmes fill financing and knowledge gaps that prevent private sector players from operating successfully in frontier markets.

REEEP is a pathfinder: we design our programmes as lighthouse activities that demonstrate how governments and the private sector can cooperate to advance market readiness for renewable energy, energy efficiency

and energy access, for the benefit of the most vulnerable populations. We invest primarily in small- and medium-sized enterprise (SME) players, facilitating market- and community-led energy transitions. REEEP's work contributes to global efforts under the United Nations 2030 Agenda for Sustainable Development to advance energy access; combat climate change and improve resilience; reduce damage to the environment; improve livelihoods and facilitate economic growth where it is most needed. The 2015 Paris Agreement on Climate Change remains the second major guiding force in REEEP's work.

REEEP's strength lies in the combination of extensive on-the-ground experience with a broad global network of experts and partners. In all our programmes, we bring the two together by facilitating cooperation between governments, international organisations, the private sector, civil society and local stakeholders. These partnerships are built to last far beyond REEEP's direct engagement and are critical for the realisation of far-reaching, long-term impact on the ground.

Market transformation is complex and multidimensional. REEEP develops pioneering ways of monitoring, evaluating and learning from its programmes, combining in-depth qualitative information with ground-breaking quantitative data to improve our own and our partners' understanding of the systems we work in, identifying opportunities and barriers to success and lower risk for market actors. We share the insights and knowledge we gain with government and private sector stakeholders, helping to improve policy and investment decisions. This knowledge also informs the continuous adaptation of our methodologies to build scale within and enable replication of our programmes across markets.

In 2020, we continue to support clean energy and climate adaptation entrepreneurs through the Beyond the Grid Fund for Africa (see p.29) and the Private Financing Advisory Network (see p.37). Though some of our focus has naturally shifted to assisting our current private sector partners as they navigate the Covid-19 crisis, we have also continued to look forward. The autumn of 2020 will see the launch of funding rounds for off-grid clean energy companies in Burkina Faso, Liberia, Mozambique and Zambia under the Beyond the Grid Fund for Africa (p.29). In addition, we are preparing to establish two new innovative financing facilities, one for small-scale clean energy projects in Nepal (see p.47) and another to channel climate finance towards clean energy businesses targeting the agriculture sector in Namibia, Tanzania and Zambia (see p.43). Each of these new facilities will benefit from lessons learned during the implementation of the Cambodian Clean Energy Revolving Fund, which closed in late 2019 (see p.51).



FOREWORD



Hon. Matthew Nkhuwa, MP,
Minister of Energy for Zambia

In September 2019, just a month before our country's 55th birthday, I had the pleasure to speak at the opening of a stakeholder workshop for the design of the new funding round of the Beyond the Grid Fund for Africa (BGFA) in Zambia. The funding round is due to be launched in September this year, and it comes at a crucial time for our country.

When our President, His Excellency Edgar Chagwa Lungu, opened parliament at around the same time as the BGFA workshop last year, he spoke at length about climate change as the greatest challenge Zambia is faced with. Though Zambia's contribution to climate change is negligible, we are among the most vulnerable countries to its impacts. We have started to experience catastrophic droughts in the south of the country, while at the same time the north has seen unprecedented floods. As Energy Minister, I have primarily concerned myself with climate change impacts on our energy system. Around 80% of our electricity is generated through hydropower, which has proven highly vulnerable to changes in rainfall patterns. In 2019 we faced the most severe drought in 40 years, which drastically reduced the power output of our dams on the Zambezi river and its tributaries.

Now in 2020, we are confronted with the most disruptive health crises for a century, as the Covid-19 pandemic races around the world with steadily climbing numbers in Africa. To avoid the worst impacts and help contain the virus, we must ensure to deploy solutions that provide life-saving energy access and increase resilience for those who need it most. Energy services are key to preventing disease and fighting pandemics - from powering healthcare facilities and supplying clean water for essential hygiene, to enabling communications and IT services that connect people while maintaining social distancing.

I am happy to support the work of the Beyond the Grid Fund, which has already empowered over 800,000 people to access clean off-grid energy, and with its second funding round will reach many more. With the support of my Ministry and the rest of the Zambian Government, the second funding round will help to further level the playing field for market participants and create more higher-quality,

affordable connections, more jobs, more investment and more competition in the off-grid space. We are particularly pleased that this new round will include special incentives for productive use of energy for income generation and for delivering energy services to communities in deep rural areas.

Domestically, we have the support of Zambia's private sector and civil society and that of our friends in other nations. The Government of Sweden has been one such friend, which has long supported the development of the Zambian energy sector. As the Zambian Government, we also look forward to taking up the mantle of off-grid trailblazer, to share our experiences and our secrets to success with the other countries participating in BGFA.

For the past three years, my Ministry of Energy has hosted the Off-Grid Energy Task Force, which brings together all relevant stakeholders in Zambia's off-grid sector, from government departments to companies and from finance institutions to non-profits. In Task Force meetings, we share knowledge and plan cooperative efforts to further push the growth of Zambia's off-grid energy market.



THE GOVERNMENT OF SWEDEN HAS BEEN ONE SUCH FRIEND, WHICH HAS LONG SUPPORTED THE DEVELOPMENT OF THE ZAMBIAN ENERGY SECTOR.

Under our leadership, the Task Force has made great strides in creating a regulatory and tax environment that is beneficial and attractive to private sector companies. Together with the Beyond the Grid Fund, which has helped four companies demonstrate the potential offered by the Zambian market, this has led to a cascade of new companies and investors entering the space.

The Off-Grid Energy Task Force and its ambitious programmes such as the Beyond the Grid Fund gives us faith in a bright future.



A WORD FROM THE DIRECTOR GENERAL

As we reach the mid-point of 2020, we are faced with monumental changes around the world that were unimaginable only six months ago. The devastating humanitarian and economic impact of the Covid-19 pandemic has fundamentally altered our societies, and the global fight against the virus will continue to weigh on our shoulders for years to come. Our vulnerabilities have been laid bare as public health systems in the hardest hit areas are strained to the breaking point; the toll on national budgets – with economies shut down and hundreds of millions suddenly without work – has been disastrous.

Yet in tackling this crisis, we must not forget that we face an equally urgent challenge in climate change.

In many of the low- and middle income countries in which REEEP operates, unpredictable weather patterns brought on by the changing climate are disrupting agriculture, soil fertility is diminishing due to exploitative land use patterns and the rise of urban populations and changes in lifestyle are generating increased municipal and industrial waste and strain on water resources. Climate change may also lead to or exacerbate further pandemics in the future, and we are already seeing accelerating outbreaks of malaria due to a warming climate. We have only a limited timeframe left to reduce carbon emissions to keep global temperature increase within 1.5 degrees by 2050, or we face a catastrophic loss of biodiversity and ever more uninhabitable regions of the world.

However, there is hope that the events of 2020 will lead to a rethinking of the status quo. We can view it as a chance to stimulate entrepreneurship across the complete growth cycle, build resilience towards the devastating effects of climate change – especially among the most vulnerable communities – and to strengthen sector value chains and sector interconnections for sustainable recovery and growth. One of the greatest challenges ahead of us is how to design the transition from immediate life support, necessary in the short term, towards sustainable support for longer-term growth and investment.

We must consider how to best invest the economic stimulus required to offset the impact of Covid-19 in order to ensure a sustainable,



Magdalena Kouneva,
Director General of REEEP

resilient and inclusive recovery, which will accelerate the transition to a green economy and broader access to clean energy. For the green recovery emerging from the rescue phase to work, sufficient external and domestic funds must be deployed in innovative measures that address pervasive market failures and sub-optimal investment conditions and support the growth of green sectors in developing markets.

Official development assistance funds alone will not be sufficient. The financing gap for necessary investments to tackle development needs are calculated by the UN at more than USD 2 trillion per year, thus the transition towards a green low carbon economy requires investments well beyond the capacity of the public sector. We must mobilize more private sector financing and domestic resources towards sustainable investments through measures such as blending, crowding-in private co-investors and risk sharing instruments. We need to bring about a rapid growth of blending guarantees relevant to the needs of the less developed markets in the post-Covid period. Furthermore, while demand for green and sustainability bonds is also growing, very few developing markets are currently able to meet this demand.

The challenges are myriad: such instruments are still novel to these regions; the markets in which they must be applied – from least-developed to rapidly emerging middle-income markets – are wildly diverse (also with respect to the regulatory

environment and local capital markets); local exposure and vulnerability to climate impacts are diverging and dynamic; experience within financial systems (public development banks, local banks and non-bank financial institutions, promoters) is scarce to non-existent; and the rich data infrastructure underpinning much of the advancement of the financial sector in industrialized countries is absent.

In countries where economic activity is already exposed to high climate risks such as droughts, flooding, and other extreme weather events, impacts from a changing climate are likely to be exacerbated by low levels of readiness and ability to respond, as rising temperatures cause further stress on the local systems. High public debt and limited access to technological know-how in developing markets underscores the need for innovation and innovative use of financial instruments to accelerate clean markets. Furthermore, development actors need to improve their ability to monitor the results achieved through innovative instruments and by using smart data systems – and they must capture and leverage this data to help build vital data infrastructure in developing countries.

For nearly 20 years, REEEP has worked to accelerate clean energy markets in developing countries and emerging markets and achieve social and economic change by contributing to the building up of local ecosystems. We only have 10 years left to the delivery of the Paris Agreement 2030 Agenda. As the incoming Director General, I will support REEEP in spearheading a new strategic vision in which REEEP will work with development actors and investors to support reaching the 2030 Agenda in a post-pandemic world. This includes testing

new approaches and methodologies in off-grid environments, developing information systems for monitoring and continuous improvement of knowledge products.

We must see the silver lining of the Covid-19 crisis as a catalyst to accelerate and strengthen clean energy in frontier markets. Considering the scale and the urgency of the challenge, we aim to strengthen our role as a vital link between the public and the private sectors, creating further green market opportunities and mobilising finance to support sustainable recovery, attracting new market actors, accelerating the development of markets for new technologies and enabling additional investments by mitigating risks and alleviating challenging market barriers.

We support this transition working closely with our strategic partners from the international development finance community, but to be sustainable this must be rooted in local efforts. Country-specific platforms and coordination mechanisms – such as the Zambian Off-Grid Energy Taskforce (see page 34) which REEEP helped to establish – must be in place to take over when our direct involvement comes to an end. We incorporate cross-cutting themes in our approach, starting with bottom-up project preparation to bridge the gap between policies and strategies. We mobilize markets by helping to create a strong pipeline of local clean energy and climate projects and businesses with PFAN (see page 37). We develop innovative partnerships with local financial institutions such as NMB Bank Nepal (see page 47) to support the greening of local financial systems and ensuring sustainability of investment. Digital solutions can support accelerating the transition to a green low carbon economy in a way that does not leave the most vulnerable population groups further behind. Our custom-built tools, such as Edison (page 34), support our role as a 'go-to' energy analytics data hub in the access to energy domain, and we aim to become a knowledge resource which supports growing interest in sustainable finance taxonomy.

We have not only the responsibility but the opportunity to make the best use of this challenging moment and address the implications from Covid-19, while also addressing climate priorities aligned with social objectives. By following these principles, we can ensure our actions today have positive outcomes for future generations.

“
IN COUNTRIES WHERE ECONOMIC ACTIVITY IS ALREADY EXPOSED TO HIGH CLIMATE RISKS SUCH AS DROUGHTS, FLOODING, AND OTHER EXTREME WEATHER EVENTS, IMPACTS FROM A CHANGING CLIMATE ARE LIKELY TO BE EXACERBATED BY LOW LEVELS OF READINESS AND ABILITY TO RESPOND.

INTRODUCTION



Maher Chebbo,
Chair of the Governing Board

At the time of writing we are only halfway through, but 2020 has already been a year of 'unprecedented'. It began in January (though it might seem like years ago) with unprecedented bushfires in Australia, followed by the unprecedented Covid-19 pandemic and what is starting to emerge as the largest economic crisis in a century.

The pandemic has been a global tragedy, causing immense suffering and grief, and so I would be loath to present it as an opportunity. We do, however, need to learn from it in order to prepare for another, even larger, global tragedy that continues to unfold: climate change. How can we accelerate the readiness of our organisations, our businesses and our societies for unprecedented times to come leveraging the climate change programs to generate socio-economic benefits?

Companies around the world have begun to consider this. Just-in-time delivery mechanisms, long taught at business schools as the ultimate efficient, and therefore good, business practice, turned out to render companies extremely vulnerable to supply chain disruptions and sovereignty. According to Forbes, boardrooms across the globe are shifting focus "from agility to resilience", because agile "rhymes with fragile, and for good reasons" and where "lean and hungry" start-ups used to be the ideal, their small teams and lack of buffers have now been exposed as liabilities in times of crisis. In order



Above: Empty streets in Cape Town, South Africa during the Covid-19 lockdown.

Credit: fivepointsix

to get through the current and future crises, businesses will need reserves, coping strategies and, above all, strong networks. However, we believe that targeted innovations meeting market critical expectations are still the best way for start-ups to develop and grow in these uncertain times.

At REEEP, we have long valued our leanness and agility. As a long-existing agile organisation we have been able to design and implement innovative "must have" projects quickly, responding to market needs before those markets have moved on. Rather than always designing an entire project a priori without any flexibility, we have been adjusting our projects execution annually or quarterly, so that our priorities evolve along the eco-system unexpected changes and the partners we work with. In this way, thanks to REEEP's know how in challenging markets, we have been anticipating the unforeseen events or risks into the project design or re-design. We trust our partners' key role to achieving agility and resilience simultaneously. In fact, our programmes have proven to be solid, safely executed and resilient due to the excellent cooperation with our local partners in the co-design and scoping phases. Local involvement and support from the field to governments have ensured that our activities address sustainable basic local priorities that are capable of overcoming unique and unprecedented crises like Covid-19. We have been able to rely on our partners while we have been unable to travel, and they could also rely fully on us, as REEEP has years of experience running remote operations when physical operations cannot happen: the Beyond the Grid Fund for Africa is assisting its contracted companies in Zambia through the crisis with emergency financial assistance and increased flexibility in terms of targets. The Private Financing Advisory Network swiftly responded in supporting clean energy companies to ensure business continuity through webinars, enabling access to special Covid-19 Relief Funds, and providing one-on-one advice. We see it as our duty to assist these companies during this exceptional time, to safeguard the health, safety and business of passionate entrepreneurs and the progress towards SDG7 they have achieved, and to make sure they are ready to go remotely or physically when the world comes back to business as usual.



LOCAL INVOLVEMENT AND SUPPORT FROM THE FIELD TO GOVERNMENTS HAVE ENSURED THAT OUR ACTIVITIES ADDRESS SUSTAINABLE BASIC LOCAL PRIORITIES THAT ARE CAPABLE OF OVERCOMING UNIQUE AND UNPRECEDENTED CRISES LIKE COVID-19.

Left: People maintain social distance while waiting outside a bank during the Covid-19 lockdown in Sirsa, India.

Credit: Rohit

DONORS & GOVERNANCE

Donors

REEEP's activities are generously funded by:

- » Government of Australia
- » Government of Austria
- » Government of Germany
- » Government of Japan
- » Government of Norway
- » Government of Sweden
- » United States Agency for International Development (USAID)
- » European Commission
- » OPEC Fund for International Development (OFID)
- » The Blue Moon Fund
- » United Nations Industrial Development Organization (UNIDO)

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We are grateful to the following experts for investing their time in REEEP and sharing strategic insights as members of our Governing and Advisory Boards:

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Right: Ty Heang (right) owns a mango farm which is connected to the grid, but power cuts are frequent and can last up to a week. With his solar pumping system, purchased with a CERF loan, he can now reliably irrigate his orchard and produce mangoes also in the off-season. Mr. Mika is pictured here with his farm manager, Ms. Aet.

Credit: Jeremy Meek for REEEP





ONE _____

REEEP IN THE WORLD

IN SEPTEMBER 2019, UN SECRETARY-GENERAL ANTÓNIO GUTERRES LAUNCHED A DECADE OF ACTION TO DELIVER THE SUSTAINABLE DEVELOPMENT GOALS, IN RESPONSE TO THE FINDING THAT THE WORLD IS CURRENTLY NOT ON TRACK TO ACHIEVE THEM BY 2030. PROGRESS HAS BEEN MADE IN SOME AREAS, BUT IN OTHERS THE STATE OF AFFAIRS HAS WORSENERD.

Left: In Zambia, a house belonging to one of Standard Microgrid's customers is lit up during the night.

Credit:
Jason J Mulikita
for REEEP



Left: Solar panels harness the sun in a village in Northern Thailand.

Credit: DN6

Poverty rates are still declining, but global hunger is on the rise. Child and maternal mortality rates have fallen significantly, but inequality continues to grow both within and among countries. More and more people are gaining access to electricity, but the climate is changing faster than anticipated. And this was before the Covid-19 pandemic, which threatens to halt or reverse progress on many of the SDGs. Just seven months after the Decade of Action was launched, with economies ground to a halt and people around the world sheltering in their houses (if they were fortunate enough to have a roof over their heads), it almost seemed like an anachronistic concept, a vestige of a more optimistic, more dynamic era.

Though it is impossible to predict how the pandemic will develop from here onwards, or what the situation will be like when you are reading this, there are already lessons to be learned from the parallels between the current crisis and climate change. For example, though Covid-19 and climate change both affect people's lives everywhere, they are not 'great levellers'; many of the groups that are most vulnerable to climate change have also been among the worst affected by the pandemic. Pre-existing conditions exacerbating vulnerability to both include food, housing and income insecurity.

Another parallel between the Covid-19 pandemic and climate change is a renewed focus on resilience. Countries', businesses' and communities' resilience – or lack thereof – to unexpected shocks has suddenly become apparent. What has also become apparent is that resilience requires preparation. Governments have had great difficulty building up stockpiles of medical supplies after the crisis hit. Similarly, it is much less effective to start providing irrigation infrastructure to farmers already facing drought, and it is too late to begin reinforcing roofs during a hurricane. Poor communities are less resilient because they tend to lack the time, resources and information to make preparations for future eventualities. Resilience also requires a buffer: enough resources to enable people to pause, plan and change direction, or to wait out a crisis. Many people do not have savings they can live off while they shelter indoors, or to feed their families and start over after a flood, a drought or a storm ruins their harvest.





Though it is only a small part of the puzzle, REEEP's work helps to build resilience in vulnerable communities by providing access to modern, clean, decentralised energy. The energy services provided by the companies working with the Beyond the Grid Fund for Africa are more reliable than the grid, ensuring people can stay informed through a crisis. They are more affordable than candles, reducing financial stress on families. In addition, the companies offer flexible repayment plans which give people breathing room, allowing them to prioritise spending on immediate threats or emergencies without having to forgo electricity. The new SOARING programme will help farmers to access modern technology including solar-powered irrigation pumps to protect their harvests from droughts.

All of REEEP's programmes increase economic resilience in communities by supporting small- and medium-sized enterprises (SMEs). SMEs form the backbone of emerging market economies, providing local employment and access to products and services. Emerging market SMEs are also, however, among the hardest hit by Covid-19, as they tend to have few buffers and lack access to emergency assistance. The Private Financing Advisory Network (PFAN) has helped launch and build the resilience of over a hundred climate and clean energy SMEs by providing coaching to develop solid, crisis-proof business plans and investor matchmaking to attract financing.

A further parallel between the Covid-19 pandemic and climate change is the importance of quality data. The epidemic has proven that the future cannot always be predicted based on past trends. Climate change is resulting in more unpredictable weather conditions around the world, causing extreme storms, floods, droughts and wildfires, to name but a few. It is also altering species' ranges in unpredictable ways, displacing animals and plants which people have long relied on for food and spreading diseases and pests to new areas. So how do we prepare for the unforeseeable?



IN THE COMING DECADE OF ACTION, REEEP WILL CONTINUE TO EXPAND ITS WORK, TO EMPOWER MORE PEOPLE TO GAIN ENERGY ACCESS AND BUILD RESILIENT, PROSPEROUS COMMUNITIES.



Right: Godfrey Miti, a resident of Ngwerere, Zambia gained employment from the construction of the microgrid.

Credit: Jason J Mulikita for REEEP

Below: Standard Microgrid has pioneered a scalable model for delivering clean, renewable and reliable electricity to off-grid, high-density communities.

Credit: Jason J Mulikita for REEEP



Resilience forms a large part of the answer. Everyone from governments and scientific organisations to companies, universities, NGOs and communities all need to consider their preparation for unexpected shocks. Another part of the answer is data. We need to have the systems in place that allow us, in the event of a shock, to quickly analyse what is happening, who is affected and how, and how they can best be assisted. In Europe and North America, such systems, though not perfect, are in place. The situation in Sub-Saharan Africa, where only 44% of children born between 2010 and 2019 were officially recorded, is a different story. Real-time economic data such as that collected through the Beyond the Grid Fund for Africa can play a crucial role both in the long term, by identifying vulnerabilities in communities, and immediately after a shock, by providing estimates of how badly communities in different areas are affected.

At the time of writing, the world is still in the middle of the Covid-19 crisis. But that does not mean we should not already start applying its lessons to plan for climate-related crises still to come. In the coming Decade of Action, REEEP will continue to expand its work, to empower more people to gain energy access and build resilient, prosperous communities. We will continue to build the resilience of SMEs by providing them with financing, capacity building and the breathing room to plan for an uncertain future. We will continue to work with governments, providing them with data and partnerships to help them plan for and respond to the climate crisis. 2030 is just around the corner. Clean energy access for all is within reach. Let's make it happen.



TWO

HOW REEEP WORKS

BUILDING FINANCIALLY, ENVIRONMENTALLY AND SOCIALLY SUSTAINABLE MARKETS FOR CLEAN ENERGY TECHNOLOGY WHILST REDUCING POVERTY IN LOW- AND MIDDLE-INCOME COUNTRIES REQUIRES A WHOLE-OF-SYSTEM APPROACH.

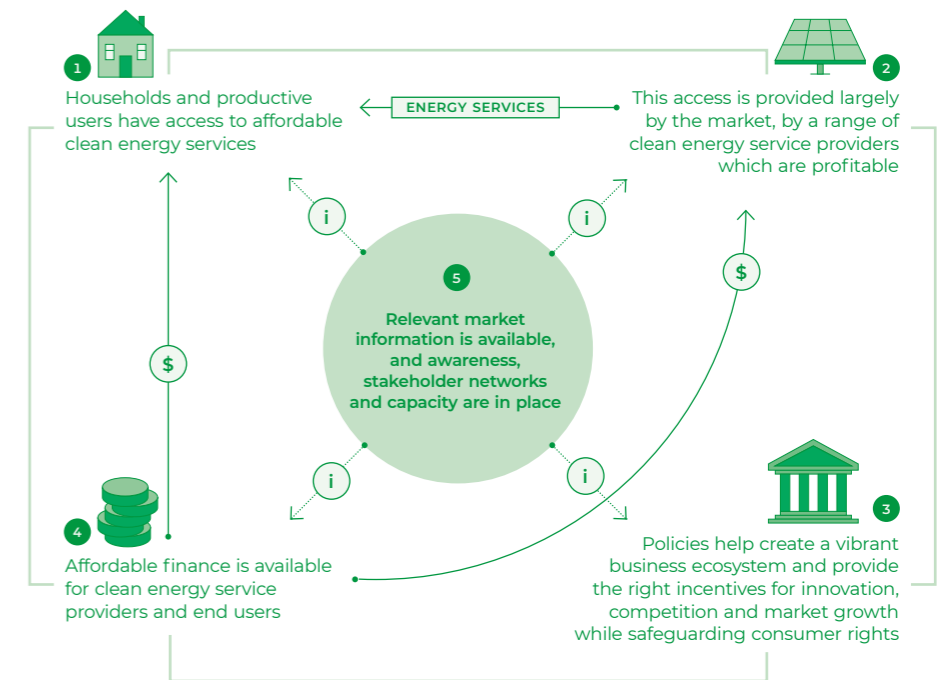


On the demand side, our programmes demonstrate the benefits of clean energy technology for both household and productive use. At the same time, we work with SMEs on the supply side to develop viable business models and improve the accessibility, affordability and quality of a range of clean energy services. We also work with financiers, demonstrating the opportunities in the clean energy sector and helping them to de-risk their investments. Throughout our programmes, we cooperate with local and national governments and consult with strategic in-country and international partners to help create an enabling policy environment, crowd in new outside investors and ensure the sustainability of the market beyond the duration of REEEP's intervention.

WHAT IS MARKET READINESS?

REEEP demonstrates how countries can, effectively and efficiently, advance market readiness for renewable energy and energy efficiency solutions.

Market readiness describes a situation where:



← BASELINE

← KNOWLEDGE VALUE CHAIN

← KNOWLEDGE SHARING

Market readiness assessment	Assess
Programme strategy/ advisory	Design / Test
Programme development / preparation	Implement
Programme implementation / administration	Learn
Programme evaluation / learning	Scale
Programme growth pathways	Replicate & Scale
Programme handover advisory	

MARKET READINESS - THE REEEP APPROACH

In order to advance market readiness for new, low carbon, energy efficient technologies and solutions, REEEP partners need tailored solutions: solutions that are geographically appropriate, technically sophisticated, and financially innovative.

Our overarching methodology for tackling market readiness at the country level includes a number of distinct stages. Each stage consists of a defined set of activities that REEEP has experience with and can draw on to develop a full, tailored programme.

This 'REEEP Approach to Advance Market Readiness' integrates the following elements:

To see how this methodology works in practice, see the overview of current REEEP programmes, starting at p.29.

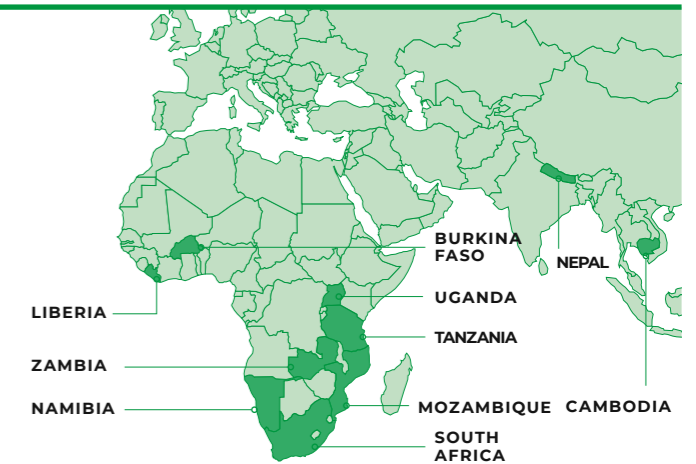
- 1 ASSESS baseline market readiness;
- 2 DESIGN and TEST appropriate measures to stimulate the sector;
- 3 Install a LEARNING FRAMEWORK;
- 4 IMPLEMENT the measures that were successfully tested;
- 5 LEARN throughout the process, extracting intelligence from all practical experiences for the benefit of the market; and finally, based on lessons learned,
- 6 SCALE and REPLICATE successful concepts and approaches.

FOCUS COUNTRIES AND REGIONS

REEEP's priority regions are Sub-Saharan Africa and South and Southeast Asia.

Within these regions, we work where we encounter specific interest, committed partners, and tangible opportunities. We focus on low- and middle-income countries as defined by the World Bank, with a per capita GDP of up to USD 4,000. Exceptions can be made when a country has, for instance, the function of a trailblazer in the region.

Current priority countries include Burkina Faso, Liberia, Mozambique, Namibia, South Africa, Tanzania, Uganda, Zambia, Cambodia and Nepal.



WATER-ENERGY-FOOD NEXUS

CLEAN ENERGY IN AGRICULTURE

The development and deployment of renewable energy and energy efficiency solutions that increase agricultural productivity at particular stages in an agricultural value chain in low- and middle-income countries. The value chain approach allows us to deploy specific SME-level interventions while taking into account interconnections within and impacts on the value chain as a whole.

CLEAN ENERGY IN OFF-GRID AND DISTRIBUTED SMALL-SCALE POWER

The development and deployment of renewable energy generation and distribution in low- and middle-income countries to provide high quality, modern access to power to underserved/energy-poor communities in rural and peri-urban communities.

CLEAN ENERGY IN MUNICIPAL WATERWORKS

The development and deployment of renewable energy and energy efficiency solutions that reduce energy use and improve the reliability, resilience and performance of municipal water supply and sanitation services in urban areas in low- and middle-income countries.

Right: Mary Mpupuma has owned her shop since 1992 where she sells general goods and supplies to people in the village of Katobe in Chongwe, Lusaka Province, Zambia. She became a Vitalite agent in 2015.

Credit: Jason J Mulikita for REEEP



Bridging Information Gaps

Though businesses offering clean energy solutions for off-grid populations face particularly tough conditions – a poor customer base and extensive distribution infrastructure requirements, among others – they share these challenges with other actors in frontier markets for clean energy. Many of these are related to information gaps rather than to a lack of financing, a shortage of good business ideas, or the absence of appropriate, proven technologies.

Even entrepreneurs with groundbreaking ideas often find it difficult to meet investors or to know what they look for in a business plan. International investors may lack the local insight to assess the risk of an opportunity in a frontier market. Renewable energy and energy efficiency solutions offer enormous potential for energy savings in industrial and municipal facilities, which may go unrealised when the persons managing these facilities lack the mandates, time and/or specialist knowledge to recognise and act upon this potential.

REEEP helps to bridge knowledge gaps to overcome the challenges described above through a combination of capacity building, comprehensive stakeholder engagement and innovative data collection and monitoring, evaluation and learning mechanisms. The financing we provide serves to demonstrate what can be achieved when knowledge gaps are tackled.

Monitoring, Evaluation and Learning

Learning and sharing information are central to REEEP’s mission – as a pathfinder organisation, we need to leave a trail that others can follow.

First implemented in our Powering Agrifood Value Chains programme (2015-2017), REEEP’s enhanced Monitoring, Evaluation and Learning (MEL) Framework utilises a number of proven approaches, including Theory of Change, Logical Framework Approach, Outcome Mapping (for stakeholder analysis) and Most Significant Change to build a tailored approach for each

programme. Through this MEL framework, REEEP has gained a thorough understanding of a range of business models being tested in our focus sectors, while at the same time maintaining a high-level picture of the overall market.

Closing Data Gaps

One of the main barriers to the development of sustainable markets for clean energy services is a lack of high quality, reliable and up-to-date data and information on rural and peri-urban parts of Africa and Asia. This data is crucial for businesses and investors to make decisions about entering markets and tailor their offering to local conditions, and for governments and development stakeholders to design policies and monitor those policies’ results.

In some African countries 90% of people work in the informal sector, which makes any data on their financial situation very difficult to obtain and verify. Even information on the poverty rate, a relatively basic indicator, can be highly unreliable. For example, two surveys of poverty in Nigeria, both undertaken in 2010, found vastly different poverty rates: 26 and 53%¹. For off-grid energy companies, data on customer willingness and ability to pay is particularly crucial, as clean energy technology sold on a pay-as-you-go basis requires a much more complex and long-term relationship between vendor and customer than,



Left: A worker on a farm producing pepper and longan fruit in Preah Vihear province (top center on the map). The owner, Gnek Sarith, used a CERF loan to replace his diesel-powered pumps with a solar-powered one.

Credit: Jeremy Meek for REEEP



Left: Environment 360 team members sort different grades of plastic in preparation for recycling in Accra, Ghana.

Credit: CW Studios for REEEP

1. <http://documents.worldbank.org/curated/en/288841468186544366/pdf/101268BRI-PUBLIC-ADD-SERIES-Box393262B-Nov2015PolicyBrief.pdf>



for instance, selling candles would. Traditional financiers would never consider providing a loan to a customer with no bank account or credit rating, but off-grid energy service providers do not have a choice. This situation requires new ways of operating, which makes off-grid energy service providers risky in the eyes of investors.

Beyond the private sector, data is also underutilised by low- and middle-income country governments and development agencies in planning policies and interventions, leading to inefficient planning, sub-optimal decision-making, and inadequate outcomes. OECD country governments use vast amounts of data for purposes ranging from optimising bus routes to predicting flu epidemics. The effects of any intervention, whether it is a change in traffic light patterns or a new approach to public information campaigns on flu shots, can be measured and responded to in real time. Developing country governments tend to miss out on these opportunities due to both a lack of reliable data and a lack of funding into programmes and systems to collect, manage and analyse data.

REEEP's Opportunity: A Remote Area Data Analytics Resource

As the implementing agency of the Sweden-funded Beyond the Grid Fund for Africa (BGFA), REEEP collects unique, fine-grained big datasets on energy usage and financial transactions for over one hundred thousand off-grid customers and their service providers in Zambia. We expect to collect similar data in Burkina Faso, Liberia and Mozambique once companies have been contracted and the deployment of energy services there has begun.

To manage data collection, storage, access, analysis and visualisation, we have developed an innovative, dedicated software system called Edison. Edison manages and displays real-time data on energy services in off-grid rural and peri-urban areas, while maintaining high standards of data privacy and security. The platform is used by REEEP programme teams to monitor and remotely audit the deployment of energy services under the results-based financing mechanism of BGFA.

Using Edison, REEEP has a view on data from off-grid energy technology purchases, upgrades, customer service events and repayments, among other aspects. This data holds tremendous potential to improve the lives of people living in underserved areas, particularly but not exclusively through enhancing access to modern clean energy. It can support evidence of ability and willingness to pay of people in different regions and over time – for the first time we are tracking, for example, how customer spending on energy

Right: A village in rural Nepal.

Credit: SNV



services fluctuates depending on the season, on extreme weather events, or on agricultural commodity prices. We have been able to monitor closely the impact of the Covid-19 pandemic and resultant lockdowns on the sales made and payments received by our portfolio of companies, allowing us to both quickly mobilise support for those companies if needed and assess the resilience of their customers to shocks such as the current one.

REEEP is currently developing a new, improved version of Edison with funding from Sida. The

next generation of Edison will be made available not only for BGFA, but will also be available to a range of organisations and agencies implementing results-based financing or other energy access facilities supporting off-grid electrification. In addition, we want to use this next generation of Edison to make aggregate data available to international organisations, NGOs, universities and research institutes that are actively involved in data, information and knowledge in the off-grid electrification space, to help them monitor and verify progress on SDG7 and much more.



THREE

BEYOND THE GRID FUND FOR AFRICA

AN AWARD-WINNING INNOVATIVE APPROACH TO KICK-START MARKETS FOR CLEAN, OFF-GRID ENERGY IN AFRICA.

Left: Lister Sithole, Vitalite's original agent in Chongwe. A mother of five, Lister is able to balance home life and business thanks to the flexibility of being an agent. She's also able to keep her shop open later at night, thanks to the solar lighting system she sells and uses.

Credit: Jason J Mulikita for REEEP



Left: Brian Chitundu works as an agent for ReadyPay, one of more than a thousand jobs created through the Beyond the Grid Zambia Fund. As a full-time agent, he educates and helps his customers understand the benefits of renewable energy and how to use mobile money – a system that is becoming increasingly popular for various payments. Brian shows Mrs Joylex Zulu how to use her HomeStarter solar kit, which provides much-needed light to her house.

Credit: Jason J Mulikita for REEEP

WINNER OF A 2019 ASHDEN AWARD AND A 2019 UN GLOBAL CLIMATE ACTION AWARD.

The Beyond the Grid Fund for Africa (BGFA) aims to kick-start markets for off-grid clean energy solutions in at least five African countries, and reach five million people with clean, affordable and reliable electricity by 2025.

BGFA uses a unique results-based financing mechanism to encourage off-grid clean energy companies to enter markets where they can deliver great positive impacts on the lives of vulnerable communities, but where operations would not currently be commercially viable without public funding. The programme helps these pioneers establish operations and pave the way for other companies and investors to follow. In the autumn of 2020, the programme will launch tailored funding rounds to support off-grid energy companies in Burkina Faso, Liberia, Mozambique and Zambia. Market scoping studies are currently underway to assess the feasibility of extending the programme to Uganda.

BGFA is currently funded by the Swedish Government, managed by the Nordic Environment Finance Corporation (NEFCO) and implemented by REEEP. The German Development Bank (KfW), USAID and the Danish Government have also pledged funds or are in discussion, and the programme is open to further likeminded donors. It builds on the success of the Beyond the Grid Fund for Zambia (BGFZ), which through its first funding round has thus far deployed over 160,000 connections, reaching more than 835,000 people.

Why the Beyond the Grid Fund?

Over 50% of all people in Sub-Saharan Africa lack any access to electricity. For lighting, they depend on candles or kerosene lamps, which generate indoor pollution and frequently cause fires. Some have access to diesel generators, but these require a reliable supply of expensive diesel and cause local air pollution and significant GHG emissions. Expansion of national utility grids to sparsely populated rural areas is generally neither economically nor technically feasible. Even in peri-urban areas close to the grid, expansion tends to be slow and connecting individual households costly, so that people living within a few hundred meters from the grid often end up waiting for years to be connected. National grids are also often unreliable, so even once connected, people frequently have to contend with power outages.

Off-grid energy solutions offer a technically viable, affordable, quickly deployed and reliable alternative to grid expansion. Unlike grid expansion, these solutions have been primarily provided by private companies. However, as pioneers serving an overwhelmingly poor





customer base, even the most successful of these companies are viewed as risky investments and have consequently had great difficulty accessing start-up or scale-up capital. BGFA acts as a trailblazing investor, incentivising off-grid energy businesses to enter or scale up their operations in its focus countries. In Zambia, this approach has already resulted in a cascade of new impact investment into the off-grid energy space.

How Does BGFA Work?

The Beyond the Grid Fund for Africa approach is flexible: funding rounds are designed based on extensive market scoping studies to address the areas of greatest need and greatest opportunities in each market. BGFA activities are founded on the following three pillars:

Incentives and Procurement

The backbone of the BGFA approach is its unique procurement mechanism, which invites companies to bid for a tranche of funding to provide a certain number of energy service subscriptions to customers. The programme does not buy the energy services on behalf of customers; rather, it closes the ‘viability gap’, on a per-connection basis, incentivising rollout and scaling up in areas that would – under current circumstances and in the absence of BGFA – not represent viable markets for companies. Companies applying for funding to launch in a new country, as opposed to scaling up in a country where they are already operational, will receive additional launch support before graduating to scale-up financing. All companies will receive technical assistance, provided in cooperation with the Private Financing Advisory Network (PFAN).

Bids are assessed based on their overall quality and the value (in connections) which they can deliver with the available public money. Extra incentives are offered for committing to deliver energy services to deep rural areas, services that address gender issues (including clean cooking technology) and solutions for productive use. Companies are also incentivised to put gender strategies and e-waste recycling plans in place and will receive support to refine these once contracted.

Under its first funding round in Zambia, BGFZ contracted four companies to deliver 300,000 connections which the aim to reach 1.6 million people by 2021. BGFA will launch its first funding rounds in Burkina Faso, Liberia, Uganda and Mozambique as well as a second round in Zambia in the autumn of 2020, and it is expected to contract the successful bidders in 2021. Based on the results of the market scoping studies, the funding rounds in each country will focus on either solar home systems alone, or on solar home systems and mini-grids.

THE BGFZ COMPANIES:

The four companies contracted by BGFZ in its first round are Fenix Intl (trading in Zambia as ReadyPay), VITALITE Zambia, Emerging Cooking Solutions (trading in Zambia as SupaMoto) and Standard Microgrid.

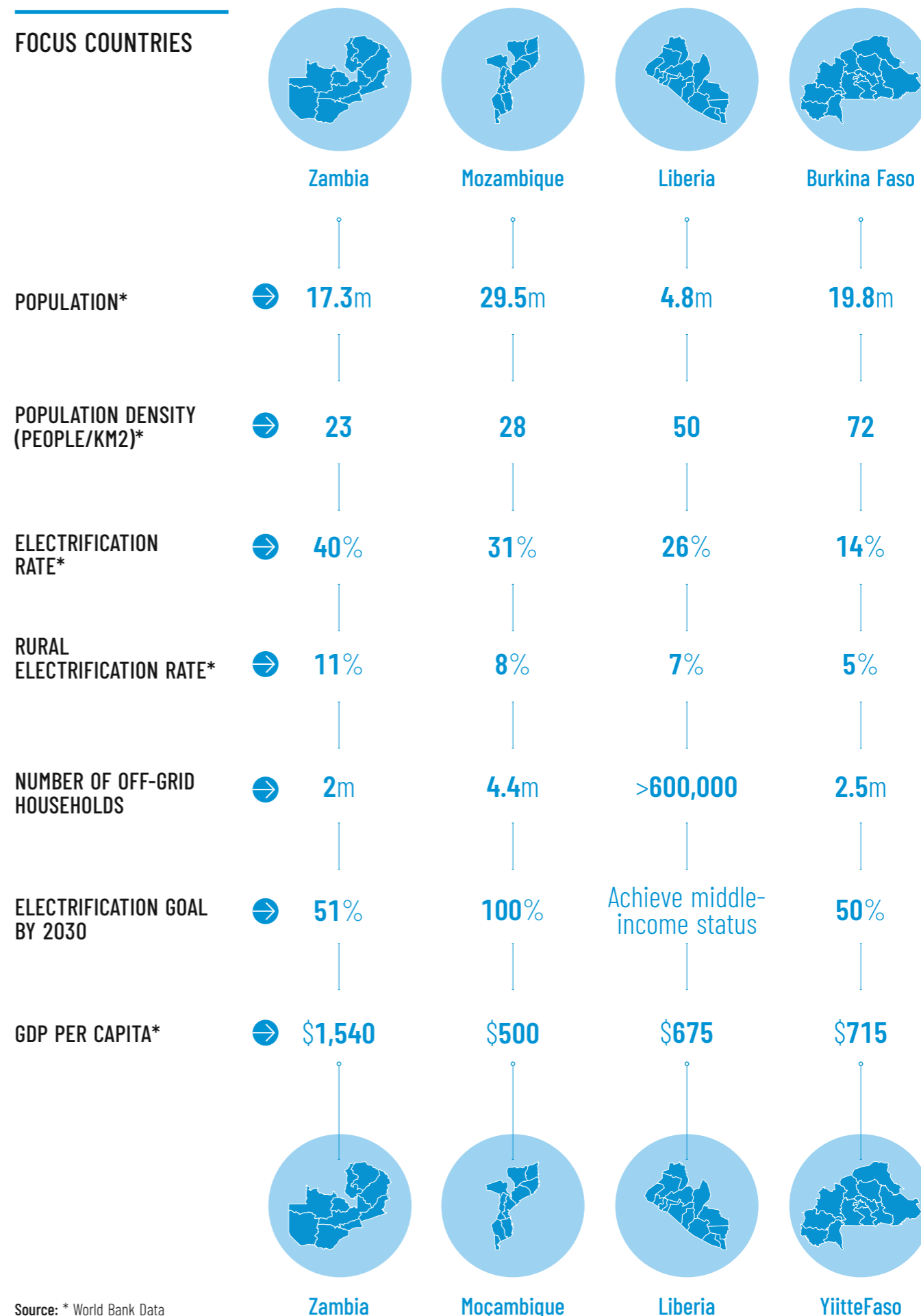


Engaging Stakeholders

BGFA works with host governments to establish dedicated working platforms for cooperation in order to streamline and systematise coordination in the off-grid space between donors, government agencies and the private sector. In Zambia, this work has been formalised as the Off-Grid Energy Task Force, which is embedded in and led by the Ministry of Energy and the Office of the Vice President, with REEEP providing secretariat services. Since its launch in April 2018, the Task Force has met regularly and, among other activities, facilitated a VAT exemption for LED lights, the drafting and adoption of a new national mini-grid policy and the initiation of discussions to improve the affordability of off-grid energy solutions.

Stakeholders in Burkina Faso, Liberia and Mozambique have expressed interest in the creation of similar platforms there. Opportunities for inter-country exchange of experiences will be facilitated.

FOCUS COUNTRIES



Source: * World Bank Data



BGFZ IMPACTS AS OF JUNE 2020:



160,726
Connections



835,775
Beneficiaries



2,600t annually
CO2 emissions avoided



USD 7M
Public financing disbursed



3.7 MW
Capacity added



1294 agents
370 full-time employees
Jobs created



PEOPLE IN THE COMMUNITY ARE EXCITED WITH WHAT THEY CAN DO NOW. WE'RE SAFER, AND WE HAVE MORE HOPE.

Market Information and Analytics

With its aim to reach at least 5 million people in five African countries in the next five years, BGFA has the potential to generate invaluable market intelligence, including data on customer willingness and ability to pay. To capture this intelligence, REEEP has developed Edison, a data collection and analysis platform that connects to the contracted off-grid energy companies' internal systems and allows for automatic, real-time monitoring and verification. Since Edison receives real-time information on all payments made through the companies' pay-as-you-go systems, it also provides a unique snapshot of the financial health of different communities and allows REEEP to rapidly understand the impacts of different shocks. For example, the BGFZ team is using Edison to closely track impacts of the Covid-19 epidemic on customers supported via the BGFZ, which will allow us to respond more quickly and precisely to the needs of customers and the energy companies providing them electricity.

Analysis of Edison data is shared through the Platforms for Market Change and used to inform investment decisions and policymaking. The progress and impacts of BGFZ can be followed live on Edison's BGFZ dashboard (edison.bgfz.org).

HOW BGFA IS RESPONDING TO COVID-19

REEEP is keeping a close eye on the impact of Covid-19 on the performance of the four companies contracted under BGFZ. Early evidence suggests that though sales have dropped slightly, payments and demand for existing systems have been less affected thus far. If high numbers of customers were to default on their payments, risking losing their energy connection and causing serious cashflow problems for the companies, REEEP and Sida are prepared to provide emergency financial assistance and other technical assistance measures. Sida and REEEP are already working together to develop a package of response measures designed to minimize economic stress and keep the lights on for customers in Zambia, while providing a much-needed buffer to energy companies and their employees.

Below: Eight-year-old Dorkas helps her grandmother prepare the family's food indoors, a task that would previously result in high levels of carbon monoxide in the home—a result of cooking on charcoal. The SupaMoto stove uses pellets out of sustainable forestry waste and reduces cooking time by up to 75% resulting in a cleaner environment inside and out. By reducing reliance on charcoal, SupaMoto clients are also helping to conserve Zambia's environment which has been hindered by high levels of deforestation – predominantly for fuel.

Credit: Jason J Mulikita for REEEP

QUICK FACTS

Initial Budget:
USD 52 million

Funder:
Sweden

Focus countries:
Burkina Faso, Liberia, Mozambique, Zambia, Uganda (in market scoping phase)

Goals:
To deploy at least one million high-quality, long-term clean energy services to underserved communities, reaching at least five million people

Benefits of thriving markets for clean energy services:

- » **Social impact:**
safer, more prosperous, better informed communities
- » **Development impact:**
job creation and accelerated economic development within communities
- » **Environmental impact:**
cleaner air, lower GHG emissions





FOUR

THE PRIVATE FINANCING ADVISORY NETWORK

CONNECTING INVESTORS TO HIGH-POTENTIAL CLIMATE AND CLEAN ENERGY PROJECTS IN EMERGING MARKETS.



DONORS:



Left: The Farm-Hand team ploughs the fields in Auroville, India.

Credit: Farm-Hand



2019-2020
SPECIAL FOCUS AREAS:



Gender:
PFAN has finalised its gender strategy and continues its efforts at gender mainstreaming in all its activities. Advisors around the world have received intensive gender training at 12 capacity building workshops.



Adaptation:
Climate adaptation has long been viewed as the sphere of grant or public financing. PFAN is demonstrating opportunities for private financiers to invest in projects with adaptation co-benefits.



Cooling:
As the planet warms, access to cooling for foodstuffs, medicine and dwellings will become ever more critical. But cooling is energy-intensive, and with current technology could cause enormous increases in energy consumption. PFAN is working with the Kigali Cooling Efficiency Programme to support entrepreneurs developing efficient, clean cooling solutions for use in emerging markets.



Left: In Ghana, PFAN works with the Millennium Development Institute to further develop its sustainable charcoal project. Here, Kwadwo Opoku, site foreman, and Kwame Agyako-Agyeben, charcoal expert, gather wood at their production site outside Kumasi.
Credit: CW Studios for REEEP

The Private Financing Advisory Network offers free coaching and investor matchmaking to entrepreneurs developing promising clean energy projects or projects with climate change adaptation benefits in low- and middle-income countries. The network consists of 120 business and energy financing expert advisors based in 40 countries, who offer one-to-one support to help entrepreneurs structure their projects, develop a solid business plan and perfect their pitch to investors.

A rapid scale-up of investment in clean energy generation capacity is required to replace energy generation based on fossil fuels and avoid the worst impacts of climate change. With its work, PFAN helps to bring much-needed private investment into the climate adaptation and clean energy space. It is estimated that low- and middle-income countries will require USD 349 billion annually to implement their Nationally Determined Contributions under the Paris Agreement on climate change. The vast majority

of this financing will need to come from private investors. And while there is no shortage of passionate entrepreneurs with great ideas, and no lack of financiers looking to make an impact with their investments, it is almost impossible for, say, a Nigerian mini-grid developer to get the attention of an international investor. This is where PFAN steps in, to help entrepreneurs to present their projects to investors effectively, and to help investors identify great opportunities in markets they may be unfamiliar with.

PFAN continues its journey to scale up its activities and reach more project developers in more countries. PFAN now accepts applications year-round from 122 countries in Asia, Central America and the Caribbean, Eastern Europe and Central Asia, Sub-Saharan Africa and the Pacific.

PFAN was initiated by UNFCCC and the Climate Technology Initiative in 2006. Managed by ICETT until 2016, it is now hosted jointly by UNIDO and REEEP.

Right: Education is a key aspect of Environment 360's work. In helping communities to deal with their waste, the company is also teaching them about the benefits to the environment that come with better waste management in Accra, Ghana.

Credit: CW Studios for REEEP



THE PFAN GENDER STRATEGY

The PFAN Gender Strategy has three main objectives:

1. To achieve greater, more sustainable and equitable impact by empowering women to actively contribute to and benefit from PFAN's network and services;
2. To encourage gender-responsiveness in every project supported by PFAN so that women's and men's resilience to and ability to address climate change, as well as access to clean energy, are equally enhanced;
3. To increase the pool of women-led and gender-focused projects in the clean energy and climate adaptation space in order to reduce gender disparities in climate change-exacerbated social, economic and environmental vulnerabilities.





THE PFAN JOURNEY

- 1 Open-ended Call for Projects**
 Project developers and entrepreneurs looking to scale up their businesses are invited to submit proposals detailing their investment needs online at pfan.net.
- 2 Project Evaluation and Selection**
 We assess the maturity, technical and economic viability as well as the climate change mitigation and adaptation potential of each application and select high potential projects and businesses for PFAN support.
- 3 Business Coaching**
 We appoint an expert business and financial advisor from our network to provide targeted, unbiased one-on-one advice to help entrepreneurs refine their business plans and financial models. We support the preparation of an investment structure and investor pitch to get entrepreneurs ready for investor introductions.
- 4 Investor Introductions**
 We introduce investment-ready projects to investors in a targeted manner, matching each project with local and international investors based on the latter's profiles. Projects on the verge of investment-readiness can be selected for participation in a Climate & Clean Energy Investment Forum, where developers get the chance to pitch their business plans to a panel of seasoned financial experts and an audience of investors.
- 5 Tipping Point Technical Assistance**
 This is late-stage technical assistance which a project developer can request when an interested investor has been found, to remove the final barriers standing in the way of investment. This assistance can take the form of a legal opinion, technical review or engineering feasibility report, or can support due diligence and meeting of conditions precedent.
- 6 Financial Close**
 Depending on the needs of the project or business, the PFAN advisor provides valuation and transaction advisory support and gets involved in the negotiation to bring the project to financial close.

PFAN'S COVID-19 RESPONSE

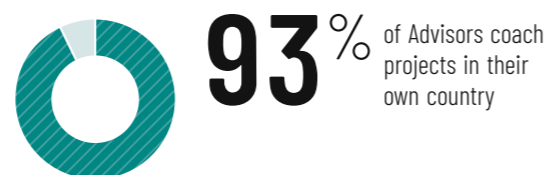
At the time of writing, PFAN is providing additional online support to businesses in their pipeline and beyond, to help them get through these turbulent times. This support is focused on business continuity and enabling access to special Covid-19 relief funds and financing facilities established by investors and donors, as well as supporting rescheduling and renegotiation of existing facilities.

\$1.7^{bn}

investment raised by 127 PFAN-supported projects and businesses in



120 Advisors and 34 country coordinators



THREE COMPANIES THAT FOUND INVESTMENT AFTER PFAN COACHING IN 2019:



PFAN HELPED US UNDERSTAND PROJECT FINANCING [AND] PUT US IN FRONT OF AN AUDIENCE OF PEOPLE WHO AREN'T YOUR TYPICAL VENTURE CAPITAL INVESTORS. THIS EXPOSURE AT AN EARLY STAGE HELPED US IN PLANNING OUR GROWTH TRAJECTORY.

- AFNAN HANNAN, CO-FOUNDER AND CEO OF OKRA SOLAR, A START-UP MAKING WAVES WITH ITS TECHNOLOGY THAT ALLOWS OFF-THE-SHELF SOLAR PANELS AND BATTERIES TO BE CONNECTED TO CREATE SMART PAY-AS-YOU-GO MICROGRIDS. OKRA SOLAR RAISED US\$200,000 IN INVESTMENT IN 2019.



I SIGNED UP TO PFAN AND WENT THROUGH THE COMPETITION WITH THE MISSION OF ENSURING THAT BY THE TIME WE ARE DONE WITH THE TRAINING PROCESS, WE WOULD HAVE THE TEAM THAT COULD DEVELOP INVESTMENT-READY PROJECTS. I NOW SEE THE OPPORTUNITIES EXTENDING WAY BEYOND JUST THE PROVISION OF SOLAR ENERGY. I'M STILL VERY EXCITED.

- KOBINA NYANTEH, CEO AND FOUNDER OF TRANSLIGHT SOLAR, WHICH RAISED OVER US\$ 180,000 TO EXPAND ITS PAY-AS-YOU-GO SOLAR ENERGY BUSINESS IN GHANA.





FIVE _____

SOUTHERN AFRICAN RENEWABLE ENERGY INVESTMENT AND GROWTH PROGRAMME (SOARING)

SUPPORTING INVESTMENT IN SMALL AND MEDIUM-SIZED CLEAN ENERGY PROJECTS IN ZAMBIA, TANZANIA AND NAMIBIA.

REEEP

Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety

renac
renewables academy

Left: An irrigated cabbage field in a village outskirts.

Credit: Riccardo Niels Mayer



Above:
Left: A traditional style African house in rural Namibia powered by solar energy.

Credit: Cheryl Ramalho

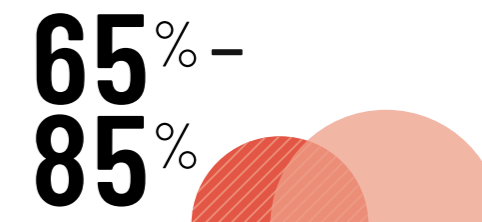
The SOARING programme will design and implement a prototype approach to prepare, bundle and structure investments into small- and medium-sized clean energy projects in Zambia, Tanzania and Namibia. The goal is to support these countries and the Southern African region in general as they seek to channel larger sums of climate-linked and blended financing into their economies. The programme is funded by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) as part of the International Climate Initiative (IKI) and implemented by REEEP in cooperation with the Renewables Academy (RENAC).

Southern African countries face a considerable challenge in financing their climate change mitigation and adaptation plans. Nearly all Nationally Determined Contributions (NDCs) submitted under the Paris Agreement on

Climate Change include targets conditional on receiving additional public and/or private finance. In Zambia and Namibia alone, around USD 83bn of external finance is needed for NDC implementation. The agricultural sector still plays a major role in Southern African economies, representing up to 27% of GDP and 13% of export earnings. SMEs, meanwhile, form the backbone of Southern African economies, but report substantial challenges related to limited access to energy supply and to financing. These challenges negatively affect SMEs' resilience to shocks such as the one caused by the current Covid-19 epidemic and any future ones caused by climate change.

Below: Raw coffee beans on a farm in northern Tanzania.

Credit:
Abdelrahman



Agricultural sector share of employment in Southern Africa

REEEP and its partners have identified an opportunity to simultaneously support SMEs providing clean energy solutions for agricultural value chains, advance the pilot countries' NDC targets by displacing fossil fuels, and enhance the resilience of the agricultural sector through improved access to clean, reliable energy.

While the combined financing requirements of Southern African SMEs are huge, their individual asks are far too small for existing climate finance instruments, and for most investors. SOARING aims to design and launch a climate finance catalyst that will bundle SME-level investment opportunities and develop a methodology to channel private investment and climate finance towards these bundles.

SOARING will employ innovative technology, data-driven approaches and financial incentives, combined with peer-to-peer learning and capacity building for government, financiers and the private sector, to help the pilot countries build an improved financial ecosystem to allow for the channelling of large-scale blended private investment and climate finance into clean energy off-grid and/or agricultural SMEs.

Market scoping studies in Namibia, Tanzania and Zambia are expected to be finalised by August 2020. These studies will inform the design of financial instruments to be utilized under the SOARING Fund for each country.

The learnings from this pilot will be packaged in a number of 'SME Climate Finance Pathways', which will facilitate replication of the project's achievements in other sectors and countries.

\$83^{bn}

Conditional

Required external, international financing to support Zambia and Namibia NDC's



27%

Agricultural sector share of GDP in Southern Africa



SIX

AUSTRIA- NEPAL RENEWABLE ENERGY BLENDED FINANCE FACILITY

ESTABLISHING A BLENDED
FINANCE INSTRUMENT FOR SMALL-
SCALE RENEWABLE ENERGY
PROJECTS IN NEPAL.

Federal Ministry
Republic of Austria
Climate Action, Environment,
Energy, Mobility,
Innovation and Technology

REEEP

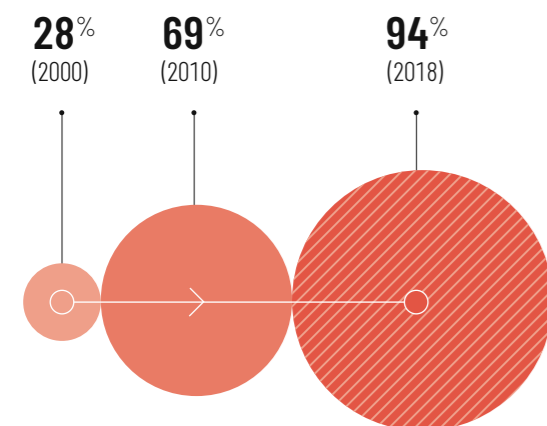
Left: A village
in Nepal's far
western province
of Sudurpashchim
Pradesh.

Credit: SNV

Nepal is facing an energy crisis of unprecedented proportions. The electricity generation capacity managed by Nepal Electricity Authority (NEA) is insufficient to meet demand, leading to frequent power outages. Though the government has been highly effective in expanding energy access – from 28% in 2000 to 69% in 2010 and 94% in 2018 - around 1.75 million Nepalis still do not have access to modern energy, and over 70% of the population relies on traditional biomass for cooking¹.

Addressing the energy crisis by accelerating the deployment of modern renewable energy solutions, both on- and off-grid, is a high priority for the Government of Nepal. The country aims to achieve universal electrification by 2030. Many communities that remain off the grid are in remote, mountainous areas where small-scale clean energy generation is the only viable solution for electrification².

The universal access goal cannot be reached with public and donor funding alone, and the government aims to help the energy sector access new sources of financing through a shift from 'aid to trade' and from 'subsidy to credit'.



Over the last 20 years the government has been highly effective in expanding energy access



Above: Nepalese children in Sudurpashchim Pradesh, Nepal's far western province.
Credit: SNV



The Austria-Nepal Renewable Energy Blended Finance Facility, funded by the Austrian Government and implemented by REEEP in cooperation with SNV and NMB Bank Nepal, will support this shift by establishing a blended finance instrument for small-scale renewable energy projects and carrying out capacity building activities. Its aims are to:

- » mainstream commercial lending for small-scale renewable energy projects in Nepal;
- » build capacity among key stakeholders at the provincial level for upscaling renewable energy programmes;
- » accelerate the transition of the Nepalese clean energy market away from being mostly dependent on subsidies, and help establish a market based on credit to enhance the Nepalese government's access to and use of international technical assistance and finance.

In addition, the project aims to generate co-benefits such as a reduction of GHG emissions and increased productive end use of energy. The project will run until August 2022, with the core period of implementation in 2020 and 2021. The project's activities will be focused in the province of Karnali Pradesh in north-western Nepal.

The project leverages experience gained by REEEP through the implementation of its previous project in Nepal, which provided credit for improved water mills for productive use. It will also leverage the financial innovation and governance structure developed for the Clean Energy Revolving Fund (CERF) in Cambodia (see page 51).

The design and Operational Manual for the finance instrument, a Credit Guarantee Facility, was completed in June 2020. The facility, which is to be launched later in 2020, will finance renewable energy projects through wholesale lending to microfinance institutions and direct lending to communities. SNV has compiled a preliminary shortlist of ten potentially bankable solar mini-grid and micro hydro projects in Karnali Pradesh. The projects have a total capacity of at least 247 kW, enough to provide electricity to around 10,000 people.

Working closely with SNV Nepal, the Alternative Energy Promotion Centre (AEPCC) and other stakeholders, REEEP will also design and establish a Renewable Energy Local Capacity Development Facility (RE-LCDF), which will launch capacity building activities for relevant Nepalese provincial government agencies and renewable energy technology providers.

1. World Bank Data
2. www.weecs.gov.np/uploaded/National-Energy-Strategy-of-Nepal-2013.pdf



SEVEN

CLEAN ENERGY REVOLVING FUND - CAMBODIA

OFFERING ACCESS TO FINANCE TO SMALL ENTERPRISES IN THE AGRIFOOD SECTOR TO INVEST IN CLEAN ENERGY TECHNOLOGIES.

REEEP

Federal Ministry
Republic of Austria
Climate Action, Environment,
Energy, Mobility,
Innovation and Technology

 Nexus
for development

 blue
moon
FUND

Left: Gnek Sarith inspects the pepper vines on his farm in Preah Vihear province. After buying a small solar pump from a local firm, a CERF loan allowed him to purchase a system large enough to irrigate his entire 50-hectare farm.

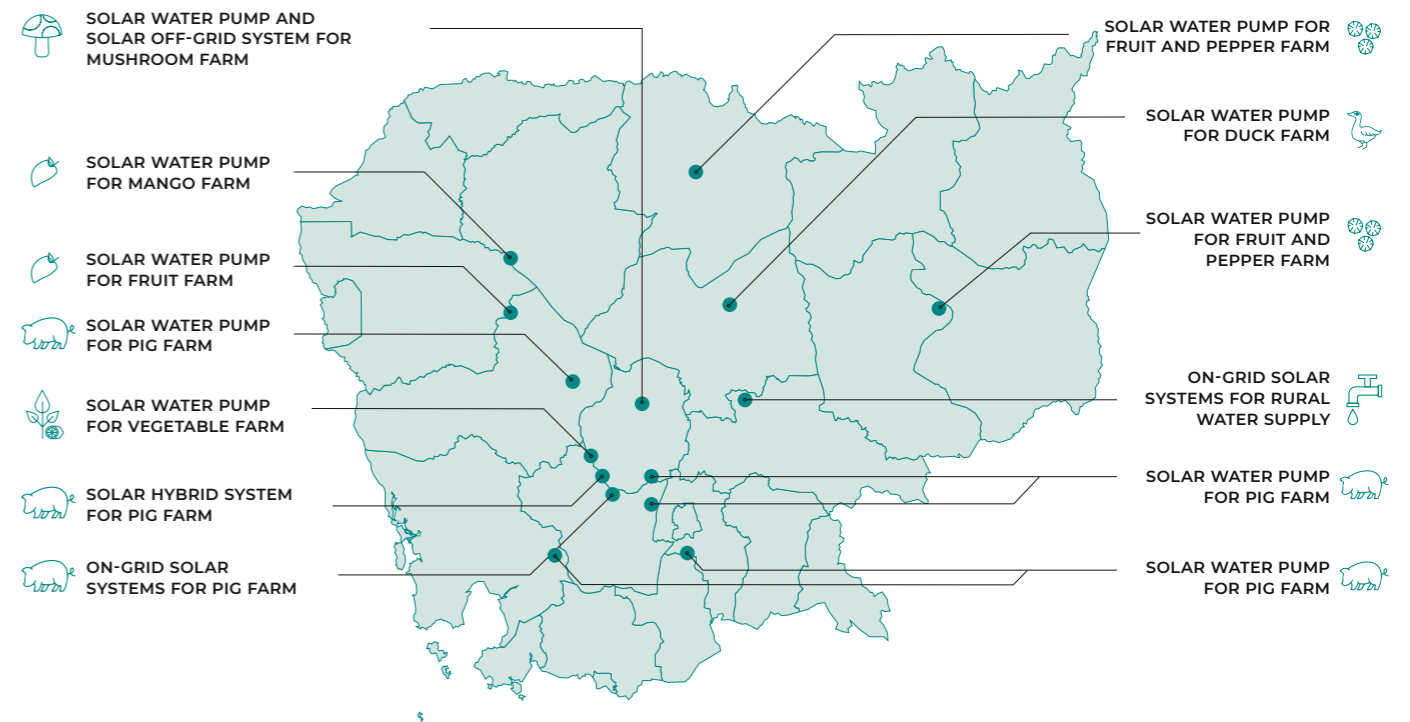
Credit: Jeremy Meek for REEEP



Left: Mr. Sokhom in his longan farm in Battambang province, which is now irrigated through a solar pumping installation purchased with a CERF loan.

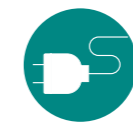
Credit: Jeremy Meek for REEEP

CLEAN ENERGY REVOLVING FUND INVESTMENTS - SNAPSHOT



The Clean Energy Revolving Fund (CERF), managed by Nexus from 2016 until 2019, addressed two important barriers to the uptake of clean energy solutions in the agricultural sectors of low- and middle-income countries: a lack of knowledge of and trust in clean energy technology among end-users and a lack of flexible financial instruments for SME-level lenders. CERF targeted different segments of the agrifood sector, offering concessional loans and flexible repayment terms to enable SMEs to purchase clean energy technology for use on farms.

Cambodian financial institutions (FIs) providing loans to agricultural SMEs charge high interests and usually require land titles as collateral. At the same time, awareness of the benefits of clean energy technology among Cambodian farmers is low. Unsurprisingly, these farmers tend to be unwilling to take out a loan to invest in such technology at the risk of losing their land if it does not generate the promised savings. CERF, however, demonstrated that, given the right conditions and capacity building, many farmers would be interested in adopting clean energy technology. As most agricultural SMEs in Cambodia are unregistered and lack any financial records, CERF had to develop a relationship-based methodology to assess those businesses' financial performance. An additional benefit of the due diligence and loan repayment processes was an increase in the financial know-how of farmers, who will be able to use this knowledge in applications for future loans.



85.76 kW
Total CE generation capacity installed



3-5 years
Payback periods



168 tonnes
CO2e emissions reductions (annual)



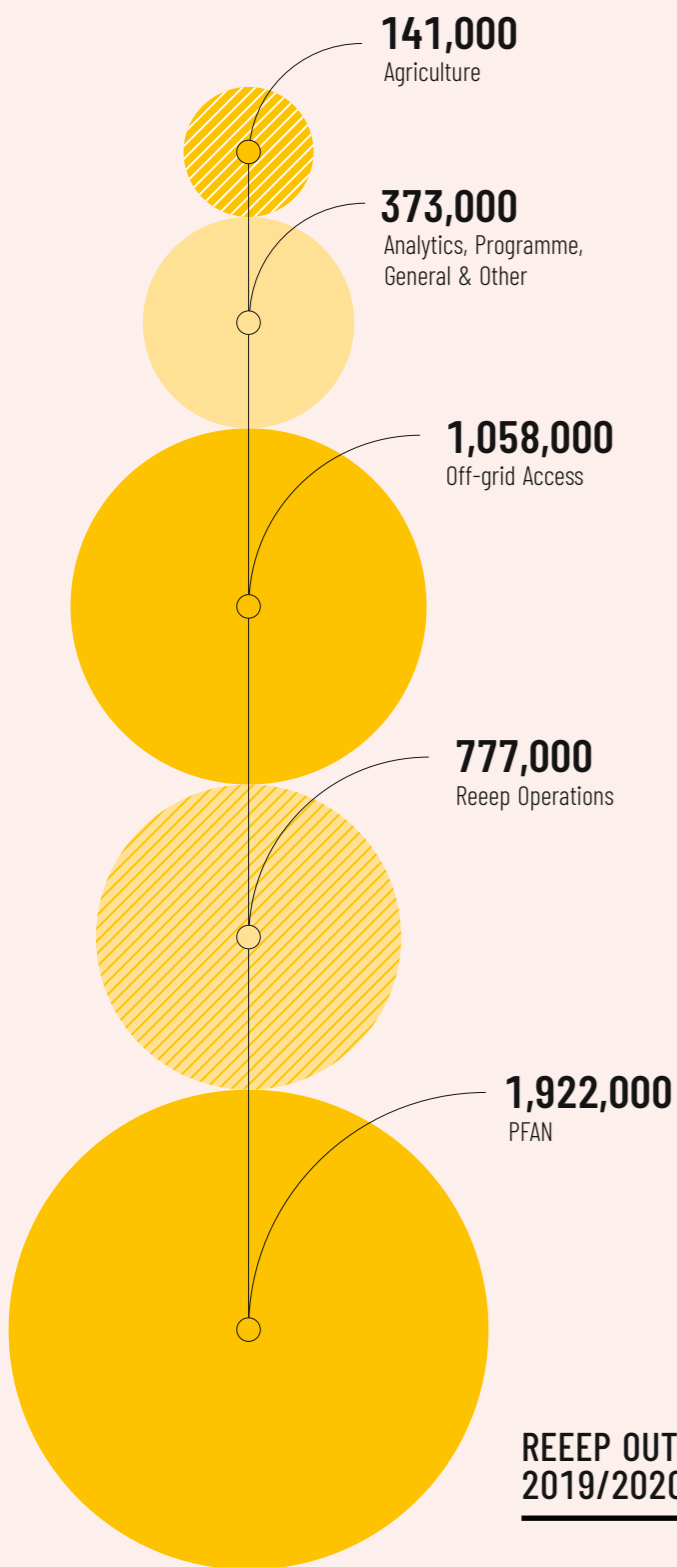
USD 7,000 - 50,000
Loan size

CERF disbursed fifteen loans with a total value of USD 261,014, almost all for the purchase of solar-powered water pumps. All farmers made significant savings on their energy costs, and the loans continue to be repaid.

Demand for CERF loans was strong, with potential borrowers clearly responding to the gap the loans addressed in the Cambodian finance market. However, following the adoption by the Cambodian government of new restrictions on non-FI lenders, Nexus was unable to disburse further loans or attempt to further grow the fund without a banking license. In addition, Nexus' single office location in Phnom Penh led to high costs for due diligence and follow-ups across the country, and the project team suspected that lenders' awareness of the fact that Nexus was an NGO led some to take a lax attitude towards their debt obligations. For these reasons, REEEP and Nexus decided to close the fund and continue to work towards adoption of the learnings of CERF by Cambodian FIs. Only 11% of capital needs in the Cambodian agricultural sector are currently met, and several FIs have expressed interest in addressing this market gap.

In late 2019, Nexus published the CERF Handbook, which discusses the design and activities of the fund and summarizes lessons learned. It is envisioned that Cambodian financial institutions will be able to use the handbook and guidance from Nexus to develop their own concessional financing mechanisms for clean energy in agriculture.

REEEP IN NUMBERS



FINANCIAL INFORMATION

In April-May 2020, Grant Thornton Austria conducted the annual audit of REEEP's financial statements and performed assurance services – including verification of compliance – conform the requirements of the Austrian Association Act. The audit found REEEP's accounting system to be fully in accordance with generally accepted accounting procedures and an internal control environment. The Audit determined that:

- » No objections to REEEP financial procedures were found.
- » REEEP financial statements comply with legal requirements, are consistent in all material respects, and give a true and fair view of its financial position and performance for 2019/20.
- » REEEP funds were used in accordance with its statutes.
- » No unusual income or expenses were noted.

REEEP LEGAL STATUS

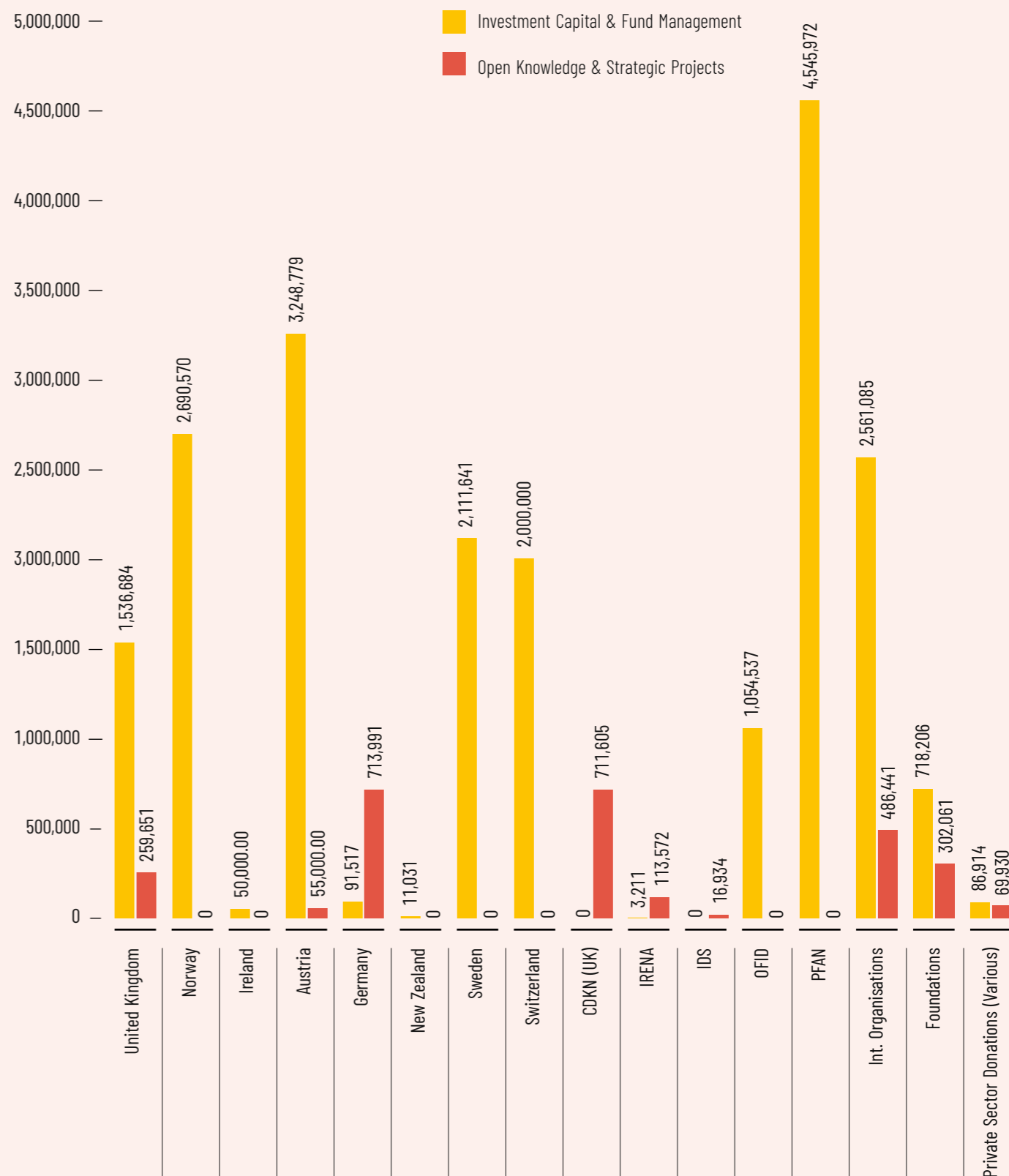
REEEP is an international multilateral partnership, registered in Austria and recognised under Austrian law as a Quasi-International Organization (QuIO), a category of international organization introduced in 2015 to accommodate international organizations with multi-stakeholder institutional structures similar to those of intergovernmental organizations, but also allowing membership of non-government actors. REEEP qualifies as an international NGO for official development assistance (ODA) contributions according to the Organization for Economic CoOperation and Development (OECD).

REEEP OUTLAYS 2019/20

In 2019/20, REEEP outlays amounted to EUR 4.271 million. REEEP operations, including outreach, represented 18% of total expenditures. PFAN accounted for 45%; off-grid energy access accounted for 25%; analytics, programme, and other accounted for 9%, while agriculture accounted for 3% of the total.

REEEP FUNDING OVERVIEW

OVER THE EIGHT-YEAR PERIOD FROM 2011/12 TO 2019/20, REEEP RECEIVED EUR 23.55 MILLION IN DONATIONS, INCLUDING EUR 20.7 MILLION FOR INVESTMENT CAPITAL AND FUND MANAGEMENT, AND EUR 2.85 MILLION FOR OPEN KNOWLEDGE AND STRATEGIC PROJECTS.



OVERVIEW OF ASSETS AND LIABILITIES

	31/3/2020	31/3/2019	31/3/2018	31/3/2017	31/3/2016	31/3/2015	31/3/2014	31/3/2013	31/3/2012	31/3/2011	31/3/2010
	KEUR	KEUR	KEUR	KEUR	KEUR	KEUR	KEUR	KEUR	KEUR	KEUR	KEUR
ASSETS											
Fixed assets											
Intangible assets	6	2	4	20	49	80	115	152	65	25	98
Tangible assets	7	5	5	5	3	5	9	18	27	17	7
Current assets											
Inventory	170	314	60	196	0	0	0	0	0	0	0
Accounts receivable	0	40	0	33	88	114	8	30	99	91	104
Cash	2,917	3,592	4,260	4,084	4,875	5,920	9,135	11,998	11,953	12,881	12,546
Prepaid expenses	7	7	17	22	5	9	13	7	6	1	0
	3,107	3,959	4,346	4,360	5,019	6,128	9,281	12,204	12,150	13,015	12,756
LIABILITIES											
Equity	1,394	1,346	1,337	1,299	1,323	1,377	1,797	2,249	2,341	1,908	1,838
Provisions	113	148	113	578	621	868	1,104	1,066	786	628	1,0218
Liabilities on account of earmarked funds	1,372	2,253	2,704	2,373	3,001	3,659	5,989	8,312	7,946	9,219	8,833
Liabilities											
Accounts payable	174	179	132	53	12	35	92	181	282	164	49
Other liabilities	54	33	59	57	64	189	299	395	814	1,096	987
Deferred Income	0	0	0	0	0	0	0	0	0	0	20
	3,107	3,959	4,346	4,360	5,019	6,128	9,281	12,204	12,150	13,015	12,756
NET FINANCIAL ASSETS											
Current assets											
+ pre-paid expenses	3,094	3,953	4,337	4,335	4,968	6,043	9,156	12,035	12,058	12,973	12,650
Provisions and liabilities	1,714	2,613	3,009	3,061	3,698	4,751	7,484	9,954	9,828	11,107	10,917
	1,380	1,340	1,328	1,274	1,270	1,292	1,672	2,081	2,230	1,866	1,733

OVERVIEW OF INCOME AND EXPENSES

	2019/20	2018/19	2017/18	2016/17	2015/16	2014/15	2013/14	2012/13	2011/12	2010/11
	KEUR	KEUR	KEUR	KEUR	KEUR	KEUR	KEUR	KEUR	KEUR	KEUR
Non-earmarked contributions	127	70	98	150	507	70	70	712	85	79
Earmarked contributions	3,599	2,663	3,055	1,733	1,618	268	1,679	3,805	2,729	4,685
Allocation to liabilities on acc.	898	480	-331	628	658	2,330	2,323	-366	1,273	-386
Allocation to work in progress	-143	254	-137	196	0	0	0	0	0	0
Other income	61	27	30	39	5	15	27	5	0	0
Expenses for projects	-2,667	-1,949	-1,306	-1,446	-1,683	-1,694	-3,083	-2,734	-2,267	-3,067
Expenses for regional secretariats	0	0	0	-2	-7	-217	-288	-630	-377	-307
Cost of Staff	-1,564	-1,311	-1,124	-1,046	-903	-851	-763	-720	-707	-546
Depreciation	-8	-8	-22	-36	-39	-53	-54	-47	-27	-81
Other operating expenses	-274	-203	-212	-244	-215	-308	-381	-450	-368	-372
Subtotal	28	22	52	-28	-59	-440	-471	-154	341	5
Financial result	20	-13	-14	5	8	27	25	83	122	86
Operating Surplus/Loss	48	9	38	-23	-51	-413	-446	-71	464	91
Taxes on income	0	0	0	-1	-3	-7	-6	-21	-31	-22
Annual Surplus/loss	48	9	38	-24	-54	-420	-452	-91	433	70

GOVERNANCE

REEEP's governance structure comprises two acting bodies: the Governing Board and a General Assembly of Members. REEEP's Meeting of Members, held at least once every two years and to which all 359 Members are invited, functions as the General Assembly of the Renewable Energy and Energy Efficiency Partnership. The REEEP Statutes and Strategy are subject to ultimate approval by this Assembly.

Governing Board

REEEP's Governing Board holds office for a period of four years and is responsible for the conduct of business in accordance with the REEEP Statutes. The Governing Board develops and oversees key strategic direction, targets, time frames and priorities for REEEP's activities; prepares financial rules and accounting systems; and guides the operations of the International Secretariat.

Please see page 10 for a full list of Governing Board members.

Advisory Board

The REEEP Advisory Board comprises eminent experts and thinkers in clean energy and related fields, who provide the organisation with high-level expertise and strategic guidance. Members are invited by the Director General and approved by the Governing Board.

Please see page 10 for a full list of Advisory Board members.

REEEP members

REEEP is a global public-private partnership, and counts as its official members 359 governments, international and multilateral organisations, non-governmental institutions, foundations and private sector actors.

The full list of REEEP Members can be found at www.reeep.org/members

- » Governments: 46
- » Government Ministries and agencies: 12
- » Local governments: 11
- » Multilateral agencies: 8
- » Education facilities: 8
- » NGOs: 116
- » Businesses: 153
- » Individuals: 5

ACRONYMS AND ABBREVIATIONS

AEPC – Alternative Energy Promotion Centre

BGFA – Beyond the Grid Fund for Africa

BGFZ – Beyond the Grid Fund for Zambia

BMU - German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety

CDKN – Climate and Development Knowledge Network

CEKH – CARICOM Energy Knowledge Hub

CERF – Clean Energy Revolving Fund

EDISON – Energy Data and Intelligence System for Off-Grid Networks

EUR – Euro

GDP – Gross Domestic Product

GEI – Global Environmental Institute

GHG – Greenhouse gas

HSBC – Hong Kong and Shanghai Banking Corporation

ICETT – International Center for Environmental Technology Transfer

IDS – Institute of Development Studies

IKI – International Climate Initiative

IRENA – International Renewable Energy Agency

KfW – German Development Bank

LED – light emitting diode

MEL – Monitoring, Evaluation and Learning

NEA – Nepal Energy Authority

NEFCO – Nordic Environment Finance Corporation

NDCs – Nationally Determined Contributions

NGO – Non-governmental organisation

ODA – Official development assistance

OECD – Organisation for Economic Cooperation and Development

OFID – OPEC Fund for International Development

OPEC – Organization of the Petroleum Exporting Countries PFAN – Private Financing Advisory Network

QuIO – Quasi-international organisation

RE – Renewable energy

RENAC – Renewables Academy

REEEP – Renewable Energy and Energy Efficiency Partnership

RE-LCDF – Renewable Energy Local Capacity Development Facility

SETA – Sustainability, Energy, Technology, Architecture SDGs – Sustainable Development Goals

Sida – Swedish International Development Cooperation Agency

SMEs – Small and medium-sized enterprises

SNV – SNV Netherlands Development Organisation

SOARING – Southern African Renewable Energy Investment and Growth Programme

UK – United Kingdom

UN – United Nations

UNFCCC – United Nations Framework Convention on Climate Change

UNIDO – United Nations Industrial Development Organization

USAID – United States Agency for International Development

USD – U.S. Dollar

VAT – Value Added Tax

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INTERNATIONAL SECRETARIAT

REEEP's International Secretariat is based in Vienna, Austria, and employs a team of highly committed international professionals.



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GET IN TOUCH

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Above: The United Nations headquarters in Vienna, Austria, where the REEEP offices are located.

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