

20 YEARS OF IMPACT

ANNUAL REPORT 2022



REEEP

ABOUT REEEP

REEEP WAS ESTABLISHED IN 2002 AS AN INTERNATIONAL MULTILATERAL PARTNERSHIP TO ACCELERATE THE UPTAKE OF CLEAN ENERGY TECHNOLOGIES IN DEVELOPING AND EMERGING MARKETS, PROMOTE MODERN ENERGY ACCESS, MITIGATE GREENHOUSE GAS EMISSIONS AND SUPPORT LOW-CARBON DEVELOPMENT.

For over twenty years, REEEP has been a driving force in the global energy transition by accelerating reliable and affordable clean energy solutions in low- and middle-income countries. We mobilise financing to build dynamic, sustainable markets and ultimately make clean energy technology accessible and affordable for peri-urban and rural populations, down to the very last mile. Through a combination of financial instruments, capacity building, facilitation of stakeholder cooperation and technical assistance, REEEP's programmes fill financing and knowledge gaps and drive private sector investment, enabling frontier markets to thrive. We work closely with stakeholders across the public and private sectors to ensure holistic programme design and implementation are rooted in local needs, decreasing risk in clean energy investment to create long-lasting ecosystem change.

Our unique approach hinges on extensive on-the-ground experience and the agility and expertise of our small team, which can innovate, adapt and design at a speed and flexibility unmatched by larger organisations. REEEP is a pathfinder: we identify market needs to develop and implement groundbreaking programmes which build up and strengthen local markets which, once proven, can be scaled up and replicated in multiple markets. For example, the Ashden and UN Global Climate Action Award-winning Beyond the Grid Fund for Zambia (BGFZ) has successfully connected over one million Zambians to affordable, reliable off-grid energy access. The programme has now been expanded into the Beyond the Grid Fund for Africa (BGFA), which aims to connect 6.5 million people in six sub-Saharan African countries by 2028.

200+
PROJECTS DONE

56
COUNTRIES

STRENGTHENING RESILIENCE

We support global efforts under the 2015 Paris Agreement on Climate Change and the United Nations 2030 Agenda for Sustainable Development with a focus on the Sustainable Development Goals (SDGs) of ensuring access to affordable, reliable, sustainable and modern energy for all and taking action to combat climate change and improve resilience. Our work also contributes to achieving food security, reducing damage

to the environment, ending poverty, achieving gender equality and facilitating decent work and economic growth where it is most needed.

REEEP's focus lies in advancing clean energy solutions for off-grid and distributed small-scale power as well as promoting the productive use of clean energy within agri-food value chains. Our mandate is global, with

a current focus on low- and lower-middle-income countries across sub-Saharan Africa, South Asia and Southeast Asia.

REEEP is a co-hosting and implementation partner for two large programmes: The Beyond the Grid Fund for Africa (BGFA), which incentivises off-grid energy service companies to accelerate access to affordable clean energy, and the Private Financing Advisory Network (PFAN), which provides project preparation support and investment facilitation for clean energy and climate adaptation businesses. We also provide first-loss loan reserves and green lending capacity building to local financial institutions to extend affordable local currency finance for energy access, productive uses, small-scale renewables and energy efficiency investments through two innovative financing facilities – the Austria Nepal Blended Finance Facility supporting clean energy projects in Nepal and the Southern African Renewable Energy Investment and Growth Programme (SOARING), which channels climate finance towards clean energy businesses targeting productive use technologies leveraging solar in Tanzania and Zambia.

REEEP's strength lies in our broad global network of experts and partners. In all our programmes, we work on multiple levels, 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.



A MOON employee holds the hands of two young boys getting light for the first time in their village in Sansaba, Senegal.

Cover: A child in Yabone, Senegal, who can finally study at night thanks to lamps powered by MOON solar technology.

Credit: Audy Valera

“ REEEP IS A UNIQUE PARTNERSHIP TO ACCELERATE THE ENERGY TRANSITION IN LOW- AND MIDDLE-INCOME COUNTRIES. IT CONTRIBUTES TO CONCRETE IMPLEMENTATION ON THE GROUND, SUPPORTS VULNERABLE POPULATIONS AND HELPS TO ACHIEVE THE PARIS AGREEMENT AND THE SDGS. THAT'S WHY AUSTRIA SUPPORTS REEEP AND IS PROUD TO HOST THE SECRETARIAT IN VIENNA.



Elfriede-Anna More

DIRECTOR FOR INTERNATIONAL ENVIRONMENTAL AFFAIRS, FEDERAL MINISTRY FOR CLIMATE ACTION, ENVIRONMENT, ENERGY, MOBILITY, INNOVATION AND TECHNOLOGY, AUSTRIA | RAPPORTEUR OF THE REEEP GOVERNING BOARD

FOREWORD



Leonore Gewessler
FEDERAL MINISTER FOR CLIMATE ACTION, ENVIRONMENT, ENERGY, MOBILITY, INNOVATION AND TECHNOLOGY OF AUSTRIA

Just 10 years before REEEP's founding, the United Nations Framework Convention on Climate Change (UNFCCC) was adopted to address the global issue of climate change. This historic policy framework agreement put the emphasis on reducing greenhouse gas emissions, facilitating global adaptation to the impacts of climate change and promoting sustainable development.



A solar panel used to power solar water pumps by Futurepump in Kenya, supported by REEEP's 10th call. Credit: Futurepump

In Austria and around the globe, everyone has a stake in sustainable thinking and action.

Since then, Austria has been actively engaged in advancing the goals of the UNFCCC and the Paris Agreement, which introduced a binding worldwide agreement on climate change to limit global warming to well below 2 degrees Celsius above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5 °C. It also recognised climate change adaptation as an equally important objective as mitigation, a stance we have held and pursued since the early 2010s. To this end, Austria was one of the first EU Member States to put forward a comprehensive strategy for climate change adaptation, aimed at mitigating the adverse impacts of climate change on the environment, society and the economy, and we are on a decarbonisation path towards becoming climate-neutral by 2040.

Our collective future relies on the efforts of everyone from governments, academia and NGOs to lead the way, to SMEs and each individual to act sustainably in the race to combat climate change. To further define what is required, the international community achieved a significant milestone with the adoption of the Sustainable Development Goals and the 2030 Agenda. These goals serve as a universal guide for sustainable living on our planet, while also ensuring that "no one is left behind", a policy institutionally safeguarded in Austria.



Mango harvest in Cambodia by farmers supported by the Clean Energy Revolving Fund (CERF), which offered access to finance to small enterprises in the agri-food sector looking to invest in clean energy technologies. Credit: CERF



A smallholder farmer using low-pressure drip irrigation in Nicaragua from iDEal Tecnologias, supported by REEEP's 10th call. Credit: iDEal

Reaching these goals wouldn't be possible without organisations like REEEP, which we have supported since 2003, as part of our commitment to combating climate change. For twenty years, REEEP has played an important and independent role, together with Austria, to facilitate change in the developing world and catalyse long-lasting market development.

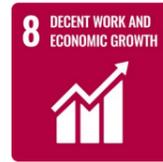
Energy access and energy security are critical components to the success of these aforementioned agreements – access to a diversified supply of clean,

affordable and reliable energy is essential for socio-economic development, poverty eradication and improving quality of life, especially in the countries of the Global South where REEEP works. The UN Climate Change Conference is an excellent barometer of the primary concerns of the global sustainability community, and as evidenced in the discussions at COP27, energy, food security and increasing resilience to climate-related challenges are high on the list of priorities.

REEEP'S FOCUS SUSTAINABLE DEVELOPMENT GOALS



ADDITIONAL GOALS



“ SINCE REEEP WAS LAUNCHED 20 YEARS AGO, PUBLIC CONSCIOUSNESS ON NEEDS FOR ENERGY RENEWABLES AND EFFICIENCY HAS INCREASED AND INNOVATIONS HAVE MUSHROOMED, BUT POLICIES AND SOLUTIONS DO NOT MATCH YET THE SCALE OF THE PLANETARY CRISES. REEEP’S EXPERTISE IN CATALYTIC MULTI-STAKEHOLDER ACTIONS, WITH A FOCUS ON THE NEEDS OF SMES, IS NEEDED TO FURTHER CONTRIBUTE TO THE JUST TRANSITION TO RESPONSIBLE CLIMATE ACTION AND SUSTAINABILITY.



Arab Hoballah
EXECUTIVE DIRECTOR, SEED – ENTREPRENEURSHIP FOR SUSTAINABLE DEVELOPMENT

REFLECTIONS ON REEEP

Eva Kelly, CEO and Martijn Wilder, Chairman of the Governing Board

Twenty years ago, REEEP was launched as a global public policy partnership at the World Summit for Sustainable Development (WSSD) in Johannesburg in 2002. As we celebrate two decades of successful operation, it is a timely moment to reflect on the original objectives against the changing context of markets for renewable energy and energy efficiency.

In the years since our establishment, we have been part of the momentum which transformed renewable energy from a niche topic at the turn of the Millennium into an essential part of the energy sector. Our beginnings were during the early days for renewables. Technologies had been demonstrated but were considered expensive. There was a feeling that renewables would never be commercial – many thought they would remain an expensive, luxury option. Some in policy circles, therefore, felt they were inconsistent with development needs. Energy efficiency was cheap but under-deployed.

This thought drove the creation of REEEP in 2002 as an institution to legitimise clean energy, with the original goals of reducing emissions and delivering social improvement and economic benefits from using energy in a more efficient way. REEEP was born in an economic rather than a geopolitical age. As the WSSD launch suggests, this was deliberately a sustainable development framing of social, environmental and economic benefits: pro-poor development as well as

REEEP was never intended just to be a project-based organisation, rather it would develop and accelerate markets, aiming for transformation. In the words of Nick Mabey, one of REEEP’s originators, “you can’t just leap to the endpoint, you have to go in cycles of building. As one market grows, you find out more about what you need to do to make markets grow and to sustain them and move them forward”.



A VITALITE employee assembles a solar home system at their headquarters in Lusaka, Zambia. VITALITE is supported by both the Beyond the Grid Fund for Zambia and the Beyond the Grid Fund for Africa. Credit: Jason J Mulikita

greenhouse gas emissions reduction and biodiversity. 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.



Children watching TV powered by an RDG solar home system at a school in rural Zambia. RDG is supported by the Beyond the Grid Fund for Africa. Credit: Jason J Mulikita

To those visionaries who dreamt up and launched the new partnership, it was clear that the scale of the transition required was so vast that existing organisations across the world must be brought on board. REEEP would act as a permanent push to other organisations to think and do more, driving change in policy and regulation, supporting innovation on clean energy finance, and promoting knowledge and capacity-building.

It would identify leaders, supporting and empowering those champions who were already active, be they working in governments, regulators, industry, international organisations, think tanks, academic institutions or civil society. Partners would share knowledge across regions on successful business models; regulators would learn from other regulators – for the first 10 years of its operation, REEEP supported the Sustainable Energy Regulators Network (SERN). So far REEEP has offered support to over 200 projects in 56 countries across 10 funding calls. On the knowledge side, REEEP was an early adopter of open data and our clean energy portal reeple had 220,000 monthly users at its peak.

One key change over REEEP’s lifetime has been a shift in the ratio of funding for ecosystem building against funding directly to private sector companies. Over time it has further focused on funding for off-grid, decentralised renewable energy service providers in lower-income countries.

With a solid background in policy and a strategic shift more towards direct support for the private sector, our programmes such as the multi-award winning Beyond the Grid Fund for Zambia (BGFZ) have maintained all the original key elements of the REEEP vision: innovative finance through an improved results-based financing scheme adapted to the early stage market, policy and regulatory change via the Off-Grid Task Force and market intelligence through the REEEP-developed Edison data platform. The growth of individual SMEs through our programmes is just one element of REEEP’s greater mission of transformational development, building up local energy markets which continue to flourish long after our involvement is over.



Employee at a solar-powered multi-use cold storage in Uganda by Station Energy, supported by REEEP’s 10th Call. Credit: Station Energy

Our sector has come so far in the past 20 years. Scaling up is now possible – BGFZ acted as the pilot for the Beyond the Grid Fund for Africa, which aims to connect 6.5 million people in six countries across sub-Saharan Africa. Increasingly, renewables are the most competitive option and have accounted for the majority of new electricity generation capacity added globally over the past several years.

IT IS CLEAR REEEP STILL HAS A CRUCIAL ROLE TO PLAY OVER THE NEXT 20 YEARS

Whilst retaining our focus on energy access, we are looking towards future trends. The majority of people in rural areas in many African and Asian countries make their living from agriculture and related enterprises. We are preparing the stage to launch REEEP’s 11th Programme Call in 2023, which will cover productive use of energy (PURE) in agri-food value chains: on-farm needs such as irrigation, as well as downstream storage (cooling) and processing solutions. We will build on previous work in this sector, focusing on specific markets and developing the opportunity to create a multi-country programme.

As the world continues to warm we must also pay attention to climate adaptation. Efforts are crucial to safeguard vulnerable communities, ecosystems and infrastructure from the adverse impacts and escalating risks. Most people are not yet aware of the potential for renewables in climate adaptation. They can, for example, enhance energy resilience and faster recovery from climate disasters, power desalination and irrigation in areas of water shortage, and provide clean cooling solutions in the face of rising temperatures and frequent heatwaves, with positive impacts on health.

We are proud to have reached this significant milestone on our twenty-year path as trailblazers, developing clean energy markets for the benefit of the most vulnerable populations. REEEP doesn’t stop here – we will take the lessons learned through practice, build on those foundations and invent the next developments.

REEEP’s flexible approach to market development is ideal to push forward on these and other vital issues, boosting the energy transition and improving lives into the future.



A woman cooking on her Supamoto stove in Lusaka, Zambia. Supamoto, as Emerging Cooking Solutions, was supported by the Beyond the Grid Fund for Zambia. Credit: Jason J Mulikita

REEEP'S STORY

2002

The Renewable Energy and Energy Efficiency Partnership (REEEP) is founded at the Johannesburg World Summit for Sustainable Development as an international multilateral partnership for sustainable development whose mission is to advance market readiness for clean energy and energy access in developing markets.

2003

A total of 48 projects are funded in the First and Second Programme Cycles, managed by the Foreign and Commonwealth Office Global Opportunities Fund under the REEEP banner from October 2003 – March 2005.

2004

Establishment of International Secretariat, hosted by UNIDO at the Vienna International Centre in Austria.

2005

The Third REEEP Programme Cycle announces €1.1 million in funding for 18 projects.

2006

In the Fourth and Fifth Programme Cycles, 28 projects are funded with €2.2 million.

REEEP, working in cooperation with REN21, establishes reegle as a clean energy information portal presenting detailed country energy profiles for all countries.

Reegle drew on primary data gathering through REEEP as well as a wide range of open data sources from the World Bank and UN Foundation through OpenEI to the CIA World Factbook and Wikipedia. Also incorporating a clean energy search function amongst a curated amongst a curated selection of trustworthy sources, it was broadly used throughout the world, with 220,000 individual users per month at its peak.



2007

The Sixth Programme Cycle distributes €3.2 million for 35 clean energy projects.



REEEP's work contributes to global efforts under the United Nations 2030 Agenda for Sustainable Development

2009

The Seventh Programme Cycle offers €4.3 million in funding to 48 low-carbon energy projects.

2011

The Eighth Programme Cycle allocates €3.6 million to 26 low-carbon energy projects.

REEEP promoted the take-up of open data and data sharing across the clean energy sector, running a series of workshops in Europe, the USA, the Middle East and Southeast Asia for governments, multilateral development banks, NGOs and civil society, research institutes and academia. REEEP also published two editions of an Open Data handbook, Linked Open Data: The Essentials, in partnership with the Semantic Web Company.



2012

REEEP reaches a total of 400 partners, including 45 national governments; the clean energy portal reegle exceeds 220,000 users monthly.

REEEP celebrates a decade of success including supporting more than 150 projects in 57 developing countries and begins the next decade with a strategic refocus on supporting clean energy SMEs in low- and middle-income countries.

2013

REEEP launches its 9th Programme Cycle aimed at supporting SMEs offering solutions within the water–energy–food nexus in low- and middle-income countries.

2014

REEEP expands its role in the global knowledge broker community, developing new products and helping create the new Climate Knowledge Brokers Group which expanded collaboration and cooperation between knowledge brokers well beyond the climate and development community to new sectors and fields, helping bridge the gaps that exist between them.

REEEP develops its Climate Tagger toolkit, a growing suite of tools to help organizations better structure and link their data within and across sectors.

REEEP hosts the newly-created CKB Coordination Hub that orchestrates efforts to make the vision of a joined-up information world a reality.

REEEP was a founding member and later operated the coordination hub of the Climate Knowledge Brokers Group, a pioneering community of practice for people and organisations with a brokering role for knowledge relating to climate change. Its members produced lasting products and services including the Climate Knowledge Brokers Manifesto and Climate Tagger. REEEP led the development of Climate Tagger, which automatically scans, labels, sorts and catalogues data and document collections to help knowledge-driven organisations in the climate and development arenas streamline information resources and connect to the wider climate knowledge community.



2015

REEEP receives a grant from The Rockefeller Foundation to study the evidence and lessons learned from the Smart Power for Rural Development (SPRD) programme supporting mini-grids in India and to analyse trends in the market and enabling environment, leading to publication of 'Scale and Sustainability: Toward a Public-Private Paradigm in Powering India.'

REEEP and SANEDI launch the SWITCH Africa Green project, providing training programmes and direct capacity building to 93 SMEs, which increases awareness, uptake and successful implementation of SCP practices and sustainable energy opportunities in SMEs in agri-food value chains in South Africa.



REEEP and the International Renewable Energy Agency (IRENA) team up to massively enhance the Climate Tagger renewable energy-specific vocabulary through the release of the Renewables Tagger.

2016

The Swedish Government and REEEP launch the Power Africa: Beyond the Grid Fund for Zambia (BGFZ), an ambitious new undertaking to bring clean energy access to one million Zambians and accelerate private-sector growth in energy generation and distribution in the country.

Initiated by UNFCCC and CTI in 2006 and managed by ICETT until 2016, the Private Financing Advisory Network (PFAN) is now hosted jointly by UNIDO and REEEP.

The Climate Change, Clean Energy and Urban Water in Africa programme, funded by the European Commission, implemented by UNIDO and executed by REEEP, aims to empower South African municipalities to upgrade their water infrastructure with clean energy and energy efficiency solutions, to reduce energy use, costs and greenhouse gas (GHG) emissions, and improve service delivery.

2017

REEEP and GIZ carry out a study to identify potential entry points for clean energy cooling solutions in the dairy value chains of India and Kenya. In this follow-up project, Greening India's Dairy Value Chain, REEEP develops concrete opportunities for clean energy interventions in India's dairy sector.



2019

The Swedish Government, REEEP and the Nordic Environment Finance Corporation (NEFCO) launch the Beyond the Grid Fund for Africa (BGFA).

REEEP develops a working prototype of an innovative dedicated software system to manage data collection, storage, access, analysis and visualisation called Edison, which is used to verify remotely the deployment of energy services under the results-based financing mechanism of BGFZ.

The Clean Energy Revolving Fund (CERF), managed by Nexus for Development and supported by the Austrian Government, Blue Moon Foundation and REEEP, offers access to finance to small enterprises in the agri-food sector that wish to invest in clean energy technologies. In 2019, the Fund is fully operational and supports a healthy pipeline of renewable energy investments.

REEEP launches the Southern Africa Renewable Energy Investment and Growth Programme (SOARING), a programme designing and implementing a prototype approach to prepare, bundle and structure investments into small- and medium-sized clean energy projects in Zambia and Tanzania.

REEEP launches the Austria-Nepal Renewable Energy Blended Finance Facility, establishing a first of its kind blended finance instrument for small-scale renewable energy projects in Nepal and carries out capacity-building activities.

2021

BGFZ reaches its goal to bring modern energy services to more than one million Zambians.

REEEP and the Rural Electrification Authority of Zambia (REA) sign a memorandum of understanding outlining a joint effort to leverage REEEP's Edison data platform to monitor and support Zambia's broader electrification efforts with advanced data collection and analysis.

2022

PFAN reaches the milestone of leveraging USD 3 billion of investment since its inception in 2006.

The Beyond the Grid Fund for Africa programme signs its first projects with off-grid energy service companies in Burkina Faso, Liberia, Uganda and Zambia and expands to the Democratic Republic of the Congo and Uganda.

REEEP's SOARING programme kicks off outward facing operations with its first workshops on "Financing Renewable Energy Technologies" for SMEs in Tanzania and Zambia.



20 YEARS REEEP

CREATING LONG-LASTING SHIFT IN CLEAN ENERGY MARKETS



- 01 REEEP has a long track record of success in policy development, managing funds for 10 global calls as a multi-donor financing channel and directly supporting more than 200 projects worldwide.
- 02 The Beyond the Grid Fund for Zambia won the 2019 Ashden Award in the category of “Innovative Finance”, a 2019 Momentum for Change UN Global Climate Action Award and the 2020 Energy Globe Prize for Zambia, and reached its goal to connect over one million Zambians to affordable energy access in 2022.
- 03 In the mid-2000s, REEEP’s contribution to strategic developments in clean energy policy was instrumental in kick starting major policy shifts in the BRICS countries – such as wind power in Brazil and solar PV in China – that are still shaping these economies’ energy policies today.
- 04 The innovative Austria-Nepal Renewable Energy Blended Finance Facility established a blended finance instrument for small-scale renewable energy projects, the first green portfolio-based guarantee instrument in the country.
- 05 REEEP’s 2015-2017 investment portfolio “Powering Agri-food Value Chains” was a forerunner in supporting the water-food-energy nexus, comprised of eight high-potential SMEs active in Asia, Eastern Africa and Central America.
- 06 The Private Financing Advisory Network, co-hosted by REEEP and UNIDO has leveraged over USD 3 billion in investment for climate and clean energy by over 1300 PFAN-supported projects and businesses.
- 07 REEEP co-created and ran the Sustainable Energy Regulators Network (SERN) from 2006-2014, a deeply influential network which guided government institutions charged with clean energy development in knowledge exchange with regulators to create stable policy and regulatory mechanisms, helping to grow the clean energy market.
- 08 REEEP’s design and implementation of the Beyond the Grid Fund for Zambia served as the successful pilot of the Beyond the Grid Fund for Africa, which is now a EUR 126 million programme active in six sub-Saharan countries with the aim to connect 6.5 million people to affordable energy access by 2028.

PAST PROJECTS & PROGRAMMES

OVER THE PAST TWENTY YEARS, REEEP HAS SUPPORTED HUNDREDS OF PROJECTS IN THE CLIMATE AND CLEAN ENERGY SECTOR.



A solar-powered milk collection centre in Bangladesh, supported through REEEP’s 10th Programme Call. Credit: Enerplus

“ AS WE MOVE FORWARD, REEEP IS DETERMINED TO CONTINUE TO PLAY A KEY ROLE IN DELIVERING ENERGY ACCESS TO THOSE MOST IN NEED AND CREATING MORE EFFICIENT DELIVERY SYSTEMS.



Martijn Wilder

CHAIRMAN OF THE GOVERNING BOARD

LOCATION: INDIA • STATUS: COMPLETED

EMPOWERMENT THROUGH A WOMEN'S CLEAN ENERGY CO-OPERATIVE IN INDIA

ESTABLISHING A WOMEN'S ENERGY CO-OPERATIVE AS AN INDEPENDENT ENERGY SERVICE PROVIDER TO THOUSANDS OF OFF-GRID HOUSEHOLDS IN THE STATE OF BIHAR



Women in Bihar, India. Credit: SELCO



A home in Bihar, India with a SELCO solar panel. Credit: SELCO

THE CHALLENGE

In 2005, Indian government data showed that almost 90% of households in the state of Bihar were not connected to the conventional grid. Bihar is also the state with one of the greatest numbers of people below the poverty line, where populations in both rural and urban centres were forced to spend a large part of their income on alternative sources of energy like kerosene and diesel generators.

Since then, there has been extensive focus on rural electrification in India. As per the India Residential Energy Consumption Survey (IRES) 2020, as many as 97% of Indian households are electrified, with 96.7%

now connected to the grid and another 0.33% relying on off-grid electricity sources. However, 2.4% of Indian households still remain unelectrified. The majority of the unelectrified households are concentrated in rural areas, including Bihar, where 2.2% of households are without electricity.

As a driving force in this energy transition, SELCO – supported by REEEP in our 5th, 6th, 7th and 9th programmatic cycles between 2006-2015 – has become one of India's best-known social enterprises, seeking to eradicate poverty by promoting sustainable technologies in rural India.

SOLAR LIGHTING SOLUTIONS

In its last REEEP-funded project – part of REEEP’s 9th Call in 2013 – SELCO began replicating its successful solar lighting model in the Munger district of Bihar in partnership with SEWA Bharat, a local organisation working with rural women. Its aim was to establish a women’s energy co-operative in Bihar which would become the energy service provider. The co-operative incubated the resulting partnership into an actual cooperative that systematically takes up the energy services business, with a long-term plan for servicing the local communities.

Under this project, SELCO installed 400 home systems financed by Bihar Kshetriya Gramin Bank (BKGB) and other banks/microfinance institutions in the area, for end-user financing through some 40 women’s self-help groups (SHG).



India has a huge potential to implement the proposed energy co-operative idea in many areas

With a large off-grid population and widespread women SHG networks, India has a huge potential to implement



A rural dwelling using SELCO solar panels.
Credit: SELCO India

the proposed energy co-operative idea in many areas. This programme not only provided energy service to end-users with a local service guarantee but also created income for the participating households.

At the beginning of the project, energy-poor states – including Bihar, Uttar Pradesh, Rajasthan, Odisha, Chhattisgarh, Jharkhand and Madhya Pradesh – were far from being able to provide reliable energy access to their people due to their poor infrastructure and remote hilly areas. However, the presence of regional/rural banks and strong women SHG networks in these states provided great potential for replication, particularly with the appropriate capacity building. This acted as a base for implementing the proposed model of an energy co-operative providing need-based renewable energy services while generating income for women.

LONG-LASTING IMPACT

This project catalysed increased deployment of renewable energy solutions, and it was a first step towards addressing the lack of energy service providers with rural networks. It demonstrated the social and commercial angles to the service providers and bankers, encouraging them to participate in creating a powerful energy service network.

This project established a strong value chain of renewable energy service which includes connecting the equipment supply chain, end-user financing, creating man-power required for service maintenance and processes to use various Government schemes including

the off-grid component of the National Solar Mission, through the banking network and in partnership with agencies like the National Bank for Agriculture and Rural Development (NABARD).

The programme has now expanded to many energy-poor states across India, including Odisha, Jharkhand and parts of Karnataka. “The small programme that we started with REEEP has led to a snowball effect. “Today, more than 4500 women entrepreneurs and innovators use solar energy, and that is the result of the replication of the programme we started years ago”, says Harish Hande, CEO of SELCO Foundation.



All photos: SELCO solar panels lighting up lives in India
Credit: SELCO India



Two boys sitting under a SELCO solar panel. Credit: SELCO India

OUR SUPPORT

REEEP worked together with SELCO to develop innovative financing mechanisms and technologies that better met the needs of the very poor, and in the process, represented potential models for projects in other countries. By 2018, SELCO served more than half a million household and business customers through its network of 45 energy service centres in India. With the funding REEEP provided, the project was replicated in many states across India. “REEEP has helped SELCO and its affiliates to prove that once you use women as

a catalyst, the scaling up and replication can happen faster”, says Harish. “It has led to replication in more than 7 to 8 states, including two states in the South, which would not have happened if that risk-taking resources were not available”.

One of the main challenges SELCO encountered was establishing financing between local bank managers and very poor clients. “Trust needs to be built with each head of a local bank, and that trust emerges

when a bank has started to loan to very poor people on recommendation of SELCO, and they really pay back regularly,” says Harish. The risk capital from REEEP has helped SELCO overcome those barriers with the local financial institutions as they were more confident that poor women were going to pay back the loan.

“The hesitations from the bank were removed after we put up guarantees in the banks and used the philanthropic capital of the REEEP programme”, he continued. This has now led to numerous banks across the country, especially in the poorer parts, to finance women, even for less than USD 1000. All in all, Harish

explained that the “overall objectives [of the project] were met, and the flexibility of resources enabled us to change some of the programme deliverables over the period of the project timeline”.

“Using the success of this programme, which got replicated in other states [in India], our next goal is to have more than 10,000 women entrepreneurs and innovators by 2026 and 15,000 women and girls, champions of sustainability”, Harish shares.

“ REEEP HAS HELPED SELCO AND ITS AFFILIATES TO PROVE THAT ONCE YOU USE WOMEN AS A CATALYST, THE SCALING UP AND REPLICATION CAN HAPPEN FASTER.



Harish Hande
CEO, SELCO INDIA

DONOR



Department
of Energy &
Climate Change



LOCATION: KENYA • STATUS: COMPLETED

SOLAR IRRIGATION IN KENYA

THE MAJORITY OF KENYA'S SMALLHOLDER FARMERS LARGELY RELY ON RAINFALL TO IRRIGATE THEIR CROPS, AS ONLY SIX PERCENT OF FARMLAND IN THE COUNTRY IS IRRIGATED. FUTUREPUMP MANUFACTURES AND SELL A RANGE OF PRODUCTS THAT MEET THEIR NEEDS.

THE CHALLENGE

As the population grows and the climate changes, these farmers will need to meet the growing demand for food while building their resilience to changes in rainfall patterns. Irrigation can provide this resilience while increasing farmers' incomes, as it allows for growing high-value, nutritious vegetables such as tomatoes and cabbage. The expansion of irrigation capacity in Kenya has thus far been dominated by traditional pumps powered by diesel or petrol. These cause pollution and leave farmers vulnerable to fluctuations in the price of fuel. Irrigation in general – and Solar Powered Irrigation Systems (or SPIS) in particular – can provide substantial benefits to local prosperity in regions that adopt them. The most direct benefit is the increased revenue and income that comes with the greater yields of irrigated

cropland vis-à-vis rain-fed land. Stable water supplies allow additional growing seasons per year, massively increasing output.

Drip irrigation (a central, although not unique, element of SPIS), leads to substantial water savings compared to current practices, and improves crop quality thanks to a more stable supply, often improving real yields by over 300%. In addition, SPIS offer significant cost savings over time on labour, fuel and fertilizer, a total value to smallholder farmers estimated at around \$14,000 per acre annually. Economically, the benefits of increased use of SPIS translate into local opportunities beyond the agricultural boundaries, as small businesses arise to meet demand in manufacture, assembly, repair and sales of SPIS.



Left and above: a banana plantation watered by solar-powered irrigation pumps. Credit: Futurepump

THE SOLUTION

Futurepump has developed a new model to enable smallholder farmers in Kenya to adopt sustainable irrigation solutions with a proprietary solar-powered irrigation pump, combined with an end-user finance programme that allows for flexible payments at a time when the farmer is gaining the economic benefits from irrigating their lands.

With this innovative model, Futurepump is able to reach even very low-income farmers with less than one acre of land – which constitute the majority of the agricultural sector in Kenya. By addressing a key barrier in up-front cost and targeting the market segment accounting for

the majority of production (yet is most difficult to reach via conventional sales models), Futurepump's model holds great potential for transforming the sector in the country.

During REEEP's engagement with Futurepump in 2013, they were in their early-stage development of field testing, setting up their manufacturing and learning about the product market. Since then, they have gradually grown and are in the scaling-up process. Now with over a decade of experience, Futurepump is at the stage where they manufacture and sell a range of products that meet the needs of small-scale farmers.



A Sunflower solar powered irrigation pump. Credit: Futurepump



Water flows freely from one of Futurepump's solar-powered irrigation pumps. Credit: Futurepump

“REEEP's funding for us came at a critical early stage for our business, allowing us to begin the manufacturing process, find out where we wanted to be manufacturing and start it out, and scale up our field trials, which both the field testing and manufacturing form the basis of what we still do today”, shares Helen Yapp, Marketing and Communications Manager at Futurepump.

Futurepump was a part of REEEP's 10th Call which helped them test finance plans and decide whether they wanted to be financing their products or focus on manufacturing. Through our support, they had the opportunity to discover their strengths and hone their optimal business model.

“We had a lot of different options and ways we could have taken the business – it could have been that we were trying to do too many things at once. With the funding from REEEP, we were able to test this and focus on what we have now scaled into the business today”, says Helen. The outcome showed that they would rather focus on their expertise in manufacturing and work with partners in the financing and distribution of the products.

Futurepump is now selling pumps globally through over 28 different distributors, including in sub-Saharan Africa and South and Southeast Asia. These distributors have networks of stores nationwide across the countries of operation, bringing Futurepump's solar irrigation pumps to hundreds to thousands of farming communities. Due to the direct link to the factory, Futurepump is constantly gathering feedback from customers and distributors and is able to make necessary improvements quickly.

The next step for Futurepump is to show that a business in the productive asset and renewables sector can break even and sustain itself financially. They are looking to expand their product range by bringing in both bigger and smaller pumps. Helen explains further, “The bigger pumps are to continue the mission of ridding the world of petrol/diesel-powered pumps. Smaller pumps are more affordable and support the mission to get irrigation to even more low-income customers”.

DONORS

 Federal Ministry
Republic of Austria
Labour and Economy



LOCATION: CAMBODIA • STATUS: COMPLETED

INNOVATIVE CLEAN ENERGY FINANCE FOR CAMBODIAN FARMERS

A BLENDED FINANCE APPROACH PROVIDING AFFORDABLE LOANS TO CAMBODIAN FARMERS TO PURCHASE CLEAN ENERGY TECHNOLOGY



Mr. Sokhom inspects his longan orchard. Credit: Jeremy Meek for Nexus for Development



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 Nexus for Development

In 2021, Cambodia had an estimated population of 16.6 million people, including 10 million people in rural areas. The country's agricultural sector, which employs 37% of the Cambodian labour force, is highly dependent on monsoon rains and the annual flooding of the Tonle Sap Lake and therefore extremely vulnerable to climate change as well as dam building projects upstream on the Mekong River. In recent years Cambodian farms have had difficulty competing internationally, partly because grid electricity is expensive, unreliable and not universally accessible.

Clean energy technology offers a reliable and affordable alternative, but the absence of flexible finance instruments for renewable energy technology investments coupled with low levels of end-user knowledge and trust in renewable energy caused low-adoption rates across the country for decades.

The Clean Energy Revolving Fund (CERF) was created by Nexus for Development to tackle this challenge. The innovative financial model began with an initial investment from REEEP with support from the Austrian Government and the Blue Moon Fund. It ran from 2016 to 2019 and offered affordable loans to farmers and small and medium agri-businesses (SMAs) for the purchase of clean energy technologies which increase farmers' productivity, resilience and regional competitiveness by helping them to manage electricity costs and contribute to climate change mitigation. This in turn reduced CO2 emissions, encouraged an early shift away from fossil fuel-based energy, and increased food processing productivity.



Farmers working in a pepper farm. Credit: Jeremy Meek for Nexus for Development

HOW IT WORKED

CERF's financing conditions were truly innovative in the Cambodian context, as financial institutions previously only provided SMAs and farmers with expensive and fully collateralized loans (usually with land titles serving as the preferred form of collateral). CERF provided SMAs and farmers with unique and flexible financial terms (whereby both loan tenors and repayment schedules were structured to fit agricultural cycles), accompanied by technical assistance and capacity building. The renewable energy technology was used as collateral, and low financing fees were charged.

This dynamic mechanism allowed the fund to learn, adapt and respond quickly to agricultural market realities, and the results exemplify these successes. CERF borrowers or farmers reported that they would

not have made the RE investments without CERF, while technology providers, who had previously struggled to match their offer with a financial product, highlighted CERF's role as trust brokers with their target clients.

When given access to renewable and affordable energy technologies, CERF SMAs and farmers significantly reduced on farm and agricultural processing costs and improved the resiliency of their businesses. CERF enabled SMAs and farmers to capitalise on energy cost savings by reinvesting this as funding to scale their businesses. As the payback period of RE investments for SMAs and farmers was typically realised within three to five years, businesses could expect to see further growth in the medium and long-term.

THE RESULTS

Over the three-year project life, CERF provided 15 loans with a value of approximately \$250,000. These loans enabled the installation of 85.76 kilowatts of solar energy and produced 115,264 kWh of clean energy, which is equivalent to a reduction of 168 tonnes of CO₂e pollution each year.

On average, SMAs saved \$3,200 per year by switching to the CERF-financed renewable energy source, making a significant difference in their business. The fund focused on productive use of renewable energy for agriculture (PURE), with most loans used to purchase solar-powered water pumps and small on- and off-grid solar for SMAs growing fruit, vegetables and pepper and livestock farms. CERF loans funded up to 90% of the technology cost, with the remainder co-financed by the investees.

By providing flexible financing terms, CERF encouraged an early shift away from fossil fuel-based energy and increased food processing productivity, helping producers, processors, and distributors to compete in the regional economy.

To share learnings from managing CERF, the project implementation partners produced a handbook which provides background on the history of the design and set-up of CERF, CERF due diligence processes, lessons learnt, case studies, and to objectively review the challenges that were met in managing CERF.



Ty Heang (front) is one of the workers on Mr. Sokhom's longan farm in Battambang province, which is now irrigated through a solar pumping installation purchased with a CERF loan. Credit: Jeremy Meek for Nexus for Development

INTERVIEW WITH NEXUS DEVELOPMENT

MICHELLE LOWERY, COMMUNICATIONS MANAGER, NEXUS FOR DEVELOPMENT

How did working together with REEEP help the fund succeed?

The fund wouldn't have been possible without the financial investment and strategic support of REEEP, it allowed us to drive the pilot forward and aid farmers in Cambodia to make the pivot to sustainable, clean energy. REEEP also brought their expertise in advancing market readiness for clean energy solutions in emerging markets to the investment committee, which enabled us to make joint strategic decisions on the most appropriate allocation of funds.

Nexus for Development created the Clean Energy Revolving Fund (CERF), to provide affordable, unsecured loans to small and medium-sized agri-food businesses to enable them to purchase clean energy technologies,

primarily solar-powered water pumps and small on- and off-grid solar systems.

Our belief is that the best way to deliver value for the funders and end users is through a blended partnership approach. This approach allows us to address the most pressing needs facing our partners in the field and ensures that investor funds are being directed to where they will deliver the most impact. By working together with Renewable Energy and Energy Efficiency Partnership (REEEP), the Austrian Government and the Blue Moon Fund we were able to prove this approach is a success.

In your opinion, what were the main strengths of the fund and its benefits for SMEs?

We were able to launch an initiative that was regionally unique, bringing to the clean energy market an innovative concept based on a blended finance approach.

Through our approach, we could offer unsecured loans and flexible repayment terms adapted to the needs of farmers. CERF addressed a financing gap in the market that MFIs and commercial banks did not have an interest in, to support SMAs, who are often without financing alternatives because of limited credit history and/ or collateral.

We also found that the most effective way to connect with SMAs was through technology providers who were able to promote the use of solar technology through user campaigns and demos. However, until CERF the effectiveness of their campaigns was low as they were not able to then provide fit-for-purpose financial solutions. Nexus was able to help facilitate this and act as an intermediary between the technology providers and the SMAs while also looking at viable financial solutions.

How did the fund contribute to advancing Nexus' overall strategy on providing affordable loans for clean energy in agriculture, and how did it influence the Pioneer Facility?

It's been a positive circular contribution, the money repaid by SMAs is being fed into the Pioneer Facility so we can support the growth of other businesses working in the clean energy, water or waste management space in Southeast Asia.

From a greater strategic point of view, it allows us to show that this demo approach works in emerging markets. Our strength at Nexus lies within being able to

pioneer new things and test these prior to scale, which is vital for us to do as an NGO, we need to prove that things work.

The Pioneer Facility is another pilot fund that blends development financing with foundations and impact investors and thanks to CERF, supported by REEEP, we have demonstrable evidence this works with our target markets and businesses.

Were there any surprising outcomes?

There are two unanticipated outcomes that really stand out to us. Firstly, the project really allowed us to explore and deepen relationships with technology providers in the clean energy space. Sourcing potential projects in frontier markets such as Cambodia involves many steps and high due diligence costs. As a financial intermediary, Nexus had to take on the additional role of an advisor and trust broker between business and technology providers. This allows us to expand our network for potential future investment opportunities.

The second unanticipated positive outcome is focused on the business owners in Cambodia. Most businesses are not registered entities and have no financial records. This makes it difficult for them to apply for loans with traditional financial institutions or to attract other investments. The due diligence process of applying for a CERF loan prepares these businesses to apply for future loans and build a credit history that can be supported by the documentation they prepared by working with us. We're proud to be able to help upskill businesses so they can succeed in the next stage of their development.

“ THE FUND WOULDN'T HAVE BEEN POSSIBLE WITHOUT THE FINANCIAL INVESTMENT AND STRATEGIC SUPPORT OF REEEP, IT ALLOWED US TO DRIVE THE PILOT FORWARD AND AID FARMERS IN CAMBODIA TO MAKE THE PIVOT TO SUSTAINABLE, CLEAN ENERGY.



Michelle Lowery
COMMUNICATIONS MANAGER, NEXUS FOR DEVELOPMENT

DONORS

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





LOCATION: INDIA • STATUS: COMPLETED

FINANCING ENERGY EFFICIENT STREET LIGHTING IN INDIA

REEEP SUPPORTED AN INNOVATIVE FINANCING MECHANISM WHICH REDUCED THE ENERGY CONSUMPTION OF THE STREET LIGHTING NETWORK IN THE CITIES OF MADHYA PRADESH.

THE PROJECT

Street lighting represents a significant proportion of energy consumption in India, and the burden of providing the service falls on the electricity boards of each state. In several municipalities, the electricity consumed is not metered, and this provides no incentive for municipalities to improve efficiency. Furthermore, utilities have to offer street lighting electricity cheaply, resulting in financial losses, which in turn prevent them from investing in a more sustainable lighting system.

Starting in the mid-00s, REEEP worked extensively in India for several years to integrate clean energy into large-scale infrastructure. In 2005, REEEP, together with municipal corporations and the energy service company, Central Discom, supported the development of a sustainable financing mechanism for the implementation of energy-efficient street light projects in the state of Madhya Pradesh as part of REEEP's third programme cycle in 2005/6.



Left: Empty road at night illuminated with street light in Rohtak, Haryana, India. Credit: soniadhankhar
Above: Rural street in the Indian village of Khajuraho, India. Credit: float



Road in rural India under evening sun light. Credit: SNEHIT Photo

REEEP set the goal of a 30-40% reduction in energy consumption for street lighting in Madhya Pradesh as a realistic target figure. To achieve this reduction, we aimed to promote the engagement of national and local investors, financial institutions and capital markets in improving energy conservation, and thus cost savings in street lighting within the state.

Similar projects in Indore and Ujjain reaped considerable benefits, and REEEP believed that the most effective way of obtaining investment to achieve these goals was to bundle projects together, providing more attractive investment portfolios with profits shared among investors.

The model used in Indore and Ujjain saw a private energy service company (ESCO) take over the provision and cost of street lighting with considerable efficiency gains. The utility that provided the power and gained from the savings then reimbursed the ESCO for the costs of the project over a period of 27 months. In this case, the contract used between the municipalities, the ESCO and the Madhya Pradesh State Electricity Board (MPSEB) (and now in the DISCOMS) was based on a shared savings model.

REEEP's financing helped Econoler International, a consulting firm based in Canada, to provide support to MPSEB. The project worked with Sehore and Dewas

Municipal Corporations as well as central DISCOM to implement, and a tendering process to identify an ESCO was also launched. Econoler International was able to scale up to five cities with an innovative approach for tendering and implementing energy-efficient street lighting projects in cities developed from a previous technical assistance project financed by the Canadian government involving two cities in Madhya Pradesh. The implementation of three projects in the municipalities and the capacity building of the utilities was completed by October 2006.

The project implemented street lighting projects in cities across Madyha Pradesh, with an evaluated cost of € 1,5000,000, and improved energy efficiency of 13.93 GWh per year; in the cities of Bhopal with 5.25 GWh, Jabalpur with 5.27 GWh, Sehore with 1.26 GWh and Dewas with 2.15 GWh.

“Existing lighting systems were often lacking maintenance and several lamps were burned [out], reducing the safety of drivers and pedestrians. New and efficient lighting systems ensured better lighting coverage not only for cars but also for pedestrians, especially women, in their use of the roads at night by improving the security and safety in the streets”, says Myriam LeBlanc, Development Director at Econoler.

The project catalysed long-lasting impact which is still lighting up these regions today. It continues to contribute to creating new jobs and opportunities in the energy sector, as more projects will be developed and implemented based on this model and the lessons learned.

“ NEW AND EFFICIENT LIGHTING SYSTEMS ENSURED BETTER LIGHTING COVERAGE NOT ONLY FOR CARS BUT ALSO FOR PEDESTRIANS, ESPECIALLY WOMEN, IN THEIR USE OF THE ROADS AT NIGHT BY IMPROVING THE SECURITY AND SAFETY IN THE STREETS.



Myriam LeBlanc
DEVELOPMENT DIRECTOR AT ECONOLER

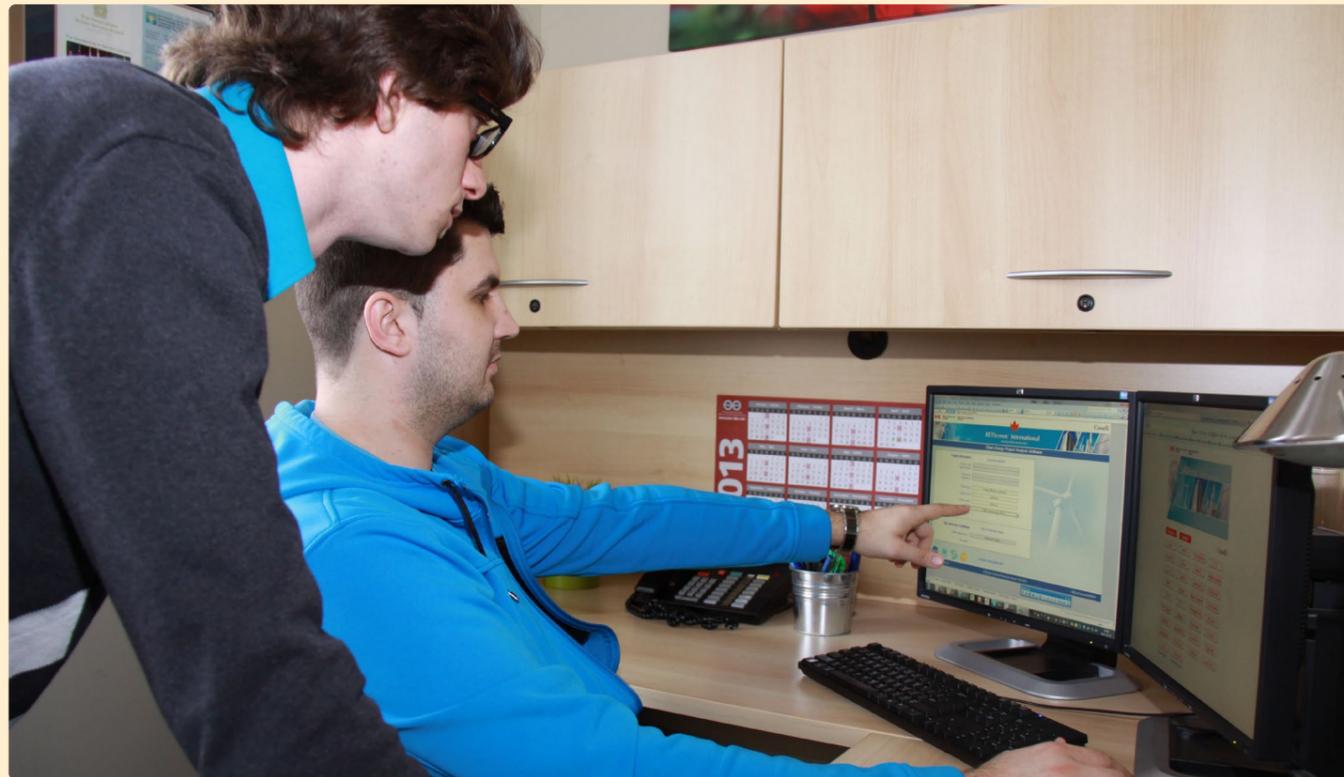
DONORS



LOCATION: CANADA • STATUS: COMPLETED

RETScreen EXPERT – DECISION INTELLIGENCE SOFTWARE PLATFORM

THE RETScreen CLEAN ENERGY MANAGEMENT SOFTWARE PLATFORM IS THE WORLD'S LEADING CLEAN ENERGY DECISION-MAKING TOOL, ENABLING LOW-CARBON PLANNING, IMPLEMENTATION, MONITORING AND REPORTING.



BACKGROUND

The RETScreen Clean Energy Management Software platform enables low-carbon planning, implementation, monitoring and reporting. Developed by the Government of Canada in collaboration with government and multilateral organizations, RETScreen Expert, an advanced version of the software, is the world's leading clean energy decision-making tool. RETScreen Expert incorporates benchmark, feasibility, performance and portfolio analysis for various types of facilities, including commercial, institutional, residential, industrial and power generation, all within one comprehensive platform.

By helping to break down barriers to the development of clean energy, RETScreen allows decision-makers and professionals to determine if a proposed clean energy project makes sense and to track facility performance and emission reduction efforts.

As of April 2023, RETScreen is used by more than 800,000 energy, facility and sustainability professionals around the world. The software is available in 38 languages, covering 2/3rds of the world's population and is used by over 1,400 colleges and universities worldwide.

REEEP'S SUPPORT

Over a number of programme cycles, REEEP supported CanmetENERGY throughout the development of RETScreen 4 (9th Call from 2013/15), the RETScreen Performance Analysis module (7th Call from 2009/11) and Benchmark Analysis Tool (8th Call from 2011/13), as well as the creation of RETScreen Clean Energy Legal & Policy Toolkits (6th Call from 2008/10). All of these innovative tools are part of a free clean energy project analysis software suite that helps practitioners and decision makers quickly and inexpensively determine the technical and financial viability of potential renewable energy, energy efficiency and cogeneration projects.

In 2011-2013, REEEP helped develop two new components for RETScreen: a Benchmark Analysis Tool

to allow for comparisons of the energy performance of different facilities and energy applications by country, and a Clean Energy Policy Toolkit to aid policy analysis and training. The Benchmark Analysis Tool has become an integral part of project analysis for all types of energy projects and has directly contributed to better quality energy analyses around the world.

The toolkit is currently being used by governments, private firms, manufacturers, and other stakeholders. It has been incorporated in universities, colleges, hospitals, and other institutions in countries such as Canada, United States, France, Ghana, and Mexico to name a few.



Left: Programmers work with the latest version of RETScreen software during REEEP's involvement. Credit: RetSCREEN
Above: Solar panels powering a mountainous village. Credit: Thinapob

INTERVIEW WITH KEVIN BOURQUE

SENIOR ENGINEER, RETSCREEN SOFTWARE, ENERGY EFFICIENCY AND TECHNOLOGY SECTOR, GOVERNMENT OF CANADA

In what way has REEEP's support helped RETScreen Expert succeed?

REEEP's support and funding has helped advance many features in the RETScreen software and has helped expand access to the platform globally. For instance, REEEP contributed funding for the development of

RETScreen's Benchmark and Performance Analysis modules, as well as the Clean Energy Policy toolkit. REEEP's funding was also used for translation, making the software more accessible worldwide.

What are some latest exciting developments and/or updates of the RETScreen Expert?

There have been many additions to the latest update to RETScreen Expert, an advanced version of the software. Version 9 was released in late 2022 and includes many new archetypes, including deep emission reduction, archetypes for water treatment plants, a scaling tool, and an EnergyPlus connector for output results linked directly to the software.

In the Performance Analysis Module, new direct data connectors such as EnergyCAP, Blackstone, Schneider and more have been added. Version 9 now includes an automated energy performance report generator for ISO 50001 and new advanced filtering tools.

In the Portfolio Analysis Module, new automation tools for portfolio creation and management of portfolio-wide feasibility analysis, performance analysis (M&V), GHG reporting, and so on.

Databases throughout the software have been added and updated, including GHG emission factors, cost databases, utility rate databases and more.

These are only some of the many new features incorporated in the latest version of RETScreen Expert. The software is constantly being updated to assure it is the most cutting-edge platform for energy management.

What is the main focus of the RETScreen innovation lab and how did our work help to expand towards that?

The RETScreen Innovation Lab collaborates with government and multilateral organizations such as REEEP to co-fund and develop advanced versions of the RETScreen Clean Energy Management Software platform.

REEEP's contributions have helped the innovation lab ensure that the RETScreen software is always at the leading edge of the clean energy technology transition, and that we continuously improve our platform to meet

the complex needs of our large and rapidly growing global user community.

The innovation lab works to continuously update the platform such that the RETScreen software harnesses advanced algorithms and data to simplify decision making around energy projects, including renewable energy, energy efficiency, cogeneration and transportation.

What are the main benefits of RETScreen Expert to global economic development as well as energy security?

As the world's leading software for clean energy, RETScreen Expert provides decision-makers with the tools they need to help reduce energy consumption and greenhouse gas emissions. There has been a rapid uptake

by energy, facility and sustainability managers at public and private sector enterprises, who are using RETScreen Expert for portfolio-wide energy management and greenhouse gas (GHG) reporting.

How is the Monitoring, Targeting & Verification Tool for RETScreen software integrated into the current version of RETScreen?

The Monitoring, Targeting & Verification Tool is part of RETScreen's Performance Analysis Module. This module helps the user monitor, analyze, and report key energy performance data to facility operators, managers and senior decision-makers.

Implementing an energy monitoring, targeting and reporting (MT&R) system can be a powerful way to better manage energy project investments as well as identify additional project opportunities. In addition, the measurement and verification (M&V) of actual savings (or production) achieved by a clean energy project is an important final step in the energy decision chain.

To help address this need on a global basis, RETScreen, in collaboration with REEEP and the NASA Langley Research Centre, developed the RETScreen Performance Analysis Module. This energy management software tool, which integrates near real-time satellite-derived weather data from NASA for the entire surface of the planet, can be used worldwide to track a facility's actual energy performance versus predicted performance.

Were there any other surprising outcomes you would like to share with us?

In addition to continued global uptake and ongoing development, all Canadian federal departments are required to use RETScreen as part of the Government's Greening of Government Strategy. We also provide data onboarding services on a cost-recovery basis for our enterprise customers to help them with their portfolio-wide deployment of the RETScreen Clean Energy Management Software platform.

In January 2023, the RETScreen World Conference was hosted by Energy Manager Canada and featured many speakers from different industries who shared their experiences and best practices in using the software. Recordings of every session, including the live Q&A sessions, is available on the conference website: <https://www.energy-manager.ca/virtual-events/retscreen/>

“ REEEP'S SUPPORT AND FUNDING HAS HELPED ADVANCE MANY FEATURES IN THE RETSCREEN SOFTWARE AND HAS HELPED EXPAND ACCESS TO THE PLATFORM GLOBALLY



Kevin Bourque
SENIOR ENGINEER, RETSCREEN SOFTWARE, ENERGY EFFICIENCY AND TECHNOLOGY SECTOR, GOVERNMENT OF CANADA

DONORS



Norwegian Ministry of Foreign Affairs



Department for Business, Energy & Industrial Strategy



LOCATION: FIJI • STATUS: COMPLETED

HOTEL SECTOR ENERGY EFFICIENCY IN FIJI

THIS PROJECT WITH THE GREENLIGHT TECHNOLOGY GROUP (GLTG), WHICH WAS PART OF REEEP'S 7TH FUNDING CYCLE, AIMED TO DEVELOP A STRUCTURED MARKETPLACE FOR ENERGY EFFICIENCY AND RENEWABLE ENERGY SERVICES AND TECHNOLOGIES TAILORED TO FIJI'S HOTEL AND RESORT SECTOR.

THE PROJECT

In Fiji, where tourism is the largest industry and estimated to account for a quarter of the nation's economy, there was strong potential at the end of the 2000s for a sectoral approach that coordinated the efforts of all major tourism stakeholders to achieve collective energy savings and reduce costs.

In 2009, REEEP provided funding to an Australian-based clean technology specialist, Greenlight Technology Group, to develop a structured marketplace for energy efficiency (EE) and renewable energy (RE) services and technologies tailored to Fiji's hotel and resort sector and to provide instruction on the financing opportunities available under the Clean Development Mechanism (CDM) of the time for small-scale energy efficiency projects.



Left: A hotel complex in Fiji. Credit: Ignacio
Above: Solar panels on a remote Island in Fiji. Credit: Rafael Ben-Ari

REEEP'S SUPPORT

To develop the marketplace, the project created a strategic plan for implementing a range of EE and RE solutions in the Fijian hotel and resort sector and established a local partnership in Fiji to facilitate the project and provide long-term benefits to the community. It also identified key stakeholders and created the Low Carbon Tourism Alliance, a sector-wide alliance of the key players in Fiji's hotels and resorts sector and local clean technology businesses to widen the uptake of renewable energy.

This resulted in improved awareness of renewable energy and energy efficiency solutions within the hotel and resort sector, and it used CDM as a funding vehicle to subsidise small-scale EE/RE projects.

When GLTG entered Fiji and started building a network, there was a greater demand for a broader project, which they reframed in their initiative with REEEP. Through our support, GLTG holistically looked at a low-carbon tourism initiative, which established a broader platform to bring stakeholders in and combine what GLTG was trying to do regarding mobilising finance and technology with support from the government and the tourism sector in the country.



GLTG helped key stakeholders in Fiji's hotel and resort sector to find common ground on renewable energy and energy efficiency policies. Credit: Martin Valigursky



An aerial view of a hotel complex in Fiji. Credit: Ignacio

“REEEP gave us the baseline funding to take a risk to a certain extent and trial our model offshore. With that sort of financial support, it enabled us to take a little bit more risk in our approach and be a lot more adaptive”, says Chris Andrew, CEO of Green Light Technology Group.

The partnership with REEEP gave them the confidence that they had the backing of an organisation that was focused on developing the market. “REEEP was supportive of us being exploratory, trialling and erroring and being adaptive to where we were going. It allowed us to step into a market that we hadn't worked in [Fiji], but we were confident we could work in.”

The project saw success in doing what it ultimately set out to do and in delivering a framework. Regarding the model for low-carbon tourism in Fiji developed by the strategic alliance of key tourism stakeholders, he says, “We had the Ministry of Energy, the Hotel Association, the Minister for Tourism, the Director of Energy, the Reserve Bank and a number of other players sitting at a table discussing clean energy and sustainable energy – I think that model was hugely successful because it brought people with a common goal from different parts of Fiji”.

The project also resulted in unexpected positive outcomes by making certain groups reassess their investments and capacity-building objectives in the

Pacific. “REEEP played a key role in catalysing interest in mobilising existing development agencies in the Pacific to think differently,” says Chris.

“REEEP's invest, learn and share model is a model that is replicable in a lot of other sectors. Here in Australia, it's easily replicable in not only just the clean energy space but a number of other different initiatives where we need to better mobilise actions to deliver the Sustainable Development Goals”.

“ REEEP PLAYED A KEY ROLE IN CATALYSING INTEREST IN MOBILISING EXISTING DEVELOPMENT AGENCIES IN THE PACIFIC TO THINK DIFFERENTLY.



Chris Andrew
CEO OF GREEN LIGHT TECHNOLOGY GROUP

DONORS



Australian Government
Department of Foreign Affairs and Trade

LOCATION: SOUTH AFRICA • STATUS: COMPLETED

CLIMATE CHANGE, CLEAN ENERGY AND URBAN WATER IN SOUTH AFRICA

EMPOWERING MUNICIPALITIES TO BUILD CAPACITY, IDENTIFY APPROPRIATE WAYS TO ENGAGE, ACCESS FINANCE AND ULTIMATELY DEPLOY CLEAN ENERGY TECHNOLOGIES AND SYSTEMS IN THEIR WATER INFRASTRUCTURE.



BACKGROUND

Water and waste water systems form the core infrastructure that underpins delivery of water and sanitation services in cities. With pumps and other systems running 24 hours a day, they are also among the largest consumers of electricity in municipalities – and therefore generate substantial costs and greenhouse gas emissions. As cities, particularly in the developing world, continue to grow rapidly, demand for water and wastewater services will continue to rise, increasing the pressure on underlying infrastructure. Decisive action is required to manage both the environmental and

financial impacts of providing water and sanitation as essential services to growing urban populations.

Clean energy technologies and energy efficiency support can dramatically improve efficiency and reduce GHG emissions in urban water and wastewater infrastructure, and do so cost-effectively, with investment payback periods of often only a few years. However, municipalities often lack both the staff capacity and the financial means to plan, fund and implement such interventions.

REEEP'S SUPPORT

The Climate Change, Clean Energy and Urban Water in Africa project, funded by the European Commission, implemented by UNIDO and executed by REEEP, aimed to empower South African municipalities to upgrade their water infrastructure with clean energy and energy efficiency solutions, to reduce energy use, costs and greenhouse gas (GHG) emissions, and improve service delivery.

The project, which wrapped up in July 2019, created pathways to empower municipalities to build capacity, identify appropriate ways to engage, access finance and ultimately deploy clean energy technologies and systems in their water infrastructure. The pilot project was implemented in two disparate municipalities in South Africa, Nelson Mandela Bay in Eastern Cape and !Kheis in Northern Cape.

REEEP and its local partners developed technical action plans with both host municipalities, which, based on detailed energy usage data collected through energy audits, led to the selection of high-impact technical interventions at their waterworks sites. Each municipality also signed a Memorandum of Understanding with the National Cleaner Production Center (NCPC), which joined the project to provide accredited energy training to the municipalities' technical teams.

Our work with these two municipalities has revealed that, despite the vast difference in population and municipal budgets, they face similar challenges. They could apply similar approaches to overcoming these challenges and successfully implementing clean energy solutions. The best practice advice developed based on experiences in the two municipalities was therefore useful to most municipalities in the country and created a solid base for replication across sub-Saharan Africa.



Desmond Dolopi and Derrick Bromkamp (Water Operator Kheis Municipality) inspect newly fitted pumps at Groblershoop treatment plant. Credit: Incubate



Above and previous page: Aerial view of the Fishwater Flats Waste Water Treatment Works in Nelson Mandela Bay Metropolitan Municipality. Credit: Charles Meadows for REEEP

Our approach consisted of four main parts:

- 01** Building capacity: The project provided training to municipal technical managers to help them identify, procure, finance, install and operate fit-for-purpose clean energy interventions in municipal water infrastructure.
- 02** Laying foundations: The project assisted municipalities in carrying out energy audits and other baseline studies, so that technical interventions can be identified and selected based on reliable data, and any energy and cost savings proven.
- 03** Connecting stakeholders: The project created opportunities for representatives of municipalities, the private sector, financiers and government to meet and discuss challenges and opportunities, improve mutual understanding and remove barriers for future cooperation.
- 04** Untangling procurement processes: The project helped municipal technical managers identify and navigate the procurement pathways that must be followed to upgrade their water and wastewater infrastructure, and facilitates a dialogue with private sector stakeholders to enable them to respond effectively to municipal tenders.

LOCATIONS

NELSON MANDELA BAY MUNICIPALITY

Nelson Mandela Bay Municipality includes Port Elizabeth, South Africa's sixth largest city and a major industrial hub. The technical intervention under this project centred on the Fishwater Flats Waste Water Treatment Works which processes 67% of the municipality's wastewater – 120 million litres per day. An estimated 70% of the energy used by the site is consumed by 70 motors used to aerate sludge – a step in the wastewater treatment process which allows bacteria to filter out organic matter. The treatment works aimed to replace these motors with new technology providing a more precise and vastly more efficient method for aerating sludge. The intervention required gathering data on energy use, so that savings can be calculated and investments in upgrades justified.

The Fishwater Flats site did not have equipment to measure the energy use of its different assets over time, though, and monitored only the site's total energy use. With the assistance of this project, the municipality installed sophisticated energy meters for the sludge mixers, a significant first step towards making this process much more energy efficient. For the first time, technical staff at the site could now oversee operations and diagnose problems remotely, via an online dashboard. The municipality used the data gathered to future-proof Fishwater Flats, increase its resilience to climate change and improve service delivery to its 1.1 million residents.



The Fishwater Flats Waste Water Treatment Works in Nelson Mandela Bay Metropolitan Municipality. The project helped the municipality install an energy metering system to better monitor the energy use and functioning of some of the plant's key assets. Credit: Charles Meadows for REEEP



Andries Letsheeny from Rauco Trading Technical Team at the Groblershoop treatment plant in !Kheis Local Municipality.
Credit: Incubate for REEEP

!KHEIS LOCAL MUNICIPALITY

!Kheis Local Municipality is a stretched out, sparsely populated municipality on the edge of the Green Kalahari in Northern Cape province. The municipality, which measures nearly 100 km from its northernmost to its southernmost point, and roughly the same east to west, employs only a handful of engineers to maintain all infrastructure, including roads, electricity and water and sanitation provision to its widely dispersed population. The municipality’s technical staff, together with the project partners, identified fifteen sites for clean energy interventions.

Energy meters were installed at all sites, allowing for remote monitoring of the functioning of different assets and for the remote identification of breakdowns, and ten pumps were replaced with new, energy efficient models. Back-up pumps were installed for pumps that are critical to the water supply, to prevent service interruptions in case of breakdowns. In addition, REEEP conducted a community engagement event in Groblershoop, the municipality’s largest town, to inform the local community of the planned interventions. As part of this event, educational plays were performed at two local primary schools, teaching hundreds of students about the importance of saving water.

STAKEHOLDER ENGAGEMENT

In parallel with the technical work, REEEP ran an intensive programme of stakeholder engagement events which brought together, often for the first time, representatives of different departments in municipalities, the finance sector, private sector technology providers and project partners. The lessons learned at these roundtables were integrated into a Best Practice Guide, which contains advice for municipalities on which steps to take when implementing clean energy

solutions. The lessons have also been leveraged in a Policy Brief, which provides policy recommendations to the South African government to create an enabling environment for clean energy and support municipalities to procure and fund improvements to their water infrastructure.

“ WE ARE VERY OPTIMISTIC ABOUT THE POTENTIAL OF THESE ENERGY EFFICIENCY INTERVENTIONS TO SAVE ON OUR ELECTRICITY BILLS. THIS PROJECT WILL IMPROVE SERVICE DELIVERY TO OUR COMMUNITIES FOR DECADES TO COME.



Desmond Dolopi
TECHNICAL MANAGER, !KHEIS LOCAL MUNICIPALITY

DONORS



HOW REEEP WORKS

CLIMATE-SMART SOLUTIONS

REEEP'S MARKET DEVELOPMENT APPROACH

In the 20 years since REEEP was launched, we have gained deep experience and understanding of market development, evolving a unique approach to achieving catalytic impact.

We design and implement holistic market actions to address barriers, tailoring programmes to the prevailing market conditions and stage of market maturity, using proven tools or creating new ones where none exist.

Working with small and medium enterprises (SMEs), REEEP facilitates the adoption at scale of clean energy solutions where the technology is proven through pilot demonstrations or prior successful deployment in different countries and questions of product/market fit have substantially been addressed. We support SMEs as they refine and prove out business models and deploy at scale, design programmes making effective use of public (donor) finance to support the sector during wider rollout, and ensure private financing



A Solergie solar panel installation in Togo. Credit: Solergie

is available to sustain market growth as public support is reduced and eventually withdrawn. We simultaneously prepare the ground for larger-scale multi-country programmes based on these successful market engagements.

Our actions are primarily supply side measures, whilst keeping a strong focus on demand side energy needs and the sustainability of the market. Detailed market scoping is conducted to understand market and community needs and the potential to address suppressed demand through support and de-risking measures for SMEs as well as improvement of market conditions. In all cases when selecting companies for support, we ensure they have a coherent understanding of the market and demand, market-appropriate models and solutions, capacity to implement and appropriate plans for marketing and awareness-raising. We insist on high-quality standards, as well as means to advance gender equality across their operations and impact on the market.

Securing suitable finances represents one of the key barriers to clean energy SMEs – in frontier markets too many fail in the so-called “valley of death” between seed funding and scale – so one of our functions is to design public and private financial instruments. An enabling

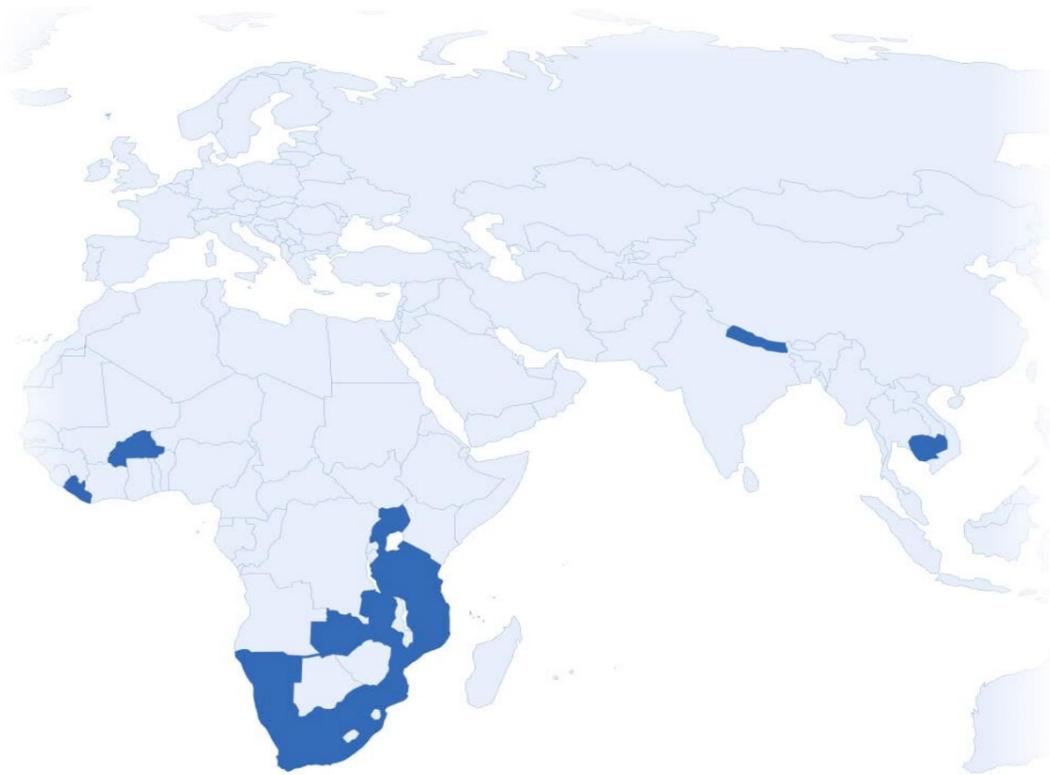
environment is also essential, so we work with governments and other key stakeholders on relevant policy and regulation. Furthermore, we collect and disseminate market intelligence so that public and private stakeholders are better informed in decision-making. In addition to its initial importance in removing barriers to market growth, the regulatory role remains vital as those markets grow, ensuring consumer protection and control of pollution from e-waste and allowing strategic planning of national energy systems.

We honed this approach working with our partnership of governments, international organisations, the private sector and civil society as well as research institutes, think tanks and academia. REEEP already has a wide network, and when entering a market, we fill in any gaps by developing intentional relationships with all the right market stakeholders necessary to remove barriers to growth.

This holistic perspective, with no vested interests and taking into account the needs of all stakeholders, befits our status as a not-for-profit Quasi-International Organisation (QuIO). Combined with a speed of response impossible for larger organisations, it sets REEEP apart from the field.

OUR KEY LEVERS TO ADVANCE OVERALL MARKET DEVELOPMENT ARE:

- 01 to design public (donor)-funded financial instruments leveraging private finance
- 02 to structure private financial instruments to ensure availability of adapted and affordable private finance
- 03 to support a cohort of SMEs to refine their business models and accelerate deployment at scale
- 04 to support SMEs in accessing private finance locally and on international markets
- 05 to support a suitable enabling environment, working with governments and targeted key stakeholders on policy and regulation
- 06 to collect and disseminate market intelligence so public and private stakeholders are better informed in decision-making



FOCUS SECTORS

Rural electrification and energy access are high priorities for REEEP: some 675 million people still lack access to electricity. We are increasing our focus on productive uses of renewable energy (PURE), particularly in agri-food value chains, which provide livelihoods for the majority of people in rural areas of many African and Asian countries.

Off-grid clean energy solutions can contribute to increased production through solutions such as solar irrigation as well as reduced food loss and waste, for example through cooling and processing solutions which extend the life span of agricultural yields. Mini-grids can support these more intensive energy uses, as well as supplying domestic clean energy, and we look to support innovative ways to unlock demand.

We are continuously exploring potential areas of expansion where our market development approach can be applied successfully to drive transformative change.

E-mobility is one such area, with increasing options to implement electric transport solutions for smaller vehicles such as two- and three-wheelers, or electric boats for fishing communities, including ancillary services necessary to grow markets such as battery swaps and establishing recharging stations.

As the world continues to warm, adverse impacts increase and risks escalate for vulnerable communities, ecosystems and infrastructure. REEEP is evaluating further ways to support climate adaptation efforts through renewable energy solutions, both by building consideration of adaptation impacts into our work on PURE in agri-food value chains, whilst also researching the potential for a specific future programme on the topic.

WHERE WE WORK

FOCUS COUNTRIES AND REGIONS

REEEP applies our approach to market development flexibly and can adapt it rapidly to different countries – we are currently active in Burkina Faso, Democratic Republic of Congo, Mozambique, Liberia, Nepal, Tanzania, Uganda and Zambia. It also suits different clean energy solutions (market sectors) and allows us to respond to market shifts.

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.

Furthermore, though the Private Financing Advisory Network we are active in low- and middle-income countries in sub-Saharan Africa, South Asia, Southeast Asia, the Pacific Islands, Eastern Europe, Central Asia, Central America and the Caribbean Islands.



Setting up drip irrigation in Kenya. Credit: Futurepump



DATA FOR IMPACT

DATA USE TO IMPROVE DECISION-MAKING IN ENERGY ACCESS

As with our projects and programmes, REEEP's role as an innovator, incubator and trusted partner extends to our work with data. We developed the Edison platform to monitor the Beyond the Grid Fund for Zambia (BGFZ), making it possible for the first time for a results-based funding programme to accurately monitor the sustainability of every single electricity connection for which a subsidy is provided. This unique insight into the impact of the programme prompted SIDA, the funder of BGFZ, to provide additional grant funding to investigate the possibility of other organisations in the energy access sector using Edison.

We carried out a lengthy consultation process with actors in governments and public sector agencies responsible for energy access, as well as programme managers in the development sector, other funders and financiers, AMDA, GOGLA and individual energy service providers/solar distribution companies (ESPs). These discussions led to a pilot programme with the Rural Electrification Authority of Zambia.

REA Zambia is acting as a trailblazer for similar organisations across Africa with its commitment to take full advantage of modern data collection, analysis and

visualisation across all the activities under its auspices, both on and off-grid. Together with our counterparts in the REA IT team we carried out a detailed scoping exercise on how data can improve decision-making across the whole organisation, including engineering services, monitoring and evaluation, economics, as well as the programme management team for the World Bank financed Electricity Service Access Project (ESAP).

Following this success – and growing interest in the platform across the sector – REEEP has now transferred the data platform to a new collaboration that is better placed to support its rapid expansion. The Access to Energy Institute (A2EI), a not-for-profit software and hardware research and development institute based in Berlin, is now chiefly responsible for software engineering, combining Edison with its own existing

platform CLIPP into: Prospect, the Primary Open Source Platform for Energy and Climate Tracking. A2EI works in collaboration with the Global Energy Transition Programme's GET.invest pillar, operated by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), with GET.invest taking the lead on promotion and development of the Prospect initiative – data use and open data collaboration across the energy access sector.

REEEP will continue to use Prospect to inform its delivery of technical assistance services to ESPs under the Beyond the Grid for Africa (BGFA). And of course, we remain on the lookout via our other programmes for new opportunities where improved data use can accelerate the transition to clean energy, in keeping with our long history of helping partners make better use of data, information and knowledge.

“ REEEP'S STRENGTH IS TO ACT AS A MARKET FACILITATOR BY REDUCING MARKET BARRIERS FOR RENEWABLES AND ENERGY EFFICIENCY SYSTEMS. IT HAS FOUND NEW WAYS MAKING OFF-GRID RENEWABLE ENERGY TECHNOLOGIES MORE AFFORDABLE. THERE ARE A NUMBER OF IMPRESSIVE PORTFOLIOS WHERE THE 'BOTTOM-UP APPROACH' TO PROJECTS SHOWS REEEP WORKING WITH GOVERNMENTS AND THE PRIVATE SECTOR TO IMPROVE ACCESS TO SUSTAINABLE CLEAN ENERGY, ESPECIALLY IN AFRICA.



Twarath Sutabutr

OFFICE OF KNOWLEDGE MANAGEMENT AND DEVELOPMENT, THAILAND

Image left: Training for new nano-entrepreneurs by Nanoé in Madagascar. Nanoé selects and train young local entrepreneurs who come from rural villages and provide them a three-month training in “electricity and marketing”. Credit: Photomap

FINANCIAL INSTRUMENTS

As part of our holistic approach to building dynamic, sustainable markets, REEEP designs and implements tailor-made financing and support mechanisms attuned to local market conditions and needs. Through a combination of financial incentives, capacity building, facilitation of stakeholder cooperation and technical assistance, REEEP's programmes fill financing and knowledge gaps and enable private sector players to operate successfully in frontier markets.

REEEP'S TOOLBOX



Results-based financing to SMEs



Stakeholder engagement (Country Platforms for Change)



Risk mitigation for financial institutions



Facilitation of a market learning effect through collection and aggregation of data



Technical assistance to SMEs



Pipeline origination and development



Capacity building for financial institutions



Local currency enabler



● MARKET TRANSFORMATION

Market transformation is complex and multidimensional. REEEP develops pioneering ways of monitoring, evaluating and learning from our 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.

● RESULTS-BASED FINANCING

REEEP develops results-based financing (RBF) schemes that deploy public sector funding as incentives for the private sector to overcome early structural challenges in early-stage markets, incentivise start-up and medium-term scale-up needs of clean energy service providers and create conditions for long-term sustainability as well as leverage private finance and commercial investment. The financing takes place on a grant basis as "free-equity" across multi-year project lifecycles, subject to rigorous monitoring and verification of milestones. The Beyond the Grid for Zambia (2017-2022) and the Beyond the Grid for Africa (2019-to date) are two examples of the effective approach to spurring market activity in nascent markets.

All In Trade employees carry a solar panel for installation outside of Kampala, Uganda. Credit: Redbunny



● **RISK MITIGATION FOR FINANCIAL INSTITUTIONS**

REEEP designs and implements first loss reserves to cover local financial institutions’ portfolios of eligible loans, using cash-backed and on-demand guarantees for simple and effective reduction of provisions, credit risk mitigation and to address collateral requirements. For example, the Austria Nepal Blended Finance Facility provides a specialised first loss Credit Guarantee Facility (CGF) of 25% to a fund operated by NMB, our partner Nepalese bank, for loans to renewable energy projects, along with other support to the renewable energy ecosystem. The CGF is a revolving fund, so monies not needing to be drawn by the bank in respect of non-performing loans can be recycled to support future projects after loan maturity.

● **TECHNICAL ASSISTANCE TO SMES**

REEEP provides technical assistance on a broad range of challenges that SMEs face that are critical to their success. Through the PFAN programme, project developers receive technical assistance mainly in the areas of business planning, financial modelling, investment structuring and transaction management. Technical assistance in the BGFA and SOARING programmes covers these as well as additional areas such as e-waste policies and action plans, environmental policies and management systems (ESMS), GHG

monitoring, gender policies and action plans, consumer protection and satisfaction, procurement and standard operating procedures (SOPs), regulations and licensing, key performance indicators (KPIs), management structure and HR management among other aspects.

● **CAPACITY BUILDING FOR FINANCIAL INSTITUTIONS**

Capacity building support includes engagement of senior management, improvement of internal processes, policy frameworks and standardised approaches for due diligence and credit analysis which are appropriate for green projects and SMEs. It also includes support to access climate finance as part of the strategic diversification of funding sources of local financial institutions. The SOARING programme provides targeted trainings to participating development and commercial banks as well as microfinance institutions, aiming to build internal risk assessment methodologies for investments in and financing of renewable energy companies/projects and their end users in Tanzania and Zambia. Furthermore, SOARING provides trainings on renewable energy business and delivery models to management level bank and MFI representatives.

● **FACILITATION OF A MARKET LEARNING EFFECT THROUGH COLLECTION AND AGGREGATION OF DATA**

REEEP facilitates a market learning effect through the collection, aggregation and sharing of data contributing to reduction of risks, filling information gaps for the public and private sector and providing evidence for impact and opportunity along with an increased understanding of trends and market characteristics. As part of the BGFZ programme, REEEP established a data-driven monitoring approach which facilitated collection of unique data on energy access in a newly established sector in a nascent market as well as leveraged the experience of the portfolio of off-grid energy service providers towards policy improvements, planning of additional market supporting efforts and leveraging private finance.

● **PIPELINE ORIGATION AND DEVELOPMENT**

Through a variety of programmes, REEEP supports SMEs in early-stage sectors and markets helping to mature the private sector base offering investment opportunities. As part of our programmes, REEEP provides support to fulfil due diligence requirements, loan application documentation and post-disbursement monitoring and financial advisory services among other potential support required to secure finance

● **LOCAL CURRENCY ENABLER**

REEEP is currently working on a solution to solve the exchange risk problem within local markets. Our goal is to provide local currency hedging that would otherwise not be available to lenders and that would support the borrowers in terms of exchange risk protected lending. The hedging facility would reduce the risk of possible upside of interest rates when borrowing in hard currency (e.g. in EUR or USD).



Left: Mr. Sokhom got a CERF loan to finance a solar pump for his longan orchard in Battambang Province, Cambodia. Credit: Jeremy Meek
Above: An elderly resident of Yabone, Senegal happy to receive a lamp powered by MOON solar technology. Credit: Audy Valera

CURRENT PROGRAMMES AND PROJECTS

01. BEYOND THE GRID FUND FOR AFRICA

ESTABLISHING UP TO 1.44 MILLION ENERGY CONNECTIONS BY 2028 TO BENEFIT MORE THAN 6.5 MILLION PEOPLE IN BURKINA FASO, THE DEMOCRATIC REPUBLIC OF THE CONGO, LIBERIA, MOZAMBIQUE, UGANDA AND ZAMBIA.



Left: Comrade Kamwendo waters his crops with a solar pump from VITALITE in Kafue, Zambia. Above: Teacher Rita Chanda now has now access to electricity 24/7 with her RDG solar home system. Credit: Jason J Mulikita

ABOUT BGFA

Over 600 million people in sub-Saharan Africa live without access to electricity. The Beyond the Grid Fund for Africa (BGFA) aims to reduce this gap by stimulating and accelerating new business models to incentivise the private sector to offer affordable and clean energy access at scale to people living in rural and peri-urban areas. BGFA was established in 2019 as an initiative of the Swedish Government – building on REEEP’s successful, award-winning pilot in Zambia, the Beyond the Grid Fund for Zambia (BGFZ) – and is facility managed by the Nordic Environmental Finance Corporation (Nefco).

Today, BGFA is a multi-year funding facility aimed at expanding BGFZ’s approach into new sub-Saharan African countries and kick-start markets for clean off-grid energy. By enabling the scale-up and greater deployment of energy access solutions in different markets, the programme aims to create long-lasting change. It works through a combination of an innovative results-based financing mechanism for energy companies, close cooperation with governments and real-time data collection and analysis. The BGFA programme aims to establish up to 1.44 million energy connections by 2028, benefiting more than 6.5 million people.

IT IS CURRENTLY OPERATING IN SIX AFRICAN COUNTRIES

- 01 Burkina Faso
- 02 Democratic Republic of the Congo
- 03 Liberia
- 04 Mozambique
- 05 Uganda
- 06 Zambia

KEY ACHIEVEMENTS IN 2022

In 2022, 13 companies were contracted in 4 sub-Saharan countries. Their projects are expected to establish 953,000 new energy service subscriptions in the coming four years, which have the potential to provide clean energy access for 4.8 million people in rural areas of Burkina Faso, Liberia, Uganda and Zambia.

The BGFA programme has committed EUR 25 million in results-based financing to these 13 investees, which in turn are seeking to mobilise EUR 80-100 million in additional funding over the lifetime of the agreements, scheduled to end in 2027.



13

portfolio companies



4

sub-Saharan countries



953,000

energy service subscriptions



4.8m

total beneficiaries



€25m

funding committed



€80-100m

expected leveraging



3,600

full-time jobs to be created



€2.77m

disbursements made

REEEP'S WORK ON BGFA

REEEP'S WORK ON THE BGFA PROGRAMME FALLS PRIMARILY UNDER THE FIVE MANDATES OF MARKET SCOPING, WINDOW DESIGN, SHADOW EVALUATION, DUE DILIGENCE AND TECHNICAL ASSISTANCE

In 2022, REEEP supported the launch and implementation of EUR 20.7 million funding window in Uganda (BGFA3) by conducting shadow evaluations and due diligence of companies shortlisted for a potential contract. Similarly, REEEP supported the launch of the EUR 15 million BGFA4 funding window in DRC by conducting market scoping, developing the design of the funding window and contributing to the development of the BGFA guidelines and tailoring the awarding process and design appropriate for the DRC market. We also continued the preparation of the EUR 6.7 million BGFA2 funding window in Mozambique by liaising with government stakeholders and identifying mini-grid clusters for bidding under the funding window.

With the additional funding by Norway in 2022 and resulting shortlisting of additional companies for funding under BGFA1 in Zambia, Liberia and Burkina Faso, REEEP conducted due diligence on these companies including standalone, mini-grid and productive use players. REEEP also designed and mobilised the technical assistance component of BGFA and continued to support Nefco on programme advisory regarding various aspects of design, market developments and technical components supporting the implementation of the programme.



John of VITALITE Headquarters in Lusaka speaks with Moses Mbewe, a VITALITE sales agent and customer in the rural area of Kafue, Zambia. Credit: Jason J Mulikita

BGFA 1

BURKINA FASO, LIBERIA AND ZAMBIA

Technical Assistance

Last year, REEEP commenced the BGFA technical assistance component by structuring the approach, setting up processes and establishing an institutional framework for the implementation of technical assistance between BGFA partners. BGFA technical assistance (TA) will support the companies throughout the whole implementation period. TA is need-based and adaptive to changing circumstances of the company and the market. The first needs assessments were conducted for ten companies contracted by the end of 2022, and the first assignments focused on gender, environmental management, integrating IFC performance standards into company policies as well as support with improvement of financial models.

Going forward, REEEP will support the companies with, among other things, aspects of strategy, recruitment, performance management, development and implementation of gender action plans, setting up environmental and social management policies and systems (ESMS), fundraising, improvement of operations through SOPs, understanding the policy requirements, implementation of security plans as well to taking on opportunities for productive use of energy. REEEP is also leveraging its capacity as the implementation partner of the Private Financing Advisory Network (PFAN) for supporting the ability of companies to secure additional finance for growing their business and assist in meeting the BGFA co-financing requirements.



The village Headwoman and her husband display their RDG solar home system power unit in Chimombo, Zambia. Credit: Jason J. Mulikita

Due Diligence

REEEP completed the due diligence process for the 21 companies initially shortlisted under the BGFA1 funding window. Twelve of these were successfully contracted by Nefco and are now under implementation. In 2022 specifically, REEEP conducted due diligence for eleven

Energy Service Providers (ESPs) with seven ESPs being successful and contracted by Nefco in 2022. Thanks to Norway's contributions to BGFA, additional resources were made available to undertake due diligence on high-scoring BGFA applicants under BGFA1.



A chicken farmer is able to rear more poultry thanks to his VITALITE system near Kafue, Zambia. Credit: Jason J. Mulikita

BGFA 2

MOZAMBIQUE

In 2022, REEEP continued the preparatory work for the launch of the mini-grid-focused funding window in Mozambique. In collaboration with Greenlight Africa and FUNAE, REEEP identified clusters of mini-grids that will be available for bidding under the funding window, and the ESPs to be contracted under BGFA2 are expected to be granted a concession license under the new policy

for off-grid areas (published in 2021 and expected to be operationalised soon).

REEEP also continued to liaise with other programmes on initiatives and market information as part of the private sector coordination group of the Energy Sector Working Group in the country.

BGFA 3 UGANDA

Public Sector Engagement

To ensure that the activities and plans of applicant firms to BGFA3 synchronize and complement national-level strategy, REEEP continued fruitful and collaborative engagement with key regulators and governmental bodies in Uganda throughout 2022. As the activities and deployment of mini-grid companies were of the highest priority, REEEP liaised with the Rural Electrification Agency (REA), which was later reformed as the Rural Electrification Program (REP) and re-absorbed under

the remit of the Ugandan Ministry of Energy and Mineral Development (MEMD).

In addition, REEEP continued communication with the Electricity Regulatory Authority (ERA) in Kampala regarding key intersections of their work with mini-grid planning and rollout and collaborated and communicated with donors, implementing organisations and counterpart programs working across the country.

Due Diligence

Due diligence was undertaken on companies under the BGFA3 funding window in Uganda. This process involved analysis of documentation, discussion with company management and, in some cases, visits to sites or facilities. Eleven applicants to BGFA3 went through most, or all, steps of the due diligence process throughout the course of 2022, with one ESP being contracted by Nefco in 2022.



A seller from d.light, one of the two companies in Uganda contracted under BGFA in 2022. Credit: d.light



Although it's located along on a street with access to the national power grid, it is more affordable to use VITALITE solar home systems to light a general store in the 10 mile area of Lusaka, Zambia. Credit: Jason J. Mulikita

BGFA 4 DEMOCRATIC REPUBLIC OF THE CONGO

Market Scoping

An in-depth country assessment was undertaken involving interviews with public officials, private sector actors, companies, sector associations, non-governmental actors and international development actors, as well as a hybrid, in-person and online workshop.

The market scoping covered the standalone solar and mini-grid sub-sectors and aimed to identify the

level of maturity and readiness of the private sector off-grid players, challenges and opportunities of the market, and an analysis of ongoing and planned market support mechanism to ensure that BGFA activities were complementary and not duplicative. The study informed the BGFA4 funding window design in terms of sector focus as well as programmatic aspects embedded in the programme guidelines.

Window Design

A joint workshop with Nefco was held in Vienna to design the funding window based on the conclusions and findings of the market scoping exercise. This resulted in defining a single funding lot where technologies would compete with each other, in contrast to earlier BGFA funding windows that have separated funding lots. This is expected to offer valuable insights into the maturity, competitiveness and efficiency of the variety of technologies, business models and players on the market as well as direct the use of public funds to those models and technologies offering the best value for money in a market where the potential for impact and need for incentives for all the range of technologies is high.

Call Launch

BGFA4's Pre-qualification stage was launched in June 2021, and a follow-up launch of the final application stage was held in Kinshasa in November 2022.

The mission to Kinshasa in November was also an opportunity to launch the initial conversations to set up an Off-grid Task Force with local market players and governmental authorities.



A VITALITE customer and sales agent in Kafue, Zambia. Credit: Jason J Mulikita

PROGRAMME-WIDE

REEEP contributed to BGFA with a variety of programme advisory actions including setting up standards and requirements for gender, monitoring, reporting & verification (MRV), market stakeholder engagement, policy advisory as well as sharing lessons learned on setting up institutional frameworks and processes for replicating the Off-Grid Energy Taskforce concept from Zambia in other BGFA countries.

REEEP also contributed to an evaluation conducted on BGFA's offer to the market as well as on the efficiency of the process from launch to contracting. Furthermore, REEEP participated in the two BGFA Steering Committee meetings held in May and November 2022 respectively, engaging with Nefco, donors and other programme partners on the status, progress and next steps for the programme.



SupaMoto clean energy stove sellers the outskirts of Lusaka, Zambia. Credit: Jason J Mulikita

DONORS



02. BEYOND THE GRID FUND FOR ZAMBIA

THE BEYOND THE GRID FUND FOR ZAMBIA (BGFZ) REACHED ITS SUCCESSFUL CONCLUSION – THE DELIVERY OF ENERGY SERVICE SUBSCRIPTIONS TO OVER 1 MILLION ZAMBIANS.



ONE MILLION LIVES LIT UP

The Beyond the Grid Fund for Zambia (BGFZ) reached its successful conclusion – one million lives lit up. Launched in 2016, the pilot programme was funded by Sweden and implemented by REEEP as an ambitious results-based financing multi-year programme aiming to increase energy access, accelerate private-sector growth in energy generation and distribution in the country, improve livelihoods and catalyse economic activity in rural and peri-urban areas.

BGFZ’s objective was to bring modern affordable energy services to at least 192,000 households – translating to one million Zambians – by 2021. This target was achieved in September 2021, and the results were acknowledged by public and private stakeholders at an acknowledgement event in Lusaka in March 2022.

Building on the success of this pilot, the programme was expanded into the Beyond the Grid Fund for Africa (BGFA) in 2019, which brings the concept to five additional countries along with more financing to further improve energy access in Zambia.

SUCCESSFUL OUTCOMES

BGFZ had four companies in its portfolio including two offering services through solar home systems – Fenix International Zambia Limited (currently part of Engie Energy Access) and VITALITE Zambia Limited, an improved cooking company – Emerging Cooking Solutions Zambia Limited (ECS) and a micro-grid company – Standard Microgrid Initiatives Limited (Zambia). Programme implementation began in July 2017, and by the end of 2022 all companies had concluded their contracts with encouraging results – the BGFZ programme target was overall exceeded, and 71% of the total contracted connection targets were delivered by the four energy service providers.

The EUR 20 million fund was financed by the Swedish Government through the Swedish International Development Cooperation Agency (Sida) and designed as well as managed by REEEP on behalf of the Swedish Embassy in Zambia. BGFZ was comprised of three pillars: i) incentivizing and procuring affordable, sustainable high-quality energy services, ii) the platform for



A SupaMoto sales agent at a demonstration of their clean cookstoves in Lusaka, Zambia. Credit: Jason J. Mulikita

market change executed through the national Off-Grid Task Force that enables close cooperation with the government of Zambia and iii) real-time and data collection and analysis that was handled through REEEP’s custom-built Edison platform.

Data from the Edison platform automated much of the key reporting and analysis supporting the results-based payments, including data for business performance and impact monitoring.



Young boys watch educational TV powered by their VITALITE solar home system in Kafue, Zambia. Credit: Jason J. Mulikita

Left: Standard Microgrid installation in the village of Ngewere, Zambia.

It allowed for cost-effective real-time snapshots of the market and analysis of market dynamics and trends, as well as understanding customer behaviour over time including sustainability of the energy service provision by the supported companies. The companies would only be compensated for sustained energy services and with the daily data collection enabled by Edison, so the programme was able to ensure that the companies received incentives only for the portion of their portfolio with active sustained service.

The data on improved energy access has also been leveraged for investor engagement and government planning as well as design of additional market-supporting measures in Zambia. Edison is now open source since 2022 and is scaled as a revised version (Prospect) with funding from Sida and GIZ and continues to contribute to improved energy access.

BGFZ RESULTS

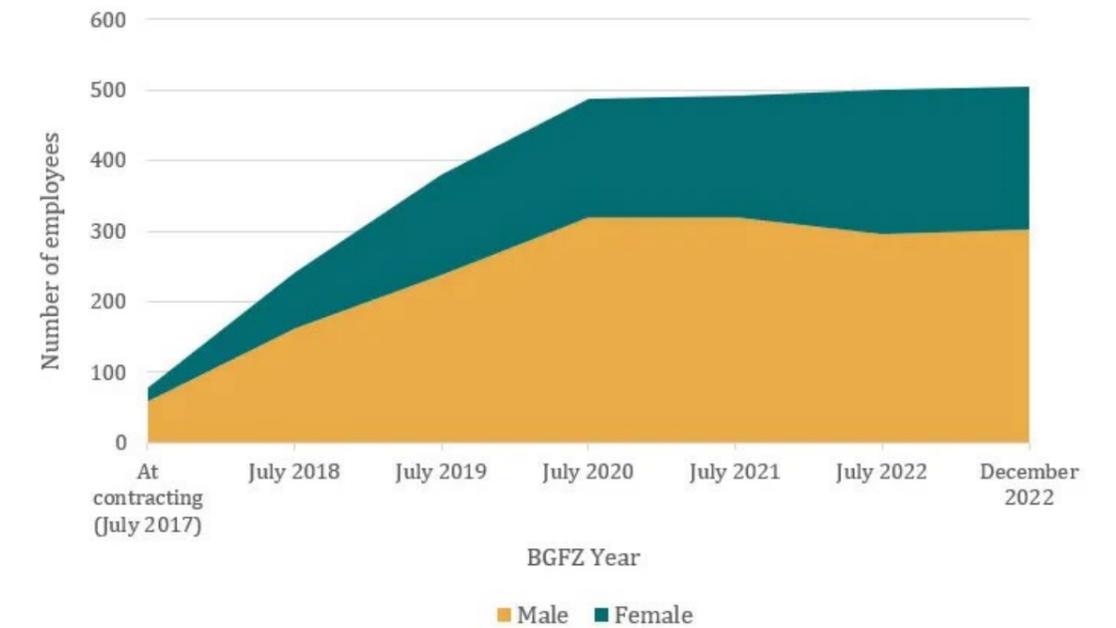
BGFZ reached a successful completion and provided quality clean energy access to over one million Zambians by connecting 194,000 households by 31 December 2022 with >50% of the customers living in rural areas and 30% of the primary customers being women. The four companies in the portfolio reached 72% of the total contracted energy service subscriptions, despite considerable disruption and negative impact of the Covid-19 pandemic during 2020 – 2022 which disrupted supply chains, sales activity and increased risk-aversion of funders, particularly in challenging markets such as Zambia. By enabling access to clean

energy, the programme also contributed to GHG mitigation with an estimated total annual mitigation of 12,300 tonnes of CO2 equivalent.

Through de-risking, incentivizing and promotion of successful business models for scale-up, BGFZ facilitated long-term sustainable operations and contributed to market development and improvement of sector standards and gender equity. By the end of 2022, Sida had released 91.5% of the allocated BGFZ funds to the four companies which has leveraged a total of USD 50.4 million of finance from the companies themselves as well as from over 25 third-party financiers.



Ester Tembo lives in a rural village in Chongwe with her children and grandchildren where she often cooks for up to 25 people – a job made far easier by her SupaMoto clean energy stove. Credit: Jason J Mulikita



Employment by gender over a six-year BGFZ implementation period (01 July 2017 – 31 December 2022)

EMPLOYMENT

BGFZ enabled the creation of new income-generating opportunities. Within six years, the total number of people employed by the BGFZ companies increased by 555% from the beginning of the programme in July 2017 to December 2022. Special attention was paid to improving the gender balance during recruitment, which increased the share of female employees in direct employment at the companies (full and part-time) from 27% in 2017 to 40% in 2022.

The share of women in management positions of the companies was also improved throughout the BGFZ programme, increasing from 31% in July 2018 to 41%

as of December 2022, while the rise of women in other roles has been slowly but steadily increasing from about 33% to 36% over the course of BGFZ.

Many people have the opportunity to also earn an income as agents for the BGFZ companies by selling solar home systems, improved cooking stoves or Power Time packages to households powered by a micro-grid. Agents typically earn a commission for each sale made as well as for maintaining steady payments from their customer portfolio along with sales training and opportunities for skills and career development.



The whole family benefits from a variety of solar devices from VITALITE in their off-grid home in Kafue, Zambia. Credit: Jason J Mulikita

SOCIAL IMPACT

A 60 dB verification and customer survey published in May 2020 shows that the companies in the BGFZ portfolio are reaching underserved and low-income population of Zambia with 60% of customers living below USD 3.1/person per day. BGFZ has proved to be addressing a gap in the market as 86% of the surveyed customers reported that they could not easily find a good alternative to the companies' products and services while 85% of the customers were accessing the service for the first time with candles and torches being the most common prior sources of lighting.

BGFZ companies with their products and services have contributed to improving the livelihood of the Zambian people with 96% of the customers responding to have had experienced an improvement in their quality of life while 83% of the respondents said that their life has "very much improved". The services provided have also created some income-generating opportunities with 9% of customers indicating that the services enabled them to generate income. 95% of these customers make additional income at their homes, and others in shops, bars, poultry and a hospital.

THE OFF-GRID TASK FORCE

The platform for market change was designed to amplify learning between stakeholders in the off-grid energy market and coordinate with relevant stakeholders such as government, donors, financiers and private sector actors to promote synergies and avoid duplication of efforts, provide market information, coordinate capacity and awareness building and meet specific needs of the private sector providing off-grid energy solutions to rural and peri-urban areas in Zambia. With support from REEEP, the platform for market change in Zambia was formalised as the National Off-grid Task Force (OGTF) in February 2018 to provide a focus for coordination and oversight of initiatives designed to raise the profile of the potential of the off-grid sector in Zambia and deliver increased energy access, particularly in rural areas, in line with the objectives of the Zambian Government.

The Task Force aims to ensure that investments – both public and private – achieve transformational change in the lives of the rural populace by expanding access to clean and sustainable energy and growing the markets. It serves as a hub for the exchange and dissemination of experience and information from programme implementation, policy developments and a forum in which participants come together to share information on interventions, opportunities and barriers to market growth. Furthermore, it is action-oriented and helps ensure that the various activities of government and the donor community are properly coordinated and that private sector investments are optimally targeted and structured, to leverage the available resources and increase the growth of the market and promote investment opportunities. The Rural Energy Agency (REA) in Zambia was also supported by REEEP to adopt Edison for programme monitoring and data management as it has increasingly cooperated with the private sector towards increasing energy access. Pilot implementation is now being continued by the Prospect team.

In 2022, the Zambian OGTF serves as a model for the eventual replication of the concept in all countries of operation for the Beyond the Grid Fund for Africa (BGFA), with the implementation partner NIRAS launching the stakeholder engagement activities this year towards structuring similar platforms in Burkina Faso, the Democratic Republic of the Congo, Liberia, Mozambique and Uganda. We expect the Zambian government to stand as a role model and be able to share their experience and best practice with peers in other countries in the coming years.



The 8th Task Force meeting was held on 15 March 2022 which set up the action items for the year ahead and provided an update on ongoing efforts in the off-grid sector by the OGTF members.

DONOR



03. THE PRIVATE FINANCING ADVISORY NETWORK

MOBILISING INVESTMENT FOR CLIMATE CHANGE ADAPTATION AND MITIGATION PROJECTS AND BUSINESSES.



ABOUT PFAN

The Private Financing Advisory Network is a global network of locally based climate and clean energy finance experts which offers free business coaching and investment facilitation to entrepreneurs developing climate and clean energy projects in low and middle-income countries. With a focus on clean energy and climate mitigation and adaptation, PFAN has been in operation since 2006, making it one of the longest-standing project preparation facilities working with SMEs in developing country markets. Since 2016, REEEP has been co-hosting the Private Financing Advisory Network (PFAN) together with UNIDO. PFAN

aims to build clean energy markets one business at a time, mitigate climate change and mobilise private investment in support of the Paris Agreement on Climate Change and the Sustainable Development Goals. While combating climate change is its ultimate goal, in its day-to-day work, PFAN is driven by a desire to help entrepreneurs succeed. Getting a project off the ground is difficult; there are many barriers faced by entrepreneurs, especially those linked to accessing additional investment. Its efforts have resulted in a milestone in 2022: since inception, PFAN-supported projects have mobilised over USD 3 billion in investment.

PFAN OPERATES IN

- 01 Sub-Saharan Africa
- 03 Southeast Asia
- 05 Eastern Europe & Central Asia
- 02 South Asia
- 04 Pacific Islands
- 06 Latin America & the Caribbean

PFAN IN 2022

Now more than ever, supporting small and medium-sized enterprises (SMEs) that focus on climate change is crucial. SMEs play a critical role in driving sustainability, reducing greenhouse gas emissions and increasing climate resilience. By increasing investment in and supporting SMEs that prioritise climate action, we can help create a more resilient and sustainable future, while also promoting economic growth and job creation.

Throughout 2022, PFAN continued its work with its global network of locally-based clean energy and climate finance experts. Its focus remained on bridging the gap between entrepreneurs and investors, which includes capacitating entrepreneurs to develop bankable projects, increasing investor confidence in and providing access to climate and clean energy projects as well as enhancing the capacity of local ecosystems to develop self-sustaining and gender-responsive climate mitigation and adaptation markets.

2022 was a year of global challenges: ongoing impacts of the pandemic and the war in Ukraine resulted in a significant increase in food and energy prices and tightening financial conditions, all factors which are hindering the efforts towards the Paris Agreement on Climate Change and the Sustainable Development Goals. Despite these challenging circumstances, PFAN

celebrated the remarkable achievement of USD 3 billion leveraged by PFAN-supported climate and clean energy projects.

In 2022, 47 PFAN-supported projects mobilised financing and leveraged over USD 865 million. It is continuously working to improve support for climate entrepreneurs, including looking at new ways of creating impact and introducing new service modules to get them better equipped to interact with investors. Last year, PFAN capacitated its network of Advisors to transform them into effective agents of gender-equitable change in their support to entrepreneurs. It also increased its focus on the circular economy with dedicated capacity building to its networks and launched a knowledge corner on the topic.

PFAN further intensified its efforts to raise awareness of the need for adaptation solutions and organised several events to originate projects with a focus on climate adaptation. With the return of more in-person events, PFAN took the opportunity to showcase its work in adaptation at COP27 and facilitate a space for discussion and exploring key challenges and opportunities in scaling up adaptation finance and closing existing gaps between relevant actors.



Left: A worker harvests avocados which will be kept fresh longer through SokoFresh's cold storage hub near Nairobi, Kenya. Credit: Redbunny
Above: Cold storage solutions at PFAN-supported project New Leaf Dynamic Technologies in India. Credit: New Leaf



A solar panel installation in process on the island of Tavenui, Fiji. Credit: Jason Chute

MILESTONES & FOCUS AREAS

USD 3 BILLION LEVERAGED

After reaching the milestone of USD 2 billion in investment leveraged by PFAN-supported projects and businesses in 2021, in just over one year, PFAN celebrated another milestone of USD 3 billion in investment leveraged. PFAN continues to grow on its journey to create greater transformative impacts. Project origination and development are increasingly important to create compelling climate investment opportunities to mobilise climate finance, reduce GHG emissions, contribute to the Paris Agreement and Sustainable Development Goals and empower and accelerate a just transition.



Credit: Polarfux

PFAN IN NUMBERS: 2006-2022

3

TOTAL INVESTMENT LEVERAGED (USD BILLION)

1803

CLEAN ENERGY CAPACITY ADDED (MW)

1327

TOTAL PROJECTS SUPPORTED BY PFAN

243

TOTAL PROJECTS WHICH MOBILISED FINANCE

18%

OF PROJECTS MOBILISED FINANCE

4.93

POTENTIAL CO2E EMISSION MITIGATION (MEGATONNES/YEAR)



Solergie panels in Togo. Credit: Steven Midjola

CLIMATE ADAPTATION

The focus of PFAN’s work has traditionally been on mitigation projects for the deployment of relatively mature clean energy technologies and, more recently, other innovative climate mitigation solutions. While this is paramount to reduce greenhouse emissions to help achieve the goals of the Paris Agreement, the implementation of solutions for adaptation plays a key role in reducing exposure and vulnerability to the impacts of climate change, also contributing to sustainable development. Climate risks are rising, and impacts are already coming at only 1.1°C above pre-industrial temperatures.

Mindful of the relevance and need for adaptation solutions, PFAN started looking into adaptation through pilot projects several years ago with positive outcomes. More recently, the private sector and investors, spearheaded by the Lightsmith Group and the support of various multilateral organisations, contributed to the definition of what consists of adaptation solutions by developing a taxonomy, which is used as the blueprint for PFAN’s engagement in this space. However, it has been observed that the deployment of climate adaptation solutions faces additional challenges, such as a high-risk investor’s perception or the lack of knowledge about these technologies and their business models. The Adaptation Gap Report 2022 stated that “global efforts in adaptation[...] financing and

implementation continue to make incremental progress but fail to keep pace with increasing risks”.

To address these challenges, PFAN intensified its efforts in 2022 to raise awareness of the need for adaptation solutions and organised several events to originate projects with a focus on climate adaptation. For example, PFAN hosted an evening event on the sidelines of COP27 titled “Closing the Financing Gap for Climate Adaptation SMEs” on Finance Day in Sharm El Sheikh, Egypt, which highlighted the actions needed to mobilise the necessary capital to finance climate adaptation projects and businesses and emphasised how the roles of both the public and private sectors are critical in catalysing investment. Furthermore, it submitted the Resilient Investment in Southern Africa-Technical Assistance Facility (RISA-TAF) project to the Green Climate Fund, which was developed in partnership with Camco to mobilise private sector capital for climate adaptation projects and businesses in the agriculture sector in 8 countries in Southern Africa.

GENDER MAINSTREAMING

In 2022, the work with Value for Women – a consultancy firm specialised in providing gender mainstreaming advisory services – continued in order to ensure that the network of PFAN advisors received training on integrating gender aspects in the evaluation and advisory process while supporting entrepreneurs in raising finance for their projects and businesses. The main focus of PFAN’s gender mainstreaming activities centred on outreach to women entrepreneurs and exploring collaboration with women’s organisations with the support of the newly introduced Gender Focal Points, as well as the implementation of activities which contribute to ecosystems becoming more gender inclusive.

Masterclasses on Gender Lens Advising were provided to PFAN Advisors and Country Coordinators in all regions, which resulted in over 100 PFAN advisors successfully completing the training. Externally, outreach to women entrepreneurs and women’s organisations included a gender-targeted campaign on social media with a particular focus on sub-Saharan Africa to demonstrate



Women carry fresh produce at New Leaf Dynamic Technologies’ GreenCHILL centre in India Credit: New Leaf

PFAN’s work towards making projects and businesses more gender-responsive for a positive impact on economic growth and society.

Furthermore, PFAN initiated two new collaborations in 2022 involving outreach and selection of businesses, namely the African Development Bank Group’s 2022 AgriPitch Competition targeting young and women agripreneurs and the partnership with Serengeti Energy via the Umoja Incubator. With the involvement of the Gender Focal Points, gender aspects were integrated in the evaluation and advisory process of both partnership initiatives which were led by PFAN partners Private Equity Support and Serengeti Energy respectively. These collaborations underlined that PFAN’s commitment goes beyond making its own advisory process more inclusive, but we also influence other entrepreneur support organisations to include gender aspects in their evaluation and advisory processes.



Rural women with clean cookstoves from BioMassters in Rwanda. Credit: BioMassters

“ WE ARE GRATEFUL FOR PFAN. THROUGH THEIR SUPPORT, WE WERE ABLE TO GET AN ADVISOR WHO HAS SUPPORTED US ON THIS FUNDRAISING JOURNEY. WE BELIEVE THAT THROUGH THE PFAN NETWORK, WE CAN BE ABLE TO FIND INVESTORS TO WORK WITH US.



Mohammed Lubowa
FOUNDER, ALL IN TRADE

DONORS



04. SOUTHERN AFRICAN RENEWABLE ENERGY INVESTMENT AND GROWTH PROGRAMME (SOARING)

PRODUCTIVE USE OF RENEWABLE ENERGY (PURE) IS ONE OF THE MOST RELEVANT CHALLENGES IN AGRICULTURAL VALUE CHAINS TO IMPROVE SMALLHOLDER FARMERS LIVELIHOODS AND INCREASE THE RESILIENCE TO CLIMATE CHANGE CONTRIBUTING TO GHG EMISSIONS REDUCTION.



THE CHALLENGE

The agricultural sector still plays a major role in Southern African economies, representing up to 27% of GDP and 13% of export earnings. Southern African countries face a considerable challenge in financing their climate change mitigation and adaptation plans. Small and medium-sized enterprises (SMEs) form the backbone of Southern African economies, in the renewable energy and agricultural sectors however SMEs are facing substantial challenges in accessing finance through financial institutions locally.

Local development and commercial banks are increasingly gaining access to climate/green funds but are lacking the capacity and tools to build an investment pipeline to finance SMEs in these fields.

SOARING IS CURRENTLY FOCUSING ON TWO AFRICAN COUNTRIES:

- 01** Tanzania
- 02** Zambia

OUR SOLUTION

To overcome these market barriers, REEEP, in partnership with RENAC, is implementing the Southern African Renewable Energy Investment and Growth Programme (SOARING) programme, which is taking a prototype approach to enable SMEs working with clean energy and productive use technologies leveraging renewable energies to access finance from the local financial sector.

Market scoping studies were completed in 2020 in Namibia, Tanzania and Zambia, which confirmed that 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 that require large ticket sizes. At the same time, SOARING identified existing concessional credit lines earmarked to energy access that have been untapped by local financial institutions for years.

The conclusion of the market scoping exercise also indicated that there was an opportunity to (i) focus the programme on Zambia and Tanzania, mainly due to the size of the markets and the absence of suitable local finance to the target sector, and (ii) use blended finance instruments and green finance tools to unlock local currency financing to the sector via the existing infrastructure of national development banks and local financial institutions (participating LFI), which provide the required penetration and capillarity to reach green SMEs and their end customers.

The SOARING programme is taking an ecosystem approach and is focusing on Tanzania and Zambia. The main pillars of SOARING consist of the following activities and support mechanisms:



Left: A solar water pump in Kafue, Zambia. Credit: Jason J Mulikita. Above: Entrepreneurs and Marianne Walpert at SOARING stakeholder workshop in Tanzania. Credit: Chimwemwe Mkandawire

- 01 Credit Enhancement Facility** to de-risk “First mover” Financial Institutions and enable Project Developers to meet over-collateralization requirements.
- 02 Climate Finance Capacity Building** to improve renewable energy sector knowledge of financial institution’ stakeholders and to co-design risk assessment methodologies and market-fit financial solutions.
- 03 Pipeline Origination and Development** to match demand of renewable energy SMEs with supply of climate funds from local financial institutions.
- 04 Platforms for Market Change** for institutionalized stakeholder engagement on renewable energy finance.

DONORS AND PARTNERS

SOARING 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).





05. AUSTRIA-NEPAL RENEWABLE ENERGY BLENDED FINANCE FACILITY

COMBINING AN INNOVATIVE BLENDED FINANCE INSTRUMENT WITH CAPACITY-BUILDING ACTIVITIES

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 2020 – around 1.7 million Nepalis still do not have access to modern energy, and over 73.5% of the population relies on traditional biomass for cooking (as of 2019).

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, as 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 electrification.

However, 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’.

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, supports this shift by establishing a blended finance instrument for renewable energy projects and carrying out capacity-building activities. It is working towards:

- 01 Mainstreaming commercial lending for renewable energy projects in Nepal;
- 02 Building capacity among key stakeholders at the provincial level for upscaling renewable energy programmes;
- 03 Accelerating 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. It will run until December 2023, with the core period of implementation in 2021-2023.



Left and above: A solar farm powers the remote village of Gutu, in the province of Karnali, Nepal. Credit: Stewart

REACHING THE LAST MILE

Activities are focused in the province of Karnali Pradesh in north-western Nepal, one of the country’s most remote and least developed regions. In our drive to reach last mile customers and build on our prior work, REEEP is leveraging the experience gained through the implementation of our previous project in Nepal, which provided credit for improved water mills for the productive use of energy.

Market scoping activities and capacity need assessment in Karnali have been completed by SNV, and a pipeline of potentially bankable, ready-to-be-financed projects in the off-grid sector – solar, mini-grid, micro-hydro, biogas – has been established. Different renewable energy technologies and project sizes will be considered to increase the visibility and awareness of the project and to showcase the various uses of the credit guarantee mechanism.

The facility, through NMB Bank, will be financing renewable energy projects via wholesale lending to microfinance institutions, direct lending to communities and vendor lending. To guide them through the process, we have designed an Operational Manual outlining the framework and structure of the credit guarantee facility in an effective and replicable manner, which will be launched later in 2023.

Working closely with the Alternative Energy Promotion Centre (AEPD) and other stakeholders such as MOPID (the energy unit under the Ministry of Physical Infrastructure Development), we are establishing a renewable energy local capacity development facility which has started capacity-building activities for relevant Nepalese provincial government agencies and renewable energy technology providers.



Krishna Dhakal displays his contract a local farmer. She is one of several farmers in the Surkhet area who sells the animal waste to be turned into biogas and fertilizer. Credit: Erin Stewart



Farm in Surkhet in the remote province of Karnali, Nepal. Credit: Erin Stewart

To conclude the project with sharing best practices and learnings, we are currently developing a handbook for mainstreaming commercial lending in renewable energy projects, which will provide the operational framework for commercial lending through NMB Bank and local financial institutions.

DONORS AND PARTNERS

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



STRATEGY AND DIRECTION



An off-grid home using VITALITE solar home systems in Kafue, Zambia.
Credit: Jason J Mulikita

URGENT NEED FOR SCALING UP CLIMATE FINANCE

The clean energy transition is well underway, but it is still not progressing fast enough to meet the goals of the Paris Agreement and the SDGs. So whilst we are celebrating the 20 years of market development

experience in sub-Saharan Africa, Asia and Latin America we have achieved, as we look towards the future we prepare to redouble our efforts.



A picker on a longan farm in Battambang province, Cambodia, which is irrigated through a solar pumping installation purchased with a Clean Energy Revolving Fund loan.
Credit: Jeremy Meek

Productive use of renewable energy in agri-food value chains

Productive use of renewable energy (PURE) offers the opportunity to lock in low GHG emission development pathways for the Global South, improving lives and livelihoods and building resilience to future shocks. In rural areas in many African and Asian countries, the majority of people make their living from agriculture and related enterprises. Much of the energy used in these value chains is still supplied by manual labour, and in cases where electrical appliances are available, they often run on imported and increasingly expensive fossil fuels or depend on an unreliable national grid. Domestic agricultural yields are impacted by climate change while populations, as well as demand for food, are growing.

Donor-Supported Activity

Rural electrification and clean energy access have been at the heart of REEEP's recent work and will remain a priority. Our efforts have contributed to the rapid development of Solar Home System (SHS) markets in off-grid areas, bringing about economic development, social empowerment and improved quality of life.

As communities aim to move up the energy ladder, mini-grids, which are capable of supporting more intensive energy use, as well as standalone productive uses of renewable energy (PURE), come into focus.



The municipality of Belaoko Lokoho in Madagascar, where PFAN-supported project has mobilised finance to build a hydropower plant.
Credit: Photomap

REEEP'S KEY AREAS

REEEP strives to actively engage in markets and sectors where we can make a significant lasting impact, leveraging our expertise and collaborative networks. We are continuously exploring potential areas of expansion where our market development approach can be applied successfully to drive transformative change.



A Standard Microgrid mini-grid installed in the centre of Ngewere, on the outskirts of Lusaka, Zambia.
Credit: Jason J Mulikita

MINI-GRIDS

REEEP has been supporting the development of markets for mini-grids through the Beyond the Grid Fund for Africa, with funding windows for mini/micro-grids in the Democratic Republic of the Congo, Burkina Faso, Liberia, Mozambique, Uganda and Zambia. As the sector continues to scale in sub-Saharan Africa, mini-grid developers still face multiple challenges. High upfront costs remain a problem, along with the cost

and frequency of equipment replacement, particularly batteries, when set against current low demand levels and therefore revenues. Issues to be resolved also include the lack of long-term private financing options that are willing to treat mini-grids as infrastructure. REEEP sees the potential for business model innovation and is actively developing approaches to unlock demand, increasing the commercial viability of mini-grids.

CLIMATE ADAPTATION

Climate adaptation efforts are crucial to safeguard vulnerable communities, ecosystems and infrastructure from the escalating risks and adverse impacts of climate

change, and the importance of these efforts is being increasingly recognised at the international and national levels. The majority of clean energy applications are

traditionally seen as mitigation efforts, but renewables also have a significant role to play in climate adaptation by, for example, enhancing energy resilience, powering desalination and irrigation and providing clean cooling solutions in the face of rising temperatures and frequent heatwaves. By facilitating access to decentralised clean energy services – which are more reliable than the grid – REEEP’s programmes contribute to strengthening the resilience of electricity infrastructure to extreme weather events. For example, the Private Financing Advisory Network (PFAN) has been originating climate

adaptation projects and providing them with business coaching and investment facilitation since 2014. During last year’s COP28 in Egypt, we showcased three of these projects and hosted a lively discussion around the topic. As we move forward, REEEP is evaluating further ways to support climate adaptation efforts through renewable energy solutions, both by building consideration of adaptation impacts into our 11th Programmatic Call, whilst also researching the potential for a specific future programme on the topic.

E-MOBILITY

Clean transport is high on the international development agenda, particularly in light of the pollution crises in many major cities. In addition to contributing to the decarbonization of the economy, e-mobility also provides other benefits, for example making transportation more accessible to low-income communities. In rural areas, affordable electric motorcycles coupled with solar photovoltaic systems can lessen the reliance on costly or difficult-to-obtain

gasoline, improve accessibility to markets and address first and/or last-mile travel challenges associated with using public transit. Given our extensive expertise in market development, REEEP is well-equipped to support SMEs in implementing electric transport solutions for smaller vehicles such as two- and three-wheelers, or electric boats for fishing communities, including ancillary services necessary to grow markets such as battery swaps and establishing recharging stations.

“ I WAS INITIALLY ATTRACTED TO REEEP’S PROPOSED DNA WHILST IT WAS STILL CONCEPTUAL BACK IN 2002. I WAS A FAN AND EVENTUALLY WENT ON THE BOARD WHEN AUSTRALIA RATIFIED KYOTO IN 2007. 20 YEARS ON I BELIEVE REEEP CAN, PARTICULARLY WITH THE UPCOMING STRATEGIC DIRECTION, PROVIDE A VERY IMPORTANT INTERVENTION TO ASSIST FINANCING SME GROWTH IN THE DEVELOPING POST PANDEMIC WORLD.



Mark Fogarty
TREASURER

EVENTS IN 2022



14 June 2022 • Organised by Asian Development Bank

REEEP AT THE ASIA CLEAN ENERGY FORUM 2022



18-20 October 2022 • Organised by GOGLA

GLOBAL OFF-GRID FORUM AND EXPO 2022



12 November 2022 • Organised by REEEP, Efficiency for Access, Stockholm Resilience Centre, Global Resilience Partnership and World Economic Forum

COP27 SIDE EVENT: EMERGING INNOVATIONS AND THEIR POTENTIAL TO TRANSFORM MITIGATION AND ADAPTATION EFFORTS IN AGRICULTURE, A SHOWCASE



22 June 2022 • Organised by ICF Institutional Capital Forum

INFRASTRUCTURE INVESTOR SUMMIT



9 November 2022 • Organised by UNIDO and REEEP

PFAN STANDALONE EVENT AT COP27: CLOSING THE FINANCING GAP FOR CLIMATE ADAPTATION SMES



11 November 2022 • Organised by REEEP, SNV and WWF

UNFCCC COP27 SIDE EVENT: ACCELERATING EFFECTIVE LOCAL CLIMATE ADAPTATION IN ENERGY AND FOOD SYSTEMS

REEEP GOVERNING BOARD

REEEP's governing board is responsible for the conduct of business in accordance with reeep statutes, and holds office for a period of four years. The governing board develops and oversees key strategic direction, targets, timeframes and priorities; prepares financial rules and accounting systems; and guides the operations of REEEP's international secretariat.



Martijn Wilder

Individual Member | Pollination
POSITION: Chair



Silke Krawietz

Individual Member | SETA Network
POSITION: Vice-Chair



Elfriede Anna More

Institutional Member | Austrian Government
POSITION: Rapporteur



Mark Fogarty

Individual Member | First Energy Asia
POSITION: Treasurer



Christine Eibs Singer

Individual Member | Senior Energy Access Advisor



Tareq Emtairah

Institutional Member | UNIDO



Arab Hoballah

Individual Member | SEED



Mark Lambrides

Individual Member | Organization of American States



Greg Murray

Individual Member | KOKO Networks



Twarath Sutabutr

Individual Member | Office of Knowledge Management and Development, Thailand

OUR DONORS

REEEP’s work is made possible by generous donors who share our strong belief in developing clean energy markets for a low-carbon, sustainable future. REEEP and the programmes we work on are funded primarily by sovereign governments, multilateral and international organizations.



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

Austria – BMK

The Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK) funds REEEP and the Austria-Nepal Blended Finance Project.

**Federal Ministry
Republic of Austria**
Labour and Economy

Austria – BMAW

The Austrian Ministry for Labour and Economy (BMAW) funds the Private Financing Advisory Network (PFAN).

Australian Government
Department of Foreign Affairs and Trade

Australia

The Department of Foreign Affairs and Trade (DFAT) funds the Private Financing Advisory Network (PFAN).

**MINISTRY OF
FOREIGN AFFAIR
OF DENMARK**
Danida

Denmark

The Ministry of Foreign Affairs of Denmark funds the Beyond the Grid Fund for Africa (BGFA).

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

Germany – BMU

The Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) funds the Southern African Renewable Energy Investment and Growth Programme (SOARING) as part of the International Climate Initiative (ICI).

KFW

Germany – KfW

The KfW Development Bank funds the Beyond the Grid Fund for Africa (BGFA).

Norad

Norway

The Norwegian Agency for Development Cooperation (Norad) funds the Beyond the Grid Fund for Africa (BGFA) and the Private Financing Advisory Network (PFAN).

Sida
SWEDISH INTERNATIONAL
DEVELOPMENT COOPERATION AGENCY

Sweden

The Swedish International Development Cooperation Agency (Sida) funds the Beyond the Grid Fund for Africa (BGFA), the Beyond the Grid Fund for Zambia (BGFZ) and the Private Financing Advisory Network (PFAN).

**POWER
AFRICA**

United States of America – Power Africa

Power Africa funds the Beyond the Grid Fund for Africa (BGFA) and the Beyond the Grid Fund for Zambia (BGFZ).

USAID
FROM THE AMERICAN PEOPLE

United States of America – USAID

The United States Agency for International Development (USAID) funds the Private Financing Advisory Network (PFAN).

REEEP IN NUMBERS

Mazars 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:

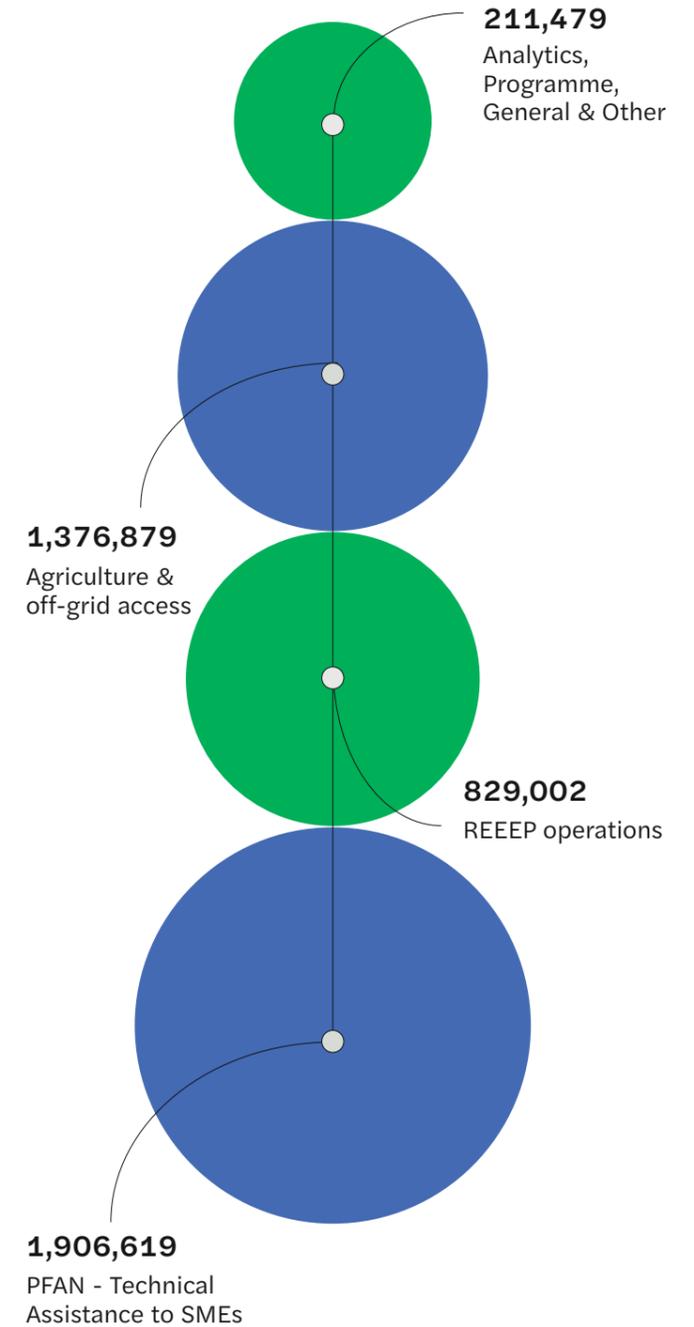
- No objections to REEEP financial procedures were found.
- REEEP financial statements comply with legal requirements, are consistent in all material respects, and give a true and fair view of its financial position and performance for 2021/22
- REEEP funds were used in accordance with its statutes.
- No unusual income or expenses were noted.

REEEP OUTLAYS 2021/22

In 2021/22, REEEP outlays amounted to EUR 4,323,979. REEEP operations represented 19% of total expenditures; agriculture and off-grid energy access accounted for 32%; PFAN accounted for 44%, while analytics, programme, general and all other costs accounted for 5% of the total. Not all expenses are considered outlays, allowing for marginal costs.

REEEP LEGAL STATUS

REEEP is an international multilateral partnership, registered in Austria and recognised under Austrian law as a Quasi-International Organization (QulO), 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).



OVERVIEW OF ASSETS AND LIABILITIES

	31/3/2022	31/3/2021	31/3/2020	31/3/2019	31/3/2018	31/3/2017	31/3/2016	31/3/2015	31/3/2014	31/3/2013	31/3/2013
	kEUR										
ASSETS											
Fixed assets											
Intangible assets	18	24	6	2	4	20	49	80	115	152	65
Tangible assets	13	14	7	5	5	5	3	5	9	18	27
Current assets											
Inventory	851	387	170	314	60	196	0	0	0	0	0
Accounts receivable	0	0	0	40	0	33	88	114	8	30	99
Cash	2,469	3,291	2,917	3,592	4,260	4,084	4,875	5,920	9,135	11,998	11,953
Prepaid expenses	29	16	7	7	17	22	5	9	13	7	6
	3,380	3,732	3,107	3,959	4,346	4,360	5,019	6,128	9,281	12,204	12,150
LIABILITIES											
Equity	1,280	1,351	1,394	1,346	1,337	1,299	1,323	1,377	1,797	2,249	2,341
Provisions	186	243	113	148	113	578	621	868	1,104	1,066	786
Liabilities on account of earmarked funds											
Liabilities	1,686	1,805	1,372	2,253	2,704	2,373	3,001	3,659	5,989	8,312	7,946
Accounts payable	192	291	174	179	132	53	12	35	92	181	282
Other liabilities	36	42	54	33	59	57	64	189	299	395	814
Deferred Income	0	0	0	0	0	0	0	0	0	0	0
	3,380	3,732	3,107	3,959	4,346	4,360	5,019	6,128	9,281	12,204	12,150
NET FINANCIAL ASSETS											
Current assets											
+ pre-paid expenses	3,349	3,694	3,094	3,953	4,337	4,335	4,968	6,043	9,156	12,035	12,058
Provisions and liabilities	2,100	2,381	1,714	2,613	3,009	3,061	3,698	4,751	7,484	9,954	9,828
	1,249	1,313	1,380	1,340	1,328	1,274	1,270	1,292	1,672	2,081	2,230

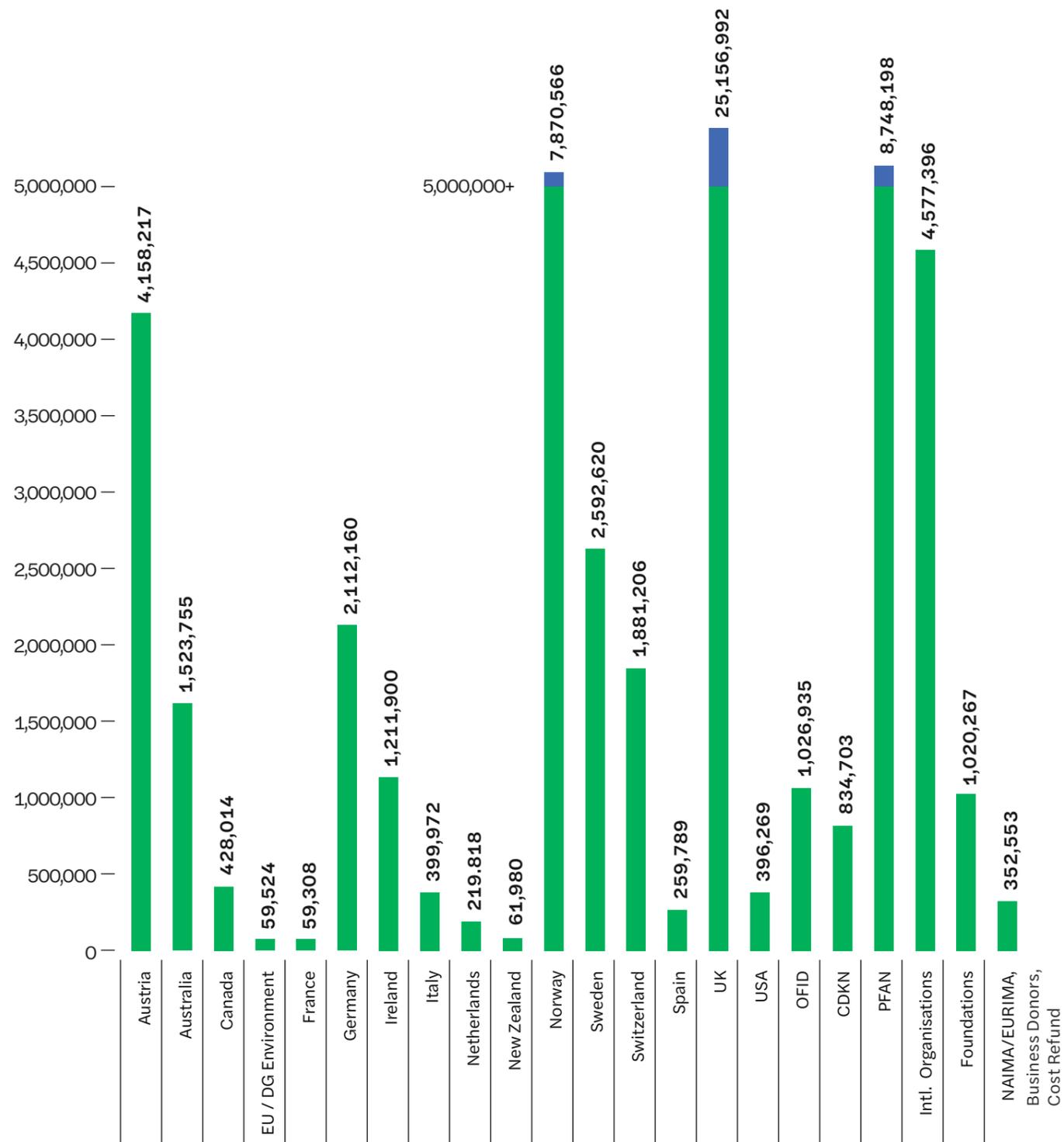
OVERVIEW OF INCOME AND EXPENSES

	2021/22	2020/21	2019/20	2018/19	2017/18	2016/17	2015/16	2014/15	2013/14	2012/13
	kEUR									
Non-earmarked contributions	230	70	127	70	98	150	507	70	70	712
Earmarked contributions	3,281	3,861	3,599	2,663	3,055	1,733	1,618	268	1,679	3,805
Allocation to liabilities on acc.	137	-432	898	480	-331	628	658	2,330	2,323	-366
Allocation to work in progress	464	217	-143	254	-137	196	0	0	0	0
Other income	127	11	61	27	30	39	5	15	27	5
Expenses for projects	-2,332	-1,742	-2,667	-1,949	-1,306	-1,446	-1,683	-1,694	-3,083	-2,734
Expenses for regional secretariats	0	0	0	0	0	-2	-7	-217	-288	-630
Cost of staff	-1,781	-1,751	-1,564	-1,311	-1,124	-1,046	-903	-851	-763	-720
Depreciation	-19	-15	-8	-8	-22	-36	-39	-53	-54	-47
Other operating expenses	-284	-240	-274	-203	-212	-244	-215	-308	-381	-450
Subtotal	-177	-21	28	22	52	-28	-59	-440	-471	-154
Financial result	105	-21	20	-13	-14	5	8	27	25	83
Operating surplus/loss	-72	-42	48	9	38	-23	-51	-413	-446	-71
Taxes on income	0	0	0	0	0	-1	-3	-7	-6	-21
Annual surplus/loss	-72	48	9	38	-24	-54	-420	-452	-91	433

CONTRIBUTIONS SINCE 2004

REEEP'S FUNDING OVERVIEW

Since 2004, REEEP has received EUR 64,952,142 in donations, which we have used for investment capital, fund management, and open knowledge and strategic projects.



ABBREVIATIONS AND ACRONYMS

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
COP	Conference of the Parties
DFI	development finance institution
ESS	energy service subscriptions
FUNAE	Mozambique Energy Fund
FX	currency
ICETT	International Center for Environmental Technology Transfer
IKI	International Climate Initiative
K-CEP	Kigali Cooling Efficiency Program
KfW	German Development Bank
LED	light emitting diode
LFI	local financial institution
LCY	local currency
MOPID	the energy unit under the Ministry of Physical Infrastructure Development
MRV	monitoring, reporting and verification
NEA	Nepal Electricity Authority
Nefco	Nordic Environment Finance Corporation
NDB	national development bank
NDC	nationally determined contribution
RBF	results-based financing
REA	The Rural Electrification Authority of Zambia
REEEP	The Renewable Energy and Energy Efficiency Partnership
RE-LCDF	Renewable Energy Local Capacity Development Facility
RENAC	Renewables Academy
Sida	Swedish International Development Cooperation Agency
SMEs	small and medium enterprises
SNV	Netherlands Development Organisation
SOARING	Southern African Renewable Energy Investment and Growth Programme
TCX	The Currency Exchange Fund
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development
VAT	Value Added Tax



INTERNATIONAL SECRETARIAT

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

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

Back cover: Solergie solar panels installed on a roof in Wawa, Togo. Credit: Steven Midjola



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