SUSTAINABLE ENERGY FUND FOR AFRICA

AFRICAN DEVELOPMENT BANK GROUP

2017 Annual report



UKaid from the British people

MINISTERO DELL'AMBIENTE E DELLA TUTELA DEL TERRITORIO E DEL MARE

Ministry of Foreign Affairs of Denmark
DANIDA | INTERNATIONAL DEVELOPMENT COOPERATION

USAID FROM THE AMERICAN PEOPLE


Frank Fennema

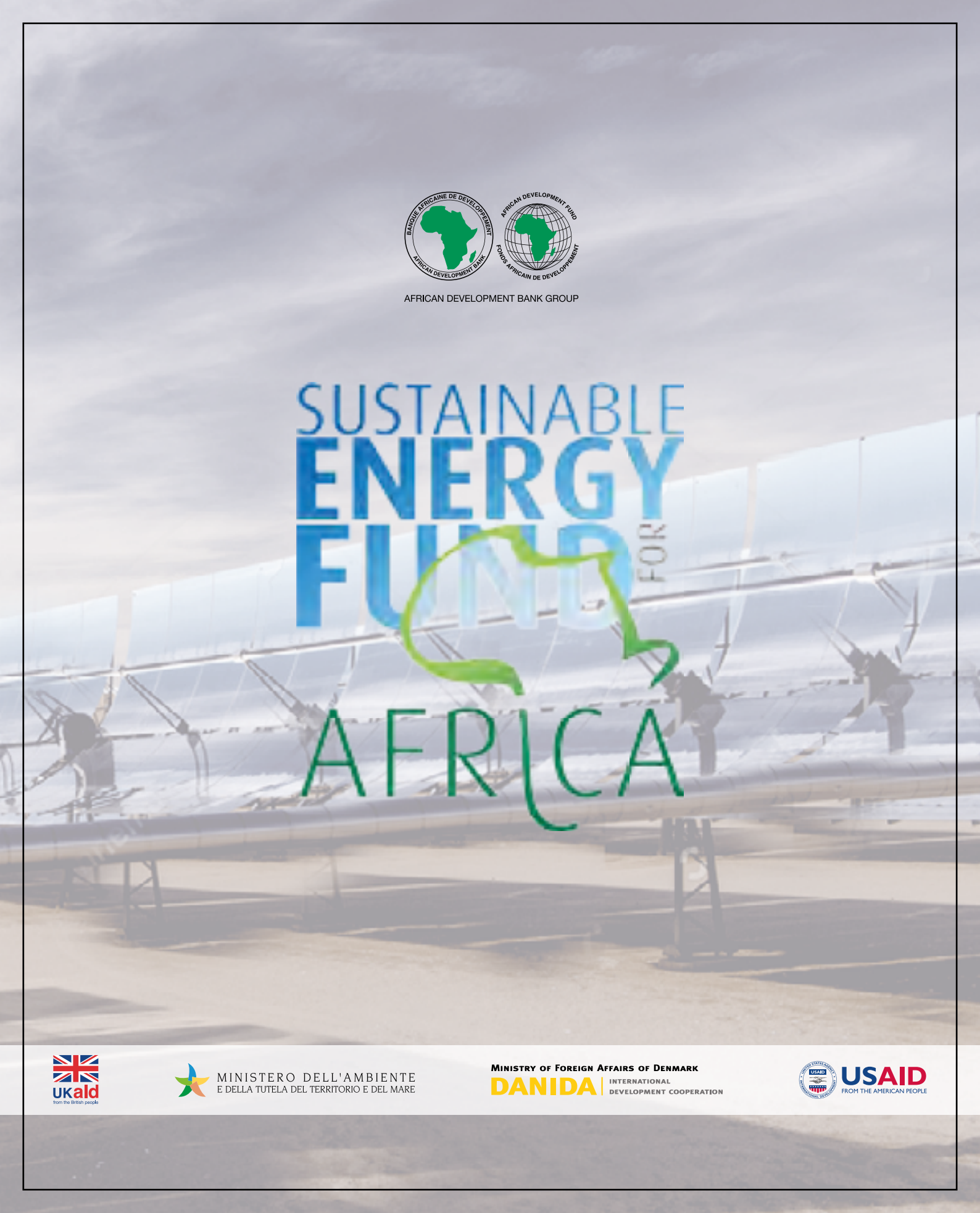

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List of Acronyms

Acronyms

ACTC	Africa Climate Technology Center
AfDB	African Development Bank
AREF	African Renewable Energy Fund
DANIDA	Danish International Development Agency
DFID	Department for International Development of the United Kingdom
DMT	Department Management Team
EE	Energy Efficiency
EPC	Engineering, Procurement and Construction
FEI	Facility for Energy Inclusion
ESIA	Environmental and Social Impact Assessment
GEF	Global Environmental Facility
GHG	Greenhouse gas
GMG	Green Mini-Grid
IRMA	Initiative for Risk Mitigation in Africa
MW	Megawatt
PPG	Project Preparation Grant
ACTC	Africa Climate Technology Center
PPM	Private Placement Memorandum
PPP	Public-private partnership
PSF	Project Support Facility
PV	Solar Photovoltaic
RE	Renewable Energy
RMC	Regional Member Country of the AfDB
SCAF	Seed Capital Assistance Facility
SE	Sustainable Energy
SEFA	Sustainable Energy Fund for Africa
SE4ALL	Sustainable Energy for All Initiative
SPV	Special Purpose Vehicle
UNEP	United Nations Environment Program
USAID	United States Agency for International Development
WAFCEF	West African Clean Energy Forum

THE CRITICAL ROLE OF SEFA

The Sustainable Energy Fund for Africa (SEFA) seeks to promote energy access and local economic development by unlocking investments in small and medium-scale renewable energy and energy efficiency (RE/EE) projects. Financing options available through SEFA include project preparation grants, equity investments and enabling environment grants.

SEFA operates through three components:

	I-PROJECT PREPARATION GRANTS	II-EQUITY INVESTMENTS	III-ENABLING ENVIRONMENT GRANTS
SCOPE	Activities from feasibility to financial close	Seed and growth capital for RE projects	Technical assistance and capacity building
ELIGIBLE PROJECTS	Private and PPP projects in Africa with expected project cost between USD 30-200 million which employ clean technologies	Private projects in Sub-Saharan Africa with expected project cost between USD 10-80 million	Public sector enabling environment projects in the on-grid and mini-grid spaces
ELIGIBLE ACTIVITIES	Including, but not limited to: feasibility studies, environment and social assessments, engineering studies, transaction advisory and due diligence for lenders	Not applicable	Strategy, legal, policy and regulatory activities; advisory and training; market development; and knowledge generation
FINANCING INSTRUMENT	Grants to project developers	Equity capital tickets of USD 10-30 million in project companies	Grants to institutions or sponsors of public-sector-type interventions
MANAGEMENT	SEFA Secretariat	Berkeley Energy LLC (AREF)**	SEFA Secretariat
RESOURCES ENVELOPE	USD 21.7 million	USD 35.5 million***	USD 30 million****

** The African Renewable Energy Fund (AREF) manager
***As part of a total envelope of USD 210 million provided by other investors in Africa Renewable Energy Fund
**** Includes USD 10 million for green mini-grid activities

Key milestones for donors' commitment to the SEFA initiative

2009
Conribution through the Danish-initiated Africa Commission

2013
Conribution under the United States' Power Africa initiative

2014
The United Kingdom's contribution under the Green Mini-Grid Regional Facility for Africa

2015
Italy's contribution as part of its COP 21 commitments

KEY HIGHLIGHTS: 2012 – 2016

2012

- Secretariat set-up with first SEFA advisor
- Outreach and communication events to introduce SEFA and identify projects
- Identification and sourcing of the first pipeline opportunities
- Launching the preparatory activities for equity investment window
- SEFA commits the very first USD 1 million to set the stage for making AREF possible
- SEFA partners with ECREEE and CTI–PFAN to launch the 1st edition of the WAFCEF business plan competition

2013

- First preparation grants approved and pipeline building up progressively
- SEFA becomes anchor investor with USD 25m in equity to AREF and additional USD 10m for the Project Support Facility (PSF) and paves the way for other investors to join
- Concept design for a third component pertaining to the enhancement of enabling environment for SE investment
- SEFA converts into multi-donor facility with a USD 5m contribution from the Power Africa Initiative
- First participation to the SCAF Africa Committe

2014

- AREF attracts 16 investors and achieves its first close with USD 100m capital then a 2nd close at USD 132m
- Enabling environment window launched
- UK's DfID pledge of GBP 10m with focus on Green Mini-Grids
- SEFA pipeline matures and portfolio takes shape for bankable projects
- USD 3.6 million of new approvals across 5 projects) and USD 5.6 million disbursed

2015

- USD 2.7 million of new approvals across 3 projects) and USD 5.7 million disbursed
- SEFA's upstream support and financing to AREF turns into USD 200 million investment capital, at 3rd close
- Jumeme Rural Power Supply (Tanzania) : SEFA-supported Project wins the "Power Transaction of Year 2015" award
- Republic of Italy pledges USD 8 million for SEFA as part of COP21 commitment

2016

- USD 5.8 million of new approvals across 7 projects) and USD 5.8 million disbursed
- SEFA breaks precocity record – as an early stage initiative – by enabling 250 direct connections through Jumeme Rural Power Project in Tanzania
- First SEFA project reaches financial close (Achwa Hydro 42 MW in Uganda)
- Launch of the GMG Market Development Programme
- SEFA Validates the concept of the Facility for Energy Inclusion



HIGHLIGHTS OF 2017

Component 1
Project Preparation Grants

Project Preparation completed for:
Madagascar Nosy Be
Mauritius DOWA
Multinational Facility for Energy Inclusion (FEI)
and now at financial structuring phase.

Approvals

USD 6 million
in approvals for 7 projects

150 MW
of expected additional capacity

USD 341 million
expected to be raised

Portfolio disbursement

USD 2.77 million
was disbursed for technical assistance services

Screening of applications

138 applications
were reviewed and screened

38 projects
proved eligible

15 applications
were included in
the SEFA pipeline

Component 2
Equity Investments

Commitments



USD 16.4 million
equity invested (cumulative)

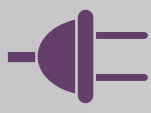


USD 8.6 millions
committed to projects

Approvals



9 projects
reached investment stage



220 MW
of expected additional capacity



USD 550 million
expected to be raised

Project Preparation Facility (PSF)



9 projects
supported



USD 2.5 million
disbursed

Component 3
Enabling Environment

Enabling Environment Project Completed



Approvals

USD 7 million in approvals for 5 projects

Green Mini-Grids (GMG) Country Programmes in The Gambia, Burkina Faso, Democratic Republic of Congo; and Phase 2 of Multinational GMG Market Development Programme

CIZO Off-Grid pilot project in Togo

Portfolio disbursement

USD 0.6 million
disbursed for technical assistance services



Project Portfolio Across the Three Components

Category	# of Projects	Commitments (USD m)	Disbursements (USD m)	MW estimated	CAPEX (USD m)
Portfolio (closed and ongoing)	45	67.6	25.07	608	1,675
Cumulative Target 2017	43	66	25.33	500	1,000

SEFA currently has an active portfolio spread in twenty-five (25) Sub-Sahel African countries, including nine (9) multinational projects, totaling **USD 67.6 million** in commitments across its three components. The project preparation and equity components currently represent a **total of USD 1.68 billion in investments and over 600 MW of installed capacity.** See next page for graphics/information on the breakdown/disaggregation of the SEFA portfolio across the 3 Components, generation technology and geographical spread.

SEFA Components	# of Projects	Commitments (USD m)	Cumulative Disbursements (USD m)	MW estimated	CAPEX (USD m)
Component 1 - PPG	21	18.1	5.1	387	1.115
Component 2 - EI	9	35.5	18.9	221	560
Component 3 - EE	15	14	1.16	—	—

SEFA Commitments Snapshot/Highlights

Multinational



13%



15%
Central



9%
Western



19%
Southern

44%
Eastern



35% Policy	**8%** Geothermal	**7%** Wind	**5%** Solar PV	**2%** Wave	**2%** Industrial
31% Hydro	**2%** Fund Structuring	**2%** Energy Efficiency	**1%** Bio-Energy	**3%** Biomass	**2%** Hybrid

Component	#	Project	Country	Technology	Approval Date	SEFA Contribution ($)	MW	Capital Expenditure (USD million)
I- Project Preparation Grants	1	ABREF	Multinational	Other	2012	398,656	-	
	2	Nosy Be	Madagascar	Hybrid	2013	987,000	8	35
	3	Lake Assal	Djibouti	Geothermal	2013	1,800,000	20	75
	4	DOWA	Mauritius	EE	2013	1,000,000	23	63
	5	Green Energy and Biofuels	Nigeria	Bio-Energy	2014	580,000	-	67
	6	Dventus Technologies	Ethiopia	Industrial	2014	842,000	-	32
	7	JCM Greenquest	Cameroon	Solar PV	2014	777,000	72	130
	8	Jumeme Rural Power Supply	Tanzania	Hybrid-Mini-Grid	2014	420,000	5	22
	9	Starsol	Chad	Solar PV	2015	770,000	40	80
	10	Saltinho Hydropower Project	Guinea-Bissau	Hydro	2015	980,000	40	83
	11	Wave2O Desalination	Cape Verde	Ocean	2015	930,000	-	40
	12	Facility for Energy Inclusion	Multinational	Other	2016	600,000	-	-
	13	Earth Energy	Uganda	Biomass	2016	993,000	20	130
	14	Mutunguru	Kenya	Hydro	2016	992,000	8	18
	15	Oxygen Rooftop Solar	Zimbabwe	Solar PV	2017	965,000	20	32
	16	Off-Grid Energy Access Fund (OFSD)	Multinational	Fund Structuring	2017	400,000	-	-
	17	Nord-Kivu	D R Congo	Hydro	2017	985,500	12	64
	18	Mafeteng Solar PV	Lesotho	Solar PV	2017	695,500	20	30
	19	Ethala Biomass	South Africa	Biomass	2017	990,000	27	90
	20	Kabira WTE	Kenya	Waste to Energy	2017	995,000	12	65
	21	eleQtra Wind	Mozambique	Wind	2017	985,000	60	60
					Sub-total	18,080,656	387	1,115

Component	#	Project	Country	Technology	Approval Date	SEFA Contribution ($)	MW	Capital Expenditure (USD million)
II- Equity Investments	22	Achwa 2	Uganda	Hydro	2014	4,427,687	41	102
	23	Corbetti	Ethiopia	Geothermal	2014	3,200,000	10	90
	24	Bugoye brownfield	Uganda	Hydro	2015	4,644,981	-	-
	25	Kigagati	Uganda	Hydro	2016	2,100,000	32	55
	26	Makambako	Tanzania	Wind	2016	3,200,000	50	121
	27	Kaboni	Cameroon	Hydro	2016	2,600,000	25	68
	28	Achwa 1	Uganda	Hydro	2016	1,800,000	42	95
	29	Azimuth	Multinational	Solar	2016	900,000	15	17
	30	Maiji	Multinational	Platform	2017	180,000	-	-
					Sub-total	23,052,668	220	560
III – Enabling Environment, including GMG	31	Renewable Energy Promotion (PAPERM)	Mali	Policy	2014	530,000		
	32	UNEP/ICA Atlas Africa Energy Resources	Multinational	Policy	2014	265,000		
	33	Energy Sector Support	Comoros	Policy	2014	480,000		
	34	Renewable Energy Promotion	Mozambique	Policy	2015	740,000		
	35	Green Mini-Grid Market Development Programme (GMG/MDP)	Multinational	Policy	2015	1,000,000		
	36	GMG Support Programme	Rwanda	Policy	2015	840,000		
	37	RE Master Plan	Burundi	Policy	2016	630,000		
	38	Programme for Risk Mitigation - RSME	Multinational	Policy	2016	700,000		
	39	GMG Country Programme	Niger	Policy	2016	994,270		
	40	Renewable Energy Policy Support	Tanzania	Policy	2016	870,000		
	41	GMG Country Programme	Gambia	Policy	2017	995,000		
	42	Green Mini-Grid Market Development Programme (GMG/MDP) – Phase 2	Multinational	Policy	2017	3,000,000		
	43	CIZO Off-Grid	Togo	Policy	2017	975,000		
	44	GMG Country Programme	Burkina Faso	Policy	2017	983,000		
	45	GMG Country Programme	DR Congo	Policy	2017	998,000		
					Sub-total	14,000,270		

Project Preparation Grants

21 projects

18.08 million
in approvals

387 MW
expected to be generated

1.11 million
in investments



Equity Investments

9 projects

35.5 million
committed in Equity and Project Support

221 MW
expected to be generated

560 million
in investments



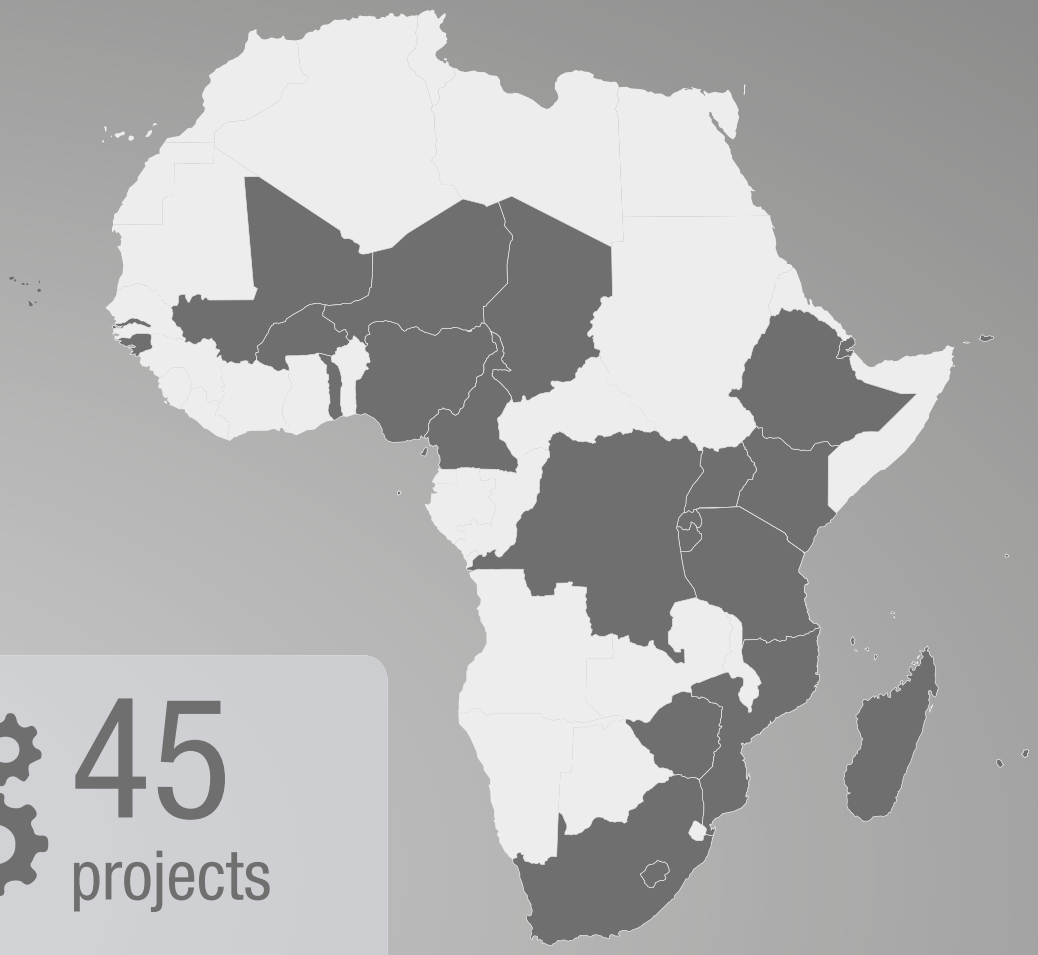
Enabling Environment, including GMG

15 projects

14 million
in approvals

11 countries
with Enabling Environment Interventions





45
projects

26
countries
covered

+

7
multinational
interventions

Over
600
MW expected

67.5
million
in commitments

1.6
billion
in investments



Project Approvals in 2017

Component I: Project Preparation Grants

The project preparation grant request component provides financial and technical assistance to facilitate pre-investment activities of commercially viable private sector medium-scale projects. Grants are awarded on a cost-sharing basis to fund specific development activities, from feasibility to financial close. **During 2017, SEFA approved seven (7) preparation grants** as described below:

Zimbabwe: Oxygen Rooftop Solar PV Project

A highly innovative project that will provide reliable and competitive solar power to multiple SMEs throughout the country. Working with a strong domestic financial institution has been essential in overcoming common barriers and will help achieve speed and scale.

PPG of USD 965,000 for the structuring and implementation of a bankable business case for the development of an off-grid solar PV rooftop project on more than 200 commercial buildings across Zimbabwe. The Project aims at compensating for the significant baseload lapses of the national grid and thus at providing reliable electricity to hundreds of SMEs tenanting these buildings. Through its unique wide-latitude off-grid lay-out and economically resistant business model, the Project will generate significant socio-economic benefits, mainly in terms of a rural and urban economic boost for SMEs who will be empowered to resume, keep up, or even to expand their commercial activities. Activities to be funded by SEFA grant resources include: (i) Technical & Bankability Feasibility Analyses; (ii) Preparation of SPV-related documents including PPAs and provision of Financial Advisory Services and (iii) Preparation of equity documents for SPVs and Holding Company. In addition, the AfDB's Africa Climate Technology Centre (ACTC) will cover the costs for environmental and social impact assessment and Grid Interconnection Study.

Expected Results	Target
New generation capacity	20 MW
jobs created	8,000
Debt and equity leverage	USD 32 million

Multinational: Off-Grid Energy Access Fund (OGEF)

PPG of USD 400,000 to support AfDB (as lead sponsor), in the design, structuring and establishment of the Off-Grid Energy Access Fund (OGEF). The Nordic Development Fund (NDF) as co-sponsor of OGEF, provided co-financing of USD 300,000 in additional preparation funds. OGEF's objective is to increase investor confidence in the sector, demonstrate the viability of commercial lending to these enterprises, and catalyze future investment into the off-grid sector.

Expected Results	Target
Generation capacity	184 MW
Jobs created	15,000
Debt and equity leverage	USD 100 million

Democratic Republic of Congo: Énergie Nord-Kivu Hydro Power Project

PPG of USD 985,500 to Énergie de Nord-Kivu (ENK) for the preparation/development of two small hydropower plants as well as transmission and distribution networks. This project will provide access to electricity for ten thousand households situated in and around the towns of Butembo and Beni, in North Kivu Province of the Democratic Republic of Congo. As the Province does not have an electricity grid outside of Goma, this off-grid / mini-grid project, based on standard technologies, proposes to install 12 MW of electric power (two sites) to meet demand in the two-city region. The Project meets all the priorities of a sustainable development policy: (i) it will trigger the economic awakening of an entire region, currently isolated and without electricity, and in this way will reduce the high rate of unemployment; it will substitute a cleaner and more sustainable source for polluting diesel generators whose operation relies on the importation of expensive petroleum products; it will free women and children from time-consuming chores, including collecting wood for cooking.

The SEFA PPG will fund the topographic and geotechnical studies, verification of hydrological data of two rivers, the detailed engineering design, validation of the EPC implementation studies, the entire EPC procurement process and the due diligence of lenders. In addition, from the ACTC will fund environmental and social impact assessment costs and legal services to validate concession contracts.

Expected Results	Target
Generation capacity	12 MW
Jobs created	140 (of which 30% for women)
Debt and equity leverage	USD 64 million

Operationalization of the Facility for Energy Inclusion (FEI)

Following the implementation of the SEFA grant for the design and establishment of FEI in 2016, significant work took place over the course of 2017 to operationalize the FEI framework approved by the Board in 2016 (USD 100 million in Debt and Equity). Based on updated market feedback, FEI will be implemented through two separate windows (two dedicated funds) – an evolution to the single facility concept initially approved – for maximum operational effectiveness and impact.

- The FEI ON-GRID fund window is a USD 400 million fund to support small-scale renewable energy IPPs, mini-grids and captive power projects by providing long-term debt through project finance transactions. The Bank's contribution to the FEI ON-GRID fund window will be USD 40 million in equity participation and USD 30 million in senior convertible loan.

- The FEI OFF-GRID fund window is a USD 100 million fund to support innovative off-grid energy access companies through corporate loans, secured loans and securitized receivables transactions. The Bank's contribution to the FEI OFF-GRID fund window will be USD 10 million in equity participation and USD 20 million in senior loan.

Lesotho: Neo1 Mafeteng Solar PV

PPG of US $ 695,500 to NEO I SPV Pty Ltd., a subsidiary of OnePower Lesotho Pty Ltd., to support the preparation of a bankable business case for the development of the winning project/bid of the 2016 Lesotho 20 MW solar PV tender- potentially the first utility-scale solar PV project in Lesotho. The power will feed into the national grid in Mafeteng Province. The Project will contribute to a strategic phase-out of costly power imports from Moçambique and to reducing reliance on imported coal-generated power from the Republic of South Africa , thereby promoting independence of power supply, achieving substantial savings in the national budget and abating regional CO2 emissions. Project will further support rural development by stabilizing the grid in Mafeteng Province. SEFA support is instrumental in leading the project to financial closure by funding technical and financial services, environmental and social impact assessment, lenders' due diligence and risk allocation. In addition, the ACTC will cover the costs for legal services and project implementation support.

Expected Results	Target
Generation capacity	20 MW
Green Gas Emissions reduced (MT of Co2)	17,000
Debt and equity leverage	USD 30 million

South Africa: eThala Biomass to Power

PPG of US$990,000 to eThala Management Services, to support the development of a 10-MW Biomass-to-Power plant to be located in Harding, 200 km south of Durban in the KwaZulu Natal Province of South Africa. The project will enable further diversification of South Africa's power generation mix away from coal dominance by adding renewable energy generation from biomass. The viability of the project will have a significant demonstration effect with regards to bioenergy and showcase Corporate Power Purchase Agreements as an anchor for renewable energy generation. It is expected to deliver economic empowerment and boost the socio-economic development of Harding community. The project's source of biomass is agricultural, forestry and timber processing waste which, coupled with the gasification technology presents significant CO2 emissions reductions benefits. The SEFA funding will be instrumental in supporting the development of the project towards financial close with the conduct of detailed engineering design, a full environmental and social impact assessment (ESIA), as well as legal and financial/transaction advisory services.

Expected Results	Target
Generation capacity	10 MW
Jobs created	450 (of which 35% for women)
Debt and equity leverage	USD 27 million

Kenya: Kabira Waste to Energy

Grant of US$995,000 to Asticom Kenya Ltd., to support a 12MW grid-connected municipal Waste-To-Energy (WTE) plant to be located in Kabira, a suburb of Kenya's capital Nairobi.

The WTE project will convert municipal solid waste (MSW) to biogas/fuel ethanol and generate electricity. The Kabira site, where the project is to be sited (tip/landfill site) receives close to 1,000 tons/day of MSW from Nairobi County. The Project's diversion of and use of MSW away from landfill/tip will have significant health, social and development outcomes and benefits for the inhabitants of the slum area within the vicinity. Employment and thus income benefits will also accrue to local inhabitants who will be contracted to provide manual sorting of a component of the municipal waste. The SEFA funding will be instrumental in supporting the development of the project towards financial close by funding the costs of conducting a full environmental and social impact assessment (ESIA), detailed engineering design and the provision of project-related legal advisory services as well as financial/transaction advisory services.

Expected Results	Target
Generation capacity	12 MW
Jobs created	450 (of which 35% for women)
Debt and equity leverage	USD 27 million

Mozambique: Parque Eólico da Namaacha Wind Project

US$985,000 to Parque Eólico da Namaacha S.A SPV, to support project preparation activities for a utility-scale Wind Farm Project in Mozambique. The project will provide reliable and clean power to the grid-connected population and industries in Maputo Province, add 60 MW peak power to the grid and expand transmission capacities. Further, SEFA aims at rendering the Project a replicable wind farm reference for the SADC Region.

The intervention will trigger bankability and financial close of what will likely be the first utility-scale wind farm in Mozambique, contributing to reducing the significant peak-load gaps exhibited by the grid in Southern Maputo Province. SEFA funding will be instrumental in supporting the development of the Project towards financial close, by covering the costs of technical and legal advisory services as well as of parts of the environmental and social activities.

Expected Results	Target
Generation capacity	60 MW
Green Gas Emissions reduced (MT of Co2)	217,000
Debt and equity leverage	USD 60 million

Component II: Equity Investments

SEFA's equity investment component seeks to address the lack of access to early stage capital for small and medium-sized projects, as well as the limited managerial and technical capability of small-scale entrepreneurs and developers.

SEFA equity capital combined with dedicated technical assistance funds are deployed by the SEFA co-sponsored **Africa Renewable Energy Fund (AREF),** a Sub-Saharan Africa (excl. South Africa) private equity fund solely focused on small and medium-sized (5-50 MW) independent power projects utilizing solar, wind, biomass, hydro, as well as geothermal and stranded gas technologies.

AREF capitalization stands around USD 200 million with significant commercial capital. SEFA's current shareholding in AREF stands at 12.74%.

AREF – progress update

As at the end of 2017, the fund called USD 117 million (circa 63% of total capital) which was used for investments, and covering fees and expenses. Currently the portfolio shows one operational hydro-asset of 13 MW in Uganda (Bugoye), two 42 MW hydro along the Achwa river in Uganda (Achwa n°1 in pre-construction stage and Achwa in advanced construction stage), another 16 MW hydro project along the Uganda-Tanzania border, a 60 MW geothermal project in Ethiopia in pre-construction stage, a 60 MW biomass project located (APSD), and an off-grid solar project company in Ghana (Azimuth) and some early stage hydro projects in Cameroon comprising five sites ranging from 5 to 40MW.

Total direct and contractor employment at portfolio level is 1097 including 360 female employees. The portfolio of projects comprises an asset of 13 MW capacity in operation and others expected to generate a capacity of 230MW. Through the activities of the fund and its portfolio companies, 43,377 tons of GHG were avoided.

AREF Status	Amount allocated by SEFA USD (A)	Commitments on Projects (SEFA equity share) USD	AREF Expenditure USD (B)	Disbursement rate (B/A)
Equity (FIC and IS projects*)	25,500,000	22,872,668	12,085,493	47.4%
Project Support Facility	10,000,000	2,500,000	1,237,884	12.4%
Total	35,500,000	25,372,668	13,237,377	37.3%

AREF – a satisfactory implementation progress

The fund have had some positive events in second half of 2017 with: the confirmation of the IFC management AMC's entry into the fund, the signing of PPA of some deals (Corbetti, Kikagati), the progress of construction of some projects and the completion of the rehabilitation of the operational asset (replacement of penstock and turbines) in addition to the achievement of break-even. The Development outcomes are still small but growing. Going forward, monitoring of construction and development of the assets in the portfolio is critical while ensuring closing of deals before the end of the investment period.

The fund reached its final closing in September 2015 with a total commitment of USD 200 million. One of the investors however defaulted (USD 15,5 million) due to their own fundraising issue. The manager proposed to replace it with another investor. After some prolonged diligence, such investment into the fund was confirmed, which would effect in 2018.

As at the end of December 2017, the fund made drawn down of USD 117 million, representing 63% of total commitment and an increase of 51% relative to last year's draw down level. Out of the drawn amount, USD 70 million was invested in 8 companies. Compared to last year, the invested amount rose by 14,25%. The portfolio of active investments developed with the addition of three projects (Azimuth, Achwa II, and Cameroon Hydro). The manager expects to use more than 75% of the total commitment by the end of 2018 and envisages to start the fundraising of the successor fund which will have the same thesis and strategy as AREF.

6 projects – using solar, wind and hydro technology – feature in the pipeline. They are at different processing stages due to reasons related to project documentation, project economics, etc.). Total expected combined capacity of the projects are above 200 MW. Exploration of new deals continues with some hydro projects in Madagascar and Côte d'Ivoire.

Component III: Enabling Environment Grants

SEFA's enabling environment grant component supports activities that work toward the creation of an enabling environment for private investments in sustainable energy in Africa. This includes advisory services which support implementation of regulatory and policy regimes that provide clear and predictable rules for RE project development, in addition to operation and capacity building activities which allow the public sector to act as a reliable and creditworthy counterpart to such projects. Component III also allows SEFA to better align with the SEforAll initiative by supporting preparatory, sector planning and capacity-building activities arising from the AfDB-hosted SEforAll Africa Hub.

During 2017, SEFA approved five enabling environment grants for a total amount of USD 6.9 million. These include grants for The Gambia, Togo, Burkina Faso and DR Congo. The second phase of the Green Mini Grid Market Development Programme was also approved.

Gambia: Green Mini-Grid Support Program

Grant of US $ 995,000 grant to the Republic of The Gambia to implement a programme to facilitate private investments in Green Mini-Grids (GMG) through the creation of an enabling policy, institutional and regulatory framework, as well as direct support to the GMG projects development activities. Electricity access stands around 40% countrywide and 12% in rural areas, and is mostly powered by fossil fuel generation, which translates into one of the highest consumer tariffs in the region. The Government of The Gambia is interested in realizing the opportunity of "greening" its power sector by incorporating renewable energy in the country's energy mix, while providing access to 1.91 million population in the country by 2030. Specifically, the SEFA-funded project will support the preparation of appropriate policy and regulatory framework, develop technical standards and guidelines, carry out feasibility studies and structure a tender process to attract the most suitable investors. The project will also provide technical and institutional capacity building, including on legal and regulatory issues, for the Ministry of Petroleum and Energy (MoPE), the Regulator (PURA), the National Power Utility (NAWEC), the communities and other private key stakeholders.

Expected Results	Target
Mini-grid projects that receive permits/authorizations from relevant government institution	5
People trained on RE matters	60 (of which 30% women)
Debt and equity leverage	USD 25 million

Multinational: Green Mini-Grid Market Development Program

A new mini-grid deployment model, based on solar energy, will unlock private investment across the 3,000 localities that have been identified for the country programme

Grant of US$ 3 million grant for Phase 2 of the Green Mini-Grid Market Development Programme (GMG MDP). Implemented by the Bank-hosted SEforALL Africa Hub, the GMG MDP's objective is to support the scale-up of investments in commercially viable GMG projects through a broad range of interventions to improve the enabling environment. The project seeks to remove or reduce market barriers at regional scale to facilitate the emergence of a thriving GMG sector in Sub-Saharan Africa – contributing significantly to the objectives of SEforALL and the New Deal on Energy for Africa.

Phase 1 of the Programme achieved notable successes, including the set-up of the GMG Developers' Help Desk (http://greenminigrid.se4all-africa.org/), which provides knowledge products and direct technical assistance to GMG developers, and the endorsement of the GMG Africa Strategy by the African Union Ministers meeting on energy in Lomé last March, which establishes a number of essential policy principles to enable GMG development, including simplified licensing and sustainable cost-reflective tariff setting. The GMG MDP has become a central point of reference for mini-grid activities on the continent.

The GMG MDP is increasing in scale and scope as it evolves from its Phase 1 to its Phase 2 including additional activities under its five business lines on market intelligence, business development support, policy & regulatory support, quality assurance and access to finance. This includes inter alia an expansion of the Help Desk and the addition of a Policy Help Desk aimed at public policy makers, additional GMG country market assessment and the development of a state of the mini-grid market in Africa assessment.

Expected Results	Target
Generation capacity	10 MW
Operational projects by supported GMG developers	50
Debt and equity leverage	USD 50 million

Togo: CIZO rural electrification program

Grant of US $ 975,000 to the Republic of Togo for the implementation of the «CIZO» project for off-grid rural electrification by PAYGO solar home systems. The purpose of the first phase of the rural electrification program CIZO (which means «Light» in local language) is to create the right conditions to attract the private sector (especially the decentralized energy service operators). The expected result is the deployment of 300 000 individual solar systems in 5 years using a PAYGO model, in remote rural areas of the network , relying on mobile payment technologies. CIZO is based on two key pillars: (i) the implementation of a national IT platform with the objective of aggregating the instant payment functionalities (DESCO, MNO) and the collection of data on the energy needs of the population, their consumption habits and their solvency and; (ii) capacity building to provide sales, installation and maintenance services for solar kits in rural areas. As part of the CIZO program, SEFA's intervention aims at (i) setting up a national network of mobile payment agents (recruitment and training) to make PAYGO operations possible by making electronic money available in the communities the most remote rural areas, and (ii) establish a Solar Academy in each region for the training and certification of local technicians.

Expected Results	Target
Number of people connected	1.500,000
Solar home Systems deployed	300 000
Agents and Trainers formed and certified	6084 (of which 35% women)

Burkina Faso: Green Mini-Grid Support Program

Grant of US $ 983,000 grant to support the government of the Republic of BurkinaFaso to create an enabling framework for increased private sector investment in renewable energy mini-grids. Energy access is marked by a large disparity between urban (59%) and rural areas (3%) at an overall electrification rate of 18.8% in 2016. The Government of Burkina Faso (GoBF) has set ambitious targets for raising the overall access rate to 36% by 2020 and 75% by 2030. The country is already familiar with the concept of mini-grids through implementing 50 mini-grids powered by diesel generators, mostly managed by female farmers' cooperatives. There is however acknowledgement that the current practice of public-driven electrification programs – depending mainly on donor financing – is insufficient to meet the targets, and an attractive institutional framework is needed to trigger private sector investment. The proposed SEFA Green Mini-Grid country program will (i) review and recommend improvements to the energy sector policy to promote RE-based Mini Grids for raising the national electrification rate; (ii) develop a regulatory framework including tariff framework, establish GMG technical standards & guidelines and; (iii) conduct assessment of the existing diesel-powered mini-grids and draw up a sustainability plan including recommendations for substitution or inclusion of potential RE technologies, private/public investment and business models; and (iv) recommend a financial incentive framework for GMG investments.

Expected Results	Target
Mini-grid projects that receive permits/authorizations from relevant government institution	5
People trained on RE matters	103 (of which 30% women)
Debt and equity leverage	USD 10 million

Democratic Republic of Congo: Green Mini-Grid Support Program

Grant of US $ 998,000 grant to support the government of the Democratic Republic of Congo to create an enabling framework for increased private sector investment in renewable energy mini-grids. The country power sector is characterized by very low electrification rate standing at 11%, the rate goes as low as 1% for the rural areas. The country is faced with infrastructural challenges whereby it cannot be interconnected by an as yet absent national grid and thus, only decentralization of power systems (mini grids) is the viable solution. SEFA program is aimed at creating conductive environment to bring private sector to invest in mini grids across the country. The project is structured to create an environment that attracts private sector investment into Green Mini-Grids (GMGs) in the DRC. The intervention is twofold, firstly supporting the public sector with the creation of an enabling environment framework through the review of policies and regulation and capacity building activities, and secondly supporting projects with technical assistance on early stage tasks (up to financial close). Specifically, the SEFA grant will support: (a) the creation of an enabling framework focusing on strategies and regulations to crowdin private sector investments into GMG ; (b) capacity building support for the UCM and the regulatory authority to improve their capacity in facilitating investments in GMG projects (c) technical assistance for mini-grid solar projects developed under the DFID/ ESSOR program, in particular for the three pilot sites, in carrying out detailed feasibility studies, ESIAs and the legal requirements of finalizing concession agreements; (d) selection of and assistance to additional small hydro/ solar power GMGs; and (e) assistance in technical and non-technical risk assessment for the three pilot ESSOR mini-grids to be considered for staple financing under the bank's private sector financing window.

Expected Results	Target
Mini-grid projects that receive permits/authorizations from relevant government institution	3
Power Generation	40MW
People trained on RE matters	45 (of which 30% women)
Debt and equity leverage	USD 40 million

SEFA/SEforALL Green Mini-Grid Market Development Program – Completion of Phase 1

By the end of 2017, the GMG MDP was providing technical assistance to 60 mini-grid developers in 30 countries through the GMG Help Desk. The MDP had also completed its fifth GMG country market assessment (including Mozambique, Ethiopia, Burkina Faso, Cameroon and the DRC). The Burkina Faso assessment has subsequently providing underpinning for an important AfDB-supported GMG program in that country. The GMG Africa Strategy, endorsed by the African Union Commission also in 2017, provides the GMG policy principles that the Bank now follows when providing GMG policy-related technical assistance to governments.»

FlexGrid Developer

This developer is a GMG Helpdesk beneficiary. This company has a mini-pilot network 60 kilometers from Bamako, the first GMG among 500 GMG villages that the company plans to install in the next three years, for a project cost of $ 23 million. FlexGrid already has financing from ElectriFi for a significant part of the project, but is still looking for other investments.

The mission team conducted a field visit to Zantiguilla with the manager of Green Ventures and that of Mali Solaire, FlexGrid's Malian partner on their pilot project for rural electrification. The pilot project connects 30 families.



Summary of Financial and Operational Performance

Since it became operational in in 2012??, SEFA has **committed just over USD 72 million** corresponding to a **81% commitment rate**. Of this commitment, almost USD 27.5 million has been disbursed or invested, which corresponds to 31% of available resources. There is an outstanding cash balance (end of 2017) of USD 17 million for new commitments.

Financial Summary as of December 2017	Resource Envelope	Committed	Disbursed	% disbursed
Donor pledged contributions		**$91 922 258**	**$89 868 402**	**98%**
DANIDA (DK 300 million)		$51 933 100	$51 933 100	100%
USAID (USD 20 million)		$20 000 000	$17 000 000	85%
DfID (GBP 9 million)		$11 897 998	$11 897 998	100%
Italy (EUR 7.4 million)		$8 091 160	$8 091 160	100%
+Interest accrued			$946 144	
Project commitments	**$84 568 478**	**$67 565 926**	**$25 261 647**	**37,4%**
Approvals component I	$24 456 844	$18 065 656	$5 255 773	29%
Approvals component II* - Equity	$25 500 000	$25 500 000	$16 349 721	64%
Approvals component II* - PSF	$10 000 000	$10 000 000	$2 500 000	25%
Approvals component III	$24 611 634	$14 000 270	$1 156 153	8%
Overhead	**$7 353 781**	**$4 903 518**	**$2 237 028**	**46%**
Admin & Secretariat costs	$2 757 668	$2 039 363	$1 656 535	81%
Bank management fee	$4 596 113	$2 864 155	$580 493	20%

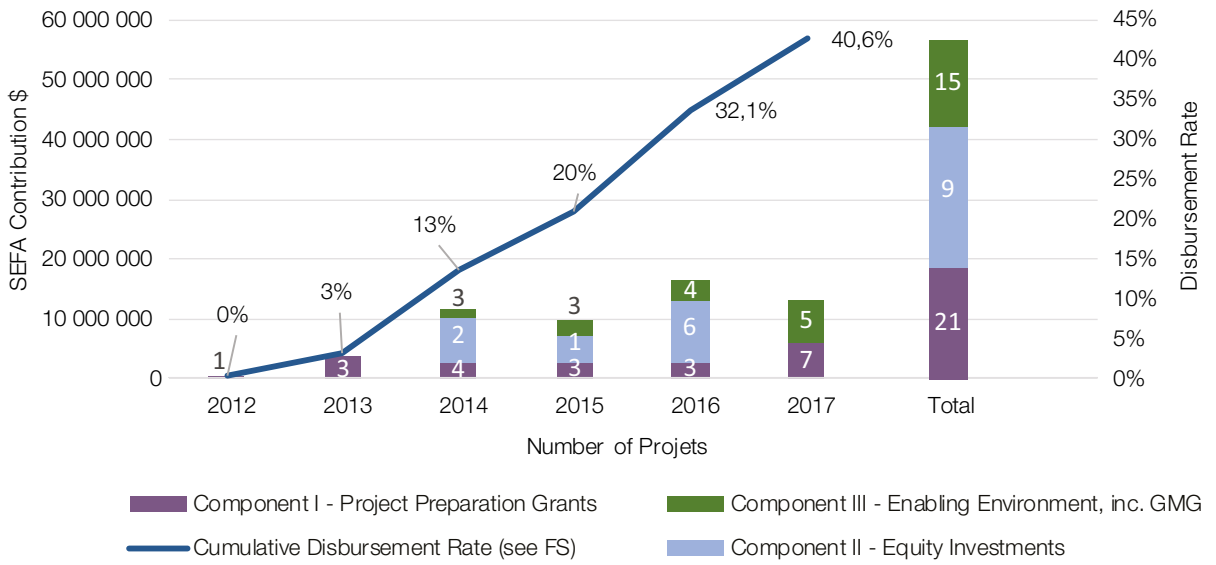
Financial Key Performance Indicators	Amount	% of cash
Cumulative commitments	**$72 469 444**	81%
Cumulative disbursements	**$27 498 675**	31%
Cash available for new commitments	**$17 002 552**	19%
Cash available net of pipeline	**$12 002 552**	

* The entire available equity resources stemming from the AfDB have been committed to AREF.

In terms of funding committed to projects across the three components, in 2017 twelve projects were approved for a combined total of almost USD 12.9 million – USD 6 million for seven preparation grants and USD 6.9 million for five enabling environment grants.

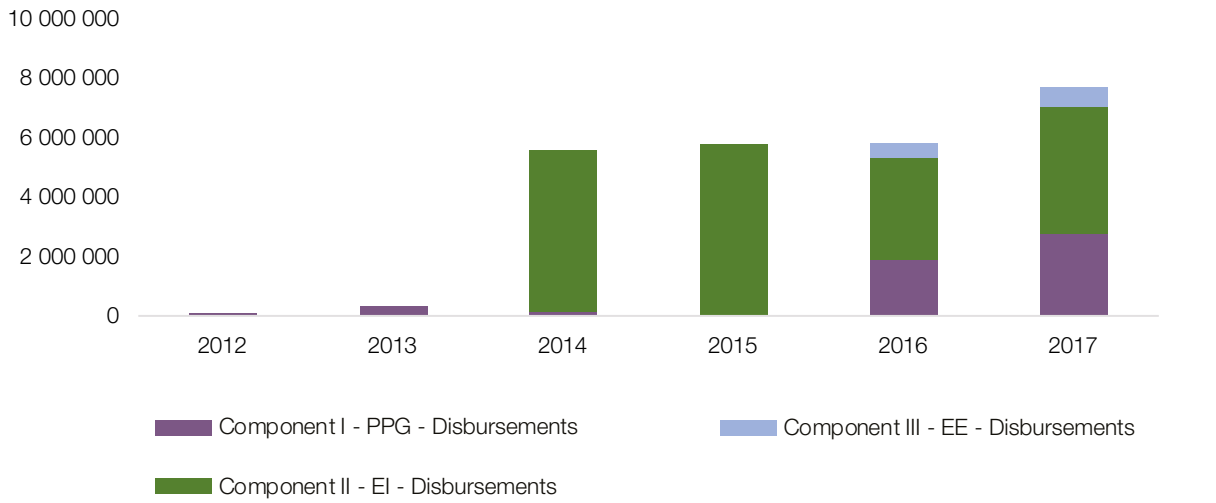
	I-Project Preparation		II-Equity Investments		III-Enabling Environment		TOTAL	
Year	#	USD	#	USD	#	USD	#	USD
2012	1	398,658	0	0	0	-	1	398,658
2013	3	3,787,000	0	0	0	-	3	4,747,000
2014	4	2,619,000	2	7,627,687	3	1,275,000	9	7,282,583
2015	3	2,675,000	1	4,644,981	3	2,580,000	7	9,909,981
2016	3	2,585,000	6	10,78,000	4	3,194,270	13	16,379,270
2017	7	6,016,000	0	0	5	6,951,000	12	12,967,000
TOTAL	21	18,080,656	9	23,052,668	15	14,000,270	33	55,133,594

Annual SEFA commitments and number of projects by component



SEFA disbursed a total amount of **USD 7.7 million in 2017, the highest amount disbursed in any calendar year to date,** driven by all three components. The disbursement rate for **component 1 increased from 21% in 2016 to 29% in 2017;** whilst the disbursement rate for **component 3 rose from 7% in 2016 to 8.3% in 2017.**

Annual SEFA disbursements/investments by component



SEFA paves the way for first-time private investment in medium scale renewable energy IPP in Madagascar.

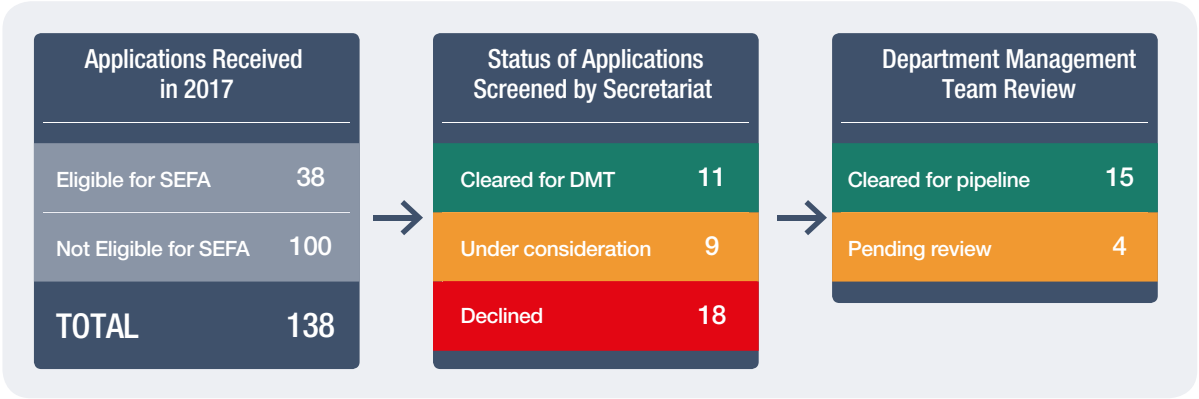
In line with both Madagascar and AfDB strategies, SEFA supported the "Pôles Intégrés de Croissance (PIC)" for the preparation and structuring of the Nosy-Be Hybrid Renewable Energy IPP project. The targeted activities comprises (i) feasibility studies for a combination of hydro, wind and solar technologies; and (ii) technical assistance to the national power utility - JIRAMA. This support helped JIRAMA initiate the decentralisation of management operations & finance management at regional level in the view to catalysing PPPs and IPPs and build capacity to successfully implement that. Further to the successful closure of the SEFA-supported pre-investment activities, the government identified and selected a private investor who is committed to delivering, in a first phase, a 5 MW solar generation facility with storage to partly substitute and complement the existing high-cost thermal electricity generation. A concession agreement has already been concluded with the government and a PPA signed with JIRAMA. Investors negotiation are currently ongoing with the objective of raising the requisite capital by end of 2018.

The Nosy Be Island is one of the most appreciated touristic zones of the country with high development potential but is severely challenged in terms of access to reliable, affordable and clean energy. 70 new businesses and around 300 additional jobs per year mostly from tourism and hospitality sector would be created as a result of additional electricity supplied by the project. The project will as well reinforce the quality of services to the benefit of the existing customers of the utility and augment the electricity access rate in Nosy-Be from 35% to 70% in five years from the operational start. As a result, around 50,000 people will benefit from more reliable energy services. In addition, there will be significant carbon emissions reduction benefits.

SCREENING OF REQUESTS

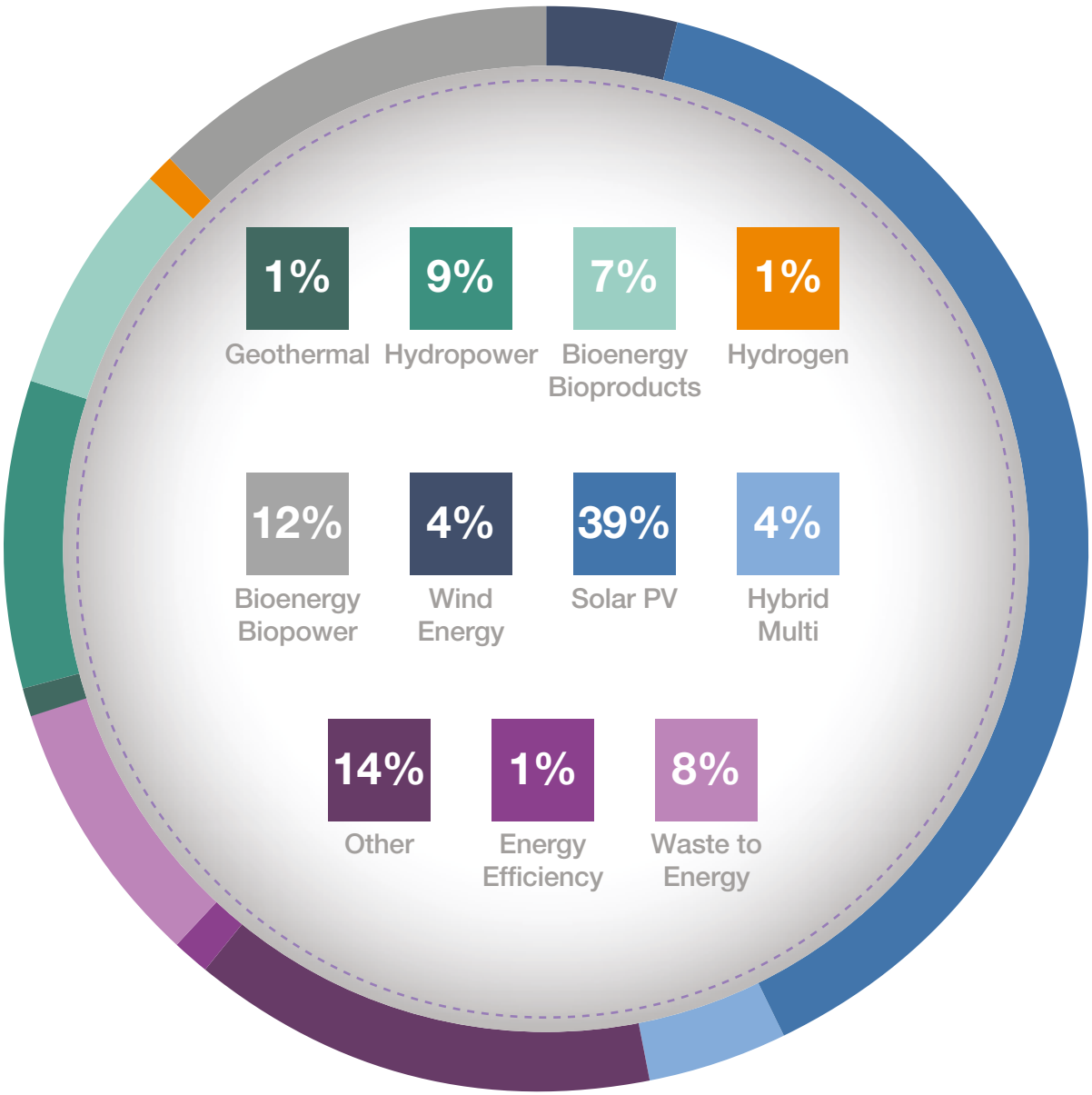
The SEFA Secretariat screened 138 project preparation funding requests in 2017 (Figure X). Out of the total application pool, 38 were considered SEFA-eligible. The majority of the requests came from West Africa (50), followed by Southern Africa (38 requests), East Africa (27), Central Africa (10), Regional (8) and North Africa (5). Solar PV and bio-energy appeared the most frequent technologies. (See Figure X). Most of the applications were for projects to be developed in Kenya, Nigeria, Zimbabwe and South Africa, or multi-nationally, and were mainly in the solar PV, hydropower and biomass sectors. More information is provided in Annex 2.

Number of requests received in 2017 by status

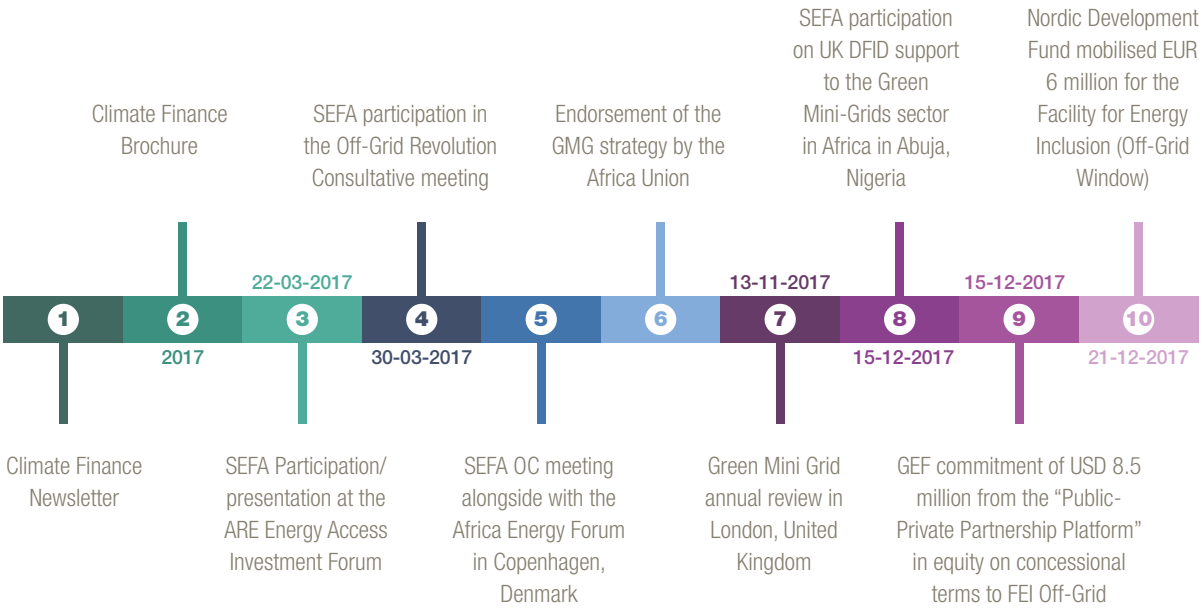


About twothirds of the applications were rejected due to their immaturity to be considered in the SEFA pipeline (i.e., pre-feasibility studies not completed) or their illegibility or mismatch with SEFA's scope and mandate (i.e., below SEFA's threshold of USD 30 million investment size). Rejected applications are often referred to other project preparation facilities by the SEFA Secretariat.

Requests by Technology



Non Lending Activities



OUTLOOK FOR 2018

Key program-level targets are as follows:

Performance indicator	2017 baseline	2018 Target
Project preparation grants approved (number)	7	5
Enabling environment projects (including Green Mini-Grid Country Programmes) approvals (number)	5	5
Total funding approved for projects (cumulative USD million)	67.5	82
Overall disbursement/investment rate	40.6%	54%

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Annex I: SEFA Results Log Frame

	RESULTS CHAIN	PERFORMANCE INDICATORS				
		Indicator	Baseline	Target	ACTUAL VALUES	Commitments based on projects approved
						Total
IMPACT	Promoting job creation, private sector led growth, and human development through the use of sustainable (affordable, reliable, clean) energy	Energy Development Index (EDI) Human Development Index (HDI)*	2012 HDI value and EDI value for each country	N/A	N/A	N/A
	Access to modern energy increased for SMEs and households	New connections (number) for projects	0 (2012)	150000 (2018)	250	335,848
OUTCOMES	Funding raised for RE projects (financial leverage)	Total volume (of equity and debt raised for RE projects USD million)	0 (2012)	1,000 (2018)	314,6	2,080
	Increase in RE in the energy mix	Aggregate installed RE capacity (MW)	0 (2012)	500 (2018)	0	608
	Direct employment creation (sector/ project level)	Jobs created at project sites (number)	0 (2012)	450 (2018)	26	26,565
	Reduction/avoidance of GHG emissions (project level)	CO2 equiv. saved through use of RE (tons)	0 (2012)	3,000,000 (2018)	0	3,687,100
	RE projects supported by SEFA reaching financial close	No. of projects receiving Project Preparation Grants reaching financial close - 1 project/year from 2014	0 (2012)	4 (2018)	1	26
OUTPUTS - I	RE projects receiving pre-investment assistance from SEFA	No. of PPGs awarded - 4-6 new PPGs/year from 2013 to 2018	0 (2012)	30 (2018)	21	21
	RE projects receiving equity and managerial support	Committed capital invested (%)	0 (2013)	90 (2018)	81	81
OUTPUTS - II		Portfolio companies at end of investment period (number)	0 (2013)	10 (2018)	9	9
	Pre-investment support provided to RE projects and entrepreneurs	Companies/projects supported (number)	0 (2013)	20 (2018)	9	9
OUTPUTS - III	Improved investment environment for RE projects	Countries with new policies - 3 countries/ year supported from 2014 (number)	0 (2013)	12 (2018)	1	10
	Completed activities related to institutional support and capacity development on RE/EE	People trained on RE/EE *** (number)	0 (2013)	150 (2018)	0	1719
	Improved regulatory and market conditions for Green Mini-Grids	No. of GMG enabling projects - 5 country support packages & Market Development Programmes implemented	0 (2014)	6 (2018)	6	6

Annex II: Financial Statement as at 31 December 2017

	Budgeted Amount	Disbursement 2017	Cumulative Disbursements	Undisbursed Balance
	(USD)			
Component I - Project Preparation Support				
African Biofuel and Renewable Energy	398,656	-	398,656	-
Madagascar Nosy Be Solar/Hydro	987,000	521,753	694,168	292,832
Djibouti Lake Assal Geothermal	1,800,000	24,328	587,517	1,212,483
Mauritius DOWA Urban Cooling	1,000,000	521,518	883,918	116,082
Nigeria Green Energy & Biofuels	580,000	271,958	427,958	152,042
Ethiopia dVentus Technologies	842,000	415,566	559,066	282,934
Tanzania Jumeme Rural Energy Supply	420,000	84,687	294,939	125,061
Cameroon JCM Solar PV	777,000	104,123	104,123	672,877
Chad Starsol Solar PV	780,000	-	-	780,000
Saltinho Hydro Power Project	965,000	-	-	965,000
Wave 2o Desalination Plan Project	930,000	41,034	41,034	888,966
Uganda Earth Energy Biomass	993,000	-	-	993,000
Kenya Mutunguru HPP	992,000	425,588	425,588	566,412
Facility for Energy Inclusion	600,000	119,761	598,806	1,194
Off-Grid Energy Access Fund	400,000	240,000	240,000	160,000
Zimbabwe Oxygen Rooftop Solar	965,000	-	-	965,000
DR Congo Nord Kivu SHPP	985,500	-	-	985,500
Lesotho Neo I Mafeteng Solar	695,500	-	-	695,500
South Africa eThala Biomass	990,000	-	-	990,000
Mozambique eleQtra Namaacha Wind	985,000	-	-	985,000
Kenya Kabira Waste to Energy	980,000	-	-	980,000
Sub-total	18,065,656	2,770,316	5,255,773	12,809,883
Component II – Equity Investment and Support to RE/EE Enterprises				
Investment Capital	25,000,000	4,264,228	16,349,721	9,150,279
Project Support Facility	10,000,000	-	2,500,000	7,500,000
Sub-total	35,000,000	4,264,228	18,849,721	16,650,279

	Budgeted Amount	Disbursement 2017	Cumulative Disbursements	Undisbursed Balance
	(USD)			
Component III - Enabling Environment Support				
Comoros Energy Sector Support	480,000	-	-	480,000
Mozambique Renewable Energy Promotion	740,000	-	-	740,000
Mali Renewable Energy Promotion (PAPERM)	530,000	-	-	530,000
UNEP/ICA Atlas of Africa Energy Resources	265,000	74,520	248,400	16,600
Green Mini-Grid Market Develop. Program (GMG/MDP)	1,000,000	494,551	813,599	186,401
Rwanda GMG Support Program	840,000	49,154	49,154	790,846
Burundi Sector Master Plan	630,000	-	-	630,000
Program for Risk Mitigation in Sustainable Energy	700,000	-	-	700,000
Niger GMG Support Program	994,270	-	-	870,000
Tanzania RE Investment Facility	870,000	-	-	994,270
Gambia Green Mini-Grid Country Program	995,000	-	-	995,000
Green Mini-G Market Develop. Program (GMG MDP) Phase II	3,000,000	45,000	45,000	2,955,000
Togo CIZ Off-Grid - Pilot Phase	975,000	-	-	975,000
Burkina Faso Green Mini-Grid Country Program	983,000	-	-	983,000
DR Congo GMG Mini-Grid Country Program	998,000	-	-	480,000
Sub-total	14,000,270	663,225	1,156,153	11,846,117
TOTAL	**67,565,926**	**7,697,769**	**25,261,647**	**41,306,279**