Energising DevelopmentAnnual Planning 2020 Update Final version





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Collaborative Labeling and Appliance Standard Program (CLASP)
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1. Introduction

The Governing Board of EnDev recommended to approve the Annual Planning 2020 during the 21st meeting in November 2019. Since then, and as the Annual Planning 2020 presented no new or amended project proposals, EnDev country projects continued to implement activities as already outlined in the Annual Planning 2019 Update. For the remaining months of 2020, projects will continue to be implemented as planned, as far as the effects of the global COVID-19 pandemic allow. According to current planning, the portfolio will be further consolidated as two EnDev country projects and the remaining RBF Facility projects will be phasing out.

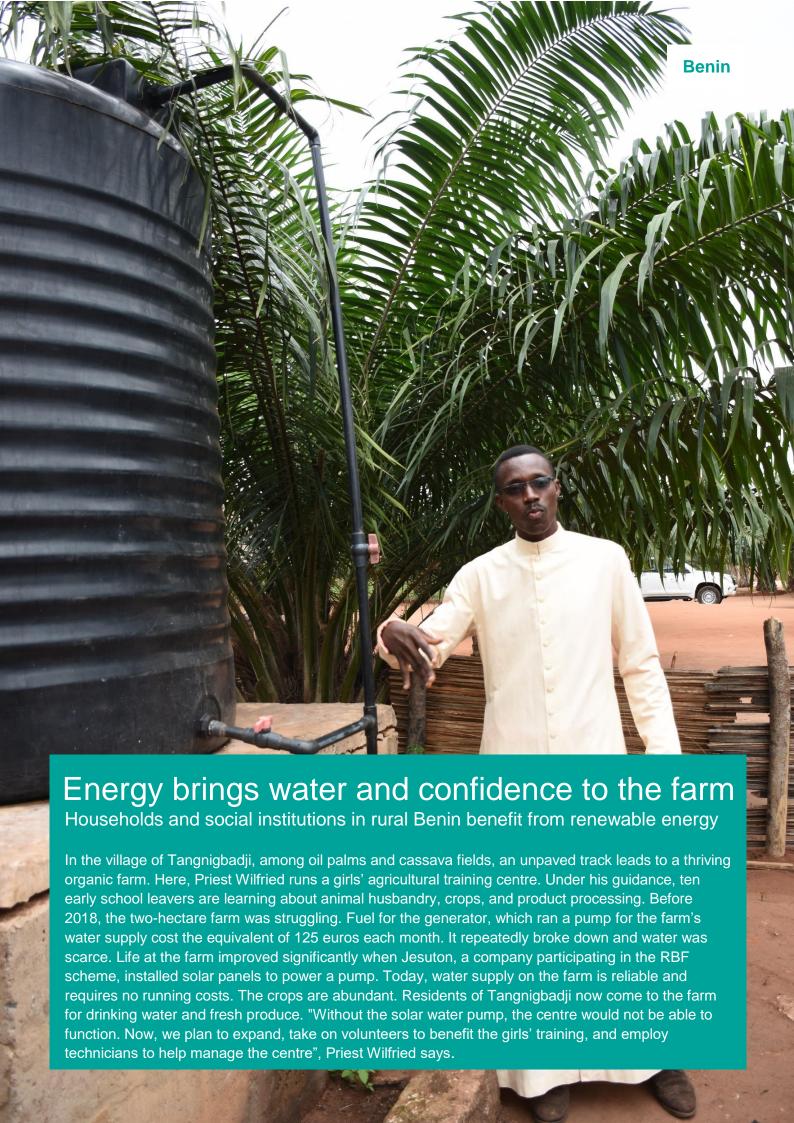
The impact of the COVID-19 pandemic on EnDev is being closely monitored. As the situation is very dynamic and is likely to continue throughout 2020, progress in 2020 is expected to be below projected targets.

EnDev will conduct its next portfolio review in the course of 2020. The focus will be to assess whether the implementation of the new strategy at country level is progressing and reflecting the planned changes and, if not, orienting country projects respectively. The subsequent programming process will be slightly shifted due to COVID-19. Proposals will be presented as part of the *Annual Planning 2021 Update*. Therefore,

full country proposals including changes proposed in this document will be submitted to the Governing Board in spring 2021. This includes also adaptations which become necessary as part of starting the implementation of the EnDev GCF project in Kenya and Senegal in mid-2020.

In this *Annual Planning 2020 Update*, proposed changes are limited:

- For Bangladesh, an extension of the project duration and a budget adjustment are planned.
- For Mozambique, a budget adjustment is planned.
- For phasing out Indonesia, a budgetneutral extension of three months is proposed to allow the handover process to be adjusted to the current situation.
- For four ending RBF projects adjustments for either the project duration or budget are proposed.
- For the four innovation fund pilots from the 2018 innovation call a budgetneutral extension is proposed.



Portfolio development

2020 marks an important step in EnDev's portfolio development. While 2020 will provide the results of the second full portfolio review as a basis for the then following programming cycle in early 2021, EnDev continues to gradually phase out the earmarked RBF Facility. In parallel, new trajectories are evolving such as further developing the RBF modality and kicking off implementation with climate finance.

2.1 RBF Facility

Review of RBF Facility projects

In December 2019, DFID and EnDev jointly reviewed and assessed the status of the RBF Mini-Grid project in Kenya, the East Africa Biogas RBF project, and the RBF Grid Densification Challenge Fund.

All projects were scheduled to end in December 2019 and it was decided to extend the implementation period until early 2020. In addition, the decision was made to upscale and extend the regional RBF project on solar appliances until November 2020 with the aim to pilot an RBF approach for electric pressure cookers in Kenya.

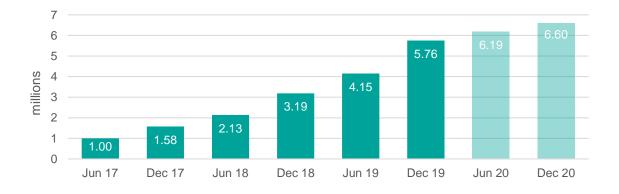
The proposed changes to budget and project duration as well as adjusted KPIs

and rationale behind the decisions are provided in the chapter 4.

Since its initiation, the RBF Facility provided clean energy access to more than 5.5 million people (based on data from December 2019). This marks an important milestone of the RBF facility and demonstrates that the dynamic growth in terms of people gaining improved access that was observed in the past semesters could be continued. Under normal circumstances results are expected to reach 6.6 million people by end 2020.

However, the COVID-19 pandemic will most likely have negative implications on the implementation of the remaining RBF projects, eventually slowing down progress in the remaining months of implementation.

Figure 2-1 **RBF Facility progress – Total number of people with improved access**



Learning agenda RBF Facility

In light of the RBF Facility phasing out at the end of 2020, this year is dedicated to compiling the considerable amount of learning outcomes which EnDev is gaining through applying RBF in energy access markets.

Since its beginning, the learning agenda was a crucial element of the RBF Facility being of special interest for stakeholders applyi Dec 18 r RBF approaches il Dec 19 infrastructure sectors and beyond. The RBF Facility was designed to include a parallel learning agenda on catalyzing entrepreneurial activities in new markets. For that reason, the RBF Facility was conceptualized and implemented in a diverse portfolio of sectors, technologies, and countries. EnDev aims to share experience in implementing this diverse portfolio of projects in energy access markets and working with the private sector; providing an overview of which RBF-approaches and design features worked under which circumstances and why.

A review of lessons learnt across the whole portfolio is under way. Key learnings will be compiled into different knowledge products

such as closure stories, an updated lessons learnt report and a verification manual. These are developed in parallel to the final evaluation report and market transformation survey which aim to answer the underlying hypothesis that RBF serves as a tool to develop self-sustaining energy access markets.

To further enhance knowledge transfer, from June until November 2020, a webinar series will address most highlighted topics of interest in the field of RBF. Experiences with the implementation of RBF will be shared from a variety of stakeholders ranging from public funders, RBF practitioners and the private sector. The webinar series will lead up to the final RBF closing event which will reflect on the facility's learning circle from beginning to end: How has it influenced applying RBF in the energy access sector, where does the community of energy practitioners stand today and what might the future of RBF look like?

Although the facility is phasing out, applying RBF as a modality in the sector does not stop here. EnDev continues to integrate RBF approaches into its regular operations and further develops its RBF approach.

2.2 Next-generation RBF approaches

Beyond integrating RBF approaches into its regular operations, the experience gained during the implementation of the RBF Facility also serves EnDev to further refine its RBF approach. SDC and USAID provide valuable support in this process. They commissioned EnDev to implement two pilot projects for the development of so-called next-generation RBF approaches in 2020:

model developed by SDC uses RBF incentives to leverage investments from private investors into energy enterprises that become investment-ready for the first time. This allows EnDev to more actively engage private capital providers as new cooperation partners to overcome funding gaps for achieving SDG7. EnDev thereby addresses the issue of the "missing middle" in development finance, i.e. the

finance gap for early growth stage enterprises. The modality aligns with EnDev's focus on providing business development services (BDS) to increase bankability of energy enterprises to support sector scaling towards 2030. Testing the approach in the off-grid energy sector through EnDev's implementation structure in sub-Saharan Africa also serves as a proof-of-concept to inform the potential creation of a multi-donor SIINC Outcomes Fund. In 2020, preparation for the pilot project continues, and the pilot is expected to 'go live' in mid-2020.

 In partnership with USAID, EnDev develops a risk protection mechanism for off-grid solar enterprises to enable them to scale their operations to more remote 'last-mile' target groups. Through the targeted use of RBF incentives, the instrument increases the commercial viability of last-mile operations thereby supporting enterprises to create additional outreach areas. This first-of-a-kind instrument is complementary to other off-grid solar sector interventions and has the potential to drive expansion also of higher-tier electrification markets. If proven successful in triggering last-mile expansion of off-grid energy enterprises, the approach is expected to be transferable and scalable also to other contexts. Preparation of the pilot project will be completed in the first half of 2020 and is expected to 'go live' in mid-2020.

These future-oriented instruments will give EnDev increased ability to actively support growth and sector scalability towards the Agenda 2030 goals and towards more remote targets groups.



3. Overview of planned country activities in 2020

This chapter provides information on current projects, durations, and budgets. The proposed changes for individual projects are listed in the column labelled "new". Ongoing projects are shown in Table 3-1, Table 3-2 provides an overview

of projects phasing out. Management and thematic activities are presented in Table 3-3. Additional thematic activities that are implemented outside EnDev are presented in Table 3-4.

Table 3-1 **Ongoing country and regional projects**

Country	Lead political partner	Project duration			Funding (in EUR 1,000)		Planned outcomes on HH level in	
			start	end old	end new	old	new	persons ¹
Bangladesh		Bangladesh Ministry of Power, Energy and Mineral Resources	06/09	12/20	06/21	26,416	25,975	3,433,500
Benin		Ministère de l'Energie	10/09	06/21	-	19,599	-	1,065,000
Bolivia		Vice-Ministry of Electricity and Alternative Energy (VMEEA) of the Ministry of Energy	10/09	06/21	-	17,584	-	591,000
Ethiopia		Ministry of Water, Irrigation and Electricity (MoWIE)	01/10	06//21	-	38,087	-	2,420,000
Kenya		Ministry of Energy	04/09	06/21	-	26,230	-	4,895,000
Liberia (with SL)		Liberia: Ministry of Mines and Energy; Sierra Leone: Ministry of Energy	05/12	06/21	-	7,720	-	85,700
Madagascar		Secrétaire Général de la Région Atsimo Andrefana	12/12	06/21	-	1,289	-	145,000
Malawi		Ministry of Natural Resources, Energy and Mining / Ministry of Gender, Children, Disability and Social Welfare (for RBF)	12/12	06/21	-	7,951	-	1,513,000
Mali	P	Ministry of Water and Energy	04/09	06/21	-	10,057	-	168,800

Indicative target forecasts are not in all cases synchronized to the current end of the commissioned phase in 06/2021. Indicative targets might span a time horizon until end of 2022 depending on the categorization as medium-/long-term involvement countries. In these cases, indicative targets are not broken down to mid-term targets, meaning that for countries with a time horizon beyond the duration of the actually commissioned phase, target achievement might appear off while in fact this is not the case. This misleading discrepancy between the actual status and the target value vis-à-vis the remaining duration of the commissioned phase will become obsolete once the current phase is extended or the follow-on phase is commissioned.

Country	Lead political partner	Project duration			Funding (in EUR 1,000)		Planned outcomes on HH level in persons ²		
Country		Load political partito.	start	end old	end new	old	new	old	new
Mekong		Cambodia: Ministry of Mines and Energy (MME) Laos: Ministry of Science and Technology (MoST)	03/15	06/21	-	4,163	-	103,000	-
Mozambique		Ministry of Mineral Resources and Energy	10/09	06/21	-	21,576	27,509	tbd	tbd ³
Nepal		Ministry of Energy, Water Resources and Irrigation	05/09	06/21	-	9,854	-	505,000	-
Rwanda (with BI, DRC)		Rwanda Energy Group (REG) – Energy Development Company Limited (EDCL) / Ministry of Infrastructure; BI+DRC: suspended; focus on local private sector	10/09	06/21	-	25,061	-	753,000	-
Senegal		Ministry of Petroleum and Energy	04/09	06/21	-	21,298	-	1,800,000	-
Tanzania		Ministry of Energy	12/12	06/21	-	12,200	-	1,485,000	-
Uganda		Ministry of Energy and Mineral Development (MEMD)	04/09	06/21	-	14,043	-	915,000	-
RBF BD, KE, RW, TZ, UG	Œ	BD: Ministry of Power, Energy and Mineral Resources (MoPEMR); KE: Ministry of Energy and Petroleum; Renewable Energy Directorate; RW: Ministry of Infrastructure (MININFRA) TZ: President's Office of Regional and Local Government (PO-RALG); UG: Ministry of Energy and Mineral Development (MEMD)	03/15	09/20	11/20	6,230	6,580	305,000	311,000

Indicative target forecasts are not in all cases synchronized to the current end of the commissioned phase in 06/2021. Indicative targets might span a time horizon until end of 2022 depending on the categorization as medium-/long-term involvement countries. In these cases, indicative targets are not broken down to mid-term targets, meaning that for countries with a time horizon beyond the duration of the actually commissioned phase, target achievement might appear off while in fact this is not the case. This misleading discrepancy between the actual status and the target value vis-à-vis the remaining duration of the commissioned phase will become obsolete once the current phase is extended or the follow-on phase is commissioned.

After the cyclone Idai hit Mozambique, the project's approach and geographic scope needs to be adjusted to the new situation. The project is in the process of restructuring and starting activities as a direct reaction on the cyclone. This process also includes implementation plans for additional funds from a new co-financing by Norad. NOK 60 million (EUR 5.933 million) have been earmarked for this purpose.

Table 3-2 Ending projects⁴

Country			Project duration			Funding	Planned	
Country		Lead political partner	start	end old	end new	(in EUR 1,000)	outcomes on HH level in persons	
Indonesia biogas		Ministry of Energy and Mineral Resources (MEMR)	12/12	03/21	06/21 ⁵	3,431	51,000	
Vietnam		Ministry of Agriculture and Rural Development (MARD)	07/13	12/20	-	4,432	107,700	
RBF MZ, RW, UG ⁶	(E)	UG: Ministry of Energy and Mineral Development (MEMD) MOMZ: Ministry of Mineral Resources and Energy; RW: Ministry of Finance and Economic Planning (MINECOFIN)	03/15	12/19	02/20	3,283	165,000	
RBF KE, TZ, UG		KE: Ministry of Energy and Petroleum; Renewable Energy Directorate; TZ: President's Office of Regional and Local Government (PO-RALG); UG: Ministry of Energy and Mineral Development (MEMD)	03/15	12/19	03/20	1,835	24,500	

The original funding of projects that are finalized in total is EUR 63.957 million.
 Budget-neutral extension under consideration to cope with the specific COVID-19 challenges.

Table 3-3 **Management and thematic activities**⁷

	Country / Pagion	P	roject duration	Funding (in EUR 1,000)	
	Country / Region	start	end old	end new	
Head office	Programme mgmt., incl. DFAT prep. and Myanmar	01/09	06/21	-	28,426
Head office	Conceptual developing and piloting (DEZA, USAID)	08/18	12/20	-	1,494
RBF preparation		08/12	12/20	-	956
RBF evaluation		08/12	12/20	-	1,051
Innovation Fund	Bangladesh, Madagascar, Mali, Mozambique	11/18	11/20	06/21	1,250

 $^{^{7}}$ The original funding of thematic activities that are finalized in total is EUR 3.300 million.

Table 3-4
Additional thematic activities outside EnDev (GIZ)

	Country / Region	Project	duration	Funding (in EUR 1,000)
	Country / Neglon	start	end	Fullding (in EOK 1,000)
	Tanzania - stoves, picoPV	01/18	12/20	1,600
Defenses	Uganda (ESDS)	08/19	10/22	3,184
Refugees	Kenya (ESDS)	09/19	12/22	2,446
	Ethiopia (ESDS)	11/19	10/22	2,296
	Benin (GPE)	04/20	09/22	1,000
Green people's energy	Mozambique (GPE)	08/19	09/22	5,800
	Senegal (GPE)	01/20	09/22	4,900
	Kenya (GCF)	01/20	12/24	14,110
Climate-friendly cooking	Senegal (GCF)	01/20	12/24	13,203
	Global (GCF)	01/20	12/24	1,996

4. RBF project revision documents

- Market Creation in Private Sector Operated Mini-grids in Kenya
- Accelerating the Uptake of Off-Grid Solar Technologies with RBF in Bangladesh, Kenya, Rwanda, Tanzania and Uganda
- Biogas Business Boost Benefitting Farmers (4BF) in Kenya and Uganda (regional)
- Sub-Saharan Grid Densification Challenge Fund (regional)

Market Creation in Private Sector Operated Mini-grids in Kenya

1. RBF project revision

In a RBF review meeting in December 2019, it was recommended that the project will be:

Extended until: 03.2020

EnDev Kenya started the implementation of the RBF project in 2014 with mini-grid site identification, feasibility studies and involvement of local communities jointly with the Ministry of Energy (MoE) and the governments of Turkana and Marsabit county. Working with Barclays Bank of Kenya (BBK) as a fund manager, selected sites were publicly tendered and private sector companies, interested in financing, constructing and operating mini-grids, were identified. Awarded project developers signed RBF incentive contracts (RBFIC) with BBK, which stipulated a possible disbursement of up to 50% of total project costs upon system commissioning and

delivering connections to the contractually agreed number of customers.

In total, four companies were contracted for the construction of 14 mini-grids and a total of 7,000 people connected. While 10 mini-grids with a total number of 1,845 connections have been completed in time, one company was not able to complete the work of three mini-grids and a total of 361 connections in Turkana County could not be realized. Therefore, a **budget-neutral extension of three months is requested** to enable the developer to complete the construction of the three mini-grids and the RBF project to complete implementation activities.

2. Adjustment of KPIs

No adjustments of KPIs as the funding remains the same

RBF Key Performance Indicators (KPI)	Old targets	New targets
No. of people gaining access	7,000	-
No. of social institutions gaining access	-	-
No. of productive uses gaining access	-	-
EUR per person gaining access	296.43	-
t CO ₂ e emissions avoided (over the lifetime of the products sold during project)	1,835	-
EUR per t CO ₂ e emissions avoided	1,130.79	-
Private sector leverage ratio	0.3	-
Jobs created	60	-
Thereof jobs for females	12	-
Enterprises created / improved	5	-
Technologies deployed	14 mini-grids	-

Accelerating the Uptake of Off-Grid Solar Technologies with RBF in Bangladesh, Kenya, Rwanda, Tanzania and Uganda

1. RBF project revision

In a RBF review meeting in February 2020, it was decided that the project will be:

Extended until: 11.2020

Increased budget: EUR 6,580,000 (previous budget: EUR 6,230,000)

Electric cooking (e-cooking) technology has long been of interest to the off-grid solar market, but most market stakeholders perceived the amount of energy required to power e-cooking technologies as prohibitive. However, a new generation of super-efficient ecooking products has the potential to overcome this long-standing barrier and to offer a viable alternative to biomass and LPG, which will have a positive impact on health, household economics and the environment. The primary technology driving a new generation of electric cooking is the electric pressure cooker (EPC). EPCs cook food quickly, more conveniently, and with a fraction of the energy required to power other types of e-cooking technologies, such as induction stoves. While availability of

EPCs in sub-Saharan Africa is still limited, the first commercial endeavors are starting to emerge especially in Kenya. The CLASP team will work in collaboration with the DFID-funded Modern Energy Cooking Solutions (MECS) program to identify EPCs that meet safety and performance standards. They proposed to scale-up their project approach and additionally target the disbursement of RBF procurement and sales incentives to early mover EPC distributers. Aligning MECS work with the RBF project activities has the potential to contribute to transform the market for these critical products. It is therefore requested to up-scale this project to start catalyzing and accelerating the nascent market for e-cooking technology by including EPC into the project's portfolio.

2. Adjustment of KPIs

The up-scaling will allow the project to reach an additional 25,000 beneficiaries through the sale of 5,000 products.

RBF Key Performance Indicators (KPI)	Old targets	New targets
No. of people gaining access	1,138,254	1,163,254
No. of productive uses gaining access	21,426	21,426
EUR per person gaining access	5.89	5.66
t CO ₂ e emissions avoided (over the lifetime of the products sold during project)	148,214	148,214
EUR per t CO₂e emissions avoided	39.47	44.40
Private sector leverage ratio	13.0	13.0
Jobs created	300	310
Thereof jobs for females	70	75
Enterprises created / improved	45	50
Technologies deployed	259,953	264,953

Biogas Business Boost Benefitting Farmers (4BF) in Kenya and Uganda (regional)

1. RBF project revision

In a RBF review meeting in December 2019, it was recommended that the project will be:

Extended until: 03.2020

Expectations of a continuing increase in the uptake of biodigester sales in 2019 have been met. In 2019, the production figures in Kenya and Uganda increased by 43% and 21% respectively. Due to the 2stage incentive disbursement, upon the verification of product sale and three months later upon the verification of aftersale service, only sales until September 2019 would have been eligible for full incentive disbursement in the original project design. Due to delays in administrative processes, project progress is noted to be behind schedule. Sticking to the original project planning will not only prevent the project from achieving the full

target but will have a major effect on the sustainability of the project. A sustainability risk is related to the impacts on financial stability of many enterprises which already factor the incentives into their financial planning. Another risk is related to the quality of the biodigesters, as the biogas construction enterprises will loose the incentive to follow up on aftersale services. For this reason, a budget-neutral extension of three months is requested to allow the project to consider all biodigesters constructed in 2019 eligible for the RBF incentives and to complete the verification process respectively.

2. Adjustment of KPIs

No adjustments of KPIs as the funding remains the same.

RBF Key Performance Indicators (KPI)	Old targets	New targets
No. of people gaining access	36,132	-
EUR per person gaining access	49.26	-
t CO ₂ e emissions avoided (over the lifetime of the products sold during project)	540,781	-
EUR per t CO ₂ e emissions avoided	3.16	-
Private sector leverage ratio	2.3	-
Jobs created	488	-
Thereof jobs for females	29	-
Enterprises created / improved	61	-
Technologies deployed	7,622	-

Sub-Saharan Grid Densification Challenge Fund (regional)

1. RBF project revision

In a RBF review meeting in December 2019, it was recommended that the project will be:

Extended until: 02.2020

One of the main learnings in this RBF project is that integrating an output-based approach into the working modalities with national partner institutions takes a significant amount of time. The administrative processes within the national partner institutions have affected the speed of implementation massively over the past two years in two ways. The results-based disbursements of the contracts do not only require specific approval in the national structures, but also require securing sufficient public financing, which is tied to annual budgetary planning processes. For both partner institutions in Uganda and Rwanda the contract approval process alone took over a year each.

Another challenge resulting in an implementation delay is related to bureaucratic procurement processes of the national institutions for the materials and services to execute the planned connections and the subsequent verification. However, given the nature of grid densification and the utilities' track record, it has been observed that once the projects started delivering connections, full target achievement will be met. Due to delays caused by reasons highlighted above, verification of the connections in both projects could not be completed within the initial project period. For this reason, a budget-neutral extension of two months is requested.

2. Adjustment of KPIs

No adjustments of targets as funding remains the same.

RBF Key Performance Indicators (KPI)	Old targets	New targets
No. of people gaining access	207,963	-
No. of productive uses gaining access	3,750	-
EUR per person gaining access	17.19	-
t CO ₂ e emissions avoided (over the lifetime of the products sold during project)	54,776	-
EUR per t CO ₂ e emissions avoided	65.27	-
Private sector leverage ratio	1.0	-
Jobs created	4,450	-
Thereof jobs for females	1,650	-
Enterprises created / improved	0	-
Technologies deployed	41,750 connections	-

5. Abbreviations

ADES	Association pour le Développement de l'Energie Solaire, Switzerland
BBK	Barclays Bank of Kenya
BDS	business development support
CLASP	Collaborative Labelling and Appliance Standard Program
DFAT / AUSAid	Australian Department of Foreign Affairs and Trade
DFID	UK Department for International Development
EnDev	Energising Development programme
EPC	electric pressure cooker
ESDS	Energy Solutions for Displacement Settings
GCF	Green Climate Fund
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
GPE	Green People's Energy
НН	households
HIVOS	Humanistisch Instituut voor Ontwikkelingssamenwerking
KOFIH	Korea Foundation for International Healthcare
KPI	key performance indicator
LPG	liquefied petroleum gas
MECS	Modern Energy Cooking Services Programme (DFID)
NIS	Nordic International Support Foundation
PAYGo	Pay-As-You-Go
picoPV	pico photo voltaic
RBF	results-based finance
RBFIC	results-based finance incentive contracts
RVO	Rijksdienst voor Ondernemend Nederland
SDC / DEZA	Swiss Agency for Development and Cooperation
SDG	sustainable development goals
SIINC	Social Impact Incentives
SNV	Stichting Nederlandse Vrijwilligers / Netherlands Development Organisation
USAID	United States Agency for International Development

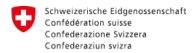
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